



Sandy Lane Improvement North Northampton

Post-Excavation Assessment and Updated Project Design



for WSP Environmental Ltd

> CA Project: 669028 CA Report: 17177

> > March 2017





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SUMMARY

Site Name:	Sandy Lane Improvement North
Location:	Northampton
NGR:	SP 7051 6187 to SP 7127 6346
Туре:	Excavation
Date:	February to April 2010
Planning Reference:	SN/06/1502 & DA/06/1218
Location of archive:	Currently held by Cotswold Archaeology, Milton Keynes
Site Code:	SLN10

A programme of archaeological investigation was undertaken by Cotswold Archaeology in February to April 2010 at the request of WSP Environmental Ltd (on behalf of MGWSP) at the Sandy Lane Improvement North, north-west of Northampton. A total area of 3.6ha was excavated across Areas 1 to 7.

Archaeological remains were confined to Areas 1–4 and 6 in the northern and central parts of the site. The archaeology excavated comprised the remains of a small settlement in Area 2 and a pit alignment in Area 3, both dating to the Middle Iron Age period. Several other areas of occupation broadly dating to the Late Prehistoric period were encountered across the site, and included pits, hearths and a cremation burial in Area 1; postholes in Area 2; a trackway/droveway, enclosure and associated ditches, hearths, pits and postholes in Area 3; pits and hearths in Area 4; and a ditch and posthole in Area 6. Medieval and post-medieval features included a boundary ditches in Areas 1 and 6; and plough furrows and pits in Area 4. A moderate pottery assemblage was recovered from the site broadly dating to the Late Prehistoric period with a small number of rim sherds suggesting a Middle Iron Age date for part of the assemblage. Other finds included a small amount of fired clay representing parts of two loomweights, and a worked stone object identified as a possible loomweight or flywheel.

This document presents a quantification and assessment of the evidence recovered from the excavation. It considers the evidence collectively in its local, regional and national context, and presents an updated project design for a programme of post-excavation analysis to bring the results to appropriate publication.

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1 INTRODUCTION

- 1.1 Between February and April 2010 Cotswold Archaeology (CA) carried out an archaeological excavation at the Sandy Lane Improvement North, north-west of Northampton (centred on NGR: SP 7051 6187 to SP 7127 6346; Fig. 1). The work was undertaken at the request of WSP Environmental Ltd in order to fulfil a condition attached to planning permission granted by Northamptonshire County Council (NCC) for the construction of a new road, associated roundabout junctions and side roads (refs SN/06/1502 and DA/06/1218; Condition 3).
- 1.2 The scope of excavation was set out in accordance with a brief for archaeological recording (NCC 2009) prepared by Lesley-Ann Mather, Northamptonshire County Council's Archaeological Advisor (NCCAA) to the Local Planning Authority (LPA), and with a subsequent detailed WSI produced by WSP Environmental Ltd (WSP 2010) and approved by the LPA acting on the advice of Lesley-Ann Mather.
- 1.3 The fieldwork also followed Standard and Guidance for Archaeological Excavation (ClfA 2014a); the Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide (HE 2015a) and accompanying PPN3: Archaeological Excavation (HE 2015b). The fieldwork was monitored by Lesley-Ann Mather (NCCAA).

Location, topography and geology

- 1.4 The site was located on the north-western edge of the town of Northampton, within the suburb of New Duston. The site leads from Harlestone Road to the north, to Berrywood Road to the south (Figs 1 and 2). The site is bounded by open agricultural fields to the south and west, residential housing to the east and woodland to the north/north-west. It lies at approximately 111m above Ordnance Datum (AOD) to the south, gently dropping away to a height of 97m AOD to the north.
- 1.5 At the northern and southern ends of the site, the underlying bedrock geology is mapped as interbedded Stamford Member (comprising sandstone and siltstone), which formed approximately 165 to 172 million years ago during the Jurassic Period (BGS 2016). A band of Northampton Sand Formation is present across the central area of the site. This sedimentary bedrock, comprising sandstone and siltstone, was formed during the same period. Alluvial deposits comprising clay,

silt, sand and gravel, formed up to 2 million years ago during the Quaternary Period, were also uncovered along each side of Dallington Brook (see Fig. 2).

1.6 At the time of archaeological fieldwork the route comprised a number of arable and pastoral fields sub-divided by field boundaries. The route was divided in two by Dallington Brook, which flows from west to east across the centre of the site. Since the end of the fieldwork, New Sandy Lane has been constructed.

Project background

- 1.7 Archaeological interest in the site arises from previous archaeological works which have taken place within the boundary of and/or close to the site. These comprise a large quantity of cropmarks, which were identified as part of the Northamptonshire National Mapping Programme (NMP) (Deegan and Foard 2007), an Environmental Statement (Atkins 2006a and 2006b), a geophysical survey (Stratascan 2006) and an archaeological evaluation (NA 2006) (Fig. 2).
- 1.8 The mapped cropmarks (Deegan and Foard 2007) and Environmental Statement (Atkins 2006a and 2006b) confirmed that the route lay within an area of known prehistoric and Roman activity, and subsequent geophysical survey recorded a number of anomalies of potential archaeological interest. These included the identification of two discrete areas of possible settlement activity in the northern and central areas of the route (Stratascan 2006, 3).
- 1.9 Following the completion of the geophysical survey, a field evaluation was undertaken, targeting the geophysical survey results as well as areas in which no archaeological remains were identified (NA 2006). Thirty-three trenches were excavated with archaeological remains uncovered in four trenches. The features uncovered included a number of undated ditches and gullies, the majority of which corresponded with anomalies identified during the geophysical survey. A number of the potential features identified by the geophysical survey were tested and found to represent either modern disturbance or differences in the underlying geology.
- 1.10 Since the construction of the road, subsequent works including an archaeological desk-based assessment (CA 2016a), geophysical survey (GSB 2016) and field evaluation (CA 2016b) have been undertaken directly to the west of the site to inform a forthcoming planning application for residential development (Fig. 3). The geophysical anomalies identified there were targeted during field evaluation, and

excavated features were found to correlate well with NMP cropmark evidence (Deegan and Foard 2007), providing further context for the archaeological remains excavated at Sandy Lane. The results of these works are summarised below.

Archaeological background

Prehistoric (4000 BC – AD 43)

- 1.11 The Northamptonshire NMP identified a number of prehistoric remains in the area surrounding the route. Features of an earlier prehistoric date include a possible Neolithic causewayed enclosure adjacent to Grange Farm located *c*. 2km to the north-east. Despite a number of evaluations in the area, little is known about the possible causewayed enclosure; however, it has been defined as such based on the morphology of the enclosing ditches (Deegan and Foard 2007, 48). A henge may be located within the centre of the enclosure, although the presence of this feature has been debated (Deegan and Foard 2007, 54). A number of other enclosure and field boundaries, possibly of Neolithic or Bronze Age date, have also been identified in areas *c*. 1km to the north and *c*. 2.3km to the north-east of the site.
- 1.12 A large complex of cropmarks covering an area of 10ha has been identified at Brampton Hill, located *c*. 2.9km to the north-east of the site. These cropmarks have been interpreted as representing a multi-period settlement including a number of hut circles, square and round barrows, and trackways. A second group of cropmarks has also been identified at Harlestone Brook, *c*. 1.4km to the northwest of the site. The Northampton NMP defines the cropmarks in this area, designated together as a Scheduled Monument, as representing a number of Bronze Age barrows, hut circles, enclosures, trackway and field systems.
- 1.13 Evidence of probable later prehistoric activity has been uncovered during a series of investigations at Harlestone Quarry, located *c*. 1km to the north-west of the site. A probable prehistoric pit alignment was identified through trial trenching in 2003/2004; whilst an excavation in 2006, in the eastern area of the site, uncovered a small scatter of pits and postholes, which suggested a small Late Bronze Age to Early/Middle Iron Age settlement (Field and Chapman 2006).
- 1.14 Archaeological investigations between 1988–92 surrounding King's Heath, located c. 2km to the east of the site, revealed a large Middle to Late Iron Age settlement, comprising a number of rectangular enclosures, roundhouses, pit alignments, field systems and trackways (Shaw *et al.* 1990). Moreover, a Middle to Late Iron Age

settlement, initially identified as cropmarks and later subject to geophysical survey and some archaeological excavation, has been identified on the slopes above Dallington Brook, *c.* 1.6km to the east of the site. The settlement was defined by a number of sub-rectangular enclosure and pits identified across this area (Shaw *et al.* 1990).

1.15 A number of cropmarks were identified in the fields immediately to the west of the site and were initially interpreted as stock enclosures and field boundaries of Iron Age or Romano-British date (Fig. 2). Subsequent works in 2016, including geophysical survey (GSB 2016) and trial trench evaluation of this area (CA 2016a and CA 2016b), confirmed the presence of many of these cropmarks and suggested the presence of intensive area of Iron Age settlement activity to either side of Dallington Brook (Fig. 3). The features uncovered during these investigations included a number of enclosures, trackways and field systems.

Roman (AD 43 - AD 410)

- 1.16 A number of features of probable Roman date have been identified in the area to the south of the site, concentrated along the alignment of a Roman road. Berrywood Road, which forms the southern boundary of the site, follows the route of the Roman road that ran between *Bannaventa* (located close to Norton, 9km north-west) and Duston (Margary 17). A Roman villa and associated yard surfaces and stock enclosures were discovered just to the south of the road and *c*. 1km to the south-west of the site (Fisher 2003; Butler 2008).
- 1.17 A number of sub-rectangular and rectilinear enclosures have been identified as cropmarks in the areas surrounding Church Brampton, *c*. 3km to the north-east of the site. Although the enclosures remain unexcavated, a number of Iron Age and Roman pottery sherds have been collected through fieldwalking across this area. At Harlestone, 1.4km to the north-west of the site, a number of cropmarks representing enclosures and unenclosed settlements appear to suggest the presence of similar agricultural activities. Again, Iron Age and Roman pottery has been recovered from fieldwalking of this area.
- 1.18 A programme of geophysical survey undertaken at Dallington Gateway, located 400m to the north of the site, revealed a double-ditched enclosure, gullies and pit alignment (Butler *et al.* 2012; Walker and Wolframm-Murray 2012). Although some of the features (including the pit alignment) were thought to date to the later

prehistoric period, it was determined that, due to its morphology, that the enclosure was likely of Roman date.

Early medieval/Anglo-Saxon (AD 410 – 1066) and medieval (1066 – 1539)

- 1.19 Dallington Brook marks the boundary between the parishes of Harlestone, to the north, and Harpole, to the south. Both places are recorded in the Domesday Survey of 1086 and are therefore likely to have had origins in the early medieval period. While no early medieval remains have been identified in archaeological investigations of the area surrounding the site, fieldwalking in the area to the west has recovered a number of early to middle Anglo-Saxon artefacts (Holmes 1992).
- 1.20 Earthworks of a medieval moat are visible on historic aerial photographs of Harpole, located to the south-west of the site. This moated manorial site may represent the seat of Vaux Manor (RCHME 1982). The extant Church of All Saints dates to the 12th century and a settlement was clearly well-established in this area by the early 13th century.
- 1.21 Throughout the medieval period, the landscape was agricultural in character. Field survey, aerial reconnaissance and archival research undertaken for An Atlas of Northamptonshire (Partida *et al.* 2013) recorded ridge-and-furrow earthworks (indicative of the open field system of arable cultivation) across the parishes of Harlestone and Harpole. Evidence for ridge-and-furrow agriculture, visible as surviving earthworks, has also been observed in the fields to the west of the site. The earthworks extend across *c.* 5ha of pasture land immediately to the north and north-east of Fleetland Farm (Fig. 2).

Post-medieval/Modern (1539 – present)

- 1.22 Harlestone and Harpole villages were thriving agricultural communities during the post-medieval and early modern periods, with many surviving 17th, 18th and 19th century vernacular houses and farm building. Land which had been previously under the medieval open field system was formally enclosed in 1766 (Harlestone parish) and 1778 (Harpole parish), but neither Enclosure Map survives.
- 1.23 Cartographic evidence of this area in the post-medieval and modern periods confirms that the site was predominantly used as an area of agricultural activity throughout this period. The 1st Edition OS Maps indicate the presence of farm buildings within the development area, however none of these survive to the present.

2 AIMS AND OBJECTIVES

- 2.1 The aims of the excavation were to establish the character, quality, date, significance and extent of any archaeological remains or deposits surviving within the site. The objectives were laid out in a WSI produced by WSP Environmental Ltd. (WSP 2010) and in accordance with the brief prepared by Northamptonshire County Council (NCC 2009), as follows:
 - Characterise the nature of the main stratigraphic units encountered in terms of their physical composition (stone, sand, gravel, organic materials etc) and their archaeological formation (primary deposits, secondary deposits etc);
 - Assess the overall presence and survival of structural remains relating to the main periods of occupation revealed, and the potential for the recovery of additional structural information given the nature of the deposits encountered (e.g. extent of later disturbance etc);
 - Assess the overall presence and survival of the main kinds of artefactual evidence (including pottery, brick, tile, stone, glass, metal, bone, small finds, industrial residues, etc), and its condition and potential, given the nature of the deposits encountered;
 - Assess the overall presence and survival of the main kinds of ecofactual and environmental evidence (including animal bone, human bone, plant remains, pollen, charcoal, mollusca, soils etc), its condition and potential given the nature of the deposits encountered; and
 - Appraise the relative value of the main stratigraphic units revealed in terms of their importance for preservation and conservation.

3 METHODOLOGY

3.1 The location of the seven excavation areas (Fig. 2) was agreed with Lesley-Ann Mather (NCCAA) informed by the results from the mapped cropmarks (Deegan and Foard 2007), Environmental Statement (Atkins 2006a and Atkins 2006b), geophysical survey (Stratascan 2006) and archaeological evaluation (NA 2006). The excavation areas targeted the undated ditches and gullies recorded in the preceding evaluation (NA 2006).

- Area 1 was located at the northern extent of the route and measured 165m long and 48m wide;
- Area 2 was located immediately north of Port Road and measured 175m long and 40m wide;
- Area 3 was located immediately south of Port Road and measured 255m long and 43m wide;
- Area 4 was located 25m south-east of Area 3 and measured 160m long and 80m wide;
- Area 5 was located immediately south of Dallington Brook and measured 220m long and 40m wide,
- Area 6 was located to the east of Heath Farm and measured 32m long and 25m wide; and
- Area 7 was located at the southern extent of the route and measured 82m long and 25m wide.
- 3.2 Fieldwork commenced with the removal of topsoil and subsoil from the excavation area by mechanical excavator with a toothless grading bucket under archaeological supervision. The archaeological features exposed were hand-excavated to the bottom of archaeological stratigraphy.
- 3.3 The archaeological features thus exposed were hand-excavated to the bottom of archaeological stratigraphy. Particular emphasis was placed upon retrieving a stratigraphic sequence, and upon obtaining details of the phasing of the site. Sample sizes were as follows:
 - Stakeholes 100%
 - Posthole/pits 50%
 - Linear features (≤ 5m long) 25%
 - Linear features (≥ 10m long) 10%
 - Industrial features 100%

- Cremation deposits 100%
- 3.4 All features were planned and recorded in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*. Deposits were assessed for their environmental potential in accordance with CA Technical Manual 2: *The taking and processing of environmental and other samples from archaeological sites* and a number of deposits were deemed suitable for environmental sampling. All artefacts recovered from the excavation were retained in accordance with CA Technical Manual 3: *Treatment of finds immediately after excavation*.
- 3.5 A single cremation burial was uncovered during the archaeological excavation of Area 1 and fully recorded and excavated in compliance with the Licence granted by the Ministry of Justice Licence and in accordance with the WSI (WSP 2010).

4 RESULTS

- 4.1 The archaeological potential of the *c*. 3.6ha site had been highlighted by the results from the mapped cropmarks (Deegan and Foard 2007), Environmental Statement (Atkins 2006a and Atkins 2006b), geophysical survey (Stratascan 2006) and archaeological evaluation (NA 2006).
- 4.2 Archaeological remains were confined to Areas 1–4 and 6 in the northern and central parts of the site, with no features of archaeological significance uncovered in Areas 5 and 7. The earliest evidence for activity is provided by an assemblage of worked flints, some of which broadly date to the Mesolithic and Early Neolithic periods. All of these were recovered as residual finds within Late Prehistoric features, although their presence does attest to earlier prehistoric activity within the area. A sherd of Late Bronze Age/Early Iron Age pottery was also recovered as a surface find, also hinting towards earlier activity in the area.
- 4.3 The archaeology comprised a small settlement in Area 2 and a pit alignment in Area 3, both dating to the Middle Iron Age period. Several other areas of occupation broadly dating to the Late Prehistoric period were encountered across the site, and included pits, hearths and a cremation burial in Area 1; postholes in Area 2; a trackway/droveway, Enclosure and associated ditches, hearths, pits and postholes in Area 3; pits and hearths in Area 4; and a ditch and posthole in Area 6.

Medieval and post-medieval features included a boundary ditches in Areas 1 and 6; and plough furrows and pits in Area 4.

- 4.4 A moderate pottery assemblage was recovered from the site comprising 205 sherds broadly dating to the Late Prehistoric period. The surfaces of the potsherds are moderately well preserved, but the acidic burial conditions have caused leaching of some of the calcareous inclusions, which together with a number of undiagnostic sherds hinders further dating refinement. A small number of rim sherds suggest a Middle Iron Age date for part of the assemblage.
- 4.5 The features excavated have been assigned to periods on the basis of spot dates available from recovered artefacts, feature morphology and spatial/stratigraphic relationships to those features containing dated artefacts.
- 4.6 This section provides an overview of the excavation results; detailed summaries of the recorded contexts, finds and environmental samples (biological evidence) are to be found in Appendices 1–9. On the basis of the criteria discussed above, features have been assigned to the following provisional periods:
 - Period 1: Middle Iron Age (400 BC 100 BC)
 - Period 2: Late Prehistoric (1100 BC 43 AD)
 - Period 3: Medieval/post-medieval (1066 1800)

Geology

4.1 The natural geological substrate was identified at an average depth of 0.4m below the topsoil and subsoil. It varied from a yellow clay with frequent limestone inclusions to an orange-brown clayey sand with moderate small stone inclusions. This was overlain by mid-brown silty clay subsoil measuring up to 0.15m in depth and was in turn sealed by a grey-brown clayey silt topsoil, which averaged 0.25m in thickness. All identified archaeological features cut the underlying natural.

Period 1: Middle Iron Age (400 BC – 100 BC)

4.2 Middle Iron Age activity was identified within Areas 2 and 3 and included an area of settlement comprising structural remains and associated pits, postholes and hearths in Area 2 and a short pit alignment formed of six pits in Area 3.

Area 2 (Fig. 5)

4.3 The earliest phase of occupation was represented by a Middle Iron Age settlement, comprising two post-built roundhouse structures (436 and 437), three possible 4-post structures and a number of scattered pits, postholes and hearth features. Only two features in this area contained pottery dating to the Middle Iron Age period, with pottery of Late Prehistoric date recovered from a number of other features. However, all the features in this area have been phased as Middle Iron Age based upon similarities in feature morphology and fill type, and spatial relationships to those features containing Middle Iron Age pottery.

Roundhouses 436 and 437

- 4.4 Post-built roundhouse 436 was located adjacent to the north-western edge of excavation area, in the northern part of Area 2. The structure was defined by seven postholes which were sub-circular in shape and measured between 0.27m and 0.5m in diameter and 0.11m and 0.21m deep.
- 4.5 The postholes appear to represent an internal ring of support posts for the structure, and suggest that the roundhouse was over 8.5m in diameter. A large hearth (379) was recorded within the centre of roundhouse 437 although no finds were recovered from the fills of this feature. There were gaps in the posts towards the north and south-east of the structure. This could have been a result of truncation, although it is possible one of these gaps could have been an entrance to the roundhouse.
- 4.6 A single sherd of Late Prehistoric pottery was recovered from posthole 368 and a worked stone disc was recovered from posthole 362. The worked stone disc is too large to have functioned as a spindlewhorl, and may have functioned as a loomweight or a flywheel. Bulk soil samples containing small quantities of charcoal fragments were recovered from postholes 261, 370 and 376 (samples 12, 15 and 14 respectively), which may be representative of hearth debris. Small quantities of burnt animal bone were also recovered from postholes 370 and 376. The burnt bone from posthole 370 refitted to form a worked bone object, sharpened at one end, possibly utilised as an awl or point, most likely for leatherworking. Two small pieces of burnt sandstone were also recovered from the fill of posthole 364.
- 4.7 A second post-built roundhouse (437) was located 1.5m east of roundhouse 436.The structure also consisted of seven postholes, and measured 6.8m in diameter.The postholes were broadly sub-circular in shape and measured between 0.19m

and 0.42m in diameter and 0.05m and 0.22m deep. The posts were broadly equidistant, although there are slightly larger gaps on the northern and southern edges, one of which may represent the position of an entrance to the structure. A total of five sherds of pottery dating to the Late Prehistoric period was recovered from postholes 255 and 360.

- 4.8 Three small pits/postholes (325, 333, 335) and a hearth (259) were recorded within the roundhouse and may represent internal structural features.
- 4.9 Hearth 259 measured 0.66m in diameter and 0.27m in depth and was uncovered in the north-western part of the structure. A number of burnt reddened sandstones (deposit 258) were present in the base of the hearth and these were in turn overlain by charcoal rich fills 257 and 258 (Fig. 9, Section AA). While no artefacts were recovered from the hearth, a small quantity of burnt animal bone and charred plant remains including barley, hulled wheat and possible free-threshing wheat were recovered from fill 256 (sample 13) and are likely representative of possible crop processing or food production waste.
- 4.10 Given the close proximity of roundhouses 436 and 437 (*c*. 1.5m apart), it is possible that they represent two separate phases of activity, perhaps associated with the reconstruction of the building. However, as there are no stratigraphic relationships between the features associated with either roundhouse, this cannot be confirmed.

Pits to east of roundhouses 436 and 437

4.11 Two large pits (251 and 281) were uncovered *c*. 7m east of roundhouse 437. Pit 281 measured 2.6m in diameter and 0.4m deep and pit 251 measured 1.15m long, 0.4m wide and 0.1m deep. No finds were recovered from either pit, except a single sherd of Late Prehistoric pottery from pit 251. These features may represent the truncated bases of storage or refuse pits associated with the use of the roundhouse structures.

Postholes to south-east of roundhouses 436 and 437

4.12 A small group of six postholes were uncovered *c*.12m south-west of roundhouse 437. The postholes were broadly sub-circular in shape, 0.25–0.56m in diameter and 0.09–0.16m deep. No obvious pattern was observed which may determine their function however it is possible that they represent evidence for temporary structure(s) such as fencelines, wind breaks or small huts/buildings. No finds were

recovered from the fills of these features however they have phased to this period, based upon their proximity to roundhouses 436 and 437.

Postholes to north of Area 2

- 4.13 Several discrete groups of postholes/small pits were observed in the northern part of Area 2. The features were circular or sub-circular in shape, had moderate or steeply sloping sides and measured between 0.25m and 0.72m in diameter and 0.05m and 0.44m in depth. The spatial positioning of the features revealed four possible structural features.
- 4.14 The linear arrangement of three of postholes 230, 237 and 239 may represent a small fenceline, while three square/sub-square possible 4-post structures (structures 439, 440, 441) were also recorded. Whilst these have been interpreted as possible 4-post structures, only three corner posts were identified for each structure, although given the shallow depth of the features in this area it is possible the postholes representing the fourth corners had been truncated away.
- 4.15 Structure 439 comprised postholes 269, 271 and 279, measuring 1.5m across, and structure 441 was made up of postholes 319, 241 and double post 321/323, measuring 2m wide. Structure 440 was slightly more difficult to discern. It comprised postholes 214, 216 and 222 defining a space 1m across, however intercutting postholes 218/220 were located within the internal space of the possible structure. It is possible these represent earlier or later phases of structural activity. The remaining postholes scattered across this northern area may represent the remains other temporary/small-scale structures associated with settlement.
- 4.16 A small assemblage of finds was recovered from a number of the features in this area. Seven sherds of pottery were recovered from posthole 218 and three from posthole 214 all dating to the Middle Iron Age. Small quantities (between one and ten sherds) of Late Prehistoric pottery were recovered from the fills of five other postholes/pits (210, 212, 222, 224 and 269). Furthermore, a single piece of burnt sandstone was also recovered from the fill of pit 269. The function of these structural remains is uncertain; they may represent storage huts or granaries, but no artefactual or ecofactual evidence has been recovered that could confirm this assertion.

Pits/hearth to the north-west of roundhouses 436 and 437

4.17 Four discrete features were uncovered *c*. 45m to the north-west of the two roundhouse structures. Three small pits (315, 317 and 350) were sub-circular in shape and measured 0.42–0.7m in diameter and 0.15–0.2m deep. Thirteen sherds of Late Prehistoric were recovered from pit 350. Twenty-seven fragments of fired clay, which represent parts of two probable loomweights, were recovered from pit 317. A possible hearth (348) was also located in this area. The hearth measured 0.85m in length, 0.4m in width and 0.7m in depth and contained abundant charcoal and fire cracked stones.

Area 3 (Figs 6 and 7)

Pit alignment 433

- 4.18 Middle Iron Age activity was represented by pit alignment 433, which extended across the centre of Area 3 for a distance of 18m (Fig. 7). Pit alignment 433 was north-east/south-west-aligned and comprised six pits (177, 181, 292, 293, 354, 402), which were broadly square or circular in plan and measured 1.11–2.4m in diameter and 0.58–1.24m deep. No further excavated evidence for the alignment was seen to the north-east, although the pits had been truncated by later ditch 352 (e.g. pit 354, Fig. 9; Section BB), which may have removed any further evidence for the alignment. A tree-throw pit was located north-east of pit 402, however this was only 0.1m deep, with irregular sides and undulating base and was very different in form to the other pits within the alignment.
- 4.19 Cropmarks within and close to Area 4 (Fig. 6) suggest that there had been another section of the same pit alignment to the north-east (Fig. 7), although no evidence for this was found in Area 4. It is probable that the alignment continued to the south-west beyond the western edge of Area 3, based upon the presence of a corresponding cropmark in the fields to the west of the site.
- 4.20 Although the top of the pits had been truncated by Late Prehistoric ditch 352, the bases of three of the pits were rectangular or square in shape at a depth of 1.2m below ground level (e.g. pit 292, Fig. 11, photograph). The bases of those pits fully exposed measured 0.4m wide and at least 0.5m long.
- 4.21 The pits contained between one and five fills, depending on the level of truncation of Period 2 ditch 352. The primary fill in all pits comprised a natural silting deposit. Where more than one fill was recorded, these comprised dumped refuse deposits including charcoal and fired clay. Pits 177, 181, 354 and 402 contained prehistoric

pottery including one sherd dating to Middle Iron Age from pit 354 and a small number sherds dating to the Late Prehistoric period from pits 177, 181 and 402.

4.22 In addition, a single piece of burnt animal bone was recovered from pit 181 and a small number of fired-clay fragments, possibly part of a loomweight, were recovered from pit 402. Bulk soil samples from pits 177, 181 and 354 (samples 9, 8 and 10 respectively) revealed small to moderate quantities of charcoal representative of dispersed hearth material.

Period 2: Late Prehistoric (1100 BC – 43 AD)

4.23 A series of pits, postholes, hearths, ditches and a cremation burial located across all five of the excavation areas have been assigned a broad Late Prehistoric date, based on the recovery of small quantities of Late Prehistoric pottery. Other undated features have also been assigned to this phase based on similarities in feature morphology, fill composition and proximity to dated features.

Area 1 (Fig. 4)

4.24 Two pits, a possible hearth and a cremation burial were uncovered towards the north-eastern part of Area 1 and a single posthole was located towards the south of the area. No finds were recovered from the fills of any of these features, however, they have been assigned a Late Prehistoric date based on the similarity to other features located further to the south (e.g. Area 3; Figs 6 and 7).

Cremation burial 515

4.25 Cremation burial 515 was sub-circular in shape and measured 0.69m long, 0.65m wide and 0.14m deep (Fig. 10, Section CC). It contained a single grey-brown sandy silt fill (514) which was fully sampled (samples 17, 18, 20, 21, a and b). Bulk soil samples yielded a total of 82.9g of cremated human bone, alongside a small amount of charcoal and hazelnut shell fragments. The cremated bone could not be identified as male or female and the small amount recovered suggests only a small amount of the burnt body had been deposited in this pit.

Pits and hearth

4.26 Cremation burial 515 truncated oval pit 517 (Fig. 10, Section CC) which measured 1.9m long, 0.7m wide and 0.2m deep. Pit 521 was located *c*. 4.5m to the southwest of pit 517, and possible hearth 522, measuring 0.6m in diameter and 0.8m deep was located 4.5m north of pit 517. No finds were recovered from either of these features and their function is uncertain, however they may represent the

truncated remains of a small temporary occupation, perhaps associated with burial activity.

Posthole

4.27 Posthole 511 was located approximately 53m south of pit 521. It measured 0.29m in diameter and 0.11m deep and contained a single red-grey silt derived fill. No artefactual material was recovered from this feature and its function is uncertain.

Area 2 (Fig. 7)

Postholes

4.28 Two possible postholes (191 and 194) were located in the southern part of Area 2. The postholes were sub-circular in shape and measured 0.26–0.6m in diameter and 0.2–0.36m deep. The postholes have been assigned to this phase of occupation based on the similarity of the morphology and fill characteristics of these features to other postholes uncovered within Area 3 which are of a Late Prehistoric date.

Area 3 (Figs 6 and 7)

4.29 Late Prehistoric features within Area 3 comprised two hearths located to the north of Area 3, two parallel ditches making up either side of a trackway/droveway, an enclosure and associated ditches, pits and postholes towards the middle of Area 3.

Hearths to the north of Area 3

4.30 Hearths 165 and 266 (Fig. 7) were circular in shape and measured between 0.56– 0.64m in diameter and 0.07m deep. Each of these features was filled by a charcoal-rich mid-brown sandy silt fill. No finds were recovered from the fills of either feature. The hearths were located at a distance of *c*. 75m from other structural features to the south and likely represent temporary or transitory activity in this part of the site in the later prehistoric period.

Enclosure 432

4.31 Oval Enclosure 432 was uncovered in the central part of Area 3, comprising two semi-circular ditches (127 and 129) which enclosed a space 8.5m in diameter (Fig. 6). The ditches averaged 0.4m wide and 0.2–0.3m deep and both terminated to the west, forming a 1.9m-wide entrance (Fig. 12, photograph). A possible second entrance was located to the south, although two intercutting pits (102 and 155)

were also located at this point, and being so close to the edge of the excavation it was difficult to ascertain whether gap this had functioned as an entrance.

- 4.32 The curvilinear ditches produced two sherds of pottery dating to the Late Prehistoric period, alongside a few charred remains including barley grain fragments and seeds of ivy-leaved speedwell, representative of wind-blown hearth material, recovered from bulk soil samples 4–6. It is difficult to ascertain the function of this enclosure, although given the absence of any other artefactual/ecofactual material, it may represent a small pen or enclosure for stock.
- 4.33 Two intercutting pits (102 and 155) were at the possible southern entrance of Enclosure 432. Pit 102 was oval in shape and measured 1.5m long, 0.6m wide and 0.36m deep and had been truncated by the terminus of curvilinear ditch 129. A single sherd of Late Prehistoric pottery was recovered from this pit.
- 4.34 Pit 155 measured 1.7m long and 1.3m wide and 0.5m deep. It contained two fills from which six sherds of Late Prehistoric pottery, two fragments of fired clay and two pieces of burnt animal bone were recovered. A small assemblage of charred plant material and a moderate assemblage of charcoal was recovered from fills the fills of pits 102 and 155 (samples 7 and 1 respectively).

Pits surrounding Enclosure 432

- 4.35 While there were no internal features internal to Enclosure 432, six small pits (100, 104, 107, 135, 145 and 172) were located within 15m of the structure (Fig. 6). Pit 107 was oval in shape and measured 0.9m in diameter and 0.25m deep. The single fill (108) produced 4.49kg of burnt reddened sandstone and an abundance of charcoal (sample 3). During excavation, this feature had been interpreted as a hearth, but there was no evidence of scorching around the edges/base of the feature and for this reason it is more likely to represent a pit containing hearth debris.
- 4.36 The five small pits were either oval or circular in shape and measured 0.8–1.59m in diameter and 0.15–0.4m deep. A clay lining was present within pit 104, suggesting that it may have been used to hold water. No finds were recovered from the fills of these features, however, moderate assemblages of charred plant material including hazelnut shells and sloe pips alongside large quantities of charcoal were recovered from pits 107 and 172 (samples 3 and 2 respectively), which may represent domestic hearth debris. Despite a paucity of dating evidence,

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these features have been dated to the Late Prehistoric period based on their proximity to Enclosure 432 and may represent remains associated with settlement in this area.

Trackway/droveway and ditches 428 and 429

- 4.37 Four ditches dating to the Late Prehistoric period were recorded within the centre of Area 3. North-east/south-west-aligned parallel ditches 427 and 352 extended for approximately 65m across the excavation area (Fig. 6). The distance between the two ditches measured 8m and the feature has been interpreted as a trackway/droveway. The continuation of these ditches outside the excavation area is apparent from the cropmarks extending to the north-east and south-west. A probable continuation of ditch 352 could also be seen to the north-west of Area 4 (Fig. 7).
- 4.38 The south-eastern boundary of the trackway, ditch 352, extended across Area 2 for 57m. It comprised ditch 431 (not visible on plan) which was recorded for 5m and later recut by ditch 352. Ditch 352 truncated Period 1 pit alignment 433 (Fig. 9, Section BB). Ditch 352 was concave in profile and measured 0.6–1.41m wide and 0.27–0.64m deep and contained 14 sherds of Late Prehistoric pottery. The alignment of the ditch, which broadly followed that of the pit alignment, suggests that the pit alignment was still visible in this area when the ditch was created, and may therefore represent a renewal of the pit alignment boundary.
- 4.39 Ditch 427, making up the north-western boundary of the trackway/droveway, was 65m long, 0.5–0.91m wide and 0.25m deep. No finds evidence was recovered from the fills of this ditch, however, it has been assigned a Late Prehistoric date based on its parallel alignment to ditch 352.

Ditches 428 and 429

- 4.40 Ditch 428 was located approximately 3.5m south-east of, and ran parallel to, the trackway/droveway (Fig. 6). It extended from the edge of excavation for 24m before terminating. No artefacts were recovered from the fill of this ditch, but it has been phased as Late Prehistoric based on its parallel alignment with the trackway/droveway.
- 4.41 Ditch 429 was orientated north-west/south-east and extended from the edge of excavation for 23m, running perpendicular to, and truncating at, ditch 352 (Fig. 6). It was approximately 1m wide and 0.4m deep and contained two sherds of Late

Prehistoric pottery. The function of ditches 428 and 429 is uncertain, but they may represent field boundaries contemporary with the trackway/droveway.

Isolated pits to south of the trackway/droveway

4.42 Three small pits (341, 343 and 346) were located approximately 5m south of the trackway/droveway. The pits varied in size from 0.35–1.1m in diameter and 0.15–0.7m deep, with pit 343 cutting pit 341. Twelve sherds of Late Prehistoric pottery were recovered from pit 346. Two of these sherds appear to have been decorated with a row of dimples which is typically seen in earlier Iron Age pottery. However the poor surface condition meant this could not be confirmed and for this reason the feature has been phased as Late Prehistoric. No finds were recovered from the other pits, however, based on their proximity to pit 346 they have been phased as Late Prehistoric.

Area 4 (Fig. 6)

Pits and hearths

4.43 Three pits and two possible hearths were located in the southern part of Area 4, approximately 70m to the north-east of Enclosure 432 in Area 3. Intercutting pits 111, 284 and 286 were circular in shape and measured 0.41–1.1m in diameter and 0.3–0.42m deep (Fig. 10, Section DD). Hearths 113 and 171 were located 6.5m north and 2m east (respectively) of pits 111, 284 and 286. They were irregular in shape and measured 0.44–0.9m in diameter and 0.11–0.17m deep, and contained charcoal-rich fills. Although no finds were recovered from the fills of these features, their similarity in shape/form to other feature within Areas 1, 2 and 3 suggests they may be contemporary in date.

Ditch 430

4.44 A north-west/south-east-aligned ditch was recorded crossing the southern part of Area 4. The ditch measured *c*. 42m in length, 0.39m in width and 0.17m deep. No finds were recovered from the fill of the ditch, however it formed a parallel alignment to ditch 429 and was perpendicular to the trackway/droveway located in Area 3 (Fig. 6), and therefore likely formed part of a wider field system in this area during the later prehistoric period.

Ditch 352

4.45 A north-east/south-west-orientated ditch measuring 23m long was recorded in the north-western part of Area 4. No finds were recovered from this ditch, but spatial

alignments suggests it represents a continuation of ditch 352 located within Area 3 (Fig. 6) and for this reason it has been phased as Late Prehistoric.

Area 6 (Fig. 8) Ditch and posthole

- 4.46 Ditch 434 ran across Area 6 for 30m in a north-west/south-east alignment. The ditch measured *c*. 2m wide and 1.05m deep and was V-shaped in profile (Fig. 11, Section EE). The ditch extended to the north-west and south-east beyond the limit of Area 6 and appeared to correspond to activity revealed by cropmarks (Deegan and Foard 2007). Cropmarks suggest that a parallel ditch ran 6.5m to the north-west of ditch 434, although no evidence for this was found within the excavation area.
- 4.47 No finds were recovered from the fills of ditch 434, however, it is likely that it represents the continuation of Iron Age activity recorded as cropmarks to the west of the site (Fig. 2) and for this reason has been phased as Late Prehistoric.
- 4.48 Posthole 422, located 10m north-east of ditch 434, was undated but may also represent occupation of a later prehistoric date. A bulk soil sample (sample 16) was recovered but contained no plant macrofossil or charcoal material.

Period 3: Medieval/post-medieval (1066 – 1800)

4.49 A number of features of probable medieval or post-medieval date were uncovered across Areas 1, 4 and 6. Although no pottery or other finds of post-medieval date were recovered from the fills of these features, they have been assigned to this period based on their general alignment with current field boundaries and, in some cases, stratigraphic relationships to earlier features.

Area 1 (Fig. 4)

4.50 A north-west/south-east aligned ditch (506) in Area 1 was uncovered along a parallel alignment to a modern service and likely forms a post-medieval or modern boundary/drainage ditch. No finds were recovered.

Area 4 (Fig. 7)

4.51 The remains of five north-west/south-east-orientated plough furrows were identified towards the north of Area 4, measuring between 23m and 73m in length and 0.5–2m wide. No finds were recovered from the furrows and for this reason can only be assigned a broad medieval/post-medieval date.

4.52 Three isolated pits (183, 185 and 196) were uncovered to the north of Area 4. Although no finds were recovered from the fills of these features, they were considered likely to be post-medieval or modern in date during excavation due to the similarity between the fills of these features and the overlying topsoil/subsoil deposits.

Area 6 (Fig. 8)

4.53 An undated ditch (435) was uncovered crossing Area 6. The ditch measured *c*. 33m (where uncovered), 2m in width and 0.25m in depth and had a concave profile. Although no finds were recovered from the fills of the ditch, it lay parallel to existing field boundaries and truncated the line of a prehistoric ditch (434). A parallel gully (438), measuring 8.3m in length and located 6m to the west has also been assigned a post-medieval date based upon the similarity in orientation. No finds were recovered from the fills of this ditch.

5 FACTUAL DATA AND STATEMENTS OF POTENTIAL

Stratigraphic Record: factual data

5.1 Following the completion of the fieldwork an ordered, indexed, and internally consistent site archive was compiled in accordance with specifications presented in the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (HE 2015a). A database of all contextual and artefactual evidence and a site matrix was also compiled and cross-referenced to spot-dating. The fieldwork comprises the following records:

Context sheets	361
Plans (1:10, 1:20, 1:100)	76
Sections (1:10, 1:20)	126
Sample sheets	26
Monochrome Films	5
Digital photographs	145
Matrices	1

5.2 The survival and intelligibility of the site stratigraphy was moderate to poor with archaeological remains having been subjected to a large amount of horizontal truncation. Despite a relative paucity of stratigraphic relationships, most features have been assigned a preliminary period based on dating evidence recovered from contexts and/or spatial association.

Stratigraphic record: statement of potential

- 5.3 A secure stratigraphic sequence is essential to elucidating the form, purpose, date, organisation and development of the various phases of activity represented. This can be achieved through detailed analysis of the sequence and further integration of the artefactual dating evidence. The refined sequence will then serve as the spatial and temporal framework within which other artefactual and biological evidence can be understood.
- 5.4 While the stratigraphic record forms a complete record of the archaeological features uncovered, the relative lack of inter-relationships between these features, and the limited amount of dating evidence available from other datasets partly resulting from the high level of truncation, limits the potential for fully elucidating the function and development of the site.

Artefactual record: factual data

5.5 All finds collected during the excavation have been cleaned, marked, quantified and catalogued by context.

Туре	Category	Count	Weight (g)
Pottery	Prehistoric	205	538
Fired Clay	All	30	634
Flint	Worked	18	340
	Burnt, unworked	22	244
Worked bone	Burnt, object	5	3
Worked Stone	Worked Stone Objects		91
	Burnt	63	4499

5.6 A moderate assemblage of pottery, along with small amounts of fired clay, a worked stone object and residual worked flint pieces were recovered from the site. The majority of the pottery dates to the Late Prehistoric period, with a small amount more closely dateable to the Middle Iron Age. Some of the fired clay fragments represent parts of two loomweights and the worked stone object has been identified as a possible loomweight or flywheel.

Pottery

5.7 Pottery amounting to 205 sherds (538g) was recorded, all dating to the Late Prehistoric period (Late Bronze Age and Iron Age). The most common fabric types feature shell (54%) or limestone (35%) as the primary inclusion, which has subsequently leached out, leaving voids. The remaining pottery is in fabrics tempered with flint, quartz or grog. A small number of rimsherds are present, suggestive of globular jars, mostly with short, upright necks and simple rims. One vessel was recorded with an upright, flattened rim. These forms provide a Middle Iron Age date for the sherds.

Fired clay

5.8 Fired clay amounting to 30 fragments (634g) was recovered from three deposits. Three amorphous fragments were recovered from Period 1 pit 402 and Period 2 pit 155. The other 27 pieces comprised the fragmentary remains of two loomweights recovered from Period 1 pit 317. The precise form of each object is unknown, but the surviving flat surfaces are consistent with the triangular/pyramidal forms common to the Iron Age period.

Flint

5.9 A total of 18 worked lithics (340g) and 22 pieces of burnt, unworked flint (244g) was retrieved from pit, posthole and ditch features. The flint was in moderate condition, with some pieces exhibiting breakage and/or edge damage.

Worked stone

5.10 A single worked stone object, alongside approximately 60 pieces of burnt stone were recovered from the site. A worked stone disc was recovered from Period 1 posthole 362 and has been identified as a possible loomweight or flywheel. The remaining material comprises burnt pieces of sandstone mostly recovered from Period 2 possible hearth 107.

Worked bone

5.11 A single worked bone object which had been burnt and fragmented in five pieces was recovered from Period 1 posthole 370. The object was circular in section and sharpened to a point and has been identified as a possible awl or point most likely used as a piecing tool for leatherwork. It was not possible to identify the bone to species or element.

Artefactual record: statements of potential

Pottery

5.12 The pottery assemblage is small but presents the main source of dating for the site. It should be reported to publication standard to include further reference to comparable material.

Fired clay

5.13 The loomweights provide evidence of textile-making on site. The recording of the fired-clay fragments carried out for assessment purposes is sufficient for the

archive, but it is recommended that a mention in passing of the fired-clay assessment report be included within the final excavation report.

Flint

5.14 The worked flint assemblage provides some evidence for earlier prehistoric activity although all appears to be re-deposited. The significance of this material is therefore limited and further analysis is not warranted. It is recommended that a mention in passing of the flint assessment report be included within the final excavation report.

Worked stone

5.15 The stone has limited potential to add to the understanding of the site, however it is recommended that a note on the worked stone disc be included within the excavation report, accompanied by an illustration of the object to show both faces and a cross-section.

Worked bone

5.16 The worked bone object (awl/piecing tool) is of interest as among the few nonceramic artefacts from the site and providing possible evidence for crafts activity (leatherworking). A description of this item should be included in any publication of the site.

Biological record: factual data

5.17 All ecofacts recovered from the excavation have been cleaned, marked, quantified and catalogued by context. A total of 21 bulk samples were taken for the recovery of environmental remains.

Туре	Category	Count	Weight (g)	Litres
Human bone	Cremation burial	-	82.9	-
Animal bone	Fragments	53	6.13	-
Bulk soil samples	Environmental	21	-	249

Animal bone

5.18 Burnt animal bone amounting to 54 fragments (3.21g) was recovered from features associated with Period 1 roundhouses 436 and 437 and pit alignment 433 and Period 2 pit 155. The bone was highly fragmentary and displayed the bright white colour indicative of burning at high temperature. For this reason, it has not been possible to ascertain whether the bone was human or animal in origin.

Human bone

- 5.19 A single deposit of cremated human bone was recovered from Period 2 cremation burial 515. The feature contained no dateable finds, but has been phased as Late Prehistoric.
- 5.20 The bone identified cranial vault and unidentified long bone fragments, all of which were while/grey in colour. No diagnostic elements allowing age or sex determination were present. The bone was highly fragmented and displayed evidence of abrasion. Despite the likelihood of vertical truncation, it appears that only a small amount of the original cremation has been deposited within this pit.

Plant macrofossil and charcoal

- 5.21 A total of 21 environmental samples (249 litres of soil) were processed from a range of pit, posthole, ditch features and a cremation burial dating to the Middle Iron Age and Late Prehistoric periods.
- 5.22 Cereal remains were present in small quantities and identified as barley (*Hordeum vulgare*), hulled wheat (*Triticum dicoccum/spelta*) and possible free-threshing wheat (*Triticum turgidum/aestivum* type) grains. No cereal chaff was recorded. Weeds included seeds of ivy-leaved speedwell (*Veronica hederifolia*)
- 5.23 Other remains included hazelnut shells (*Corylus avellana*), sloe stones (*Prunus spinosa*), tuber and stem fragments
- 5.24 The charcoal remains were present in variable quantities and included round and mature wood fragments. There is no evidence of vitrification, caused by intense heat, within these assemblages

Biological record: statements of potential

Animal bone

5.25 The small quantity and highly fragmented nature of the material means the bone cannot be definitely identified as animal or human and no further work is recommended.

Human bone

5.1 The cremated human remains have been recorded, analysed and reported on fully and further osteological work will not be necessary. It is recommended that radiocarbon dating of the cremated bone be undertaken in order to have a better understanding of the date of this deposit. The results of the human bone analysis should then be integrated into the final site phasing, reviewed in their correct sequence and placed in their local and regional context.

Plant macrofossil and charcoal

5.2 There is potential for further work on a selection of the charred plant assemblages to provide some information on the nature of the settlement, the surrounding environment and local crops. The charcoal has the potential to provide some information of the species composition, exploitation and management of the local woodland resource and whether this changed over time. There is also the potential to examine any local funerary practices.

6 SUMMARY STATEMENT OF POTENTIAL

6.1 The main focus of activity was revealed in Areas 1–4 and 6 dating to the Middle Iron Age, Late Prehistoric and medieval/post-medieval periods. The earliest evidence for activity was provided by an assemblage of worked flints, some of which broadly date to the Mesolithic and Early Neolithic periods. All of these were recovered as residual finds within Late Prehistoric features, although their presence does attest to earlier prehistoric activity within the area. A sherd of Late Bronze Age/Early Iron Age pottery was also recovered as a surface find, also suggesting the possibility of earlier activity in the area.

Middle Iron Age

6.2 The archaeological remains dating to the Middle Iron Age comprised an area of settlement in Area 2 and a pit alignment within Area 3.

Roundhouses and associated features

- 6.3 Settlement identified within Area 2 included two post-built roundhouses, three possible 4-post structures and a fenceline, alongside a number of hearths, pits and postholes. Although the area investigated was restricted to the width of the development (approximately 60m), no evidence for an enclosing ditch was identified, and it is probable this represents a small open settlement.
- 6.4 There was a paucity of visible stratigraphic relationships between features within Area 2, although it is possible that more than one phase of activity is represented.

The close proximity of the two roundhouses (436 and 437) may suggest that the building was reconstructed at some point. In addition the scatter of postholes across the northern part of Area 2 may represent successive phases of temporary/small-scale structures associated with occupation.

- 6.5 Domestic occupation of this area is evidenced by the presence of hearths and possible storage/waste pits within and/or surrounding the roundhouses. The charred botanical remains from hearth 259 (roundhouse 437) and postholes 261 and 376 (roundhouse 436) have the potential to provide information on the nature of the settlement and surrounding landscape, fuel utilisation, crop selection, processing activities taking place on site.
- 6.6 The worked stone disc (identified as a possible loomweight/flywheel) from posthole 362 (roundhouse 436), alongside fired-clay loomweight fragments from the group of pits to the north-west of the main settlement provides evidence for textile manufacture taking place in this area.

Pit alignment 433

- 6.7 North-east/south-west-orientated pit alignment 433 located within Area 3 consisted of six pits and has been dated based on stratigraphic relationships alongside a small assemblage of Middle Iron Age pottery. Due to the small size and range of the group, little further work is required beyond using the pottery to provide dating evidence for the site. A small amount of charcoal was recovered, but is insufficient to provide a secure radiocarbon date for the feature. This low level of artefactual and ecofactual material is not unusual for Iron Age pit alignments (Thomas 2003, 82).
- 6.8 A large number of pit alignments, dating between the Late Bronze Age and Middle Iron Age periods, have been identified in Northamptonshire, usually as cropmarks on aerial photographs (Deegan and Ford 2007, 82–9), but also through excavation as a result of developer-funded archaeological investigation. These pit alignments form part of a phase of land division across the later prehistoric period in the East Midlands and examples have been identified as cropmarks in the areas to the north and west of Northampton (Deegan and Ford 2007, 82).
- 6.9 In addition, a number of examples have been excavated in the area surrounding the site and have tended to be orientated on a north-east/south-west or east/west alignment (Carlyle 2010, Speed 2015). Knight (2007, 210) argues that the

correspondence in orientation between pit alignments, as well as the wide spacing between them, suggest that they were constructed to divide the landscape into larger blocks, as field divisions but also possibly to form a boundary between competing social groups.

- 6.10 It should be noted that the broad parallel orientation between pit alignment 433 and Dallington Brook, located 100m to the south, may suggest that the pit alignment had a corresponding symbolic importance, possibly in order to reaffirm the natural boundary (Thomas 2003, 83).
- 6.11 Further analysis work comparing the excavated example at Sandy Lane with those identified in cropmarks and those excavated as part of developer-funded work in the wider area has the potential to contributing to the understanding of field system and boundary development in the Northampton area during the Iron Age.

Late Prehistoric

- 6.12 From the activity dating to the Late Prehistoric period, three main areas of occupation can be identified, comprising the cremation burial, pits and hearth in Area 1; trackway/droveway, enclosure, ditch, pits, hearths and postholes in Area 3; and a ditch and posthole in Area 6.
- 6.13 The broad date range assigned to the pottery has meant it has been difficult to refine the chronology for features within the excavation areas. Due to the small size and range of the group, little further work pottery work is required beyond using the pottery to provide dating evidence for the site. However the carbonised remains from pit 107 and enclosure 432 (ditch 127 or 129) in Area 3 and bone from cremation burial 515 in Area 1 offers the potential for further radiocarbon dating, which has the potential to tighten the site chronology.

Cremation burial (Area 1)

6.14 The cremation burial (515) in Area 1 is similar to a range of burials of a Bronze Age or Iron Age date found elsewhere in Britain although, a radiocarbon date from this feature will allow the burial to be placed within its correct sequence and reviewed within its regional context. In addition, the analysis of the charcoal material has the potential to inform on the composition of the local woodland resource and examine local funerary practices.

Enclosure 432 (Area 3)

- 6.15 The pits, postholes and hearths associated with Enclosure 432 within Area 3 are broadly similar in size and form to those uncovered within the open Middle Iron Age settlement in Area 2 and may suggest they were contemporary in date. Radiocarbon dating of material from the enclosure ditch (either ditch 127/129) and associated pit 107 has the potential clarify the chronology in this area.
- 6.16 The function of Enclosure 432 is uncertain although given its oval shape, it may represent an enclosure for animals. However, evidence for occupation has been observed through deposits of charcoal alongside grain fragments, hazelnut shells and cherry pips found in pit 172 and pit 107 located outside the enclosure. Further analysis of these remains hopes to provide information on the nature of the occupation and composition of the surrounding landscape.

Ditch 352 (Area 3)

6.17 Also of interest within Area 3 was ditch 352 which truncated Middle Iron Age pit alignment 433. Although only broadly Late Prehistoric pottery was recovered from this feature, given it cut the pit alignment it must have been at least Middle to Late Iron Age in date. It is possible that this ditch renewed the boundary originally defined by the pit alignment. If, as discussed above (Section 6.8–6.9), pit alignments formed the boundary between competing social groups (Knight 2007, 210), it may be that the occupation in Area 3 formed a separate area and/or phase of occupation from the settlement uncovered in Area 2. It is hoped that radiocarbon dating of material from the Enclosure 432 in Area 3 will provide evidence to discuss this assertion.

Ditch 434 (Area 6)

6.18 Ditch 434 was excavated running north-west/south-east across Area 6. It did not contain any dateable material but corresponds to activity revealed by cropmarks (Figs 2 and 8) (Deegan and Foard 2007). Examination of this ditch, in relation to the mapped cropmarks and evidence uncovered during the evaluation to the west of the site, is hoped to provide further evidence for the development of boundaries within the Iron Age period.

Medieval and post-medieval

6.19 A number of probably medieval or post-medieval ditches, pits and plough furrows were identified across Areas 1, 4 and 6. No artefactual material was recovered allowing closer dating of these features, and all have been assigned to this general period based on their alignments relative to current field boundaries and/or

stratigraphic/spatial relationships to earlier features. These features should be compared with the 1st edition OS maps to provide brief comment on the historic landscape.

Original aims and objectives

- 6.20 The original specific aims of the excavation were to:
 - Characterise the nature of the main stratigraphic units encountered in terms of their physical composition (stone, sand, gravel, organic materials etc) and their archaeological formation (primary deposits, secondary deposits etc);
 - Assess the overall presence and survival of structural remains relating to the main periods of occupation revealed and the potential for the recovery of additional structural information given the nature of the deposits encountered (e.g. extent of later disturbance etc);
 - Assess the overall presence and survival of the main kinds of artefactual evidence (including pottery, brick, tile, stone, glass, metal, bone, small finds, industrial residues etc), its condition and potential, given the nature of the deposits encountered;
 - Assess the overall presence and survival of the main kinds of ecofactual and environmental evidence (including animal bone, human bone, plant remains, pollen, charcoal, mollusca, soils etc), its condition and potential, given the nature of the deposits encountered; and
 - Appraise the relative value of the main stratigraphic units revealed in terms of their importance for preservation and conservation.
- 6.21 These objectives have been broadly achieved with archaeological features uncovered and recorded characterising the form and composition of the deposits/structural remains and, where possible, deducing site function. The artefactual and ecofactual material has been assessed. Further work will be required to refine the chronology of the site, analyse artefacts and ecofacts to characterise site function and place the remains within its local and regional context.

7 STORAGE AND CURATION

- 7.1 The archive is currently held at CA offices, Milton Keynes, whilst post-excavation work proceeds. Upon completion of the project and with the agreement of the legal landowners, the site archive and artefactual collection will be deposited with Northampton Museum and Art Gallery (accession number: tbc) which has agreed in principle to accept the complete archive upon completion of the project.
- 7.2 The archive has been prepared and compiled using CA archive procedures and in accordance with the receiving museum's guidelines, and those of the Archaeological Archives Forum (Brown 2011) and the Chartered Institute for Archaeologists (CIFA 2014b).

8 UPDATED AIMS AND OBJECTIVES

8.1 To fulfil the potential of the site data, the following updated objectives have been set out to provide a framework for the proposed further analysis. Where applicable these research objectives have been cross referenced with research aims from *East Midlands heritage: An updated research agenda and strategy for the historic environment of the East Midlands* (Knight *et al.* 2012).

Objective 1: Refine the chronology of the Late Prehistoric activity

- 8.2 The relative absence of stratigraphic relationships and the number of undiagnostic pottery sherds hindering further dating refinement of the pottery has meant it is difficult to determine the exact chronology of the later prehistoric occupation on the site. Although some of the features have been dated to the Middle Iron Age, a large number of contexts have been assigned to a broad Late Prehistoric phase.
- 8.3 Refinement of the chronology will be achieved through further characterisation of the pottery fabrics and form with emphasis placed on an attempt to refine the dating and compare with other local groups, alongside a program of radiocarbon dating and examination of the stratigraphic sequence. This will help refine the chronology of activity in this period.
- 8.4 The following contexts have been chosen for radiocarbon dating based on the presence of suitable material from environmental samples (Appendix 8) and their potential to refine the date of features which are currently phased as Period 2 Late prehistoric and to confirm a Period 1 Middle Iron Age date for roundhouse 437.

Area	Context	Feature	Material
3	108	Pit 107	Charred plants
3	126/128 or 133	Ditches 127/129 Enclosure 432	Charcoal
1	514	Cremation burial 515	Cremated human bone
2	259	Hearth 259 (roundhouse 437)	Charcoal/charred plants

Objective 2: Compare the form and function of Middle Iron Age pit alignment 433 to known examples within the Northamptonshire area

- 8.5 A number of pit alignments have been excavated surrounding Northampton in recent years as a result of extensive development in this area. This includes cropmark mapping from aerial surveys as part of the NMP (Deegan and Foard 2007) (Fig. 2), alongside other excavation work (e.g. Carlyle 2010, Field and Chapman 2006, McAree 2005, Speed 2015).
- 8.6 The origin and functions of pit alignments and interrelationship with linear ditched boundaries has been outlined as a research priority within the *East Midlands Research Agenda* (Knight *et al.* 2012, 54; Research Objective 4F). Of particular interest is any correlation between the pit alignment 433 and the Dallington Brook, located 100m to the south, and whether this suggests that the pit alignment had a corresponding symbolic importance, possibly in order to reaffirm the natural boundary (Thomas 2003, 83).
- 8.7 It is proposed that comparative analysis between excavated pit alignments in the wider area, the extensive number identified during the course of the Northamptonshire NMP (Deegan and Ford 2007) and the pit alignment uncovered at Sandy Lane be undertaken with a view to contributing to the understanding of field system development in the Northampton area during the Iron Age.

Objective 3: Establish the function/nature of the settlement by integrating material culture and environmental remains with the stratigraphic sequence

8.1 Although the finds assemblage from the site is fairly minimal, contextual analysis of artefacts and ecofacts may elucidate function for some features/areas. Contextual analysis of the deposits containing the worked bone awl/piecing tool, fired clay and worked stone loomweights, may allow recognition of areas associated with textile/leather production. In addition, analysis of a selection of charred plant and charcoal assemblages may provide more information on the nature of the settlement and surrounding landscape, the range of crops cultivated and the any crop-processing activities taking place on site.

Objective 4: Establish the context of the Iron Age occupation, placing the site within its regional context

- 8.2 Leading on from the analysis undertaken as part of Objectives 1–3, it is important to place the archaeological remains at Sandy Lane within the context of our current knowledge of Iron Age occupation in the surrounding landscape.
- 8.3 The site will be considered in conjunction with detailed analysis of the mapped cropmarks (Fig. 2) and results from recent evaluation and geophysical survey work undertaken in the area immediately to the west of the site (Fig. 3) which has illustrated the presence of a complex array of enclosures, droveways/trackways and field systems all tentatively dated to the Iron Age (CA 2016a, CA 2016b).
- 8.4 Considering the presence of a probable open Middle Iron Age settlement at Sandy Lane, part of this analysis should consider why settlements were increasingly enclosed during the Middle Iron Age and to what extent the progress of enclosure have varied regionally (Knight *et al.* 2012, 58) through comparison with local and regional examples.
- 8.5 Understanding the relationship between these areas of settlement, pit alignments and ditch boundaries, particularly those located on either side the Dallington Brook and comparisons with local and regional examples, will hopefully help to develop a greater understanding of the role of boundary in separating/unifying social groups in this area during the Iron Age in this area.

Objective 5: To understand the evidence for medieval and post-medieval open field systems in its local context

8.6 An aim of within *East Midlands Research Agenda* (Knight *et al.* 2012, 108; Research Objective 8.3) is to improve our understanding of the early landscapes of enclosure. Only few medieval/post-medieval features were encountered, but the ditch and plough furrows features recorded should be compared to the early OS maps, which will hopefully contribute to current understanding of improving our understanding of the development of open field systems in the medieval and postmedieval periods.

9 PUBLICATION

- 9.1 The results from the investigations of the Sandy Lane Improvement North, Northampton, are of local and regional significance and merit publication. The presence of the open Middle Iron Age settlement and pit alignment, and Late Prehistoric enclosure, trackway/droveway, cremation burial and hearths, pits and postholes are of significance for our understanding of the Iron Age settlement and field system/boundary development in this area.
- 9.2 It is proposed that a typescript excavation report is produced, incorporating the stratigraphic analysis, radiocarbon dating results and specialist analyses as outlined above. These results will be summarised as a short 4–6 page publication in *Northamptonshire Archaeology*, signposting the full excavation report, which will be accessible via the Cotswold Archaeology website and held on the ADS.

Synopsis of Proposed Report

Archaeological Investigations along the Sandy Lane Improvement, Northampton, 2010

by Nicky Garland

Introduction	150
Middle Iron Age open settlement and pit alignment	800
Late Prehistoric Enclosure and burial	500
The artefactual and ecofactual evidence	500
Discussion	1000
Acknowledgements	50
Total Words	3000
Bibliography	1 page
Illustrations (site location plan; phase plans)	3 Figures

Approx. 6 full A4 pages in *Northamptonshire Archaeology* (approx. 1000 words per page).

10 PROJECT TEAM

10.1 The analysis and publication programme will be quality assured by Martin Watts FSA MCIfA (Head of Publications: HoP) and managed by Sarah Cobain ACIfA (Post-excavation Manager: PXM), who will contribute to the discussion as senior author and co-ordinate the work of the following personnel:

Nicky Garland (Publications Officer: PO): Post-excavation phasing, draft report preparation, research and archive

Jacky Sommerville PCIfA (Finds Officer: FO): Specialist report preparation and liaison, post-excavation phasing.

Sharon Clough MClfA (Environmental Officer (Osteologist): EO;) Specialist report preparation: human bone

Sarah Wyles PCIfA (Senior Environmental Officer: SEO) Specialist report preparation: plant macrofossils and liaison

Dan Bashford (Senior Illustrator: ILL):

Production of all site plans, sections and artefact drawings (exc. pottery)

Jake Streatfeild-James (Geomatics Officer: GO):

GIS applications

- 10.2 Contributions by the following external consultants will be managed by the Finds Officer:
 - Ruth Shaffrey: Worked Stone
- 10.3 Contributions by the following external consultants will be managed by the Senior Environmental Officer:
 - SUERC (East Kilbride): Radiocarbon dating
 - Dana Challinor: Archaeobotanist (Wood and Charcoal)
- 10.4 The final publication report will be edited and refereed internally by CA senior project management.

11 TASK LIST FOR PUBLICATION

TASK	PERSONNEL	DURATION/ COST
EXCAVATION REPORT		
Project Management	PXM	4
Quality Assurance	HoP	1
-		
Stratigraphic Analysis	PO	2.5
	SA	1
	FO	0.5
Excavation results	PO	2
	SA	1
Figures	SI	2
Finds Analyses	50	0
Pottery Fired/burnt clay/worked bone	FO FO	2 0.5
Worked stone	External	Fee
Finds illustrations (pottery, worked stone, worked bone)	SI	1.5
Environmental Analyses		
Human bone	EO	0.25
Plant macrofossils	SEO	2.5
Charcoal	External	Fee
Radiocarbon dating		_
Analysis	Specialist	Fee
Report preparation	SA	1
Research, comparanda	PO	2
Discussion, conclusions	PO	3
	SA	1
Acknowledgements, bibliography	SA	0.5
PREPARATION OF SUMMARY PUBLICATION REPORT		
Abstract and introduction	SA	0.25
Excavation results	SA	1
Discussion	SA	2
Compilation of specialist reports, figures etc	SA	0.25
Acknowledgements, bibliography	SA	0.5
Illustrations	SI	2
Submission to external referees		0.5
Editing Revisions	PXM SA	0.5
SUBMISSION OF PUBLICATION TEXT		0.0
Archive		
Research archive completion	PO	0.5
Security copy		FEE
Deposition		FEE
Publication		
Printing	Northamptonshire Archaeology	FEE

12 TIMETABLE

12.1 For a publication project, CA would normally aim to have completed a typescript report draft within 9 months of submission of the updated publication project design, and a draft summary publication report 3 months after completion of the excavation report. A detailed programme can be produced if desired.

13 REFERENCES

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- Atkins 2006b Sandy Lane Improvement North, Environmental Statement October 2006 Addendum, Cultural Heritage Section, Volume 1: Main Reports Atkins Heritage Report <u>http://www.northamptonshire.gov.uk/en/councilservices/Environ/planning/pla</u> <u>napps/Documents/PDF%20Documents/County%20Council%20Apps/SLIN%20-%20</u> <u>Addendum.pdf</u> (accessed 07 March 2017)
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- GSB (GSB Prospection Ltd) 2016 Northampton West Geophysical Survey Report G1641
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- NA (Northamptonshire Archaeology) 2006 An archaeological trial trench evaluation Sandy Lane North Improvement Scheme, Northampton Northamptonshire Archaeology Report 06/164
- NCC (Northamptonshire County Council) 2009 Brief for a programme of archaeological excavation, recording, analysis and publication of land associated with Sandy Lane Improvement North, Northamptonshire
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Walker, C. and Wolframm-Murray, Y. 2012 An archaeological evaluation of land at Dallington Gateway, Northampton, September 2012 Northamptonshire Archaeology Report

WSP (WSP Environmental Ltd) 2010 Written scheme of investigation for the archaeological investigation of the Sandy Lane Improvement North Route

APPENDIX 1: STRATIGRAPHIC ASSESSEMENT BY NICKY GARLAND

A total of 361 contexts was recorded during the excavation. Twenty-tree contexts were assigned to deposits of geological origin and the remaining 338 contexts were assigned to periods as detailed below:

Table 1: Number of contexts by period

Period	No. of Contexts
Period 1: Middle Iron Age	167
Period 2: Late Prehistoric	141
Period 3: Medieval/post-medieval	30

Potential for further analysis

The preservation of the archaeological sequence and the recovered artefactual evidence means that phasing to broad period has been achieved for all of the excavated contexts. The most significant contexts relate to Periods 1 and 2 (308 contexts) representing approximately 85% of the total records. However, the broad date range of the Late Prehistoric period requires refinement, which can be achieved through radiocarbon dating and comparative analysis with similar sites in the surrounding Northamptonshire area. Contexts from Period 3 represent a number of medieval/post-medieval features, predominantly associated with agricultural features or land boundaries, which require no further analysis.

APPENDIX 2: POTTERY BY JACKY SOMMERVILLE

A total of 205 sherds (538g) of pottery was retrieved from the excavation of 33 separate deposits and as unstratified finds. For the purpose of assessment the assemblage was sorted by fabric per context and quantified by sherd count, weight and rim EVE (estimated vessel equivalent). No established County series exists and for this reason, unique fabric codings have been devised for this report. In addition, vessels identifiable to form (mostly rimsherds) were recorded for each deposit by fabric, along with any evidence for use in the form of carbonised/other residues. The total EVEs value was 0.34.

Provenance

Four sherds (2%) were recovered as unstratified finds, in addition to one from subsoil (1%). The remainder were from fills of ditches (9%), pits (66%) and postholes (22%). Fills of four pits within Period 1 pit alignment 433 produced 71 sherds (35% of the assemblage) and 20 sherds (10%) were recovered from fills associated with Period 1 roundhouses 436 and 437 and Period 2 Enclosure 432.

Condition

Across the whole assemblage, abrasion/surface loss was recorded as moderate to heavy on 134 sherds (65%) and slight on 63 sherds (31%). Carbonised (burnt food) residue was noted on nine sherds. The average sherd weight was very low, at under 3g, suggesting a well broken up assemblage. Burial environment has resulted in poor survival of calcareous inclusions, with the effect that the dominant shell or limestone-tempered fabrics were characteristically vesicular (82% of the assemblage).

Range and variety

All of the recovered pottery was of Late Prehistoric date (spanning the Late Bronze Age and Iron Age).

Fabric

The majority of sherds presented in fabrics which had featured shell (SHC, SHF, 54%) or limestone (LS, 35%) as the primary inclusion, which had subsequently leached out leaving voids. Fabrics also included those featuring flint (FL), quartz (QZ, QZSH) and grog (GRPL, GRLS, GRQZ, GRLS) inclusions (Table 2).

Vessel form/decoration

The number of featured (rim/base or decorated) sherds in this group was small. As a consequence, identification of vessel form was rarely possible and, therefore, dating based on vessel morphology was difficult.

Two bodysherds in fabric SHF, from Period 2 pit 346 (fill 345) appeared to have been decorated with a row of small dimples, although this was uncertain due to the poor surface condition. This type of decoration would be most typical during the earlier Iron Age (*c*. 6th/5th to 4th/3rd centuries BC). Burnishing was noted on single bodysherds in fabric LSF from two Period 1 features: pit 281 and posthole 368 of roundhouse 436.

Where sufficient of the vessel was present, for example a vessel in fabric SHF from pit 354 (part of Period 1 pit alignment 433), forms were probably jar-proportioned and of globular profile. Vessels tend to shorter, upright necks and simple rims (examples in fabric LS from Period 1 posthole 214 and in fabric SHF from Period 1 pit 181 (pit alignment 433)). A vessel with an upright, flattened rim top occurred in fabric LS from Period 1 posthole 218.

Dating

Rim types similar to these discussed above were common amongst the Middle Iron Age assemblage (*c*. 4th/3rd to 1st century BC) from Crick Covert Farm (Hughes and Woodward 2015, 42 and 59). The fabric proportions, however, were quite different, with grogged fabrics most common (69%) and only 5% of shelly fabrics during the early Middle Iron Age (*ibid.*, 208) and grog, grog-and-shell and quartz-tempered fabrics predominating during the later Middle Iron Age. The remainder of the pottery from Sandy Lane lacks decoration or indicators of form: fabric and firing characteristics suggest that dating in the Iron Age is most likely.

Statement of potential and recommendations for further work

The level of recording which has been carried out for the purpose of this assessment is sufficient for the archive. A report on pottery assemblage should be included in any publication, to include further reference to comparable material. Illustrations and catalogue descriptions should also be included for up to five sherds.

Reference

Hughes, G. and Woodward, A. 2015 The Iron Age and Romano-British Settlement at Crick Covert Farm: Excavations 1997-1998 (DIRFT Volume I) Oxford, Archaeopress Archaeology

Table	2:	Pottery	assemblage
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Period	Code	Description	Count	Weight (g)	EVEs
Late Prehistoric FL		Flint-tempered fabric	1	3	
	GRPL	Grog or clay pellet-tempered fabric	4	7	
	GRLS	Grog-and-limestone tempered fabric	2	4	
	GRQZ	Grog-and-quartz tempered fabric	2	8	
	GRSH	Grog-and-shell tempered fabric	2	6	
	LS	Limestone-tempered fabric	71	141	17
	LSF	Fine limestone-tempered fabric	5	38	
	QZ	Quartz-tempered fabric	2	7	
	QZSH	Quartz-and-shell tempered fabric	5	9	
	SHC	Coarse shell-tempered fabric	43	96	
	SHF	Fine shell-tempered fabric	68	219	17
Total			205	538	34

APPENDIX 3: FIRED CLAY BY JACKY SOMMERVILLE

A total of 30 fragments of fired clay (634g) was recovered from three deposits.

The small fragments from Period 1 pit 402 and Period 2 pit 155 were orange in colour, sandy, soft and amorphous.

Loomweights

Period 1 pit 317 (fill 316) produced 27 fragments (621g) of fired clay, which most likely represent parts of two loomweights. One object of this type was represented by seven fragments (268g) in a mid orange-fired fabric containing common organic inclusions. All of the fragments preserved a single smoothed surface and one piece a

portion of a circular perforation. The remaining 20 fragments (353g) occurred in a soft, slightly sandy fabric which was fired to a bright orange, with a grey core. The surviving surfaces are less well smoothed compared with those of the first object. Identification as a loomweight is indicated by portions of a rounded perforation.

In neither instance were the recovered fragments joinable and the precise form of each object is unknown. The surviving flat surfaces are, however, consistent with triangular/pyramidal forms common to the Iron Age period.

Statement of potential and recommendations for further work

The loomweights provide evidence of textile-making on site. The recording of the fired clay fragments which has been carried out for assessment purposes is sufficient for the archive. A short summary of this report should be included within the final excavation report. The fragments are not suitable for illustration.

APPENDIX 4: FLINT BY JACKY SOMMERVILLE

A total of 18 worked lithics (340g) and 22 pieces of burnt, unworked flint (244g) was retrieved from 17 separate deposits. All were hand-recovered with the exception of one flake from bulk soil sampling of a fill of Period 1 roundhouse 436. The artefacts were recorded according to broad artefact/debitage type and catalogued directly onto a Microsoft Access database. Attributes recorded were: raw material; weight; colour; cortex description; degree of edge damage (microflaking) and rolling (abrasion); and presence of breakage and/or burning.

Provenance

The lithics were mostly recorded from posthole, pit and ditch fills, and as unstratified finds. Of the worked flints, six were from Period 1 roundhouses, four from Period 2 (Late Prehistoric) deposits and four were recovered unstratified. It is most likely that all of the lithics have been redeposited.

Raw material and condition

The raw material was flint in all cases. Cortex was present on nine items: on all but one it was abraded, indicating a reliance on secondary resources, such as river gravels. This is typical of Northamptonshire assemblages and the source was likely to have been local river terraces (Chapman 2015, 17). Most items were brown or grey, with two honey-coloured and three of the burnt flakes displaying white discolouration.

Six of the flints were broken and four had been burnt, as well as worked. Condition was mixed and the four unstratified items were moderately rolled and edge damaged. Six of the flints from probable Iron Age features evidenced only slight rolling and edge damage, or none at all, suggesting that they had undergone minimal movement since deposition.

Range and variety

The assemblage comprised: sixteen flakes, one core and one core rejuvenation flake. No retouched tools were recovered. The core was a dual-platform type, with the platforms at right angles to each other, which had been used for the production of flakes. The only chronologically diagnostic item was the core rejuvenation flake from Period 1 pit 281: the rejuvenation of the striking platform is an aspect of flintworking technology which was in use during the Mesolithic and Early Neolithic periods.

Statement of potential and recommendations for further work

The small lithic assemblage is for the most part not closely dateable and is probably all redeposited. For these reasons it cannot be meaningfully compared to other assemblages in the area. The recording which has been carried out for the purpose of assessment is sufficient for the archive. A short summary of this report should be included within the excavation report, as a record of earlier prehistoric activity on the site. No illustrations will be necessary.

Reference

Chapman, A. 2015 'The worked flint from the Long Dole', in Masefield, R. (Ed), Chapman, A., Mudd, A., Hart, J.,
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APPENDIX 5: WORKED STONE BY RUTH SHAFFREY

Introduction

A single object alongside approximately 60 pieces of burnt stone was retained for assessment The object was recorded with the aid of a x10 magnification hand lens (Tables 3 and 4).

Description

A single stone disc is the only object of worked stone from this site (fill 361 within Period 1 posthole 362; roundhouse 436). It is too large to have functioned as a spindle whorl. It could have been intended for use as a loomweight or a flywheel, but it is not possible to be certain.

The remainder of the retained stone are burnt chunks of reddened sandstone, most of which were recovered from fill 108 within Period 2 pit 107. These can now be discarded.

Statement of potential and recommendations for further work

The stone has limited potential to add to the understanding of the site. A note on the disc should be included in any publication report, accompanied by an illustration of the object to show both faces and a cross-section.

Table 3: stone object

Period	Context	Feature	Function	Notes	Size	Weight (g)	Lithology
1	361		flywheel	· · · · · · · · · · · · · · · · · · ·	64mm diameter x 13mm thick	-	Fine-medium grained red micaceous sandstone

Table 4: Burnt unworked stone

Period	Context	Feature	Notes	No	Wt (g)	Lithology
1	270	Pit 269	Tiny	1	4	Reddened sandstone
1	363	Posthole 364	Tiny	2	5	Reddened sandstone
2	108		Degraded and friable burnt lumps	60	4490	Reddened sandstone

APPENDIX 5: WORKED BONE BY E.R. MCSLOY

The single object of worked bone was recorded from Period 1 posthole 370 (fill 371), which was part of roundhouse structure 436. The object is fragmented (in five pieces) and also burnt.

Insufficient survives to determine the species or element utilised. The surviving portion is approximately circular in section, measuring c. 8-9mm in diam., and hollow. The bone has been cut diagonally and the surviving cortex worked to a sharp point, which is smoothed from use. Sharpened bones, typically described as awls or points and most often formed from sheep/goat limb bones are common finds from Iron Age sites. Groups from Danebury and Maiden Castle occurred from across the dated (Iron Age) sequences (Sellwood 1984, 387). Use as piercing tools, most likely for leatherworking, has been suggested (*ibid*.)

Statement of potential and recommendations for further analysis

The object described is of some interest as among the few non-ceramic artefacts from the site and providing possible evidence for crafts activity (leatherworking). A description of this item should be included in any publication of the site, which might be adapted from that provided here. A drawing of this object (or high quality photograph) should also be prepared.

Reference

Sellwood, L. 1984 'Objects of bone and antler', in Cunliffe, B. 1984 *Danebury: an Iron Age hillfort in Hampshire:* Volume 2 The excavations, 1969–1978: the finds York, CBA Research Report **52**, 371–95

APPENDIX 7: ANIMAL BONE BY ANDREW CLARKE

Animal bone amounting to 60 fragments (6.13g) was recovered via floatation of bulk soil samples taken from six features dating from the Middle Iron Age and Late Prehistoric periods (Table 5). The bone was highly fragmentary and displayed the bright white colour and cracked appearance indicative of prolonged burning at temperatures exceeding 700°C (Lyman, 1994). This has rendered the entire assemble unidentifiable, to the extent that it has not been possible to ascertain either a human or animal origin. Five fragments from Period 1 posthole 370 were worked and have been reported on in Appendix 6.

Statement of potential and recommendations for further work

As the bone cannot be definitively identified as human or animal, no further work is recommended.

Reference

Lyman, R.L. 1994 Vertebrate taphonomphy; Cambridge Manuals in Archaeology Cambridge, Cambridge University Press

Table 5: Identified animal species by fragment count (NISP) and weight and context.

Area	Cut	Cut Feature label				Weight (g)			
Period	Period 1 – Middle Iron Age								
2	Hearth 259	Roundhouse 437	256	2	2	0.12			
2	Posthole 370	Roundhouse 436	369	41	41	4.26			
2	Posthole 376 (postpipe cut 374)	Roundhouse 436	373	14	14	1.64			
3	Pit 181	Pit alignment 433	180	1	1	0.06			
Period	2 – Late Prehistoric								
3	Pit 155		156	2	2	0.05			
Total		60	60						
Weigh	nt	6.13	6.13						

Un-id SS = unidentifiable fragments from bulk soil samples

APPENDIX 8: CREMATED HUMAN BONE BY SHARON CLOUGH

Introduction

A single deposit (82.9g) of cremated human bone was recovered from Period 2 pit 515. This feature contained no dateable finds, but has been phased as Late Prehistoric.

Methodology

The cremation burial was quarter sectioned, excavated in spits and 100% sampled. The bulk soil samples were processed using standard flotation procedure using a 0.5mm residue mesh. The dry bone was hand sorted by eye from the residue. The weight of the bone retained in each fraction and spit was recorded and its percentage of the total weight of the cremation was calculated. This enabled the degree of fragmentation to be quantified.

Standard methodology and reporting were followed (Brickley and McKinley 2004; Mays *et al.* 2004). The bones examined in detail and sorted into the following identifiable bone groups: skull (including mandible and dentition); axial (clavicle, scapula, ribs, vertebra and pelvic elements); upper limb and lower limb. The separation of the bone into these groups helps illuminate any deliberate bias in the skeletal elements collected for burial. The sample was weighed on digital scales and details of colour and largest fragment were recorded. Where possible, the presence of individual bones within the defined bone groups was noted. Any unidentifiable fragments of long

bone shafts or cancellous bone, which are often the majority recovered from cremations, were weighed and incorporated into any subsequent quantitative analysis.

The prevalence of unidentifiable bone is largely dependent on the degree of fragmentation, whereby larger fragments are easier to identify than smaller ones. It must also be taken into consideration that some skeletal elements are more diagnostic and more easily identifiable than others and, therefore, more often recorded. This may create bias in calculations of the relative quantities of skeletal elements collected for burial. Fragments below a certain size are not distinguishable as to whether they are human or animal except microscopically or chemically.

Age estimations from cremated remains are dependent on the survival of particular age diagnostic elements. In adult cremations, the most useful age indicators are degenerative changes to the auricular surface (Lovejoy *et al.* 1985) and pubic symphysis (Suchey and Brooks 1990) and cranial suture closure (Meindl and Lovejoy 1985). For subadults unerupted teeth, cranial thickness and size of bones help to identify age.

Sex estimation of adult burnt bone relies on the preservation of specific elements and is uncommon in cremated material. The quantity of warping and shrinkage of the bone during the cremation process must also been taken into consideration when estimating sex using the standard analytical techniques used on dry bone.

Results

The total weight of the cremated bone was 82.9g (Table 6). As the total weight of bone for an adult from modern crematoria varies from about 1000 to 3600g (McKinley 2000, 404), then this falls short of the complete individual. It is possible that the bone collected from the pyre and deposited in the pit was a 'token' amount and may reflect the status of the individual. Experiments (McKinley 1997) have found that it is fairly easy to collect all the bones from an undisturbed pyre, which often remain in anatomical order. However, it is frequently found that 50% or less of the bone available after cremation is included in the burial (McKinley 2000).

The bone was consistently fully white and grey in colour which indicates full oxidation of the bone. This is only achieved by temperatures of over (over 645°C is quoted, but probably over 800°C) for enough time, usually several hours. The edges of the bone were much abraded, indicating erosion which may have contributed to loss of bone and further fragmentation.

The weight of bone by fraction size was greater in the 10–5mm fragment size range and the maximum fragment size was 23 mm (Table 6). This is below the average, 45.2mm (McKinley 1994, 340–1), and the same study found that on average 50% of the bone was over 10mm, which is not the case with this deposit of cremated bone. This indicates that fragmentation was high. Most fragmentation occurs during and after excavation (McKinley 1994, 341). However, the low weights of bone mean that any apparent patterns may be over inflated.

Bone identified was limited to cranial vault fragment and unidentified long bone (Table 7). As the total weight of the cremated bone was very low and fragmentation very high the quantity of skeletal parts identified was also low. Cranial fragments are easy to identify at any fragment size and are often the highest quantity identified.

The level of vertical truncation in unknown but it is likely that some quantity of the original amount deposited has been removed. Complete burial of the entire cremated individual is uncommon, as a 'token' amount appears to have sufficed in most cases.

There was not sufficient bone available for neither age nor sex estimation. There were no repeated elements or different age/size parts to suggest more than one individual.

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Context		Total Weight of cremated bone (g)	<10mm (g)	10–5mm (g)	5–2mm (g)
514	Sample 17	34.9	4.8	21.1	9
	Sample 18	11.8	1.7	5.1	5
	Sample 20	15.3	1.3	10.7	3.3
	Sample 21	6.3	0	4.5	1.8
	Sample ?a	9.2	0.8	4.7	3.7
	Sample ?b	5.4	0	2.7	2.7

Table 6 Cremated bone total weight per spit and by fraction size

Table 7 Identified cremated bone by area

Area /	Context	Skull (g)	Axial (g)	Upper Limb (g)	Unidentified Limb (g)	Unidentified (g)
514	Sample 17	1.7			3.8	29.4
	Sample 18				1.7	10.1
	Sample 20				1.3	14
	Sample 21	1.3				5
	Sample ?a	1.5				7.7

Sample ?b				5.4
Total	4.5		6.8	71.6

APPENDIX 9: PALAEOENVIRONMENTAL EVIDENCE BY SARAH F. WYLES

Introduction and Methodology

A series of 21 environmental samples (249 litres of soil) were processed from a range of feature types and periods with the intention of recovering cremated bone and environmental evidence of industrial or domestic activity on the site and examining how this changed over time. The breakdown of the bulk samples by period is tabulated in Table 8 below. The samples were processed by standard flotation procedures (CA Technical Manual No. 2). Preliminary identifications of plant macrofossils are noted in Table 9, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary *et al* (2012) for cereals.

Table 8 Breakdown of bulk samples b) y	period
-------------------------------------	-----	--------

Period	No of samples	Volume (L)	Feature types
1	7		Roundhouse 436 postholes, roundhouse 437 hearth, pit alignment 433 pits
2	14	1//	Enclosure 432 ditches; pits, postholes, hearth and cremation burial
Total	21	249	

Results and Discussion

The flots varied in size and generally contained low levels of rooty material and uncharred weed seeds.

Period 1: Middle Iron Age

No charred plant remains were recorded from fills 261 (sample 12), 369 (sample 15) and 373 (sample 14) of postholes 261, 370 and 376, part of roundhouse 436. Moderately small quantities of charcoal fragments greater than 2mm were recovered from these fills. They included mature and round wood fragments. These assemblages may be representative of hearth debris.

Fill 256 (sample 13) of hearth 259, associated with roundhouse 437, contained a moderately small number of charred plant remains. These included barley (*Hordeum vulgare*), hulled wheat, emmer or spelt (*Triticum dicoccum/spelta* sp.) and possible free-threshing wheat (*Triticum turgidum/aestivum* type) grain fragments. The large quantity of charcoal noted from this fill included mature and round wood fragments. This assemblage may be representative of dumped domestic hearth material.

Small to moderate quantities of charcoal fragments, including round and mature wood pieces, were recorded from fill 204 (sample 9) of pit 177, fill 180 (sample 8) within pit 181 and fill 389 (sample 10) of pit 354, all part of pit alignment 433. The only charred plant remains observed were a few monocotyledon stem fragments. These assemblages may be representative of dispersed hearth material.

Period 2: Late Prehistoric

Fills 126 and 133 (samples 5 and 4 respectively) of ditches 127 and fill 128 (sample 6) ditch 129 (both ditches part of Enclosure 432) contained a few charred remains including barley grain fragments, seeds of ivy-leaved speedwell (*Veronica hederifolia*), monocotyledon stem fragments and charcoal fragments. These assemblages may be representative of wind-blown hearth material.

A moderately small amount of charcoal fragments but no charred plant remains were recorded from fill 421 of posthole 422.

The small charred plant assemblages recovered from fill 103 of pit 102 and fill 155 of pit 156 included tuber and hazelnut (*Corylus avellana*) shell fragments. The moderate charcoal assemblages included round, mature and twig wood fragments.

Moderate charred plant assemblages and large quantities of charcoal fragments were noted from fills 108 (sample 3) from pit 107 and fill 173 (sample 2) from pit 172. These assemblages included hazelnut shell and sloe (*Prunus spinosa*) stone fragments. A number of the sloe stones were almost intact with holes in. The charcoal included mature wood fragments. The assemblages may be representative of domestic hearth material.

The series of six samples taken from deposit 514 of cremation burial 515 contained low levels of charcoal fragments and a few plant remains. The plant remains included hazelnut shell and monocotyledon stem fragments. The charcoal included round and twig wood pieces.

Statement of potential and recommendation for further work

There is potential for further work on a selection of the charred plant assemblages to provide some information on the nature of the settlement, the surrounding environment and local crops. The charcoal has the potential to provide some information of the species composition, exploitation and management of the local woodland resource and whether this changed over time. There is also the small potential to examine any local funerary practices. This potential would be increased if the dates of Period 2 pit 107, pit 172 and cremation burial 515 are refined. Samples recommended for further work are shown on Table 9.

This small amount of information will provide a comparison with other assemblages of the same date in the wider area such as at Covert Farm, Crick (Monckton 2015) and Grange Farm, Courteenhall (Ciaraldi 2006). It would also contribute data to the environmental resource for the East Midlands area and potentially assist in addressing the wider environmental research aims for the area (Monckton 2012).

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Table 9 Assessment of the palaeoenvironmental remains

Feature	Context	Sample	Vol (L)	Flot size (ml)	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
Period 1 Middle Irc	n Age		•										-
Roundhouse 436 - p	ostholes												
261	260	12	7	40	5	-	-	-	-	-	**/***	-	С
370	369	15	3	10	10	-	-	-	-	-	*/**	-	
376 (postpipe cut 374)	373	14	12	25	10	-	-	-	-	-	**/***	-	С
Roundhouse 437 -	hearth								-				
259	256	13	7	70	5	**	_	Barley, hulled wheat + ?f-t wheat grain frags	-	-	***/****	Fuel-ash frags	РС
Pit Alignment 433 -	oits					1						1	<u> </u>
177	204	9	17	25	10	-	-	-	-	-	*/**	-	1
181	180	8	10	10	10	-	-	-	*	stem frags	*/**	-	
354	389	10	16	30	5	-	-	-	-	-	**/***	-	
Period 2 Late Preh	istoric		•					•	•				
Enclosure 432 – dite	ches 127 ai	nd 129											
127	126	5	38	10	25	-	-	-	-	-	*/**	-	Τ
129	128	6	38	15	10	-	-	-	*	stem frags	*/**	-	
127 (cut 134)	133	4	38	15	20	*	-	Barley grain frags	*	Veronica, stem frags	*/**	-	
Posthole				•	•		•			·	•		
422	421	16	2	35	10	-	-	-	-	-	*/***	-	Τ
Pits			•					•	•				
102	103	7	5	50	5	-	-	-	*	tuber frag	**/***	-	T
107	108	3	18	300	1	*	-	Indet. grain frag	***	Corylus avellana shell frags, Prunus spinosa stone frags, 1 x complete Prunus spinosa stone with hole	****/****	-	РС
155	156	1	8	10	10	-	-	-	*	Corylus avellana shell frags	**/**	-	
172	173	2	6	100	2	-	-	-	***	Corylus avellana shell frags, 3 x complete Prunus spinosa stones with holes	***/****	-	РС
Cremation burial	•		•	•	•		•	•	•	·	•		
	514	17	4	10	10	-	-	-	-	-	*/**	-	Τ
	514	18	4	5	10	-	-	-	*	Corylus avellana shell frag	*/**	-	1
E1E	514	20	4	5	10	-	-	-	*	stem frags	-/**	-	
515	514	21	4	10	10	-	-	-	-	-	*/**	-	
	514	?a	4	5	10	-	-	-	-	-	-/**	-]
	514	?b	4	10	5	-	-	-	-	-	*/**	-]

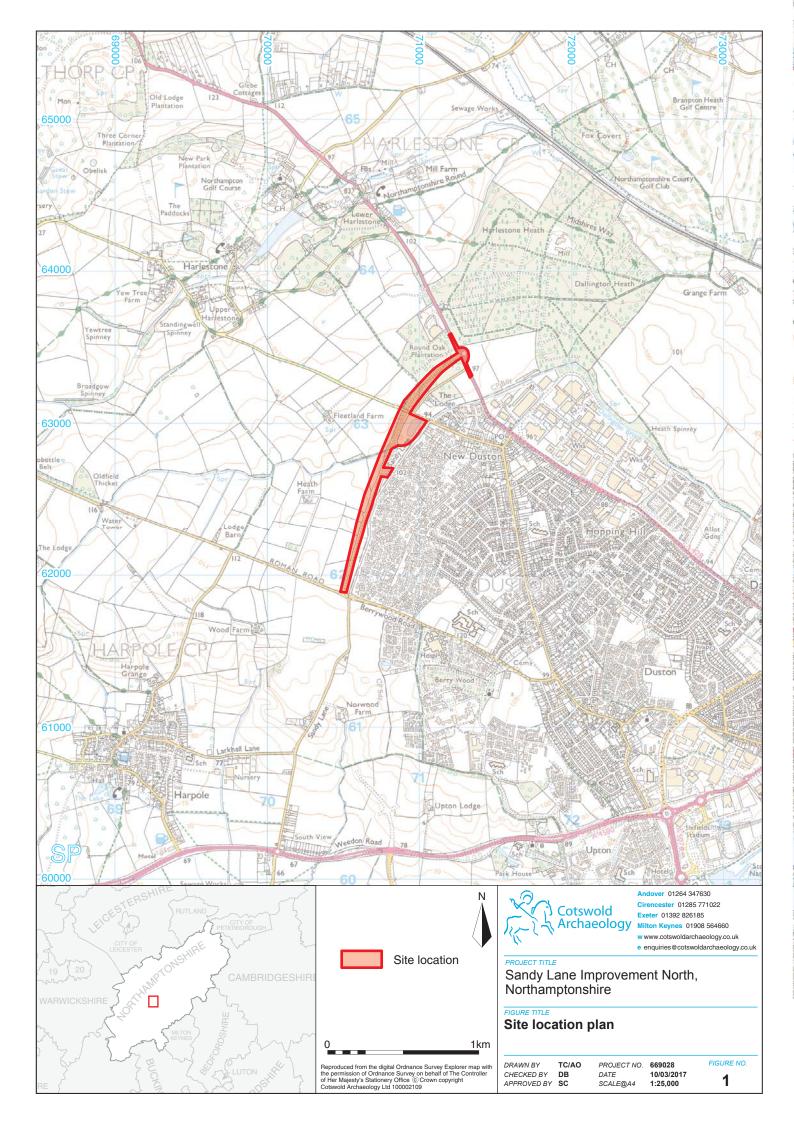
Key: * = 1-4 items; ** = 5-19 items; *** = 20-49 items; **** = 50-99 items; **** = >100 items, P = plants, C = charcoal

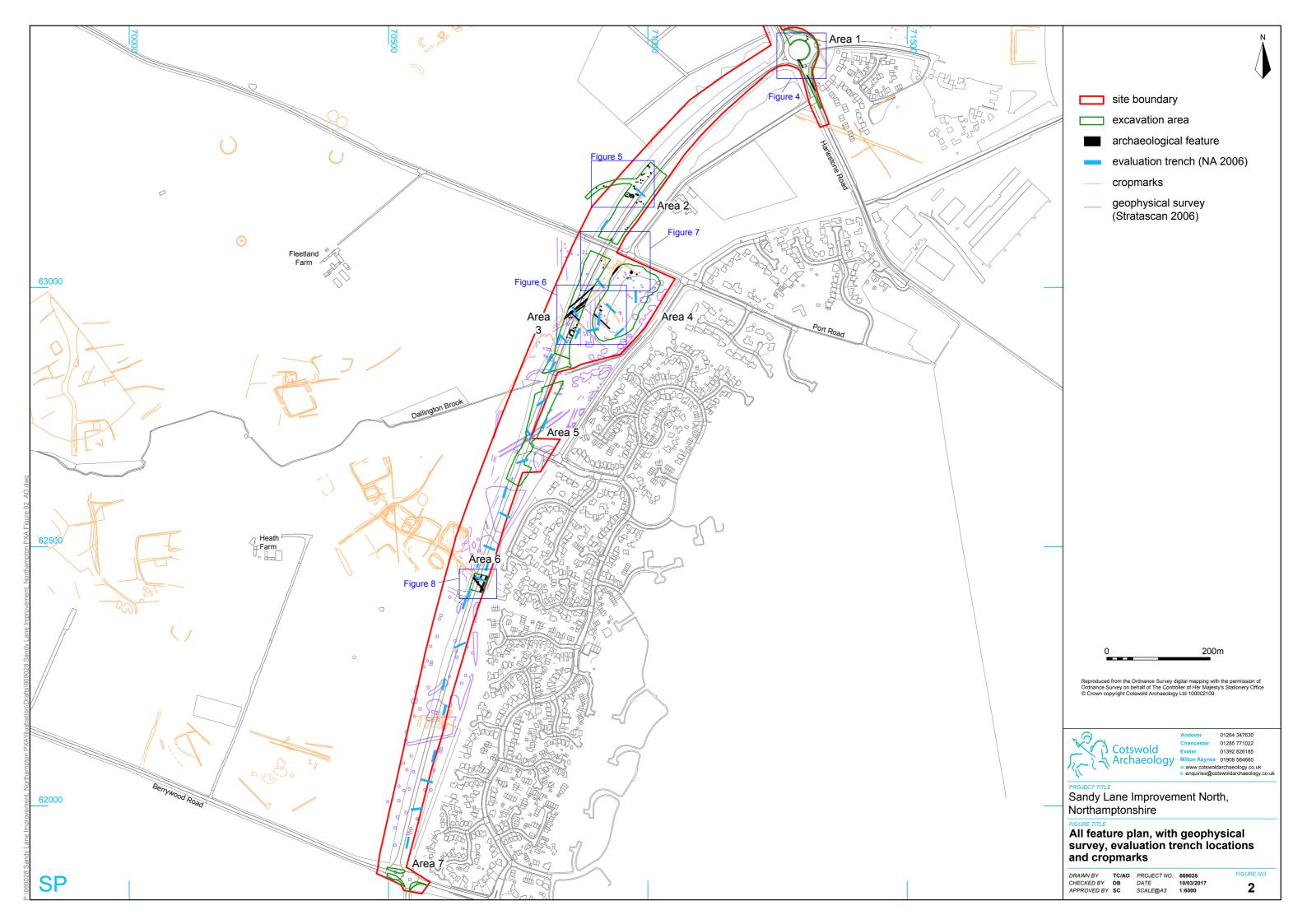
APPENDIX 10: OASIS REPORT FORM

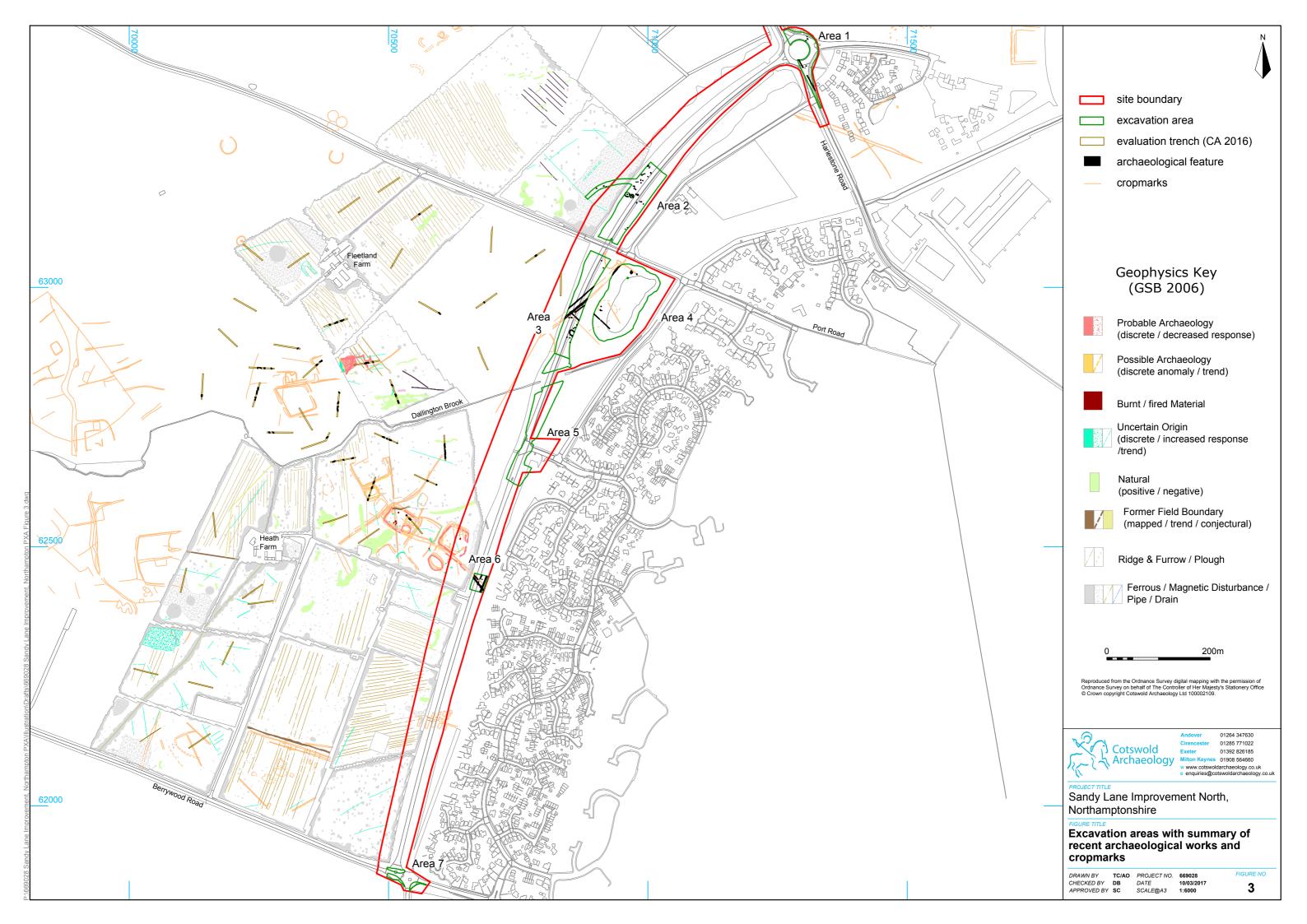
PROJECT DETAILS

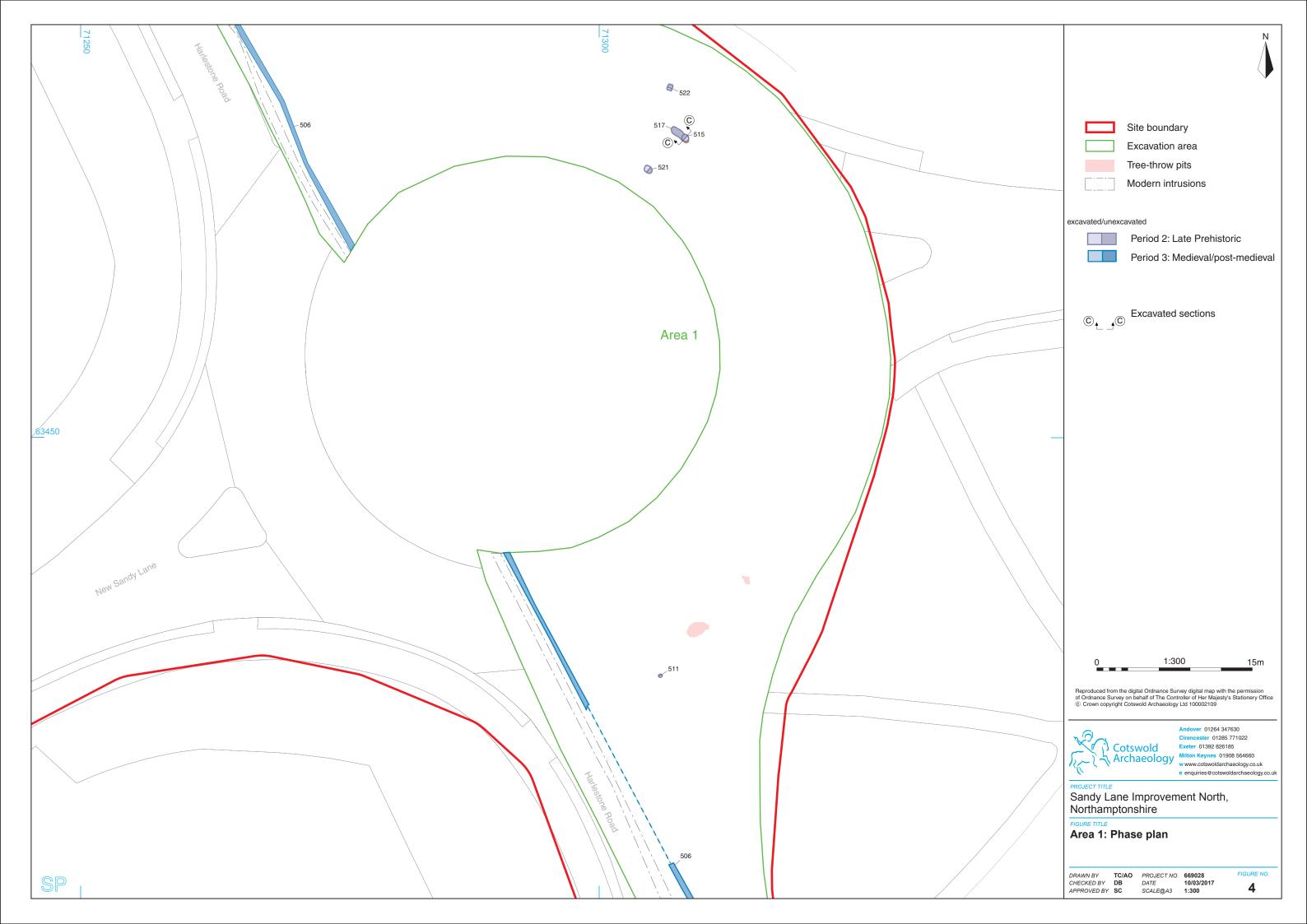
Project Name	Sandy Lane Improvement North	, Northamptonshire			
Short description	A programme of archaeological investigation was undertaken by Cotswold Archaeology in February to April 2010 at the request of WSP Environmental Ltd (on behalf of MGWSP) at the Sandy Lane Improvement North, Northamptonshire. A total area of 3.6ha was excavated across Areas 1-7.				
	Archaeological remains were confined to Areas 1–4 and 6 in the northern and central parts of the site. The archaeology excavate comprised a small settlement in Area 2 and a pit alignment in Area both dating to the Middle Iron Age period. Several other areas occupation broadly dating to the Late Prehistoric period we encountered across the site, and included pits, hearths and a crematic burial in Area 1; postholes in Area 2; a trackway/droveway, Enclosu and associated ditches, hearths, pits and postholes in Area 3; pits an hearths in Area 4; and a ditch and posthole in Area 6. Medieval and post-medieval features included a boundary ditches in Areas 1 and and plough furrows and pits in Area 4.				
Project dates	dating to the Late Prehistoric pe suggesting a Middle Iron Age finds included a small amount	e was recovered from the site broadly eriod with a small number of rim sherds date for part of the assemblage. Other of fired clay representing parts of two stone object identified as a possible			
Project type	Excavation				
Previous work	Geophysical Survey (Stratascan 2006). Field evaluation (Northamptonshire Archaeology 2006)				
Future work	Unknown				
PROJECT LOCATION					
Site Location	Sandy Lane Improvement North, Northamptonshire				
Study area (M ² /ha)	3.6 ha				
Site co-ordinates	SP 707 626				
PROJECT CREATORS					
Name of organisation	Cotswold Archaeology				
Project Brief originator	Northamptonshire County Count	cil			
Project Design (WSI) originator	WSP Ltd				
Project Manager	Richard Young				
Project Supervisor	Jamie Wright				
MONUMENT TYPE		Pit Alignment; Middle Iron Age Post-built roundhouse; Middle Iron Age, Late Prehistoric			
SIGNIFICANT FINDS	Pottery; Middle Iron Age, Late P Loomweights; Middle Iron Age, I	rehistoric ∟ate Prehistoric			
PROJECT ARCHIVES	Intended final location of archive (museum/Accession no.)	Content (e.g. pottery, animal bone etc)			
Physical	Northampton Museum and Art Gallery	Ceramics, burnt bone, charcoal, charred plant remains, cremated bone, lithics, worked stone, fired clay			
Paper	Northampton Museum and Art Gallery	Context sheets, matrices, sections and plans, sample sheets, registers			

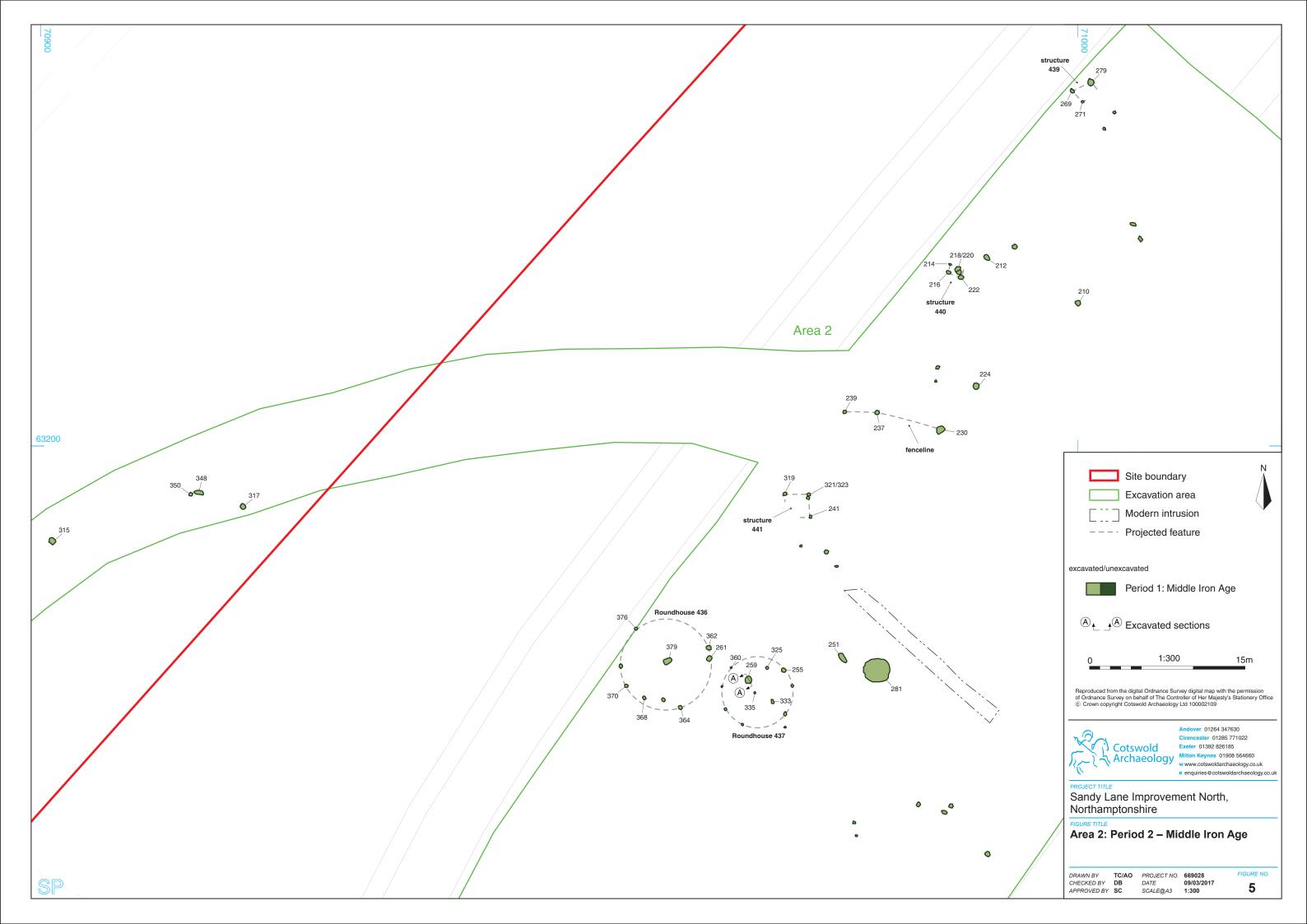
Digital	Archaeology Data Service	Database, digital photos, survey
BIBLIOGRAPHY		
	Sandy Lane Improvement Nor ject design CA typescript report 1	th, Northamptonshire: Post-excavation 7177

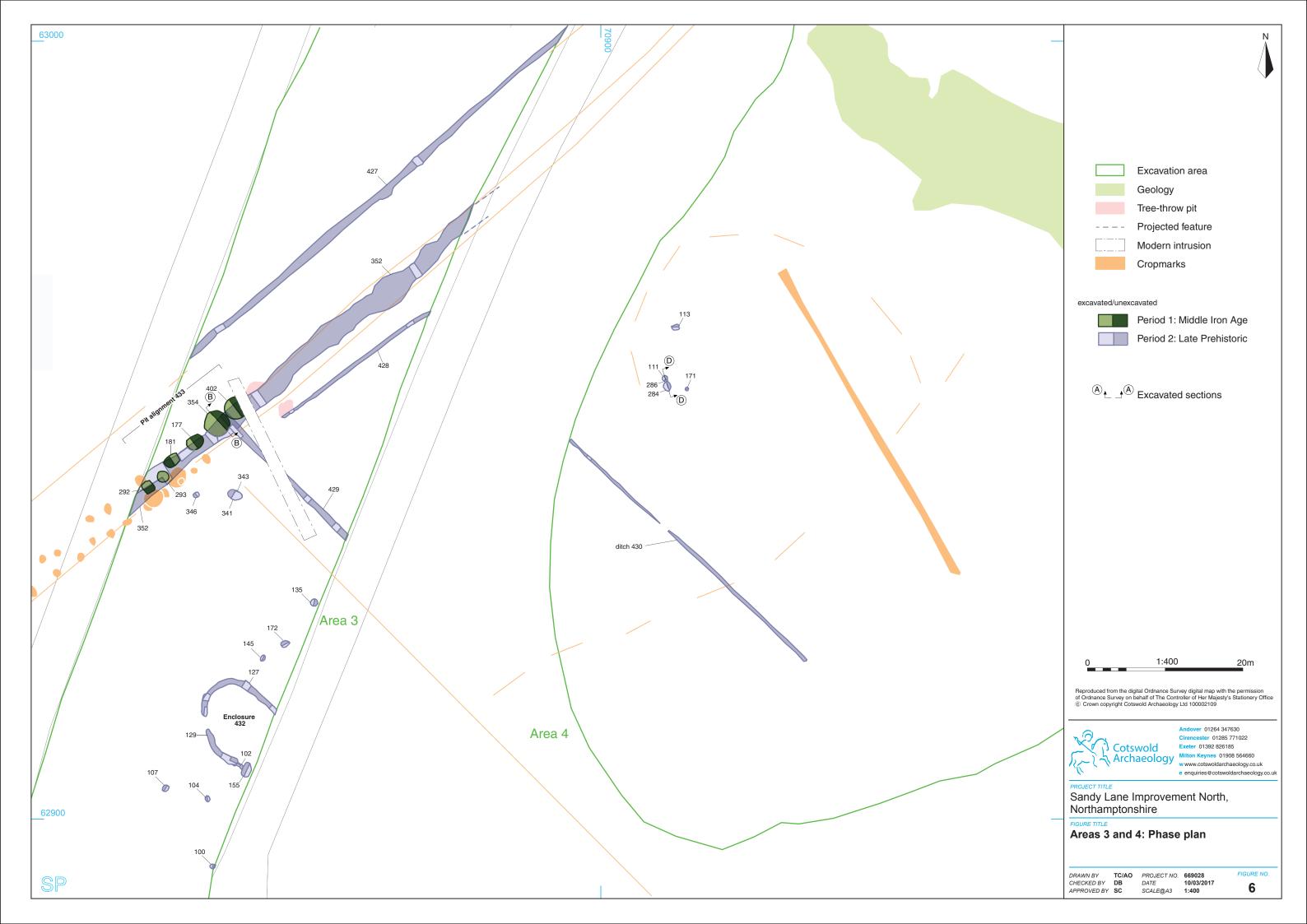


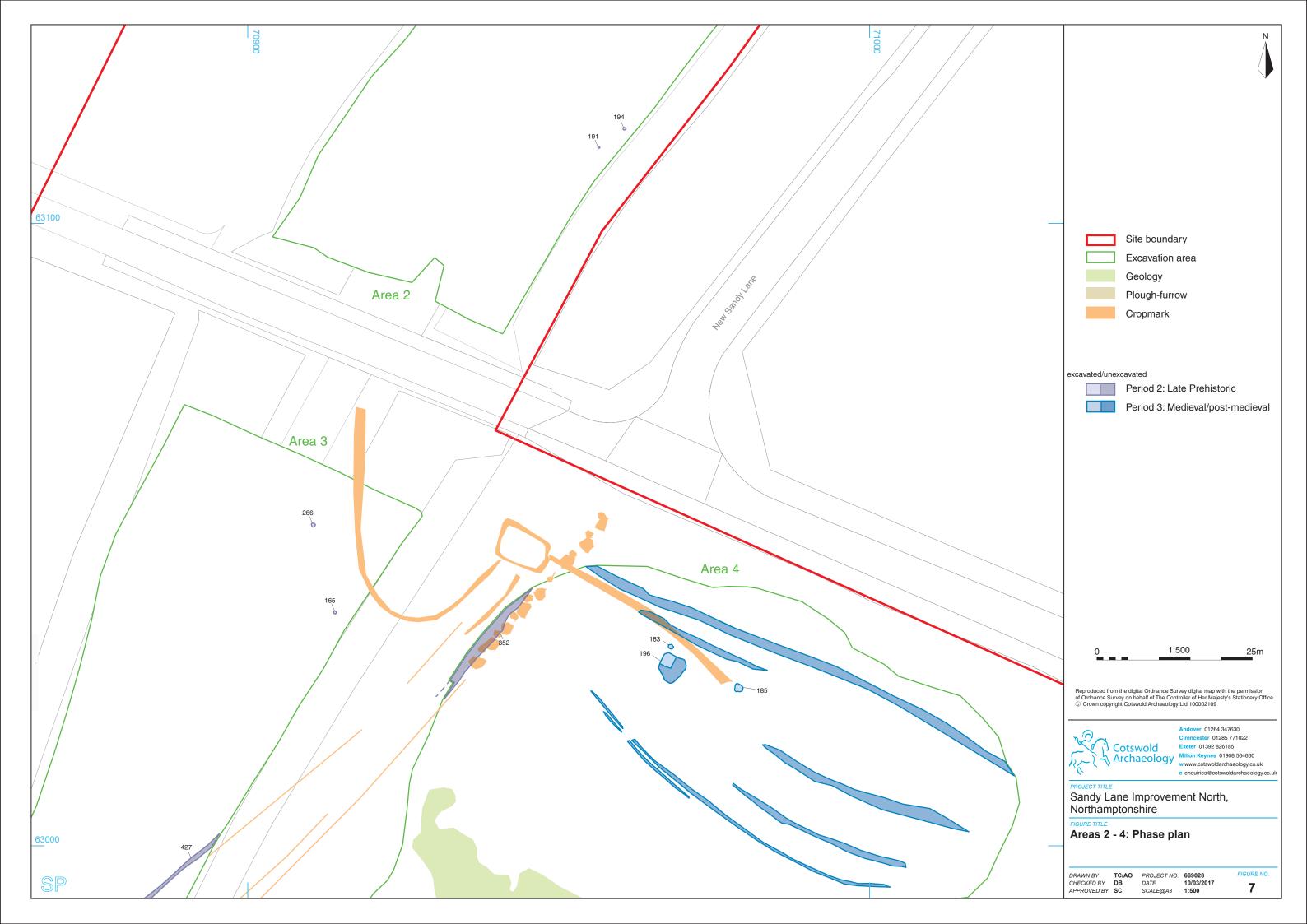


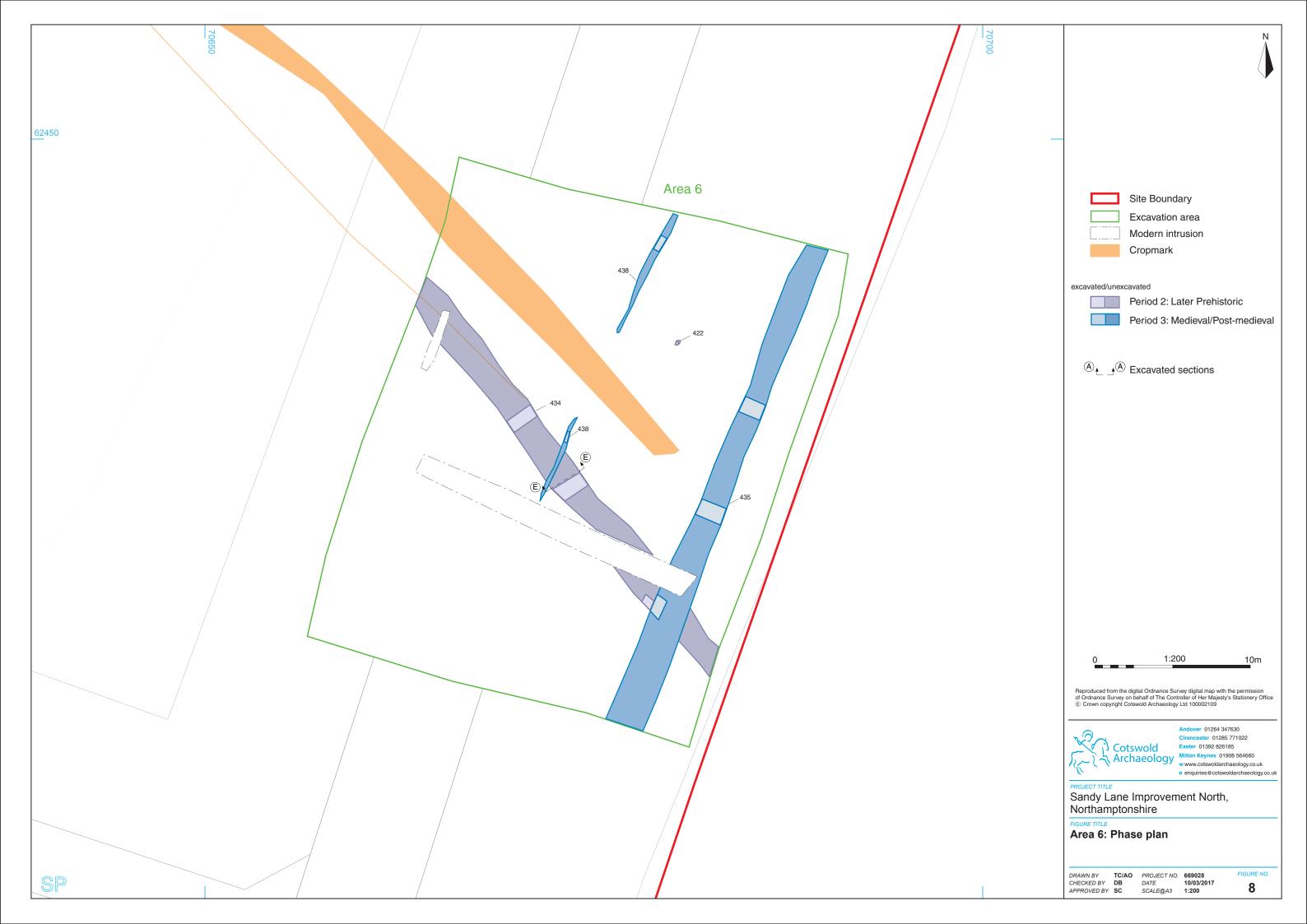


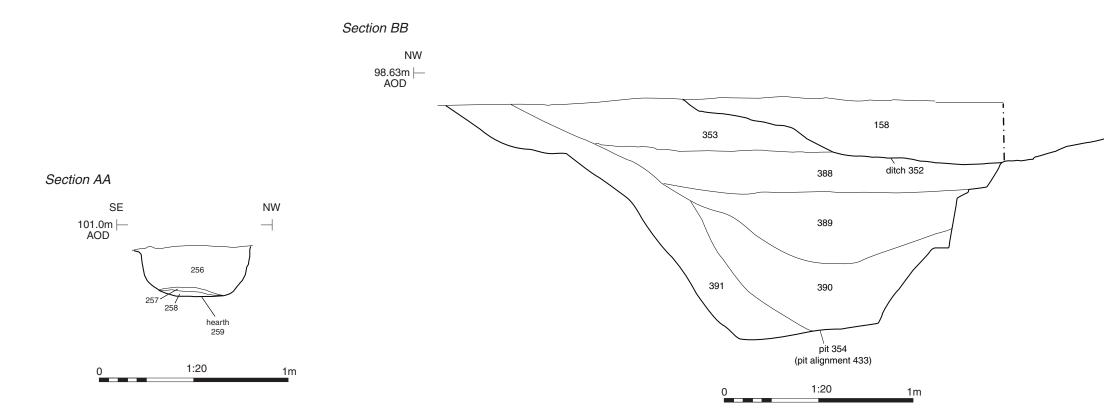






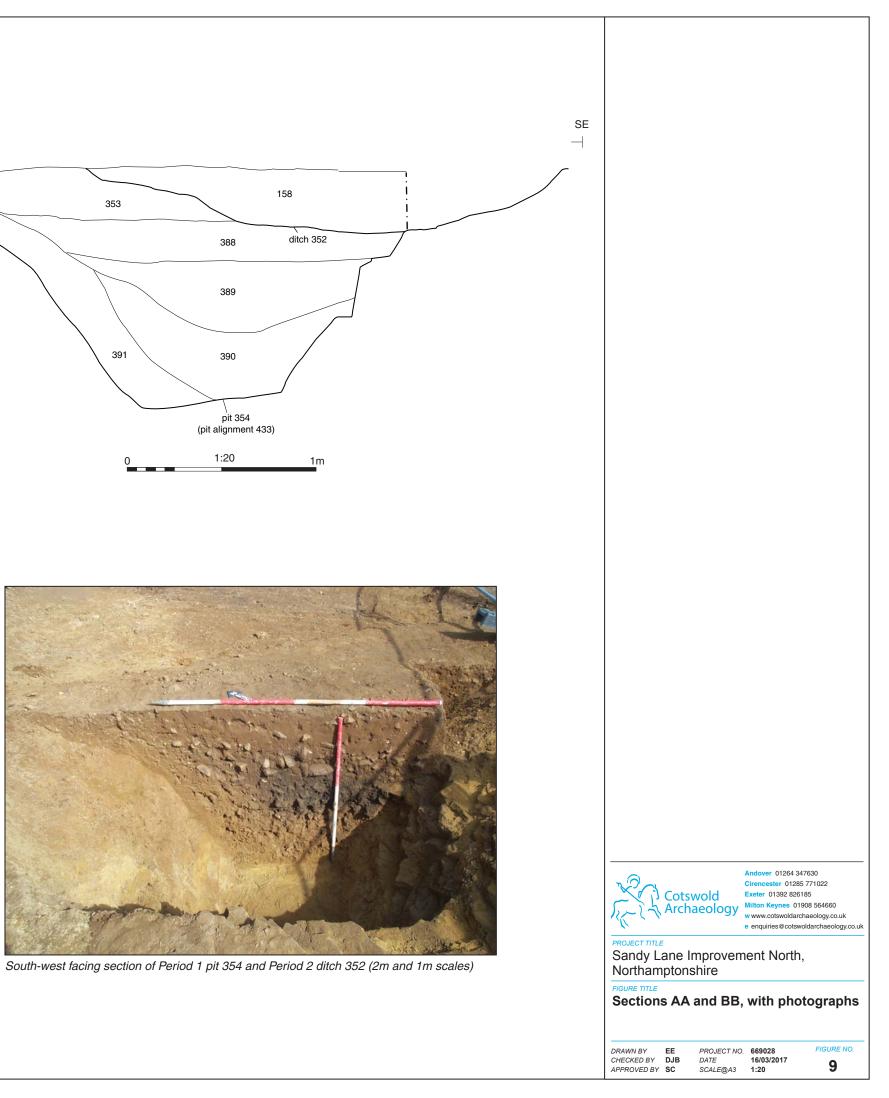




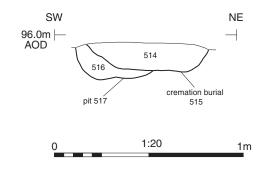




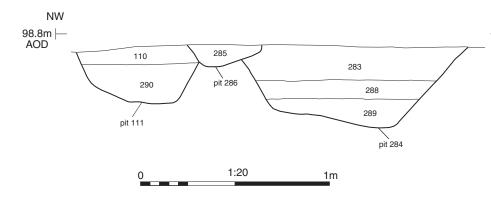
North-east facing section of Period 1 hearth 259 (1m scale)







Section DD

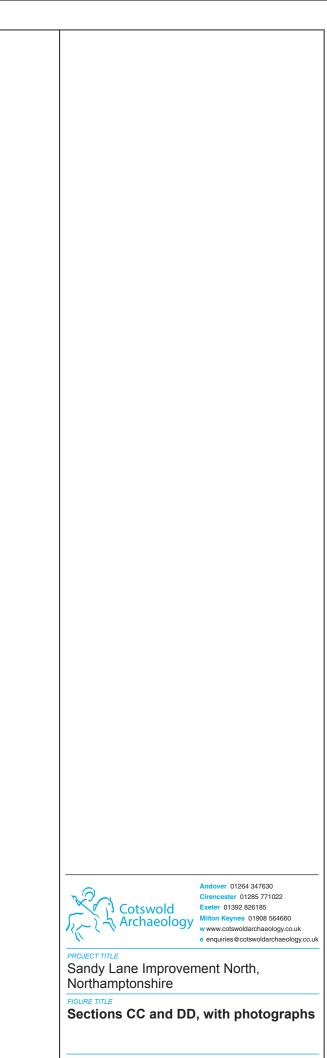




South-east facing section of Period 2 cremation burial 515 and pit 517 (1m scale)



South-west facing section of Period 2 pits 111, 284 and 286 (1m scale)



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 PROJECT NO.
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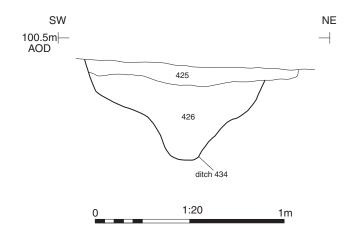
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Section EE





South-east facing section of Period 2 ditch 434 (1m scale)

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Period 1 pit 292 part of pit alignment 433, looking south-east (2m scales)



Period 2 Enclosure 432, looking north (1m and 2m scales)

Andover 01264 347630 Cirencester 01285 771022 Exeter 01392 826185 Milton Keynes 01908 564660 w www.cotswoldarchaeology.co.uk e enquiries@cotswoldarchaeology.co.uk
PROJECT TITLE Sandy Lane Improvement North, Northamptonshire
Pigure Title Photographs
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