

ARCHAEOLOGICAL SOLUTIONS LTD

DENHAM PARK FARM, DENHAM, BUCKINGHAMSHIRE

RESEARCH ARCHIVE REPORT

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NGR: TQ 02150 90210	Report No: 5575
District: South Bucks	Site Code: AS 1009
Approved: Claire Halpin MCIfA	Project No: 2372
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OASIS SUMMARY SHEET			
Project name	<i>Denham Park Farm, Denham, Buckinghamshire</i>		
<p><i>The excavation revealed a multi-period archaeological landscape with the most extensive activity dating to the late Bronze Age and Romano-British periods. Further, but quite limited, evidence of Neolithic, medieval, post-medieval and modern activity was recorded. No Bronze Age activity has previously been recorded in the immediate vicinity of the site and, similarly, very little material associated with human activity during the Roman period has been recorded locally, despite the purported route of a Roman road running nearby.</i></p> <p><i>One hundred and six features can be attributed to the late Bronze Age; all of these features were concentrated on a small area in the western part of the site. They consisted of two ditches, representing boundaries or enclosures and a large number of pits and postholes, including at least one concentration which may represent a structure. The late Bronze Age archaeology recorded at Denham Park Farm appears to represent activity adjacent to, or on the periphery of, a settlement. The topographical position of the western part of the site may have afforded any settlement located here, or in the immediate vicinity, commanding views of the surrounding landscape and particularly the valley of the river Colne.</i></p> <p><i>The Roman archaeology consisted of a set of boundary ditches representing a field system or set of enclosures and associated pits located in the western part of the site. Further Roman features were sparsely distributed across the eastern part of the site. To the north of the Roman enclosures was a focus of industrial activity associated with iron smelting. This has been tentatively dated as Roman due to its proximity to the concentration Roman activity; dateable ceramic evidence from these features, however, is of late Bronze Age date which clearly must be residual. This type of industrial activity is not unusual for this area; sites across the Solent-Thames region attest small-scale ironmaking, including the continuation of prehistoric traditions alongside shaft furnaces. The Roman activity here may represent areas appended to a low-status agricultural settlement in the immediate vicinity but alternatively could represent a small part of a larger estate focussed on the villas and high status sites known from the Colne valley.</i></p>			
Project dates (fieldwork)	<i>2012 - 2016</i>		
Previous work (Y/N/?)	<i>Y</i>		
P. number	<i>2372</i>		
Type of project	<i>Archaeological Excavation</i>		
Site status	<i>-</i>		
Current land use	<i>Agricultural land</i>		
Planned development	<i>Gravel extraction and landfill</i>		
Main features (+dates)	<i>Potential structure and boundary ditches (late Bronze Age), boundary ditches and iron working activity (Romano-British)</i>		
Significant finds (+dates)	<i>Late Bronze Age and Roman pottery. Potentially Romano-British iron smelting slag</i>		
Project location			
County/ District/ Parish	<i>Bucks</i>	<i>South Bucks</i>	<i>Denham</i>
HER/ SMR for area	<i>Buckinghamshire HER</i>		
Post code (if known)	<i>-</i>		
Area of site			
NGR	<i>TQ 02150 90210</i>		
Height AOD (max/ min)	<i>64-85m</i>		
Project creators			
Brief issued by	<i>BCC</i>		
Project supervisor/s (PO)	<i>Julie Walker, Vinny Monahan</i>		
Funded by	<i>RJD Ltd</i>		
Project creators			
Full title	<i>Denham Park Farm, Denham, Buckinghamshire. Research Archive Report</i>		
Authors	<i>Julie Walker, Vinny Monahan, Andrew A. S. Newton</i>		
Report no.	<i>5575</i>		
Date of report	<i>April 2018</i>		

DENHAM PARK FARM, DENHAM, BUCKINGHAMSHIRE RESEARCH ARCHIVE REPORT

SUMMARY

The excavation revealed a multi-period archaeological landscape with the most extensive activity dating to the late Bronze Age and Romano-British periods. Further, but quite limited, evidence of Neolithic, medieval, post-medieval and modern activity was recorded. No Bronze Age activity has previously been recorded in the immediate vicinity of the site and, similarly, very little material associated with human activity during the Roman period has been recorded locally, despite the purported route of a Roman road running nearby.

One hundred and six features can be attributed to the late Bronze Age; all of these features were concentrated on a small area in the western part of the site. They consisted of two ditches, representing boundaries or enclosures and a large number of pits and postholes, including at least one concentration which may represent a structure. The late Bronze Age archaeology recorded at Denham Park Farm appears to represent activity adjacent to, or on the periphery of, a settlement. The topographical position of the western part of the site may have afforded any settlement located here, or in the immediate vicinity, commanding views of the surrounding landscape and particularly the valley of the river Colne.

The Roman archaeology consisted of a set of boundary ditches representing a field system or set of enclosures and associated pits located in the western part of the site. Further Roman features were sparsely distributed across the eastern part of the site. To the north of the Roman enclosures was a focus of industrial activity associated with iron smelting. This has been tentatively dated as Roman due to its proximity to the concentration Roman activity; dateable ceramic evidence from these features, however, is of late Bronze Age date which clearly must be residual. This type of industrial activity is not unusual for this area; sites across the Solent-Thames region attest small-scale ironmaking, including the continuation of prehistoric traditions alongside shaft furnaces. The Roman activity here may represent areas appended to a low-status agricultural settlement in the immediate vicinity but alternatively could represent a small part of a larger estate focussed on the villas and high status sites known from the Colne valley.

1. INTRODUCTION

1.1 This document comprises the Research Archive for archaeological excavations carried out by Archaeological Solutions Ltd (AS) on land at Denham Park Farm, Denham, Buckinghamshire (TQ 02150 90210; Figs. 1 and 2). From 2012 to 2017, AS carried out an archaeological 'strip, map and sample investigation' at Denham Park Farm. The excavation was commissioned by

RJD Ltd in compliance with a planning condition attached to planning permission requiring a programme of archaeological work (South Buckinghamshire District Council Planning Ref. 11/01260/CM).

1.2 The excavation was undertaken in accordance to a generic brief prepared by Buckinghamshire County Council (BCAS), and a written scheme of investigation (specification) prepared by AS (dated 12th September 2012), and approved by BCAS. The project conformed to the Chartered Institute for Archaeologists (CIfA) *Code of Conduct and Standard and Guidance for Archaeological Excavation* (2014).

2 SITE NARRATIVE

2.1 Overview

The primary objective of the project was to record the location, extent, date and character of any surviving archaeological remains within the quarry, and to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history and use of the site

Planning policy context

The National Planning Policy Framework (NPPF 2012) states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The NPPF aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. The NPPF requires applications to describe the significance of any heritage asset, including its setting that may be affected in proportion to the asset's importance and the potential impact of the proposal.

The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2.2 Description of the site

The site is located on land at Denham Park Farm, which lies c. 800m to the south-east. The site is situated immediately to the east of the north to south aligned M25 motorway between junctions 16 and 17, just to the north of Old Rectory Lane, which is the south-east to north-west orientated the Denham to Chalfont St Peter road. The small settlement of Denham Green lies 2km to the south-east, Denham is 3.50km to the south, Chalfont St Peter lies 2km to the north-west and Gerrards Cross 2.50km to the south-west (Fig. 1).

The site is bordered to the immediate west by the M25 motorway, and to the south by large coverts Nockhill Wood and Juniper Wood. The Old Shire Lane (Path), which forms part of the Old Shire Lane Circular Walk, forms the eastern boundary, and is also the administrative boundary with Hertfordshire (Fig. 1). There is no clear boundary to the north of the site, although the north-western extent is demarcated by an existing field boundary, which lies on a north-east to south-west alignment. An adjoining field boundary, located on a north to south alignment, continues into the northern section of the site, with a small covert on its western side at its southernmost extent (Fig. 2).

Prior to the onset of archaeological investigation, the site was under arable cultivation. It lies on the western side of the Colne valley, which has been subject to extensive mineral extraction in the past, resulting in a landscape of large lakes. The smaller valley of the Misbourne lies some distance to the west and south.

2.3 Background

2.3.1 Topography, geology and soils

The site lies on the western side of the Colne Valley, with land sloping relatively steeply down to the north-east towards the valley and the river Colne, which lies some 1.70km to the north-east (Fig. 1). The smaller valley of the river Misbourne, however, lies some 1.50km to the west-south-west and 2km to the south of the site. The relief of the site itself varies significantly from the higher west to the east, which is closer to the Colne Valley and its associated gravel pits. The site lies at a height of c. 86m AOD at its eastern extent and slopes downwards westwards to c. 70m AOD.

A desk-based assessment and geoarchaeological investigation undertaken at Denham Garden Village (Gill and Bates 2002), c. 2km south-east of the site discussed the presence of the Pleistocene deposit 'Winter Hill Member', recorded around Denham Aerodrome. The distribution of this deposit, which comprises Glacial Sand and Gravel, is not well understood and is thought to occur at a height of c. 70m AOD. The report also highlighted the occurrence of solution features in the area that led to the mixing of Pleistocene sediments and

the creation of deep sumps that may contain important sequences indicative of palaeoenvironmental and human activity (*ibid*).

A geological assessment with bore-hole data undertaken at the Denham Park Farm site (Greenham Construction Materials 1998), however, determined that the site consisted of glacial sand and gravel which occasionally is very clayey (hoggin), which exists in greater depths towards the eastern part of the site. The gravel and glacial sand overlaid Reading Beds, subdivided into upper Reading Beds and lower Reading Beds. The latter were only recorded in the eastern part of the site, whilst the Reading Beds in turn overlie the chalk. Overall, the deposits on the eastern side of the site are much more variable, both laterally and vertically, in comparison to the western side (*ibid*).

The site, and the surrounding area from Chenies in the north to Denham in the south, is situated on soils of the Marlow association (SSEW 1983). Marlow association soils are described as well drained fine loamy over clayey and clayey soils located upon plateau and river terrace drift. Soils of the Marlow association also comprise some coarse and fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging. Marlow association soils are commonly used in agriculture for cereals and short term grassland, as well as coniferous woodland on the slopes, although the site itself is currently in arable use.

2.3.2 *Archaeological and historical background*

Palaeolithic period (to 12, 000 BC)

The site is known to lie in an area with potential for Palaeolithic remains from the lower gravel deposits. Palaeolithic material has been recorded around Chalfont St. Peter, Burnham and Iver (Reed 1979) and there is a potential for finds of similar date from the lower deposits of gravel on the site. There is a presence of Black Park Gravel in the area, a deposit which has proved to be rich in Palaeolithic sites.

Palaeolithic flint implements have been found widely in the Colne and Chess valleys of Hertfordshire, suggesting occupation of the area during this period. Significant excavations at Uxbridge have revealed a sequence of hunter-gatherer butchery sites on gravel islands in the floor of the Colne Valley (Lewis 1991, 2000; Lewis *et al* 1992; Murray 1997), left by groups of nomadic human hunters (Rackham and Sidell 2000). Much of the potential archaeology of this period lies below deep alluvium along the former river floodplains (Bates and Barham 1995), and such areas of high potential are highlighted in local research agendas (Rackham and Sidell 2000). Numerous stray finds of struck flint have been made in the Colne valley to the south-west (Lacaille 1961). However, little evidence for Palaeolithic activity has been recorded in the vicinity of the site, in the relatively upland area of wooded, heavy clays and gravels which may have been less attractive than the flint-rich and well-drained gravelly valleys.

Important Palaeolithic scatters of *in situ* lithic and faunal material were excavated at the nationally important 'kill site' at Three Ways Wharf, Oxford Road, Uxbridge, c.7.50km south-east of the current site in the late 1980s (Lewis *et al* 1992, HER 51023 & 51101). Excavations revealed a sequence of hunter-gatherer butchery sites on gravel islands in the floor of the Colne Valley (Lewis 2000). Scatters of struck flints were found in association with animal bone, including reindeer and horse that was carbon dated to c. 10,000 BP. Other flint scatters were of early Mesolithic date, c. 8000 BP, and were associated with red deer, beaver and swan remains.

Mesolithic period (12, 000 to 4, 300 BC)

That part of the Colne valley to the north-west of the current site has yielded evidence for human activity dating to the earliest prehistoric periods (Munby 1977). In particular, the river terrace gravels appear to have attracted prehistoric activity and Mesolithic and Neolithic struck and burnt flint have been recovered from many sites in this area.

A number of worked flints dating from the Mesolithic through to the Bronze Age have been recovered in the vicinity of Denham Park Farm. The majority of these were recovered during the construction of the M25 immediately to the west of the site and include part of a tranchet axe, a hammerstone and a blade (HER 5085, 5322, 5324, 5325 and 5483). Mesolithic and early Neolithic flints were recovered from a layer of material overlying a gravel layer during an evaluation at the former Sanderson site, Oxford Road, Denham (Howell & Corcoran 2002).

Concentrations of struck flint have been collected over the years, either from gravel pits or in the course of dredging and deep ploughing. Such finds have been recovered from West Hyde, c. 1.5km to the north-east of the site on the western bank of the river Colne (Lacaille 1961). Further finds were recorded at the occupation site of Dewes Farm and the flint-working site of Dewes Pit and south Harefield (Lacaille 1961). Stray finds of Mesolithic struck flint are recorded from Colney Farm (HER 50134), Cooks Wood (HER 50423) and St Mary's Church, Harefield (HER 50150). Other sites are clustered further to the south, along the Colne Valley at Uxbridge (HER 51023, 50044).

Neolithic period (4, 300 to 2, 100 BC)

Neolithic flint artefacts have been found at Colney Farm (HER 50134) and South Harefield, c. 3km east-south-east of the Denham Park Farm site (HER 50388). Flint artefacts have also been recovered to the south-east, at Ruislip and Ickenham (HER 50172, 50444, 50974). There are Neolithic sites to the south-east of the site in the Colne Valley at Uxbridge, including a pit recorded during excavation (HER 51019), a flint artefact (HER 50163) and an earthwork (HER 50376).

Worked flints dating from the Neolithic to the Bronze Age were recorded during the construction of the M25. Flint flakes probably dating to the late

Neolithic/Bronze Age were found during fieldwalking to the north-west of the current site (HER 4198) and flint from a similar date was found to the south (HER 5814). Mesolithic and early Neolithic flints were recovered from a layer of material overlying a gravel layer during an evaluation at the former Sanderson site, Oxford Road, Denham (Howell & Corcoran 2002). Four areas of Neolithic flint scatters were recorded during previous archaeological monitoring at the Batchworth Golf Course, although no associated features were identified (McDonald 1995). A Neolithic assemblage of flint implements and flakes has been recorded at a location 1km to the east-north-east of the site (HER 870).

Bronze Age (2, 100 to 750 BC)

There is no Bronze Age activity recorded in the immediate vicinity of the site, but to the north-east of the site, at Dawes Farm Road, a ring ditch was recorded (HER 50800). Two Bronze Age pots were recovered from Dawes Pit (HER 50233). To the south-east, at Uxbridge, ditches and an occupation site have been recorded (HER 52349-50, 56024301, 50243). A number of worked flints dating from the Neolithic to the Bronze Age have been recovered during the construction of the M25. A number of flint flakes probably dating to the late Neolithic/Bronze Age were found during fieldwalking c.1km to the north-west (HER 4198) and flint from a similar date was found c. 800m to the south (HER 5814).

Iron Age (750 BC to AD 43)

No sites dating to this period have been recorded in the immediate vicinity of Denham Park Farm, but an Iron Age occupation site was recorded during excavations at Uxbridge (HER 50243).

Roman (AD 43 to AD 410)

Very little material associated with human activity during the Roman period has been recorded in the vicinity of the site. The Viatores assert that a Roman road (Road 163b) existed on the line of Shire Lane, which forms the eastern boundary of the site, but there is no corroborative evidence to suggest that it is Roman (HER 4179, see HER 4341 below).

Another reputed Roman road that links Chorleywood to Langley Park passes near the site (HER 4362 – following Old Shire Lane, and noted in the Viatores) and the remains of a Roman pottery kiln was investigated during the construction of the M25 nearby. A Roman burial in a ‘tomb’ was found at Breakspear Avenue, Harefield only 3km east of the current site (HER 50450). The remains of Roman buildings have been noted at Uxbridge (HER 50246) and Ruislip (HER 50281, 50282, 50306).

Pieces of Roman tegula and one mortaria sherd (HER 50258) were found during field walking close to the Yeading Brook, c. 3km north-east of the site.

The presence of tegula suggests Roman roofed buildings in the vicinity, but may have been deposited during the manuring of fields and the source building may lie some distance away. Sparse, abraded re-deposited mid to late Roman pottery and Samian ware was also found during excavations at Downs Barn (HER 50257 & 50863).

The Colne valley and its tributary streams are, however, known to have been densely settled in the Romano-British period, with extensive evidence from Hertfordshire and Buckinghamshire. Such remains include villa estates, rural farmsteads and industrial activity. A Roman villa, for example, was discovered in 1834 at Latimer Bottom on the edge of the Chilterns, c. 9km north-west of the assessment site (HER 400). A Roman building was excavated in the 1960s at Sandy Lodge Golf Course and a number of stray finds of coins, pottery and building material have been recovered, many recovered from the Sandy Lodge area to the north-west.

Anglo-Saxon (AD 410 to 1150)

A number of villages in the area have place names indicating Anglo-Saxon origins, and were probably founded in the middle or later Anglo-Saxon period (Doyle & Grassam 2005). The name of Uxbridge (Wxebruge) is understood to derive from a Saxon tribe called the Wixan who built a bridge across the Colne. Other Saxon place-names include Hillingdon ('the hill people of Hilda), Yeading (Geddi's settlement) and Yiewsley (Wives-leg; 'wife's clearing'). However, very little physical evidence has been found in the area surrounding the site to suggest Saxon occupation. A Saxon spearhead was found at Dewes Farm to the south-east of the assessment site (HER 50340).

Shire Lane constitutes the boundary between Buckinghamshire and Hertfordshire (HER 4341). A hedge on the Buckinghamshire side is said to be ancient, although the M25 has now cut through this lane 1.30km north of the site. Shire Lane runs for a total of 7km, from Chorleywood Station to West Hyde. It is presumably of late Saxon or slightly later date and it is not certain where the boundary between the two shires was fixed at this time.

Medieval (AD 1150 to 1500)

The parish of Denham is documented in the Domesday Survey, indicating the existence of settlement activity in the area from the later Saxon period. Little earlier Saxon occupation is known from this part of the Colne valley. The survey notes that the manor of Denham was held by the Abbot of St Peter's of Westminster and the manor of Chalfont belonged to Bishop Odo (Morris 1978). Although only one manor is referred to in the survey, it is thought that over time three manors were established in the parish and one of these, the manor of Brudenells or Bulstrode, lies c.1.2km to the west of the assessment area on the site of the modern Chalfont Park (HER 0851). The remains of a small moat are situated c. 800m to the west, and is probably associated with one of the manors. The purpose of this moat is unclear, however it may have been the

location of a domestic or religious building or used for horticulture (Scheduled Monument no. 27153).

The Domesday survey also highlights the presence of woodland in the area, and it is possible that some of the woodland surrounding the assessment area can be dated back to the medieval period. Although Denham is a village, it once had burgage tenure indicative of a sizeable settlement; it appears, however, to have lacked long-term economic potential as it has remained a small settlement (Reed 1993). There may also be evidence of medieval activity. The site appears to have lain in the rural agricultural hinterland of the main medieval settlements.

The Domesday survey (1086) records Prichemareworde (Rickmansworth), c. 5km north, as being held by the Abbot, to which it answers for 15 hides. One mill, a meadow, pasture and a woodland large enough for 1200 pigs existed here. The settlement had a total value of £20 10s, and was held in lordship by St Albans (Morris 1976). Offa is said to have granted the Abbey of St Albans the manor of Rickmansworth, King John having it confirmed to the abbey and convent (Page 1908). The men of the town, like many other tenants of St Albans Abbey, extorted a charter, from the abbot, of liberties at around the time of Wat Tyler's Rebellion.

Records suggest that during the medieval period, much of the parish of Harefield, c. 3km east, was uncultivated scrub and woodland (Pugh 1962). The Domesday Book recorded two water mills and four fishponds in the manor in 1086. Commons and moors played an important part in the life of the parish from early times. The moors surrounding Harefield extended south to Moorhall, which belonged to the Knights of St John of Jerusalem from 1180 (HER 50501); there was a Templar cell at Moorhall by 1333 (Pugh 1962). Many lands in the parish were granted to these Hospitallers from the 12th century onwards (Pugh 1962).

Records note that a medieval hamlet was located at Gulch Well or Springfield, 3.50km north-east of the assessment site (HER 52945). A water mill belonging to Gapes Tenement was included in the rental of Harefield manor in 1536. Gapes Mill was described as a fulling mill in 1545, but was either disused or demolished by 1560. Fulling became a locally important industry. There was another fulling mill to the south of the former at Ravnyng Mill (HER 52928). This mill was granted to the Swanlands, lords of Harefield manor, by the Ravening family in 1370. It was rebuilt c. 1438; the contract specified that the old mill was to be underpinned and its old timbers removed and new floodgates and other necessary equipment were to be made.

Another important local industry was mineral extraction, in particular chalk and lime digging. A marl pit (yielding limy clay used as fertiliser) was conveyed by the lord of Harefield manor in 1318, and another in 1545. By 1636, customary tenants of the manor were allowed to sell chalk, lime and sand from their lands.

Post-medieval (AD 1500 to the present-day)

During the post-medieval period the land has continued to be used primarily for agriculture. Approximately 1km east of the assessment site, a conduit, which was constructed in 1912, is thought to have existed, but by the 1994 survey it could not be located (HER 5948). The house c. 3km north at Mopes Farm appears to date to the 16th, while two of the barns date to the 18th century (HER 12513). The VCH reveals that in 1510 Mopes Farm was held by the Baldwin family, whose name occurs in connection with Chalfont (Page 1969).

Further evidence for activity in the vicinity is represented by the remains of a charcoal burner's site, c. 800m to the south-west (HER 5321) and the first edition Ordnance Survey map depicts a gravel pit located to the immediately to the north of the site (HER 8119). A Tile House is labelled on Jeffery's 1770 county map to the east of the site possibly indicative of activity associated with the development of a local industry of this type. There may also be evidence of activity associated with the local agricultural industry.

The transport network proved to be the key to growth in the area. Located on the route of two 18th century turnpike roads (Hatfield to Reading Trust and Pinner Trust), Rickmansworth and Harefield contained a number of coaching inns. During the 18th century there were great improvements in the transport routes in the area. The Turnpike Trust maintained the main roads, charging tolls to use the roads. The Bath Road, Uxbridge Road, and Pinner Road were all Turnpike Roads. Uxbridge was located on the main London to Oxford carriage route, which declined after the opening of the Great Western Railway in 1838.

In the 18th century the rural environment surrounding the site began to change. Land was enclosed and the Grand Union Canal was built alongside the river Colne in Hertfordshire and Middlesex. Opened in 1814, the canal linked the Grand Junction and Leicestershire and Northamptonshire canals, but its narrow locks at Foxton and Watford prevented its use by wide boats. It was purchased in 1894 by the Grand Junction Canal Company, which in 1929 joined the Regent's Canal in London to the Warwick and Birmingham canals to form the new Grand Union Canal linking London to Birmingham (Weinreb and Hibbert 1983, 321). The Grand Junction Canal was used for gravel removal from the large pits (now lakes) nearby and also served the Rickmansworth Gas Company and breweries to the north in the 19th century. The first railway arrived in 1862, linking Watford Junction and Church Street.

2.3.3 Previous Archaeological work

During August and early September 2006, Archaeological Solutions Ltd conducted an archaeological trial trench evaluation of land at Denham Park Farm (Doyle & Hallybone 2006). One hundred and seventy-two trial trenches were excavated across the site, 33 trenches contained features and 139 revealed no archaeological features or finds. The majority of features consisted of linears which were probably associated with old field systems. Finds recovered from such features include late Iron Age, Roman, late medieval and

modern pottery, along with metal objects, plastic and glass. Trench 110 contained the remains of old farm buildings most likely dating to the post-medieval/early modern period. An alignment of postholes and postholes pits considered to be of Iron Age date was identified in Trench 69 and was probably also an agricultural structure. The evaluation did not detect any clear evidence of settlement and the relatively small finds assemblage from the site indicates that the area has been used for agricultural purposes for a long time. Struck flint was recovered (largely from the topsoil). The identified archaeology was considered to be of late Iron Age and Roman date. No other period was represented until the late medieval period.

Following the trial trench evaluation (Doyle & Hallybone 2006), and as a result of its findings, the site was subject to a phased programme of archaeological excavation (Fig. 3) designed to complement the timetable of gravel extraction planned for the site. Excavation comprised the monitoring, under archaeological supervision, of the stripping of the overburden within each phase area back to the natural substrate and the appropriate archaeological investigation and recording of any archaeological features or deposits revealed during this process. The first phase of excavation was conducted in September and October 2012 (Pozorski 2012), thereafter further phases of excavation were carried out in May to August 2014, July 2015, October 2015, June 2016 and May 2017. For ease of reference, these excavation areas have been numbered from 1 to 7 (Fig. 3). The findings of these phases of excavation are described below.

2.4 Excavation Methodology and Deposit Model

2.4.1 Excavation Methodology

The areas of proposed mineral extraction were subject to stripping under archaeological supervision followed by the mapping and archaeological excavation of all revealed archaeological features prior to extraction commencing.

Machine stripping was undertaken to an agreed standard, using a toothless ditching bucket, and under the supervision and to the satisfaction of a professional archaeologist. Thereafter all further investigation was undertaken by hand. Exposed surfaces were cleaned as appropriate and examined for archaeological features and finds. Archaeological features and deposits were recorded using *pro forma* recording sheets, drawn to scale and photographed as necessary.

All stages of the excavation were carried out in accordance with the procedures and guidance contained within *Management of Archaeological Projects 2*, English Heritage 1991 and MoRPHE (2006).

2.4.2 Deposit Model

The site was commonly overlain by a dark to mid greyish brown, firm, clayey silt with occasional stone (0.30 – 0.50m thick), becoming sandier towards the west and recorded variously as L2000, L4000, L5000, L6000, L7000 and L8000. Locally it overlay Subsoil L2001/L4001/L6001/L7001/L8001, a mid orange or reddish brown (L7001 and L8001 were mid grey brown), compact, sandy clay that became increasingly silty and lighter towards the west and east (0.01 – 0.35m thick).

The natural geology, L2002=L4002, was present at 0.30 – 0.55m below existing ground level and comprised a yellow/brown grey silty gravel with frequent sub-angular flints. In the western and eastern parts of the site, the natural was recorded as L6002 and L7002 and described as a mid brownish red or orange mixed sand and gravel; it was described similarly in the southern central part of the site where it was recorded as L5001. In Excavation Area 7, the natural (L8002) was described as a mid yellow to red mixed clay and sandy gravel.

2.5 Phasing

Six phases of archaeological activity have been identified, based on artefact typologies and stratigraphic and spatial relationships (Table 1). The earliest identifiable activity can be dated to the late Neolithic. This is followed by late Bronze Age activity. There is no clear evidence for occupation or activity during the Iron Age and the next identifiable phase of human activity consists of an early Romano-British enclosure system with related industrial activity. Subsequently, evidence becomes more sporadic with occasional features of medieval, post-medieval, and early modern date recorded across the site.

Phase	Period	Date
1	Late Neolithic	c.3000/2900-2100/2000 BC
2	Late Bronze Age	1300-750 BC
3	Early Romano-British	Mid 1 st to 2 nd century AD
4	Medieval	12 th to 14 th century AD
5	Post-medieval	AD 1500 to AD 1750
6	Modern	Post AD 1750

Table 1: The phases of activity represented at Denham Park Farm

Seven areas have been subject to archaeological excavation since 2012 (Fig. 3). The chronological order in which these areas were excavated does not follow a neat east to west or north to south pattern or any variation thereof (indeed, the areas excavated in 2012 and 2014 are sandwiched between areas excavated in 2015), therefore the locations of individual archaeological features are identified by grid location.

2.6 Phase 1. Late Neolithic

A single feature was recorded which can be securely dated to the Neolithic period. Pit F6449 was located on the eastern side of Area 6 (GS D8; Figs. 6, 11 & 18; *Appendix 1, Table i*) contained eight sherds of a Durrington Walls sub-style of late Neolithic Grooved ware with a vertical cordon which has a currency of c.3000/2900-2100/2000BC (Peachey, Ch. 3.2). F6449 cut F6447, which has been classified as a posthole, indicating that this smaller feature must be of late Neolithic date or earlier.

2.7 Phase 2. Late Bronze Age

2.7.1 Introduction

One hundred and six features can be attributed to the Late Bronze Age; 65 by pottery in their respective fills and 41 by association due to their presence in Structure 6306. All of these features were concentrated in a small area in the western part of the site (GS B7-C10; Figs. 6-16 and 18-19).

2.7.2 Dispersed Features

Two ditches were assigned a late Bronze Age date (*Appendix 1; Table 2*). These were F6154, which ran on a north-west to south-east alignment from Grid Square B9 to D7, and F6603, which initially entered the excavated area on a south-west to north-east alignment but turned through approximately 120° and extended beyond the limit of excavation again in this direction (GS C5-D5; Figs. 6, 8-11, 14, 17 & 18). F6154 was cut along most of its length by a Roman ditch and the south-west to north-east aligned portion of F6603 ran parallel to a Roman ditch. This may suggest either that the layout of the Roman site was influenced by the layout of earlier enclosures, by the same (possibly topographical) factors that influenced the layout of the late Bronze Age site, or that the pottery that dates F6154 and F6603 to the late Bronze Age was residual.

Thirty-six dispersed features are attributable to this phase (*Appendix 1, table iii*), most of which were discreet pits. They were distributed throughout Grid Squares B7-C10 (Figs. 6-15, 18 & 19), forming part of the concentration of late Bronze Age activity in this area. Some occurred as part of loose groups also containing undated features, potentially comprising groups of contemporary and functionally related pits. These groups, however, displayed no clear functional configuration or relationships. Finds from these features consisted mostly of small to moderate quantities of pottery but a small number for features were found to contain slightly more extensive finds assemblages; F6009 (Grid Square C10) contained loomweight fragments in addition to pottery, F6225 (Grid Square C9) also contained worked stone, struck flint and daub, and F6461 (Grid Square C8) contain struck flint, burnt clay and daub as well as pottery. Features F6079 (Grid Square C9), F6150 (Grid Square C9), F6279 (Grid

Square D9), and F6506 (Grid Square C8) all contained struck flint in addition to the pottery which dated them to Phase 2.

Structure 6306

A fairly dense cluster of 68 pits and postholes, several of which were truncated or sealed by later activity, were identified during excavation as a potential structure (St6306; Grid Square D8; *Appendix 1 Table iv*; Figs. 6, 9, 18-19). Finds were recovered from 23 of the features within this group. Pottery comprised a range of form and fabric types consistent with late Bronze Age post-Deverel-Rimbury (PDR) pottery in the Thames Valley (151/716g), two pieces of fired clay (F6327 and F6403), and two flint flakes (F6323 and F6421) were also present in the assemblage. The clustering of the features was considered sufficient evidence to suggest that those which were undated were contemporary with the dateable features.

There was limited structural configuration to this group of features, despite its designation during excavation as a structure. It is notable that its north-western and south-eastern extents were marked by intercutting groups of pits with smaller postholes occurring in the intervening area. Within the layout of these postholes it may be possible to discern lines or pairs of features but nothing that can be clearly seen to represent a recognisable structure.

2.8 Phase 3. Early Romano-British

Introduction

Features of this date were present across the site. Those towards the eastern extent were sporadically distributed and formed no clear structures or systems of land division. The main concentration of activity occurred towards the western extent of the site. These consisted of enclosure ditches, a sub-circular or penannular ditch, and a kiln structure, in addition to several discreet pits.

Discreet Features

A single feature containing Romano-British pottery was recorded in the north-eastern part of the site (GS K15). This feature, F7012 (*Appendix 1, table v*; Figs. 4 & 20), appeared to cut the north-eastern end of a short undated gully.

In the excavation area to the south-east of this (Grid Squares I9-K14), six discreet pits/postholes (F5002, F5008, F5010, F5012, F5028 and F5032; *Appendix 1, table v*; Figs. 5 & 20) and a single layer or deposit (L5026; *Appendix 1, table v*; Fig. 5) containing Romano-British artefactual material were sparsely distributed. Several broadly similar but undated features were also recorded in this area; no structural configuration or obvious functional relationships were observed between these features. Two linear features, F5004 and F5018, displaying no clear function but containing Romano-British finds, were also recorded within this part of the site (*Appendix 1, table vi*).

Towards the western extent of the site, 12 pits/postholes occurring in small intercutting groups or as discreet features, lying in relative isolation, were recorded (*Appendix 1, table v*). The majority of these were located in Grid Squares D7 or E7 (Figs. 6, 11, 13, 20 & 21), in close proximity to the area upon which the Romano-British enclosure ditches appeared to converge. Most of these features were dated by the pottery present within their fills. However, F6040, F6088 and F6470 have been tentatively dated as Roman due to the presence of iron slag in their fills which contradicts the date suggested by the late Bronze Age pottery that was also recovered from them. Pits F6758, F6760 and F6762 formed a small group of intercutting features with the undated but stratigraphically later F6764. Pits F6736, F6740 and F6007 were located in area to the immediate east of ditch F6611, to the south of south-eastern terminus of ditch/gully F6728s, and amongst a group of undated features of similar size and form. F6770 was a fairly large feature located towards the eastern side of this area of excavation. F6680 was similar in size and located approximately 40m north of F6770. Pit F6627 was a slightly amorphous feature located towards the southern edge of the excavated area in Grid Square D5.

Two discrete gullies, F6728 (GS D7) and F6464 (GS C8), were also located in this area (*Appendix 1, table vi*; Figs. 6, 10, 13, 20 & 21). They were dateable to the Romano-British period and it seems likely that they functioned in conjunction with the Romano-British enclosure ditches that were also recorded within this part of the site.

Structure 6019 and Oval Enclosure F6036

Structure F6019 (*Appendix 1, table vii*; GS C10; Figs. 6, 7 & 22) is an interesting and intriguing feature due to the apparently contradictory artefactual assemblages recovered from it. It is possible that this feature was of late Bronze Age date, based solely on the pottery recovered from it but other finds and the technological characteristics that it displays suggest otherwise. F6019 was identified during excavation as a furnace or oven. It was initially considered that the structure took a figure-of-eight form with the eastern end, F6028, forming the furnace chamber and the western end, F6022, forming the stokehole, with the slight depression between them, F6026, representing some kind of flue. Further examination suggests that this is not the case. The presence of a slightly more than 15kg of iron slag (including tap slag) suggests that it is likely that this feature represents an iron smelting furnace which would not have taken the form inherent to the original on-site interpretation. Instead, it would appear that the figure-of-eight form taken by clay lining L6023 and L6029 represent the bases of two shaft furnaces positioned at the edges of a deliberately cut depression (F6020), designed for ease of access and to facilitate tapping of the slag within the base of the depression. It appears likely that the air inlets to these furnaces would have been on the outer edges of F6020 and the slag outlets facing each other. Following demolition of the furnaces, two further pits, F6032 and F6034, appear to have been dug in to their backfill.

Pottery recovered from the features forming St6019 has been identified as being of late Bronze Age date, although in some cases it is possible that elements of this assemblage might run into the transitional period with the early Iron Age. However, it is conventionally assumed that slag-tapping furnaces were introduced late in the Iron Age, not becoming common until the Roman period (Bayley *et al* 2008, 43). Therefore, in light of the presence of iron-working slag, and most notably, tap slag, this ceramic material must be considered to be residual, although present in considerable quantities, possibly having been incorporated into material used to backfill the furnace structures after they were no longer in use. Due to the presence of Romano-British activity in the vicinity it is tentatively suggested that these smelting furnaces were of Roman date; this would be in keeping with the smelting technology that is represented by these features.

Similarly, penannular gully F6036, which was located slightly to the south-west of St6019 (GS B10-C10; Figs. 6, 7 & 22), contained pottery of late Bronze Age date, in addition to a significant quantity of iron slag (*Appendix 1, table viii*). This indicates that the feature is unlikely to be of later Bronze Age date as suggested by the pottery. The quantity of slag (including tap slag) present here suggests some kind of relationship with St6019, although it is possible that this relationship is nothing more than the use of material dug from the backfilled furnace, possibly during the excavation of pits F6032 or F6034, to backfill the gully.

Enclosure Ditches

Several Romano-British ditches appeared to form part of a field system (*Appendix 1, table ix*). Ditch F6274 ran on a north-west to south-east alignment from beyond the limit of excavation in Grid Square B9 to Grid Square D7 (Figs. 6, 8, 10, 11 & 20) where it turned to the south and was recorded as the c. 10m long F6676.

Slightly to the south of the southern terminus of F6676 was the apex of Ditch F6573. This feature extended from beyond the southern limit of excavation in Grid Square D6, running due north for c. 50m before turning through 120° and running on a north-east to south-west alignment. On this alignment it re-cut an earlier ditch, F6611, which ran on the same orientation and then continued beyond the southern limit of excavation in Grid Square C5 (Figs. 6, 13, 14, 15, 20 & 21). Cut by F6573 at the point at which it turned was the west-north-west to east-south-east aligned ditch/gully F6653.

Running on a north to south alignment, within Grid Square D7, approximately 10m to the east of F6676, was Ditch F6700 (Figs. 6, 11 & 21).

These features combined to form what appear to be the corner of a large field or enclosure, the interior of which appears to have been to the west. Within this area, the discreet Roman linears F6728 and F6464 and undated linear F6509 (GS C7-C8; Figs. 6, 11 & 12) may have formed a double-ditched boundary or similar arrangement, which appeared in fragmentary form. To the east of this

apparent enclosure, the undated ditches F6704, F6716 and F6718 appear to form the north-eastern corner of a possibly related enclosure.

2.9 Phase 4. Medieval

Only one medieval feature, Occupation Layer L6400 (GS D8; *Appendix 1, table x*; Fig. 6, 9 & 22) was recorded during excavation. This was located within the area of late Bronze Age Structure St6306 and sealed features F6401 and F6403. Pottery recovered from this layer consisted of locally-produced glazed ware and un-glazed coarseware (24/97g). This isolated activity indicates that, while domestic habitation appears not to have occurred in the area, there was some limited activity of this date.

2.10 Phase 5. Post-medieval

A single ditch (*Appendix 1, table xi*) was identified as being of post-medieval date. F5030 (GS I9; Figs. 4 & 22) was aligned north-east to south-west and was dated by the presence of post-medieval peg tile in its single fill.

2.11 Phase 6. Modern features

Five modern ditches (*Appendix 1, table xii*) were recorded during excavation. F5036 ran on a west-south-west to east-north-east alignment from Grid Square L11 to K12 and was recorded as F8203 during a later phase of excavation running from Grid Square K13 to M14 (Figs. 3, 4, 16 & 23). F6152 ran on a north-west to south-east alignment from Grid Square B9 to E6 and extended beyond the limit of excavation in both directions (Figs. 5, 7, & 23). F7006 (GS K16-L13) and its southerly continuation, F8019, (GS L13) ran on a north-north-west to south-south-east alignment, terminating at the point that it cut F8023 (Figs. 3, 4, 17 & 23)

These ditches relate to more recent agricultural activity. F5036 was dated by the presence of modern pottery and metal alloys in its fill, L5037.

Pit F8035 (*Appendix 1, table xiii*; Figs. 3, 17 & 23) was a very large feature, measuring 9.75 x 8.00m and reaching to a depth of 1.22m. It contained four fills from which were recovered two sherds of 19th century pottery, 558g of CBM, and two iron nails.

2.12 Undated features

The majority of features on site contained no dating evidence. Some undated features have been assigned to particular phases of activity on the basis of the stratigraphic or spatial relationships which they share with features containing secure artefactual dating evidence. Many of the features within the western part of the site were potentially contemporary with the late Bronze Age and early

Romano-British features but displayed insufficiently clear spatial relationships with dated features for them to be identifiable to a particular phase of activity.

Twenty-eight undated linear features (*Appendix 1, table xiv*; Figs. 3-17 & 23-28) were identified across the site. Several short linears, such as F5016, F5042 and F5046 (Fig. 4) have no stratigraphic relationship, but were located in proximity to Romano-British features, perhaps suggesting some kind of inter-relationship or contemporaneity.

Two hundred and twenty-eight further undated features or layers were also recorded. Most of these consisted of pits or postholes (*Appendix 1, table xv*; Figs. 3-17 & 23-28), many as dispersed features, but some arranged into loose clusters or groups, such as F8005, F8007, F8009, F8011, and F8013. Undated pits in the western part of the site are potentially contemporary with the late Bronze Age pits which proliferate in this area. Elsewhere, it seems most likely that undated features are related to the Roman systems and later activity that is present in these areas.

3 SPECIALIST REPORTS

3.1 The Struck Flint

Andrew Peachey

Excavations recovered a total of 41 pieces (3360g) of struck flint. The assemblage is predominantly comprised of blade-like debitage flakes, with single examples of a blade core and blade present (Table 2), suggesting a date of origin in the Neolithic period, probably in the early Neolithic but the evidence is far from conclusive. The struck flint was manufactured using pale to dark grey mottled flint of moderate quantity that, despite some weathering, preserves, where extant, a chalky white cortex indicating that it was sourced from local primary Upper Chalk deposits or derived marls in the Chiltern and Thames Valley region.

Flint type	Frequency	Weight (g)
Core	1	91
Blade	2	16
Debitage (core trimming flake?)	1	27
Debitage (blade-like)	34	174
Debitage (irregular flake)	3	52
<i>Total</i>	<i>41</i>	<i>360</i>

Table 2: Quantification of struck flint

Curvilinear feature F6728 contained both the only core and non-blade-like flakes in the assemblage. The core was used to produce blades and has two platforms, one at an oblique angle. The shape of the core and the extensive stepped termination scars on one face suggest it has become unviable, if not exhausted, before it was discarded. Ditch F5004 (Seg.B) contained a possible core trimming (secondary) flake with faceted edges resulting from adjacent removals. The presence of very limited evidence for core preparation and blade production may tentatively support an earlier Neolithic date but equally, based

on such low quantities, it cannot be discounted that these flakes were produced by similar processes in the later Neolithic or after.

The irregular debitage flakes are slightly larger than the blade-like types that dominate the assemblage, and exhibit slight abrasion around their butt ends, potentially indicating the careful preparation of a striking platform during the cortex trimming and preparation of a core. The blades were contained in Pit F6094 and Gully F8027, and had a length of 45mm, consistent with the size of blade produced during the latter stages of the recorded core's exploitation, and with the bulk of the blade-like debitage. The latter blade exhibited a moderate degree of wear on one lateral edge, with the opposing edge backed by cortex, suggesting activity beyond simply the production or maintenance of stone tools. The blade-like un-corticated and tertiary flakes were generally recorded as isolated flakes, except for in Pit F6088, where a total of 19 flakes (99g) were present, potentially indicative of *in situ* knapping in the immediate vicinity and possibly derived from a single core. The flake technology evident in this assemblage was most prevalent in the early Neolithic period, but although it declined, continued to form an important component of the flint toolkit throughout the late Neolithic.

3.2 The Pottery

Andrew Peachey

Excavations recovered a total of 1891 sherds (12251g) of pottery, predominantly comprised of late Bronze Age vessels (Table 3) contained in pit and posthole groups, with sparse early Roman (mid-late 1st century AD) coarse wares also contained in ditches and pits and occasional earlier prehistoric and medieval sherds also present. The Late Bronze Age pottery is consistent with the post-Deverel-Rimbury (PDR) style in the Thames Valley region, notably the highly significant assemblage from Runnymede Bridge, a short distance to the south, which was broadly dated to the early first millennium BC. The limited diagnostic component of the PDR vessels in this assemblage is primarily composed of plain coarse ware jars, occasionally with limited finger-nail impressed decoration, with a low number of fine ware bowls also present. Evidence for other forms of surface treatment or use wear (i.e. soot/residue) appears virtually absent, possibly due to adverse soil conditions. A total of nine pits contain moderate concentrations of late Bronze Age pottery, situated broadly between two possible roundhouses located c.100m apart, however there appears to be little favourable bias in the fragmentation of pottery in these deposits in comparison to pits and postholes containing low quantities of sherds elsewhere on the site.

Pottery Date	Sherd Count	Weight (g)	R.EVE
Late Neolithic	8	22	-
Late Bronze Age	1548	9503	1.20
Early Roman	324	2705	0.37
Medieval	11	21	-
<i>Total</i>	<i>1891</i>	<i>12251</i>	<i>1.57</i>

Table 3: Quantification of pottery by period

Methodology

The pottery was quantified by sherd count, weight (g) and R.EVE with fabrics examined at x20 magnification in accordance with the guidelines of the Prehistoric Ceramics Research Group (PCRG 1995) and Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). All data was entered into a Microsoft Excel spreadsheet that forms part of the site archive.

The late Bronze Age vessels were broadly classified using the scheme developed by Barrett (1980) that differentiates fine and coarse ware jars, bowls and cups, and using the vessel classification defined at Runnymede Bridge, which takes into account variations in profile (Longley 1991, 162). To avoid repetition, references to form types recorded at the type site of Runnymede Bridge (Longley 1991, Needham 1996) are abbreviated to *RBX*, and specific vessels to *RB PXXX*.

Late Neolithic Pottery

The eight sherds (22g) of late Neolithic pottery contained in Pit F6449 (L6451) comprised cross joining sherds from a single vessel, manufactured in a soft powdery fabric with orange external surfaces that fade to dark grey interior surfaces. The fabric is tempered with common angular grog (0.5-2mm) set in a very fine silty matrix. The sherds form part of the wall of a near straight-sided urn, decorated with a narrow vertical cordon, either side of which are zones filled with opposed oblique lines. This type of decoration is characteristic of the Durrington Walls sub-style of late Neolithic Grooved ware, which has a currency of c.3000/2900-2100/2000BC and has been recorded on sites in the Thames Valley, including at the Eton Dorney Rowing Lake c.14km to the south-west (Longworth & Cleal 1999, 179; Barclay 2013, 395).

The Late Bronze Age Pottery

The 1548 sherds (9503g) of Bronze Age pottery in the assemblage comprise a range of form and fabric types consistent with late Bronze Age post-Deverel-Rimbury (PDR) pottery in the Thames Valley, and include moderate quantities of diagnostic cross-joining sherds in a moderately fragmented and abraded condition. The assemblage contains a limited range of coarse jar and bowl types, supplemented with occasional fine bowls. Notable components of this repertoire include jars and bowls with angled shoulders and varying finger-tip impressed decoration, a near complete plain fine ware bowl and the fragmentary remnants of a fine bowl with incised and stamped decoration. The distribution of these vessels is primarily in dispersed single pits, although these features appear to be distributed in an area situated between two roundhouses, with sparse sherds also contained in a probable oven. The character of the fabric and form types appear to suggest deliberate primary refuse deposits resulting from domestic activity in the immediate vicinity.

Fabric Types

Six fabric types were identified within the late Bronze Age pottery, all hand-made and bonfire-fired; they are described below. Calcined flint remains the dominant inclusion, principally in coarse fabric FQ1, and to a lesser degree in the other coarse fabric QF1, which collectively account for c.85% of the assemblage by sherd count and weight (Table 4). Nonetheless, the absence of large flint grits (<5mm), and to a degree medium flint grits (2-4mm), is striking with the general sandiness of the fabrics broadly comparable to those identified (but not the proportions) in the late Bronze Age pottery at Petters Sports Field, Egham (O'Connell 1986, 61-2) c.16km to the south, but with less fine to 'gritless' or grog-tempered fabrics, thus retaining a degree of comparability with the medium (<2.5mm) flint-gritted fabrics recorded at Runnymede Bridge (Longley 1991, 163-4) c.14km to the south. A slight degree of variability was observed in the frequency, sorting and coarseness of the calcined flint temper within cross-joining sherds and large profiles of single vessels, reflecting the hand-made character of the vessels, but generally the temper remains consistent while the colour and surface finish may vary considerably around a single vessel, probably reflecting preservation conditions and post-depositional processes rather than manufacture. The fine fabrics, defined as those with burnished or smooth, even surfaces, collectively account for c.15% of the assemblage by sherd count and weight (Table 4), with sand the primary selected filler (Q1, QF2 & Q2) and grog also present (G1), though the latter is over represented in raw quantification due to the presence of a single near complete bowl. These proportions of fabric type correlate closely with those at Runnymede Bridge (Longley 1991, 165), while grog is far more common at Petters Sports Field (O'Connell 1986, 62). The relative absence of coarse flint temper, a prevalence of flint temper (the bulk <3mm), supplemented with sparse sand- and grog-tempered fabrics is also paralleled in the late Bronze Age pottery from Reading Business Park (Morris 2004, 62) c.35km to the west. Conversely, at Aldermarston Wharf and Knights Farm, slightly further to the west, there is a higher proportion of coarse flint temper (Bradley 1980, 232 & 266).

- FQ1 Flint-and-sand temper. A dark grey core, over which the surfaces may range from mid orange, brown to very dark grey (all on one vessel). Inclusions comprise common calcined flint (generally 0.25-2mm, occasionally to 3.5mm) and common sub-rounded quartz (0.2-0.5mm).
- QF1 Sand-and-flint temper. Orange-red throughout. Inclusions comprise common quartz sand (0.1-0.25mm) and sparse-occasional calcined flint (0.5-2.5mm), and occasional iron-rich pellets (<3mm).
- Q1 Sand temper. Dark grey, typically with orange-red exterior surfaces. Inclusions comprise common-abundant quartz (0.1-0.5mm), with occasional flint and iron-rich grains (<1.5mm).
- G1 Grog-temper. Generally dark grey, sometimes with orange-brown surfaces. Inclusions comprise common angular grog, typically pale grey to dark grey-brown (<1.5mm), with occasional flint <5mm)
- QF2 Fine sand-and-flint temper. Black surfaces over a dark red-brown core. Inclusions comprise common fine quartz (<0.2mm), sparse calcined flint and red grog (both <1mm).
- Q2 Fine sand temper. Black surfaces, thin dark red margins over a dark grey core. Inclusions comprise common-abundant well-sorted quartz (0.1-0.25mm), with sparse red iron rich grains (<0.25mm).

Fabric	Summary description	Sherd Count	%	Weight (g)	%	R.EVE
FQ1	Flint-and-sand tempered	1141	73.72	6614	69.60	0.95
QF1	Sand-and-flint tempered	181	11.69	1447	15.23	0.05
Q1	Sand tempered	72	4.65	543	5.71	-
G1	Grog tempered	98	6.33	549	5.78	0.10
QF2	Fine sand-and-flint tempered	40	2.58	249	2.62	0.05
Q2	Fine sand tempered	16	1.03	101	1.06	0.05
<i>Total</i>		<i>1548</i>	<i>100</i>	<i>9503</i>	<i>100</i>	<i>1.2</i>

Table 4: Quantification of late Bronze Age fabric groups

Form Types

In total, 16 individual vessels could be identified by diagnostic rim and decorated sherds; basal sherds were rare and were associated with previously identified vessels. The vessels were all clearly hand-made, with the coarse vessels typically exhibiting a wall thickness of 8-10mm, and the fine bowls thin wall of 3-5mm thick; however while numerous cross-joining fragments were identified, further analysis of construction methods (i.e. coils) was obscured by fragmentation and abrasion.

The limited sample size of diagnostic form types dictates the suite of vessels may not be representative of a pattern of consumption. Nonetheless, there does appear to be a clear bias in form types present. The 12 coarse vessels include a single barrel-shape/ovoid jar but the majority are comprised of jars with angular shoulders, possibly including shallower variants that may be bowls (Table 5). The fine bowls also appear to have a similar shouldered profile, though in contrast the rims appear to exceed the diameter of the shoulders. Thus based on Barrett's (1980) scheme of classification, Class I coarse jars (and possibly bowls) are three times as common as Class IV fine bowls, with fine jars and cups entirely absent. This is a typical pattern, albeit exaggerated by limited sample size for PDR assemblages in the Thames Valley and southern England (Barrett, 1980, 302). Complementing this classification, the more nuanced classification of profile types defined at Runnymede Bridge produces a similarly skewed trend in this assemblage. Longley (1991, 162) rationalised nine vessel types (not consecutively numbered due to earlier sub-types), of which type *RB12* jars are dominant in this assemblage, with the related *RB9* bowls also relatively common (Table 5). This pattern, including the lesser presence of an *RB5* barrel-shape/ovoid jar, mirrors the general pattern at Runnymede Bridge (Longley 1991, 163), although the absence here of biconical and bipartite bowls is conspicuous, while other forms including cups are always very scarce. *RB12* jars are equally common at Petters Sports Field where the range of form types is also narrower than at Runnymede Bridge; however, that assemblage has a preponderance of biconical bowls (O'Connell 1986, 63) that may reflect a slightly later chronology extending into the transition with the early Iron Age. A similar range of coarse shouldered jars/bowls and fine decorated/burnished bowls is also common at Aldermarston Wharf and Knights Farm (Bradley 1980) but in those assemblages barrel-shape/ovoid jars are the dominant type while at Reading Business Park barrel-shape/ovoid jars are abundant almost to the exclusion of other types (Morris 2004), but it remains

unclear if this reflects the evolution of manufacture (chronology) or local/regional preference (cultural choice).

Vessel	Barrett Class	RB type	Description	Minimum No. vessels	R.EVE
Coarse Jar	I	5	Barrel-shape/ovoid body with plain rim (Fig 29.10)	1	0.10
Coarse Jar	I	12	Upright/everted rim; angular shoulder; plain or with finger-tip impressions on rim or shoulder (Fig 29.2, 29.3, 29.5, & 29.7)	4	0.40
Coarse Jar/Bowl	I/III	9/12?	Angular shouldered vessels, indistinct if jar or bowl; plain or with finger-tip impressions on rim or shoulder (Fig 29.1, 29.4 & 29.9)	7	0.50
Fine Bowl	IV	9	Everted/flaring rim (slightly exceeding shoulder); carinated shoulder; plain/burnished exterior (Fig 29.6 & 29.8)	3	0.20
Fine Bowl	IV	?	Cordoned, with inscribed line and stamped dot decoration (body sherds only)	1	-
<i>Total</i>				16	1.20

Table 5: Late Bronze Age PDR vessel types by class (after Barrett 1980) and Runnymede Bridge (RB) type (after Longley 1991)

The single *RB5* barrel-shape/ovoid jar was contained in Ditch F6603 (Fig 29.10) and is comparable to common examples at Reading Business Park (i.e. Morris 2004, 84-7: vessels 16 & 60) and Aldermarston Wharf (Bradley 1980, 236-7: vessels 23 & 40), as well as scarce examples at Runnymede Bridge (*RB* P650, P680 & P766), although the latter examples may have functioned as globular bowls rather than jars. The blurred distinction between PDR plainware jars and bowls is highlighted by the rim diameter of this vessel (22cm), which is in the same size range as the confirmed jars in the assemblage.

The common *RB12* angular shouldered jars (including those of uncertain *RB9/12* bowl or jar definition) exhibit minor variations, with the bulk exhibiting some form of limited finger-tip impressed decoration. Four examples have finger-tip cabled rims, four have a band of finger-tip impressions on the shoulder, a single example has finger-tip impressions on the rim and shoulder, and only two examples are plain. The most complete profiles belong to a jar with both decorated rim and shoulder in Pit F6150 (Fig 29.9), and with a decorated shoulder in Pit F6106 (Fig 29.2), both paralleled at Runnymede Bridge (*RB* P771 & *RB* P141). The profile of these two jars is closely comparable to the plain examples in Pit F6251 (Fig 29.1) and Pit F6088 (Fig 29.4), which are extensively paralleled at Runnymede Bridge (i.e. *RB* P369/P431/P563/P657) and Petters Sports Field (O'Connell 1986, 63-65: vessels 23-30); with sparse similar examples at Aldermarston Wharf (Bradley 1980, 238-40: vessels 63 & 117). The vessels with finger-tip cabled rims tend to have more pronounced, everted rims, including examples in Pits F6034 (Fig 29.5) and F6267 (Fig 29.3). This may represent a false distinction as the shoulders of these jars were not recorded, but they appear consistent with rims at Runnymede Bridge (*RB* P7/13/P304) although a single example in Pit F6225 (Fig 29.7) is more robust with thicker walls and an upright rim, comparable to an example from Knight's Farm (Bradley 1980, 272: vessel 20). These coarse jars have a mean rim diameter of 21cm but range between 14 and 30cm, and

unfortunately do not preserve any evidence for use wear (residue, soot, burning) that may indicate their function.

With the exception of a single fine bowl in fabric G1 in Pit F6461, which was deposited near- or wholly-complete, the evidence for the fine bowls is highly fragmentary. This is potentially a reflection of their thin-walled construction as their fabric is less friable than that of the coarse jars. The bowl in Pit F6461 (Fig 29.6) had an everted tapering rim with a diameter slightly greater than the angled/carinated shoulder, below which the body curves to the extent it is poorly-defined from the base. Comparable bowls have been recorded at Runnymede Bridge (RB P1/P416/P690) and Reading Business Park (Morris 2004, 90: vessel 78), and very small rim sherds from fabric QF2 (Fig 29.8) and Q2 fine bowls with burnished exteriors, both in Pit F6225, are likely to come from the same type of bowl. The more complex decoration of fine bowls is represented by small body sherds of a QF2 vessel of uncertain profile in Pit F6500 which has a girth or cordon decorated with a row of stamped circular dots (4mm wide) below an incised zig-zag of parallel lines. A single bowl at Runnymede Bridge (RB P104) has a similar decorative scheme but this form of decoration is a significant component of the late Bronze Age fine ware from Knight's Farm (Bradley 1980, 269 & 273: vessels 24, 36-40 & 43-8).

Distribution and Discussion

The distribution of the late Bronze Age (PDR) does not comprise a single concentration or cluster but extends across a zone spanning a length of c.100m, broadly between two clusters of features. Within this area, nine pits contain c.58% of the late Bronze Age pottery by sherd count (c.60% by weight), with a mean sherd weight of 6.3g, only fractionally above that for the whole assemblage (Table 6). Nonetheless, these nine pits do contain c.83% of the diagnostic rim sherds and the concentrations of sherds, particularly in Pits F6088 and P6251 probably represent the deliberate deposition of discarded and broken domestic detritus, possibly as part of middening as the limited proportions of vessels present suggest the remainder may have formed part of above ground deposits. The highest concentrations occur in Pits F6088 and F6251 but contain diagnostic sherds from just one coarse jar in each instance (Fig 29.4 & Fig 29.1 respectively), with the sherds in Pit F6251 (L6252) most likely to come entirely from a single vessel. With the exception of Pit F6225, each of the concentrations of pottery includes diagnostic rim sherds from only a single jar or bowl, although body sherds clearly represent a minimum of two or three vessels. Pit F6225, situated c.20m from any other concentration, contained a coarse FQ1 jar (Fig 29.7), and small fragments of two fine bowls with burnished surfaces in fabrics QF2 (Fig 29.8) and Q2.

Feature	No. of Features	Sherd Count	Weight (g)	R.EVE	Mean Sherd Weight (g)	Figs.
Pit F6088	1	226	1402	0.05	6.20	29.4
Pit F6251	1	210	1355	0.30	6.45	29.1
Pit F6461	1	140	700	0.10	5.00	29.6
Pit F6106	1	90	673	0.05	7.48	29.2
Pit F6267	1	65	279	0.10	4.29	29.3

Pit F6500	1	51	271	-	5.31	-
Pit F6225	1	50	483	0.30	9.66	29.7, 29.8
Pit F6506	1	28	281	-	10.04	-
Pit F6150	1	35	209	0.10	5.97	29.9
Posthole F6289	1	17	263	-	15.47	-
Furnaces St6019	5	38	316	-	8.32	-
Other Pits	39	311	1629	0.05	5.24	29.5
Other Postholes	19	70	449	0.05	6.41	-
Ditches	4	89	653	0.10	7.34	29.10
Residual	4	112	520	-	4.64	-
Un-stratified	1	16	20	-	1.25	-
<i>Total</i>	<i>82</i>	<i>1548</i>	<i>9503</i>	<i>1.20</i>	<i>6.14</i>	

Table 6: Distribution of late Bronze Age pottery

The PDR pottery in this assemblage is comparable to the style defined at the major late Bronze Age Thames-side settlement at Runnymede Bridge, notably through the predominance of angular shouldered jars (or bowls), although the more limited suite of vessel types is perhaps more consistent with the smaller scale settlement identified at Petters Sports Field, Egham. Variations in this assemblage, in comparison to these and other sites in the Thames Valley, principally the utilisation of sandier fabrics, the scarcity of barrel-shaped/ovoid jars, and the complete absence of bipartite or biconical vessels are probably indicative of local selection relative to function, individual potters and economy rather than the evolution of a ceramic style relative to chronology. However, the limited diagnostic sherds associated with domestic rubbish deposition in this assemblage strongly support a late Bronze Age date but not extending into the transitional period with the early Iron Age. A program of radiocarbon dates derived from animal bone from late Bronze Age occupation deposits, primary dumps, and dark earth deposits at Runnymede Bridge returned a range of dates spanning c.895-760BC with some samples having alternate dates within c.685-550BC due to the nature of the dating curve (Ambers and Leese 1996, 80). A more limited program of radiocarbon dates at Petters Sports Field, suggested that the earlier phase of occupation in the late Bronze Age occurred within c.1093-788BC (O'Connell 1986, 75). The fabric and form types in this assemblage have a high degree of consistency with these post-Deverel-Rimbury 'plain ware' assemblages, confirming domestic consumption and rubbish deposition into pits (or middens) of pottery at a further late Bronze Age settlement in the Thames Valley.

Catalogue of Illustrated Late Bronze Age Pottery Vessels

- Fig. 29.10 Fabric FQ1; Ditch F6603 (L6604); barrel-shape/ovoid jar (RB5)
 Fig. 29.9 Fabric FQ1; Pit F6150 (L6151); angular shoulder jar with finger-nail cabled rim and finger-tip impressed shoulder (RB12)
 Fig. 29.2 Fabric FQ1; Pit F6106 (L6107); angular shoulder jar with finger-tip impressed shoulder (RB12)
 Fig. 29.1 Fabric FQ1; Pit F6251 (L6252); angular shoulder jar (RB9/12)
 Fig. 29.4 Fabric QF1; Pit F6088 (L6089); angular shoulder jar (RB9/12)
 Fig. 29.5 Fabric FQ1; Pit F6034 (L6035); jar with finger-nail cabled rim (RB12)
 Fig. 29.3 Fabric FQ1; Pit F6267 (L6268); jar with finger-nail cabled rim (RB12)
 Fig. 29.7 Fabric FQ1; Pit F6225 (L6228); jar with finger-nail cabled rim (RB12)

- Fig. 29.6 Fabric G1; Pit F6461 (L6462); fine bowl with tapering rim and angular/carinated shoulder; smoothed exterior; deposited near/wholly complete (RB9)
- Fig. 29.8 Fabric QF2; Pit F6225 (L6228); fine bowl with slightly flared rim; burnished exterior (RB9)

The Roman Pottery

A sparse distribution of Roman pottery sherds was recovered from a ditch system and associated features, possibly including ditches in the eastern part of the site. Small groups of c.20-40 sherds were contained in Ditches F6700 F6728, Pits F5028, F5032 and Tree Bole fill L5026. Low quantities were present in related ditches F6464, F6573, F6611, F6655, F6676 and associated Pits F6680, F6627, F6736, F6740, F6758, F6762, F6770 and F7012. An outlier to this distribution is a single small group of 32 sherds (489g) contained in Pit F6007 c.120m to the north of the ditch system. The Roman pottery is comprised of six fabrics (Table 7), probably locally-produced that suggest a date in the mid to late 1st century AD. The Roman sherds are in a moderately abraded condition, and diagnostic sherds are limited to rare, small rim sherds. The six fabrics comprise:

- SOB GT Southern British ('Belgic') grog-tempered ware, wheel-made (Tomber & Dore 1998, 214)
- BSW Black-surfaced/Romanising grey ware. Black surfaces, thin red margins and a mid grey core. Inclusions comprise common quartz (<0.25mm), sparse fine mica and sparse grog (0.5-1.5mm).
- EGRS Early sandy grey ware. This is dark grey to black, with inclusions of common, poorly-sorted quartz (0.1-0.5mm), sparse flint (1-3mm) and occasional iron rich grains and grog (<3mm). This is a hard gritty fabric, comparable to Milton Keynes Fabric 47j (Marney 1989, 194)
- GRS Sandy grey ware. Mid grey surfaces fading to a slightly paler or orange-red core. Inclusions comprise common moderately-sorted quartz (0.1-0.5mm), sparse fine mica and black/red iron-rich grains (<0.2mm)
- GRF Fine grey ware. A reduced fabric with slightly paler surfaces than the core. Inclusions of well-sorted, common quartz (<0.1mm), sparse matrix coloured clay pellets (<0.5mm) and sparse fine silver mica. A powdery surface. Possibly produced locally or could be a product of the Hadham kilns, Hertfordshire.
- ROB SH Roman (wheel-made) shell-tempered ware (Marney 1989, 174: fabric 1a)

Fabric	Sherd Count	Weight (g)	R.EVE
SOB GT	145	1509	0.15
BSW	27	184	-
EGRS	95	573	0.12
GRS	37	232	-
GRF	9	114	-
ROB SH	11	93	0.10
<i>Total</i>	<i>324</i>	<i>2705</i>	<i>0.37</i>

Table 7: Quantification of Roman pottery by fabric

The Roman pottery is dominated by early sandy grey ware (EGRS) and southern British grog-tempered ware (SOB GT) (Table 7). In Buckinghamshire and the Thames Valley area of the site, SOB GT emerges by the beginning of the 1st century AD, but its prevalence in an assemblage, supplemented by BSW, EGRS and GRS, which would eventually supersede it, as well as wheel-

made ROB SH, is consistent with a chronology in the decades following the Roman Conquest. The SOB GT includes a fragment of a large everted bead rim, probably from a storage jar in Pit F6740 while the groups in Pits F6007 and F7012 are entirely comprised of SOB GT body sherds from closed vessels, probably jars or necked bowls.

The only diagnostic vessel type present in EGRS is an ovoid jar with a simple small bead rim contained in Pit F5032 (L5033) which is comparable to mid 1st century AD examples at Milton Keynes (Marney 1989, 8: fig.5.1). However, Ditch F5004 (L5005) contained very small fragments of an EGRS everted bead rim from an unidentifiable jar or bowl, with the base of a further EGRS jar contained in Tree Bole F5026. The ROB SH includes an ovoid jar with a simple bead rim in Ditch F6655 (Seg.A), and Ditch F6700 contained a GRS body sherd that formed part of a rounded cordon decorated with burnished lattice, probably part of an early Roman necked bowl, which support the chronology indicated by the proportions of fabrics. The only fine ware in the assemblage comprises a small group of nine sherds (114g) of GRF contained in Ditch F5018 (L5019 Seg.A), representing the cross-joining remnants of the base of a small jar or large beaker. It is not possible to more accurately date this GRF vessel beyond the broad Roman period but it could feasibly represent a fully Romanised vessel contemporary with the rest of the mid to late 1st century AD pottery. The limited distribution, quantity and diagnostic components in this assemblage restrict the conclusions that can be drawn but these fabric and form types appear consistent with low status domestic activity in the region, frequently associated with small farmsteads or agricultural settlements in the Colne Valley and Buckinghamshire region.

The Medieval Pottery

A total of 11 sherds (21g) of medieval pottery were recovered from Occupation Layer L6400. The sherds comprised a mix of locally-produced glazed and unglazed courseware, both with fabrics that contained common fine quartz (<0.1mm) with sparse polycrystalline grains (<1mm), and sparse rounded calcitic grains (<1mm). The six sherds (12g) of glazed ware exhibit a splashed green lead glaze, while both fabrics are limited to small non-diagnostic body sherds, probably derived from jars or cooking pots produced in the late 12th to 14th centuries.

3.3 The Loom Weights

Andrew Peachey

Excavations recovered a total of 40 fragments (4066g) of fired clay derived from triangular loom weights, including three complete or near-complete examples contained in Pit F6009.

The loom weights were manufactured in a fine silty fabric with sparse inclusions of charred organics or voids and burnt flint (both 1.5-5mm), which is relatively friable in nature. The weights had been baked or fired at a low temperature in a

clamp kiln, and are generally pale to mid orange in colour with sparse black mottling resulting from the firing.

The three loomweights (SF2) in Pit F6009 (L6012) are characterised in Table 8, with a further corner of a triangular loom weight (SF6) contained in Pit F6461, broken along the natural stress point of a perforation through one corner. Small non-diagnostic fragments in the same fabric contained in Pits F6007, F6682 and F6712 are also likely to be derived from comparable weights.

Loomweight	Condition	Weight	Side Length	Thickness	Corners
Fig. 30.1	Complete (whole)	1598g	140mm	60mm	Rounded with single circular perforations (10-15mm) through each corner
Fig. 30.2	Complete (fragmentary)	1616g	140mm	60mm	
Fig. 30.3	Broken (two corners missing)	612g	140mm	45mm	

Table 8: Characteristics of triangular loom weights in Pit F6009

Triangular loom weights emerge in the mid/late Iron Age and continue to be utilised throughout the Roman period, consistent with the mid to late 1st century AD pottery recorded in the assemblage, and suggestive of low to moderate status domestic industry. The perforations through the weights allowed groups of warp threads to be suspended under tension from the upper beam of a warp-weighted loom, allowing the smooth operation of a leash rod (heddle) that separated alternate threads so a shuttle attached to the weft thread could be woven through. Where loom weights are recovered in association with one another, it is generally indicative of weaving in the immediate vicinity, and the broken example need not have been rendered non functional; indeed the two broken corners appear to have been smoothed, though this is also close to the natural fracture line along the perforations, thus the lighter pentagonal weight could have continued to function with a single perforation. Comparable triangular loom weights have been recorded in association with late Iron Age to early Roman activity, spanning the decades before and after the 1st century AD throughout Buckinghamshire. Notable examples are from the settlements and farmsteads recorded in the Milton Keynes area, including at Wavendon Gate (Hylton & Williams 1996, 140), Pennyland (Williams 1993, 121) and Caldecotte (Zeepvat *et al* 1994, 127), with the size of the examples in this assemblage indicating they are relatively small, in the lower quartile of the range of triangular weights from the region.

3.4 The Daub

Andrew Peachey

A total of six fragments (47g) of friable daub were contained in Pits F5002 and F5028. The pale orange daub was manufactured from silty clay with occasional

inclusions of chalk or flint, and is consistent with materials that may have been employed in construction in the Roman period, supporting the early Roman date of the features as indicated by associated pottery.

3.5 The Ceramic Building Materials

Andrew Peachey

Excavations recovered a total of three fragments (133g) of Roman tile and 26 fragments (847g) of post-medieval roof tile.

Ditch F7006 (L7007 Seg. A) contained three fragments (133g) of Roman tile in an orange fabric with inclusions of common quartz (<0.25mm) and sparse red iron rich grains (0.1-0.5mm, occasionally to 2mm). The tile is 16mm thick and although no diagnostic traits remain extant, was most likely tegulae roof tile.

The post-medieval roof tile is entirely comprised of 12mm thick peg tile, manufactured in a red-orange, medium sandy fabric. The fragments contained in Ditches F6223 and F7006 (Seg. B) have a sanded base and slightly irregular edges that suggest they may be Tudor to early post-medieval in date, while the fragments contained in Pits F6653, F8035, F8036, Ditch Terminus F5030, Ditch F8015 have a smooth base and sharp regular edges suggesting an 18th century to Victorian date, although all were probably re-deposited via agricultural processes or as incidental material incorporated in backfilled soil.

3.6 The Slag

Andrew A. S. Newton

Introduction

One hundred and thirty-two pieces (19258g) of slag, originating from 12 contexts, were recovered during archaeological work at Denham Park Farm, Buckinghamshire. The slag was identified on morphological grounds by visual examination.

Visual examination of metalworking residues allows them to be categorised according to morphology, colour, density, and vesicularity. It should be noted, however, that not all slags are diagnostic of a particular metalworking process or part of that process. Slags are also particularly susceptible to morphological and composition alteration by secondary corrosion products.

Reference was made to the National Slag Reference Collection (Dungworth *et al* 2009) where appropriate and to the relevant subject-specific (Bayley *et al* 2008) and regional (Hey and Hind (eds.) 2014) research frameworks.

Results

F6022, L6024 *2 fragments, 4358g.* The slag from this context comprises two large pieces of amorphous material displaying the rippling/mammillation associated with tap slag but also displaying a somewhat contorted shape. A number of impressions of charcoal are evident

and small quantities of charcoal can be observed embedded into the material. A number of stones are also embedded in the material. The overall impression is that this is slag that has not flowed very far from the furnace and may have remained within it when as it cooled. It is possible that the contorted shape may to some extent derive from the material having been raked, or manipulated in some other way, when still plastic. The material itself is dense with broken surfaces revealing significant internal porosity. In colour, it is dark grey to black with extensive orange brown staining. Some slight possible vitrification is evident on some surfaces. It gives little response to the magnet.

F6022D, L6024D *15 fragments, 1333g.*

13 fragments comprise mid to dark grey material with some dark orange staining and occasional vitrification. Material is dense with only occasional internal air pockets. All fragments comprise runs or prills of tap slag clearly broken from a larger accumulation in antiquity.

1 fragment- dark grey to mid brown in colour. Material is dense but porous with rough, dull surfaces. However, the material appears to incorporate frequent glittery crystal structures. Very faint response to magnet. Undiagnostic slag.

1 fragment- light grey to dark orange brown in colour and measuring approx 140mm x80mm x 40mm. This is ceramic material with slag incorporated on what must be considered to be the inner surface; this surface also displays occasional vitrified patches. What appears to be occasional burnt flint is embedded in the material. This is furnace lining material and the grey colour suggests a reducing atmosphere in the furnace.

F6022, L6025 *5 fragments, 2647g.* Black to dark brown in colour. Very dense material with very occasional small air pockets. Variable response to magnet, but indicates that this is likely to derive from iron smelting. These fragments have the rippled/mammilated morphology associated with tap slag. Several surfaces have clear impressions of what would appear to be charcoal. In other cases, charcoal can be seen embedded into the surface of the material.

F6022D, L6025D *3 fragments, 286g.*

Two fragments are a dark grey brown with extensive orange-brown staining. Material is dense but has frequent moderate to large internal air pockets. Some possible fuel impressions on lower surfaces but upper surfaces have rippled/mammilated appearance suggestive of tap slag. One fragment is light grey in colour with dark liver-red patches. This is not slag but could be naturally occurring ironstone and is potentially an example of the raw material from which the slag derives.

F6026, L6027 *4 fragments, 173g.* Morphologically, all of these fragments may be classified as tap slag. Three pieces are dark grey in colour and comprise dense material with little or no internal porosity. Two of these display smooth but dull surfaces, the third has rougher surfaces and displays fragments of white mineral embedded into it. The fourth fragment is dark orange brown in colour with rough granular/powdery surfaces and is strongly magnetic.

F6028B, L6031B *1 fragment, 342g.* Black to light purple grey in colour. The black surface is vitrified and glossy and the other portions are rough and dull and incorporate numerous small stones. This is ceramic material and represents furnace lining. There is some indication of two layers of vitrified material and this is suggestive of furnace repair (Crew 1995; Dungworth *et al* 2012).

F6034, L6035 *6 fragments, 785g.*

Four fragments black to red brown in colour. Dense material with little indication of internal air pockets. Little response to magnet. Tap slag.

Two fragments light grey to dark red brown in colour. Some black vitrified surfaces. High ceramic content indicates that these are pieces of vitrified furnace lining incorporating slag.

F6036A, L6037A *36 fragments, 7096g.* Very dark grey to mid grey brown in colour. Occasional orange brown staining. Very dense material with occasional indications of internal air pockets. No response to magnet. Some pieces display a morphology which is indicative of tap slag with numerous charcoal impressions. However, the incorporation of flints and other stones and portions of furnace lining, in addition to the large size and density of the material, suggest that this is material that has been largely allowed to cool *in situ* within a furnace/kiln.

F6036B, L6037B 3 fragments, 92g.

2 fragments are dark grey in colour, dense material, with no air pockets. One gives strong response to the magnet. Although both pieces are small, their morphology suggests that they may be broken from a larger piece of tap slag.

The third fragment is a light grey colour. It is a hard, pumice-like material with numerous air pockets. It gives no response to the magnet. The upper surface is partially rippled/mammillated, similar to tap slag, but the lower surface would appear to consist of ceramic material, suggesting that this is slag that has become fused to the furnace lining in a reducing atmosphere.

F6036D, L6037D 22 fragments, 1563g.

2 fragments comprising clay furnace lining; one is dark grey fading to light purple grey. The has a black glossy vitrified upper surface with the lower surface fading from dark grey to light purple grey.

2 small fragments comprise rough, amorphous material of dark grey colour with bright orange patches. They are strongly magnetic. Undiagnostic slag.

7 fragments of mid to dark grey, with some light vitrification and bright orange corrosion/oxidisation products, dense material with few internal air pockets. Little response to the magnet. These are all fragments of tap slag broken in antiquity from a larger accumulation of such material.

11 fragments dark grey to black material. Very dense material with few visible internal air pockets. Variable weak response to the magnet. Morphology indicates that this is tap slag. Some fragments have charcoal impressions while others appear to indicate vertical flow. This tap slag is distinguished from the other 7 fragments of tap slag from this context by colour; this suggests that tap slag from two different smelts was deposited into this context.

F6040, L6041 34 fragments, 534g. This material ranges in colour from mid grey to black. It is all dense material with limited internal airpockets. Response to the magnet varies from piece to piece. Some pieces show glossy or vitrified surfaces. Occasional pieces display charcoal impressions. The morphology of all of this material indicates that it comprises small fragments broken from a larger accumulation of tap slag. It is not possible to determine if this all derived from a single smelt to due to slight variations in colour and the lack of clearly conjoining fragments.

F6088, L6089 1 fragment, 49g. Mid orange brown in colour. Rough dull surfaces. Dense, heavy material. Strong response to magnet. Undiagnostic Fe slag.

Discussion

All of the slag in this assemblage appears to derive from iron working. The quantity of tap slag that is present indicates that it derives from the smelting process. No indication of smithing activity, which is perhaps best represented by plano-convex smithing hearth bottoms (Crew 1996), was present within this assemblage. The material was consistently recovered from contexts which have been dated as Bronze Age on the basis of pottery evidence. There is, therefore, a clear discrepancy here. It is not possible that this material represents copper smelting (as would be consistent with the pottery dates); this is indicated by the notable Fe content of the slag and the fact that there is little or no archaeological evidence for copper smelting in the British Isles before the 18th century (Dungworth 2012).

The slag itself appeared almost consistently to be a very dense material with little internal porosity. A general low response to the magnet across the

assemblage suggests a quite efficient smelting process that removed most of the iron from the ore.

The slag assemblage was recovered from one small part of the excavation area, being focussed on features in Grid Squares B10 and C10. A large proportion of the assemblage came from features forming Structure St6019, which has been interpreted as an oven or furnace, with over 8kg of slag coming from F6022, which has been interpreted as a stokehole. In reality, this is unlikely to have been a stokehole as, if this is indeed a smelting furnace, the type of furnace it is likely to represent would have been stoked from the top. The clay-lined bowls that F6022 and F6028 appeared to form are, however, characteristic of the lower portions of shaft furnaces (Crew 1995). The thickness of the clay lining of these bowls is usually a good indicator of the width of the furnace walls (Crew 1995) which were usually over 0.2m thick in order to reduce heat loss (Dungworth *et al* 2012). L6023=6029, the clay and gravel lining of the base of the furnace, was recorded as being between 0.02m and 0.1m thick, suggesting that this furnace may have had unusually thin walls, although it is possible that this lining has suffered degradation or damage during the clearing out of the furnace. The overall evidence suggests that St6019 represents an iron smelting furnace.

The form of the furnace may be slightly unusual. The clay lined basal bowl appears to have been well in excess of 2m in length and approximately 0.6m in width. Shaft furnaces were usually approximately 0.3m in (internal) diameter, although larger examples are known (Dungworth *et al* 2012). This suggests that the furnace may have been of unusual form and structure. Plates 1 and 2, however, suggest that St6019 may actually have comprised two shaft furnaces, each cut into a slight bank and perhaps positioned with the slag outlets facing each other. In this arrangement it appears that the tapped slag would have accumulated in the area between the two furnaces which would have been at the same height or slightly lower than the interior of the furnaces.

The slag appears not to be *in situ* as the material from F6022, for example, comprises tap slag and furnace lining suggesting that the pit that was left after deconstruction of the furnace was backfilled with waste material from the operation and destruction of the furnace, rather than simply being left to fall into repair and subsequent disintegration. A large quantity of slag and furnace lining was also deposited into penannular gully F6036. It is possible that this was used as a regular dump for the deposition of slag over a prolonged period of use for the furnace but alternatively could derive from a single event such as the demolition of the furnace.

The date of the furnace structure is not known; the Bronze Age pottery recovered from the various fills of the various features associated with St6019 must be considered to be residual. The furnace may therefore be contemporary with the early Romano-British phase of activity that has been recorded during other phases of archaeological work at Denham Park Farm. Crew (1995) notes that the amount of slag which can be expected at a primary iron production site varies considerably by period; at prehistoric sites even a few tens of kilograms is significant, whereas Roman and Medieval sites can produce quantities

varying from approximately one tonne to hundreds of tonnes. This may indicate that St6019 represents small scale Roman smelting activity.



Plate 1. St6019 view east, showing furnace bases at either end of the structure.



Plate 2. St6019 view south, showing furnace bases at either end of the structure.

3.7 The Environmental Samples

Dr John Summers

Introduction

During multiple phases of excavation at Denham Park Farm, Buckinghamshire, 120 bulk soil samples for environmental archaeological analysis were taken and processed. Sampling was directed towards features attributable to the two main periods of activity at the site: the late Bronze Age (Phase 2) and early Romano-British (Phase 3).

The investigation of carbonised plant macrofossils and charcoal from these deposits was intended to examine the plant based economy of the site during its main periods of occupation. In addition, charcoal, which generally represents fuel debris, was used to examine the selection of fuel resources for the smelting of iron in the double furnace identified from Phase 3.

Methods

Samples were processed at the Archaeological Solutions Ltd facilities in Bury St. Edmunds using standard flotation methods. The light fractions were washed onto a mesh of 500µm (microns), while the heavy fractions were sieved to 1mm. The

dried light fractions were sorted under a low power stereomicroscope (x10-x30 magnification). Botanical and molluscan remains were identified and recorded using reference literature (Cappers *et al.* 2006; Jacomet 2006; Kerney and Cameron 1979; Kerney 1999) and a reference collection of modern seeds. Potential contaminants, such as modern roots, seeds, and invertebrate fauna were also recorded in order to gain an insight into possible disturbance of the deposits.

Results

The data from the bulk sample light fractions are presented in Table 9.

Phase 1 - Late Neolithic

A single sample was present from late Neolithic pit fill L6451 (F6449) but no carbonised plant macrofossils were present. A small concentration of oak charcoal (*Quercus* sp.) represented the only environmental archaeological material in this sample.

Phase 2 - Late Bronze Age

Late Bronze Age deposits were targeted with 30 samples. Ubiquity calculations show that cereal remains were present in 43.33% of samples, demonstrating that they were in relatively common usage across the site during the late Bronze Age. The most ubiquitous cereal was barley (*Hordeum* sp.) in 30% of samples, followed by wheat (*Triticum* sp.) in 20%. Where identifiable, the barley grains were hulled and included asymmetric grains indicative of hulled six row barley (*Hordeum vulgare* var. *vulgare*). Wheat remains were dominated by glume wheat grains (*Triticum dicoccum/ spelta*). Chaff remains were rare and the only identifiable glume base in the Phase 2 deposits was spelt (*T. spelta*) from pit fill L6462 (F6461). In addition were two free-threshing type wheat grains (*T. aestivum/ turgidum* type) in L6237. Free-threshing type wheat is known at other sites from this period (Campbell and Straker 2003, 23) but may not have been a crop in its own right during the Bronze Age.

Densities of carbonised remains were low, with the highest concentration of remains being 1.65 items per litre in pit fill L6462 (F6461). This suggests that the material was present as dispersed carbonised debris rather than discrete deposits resulting from intensive nearby crop processing activities. The limited quantities of chaff are likely to be a reflection of this, since they are more fragile and vulnerable to mechanical damage if the material spent much time on surrounding surfaces prior to deposition.

Non-cereal taxa were recovered which are likely to have originated as arable weeds. These included goosefoot (*Chenopodium* sp.), knotweed (*Polygonum aviculare*), vetch/ wild pea (*Vicia/ Lathyrus* sp.), cleavers (*Galium aparine*), chess (*Bromus secalinus* type), and other wild grasses (Poaceae). The presence of

cleavers, which is more common in autumn-sown cereals, may suggest that the spelt wheat was grown as a winter crop.

In the richest sample (Sample 6.667 of L6462) cereals were dominated by wheat remains over barley but no other sample was rich enough to make a more detailed comparison of the numeric dominance of either crop. The non-cereal remains in L6462 were dominated by large seeded grasses, including chess-type (*Bromus secalinus* type). These may have represented tolerated weeds within the crop, potentially acting as a buffer against crop failure (e.g. Campbell 2000, 48-50).

Phase 3 - Early Romano-British

A total of 37 bulk samples were taken from early Romano-British deposits, including numerous samples associated with furnace F6022/F6028. Ubiquity calculations showed a lower percentage presence of cereals in samples from the early Romano-British period, with cereal remains recorded in 18.92% of samples. Barley was again most ubiquitous (8.11%), followed by wheat (5.41%) and oat (*Avena* sp.; 2.7%). To a degree, the lower ubiquity of cereals may have been affected by the nine samples associated with the furnace deposits, which had little association with the use and processing of cereals.

The fills of pit F6088 were rich in carbonised remains, in particular seeds of non-cereal taxa. Cereal remains from L6089 and L6122 included hulled barley, wheat and oat, although in rather low concentrations. Non-cereal remains were richest in L6089 and were dominated by goosefoot (*Chenopodium* sp.) and black bindweed (*Fallopia convolvulus*). Goosefoot species tend to have a preference for fertile soils, as do knotgrass (*Persicaria* sp.) and knotweed (*Polygonum aviculare*), which may reflect the cultivation of good soils and some degree of improvement through manuring. A single sloe stone (*Prunus spinosa*) was also recovered, which may represent gathered fruits, or perhaps an accidental addition to the hearth with gathered firewood.

Charcoal from deposits L6024D, L6025D and L6030B, associated with the furnaces excavated on the site, was also identified (Table 10). The bulk of the material was composed of oak (*Quercus* sp.), which included fragments with tyloses in the vessels indicative of heartwood. Also present were a small number of fragments of beech (*Fagus* sp.) and cherry (*Prunus* sp.). This indicates that the primary fuel employed was oak, which is dense and slow-burning, making it ideal for industrial purposes. It is likely that it was burned as charcoal.

Site code	Sample number	Context	Feature	Feature type	Volume (litres)	Phase	Fraction	Fagus		Quercus		Prunus		Diffuse		Indet./unidentified	Total weight (g)
								COUNT	WEIGHT (g)	COUNT	WEIGHT (g)	COUNT	WEIGHT (g)	COUNT	WEIGHT (g)		
AS1009	6	6024D	6022	Furnace	20	3	>5mm	-	-	74	5.087	-	-	-	-	0.955	6.042
							2-5mm	-	-	100	2.093	-	-	-	-	15.175	17.268
							Tot	-	-	174	7.18	-	-	-	-	16.13	23.31
AS1009	9	6025D	6022	Furnace	10	3	>5mm	-	-	74	6.182	1	0.038	-	-	0.292	6.512
							2-5mm	-	-	100	1.831	-	-	-	-	5.638	7.469
							Tot	-	-	174	8.013	1	0.038	-	-	5.93	13.981
AS1009	10	6030B	6028	Furnace	20	3	>5mm	1	0.039	30	3.021	-	-	-	-	0.655	3.715
							2-5mm	-	-	59	1.256	-	-	1	0.024	4.744	6.024
							Tot	1	0.039	89	4.277	-	-	1	0.024	5.399	9.739

Table 10. Charcoal quantification from furnace deposits

Phases 4 and 5 - Medieval and Post-Medieval

A single Phase 4 deposit was sampled (occupation layer L6400) and two post-medieval deposits were investigated (ditch fills L5031 and L7007A). None of these contained carbonised macrofossils and only a small concentration of indeterminate charcoal fragments were present in L5031.

Undated

Some 49 samples were taken from undated deposits, largely representing the fills of discrete pits and postholes. Carbonised remains were generally sparse, much like the pattern seen in Phases 2 and 3.

Discussion and conclusions

The carbonised plant remains from late Bronze Age Phase 2 are quite typical of the period. The scattered, low-level occurrence of cereal remains reflects the widespread use and processing of cereals. This was most likely carried out in a piecemeal fashion as semi-processed spikelets were removed from storage for day-to-day processing (e.g. Stevens 2003, 71-73). Evidence suggests that both hulled barley and glume wheat were significant in the economy, although insufficient evidence exists to determine the relative importance of each. Whether spelt wheat was accompanied by emmer wheat is unclear, as is the status of free-threshing type wheat. At other late Bronze Age sites, both glume wheat types have been recorded and free-threshing type wheat has also been found to make a contribution (e.g. Straker 2000; Campbell 2004; Greig 1991). Hulled barley was also predominant at this time (*ibid.*). Evidence that was absent from Denham Park Farm, which has been recognised elsewhere, were other potential crop plants and contaminants. These include oat (*Avena* sp.), identified at Potterne for example (Straker 2000), rye (*Secale cereale*), identified in waterlogged and charred assemblages from Runnymede Bridge (Greig 1991),

and flax (*Linum usitatissimum*), identified in mineralised deposits at Potterne (Carruthers 2000) and waterlogged deposits at Runnymede Bridge (Greig 1991) and Reading Business Park (Campbell 1992), among others. It is likely that pulses also made a contribution to the late Bronze Age diet (Campbell and Straker 2003) but are not regularly preserved in significant concentrations. It is likely that the late Bronze Age diet and economy at Denham Park Farm was considerably more diverse than the available evidence from carbonised remains suggests.

During the early Romano-British period, there was little evidence for any kind of agricultural intensification focussed on the present site. Cereal remains were generally scattered and present in low densities, with no evidence of bulk processing activities for large scale storage or export. The deposit from L6089, which was rich in seeds of non-cereal taxa, may represent a deposit of crop processing by-products, in which chaff elements have failed to survive. Alternatively, these plant remains could have originated as plants from waste ground that was cleared and burned during activity on the site. The low representation of carbonised remains may indicate that the excavated features were peripheral to the main focus of Roman domestic settlement and agricultural processing activities.

The analysis of charcoal remains from the furnace deposits has shown that oak was the primary fuel. It is likely that this was burnt as charcoal and may have come from nearby managed woodland.

Site code	Sample number	Context	Feature	Description	Phase	Volume taken (litres)	Volume processed (litres)	% processed	Cereals			Non-cereal taxa		Hazelnut shell		Charcoal		Molluscs		Contaminants					Other remains	
									Cereal grains	Cereal chaff	Notes	Seeds	Notes		Charcoal>2mm	Notes	Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules			
Phase 1 - Late Neolithic																										
AS1009	6.66	6451	6449	Fill of Pit	1	40	40	100%	-	-	-	-	-	-	-	X	Quercus sp.	-	-	XX	-	X	-	-	-	-
Phase 2 - Late Bronze Age																										
AS1009	6.3	6006	6005	Fill of Pit	2	10	10	100%	X	-	HB (1), NFI (1)	-	-	-	-	X	-	-	-	XX	-	-	-	-	-	-
AS1009	6.4	6012	6009	Fill of Pit	2	30	30	100%	X	-	NFI (1)	X	-	-	-	XXX	Quercus sp.	-	-	XX	-	X	-	-	-	-
AS1009	6.20	6072	6071	Fill of Pit	2	20	20	100%	X	-	HB (1)	-	-	-	-	X	-	-	-	XX	-	X	-	-	-	-
AS1009	6.22	6080	6079	Fill of Pit	2	10	10	100%	X	-	NFI (1)	-	-	-	-	X	-	-	-	XX	-	X	-	-	-	-
AS1009	6.23	6090	6079	Fill of Pit	2	10	10	100%	X	-	HB (1)	-	-	-	-	-	-	-	-	XX	-	-	-	-	-	-
AS1009	6.26	6092/ 6094	6091/ 6093	Fill of Postholes	2	20	10	50%	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-
AS1009	6.27	6101/ 6103	6100/ 6102	Fill of Postholes	2	20	10	50%	-	-	-	X	-	-	-	-	-	-	-	X	-	X	-	-	-	-
AS1009	6.35	6134	6133	Fill of Pit	2	20	10	50%	X	-	NFI (1)	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-
AS1009	6.41	6205	6204	Fill of Pit	2	20	10	50%	-	-	-	-	-	-	-	X	-	-	-	X	-	X	-	-	-	-
AS1009	6.45	6226	6225	Fill of Pit	2	20	10	50%	X	-	Hord (1)	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-
AS1009	6.46	6227	6225	Fill of Pit	2	20	10	50%	-	-	-	-	-	-	-	XX	Quercus sp., Ring porous	-	-	X	-	-	-	-	-	-

AS1009	6.72	6469	6468	Fill of Pit	2	20	20	100%	X	-	HB (1), Hord (1), Trit (1), NFI (1)	X	Caryophyllaceae (1)	5 (0.056g)	XX	Quercus sp.	-	XX	-	X	-	-
AS1009	6.73	6491	6490	Fill of Pit	2	10	10	100%	-	-	-	-	-	-	X	-	XX	-	X	-	-	
AS1009	6.74	6507/ 6508	6506	Fill of Pit	2	10	10	100%	-	-	-	-	-	-	-	-	XXX	-	X	-	-	
AS1009	6.75	6501	6500	Fill of Pit	2	40	20	50%	-	-	-	-	-	-	XX	Quercus sp., Diffuse porous	-	X	-	X	-	
AS1009	6.76	6524	6523	Fill of Pit	2	10	10	100%	-	-	-	-	-	-	-	-	XX	-	X	-	-	
AS1009	6.87	6604C	6603	Fill of Ditch	2	40	20	50%	-	-	-	-	-	-	X	-	X	-	-	-	-	
AS1009	6.93	6650	6649	Fill of Pit	2	20	10	100%	-	-	-	-	-	-	X	-	X	-	-	-	-	
AS1009	6.94	6660	6659	Fill of Posthole	2	10	10	100%	-	-	-	-	-	-	X	Quercus sp.	-	X	-	X	-	-

Phase 3 - Early Romano-British

AS1009	5.2	5005B	5004	Fill of Ditch	3	40	40	100%	-	-	-	-	-	-	XXX	Quercus sp.	-	XX	-	X	-	-
AS1009	5.3	5011	5010	Fill of Pit	3	10	10	100%	-	-	-	-	-	-	X	-	X	-	-	-	-	
AS1009	5.5	5019B	5018	Fill of Ditch	3	10	10	100%	-	-	-	-	-	-	XX	Quercus sp.	-	X	-	-	-	
AS1009	5.7	5029	5028	Fill of Pit	3	10	10	100%	-	-	-	-	-	-	X	-	XX	-	X	-	-	
AS1009	5.9	5033	5032	Fill of Pit	3	10	10	100%	X	-	NFI (1)	-	-	-	XX	Quercus sp., Diffuse porous	-	X	-	-	-	
AS1009	6.1	6008	6007	Fill of Pit	3	40	40	100%	X	-	NFI (1)	-	-	-	-	Quercus sp.	-	XX	-	-	-	
AS1009	6.5	6024A	6022	Furnace	3	10	10	100%	-	-	-	-	-	-	XX	Quercus sp.	-	XX	-	X	-	
AS1009	6.6	6024D	6022	Furnace	3	20	20	100%	-	-	-	X	Chenopodium sp. (1)	-	XXX	Quercus sp.	-	XX	-	X	-	
AS1009	6.7	6025A	6022	Furnace	3	20	20	100%	-	-	-	-	-	-	X	-	XX	-	X	-	-	
AS1009	6.8	6025D	6022	Furnace	3	20	10	50%	-	-	-	-	-	-	XX	Quercus sp.	-	X	-	X	-	
AS1009	6.9	6025D	6022	Furnace	3	10	10	100%	-	-	-	-	-	-	XXX	Quercus sp.	-	X	-	X	-	

AS1009	6.32	6122	6088	Fill of Pit	3	30	30	100%	XX	-	HTB (1), HB (23), Hord (38), Hord germ (1), Trit (4), NFI (50)	X	Chenopodiaceae (2), <i>Fallopia convolvulus</i> (1), <i>Gallium</i> sp. (1), <i>Bromus</i> sp. (1), Large Poaceae (1)	-	XX	<i>Quercus</i> sp.	X	<i>Pupilla muscorum</i>	XX	-	X	-	-
AS1009	6.39	6029	6026	Fill of Pit	3	30	30	100%	-	-		-		-	XXX	<i>Quercus</i> sp.	-	-	XX	-	X	-	-
AS1009	6.53	6269D	6274	Fill of Ditch	3	40	40	100%	-	-		-		-	XX	<i>Quercus</i> sp.	-	-	XX	X	X	-	-
AS1009	6.69	6471	6470	Fill of Pit	3	30	30	100%	-	-		-		-	X	-	-	-	XX	-	X	-	-
AS1009	6.70	6465A	6464	Fill of Linear	3	10	10	100%	-	-		-		-	XX	<i>Quercus</i> sp.	-	-	X	-	X	-	-
AS1009	6.89	6628	6627	Fill of Pit	3	40	40	100%	-	-		-		-	XX	Root wood?	-	-	XX	-	X	-	-
AS1009	6.90	6637	6627	Fill of Pit	3	20	20	100%	-	-		-	1	-	XX	Diffuse porous, Root wood?	-	-	X	-	X	-	-
AS1009	6.95	6661	6659	Fill of Pit	3	10	10	100%	-	-		-		-	X	<i>Quercus</i> sp.	-	-	X	X	X	-	-
AS1009	6.96	6662	6659	Fill of Pit	3	10	10	100%	-	-		-		-	X	-	-	-	X	-	X	-	-
AS1009	6.97a	6638	6627	Fill of Pit	3	5	5	100%	-	-		-		-	X	-	-	-	X	-	X	-	-
AS1009	6.97b	6681	6660	Fill of Pit	3	40	20	50%	-	-		-		-	X	-	-	-	X	-	X	-	-
AS1009	6.99	6701	6700	Fill of Ditch	3	40	20	50%	-	-		-		-	-	-	-	-	XX	X	X	-	-
AS1009	6.101	6729A	6728	Fill of Curvilinear Feature	3	30	20	67%	-	-		-		-	XX	<i>Quercus</i> sp.	-	-	XX	-	X	-	X
AS1009	6.102	6737	6736	Fill of Pit	3	10	10	100%	-	-		-		-	-	-	-	-	X	-	-	-	-
AS1009	6.103	6741	6740	Fill of Pit	3	40	40	100%	-	-		-		-	XXX	<i>Quercus</i> sp.	-	-	XX	-	X	-	-
AS1009	7.2	7013	7012	Fill of Pit	3	20	20	100%	-	-		-		-	X	-	-	-	X	-	X	-	-
Phase 4 - Medieval																							
AS1009	6.77	6400	-	Occupation layer	4	40	20	50%	-	-		-		-	-	-	-	-	XX	-	-	-	-

4 DISCUSSION

4.1 The distribution of the archaeology

The excavation revealed a multi-period archaeological landscape with the most extensive activity dating to the late Bronze Age and Romano-British periods. Further, but quite limited, evidence of Neolithic, medieval, post-medieval and modern activity was recorded.

Archaeological features were recorded across the site (Fig. 3) but were most concentrated in the most westerly of the excavation areas (Area 6). Towards the east (Areas 1, 2 and 7) features were more sparsely distributed and those which were not undated consisted of a handful of Roman features and several modern ditches. The central part of the site (Areas 3, 4 and 5) was comparatively archaeologically blank. A small number of features were recorded in these areas (F4003 and F4005) but these were undated. The distribution and alignment of features recorded in Area 6 suggested that these features may have continued towards the east into Area 5, and possibly beyond. The absence of late Bronze Age, Roman and other features in this part of the site suggests that it has been significantly effected by agricultural practices such as ploughing which have caused extensive damage to pre-existing archaeological features and deposits.

It is possible that the western part of the site was preferred as a focus of activity, particularly in the later Bronze Age and earlier, as it offered views across the valley of the Colne to the east and much of the surrounding landscape to the west. This position may have made any settlement associated with the prehistoric activity recorded here a prominent feature in the landscape, the wide and sweeping views may have provided plenty of warning of the approach of other groups or individuals travelling through this landscape or to the site, and it would have allowed easy access to grazing sites lower down in the valley (should these areas not have contained other settlements) but at a suitable distance from areas prone to flooding.

4.2 The Neolithic activity

Neolithic evidence at Denham Park Farm

The Neolithic period was represented at the current site by an assemblage of worked flint and two intercutting pits (F6447 and the stratigraphically more recent F6449). The worked flint assemblage appeared to belong to a technology that was most prevalent in the early Neolithic period but which continued to form an important component of the flint toolkit throughout the late Neolithic (Peachey Ch. 3.1).

None of this apparently Neolithic worked flint assemblage was recovered from either of the two Neolithic cut features that were identified during excavation. These were dated by eight sherds (22g) of pottery bearing decoration characteristic of the Durrington Walls sub-style of late Neolithic Grooved ware.

Pits form the majority of the evidence for Neolithic settlement sites in both the Solent-Thames region (Bradley 2014, 92,101) and in the East Anglian region, which includes neighbouring Hertfordshire (Medlycott and Brown 2008, 16). Such pits can be found in isolation or as clearly-defined clusters. They may also be scattered over an extensive area of land (Bradley 2014, 92). Such patterns of pits constitute the most frequent evidence of settlement in Neolithic south-eastern England as a whole and often these pits have no coherent plan (Smith 1974, 105). Although it is hard to interpret the different patterns and plans in which these pits occur they presumably reflect differences in the duration and intensity of occupation (Bradley 2014, 92). Two pits, one of which cuts the other, might therefore only represent brief occupation of this area.

The content of these pits is often interpreted as material that was deposited in to them when a living site was abandoned (Bradley 2014, 92). Garrow (2006, 59) indicates that the very process of depositing this apparent refuse material into the pits may have had some kind of significance to the people that were carrying out this act. It is possible that there is structure to the way in which this material was deposited and it is even possible that midden material or refuse was deliberately curated for use in acts of structured deposition (Garrow 2006). Garrow (2007, 12) has noted the characteristics of pit fills and the artefacts located therein from Neolithic sites in East Anglia. His study showed that whole pots, without exception, were not present, flint assemblages were comprised primarily of working waste, very few bones of any kind were present (although this may be explained by the acidic soils of the sites included in the study), and often the artefacts had been deposited within a soil matrix containing charcoal-rich material, including charred hazelnut shells and seeds. With the exception of the presence of pottery, the Neolithic features recorded at Denham Park Farm did not conform to this pattern (see *Appendix 1, table i*). It is possible that this represents regional variation, an area of the study of Neolithic pits which has only really started to emerge with the realisation that such features appear not to be limited only to certain regions of the British Isles (Garrow 2011, 219-222). That the evidence from the Denham Park Farm pits represents such variation, however, seems unlikely as Neolithic pits recorded elsewhere in Buckinghamshire, such as those at Broughton Manor Farm (Atkins and Rees 2008), Stacey Bushes, Milton Keynes (Green and Sofranoff 1985, 10-37), and Caldecote Farm, Willen (Hancock and Cuthbert 2011) arguably conform more closely to the model suggested by Garrow (2007, 12).

Neolithic activity at Denham Park Farm in wider context

A considerable amount of evidence for Neolithic activity has been recorded in the wider area, including possible enclosures at Stoke Hammond (Edwards 2013), a barrow excavated in the 1930s at Whiteleaf Hill, Princes Risborough (Hey *et al* 2007, 8), and significant occupation evidence in the form of middens, pits, and other features at the Eton Dorney Rowing Lake (Longworth and Cleal 1999, 179; Allen *et al* 2004; Barclay 2013, 395). Within an approximate 5km radius of the site at Denham Park Farm, however, the majority of the evidence for Neolithic occupation takes the form of spot finds and surface scatters of lithic

artefacts or such artefacts present as residual material in later features (Fig. 31). There are occasional instances of finds of pottery as spot finds (e.g. Hertfordshire HER 31233) but these, along with cut features are much rarer. It is of note, therefore, that cut features have been recorded in close proximity to the current site at Mopes Farm, which lies approximately 250m to the west-north-west. These include pits of Neolithic to Bronze Age date (HER 0532300000, 0532302000; Fig. 31) and a possible former ground surface of this date (HER 0532301000; Fig. 31). While the dating of these features and contexts is far from conclusive, it is possible that they are broadly contemporary with Pits F6447 and F6449 and therefore potentially represent a slight concentration of Neolithic activity or repeated reuse of this general area.

The presence of a possible round barrow at Savay Farm (HER 0015000000), to the south-east, and a possible long barrow at Bulstrode Camp (HER 0805600000; Gover 2003), to the south-west demonstrate that there was a, presumably mobile or semi-mobile, community regularly using this area who wished to create a fixed communal focal point in the landscape (c.f. Cooney 1997). This landscape is unlikely to have been as heavily forested as it is generally considered to have been during the preceding Mesolithic (Field 2004, 155). The general trend seen in pollen and molluscan evidence suggest gradually increasing forest clearance but with notable regional variation and evidence for phases of regeneration in some areas (Whittle 1999, 60). By the beginning of the Neolithic some areas had already been significantly modified by deliberate clearing and accidental burning and by natural events such as storms. The vegetation cover will also have been subject to the effects of wild animals and by the ecological suitability of different areas to support different types of woodland, indeed certain areas of chalk downland may never have been covered by primary forest at all. As the Neolithic progressed, woodland management practices such as coppicing and pollarding would have had an impact on the presence and extent of woodland (Bradley 2014, 87). In the slightly more elevated landscape surrounding Denham, conditions are likely to have been notably different to the river valley sites such as the Eton Dorney Rowing Lake (Longworth and Cleal 1999, 179; Allen *et al* 2004; Barclay 2013, 395). Differences in apparent density of occupation between riverine sites and sites in other parts of the landscape might, however, be explained by differing preservation conditions. A small concentration of oak charcoal present in Pit F6449 (Summers Ch. 3.7) suggests that oak was a readily available resource but the less concentrated and dense settlement evidence, in comparison to the riverine sites of the nearby Thames valley, such as Eton Dorney, suggests that the groups occupying this area may have had a more mobile lifestyle, potentially associated with a form of transhumant agriculture and therefore perhaps suggesting a more open landscape.

4.3 The late Bronze Age

The overall character of the late Bronze Age activity at Denham Park Farm

The late Bronze Age activity consisted of potential boundary ditches and a variety of pits and postholes, most of which were widely spaced but some of which were organised in to loose clusters, at least one of which is potentially representative of a structure (St6306).

During the middle Bronze Age in southern England, settlement size and morphology is fairly uniform, consisting of clusters of two to five roundhouses accompanied by ponds, granaries and storage pits (Brück 1999; Brück 2007, 25). These were often set within in an enclosure and associated field system (Brück 2000, 285). By the later Bronze Age, which the Phase 2 archaeology at Denham Park Farm represents, there was increasing diversification in settlement types, with settlement similar to those of the middle Bronze Age still present in addition to a range of other site types, including ringworks, early hillforts and hilltop enclosures, midden sites and timber platforms in wetland contexts (Brück 2007, 25). The archaeology at Denham Park Farm appears not to conform to any of these types of settlement; only one potential roundhouse is present (and doubts must be raised about the structural configuration of this possible building; see below) and although it lies in close proximity to a a long, straight ditch, it does not appear to have been enclosed in anyway. Across most of northern and western Europe, late Bronze Age settlement appears to be dominated by scattered farmsteads, with nucleated settlement rare, and particularly in Denmark and the Low Countries these were often occupied by a single household group (Brück and Fokkens 2013, 90). It is possible that the activity recorded here represents a similar type of settlement, consisting of a single household and associated features. Alternatively, and as is suggested by the positioning of Ditch F6603, further evidence for late Bronze Age activity exists beyond the limits of excavation, especially to the south, or was present in the area adjacent to the east, which was subject to excavation in 2014 but which appears to have suffered significant truncation or damage by later agricultural activity, effectively removing any archaeological evidence which may have existed in this area.

The late Bronze Age pottery associated with the Phase 2 features belongs to the post-Deverel-Rimbury tradition. The assemblage is comparable to the style defined at the important Thames-side settlement at Runnymede Bridge (Peachey Ch. 3.2; Needham 1996) and has affinities with the post-Deverel-Rimbury 'plain ware' assemblage at Petters Sports Field, Egham (O'Connell 1986, 75). Individual elements of the assemblage are also comparable to the assemblages at other notable local sites such as Reading Business Park (Morris 2004), Aldermaston Wharf (Bradley 1980), and Knight's Farm (Bradley 1980). Significant elements of the pottery assemblage are considered to represent deliberate deposition of discarded and broken domestic detritus, possibly originally accumulated in above-ground middens.

The carbonised plant remains recovered from late Bronze Age contexts are typical of the period. The scattered, low-level occurrence of these remains

suggests widespread use and processing of cereals, which were probably removed from storage and prepared for use as they were needed. It appears that hulled barley and glume wheat were of importance in the local late Bronze Age economy but it also seems that some other crops that are likely to have been used here, due to their identification at nearby contemporary sites, were not represented in the assemblage (Summers Ch 3.7). The presence of cultivated crops indicates that there must have been some degree of permanent settlement, supporting the suggestion that further evidence for house structures, enclosures, and the other appurtenances of domestic activity must exist outside of the excavated areas. However, it is understood that there was some fluidity of movement in this period, as is known to have been the case in the earlier Bronze Age (Ashwin 1996; Newton 2013, 16), with people moving around and congregating at certain locations, particularly midden sites, on a seasonal basis (Brück 2007, 26). Work at the midden site at Runnymede in Surrey has shown that the materials present here, such as pottery, were brought to the site from a wide area (Longley 1980; Needham and Bimson 1988; Needham 1991; Needham and Spence 1996; Brück 2007, 26). Some possibility, therefore, remains that this site was only occasionally (but perhaps regularly) occupied, which could potentially explain the scattered distribution of the pits and other features present here.

Some consideration needs to be given to the presence of struck flint at the site. Most of this has been identified as being of Neolithic date. However, twelve pieces (49g) of the total 41 fragments (360g) of flint were recovered from features which have been dated as late Bronze Age. While it is feasible that this material is residual and represents activity more closely associated with Phase 1 occupation of the site, it is equally possible that at least some of the assemblage represents late Bronze Age flintworking. During the middle and later Bronze Age, flintworking tends to be casual and opportunistic, and flint was generally only knapped when needed, used for the specific purpose in mind and readily discarded (Young and Humphrey 1999). Worked flint of these periods tends, therefore, to be recovered only in small quantities and scattered around settlements and field-systems (Bishop 2007, 15). This would be a fitting description of the Denham Park Farm lithic assemblage and, as a large proportion of the assemblage (34 fragments, 174g) has been identified as blade-like debitage and there is evidence for substantially more occupation of Bronze Age date than of Neolithic date, it is possible that at least some of the lithic assemblage is of late Bronze Age origin, perhaps to some extent mimicking, either by accident or design, earlier lithic technologies.

The function and character of Structure 6306

St6306 consisted of a dense cluster of 68 pits and postholes. During excavation, it was identified as a structure due to the close spacing of the features and the presence of cultural material in the fills in some of the constituent features. There is, however, limited structural configuration evident in the plan of the structure.

The roundhouse was the standardised form of domestic structure which predominated throughout the later Bronze Age and Iron Age (Brück 2000, 287). In the Solent-Thames region, within which the site lies, simple post-built roundhouses, sometimes with porch-like structures marking their entrances become apparent from the middle Bronze Age onwards and post-built roundhouses become much more common in the later Bronze Age (Lambrick 2014, 135) It is therefore reasonable to suggest that complex domestic structures at Bronze Age settlement sites are most likely to be roundhouses. The groundplan of St6306 superficially appears to comprise a vaguely ring-like accumulation of features with a relatively blank patch within this ring. This impression, however, is mainly given by the groups of intercutting pits located to the north-west and south-east of the structure. A similar situation was noted amongst the late Bronze Age features at Mill House Farm, Chadwell St Mary, Essex, where few of the identified posthole groups displayed clear structural configurations including those which were identified as structures during excavation (Newton 2017). A few of the many posthole groups identified at Mill House Farm were considered to be comparable to some of the buildings recorded at the buildings at Mucking, also in Essex (Bond 1988, fig 8). However, none of these possible buildings were truly circular, although oval-shaped buildings are not uncommon in the Bronze Age (c.f. Drury 1977, 23; Bradley 1970, 322-323), and they displayed less clarity of structural configuration than examples from contemporary sites in the vicinity. It is possible, therefore, that structure St6306, like those at Mill House Farm (Newton 2017), represents a roundhouse structure which has not left a particularly clear ground plan due, possibly, to taphonomic processes or phases of repair and rebuilding during its lifespan. Contemporary sites in closer proximity to Denham Park Farm than these Essex examples, such as Hartshill Copse, West Berkshire (Collard *et al* 2006, figs. 3 & 5), Green Park, Reading (Brossler *et al* 2003, figs. 3.10 & 3.11), and Building 500 at Bancroft, Milton Keynes (Williams and Zeepvat 1994, fig. 11), however, contain roundhouse structures with much clearer circular ground plans.

Closer inspection of the ground plan of St6306 suggests that it may in actual fact have been a rectangular building. Several straight lines of postholes are evident, whereas they do not appear to form a clear ring, and these straight lines may be considered to represent several possible configurations (Fig. 32). Despite the predominance of the roundhouse in the later Bronze Age (Brück 2000, 287), rectangular structures of this date are known, such as Structure X at Hartshill Copse, West Berkshire (Collard *et al* 2006, fig. 5). It seems possible, therefore, that St6306 may have been a small rectangular building, possibly representing an ancillary structure of some kind, appended to or associated with domestic structures beyond the limit of excavation. The number of postholes and the various permutations that the ground plan might indicate suggest that any structure at this location might have been rebuilt, repaired, or modified, perhaps more than once. The groups of intercutting pits that flank the posthole group to the north-west (F6413, F6415, F6417, F6419, F6421, F6423 and F6384), north-east (F6430, F6432 and F6434) and south-east (F6315, F6317, F6319, F6321 and F6323) may represent storage or refuse pits directly associated with the structure.

The function of the late Bronze Age enclosure ditches

Two ditches were assigned a late Bronze Age date on the basis of pottery present within their fills. Ditch F6154 ran on a north-west to south-east alignment from Grid Square B9 to Grid Square D7. It contained a total of four sherds (12g) of late Bronze Age pottery and no other finds. It was, however, re-cut along the majority of its identifiable length by Phase 3 (Roman) Ditch F6274. F6274 was a coherent and integral part of a Roman ditch system and so it may be more than coincidence that this Roman feature so precisely follows the earlier one. It is possible that F6154 remained as a visible feature in the landscape and was re-used as a boundary in the later period. Modern Ditch F6152 ran on a similar alignment, perhaps suggesting that the local topography made this a natural and logical way in which to divide up the landscape. Alternatively, the fairly small quantity of pottery recovered from F6154 may be residual and may have arrived in what is, in actual fact, a Roman ditch due to the disturbance by this feature of one of the numerous late Bronze Age pits which occur in this area.

Similarly, F6603, the curving Phase 2 ditch at the southern end of the westernmost area of excavation ran parallel to Roman Ditch F6573, suggesting a spatial/functional relationship. However, dating evidence was slightly more secure for F6603, consisting of 23 sherds (131g) of late Bronze Age flint and sand tempered pottery, than that associated with F6154. The possibility that topographic factors or that earlier systems of enclosure/land division influenced later system is behind the similarity in alignment of this ditch to the surrounding Roman ditches must be considered in the same way that it is for Ditch F6154.

At the Reading Business Park site, very regular, rectilinear ditched enclosures of middle to late Bronze Age date were recorded (Brossler *et al* 2003, fig. 3.10). The late Bronze Age to early Iron Age rectilinear enclosures recorded at Springfield Quarry Extension, Beaconsfield, Buckinghamshire, have been described as being of regional significance, relatively rare for the eastern region, and as representing agricultural intensification (Phillips 2006, 14). These are very similar to the Bronze Age enclosures and field systems which lie approximately midway between the North and South Rings at Mucking, Essex (Bond 1988, fig. 2) and in close proximity to the ringwork recorded at South Hornchurch, Essex (Guttmann and Last 2000, figs. 2 & 4). Despite the straight line followed by F6154, there is little indication of the late Bronze Age ditches forming enclosures of such regularity. The form of F6603 is more reminiscent of the boundaries recorded at sites such as Stratford Close, Aston Clinton, Bucks (Stansbie 2016, fig. 3), Mill House Farm, Chadwell St Mary, Essex (Newton 2017, fig. 20), and Game Farm, Brandon, Suffolk (Gibson 2004, fig. 10), which, although forming clear and distinct enclosures, took a more organic, undulating form than the regular straight lines at Reading Business Park, Springfield Quarry, South Hornchurch and Mucking. At Game Farm, Brandon (Gibson 2004) and Chadwell St Mary (Newton 2017) these undulating, gently curving ditches appear to have been directly associated with domestic activity and house structures. At Reading Business Park and Springfield Quarry the straight, regular ditches forming rectilinear enclosures are described as field systems

(Brossler *et al* 2003, fig. 3.10) and are similar in form to Bronze Age field systems recorded at sites such as The Holme, Colne Fen, Earith, Cambridgeshire (Evans 2013, fig. 4.2) and several of the Fengate sites near Peterborough (Pryor 2006, figs 42 & 43). Therefore, on the basis of the very short section of Ditch F6603 that was present within the excavated area, it is possible to speculate that this feature formed part of an organically-shaped enclosure of the type that appears to have been associated with domestic occupation at the sites discussed above. Limited finds and environmental evidence to support this interpretation was recovered from F6603, with the pottery assemblage only of moderate size in comparison to those from other Phase 2 features and, as was typical across the site, only low densities of carbonised plant remains, associated with the processing of cereal crops, were present. However, it appears likely that further evidence associated with late Bronze Age domestic activity exists to the south of the western-most excavated area.

Other Bronze Age features

The remaining Phase 2 feature consisted of pits and postholes distributed mainly across the western-most area of excavation. A total of 40 pits were dated to the late Bronze Age on the basis of artefactual evidence recovered from them. It is likely that several of the undated pits which were also recorded in this area were contemporary with them but the presence of Roman pits, and other features, in this area indicates that it cannot be assumed that these undated pits are of Phase 2 date.

At the Reading Business Park site, Brossler *et al* (2003, 126) identify four different types of late Bronze Age pit, mainly on the basis of their shape in profile. They considered that the pits with a rectangular profile (steep sides and flat base) were potentially storage pits (*ibid.*) Of the 40 Phase 2 pits and postholes that were recorded at the current site, ten displayed the steep-sided, flat-based profile of Brossler *et al*'s (2003, 126) storage pits (although to some extent, such an identification is subjective). Similar profiles were identified amongst the early Bronze Age pits which were recorded at Church Hill, Saxmundham, Suffolk, some of which were considered to have a possible storage function (Newton 2013, figs 8 & 9). Experimental work has shown that the optimal angle for the sides of pits used for the storage of grain was less than 90°; making the beehive profile of many Iron Age pits the most effective form and the bowl-shaped profile the least efficient (Reynolds 1974, 126–127; Anderson-Whymark 2011, 189). Very few, if any, of the Phase 2 pits at Denham displayed beehive shaped profiles. However, this does not preclude them from being interpreted as storage pits; they may not have been used for the storage grain but could have worked effectively for the storage of other items, particularly if those items were stored in pottery vessels, wooden containers or skin or leather bags. Indeed, this may be the case for any of the pits recorded at this site. Pits could also have been used for the preparation of foodstuffs as part of this storage process. *Kiviak*, for example, is a Greenland Inuit delicacy made by sealing seabirds, usually little auks, in fresh sealskin and storing it in pits for several months until it is partially decomposed/fermented (Evans 2011). *Kæstur*

Hákarl, Icelandic fermented shark, is prepared in a similar way (Durst 2012, 91). It is conceivable that foods could have been stored and preserved in similar ways during the Bronze Age and the shape of the pit required for this may have been markedly different from that required for the storage of grain. These pits could also have been associated with the extraction of the underlying gravel, which could have had a structural function, even in the Neolithic and Bronze Age (Thomas 1999, 66). Refuse disposal is another possible primary function of pits features but even if their primary function was something else, refuse disposal is a possible, if not probable, secondary function of such features. Based on their shapes in profile, pits recorded at the Iron Age riverside settlement at Farmoor, Oxfordshire may have been storage pits but, due to the finds assemblages recovered from them, it was suggested that they may equally have been rubbish pits (Lambrick and Robinson 1979, 65). As Brück (1995, 255) notes, many societies view rubbish and refuse as being a source of symbolic fertility and regeneration, at least in part due to its potential for use as manure, and it is therefore possible that the way in which it was deposited was subject to a specific set of rules or behaviours. It is even possible that such material was deliberately curated for use in acts of 'structured deposition' (Garrow 2006), in which deposits are placed in features in a structured and recurring manner (Cunliffe and Poole 1995, 83) or, as Lally (2008a & b) describes it, 'the deliberate deposition of specially selected 'packages' of objects of different kinds, repetitively and sequentially in certain positions within the fill matrices of certain features'. Richards and Thomas (1984) have suggested this is one of the key ways in which prehistoric 'ritual' practices may be identified. There is, however, little clear patterning in the artefactual assemblages recovered from the Phase 2 pits, with only a handful of features containing anything other than a handful of pottery sherds (see *Appendix 1, table iii*). The only possible indication of such behaviour can be seen in those features which contain more than one fill; in these features it is usually the basal fill which contains the greatest quantity of artefactual material. The recognition of such patterns of deposition may be hampered by the lack of favourable survival conditions for organic materials in general and, specifically at this site, the lack of faunal remains.

If these pits were associated with the storage of grain or the storage and/or preservation of other foodstuffs, it may be considered slightly unusual that they were located in an area that appears to be unenclosed, despite the apparent presence of an enclosure to the south, as represented by Ditch F6603. A similar situation has, however, been observed at Mill House Farm, Chadwell St Mary, Essex (Newton 2017) where several groups of both pits and postholes were observed to occur outside of the various enclosures. It is possible that this indicates that these features were associated with activities which needed to be kept away from areas of domestic habitation but could also represent chronological development of the site, with foci of activity shifting from location to location, possibly with 'unenclosed' features representing activity prior to the development of enclosures and the focusing of activity on the interiors of such enclosures.

The various Phase 2, and undated, postholes present across the site, particularly where there occur in groups or clusters, potentially represent small

structures of the kind that may have been used as granaries (Reynolds 1979, 80), *ricks*, in which corn or barley, that had been cut damp, could be stored and allowed to dry prior to threshing (Cunliffe 1986), or as drying racks for grain or skins (Megaw and Simpson 1981, 382).

The late Bronze Age activity and the surrounding area

The late Bronze Age archaeology recorded at Denham Park Farm appears to represent activity adjacent to, or on the periphery of, a settlement. Based on the positioning and distribution of the Phase 2 features, it appears most likely that any such settlement would have been located to the south of Area 6 in areas that have not been subject to archaeological investigation, or to the east in Area 5, which is archaeologically blank and appears to have suffered from significant plough truncation or similar factors.

As is noted above, the topographical position of this part of the site may have afforded any settlement located here, or in the immediate vicinity, commanding views of the surrounding landscape and particularly the valley of the river Colne. This potentially provided benefits in terms of defence, communication, control of the landscape, grazing strategies, and food procurement/hunting strategies. Limited contemporary settlement evidence is known in the surrounding area but the Colne Valley may have been an important communication link between this site and the settlement activity recorded in the Uxbridge area (HER 52349-50, 56024301, 50243). The various flint scatters that have been recorded in the surrounding area suggest greater utilisation of the landscape than is indicated by the number of known sites bearing evidence for cut features and finds of other types, including pottery (HER 50233) and a bronze palstave found in Rickmansworth (Rawlins 1976), are suggestive of notable levels of activity in these areas.

4.4 The Romano-British activity

Introduction

The Roman archaeology consisted of a set of boundary ditches representing a field system or set of enclosures and associated pits located in the western part of the site. Further Roman features were sparsely distributed across the eastern part of the site. To the north of the Roman enclosures was a focus of industrial activity associated with iron smelting. This has been tentatively dated as Roman due to its proximity to the concentration of Roman activity; dateable ceramic evidence from these features, however, is of late Bronze Age date which clearly must be residual. In addition to this were several discreet pits, distributed mainly in close proximity to the boundary ditches.

The low representation of carbonised plant remains in Roman contexts suggests that the site was located in a peripheral position in relation to the main focus of Roman domestic settlement and agricultural processing activities. However, the character of the pottery from this phase appears consistent with

low status domestic activity in the region, frequently associated with small farmsteads or agricultural settlements in the Colne Valley and Buckinghamshire region. Pottery from Roman features consists of probably locally-produced fabrics that suggest a date in the mid to late 1st century AD.

The industrial activity

Initial interpretations regarding St6019 identified it as a single kiln or oven. The presence of slightly more than 15kg of iron slag, however, suggests that this structure was associated with iron smelting. The description of the structure derived from observations made during excavation did not lend itself to a function as a smelting furnace (Newton Ch. 3.6), especially not in light of the types of Roman furnaces described by Cleere (1981, figs. 6 & 7). The figure-of-eight morphology of St6019 appeared to suggest that it was more likely to represent two dome or shaft furnaces of these types, positioned adjacent to one another. The presence of tap slag in the assemblage suggested that these were tapping furnaces, which is an important indicator of date. It is conjectured that the furnaces faced each other, both tapping out into the slight depression that lay between them with air presumably introduced through a tuyere positioned on the opposite side of the structure (see Cleere 1981, fig. 6) where the ground was slightly higher. Despite the form and mode of operation of Iron Age and Romano-British smelting furnaces being very difficult to reconstruct (Paynter 2007a, 202), a conjectured reconstruction of the two furnaces, based on their ground plan is presented in Figure 33.

Analysis of environmental samples from the furnace indicates that oak was the primary fuel (Summers Ch. 3.7). It is likely that this was burnt as charcoal and may have come from nearby managed woodland.

Dating evidence recovered from this feature consisted of a notable quantity of late Bronze Age pottery (56 sherds; 564g). Technologically, however, the suggestion that these were tapping furnaces would conventionally place them in the late Iron Age or Romano-British period (Bayley *et al* 2008, 43). Salter (1989) has challenged this view and it should be noted that tapped slag has been recovered from the core of the 5th century BC rampart at Castle Yard, Farthingstone, Northamptonshire (McDonnell in Knight 1986-87). This potentially extends the chronology for tapping furnaces much further back than is conventionally accepted, although the evidence is slight and, as Bayley *et al* (2008, 43) note further evidence is required to realistically challenge this view, but it does not support a date of late Bronze Age (or the late Bronze Age/early Iron Age transitional period) for the use of tapping furnaces. In light of the presence of the ironworking residues, it was considered that the ceramic material must be residual, perhaps incorporated in to back fill material dug from the surrounding area when the remains of the furnaces were filled in following their final use and, given the lack of clear evidence for a furnace superstructure, their dismantling. However, while it seems most likely that St6019 relates directly to the more securely dated Romano-British activity recorded in this area, and that the apparent discrepancy between the presence of iron smelting residues and the late Bronze Age pottery is the result of residuality, the

possibility of late Bronze Age iron production cannot be dismissed completely as has been demonstrated at Hartshill Copse in West Berkshire (Collard *et al* 2006). At Hartshill Copse, hammerscale from iron smithing has been found in late Bronze Age contexts and its density and distribution cannot be explained by post-depositional processes, such as the possibility that this material filtered through as intrusive material from later contexts (Collard *et al* 2006, 395-397).

Penannular Gully F6036 lay to the south-west of the furnace structure St6019. Like the furnaces, the fill of this feature contained late Bronze Age pottery and 8751g of ironworking slag. The proximity of this feature to the furnace structure as well as the presence of slag indicates that there must have been a functional relationship between the two. It is unclear if F6036 denoted an area in which processes associated with metalworking were carried out or if this feature was simply used as a convenient location in which to dump slag removed from the smelting furnace. With an external diameter of 5.2m and an internal diameter of 3.2m, coupled with the 1m width of the feature itself it is unlikely that this feature represents a roundhouse; the north-facing entrance would also be a notable deviation from the regularly observed southern or south-eastern position of roundhouse doorways (c.f. Oswald 1997). Similar features do not appear to be present at notable Roman iron smelting sites such as Rathlin Road, Crawley (Pine 2013, figs 2 & 3), Laxton, Northamptonshire (Jackson *et al* 1988, figs. 3 & 4), St. Denys, Southampton (Smith 2002, fig. 2), or Westhawk Farm, Kent, where even the 'crescent-shaped feature' associated with Workshop 1 was not comparable to F6036 (Paynter 2007b, fig. 6 & 23). Nor were any such features recorded at Hartshill Copse, West Berkshire where indications of late Bronze Age ironworking were recorded (Collard *et al* 2006).

What is notable, however, is that both F6036 and St 6019 contained slag alongside Bronze Age pottery but no Roman pottery at all. It is conceivable that this is because the processes of iron smelting did not entail the use of pottery but this seems unusual when Roman pottery has clearly made its way into other features of this date. Insufficient suitable material was recovered from these features to make scientific dating viable, however, it must be considered that residual late Bronze Age pottery was present in some of the other Roman features (although perhaps not to the same degree) and so its presence (as residual material) in these features associated with iron working is not necessarily unusual. While Collard *et al* (2006) have demonstrated iron working in the late Bronze Age at Hartshill Copse, the degree of stratification and other evidence noted at that site is not present at Denham Park Farm. The evidence from Hartshill Copse also appears to relate only to smithing or refining, there is no indication that the original smelting of this material was carried out in the British Isles; iron production is understood to have been carried out as early as 2500-2300 BC in central Turkey (Collis 2003, 31) and it must be considered conceivable that small quantities of iron could have made its way to these shores through processes of trade and exchange much earlier than the technology and technical knowledge to smelt it from raw materials did. The presence of so much Bronze Age pottery indicates that there are question marks surrounding the date of these features at Denham but due to the quantity of slag present, current understanding of the chronology of the development of iron working, and the lack of any evidence to suggest otherwise, it must be

assumed that the presence of this Bronze Age material, and the lack of Roman pottery, must be nothing more than an anomaly, possibly associated with taphonomic processes and the way that these features were dealt with when they were no longer in use. It appears that the slag was removed from the furnaces and the superstructure demolished; this material was then used to back fill what remained of the furnaces and Gully F6036. It is at this point that the Bronze Age material may have become incorporated, as the slag and furnace remains are mixed with soil dug from the surrounding area to back fill these features.

Crew (1995) notes that the quantity of slag that may be expected from a primary iron production site of Roman date may be as high as a tonne or more. At the late Iron Age and Roman iron production site recorded at Rathlin Road, Crawley, Sussex, in excess of 121kg of slag was recovered (Pine 2013) at the large Roman iron working site at Westhawk Farm in Kent 1.65 tonnes of slag were recovered (Paynter 2007b, 17). In comparison to these sites, the single kiln and the 19kg of slag that were present at the site, the smelting activity represented at Denham Park Farm appears to have been a small-scale operation. It is possible that this represents the work of an itinerant iron worker of the production of iron to be used in the manufacture of items for a small estate or farmstead. This type of industrial activity is not unusual for this area; sites across the Solent-Thames region attest small-scale ironmaking, including the continuation of prehistoric traditions alongside shaft furnaces (Fulford 2014, 183).

The Romano-British enclosure system.

As with the earlier activity, Romano-British activity appeared to be concentrated mostly towards the western-most extent of the site. In part this may be a result of taphonomic factors, such as the plough damage which appears to have been sustained within the excavation area to the immediate east of this concentration but, on the whole, the distribution of archaeological features became increasingly sparse towards the east. Within the western-most excavation area, however, an arrangement of ditches is suggestive of part of a system of enclosures.

Ditches F6274=F6676 and F6611 appeared to form the corner of a large enclosure, the majority of which extended beyond limits of excavation to the west, although it is possible that the undated linear feature F6629 (Grid Square B4) represented part of the southern edge of this enclosure. The slightly later F6573, which cut F6611 for much of its length, appears to represent some kind of elaboration to the enclosure, possibly forming a new triangular enclosure appended to its south-eastern side or, if undated ditches F6716, F6718 and F6704 were contemporary with the dateable Roman features, it might have additionally formed a corridor of land between two enclosures. The northerly end of this corridor appeared to open out in to some kind of junction or intersection with entrances to other possible enclosures to the north and east, beyond the limits of excavation and represented at this location by F6676=F6274, F6700, and the undated F6704 (these enclosures were not

visible in the excavation area to the east because of the plough truncation that this area appears to have suffered from). This junction/intersection has similarities to the prehistoric 'stock management system' identified by Pryor (2001, 417-418) at Storey's Bar Road in the Fengate area of Peterborough. This interpretation of the Storey's Bar Road arrangement does, however, have to be questioned especially in light of the reconstruction drawing reproduced by Yates (2007, plate 2) and because much of Pryor's (e.g. 2006) interpretation regarding prehistoric farming is based on his own experiences of modern lowland sheep farming and ignores other farming practices, including even different types of modern sheep farming practiced elsewhere in Britain. Despite this, the implication of such a junction between enclosures is suggestive of pastoral agriculture and the need to move animals between enclosures. Evidence for this type of agriculture is lacking in the form of faunal remains due to the poor survival conditions for bone in this locality. It might, however, be considered to be supported by the limited artefactual (and specifically pottery) evidence from the enclosure ditches, which might be seen to indicate that the use of midden material for manuring purposes was not carried out (c.f. Gaffney and Tingle 1989, 224-225; Dark 2017, 21), and by limited evidence for any kind of arable agricultural intensification (Summers Ch. 3.7).

Pollen evidence from Dorney, approximately 13km to the south-west, indicates that during the late Iron Age and early Roman period, the landscape was predominantly open, with extensive meadowland and localised arable cultivation, but over the course of the Romano-British period levels of grass, herb, and cereal pollen increased dramatically (Parker *et al* 2008; Ripon *et al* 2015, 135-136). It is reasonable to suggest that a similar range of agricultural practices would have prevailed in the area of Denham Park Farm, despite the significantly higher elevation of the Denham area. Wachter (1978, 111) suggests that bounded enclosures may have been used in a type of crop-rotation system during which livestock was allowed in the fallow fields to feed off the stubble and weed growth, while at the same time manuring the soil. This suggests that, despite the lack of clear evidence for arable cultivation, the enclosures recorded at Denham Park Farm may represent a mixed farming economy. It seems unlikely, although remains possible, that they mustering points for the type of ranch-style farming that Wachter (1978, 111) describes as being associated with open spaces on moor, down, or fen. Fulford (2014, 166) suggests that fields for animal husbandry are less likely to have such pronounced lynchets and banks, as pasture does not result in as much erosion as cultivation but the possibility that a mixed economy with a system of field rotation was in use would perhaps negate such an assertion. Furthermore, boundaries to corral livestock would have been required to be more imposing than those required to delineate areas of arable cultivation. Indeed, it is not necessary to enclose areas of arable cultivation as there are alternative methods that can be employed to keep pest animals out (Newton *forthcoming*, 150). It is likely that the ditches demarcating the enclosures at Denham Park Farm would have been complemented by a bank formed from the upcast generated during their excavation but a bank and a ditch of the proportions indicated by the excavated evidence are unlikely to have proven an insurmountable barrier to most livestock, particularly sheep. However, the position of any such bank would have affected the way in which the arrangement of ditches at the suggested 'junction' would have worked. No

evidence for the position of any such bank was observed during excavation. To have functioned effectively to control the movement of livestock these boundaries must also have been augmented by a fence/hurdle line or a hedgerow. As none of these ditches were flanked by rows of postholes, any such fence line must have been situated at the summit of the putative bank.

'Trackways' between and linking fields, similar to those identified here, have been recorded at sites such as Armthorpe, South Yorkshire (Chadwick 2013, fig. 3 after Hughes 2006 and Roberts 2008) and Dernford Farm, Sawston, Cambridgeshire (Newton *forthcoming*). There are superficial similarities between the enclosures recorded at Denham Park Farm and those identified at Weedon Hill, Aylesbury (Wakeham and Bradley 2013) inasmuch as narrowly spaced parallel linear features were recorded at both sites. At Weedon Hill, however, these features appeared not to have the same 'trackway' function as those at Denham Park Farm. It is possible that this is because the Weedon Hill site represented enclosures appended to a nearby focus of domestic settlement, whereas the available evidence appears to indicate that domestic activity was not present in particularly close proximity to the Denham site. The movement of livestock in such paddocks might have been facilitated in a different way to the outer fields of a farmstead or farming estate. However, trackways linking and alongside fields were recorded at Whitelands Farm, Bicester, Oxfordshire (Martin 2011) and these were similar in appearance to the boundaries/enclosures visible within the excavated areas at Denham Park Farm. Unlike the current site, however, evidence for domestic occupation was recorded in proximity to these enclosures (*ibid.*).

The Denham Park Farm site as part of the wider Roman landscape

The Colne and Chess valleys were seemingly relatively well-populated in the Romano-British period, with a number of villa estates, industrial sites and other settlements. However, only sparse Roman remains have previously been recorded close to the Denham Park Farm site.

The position of the site, above the Colne valley, and seemingly consisting of agricultural enclosures with a small amount of industrial activity might indicate that this is an outlying part of one of the villa estates known from the valley of the Colne. At Fordham Road, Soham, Cambridgeshire, agricultural enclosures associated with a kiln of unknown purpose, corn-drying ovens, and a pair of ovens constructed from re-used *dolia*, were considered to represent an outlying or satellite component of one of the villa estates known from the surrounding area (Newton 2015). Supporting the link between the Soham site and one of the local villas was the quantity of high status pottery in the finds assemblage; this was also noted in association with the enclosures recorded at Beck Row, Suffolk (Mustchin 2014), where quantity of fine wares in the assemblage was considered to be more typical of major urban sites than a rural one, and which was also considered to have been part of an estate linked to a high-status settlement or villa in the local landscape. This was not the case at Denham Park Farm, where the pottery assemblage was suggestive of low status domestic activity. This does not necessarily negate the suggestion of a link between this

site and the villa estates of the Colne valley; at Fordham Road, Soham, it was suggested that refuse material generated at the high status dwellings was deposited in or near the enclosure ditches identified at that site and this was not necessarily the case at Denham. The small quantity of refuse material recorded here could conceivably have been generated by estate workers living, perhaps temporarily, or regularly visiting this location. The presence of the ironworking activity is, however, notable in this regard. It indicates that there were individuals present in the area from whom an ironworker could have made a living; these were skilled craftsmen and were paid accordingly. Diocletian's price edict of AD301 indicates that an ironworker should earn the same as a joiner, cartwright, woodworker, or lime burner (50 *denarii per diem*) and only slightly less than a marble worker or mosaicist (Bernard 2017, 81). Alternatively, an ironworker might have been employed directly by an estate; Palladius *Opus agriculturae* of the 5th century advises the masters of agricultural estates to keep their own ironworkers, carpenters, jar- and cask-makers on the estate (Harper 2011, 189). Without further investigation of the surrounding area, however, it is not possible to determine if the Roman archaeology here does indeed represent outlying enclosures forming part of a larger estate or farm or if it represents lower status land holding belonging to a skilled craftsman/men (the ironworker/s associated with the furnaces) and associated agricultural activity designed to supplement their income.

Features further to the east are more sparsely distributed. It is possible that several of the undated features towards the eastern extent of the site are of Romano-British date but very few form coherent enclosure forms or structural configurations.

4.5 Later Features

A medieval layer was recorded overlying the Phase 2 structure St6306. This contained 11 sherds of pottery from jars or cooking pots that appear to have been produced in the late 12th to 14th centuries. The isolation of this layer from any contemporary features or activity make interpretations regarding its origins or function limited. It is possible that it represents the remains of a dump of refuse material from medieval settlement activity located further to the west alongside Denham Lane perhaps. Little evidence of this period has been recorded in the immediate environs of the site.

Similarly, post-medieval activity was limited to a single ditch, F5030. This may have had a functional association with the undated ditch/gully F5014 which was located slightly to the east. Beyond this, there was little evidence from which the function of this feature could be determined.

With the exception of the large pit F8035, all of the modern features recorded at the site were ditches. They are most likely to represent former boundaries or drainage features.

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BIBLIOGRAPHY

Allen, T., Barclay, A. and Lamdin-Whymark, H. 2004, 'Opening the wood, making the land: the study of a Neolithic landscape in the Dorney area of the Middle Thames Valley' *in* Cotton, J. and Field, D. (eds) *Towards a New Stone Age: aspects of the Neolithic in south-east England*, Council for British Archaeology Research Report 137, 82-98

Ambers, J. and Leese, M. 1996, 'The radiocarbon results and their interpretation' *in* Needham, S. & Spence, T. *Runnymede Bridge Research Excavations volume 2: Refuse and Disposal At Area 16 East, Runnymede*, British Museum Press, London, 78-82

Ashwin, T, 1996 'Neolithic and Bronze Age Norfolk' *Proceedings of the Prehistoric Society* 62, 41-62

Atkins, R. and Rees, G. 2008, *An Iron Age and Roman settlement at Broughton Manor Farm, Milton Keynes, Bucks*, CAM ARC unpublished report number 968

Barclay, A. 2013, 'Late Neolithic Grooved Ware from Area 6' *in* Allen, T., Barclay, A., Cromarty, A., Anderson-Whymark, H., Parker, A., Robinson, M. & Jones, G. *Opening the Wood. The Archaeology of a Middle Thames Landscape: Mesolithic, Neolithic and Early Bronze Age; the Eton College Rowing Course Project and the Maidenhead, Windsor and Eton Flood Alleviation Scheme*, Oxford Archaeology Thames Valley Landscapes Monograph 38, 395

Barrett, J. 1980, 'The pottery of the later Bronze Age in lowland England,' *Proceedings of the Prehistoric Society* 46, 297-320

Bates, M. R. and Barham, A. J. 1995, 'Holocene alluvial stratigraphic architecture and archaeology in the lower Thames area' *in* Bridgland, D. R. Allen, P. and Haggart, B. A. (eds.) *The Quaternary of the Lower Reaches of the Thames: field guide*, Quaternary Research Association

Bayley, J., Crossley, D. and Ponting, M. 2008, *Metals and Metalworking: a research framework for archaeometallurgy*, The Historical Metallurgical Society/English Heritage, London

Bernard, S. G. 2017, 'Workers in Roman Imperial Building Industry', in Verboven, K. and Laes, C. (eds.) *Work, Labour, and Professions in the Roman World*. Impact of Empire Vol. 23, Brill, Leiden, 62-86

Bishop, B. 2007, 'The Lithics' in Mortimer, R. *Prehistoric Remains at Riddlesworth Hall School, Riddlesworth, Diss, Norfolk. Evaluation Report*, CAM ARC unpublished report number 963

Bond, D. 1988, *Excavation at the North Ring, Mucking, Essex: A Late Bronze Age Enclosure*, East Anglian Archaeology 43, Archaeology Section Essex County Council

Bradley, R. J. 1970, 'The excavation of a Beaker settlement at Belle Tout, East Sussex, England', *Proceedings of the Prehistoric Society*, 36, 312-379

Bradley, R. 1980, 'Pottery' in Bradley, R., Lobb, S., Richards, J. & Robinson, M. 'Two Late Bronze Age settlements on the Kennet gravels: excavations at Aldermarston wharf and Knight's Farm, Burghfield, Berkshire,' *Proceedings of the Prehistoric Society* 46, 217-296

Bradley, R. 2014, 'The Neolithic and early Bronze Age: Resource Assessment' in Hey, G. and Hind, J. (eds.), *Solent-Thames Research Framework for the Historic Environment Resource Assessments and Research Agendas*, Oxford Wessex Monograph No. 6, 87-109

Brossler, A., Early, R. and Allen, C. 2004, *Green Park (Reading Business Park): Phase 2 Excavations 1995 - Neolithic and Bronze Age Sites*, Thames Valley Archaeology Monograph 19, Oxford Archaeological Unit, Oxford

Brück, J. 1995, 'A place for the dead: the role of human remains in Late Bronze Age Britain', *Proceedings of the Prehistoric Society* 61, 245-277

Brück, J. 1999, Houses, lifecycles and deposition on Middle Bronze Age settlements in southern England, *Proceedings of the Prehistoric Society*, 65, 1-22

Brück, J. 2000, Settlement, landscape and social identity: the early-middle Bronze Age transition in Wessex, Sussex and the Thames Valley, *Oxford Journal of Archaeology* 19 (3), 273-300

Brück, J. 2007, 'The character of late Bronze Age settlement in southern Britain' in Haselgrove, C. and Pope, R. (eds) *The earlier Iron Age in Britain and the near continent*, Oxbow Books, Oxford, 24-38

- Brück, J. and Fokkens, H. 2013, 'Bronze Age Settlements', *in* Fokkens, H. and Harding, A. (eds.) *The Oxford Handbook of the European Bronze Age*, Oxford University Press, Oxford, 82-101
- Campbell, G. 1992, 'Bronze Age plant remains', *in* Moore, J. and Jennings, D. *Reading Business Park: A Bronze Age Landscape*, Oxford Archaeological Unit, Oxford, 103-110
- Campbell, G. 2000, 'Plant utilization: the evidence from charred plant remains', *in* Cunliffe, B. *The Danebury Environs Programme: The Prehistory of a Wessex Landscape. Volume 1: Introduction*, English Heritage and Oxford University Committee for Archaeology Monograph No. 48, Institute of Archaeology, Oxford, 45-59
- Campbell, G. 2004, 'Charred plant remains', *in* Brossler, A., Early, R. and Allen, C. *Green Park (Reading Business Park): Phase 2 Excavations 1995 - Neolithic and Bronze Age Sites*, Oxford Archaeological Unit, Oxford, 108-111
- Campbell, G. and Straker, V. 2003, 'Prehistoric crop husbandry and plant use in southern England: development and regionality', *in* Brown, K.A.R. (ed) *Archaeological Sciences 1999: Proceedings of the Archaeological Sciences Conference, University of Bristol, 1999*, BAR International Series 1111, Oxford, 14-30
- Cappers, R. T. J., Bekker R. M. and Jans J. E. A. 2006, *Digital Seed Atlas of the Netherlands. Groningen Archaeological Studies Volume 4*, Barkhuis Publishing, Eelde
- Carruthers, W. J. 2000, 'Mineralised plant remains', *in* Lawson, A.J. *Potterne 1982-1985: Animal Husbandry in Later Prehistoric Wiltshire*, Wessex Archaeology Report No. 17, Wessex Archaeology, Salisbury, 72-84
- Chadwick, A. 'Some fishy things about scales: Macro and Micro-approaches to later Prehistoric and Romano-British field systems', *Landscapes* 14 (1), 13-32
- Cleere, H. F. 1981, *The Iron Industry of Roman Britain*, unpublished thesis (<http://www.wealdeniron.org.uk/HCleereThesis.pdf> accessed 28.03.2018)
- Collard, M., Darvill, T., Watts, M., Bayliss, A., Brett, M., Bronk Ramsey, C., Meadows, J., Morris, E. L., van der Plicht, H. and Young, T. 2006, Ironworking in the Bronze Age? Evidence from a 10th Century BC Settlement at Hartshill Copse, Upper Bucklebury, West Berkshire, *Proceedings of the Prehistoric Society* 72, 367-421
- Collis, J. 2003, *The European Iron Age*, Routledge, London
- Cooney, G. 1997, 'Images of settlement and the landscape in the Neolithic' *in* Topping, P. (ed.) *Neolithic Landscapes*, Neolithic Studies Group Seminar Papers 2, Oxbow Books, Oxford, 23-32

Crew, P. 1995, *Bloomery Iron Smelting Slags and other residues*, Historical Metallurgy Society, Archaeology Data Sheet No. 5

Crew, P. 1996, *Bloom refining and smithing slags and other residues* Historical Metallurgy Society, Archaeology Data Sheet No. 6

Cunliffe, B. 1986 *Danebury: Anatomy of an Iron Age Hillfort*, BT Batsford Ltd, London

Cunliffe, B. 2005, *Iron Age Communities in Britain* (4th edition), Routledge, London

Cunliffe, B. and Poole, C. 1995, 'Pits and Propitiation' *in* Cunliffe, B., *Danebury: An Iron Age Hillfort in Hampshire. Volume 6: A hillfort community in perspective*. CBA Research Report 102, York

Dark, P. 2017, 'The Environment of Roman Southern Britain' *in* Bird, D. (ed.), *Agriculture and Industry in South-Eastern Roman Britain*, Oxbow, Oxford, 17-33

Darling, M. 1994, *Guidelines for the Archiving of Roman Pottery*, Study Group for Roman Pottery

Department for Communities and Local Government 2012, *National Planning Policy Framework*, Department for Communities and Local Government

Doyle, K. and Grassam, A. 2005, *Denham Park Farm, Denham, Buckinghamshire. An Archaeological Desk-Based Assessment*, Archaeological Solutions Ltd unpublished report number 1739

Doyle, K. and Hallybone, C. 2006, *Denham Park Farm, Denham, Buckinghamshire; an archaeological evaluation*, Archaeological Solutions Ltd unpublished report number 2100

Drury, P. J. 1977, 'Excavations at Rawreth, 1968', *Essex Archaeology and History* 9, 20-47

Dungworth, D. 2012, *Copper: smelting and production of alloys*, Historical Metallurgy Society, Archaeology Data Sheet No. 202

Dungworth, D, with Blakelock, E. and Nicholas, M. 2009, *National Slag Collection*, Ironbridge Gorge Museums Trust/Historical Metallurgy Society

Dungworth, D., Crew, P. and McDonnell, G. 2012, *Iron: bloomery smelting and associated processes*, Historical Metallurgy Society, Archaeology Data Sheet No. 301

Durst, S. 2012, 'Hákarl' *in* Deutch, J. and Murakhver, N. (eds.) *They Eat That? A cultural encyclopedia of weird and exotic food from around the world*, ABC-Clio, Denver

Edwards, Z. 2013, *Stoke Hammond, Buckinghamshire; two possible Neolithic enclosures. Aerial investigation and mapping*, English Heritage Research Report Series 41-2013

Evans, B. 2011, *Is this the strangest meal in the world?* <http://www.bbc.co.uk/blogs/food/2011/01/rotten-seabirds-for-supper.shtml> (accessed 27.03.2018).

Evans, C. 2013, *Process and History. Prehistoric Communities at Colne Fen, Earith, Cambridge Archaeological Unit Landscape Archives: The Archaeology of the Lower Ouse Valley, Volume 1*

Field, D. 2004, 'Sacred geographies in the Neolithic of south-east England' in Cotton, J. and Field, D. (eds) *Towards a New Stone Age: aspects of the Neolithic in south-east England*, Council for British Archaeology Research Report 137, 154-163

Gaffney, V. and Tingle, M. 1989, *The Maddie Farm Project: an integrated survey of prehistoric and Roman landscapes on the Berkshire Downs*, British Archaeological Reports, British Series 200, Oxford

Garrow, D. 2006, *Pits, Settlement and Deposition during the Neolithic and early Bronze Age in East Anglia*, British Archaeological Reports, British Series 414

Garrow, D. 2007, 'Placing pits: landscape occupation and depositional practice during the Neolithic in East Anglia', *Proceedings of the Prehistoric Society* 73, 1-24

Garrow, D. 2011, 'Concluding Discussion: Pits and Perspective' in Anderson-Whymark, H. and Thomas, J. *Regional Perspectives on Neolithic Pit Deposition. Beyond the Mundane*, Oxbow Books, Oxford, 216-225

Gibson, C. 2004, *Lines in the sand; middle to late Bronze Age settlement at Game Farm, Brandon*, Archaeological Solutions Ltd/East Anglian Archaeology Occasional Papers 19

Gill, J. and Bates, M. 2002, *Denham Garden Village, Denham, Buckinghamshire: desk-based assessment and geoarchaeological investigation*, Oxford Archaeology Job No. 01/1316

Gover, J., 2003, *Bulstrode "Iron Age" Camp Gerrards Cross. A site of many periods*, unpublished report, submitted to Bucks CC

Green, H. S. and Sofranoff, S. 1985, *A Neolithic Settlement at Stacey Bushes, Milton Keynes*, *Records of Buckinghamshire* 27, 10-37

Greenham Construction Materials (GCM) 1998, *Geological Report: Denham Park Farm, Buckinghamshire*, Greenham Construction Materials

- Greig, J. 1991, 'The botanical remains', *in* Needham, S.P. *Excavation and Salvage at Runnymede Bridge 1978: The Late Bronze Age Waterfront Site*, British Museum Press, London, 234-262
- Guttmann, E. B. A. and Last, J. 2000, A Late Bronze Age Landscape at South Hornchurch, Essex, *Proceedings of the Prehistoric Society*, 66, 319-359
- Hancock, A. and Cuthbert, M. 2011, *Archaeological Evaluation: Area A, Caldecote Farm, Willen, Milton Keynes*, Archaeological Services and Consultancy Ltd report number 1335/CFQ/2
- Harper, K. 2011, *Slavery in the late Roman World AD275-425*, Cambridge University Press, Cambridge
- Hey, G., Dennis, C. and Mayes, A. 2007, Archaeological Investigations on Whiteleaf Hill, Princes Risborough, Buckinghamshire, 2002-6, *Records of Buckinghamshire* 47 (2), 1-80
- Howell, I. and Corcoran, J. 2002, *The former Sanderson site, Oxford Road, Denham: archaeological evaluation report*. MoLAS Report
- Hughes, V. 2006, *West Moor Park, Armthorpe, South Yorkshire. Post-excavation assessment report*, Oxford Archaeology North
- Hylton, T. and Williams, R. J. 1996, 'Clay Weights' *in* Williams, R. J., Hart, P.J., and Williams, A.T.L. *Wavendon Gate – A Late Iron Age and Roman Settlement in Milton Keynes*. Buckinghamshire Archaeology Society Monograph Series No.10, 140-141
- Institute for Archaeologists 2008, *Standard and Guidance for Archaeological Excavation*. IfA, Reading
- Jackson, D. A., Tylecote, R. F., MacRobert, E. and Parker, S. 1988, Two New Romano-British Iron-Working Sites in Northamptonshire - A New Type of Furnace?, *Britannia* 19, 275-298
- Jacomet, S. 2006, *Identification of Cereal Remains from Archaeological Sites* (2nd edn), Laboratory of Palynology and Palaeoecology, Basel University
- Kerney, M.P. 1999, *Atlas of the Land and Freshwater Molluscs of Britain and Ireland*, Harley Books, Colchester
- Kerney, M.P. and Cameron, R.A.D. 1979, *A Field Guide to Land Snails of Britain and North-West Europe*, Collins, London
- Knight, D. 1986-7, An Early Iron Age hillfort at Castle Yard, Farthingstone, Northamptonshire, *Northamptonshire Archaeology*, 21, 16-30
- Lacaille, A.D. 1961, 'Mesolithic facies in Middlesex and London' *Transactions of the London and Middlesex Archaeological Society* 20

Lally, M. 2008a, 'Bodies of Difference in Iron Age southern England' in Davies, O., Sharples, N. and Waddington, K. (eds.). *Changing perspectives on the first millennium BC*, Oxbow Books, Oxford

Lally, M. 2008b, 'Objectification and Human Infant Materials in Iron Age Southern England'. www.wac6.org/livesite/precirculated/2231_precirculated.pdf. Pre-circulated paper, presented at World Archaeological Congress 6, Dublin, 30th June 2008

Lambrick, G. 2014, 'The later Bronze Age and Iron Age: Resource Assessment' in Hey, G. and Hind, J. (eds.), *Solent-Thames Research Framework for the Historic Environment Resource Assessments and Research Agendas*, Oxford Wessex Monograph No. 6, 115-147

Lambrick, G. and Robinson, M. 1979, *Iron Age and Roman Riverside Settlements at Farmoor, Oxfordshire*, Oxfordshire Archaeological Unit Report 2/Council for British Archaeology Research Report 32

Lewis, J. S. C., Wiltshire, P. E. J. and Macphail, R. 1992, 'A Late Devensian/Early Flandrian site at Three Ways Wharf, Uxbridge: environmental implications' in Needham, S. and Macklin, M. G. (eds.) *Alluvial Archaeology in Britain* Oxbow Monograph 27

Lewis, J. S. C. 1991, 'A Late Glacial and Early Post Glacial site at Three Ways Wharf, Uxbridge: interim report' in Barton, N. Roberts, A. J. and Roe, D. A. (eds.) *The Late Glacial in North West Europe*, Council for British Archaeology Research Report 77

Lewis, J. S. C. 2000, 'The Upper and Palaeolithic and Mesolithic Periods' in MoLAS *The Archaeology of Greater London: an assessment of archaeological evidence for human presence in the area now covered by Greater London*. Museum of London Archaeology Service/English Heritage/City of London Archaeological Trust

Longley, D. 1980, *Runnymede Bridge 1976: Excavations on the Site of a Late Bronze Age Settlement*, Research Volume of the Surrey Archaeological Society 6.

Longley, D. 1991, 'The Late Bronze Age Pottery' in Needham, S. *Excavation and Salvage at Runnymede Bridge 1978: The Late Bronze Age Waterfront Site*. British Museum Press, London, 162-212

Longworth, I. and Cleal, R. 1999, 'Grooved Ware Gazetteer' in Cleal, R. and MacSween, A. (eds.) *Grooved Ware in Britain and Ireland*, Neolithic Studies Group Seminar Papers 3, Oxbow Books, Oxford, 177-206

Marney, P. 1989, *Roman & Belgic Pottery from excavations in Milton Keynes, 1972-82*, Buckinghamshire Archaeological Society Monograph Series No.2

- Martin, J. 2011, Prehistoric, Romano-British, and Anglo-Saxon Activity at Whitelands Farm, Bicester, *Oxoniensia* 76, 173-240
- Medlycott, M & Brown, N, 2008, *Revised Eastern Region Archaeological Research Frameworks*, www.eaareports/algaoee
- Megaw, J. V. S. and Simpson, D. D. A. (eds.) 1981, *Introduction to British Prehistory*, Leicester University Press, Leicester
- Morris, E. 2004, 'Later Prehistoric Pottery' in Brossler, A., Early, R. and Allen, C., *Green Park (Reading Business Park): Phase 2 Excavations 1995 – Neolithic and Bronze Age Sites*, Oxford Archaeology, Thames Valley Landscapes Monograph No.19, 58-90
- Morris, J. (ed.) 1976, *Domesday Book Hertfordshire*, Phillimore, Chichester
- Morris, J. 1978, *Domesday Book of Buckinghamshire*, Phillimore, Chichester
- Munby, L. M. 1977, *The Hertfordshire Landscape*, Hodder & Stoughton, London
- Murray, J. 1997, *Land at Church Street, Rickmansworth (Former Batchworth Arms PH): an archaeological evaluation*. Hertfordshire Archaeological Trust Report number 206
- Mustchin, A. R. R. 2014, *Former Smoke House Inn, Beck Row, Mildenhall, Suffolk. Research Archive Report*, Archaeological Solutions Ltd unpublished report 4514
- Needham, S. 1991, *Excavation and Salvage at Runnymede Bridge 1978: The Late Bronze Age Waterfront Site*, British Museum Press, London, 162-212
- Needham, S. 1996, 'The Late Bronze Age Pottery: style, fabric and finish' in Needham, S. and Spence, T. *Runnymede Bridge Research Excavations volume 2: Refuse and Disposal at Area 16 East, Runnymede*, British Museum Press, London, 106-164
- Needham, S. and Bimson, M. 1988, Late Bronze Age Egyptian blue at Runnymede, *Antiquaries Journal* 68, 314–315
- Needham, S. and Spence, T. 1996, *Runnymede Bridge Research Excavations volume 2: Refuse and Disposal at Area 16 East, Runnymede*, British Museum Press, London
- Newton, A. A. S. 2013, 'Beaker Pits at Church Hill, Saxmundham, Suffolk', *Proceedings of the Suffolk Institute of Archaeology and History* 43 (1), 1-23
- Newton, A. A. S. 2017, *Mill House Farm, Chadwell St Mary, Essex. Research Archive Report*, Archaeological Solutions Ltd unpublished report 5352

- Newton, A. A. S. 2015, *Land North East of Fordham Road, Soham, Cambridgeshire; Research Archive Report*, Archaeological Solutions Ltd unpublished report 4816
- Newton, A. A. S. forthcoming, *Small Communities. Life in the Cam Valley in the Neolithic, Late Iron Age, and Early Anglo-Saxon periods. Excavations at Dernford Farm, Sawston*, East Anglian Archaeology
- O'Connell, M. 1986, 'The Pottery' in O'Connell, M. *Pettors Sports Field, Egham: Excavation of a Late Bronze Age/Early Iron Age Site*. Research Volume of the Surrey archaeological Society No.10, 60-72
- Oswald, A. 1997, 'A doorway on the past: practical and mystic concerns in the orientation of roundhouse doorways' in Gwilt, A and Haselgrove, C (eds.) *Reconstructing Iron Age Societies: New Approaches to the British Iron Age*, Oxbow Monograph 71, Oxbow, Oxford, 87-95
- Page, W. (ed.) 1908, *Victoria History of the County of Middlesex*, Volume 2 Constable & Co., London
- Page, W. (ed.) 1969, *The Victoria County History of Buckinghamshire*. Vol III. University of London, Institute of Historical Research, London
- Parker, A. G., Lucas, A. S., Walden, J., Goudie, A. S., Robinson, M. A. and Allen, T. G. 2008, Late Holocene geoarchaeological investigation of the Middle Thames floodplain at Dorney, Buckinghamshire, UK: An evaluation of the Bronze Age, Iron Age, Roman and Saxon landscapes, *Geomorphology* 101, 471-483
- Paynter, S. 2007a, 'Innovations in bloomery smelting in Iron Age and Romano-British England' in La Niece, S., Hook, D. R. and Craddock, P. T. (eds.) *Metals and Mines: Studies in Archaeometallurgy*, Archetype Publications, London, 202-210
- Paynter, S. 2007b, Romano-British workshops for iron smelting and smithing at Westhawk Farm, Kent, *Historical Metallurgy* 41 (1), 15-31
- Phillips, M. 2006, *Springfield Quarry Extension, Beaconsfield, Buckinghamshire. Archaeological Field Evaluation*, Albion Archaeology unpublished report number 2006/79
- Pine, J. 2013, 'A re-investigation of Late Iron Age and Roman iron production, and Saxon activity, at Rathlin Road, Crawley' *Sussex Archaeological Collections* 151, 13-25
- Pozorski, Z. 2012, *Denham Park Farm, Denham, Buckinghamshire. Area G1. Archaeological Excavation*, Archaeological Solutions Ltd unpublished report number 4172

Prehistoric Ceramics Research Group (PCRG) 1995, *The study of later prehistoric pottery: general policies for analysis and publication*, Occasional Papers 1-2

Pryor, F. M. M. 2001, *The Flag Fen Basin: Archaeology and Environment of a Fenland Landscape*, English Heritage Archaeological Reports, London

Pryor, F. 2006, *Farmers in Prehistoric Britain*, The History Press, Stroud

Pugh, R. B. 1962 (ed.) 'Harehill' *Victoria History of the County of Middlesex*, III, University of London, Institute of Historical Research

Rackham, J. and Sidell, J. 2000, 'London's Landscapes: the changing environment' in MoLAS *The Archaeology of Greater London: an assessment of archaeological evidence for human presence in the area now covered by Greater London*. Museum of London Archaeology Service/English Heritage/City of London Archaeological Trust

Rawlins, B. F. 1976, *Archaeological Survey of South-West Hertfordshire, Watford and South-West Hertfordshire Archaeological Society Bulletin 23* (Spring 1976), 13-14

Reed, M. 1979, *The Buckinghamshire Landscape*, Hodder & Stoughton, London

Reed, M. 1993, *A History of Buckinghamshire*, Phillimore, Chichester

Richards, C. and Thomas, J. 1984, 'Ritual activity and structured deposition in later Neolithic Wessex' in Bradley, R. and Gardiner, J. (eds.), *Neolithic Studies*, BAR 133, 189-218

Rippon, S., Smart, C. and Pears, B. 2015, *The Fields of Britannia*, Oxford University Press, Oxford

Roberts, I. 2008, 'Late prehistoric and Romano-British land division in South and West Yorkshire: an overview of the evidence', in *Recent Approaches to the Archaeology of Land Allotment*, Chadwick, A. M. (ed.), British Archaeological Reports International Series S1875, 185–203

Smith, I. F. 1974, 'The Neolithic' in Renfrew, C. (ed.) *British Prehistory; a new outline*, Duckworth, London

Smith, M. P. 2002, A Roman settlement and iron working site at St. Denys, Southampton (SOU 981), *Proceedings of the Hampshire Field Club Archaeological Society* 57, 30-37

Reynolds, P. 1974, Experimental Iron Age pits: an interim report, *Proceedings of the Prehistoric Society* 40, 118–131

Reynolds, P. J. 1979, *Iron Age Farm: The Butser Experiment*, British Museum Publications Limited, London

Soil Survey of England & Wales (SSEW) 1983, *Legend for the 1:250,000 Soil Map of England and Wales*. SSEW, Harpenden

Stansbie, D. 2016, *Land at Stratford Close, Aston Clinton, Buckinghamshire. Post-Excavation Assessment and Updated Project Design*, Cotswold Archaeology unpublished report 16425

Stevens, C. J. 2003, 'An investigation of agricultural consumption and production models for prehistoric and Roman Britain', *Environmental Archaeology* 8, 61-76

Straker, V. 2000, 'Charred plant remains' *in* Lawson, A.J. *Potterne 1982-1985: Animal Husbandry in Later Prehistoric Wiltshire*, Wessex Archaeology Report No. 17, Wessex Archaeology, Salisbury, 84-91

Thomas, J. 1999, *Understanding the Neolithic*, Routledge, London

Thompson, I. 1982, *Grog-tempered 'Belgic' Pottery of South-eastern England*, BAR British Series 108 (i-iii)

Tomber, R. & Dore, J. 1998, *The National Roman Fabric Reference Collection*, Museum of London, London

Wacher, J. 1978, *Roman Britain*, J. M. Dent and Sons, London

Wakeham, G. and Bradley, P. 2013, A Romano-British Malthouse and other remains at Weedon Hill, Aylesbury, Buckinghamshire, *Records of Buckinghamshire* 53, 1-44

Webster, G. (ed.) 1976, *Romano-British Coarse Pottery: a Students Guide*, CBA Research Report No. 6

Weinreb, B. and Hibbert, C. 1983, *The London Encyclopaedia*, MacMillan, London

Whittle, A. 1999, 'The Neolithic Period, c. 4000-2500/2200BC: Changing the World' *in* Hunter, J. and Ralston, I. (eds.), *The Archaeology of Britain. An Introduction from the Upper Palaeolithic to the Industrial Revolution*, Routledge, London, 58-76

Williams, R. J. 1993 *Pennyland and Hartigans: Two Iron Age and Saxon sites in Milton Keynes*, Buckinghamshire Archaeology Society Monograph Series No.4

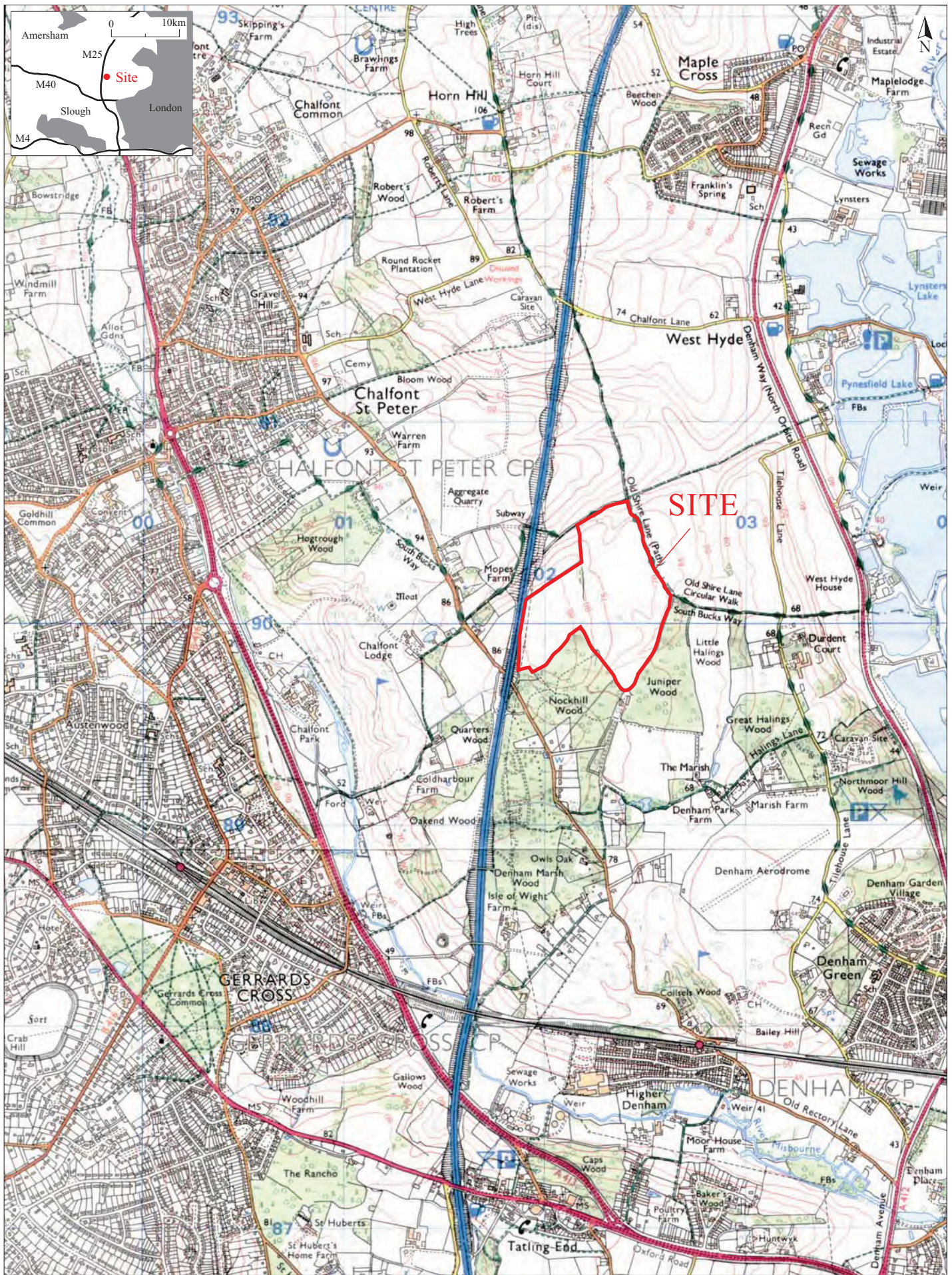
Williams, R. J. and Zeepvat, R. J. 1994, *Bancroft. A late Bronze Age/Iron Age settlement, Roman villa and temple-mausoleum, Volume 1. Excavations and Building Materials*, Buckinghamshire Archaeological Society Monograph Series No. 7

Willis, S. 2004, 'The Study Group for Roman Pottery Research Framework Document for the Study of Roman Pottery in Britain, 2003', *Journal of Roman Pottery Studies* 11, 1–20

Yates, D., 2007, *Land, Power and Prestige; Bronze Age Field Systems in Southern England*, Oxbow Books, Oxford

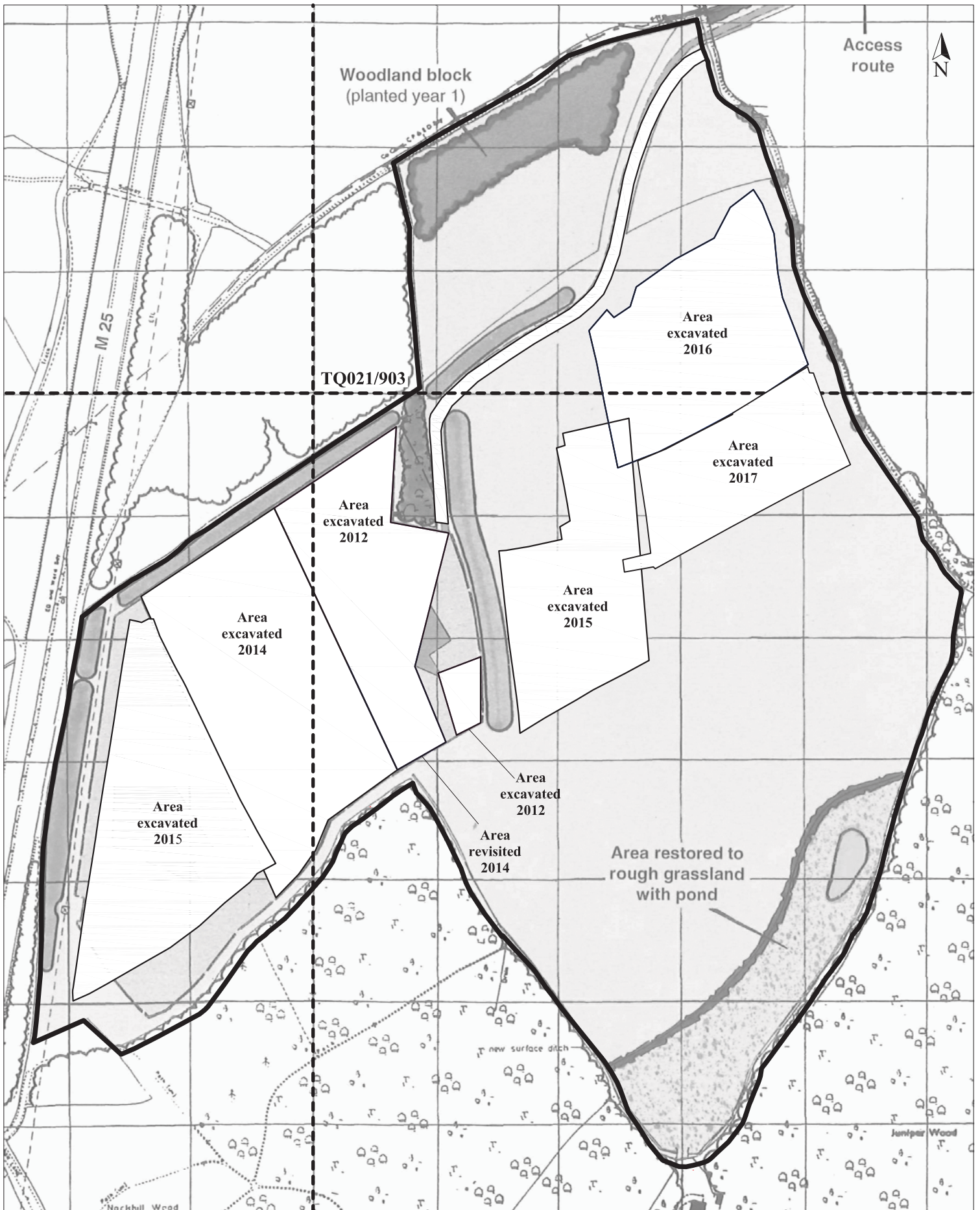
Young, R. and Humphrey, J. 1999, 'Flint use in England after the Bronze Age: time for a re-evaluation?', *Proceedings of the Prehistoric Society* 65, 231-242

Zeevat, R. J., Roberts, J. S., and King, N. A. 1994, *Caldecotte, Milton Keynes: Excavations and Fieldwork 1966-91*, Buckinghamshire Archaeology Society Monograph Series No.9



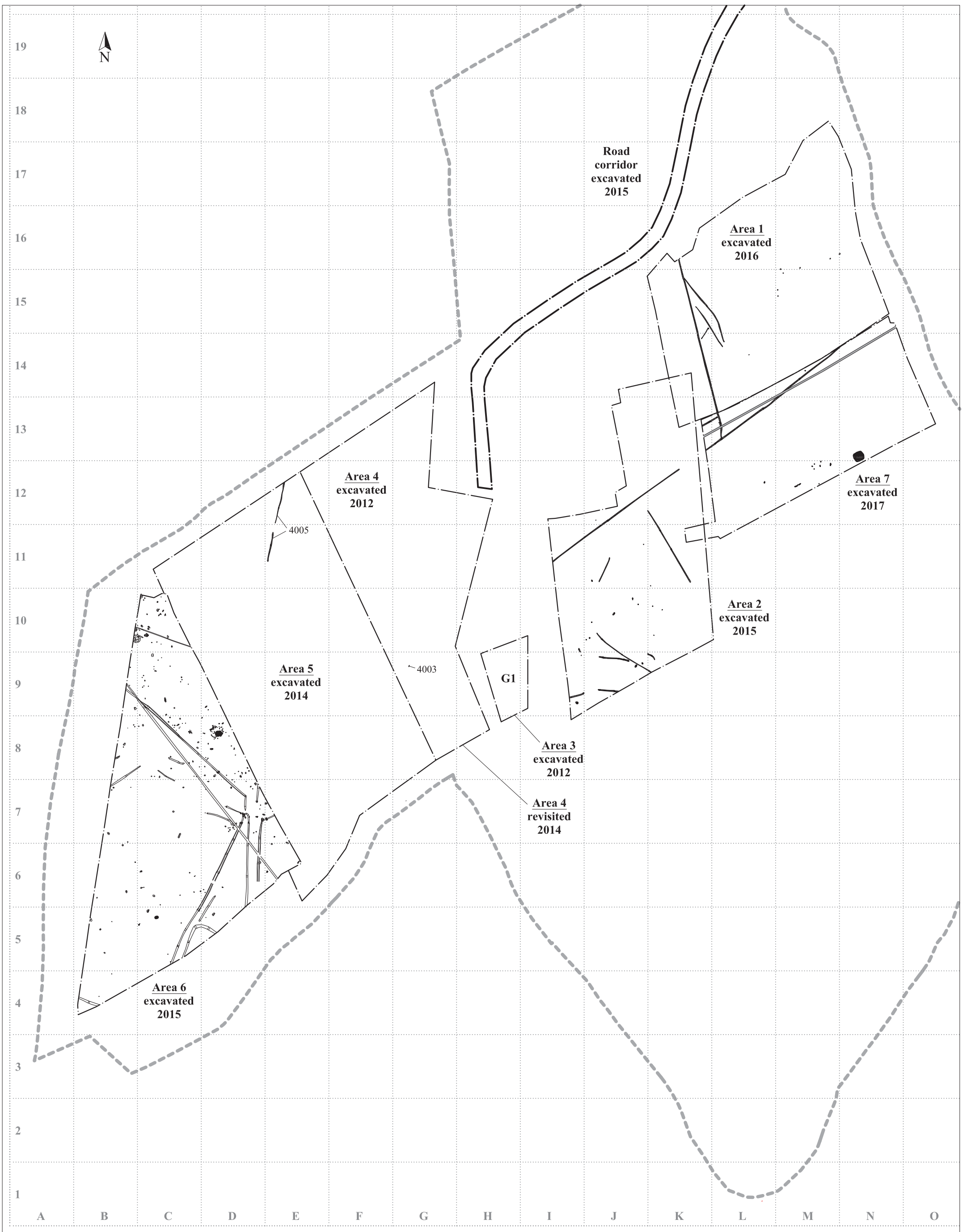
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Fig. 1 Site location plan
 Scale 1:25,000
 Denham Park Farm, Denham, Buckinghamshire (P2372)



0 150m

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Fig. 2 Detailed site location plan
 Scale 1:2500 at A4
 Denham Park Farm, Denham, Buckinghamshire (P2372)

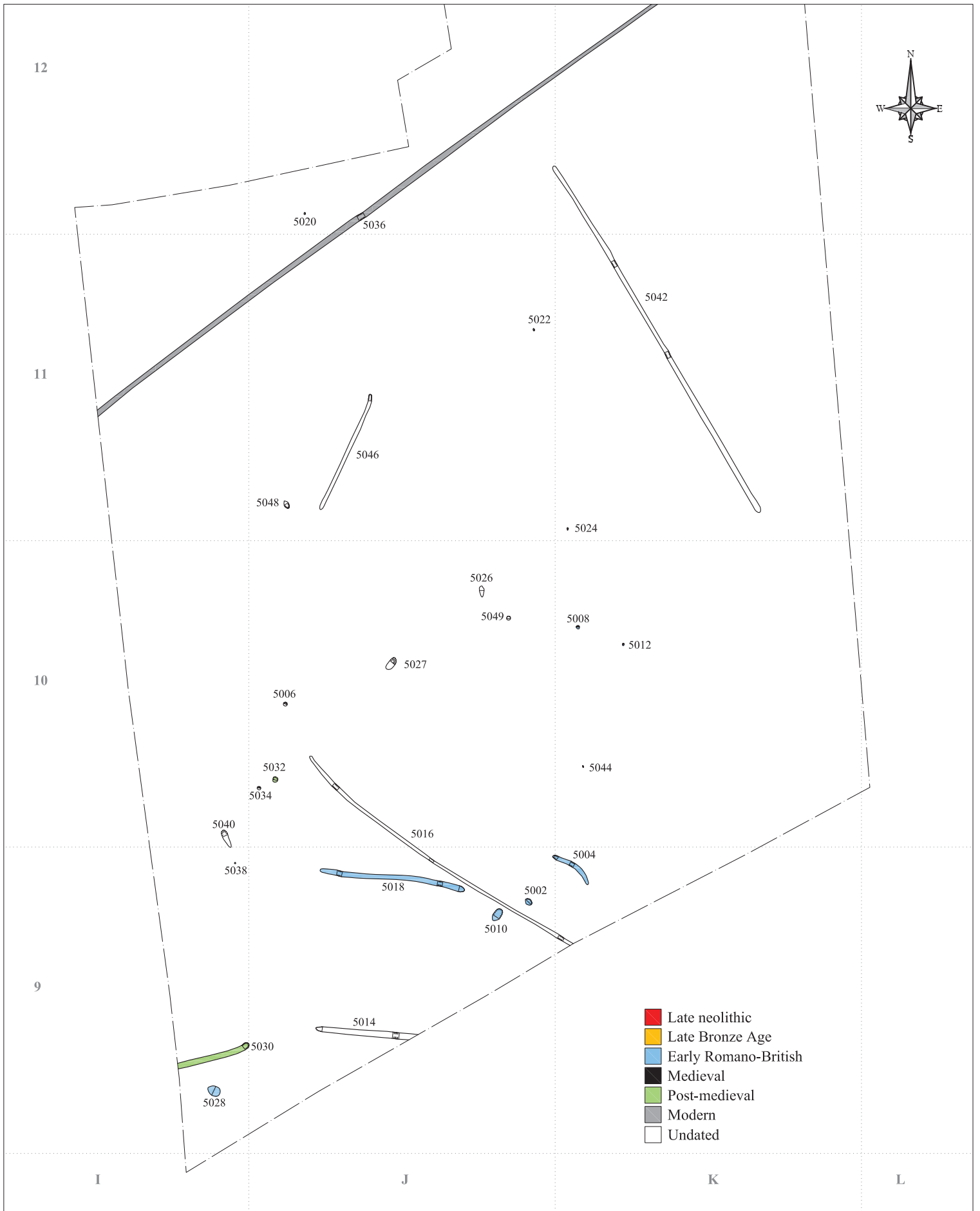


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Fig. 3 All features plan
 Scale 1:2500 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

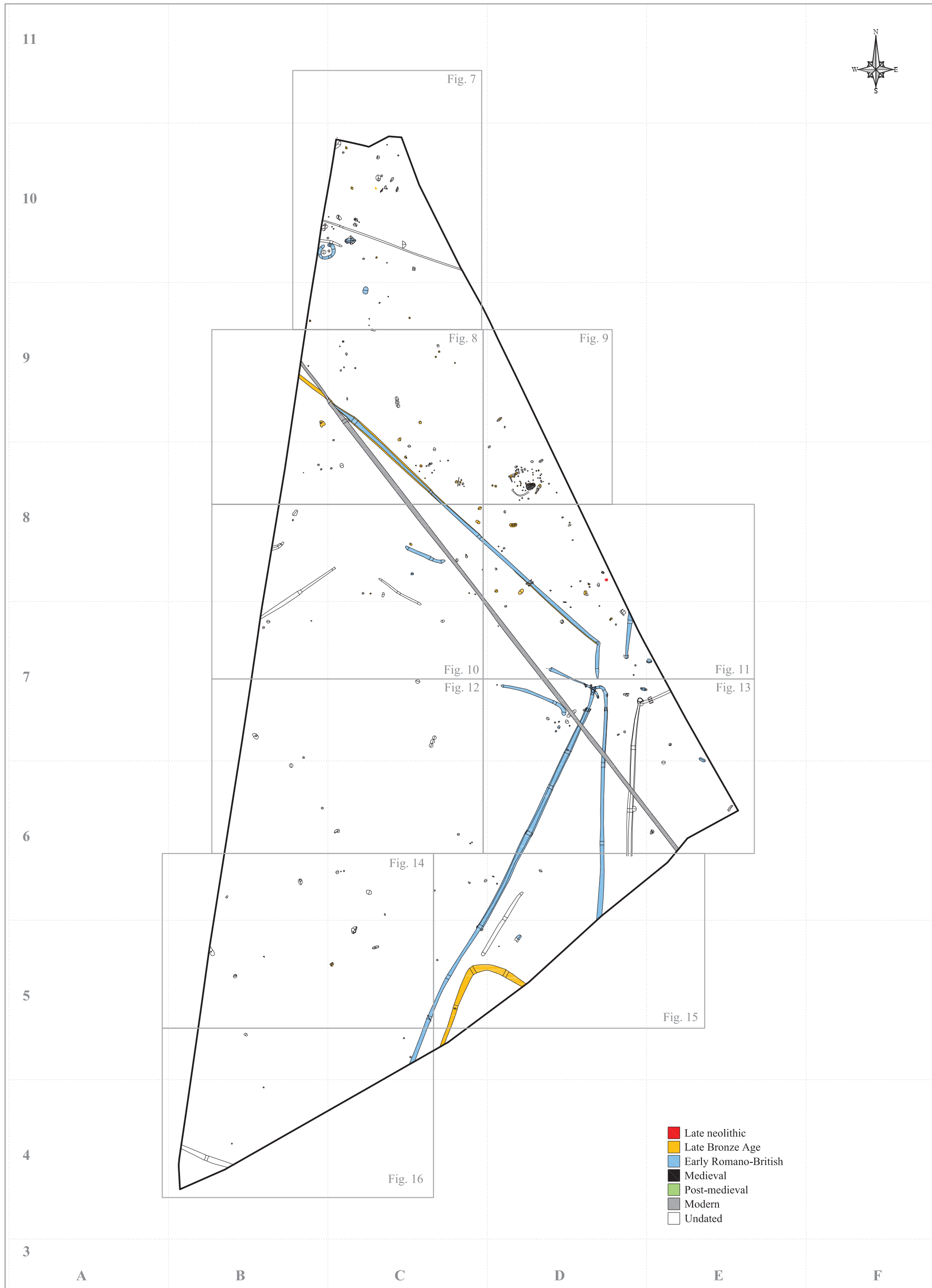
0 250m



Fig. 4 All features plan for Area 1
 Scale 1:300 at A3
 Archaeological Solutions Ltd
 Denham Park Farm, Buckinghamshire (P2372)



Archaeological Solutions Ltd
Fig. 5 All features plan for Area 2
 Scale 1:750 at A3
 Denham Park Farm, Buckinghamshire (P2372)



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Fig. 6 All features plan for Area 6
 Scale 1:1000 at A3
 Denham Park Farm, Buckinghamshire (P2372)

11



10



9

C

6093
6091

6144
6142

6106

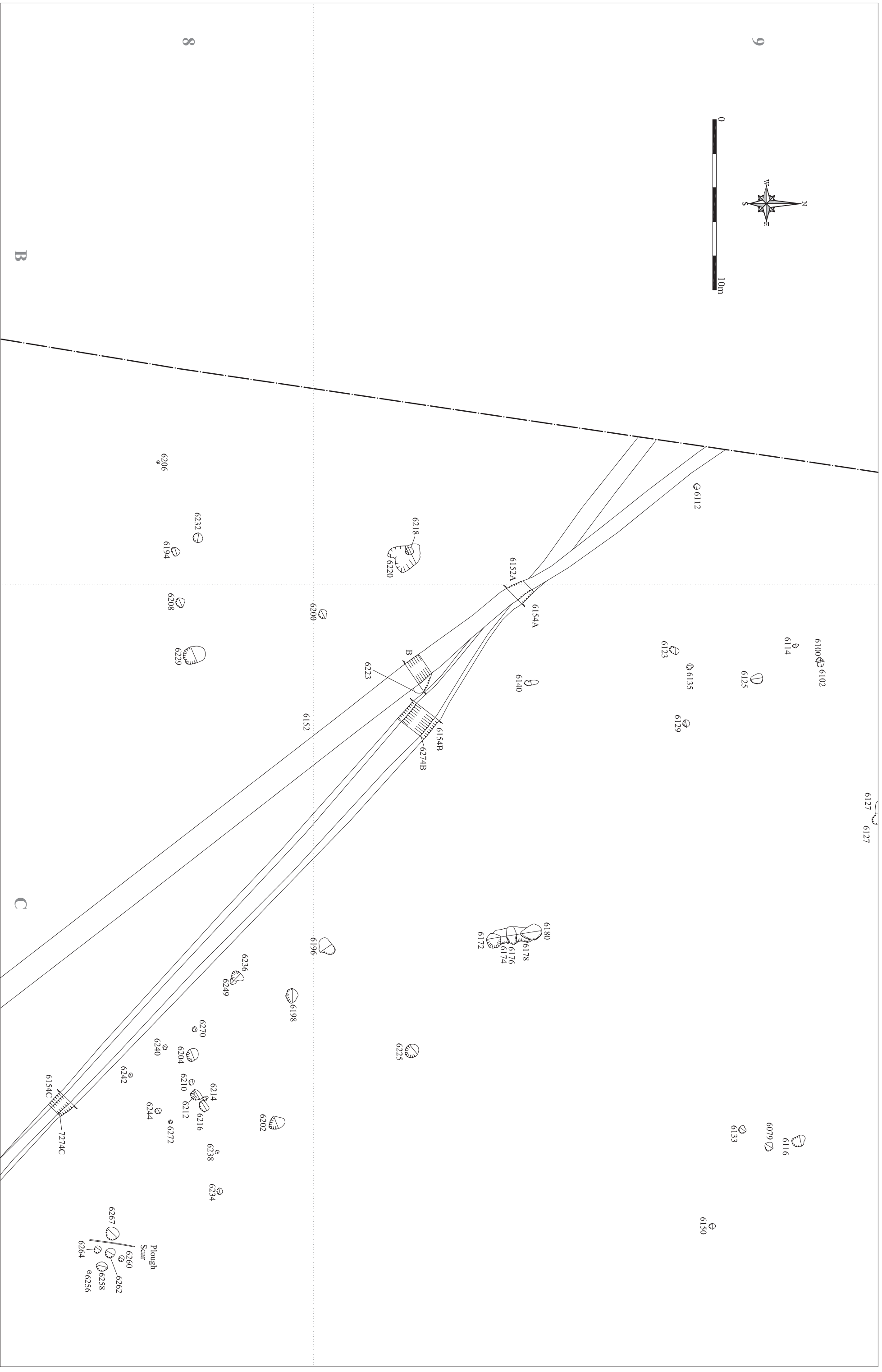
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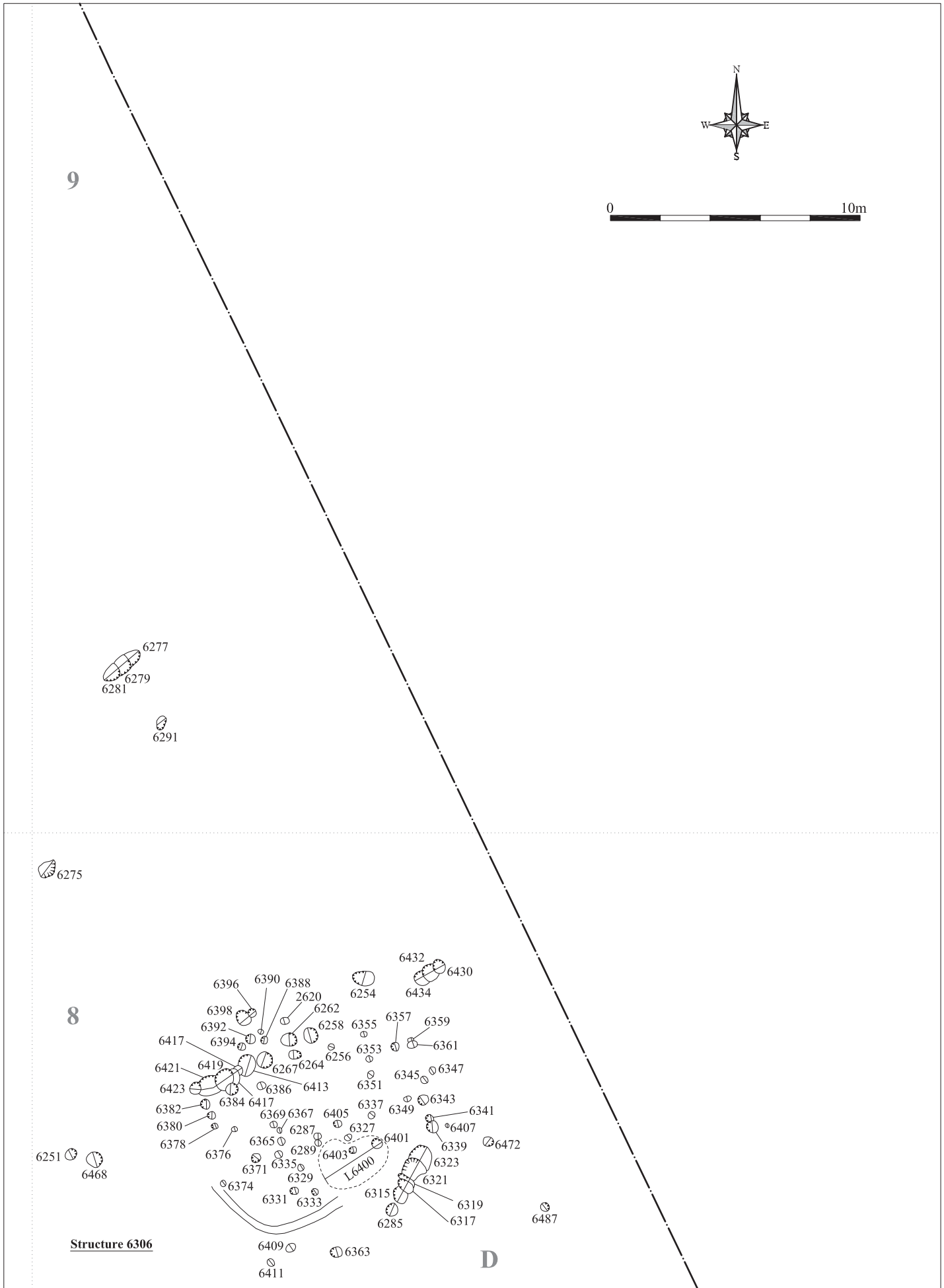
Fig. 7 Close up plan for Area 6

Scale 1:200 at A3

Denham Park Farm, Denham, Buckinghamshire (P2372)



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Fig. 8 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



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Fig. 9 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

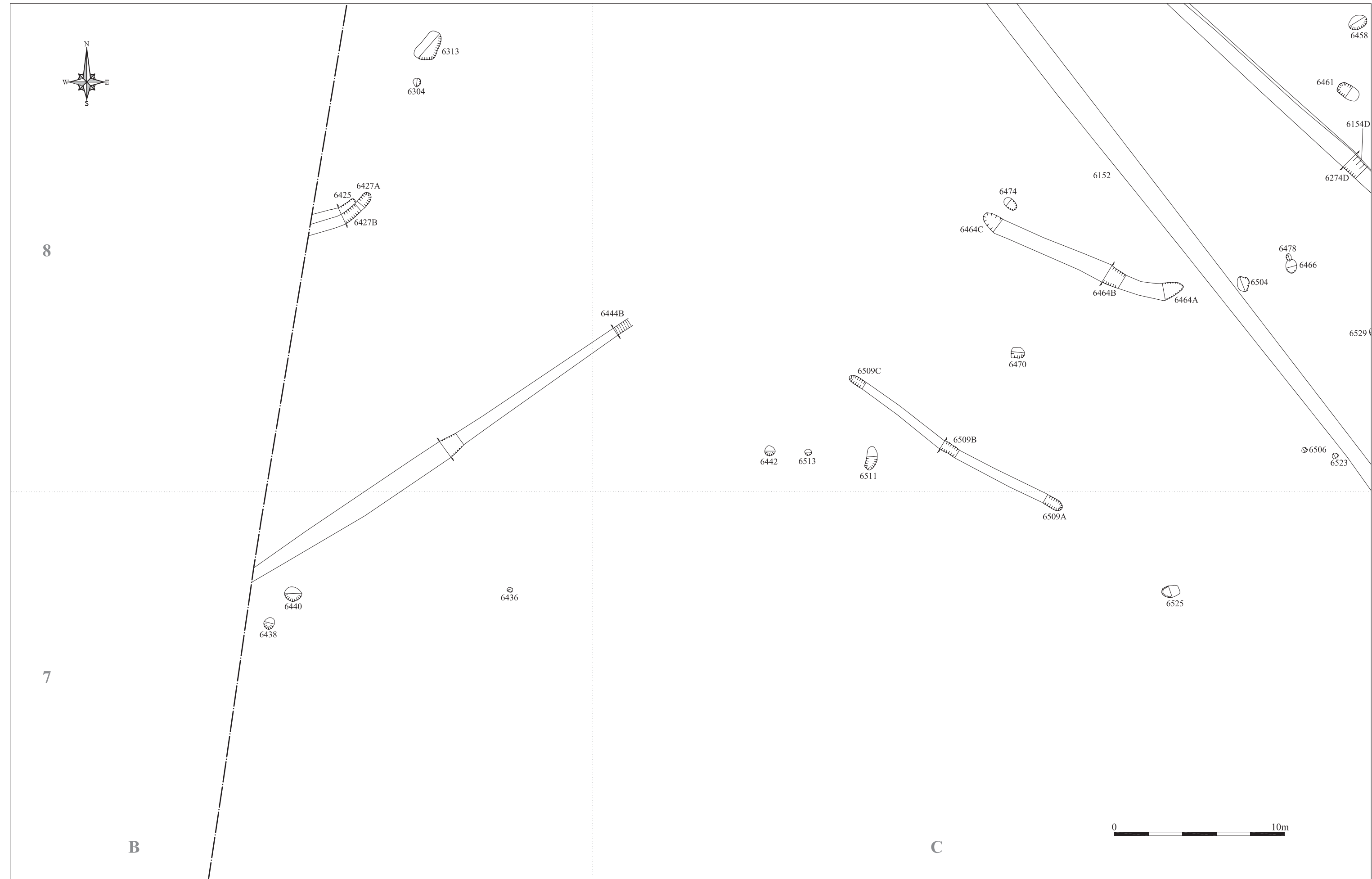


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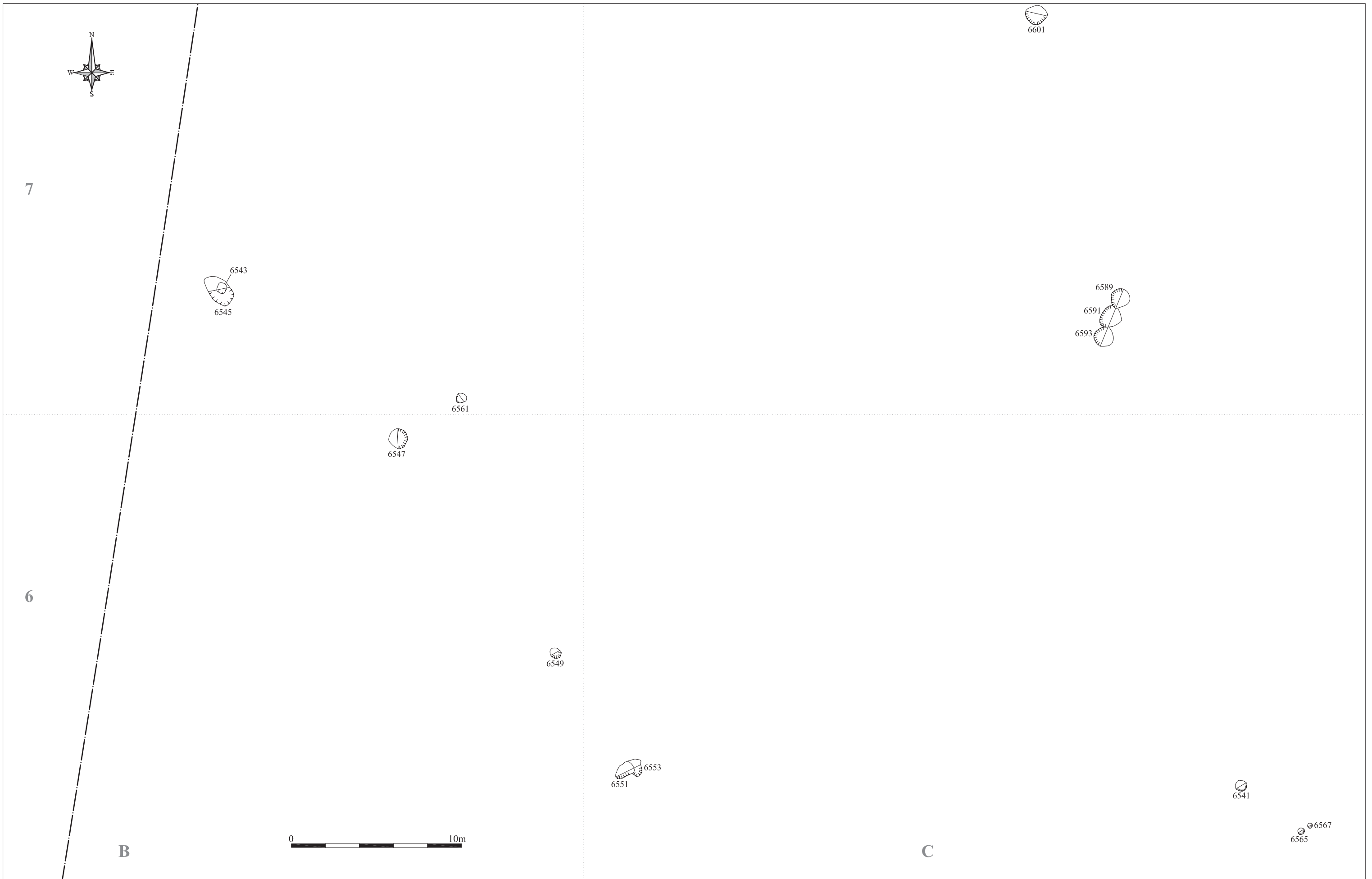
C



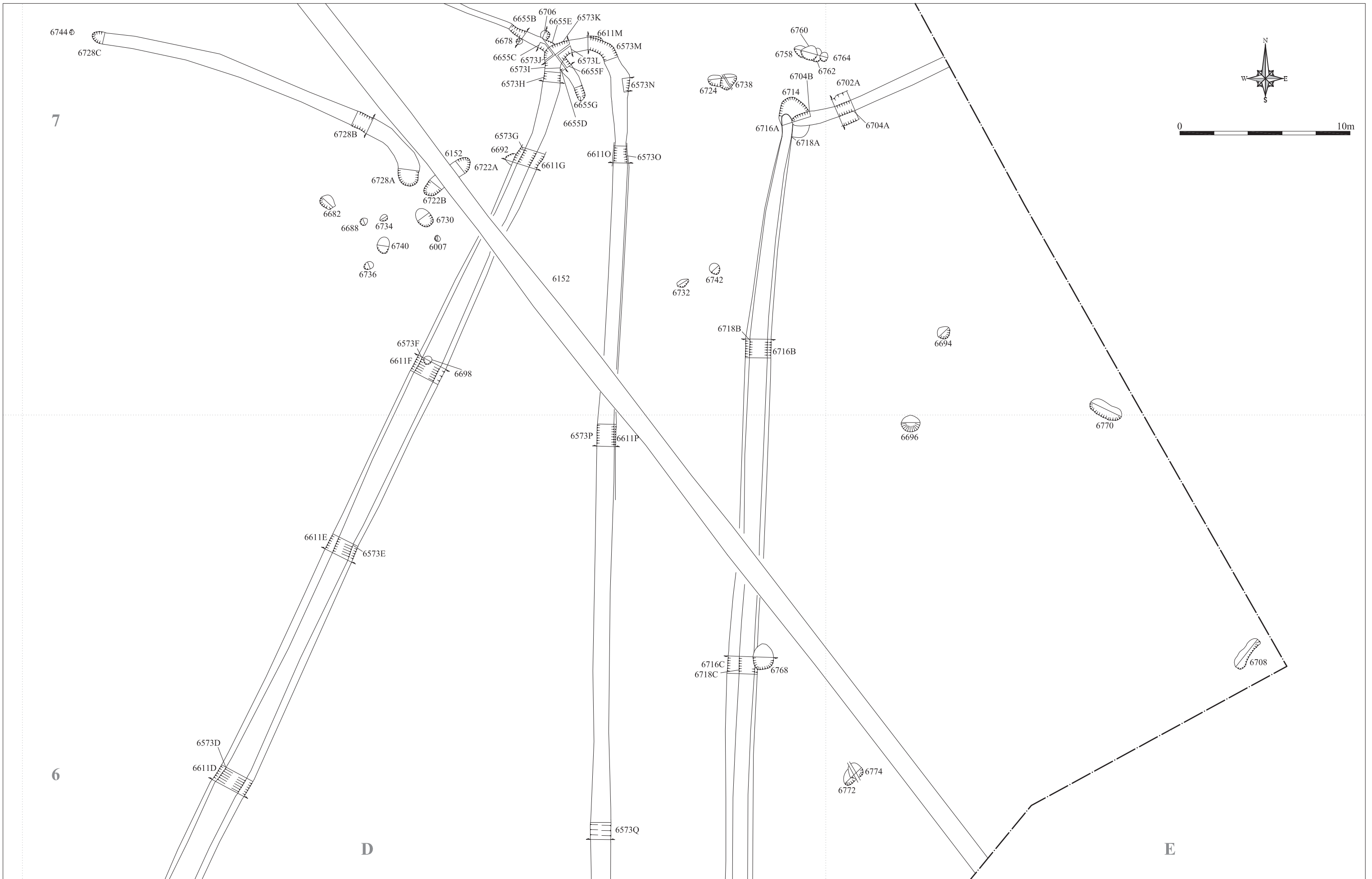
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Fig. 10 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



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Fig. 11 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



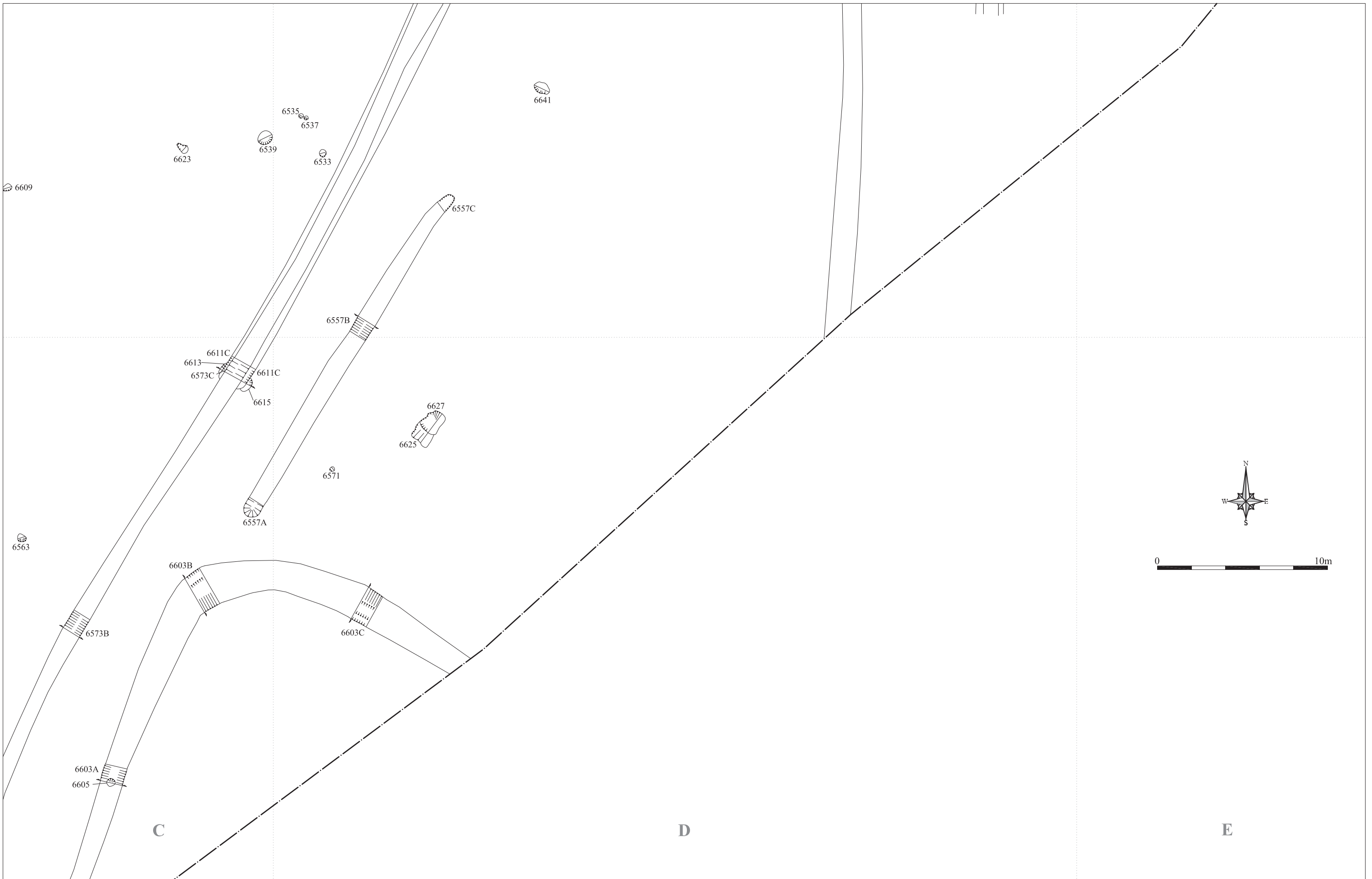
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Fig. 12 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



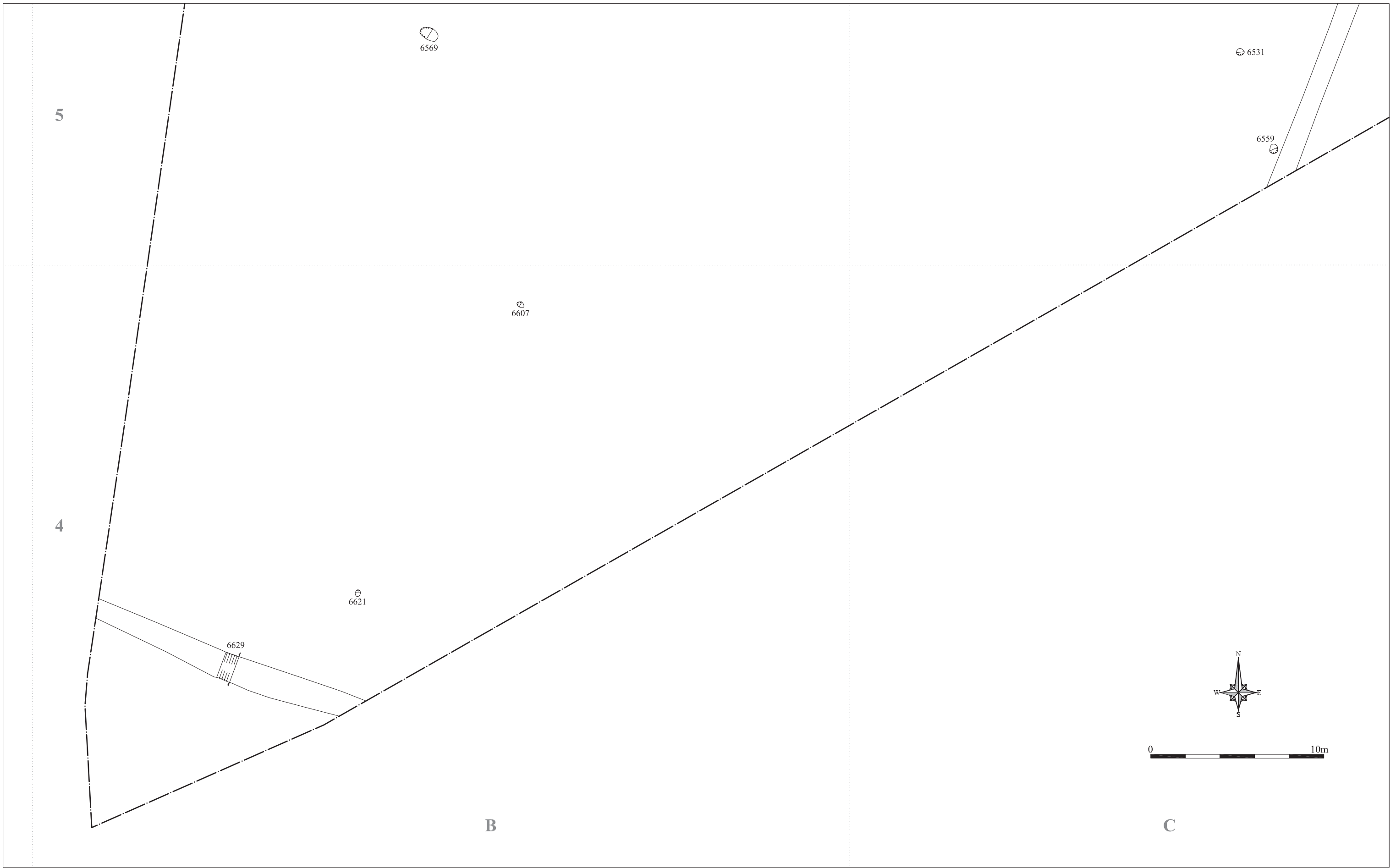
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Fig. 13 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



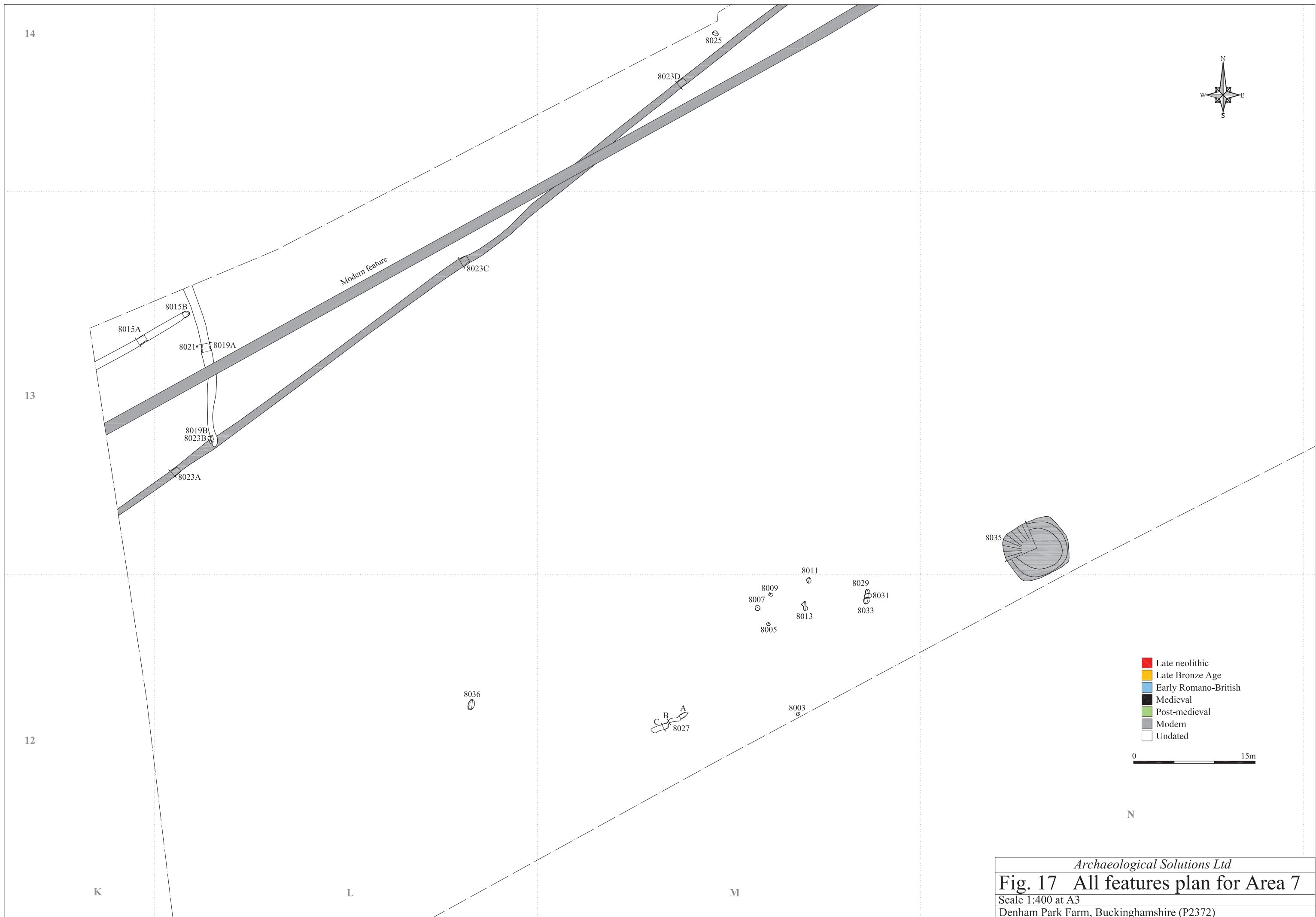
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Fig. 14 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)



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Fig. 15 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

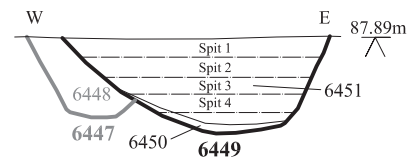


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Fig. 16 Close up plan for Area 6
 Scale 1:200 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

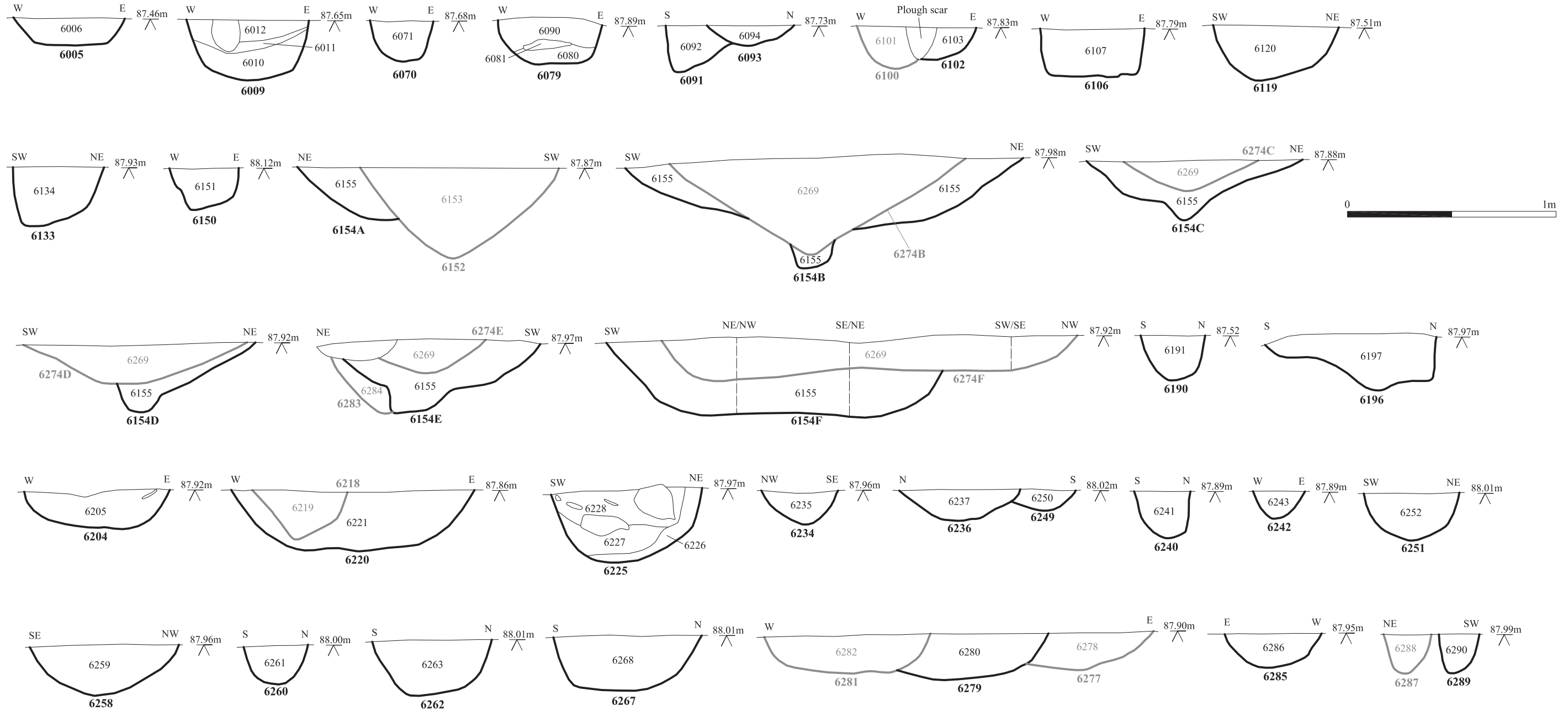


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Fig. 17 All features plan for Area 7
 Scale 1:400 at A3
 Denham Park Farm, Buckinghamshire (P2372)

Phase 1 Neolithic

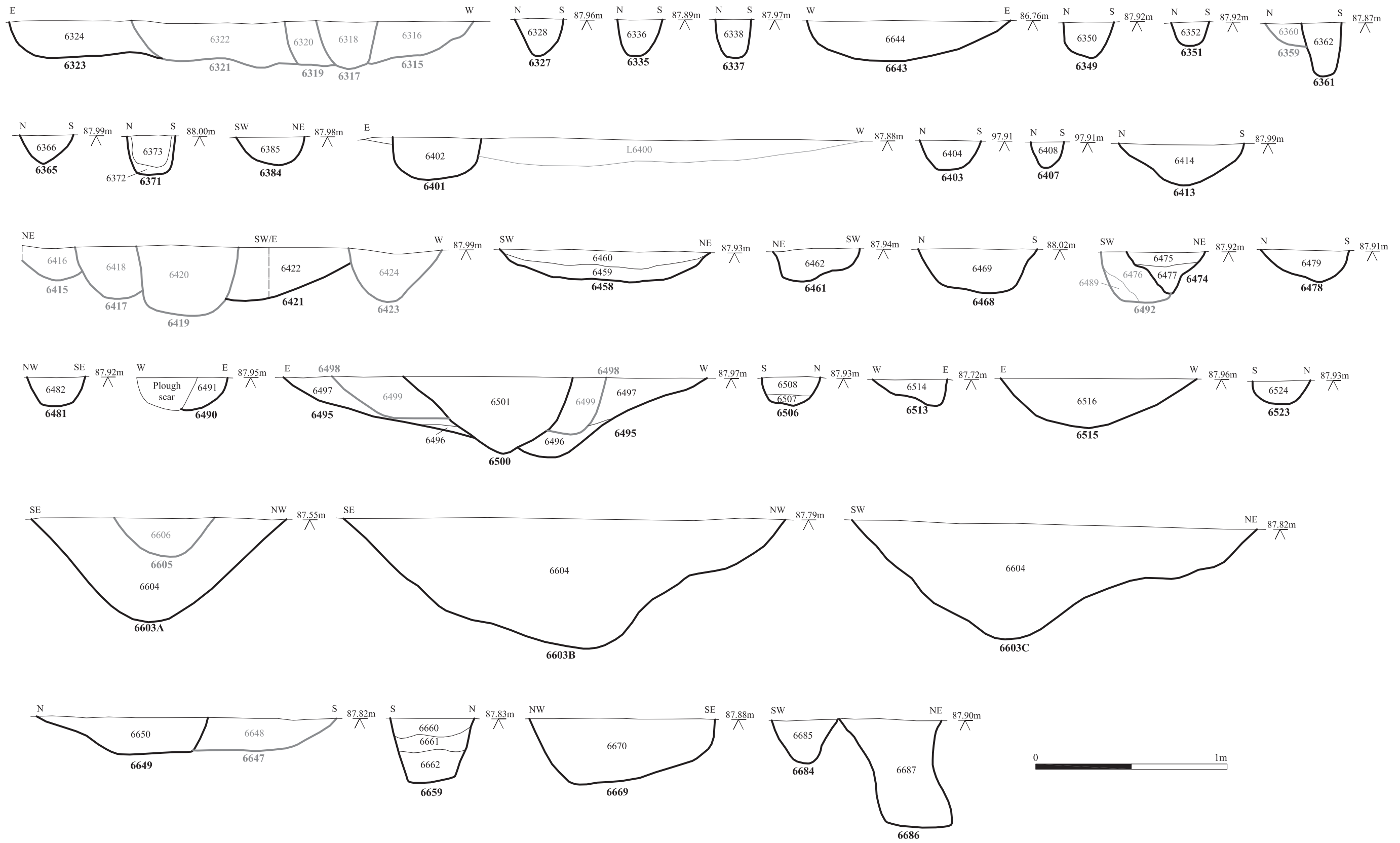


Phase 2 Late Bronze Age



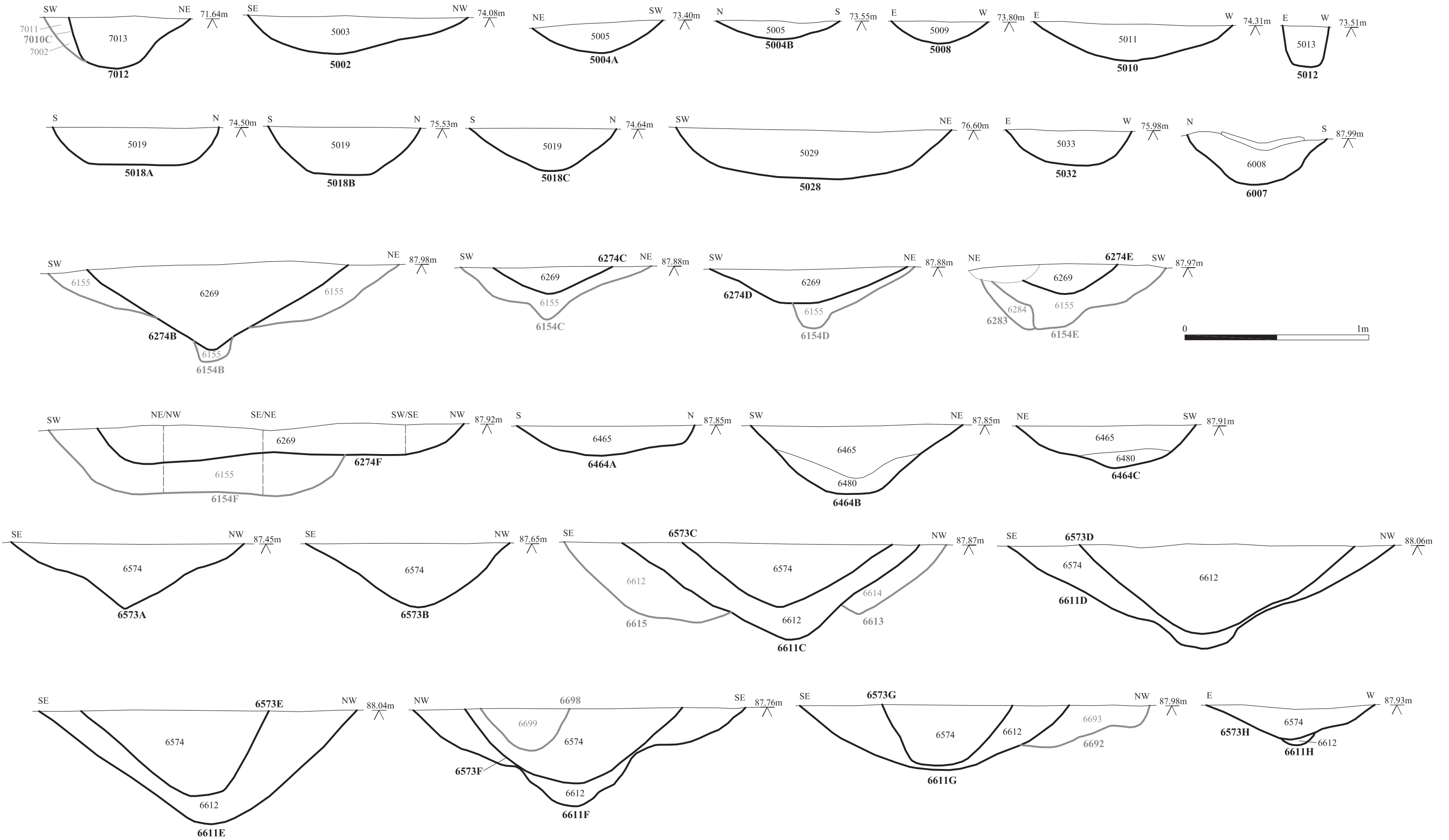
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Fig. 18 Neolithic & late Bronze Age sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Phase 2 Late Bronze Age (continued)



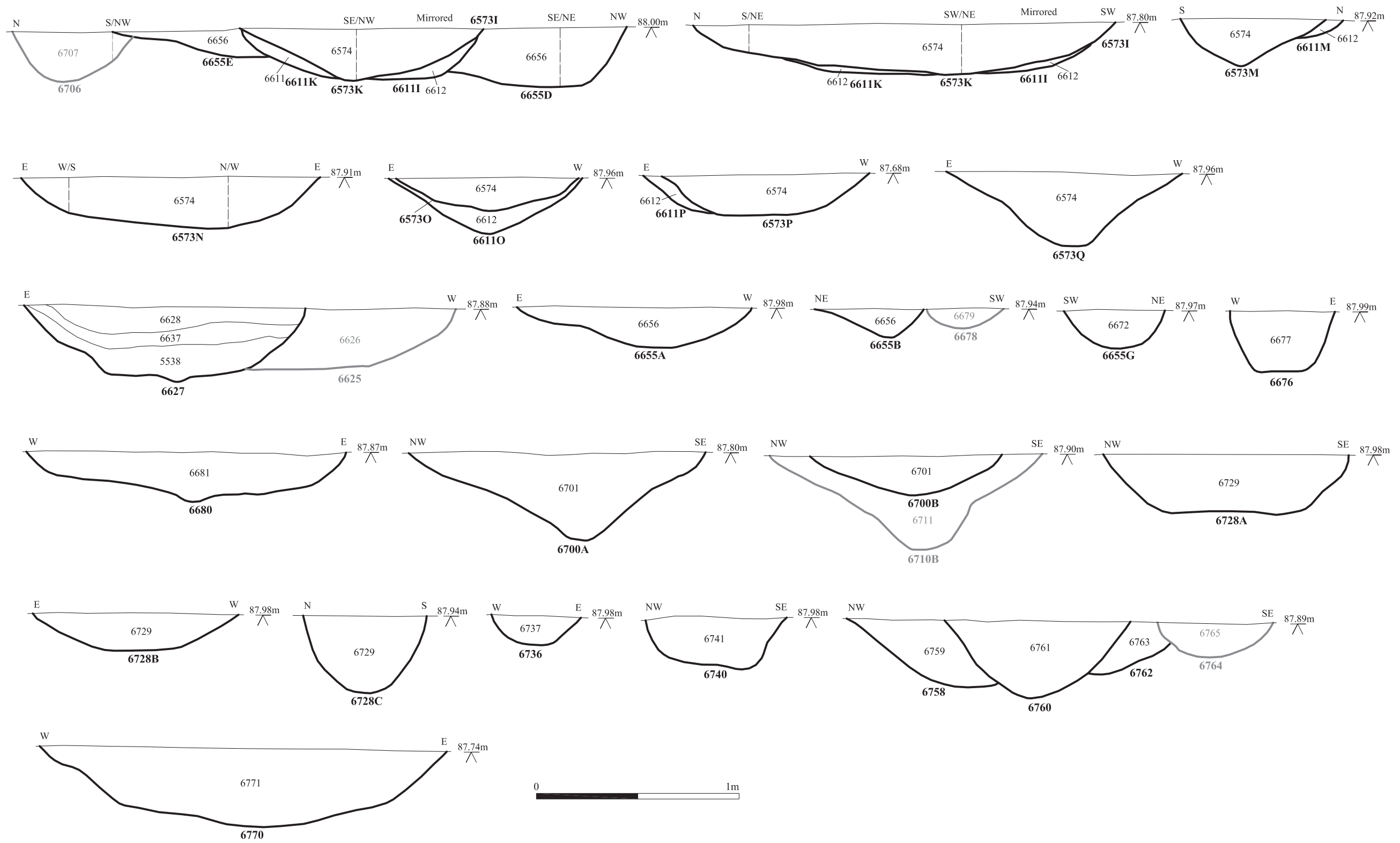
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Fig. 19 Late Bronze Age sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Phase 3 Early Romano-British



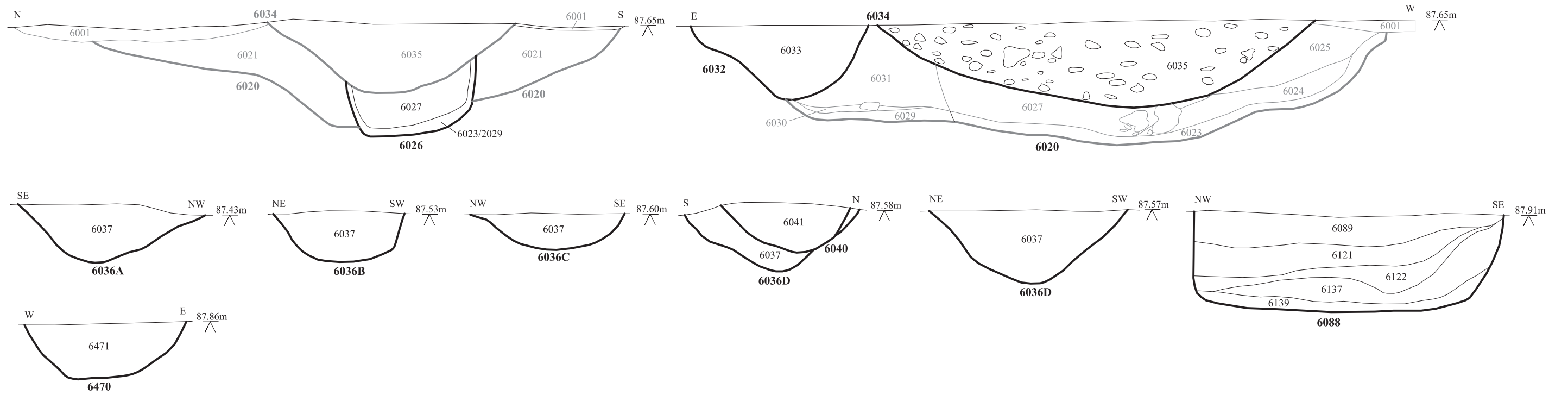
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Fig. 20 Early Romano-British sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Phase 3 Early Romano-British (continued)

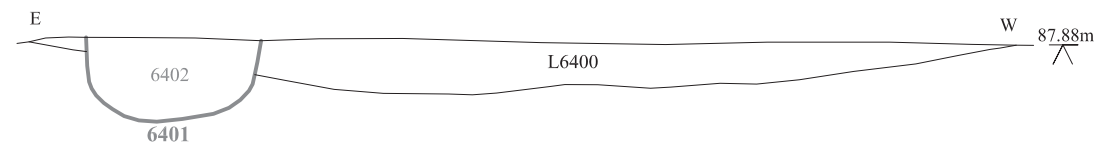


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Fig. 21 Early Romano-British sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

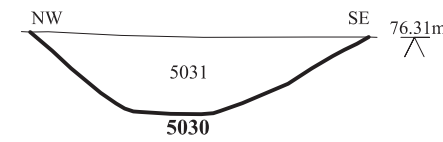
Possible Romano-British containing Bronze Age pottery and Fe slag



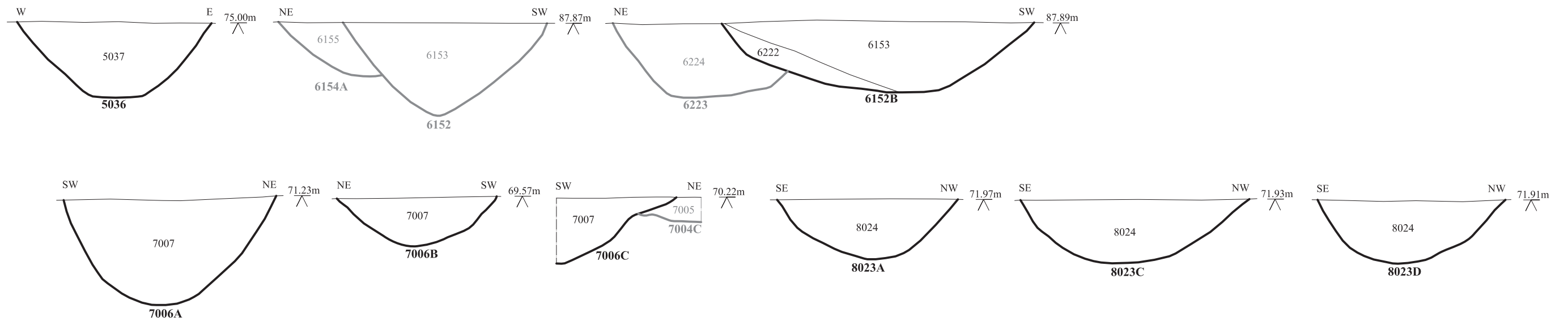
Medieval



Post-medieval

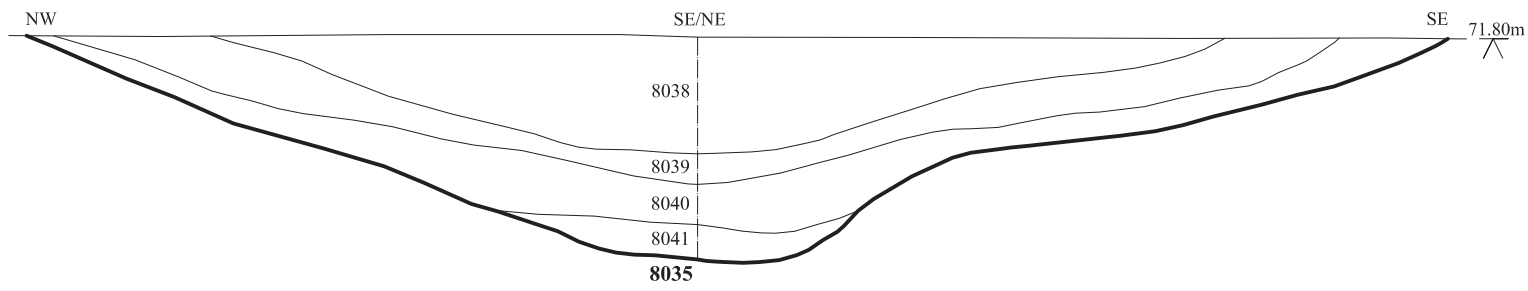


Modern

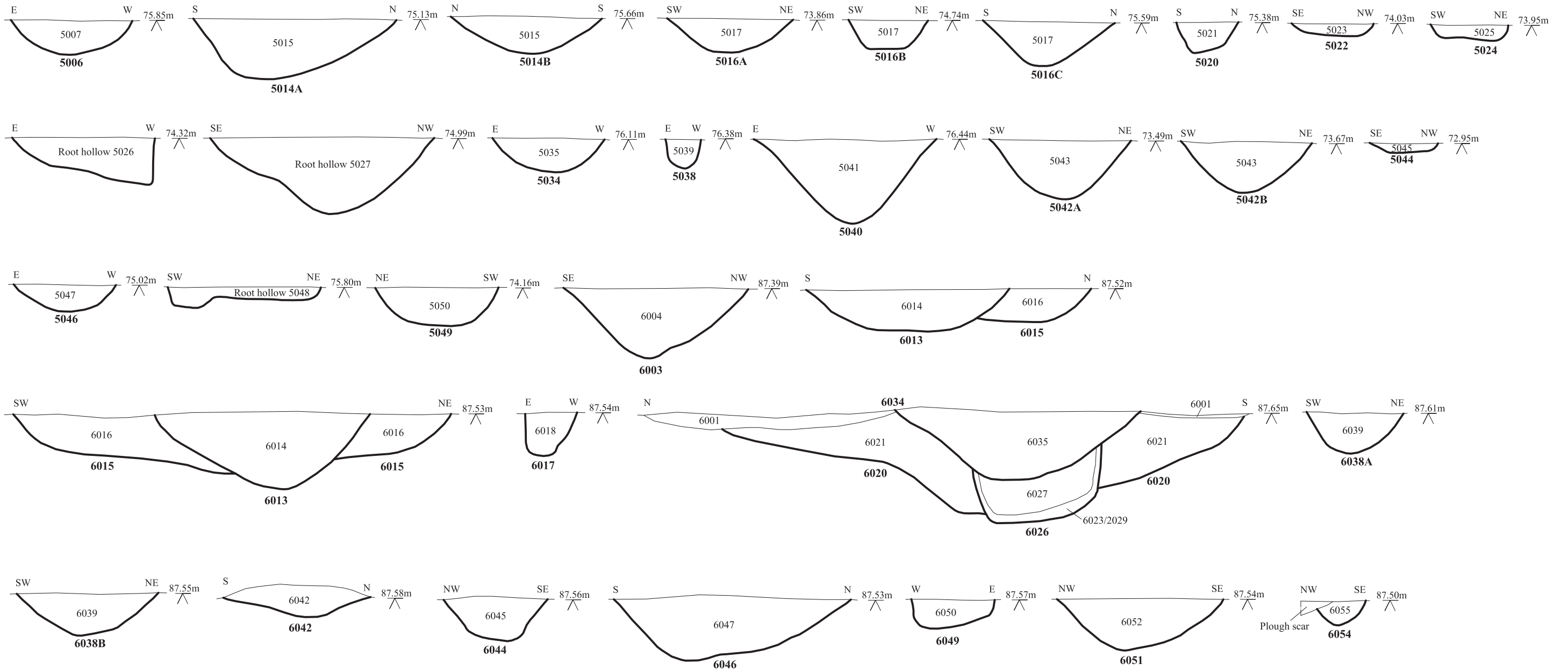


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Fig. 22 Possible Romano-British (and later) sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Modern (continued)

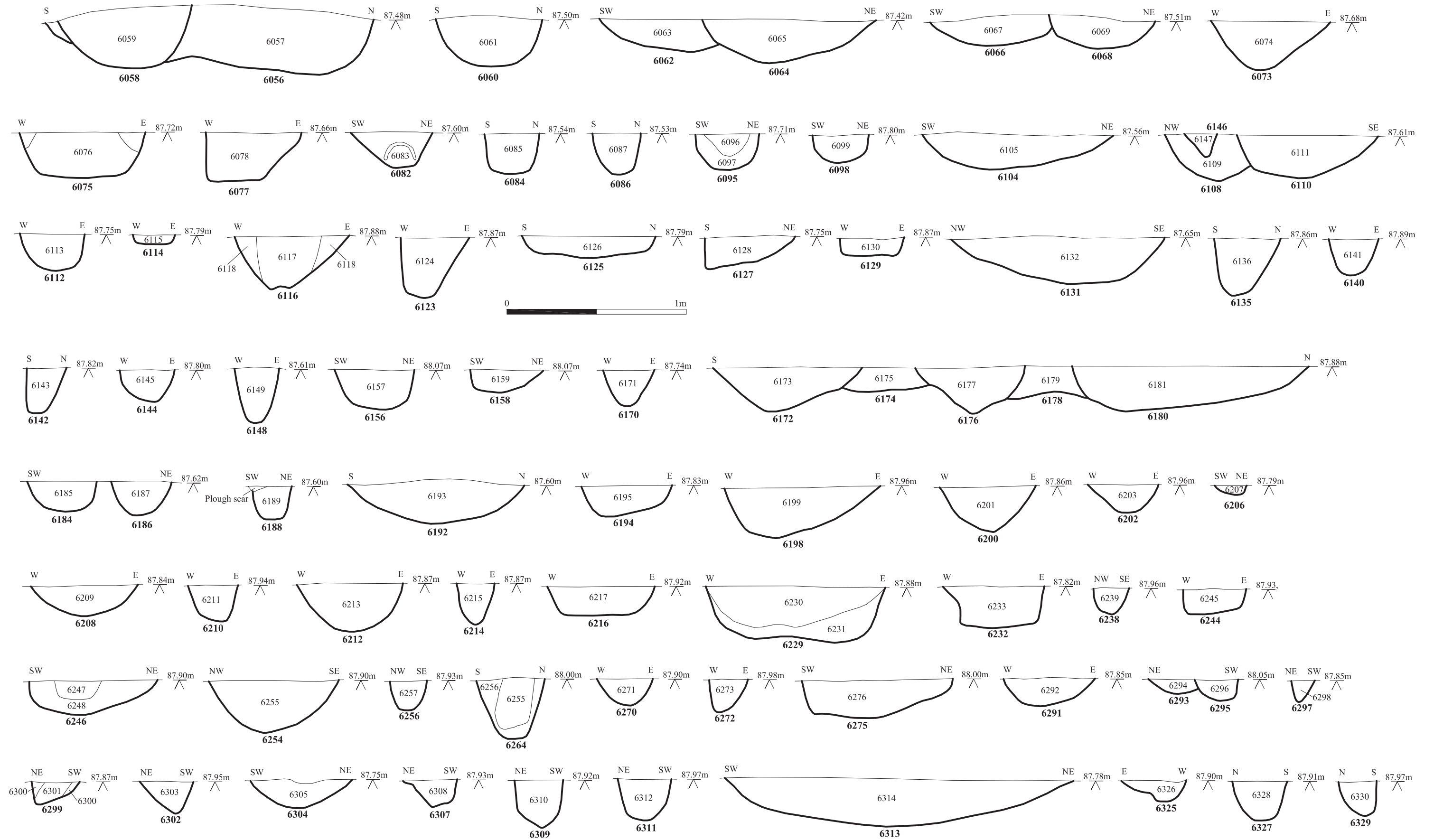


Undated



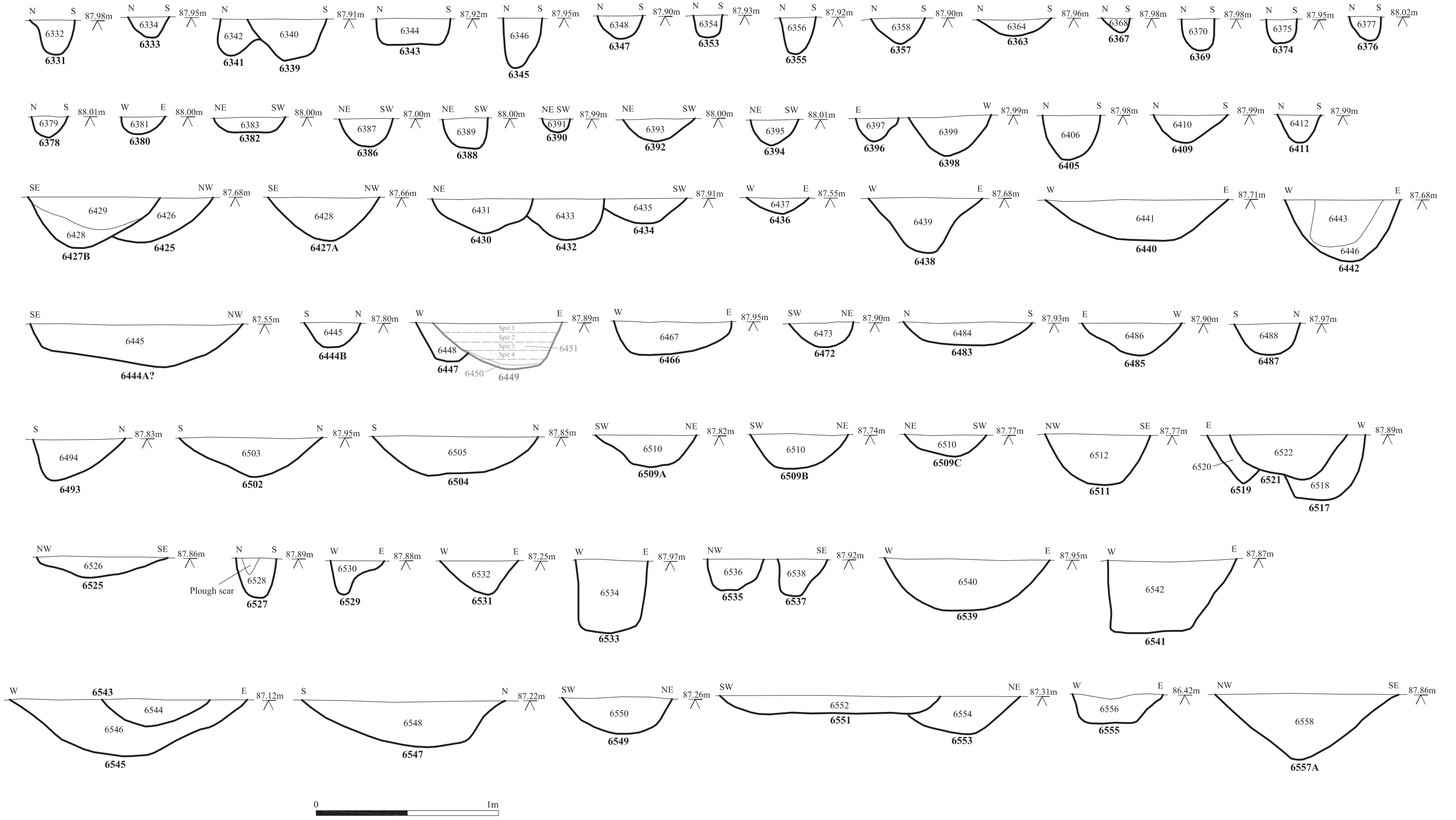
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Fig. 23 Modern and undated sections
Scale 1:20 at A3
Denham Park Farm, Denham, Buckinghamshire (P2372)

Undated (continued)



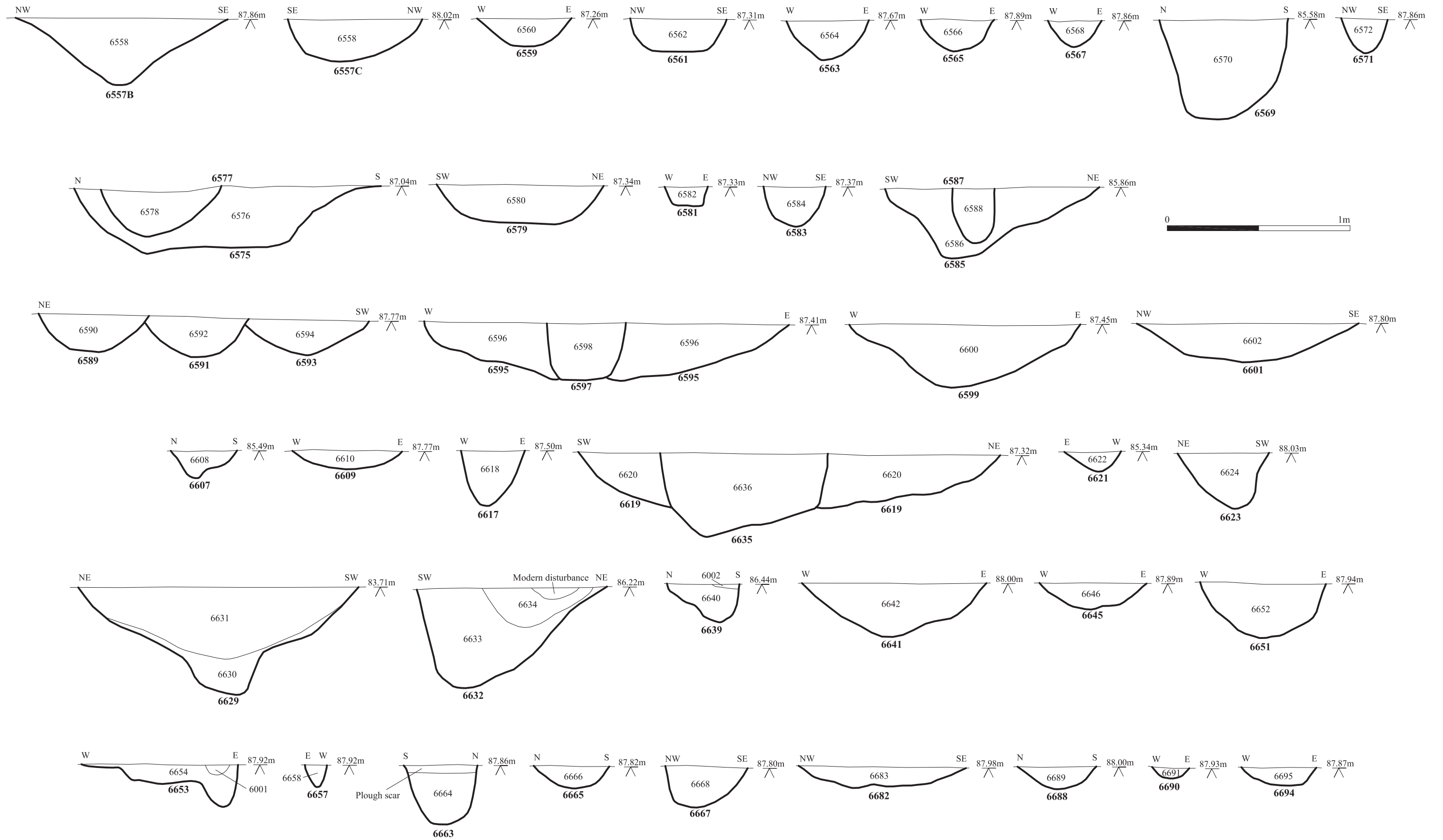
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Fig. 24 Undated sections
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Undated (continued)



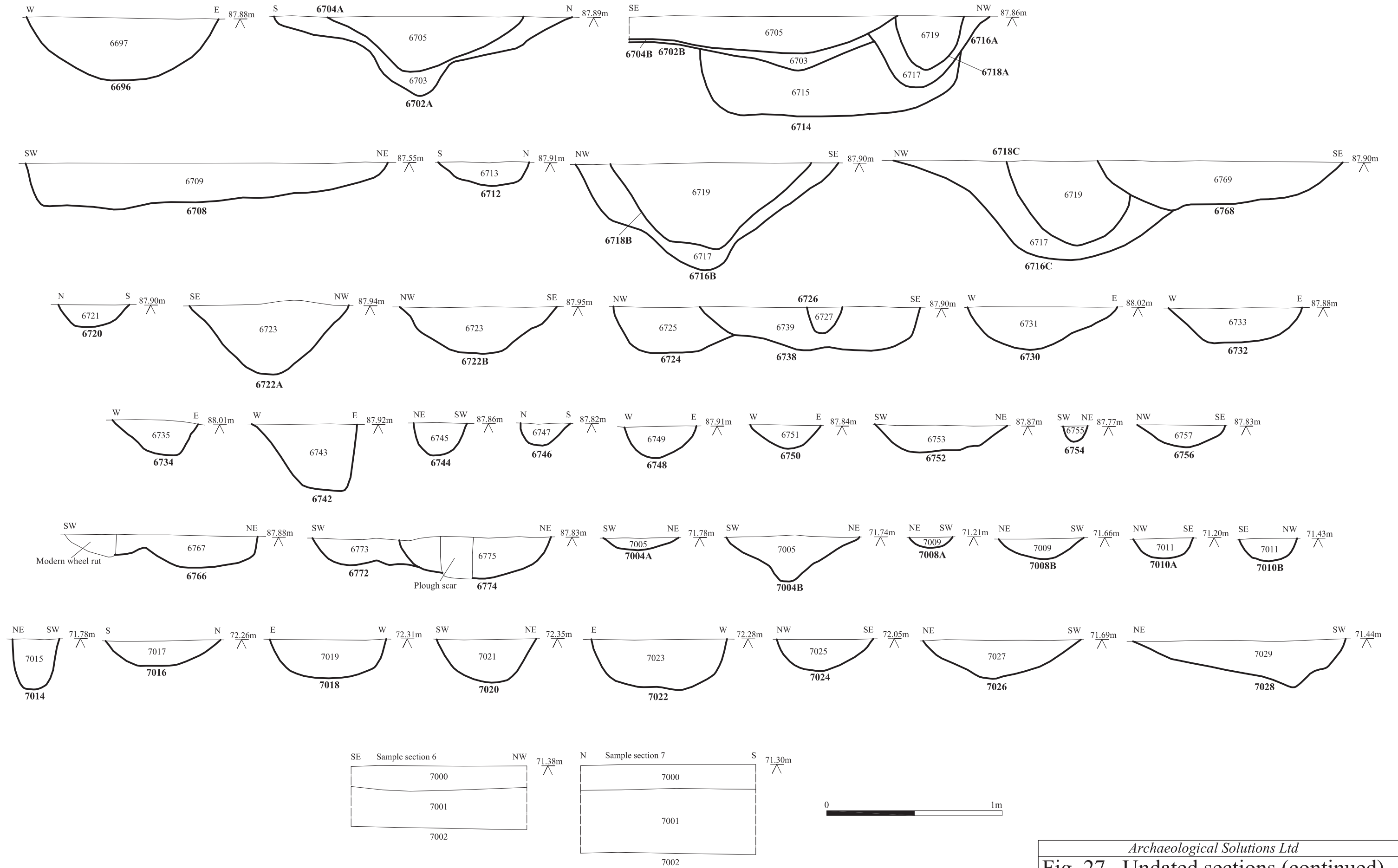
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Fig. 25 Undated sections (continued)
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Undated (continued)



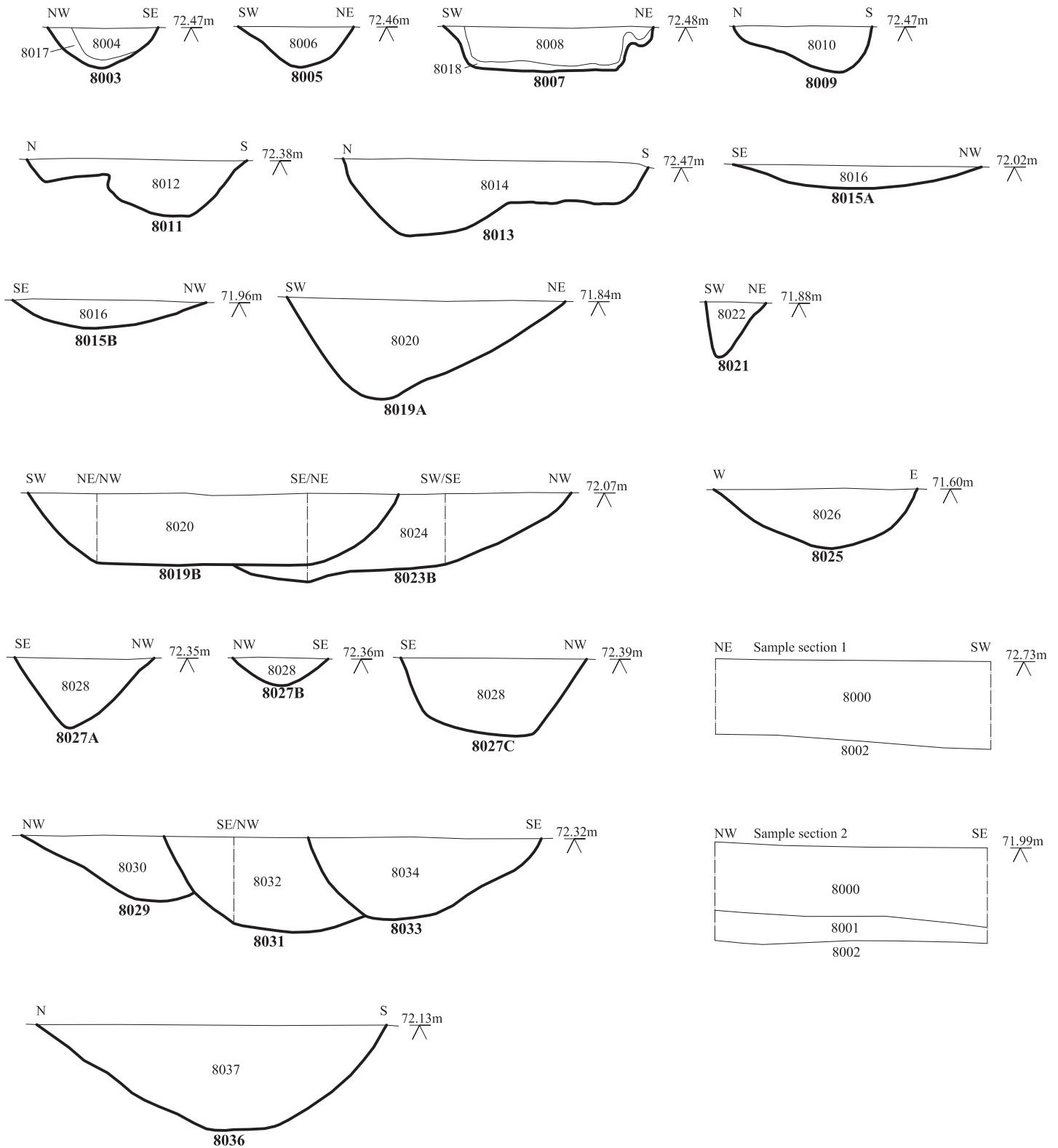
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Fig. 26 Undated sections (continued)
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

Undated (continued)

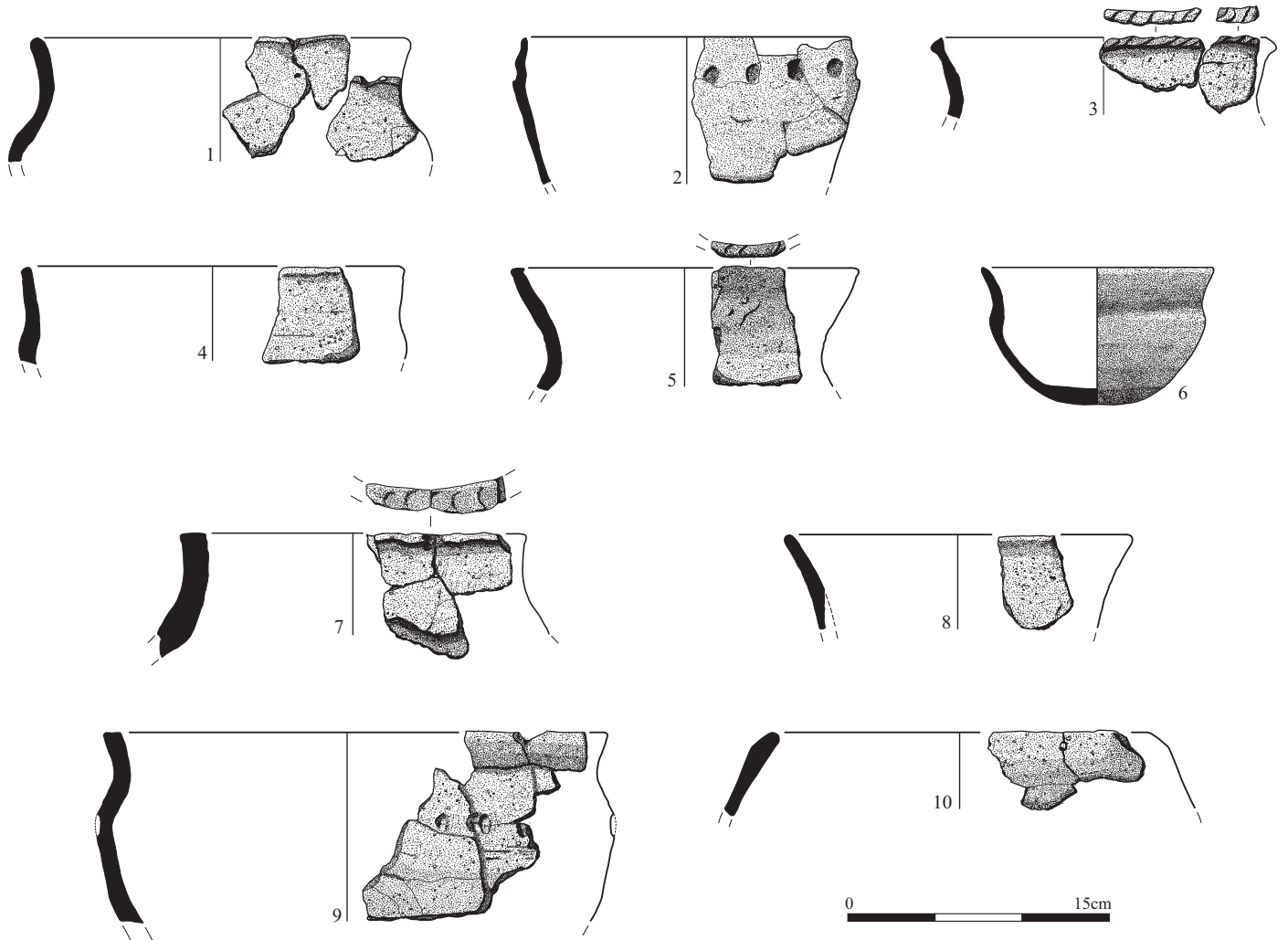


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Fig. 27 Undated sections (continued)
 Scale 1:20 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

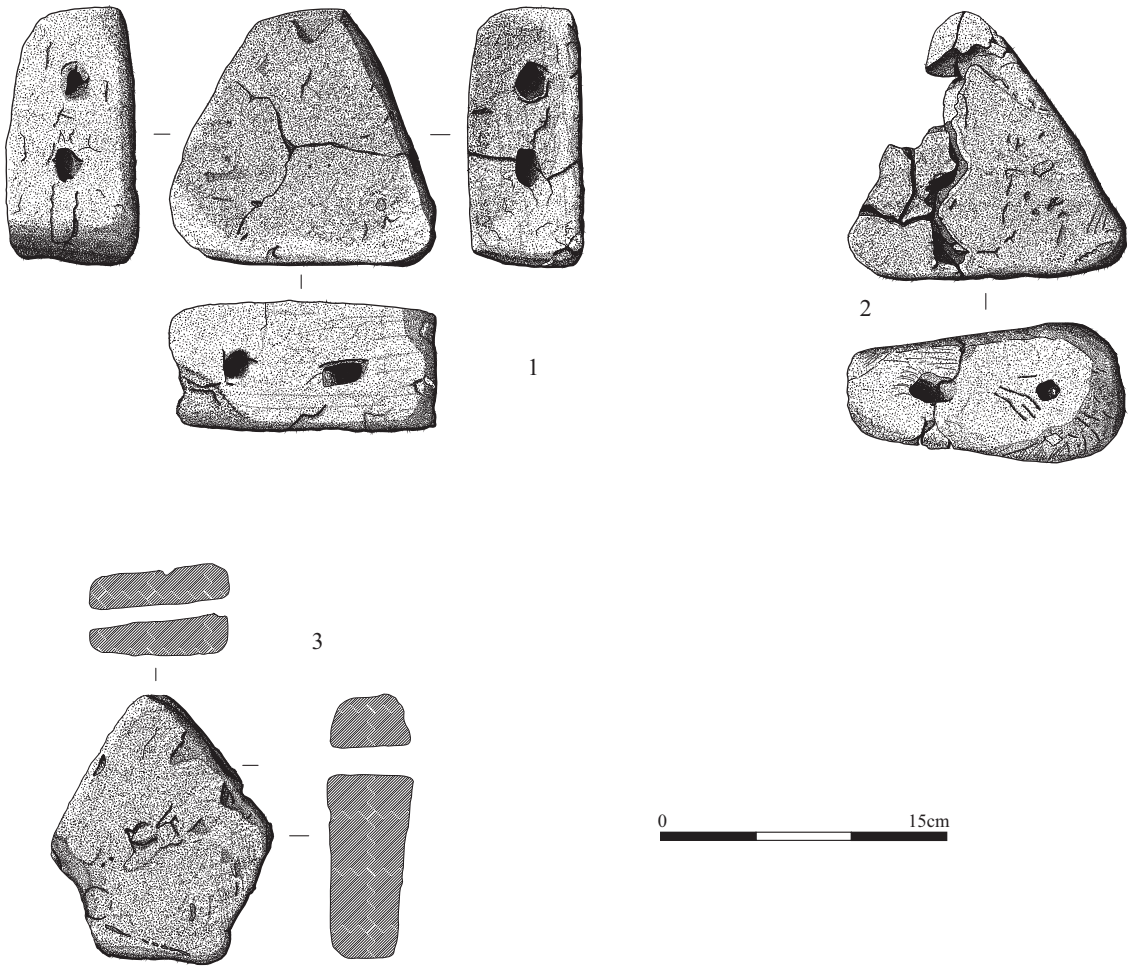
Undated (continued)



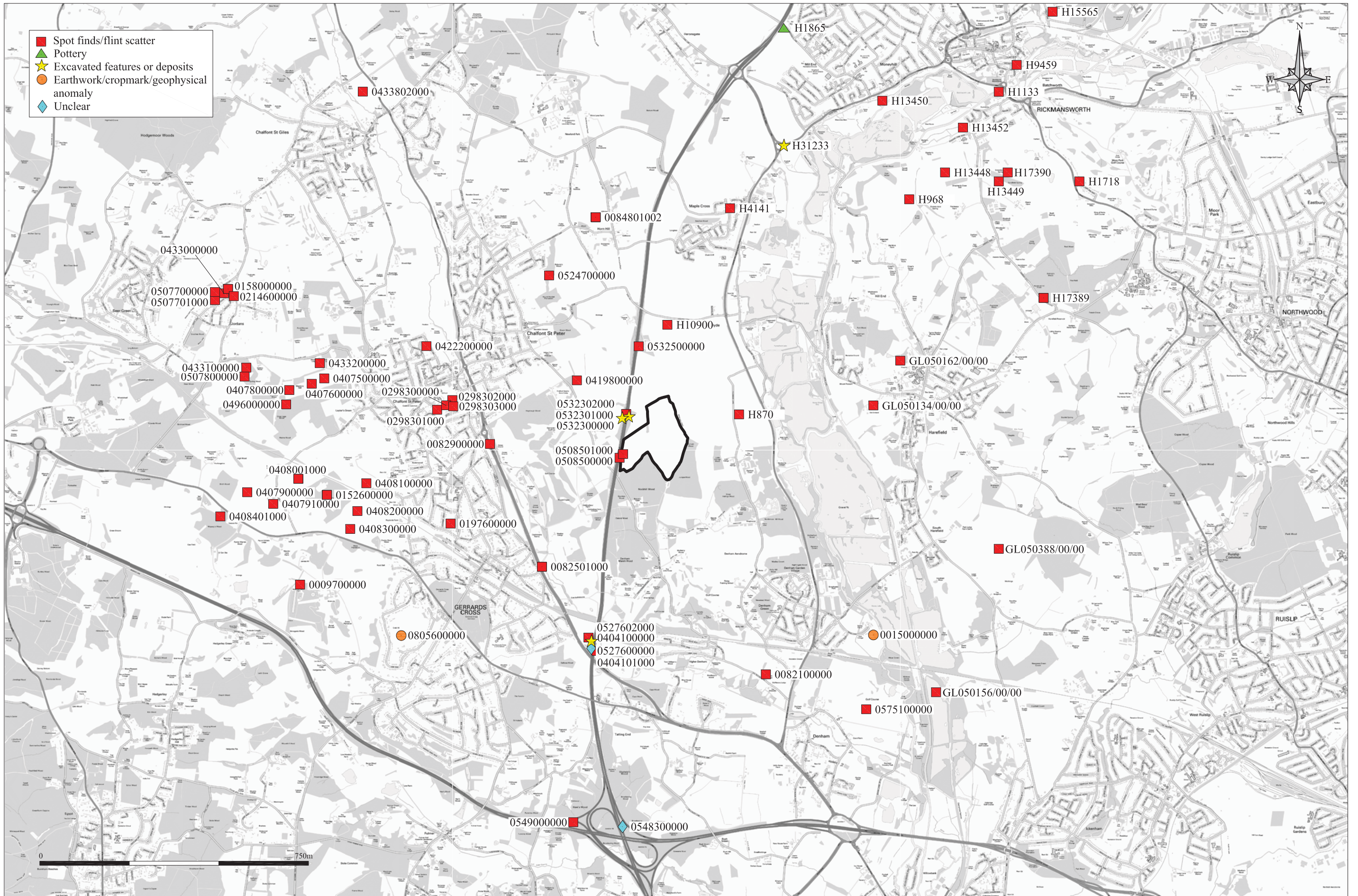
<i>Archaeological Solutions Ltd</i>
Fig. 28 Undated sections (continued)
Scale 1:20 at A3
Denham Park Farm, Denham, Buckinghamshire (P2372)



<i>Archaeological Solutions Ltd</i>
Fig. 29 Pottery illustrations
Scale 1:4 at A4
Denham Park Farm, Buckinghamshire (P2372)



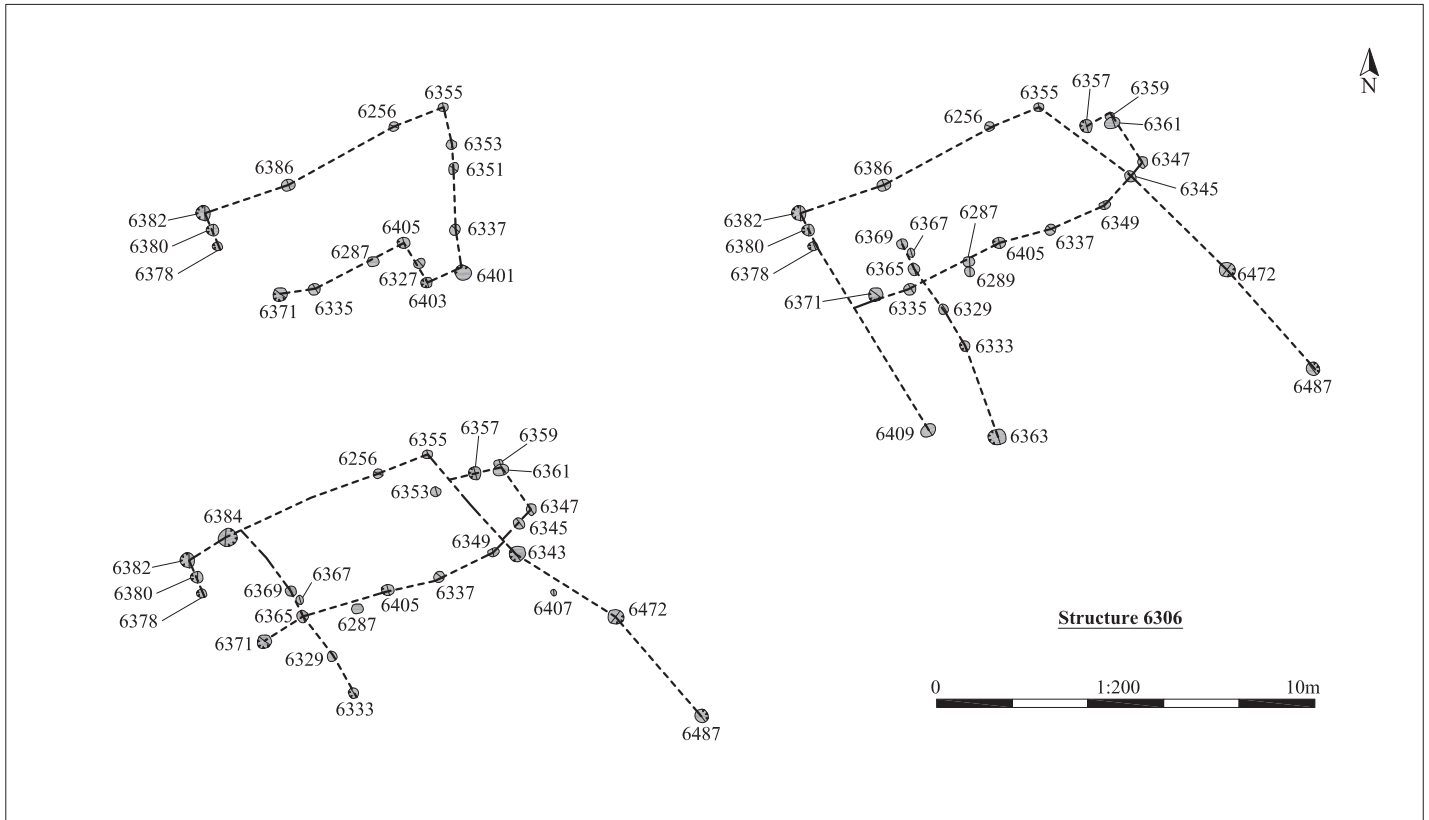
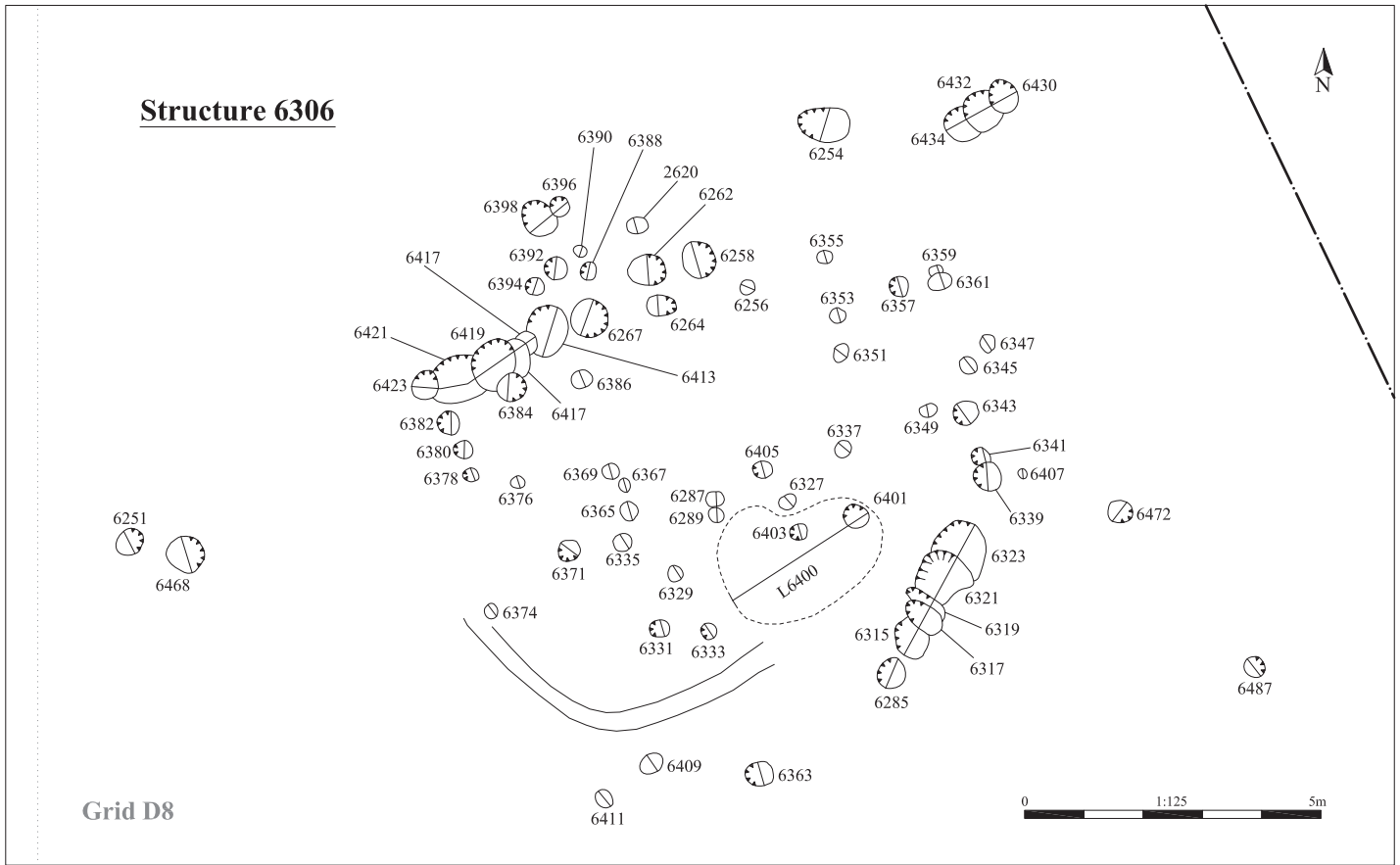
<i>Archaeological Solutions Ltd</i>
Fig. 30 Clay loomweights
Scale 1:4 at A4
Denham Park Farm, Buckinghamshire (P2372)



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 Numbers prefixed by H are from the Hertfordshire HER
 Numbers without prefix are from the Buckinghamshire HER

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Fig. 31 Neolithic sites in the surrounding area
 Scale 1:40,000 at A3
 Denham Park Farm, Denham, Buckinghamshire (P2372)

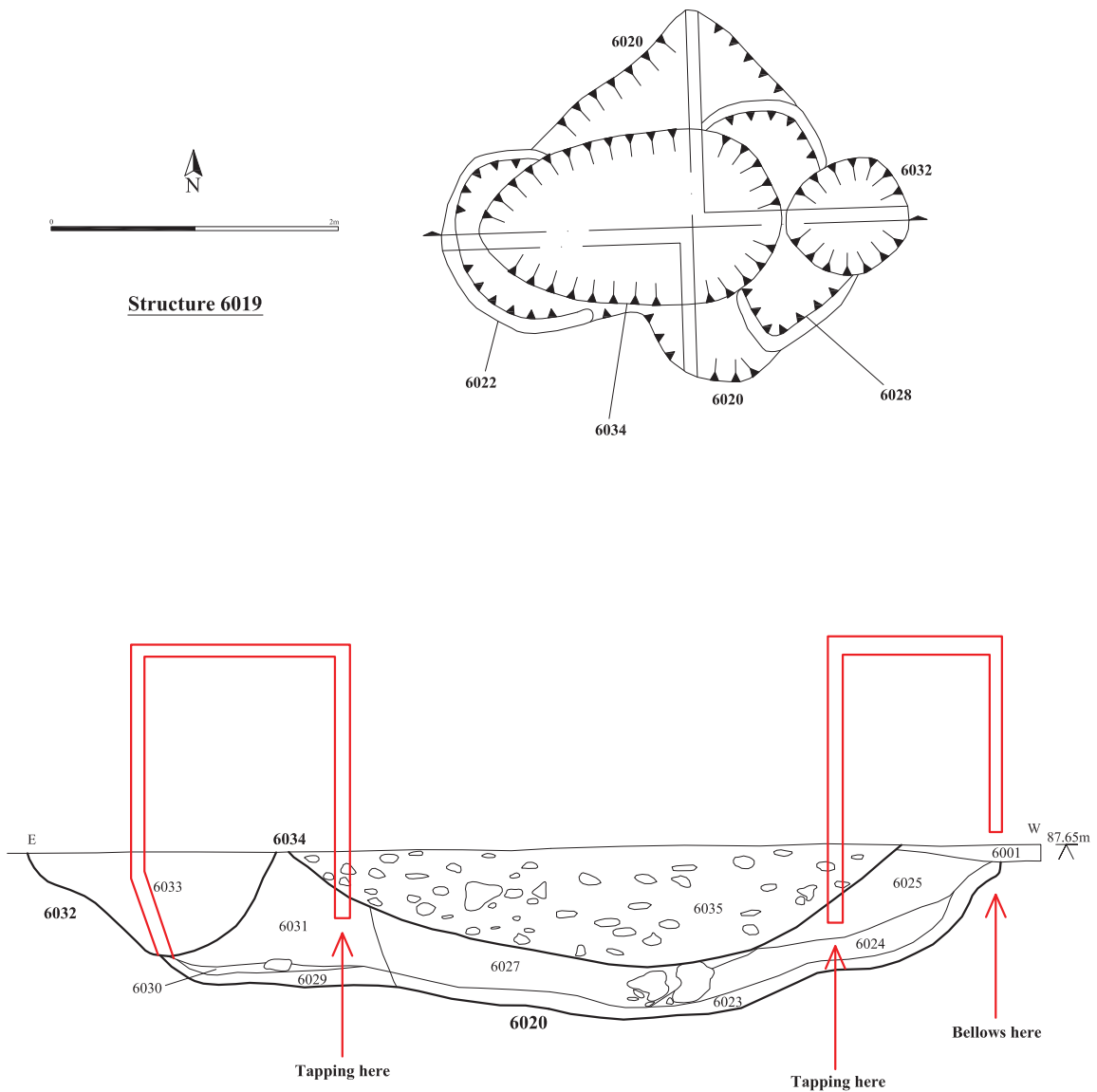


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Fig. 32 Potential structural configurations of Structure 6306

Scale 1:125 and 1:200 at A4

Denham Park Farm, Denham, Buckinghamshire (P2372)



<i>Archaeological Solutions Ltd</i>
Fig. 33 Conjectural reconstruction of Structure 6019
Scale 1:125 and 1:200 at A4
Denham Park Farm, Denham, Buckinghamshire (P2372)