NAA

POST-EXCAVATION ANALYSIS REPORT

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EAST WIDEOPEN FARM
WIDEOPEN
NORTH TYNESIDE

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EAST WIDEOPEN FARM, WIDEOPEN, NORTH TYNESIDE
POST-EXCAVATION ANALYSIS REPORT

TABLE OF CONTENTS

Summary

1.0	Introduction	1
2.0	Location, topography and geology	1
3.0	Summary archaeological and historical background	2
4.0	Aims and objectives	5
5.0	Methodology	6
6.0	Results	7
7.0	Specialist finds and environmental analyses	50
8.0	Discussion	54
9.0	Conclusions	75

References 78

Appendix A Context catalogue 84

Appendix B Pottery 133

Appendix C Ceramic Building Material 143

Appendix D Worked Stone 145

Appendix E Metal production residues 151

Appendix F Animal bone 154

Appendix G Palaeoenvironmental 160

Appendix H Radiocarbon dating 183

LIST OF PLATES

Plate 1: Section through Enclosure B ditch **3933**, facing northwest. 13

Plate 2: Section through Enclosure B ditch **3932**, facing southwest. 15

Plate 3: Overhead view of the main ring-gully cluster showing RG 2, RG 4, RG 3, RG 5, RG 6, RG 7 and RG 8 (in order from south to north). 16

Plate 4: Section through pit **3491**, facing north. 18

Plate 5: Overhead view of RG 1 (right) and RG 10 (left) 21

Plate 6: Overhead view of posthole **3772** showing stony backfill **3773** intact. 23

Plate 7: Section showing ditch **3935** cut into ditch **3936** at their southern termini (segments 3004 and 3008), facing northeast. 27
Plate 8: Section through ditch 3936 terminal 3705, facing northeast. 28
Plate 9: Section through ditch group **750**, facing west. 32
Plate 10: RG 18 terminal segment **472**, facing south-east. 38
Plate 11: Curvilinear gully, RG 17 40
Plate 12: View of section through ditch group **195**, facing north. 43
Plate 13: Section through field system ditch group **3938**, facing south-east. 46
Plate 14: Western terminal of ditch **3937**, facing southeast. 47
Plate 15: Section through pit **3333**, facing northwest. 49
Figure F1: Bone surface preservation for animal remains recovered at East Wideopen 155
Figure H1: Probability distributions of dates as a 'Sequence' of two 'Phases' 187
Figure H2: probability distribution of the total number of years of activity 188

LIST OF TABLES

Table 1: Ring-gullies at East Wideopen Farm 65
Table 2: Measurements of ring-gullies by phase 67

LIST OF FIGURES

Figure 1: site location
Figure 2: location of 2016 and 2017 excavations showing group numbers
Figure 3: phase plan
Figure 4: phase plan detail
Figure 5: detail of excavations showing group numbers
Figure 6: Enclosure B detail
Figure 7: detail of ring-gullies in Enclosure B
Figure 8: Enclosure A detail
Figure 9: sections
Figure 10: sites mentioned in text
Figure 11: RF001 beehive quern upper from ring-gully fill 3593

EAST WIDEOPEN FARM, WIDEOPEN, NORTH TYNESIDE
POST EXCAVATION ANALYSIS REPORT

Summary

This document presents an analysis of the evidence for Iron Age and Romano-British occupation recorded during archaeological excavations carried out in 2015/2016 and 2017 on land at East Wideopen Farm, Wideopen, North Tyneside (NGR NZ 2452 7265). This report has been prepared by Northern Archaeological Associates Ltd (NAA) for Bellway Homes Ltd. The archaeological mitigation works were required as a condition of planning permission for development of the land as part of the Five Mile Park housing scheme. The development site comprised two irregularly shaped plots of land with a combined area of approximately 4.26ha, situated within the wider Five Mile Park housing development. Prior to the investigations, the plot of land had been occupied by a post-medieval farmhouse and a horse paddock.

Three main periods of Iron Age occupation were identified. An unenclosed settlement of probable Middle Iron Age date was followed by the creation of two rectilinear ditched enclosures, occupied either simultaneously or successively during the Late Iron Age. Once the main ditches had become disused and silted up, the enclosures were divided into several sub-enclosures accompanied by unenclosed settlement, and a system of large fields and at least one trackway was laid out. This unenclosed final settlement phase continued into the early Roman period. Evidence for occupation consisted of truncated ring-gullies associated with a sequence of roundhouse structures. A number of contemporary pits, postholes and drainage gullies were also encountered.

Most of the finds were recovered from features dated to the final unenclosed phase and included hand-built pottery and Roman ceramic building material, which were sometimes found together, stone objects including fragments of two quernstones and a small quantity of animal bones. Environmental samples taken from a selection of recorded features indicated that the settlement had a largely agricultural economy exploiting a variety of environments including boggy, acidic and possibly coastal soils.

Combined with the results from a number of nearby excavations, the new evidence from East Wideopen indicates that by the later Iron Age the site lay in a well-populated and intensively exploited landscape.

Due to the significance of the results of the excavations, and in line with regional and national guidelines, the results of the investigations should be published within a regional journal.

1.0 INTRODUCTION

1.1 This document presents the results of a programme of post-excavation analysis of the results of two phases of archaeological investigation carried out in 2015/2016 and 2017 in advance of residential development at East Wideopen Farm, Wideopen, North Tyneside (NGR NZ 2452 7265; Figs. 1 and 2), which forms part of the larger Five Mile Park development area. It follows recommendations made in two previous post-excavation assessment reports (NAA 2016a, NAA 2018), and has been prepared by Northern Archaeological Associates Ltd for Bellway Homes Ltd. The report forms part of the archaeological mitigation for the development, approved by the Tyne and Wear Archaeology Officer, archaeological advisor to Newcastle City Council (Morrison 2014 and 2016), as part of the planning consent for the development. The post-excavation analysis has been carried out following current national standards and guidance outlined by English Heritage (2008a, 2010), Historic England (2015) and the Chartered Institute for Archaeologists (2014a; 2014b; 2014c; 2014d).

1.2 This document discusses only the prehistoric and Romano-British phases of activity within the site. Post-medieval archaeological deposits recorded during the course of the project are discussed elsewhere (NAA 2016b and Pratt, in prep.).

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

Location

2.1 The site was located directly east of Lockey Park within Wideopen village (NGR NZ 2452 7265; Fig. 1), which is itself approximately 8km north of Newcastle upon Tyne.

2.2 The 2015/2016 excavation comprised an irregular shaped plot of land with an area of approximately 3.66ha. To the north of this, separated by a bridle path, the second excavation in 2017 had an area of 0.6ha, giving a combined area of c.4.26ha.

Topography and land-use

2.3 The site consisted of two relatively flat fields, sloping downwards towards the south and south-east. The north field had previously been occupied by East Wideopen Farm (NAA 2016b), and the southern field had been used as an equine recreational course as well as a grazing paddock.

2.4 These fields were separated by a bridle path that linked the village with the remains of the Seaton Burn Waggonway, now used as a cycle path, which formed the eastern site boundary.

2.5 The site lay at the northern limit of the Five Mile Park development area, a reference to the distance from the centre of Newcastle. The northern excavation area was bounded to the west by school grounds and to the north and north-east by residential development. The southern excavation area was bounded to the west by another bridle path with playing fields and a recreational park beyond (Lockey Park). A dismantled railway line bordered the eastern edge while the area to the south of the site was under development as part of the Five Mile Park scheme.

2.6 The site was at an average height of c.65m above Ordnance Datum (aOD).

Geology and soils

2.7 The site's solid geology consisted of the Pennine Middle Coal Measures formation comprising mudstone, siltstone and sandstone. This was overlain by a Diamicton Devensian till (BGS 2019). The soils in the area are mapped as being of the Brickfield 3 Association, loamy and clayey surface-water gley soils, prone to winter waterlogging and mostly used as permanent grassland for livestock production and dairying (Soil Survey of England and Wales 1983; Jarvis *et al*. 1984, 123-6).

3.0 SUMMARY ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 The following archaeological and historic background of the development site has primarily been summarised from reports associated with the previous phases of work detailed below.

Previous archaeological interventions

3.2 As noted above, the East Wideopen Farm site formed part of a much larger overall development area (Five Mile Park). Where relevant, the results from previous investigations associated with the Five Mile Park development area have been integrated into the following archaeological and historical background. This work has included:

- an archaeological evaluation carried out in 2009 to the south of the former Fawdon Waggonway (Frain 2009);
- a heritage statement produced in 2011 specifically for the East Wideopen Farm buildings which previously stood within the current site (Hardie 2011);

- a desk-based assessment produced in 2012 for the areas to the north and south of this farmhouse (Richardson 2012);
- a geophysical survey and archaeological evaluation carried out in 2012, which investigated the same areas as the above desk-based assessment (Muncaster 2012; Scott 2012);
- also in 2012, excavation at East Wideopen Farm to the south of the current site, focusing on an enclosure found by the 2009 evaluation to the south of the former Fawdon Waggonway (ASDU 2014; Fig. 1);
- in 2014, an archaeological watching brief was undertaken within a small area close to the centre of the development area (ASDU 2015); and
- in 2015, building recording of East Wideopen Farm and its associated outbuildings was carried out by NAA (2016b).

Prehistoric

3.3 Prehistoric activity was evident both locally and within the wider area (Richardson 2012, 7). Bronze Age activity within the vicinity of the development was suggested by the discovery of a Bronze Age spearhead approximately 570m to the south-west (Tyne and Wear Historic Environment Record (HER) 780) in the 1950s (Richardson 2012, 6).

3.4 A growing number of Iron Age and Romano-British settlements have been discovered in the region as a result of developer-funded investigations (Haselgrove *et al*. 2001; Petts and Gerrard 2006, 135). In combination with research excavations undertaken prior to 1990, and those identified through aerial photography, these sites suggest that the lowlands of north-east England, including south-east Northumberland, were a densely utilised landscape. Settlements have been recorded within the wider area including sites at East and West Brunton (Hodgson *et al*. 2012), Gardener's Houses (Biggins *et al*. 1997), Brenkley (Frain 2009) and Burradon (Jobey 1970), while the site at Hazelrigg 1.5km to the south-west of East Wideopen is a Scheduled Monument (List No. 1020703).

3.5 An Iron Age settlement and associated field system located 350m south of the current site, and known from cropmark evidence, was investigated during a previous phase of work. An evaluation recorded ditches and gullies probably associated with a potential Iron Age/Romano-British enclosure (Frain 2009), and a subsequent archaeological strip, map and record investigation demonstrated that these features formed part of an enclosed settlement associated with a field system that extended to the south and east (ASDU 2014).

3.6 Two more rectilinear cropmark enclosures have been recorded approximately 300m to the north of the wider development area (at NGR NZ 2462 7306 and NZ 2464 7312; Fig. 1), and another group of cropmark enclosures is located immediately to the west of the current site (Fig. 1). This consists of a large subdivided rectilinear cropmark with associated interior cropmarks and a circular cropmark to its immediate south (at NGR NZ 2437 7254 and NZ 2442 7261; Fig. 1).

3.7 Evidence for prehistoric activity within the boundary of the development area prior to these investigations was limited, although the presence of the surrounding cropmarks did make the site an area of potential interest. A trial-trench evaluation carried out within the site in 2012 (Muncaster 2012) identified undated ditches and gullies.

Roman period

3.8 The site lies 9km to the north of Hadrian's Wall and the Roman crossing of the River Tyne at Pons Aelius (Newcastle). Although it is likely that some prehistoric settlements immediately to the north of the wall continued to be occupied from the Late Iron Age into the Romano-British period, the only evidence for this comes from small numbers of artefacts recovered during excavation. For example, Jobey's (1970, 78) excavation of an Iron Age settlement at Burradon recovered only nine sherds of Roman pottery comprising 'perhaps no more than three vessels'.

3.9 No previous evidence for Roman-period activity had been found within the current site, although the excavations conducted a short distance to the south in 2012 recovered sherds of Roman pottery (ASDU 2014, 64, appendix. 1, table 1.2).

Medieval

3.10 Although early-medieval settlement is well documented in the area of North Tyneside and southern Northumberland (e.g. Muncaster and Bidwell 2014), no early medieval sites or finds were recorded within the development area.

3.11 The site once lay within the township of Weetslade (Wrathmell 1976), a member of the barony of Morpeth or Merlay. The Heselrig family owned land at South Weetslade from the 13th century until 1763, when it was sold to Charles Brandling and Matthew Duane (Richardson 2012, 8).

3.12 Ridge and furrow uncovered during the works appeared to be the continuation of a field system identified during trial-trenching south of the dismantled railway (Muncaster

2012, 11). This system seemed to extend into the fields north of the dismantled railway and into the site.

Post-medieval and modern

3.13 An estate plan of 1757 shows a property named 'Greenshouses' occupying the East Wideopen Farm site. The depicted farm buildings were in a linear hearth-passage/longhouse arrangement, which was common in the late 18th and 19th centuries (NAA 2016b, 11). Historic mapping shows continuing changes to the surrounding area, focused mainly on a colliery c.200m to the south of the current site (Richardson 2012). Changes to the farmhouse can be seen most notably between a tithe map of 1842 and the First Edition Ordnance Survey plan where what appears to be a gin gang was added. Such structures were circular houses containing horse-driven mills.

3.14 Post-medieval ridge-and-furrow ploughing was recorded to the immediate north of East Wideopen Farm. Although levelled by modern ploughing (Richardson 2012, 8), it was identified by both a geophysical survey (Scott 2012) and subsequent evaluation trenches (Muncaster 2012).

3.15 Wideopen Colliery was sunk in 1825, and in 1826 the Fawdon Waggonway was constructed, running from east to west c.300m to the south of the site along the same line as a modern track. In 1837, a branch line from Wideopen to Seaton Burn opened that followed the same line as a modern cycle path to the east of the site, which runs north-northwest to south-southeast (Richardson 2012, 9). The colliery closed in 1860.

4.0 AIMS AND OBJECTIVES

4.1 The principal aim of the archaeological works was to identify all unrecorded sub-surface archaeological remains within the development area and secure their preservation by record prior to their destruction by development works. To achieve this, a programme of strip, map and record investigation was undertaken, according to the specifications issued by the Tyne and Wear Specialist Conservation Team (Morrison 2014 and 2016).

4.2 The main objectives of the archaeological investigations were to:

- establish the nature, extent, degree of preservation and date of any archaeological remains within the site;
- provide a detailed record of any such archaeological remains;

- recover and assess any associated structural, artefactual and environmental evidence;
- undertake a scheme of works that conformed to national and regional professional standards for archaeological excavation (CIfA 2014a; 2014b; 2014c; English Heritage 2008a; 2008b; Historic England 2015, 2016);
- prepare an illustrated report of the results of the excavation, which characterises the nature, extent, date, significance, stratigraphic sequence and spatial patterning of the archaeological remains. This report is to be deposited with both the Tyne and Wear HER and the National Monuments Record;
- prepare a report on the results of the excavation, to be published in a local, regional or national journal, as appropriate;
- deposit the material archive with Tyne & Wear Archives & Museums (TWAM; at the Great North Museum Hancock); and
- address relevant components of the relevant research frameworks (Petts and Gerrard 2006; Symonds and Mason 2010; Blinkhorn and Milner 2014).

5.0 METHODOLOGY

Archaeological excavation

5.1 The excavation works comprised a strip, map and record investigation. The removal of overburden (topsoil, subsoil and material from the demolition of the farm) was undertaken mechanically under archaeological supervision.

5.2 Archaeological features were sampled and recorded as appropriate or as agreed with the county archaeologist and/or science advisor for Historic England (Morrison 2014, 4, and 2016, 7).

5.3 Hand excavation concentrated on intersections of features to help determine phasing and also concentrated on examining a representative sample of the different types of features encountered. Hand excavation comprised:

- up to a 50% sample of domestic, industrial, or settlement-related features; and
- a sample of up to 20% of the overall length of linear features with slots (a minimum of 1m in width).

Recording

5.4 Written descriptions of all archaeological contexts were recorded on pro-forma sheets using the NAA context recording system. Harris Matrices were produced for the site. The context catalogue is reproduced in Appendix A.

5.5 Drawn records of all archaeological features were produced at an appropriate scale, usually 1:10 or 1:20. Drawings included appropriate data on levels relative to Ordnance Datum. Drawings were located within the site and the National Grid using sub-centimetre GPS.

5.6 A photographic record of the site and archaeological features was made using monochrome prints at a format of 35mm and a digital SLR camera at a minimum resolution of 12 megapixels.

Finds recording

5.7 All finds processing, conservation work and storage was carried out following national guidelines (CIfA 2014c). Artefacts and animal bone were collected as bulk samples. Significant artefacts were three-dimensionally recorded prior to removal. Finds were appropriately recorded, processed and submitted for post-excavation assessment.

5.8 All recovered finds were appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies were in accordance with published guidelines (CIfA 2014a; Watkinson and Neal 2001).

Environmental sampling

5.9 Forty-litre bulk palaeoenvironmental samples were taken from appropriate deposits and submitted to an environmental specialist for assessment of the environmental potential. This included charcoal, small bones, cereal grains, molluscs and macro-environmental material. Recovery and sampling of environmental remains was in accordance with published guidelines (Campbell *et al*. 2011) and in consultation with the Historic England science advisor for the northeast of England.

6.0 RESULTS

6.1 The full results of both stages of mitigation works are detailed in previous reports (NAA 2016a; 2018). The following section details the prehistoric features from the excavation by archaeological phase and feature type. These results will be discussed in Section 8.

6.2 The excavations revealed evidence for occupation activity in the form of ring-gullies, other shallow gullies, enclosure ditches, and ditches relating to a contemporary field system (Fig. 2). Two large ditched-settlement enclosures have been designated Enclosure A (to the south) and Enclosure B (to the north) for simplicity (Fig. 5), although this does not denote any precedence in chronology or use.

6.3 Within the southern excavation area the archaeological deposits had been partly truncated by agricultural activity. However, the northern part of this excavation area had been heavily truncated by post-medieval activity associated with the farmhouse to the north (located in the northern excavation area). The focus of the prehistoric activity was located on the western boundary of the site, and the depth of top and subsoil here had protected the archaeological deposits relatively well, although rooting from nearby trees and post-medieval/modern drainage activity had caused some disturbance.

6.4 The remains of post-medieval farm buildings relating to the previously recorded farmhouse (NAA 2016b) were uncovered during the second phase of work. These buildings and service trenches had truncated parts of the prehistoric archaeology but, conversely, their presence had also saved some of it from modern deep-ploughing and other types of modern land usage/development prior to the current development. As a result, the preservation of the prehistoric archaeological deposits in this part of the site was, in general, good.

Phasing

6.5 Post-excavation assessment of both phases of the scheme (NAA 2016a; 2018) identified a broad division of archaeological activity on the site. The earlier period comprised the Iron Age/Romano-British features detailed here; significant post-medieval remains will be reported elsewhere (Pratt, in prep.).

6.6 Phasing of the Iron Age and Roman-period features has proven extremely challenging. Little dating evidence was recovered and, in some areas, few stratigraphic relationships between features survived as a result of truncation. This means that many features can only be broadly phased, if at all.

6.7 However, several general trends across the site can be used to provide a 'broad-brush' indication of the sequence of events. As a result of failure of a number of the samples submitted, only three radiocarbon dates were obtained, all from Enclosure B in the northern part of the site, spanning the later part of the Middle Iron Age and the Late Iron

Age and suggesting that activity in this area can be broadly dated to this period. One ring-gully was cut by the enclosure ditch, indicating an initial unenclosed phase of settlement. Another ring-gully near the periphery of the enclosure could (uncertainly) also pre-date it. A sequence of intercutting ring-gullies towards the centre of the enclosure suggests prolonged occupation, which may have begun at this location before the site became enclosed. The enclosure was subdivided by several phases of smaller ditches.

6.8 No Roman finds were made in the northern excavation area, and a few sherds of hand-built pottery were found exclusively within or adjacent to a single ring-gully. The roundhouse which this presumably encircled is likely to have been the latest structure within the enclosure, suggesting that pottery arrived on the site only at the end of the period of occupation within Enclosure B. Further re-definition of internal enclosure subdivisions occurred while this structure was present.

6.9 Conversely, all the Roman finds from the excavations came from contexts in the southern excavation area, associated with Enclosure A, a scatter of unenclosed ring-gullies, and a field system. Significantly, almost all the hand-made pottery was recovered from the unenclosed ring-gullies and the field system, and one of the ring-gullies cut (slightly uncertainly) the infilled ditch of Enclosure A. It therefore seems likely that Enclosure B was created first, and replaced by Enclosure A sometime shortly before the arrival of the Roman army, or at least Roman material culture, in the area. Enclosure A was later abandoned in favour of a more open settlement, although some elements may have been retained and, to some extent, maintained as part of the open settlement.

6.10 The proposed sequence of events is illustrated in Figures 3 and 4, and is as follows:

6.11 Phase 1: In the Middle Iron Age, there was an unenclosed settlement in the northern area consisting of ring-gully (RG) 1, and possibly RG 9, and perhaps extending into the northern edge of the southern area (RG 11). RG 2 could date from this phase;

6.12 Phase 2a: In the Middle Iron Age, Enclosure B was created, either around a pre-existing roundhouse (RG 2) or with RG 2 placed at its centre;

6.13 Phase 2b: Successive Middle-Late Iron Age rebuilds of the central roundhouse within Enclosure B took place (RG 3, RG 4, then probably RG 5, and finally the sequence RG 8, RG 6 and RG 7).

6.14 Phase 2c: At some point after the Phase 2b sequence of structures within Enclosure B had gone out of use, and after the main enclosure ditch had become infilled, a single roundhouse (represented by RG 10) was constructed and several phases of subdivision of the main enclosure took place, including successive small recuts of the western enclosure ditch. Although allocated to Phase 2, it is possible that these Phase 2c events represent reuse of the abandoned enclosure during Phase 4. This surmise is supported by the presence of small quantities of hand-built pottery associated with RG 10 (which elsewhere within the site is found associated only with Phase 4 features) and the failure to maintain most of the ditched circuit of the main enclosure;

6.15 Phase 3: The relationship between Enclosures B and A was not determined. They may have been in use simultaneously but there is no way to demonstrate this. Phase 4 activity, as suggested by the finds assemblage, was concentrated in the area of Enclosure A (suggesting that domestic activity in this area continued later), therefore the creation and use of Enclosure A has been designated Phase 3. This may coincide with, overlap or entirely post-date the Phase 2 activity within Enclosure B. Structures located within Enclosure A that could date from this phase include RG 12, RG 14 and RG 15; however, any or all of these could equally be attributed to the succeeding phase. The only 'Roman' find from features attributed to this phase was a quernstone, which was found in the upper fill of the infilled Enclosure A main ditch and that could have been deposited long after the ditch went out of use (i.e. Phase 4); alternatively, it could have been traded from a Romanised area further to the south, which would still allow a Late Iron Age date for this phase.

6.16 Phase 4: Return to unenclosed settlement, including structures RG 13, RG 16, RG 17, RG 18, RG 19, RG 20, RG 21 and RG 22 and a network of drainage gullies. Parts of the perimeter of Enclosure A continued to be maintained as part of the settlement and an enclosed field system was created. Many features attributed to this phase are distinguished by the presence of hand-made pottery and fragments of Roman ceramic building materials.

6.17 The following sections describe the results of the excavations in more detail, divided by the phased sequence described above. An overall plan of the Phase 1-4 archaeological features across both excavation areas is presented in Figures 2 and 5, which show the group numbers for the main features (ditches, gullies and ring-gullies). More detailed plans of the features excavated in the northern part of the site are shown in Figures 6 and 7, while the north-western part of the southern area containing Enclosure A is

similarly depicted in Figure 8. Section drawings of a selection of features from both areas are to be found in Figure 9.

Phase 1: unenclosed settlement

6.18 Only one feature, RG 1, could be securely attributed to Phase 1, since it was cut by the main enclosure ditch (**3933**) of Enclosure B. Most other ring-gullies in the northern excavation area either formed part of the intercutting group located in the centre of the enclosure (RGs 2-8), and presumably associated with the enclosure, although as noted above, RG 2 could have pre-dated the enclosure and provided a focus for its creation. RG 10 could be stratigraphically demonstrated to post-date creation of the enclosure. An exception was RG 9, which lay within the enclosure but to the south of the other structures, without any stratigraphic relationship to other features. As such, it remained unphased, although its peripheral location could indicate that it pre-dated the enclosure. RG 11 in the southern excavation area is included here because it was cut by ditch **750** of Enclosure A, indicating that it must have been an early feature within that part of the site.

*Ring-gully 1 (Group **3488**)*

6.19 RG 1, situated to the southwest of the main ring-gully cluster, was truncated to the east by enclosure ditch **3933** (segment **3577** truncating segment **3575**) (Fig. 6). It had the smallest diameter of any of the ring-gullies identified within the northern excavation area, with a projected internal diameter of 6.1m. Four segments excavated across the gully showed that it had a shallow, narrow U-shaped profile and contained two mid brownish grey fills to the west but only one to the east. No finds or significant environmental remains were recovered.

*Ring-gully 9 (Group **3179**)*

6.20 RG 9 was located near the southern edge of the northern excavation area. It had been largely truncated by an area of post-medieval disturbance, meaning that only part of the southern side of the feature survived. In addition, the remaining portion was further truncated by a modern service trench.

6.21 The ring-gully had a shallow U-shaped profile. Four excavated segments showed that it has a single mid grey-brown fill, except in terminal **3186** which had two fills. Terminal **3186** appeared to have an internal spur (**3123**) aligned north-west to south-east, possibly representing a recut or modification to further aid drainage.

6.22 An undated oval pit (**3047**) was located just to the north (inside) of the remaining arc of RG 9. Given the absence of other discrete features in this part of the excavated area, it may have been associated with RG 9. The pit had a shallow U-shaped profile and measured approximately 1.4m long, 0.35m wide and 0.15m deep.

*Ring-gully 11 (Group **821**)*

6.23 Within the northern side of Enclosure A was a possible ring-gully (RG 11) represented by two short lengths of gully (segments **556** and terminal **451**) which together described an arc approximately 5.6m in length. RG 11 had been truncated by enclosure ditch **750** to the north, meaning that it may have formed part of the early unenclosed settlement phase.

6.24 Both gully segments had an average width of 0.45m, depth of 0.1m and were filled with a single deposit of brownish grey silty clay. Their profiles, however, differed somewhat. Segment **556** had a shallow U-shaped profile, while terminal **451** had a much steeper U-shaped profile up to 0.21m deep.

6.25 A posthole (**458**) was located approximately 1m north-east of RG 11. It was 0.4m in diameter and had a depth of 0.14m. It had a wide U-shaped profile and contained a single fill (**459**).

Phase 2a: creation of Enclosure B

6.26 Sometime during the mid to late Iron Age, a large ditched enclosure was created, with a central roundhouse represented by RG 2. It is possible that the enclosure was created around a pre-existing structure; if so, then RG 2 would initially have formed part of the Phase 1 unenclosed settlement.

6.27 Enclosure B was slightly trapezoidal in shape, narrowing slightly to the north. It measured 54m by 48m externally. It probably had an entrance breaks located towards the southern end of the western side and a second narrow break near its north-western corner. The enclosure was formed by ditch **3933** along its northern and eastern sides and by ditch **3932** at its southern end. The western side of the original enclosure was obscured by Phase 2c recuts **3935** and **3936**, and in several locations the circuit had been truncated by post-medieval disturbances. Ditch **3933** cut Phase 1 structure RG 1.

*Plate 1: Section through Enclosure B ditch **3933**, facing northwest.*

*Enclosure ditches **3932** and **3933***

6.28 Ditch **3933** formed the northern and eastern sides of Enclosure B (Figs. 5 and 6). At its north-western end, ditch **3933** terminated (segment **3513**) to the east of the north-western terminal (**3156**) of Phase 2c recut **3936** leaving a narrow gap. From there, ditch **3933** ran east-southeast for approximately 32.8m before turning to the south and continuing for a further 31.3m until fully truncated by post-medieval disturbance.

6.29 Ditch **3933** typically had a wide, U-shaped profile apart from at segment **3468** on its northern side, where it had a wide V-shaped profile with slightly steeper sides and a stepped northern edge. Segment **3395** to the west of **3468** also had a gradual stepped northern edge. The ditch typically measured approximately 3.3m wide and 0.85m depth. Each excavated segment contained a sequence of deposits indicating a complex history of silting, recutting and backfilling.

6.30 This was most clearly demonstrated in segment **3623** (Plate 1). A primary silting deposit **3632** only survived within a step on the western (inner) side of the ditch and part of the ditch base, suggesting that the ditch had then been cleaned out. The ditch may then have been intentionally partially backfilled, represented by deposit **3624** seen as tip lines on both sides of the ditch, followed by a further silting episode. A secondary cleaning event may have been followed by a further backfill deposit **3627**, below more

silting (deposits **3628** and **3626**) and a final backfill deposit (**3629**). Another silting deposit **3630** probably represented agricultural activity related to medieval ridge and furrow cultivation of the site.

6.31 A similar sequence of recutting/cleaning and three backfill deposits was recorded seen along the eastern side of ditch **3933** at segments **3635**, **3669** and **3577** (Fig. 9, Section A. Segments **3640**, **3620**, **3654** and the north-western terminal **3513** each showed at least one backfill deposit but were all partly or heavily truncated by modern disturbance.

6.32 No significant artefacts were recovered from ditch **3933**. Small quantities of charcoal were recovered from segment **3468** (fills **3469**, **3470** and **3471**). Other deposits within the ditch that produced small amounts of coal or charcoal were **3642**, **3644**, **3691** and **3419**. Animal bone from backfill deposit **3624** was submitted for radiocarbon dating but did not retain enough carbon (Table H1, Appendix H).

6.33 At its southern end (segment **3654**), ditch **3933** had been heavily truncated; however, its alignment suggested that it continued southwards from segment **3654** towards ditch group **3932**, and the two ditches may originally have been continuous. Ground contamination prevented investigation of the north-eastern limit of ditch **3932**, although the profile of segment **3847** of ditch **3932** was very similar to the two nearest segments of ditch **3933** (**3654** and **3577**).

6.34 Ditch **3932** continued southwards from the area of disturbance for approximately 8.4m before turning west for 46.4m, forming the southern edge of the enclosure (Figs. 5 and 6). It then turned northwards, running for approximately 14.8m, before being truncated by post-medieval disturbance. Ditch **3932** presumably terminated in this area (since it did not continue to the north of this disturbance) forming, with the opposing southern terminal of the western side ditch (obscured by later recut **3935**), a western entrance to Enclosure B.

6.35 Ditch **3932** had a similar form to ditch **3933**, with a wide, deep, U-shaped profile that widened towards the west and then narrowed after turning north from segment **3873**. It had an average width of 3.3m and depth of 1m. Ditch **3932** also contained a similar sequence of silting deposits and one or two backfill episodes (best demonstrated in segment **3879**, Plate 2). The western part of ditch **3932** (segments **3192**, **3869**, **3879**, **3871**, and **3903**) also displayed evidence for a slumping event perhaps representing

partial collapse of an accompanying bank. However, this slumping was not present at the south-western corner of the ditch (segment **3873**; Fig. 9, Section B). Where present, the slumping occurred on the outer edge of the enclosure ditch, except at segment **3903** where slumping deposit **3911** was on the inner (eastern) edge of the ditch.

6.36 A shallow ditch or gully (**3180**) entered the northern part of the site from the southern limit of excavation, but its relationship with Phase 2a ditch group **3932** had been destroyed by a post-medieval furrow. Similarly, ditch **3892** also entered this area from the south and may have been turning to the east, but was cut by the south-western corner of ditch **3932** (segment **3873)**. Ditch **3892** had an observed length of 2.1m, width of 3.1m and depth of 0.34m, and contained a single silty clay deposit. These features clearly had some functional relationship to the Enclosure B perimeter, although what this was could not be determined within the limits of the excavation. The presence of the modern bridle path separating the two excavated areas meant that any relationship between ditch **3892** and Phase 4 ditch **822** to the south could also not be determined, although the two were dissimilar in character.

*Plate 2: Section through Enclosure B ditch **3932**, facing southwest.*

*Ring-gully 2 (Groups **3608** and **3606)***

6.37 Gullies **3606** (to the north) and **3608** (to the south) probably represented parts of a single ring-gully (RG 2) located centrally within Enclosure B. The ring-gully had an estimated

internal diameter of approximately 11.1m, with an east facing entrance gap c.3.6m wide between terminals **3579** (gully **3608**) and **3555** (gully **3606**). Both opposing terminals had a narrow V-shaped profile. To the north, the gully had a partially stepped profile, with a steeper inner edge. The northern gully **3606** terminated to the west (segment **3543**) suggesting that the ring-gully may have been segmented. Any continuation of the ring-gully to the west had been truncated by Phase 2c subdivision ditches **3934** and **3935**, as well as by post-medieval disturbance. The ring-gully contained a single mid-orange-grey deposit apart from in interventions **3543** and **3594**, which both contained a second upper lighter grey-orange deposit. The northern arc of RG 2 (**3606**) was cut by RG 3 and RG 4, while the southern arc (**3608**) was cut by RG 10.

6.38 A sample of short-lived alder or hazel charcoal from the south-eastern terminal of gully **3606** (segment **3555**, deposit **3556**) produced a radiocarbon date of 360-176 calBC (Appendix H, SUERC-84740), suggesting a Middle Iron Age date for RG 2 and, by association, creation of Enclosure B.

Plate 3: Overhead view of the main ring-gully cluster showing RG 2, RG 4, RG 3, RG 5, RG 6, RG 7 and RG 8 (in order from south to north). The circular feature at top left is a post-medieval horse-gin.

Phase 2b: successive rebuilds of the central roundhouse in Enclosure B

6.39 During this sub-phase, the central structure within Enclosure B (represented by RG 2) was repeatedly rebuilt and, in general (the exception being RG 3) gradually migrated northwards within the enclosure. RG 2 was replaced successively by RG 3, RG 4 and then RG 5. The next structure was probably RG 8, followed by RG 6 and finally RG 7.

*Ring-gully 3 (Group **3484**)*

6.40 Only the northern half of RG 3 survived as a result of post-medieval truncation. It had an internal diameter of approximately 8.7m (Fig. 7). Excavation of seven segments showed that the gully had a shallow U-shaped profile containing a single mid-brown-grey fill.

6.41 The south-eastern terminal (**3424**), had a very narrow profile until it widened to incorporate a step on the north-eastern (exterior) edge with a steeper interior edge. This possibly represented a recut. To the west (segments **3526** and **3569**), the gully had a shallower U-shaped profile.

*Ring-gully 4 (Groups **3486** and **3607**)*

6.42 RG 3 was replaced slightly further to the north-west by RG 4, represented by two arcs of gully, **3486** to the south and **3607** to the north. The ring-gully had an internal diameter of approximately 6.7m, with a south-east facing entrance between terminal segments **3489** and **3520**. The gully was segmented with a narrow gap to the south-west, in a manner similar to that seen in ring-gullies elsewhere, such as nearby at Cramlington roundhouse 9 (NAA 2019) and further afield in structures D and M at Thorpe Thewles (Heslop 1987, 40-44). Terminal **3520** had a wide, steep-sided U-shaped profile, and terminal **3489**, although truncated, appeared to be similar. Elsewhere, the preservation of this ring-gully was generally good. Eight sections were excavated across gully **3486** and five across gully **3607**. These showed that the gully typically had a shallow U-shaped profile, although at its western side the profile became narrower. Segment **3592** contained 24 pieces of fire-affected stone (deposit **3593**), along with a fragment of a sandstone beehive quern (RF001, Fig. 11). Carbonised plant material recovered from RG 4 (mainly from fill **3521** of terminal **3520**) included wood charcoal, cereals and arable weeds mixed with wetland/marsh plants, such as sedges (Appendix G).

6.43 Postholes **3534**, **3536** and **3551**, located towards the north-western side of the ring-gully, were possible structural in function. Posthole **3534** had a similar fill to ring-gully segment **3532** (fills **3535** and **3533** respectively). Stakehole **3536**, however, was clearly

a later intrusion. Posthole **3551**, located a little further to the north on the inner lip of the ring-gully, measured c.0.21m in diameter, 0.1m deep and had a U-shaped profile. A group of features were located within the south-eastern entrance through RG 4, comprising pit **3491** and postholes **3462**, **3479**, **3467**, and **3475**. Although there was no direct relationship between these features and the ring-gully, their arrangement was strikingly similar to that found associated with Structure 65 at Gatherley Villas near Brompton-on-Swale in North Yorkshire (Fell, forthcoming). However, at neither site can a function for these features be proposed.

6.44 At East Wideopen, pit **3491** had a shallow U-shaped profile with a flat base and measured c.0.87m in diameter, with a maximum depth of 0.25m (Fig. 9 section C). Both deposits within pit **3491** contained burnt materials, although there was no evidence for in situ burning (Plate 4). The primary deposit (**3562**) contained some fire-affected stones. Apart from some charcoal, the soil samples from the upper fill (**3507**) provided a rich charred-plant assemblage suggesting deposition of refuse from various domestic activities, including processing of spelt wheat, rubbish and bedding disposal (Appendix G). A sample of spelt grains from this deposit provided a radiocarbon date of cal. 40BC-AD83 (Appendix H, SUERC-84739).

*Plate 4: Section through pit **3491**, facing north.*

6.45 To the north of pit **3491** was a line of postholes (group **3528**), comprising postholes **3462**, **3479**, **3467**, and **3475**. This was c.2.5m long and was aligned from north-west to south-east. The postholes were on average 0.18m wide and 0.07m deep.

6.46 Posthole **3478** was located at the centre of RG 4, and could represent a central support for a building, although it had rather modest dimensions (0.3m by 0.25m by 0.1m deep), with a shallow U-shaped profile and a vertical northern edge. Alternatively, it lay at the north-western edge of RG 3, and could have been associated with the earlier structure.

6.47 RG 4 cut a small linear gully **3595**, which was otherwise undated and of unknown function. Gully **3595** had a single fill and measured c.0.6m long, 0.2m wide and 0.1m deep.

*Ring-gully 5 (Group **3485**)*

6.48 RG 4 was, in turn, replaced slightly further to the north by RG 5, which cut both RG 3 and RG 4. RG 5 was poorly preserved as a result of truncation to the west by ditch **3935** and post-medieval disturbance, and only its southern part survived. Six segments excavated across RG 5 showed that it generally had a shallow U-shaped profile. A slot cut along part of the base, between segments **3509** and **3560**, may possibly indicate a structural function for the ring-gully, although no evidence for postholes was observed. RG5 was cut by a small amorphous feature (**3477**) at its eastern terminal (segment **3476**).

*Ring-gully 8 (Group **3912**)*

6.49 The next structure in the occupation sequence in Enclosure B was probably represented by RG 8 (Fig. 7). Spatially, it is possible that it could have been present at the same time as either RG 2, RG 3 or RG 4, although there is no evidence to support this. It could not have been present at the same time as RG 5. RG 8 was cut by a possible posthole **3436** which measured 0.6m by 0.3m by 0.1m deep. This was in turn truncated by linear gully **3432**, which had a surviving length of 0.8m and depth of 0.05m. Gully **3432** was in turn cut by RG7, meaning that RG 8 pre-dated both RG 7 and (almost certainly) RG 6, of which RG 7 was clearly a recut.

6.50 RG 8 was severely truncated, and only an arc of the southern side survived, with a (rather speculative) projected internal diameter of c.6.9m. To the west, RG 8 became narrower and less uniform in section, and eventually disappeared having been truncated by Phase 1b RG 7. Four sections were excavated across the gully, showing

that it had a single mid-grey, silty clay fill and a shallow U-shaped profile. No artefacts or significant environmental remains were recovered from RG 8.

*Ring-gully 6 (Group **3487**)*

6.51 RG 6 was located slightly to the south of RG 8 and cut RG 4 (Fig. 7). Although the relationship between segment **3463** of RG 6 and Phase 2c enclosure ditch **3935** (segment **3465**) had been removed by modern truncation, the ring-gully cut was not observed on the south-east facing section of the ditch segment indicating that the ditch had cut the gully.

6.52 As a result of later truncation, only the southern part of the ring-gully survived, with an approximate internal diameter of 9.4m. The northern edge of the gully had been truncated by recut RG 7, which had also removed its eastern terminal. Five excavated sections showed that it had a stepped V-shaped profile and was filled with a series of mid- to dark-grey-brown deposits. Apart from seven pieces of fire-affected stone recovered from deposit **3418** (segment **3413**), located towards its eastern end, no artefacts were recovered from RG 6.

*Ring-gully 7 (Group **3913**)*

6.53 RG 7 represented a recut of RG 6 slightly further to the north. Segment **3430** of RG 7 cut linear gully **3432** which, as described above, in turn cut posthole **3436** which cut RG 8, demonstrating that RG 7 (and presumably RG 6) were later than RG 8.

6.54 As with RG 6, severe post-medieval truncation meant that only the southern side survived, with a projected internal diameter of approximately 8.8m. Excavation of five segments showed that it had a shallow U-shaped profile and contained two dark grey-orange fills in the eastern part which changed to a single dark grey fill to the west.

6.55 The eastern terminal (**3385**) of RG 7 was partly cut by two small postholes **3393** and **3398**. Both were positioned on the edge of the terminal, with **3393** to the north and **3398** to the east. Posthole **3393** was c.0.15m in diameter with 0.07m deep, while **3398** was slightly larger, measuring c.0.21m in diameter with a similar depth of c.0.05m. Given their position, it is likely that these were structural features associated with the ring-ditch.

6.56 RG 7 produced two pieces of fire affected stone from deposit **3431** (segment **3430**), five pieces from **3414** (segment **3529**) and four pieces from terminal (**3385**) deposit **3386**.

Soil samples taken from RG 7 produced small amounts of coal and charcoal from deposits **3386**, **3414** and **3500** (in segments **3385**, **3529** and **3499** respectively). Deposit **3386** in terminal **3385** produced a small mixed assemblage of charred plant remains from both wetland plants and arable crops and weed. Smaller assemblages of similar material were recovered from deposits **3414** and **3500**.

Plate 5: Overhead view of RG 1 (right) and RG 10 (left)

Phase 2c: ring-gully 10 and subdivision of Enclosure B

6.57 An undetermined period of time after the Phase 2b sequence of structures had gone out of use, and the main ditch of Enclosure B had become infilled, a structure (represented by RG 10) was built to the south of the earlier buildings, and several phases of subdivision of the main enclosure occurred. The spatial arrangement of a small enclosure appended to the northern side of Enclosure B suggests that it can also be attributed to this phase. As noted above, these events may have occurred as part of the later, unenclosed phase of the settlement, contemporary with Phase 4 within the southern half of the site.

*Ring-gully 10 (Group **3609**)*

6.58 RG 10 cut Phase 2a RG 2 and was itself cut by ditch terminal **3709** (below), which was cut by ditch **3935**, showing that RG 10 predated most if not all of the phases of subdivision within Enclosure B (Figs. 6 and 7, Plate 5). However, all phases of enclosure subdivision respected the area enclosed by RG 10, suggesting that any structure encircled by it was present for a considerable period of time. The southern part of RG 10 had been heavily truncated by post-medieval activity but was probably represented by segments **3670**/**3737** and **3699**/**3774**. It had an east-facing entrance between

terminals **3792** and **3737**, which were c.3.5m apart, and its internal diameter was approximately 9.3m.

6.59 RG 10 was investigated in 11 segments, showing that it had a wide U-shaped profile except at segment **3796**, where it displayed a much sharper V-shaped profile. To the south it was much narrower, probably as a result of truncation. The ring-gully typically contained two mid- to dark-brownish-grey fills, although only a single fill survived to the west due to truncation. A small gully (**3768** and **3839**) cutting the western (exterior) edge of RG 10 possibly represented a recut. To the north, RG 10 cut a pit (**3841**) of uncertain date or function.

6.60 RG 10 produced a small number of finds and an assemblage of charred plant remains. Four pieces of hand-built pottery were recovered from fill **3798** (segment **3796**). Fragments of fire-affected stone were recovered from segment **3670** (deposit **3671**) and from the north-eastern terminal **3792** (fill **3793**).

6.61 Soil samples recovered from RG 10 produced fragments of coal, and charcoal, while the plant remains suggested exploitation of sedges and heath-grasses from wetland or marshy ground for domestic use such as animal or human bedding. There was evidence for arable crops, including spelt and barley grains and chaff (see Appendix G). Barley grains from deposit **3793** in terminal **3792** provided a calibrated radiocarbon date of 40BC-AD82 (Appendix H, SUERC-84742).

6.62 A short length of curvilinear gully (**3682**/**3805**) ran within, and concentric to, the south-western arc of RG 10. It had an average width and depth of 0.23m and 0.05m respectively. It is possible that it represented a recut of RG 10. Alternatively, it could represent the wall trench for the structure encompassed by RG 10.

6.63 In the vicinity of RG 10 were a number of internal and possibly associated discrete features and postholes. A structure possibly associated with the entrance to RG 10 was represented by postholes **3757**, **3772** and **3782**. Posthole **3757** was located inside RG 10 c.0.95m southwest from northern terminal **3792**, while posthole **3772** lay c.2.1m to the east of **3757**. Posthole **3782** was located 2.2m south of posthole **3772**, external to the southern ring-gully terminal **3737** (Fig. 7). The postholes described three corners of a near-square measuring 3m by 3m.

6.64 Postholes **3757** and **3772** (respectively 0.6m and 0.7m in diameter) both had vertical sides and flat bases, with a very sharp break of slope at the base. Posthole **3782** (0.84m

diameter) had a U-shaped profile with a gentle break of slope and a southward sloping base. It is possible that a fourth posthole to the south of **3757** and the west of **3782** had been removed by post-medieval activity.

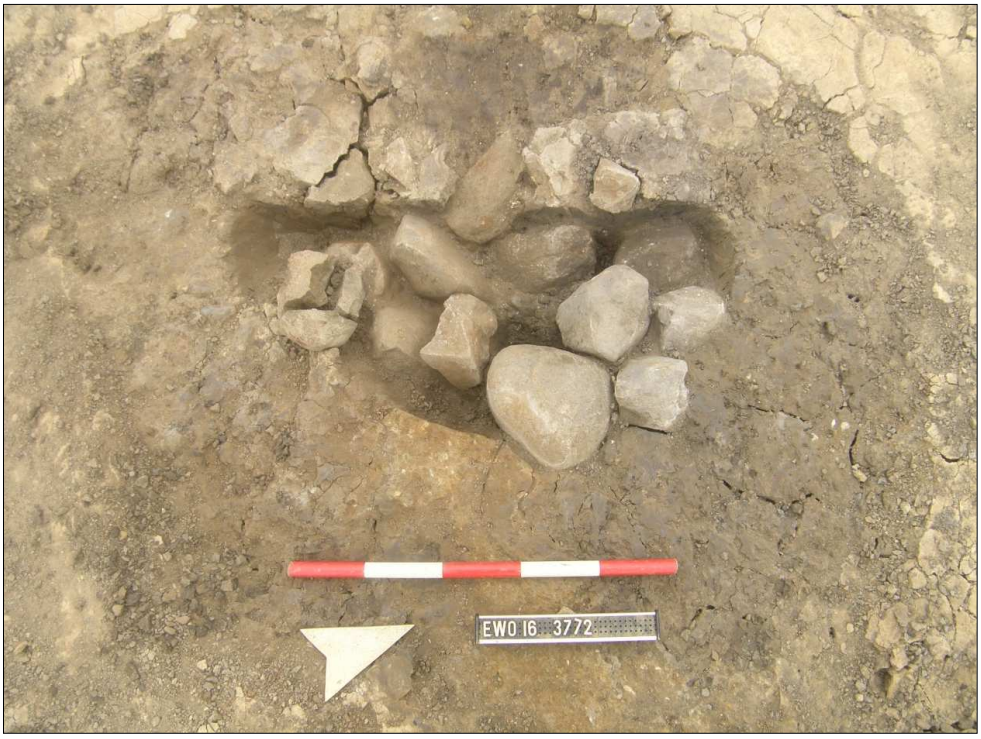

*Plate 6: Overhead view of posthole **3772** showing stony backfill **3773** intact.*

6.65 Postholes **3757** and **3782** contained two and three fills, while posthole **3772** contained evidence for a possible post pipe (deposit **3919**) along with the stone packing in the base (**3920**), overlain by a soil and rubble deposit (**3773**) (Fig.9 section D; Plate 6). A sample from the upper fill (**3759**) of the internal posthole **3757** produced an assemblage of charcoal and plant remains.

6.66 Although these postholes are most likely to represent a porch structure for the building surrounded by RG 10, it should be noted that the square arrangement was slightly skewed to the circumference of RF 10. It is therefore possible that they may represent three corners of a 'four post' structure predating RG 10 (i.e. Phase 1 to 2b). Such structures, common on Iron Age settlement sites elsewhere, are typically interpreted as raised granaries although other uses have been suggested such as mortuary platforms.

6.67 There was a third possible interpretation for the structure represented by these three postholes. RG 10 was cut just to north of its north-eastern terminal by a short, segmented linear slot or gully (**3775** and **3794**). Gully **3775** measured approximately 1.1m long, 0.28m wide and 0.06m deep with a very shallow, uneven U-shaped profile. There were

five separate circular or sub-circular indentations along its length that could have represented the bases of stakeholes. It is plausible that, coupled with gully **3794** and postholes **3862** and **3812**, it could form part of the wall-line of another roundhouse that had otherwise been lost due to truncation. Postholes **3757**, **3772** and **3782**, which were considered (above) to represent a porch structure for a building located within RG 10, could alternatively have formed a central supporting structure for a building represented by **3775**/**3794**/**3812**/**3862**. This arrangement would be similar to that recorded at Holme House, Piercebridge (Harding 2004, 166), of the Little Woodbury type of four-post central structure roundhouse (Bursu 1940).

6.68 A number of other small features lay within the circuit of RG 10, although none were demonstrably associated with it. Towards the western side of this area, stakeholes **3819**, **3820** and **3816** lay in short row c.0.57m in length. Posthole **3814** was situated immediately to the south-west, and another stakehole **3787** lay a further 0.45m to the southwest of this. Coupled with stakeholes **3816**, **3820** and **3819**, these may have formed a small L-shaped structure within the roundhouse. Stakehole **3787** cut the northern edge of pit **3785**. This had a very shallow U-shaped profile and measured 0.74m east-west by 0.34m north-south, but only 0.04m deep as a result of modern truncation.

6.69 A small pit (**3762**) lay immediately north-west of (?external to) gully **3775**. It measured 0.43m in diameter and 0.03m deep with a very shallow U-shaped profile. The single fill (**3763**) contained fragments of animal bone, charcoal and coal. As noted above, two postholes or small pits (**3812** and **3862**) were observed immediately to the north-east of RG 10. Feature **3862** had a shallow, U-shaped profile measuring c.0.3m in diameter and 0.08m deep, with a single fill (**3866**) with no finds. Feature **3812** was larger, measuring approximately 0.5m in diameter by 0.2m deep with a V-shaped profile, and also had a single fill (**3813**).

*Enclosure subdivision ditch **3717***

6.70 Several phases of subdivision of the western part of Enclosure B were recorded. All of these appeared to respect the location of RG10, avoiding the area that it defined, although some cut the ring-gully itself. On this basis, all of these features have been assigned to Phase 2c.

6.71 The earliest of these features was probably ditch **3717**. The south-eastern terminal (**3709**) of this feature cut RG 10**.** It then ran to the north-west for a short distance before

being obscured by a later phase of ditch (**3935**). Ditch **3717** had a shallow, narrow, U-shaped profile with a single sedimentary fill. A single piece of hand-built pottery from an open jar rim was recovered from deposit **3710** in terminal **3709**; however, this was not closely dateable (Table B3).

*Enclosure subdivision ditch **3934***

6.72 Ditch **3934** ran from its northern terminal **3370** for approximately 22m to the south-southwest (through excavated segments **3381**, **3427** and **3444**) before turning south-east (segment **3645**) for another 3.6m and terminating at segment **3659**, which respected RG 10 (Figs. 5, 6 and 7). The southern terminal of ditch **3934** (segment **3659**) cut curvilinear gully segment **3667** (filled by **3668**, Fig. 6), which may have represented an earlier iteration of ditch **3934** that connected southwards to gully **3777** following the outer western side of RG 10. To the north, ditch **3934** may have recut (and therefore obliterated) ditch **3717**. Ditch **3934** had no direct surviving relationship to any of the other, earlier, ring-ditches as a result of truncation by a subsequent phase of subdivision ditch (**3935**).

6.73 Ditch **3934** had a narrow, shallow V-shaped profile with a rounded base, apart from at terminal **3659** which had a wide U-shaped profile. The ditch had an average width of 1.1m and depth of 0.4m. It was filled by a series of silting deposits without any evidence for backfill events. A piece of bone and a fragment of fired clay were recovered from the single fill (**3660**) of the southern terminal.

*Enclosure subdivision ditch **3935***

6.74 Ditch **3935** ran from north-northeast to south-southwest from terminal **3368** for approximately 24.7m, then (at segment **3648**) turned west for approximately 15.2m (Figs 5 and 6). At the western side of Enclosure B, the (presumed) original enclosure ditch was recut, with the new eastern section of ditch **3935** meeting it at a T-junction (at segment **3119**). The eastern parts of the ditch measured approximately 1.6m wide and 0.5m deep with a narrow, V-shaped profile with a possible step on the western edge of the ditch and became shallower towards the north. This part of the feature contained a sequence of silting followed by a probable backfill event.

6.75 The western part of ditch **3935**, following the western side of Enclosure B, ran north-northeast from terminal **3008** through segments **3110**, **3119**, **3115**, **3117**, and terminated at **3170**. It had a deep, wide, U-shaped profile differing from that of the eastern section, although it also became shallower towards the north. Segments **3119**

and **3115** contained a sequence of three fills, with two present elsewhere. There was no evidence for deliberate backfilling of this part of the ditch. Approximately 2.3m north-west of the T-junction, ditch **3935** cut a short length of gully **3138**/**3042**, which may have formed a recut of the original western side of Enclosure B (and therefore presumably Phase 2a or 2b).

6.76 Ditch **3935** cut RGs 5-8 (Phase 2b). It also cut the western edge of a shallow, semi-circular feature (**3456**) to the west of RG 4, and a similar feature (**3442**) approximately 6m to the north. These conceivably represented a fence line, perhaps related to the earlier ditch **3934**.

*Enclosure ditch **3936***

6.77 Ditch **3935** was subsequently recut as ditch **3936** along its entire western and central parts. To the east, instead of turning northwards, ditch **3936** turned south for 11.1m, forming a new sub-enclosure in the south-western corner of Enclosure B (Figs. 5, 6 and 7). To the south of its terminal **3705** there was a large area of post-medieval disturbance before the line of the ditch was continued southwards by ditch segment **3856**. The southern terminal (**3175**) of ditch **3856** respected the main Phase 2a Enclosure B perimeter ditch **3932**. The south-western sub-enclosure formed by ditches **3936** and **3932** measured approximately 22.3m by 17.3m internally. Ditch **3936** substantially truncated the western side of RG 10.

6.78 Where it ran along the western side of Enclosure B, ditch **3936** had a wide, shallow, U-shaped profile. This changed to the east, where the profile incorporated a stepped side on the inner edge of the sub-enclosure. The ditch measured approximately 1.5m wide and 0.5m deep. The western part of the ditch had an initial silting deposit but may then have been deliberately infilled.

*Plate 7: Section showing ditch **3935** cut into ditch **3936** at their southern termini (segments 3004 and 3008), facing northeast.*

6.79 The profile and fill sequence of the eastern part of ditch **3936** showed a series of silting and slumping fills followed by a dark backfill at the top of the sequence. While there appeared to have been more sedimentary fills, including a collapse/slumping event in places (**3749**, **3836**, **3837**, **3925**) in comparison to the western portion, this may simply be a result of the ditch surviving to a greater depth in this area.

6.80 At the southern terminal (**3705**), ditch **3936** widened slightly and had a well-defined break of slope to the base (Plate 8). To the south, ditch segment **3856**/**3175** contained a single silted fill. This part of the ditch terminated 1.9m north of the Enclosure B main ditch, perhaps suggesting the presence of an above-ground barrier such as a hedge associated with the earlier boundary.

Plate 8: Section through ditch 3936 terminal 3705, facing northeast.

6.81 Despite the relatively large volume of ditch **3936** which was excavated, few finds or charred plant remains were recovered. Finds were limited to two pieces of fire-affected stone from deposit **3728** (segment **3705**) and a piece of fired clay found in deposit **3835** (segment **3818**).

*Enclosure **3939***

6.82 Ditch group **3939** was located at the northern edge of the site (Figs. 5 and 6), and had been appended to the western half of the northern side of Enclosure B. The area defined by ditch **3939** was sub-rectangular and measured approximately 19m from north to south and 14m east to west. At the south-western corner there was a 3m gap between the northern terminal (**3170**) of ditch **3935** and the southern terminal (**3066**) of the western side of ditch **3939**. From there, ditch **3939** ran north for 10m before being truncated by a post-medieval ditch. This part of the ditch had an average width of 1.55m and an average depth of 0.3m. At segment **3135** it cut a short undated linear gully **3108**. Terminal **3066** was cut by posthole **3095**. Beyond the post-medieval ditch, the north-western corner of enclosure **3939** lay beyond the limit of excavation.

6.83 After its presumed turn, the ditch re-entered the site and ran eastwards for approximately 12.4m before turning south for 2.7m and again being truncated by the post-medieval ditch. It was not identified to the south of the ditch (see below). This part of ditch **3939**

had an average width of 0.89m and depth of 0.3m, with a narrow, shallow, U-shaped profile and a single fill. There were no finds from ditch group **3939**.

6.84 Although ditch **3939** did not continue to the south of the post-medieval ditch, its route was continued by a linear group of gullies and postholes probably representing a fence line (Fig. 6, detail). The main feature was a north-to-south aligned linear gully (**3275**) running on a similar line to ditch **3939** to the north. Gully **3275** had a very shallow, narrow, steep-sided, undulating U-shaped profile. The gully was cut by postholes **3322** and **3303**, which were subsequently truncated by postholes **3305** and **3340** respectively. The alignment was extended slightly to the north by posthole **3316**. Postholes **3318** and **3328** just to the east of the alignment may have been associated features. Another posthole (**3380**) lay 3m to the west. This measured 0.32m in diameter and 0.05m in depth.

Phase 3: creation of Enclosure A

6.85 Sometime after Phase 2b (but, as noted above, not necessarily Phase 2c), the focus of settlement moved from Enclosure B and a new rectilinear Enclosure A was created a short distance to the south. Since this enclosure was subsequently (Phase 4) overlain by an unenclosed settlement, features other than the main enclosure ditches were difficult to attribute to Phase 3. Therefore, some or many of the features described in this section may instead date to the later phase. Phase 3 is distinguished by a continuing absence from Phases 1 to 2b of any ceramic tradition, and by the first appearance of what is likely to be a Roman artefact, a disc hand quern, possibly traded into the area rather than representing a local Roman presence.

6.86 Only the eastern side of Enclosure A lay within the excavated area, and its full extent remains unknown. The observed portion measured 40m from north to south externally and it was more than 18m wide. There was an entrance break 5m wide in the centre of the eastern side. The perimeter ditch was numbered **749** to the south of the break, and **750** to the north. Four ring-gullies within the enclosure were uncertainly attributed to this phase.

*Enclosure ditch **749***

6.87 Ditch **749** formed the southern and eastern arms of Enclosure A (Figs. 5 and 8). The ditch had an observed length of approximately 30m, an average width of 2.3m and an average depth of 1m (Fig. 9 section E). The northern terminal (**723**) was 2.4m wide and 1m deep with a slightly concave base and was filled with a sequence of three distinct

deposits. The lowest fill (**724**), 0.2m of mottled greyish-blue silty clay, indicated wet conditions in the base of the ditch. The second fill (**725**) was a more oxidised deposit of mottled greyish-orange silty clay 0.42m thick. The upper fill (**726**) was 0.38m of dark grey or black silty clay. No significant finds were recovered from any of these fills. Deposit **726** appeared to continue south for approximately 12m, where it was observed in segment **788**, but not beyond. The dark colour of this material and its restricted distribution suggested that it may have been midden material only carried a limited distance from the entrance of the enclosure for disposal. The ditch terminal was truncated by a shallow sub-circular pit **727** or recut (see Phase 4 below).

6.88 The lower two fills observed in terminal **723** were repeated along the course of the ditch apart from segment **788**, where there was an additional slumping event **789** against the eastern edge of the ditch. Similar potential slumping events from the outer edge of the ditch were encountered at segment **799** and in terminal **723** (deposits **801** and **724** respectively). This slumping could either represent the collapse of an external bank or, if any barrier were internal to the ditch, as a result of animals such as cattle accessing the unprotected external side of the ditch and causing increased erosion.

6.89 Segment **615** of ditch **749** contained four deposits (**657**, **469**, **656** and **468**). The lower three deposits (**657**, **469** and **656**) appeared to be natural silting, distinguishable by the manganese inclusions in the first and third (**657** and **656**). The final deposit (**468**) was redeposited natural clay, light yellow-grey in colour with no inclusions, suggesting deliberate backfilling, perhaps using material from an accompanying bank. This may have occurred when the settlement ceased to be enclosed in Phase 4 and would account for the presence of a fragment of Roman roof tile (*tegula*) (otherwise only found in Phase 4 features) in this deposit (Appendix C). Attempted radiocarbon dating of a sample of animal bone from deposit **694** (the primary fill of segment **687**) was unsuccessful (Table I1, Appendix H).

*Enclosure ditch **750***

6.90 The northern part of Enclosure A was defined by ditch **750** (Plate 9). From the western site boundary, ditch **750** ran eastwards into an area of modern truncation before turning south and terminating approximately 5.2m north of terminal **723** of enclosure ditch **749** (Figs. 5 and 8). Ditch **750** had an observed length of approximately 14m; however, the truncation to its north-eastern corner by modern farm activity had removed a significant portion of its length.

6.91 Although from its plan it was possible that the northern (east-west aligned) part of ditch **750** represented a continuation of Phase 4 field system ditch **346**, the deposits within the northern two segments (**474** and **626**) of ditch **750** were very similar to segments **634** (Fig. 9 section F) and **743** excavated along its eastern side, suggesting that all formed part of a single enclosure ditch.

6.92 Along its northern side, ditch **750** had a wide U-shaped profile with a slightly concave base, similar to that observed in ditch **749**. On its eastern side, segments **634** and **743** both had stepped sides, possibly indicating an otherwise unrecognised episode of recutting. The ditch had an average width of 2.7m and an average depth of 1m. Terminal **743** of ditch **750** was very similar to the opposing terminal **723** of enclosure ditch **749**. It was slightly wider than the rest of the ditch, at 3.16m, and had a depth of 0.88m. The northern two excavated segments of ditch **750** (**474** and **626**) both contained a sequence of four silted fills, with segment **474** containing an additional two slumping events. The southern two segments (**634** and terminal **743**) contained just three fills, both with additional slumping events. In contrast to ditch **749**, the slumping in enclosure ditch **750** occurred on both edges of the ditch.

6.93 On the eastern side of the enclosure, there was a line of three postholes (**646**, **648** and **650**) on the western (inner) edge of the ditch at segment **634**. These had U-shaped profiles with an average diameter of 0.22m, depth of 0.08m and were filled with light greyish-brown silty clay. Similar features were not identified elsewhere around the perimeter of the enclosure, so it is possible that these postholes may have been remnants of an earlier structure that had been truncated by the enclosure ditch, rather than a

palisade or fence along its inner edge.

*Plate 9: Section through ditch group **750**, facing west.*

*Pit **477***

6.94 Pit **477** was located within the southern edge of Enclosure A (Fig. 8). This shallow, oval feature had an irregular U-shaped profile, 1.2m wide and 0.4m deep. It was filled with a sequence of mottled greyish-brown silty clay deposits (**478**, **479** and **480**). A large piece of ironworking slag was recovered from deposit **479**, probably derived from the base of a bloomery furnace. Although pit **477** did not contain any dateable finds, it had been truncated by RG 15 (below) on its south-western edge (Fig. 9 section G), showing that it must have been created no later than Phase 3.

Ring-gullies

*Ring-gully 12 (Group **820**)*

6.95 This possible ring-gully was located at the western side of the southern excavation area immediately to the south of Phase 1 RG 11 (Figs. 5 and 8). The north-eastern arc was observed running from its south-eastern terminal (**411**) for a length of c.5m before being truncated to the west by Phase 4 ditch **822**, and it was also bisected by Phase 4 linear gully **572**. From the north-west, RG 12 widened from 0.34m to 0.63m at the south-eastern terminal, and had an average surviving depth of 0.07m, increasing slightly to

the south-east. The ring-gully had a shallow U-shaped profile and was filled with a single deposit of grey silty clay which did not contain any finds or environmental remains.

*Ring-gully 15 (Groups **576** and **818**)*

6.96 RG 15 was located within the southern side of Enclosure A (Fig. 8). Only a short length of the south-western quadrant of an initial cut of the gully (**576**) survived. This had a shallow U-shaped profile with an average width of 0.4m and depth of 0.12m. It contained either one (segment **826**) or two (segment **576**) fills. The south-eastern terminal **576** truncated a stakehole at its easternmost end. Stakehole **579** was 0.13m in diameter and 0.12m deep.

6.97 RG 15 had subsequently been recut on a similar alignment (gully **818**) (Figs. 5 and 8). From an eastern terminal (**449**) it curved to the north-west through segments **581** and **475** before continuing beyond the site boundary. The observed part of the gully measured c.6m in length with an average width of 0.45m and depth of 0.2m. Terminal **449** and segment **581** had similar steep sided, U-shaped profiles, while segment **475** was much wider, gentler profile. Gully **818** contained a single deposit throughout its length.

6.98 It was possible that the northern arc of RG 15 was represented by gully segments **706**, **715** and **733** to the north and north-east. However, these features had different profiles from those at the southern part of RG 15 and their position did not fit well to the radius of RG 15. Gully **715**/**733** in particular was more likely to represent a later Phase 4 feature similar to Phase 4 drainage gully **825** a short distance to the north.

*Ring-gully 14 (Group **819**)*

6.99 The eastern side of another probable ring-gully RG 14 was recorded approximately 7m to the north of RG 15, with most of the feature lying beyond the western limit of excavation (Fig. 8). The gully had an observed length of 4.6m, with a shallow U-shaped profile, averaging 0.35m wide and 0.1m deep. It was filled with a single deposit of dark brownish-grey silty clay which did not contain finds.

6.100 RG 14 cut the western end of a short linear gully (**719**) which extended eastwards from the ring-gully for approximately 1.5m. Gully **719** had an average width of 0.35m, depth of 0.04m, and was filled with dark brown-grey, clayey silt.

Phase 4: unenclosed settlement and field system

6.101 The overall circuit of the main ditch encircling Enclosure A was infilled, although there were some minor recuts along its southern side and possibly also on the eastern side. The northern side of the enclosure was cut at right angles by a ditch of uncertain function. Settlement (represented by ring-gullies) expanded over a larger area, particularly to the south and east. Several generations of structures were represented. Settlement within the area enclosed by the former Enclosure A during this phase was clearly demonstrable only in the case of RG 13, which was respected by a drainage gully that cut the infilled enclosure ditch. Other small gullies within the former enclosure possibly also dated to this phase. External to the east and south-east of the former enclosure were several structures (RG 16, RG 17, RG 18 and RG 22) which were linked by more drainage gullies that cut the infilled enclosure ditch. More ring-gullies lay to the south of the enclosure (RG 19, RG 20 and 21), and one of these may also have cut the infilled enclosure ditch. An extensive ditched field system was laid out, fitted around both Enclosure A and Enclosure B, which, as noted above, may still have contained some occupation (Phase 2c). Several settlement and field system features attributed to this phase were distinguished from earlier phases by the presence of Roman ceramic building materials (CBM) and hand-built pottery, absent in earlier phases. Since, as noted above, similar hand-built pottery also occurred in Phase 2c features in Enclosure B (Table B3), these could have been broadly contemporary.

Recutting of the Enclosure A ditch

6.102 The main ditch (**749**) forming the southern side of Enclosure A had become infilled and had ceased to function as a major boundary, but there was a sequence of repeated recuts of various sizes mostly following a similar alignment (**457**, **558**, **559**, **603**, **613**, and **611**), all continuing beyond the western limit of excavation (Fig. 8). The small size of these recuts suggests that the ditched perimeter of the former enclosure had ceased to function as a barrier, a role perhaps now undertaken by another archaeologically invisible feature such as a hedge, and that drainage was now the main consideration.

6.103 Most of the recuts had an observed length of no more than 5.6m, running from west to east with varying widths and depths; however, the varying width of the main enclosure ditch as recorded in plan suggests that some of these recuts may have continued further but could not be distinguished during excavation. The only ditch that differed in form was **613**, which extended for approximately 2.8m from the western site boundary before turning north-east for c.1.9m and terminating.

6.104 The final recognised recut (ditch **457**) extended further east, following the southern edge of enclosure ditch **749** for approximately 15.4m (excavated as segments **803** and **780**). Although not observed beyond this point, it is possible that it continued around the south-eastern corner of the former Enclosure A and terminated as 'pit' **727** 15.5m north of segment **780**, which truncated the original enclosure ditch terminal **723**. Where investigated, ditch recut **457** had an average width and depth of 1.11m and 0.32m respectively and contained a single dark clayey silt fill. Two conjoining sherds of hand-built pottery were recovered from deposit **467** (segment **457**) along with a stone 'rubber' that could have been utilised with a saddle quern.

*Ditch **822***

6.105 Ditch **822** ran from north to south and cut across the northern side of the infilled Phase 3 main enclosure ditch **750** at the northern edge of Enclosure A. After entering the southern excavation area from the north, ditch **822** ran along the edge of the area for 14.6m before either turning to the west or terminating. It did not continue directly northwards into the northern excavation area. Although in itself undated, the ditch has been included in Phase 4 because it cut the Phase 3 enclosure ditch and RG 12, but apparently either respected, or was respected by, Phase 4 gully **620** (see below). Without further excavation to the west of the area investigated it is not possible to suggest a function for this feature.

6.106 The maximum observed width of Ditch **822** was 2.1m, and where excavated it had an average depth of 0.75m. The ditch had a wide V-shape profile with two gentle steps on the eastern edge which may indicate unseen recuts. It was filled with a sequence of four silty clay deposits to the north, but only had a single fill at its southern terminal (or turn).

*Ring-gully 13 (Group **830**) and drainage gully **825***

6.107 The only possible ring-gully within the former Enclosure A attributed to Phase 4 was RG 13. This was located towards the centre of the enclosure, close to its eastern entrance (Fig. 8). Its position means that it cannot have been contemporary with RG 14 (Phase 3). As a result of later truncation, only part of the northern side of the feature survived, together with the northern terminal (**497**) of what may have been an east-facing entrance. From here, the gully ran north-west then west to the limit of excavation. The excavated part of RG 13 was 8.85m long with an average width of 0.6m and depth of 0.28m. It had a steep-sided U-shaped profile with a flat base and contained a single clay fill along its entire length (Fig. 9 section H).

6.108 To the immediate north-east of terminal **497** was a short, shallow, U-shaped gully (**499**), which was c.0.28m wide, 0.3m deep and observed over a length of c.1m. It was filled with blue-grey clayey silt. At its southern end, terminal **497** also truncated a small posthole (**509**). This was 0.35m in diameter, 0.15m deep and also filled with blue-grey silty clay. It is possible that gully **499** and posthole **509** represented part of an earlier structure replaced by RG 13.

6.109 The eastern terminal of RG 13 had been truncated on its south-western side by a short north-west to south-east aligned gully (**501**). This was 1.2m long, 0.3m wide but just 0.08m deep and was filled with light-grey silty clay (**502**) that resembled the surrounding subsoil. Its position and orientation suggested that it represented a partial recut of the terminal of RG 13. Once it had become infilled, the northern edge of RG 13 was recut as drainage gully **825** following a similar alignment (Figs 5 and 8; Fig. 9 section H), suggesting that the roundhouse associated with RG 13 was extant. Gully **825** ran from the western site boundary, in an arc to the south-east for c.7.9m to segment **487** where it turned to the north-east and continued to the infilled terminal (**723**) of enclosure ditch **750** which it cut. The gully had an overall observed length of 13.6m, was on average 0.63m wide and survived to a typical depth of 0.2m. Gully **825** generally had a shallow U-shaped profile and contained a single silty clay fill. A fragment of Roman *tegula* (roof tile) was recovered from deposit **456** (segment **455**). The small size and shallow depth of the feature suggested that its purpose was purely for drainage rather than having any boundary function.

Other gullies within the former Enclosure A

6.110 Gully **620** was located 6m to the north of gully **825** and ran approximately parallel to it. As noted above, it also lay immediately to the south of the southern terminal (or turn) of ditch **822**, suggesting that the features respected one another (Fig. 8). Gully **620** extended eastwards from the site boundary for 4.6m and cut Phase 3 RG 12. It had an average width of 0.56m and depth of 0.12m, and had a single dark-grey silty clay.

6.111 Another fragment of gully (**706**) was recorded over a length of c.2.5m running from west-southwest to east-northeast approximately 10m to the south of gully **825**. Although these features appeared convergent, in fact the projected line of gully **706** to the north-east was approximately parallel to the eastern end of gully **825**. Gully **706** had a shallow U-shaped profile and was filled with a single deposit of grey silty clay throughout. It was 0.5m wide and 0.21m deep. A second short length of a smaller gully (**715/733**)

recorded a short distance to the east but separated from gully **706** by a post-medieval disturbance ran on a different alignment and probably represented a separate (and unphased) feature of unknown function.

*Drainage gully **823/824***

6.112 The most distinctive feature of the unenclosed settlement at the eastern side of the former Enclosure A was a long drainage gully (**823**/**824**) running from north to south. This followed the outer edge of the infilled main enclosure eastern ditch (**749**/**750**) but was itself cut in places by small recuts of the ditch (see above). Gully **824** continued across the eastern entrance of Enclosure A, suggesting that this was no longer significant. To the south, gully **823** continued beyond the southern end of the enclosure. Four structures (RG 18, RG 17, RG 16 and RG 22) were either directly or spatially associated with the gully.

6.113 Drainage gully **823** ran from south to north for approximately 20m (Figs. 5 and 8). The gully had a shallow U-shaped profile, a typical width of 0.55m and an average depth of 0.25m. The southern part of the feature had suffered from modern truncation and it is possible that the gully originally extended further in that direction.

6.114 Although gully **823** was truncated to the north by a recut of the enclosure ditch, its original continuation in that direction was possibly represented after a gap of 9m by a short length of linear gully **764** (Fig. 8). Gully **764** had been truncated by an iteration of gully **824**, meaning that any direct relationship with RG 22 could not be determined.

6.115 To the north of gully **823**, but continuing the same south-to-north alignment, was a similar gully **824**. From its southern terminal (**760**), the gully ran northwards for approximately 2.6m before cutting gully **764**. It then followed (and presumably recut) the western side of RG 22, which contained *tegula* (see below), confirming that these gullies were created in Phase 4. To the north, gully **824** followed (and hence was not distinguishable from) the outer edge of the infilled enclosure ditch **750**. The gully had a U-shaped profile, an average width of 0.8m and depth of 0.2m, and contained a single deposit of mottled brown-black silty clay.

*Plate 10: RG 18 terminal segment **472**, facing south-east.*

*Ring-gully 18 (Group **817**)*

6.116 RG 18 was located external to the southern side of the former Enclosure A. Only the southern part of the circuit survived (Fig. 8). The gully had a shallow, flat-based profile with an average width of 0.55m and an average depth of 0.17m. It was filled with a single deposit of dark-grey silty clay.

6.117 The stratigraphic relationship between RG 18 and drainage gully segment **495** was uncertain, although their spatial relationship suggested that the two were contemporary. Drainage gully **495** continued east until it intersected the north-to-south aligned drainage gully **823**.

6.118 Part of the north-western side of RG 18 may have been represented by curvilinear gully **805**/**809** (Fig. 8). Gully **805**/**809** was fully truncated to the north by a recut of enclosure ditch **749** (segment **803**), so that its full extent could not be determined.

6.119 The well-defined western terminal (**472**) of the southern part of RG 18 (Plate 10) contained a deposit of rounded stones that may have represented the remnants of packing stones for a post, perhaps associated with a porch structure similar to that associated with nearby RG 17 (see below). This suggests that RG 18 may have had a (possibly second) west-facing entrance, similar to structures 1 and 7 at Pegswood Moor (Proctor 2009, 13 and 20), or roundhouse 5 at Cramlington (NAA 2019).

*Ring-gully 17 (Group **518**)*

6.120 RG 17 was located to east of RG 18, on the opposite side of drainage gully **823**. It had previously been identified during the evaluation undertaken in 2012 (Muncaster 2012, 6). The ring-gully had a maximum internal diameter of 5m, with an average width of 0.6m and average depth of 0.3m (Plate 11). It was filled with a single deposit of dark grey-brown silty clay which contained fragments of Roman ceramic building material (fill **555**) and three abraded sherds of hand-built pottery (from terminal **512**). Possible evidence of structural material relating to the walls of the roundhouse contained within the ring-gully was represented by fragments of burnt clay or daub recovered from terminal **512** and from adjacent segment **552** on the southern side of RG 17.

6.121 Adjacent to each terminal of RG 17 was a posthole (**514** and **562**). Both features were sub-oval in, with an average width of 0.27m and an average depth of 0.08m. Both postholes were filled with a single deposit of mottled grey silty clay. These features probably represented a porch or entrance structure facing towards the south-east.

6.122 A possible second curvilinear gully (**566** and **568**) was observed within the arc of RG 17. It was filled with a single deposit of dark-grey silty clay. The gully had an observed length of 1.2m, an average width of 0.35m and a depth of 0.21m. Despite its small size, it is unlikely to have represented a wall-construction slot since it cut the larger main gully comprising RG 17, and therefore probably represented recutting of the gully.

6.123 A possible posthole **526** was truncated by segment **523** of RG 17 (Fig. 8). It measured 0.26m in diameter and had a depth of 0.2m. It was filled with mottled grey brown silty clay (**527**). A second possible posthole (**564**) was located to the immediate south-west of gully **566**. It measured 0.27m by 0.2m, was 0.1m deep and was filled with soft grey silty clay (**565**).

Plate 11: Curvilinear gully, RG 17

*Ring-gully 16 (Group **815**)*

6.124 Approximately 6.5m north of RG 17 was a curving gully probably representing the western side of another structure designated RG 16 (Fig. 8). This would have had an internal diameter of c.4m. The gully had an average width of 0.3m and depth of 0.2m with a shallow U-shaped profile (Fig. 9 section E, segment **699**). It was filled with a single deposit of silty grey black clay which contained a fragment of Roman roof tile (tegula), recovered from deposit **670** in segment **669**.

6.125 RG 16 had been slightly truncated by what was probably the final recut of enclosure ditch **749** (see above). The northern part of the ring-gully truncated an earlier pit (**631**), which in turn truncated an earlier gully (**636**). It is probable that gully **697** to the south represented the same feature as gully **636**. Together, gully **636/697** could represent an earlier phase of ring-gully related to the same structure later surrounded by RG 16. No dating evidence was recovered from these earlier features.

*Ring-gully 22 (Group **816**)*

6.126 RG 22 was located to the north of RG 16, and partially blocked the former eastern entrance into Enclosure A (Fig. 8). The ring-gully had been truncated on its eastern side, where any entrance is likely to have been located. It had a minimum surviving internal diameter of 4.2m. The gully had a shallow U-shaped profile with an almost flat base. It had an average width of 0.6m, average depth of 0.1m and was filled with dark grey silty clay. A fragment of Roman *tegula* and a second unidentifiable tile fragment were

recovered from fill **670** of segment **669**. As noted above, the western side of RG 22 had been recut as part of linear gully **824**, meaning that the presence of the Roman material within RG 22 helped to phase this whole group of features.

6.127 The southern side of RG22 cut two short north to south aligned linear features (**769** and **762**). No dating material was recovered from either and their purpose was unclear. A possible posthole (**744**) was located within the southern edge of RG 22. This was roughly circular in shape, 0.25m in diameter and 0.1m deep, with a shallow U-shaped profile. It was filled with a single deposit of mottled grey brown silty clay.

*Ring-gully 20 (Group **339**)*

6.128 Three more ring-gullies were located to the south of the former Enclosure A. The southernmost, RG 20 (Fig. 8), was severely truncated and only an arc of the southern part of the feature survived, with an overall length of 6.4m. It had an average width of 0.3m and an average depth of 0.12m. The profile of the gully was generally a shallow U-shape, becoming steeper at the eastern terminal (**331**). The gully was filled with a single deposit of dark grey brown silty clay. No dating evidence was recovered from this feature.

*Ring-gully 19 (Group **814**)*

6.129 To the north of RG 20 was another fragmentary ring-gully RG 19. From the western limit of excavation this gully ran to the south-east and then curved to the north-east before terminating (terminal **369**), with an observed length of 8.2m (Fig. 8). The gully had an average width of 0.7m and an average depth of 0.25m (Fig. 9 section I). It was filled with a single deposit of dark grey silty clay. Thirty-one sherds of hand-built pottery were recovered from fill **350** of segment **349**, and another base sherd from fill **417** of segment **416** (Appendix B).

6.130 Opposing terminal **369** lay another possible terminal (**462**), which together created an east-facing entrance approximately 3.5m wide. Including gully **462**, the projected internal diameter of RG 19 was 9m. Gully **462** cut part of the sequence of recuts into the top of the infilled Enclosure A main ditch (**749**), demonstrating that this unenclosed phase of settlement associated with hand-built pottery must have post-dated disuse of the enclosure.

6.131 A posthole (**420**) on the inner edge of RG 19 (Fig. 9 section I) may have been a structural element of the roundhouse which the ring-gully presumably encircled. The posthole

was 0.15m in diameter, survived to a depth of 0.08m and was filled with greyish brown silty clay. The inner (northern) edge of RG 19 had subsequently been truncated by a recut (**418**). This ran inside any possible wall-line represented by posthole **420** and may therefore represent replacement of the entire structure rather than just refurbishment of the drainage gully.

6.132 A pit (**333**) located within the circuit of RG 19 produced two sherds of hand-built pottery and has therefore been assigned to the same phase of activity as the surrounding structure. Pit **333** was sub-circular, 1.14m long, 1.08m wide and 0.16m deep. It contained a single deposit of dark brown or black silty sand (**334**) which, apart from the pottery, contained seven pieces of fired clay and several stones which could have been 'potboilers' used for heating water. The fragments of fired clay fitted together and were probably part of an object, although it was unclear exactly what that might have been.

*Ring-gully 21 (Group **340**)*

6.133 RG 21 was located within the projected circuit of RG 20 and cut the southern (exterior) edge of RG 19 (Fig. 8). RG 21 had an internal diameter of c.3.6m and was broken by a south-east facing entrance gap approximately 2m wide. The gully had an average width of 0.5m, average surviving depth of 0.15m and was filled with a single deposit of dark-grey or black silty clay. A single sherd of hand-built pottery was found in fill **322** of the northern terminal segment **321**. Over 100 sherds of hand-built pottery, probably all derived from a single vessel, were found in deposit **798** within segment **797** at the south-western side of the ring-gully. The vessel was an unusual bowl form likely to be Roman in date (Appendix B).

6.134 No internal features were identified within the circuit of RG 21. Two possible intercutting postholes (**489** and **491**) were located c.0.6m east of (and exterior to) the northern terminal (**321**), although these were undated and their proximity to RG 21 may have been coincidental. The postholes were both oval, 0.2m in width, 0.2m deep and had a collective length of 1.2m. Both were filled with by a mid-brownish-grey silty clay. A large stone was located in posthole **489**.

*Pit **727***

6.135 The northern terminal of the infilled enclosure ditch **749** (segment **723**) was truncated by feature **727** (Fig. 8) which was 1m wide and 0.14m deep. It was filled with a single deposit of mottled grey brown silty clay (**728**) which did not contain any finds. Although initially interpreted as a shallow pit, it is possible that it represented the terminal of ditch

457 observed to the south, which recut enclosure ditch **749**. This would mean that the ditch recut would have extended the entire length of enclosure ditch **749**. This is entirely conjectural since the last observed segment of ditch **457** (**780**) was located approximately 14.5m to the south. However, if correct it would explain why Phase 3 enclosure ditch **749** appeared in plan to truncate Phase 4 gully **823**.

Field system ditches

6.136 The whole of the southern and eastern part of the site was subdivided by ditches into large fields. Whether this agricultural landscape also extended to the west of Enclosures A and B could not be determined. Within the southern part of the site, the ditches formed part of two rectilinear fields separated by a trackway or drove-way oriented roughly north-west to south-east (Fig. 2).

*Plate 12: View of section through ditch group **195**, facing north.*

*Ditch **195***

6.137 The longest of these features was ditch group **195**, with an observed length of 320m. From the south-eastern corner of the southern excavation area, it ran north-west for approximately 185m before turning north for 100m where it was truncated by modern disturbance. The ditch had a wide U-shaped profile. The north-to-south aligned part was on average 2m wide and 1m deep (Plate 12) and it reduced to 1m wide and 0.5m deep along the north-west to south east aligned portion possibly as a result of truncation.

The south-eastern terminal had been truncated and it is likely that the ditch originally extended further. Towards the northern end of ditch group **195**, a short section appeared to have been an extensive recut of an earlier ditch (**308**).

6.138 Ditch **195** was filled with a series of silting deposits. The finds that were recovered from ditch **195** all came from its northern end, closest to the area of settlement, and included hand-built pottery (from fills **432** and **440**) and a boulder with a small 'basin' pecked into it found in fill **377**.

6.139 Approximately halfway along its north-to-south aligned portion, ditch **195** truncated an earlier pit (**260**). Pit **260** was roughly circular in shape with a diameter of 2.4m and a depth of 0.3m. It contained a single fill of mottled grey-brown silty clay (**511**). No finds were recovered from this fill, and the function and phasing of the pit was not determined.

*Ditch **346***

6.140 Ditch **346** probably represented a return of the northern end of ditch **195** to the south-east (Fig. 2), although the relationship between the two features had been lost as a result of modern truncation. Together, ditches **195** and **346** would have defined the north-western end of an enclosure measuring approximately 105m wide and more than 200m long. Ditch **346** had a wide U-shaped profile, an average width of 1.2m and an average depth of 0.6m and was filled with a series of silting deposits that produced a sherd of hand-built pottery.

*Ditch **196***

6.141 Ditch group **196** was located to the south-west of, and ran roughly parallel to, ditch **195**, separated by a probable track or drove-way up to 15m wide (Fig. 2). Ditch **196** had a shallow U-shaped profile with an average width of 0.50m and depth of 0.15m. It was filled with a single deposit of mottled grey-brown silty clay along its entire length. The ditch was recorded intermittently running from south-east to north-west for an observed length of approximately 100m until it was truncated by a post-medieval furrow. Beyond this furrow were two narrow gullies (**112** and **116**). It is reasonable to assume that one of these represented a continuation of ditch **196**, although which one is unclear due to the post-medieval truncation. Both gullies were truncated by ditch group **197**.

*Ditch **199***

6.142 Ditch **199** continued to follow the alignment of ditch **196** to the north-west, separated by a modern disturbance, and then turned to the south-west (Fig. 2). At its south-eastern end it was observed for 0.5m before being truncated by ditch **197** (below). Beyond this, it continued north-west for another 8m before turning south-west and continuing for approximately 40m before being truncated by activity associated with the 19th-century colliery. Ditch **199** had a shallow U-shaped profile with an average surviving width of 0.80m and depth of 0.25m. It contained a single fill of mottled greyish-orange silty clay throughout. A sherd of hand-built pottery and an undiagnostic fragment of ceramic building material were recovered from the ditch at its north-eastern return (fill **053**).

*Gully **197***

6.143 Linking ditches **195** and **199** at the north-western end of the possible drove-way was a short north-east to south-west aligned gully (**197**) (Fig. 2). Although gully **197** cut ditch **199**, it had been truncated by ditch **195**. That ditch **195** truncated ditch **197** further suggests that ditch **195** was, as noted above, an extensive recut of an earlier feature (cut **308**).

6.144 Gully **197** ran for a total length of 15m, had an average width of 0.4m and an average depth of 0.2m. It had a shallow slightly stepped U-shaped profile with a flat base and contained a single fill of mottled grey-brown silty clay. Given that the gully was too small to have acted as any form of barrier, it is likely that it was a drain to channel water away from the entrance to the trackway.

*Plate 13: Section through field system ditch group **3938**, facing south-east.*

*Ditch **3938***

6.145 Within the northern excavation area, two more field system ditches (**3937** and **3938**) ran from north-west to south-east on a similar alignment to ditches **346**, **195** and **196** in the southern area. Ditch **3136**, which ran at right angles to these ditches, probably formed a subdivision of the field system (Figs. 2 and 6). As in the southern area, the field system ditches were not directly stratigraphically related to any other prehistoric features, and in this area produced no dating evidence.

6.146 Ditch **3938** crossed the north-eastern corner of the site (Figs. 2 and 6). It was observed intermittently over a length of 46.5m, with an average width of 1.6m and depth of 0.6m, but was truncated by a post-medieval boundary. The ditch generally had a wide V-shaped profile with a rounded base (Plate 13) and contained two fills throughout. The lower deposit was light yellow-brown sandy clay mottled with grey clay, while the upper was a mixed mid- to dark-grey-brown silty clay.

6.147 Immediately to the north of ditch **3938**, near the north-eastern corner of the excavation, lay pit **3241** (Fig. 6). This was a shallow elongated pit or short gully measuring 0.95m long, 0.55m wide and 0.2m deep, with a single silty clay fill. The relationship between pit **3241** and ditch **3938** had been removed by a modern, although given its position it

seems likely that the pit was located with respect to the ditch and hence broadly contemporary.

*Ditch **3937***

6.148 Ditch **3937**, also aligned from north-west to south-east, ran for 22.4m from a point close to ditch **3136** near the eastern site boundary, where it had been fully truncated by later disturbance, and terminated approximately 3.5m short of the Enclosure B boundary, which may still have been marked by a bank or hedge (Figs. 2 and 6, Plate 14). The ditch had an average width of 1.6m and depth of 0.6m, but had been heavily truncated. Ditch **3937** had a wide V-shaped profile and contained two fills. The lower deposit was dark grey clay, overlain by dark greyish brown silty clay.

*Plate 14: Western terminal of ditch **3937**, facing southeast.*

*Ditch **3136***

6.149 Ditch **3136** crossed the south-eastern corner of the northern excavation area and was observed over a length of 14.5m. As with ditch **3937**, it had been heavily truncated by post-medieval activity, having an average surviving width of 1m and depth of 0.25m. At both excavated sections (**3136** and **3171**), the ditch had a shallow U-shaped profile with a single mid-brown-grey, silt clay fill. No artefacts were recovered from the ditch.

Unphased features

6.150 Inevitably, a number of discrete features excavated across the site did not contain dateable finds and had no obvious relationship to other (phased) features. The following features were considered most likely to date from the pre-medieval phases of the site and are included here.

*Ditch **198***

6.151 Two parallel ditches were identified crossing the south-western corner of the site running from north-west to south-east. Ditch **198** survived in two lengths with an overall observed length of approximately 55m, but where excavated was only 0.1m deep with a shallow profile and had probably been truncated elsewhere. It had an average width of 0.5m and was filled with a single deposit of mottled greyish-green silty clay.

6.152 Located 35m to the south-west, and running on a broadly similar alignment, was ditch **004**. This was only observed over a length of 5m within the excavated area. The ditch had a shallow U-shaped profile, an average width of 0.65m and a maximum depth of 0.23m. It had a single fill of mottled grey-black clay (**005**) which contained a piece of post-medieval pantile which may have been intrusive.

6.153 Although these two ditches were undated, the gap between the two segments of ditch **198** may be significant, coinciding as it did with the alignment of Phase 4 field enclosure ditch **199**. If ditch **199** had originally been accompanied by a bank that had subsequently eroded or been partially levelled, this would have resulted in the base of ditch **198** rising slightly over its line. Given that the remains of ditch **198** were very shallow anyway, subsequent medieval or post-medieval agricultural truncation will have removed any trace of this 'raised' section, resulting in the gap observed during excavation. It can therefore be suggested that any field system represented by ditches **004** and **198** post-dated the Phase 4 field system.

*Pit **3333***

6.154 This was located immediately to the north of Enclosure B and may therefore date from one of the sub-phases of Phase 2. Pit **3333** measured 1.5m in diameter. There was a shallow step at the top of the north-eastern and south-western sides, each measuring approximately 0.3m wide (Fig. 9, section J). In plan, these steps resembled postholes but proved in section to be part of the cut of the pit. It is possible that they represented pads for a structure around, or perhaps over, the pit.

6.155 The pit had been partially filled or lined with a redeposited natural clay, which may have been processed (perhaps wedged), as it had far fewer stony inclusions than the natural clay on the site. This possible lining had been overlain around the upper pit edges by another redeposited natural clay deposit (**3350**), which had not been processed. Deposit **3349**, the main fill of the pit, contained a large amount of organic matter including a small amount of charcoal (Plate 15), possibly contaminated with decayed roots; the area over pit **3333** had been an enclosed copse or wood from as early as 1842 (Richardson 2012, fig. 5) until at least the early 20th century (*ibid.*, fig. 8). The top of the whole pit was infilled with dark silty clay.

*Plate 15: Section through pit **3333**, facing northwest.*

6.156 The date and function of pit **3333** was unclear. However, it is possible that it represented a clay-lined storage pit, with deposit **3350** representing the remnants of a clay cap. Once the cap had been removed and/or the pit went out of use, it was backfilled with deposit **3349** and then left to silt up naturally.

*Postholes **3565** and **3473***

6.157 Although undated, the general proximity of these features to the cluster of ring-gullies at the centre of Enclosure B, and the general absence of such features elsewhere within (and outside) the enclosure suggests that they can be dated broadly to Phase 2. Posthole (**3565**) was located 1.7m northeast of RG 2 (Fig. 7). It was oval, measuring 0.55m by

0.35m, with a depth of 0.13m. It had a U-shaped profile with a small step approximately 0.05m wide on its northern edge. The light grey fill (**3566**) contained a small amount of charcoal. Posthole **3473**, approximately 2.9m to the east of **3565** (Fig. 6), had a similar fill (**3474**), although without charcoal. The posthole was 0.25m in diameter and 0.2m deep with a well-defined profile.

*Pit **3400***

6.158 Pit **3400** was located within Enclosure B to the north of RG 8 and 2m to the east of enclosure ditch **3935** (Fig. 7). The pit had a deep, steep-sided U-shaped profile, with two mid- to dark-grey fills (**3401** and **3402**).

*Posthole **3610***

6.159 An isolated, undated, oval posthole **3610** with an irregular profile was located towards the north-western corner of the northern excavation area. It was initially thought to be a cremation burial due to the dark nature of its fill (**3611**) but did not contain any calcined bone.

7.0 SPECIALIST FINDS AND ENVIRONMENTAL ANALYSES

7.1 The following are summaries of the specialist reports conducted on the material recovered and retained from both phases of the archaeological mitigation works. For detailed reports see Appendices B-H.

Pottery (C. G. Cumberpatch)

7.2 In total, 273 sherds of pottery were recovered from both phases of excavation along with 62 sherds of fired clay. Of these pottery sherds, two groups were noteworthy. Twelve sherds of fingernail-impressed pottery were recovered from deposit **798** (RG 21 segment **797**), probably from a single vessel which could have represented a bowl. Bowls were not typical until their adoption during the Roman period. It is possible that it could be reconstructed, but this would require time and expertise.

7.3 The assemblage recovered from the 2017 phase of excavation included one and possibly two further examples of fingernail-impressed rims recovered from deposit **3798** (RG 10 segment **3796**), most probably from an open jar or jars (although a bowl cannot be ruled out) together with a flat-topped rim, also most probably from an open jar. The form spanned much of the pre-Roman Iron Age and the Roman period.

7.4 Together these vessels conform with the dates provided by the radiocarbon analysis of the archaeological deposits. The bowl vessel suggests a relatively late date.

7.5 The fill of pit **333** (**334**) produced seven joining fragments of fired clay although this was much harder and more robust than the typical range of such material. In addition, their surviving faces were marked with deep impressions formed by twigs or plant stems pressed into the surface of the clay. The object's form was unclear and it is now known why its surface treatment should differ so markedly from that of the pottery recovered.

7.6 Although small in size and in poor condition, the assemblage is of significance because of its unusual nature and the presence of a substantial parts of rare, decorated, vessels including a bowl and a probable jar, both with decorated rims.

Ceramic building material (C. Antink)

7.7 Of the assemblage of ceramic building material (CBM) recovered from the excavations, three were possible Roman *tegulae* but they are notably abraded, which makes identification tenuous. These came from deposits **670**, **456** and **468**. Fragments of a probable Roman brick came from context **555**.

7.8 While certainly not conclusive of any Roman activity directly on site, it suggests a regional presence, concurrent with other artefactual and scientific data recovered from the site.

Worked stone (J. Cruse)

7.9 During both phases of the excavations at East Wideopen Farm, a total of five worked-stone objects were collected from various contexts. These included a fragment of a beehive quern (RF 001) of Iron Age or Roman date, part of a probable Roman disc hand quern, a 'smoother' and a 'rubber', both likely to be prehistoric in date, and part of a boulder with a small oval 'basin' pecked into its surface.

7.10 Beehive querns are typically found in and around 'native' settlements, but are quite rare in 'Romanised' environments, such as settlements close to Roman roads, but elsewhere continued to be used well into the Roman period. The East Wideopen example had its grinding surface edges and the upper section of its hopper deliberately removed, followed by the quartering of the remaining core. This was a relatively common practice in non-Romanised settlements. While the main beehive distribution is focused in Yorkshire, their use continued up the North-East coast. The Northumberland Coastal

Plain has 30 known beehives, and smaller clusters continue to be found on the better farmland, as far north as the Forth Estuary. The excavation at East Wideopen in 2012 yielded a beehive base that had been split in half.

Metal production residues (R. Mackenzie)

7.11 The assemblage collected from the site contained one large piece of slag from deposit **480** (pit **477**) that probably originated from iron working, suggesting that iron may have been smelted or forged within or close to the area excavated. The morphology of this large piece and its fracture surface suggests that the slag may have originated from the base of a 'pre-industrial' type of iron-smelting furnace, such as a bloomery furnace.

7.12 The remaining slag-like fragments in the assemblage are largely by-products of burning coal, fuel ash slag and coke. The relatively small size of the slag assemblage, and lack of any features clearly associated with metal production, suggest the it is unlikely that metals were being smelted or refined at East Wideopen Farm. The slag could have been produced in metallurgical furnaces and working areas situated well away from the main occupational area and probably outside the excavation area.

7.13 The spheroidal hammer-slag recovered during the excavations is a common indicator of iron smithing. However, almost all of the spheroidal hammer-slag was recovered from the secondary fills of ditches or pits. This, together with the very small amounts found, make it impossible to link the material to more specific iron-smithing activities at the site.

Animal bone (E. Wright, H. Russ and A. Zochowski)

7.14 Cattle, sheep/goat and equids (three of the main domesticated livestock animals in the UK) are generally among the most common taxa found at Iron Age/Romano-British sites in Britain. The Iron Age/Romano-British phase at East Wideopen Farm could include activity, or periods of activity, over a period of c.1200 years between c.800BC and c.400AD.

7.15 Cattle have been identified as the most common taxa at the Iron Age site (Table F1), indicating that beef, and other products and resources provided by this species were frequently utilised during this period. Sheep/goat and equid are also represented, which is consistent with animal-bone assemblages recovered at prominent sites in the region.

Plant remains (L. F. Gardiner, J. Baines and H. Russ)

7.16 The majority of the charcoal recovered from ring-gully termini and ditches in the southern half of the site was most likely there through aeolian deposition since the fragments were so small. Collectively the charcoal assemblage from this part of the site offered no scope for further discussion since the presence of charcoal fragments cannot be securely linked to the feature fills.

7.17 For the northern excavation area, although the charcoal assemblage was dominated by oak (Quercus), eight other taxa were identified, two of which, apple subfamily (Maloideae) and cherry/plum (Prunus), occurred only once and poplar/willow (Populus/Salix) just twice. This poor diversity, does not indicate a particular preference or dedicated exploitation of one or two taxa, rather it highlights the abundance of oak trees in the surrounding woodland.

7.18 Pit **3491** was by far the most productive feature in terms of other charred-plant remains, revealing an assemblage that was probably compiled through the deposition of refuse from different domestic activities and plant usage. The 243 spelt wheat grains recovered from the pit reflected the discard of cereals that accidentally charred during drying. The absence of barley suggested that the crop was dried alone. The arable weeds, such as wild radish and knotweeds represented a different rubbish disposal event. The plants represented various ecologies, suggesting that these plant remains may have been dumped in multiple events. Heathgrass prefers poor and more acidic soils, forming tussocks not good for animal fodder, and together with sedge, blinks and rushes could have been laid down as bedding for animals and humans alike. They are typical of the verges between agricultural plots, abandoned ground and nearby wetlands, but not really cultivated fields or pastures. The presence of grassleaf orach seeds suggested the previous taxa may have been collected at the coast, or hint at saline soil conditions. The overall ecological mixture of this pit indicated poor agricultural land in the vicinity.

7.19 Large-seeded grasses and fescue-ryegrass suggested that forage waste was disposed of through fire, possibly enveloping local weeds like ribwort and other on-site flora, in yet another activity preserved in this pit. Wetland nearby was suggested by the recovery of gypsywort from ring-gully terminal **3385**.

7.20 RG 10 presented a contrasting picture, with chaff from both barley and wheat alongside an agricultural assemblage of arable weeds and cereals. RG 4 preserved the traces of two other edible plants, onion and vetch.

Radiocarbon dating Bayesian analysis (G. Robinson)

7.21 Nine samples were sent for radiocarbon dating: six were samples of bone and three were grains. Only four contained enough carbon to return a date, only one of these was a bone sample. This sample of bone returned a date of cal AD1666-1914 (Table I1, Appendix H, SUERC-84741) showing that this was intrusive. This left just three radiocarbon dates to analyse, all from the northern enclosure (B). In spite of this the radiocarbon dating and the limited Bayesian modelling were successful in refining the chronologies of the northern settlement, giving a lifespan between the Early or Middle Iron Age and the Late Iron Age or early Roman period.

8.0 DISCUSSION

8.1 The excavation confirmed the presence of Iron Age and Romano-British occupation at East Wideopen Farm. Combined with an additional excavated settlement a short distance to the south (ASDU 2014), and other cropmark enclosures to the west and north of the site (Fig. 1), the evidence indicates a pattern of intensive occupation in the area during the later prehistoric and early Romano-British period.

8.2 Dating and phasing of the excavated evidence from East Wideopen has been highly problematic, mainly due to extensive post-medieval truncation of the site fragmenting the stratigraphic sequence in some areas. Very few dateable finds were recovered during the excavations (and with a restricted distribution), and only three radiocarbon dates are available (also with a restricted spatial distribution). In particular, it was not possible to resolve adequately the question of whether the two ditched rectilinear enclosures were in use simultaneously or successively, and hence the features associated with the 'enclosed' period of occupation of the site have been divided into Phase 2 (for Enclosure B) and Phase 3 (for Enclosure A), although it is quite possible that in reality they all belong in 'Phase 2/3'.

8.3 What is clear from the evidence is that settlement at East Wideopen continued for a period spanning, at a minimum, the Middle Iron Age to the Early Roman period, and consisted of an initial unenclosed phase (Phase 1), a period when one or both large ditched enclosures were in use either simultaneously or successively (Phases 2 and 3), and a final phase where the large ditches of the original enclosures had become infilled and unenclosed settlement was associated with smaller ditches or gullies (Phase 4). With the exception of a few sherds found associated with RG 10 in the northern excavation area (probably the latest structure in that part of the site), the small

assemblage of hand-built pottery was restricted to the southern part of the site in contexts attributed to Phase 4, and sometimes associated with Roman material, suggesting that its use was a late development at this site. Given the association of pottery with RG 10, it is possible that the latest sub-phase in the northern area (Phase 2c) was simultaneous with other elements attributed to Phase 4. That similar material (both pottery and Romano-British ceramic building material) was found at several locations within the field-system ditches suggested that these were also a late addition and also attributable to Phase 4.

8.4 Hamilton (2010) examined the settlement chronologies for 18 later prehistoric settlement sites located between the Tees and the Forth using Bayesian modelling of a large number of both pre-existing and new radiocarbon dates. Three of the sites included in the study lay on the Northumberland Coastal Plain at Pegswood Moor and East and West Brunton. The results from Hamilton's study suggested that the creation of 'monumental' rectilinear ditched farmsteads in the region forms an 'archaeological horizon' in the decades around c.200BC (*ibid*., 248-52). Based largely on evidence from sites in the area around the Tees valley, he suggests that around 150 years later there was a change to more open settlement, as at Thorpe Thewles where the main enclosure ditch was deliberately filled in and the occupation expanded (*ibid*., 254-5). Although there was no final unenclosed phase recorded at East and West Brunton, the sequence at Pegswood ran from unenclosed to enclosed to unenclosed. The suggested sequence presented above for the evidence from East Wideopen, unenclosed settlement, followed by enclosure and then a second unenclosed phase, therefore conforms well both to the model presented by Hamilton and evidence from other sites across the wider region.

8.5 As noted above, it is impossible on the available evidence to determine whether the rectilinear ditched Enclosures A and B were in simultaneous use. As noted by Hamilton (2010, 140), the close proximity of two such enclosures is extremely unusual, there are three examples close to East Wideopen. At both East and West Brunton the order in which the enclosures were created was uncertain, but they were likely to have been in use simultaneously (Hodgson *et al*. 2012, 95-6). No excavation has taken place on the pair of enclosures at Hazelrigg.

Phase 1

8.6 The first, unenclosed, phase of Iron Age settlement at the site was characterised by one or more ring-gullies (Fig. 4), each presumably originally enclosing a roundhouse

structure. Although only RG 1 certainly belonged to this unenclosed phase, other structures such as RG 9 and RG 11 could equally be as early, and the start of the sequence of ring-gullies at the centre of Enclosure B could pre-date the enclosure, given the early (360-176 calBC) radiocarbon date obtained from RG 2.

Phases 2 and 3

8.7 Phases 2 and 3 were characterised by the rectilinear ditched enclosures encountered in each excavation area (Figs. 3 and 4). Enclosure A (Phase 3) was located within the north-western part of the southern area (Fig. 8), and Enclosure B (Phase 2) was located in the centre of the northern area (Fig. 6). As noted above, it was impossible to determine either from stratigraphic or dating evidence whether Phases 2 and 3 were simultaneous or sequential. Radiocarbon dating from nearby settlement sites at East and West Brunton and Blagdon Park 2, and also further afield, have identified the shift from unenclosed to enclosed settlement to be around 200BC (Hamilton 2010, 248-52; Hodgson *et al*. 2012, 186-189).

Enclosure A

8.8 Enclosure A measured approximately 34m north to south and more than 10.3m east to west, with an east-facing entrance, and continued beyond the western limit of excavation. It was defined by ditches **749** and **750** which had an average width and depth of 2.5m and 1m respectively (Fig. 9 sections E and F). They had both mostly silted-up over time, although there was a possibility that the very top of ditch **749** had been deliberately levelled-up, similar to the main enclosure ditch at Thorpe Thewles which had been deliberately backfilled to allow for the expansion or re-organisation of the settlement (Heslop 1987). This general lack of maintenance followed by deliberate infilling suggests that subsequent repeated excavation of small recuts on the line of the infilled ditch **749** in Phase 4 had a different purpose to that of the original large Phase 3 enclosure ditch.

8.9 The presence of three postholes (**646**, **648** and **650**) on its interior edge (Fig. 8 and 9, section F) suggested that ditch **750** at least was accompanied by a fence of some sort. The purpose of the fence is unclear, however, as no other postholes were observed along the length of either ditches **750** or **749** meaning that it could not have been a particularly robust one. In addition, the tentative suggestion of an associated bank (see above) would have rendered a palisade unnecessary. The stepped profile of both ditches (Fig. 9, sections E and F), which is mirrored in the enclosure ditches forming Enclosure B to the

north (Fig. 9, sections A and B), might suggest the presence of more recuts than were identified during the excavation.

8.10 Two samples of animal bone from ditches **749** and **750** (segment **425** deposit **426** and segment **687** deposit **694**) sent for radiocarbon dating unfortunately failed to produce a result since they did not retain enough carbon. Once they have partially silted and become grassed-over, relatively large ditches such as these can remain as earthworks for millennia. Finds from the ditches came exclusively from the uppermost fills, and hence may have post-dated creation of the features by hundreds of years, or conceivably derived from unrecognised later recuts. These finds, both Roman in date, included a fragment of a probable upper stone from a disc hand quern found in the upper fill (**752**) of terminal **743** of ditch **750** (Appendix B) and a fragment of *tegula* found in the upper fill (**468**) of segment **615** of ditch **749**.

8.11 The ring-gullies located within the enclosure which are attributed to this phase are discussed further below (RGs 12, 14 and 15). The only feature that threw light on possible industry taking place on the site in Phase 3 was pit **477**, as a 6kg piece of iron slag was recovered from the upper fill of the pit (deposit **480**). The morphology of the slag suggested that it may have come from a bloomery furnace. However, no other evidence for ironworking was encountered and it is possible that the work was being carried out in the unexcavated part of the settlement beyond the western limit of excavation.

Enclosure B

8.12 Enclosure B (Phase 2) was located approximately 13m to the north of Enclosure A. It measured 45m north to south and 42m east to west internally. There were two potential entrances, one in the north-western corner into the sub-enclosure between ditches **3935** and **3933**, and the other was a west facing entrance in the southern half of the western edge of the enclosure, between ditches **3935** and **3932**. A large area of modern truncation in the south-eastern part of the enclosure that had probably removed a significant amount of prehistoric archaeological deposits.

8.13 Enclosure B as excavated was ultimately formed by ditch recut **3935** (Phase 2c) on its western edge, ditch **3932** (Phase 2a) on its southern edge and ditch **3933** (Phase 2a) on its northern and eastern edges (Fig. 6). Ditches **3932** and **3933** both had an average width and depth of 3.3m and 1m respectively. The later recut ditch **3935** was much smaller, however, with and average width of 1.6m and depth of 0.5m. As noted above

this is slightly misleading as the western portion of ditch **3935** was considerably larger than the eastern portion, far more akin to the other main enclosure ditches, with an average width and depth of 2.7m and 1m respectively. On most sides the enclosure ditches had a similar wide U-shaped profile with slight steps on both edges, probably the result of repeated recutting, and were all filled by a series of silty clay deposits. This pattern was obscured on the western side of the enclosure by the successive Phase 2c recuts **3935** and **3936**, but was clear in ditches **3932** and **3933** (Fig. 9, section B and A respectively). Enclosure ditches **3932/3933** had a similar form and size to those encountered at other sites such as Burradon (Jobey 1970, 55).

8.14 The apparent main entrance into Enclosure B was visible between the southern terminal of (Phase 2c) ditch **3935** and the northern terminal of (Phase 2a) ditch **3932**, in the south-western corner of the enclosure. It would have led into an area of the enclosure which may have been kept clear of structures since no Iron Age features were identified in this area, although this could have been a result of post-medieval and modern truncation. When considered with the later phase 2c sub-enclosure made by ditch **3936** it could be suggested that this area was used from the outset as a type of 'porch' enclosure demarcated by wicker fencing or by shallow gullies that would not have survived the later truncation prevalent in that area. This could then have been updated in Phase 2c with ditch **3936**. This does not appear to have any direct parallels within the region, although it could be said to be similar in function to the linear entrance into the phase 1 palisaded enclosure at East Brunton; however, it did not fit the criteria of this type of enclosure set forth by Hodgson *et al*. (2012, 91).

8.15 The south-eastern corner of the enclosure had been heavily truncated, most visible in ditches **3932** and **3933**. Although it was possible that these ditch segments formed parts of the same ditch, separated by later truncation, it is equally possible that another entrance into the enclosure was present between them.

8.16 The number of distinct fills in ditch **3932** increased towards its western end, most obviously after segment **3182**, with four deposits in this segment and those to the east, and six deposits in those to the west. It is possible that the phase 2c sub enclosure made by ditch **3936** was utilised as a livestock pen (see below). If this were the case, then it is reasonable to assume that there was a larger amount of bioturbation as well as animal dung build up in this area. With this in mind it is possible that the increased number of definable deposits within this portion of the ditch is due to the presence of livestock within this pen and a resultant rapid infilling, although this would require ditch 3932 to

have been recut at the time the pen was created, and hence remained in use, at least in this area, into Phase 2c.

8.17 Unfortunately, no finds were recovered from any of the enclosure ditches in the northern area of the site apart from animal bone in ditch **3933**. A sample of the animal bone recovered from ditch **3933** segment **3623** was sent for radiocarbon dating, but, as in the case of similar samples from Enclosure A, it did not contain enough carbon to return a date (Appendix H).

8.18 The Phase 2c sub-enclosure in the north-west corner of Enclosure B was formed by Phase 2a ditch **3933** and Phase 3c **3935** which probably represented, at least in part, a redefinition of an earlier ditch **3934**. The sub-enclosure had an internal measurement of 26.7m north to south and 14m east to west. No internal Iron Age features were observed. While this may be due to the high concentration of post-medieval activity in that area, it is also possible that it was used as a livestock pen within the main enclosure. This type of smaller enclosure has multiple parallels in the region including enclosures B and C at Blagdon Park 2 (Hodgson *et al*. 2012, 32-37), Burradon (Jobey 1970, 64) and enclosure 2 at Pegswood Moor (Proctor 2009, 19). Another potential comparison would be with the much smaller sub-enclosure from phase 7 at East Wideopen (ASDU 2014, 16) only 600m to the south. The north facing entrance was located between ditches **3935** and **3933** in the north-western corner of the sub-enclosure. It is possible that other entrances were in use, although based on the observed archaeological record there is no evidence for this.

8.19 The earlier ditch **3934** possibly acted as a weather break for one or more of RGs 2-8, similar to the drainage ditches to the east of structures 2 and 3 seen in the unenclosed phase of settlement at Faverdale (Proctor 2012, 26), in which case it may have been created in Phase 2b. As ditch **3935** had to some extent recut **3934**, however, it seemed more likely that the earlier ditch was intended to form a sub-enclosure by itself, in which case it may have been part of Phase 2c. This earlier ditch may have been related to the similarly sized ditch terminal **3138** which had been truncated by ditch **3935** segment **3115** (Fig. 6). These would have formed a comparably sized enclosure, although there was no surviving evidence of corresponding east to west aligned features. It is possible that it may have been open ended or that less substantial wicker type fencing was used to fully enclose the space. There were, unfortunately, no interactions between this and any of the other enclosure ditches meaning that establishing exactly when this occurred is not possible. This type of small livestock enclosure is not uncommon at early Iron Age

unenclosed settlements with a comparable example being enclosure 2 and to come extent 3 from phase 3 at Faverdale. Here again 'temporary hurdles may have been used' in order to facilitate stock sorting between the ditches and may have formed the bulk of the boundaries of the enclosures (*op. cit.*, 31).

8.20 As has been observed above, there was no direct link between Enclosures A and B at East Wideopen. While it is possible that ditch **822** which truncated Enclosure A ditch **750** may have been the same as ditch **3892** which was truncated by enclosure ditch **3932** (Fig. 9, section B), the two do not share deposit sequences or profile forms. To the east of this, a smaller ditch **3180** had also been truncated by ditch **3932**. It is plausible to assume that these two ditches were related and formed an enclosure of some kind, however as the view of both is so limited there is no certainty to this. It is possible that Enclosures A and B were in use at the same time, and the instance of multiple contemporary occupied and unoccupied enclosures is documented elsewhere within the region (Hodgson *et al.* 2012; Proctor 2009, 2012; Heslop 1987; Harding 2004; Haselgrove 2016, 358-370).

8.21 Biggins notes that there 'may be no such entity as a 'typical' settlement' (Biggins *et al.* 1997, 51), something that may be true, however broad settlement pattern types do appear to be followed. The site at West Brandon (Jobey 1962) appeared to enclose a single roundhouse structure, although the excavation of the site was limited. The enclosures at Burradon (Jobey 1970) and Gardener's Houses Farm, Dinnington, approximately 3.9km to the north-west had enclosed at least one functioning roundhouse structure at any one time although multiple iterations of the structures appeared at both sites. It is probable that the evidence from geophysical survey at Gardener's Houses Farm shows a settlement pattern similar to that seen at Burradon and West Brandon, where an earlier phase of multiple loosely grouped unenclosed roundhouse structures had preceded the enclosure of a smaller settlement area. This pattern appears throughout the Northumberland coastal plain and beyond, and is followed at East Wideopen. However, the difficulty in dating some of the structures at the current site means that it is uncertain whether Enclosures A and B at East Wideopen Farm had enclosed multiple structures, akin to the enclosures at Blagdon Park 2, Pegswood Moor and to some extent Hartburn (Jobey 1973).

Phase 4

8.22 Phase 2c/4 was characterised by the reworking/reorganising of the initial Enclosures A and B founded during phases 2a and 3 (Figs. 3 and 4). Unfortunately, due to its position

on the western site boundary the alterations to Enclosure A were only partially visible, limiting what can be said about their form or function. They comprised considerable minor recutting of the southern enclosure ditch **749** and the northern enclosure ditch **750**, as well as the potential sub-division of the interior of Enclosure A. There was clear evidence for settlement expanding out of the enclosure to the south and east. As discussed above, the subdivision of Enclosure B, accompanied by a single ring-gully (RG 10), may have been broadly contemporary (Phase 2c). Accompanying these changes was creation to the east of the settlement of a field system consisting of large ditched enclosures and at least one trackway.

8.23 The numerous small recuts of the infilled Phase 3 enclosure ditch **749** recorded at the western edge of the excavation suggested intensive later activity in that area. Unlike the enclosure ditches seen at Thorpe Thewles it is unlikely that there was any significant backfilling of either ditch **749** or **750** in order to facilitate the reworking of the enclosure, indicating that this activity occurred long after they were initially created. With this in mind it is plausible that the site was temporarily abandoned and the ditches allowed to silt up between Phases 3 and 4, although there is no evidence for this. Alternatively, the enclosure ditches were allowed to silt up while the enclosure was occupied during a prolonged period after the last cleaning event. Gullies **558**, **559**, **603** and **611** then, were likely to have been used as minor boundaries related to the unenclosed settlement activity to the south and/or beyond the western edge of the excavated area.

8.24 It appears that the original bounds of Enclosure A were largely maintained for at least part of Phase 4, represented by the ditch **457** which recut enclosure ditch **749** along its southern edge. It is possible that this ditch continued north after segment **780** towards pit **727** which may have actually formed a terminal to the ditch, creating a full, if minor, recut of ditch **749**. The later truncation of this part of the site was relatively severe with a number of east-to-west aligned post-medieval furrows observed throughout. This could explain the gap between these two features; however, no corresponding recut of ditch **750** was observed.

8.25 Within the former Enclosure A, RG 13 had been truncated on its northern side by drainage gully **825** to the north (Fig. 9, section H), suggesting that the roundhouse encircled by RG 13 was a relatively long-lived feature. Drainage gully **825** may have been intended to subdivide the southern part of Enclosure A, perhaps similar to the enclosure formed by linear feature I at West Brunton (Hodgson *et al*. 2012, 84); ditch 25 in enclosure 1 at East Brunton (*ibid*., 55); or enclosures B and C at Blagdon Park 2

(*ibid.*, 32-37), as gully **825** separated the northern and southern halves of Enclosure A. It is possible that this happened at the same time as RG 12 (Phase 3) to the north was removed in place of drainage gully **620** in order to form a corridor with gully **825** leading towards the west, perhaps into the cropmark enclosures seen in this area (Fig. 1). This sort of multiple ladder settlement enclosure with associated trackways was seen in phase 4 at Faverdale (Proctor 2012, 38-71), which was given a 2nd-century date which accords with Romano-British finds encountered in Phase 4 features in the southern part of the East Wideopen excavation. In addition, it would fit comfortably into the dating for the phases at the site provided by the Bayesian analysis (appendix H) which indicated that the final Iron Age/Roman Phase (4) could extend into the 2nd century AD.

8.26 Ditch **822**, which truncated the western observed portion of ditch **750**, appeared to terminate to the south at segment **606**. When considered in conjunction with the potential trackway formed between gullies **620** (which it appeared to respect) and **825**, ditch **822** may have formed part of the Phase 4 field and enclosure system.

8.27 As described above, the Phase 2c modifications within Enclosure B, which were possibly contemporary with the Phase 4 activity, included a sequence of subdivision of the Phase 2a enclosure and the presence of at least one ring gully (RG 10). The line of sub-enclosures within the western side of the former Enclosure B were expanded to the north by another enclosure delineated by ditch **3939**, showing that Enclosure B had ceased to define the perimeter of activity in this part of the site in the same way that Enclosure A no longer delimited occupation within the southern part of the site.

8.28 The area enclosed by ditch **3939** and the associated possible fence line (Fig. 6 detail), together with the Phase 2a enclosure ditch 3933 (or an unrecognised later recut) would have formed a small enclosure which measured approximately 14.4m east to west and 14.2m north to south. It is likely that it was a livestock enclosure, and it is possible that the multiple entrances at its south-western corner, either southwards into the sub-enclosure formed by ditch **3935** or westwards into an open area, may represent a drafting gate system similar to that highlighted at Storey's Bar Road, Peterborough (Pryor 1996, 319). Any potential drafting race in this area of the site was not present, however it is possible that the northern part of ditch **3939** and ditch **3938** created a funnel into a stock race that lead around the fence line and into the drafting system.

8.29 Pit **333** located within RG 19 produced two heavily abraded sherds of hand-built pottery, on the basis of which it was assigned to Phase 4. Seven joining fragments of robust fired clay were also recovered from fill **334**, although there was no indication of what this might object have been.

Field system ditches

8.30 Due to the presence of the bridle path separating the excavation areas, there was no direct relationship between the field systems recorded in the two excavation areas other than that of alignment. Ditches **196**, **346**, **3937**, **3938** and the north-west to south-east aligned part of ditch **195** all ran on a similar alignment, while ditches **197** and **3136** ran at right angles (from north-east to south-west).

8.31 The two possible links between the two excavation areas were ditches **3180** and **3892**. These entered the northern excavation area from the south and quickly intersected enclosure ditch **3932**. It is possible that ditch **3892** represented a continuation of the phase 4 enclosure ditch **822** which truncated the north-western corner of Phase 3 Enclosure A. This would mean that Enclosure A pre-dated Enclosure B (although Enclosure B may have been maintained in some form in Phase 4). This seems unlikely, however, as it would require two significant changes in direction between the two ditches in the space of approximately 11m. In addition, the profile and fill sequence of ditch **3892** did not match that of ditch **822**. Ditch **3180** was even more isolated as there was no corresponding ditch on the south side of the bridle path, although it is possible that it represented a northward continuation of ditch **195**.

8.32 Unlike the settlement pattern at Blagdon Park 1 and 2 (NAA 2008: 22 and Hodgson *et al*. 2012: 17), and Pegswood Moor where the field system appeared to have radiated outwards from the settlement enclosures (Proctor 2009: 67), at East Wideopen the field system ditches appear to have accompanied the later (Phase 4) unenclosed settlement, features from both groups containing hand-built pottery and fragments of Roman ceramic building materials. A spatial (and hence chronological) relationship between the settlement features and the field system is suggested by the short corridor between phase 4 drainage gullies **823** and **824** and the north to south aligned portion of ditch **195**, containing RG 16, RG 17 and RG 22.

8.33 The trackway formed between ditches **195** and **196** measured approximately 15.5m in width with a maximum observed length of 120m, although it probably extended further to the south-east. The trackway probably acted in a similar way to that found at

Pegswood Moor (Proctor 2009, 23), used to direct livestock into either paddock enclosures or sorting pens via sheep races, an interpretation based on the site at Fengate (Pryor 1996). Although no sheep-race type features were observed at East Wideopen Farm, ditch **197** may have functioned as a stock-control device. It is possible that several postholes (**227**, **225**, **223**, **221** and **219**, not illustrated) located between ditches **196** and **199** approximately 1.5m west of the southern end of ditch **197** represented part of a temporary wooden hurdle to aid the separation/sorting of livestock (Pryor 2006, 105), or prevent animals straying into the settlement area. The south-eastern end of the trackway appeared to be leading down the slight slope towards a small stream, a tributary of Seaton Burn. The landscape in this area had, however, been so heavily altered by the post-medieval and modern wagonway that further topographic analysis to support this hypothesis was not practical.

8.34 The distance between ditches **3938** and **346** and between **346** and **195** was broadly similar, suggesting that they were laid out together. Ditch **3937** then approximately halved the space between ditches **3938** and **346** suggesting that it, and indeed north-east to south-west aligned ditch **3136**, were later insertions subdividing the area to provide smaller paddocks similar to those seen at Ingleby Barwick in Cleveland (Heslop 1984, 23). It is possible that another trackway ran between ditch **3932** and ditches **750**/**346** to the south, with the distance between them being approximately 16.4m, which is similar to that seen at Pegswood Moor and Blagdon Park 2 (between enclosures B and C) (Proctor 2009, 67; Hodgson *et al*. 2012, 29).

8.35 Regularly organised Late Iron Age field systems could extend over very large areas as seen elsewhere, for instance on the Swale gravel terraces at Scorton in North Yorkshire and in the vicinity of Pegswood Moor (Proctor 2009, 73; Speed and Evans 2013, fig. 2). The field system ditches from East Wideopen Farm were on a similar alignment to the phase 6 enclosure ditches and the phase 7 possible Iron Age western boundary ditch found during the previous excavation approximately 570m to the south (ASDU 2014, 44-46). If the boundary ditch from that excavation can be considered to be Iron Age and it cuts the enclosure ditch, it is possible that, if it forms part of the wider field system seen at East Wideopen Farm, the enclosures there were also constructed first, and the field system developed around them after they had gone out of use, in a similar sequence.

8.36 Ultimately the visibility of the field system ditches within the excavation was limited and they had no direct stratigraphic relationship with the settlement(s), meaning that a

good understanding of the association between the field system and the settlement is impossible to reach. That being said, the north-western terminal (**3734**) of ditch **3937** respected the position of Enclosure B ditch **3933**, suggesting that the enclosed settlement pre-dated ditch **3937** at least. It is unclear whether this relationship extended to the wider field system.

8.37 The artefactual evidence from the field system ditches was limited, with only small quantities of pottery and ceramic building material recovered. Sherds of hand-built pottery were recovered from ditches **195** (fills **432** and **440**) and **346**. Both hand-built pottery and possibly Roman ceramic building material were found together in ditch **199** (fill **053**). Nevertheless, this small assemblage was sufficient to suggest a link to the Phase 4 unenclosed settlement where similar material was recovered, and where, significantly, hand-built pottery, *tegula* and a fragment of disk quern of probable Roman date were found together.

8.38 The only other finds were a stone 'smoother' that was recovered from ditch **195** (segment **289** deposit **290**) along with a boulder fragment with a hollow pecked into one surface (segment **376** deposit **377**), neither of which are closely dateable (Appendix D). A sample of animal bone selected for radiocarbon dating from one of the field system ditches did not contain enough carbon to return a date (Appendix H, Table H1).

Ring-gullies and structures

8.39 There was little direct evidence for structures found at East Wideopen Farm, although it is likely that, based on the number of ring-gullies, at least 22 roundhouses were present on the site at one time or another.

8.40 While it is reasonable to assume that the ring-gullies encountered outside of, or in one case truncated by, the enclosure ditches were probably part of the unenclosed phases of occupation, as discussed above this does not exclude those ring-gullies located within the enclosure ditches from these earliest and latest phases. The stratigraphic evidence available for the ring-gullies, particularly those within the southern excavation area, cannot always directly link them with specific phases.

Table 1: Ring-gullies at East Wideopen Farm

Ring-gully	Group	Phase	Internal diameter (m)	Entrance
1	3488	1	5.65?	East
2	3606/3608	1-2a	10.3	East
3	3484	2b	8?	East
4	3486/3607	2b	6.5	South-east

5	3485	2b	6.5?	South-east
6	3487	2b	8.8?	East?
7	3913	2b	8.3?	East?
8	3912	2b	6.4?	East?
9	3179	1-2	5.25?	East
10	3609	2c	8.4	East
11	821	1	6.5?	South?
12	820	3	5.8?	South-east?
13	830	4	6.6?	East?
14	819	3	6?	South-east?
15	818	3	6.7?	South-east?
16	815	4	5.3?	East
17	518	4	4.8	South-east
18	817	4	5	Double?
19	814	4	8.6?	East?
20	339	4	8.3?	South-east
21	340	4	3.7	South-east
22	816	4	4.3	East

8.41 The (possibly) unenclosed ring-gullies encountered in the northern area (RGs 1, 2 and 9) do not appear to have been systematically arranged. The prevalence of recut ring-gullies around a roundhouse structure at Blagdon Park 2 (most notably R23, R29, and later R31 and R32) suggests a focus for the pre-enclosure unenclosed settlement (Hodgson *et al*. 2012, 17). At a later date, this can be seen to a lesser extent in Phase 4 at East Wideopen in RGs 19 -21, as well as the earlier phase 2b recuts of RG 8 (RG 6 and RG 7) during the enclosed phase. Hodgson *et al*. *(ibid*. 93) note that the inner enclosure of Blagdon Park 2 occupied the same area as the large concentration of earlier unenclosed ring-gullies which suggests that the enclosure was put in place around the extant roundhouse structures. It is possible that more of the ring-gullies in the northern excavation area at East Wideopen may have pre-dated Phase 2a Enclosure B.

8.42 Eight ring-gullies were attributed to the final unenclosed Phase 4 of the settlement at East Wideopen (RG 13 and RGs 16 - 22**)** (Fig. 4). These ring-gullies appeared to describe a north-to-south linear pattern with RGs 16, 17, 18 and 22 associated with drainage gullies **323** and **324**, with RG 11 to the north-west and RGs 19-21 to the west. As demonstrated above this linear progression was probably a result or intention of the north-to-south corridor formed by ditch **195** and drainage gullies **823** and **824**. Based on the position of the ring-gullies to the west and north-west of this corridor it is highly likely that further activity was located beyond the site boundary. Due to the limited view of these deposits not a great deal can be said.

8.43 Linear drainage gullies **823** and **824** were similar to the phase 3 drainage gullies found in the northern part of Area C at Faverdale (Proctor 2012, 25) where they clearly acted as a drainage system directing water away from the roundhouse structures. However,

although gullies **823** and **824** were small and unlikely to have acted as a barrier, they probably indicate the presence of some sort of boundary (possibly a hedge), as suggested at Pegswood Moor (Proctor 2009, 31) delineating an area of settlement within a corridor bounded to the east by the field system ditch **195** (Figs. 2 and 4). It is significant that the width of this corridor (15.6m) is almost exactly the same as that of the trackway to the south between ditches **195** and **196** (15.5m). It is possible, therefore, that this trackway initially continued northwards before being occupied by structures.

8.44 The Iron Age occupation of the Shotton North-east site displayed a similar layout with ring a cluster of ring-gullies located on the edge a possible field system with an associated livestock control system in the form of a smaller enclosure with a funnelled entrance (Hodgson *et al*. 2012, 100). At Front Street, Dinnington (WAA 2016), a cluster of four ring-gullies was associated with an east-to-west drainage gully, with a much smaller isolated penannular gully to the north that may have been utilised as a craft space rather than a dwelling (*ibid*., 27). At Pegswood Moor, the later phase of the Later Iron Age settlement consisted of a cluster of ring-gullies mainly in a linear arrangement alongside a gully or small ditch (Proctor 2009, 30-1).

Table 2: Measurements of ring-gullies by phase

Phase 1	Internal diameter (m)	Phase 2a/2b/3	Internal diameter (m)	Phase 2c/4	Internal diameter (m)
RG 1	5.65	RG 3	8	RG 10	8.4
RG 2	10.3	RG 4	6.5	RG 13	6.6
RG 9	5.25	RG 5	6.5	RG 16	5.3
RG 11	6.5	RG 6	8.8	RG 17	4.8
		RG 7	8.3	RG 18	5
		RG 8	6.4	RG 19	8.6
		RG 12	5.8	RG 20	8.3
		RG 14	6	RG 21	3.7
		RG 15	6.7	RG 22	4.3
Mean	6.924		7		6.111
Median	N/A		6.5		5.3
Mode	N/A		6.5		N/A
Min	5.65		5.8		3.7
Max	10.3		8.8		8.6

8.45 The mean internal diameter of the ring-gullies at East Wideopen was fairly consistent for Phases 1, 2a, 2b and 3 (6.924m and 7.0m) but reduced somewhat during Phases 2c and 4 to 6.111m (Table 2). The examples from Phases 2a/2b/3 were considerably more uniform than those from the earlier and later groups, although there was still a fairly large disparity between the minimum and maximum measurements. There are obvious problems with the available data. Firstly, phasing of a number of the structures is uncertain, and in addition there is a presumption that Phase 2c in the northern

excavation area equated to Phase 4 in the southern area. In addition, because of the state of preservation and truncation a total of 14 of the ring-gullies had an assumed or projected internal diameter rather than a direct measurement, meaning that approximately 64% of the dataset is imprecise.

8.46 Some comparisons can be made with other sites within the region such as that of Blagdon Park 2; West Brunton (Hodgson *et al.* 2012, 40-43; 85-88) and Stanwick (Haselgrove 2016, 406). However, there does not appear to be any pattern in the internal diameter between these sites. The structures at East Wideopen were considerably smaller than those recorded at Pegswood Moor (Proctor 2009, 75) and East Brunton (Hodgson *et al.* 2012, 62-66), with only RG 2 at East Wideopen approaching a comparable measurement (10.3m). At Cramlington the nine ring-gullies ranged in size from 5.3m to 12m in diameter, with an average of 8.2m, also rather larger than at East Wideopen (NAA 2019). Again, as with the comparable sites, there does not appear to have been any obvious pattern to the structures at East Brunton, however the majority of the phase 3 unenclosed settlement structures at Pegswood Moor did conform to an approximate 10m diameter. This would conform to a possible structural tradition apparent in the region at this time, as has been suggested by Harding (2004, 32). Nevertheless, allowing that Sherlock (2012, table 4.2) used the external diameter of ring-gullies rather than the internal measurement used here, the range of sizes of structures at East Wideopen conforms well to the size range recorded in his survey of structures in the Tees Valley, where ring-gullies ranged from 5-16m in (internal) diameter, but most were in the 7-10m range.

8.47 The evidence for structural elements at East Wideopen Farm was scant, but not absent. Most of the ring-gullies did not appear structural in nature, indicating that they probably represent drip/drainage gullies. Only RG 1, RG 2, RG 13, RG 15 and RG 19 could conceivably have been structural throughout, although none of them looked particularly like wall-slots which are normally narrow and vertical-sided. Of these five, only RG 2, RG 13, RG 15 and RG 19 were obviously not only drainage gullies, and only two (RG 15 and RG 19) contained evidence of other structural elements, for example postholes (**420** in RG 19 and **579** in RG 15), However, posthole **579** was actually truncated by the terminal of the earlier RG 15 gully, which was then recut by the later apparently structural gully. Again, as with the measurements of the structures, no clear pattern could be determined with the structural elements of the ring-gullies, and there were no clear structural rings like those encountered at Cramlington (NAA 2019).

8.48 This does not preclude structural elements associated with other ring-gullies. RG 4 contained postholes **3534** and **3536**, and similar postholes can be seen in RG 15, RG 17 and RG 19. RG 13 had what may have been structural elements in feature **509**, and other similar postholes could be seen at RG 10, RG 17 and RG 21, which may have represented porch structures.

8.49 Possible porch structures associated with four ring-gullies were observed at the site (RG 9, RG 10 and RG 17, and posthole group **3528** associated with either RG 4 or RG 5). Other potential porch structures were noted (see above) but not enough evidence could be collated to consider them credible.

8.50 Posthole group **3528** (postholes **3475**, **3467**, **3479** and **3462**) may have represented a porch structure related to either ring-gully RG 4 or RG 5. However, as noted above, in combination with the adjacent pit **3491** their arrangement was similar to that found associated with structure 65 at Gatherley Villas near Brompton-on-Swale in North Yorkshire, where the corresponding pit was excavated in the centre of the entrance across the ring-gully and the line of ran through the doorway (Fell, forthcoming). If this comparison is correct, then the features at East Wideopen are more likely to have been associated with RG 4. However, at neither site can a function for these features be proposed.

8.51 The possible porch structure observed with RG 10 was represented by three large postholes (**3757**, **3772**, **3782**), each of which had vertical sides and a flat base, and which had an average width of 0.68m. Posthole **3772** also contained evidence for a post-pipe and stone packing (Fig. 9, section D). The absence of a fourth corresponding posthole could be explained by severe post-medieval truncation in this area. There are other interpretations for these features. It is possible that they may actually be the central four-post structure of another ring-gully with linear gullies **3775** and **3794**, and postholes **3862** and **3812** being part of structural ring. Alternatively, they may represent three corners of a four-post structure (usually interpreted as a raised granary) from an earlier phase of use of the site.

8.52 The form of the extended porch structures possibly accompanying RG 4 and RG 10 can be seen elsewhere in Britain (Webley 2007) and is characterised by the Little Woodbury model (Harding 2004, 167). As discussed above, it seems to have been rare in this region with possible parallels seen at West Brandon, Burradon (Jobey 1962, 15 and 1970, 69), and possibly House 1 at Thorpe Thewles (Heslop 1987, 15). Locally, there

do not appear to be any other instances of this extended porch structure. It is important to note that the understanding/interpretation of the structure associated with RG 5 is tentative; however, this could indicate that this style of structure was brought to the site at East Wideopen Farm from elsewhere within Britain.

8.53 The comparatively large size and depth of RG 10, coupled with the surviving internal features, and possible entrance-structure postholes, may suggest that the roundhouse contained within RG 10 was intended to be a more permanent structure than others on the site and its predecessors within Enclosure B, and this accords with the respect paid to it by the successive arrangements of gullies dividing the enclosure.

8.54 Another potentially significant ring-gully was RG 18**,** which could have had either a south-west-facing entrance, or possibly opposed double entrances. Although this construction technique is unusual, another example is seen in the form of structures 1 and 7 at Pegswood Moor. It was suggested that the roundhouses there probably did not have a second, west-facing entrance and rather had an opening in the form of a window in that part of the structure to take advantage of seasonal light. This was because although there was a gap in the structural ring to allow for a small opening, there was no corresponding gap in the surrounding drainage gully of either structure.

8.55 It is unlikely, however, that RG 18 was a structural ring and is far more likely to represent a segmented drainage gully. If it is accepted that gully **809/806** to the north represented the northern arc of the same structure, then the gaps facing both north-east and south-west could certainly suggest a structure with more than one entrance.

8.56 With this in mind it is important to consider the space within the structure. The internal diameter of the ring-gully was only 5m, this would not allow for a spacious roof canopy. A similar sized structure at Front Street, Dinnington, also had evidence that it might have had two entrances, and it was suggested that it had a function other than that of a roundhouse, perhaps representing a storage structure (WAA 2016, 27), or for a craft activity such as spinning of weaving as suggested for structure 4 at Pegswood Moor (Proctor 2009, 15-6). At that site, it was also suggested that an associated internal pit had been used for votive purposes, based on the repeated periodic deposition of ashy and charcoal filled deposits. Roundhouse 1 at Cramlington, which was 6m in diameter and probably also had opposed north-east- and south-west- facing entrances, was interpreted as a smithy and contained large amounts of ironworking waste in its ring-gully (NAA 2019). No evidence for any internal features were observed with RG 18 at

East Wideopen; however, the space being utilised as storage or for a craft activity could explain the ring-gully having two entrances and its small size.

8.57 Unfortunately, very little dating evidence was recovered from any of the ring-gullies across the site, and in the case of dateable finds was exclusively associated with structures of Phases 2c and 4 which, as noted above, could have been contemporary. A large assemblage of sherds, possibly from a single vessel were recovered from Phase 4 RG 21, along with pieces of fired clay (deposit **798**) which could not be further identified. The bowl form of the vessel could suggest a Romano-British, date (Appendix B). RG 21 produced many other sherds of hand-built pottery and the base of an unidentifiable vessel. Smaller assemblages of hand-built pottery were recovered from RG 17 and RG 19 (both Phase 4). Significantly, RG 17 also produced fragments of a probable Roman brick (*opus spicatum*, Appendix C) while undiagnostic fragments of ceramic building material were recovered from RG 22 (Phase 5).

8.58 In the northern excavation area, only five sherds of hand-built pottery were recovered, from RG 10 and an immediately adjacent gully. Two fingernail-impressed rims were recovered from RG 10 segment **3796**, together with a flat-topped rim sherd. The dating of this material spanned much of the pre-Roman Iron Age and the Romano-British period (Appendix B). Typological dating alone, however, is insufficient to ascertain the date of the ring-gully and the radiocarbon date from barley grains found in the northern terminal, 40calBC-calAD82 (deposit **3793**, SUERC 84742, Appendix H) places the final silting of the ring-gully sometime between the latter half of 1st century BC and the Roman invasion. The large quantity of charred grains found in this context makes it unlikely that they could have been residual.

Other features

8.59 Pit **3333**, located in the northern part of the site, possibly represented a rare excavated example from northern England of a clay-lined pit use for storage of various materials (often grain). This interpretation was supported by its relatively large size.

8.60 Pit **3491** (Fig. 9, section C), located between the terminals of Phase 2b RG 4 (Fig. 7), has been discussed above (in conjunction with posthole group **3528**) in relation to a possible porch structure. However, it was also of interest for the charred-plant remains that had been dumped into its upper fill (**3507**). The assemblage included 243 spelt grains and various arable weeds (Appendix G) which suggested cultivation of acidic and boggy areas. The spelt grains reflected the discard of cereals that probably

accidentally charred during drying, indicating processing on the site. This processing was supported by the presence of chaff from both barley and wheat found alongside arable weed seeds within RG 10.

Dating

8.61 Although using only three radiocarbon determinations, Bayesian modelling of the dates has suggested broad date ranges for the settlement. The posterior density estimates for the start of activity at East Wideopen was *1060-175 cal BC* (*95.4% probability*) or *500-190 cal BC* (*68.2% probability*), or likely within the Early or Middle Iron Age (Appendix H). The modelled estimate for the end of activity was potentially within the Late Iron Age or Roman period, at *cal AD 1-890* (*95.4% probability*), or *cal AD20-280* (*68.2% probability*).

8.62 The initial unenclosed settlement of the site (Phase 1) is therefore likely to have started in the Early to Middle Iron Age, probably no earlier than approximately 500 cal. BC. This largely fits the regional pattern (Hodgson *et al.* 2012, 188), but more accurate dating is particularly difficult as the population may have been largely aceramic (Harding 2004, 24) and no pottery was found from the early phases at East Wideopen. The only date available from the earlier phases was from RG 2, dated 360-176 cal. BC, suggesting final silting of this gully between the 4th and 2nd centuries BC. Unfortunately, it was not possible to determine whether RG 2 predated Enclosure B, and the date spans the period when many such enclosures were created regionally.

8.63 Spelt grains from fill **3507** of pit **3491** produced a date of cal. 40BC-AD83 (Appendix H, SUERC-84739). This is almost exactly the same as that given by the barley seed sample from deposit **3793** (SUERC-84742) from RG 10 terminal **3792**. While this suggests that the two features were broadly contemporary, this goes against the apparent spatial relationship between pit **3491** and RG 4, which was assigned to Phase 2b and certainly somewhat earlier than RG 10. However, deposit **3793** represented natural silting of the ring gully and hence the barley grains could have been residual and derived from an earlier deposit. Nevertheless, the Bayesian modelling of the dates for phase 1b do suggest that much of the Phase 2b and 2c settlement activity in the northern excavation area occurred between the 1st century BC and 2nd century AD (Figure H1).

8.64 Unfortunately, no radiocarbon dates could be obtained for Phase 4 features in the southern excavation area, or from the field system, meaning that only the overall trends within the model presented in Appendix H can be used to suggest when the site was

finally abandoned, although based on only three dates all from the northern area. This therefore appears to have occurred no later than cal. AD280, and probably earlier. This dating fits with the presence of some, but very little, Roman material in Phase 4 contexts, and accords with the suggestion by Hodgson *et al*. (2012, 215) that fewer sites in the region were occupied after AD200 and, where they were, there are no Roman or otherwise dateable finds. The absence of any Roman finds at all associated with Enclosure B suggests occupation there ceased earlier than around Enclosure A, and probably earlier than the previously excavated settlement at East Wideopen to the south of the current site, which was abandoned no later than AD115 (ASDU 2014, 50).

8.65 Looking further afield, the suggestion that the site at Thorpe Thewles went from unenclosed to enclosed and back again by the mid-2nd century AD (Heslop 1987, 111) fits well with the presence of Romano-British finds within the Phase 4 enclosure ditches and some ring-gullies (RG 21 for example) at East Wideopen. Ultimately, dating here cannot be more closely resolved without further radiocarbon dating which would be severely hampered by lack of suitable sample material. No usable charred-plant remains or charcoal were identified from the southern excavation area, hence the need to submit poor-quality samples of animal bone for radiocarbon dating which failed. The northern excavation also has limited potential for any future additional dating, with only a limited number of 'secure' suitable radiocarbon candidates.

8.66 The finds assemblage contributed little to the absolute dating of the site. However, the spatial and stratigraphic distribution of different categories of material, particularly the hand-built pottery in combination with the Roman ceramic building material and quernstone, did contribute significantly to re-phasing the site to include a final unenclosed phase (Phase 4) when all of this material was deposited.

8.67 Almost all of the hand-built pottery came from roundhouses to the south of Enclosure A including RG 21 and RG 19 (which cuts the infilled enclosure ditch). Pottery attributed to context 465 in cut 457 (the latest recut of the southern side of the enclosure ditch) may in reality have derived from RG 19 which probably continued over the ditch unseen. Pottery was also found in RG 17 to the east of Enclosure A, and from widespread locations in the field system. Roman ceramic building material came from gullies or ring-gullies assigned to Phase 4, such as gully 825 (by association supplying a similar date to RG 13), and also from the field system. Since the western side of RG 22, which contained *tegula*, had been recut as part of linear gully **824**, this served to demonstrate that this whole group of features to the east of Enclosure A was late in date

and formed part of Phase 4. At other sites, both in northern England and France, fragments of Roman roofing tile have been found in Late Iron Age contexts pre-dating Roman occupation (Haselgrove 2016, 409).

Economy

8.68 The settlement(s) were on a very slight plateau in the landscape, similar to the site of that at Cramlington (NAA 2019) with downward slopes to the south and east. This was probably the best-drained location, with Seaton Burn to the north and a tributary stream nearby to the east. As discussed below, analysis of the plant remains recovered from the site suggested that some of the land in the area was acidic and/or boggy in nature.

8.69 The animal bone recovered from the site describes a cattle-dominated livestock, with some evidence for sheep and/or goat husbandry as well. The absence of evidence for butchery is unusual if the livestock was being reared for its meat and/or hide, which seems likely; however, this absence could be due to the small size of the assemblage. Certainly, the majority of the enclosures appear to have been used for livestock rather than arable practice.

8.70 Analysis of the archaeobotanical assemblage from East Wideopen Farm as a whole, matches the conclusion reached for the previous excavation at East Wideopen (ASDU 2014, 36), that the region was widely cultivated. The analyses also suggested that at least part of surrounding landscape was a boggy wetland with acidic soils (Appendix G). This could fit with the hypothesis presented by Harding that spelt was used in the area because it is more hardy and can produce viable yields in less favourable soil (2004, 42). The charred nature of the large assemblage of spelt grains present in pit **3491** suggested that the grain had been brought to the site unprocessed and dried there. Unfortunately, there was no evidence for the function of feature **3333**, which may have been a large storage pit. If it was used for grain storage then the crop had been carefully sorted after drying, with no charred material surviving. The resulting picture therefore is a mixed agrarian economy with livestock rearing, the majority being cattle, and the surrounding landscape also seeing cereal cultivation. It is possible that this was the result of larger economies to the south or possibly on the continent facilitating an agricultural expansion in the region (Hodgson *et al*. 2012, 219). In addition, smaller-scale farming was suggested by the presence of emmer collected from pit **3400** (Appendix G).

8.71 Small quantities of coal fragments within the environmental samples recovered from across the site could suggest the use of coal as a domestic fuel source (Appendix G) similar to the previously excavated site at East Wideopen (ASDU 2014, 35). The majority of the small amount of material described as 'industrial waste' (mostly coal-derived fuel ash, Appendix E) recovered from the site came from the ring-gullies within the northern excavation area, notably RG 4, RG 7 and RG 8, and smaller amounts from RGs 1, 2, 6, 9 and 10.

8.72 The large fragment of slag recovered from pit **477** suggested that iron working was taking place nearby, although possibly at some distance from the settlement to avoid the risk of fire, as was the case at Cramlington (NAA 2019). Having no practical function, it is unlikely that such a large piece would have been transported far from its point of production. Given the location of pit **477** at the western edge of the excavation, the focus of any metal-working activity may therefore lie in that direction beyond the investigated area.

East Wideopen in the wider region

8.73 When considered in conjunction with the presence of sites such as East and West Brunton, Hazelrigg, Brenkley, Blagdon Park 1 and 2, and Shotton Village, a rough northward linear progression from the Newcastle upon Tyne area could be considered to indicate the presence of an Iron Age routeway, although other sites to the east such as Burradon, Cramlington and West Shiremoor serve to blur this pattern. The potential presence of prehistoric roads in Britain has been suggested previously (Bishop 2014) and they were often subsequently incorporated into the Roman road network, although no Roman roads have been identified on the Northumberland coastal plain to the north of Newcastle (Margary 1973, fig. 16). These sites roughly follow the corridor containing the former Great North Road (now the A1), through Morpeth towards Pegswood Moor, therefore the perceived pattern is likely to represent development-lead archaeological work rather than the archaeological record itself.

9.0 CONCLUSIONS

9.1 The results of the excavations described here – together with those from the earlier excavations at East Wideopen (ASDU 2014), settlement identified through geophysical survey at Gardener's House (Biggins *et al*. 1997, 46) and the Iron Age/Romano-British settlement investigated at Dinnington (WAA 2016, 26), as well as East and West Brunton, Hazelrigg, Blagdon Park 1 and 2, Fox Covert, Shotton (Hodgson *et al*. 2012)

and the recently excavated Iron Age site at Cramlington (NAA 2019), – represent an area of intensive occupation throughout the Iron Age and early Romano-British period. The prehistoric remains from the current excavation are of regional importance because as they add to the corpus of knowledge about activity within the area and aid the understanding of a large expanse of the Iron Age landscape.

9.2 The state of preservation and the position of the site boundary in relation to the enclosures limited to some extent the understanding of the site, especially of Enclosure A. In addition, the relationship between Enclosures A and B is unclear due to the presence of the bridle path preserved between the two excavation areas. Three broad periods of Iron Age and Roman-period activity were recognised at East Wideopen Farm, subdivided in this report into four phases and several sub-phases. The earliest was an unenclosed settlement probably consisting of several roundhouses (Phase 1) uncertainly scattered across both excavation areas. The second period of activity was represented by construction of rectilinear enclosures bounded by large ditches. The relationship between Enclosure A located in the southern area (designated Phase 3) and Enclosure B in the northern area (designated Phase 2) could not be determined, and the two enclosures may have been occupied sequentially or concurrently. In Enclosure B in particular, a sequence of intercutting ring-ditches indicated prolonged occupation (Phases 2a and 2b).

9.3 A third period of occupation occurred after the large enclosure ditches had become infilled and lost their original function and therefore represented a return to unenclosed settlement. Occupation was typified by the use of smaller ditched enclosures, both within and to the north of Enclosure B (Phase 2c) and possibly subdividing the former Enclosure A (Phase 4). A field system was laid out to the east of Enclosure A but embracing the area of the former Enclosure B. Artefacts become more common, with hand-built pottery, Roman ceramic building materials and a Roman quernstone found in a number of features including ring-gullies, field-system ditches and the top of the infilled ditches of the former Enclosure A.

9.4 The overall economy of the settlement(s) at East Wideopen Farm appeared to be agricultural. The possible agricultural intensification in the centuries leading up to Roman occupation (Harding 2004, 42) was evidenced at East Wideopen Farm by the exploitation of a wide range of environments including marshy areas. The presence of a large spelt grain assemblage recovered from pit **3491** conforms with the suggestion of an acidic local soil, and Harding proposes that spelt became the dominant crop in the

region in the later first millennium BC due to its resistance to disease and hardiness in adverse soil conditions, which may have been economically/socially driven by the presence of the Roman market demands (*ibid*., 43). Towards the end of the occupation, a system of large field enclosures and possible livestock control systems were laid out, including subdivision of the former Enclosure B into smaller enclosure, possibly paddocks.

9.5 It is worth considering the possible presence of a potential later Romano-British ladder system enclosure, similar to that found at Faverdale, in the form of cropmarks to the west of East Wideopen Farm. The work conducted by Hodgson *et al*. (2012) examining the Northumberland coastal plain has shown that a wide area north of the River Tyne was extensively occupied throughout the Iron Age. The site at East Wideopen Farm not only conforms to the settlement patterns established therein (Hodgson *et al*. 2012, 186-189), but greatly expands the Iron Age archaeological record in this area. It is notable that the area around the site, from East Brunton to the northernmost cropmark enclosures on figure 1 is no more 3km and contains four excavated sites and eight cropmarks. Although development-led archaeology can distort the (pre)historic landscape, the concentration of settlements is such that this area should be considered a hive of activity throughout the Iron Age. Based on the nearby settlements at Burradon to the east and Brenkley, Shotton and Cramlington to the north, it is highly probable that further excavation in the locale would uncover more extensive settlement in the same trends describing a wide pattern of occupation between the rivers Tyne and Wansbeck and mostly likely further afield.

Publication

9.6 The results of the excavations are of sufficient significance to warrant their publication in a suitable regional journal, such as *Archaeologia Aeliana*. The publication would consist of a short, summary account of the archaeological remains, the finds and the environmental data, set within their local, regional and national context.

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APPENDIX A

CONTEXT CATALOGUE

Phase key: U = Unphased 5 = Post-medieval

Context	Group No.	Phase	Interpretative description	Relationships	Notes	Finds and sample information
EWO 15						
001		U	Topsoil			
002		U	Subsoil	underlies 001		
003		U	Natural	underlies 002		
004		U	Cut of NW/SE ditch/gully			
005		U	Fill of [004]			1 x piece of Roman pottery
006		U	Cut of NW/SE ditch/gully		same as [004]	
007		U	Fill of [006]			
008		U/5	Cut of E/W ditch			
009		U/5	Fill of [008]			
010		5	Cut of E/W furrow			
011		5	Fill of [010]			
012		U/5	Cut of E/W ditch			
013		U/5	Fill of [012]			
014		5	Cut of E/W furrow			
015		5	Fill of [014]			
016		5	Cut of E/W ditch			
017		5	Fill of [016]			
018	198	U	Cut of NE/SW ditch		same ditch as [026]	
019	198	U	Fill of [018]		same ditch as [026]	
020		U/5	Poss terminal of shallow ditch/furrow			
021		U/5	Fill of [020]			
022		U/5	Cut of shallow ditch/furrow			
023		U/5	Fill of [022]			
024		U/5	Cut of E/W ditch			
025		U/5	Fill of [024]			
026	198	U	Ditch terminal		same ditch as [018]	
027	198	U	Fill of [026]		same ditch as [018]	
028		U/5	Cut of shallow posthole			
029		U/5	Fill of [028]			
030	198	U	Ditch segment		same ditch as [018], [026]	
031	198	U	Fill of [030]		same ditch as [018], [026]	
032	198	U	Ditch segment		same ditch as [018], [026]	
033	198	U	Fill of [032]		same ditch as [018], [026]	
034		U/5	Cut of shallow posthole			
035		U/5	Fill of [034]			
036	195	4	Ditch segment			
037	195	4	Primary fill of [036]			

038	195	4	Secondary fill of [036]			
039	198	U	Ditch segment			
040	198	U	Fill of [039]			
041		U/5	Cut of poss posthole			
042		U/5	Fill of [041]			
043	67	5	Clinker/compressed coal dust layer			6 pieces of slag
044		U/5	Cut of E/W ditch			
045		U/5	Fill of [044]			
046	VOID	VOID	VOID	VOID	VOID	VOID
047	199	4	Ditch segment			
048	199	4	Fill of [047]			
049	199	4	Ditch segment			
050	199	4	Fill of [049]			
051	67	5	Rubble in building			4 pieces of glass, 1 piece of animal bone, 4 pieces of post med pot, 2xpos roman pot, 1xcu alloy button, blacking bottle
052	199	4	Ditch segment			
053	199	4	Fill of [052]			sample 053aa,2 pieces of IA? pot recovered
054	67	5	Upper sandy deposit in floor			
055	VOID	VOID	VOID	VOID	VOID	VOID
056	195	4	Ditch segment			
057	195	4	Secondary fill of [056]			
058	195	4	Primary fill of [056]			
059	196	4	Ditch segment			
060	196	4	Fill of [059]			
061	199	4	Ditch segment			
062	199	4	Fill of [061]			
063	195	4	Ditch segment			
064	195	4	Fill of [063]			
065	195	4	Ditch segment			
066	195	4	Fill of [065]			
067		5	Building group number			
068	196	4	Ditch segment			
069	196	4	Fill of [068]			
070	67	5	Lower fill of corridor [055]		Group 067	
071	195	4	Ditch segment		Possible field boundary	
072	195	4	Fill of [071]			sample 072aa
073	67	5	Machine Base		Group 067	
074	67	5	Exterior wall sandstone			
075	VOID	VOID	VOID	VOID	VOID	VOID
076	67	5	Brick chimney walls		Group 067	Brick sample 076
077	67	5	Interior sandstone rubble against 078		Group 067	

078	67	5	Northern corridor wall		Group 067	Brick sample 078
079	67	5	Southern corridor wall		Group 067	Brick sample 079
080	67	5	SW brick base		Group 067	Brick sample 080
081	67	5	SE brick base		Group 067	Brick sample 081
082	67	5	NW brick base		Group 067	Brick sample 082
083	67	5	NE brick base		Group 067	Brick sample 083
084	67	5	Curving wall boiler butting (082) (083)		Group 067	
085	67	5	Rubble core between (073) (084)		Group 067	
086	67	5	Support block eastern side of (074)		Group 067	
087	67	5	Clay base (probably same as natural)		Group 067, same as 003	
088	67	5	Construction cut or drain		Group 067	
089	67	5	Fill of [088]		Group 067	
090	67	5	Rubble infill in between chimney and western exterior wall		Group 067	
091	67	5	Large blocks in south wall		Similar to (086), Group 067	
092	67	5	Rubble butting (083) (085)		Group 067	
093	196	4	Ditch segment			
094	196	4	Fill of [093]			sample 094aa
095	196	4	Ditch segment			
096	196	4	Fill of [095]			
097	196	4	Ditch segment		Group 196	
098	196	4	Fill of [097]			sample 098aa
099	196	4	Ditch segment		Group 196	
100	196	4	Fill of [099]			
101		4	Cut of posthole			
102		4	Fill of [101]			
103	199	4	Ditch segment		Group 196	
104	199	4	Fill of [103]			sample 104aa
105		4	Fill of [101]			sample 105aa
106	197	4	Ditch segment		Same as [110] [114]	
107	197	4	Fill of [106]			
108	199	4	Ditch segment			
109	199	4	Fill of [108]			
110	197	4	Ditch segment		Same as [106] [114]	
111	197	4	Fill of [110]			
112	196	4	Ditch segment			
113	196	4	Fill of [112]			
114	197	4	Ditch segment		Same as [106] [110]	
115	197	4	Fill of [114]			
116	199	4	Ditch segment			
117	199	4	Fill of [116]			
118	67	5	Layer in chimney		Group 067	

119	67	5	Brick layer		False bottom, Group 067	Brick sample 119
120	67	5	Heat altered and rubble layer		Group 067	
121	67	5	Sand layer in chimney		Group 067	
122	67	5	Mortar below (121)		Group 067	
123	199	4	Ditch segment		Group 196	
124	199	4	Fill of [123]			
125	199	4	Ditch segment			
126	199	4	Fill of [125]			
127	196	4	Ditch segment			
128	196	4	Fill of [127]			sample 128aa
129	199	4	Cut of ditch		Same as [103]	
130	199	4	Fill of [129]			sample 130aa
131	200	5	Cut of shallow E/W ditch			
132	200	5	Fill of [131]			
133		5	Cut of N/S ditch/gully			
134		5	Fill of [133]			
135		5	Cut of E/W furrow		Cut by [088]	
136		5	Fill of [135]			
137		4	Cut of V-shaped linear ditch			
138		4	Secondary fill [137]			sample 138aa
139		4	Primary fill [137]			sample 139aa
140		4	Cut of V-shaped linear ditch			
141		4	Secondary fill [140]			
142		4	Primary fill [140]			sample 142aa
143		4	Cut of posthole in [140]			
144		4	Post deposit, fill of [143]			
145		4	Post deposit fill of [147]			
146	67	5	East wall of chimney		Group 067	Brick sample 146
147		4	Cut of posthole in [140]			
148	196	4	Ditch segment			
149	196	4	Fill of [148]			
150	195	4	Ditch segment			
151	195	4	Fill of [150]			
152	195	4	Cut of E/W linear			
153	195	4	Fill of [152]			
154	195	4	Ditch terminal			
155	195	4	Fill of [154]			
156	67	5	Redish-purple sand round wall 084		Group 067	
157	67	5	Sandy firm deposit beneath wall 084		Group 067	
158	195	4	Ditch segment		Same as [150]	
159	195	4	Fill of [158]			
160	195	4	Ditch segment			
161	195	4	Fill of [160]			
162	196	4	Ditch segment		Group 196	
163	196	4	Fill of [162]			
164	195	4	Ditch segment		Same as [056]	
165	195	4	Fill of [164]			sample 165aa

166	196	4	Ditch segment			
167	196	4	Fill of 166			
168	196	4	Ditch segment			
169	196	4	Fill of 168			
170		4	Cut of pit			
171		4	Full of [170]			
172	199	4	Ditch segment			
173	199	4	Fill of [172]			
174		4	Cut of pit			
175		4	Fill of [174]			
176	195	4	Ditch segment			
177	195	4	Primary fill [176]			sample 177aa
178	195	4	Secondary fill [176]			
179	195	4	Ditch segment			
180	195	4	Fill of [179]			sample 180aa
181	200	5	Ditch segment			
182	200	5	Fill of [181]			
183	200	5	Ditch terminal		same as [181]	
184	200	5	Fill of [183]			sample 184aa
185	199	4	Ditch segment			
186	199	4	Fill of [185]			
187	199	4	Ditch segment			
188	199	4	Fill of [187]			sample 188aa
189	195	4	Ditch segment			
190	195	4	Fill of [189]			
191	196	4	Ditch segment		Group 196	
192	196	4	Fill of [191]			
193	195	4	Ditch segment			
194	195	4	Fill of [193]			
195	*	4	Group Number for Ditch			
196	*	4	Group Number for Ditch			
197	*	4	Group Number Short Connecting Ditch			
198	*	U	Group Number for Ditch			
199	*	4	Group Number for Ditch			
200	*	5	Group Number for Ditch			
201	196	4	Ditch segment			
202	196	4	Fill of [201]			sample 202aa
203		4	Cut of possible pit			
204		4	Fill of [203]			
205	195	4	Ditch segment			
206	195	4	Fill of [205]			
207	195	4	Ditch segment			
208	195	4	Fill of [207]			sample 208aa
209		U	Cut of small pit			
210		U	Fill of [209]			
211	196	4	Ditch segment		Group 196	
212	196	4	Fill of [211]			sample 212aa
213	197	4	Ditch segment			
214	197	4	Fill of [213]			sample 214aa
215	196	4	Ditch segment		Group 196	
216	196	4	Fill of [215]			
217	197	4	Ditch segment			
218	197	4	Fill of [218]			
219		?4	Posthole			
220		?4	Fill of [219]			
221		?4	Posthole			

222		?4	Fill of [221]			
223	196	4	Ditch segment			
224	196	4	Fill of [223]			
225		?4	Posthole			
226		?4	Fill of [225]			
227		?4	Posthole			
228		?4	Fill of [227]			
229	196	4	Ditch segment			
230	196	4	Fill of [229]			sample 230aa
231	198	U	Ditch segment		Same ditch as [018],[026], [030],[032]	
232	198	U	Fill of [231]		Same ditch as [018],[026], [030],[032]	
233	196	4	Ditch segment		Group 196	
234	196	4	Fill of [233]			
235	196	4	Ditch segment		Group 196	
236	196	4	Fill of [235]			
237	198	U	Ditch segment		Same ditch as [018], [026], [030], [032], [231]	
238	198	U	Fill of [237]		Same ditch as [018], [026], [030], [032], [231]	
239	197	4	Ditch segment			
240	197	4	Secondary fill {239]			
241	197	4	Primary fill [239]			
242	195	4	Ditch segment			
243	195	4	Secondary fill [242]			
244	195	4	Primary fill [242]			
245	195	4	Lens of possible natural in [242]			
246	VOID	VOID	VOID	VOID	VOID	VOID
247	VOID	VOID	VOID	VOID	VOID	sample 247aa?
248	195	4	Ditch segment		Group 195	
249	195	4	Fill of [248]			
250	195	4	Ditch segment		Group 195	
251	195	4	Fill of [250]			
252	199	4	Ditch segment			
253	199	4	Fill of [252]			sample 253aa
254	199	4	Ditch segment			
255	199	4	Fill of [254]			
256	195	4	Ditch segment		Group 195	
257	195	4	Fill of [256]			sample 257aa
258	195	4	Fill of [256]			sample 258aa
259	195	4	Ditch segment			
260		1/3	Cut of pit		Truncated by [259]	
261	195	4	Ditch segment		Group 195	
262	195	4	Secondary fill [261]			
263	195	4	Primary fill [261]			
264	195	4	Ditch segment		Group 195	
265	195	4	Fill of [264]			
266	195	4	Ditch segment			
267	195	4	Fill of [266]			
268	195	4	Ditch segment			
269	195	4	Fill of [268]			
270	195	4	Ditch segment			
271	195	4	Primary fill [270]			
272	195	4	Ditch segment			

273	195	4	Secondary fill [272]			
274	195	4	Primary fill [272]			
275	195	4	Slumping in [270], secondary fill			
276	195	4	Tertiary fill [270]			
277	195	4	Quaternary fill [270]			
278	195	4	Quinerary fill [270]			
279		4	Cut of pit		Truncating [259]	
280	195	4	Ditch segment		Group 195	
281		1/3	Fill of [260]			
282		1/3	Fill of [260]			sample 282aa
283		4	Fill of [279]			sample 283aa
284		4	Fill of [279]			
285	195	4	Secondary fill [280]			
286	195	4	Primary fill [280]			
287		4	Fill of [147]			
288	195	4	Ditch segment		Group 195	
289	195	4	Ditch segment		Group 195	
290	195	4	Fill of [289]			1 stone
291	195	4	Ditch segment		Group 195	
292	195	4	Fill of [291]			
293	195	4	Fill of [288]			
294	195	4	Fill of [288]			sample 294aa, 2 sherds of possible abraded samian ware
295	195	4	Ditch segment			
296	195	4	Fill of [295]			
297	195	4	Fill of [295]			
298	195	4	Cut of dark linear feature in top of [289]			
299	195	4	Fill of [298]			
300	195	4	Ditch segment			
301	195	4	Fill of [300]			
302	195	4	Fill of [056]		Re-excavated	
303	195	4	Fill of [056]		Re-excavated	
304	308	4	Fill of [307]			
305	195	4	Fill of [056]		Re-excavated	
306	195	4	Fill of [056]		Re-excavated	
307	308	4	Cut of N/S ditch		Group 308	
308	*	4	Group for N/S linear ditch		Small recut of group 195	
309	308	4	Cut of ditch			
310	308	4	Secondary fill [309]			
311	308	4	Primary fill [309]			
312	195	4	Ditch segment			
313	195	4	Tertiary fill [312]			
314	195	4	Secondary fill [312]			
315	195	4	Primary fill [312]			
316	195	4	Lower fill [288]			
317	308	4	Cut of ditch		Adjacent to [288]	
318	308	4	Fill of [317]			
319	346	4	Cut of WNW/ESE ditch		In phase 2	
320	346	4	Single fill of [319]			
321	340 [RG 21]	4	Ring-gully terminal			

322	340 [RG 21]	4	Fill of [321]			sample 322aa, 1 piece of pot
323	339 [RG 20]	4	Ring-gully segment			
324	339 [RG 20]	4	Fill of [323]			sample 324aa, 1 x daub
325	195	4	Ditch segment		Group 195	
326	195	4	Fill of [325]			sample 326aa - ae
327	195	4	Ditch segment		not a cut,	
328	195	4	Fill of [327]		Black	
329	339 [RG 20]	4	Ring-gully segment			
330	339 [RG 20]	4	Fill of [329]			sample 330aa
331	339 [RG 20]	4	Ring-gully terminal			
332	339 [RG 20]	4	Fill of [331]			sample 332aa
333		4	Cut of pit			
334		4	Fill of [333]			sample 334aa, 15 sherds of pot recovered, 7 pieces of industrial waste, 10 pieces of stone
335	340 [RG 21]	4	Ring-gully segment			
336	340 [RG 21]	4	Fill of [335]			sample 336aa
337	340 [RG 21]	4	Ring-gully segment			
338	340 [RG 21]	4	Fill of [337]			sample 338aa
339 [RG 20]	*	4	Group of ring-gully			
340	*	4	Group of ring-gully			
341	346	4	Secondary fill [343]			
342	346	4	Primary fill [343]			
343	346	4	Cut of NW/Se ditch			
344	346	4	Cut of NW/SE ditch			
345	346	4	Fill of [344]			
346	*	4	Group Number E/W ditch		Top of phase 2	
347	340 [RG 21]	4	Cut of ring-gully			
348	340 [RG 21]	4	Fill of [347]			
349	814 [RG 19]	4	Cut of large ring-gully			
350	814 [RG 19]	4	Fill of [349]			sample 350aa - ae. 40 sherds of Iron Age pot found
351	346	4	Cut of ditch		Group 346	
352	346	4	Fill of [351]			
353	346	4	Cut of ditch			
354	346	4	Cut of ditch			
355	346	4	Secondary fill [354]			
356	346	4	Primary fill [354]		Dark grey charcoal	sample 356aa, poss human bone recovered
357	346	4	Upper fill [354]			
358		5	Cut of E/W ditch		Adjacent to roundhouse	
359		5	Fill of [358]			
360		5	Cut of E/W furrow			
361		5	Fill of [360]			
362	346	4	Fill of [353]			

363	VOID	VOID	VOID	VOID	VOID	VOID
364	VOID	VOID	VOID	VOID	VOID	VOID
365	346	4	Cut of NW/SE ditch			
366	346	4	Fill of [365]			sample 366aa
367	VOID	VOID	VOID	VOID	VOID	VOID
368	VOID	VOID	VOID	VOID	VOID	VOID
369	814 [RG 19]	4	Cut of ring-gully terminal			
370	814 [RG 19]	4	Fill of [369]			sample 370aa
371	346	4	Cut of E/W ditch		Group 346	
372	346	4	Tertiary fill [371]			
373	346	4	Secondary fill [371]			sample 373aa
374	346	4	Primary fill [371]			
375	346	4	Tertiary fill [354]			
376	195	4	Cut of ditch			
377	195	4	Fill of [376]			sample 377aa - ae
378	346	4	Additional fill [371]			
379	195	4	Fill of [376]			
380	195	4	Cut of ditch			
381	195	4	Primary fill [380]			
382	195	4	Secondary fill [380]			
383		5	Cut of E/W ditch			
384		5	Fill of [383]			
385		5	Cut of E/W ditch			
386		5	Fill of [385]			
387		5	Cut of E/W furrow			
388		5	Fill of [387]			
389	346	4	Cut of N/S ditch			
390	346	4	Primary Fill of [389]		Slumping East, contemporary with (391)	
391	346	4	Another Primary fill [389]		Slumping west, contemporary with (390)	
392	346	4	Secondary fill [389]			
393	346	4	Tertiary fill [389]			
394	195	4	Cut of N/S ditch		Group 195	
395	195	4	Basal fill [376]			
396	195	4	Fill of [376]			
397		5	Cut of possible ditch			
398		5	Fill of [397]			
399		5	Cut of post-med furrow			
400		5	Fill of [399]			
401	195	4	Primary fill [394]		Re-deposited natural, some charcoal	sample 401aa
402	195	4	Secondary fill [394]			sample 402aa-ae
403	195	4	Tertiary fill [394]			1 piece of glass
404	195	4	Quaternary fill [394]			
405	195	4	Quaternary fill [389]			
406	195	4	Quinary fill [389]			
407	825	4	cut of ditch			
408	825	4	Fill of [407]			sample 408aa
409	830 [RG 13]	4	Cut of ditch		Parallel to [407]	

410	830 [RG 13]	4	Fill of [409]			sample 410aa
411	820 [RG 12]	3	Cut of feature			
412	820 [RG 12]	3	Fill of [411]			sample 412aa
413		5	Cut of shallow gully			
414		5	Fill of [413]			
415	346	4	Fill of [371]			
416	814 [RG 19]	4	Ring-gully segment			
417	814 [RG 19]	4	Fill of [416]			sample 417aa-ae, 1 pot base (handmade poss IA)
418	814 [RG 19]	4	Cut of small ring-gully			
419	814 [RG 19]	4	Fill of [418]			
420	814 [RG 19]	4	Cut of possible posthole			
421	814 [RG 19]	4	Fill of [420]			
422		U	Cut of possible posthole			
423		U	Fill of [422]			
424		VOID	VOID	VOID	VOID	VOID
425	195	4	Cut of N/S boundary ditch			
426	195	4	Primary fill [425]			sample 426aa, bone (animal?) recovered
427	195	4	Secondary fill [425]			
428	195	4	Cut of ditch			
429	195	4	Quaternary fill [428]			
430	195	4	Fill of [428]			
431	195	4	Fill of [428]			
432	195	4	Primary fill [428]			1 piece of handmade pottery
433	195	4	Cut of ditch			
434	195	4	Primary fill [433]			sample 434aa
435	195	4	Secondary fill [433]			sample 435aa
436	195	4	Tertiary fill [433]			sample 436aa
437	195	4	Quaternary fill [433]			sample 437aa
438	195	4	Cut of ditch			
439	195	4	Primary fill [438]			Animal bone recovered
440	195	4	Tertiary fill [425]			sample 440aa, 2 sherds of pottery
441	195	4	Quaternary fill [425]			
442	195	4	Secondary fill [438]			
443	195	4	Tertiary fill [438]			
444	195	4	Slump in [438]			
445	195	4	Cut of ditch			
446	195	4	Fill of [445]			
447		4	Cut of possible ditch/gully terminal			
448		4	Fill of [447]			
449	818 [RG 15]	3	Ring-gully terminal			
450	818 [RG 15]	3	Fill of [449]			sample 450aa-ae

451	821 [RG 11]	1	Ring-gully terminal			
452	821 [RG 11]	1	Fill of [451]			sample 452aa
453	830 [RG 13]	4	Ring-gully segment			
454	830 [RG 13]	4	Fill of [453]			
455	825	4	Gully segment			
456	825	4	Fill of [455]			Animal bone
457		4	Ditch recut terminal			
458	821 [RG 11]	1	Cut of posthole			
459	821 [RG 11]	1	Fill of [458]			sample 459aa
460		5	Cut of possible posthole			
461		5	Fill of [460]			
462		4	Cut of gully terminal			
463		4	Fill of [462]			sample 463aa
464		5	Fill of Furrow [522]			
465		4	Upper fill of [457]			iron age pot x2, burnt stone and quernstone frag, 1x daub
466		4	Lower fill of [457]			animal bone x 5
467		4	Cut of E/W running ditch/gully			
468	749	3	Upper fill of [615]			1x burnt stone/daub
469	479	4	Lower fill of [457]			animal bone x3
470		5	Cut of furrow			
471		5	Fill of [470]			
472	817 [RG 18]	4	Cut of ring-gully			
473	817 [RG 18]	4	Fill of [472]			sample 473aa
474	750	3	Cut of E/W ditch			
475	818 [RG 15]	3	Cut of ditch			
476	818 [RG 15]	3	Fill of [475]			sample 476aa, animal bone x3
477		3	Cut of pit			
478		3	Primary fill of [477]			
479		3	Secondary fill of [477]			
480		3	Tertiary fill of [477]			sample 480aa
481	750	3	Slumping fill in [474]			
482	750	3	Slumping fill in [474]			
483	750	3	Blue clay fill in [474]			sample 483aa
484	750	3	Fill of [474]			
485	750	3	Fill of [474]			
486	750	3	Fill of [474]			
487		4	Cut of ditch			
488		4	Fill of [487]			
489		?4	Cut of possible posthole			
490		?4	Fill of [489]			sample 490aa
491		?4	Cut of possible posthole			
492		?4	Fill of [491]			sample 492aa
493	817 [RG 18]	4	Cut of ring-gully		Same as [472]	

494	817 [RG 18]	4	Fill of [493]			Animal bone? Recovered
495		4	Cut of narrow ring-gully			
496		4	Fill of [495]			
497	830 [RG 13]	4	Ring-gully terminal			
498	830 [RG 13]	4	Fill of [497]			
499	830 [RG 13]	4	Cut of feature			
500	830 [RG 13]	4	Fill of [499]			
501	830 [RG 13]	4	Cut of feature			
502	830 [RG 13]	4	Fill of [501]			
503	750	3	Cut of E/W ditch			
504	750	3	Primary fill of [503]			sample 504aa, animal bone
505	750	3	Secondary fill of [503]			sample 505aa, animal bone
506	822	4	Cut of N/S ditch			
507	822	4	Primary fill of [506]			sample 507aa
508	822	4	Secondary fill of [506]			2 frags of animal bone
509	830 [RG 13]	4	Cut of posthole			
510	830 [RG 13]	4	Fill of [509]			
511		1/3	Fill of pit [260]			
512	518 [RG 17]	4	Cut of ring-gully terminal			
513	518 [RG 17]	4	Fill of [512]			sample 513aa-ae, iron age pot x3 sherds
514	518 [RG 17]	4	Cut of posthole			
515	518 [RG 17]	4	Fill of [514]			
516	518 [RG 17]	4	Cut of ring-gully terminal			
517	518 [RG 17]	4	Fill of [516]			sample 517aa
518	*	4	Group no. RG 17			
519	518 [RG 17]	4	Cut of ring-gully			
520	518 [RG 17]	4	Primary fill of [519]			sample 520aa
521	518 [RG 17]	4	Upper fill of [519]			sample 521aa, burnt bone x 8
522		5	Cut of E-W furrow with fill (464)			
523	518 [RG 17]	4	Cut of ring ditch			
524	518 [RG 17]	4	Lower fill of [523]			
525	518 [RG 17]	4	Upper fill of [523]			sample 525aa-ae
526	518 [RG 17]	4	Cut of possible posthole			
527	518 [RG 17]	4	Fill of [526]			sample 527aa
528	518 [RG 17]	4	Cut of ring ditch			
529	518 [RG 17]	4	Lower fill of ring ditch [528]			
530	518 [RG 17]	4	Upper fill of ring ditch [528]			sample 530aa-ae
531		4	Cut of ditch			
532		4	Fill of ditch [531]			
533	346	4	Cut of ditch			
534	346	4	Cut of ditch			
535	346	4	Fill of ditch [533]			
536	346	4	Fill of ditch [533]			
537	346	4	Fill of ditch [533]			

538	346	4	Fill of ditch [533]			
539		5	Cut of furrow			
540		5	Fill of furrow [539]			
541	822	4	Fill of ditch [506]			
542		5	Cut of furrow			
543		5	Fill of furrow [542]			
544	346	4	Secondary fill of ditch [534]			
545	346	4	Primary fill of ditch [534]			
546	346	4	Slumped fill of ditch [534]			
547	346	4	Cut of ditch			
548	346	4	Primary fill of ditch [547]			
549	346	4	Secondary fill of ditch [547]			
550		5	Cut of furrow			
551		5	Fill of furrow [550]			
552	518 [RG 17]	4	Cut of ring-gully			
553	518 [RG 17]	4	Fill of ring-gully [552]			
554	518 [RG 17]	4	Fill of ring-gully [552]			sample 554aa, daub/fired clay 6 pieces
555	518 [RG 17]	4	Dump of possible burnt daub in [552]			daub/fired clay and pot 8 pieces
556	821 [RG 11]	1	Cut of gully			
557	821 [RG 11]	1	Fill of gully [556]			sample 557aa
558		4	Cut of E/W running ditch			
559		4	Cut of NE/SW ditch			
560		4	Fill of ditch [558] lower fill			
561		4	Fill of ditch [559]			
562	518 [RG 17]	4	Cut of posthole			
563	518 [RG 17]	4	Fill of posthole [562]			sample 563aa
564	518 [RG 17]	4	Cut of possible posthole			
565	518 [RG 17]	4	Fill of possible posthole [564]			
566	518 [RG 17]	4	Cut of possible gully terminal			
567	518 [RG 17]	4	Fill of possible gully terminal [566]			
568	518 [RG 17]	4	Cut of posthole/gully			
569	518 [RG 17]	4	Fill of posthole/gully [568]			
570	820 [RG 12]	3	Cut of NW/SE ditch			
571	820 [RG 12]	3	Fill of ditch [570]			
572	820 [RG 12]	3	Cut of E/W ditch			
573	820 [RG 12]	3	Fill of ditch [572]			
574	820 [RG 12]	3	Fill of ditch [575]			
575	820 [RG 12]	3	Cut of ditch			
576	818 [RG 15]	3	Cut of gully			
577	818 [RG 15]	3	Fill of gully [576]			possible pot x3
578	818 [RG 15]	3	Fill of gully [576]			

579	818 [RG 15]	3	Cut of stakehole			
580	818 [RG 15]	3	Fill of stakehole [579]			
581	818 [RG 15]	3	Ring-gully segment			
582	818 [RG 15]	3	Fill of [581]			
583	823	4	Cut of n/s ditch			
584	823	4	Fill of n/s ditch [583]			
585	822	4	Cut of n/s ditch			
586	823	4	Cut of n/s ditch			
587	823	4	Fill of [586]			sample 587aa
588	823	4	Probable terminal of n/s ditch same as [586]			
589	823	4	Fill of [588]			
590	822	4	Fill of [585]			
591	822	4	Fill of [585]			burnt bone,1x shell and animal bone
592	822	4	Fill of [585]			Burnt bone x 3
593	822	4	Fill of [585]			
594		4	Cut of E/W gully			
595		4	Cut of N/S gully			
596		4	Fill of [594]			
597		4	Fill of [594]			
598		4	Fill of [595]			
599		4	Cut of posthole			
600		4	Fill of posthole [599]			
601		4	Cut of posthole			
602		4	Fill of posthole [601]			
603		4	Cut of slightly curving E/W gully			
604		4	Fill of [603]			
605		4	Upper fill of [558]			
606	VOID	VOID	VOID	VOID	VOID	VOID
607	820 [RG 12]	3	Cut of NW/SE aligned ditch			
608	820 [RG 12]	3	Fill of [607]			
609	822	4	Cut of N/S aligned ditch			
610	822	4	Fill of [609]			
611		4	Cut of E/W ditch			
612		4	Fill of [611]			
613		4	Cut of E/W ditch			
614		4	Fill of [613]			
615	749	3	Cut of large E/W ditch			
616	VOID	VOID	VOID	VOID	VOID	VOID
617	VOID	VOID	VOID	VOID	VOID	VOID
618	VOID	VOID	VOID	VOID	VOID	VOID
619		4	Fill of [595]			
620		4	Cut of E/W ditch			
621		4	Fill of [620]			
622		5	Cut of furrow			
623		5	Fill of furrow [622]			5x post med pot, 1xshell
624	820 [RG 12]	3	Ring-gully segment			
625	820 [RG 12]	3	Fill of [624]			sample 625aa, animal bone x7
626	750	3	Cut of E/W ditch			

627	750	3	Primary fill of [626]			
628	750	3	Secondary fill of [626]			
629	750	3	Third fill of [626]			
630	750	3	Upper fill of [626]			
631		1 or 3	Cut of pit/terminal			
632		4	Cut of linear feature			
633	750	3	Fill of ditch [626]			
634	750	3	Ditch segment			
635		4	Fill of [559]			
636		1 or 3	Gully			
637		4	Fill of [632]			1 x possible pot/slag, 1x animal bone
638		1 or 3	Fill of [631]			
639		1 or 3	Fill of [631]			
640		1 or 3	Fill of [631]			
641	750	3	Fill of [634]			sample 641aa, animal bone x 6
642	750	3	Fill of [634]			
643	750	3	Fill of [634]			
644		3	Cut of modern ditch > SEE NOTES		not actually a cut, is the upper fill of ditch terminal [634]	
645	750	3	Fill of [644]			2 x post med pot, 1 x poss IA pot, 6x burnt animal bone
646		3	Cut of posthole			
647		3	Fill of posthole [646]			
648		3	Cut of posthole			
649		3	Fill of posthole [648]			
650		3	Cut of posthole			
651		3	Fill of posthole [650]			
652	816 [RG 22]	4	Cut of ring-gully			
653	813	4	Fill of [652]			slag x 2
654		4	Cut of linear feature			
655		4	Fill of [613]			
656	749	3	Fill of [615]			
657	749	3	Fill of [615]			
658		4	Cut of linear feature			
659		4	Cut of pit			
660		4	Cut of pit			
661		4	Cut of possible terminal			
662		1 or 3	Fill of [636]			
663		1 or 3	Fill of [636]			
664		4	Fill of [659]			
665		4	Fill of [658]			
666		4	Fill of [658]			
667		4	Fill of [660]			
668		4	Fill of [654]			
669	816 [RG 22]	4	Cut of ring-gully			

670	816 [RG 22]	4	Fill of ring-gully [669]			15 x possible IA pot
671		5	Cut of linear feature			
672		5	Fill of [671]			1 x CBM, 4 x post med pottery
673		U/5?	Cut of N/S linear feature			
674		U/5?	Fill of [673]			2 x daub
675		4	Fill of possible terminal [661]			
676	RG 22	4	Ring-gully segment			
677	RG 22	4	Fill of [676]			
678	824	4	Cut of linear feature			
679	824	4	Primary fill of [678]			
680	824	4	Secondary fill of [678]			
681		5	Cut of E/W linear feature			
682		5	Fill of [681]			
683	825	4	Gully segment			
684	825	4	Fill of [683]			
685	819 [RG 14]	3	Ring-gully segment		same as [690], [721] and [729]	
686	819 [RG 14]	3	Fill of [685]		same as [690], [721] and [729]	
687	749	3	Ditch segment			
688		5	Curvilinear feature terminal			
689		5	Fill of [688]			
690	819 [RG 14]	3	Ring-gully segment		same as [685], [721] and [729]	
691	819 [RG 14]	3	Fill of [690]		same as [685], [721] and [729]	
692		3	Linear feature terminal			
693		3	Fill of [692]			
694	749	3	Primary fill of [687]			sampled 694aa,5 x animal bone
695	749	3	Middle fill of [687]			
696	749	3	Upper fill of [687]			sampled 696aa
697		1or 3	Gully			
698		1 or 3	Fill of [697]			
699	815 [RG16]	4	Ring-gully segment			
700	815 [RG 16]	4	Fill of [699]			
701	RG 22	4	Ring-gully segment			
702	RG 22	4	Fill of [701]			
703	824	4	Gully segment			
704	824	4	Fill of [703]			
705		5	Modern calf burial			calf bones
706		4	Gully			
707		4	Fill of [706]			
708		5	E/W ditch			
709		5	Fill of [708]			
710		5	Cut of stone lined drain			

711		5	Stone lining of [710]			
712		5	Backfill of [710]			
713	824	4	Gully segment			
714	824	4	Fill of [713]			
715		4	Gully segment		Same feature as [733]	
716		4	Fill of [715]			animal bone x 3
717		5	Furrow			
718		5	Fill of furrow [717]			
719		3	Gully			
720		3	Fill of [719]			
721	819 [RG 14]	3	Gully segment		same as [685], [690] and [729]	
722	819 [RG 14]	3	Fill of [721]		same as [685], [690] and [729]	
723	749	3	Ditch terminal segment			
724	749	3	Fill of [723]			animal bone
725	749	3	Fill of [723]			animal bone
726	749	3	Fill of [723]			
727		4	Cut of possible pit			
728		4	Fill of possible pit [727]			
729	819 [RG 14]	3	Gully terminal		same as [685], [690], [721]	
730	819 [RG 14]	3	Fill of [729]		same as [685], [690], [721]	
731		5	Cut of ditch terminal			
732		5	Fill of ditch terminal [731]			
733		4	Gully segment		Same feature as [715]	
734		4	Fill of [733]			
735		4	Fill of [733]			
736	815 [RG 16]	4	Ring-gully segment			
737	815 [RG 16]	4	Fill of [736]			
738		5	Cut of E/W linear feature			
739		5	Fill of [738]			
740	823	4	Gully segment			
741	823	4	Primary fill of [740]			5 x pottery, 1xglass
742	823	4	Secondary fill of [740]			
743	750	3	Ditch terminal segment			
744		?4	Cut of posthole			
745		?4	Fill of posthole[744]			
746		U	Cut of linear feature			
747		U	Fill of [746]			
748		5	Field drain			
749	*	3	Group no. for Enclosure A ditch (southern)			

750	*	3	Group no. for Enclosure A ditch (northern)			
751	750	3	Slump in ditch terminal [743]			
752	750	3	Fill of ditch terminal [743]			wood recovered as sample 752aa
753	750	3	Fill of ditch terminal [743]			
754	750	3	Fill of ditch terminal [743]			sampled 754aa
755	750	3	Fill of ditch terminal [743]			
756		5	Cut of modern posthole			
757		5	Fill of [756]			
758	825	4	Cut of SW/NE ditch			
759	825	4	Fill of SW/NE ditch [758]			
760	824	4	Cut of N/S terminal			
761	824	4	Fill of [760]			
762	816 [RG 22]	4	Cut of gully terminal			
763	816 [RG 22]	4	Fill of [762]			
764		4	Cut of N/S ditch			
765	824	4	Cut of NW/SE ditch			
766	VOID	VOID	VOID	VOID	VOID	VOID
767	816 [RG 22]	4	Cut of gully			
768	816 [RG 22]	4	Fill of gully [767]			
769		1-4	Cut of feature			
770		1-4	Fill of feature [769]			
771	824	4	Fill of NW/SE ditch [765]			
772	749	4	Upper fill of N/S ditch [764]			
773	749	4	Lower fill of N/S ditch [764]			
774	749	3	Ditch segment			
775	816 [RG 22]	4	Gully terminal			
776	816 [RG 22]	4	Fill of [775]			
777	749	3	Upper fill of [774]			
778	749	3	Fill of [774]			
779	749	3	Lower fill of [774]			4 x animal bone
780	457	4	Ditch recut segment			
781		4	Fill of [780]			1x animal bone
782		5	Cut of linear feature			
783		5	Fill of [782]			
784		5	Cut of possible posthole			
785		5	Fill of possible posthole [784]			
786		4	Possible gully terminal			
787		4	Fill of [786]			
788	749	3	Ditch segment			
789	749	3	Fill of [788]			
790	817 [RG 18]	4	Ring gully segment			
791	817 [RG 18]	4	Fill of [790]			sample 791aa

792	749	3	Secondary fill of [788]			
793	749	3	Tertiary fill [788]			
794	749	3	Slumping in [788]			
795	823	4	Gully segment, same as [740]			
796	823	4	Fill of [795]			
797	340 [RG 21]	4	Ring-gully segment			
798	340 [RG 21]	4	Fill of [797]			sample 798aa x2 buckets and 120 + sherds of IA pot
799	749	3	Ditch segment			
800	749	3	Fill of [799]			
801	749	3	Fill of [799]			
802	749	3	Fill of [799]			
803		4	Ditch recut segment			
804		4	Fill of [803]			
805	?RG 18	4	?Ring-gully segment		Same feature as [809]	
806	?RG 18	4	Fill of [805]			
807	817 [RG 18]	4	Ring- gully terminal			
808	817 [RG 18]	4	Fill of [807]			
809	?RG 18	4	?Ring-gully terminal		Same feature as [805]	
810	?RG 18	4	Fill of [809]			
811		5	Cut of modern pit			
812		5	Fill of modern pit [811]			
813	340 [RG 21]	4	Fill of [797]			
814 [RG 19]	*	4	Group no. for ring-gully	situated north of grp 340		
815 [RG 16]	*	4	Group no. for ring-gully	situated north of grp 518		
816 [RG 22]	*	4	Group no. for ring-gully	situated north of grp 815		
817 [RG 18]	*	4	Group no. for ring-gully	situated west of grp 518		
818 [RG 15]	*	3	Group no. for ring-gully	situated inside enclosure		
819 [RG 14]	*	3	Group no. for ring-gully	situated north of grp 818		
820 [RG 12]	*	3	Group no. for ring-gully	situated north of grp 819 and cut by grp 822		
821 [RG 11]	*	1	Group no. for ring-gully	cut by enclosure ditch grp 750		
822	*	4	Group no. for N/S aligned ditch	cuts enclosure ditch grp 750		
823	*	4	Group no. for N/S aligned gully	situated to the west of grp 518		
824	*	4	Group no. for N/S aligned gullyditch	situated to east of enclosure ditch 750		
825	*	4	Group no. for E/W aligned gully			
826	818 [RG 15]	3	Ring-gully segment	Fb 827		
827	818 [RG 15]	3	Fill of 826	Fo 826		

828		5	Post-med. Furrow	Fb 829		
829		5	Fill of 828	Fo 828		
830 [RG 13]	*	4	Group no. for ring-gully	cut by drainage gully 825		
EWO 16						
3000		U	Natural			
3001		U	Topsoil			
3002		U	Subsoil			
3003		5	Demolition Material			Pottery (Vessel - found in cleaning)
3004	3936	2c	Ditch terminal	(3005)-(3007)		
3005	3936	2c	Fill of [3004]			
3006	3936	2c	Fill of [3004]			3006AA, Fuel, Hammerscale
3007	3936	2c	Fill of [3004]			
3008	3935	2c	Ditch terminal	(3009) (3039)		
3009	3935	2c	Fill of [3008]			
3010		5	Stakehole cut	(3011) (3012)		
3011		5	Packing material within [3010]			3011AA
3012		5	Wooden stake within [3010]			3012AA
3013	VOID	VOID	VOID	VOID		VOID
3014	VOID	VOID	VOID	VOID		VOID
3015	3936	2c	Ditch segment	(3016) (3017)		
3016	3936	2c	Primary fill of [3015]			
3017	3936	2c	Secondary fill of [3015]			
3018	3179 [RG 9]	1	Ring-gully segment	(3189)		
3019		5	Posthole	(3020)-(3022)		
3020		5	Primary fill of [3019]			Bone, fuel
3021		5	Secondary Fill of [3019]			3021AA, Fe Iron, Fuel, Hammerscale, Magnetic Matter
3022		5	Tertiary Fill of [3019]			2 x CBM
3023		5	Stakehole Cut	(3024) (3025)		
3024		5	Packing Material within [3023]			3024AA
3025		5	Wooden Stake within [3023]			3025AA
3026		5	Cut of Drain for Culvert	(3027)-(3029) (3038) (3069) (3070)		
3027		5	Primary Fill of Drain [3026]			8 x glass, 2 x pottery (vessel)
3028		5	Secondary Fill of Culvert			
3029		5	Sandstone Culvert Flags			
3030	3134	5	Cut of Stone Pad (1st from East)	(3031) (3062)		
3031	3134	5	Stone Pad [3030]			
3032		5	Cut of Later Addition to Culvert	(3033) (3041)		

3033		5	Stone Fill of Later Addition to Culvert			
3034		5	Cut of Stones of 19th C. Farm Building	(3035)-(3037)		
3035		5	Stones of 19th C. Farm Building, West Wall			
3036		5	Addition to Farmhouse, East Part			
3037		5	Brick Addition to Farmhouse Building, West			
3038		5	Redeposited Natural Backfill of Original Culvert [3026] (3029)			
3039	3935	2c	Secondary Fill of [3008]			
3040		5	Crude Floor Surface, North End of Byre 2b.			
3041		5	Black Silt/Clay, Polluted Fill of Culvert (3033)			
3042		2a/2b	Gully	(3043)		
3043		2a/2b	Fill of [3042]			
3044	3935	2c	Fill of [3115]			
3045	3935	2c	Fill of [3115]			
3046	3935	2c	Fill of [3115]			
3047		?1	Cut of Pit	(3049)		
3048	VOID	VOID	VOID	VOID		VOID
3049		?1	Fill of Pit [3047]			3049AA, fuel
3050	3936	2c	Fill of [3116]			
3051	3936	2c	Fill of [3116]			
3052		5	Wall Foundation Trench cut	(3053)-(3055)		
3053		5	Building Material of Wall 3054			
3054		5	Wall within Foundation Trench [3052]			
3055		5	Backfill within Foundation Trench [3052]			
3056	3935	2c	Primary Fill of [3117]			
3057	3935	2c	Backfill of [3117]			
3058	3936	2c	Secondary Fill of [3117]			3058AA
3059	3936	2c	Secondary Fill of [3117]			Fuel, magnetic matter
3060	3936	2c	Uppermost Fill of [3117]			
3061		5	N-S Stone Culvert, Western Edge of Byre 2b.			
3062	3134	5	Packing Fill of Stone Pad [3030]			
3063	3134	5	Cut of Stone Pad (2nd from East)	(3064) (3065)		
3064	3134	5	Stone Pad [3063]			

3065	3134	5	Packing Fill of Stone Pad [3063]			
3066	3939	2c	Ditch Terminal	(3067) (3068)		
3067	3939	2c	Upper Fill of [3066]			3067AA
3068	3939	2c	Primary Fill of [3066]			
3069	3134	5	Stone Pad Overlying Culvert [3026]			
3070	3134	5	Packing Fill of Stone Pad [3069]			
3071	3134	5	Cut of Stone Pad (4th from East)	(3072) (3073)		
3072	3134	5	Stone Pad [3071]			
3073	3134	5	Packing Fill of Stone Pad [3071]			
3074	3134	5	Cut of Stone Pad (5th from East)	(3075) (3076)		
3075	3134	5	Stone Pad [3074]			
3076	3134	5	Packing Fill of Stone Pad [3074]			
3077	3134	5	Cut of Stone Pad (6th from East)	(3078) (3079)		
3078	3134	5	Stone Pad [3077]			
3079	3134	5	Packing Fill of Stone Pad [3077]			
3080	3134	5	Cut of Stone Pad (7th from East)	(3081) (3082)		
3081	3134	5	Stone Pad [3080]			
3082	3134	5	Packing Fill of Stone Pad [3080]			
3083	3134	5	Cut of Stone Pad (8th from East)	(3084) (3085)		
3084	3134	5	Stone Pad [3083]			
3085	3134	5	Packing Fill of Stone Pad [3083]			
3086	3134	5	Cut of Stone Pad (9th from East)	(3087) (3088)		
3087	3134	5	Stone Pad [3086]			
3088	3134	5	Packing Fill of Stone Pad [3086]			
3089	3134	5	Cut of Stone Pad/Flag, Not in Alignment (1st from East)	(3090) (3091)		
3090	3134	5	Stone Pad [3089]			
3091	3134	5	Packing Fill of Stone Pad [3089]			
3092	3134	5	Cut of Stone Pad, Not in Alignment	(3093) (3094)		
3093	3134	5	Stone Pad [3092]			
3094	3134	5	Packing Fill of Stone Pad [3092]			
3095		2c	Posthole Cut	(3096)		
3096		2c	Fill of Posthole [3095]			
3097	3134	5	Cut of Stone Pad (10th from East)	(3098) (3099)		
3098	3134	5	Stone Pad [3097]			
3099	3134	5	Packing Fill of Stone Pad [3097]			
3100		5	Cut of Brick Wall (3036)	(3036) (3101)		

3101		5	Packing Fill of Brick Wall [3100] (3036)			
3102		5	Cut of Brick Wall (3037)	(3037) (3103)		
3103		5	Packing Fill of Brick Wall [3102] (3037)			
3104	3939	2c	Primary Fill of [3135]			
3105	3939	2c	Secondary Fill of [3135]			
3106	3940	5	Cut of Gully	(3107)		
3107	3940	5	Fill of [3106]			
3108		1-2b	Gully	(3109)		
3109		1-2b	Secondary Fill of [3108]			
3110	3935	2c	Ditch segment	(3114) (3118)		
3111	3936	2c	Ditch segment	(3112) (3113)		
3112	3936	2c	Fill of [3111]			
3113	3936	2c	Fill of [3111]			
3114	3935	2c	Fill of [3110]			
3115	3935	2c	Ditch segment	(3044)-(3046)		
3116	3936	2c	Ditch segment	(3050) (3051)		
3117	3935	2c	Ditch segment	(3056)-(3060) [3926]		
3118	3935	2c	Fill of [3110]			
3119	3935	2c	Ditch segment	(3120)-(3122)		
3120	3935	2c	Fill of [3119]			
3121	3935	2c	Fill of [3119]			Bone
3122	3935	2c	Fill of [3119]			Shale/Coal
3123	3179 [RG 9]	1	Ring-gully Spur	(3124)		
3124	3179 [RG 9]	1	Fill of [3123]			3124AA, Hammerscale, Magnetic Matter
3125	3939	2c	Ditch segment	(3126)		
3126	3939	2c	Fill of [3125]			3126AA
3127		5	Ditch	(3128)		
3128		5	Fill of [3127]			3128AA, 5 x CBM, CBM?, Hammerscale, Magnetic Matter
3129		5	Gully	(3130) (3131)		
3130		5	Primary Fill of [3129]			3130AA, 2 x Pottery
3131		5	Secondary Fill of [3129]			3131AA
3132		5	Cut of Possible Ditch	(3133)		
3133		5	Fill of Possible Ditch [3132]			3133AA, 4 x CBM, Glass, Pottery (Vessel)
3134	*	5	Group No. for Stone Post-Pads	[3030] (3031) (3062) [3063] (3064) (3065) (3069) (3070) [3071] (3072) (3073) [3074] (3075) (3076) [3077] (3078) (3079) [3080]		

				(3081) (3082) [3083] (3084) (3085) [3086] (3087) (3088) [3089] (3090) (3091) [3092] (3093) (3094) [3097] (3098) (3099)		
3135	3939	2c	Ditch segment	(3104) (3105)		
3136		4	Ditch	(3137)	Same feature as [3171]	
3137		4	Overall fill of Ditch (3136)			3137AA, 2 x Bone, Fuel
3138		2a/2b	Gully terminal	(3139)		
3139		2a/2b	Fill of [3138]			3139AA
3140	3940	5	Cut of Gully	(3141)		
3141	3940	5	Fill of Gully [3140]			
3142		5	Cut of Gully	(3143)		
3143		5	Fill of Gully [3142]			
3144		5	Cut of Possible Ditch	(3145)		
3145		5	Fill of Possible Ditch [3144]			
3146		5	Cut of Feature	(3147)		
3147		5	Fill of Feature [3146]			
3148		5	Cut of Ditch Terminal	(3149)		
3149		5	Fill of [3148]			3149AA
3150		5	Cut of Feature	(3151)		
3151		5	Fill of Feature [3151]			
3152		5	Cut of Feature	(3153)		
3153		5	Fill of Feature [3152]			3153AA
3154	3940	5	Cut of Terminal of Shallow Gully	(3155)		
3155	3940	5	Fill of [3154]			3155AA, Hammerscale, Magnetic Matter
3156	3936	2c	Ditch Terminal	(3157)		
3157	3936	2c	Fill of [3156]			3157AA, Fired Clay, Hammerscale, Magnetic Matter
3158	3935	2c	Ditch segment	(3159)-(3161)		
3159	3935	2c	Fill of [3158]			
3160	3935	2c	Fill of [3158]			
3161	3935	2c	Fill of [3158]			3161AA, Hammerscale, Magnetic Matter
3162	3936	2c	Ditch segment	(3162)		
3163	3936	2c	Fill of [3162]			3163AA, Fuel, Hammerscale
3164	3935	2c	Fill of [3170]			
3165	*	5	Group No. for Well	[3166] (3167) (3168) (3169)		
3166	3165	5	Construction Cut for Well	(3167)-(3169)		

3167	3165	5	Stone Lining in Well [3166]			
3168	3165	5	Packing Clay in Well [3166]			
3169	3165	5	Back/Infill of Well [3166]			
3170	3935	2c	Ditch terminal	(3164)		
3171		4	Ditch	(3172)	Same feature as [3136]	
3172		4	Fill of [3171]			3172AA, Fuel, Magnetic Matter
3173		5	Cut of Modern Posthole (?)	(3174)		
3174		5	Fill of Modern Posthole [3173]			
3175		2c	Ditch Terminal	(3176)	Same feature as [3856]	
3176		2c	Fill of [3175]			3176AA, Glass, Hammerscale, Magnetic Matter
3177		5	Cut of Ditch Terminal (Post-Med./Mod.)	(3178)		
3178		5	Fill of [3177]			3178AA
3179 [RG 9]	*	1	Group No. for Ring-gully	[3018] (3189) [3123] (3124) (3184) [3185] [3186] (3187) (3188) [3190] (3191)		
3180		2a	Ditch	(3181)		
3181		2a	Fill of [3180]			
3182		5	Cut of Possible Furrow	(3183)		
3183		5	Fill of [3182]			3183AA
3184	3179 [RG 9]	1	Fill of [3185]			3184AA
3185	3179 [RG 9]	1	Ring-gully Segment	(3184)		
3186	3179 [RG 9]	1	Ring-gully Segment	(3187) (3188)		
3187	3179 [RG 9]	1	Fill of [3186]			3187AA
3188	3179 [RG 9]	1	Fill of [3186]			3188AA, Magnetic Matter
3189	3179 [RG 9]	1	Fill of [3018]			3189AA, Fired Clay?, Fuel
3190	3179 [RG 9]	1	Fill of [3191]			
3191	3179 [RG 9]	1	Ring-gully Segment	(3190)		3191AA, Bone, Industrial Waste, Magnetic Matter
3192	3932	2a	Ditch segment	(3193)-(3196) (3198)		
3193	3932	2a	Primary Fill of [3192]			3193AA
3194	3932	2a	Lower Secondary fill of [3192]			3194AA, Fuel, Magnetic Matter

3195	3932	2a	Upper Secondary Fill of [3192]			3195AA
3196	3932	2a	Possible Tertiary Fill of [3192]			
3197	VOID	VOID	VOID	VOID		VOID
3198	3932	2a	Slump Deposit within [3192]			
3199		5	E-W Ditch, NE. Corner of Site	(3239) (3240)		
3200	3938	4	Ditch segment	(3229) (3230)		
3201		5	Cut of Pit (?)	(3203) (3206)		
3202		5	Cut of Ditch	(3204) (3205)		
3203		5	Secondary Fill of Pit [3201]			3203AA, Magnetic Matter
3204		5	Secondary Fill of Ditch [3202]			3204AA, Fuel, Hammerscale, Magnetic Matter
3205		5	Primary Fill of Ditch [3202]			3205AA, Hammerscale, Magnetic Matter
3206		5	Primary Fill of Feature [3201]			3206AA
3207	VOID	VOID	VOID	VOID		VOID
3208	VOID	VOID	VOID	VOID		VOID
3209	VOID	VOID	VOID	VOID		VOID
3210		5	E-W Wall, East of Byre 2a.			
3211		5	NW-SE Culvert, East of Byre 2a.			
3212		5	NE-SW Drain(?)/Culvert, East of Byre 2a.			
3213		5	N-S Wall, East of Byre 2a.			
3214		5	E-W Wall, East of Byre 2a.			
3215		5	N-S Wall, North of Byre 1c.			
3216		5	Rectangular Structure, Part of Byre 3?			
3217		5	N-S Drain with Slab Base, Part of Byre 1c.			
3218		5	E-W Curving Red Brick Culvert, West of Byre 1c.			
3219		5	Cut of Gully	(3220) (3221)		
3220		5	Fill of Gully [3219]			
3221		5	Fill of Gully [3219]			3221AA, Fe Iron, Hammerscale, Magnetic Matter
3222	VOID	VOID	VOID	VOID		VOID
3223	VOID	VOID	VOID	VOID		VOID
3224	VOID	VOID	VOID	VOID		VOID
3225	VOID	VOID	VOID	VOID		VOID
3226	VOID	VOID	VOID	VOID		VOID
3227	VOID	VOID	VOID	VOID		VOID

3228	VOID	VOID	VOID	VOID		VOID
3229	3938	4	Secondary Fill of [3200]			3229AA, Fuel
3230	3938	4	Primary Fill of [3200]			3230AA
3231		5	Ditch	(3232)-(3235)		
3232		5	Primary Fill of Ditch [3231]			3232AA
3233		5	Light Grey/Blue Fill of Ditch [3231]			3233AA
3234		5	Secondary Fill of Ditch [3231]			3234AA
3235		5	Tertiary Fill of Ditch [3231]			
3236	3938	4	Ditch segment	(3237) (3238)		
3237	3938	4	Primary Fill of [3236]			3237AA
3238	3938	4	Secondary Fill of [3236]			
3239		5	Primary Fill of [3199]			3239AA, Bone, Fuel, Hammerscale, Magnetic Matter
3240		5	Secondary Fill of [3199]			3240AA
3241		?4	Pit	(3242)		
3242		?4	Fill of [3241]			
3243	VOID	VOID	VOID	VOID		VOID
3244	VOID	VOID	VOID	VOID		VOID
3245	3940	5	Gully	(3246)		
3246	3940	5	Fill of [3245]			3246AA, Fuel, Hammerscale, Magnetic Matter
3247	3940	5	Cut of Gully	(3248)		
3248	3940	5	Fill of Gully [3247]			3248AA, Fuel, Hammerscale, Magnetic Matter
3249	3940	5	Cut of E-W Gully	(3250)		
3250	3940	5	Fill of Gully [3249]			3250AA, Fuel
3251		5	Cut of Feature	(3264) (3269)		
3252	3940	5	Cut of Narrow E-W Gully	(3253)		
3253	3940	5	Fill of Gully [3252]			3253AA, Fuel
3254	3940	5	Cut of Narrow E-W Gully	(3255)		
3255	3940	5	Fill of Gully [3254]			3255AA, CBM, Hammerscale, Magnetic Matter
3256	3940	5	Cut of Narrow E-W Gully	(3257)		
3257	3940	5	Fill of Gully [3256]			3257AA
3258	3940	5	Cut of E-W Gully	(3259)		
3259	3940	5	Fill of Gully [3258]			3259AA
3260	VOID	VOID	VOID	VOID		VOID
3261	3263	5	Horse Gin Track	(3262)		

3262	3263	5	Backfill within Horse Gin Track [3261]			
3263	*	5	Central Structure within Horse Gin (Not Excavated)			
3264		5	Fill of Feature [3251]			3264AA
3265		5	Cut of Possible Posthole near Gully	(3266)		
3266		5	Fill of Possible Posthole [3265]			3266AA, 2 x CBM, Fuel, Hammerscale, Magnetic Matter
3267		5	Cut of Possible Posthole near Gully	(3268)		
3268		5	Fill of Possible Posthole [3267]			3268AA, Fuel, Hammerscale, Magnetic Matter
3269		5	Fill of Feature [3251]			
3270		5	Cut of Posthole	(3271) (3277)		
3271		5	Fill around Post/Stake in [3270]			3271AA
3272	3938	4	Ditch segment	(3273) (3274)		
3273	3938	4	Primary Fill of [3272]			3273AA, Fuel
3274	3938	4	Secondary Fill of [3272]			3274AA, Magnetic Matter
3275		2c	N-S Gully	(3276)		
3276		2c	Fill of [3275]			3276AA
3277		5	Wooden Post/Stake in [3270]			3277AA
3278		5	Cut of Ditch	(3287) (3288)		
3279		5	Cut of Ditch	(3289)		
3280		5	Cut of Possible Gully	(3291)		
3281		2c	Cut of Gully	(3282)		
3282		2c	Fill of [3281]			3282AA
3283		2c	Cut of Feature	(3284)		
3284		2c	Fill of Feature [3283]			3284AA
3285		5	Cut of Enclosure Ditch, North Extent	(3307)		
3286		5	Cut of Modern Linear	(3290)		
3287		5	Primary Fill of Ditch [3278]			3287AA
3288		5	Secondary Fill of Ditch [3278]			
3289		5	Primary Fill of Ditch [3279]			3289AA
3290		5	Fill of Modern Linear [3286]			
3291		5	Fill of Possible Gully [3280]			
3292		5	Post-Med. Farmhouse Road			
3293		5	Cut of Posthole	(3294)-(3296)		

3294		5	Fill of Posthole [3293]			3294AA
3295		5	Organic Fill of Posthole [3293]			3295AA
3296		5	Wooden Stake in Posthole [3293]			3296AA
3297		5	N-S Eastern Wall of Byre 2a.			
3298		5	E-W Culvert in SW. Corner of Site			
3299		5	L-Shaped Wall SW. of Farmhouse			
3300		5	S. Wall of Foldyard 1			
3301		5	N-S Wall			
3302		5	E-W Wall North of Byre 1b			
3303		2c	Posthole	(3304)		
3304		2c	Fill of [3303]			3304AA
3305		2c	Possible posthole	(3306)		
3306		2c	Fill of [3305]			3306AA
3307		5	Fill of [3285]			3307AA
3308	VOID	VOID	VOID	VOID		VOID
3309	3938	4	Ditch segment	(3310) (3311)		
3310	3938	4	Primary Fill of [3309]			3310AA, Hammerscale
3311	3938	4	Secondary Fill of [3309]			3311AA
3312	3939	2c	Ditch segment	(3313)		
3313	3939	2c	Fill of [3312]			3313AA
3314	3939	2c	Ditch segment	(3315)		
3315	3939	2c	Fill of [3314]			3315AA
3316		2c	Stakehole	(3317)		
3317		2c	Fill of [3316]			
3318		?2c	Posthole	(3319)		
3319		?2c	Fill of [3318]			3319AA
3320		2c	Cut of Gully	(3321)		
3321		2c	Fill of [3320]			3321AA
3322		2c	Posthole	(3323)		
3323		2c	Fill of [3322]			3323AA
3324	3939	2c	Ditch segment	(3325)		
3325	3939	2c	Fill of [3324]			3325AA, Hammerscale, Magnetic Matter
3326	3939	2c	Ditch segment	(3327)		
3327	3939	2c	Fill of [3326]			3327AA
3328		?2c	Posthole	(3329)		
3329		?2c	Fill of [3328]			3329AA
3330	3939	2c	Ditch segment	(3331) (3332)		
3331	3939	2c	Dark Grey/Brown Fill of [3330]			3331AA
3332	3939	2c	Red/Brown Sandy Clay Fill of [3330]			3332A
3333		U	Pit	(3348)-(3351)		
3334		5	Cut of Possible Feature	(3335)		
3335		5	Mixed Fill of Feature [3334]			
3336		5	Cut of Animal (Sheep?) Burial	(3337)		
3337		5	Fill of Animal Burial [3336]			3337AA, 3 x Bone, 4 x

						Stone (fire cracked)
3338		2c	Cut of Gully	(3339)		
3339		2c	Fill of [3338]			
3340		2c	Possible Posthole	(3341)		
3341		2c	Fill of [3340]			3341AA
3342	3940	5	Cut of E-W Gully	(3343)		
3343	3940	5	Fill of Gully [3342]			3343AA
3344		5	Cut of Possible Posthole	(3345)		
3345		5	Fill of Possible Posthole [3344]			
3346		5	Cut of Animal (Horse?) Burial	(3347) (3389)		
3347		5	Fill of Animal Burial [3346]			3347AA, 4 x Bone, Fuel, Magnetic Matter, 2 x Pottery (Vessel)
3348		U	Primary Fill of Pit [3333]			
3349		U	Initial Humic Backfill Deposit of Pit [3333]			3349AA
3350		U	Secondary Allvial/Slumping Fill of Pit [3333]			
3351		U	Later Backfill Deposit of Pit [3333]			
3352		5	Cut of Possible Posthole	(3353)		
3353		5	Fill of Possible Posthole [3352]			3353AA
3354	3940	5	Cut of E-W Gully	(3355)		
3355	3940	5	Fill of Gully [3354]			
3356		U	Cut of Tree Bole	(3357)		
3357		U	Fill of [3356]			
3358		5	Cut of Burial	(3376)-(3378)		
3359		5	Cut of Furrow Terminal	(3360)		
3360		5	Fill of Furrow [3359]			3360AA, Hammerscale, Magnetic Matter
3361		5	Cut of Gully	(3362)		
3362		5	Fill of Gully [3361]			3362AA
3363	3935	2c	Ditch segment	(3364) (3365)		
3364	3935	2c	Top Fill of [3363]			3364AA
3365	3935	2c	Bottom Fill of [3363]			3365AA
3366		5	Cut of furrow	(3367)		
3367		5	Fill of [3366]			
3368	3935	2c	Ditch segment	(3369) (3374)		
3369	3935	2c	Fill of [3368]			3369AA
3370	3934	2c	Ditch Terminal	(3371) (3384)		
3371	3934	2c	Secondary Fill of [3370]			3371AA, Fuel, Industrial Waste, Magnetic Matter
3372		2c	Cut of Possible Pit	(3373) (3375)		

3373		2c	Secondary Fill of [3372]			3373AA
3374	3935	2c	Fill of [3368]			3374AA-AB, Fuel, Industrial Waste, Magnetic Matter
3375		2c	Primary Fill of [3372]			
3376		5	Primary Fill of [3358]			
3377		5	Upper fill of [3358]			3377AA
3378		5	Animal Skeleton within [3358]			2 x Bone
3379		1 or 2	Fill of [3380]			3379AA
3380		1 or 2	Small Pit/Posthole	(3379)		
3381	3934	2c	Ditch segment	(3382) (3383) (3391) (3392) (3397)		
3382	3934	2c	Upper Fill of [3381]			3382AA
3383	3934	2c	Lower Fill of [3381]			3383AA
3384	3934	2c	Primary Fill of [3370]			3384AA
3385	3913 [RG 7]	2b	Ring-gully Terminal	(3386) (3390)		
3386	3913 [RG 7]	2b	Fill of [3385]			3386AA-AE, Bone, 4 x Stone (fire cracked), Magnetic Matter
3387		5	Furrow	(3388)		
3388		5	Fill of [3387]			3388AA
3389		5	Skeleton of Horse within [3346]			10 x Bone
3390	3913 [RG 7]	2b	Probable Primary Fill of [3385]			
3391	3934	2c	Fill of [3381]			
3392	3934	2c	Fill of [3381]			
3393		2b	Possible Stakehole	(3394)		
3394		2b	Fill of [3393]			
3395	3933	2a	Ditch segment	(3396) (3419)-(3421) (3482)		
3396	3933	2a	Upper Fill of [3395]			
3397	3934	2c	Fill of [3381]			
3398		5	Possible Stakehole	(3399)		
3399		5	Fill of [3398]			
3400		2	Pit	(3401) (3402)		
3401		2	Fill of [3400]			
3402		2	Fill of [3400]			3402AA
3403	3935	2c	Ditch segment	(3404) (3406)		
3404	3935	2c	Fill of [3403]			
3405	VOID	VOID	VOID	VOID		VOID
3406	3935	2c	Fill of [3403]			
3407		5	Cut of Furrow	(3408)		
3408		5	Fill of Furrow [3407]			
3409	3485 [RG 5]	2b	Ring-gully segment	(3410)		
3410	3485 [RG 5]	2b	Fill of [3409]			
3411	3912 [RG 8]	2b	Ring-gully terminal	(3412)		

3412	3912 [RG 8]	2b	Fill of [3411]			3412AA-AE, Fired Clay, Fuel, Industrial Waste, Magnetic Matter
3413	3487 [RG 6]	2b	Ring-gully segment	(3415) (3418) (3530)		
3414	3913 [RG 7]	2b	Fill of [3529]			3414AA, 5 x Stone (fire cracked), Industrial Waste, Magnetic Matter
3415	3487 [RG 6]	2b	Secondary Fill of [3413]			3415AA
3416	3912 [RG 8]	2b	Ring-gully segment	(3417)		
3417	3912 [RG 8]	2b	Fill of [3416]			3417AA
3418	3487 [RG 6]	2b	Primary fill of [3413]			3418AA, 7 x Stone (fire cracked), Fuel, Industrial Waste, Magnetic Matter
3419	3933	2a	Primary fill of [3395]			3419AA
3420	3933	2a	Middle Fill of [3395]			
3421	3933	2a	Silt Layer/Band within [3395]			
3422	3487 [RG 6]	2b	Ring-gully segment	(3423)		
3423	3487 [RG 6]	2b	Fill of [3422]			3423AA, Magnetic Matter
3424	3484 [RG 3]	2b	Ring-gully terminal	(3425)		
3425	3484 [RG 3]	2b	Fill of [3424]			3425AA, Bone, Fuel, Magnetic Matter
3426	3935	2c	Ditch segment	(3438) (3439)		
3427	3934	2c	Ditch segment	(3440) (3441)		
3428	3912 [RG 8]	2b	Ring-gully segment	(3429)		
3429	3912 [RG 8]	2b	Fill of [3428]			
3430	3913 [RG 7]	2b	Ring-gully segment	(3431)		
3431	3913 [RG 7]	2b	Fill of [3430]			2 x Stone (fire cracked)
3432		5	Cut of Probable Water Channel	(3433)		
3433		5	Fill of [3433]			
3434	3912 [RG 7]	2b	Ring-gully recut segment	(3435)		
3435	3912 [RG 7]	2b	Fill of [3434]			
3436		5	Cut of Feature	(3437)		
3437		5	Fill of Feature [3436]			
3438	3935	2c	Primary Fill of [3426]			3438AA
3439	3935	2c	Secondary Fill of [3426]			3439AA, Fired Clay, Fuel, Hammerscale,

						Magnetic Matter
3440	3934	2c	Primary Fill of [3427]			3440AA, Fuel
3441	3934	2c	Secondary Fill of [3427]			3441AA
3442		?2c	?Posthole	(3443)		
3443		?2c	Fill of [3442]			
3444	3934	2c	Ditch segment	(3445)-(3447)		
3445	3935	2c	Top Fill of [3449]			
3446	3934	2c	Redeposited Natural Fill of [3444]			
3447	3934	2c	Primary Fill of [3444]			3447AA, Fuel
3448	3935	2c	Secondary Fill of [3449]			3448AA
3449	3935	2c	Ditch segment	(3448) (3450)		
3450	3935	2c	Primary Fill of [3449]			3450AA, Magnetic Matter
3451	VOID	VOID	VOID	VOID		VOID
3452		5	Cut of Possible Posthole	(3453)		
3453		5	Fill of Possible Posthole [3452]			
3454	VOID	VOID	VOID	VOID		VOID
3455	VOID	VOID	VOID	VOID		VOID
3456		?2c	?Posthole	(3457)		
3457		?2c	Fill of [3456]			
3458	VOID	VOID	VOID	VOID		VOID
3459	VOID	VOID	VOID	VOID		VOID
3460	3912 [RG 8]	2b	Ring-gully segment	(3461)		
3461	3912 [RG 8]	2b	Fill of [3460]			3461AA, Hammerscale, Industrial Waste, Magnetic Matter
3462	3528	2b	Posthole	(3517)		
3463	3487 [RG 6]	2b	Ring-gully segment	(3464)		
3464	3487 [RG 6]	2b	Fill of [3463]			
3465	3935	2c	Ditch segment	(3466) (3508)		
3466	3935	2c	Fill of [3465]			
3467	3528	2b	Posthole	(3518)		
3468	3933	2a	Ditch segment	(3469)-(3472)		
3469	3933	2a	Fill of [3468]			3469AA
3470	3933	2a	Fill of [3468]			3470AA, 3 x CBM
3471	3933	2a	Fill of [3468]			3471AA, Glass (Bottle)
3472	3933	2a	Fill of [3468]			3472AA
3473		2	Posthole	(3474)		
3474		2	Fill of [3473]			3474AA
3475	3528	2b	Posthole	(3492)		
3476	3485 [RG 5]	2b	Ring-gully terminal	(3519)		
3477		2b	Curvilinear feature	(3505)		
3478		2b	Shallow Posthole	(3483)		
3479	3528	2b	Posthole	(3506)		
3480	3484 [RG 3]	2b	Ring-gully segment	(3481)		
3481	3484 [RG 3]	2b	Fill of [3480]			3481AA, Bone, Magnetic Matter

3482	3933	2a	Fill of [3395]			
3483		2b	Fill of [3478]			
3484 [RG 3]	*	2b	Group No. for Ring-gully	[3424] (3425) [3480] (3481) [3503] (3516) [3511] (3512) [3522] (3523) [3526] (3527) [3569] (3570)		
3485 [RG 5]	*	2b	Group No. for Ring-gully	[3409] (3410) [3476] (3519) [3509] (3510) [3538] (3539) [3560] (3561) [3563] (3564)		
3486 [RG 4]	*	2b	Group No. for Ring-gully, same as 3607	[3489] (3490) [3495] (3496) [3501] (3502) [3514] (3515) [3520] (3521) [3532] (3533) [3534] (3535) [3540] (3541) [3542] (3546) [3553] (3554) [3567] (3568) [3582] (3583) [3586] (3587) [3592] (3593)		
3487 [RG 6]	*	2b	Group No. for Ring-gully	[3413] (3415) (3418) (3530) [3422] (3423) [3463] (3464) [3497] (3498) [3584] (3585)		
3488 [RG 1]	*	1	Group No. for Ring-gully	[3557] (3558) (3559) [3571] (3572) [3573] (3574) (3581) [3575] (3576)		
3489	3486 [RG 4]	2b	Ring-gully terminal	(3490)		
3490	3486 [RG 4]	2b	Fill of [3489]			3490AA-AC, Fuel, Magnetic Matter, Hammerscale
3491		2b	Pit	(3507) (3562)		
3492	3528	2b	Fill of [3475]			
3493	3606 [RG 2]	2a	Ring-gully segment	(3494)		
3494	3606 [RG 2]	2a	Fill of [3493]			
3495	3486 [RG 4]	2b	Ring-gully segment	(3496)		
3496	3486 [RG 4]	2b	Fill of [3495]			
3497	3487 [RG 6]	2b	Ring-gully segment	(3498)		
3498	3487 [RG 6]	2b	Fill of [3497]			
3499	3913 [RG 7]	2b	Ring-gully segment	(3500)		
3500	3913 [RG 7]	2b	Fill of [3499]			3500AA
3501	3486 [RG 4]	2b	Ring-gully segment	(3502)		
3502	3486 [RG 4]	2b	Fill of [3501]			3502AA, Fuel, Magnetic Matter
3503	3484 [RG 3]	2b	Ring-gully segment	(3516)		
3504	VOID	VOID	VOID	VOID		VOID
3505		2b	Fill of [3477]			
3506	3528	2b	Fill of [3479]			

3507		2b	Fill of Pit [3491]			3507AA, Bone, Hammerscale, Magnetic Matter
3508	3935	2c	Secondary Re-deposited Natural Fill of [3465]			
3509	3485 [RG 5]	2b	Ring-gully segment	(3510)		
3510	3485 [RG 5]	2b	Fill of [3509]			3510AA, Magnetic Matter
3511	3484 [RG 3]	2b	Ring-gully segment	(3512)		
3512	3484 [RG 3]	2b	Fill of [3511]			
3513	3933	2a	Enclosure B Ditch Terminal	(3545) (3743)-(3745)		
3514	3486 [RG 4]	2b	Ring-gully segment	(3515)		
3515	3486 [RG 4]	2b	Fill of [3514]			3515AA, Magnetic Matter
3516	3484 [RG 3]	2b	Second Fill of [3503]			
3517	3528	2b	Fill of [3462]			
3518	3528	2b	Fill of [3467]			
3519	3485 [RG 5]	2b	Fill of [3476]			
3520	3486 [RG 4]	2b	Ring-gully terminal	(3521)		
3521	3486 [RG 4]	2b	Fill of [3520]			3521AA-AE, 2 x Bone, Fuel, Industrial Waste, Magnetic Matter
3522	3484 [RG 3]	2b	Ring-gully segment	(3522)		
3523	3484 [RG 3]	2b	Fill of [3522]			
3524	3606 [RG 2]	2a	Ring-gully segment	(3525)		
3525	3606 [RG 2]	2a	Fill of [3524]			3525AA, Hammerscale, Industrial Waste, Magnetic Matter
3526	3484 [RG 3]	2b	Ring-gully segment	(3527)		
3527	3484 [RG 3]	2b	Fill of [3526]			3527AA, Fuel, Magnetic Matter
3528	*	2b	Group No. for Posthole Grouping near RG 4	[3462] (3517) [3467] (3518) [3475] (3492) [3479] (3506)		
3529	3913 [RG 7]	2b	Ring-gully segment	(3531)		
3530	3487 [RG 6]	2b	Third Fill of [3413]			
3531	3913 [RG 7]	2b	Primary Fill of [3529]			
3532	3486 [RG 4]	2b	Ring-gully segment	(3533)		
3533	3486 [RG 4]	2b	Fill of [3532]			3533AA, Magnetic Matter
3534	3486 [RG 4]	2b	Posthole	(3535)		
3535	3486 [RG 4]	2b	Fill of [3534]			3535AA, 2 x Bone, Fuel
3536		?2b	Stakehole	(3537)		
3537		?2b	Fill of [3536]			
3538	3485 [RG 5]	2b	Ring-gully segment	(3539)		

3539	3485 [RG 5]	2b	Fill of [3538]			3539AA, Fuel
3540	3486 [RG 4]	2b	Ring-gully segment	(3541)		
3541	3486 [RG 4]	2b	Fill of [3540]			3541AA, Fuel, Industrial Waste, Magnetic Matter
3542	3486 [RG 4]	2b	Ring-gully segment	(3546)		
3543	3606 [RG 2]	2a	Ring-gully terminal	(3547) (3548)		
3544		5	Cut of Furrow	(3550)		
3545	3933	2a	Fill of [3513]			
3546	3486 [RG 4]	2b	Fill of [3542]			
3547	3606 [RG 2]	2a	Basal Fill of [3543]			
3548	3606 [RG 2]	2a	Secondary Fill of [3543]			
3549	VOID	VOID	VOID	VOID		VOID
3550		5	Fill of Furrow [3544]			
3551		?2b	Posthole	(3552)		
3552		?2b	Fill of [3551]			
3553	3486 [RG 4]	2b	Ring-gully segment	(3554)		
3554	3486 [RG 4]	2b	Fill of [3553]			
3555	3606 [RG 2]	2a	Ring-gully terminal	(3556)		
3556	3606 [RG 2]	2a	Fill of [3555]			3556AA, Fuel, Industrial Waste, Magnetic Matter
3557	3488 [RG 1]	1	Ring-gully segment	(3558) (3559)		
3558	3488 [RG 1]	1	Second Fill of [3557]			3558AA, Magnetic Matter
3559	3488 [RG 1]	1	Primary Fill of [3557]			3559AA
3560	3485 [RG 5]	2b	Ring-gully segment	(3561)		
3561	3485 [RG 5]	2b	Fill of [3560]			3561AA, Bone
3562		2b	Basal fill pit [3491]			
3563	3485 [RG 5]	2b	Ring-gully segment	(3564)		
3564	3485 [RG 5]	2b	Fill of [3563]			3564AA, Bone
3565		2	Cut of Posthole/Pit	(3566)		
3566		2	Fill of [3565]			3566AA
3567	3486 [RG 4]	2b	Ring-gully terminal	(3568)		
3568	3486 [RG 4]	2b	Fill of [3567]			
3569	3484 [RG 3]	2b	Ring-gully segment	(3570)		
3570	3484 [RG 3]	2b	Fill of [3569]			3570AA
3571	3488 [RG 1]	1	Ring-gully segment	(3572)		
3572	3488 [RG 1]	1	Fill of [3571]			3572AA, Hammerscale, Industrial Waste, magnetic matter
3573	3488 [RG 1]	1	Ring-gully terminal	(3574) (3581)		
3574	3488 [RG 1]	1	Second Fill of [3573]			3574AA-AC
3575	3488 [RG 1]	1	Ring-gully segment	(3576)		
3576	3488 [RG 1]	1	Fill of [3575]			3576AA
3577	3933	2a	Ditch segment	(3578) (3643) (3644)		

3578	3933	2a	Fill of [3577]			3578AA, Bone, Hammerscale, Magnetic Matter
3579	3608 [RG 2]	2a	Ring-gully terminal	(3580) (3914)		
3580	3608 [RG 2]	2a	Fill of [3579]			3580AA-AB
3581	3488 [RG 1]	1	Primary Fill of [3573]			3581AA
3582	3486 [RG 4]	2b	Ring-gully terminal	(3583)		
3583	3486 [RG 4]	2b	Fill of [3582]			3583AA
3584	3487 [RG 6]	2b	Ring-gully segment	(3585)		
3585	3487 [RG 6]	2b	Fill of [3584]			3585AA, Magnetic Matter
3586	3486 [RG 4]	2b	Ring-gully segment	(3587)		
3587	3486 [RG 4]	2b	Fill of [3586]			
3588	3606 [RG 2]	2a	Ring-gully segment	(3589)		
3589	3606 [RG 2]	2a	Fill of [3588]			3589AA, Magnetic Matter
3590	3608 [RG 2]	2a	Ring-gully segment	(3591)		
3591	3608 [RG 2]	2a	Fill of [3590]			3591AA, Bone, Hammerscale, Magnetic Matter
3592	3486 [RG 4]	2b	Ring-gully segment	(3593)		
3593	3486 [RG 4]	2b	Fill of [3592]			3593AA, Fuel, Hammerscale, Industrial Waste, Magnetic Matter, 24 x Stone (fire cracked), RF001, RF002
3594	3606 [RG 2]	2a	Ring-gully segment	(3496) (3497)		
3595		1-2b	Possible Linear Feature	(3612)		
3596	3606 [RG 2]	2a	Primary Fill of [3594]			3596AA
3597	3606 [RG 2]	2a	Secondary Fill of [3594]			3597AA
3598		5	Cut of Furrow	(3599)		
3599		5	Fill of Furrow [3598]			
3600	3608 [RG 2]	2a	Ring-gully segment	(3601)		
3601	3608 [RG 2]	2a	Fill of [3600]			3601AA, Fuel, Magnetic Matter
3602	3609 [RG 10]	2c	Ring-gully segment	(3603)		
3603	3609 [RG 10]	2c	Fill of [3602]			3603AA
3604	3608 [RG 2]	2a	Ring-gully segment	(3605)		
3605	3608 [RG 2]	2a	Fill of [3604]			
3606 [RG 2]	*	2a	Group No. for Ring-gully	[3493] (3494) [3524] (3525) [3543] (3547) (3548) [3555] (3556) [3588]		

				(3589) [3594] (3596) (3597)		
3607 [RG 4]	*	2b	Group No. for Ring-gully, same as 3486	See 3486		
3608 [RG 2]	*	1/2a	Group No. for Ring-gully	[3579] (3580) (3914) [3590] (3591) [3600] (3601) [3604] (3605)		
3609 [RG 10]	*	2c	Group No. for Large Ring-gully	[3602] (3603) [3670] (3671) [3699] (3700) [3713] (3714) [3737] (3764) (3738) [3766] (3767) [3774] (3807) [3792] (3793) (3811) [3796] (3797) (3798) [3821] (3822) (3823) [3844] (3843) (3845)		
3610		U	Cut of Posthole	(3611)		
3611		U	Fill of Posthole [3610]			3611AA Fuel, Magnetic Matter
3612		1-2b	Fill of [3595]			
3613	VOID	VOID	VOID	VOID		VOID
3614		5	Cut of E-W Furrow	(3615) (3616)		
3615		5	Upper Fill of Furrow [3614]			
3616		5	Lower Fill of Furrow [3614]			
3617	3936	2c	Ditch segment	(3636)-(3639)		
3618		5	Cut of Furrow	(3619)		
3619		5	Fill of Furrow [3618]			CBM
3620	3933	2a	Ditch segment	(3621) (3652) (3653)		
3621	3933	2a	Fill of [3620]			
3622	VOID	VOID	VOID	VOID		VOID
3623	3933	2a	Ditch segment	(3624)-(3630) (3632)		
3624	3933	2a	Fill of [3623]			3624AA, Bone
3625	3933	2a	Silty Clay Fill of [3623]			Bone
3626	3933	2a	Fill of [3623]			
3627	3933	2a	Fill of [3623]			
3628	3933	2a	Silty Clay Fill of [3623]			3 x Stone (fire cracked)
3629	3933	2a	Fill of [3623]			
3630	3933	2a	Deposit of Possibly Med. Material within [3623]			
3631	VOID	VOID	VOID	VOID		VOID
3632	3933	2a	Deposit within [3623]			
3633	VOID	VOID	VOID	VOID		VOID
3634	VOID	VOID	VOID	VOID		VOID
3635	3933	2a	Ditch segment	(3656)-(3658) (3915) (3916)		

3636	3936	2c	Primary Fill of [3617]			3636AA, Fuel, Magnetic Matter
3637	3936	2c	Secondary Fill of [3617]			
3638	3936	2c	Fill of [3617]			
3639	3936	2c	Final Fill of [3617]			
3640	3933	2a	Ditch segment	(3641) (3642) (3918)		
3641	3933	2a	Primary Fill of [3640]			3641AA
3642	3933	2a	Secondary Fill of [3640]			3642AA
3643	3933	2a	Fill of [3577]			3643AA, Bone
3644	3933	2a	Primary Fill of [3577]			3644AA
3645	3934	2c	Ditch segment	(3646) (3647)		
3646	3934	2c	Primary Fill of [3645]			
3647	3934	2c	Secondary Fill of [3645]			3647AA
3648	3935	2c	Ditch segment	(3649)-(3651)		
3649	3935	2c	Primary fill of [3648]			
3650	3935	2c	Fill of [3648]			
3651	3935	2c	Upper Fill of [3648]			
3652	3933	2a	Sandy Redeposited Natural within [3620]			
3653	3933	2a	Clay Redeposited Natural within [3620]			
3654	3933	2a	Ditch segment	(3655) (3673) (3725) (3726)		
3655	3933	2a	Fill of [3654]			3655AA
3656	3933	2a	Primary Fill of [3635]			3656AA, Fuel, Stone (fire cracked)
3657	3933	2a	Secondary Fill of [3635]			3657AA
3658	3933	2a	Tertiary Fill of [3635]			
3659	3934	2c	Ditch terminal	(3660)		
3660	3934	2c	Fill of [3659]			Bone, Fired Clay
3661	3936	2c	Ditch segment	(3662)-(3664) (3921)		
3662	3936	2c	Primary Fill of [3661]			3662AA
3663	3936	2c	Mid. Fill of [3661]			
3664	3936	2c	Mid. Fill of [3661]			
3665	VOID	VOID	VOID	VOID		VOID
3666	VOID	VOID	VOID	VOID		VOID
3667		2c	Gully/Ditch	(3668)		
3668		2c	Fill of [3667]			
3669	3933	2a	Ditch segment	(3686)-(3694)		
3670	3609 [RG 10]	2c	Ring-gully segment	(3671)		
3671	3609 [RG 10]	2c	Fill of [3670]			3671AA, Fuel, 5 x Stone (fire

						cracked), Magnetic Matter
3672		5	Fill of Furrow [3917]			
3673	3933	2a	Orange Clay Lower Fill of [3654]			
3674	VOID	VOID	VOID	VOID		VOID
3675	3936	2c	Ditch segment	(3676)		
3676	3936	2c	Fill of [3675]			3676AA
3677	3937	4	Ditch segment	(3678) (3781)		
3678	3937	4	Fill of [3677]			3678AA, Hammerscale, Magnetic Matter
3679		5	Cut of Furrow	(3680)		
3680		5	Fill of [3679]			
3681		5	Cut for Buried Barrel	(3695)-(3697)		
3682		2c	Gully concentric with RG 10	(3683)		
3683		2c	Fill of [3682]			3683AA, Fuel, Magnetic Matter
3684		5	Cut of Post-Med. Pit	(3685) (3698)		
3685		5	Fill of Post-Med. Pit [3684]			
3686	3933	2a	Upper Fill of [3669]			
3687	3933	2a	Fill of [3669]			
3688	3933	2a	Fill of [3669]			
3689	3933	2a	Charcoal Lens within [3669]			
3690	3933	2a	Fill of [3669]			
3691	3933	2a	Fill of [3669]			3691AA
3692	3933	2a	Fill of [3669]			
3693	3933	2a	Fill of [3669]			
3694	3933	2a	Fill of [3669]			
3695		5	Remains of Wooden Barrel	[3681] (3696) (3697)		12 x Fe Iron
3696		5	Primary Fill of Wooden Barrel (3695)	[3681]		6 x CBM, 5 x Glass, 15 x Glass (Bottle), 69 x Pottery (Vessel)
3697		5	Secondary Fill of Wooden Barrel (3695)	[3681]		3 x Pottery (Vessel)
3698		5	Fill of Pit [3684]			
3699	3609 [RG 10]	2c	Ring-gully segment	(3700)		
3700	3609 [RG 10]	2c	Fill of [3699]			3700AA, Industrial Waste, Magnetic Matter
3701		5	Fill of [3702]			
3702		5	Cut of Pipe Trench	(3701)		
3703	3936	2c	Ditch segment	(3729) (3748)-(3750)		
3704	VOID	VOID	VOID	VOID		VOID

3705	3936	2c	Ditch terminal	(3706) (3727) (3728)		
3706	3936	2c	Third Fill of [3705]			3706AA
3707		U	Posthole	(3708)		
3708		U	Fill of [3707]			
3709		2c	Ditch	(3710) (3924)		
3710		2c	Fill of [3709]			Pottery (Handmade)
3711	3936	2c	Ditch segment	(3712) (3922) (3923)		
3712	3936	2c	Fill of [3711]			
3713	3609 [RG 10]	2c	Ring-gully segment	(3714)		
3714	3609 [RG 10]	2c	Fill of [3713]			
3715	VOID	VOID	VOID	VOID		VOID
3716	VOID	VOID	VOID	VOID		VOID
3717		2c	Ditch	(3718)		
3718		2c	Fill of [3717]			
3719		5	Cut of Sunken Post-Med. Barrel	(3739)-(3742) (3927)		
3720	3937	4	Ditch segment	(3721) (3722)		
3721	3937	4	Lower Fill of [3720]			3721AA, Fuel
3722	3937	4	Upper fill of [3720]			3722AA, Fuel, Hammerscale, Magnetic Matter
3723	3937	4	Ditch segment	(3724) (3752)		
3724	3937	4	Fill of [3723]			3724AA
3725	3933	2a	Fill of [3654]			
3726	3933	2a	Lower Fill of [3654]			
3727	3936	2c	Primary Fill of [3705]			3727AA
3728	3936	2c	Second Fill of [3705]			3728AA, 2 x Stone (fire cracked)
3729	3936	2c	Bottom Fill of [3703]			3729AA
3730		5	Possible Pit	(3731)		
3731		5	Fill of [3730]			
3732		5	Cut of Linear feature	(3733)		
3733		5	Fill of [3732]			3733AA
3734	3937	4	Ditch segment	(3735) (3736)		
3735	3937	4	Primary Fill of [3734]			3735AA
3736	3937	4	Secondary Fill of [3734]			3736AA
3737	3609 [RG 10]	2c	Ring-gully terminal	(3738) (3764)		
3738	3609 [RG 10]	2c	Second Fill of [3737]			3738AA-AC, 3 x Bone, Fuel, Industrial Waste, Magnetic Matter
3739		5	Basal Fill of Sunken Barrel [3719]			
3740		5	Fill of Sunken Barrel [3719]			

3741		5	High Pottery Waste Content Dump with Barrel [3719]			3 x Bone, 29 x CBM, 3 x CBM (Brick), CBM+Fe (Brick), Fired Clay?, 6 x Glass, Glass (Bottle), 309 x Pottery (Vessel), 2 x Pottery? (Vessel), Stone (fire cracked)
3742		5	Tumble/Rubble Upper Deposit of Sunken Barrel [3719]			
3743	3933	2a	Fill of [3513]			
3744	3933	2a	Fill of [3513]			
3745	3933	2a	Fill of [3513]			
3746		5	Ditch	(3747)		
3747		5	Fill of Ditch [3746]			8 x CBM, Glass, Pottery
3748	3936	2c	Second Fill of [3703]			3748AA
3749	3936	2c	Third Fill of [3703]			
3750	3936	2c	Top Fill of [3703]			
3751	VOID	VOID	VOID	VOID		VOID
3752	3937	4	Lower Fill of [3723]			3752AA
3753		5	Possible Posthole	(3754)		
3754		5	Fill of [3753]			
3755		5	Cut of E-W Furrow	(3756)		
3756		5	Fill of [3755]			
3757		?2c	Posthole	(3758) (3759)		
3758		?2c	Bedding Material within [3757]			3758AA
3759		?2c	Charcoal Rich Upper Fill of [3757]			3759AA, Bone, Hammerscale
3760		5	Modern Machine Mark (Cut)	(3761)		
3761		5	Fill of [3760]			Fuel, Hammerscale, Magnetic Matter
3762		?2c	Pit	(3763)		
3763		?2c	Fill of [3762]			3763AA-AB, 6 x Bone, Magnetic Matter
3764	3609 [RG 10]	2c	Primary Fill of [3737]			3764AA, Bone, Industrial Waste, Magnetic Matter
3765	3936	2c	Ditch segment	(3801)-(3804)		
3766	3609 [RG 10]	2c	Ring-gully segment	(3767)		
3767	3609 [RG 10]	2c	Fill of [3766]			
3768	3936	2c	Ditch segment	(3769) (3779) (3780) (3925)		

3769	3936	2c	Fill of [3768]			3769AA
3770		2	Stakehole	(3771)		
3771		2	Fill of [3770]			3771AA
3772		?2c	Posthole outside Ring-gully RG 10	(3773) (3799) (3800) (3919) (3920)		
3773		?2c	Fill of [3772]			3773AA, Bone, Magnetic Matter
3774	3609 [RG 10]	2c	Ring-gully segment	(3807)		
3775		2c	Linear feature within RG 10	(3776)		
3776		2c	Fill of [3775]			3776AA, Hammerscale, Magnetic Matter
3777		2c	Gully	(3778)		
3778		2c	Fill of [3777]			
3779	3936	2c	Mid. Fill of [3768]			
3780	3936	2c	Upper Fill of [3768]			
3781	3936	2c	Primary Fill of [3677]			
3782		?2c	Posthole	(3789)-(3791)		
3783		5	Modern Disturbance	(3784)		
3784		5	Fill of [3783]			
3785		?2c	Pit	(3786)		
3786		?2c	Fill of [3785]			3786AA, Fuel, Hammerscale, Magnetic Matter
3787		?2c	Posthole/Stakehole	(3788)		
3788		?2c	Fill of [3787]			
3789		?2c	Primary Fill of [3782]			
3790		?2c	Fill of [3782]			3790AA
3791		?2c	Final Fill of [3782]			3791AA, Bone, Magnetic Matter
3792	3609 [RG 10]	2c	Ring-gully terminal	(3793) (3811)		
3793	3609 [RG 10]	2c	Secondary Fill of [3792]			3793AA-AE, 6 x Bone, Fired Clay, Fuel, Magnetic Matter, Hammerscale
3794		2c	Cut of Stakehole Series Related to [3775]	(3795)		Bone
3795		2c	Fill of [3794]			3795AA
3796	3609 [RG 10]	2c	Ring-gully segment	(3797) (3798)		
3797	3609 [RG 10]	2c	Primary Fill of [3796]			3797AA
3798	3609 [RG 10]	2c	Secondary Fill of [3796]			3798AA, 2 x Pottery (Handmade), 2 x Pottery (Handmade?),

						Magnetic Matter
3799		?2c	Post Packing in Posthole [3772]			3799AA, Magnetic Matter
3800		?2c	Post Pipe in Posthole [3772]			3800AA, 2 x Bone, Magnetic Matter
3801	3936	2c	Basal Fill of [3765]			3801AA
3802	3936	2c	Fill of [3765]			
3803	3936	2c	Fill of [3765]			
3804	3936	2c	Upper Fill of [3765]			
3805		2c	Gully	(3806)		
3806		2c	Fill of [3805]			
3807	3609 [RG 10]	2c	Fill of [3774]			
3808	3936	2c	Ditch segment	(3809) (3810)		
3809	3936	2c	Fill of [3808]			
3810	3936	2c	Fill of [3808]			
3811	3609 [RG 10]	2c	Primary Fill of [3792]			3811AA, Fuel, Magnetic Matter
3812		?2c	Possible Posthole	(3813)		
3813		?2c	Fill of [3812]			3813AA
3814		?2c	Posthole	(3815)		3815AA
3815		?2c	Fill of [3814]			
3816		?2c	Possible Stakehole(s)	(3817)		3817AA
3817		?2c	Fill of [3816]			
3818	3936	2c	Ditch segment	(3833)-(3838)		
3819		?2c	Stakehole	(3832)		
3820		?2c	Stakehole	(3831)		
3821	3609 [RG 10]	2c	Ring-gully segment	(3822) (3823)		
3822	3609 [RG 10]	2c	Fill of [3821]			3822AA
3823	3609 [RG 10]	2c	Fill of [3821]			3823AA
3824		5	Modern Deposit			
3825		5	Modern Deposit			
3826		5	Modern Deposit			
3827		5	Modern Deposit			
3828		5	Modern Deposit			
3829		5	Modern Deposit			
3830		5	Modern Deposit			
3831		?2c	Fill of [3820]			
3832		?2c	Fill of [3819]			
3833	3936	2c	Basal Fill of [3818]			
3834	3936	2c	Fill of [3818]			3834AA, Fuel
3835	3936	2c	Fill of [3818]			3835AA, Bone, Fired Clay, Fuel, Magnetic Matter
3836	3936	2c	Fill of [3818]			
3837	3936	2c	Fill of [3818]			
3838	3936	2c	Upper Fill of [3818]			
3839		2c	Gully	(3840)		
3840		2c	Fill of [3839]			
3841		1-2b	Pit or gully	(3842) [3821]		

3842		1-2b	Fill of [3841]			3842AA, Magnetic Matter
3843	3609 [RG 10]	2c	Fill of [3844]			
3844	3609 [RG 10]	2c	Ring-gully segment	(3843) (3845)		
3845	3609 [RG 10]	2c	Fill of [3844]			
3846		5	Modern Cut			
3847	3932	2a	Ditch segment	(3848)-(3851)		
3848	3932	2a	Primary Fill of [3847]			
3849	3932	2a	Fill of [3847]			
3850	3932	2a	Fill of [3847]			
3851	3932	2a	Upper Fill of [3847]			
3852	VOID	VOID	VOID	VOID		VOID
3853	VOID	VOID	VOID	VOID		VOID
3854	3932	2a	Ditch segment	(3857)-(3860)		
3855	3932	2a	Ditch segment	(3863)-(3865) (3870) (3872) (3928)		
3856		2c	Ditch	(3861)		
3857	3932	2a	Primary Fill of [3854]			3857AA
3858	3932	2a	Secondary Fill of [3854]			
3859	3932	2a	Tertiary Fill of [3854]			
3860	3932	2a	Top Fill of [3854]			Pottery (Vessel)
3861		2c	Fill of [3856]			
3862		?2c	Possible Posthole	(3866)		
3863	3932	2a	Primary Fill of [3855]			3863AA, Fuel
3864	3932	2a	Fill of [3855]			3864AA, Bone
3865	3932	2a	Fill of [3855]			3865AA, Fired Clay
3866		?2c	Fill of [3862]			
3867		5	Furrow	(3868)		
3868		5	Fill of [3867]			
3869	3932	2a	Ditch segment	(3874)-(3878) (3902)		
3870	3932	2a	Fill of [3855]			3870AA
3871	3932	2a	Ditch segment	(3896)-(3901) (3931)		
3872	3932	2a	Redeposited Natural in [3855]			
3873	3932	2a	Ditch segment	(3885)-(3891)		
3874	3932	2a	Fill of [3869]			3874AA
3875	3932	2a	Fill of [3869]			3875AA
3876	3932	2a	Fill of [3869]			
3877	3932	2a	Fill of [3869]			
3878	3932	2a	Fill of [3869]			
3879	3932	2a	Ditch segment	(3880)-(3884) (3909)		
3880	3932	2a	Fill of [3879]			3880AA, Bone
3881	3932	2a	Fill of [3879]			3881AA, Bone, Fuel
3882	3932	2a	Fill of [3879]			3882AA
3883	3932	2a	Fill of [3879]			3883AA

3884	3932	2a	Fill of [3879]			3884AA, Pottery (Vessel)
3885	3932	2a	Primary Fill of [3873]			
3886	3932	2a	Secondary Fill of [3873]			
3887	3932	2a	Fill of [3873]			
3888	3932	2a	Fill of [3873]			
3889	3932	2a	Fill of [3873]			
3890	3932	2a	Fill of [3873]			
3891	3932	2a	Upper Fill of [3873]			
3892		2a	Possible Ditch	(3893)		
3893		2a	Fill of [3892]			
3894		5	Furrow	(3895)		
3895		5	Fill of [3894]			
3896	3932	2a	Fill of [3871]			
3897	3932	2a	Fill of [3871]			
3898	3932	2a	Fill of [3871]			
3899	3932	2a	Fill of [3871]			
3900	3932	2a	Second Fill of [3871]			3900AA
3901	3932	2a	Primary Fill of [3871]			3901AA, Fuel, Magnetic Matter, Fired Clay
3902	3932	2a	Fill of [3869]			
3903	3932	2a	Ditch segment	(3904)-(3908) (3910) (3911)		
3904	3932	2a	Primary Fill of[3903]			3904AA
3905	3932	2a	Secondary Fill of [3903]			
3906	3932	2a	Tertiary Fill of [3903]			
3907	3932	2a	Fill of [3903]			
3908	3932	2a	Top Fill of [3903]			
3909	3932	2a	Fill of [3879]			
3910	3932	2a	Fill of [3903]			
3911	3932	2a	Redeposited Natural Fill of [3903]			
3912 [RG 8]	*	2b	Group No. for RG 8	[3411] (3412) [3416] (3417) [3428] (3429) [3460] (3461)		
3913 [RG 7]	*	2b	Group No. for RG 6	[3385] (3386) (3390) [3430] (3431) [3434] (3435) [3499] (3500) [3529] (3414) (3531)		
3914	3608 [RG 2]	2a	Fill of [3579]			
3915	3933	2a	Fill of [3635]			
3916	3933	2a	Fill of [3635]			
3917		5	Furrow	(3672)		
3918	3933	2a	Fill of [3640]			Fuel, Industrial Waste, Magnetic Matter

3919		?2c	Post Pipe in Posthole [3772]			
3920		?2c	Stone Padding for Post in Posthole [3772]			
3921	3936	2c	Fill of [3661]			
3922	3936	2c	Fill of [3711]			
3923	3936	2c	Fill of [3711]			
3924		2c	Slumping Deposit within [3709]			
3925	3936	2c	Fill of [3768]			
3926	3936	2c	Ditch segment			
3927	3936	2c	Upper Fill of ditch segment			
3928	3932	2a	Fill of [3855]			
3929		5	Fill of Furrow [3930]			
3930		5	Cut of Med. Furrow	(3929)		
3931	3932	2a	Fill of [3871]			
3932	*	2a	Group No. for enclosure ditch	[3192] (3193) (3194) (3195) (3196) (3198) [3847] (3848) (3849) (3850) (3851) [3854] (3857) (3858) (3859) (3860) [3855] (3863) (3864) (3865) (3870) (3872) (3928) [3869] (3874) (3875) (3876) (3877) (3878) (3902) [3871] (3896) (3897) (3898) (3899) (3900) (3901) (3931) [3873] (3885) (3886) (3887) (3888) (3889) (3890) (3891) [3879] (3880) (3881) (3882) (3883) (3884) (3909) [3903] (3904) (3905) (3906) (3907) (3908) (3910) (3911)		
3933	*	2a	Group No. for enclosure ditch	[3395] (3396) (3419) (3420) (3421) (3482) [3468] (3469) (3470) (3471) (3472) [3513] (3545) (3743) (3744) (3745) [3577] (3578) (3643) (3644) [3620} (3621) (3652) (3653) [3623] (3624) (3625) (3626) (3627) (3628)		

				(3629) (3630) (3632) [3635] (3656) (3657) (3658) (3915) (3916) [3640] (3641) (3642) (3918) [3669] (3686) (3687) (3688) (3689) (3690) (3691) (3692) (3693) (3694) [3654] (3655) (3673) (3725) (3726)		
3934	*	2c	Group No. for enclosure ditch	[3370] (3371) (3384) [3381] (3382) (3383) (3391) (3392) (3397) [3427] (3440) (3441) [3444] (3446) (3447) [3645] (3646) (3647) [3659] (3660)		
3935	*	2c	Group No. for enclosure ditch	[3008] (3009) (3039) [3110] (3114) (3118) [3115] (3044) (3045) (3046) [3117] (3056) (3057) [3119] (3120) (3121) (3122) [3158] (3159) (3160) (3161) [3170] (3164) [3363] (3364) (3365) [3368] (3369) (3374) [3403] (3404) (3406) [3426] (3438) (3439) [3449] (3445) (3448) (3450) [3465] (3466) (3508) [3648] (3649) (3650) (3651)		
3936	*	2c	Group No. for enclosure ditch	[3004] (3005) (3006) (3007) [3015] (3016) (3017) [3111] (3112) (3113) [3116] (3050) (3051) [3156] (3157) [3162] (3163) [3617] (3636) (3637) (3638) (3639) [3661] (3662) (3663) (3664) (3921) [3675] (3676) [3703] (3729) (3748) (3749) (3750) [3705] (3706) (3727) (3728)		

				[3711] (3712) (3922) (3923) [3765] (3801) (3802) (3803) (3804) [3768] (3769) (3779) (3780) [3808] (3809) (3810) [3818] (3833) (3834) (3835) (3836) (3837) (3838) [3926] (3058) (3059) (3060) (3927)		
3937	*	4	Group No. for ditch	[3677] (3678) (3781) [3720] (3721) (3722) [3723] (3724) (3752) [3734] (3735) (3736)		
3938	*	4	Group No. for ditch	[3200] (3229) (3230) [3236] (3237) (3238) [3272] (3273) (3274) [3309] (3310) (3311)		
3939	*	2c	Group No. for ditch	[3312] (3313) [3314] (3315) [3324] (3325) [3326] (3327) [3330] (3331) (3332)		
3940	*	5	Group No. for linear gully	[3106] (3107) [3140] (3141) [3154] (3155) [3245] (3246) [3247] (3248) [3249] (3250) [3252] (3253) [3254] (3255) [3256] (3257) [3258] (3259) [3342] (3343) [3354] (3355)		

APPENDIX B

POTTERY

C. G. Cumberpatch BA PhD

INTRODUCTION

The pottery assemblage from the first phase of work at East Wideopen Farm, Wide Open, North Tyneside, was examined by the author on 30th June and 1st July 2016. It consisted of a total of 265 sherds of pottery weighing 1882.5g representing a maximum of 256 vessels. The data are summarised in Table B1. As will be discussed below, the estimated maximum number of vessels figure (ENV) almost certainly exaggerates the actual total as a result of the condition of the assemblage. The pottery was accompanied by a quantity (339g) of fired clay from five contexts, see Table B2.

A small assemblage of pottery recovered from the second stage of work on the site was subsequently examined and the initial report was updated on 20th October 2017. The data are summarised in Table B3.

METHODOLOGY

The late prehistoric and Roman period pottery fabrics were classified using an updated and refined version of the scheme devised for use with the assemblages from the Easington to Ganstead gas pipeline (Cumberpatch 2016: 104-109: Table 16) and other recent projects (Leary and Cumberpatch 2014, Cumberpatch 2014). It was based upon the scheme proposed by Didsbury (2003, 2004, 2009a, 2009b N.D) which distinguishes primarily between fabrics with calcareous inclusions (H1/H4), with non-crystalline inclusions (H2) and with mixed types of inclusions (H3). These groups being themselves heterogeneous, modifying terms have been introduced to refine the categories. These are based on the character of the inclusions, specifically their type, shape and size.

RESULTS

The pottery

The pottery assemblage was notable for its poor condition and highly fragmented nature. Despite this, two vessels are worthy of detailed comment. Context **417** contained the base of a jar (Table B1) and context **798** contained several rims sherds and numerous body sherds, the majority probably from a single vessel. The jar base was notable for striations on the underside which resembled those created when a pot is removed from a wheel-head using a cord or wire although there was no indication that the vessel was wheel-thrown and every indication that it was hand-made. The marks seem to indicate that the vessel was made on some sort of horizontal surface such as a board or bench and was cut free.

The vessel from context **798** appeared to be a bowl with a finger-impressed rim (Table B1). Its method of manufacture seems to have contributed to its fragmentation into many sherds and while it might be possible to reconstruct the vessel, this would be a time-consuming task for a conservator.

Bowls are, generally speaking, a rare form in the pre-Roman Iron Age in north-eastern England and do not seem to have been a regular part of the ceramic repertoire until the partial adoption

of Roman and Romano-British vessel forms after the Roman conquest and the establishment of the mass production of wheel-thrown vessels. Parallels for the bowl are therefore sparse and it is notable that Rigby does not include any bowl forms in her general typology (2004) although in her account of the coarse wares from Rudston Roman villa (1980), she notes the presence of hand-made bowls in a variety of fabrics, notably figure 28; 16, figure 30; 29, figure 34; 82, figure 52; 302, in addition to wheel-thrown examples. Two hand-made examples have been published by Didsbury from Sewerby Cottage Farm, Bridlington (2009a; fig. 177; 21 and 22). Chance finds from Flixton (Challis and Harding 1975, fig. 38;10) included a shallow bowl. Further examples were identified at sites on the Easington to Ganstead gas pipeline in southern Holderness (Cumberpatch 2016, figs. 96.94, 98.144 and 98.156), all of which were from Roman period contexts spanning the period from the late 1st century to the late 3rd or early 4th century AD (Cumberpatch 2016, 120). A similar date range was proposed for examples from Westermost Rough (Leary and Cumberpatch 2014) and for examples from sites on pipelines in north-eastern Yorkshire (Cumberpatch 2014).

This evidence seems to suggest that the adoption of this type of vessel in a hand-made form was one of the few examples of local potters adopting an alien vessel type, perhaps in response to changes in diet or in methods of serving food (Meadows 1997). In terms of dating it appears to point to a 1st century AD or later date for the feature from which it was recovered.

Decoration is, generally, rare on later prehistoric hand-made vessels but fingertip and fingernail impressions are one way it is sometimes manifested. Examples have been cited and discussed elsewhere (Cumberpatch 2016; Leary and Cumberpatch 2014) and further examples have been published from Thorpe Thewles (Swain 1987, fig. 45; 23) although they were not a significant element within the assemblage.

One small flake from context **350** was identified as being of a recent date. This small flake of Whiteware was recovered from an environmental sample and was so small that it could have been incorporated into the context through the natural disturbance of the soil.

The assemblage recovered from the 2017 phase of excavation (Table B3) included one and possibly two further examples of fingernail impressed rims in H2 fabrics (context **3798**), most probably from an open jar or jars (although a bowl cannot be ruled out) together with a flat-topped rim, also most probably from an open jar. This form has been described in detail (Cumberpatch 2016, 114-5) as has the incidence of finger-tip decoration both generally (Cumberpatch 2016, 123-4) and with specific reference to open jars (Leary and Cumberpatch 2014, 49). The form seems to have enjoyed a very long life, spanning much of the pre-Roman Iron Age and the Roman period and there is good evidence for dates within the period between the 2nd century BC and the 4th century AD (Leary and Cumberpatch 2014, 49; 2016, 114-5).

The fired clay

The fragments of fired clay were, in general, shapeless lumps that gave no indication of their origin or function. The exception were the fragments from context **334**, the fill of pit **333** (Table B2). These sherds, all from the same object, were distinguished by having surviving faces which were marked with deep impressions formed by twigs or plant stems pressed into the surface of the clay and burnt out during firing. It is unclear what the object was or why its surface treatment should differ so markedly from that of the pottery.

DISCUSSION

Field system ditches

Ditch groups **195**, **199** and **346** produced small quantities of pottery from contexts **440**, **432**, **53** and **346**. With the exception of a probable base from context **53** (Segment **52** of Ditch **199**), none of the sherds were diagnostic and those from contexts **440** and **432** (segments **425** and **428** respectively of Ditch **195**) were so small and in such poor condition that they were described as 'fragments' rather than body sherds. This may reflect the fact that they had been exposed to weathering before incorporation into the ditch fills.

Curvilinear ditches

One of the curvilinear ditches, (collectively interpreted as ring-gullies associated with roundhouses) **797**, part of RG 21, produced the largest group of sherds from the site (context **798**). The majority of sherds (in a coarse rock-tempered fabric; H2 Coarse Rock) appeared to be part of a single vessel, a bowl with a finger-impressed rim and, as noted above, it might be possible to reconstruct a significant part of the vessel. The fact that this vessel is a bowl suggests a relatively late date for the ring ditch which seems to be consistent with the recovery of Roman artefacts elsewhere on the site.

Three further sherds of pottery distinguished by their finer fabrics (H2 Fine Quartz) were recovered from the same context but were too small and abraded for the form of the vessel(s) from which they came to be determined.

Context **798** also produced 22 fragments of fired clay, oxidised throughout and containing fine quartz sand.

Context **322**, the fill of cut **321**, also part of RG 21, contained five small sherds and flakes of pottery in a fine quartz and rock tempered fabrics but none of these could be identified as being from a specific type of vessel.

Two contexts in RG 19, **350** and **417**, produced quantities of pottery with the largest assemblage recovered from context **350**. This group consisted of 51 sherds including the base of an unidentified type of vessel and small flake of late 19th or early 20th century Whiteware. All of the prehistoric sherds were rock-tempered types, the majority containing coarse rock fragments. As noted above, the Whiteware sherd might be intrusive in the earlier context. Context **417** produced just one sherd, the base of a vessel which, as described above, bore concentric striations on the underside.

Context **513**, part of RG 17, a substantial ring ditch, contained just four fragments of pottery, all of it in a fine quartz-tempered fabric (H2 Fine Quartz). All the sherds were heavily abraded, perhaps consistent with the suggestion that the ditch had infilled naturally over time. If this interpretation is correct, the pottery was probably not deliberately deposited in the ditch even though it came from a ditch terminal, often the focus of deliberate deposition. Context **525** contained just one small, heavily abraded sherd also in a fine sandy fabric (sample AA). Contexts **513** and **554** contained fragments of fired clay, all oxidised and all of undetermined function and origin.

Other features

Context **465**, the upper fill of Ditch recut **457**, produced two joining sherds in an H2 Quartz and Rock fabric, both of them heavily abraded.

The fill of pit **333**, context **334**, produced two heavily abraded sherds in a fine quartz tempered fabric. Neither could be linked with a specific vessel type. As noted above, the feature also produced seven joining fragments of fired clay although this was much harder and more robust than the typical range of such material and it is possible that the fragments belonged to an object, although there was no indication of what this might have been.

Context **705**, the fill of a modern pit, produced a single small, abraded sherd in fine quartz and rock tempered fabric, a residual element within a much later feature.

CURATION AND ARCHIVING

Although small in size and in poor condition, the assemblage is of significance because of its unusual nature and the presence of substantial parts of rare, decorated, vessels including a bowl and a probable jar, both with decorated rims. For this reason, it is recommended that the assemblage be deposited in its entirety in an appropriate museum or archive depository where it will be available for further research in the future.

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Table B1: Prehistoric and later pottery from East Wideopen Farm (2016 phase)

Group	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	Feature
195	432	H2 Fine quartz	1	4	1	Fragment	U/ID	U/ID	PRIA – Roman	Abraded fragment, no surfaces, in an orange to dark grey sandy fabric w/ sparse fine quartz		Ditch 428
195	440	H2 Fine quartz	2	8	2	Fragments	U/ID	U/Dec	PRIA – Roman	Bright orange fragments w/ fine quartz up to 0.2mm, rare soft white rock frags; cracked surface on one fragment		Ditch 425
199	53	H2 Coarse rock	1	20	1	Base?	U/ID	U/Dec	PRIA – Roman	Pale grey to buff fabric w/ sub-angular rock frags up to 7mm; very heavily abraded		Gully 52
RG 21	322	H2 Fine quartz	1	5	1	BS	U/ID	U/Dec	PRIA – Roman	Dark grey int w/ bright orange ext margin; abundant fine quartz sand up to 0.2mm, occ larger		RG 321
RG 21	322	H2 Rock	4	4	4	BS/Flakes	Hollow ware	U/Dec	PRIA – Roman	Shapeless fragments w/ occ fine rock frags	AA	RG 321
RG 21	798	H2 Coarse rock	24	50	24	BS/Flakes	Hollow ware	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly finer		RG 797
RG 21	798	H2 Coarse rock	67	130	67	BS/Flakes	Hollow ware	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797
RG 21	798	H2 Coarse rock	6	242	1	Profile?	Dish/bowl	Finger-impressed rim	PRIA – Roman	Shallow, irregularly finished bowl or dish w/ a flat-topped rim w/ fingernail impressions		RG 797
RG 21	798	H2 Coarse rock	34	59	34	BS/Flakes	Dish/bowl	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797
RG 21	798	H2 Coarse rock	22	147	22	BS/Flakes	Dish/bowl	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797
RG 21	798	H2 Coarse rock	2	13	2	Rim	Dish/bowl	Finger-impressed rim	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797

RG 21	798	H2 Coarse rock	24	127	24	BS/Flakes	Dish/bowl	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797
RG 21	798	H2 Coarse rock	10	321	10	BS/Flakes	Dish/bowl	U/Dec	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 12mm, mainly around 4mm		RG 797
RG 21	798	H2 Coarse rock	1	28	1	Rim	Dish/bowl	Finger-impressed rim	PRIA – Roman	Distinctive flaked and shattered sherds, probably from one vessel; sub-rounded rock frags up to 8mm, mainly around 4mm		RG 797
RG 21	798	H2 Fine quartz	1	2	1	BS	Hollow ware	U/Dec	PRIA – Roman	Small abraded fragment in a fine sandy fabric w/ fine quartz up to 0.2mm		RG 797
RG 21	798	H2 Fine quartz	1	7	1	BS	Hollow ware	U/Dec	PRIA – Roman	Heavily abraded shapeless sandy fabric w/ abundant quartz up to 2.5mm but mainly finer		RG 797
RG 21	798	H2 Fine quartz	1	8	1	BS	U/ID	U/Dec	PRIA – Roman	Abraded fragment		RG 797
346	346	H2 Quartz & rock	1	7	1	BS	Hollow ware	U/Dec	PRIA – Roman	Abundant sub-angular quartz and rock up to 1mm, occ larger w/ fine muscovite at surface; heavily abraded		Ditch 346
RG 17	513	H2 Fine quartz	2	3	2	Fragments	U/ID	U/ID	PRIA – Roman	Very heavily abraded round fragments w/ abundant fine quartz sand		RG 512
RG 17	513	H2 Fine quartz	1	1	1	Fragment	U/ID	U/Dec	PRIA – Roman	Small fragment		RG 512
RG 17	513	H2 Fine quartz	1	3	1	BS	U/ID	U/Dec	Undated	Heavily abraded orange sandy sherd	AE	RG 512
RG 17	525	H2 Fine quartz	1	1	1	BS	U/ID	U/Dec	PRIA – Roman	Very heavily abraded oxidised fragment w/ fine quartz	AA	RG 523
RG 19	350	H2 Coarse rock	2	65	1	BS	Hollow ware	U/Dec	PRIA – Roman	Abundant, well-sorted sub-angular rock frags (sandstone) up to 6mm; black int, pale orange-buff ext		RG 349
RG 19	350	H2 Coarse rock	3	126	1	Base	Hollow ware	U/Dec	PRIA – Roman	Abundant angular rock frags up to 11mm inc sandstone; black deposit int on some sherds		RG 349
RG 19	350	H2 Coarse rock	28	247	28	BS	Hollow ware	U/Dec	PRIA – Roman	Abundant angular rock frags up to 8mm; black deposit int		RG 349
RG 19	350	H2 Coarse rock	1	14	1	BS	Hollow ware	U/Dec	PRIA – Roman	Abundant sub-angular red rock frags in a sandy body; abraded	AC	RG 349

RG 19	350	H2 Coarse rock	4	19	4	BS	Hollow ware	U/Dec	PRIA – Roman	Abraded fragments; moderate sub-angular rock frags up to 4mm	AE	RG 349
RG 19	350	H2 Coarse rock	9	56	9	BS	Hollow ware	U/Dec	PRIA – Roman	Abraded sherds and flakes w/ moderate, well-sorted sub-angular rock frags up to 6mm, mainly finer	AA	RG 349
RG 19	350	H2 Rock	1	12	1	BS	Hollow ware	U/Dec	PRIA – Roman	Sparse angular rock frags up to 4mm in a fine sandy body		RG 349
RG 19	350	H2 Rock	1	5	1	BS	Hollow ware	U/Dec	PRIA – Roman	Sparse angular rock frags up to 3mm in a fine sandy body; abraded	AC	RG 349
RG 19	350	H2 Rock	1	7	1	BS	Hollow ware	U/Dec	PRIA – Roman	Abraded sherd or internal flake w/ moderate sub-rounded rock frags occ up to 3mm	AB	RG 349
RG 19	350	Whiteware	1	0.5	1	Flake	U/ID	U/Dec	LC19th – MC20th	Small flake	AA	RG 349
RG 19	417	H2 Fine quartz	1	117	1	Footed base	Jar	Smoothed ext	PRIA – Roman	Concentric grooves on underside of base; abundant fine sub-angular quartz up to 0.5mm w/ rare rock frags		RG 416
	334	H2 Fine quartz	2	8	2	BS/Fragments	U/ID	U/ID	PRIA – Roman	Heavily abraded rounded fragments w/ abundant fine quartz sand up to 0.4mm		Pit 333
	465	H2 Quartz and rock	2	14	1	BS	Hollow ware	U/ID	PRIA – Roman	Heavily abraded sherd w/ abundant, poorly sorted sub-angular quartz and rock frags up to 6mm		Ditch 457
	705	H2 Fine quartz and rock	1	2	1	Fragment	U/ID	U/Dec	PRIA – Roman	Heavily abraded shapeless fragment; fine angular rock and fine quartz up to 2mm but mainly finer		Modern
		Total	265	1883	256							

Table B2: Fired clay from East Wideopen Farm (2016 phase)

Group	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Feature	Sample
RG 21	322	Fired clay	4	39	4	Fragments	U/ID	U/Dec	PRIA – Roman	Shapeless fragments in fine sandy fabrics		AA
RG 21	798	Fired clay	22	80	22	Fragments	U/ID	U/Dec	PRIA – Roman	Shapeless fragments of fired clay; oxidised throughout w/ fine quartz sand; possible twig/stick impressions	RG 797	
RG 17	513	Fired clay	24	146	24	Fragments	U/ID	U/Dec	PRIA – Roman	Shapeless fragments of fired clay; oxidised throughout w/ fine quartz sand	RG 512	
RG 17	554	Fired clay	5	50	5	Fragment	U/ID	U/Dec	PRIA – Roman	Soft oxidised fragments of fired clay	RG 552	

	334	Fired clay	7	24	1	Fragments	U/ID	Grass/straw imps int and ext	PRIA – Roman	Odd frags, probably from a flat object, w/ prominent straw impressions int and ext; abundant fine quartz sand	Pit 333	
		Total	62	339	56							

Table B3: Prehistoric and Roman pottery from East Wideopen Farm (2017 phase)

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Context notes
3710	H2 Coarse rock	1	77	1	Rim	OJ	Flat-topped rim	900BC – LC4thAD+	Large, well-sorted angular rock frags up to 16mm in a fine sandy fabric; thick black burnt deposit ext	
3798	H2 Coarse rock	2	75	1	BS	Hollow ware	U/Dec	PRIA – Roman	Oxidised ext, reduced core; common red rock frags up to 6mm, mainly finer	
3798	H2 Fine quartz	1	12	1	Rim	OJ	Fingernail impressed rim	900BC – LC4thAD+	Fine black sandy fabric w /abundant fine quartz; thin black burnt deposit ext	
3798	H2 Fine quartz	1	26	1	Rim	OJ	Fingernail impressed rim?	900BC – LC4thAD+	Fine black sandy fabric w /abundant fine quartz; thin black burnt deposit ext	'found near surface while cleaning'
	Total	5	190	4						

APPENDIX C

CERAMIC BUILDING MATERIAL

Chrystal M. L. Antink

INTRODUCTION

During excavations at East Wideopen Farm, 52 fragments of ceramic building material (CBM) were recovered from 22 contexts, totalling 27,179g. The majority of these were post medieval; the diagnostic remainder may be Roman but are notably abraded making identification tenuous.

METHODOLOGY

Fragments were recorded by weight, form, and any complete dimensions in a Microsoft Access database. The assemblage was examined under a x10 hand magnifying lens to aid a compilation of a fabric series. Any unusual firing characteristics, stamps and external effects were noted.

RESULTS AND DISCUSSION

Handmade fragments

Of the 28 fragments not definitely attributable to the post-medieval period, three were possible Roman *tegulae* from contexts **670**, **456** and **468**; eight were from bricks (six of these from a single brick, see catalogue below) in contexts **555** and **674**; and the remainder were undiagnostic from contexts **053**, **670** and **555**.

Fabric series

0 Fragment too small to break for checking.

1 Occasional fine mica, well sorted, grey colour; modern.

2 Frequent, fine to coarse angular quartz; occasional fine mica; sparse fine black flecks; occasional coarse, rounded chalk; occasional fine voids; medium orange.

3 Frequent coarse to very coarse angular quartz; occasional very fine mica; occasional fine black flecks; occasional coarse red firing clay pellets; occasional white firing lenses; occasional red firing lenses; occasional Fe-rich angular pellets; red-orange colour.

3a Frequent coarse to very coarse angular quartz; occasional very fine mica; occasional fine black flecks; occasional coarse red firing clay pellets; frequent white firing lenses; occasional red firing lenses; moderately well sorted; red-orange colour; modern.

4 Occasional coarse to fine angular to sub-angular quartz; sparse very fine mica; sparse, fine rounded chalk; very sparse, fine, rounded red firing clay pellets; well sorted; red-orange colour; modern.

5 Frequent coarse to very coarse, angular to sub-angular quartz; occasional fine black flecks; occasional coarse to very coarse rounded chalk; occasional coarse red firing

clay pellets; frequent white firing lenses; frequent red firing lenses; sparse Fe pellets; ill-sorted; red-orange colour.

99 Complete modern bricks

Table C1: CBM type by fabric

	Fabric							
Type	1	2	3	3a	4	5	99	Total
Brick							9	9
Brick?			1			1		2
Floor tile					1			1
Pan tile	1			2	5			8
Tegula?		1	2					3
Undiagnostic	1	8	1					10
Total	2	9	4	2	6	1	9	33

Abridged catalogue

This is a partial catalogue referring to items of particular interest; complete details are recorded on an Access database within the site archive.

Context 555

Six partially adjoining fragments of a single brick; 45mm wide and 36mm high but unknown length, unevenly fired; 267g; possible *opus spicatum*.

Context 670

Tegula flange fragment, 53mm high, 25mm thick, standing 21mm above tile, 79g; notably abraded.

CONCLUSION

The CBM from most of the site was so fragmentary it was undiagnostic, but there were occasional identifiable fragments. While certainly not conclusive of any Roman activity directly on site, it suggests a regional presence.

It is recommended that the artefacts should be retained and deposited with the site archive.

APPENDIX D

WORKED STONE

John Cruse

INTRODUCTION

During both phases of the excavations at East Wideopen Farm a total of six fragments of worked stone were collected from various contexts. These were assessed and analysed at each phase of mitigation works.

RESULTS AND DISCUSSION

Damaged Boulder with 'Basin': Context 377

Description: c.70% of a naturally rounded boulder. Est. max dimensions 320mm x 240mm, 160mm thick: Weight 10.985kg (Est intact 16kg). Yorkshire Quern Survey (YQS 6941; Heslop 2008). It has been modified by:-

I: six or seven deliberate impacts have removed c.30% of its edges.

II: an oval 'basin' has been pecked into its 'upper' surface, which is 110mm x 80mm with a max depth 25mm.

III: on an adjacent area, the outer surface of the boulder seems to be abraded over an area of 60mm x 40mm.

As none of these features are interconnected, the sequence of their creation is unknown.

Lithology: Medium grained sandstone, with sparse coarse grains: Millstone Grit. The rounded nature of the boulder suggests that it was either derived from a swift stream or beach, or from glacial till.

Context: Secondary fill of ditch segment **376** [ditch **195**]

Comment: Similar round or oval, shallow 'basins' have been recorded elsewhere. They have been given a range of interpretations, which include:-

A: Functional: Shallow mortar: The pecked (but not ground) surface of these small 'basins' suggests a crushing or pounding usage (rather than any abrasive grinding activity). From their small size, they could be suitable for crushing haematite (or other pigments or ores), for preparing temper (for pottery production) or for pounding herbs (or other small-scale food processing items).

A recently reported, but smaller, example is an irregular cobble with a single 50mm x 65mm, 15mm deep, oval depression (SF 85), found in situ in the final phase of the Late Neolithic 'Red House' at Crossiecrown, Bay of Firth, Orkney (Card 2016, 176). Nick Card notes that such 'mortars or "paint pots"' are present at Barnhouse, Ness of Brodgar, Tofts Ness and Links of Notland, all of which date to the 3rd millennium cal BC'. He links them to pigment preparation for use in decorating the wall plaster of the houses (Card 2016, 194).

Similar items have been found in in Ireland, where they are attributed to early historic times. Corlett (2009, 32) discussed Irish rock-cut 'bullauns' and comparable 'bowls found on small, portable stones or boulders', found in areas 'directly associated with early church sites', which he interprets as 'ore-crushing mortars'.

B: Functional: Door Pivot: A LIA to R-B example from Bridlington (Cool *et al*. 2009, 106-8) was reported to be 75mm diam and 35mm deep. This interpretation is perhaps unlikely for this Wideopen artefact, as there is no evidence of rotational wear to the 'basin' and the boulder is probably too large for such usage.

C: Non-Functional:' Stoup': Heslop (2008, 66-67) has noted nine LIA/R-B lower stones of 'Beehive' querns from North Yorkshire & Cleveland, which have 'basins' cut into their grinding faces as secondary features, typically 70mm (+/- 40mm) diam and 25mm (+/- 15mm) deep. He also cites a saddle quern from a LIA context at Thorpe Thewles, Cleveland (Heslop, 1987, 88), which had been "'broken, inverted and had a [60mm diam, 30 mm deep] depression worked into the top'. Although his interpretation of such reuse was initially functional ('a small mortar'), he subsequently concluded that 'the basins are more like stoups for holding or receiving offerings', with the basin, acting like the focus on the top of a Roman altar, being used to receive libations. Such activity could well be contemporary with the excavated Roman field system at Wideopen.

D: Non-functional: Portable Cup-marked Rock: The final possibility is that it is a late Neolithic/early Bronze Age decorated artefact, which has either been curated or was residual from a nearby, destroyed cairn. Beckensall (2001, 143) cites an example of a cup-marked cobble, which was found embedded in a round barrow at Old Bewick, Northumberland. If there is little site evidence of early prehistoric activity, this explanation may be improbable.

Summary: As none of the boulder damage looks to be natural, it is assumed to be deliberate. If such irrational activity took place after its 'basin' had been used, then this could suggest that its initial purpose was also non-functional, perhaps favouring the 'stoup for libations' explanation. Alternatively, the boulder damage could have preceded its modification into a 'small mortar', which was then used to crush or pound some unknown material. While examples of both types of artefact are known from comparable late Iron Age/Romano-British contexts elsewhere, the possibility that this is a residual or curated object may also be worth considering.

Probable Upper stone of a Disc Hand Quern: Context 752

Description: c.10% fragment: difficult to reconstruct convincingly: it is assumed to be fractured radially, with 100% removal of its grinding surface (G/S) edge. The G/S is flat and worn – assumed to be slightly concave. This then implies that the flat, smoothly finished 'upper' surface is quite steeply convex (instead of being horizontal, as usual).

Lithology: Medium grained gritstone

Dimensions: Diameter >340mm (est 400-460mm), Height Rim <28mm (est. 16-23mm), Hopper Width c.120mm, Depth 55mm, Feed-Pipe diam c.100mm: Weight 1.3kg (est. intact 13kg), YQS 6942.

Context: **752** – Fill of terminal **743** of Enclosure A ditch **750**.

Comment: The above is the least unsatisfactory explanation of its features. The flat, well-finished 'upper' surface suggests it is an upper stone (rather than a lower stone or a saddle quern). The

minimal survival of the assumed feed-pipe edge makes estimating its diameter difficult. Chronologically, assumed to be Roman.

Single-handed Rubber: Context 465

Description: Water-rolled (?) cobble, which had been split obliquely (presumably to maximise the G/S area). The G/S is flat/slightly convex, worn smooth in its central area. c.25% of the G/S edge has been damaged by two impacts.

Lithology: Non-sedimentary rock with small voids: Probable igneous erratic.

Dimensions: G/S face oval, 75mm x 115mm, max height 58mm: Weight 0.7kg: YQS 6943

Context: **465** – Upper fill of large ditch recut terminal **457**.

Comment: This palm-sized cobble is well suited for single-handed grinding in a circular manner on a saddle quern lower stone. Its G/S dimension are well within those observed for 'rubbers' , typically 150mm (+/-70mm) long and 120m (+/-40mm) wide (Cruse, in prep). Similar artefacts are used from the Neolithic, through into Roman times.

'Smoother': Context 290

Description: End fragment of a longer, rectangular slab, its flat 'upper' surface and sides are apparently natural cortex. The fracture face has an impact scar in the centre of this 'upper' face (which may be a modern breakage). There are three areas of modification:-

'Base' surface (60mm wide) has been worn flat and very smooth, with minor, randomly oriented, scratches.

Top of one edge has been worn into a 10mm wide bevel.

'Upper' surface has two sets of c.7 roughly parallel scratches, 2-5mm apart (a relic of a slicing operation?)

Lithology: Non-sedimentary rock: Possible igneous erratic.

Dimensions: >65mm long, 80mm wide and 43mm thick, Weight 0.46kg, YQS 6944.

Context: **290**: Fill of ditch **195.**

Comment: The unsuitability of the rock for grinding and the lack of any abrasive wear indicate that this wasn't a grinding tool or a hone. The flat nature of the wear to the bevel and to the lower surface suggests some form of smoothing operation, an attribution that goes back to the Neolithic (Clarke 2016, 463), but continues thereafter.

Unworked Boulder Fragment: Context 465

Description: Detached end of an irregular boulder: max dimensions 180mm x 170mm x 130mm: Triangular section about the fracture. One face is flat, max width 140mm, max length 180mm. Another is concave and the third is convex. No obvious signs of surface working. Weight 3.7kg

Collection of unworked, heated pebbles and cobbles Context 334

Description: 10 fragments of pebbles/cobbles. No signs of working. Five have variable colour, suggestive of heating. One has soot on its fracture faces, thus this heating episode was subsequent to its fracture. The irregular nature of the fracture faces, plus evidence of cortex lamination, also suggests heating. Probably 'potboilers'.

Beehive quern fragment (RF001): Context 3593

Preservation: c.15% fragment, with c.85% of its grinding surface edge chipped away, 100% of its hopper top removed and the remaining core divided radially into quarters: Impact marks suggest that the last two operations were carried out using a metal point.

Features: Outer surface is neatly pecked in a 'classic' beehive shape, with evidence of some secondary abrasion: only a small area of the gently concave hopper survives (c.30mm x 50mm): grinding surface is flat, with the outer 30mm worn smooth: assuming a vertical feed-pipe, the grinding surface has worn asymmetrically (10°).

Lithology: Fine grain sandstone: no fossils: some secondary ferrous staining on the fracture surfaces: probably sourced from local Coal Measures.

Dimensions: Diameter c.320mm: Height >160mm: Hopper diam.>60mm, depth >90mm: Weight 3.5kg (est. intact c.23kg): Estimated usage before deposition c.50%: YQS 7661.

Quern fragment (RF001) comes from a beehive quern. These are typically found in and around 'native' settlements, but are quite rare in 'Romanised' environments, such as settlements close to Roman roads. Although early examples are known from the last few centuries BC, beehive querns continue to be used well into the Roman period.

While the main beehive distribution is focused on Yorkshire (between the Tees and the Don, more than 1,200 examples have been recorded by the Yorkshire Quern Survey), their use continues up the North-East coast, with 30 beehives being known from the Northumberland Coastal Plain and with smaller clusters continuing to be found on the better farmland, as far north as the Forth Estuary.

Excavations at Pegswood Moor discovered two intact beehive bases (SF 7, dated to between 2nd and 1st century BC, and SF 18, dated to between the 1st and 2nd century AD). Of the two upper stones, one was intact but had most of its grinding surface edge removed (SF 16) and another (SF 17, dated to between the 1st and 2nd century AD) had its edges similarly removed, plus the top of its hopper, before it was then quartered just like RF 001 (Wright 2009, 56).

Earlier investigations at East Wideopen by ASDU in 2012 yielded a beehive base (SF 1) that had been split in half (Cruse 2013). Beehives from other nearby local sites, reported by Heslop and Bateman (2013, 156-8) include:

- East Brunton, an intact base (SF 113). N.B: also from a ring-gully.
- West Brunton, an upper stone with its hopper completely detached (SF 259), two intact upper stones (SF 258 and SF 40) and an upper stone which had been halved (SF 273).

- Blagdon Park 2, three likely bases, of which two were divided (SF 8 and 22) and the other (SF 24) 'had all of its grinding face removed', together with apparent damage to its basal area.

RF001 has had its grinding surface edges and the upper section of its hopper deliberately removed, followed by the quartering of the remaining core. This was a relatively common practice (see above; Heslop 2008, 68-72), particularly among users whose habits seem to have been little affected by the more casual disposal practices of 'Romanised' quern users. A YQS analysis of 203 beehive querns in 2015 revealed that 61 of the stones had been divided and, of those, some 25% had also had over 90% of their grinding surface edge removed.

Such irrational behaviour may have extra relevance if RF001 is confirmed to be a 'votive deposit', as it demonstrates that the local inhabitants at Wideopen not only shared the same quern types as their neighbours further south, but also disposed of their querns in similar ways.

Natural Stone Block (RF 002): Context 3593

Dimensions: Triangular bock 90mm x 110mm x 110mm with natural faces, rounded by abrasion, fractured at a length of 85mm. No signs of human usage: Weight 1.2kg.

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APPENDIX E

METAL PRODUCTION RESIDUES

Dr. R. Mackenzie

INTRODUCTION

The following report is an archaeometallurgical assessment of possible metallurgical and/or high temperature production residues recovered during archaeological fieldwork at East Wideopen Farm, Tyne and Wear.

METHODOLOGY

The aim of this assessment has been to provisionally identify the slag-like residues, and determine whether further analysis could provide additional information about the site, or activities carried out there. All of the fragments in the assemblage have been visually examined in detail, and where necessary tested for magnetic response. The assemblage has been quantified by count and weight. A summary of the findings of the assessment is at the end of this report. It should be noted that no scientific analysis (metallurgical or chemical) has been carried out at this stage.

In some cases, scientific analysis can help to determine the process origin of slags, although this is normally justified only where there is supporting archaeological or historical evidence of metal production, or is the particular slag is of archaeometallurgically significant type.

RESULTS AND DISCUSSION

The assemblages of both the 2016 and 2017 phases are presented here as one assemblage. It contains one large piece of slag that probably originated from iron smelting or working, which suggests that iron may have been smelted or forged close to the area excavated. The assemblage also contains other fragments of possible metallurgical slag, but these are undiagnostic of a specific process.

The remaining slag-like fragments in the assemblage are largely by-products of burning coal, fuel ash slag and coke. The assemblage also contains two corroded handmade nails and some fragments of broken-up structural material.

The material in the assemblage that had provisionally been catalogued as 'fuel' predominantly consists of small fragments of coal that are each less than 50g in weight and/or less than 4cm^3. It is estimated that there are well over 1,500 individual fragments of coal in the assemblage. A small number of fragments (<30) are possibly small fragments of coal derived fuel ash slag, also known as clinker.

The material provisionally catalogued as 'hammerscale' predominantly consists of fine (i.e. <3mm) fragments of naturally magnetic geological matter, fine fragments of clinker and small shale-like fragments of coal. No true flake hammerscale was present in the assemblage, although there were trace amounts of spheroidal hammerslag in samples from five contexts, and of these, only one context produced more than one or two pieces. Context **3439** produced 12 pieces of spheroidal hammerslag, none of which were larger than 3mm diameter.

The material that had been provisionally catalogued as industrial waste has been identified as a mixture of natural geological material and coal derived fuel ash slag (clinker).

The 'fired clay' category of material appears to consist of fragments of ceramic building material, possibly from clay roof tiles or handmade red bricks. There are no identifiable fragments of refractory type brick that is more commonly found in high temperature industrial structures.

The possible structural materials mentioned above were recovered from contexts **43** and **118**; this sub-assemblage includes fragments of what appear to be stone or possibly coarse brick cemented together with lime mortar. The archaeological contexts suggest that the material may have originated from demolished structures associated with Wideopen Colliery.

The most notable piece in the assemblage is the approximately 6kg lump of slag, recovered from **480**, the upper fill of pit **477**. The lump is roughly plano-convex in section and there is a noticeable dimple in what may have been its upper surface. Its facture surface reveals a graphite grey coloured slag with moderate and variable vesicularity, with traces of fragments of charcoal present in the slag.

The morphology of this large piece and its fracture surface suggests that the slag may have originated from the base of a 'pre-industrial' type of iron smelting furnace, such as a bloomery furnace, or possibly the hearth of a later charcoal fired refining hearth, in which cast iron was converted into malleable iron.

It is interesting the large lump was found in the upper fill of an Iron Age/Roman pit, as this fill pre-dates the later medieval period and this can rule out the finery hearth origin for the slag.

The presence of fragments of coke is again of interest, as it has a relatively long history as metallurgical fuel. However, as coke has the potential to contaminate some metals during smelting and refining, it was only used for specific application, particularly before the advent of coke fire blast furnaces in the early 1700s. One of the most common and widespread uses of coke was as fuel in blacksmiths' and farriers' hearths.

The relatively small size of the slag assemblage and lack of any features clearly associated with metal production suggests it is unlikely that metals were being smelted or refined at East Wideopen Farm, and the slag could have been produced in metallurgical furnaces and working areas situated well away from the main occupational area and probably outside the excavation area.

The only material in the 2017 phase assemblage that can be directly attributed to a specific manufacturing process is the spheroidal hammerslag, which is a common indicator of iron smithing. However, almost all of the spheroidal hammerslag was recovered from the secondary fills of ditches or pits; this, together with the very small amounts found, make it impossible to link the material to more specific iron-smithing activities at the site.

The most abundant types of material in the assemblage are fragments of coal that presumably originated from the former Wideopen Colliery. Apart from a handful of larger pieces, all fragments of coal in the assemblage are very small, and they are typical of the left-over remnants of coal after the larger pieces had been screened out at the colliery. The small fragments of coal and coal dust present in the assemblage are a type of coal that was once commonly referred to as 'slack', and this was normally the cheapest type of coal available. Presumably, the low value of slack is what makes it a relatively common find in the immediate area of former collieries.

The former Wideopen Colliery and its associated coal fired engines/boilers also seems a likely potential source of much of the fuel ash slag in the assemblage.

APPENDIX F

ANIMAL BONE

Elizabeth Wright, Hannah Russ and Alistair Zochowski

INTRODUCTION

This report presents an analysis for the animal remains recovered from Iron Age/Romano British features and deposits during archaeological excavations by Northern Archaeological Associates at East Wideopen Farm, North Tyneside in 2016 (EWO15) and 2017 (EWO16) prior to the development of the Five Mile Park area (centred on NGR NZ 2457 7255) by Bellway Homes Ltd. Animal remains were uncovered during both the 2016 and 2017 excavations. The assessment of the remains from the 2016 works describes an assemblage of 58 identifiable specimens (Zochowski 2016), made up of cattle (*Bos taurus*), sheep/goat (*Ovis aries*/*Capra hircus*) and equid (*Equus* sp.) remains, with cattle the dominant species. These species are typical of those found at sites spanning this broad period, but the small size of the assemblage restricted much further analysis or interpretation. The larger assemblage recovered during the 2017 excavations increased the size of the dataset from East Wideopen, and the combined assemblage from Iron Age/Romano-British features and deposits are analysed here within the context of the wider region.

Animal bone recovered from the remains of post-medieval stone and brick buildings that had formed part of the farmhouse that was extant prior to the commencement of the archaeological excavation are not considered here, having been assessed previously (Wright 2017).

METHODS

Identifications were made by Zochowski (EWO15) and Wright (EWO16) using the reference collection held by Northern Archaeological Associates (Barnard Castle, UK), in addition to the use of identification atlases and papers (e.g. Schmid 1972; Barone 1976; Prummel 1988). Sheep (*Ovis aries*) and goat (*Capra hircus*) distinction was attempted (using Kratochvil 1969; Boessneck 1969 and Zeder and Lapham 2010) but it was not possible to assign any specimens to species.

The material was recorded according to a selective diagnostic-zone recording protocol. This involved the recording of a pre-defined set of skeletal parts, defined as 'countable', which were then used in the quantification of species and body parts. Zones followed those laid out in Bertini Vacca (2012). The Number of Identified Specimens (NISP), were calculated for each species, this was obtained by tallying the number of 'countable' identified specimens for each taxa identified.

The fusion of post-cranial bones for all taxa was recorded as 'fused', 'fusing' or 'unfused' (Albarella and Davis 1994), if the appropriate parts of the bone were present. Where possible tooth eruption and wear information was recorded according to Grant 1982 (cattle and pig) and Payne 1973 (sheep/goat).

Evidence of bone modifications including butchery, pathology, gnawing and burning was recorded. Surface preservation was also indicated as 'excellent', 'good', 'medium', 'bad or 'awful'. Where possible measurements were taken according to von den Driesch 1976, Davis 1992 and Albarella and Payne 2005.

RESULTS

The Iron Age/Romano-British assemblage from 2016 and 2017 totalled 36 bones and teeth and fragments thereof, including 25 countable specimens (NISP), Table F1. This count includes bones and teeth recovered by hand during excavation and those recovered from bulk environmental samples.

Preservation

The majority of bones showed a bad or medium state of surface preservation (Figure F1), indicating that the burial environments at the site were not particularly conducive to bone preservation. This is supported by the paucity of skeletal remains from the site in general. Poor surface preservation can make bone modification marks such as butchery or gnawing more difficult to identify. However, approximately half of the assemblage showed medium or good preservation, which indicates the potential for a useful dataset.

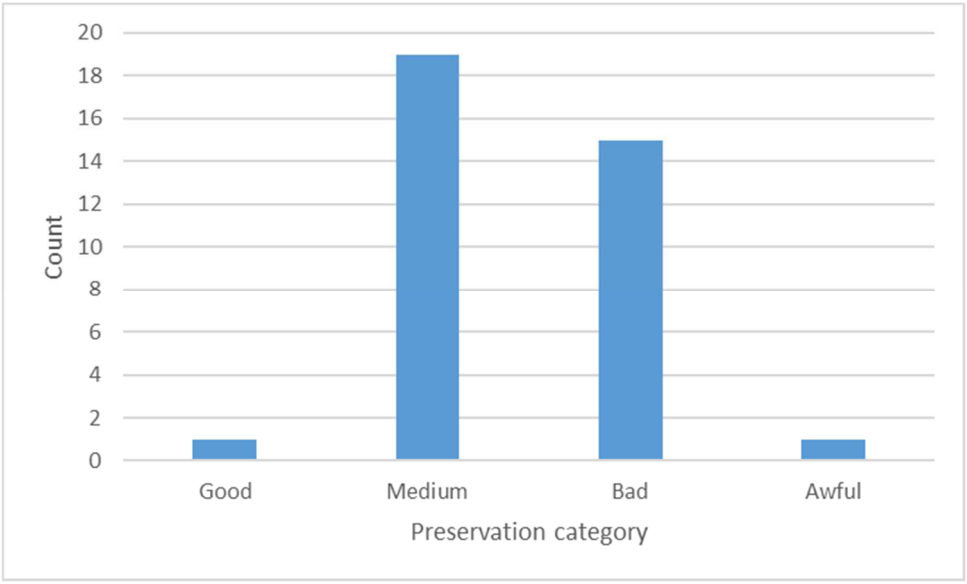

Figure F1: Bone surface preservation for animal remains recovered at East Wideopen

Species representation

The Iron Age/Romano-British animal bone assemblage from East Wideopen Farm comprised 25 specimens with countable zones (NISP - Table F1). The identified specimens comprise of cattle (*Bos taurus*), sheep/goat (*Ovis aries/Capra hircus*) and Equid (*Equus* sp.). One specimen, from context **3880** (ditch **3932**, phase 2a), represented a large ungulate but could not be identified any further than cattle or red deer (*Cervus elaphus*) and three specimens could not be assigned to an individual species, only to size-based class groups (e.g. large-sized mammal: cattle/deer; medium-sized mammal: sheep/goat/pig/dog sized). None of the caprine remains could be identified positively as either sheep or goat. Cattle were the most common taxa (NISP 13) followed by equid and sheep/goat (NISP 4 in both cases).

Butchery, burning and gnawing

No evidence for butchery in the form of cut- or chop-marks was observed on any of the animal remains. A fragment of humerus of a medium-sized mammal from context **3561** displayed

evidence for animal gnawing. Burning was recorded in two contexts: **3521** and **3763**, while many of the bone fragments recovered from samples were calcined, see Table F2.

DISCUSSION AND CONCLUSION

Cattle, sheep/goat and equids (three of the main domesticated livestock animals in the UK) are among the most common taxa found at Iron Age/Romano-British sites in Britain. The Iron Age/Romano-British phase at East Wideopen Farm could include activity, or periods of activity, over a period of c.1,200 years between c.800BC and c.400AD.

Once considered a region where Iron Age/Romano-British sites were sparse, evidence for human activity dating to this period in the North East is now well documented and becoming better understood (e.g. Sherlock 2010). Rectilinear enclosures, often containing evidence for multiple circular structures, have been recorded at a number of locations in the vicinity of those at East Wideopen, including at Brenkley (TWM Archaeology 2010), Burradon (Jobey 1970), Earsdon (Stevenson 2002), West Monkseaton (Stevenson 2002), Killingworth (Hodgson 1822; TWM Archaeology 1996; ASDU 2014a; b; c) and Wallsend (TWM Archaeology 2012).

The remains, though a small assemblage, are consistent with the animal-bone assemblage recovered at prominent sites in the North-East region; cattle have also been identified as the most common taxa at the Iron Age sites at Coxhoe, County Durham (Rackham 1982, 43-44) and Thorpe Thewles, Teesside (Rackham 1987, 101), indicating that beef, and other products and resources provided by this species were frequently utilised during this period in the North East. Similarly, sheep/goat and equid are also represented at these sites (Rackham 1982; Rackham 1987, 103-106), as they are at East Wideopen Farm.

In comparison with the larger Iron Age/Romano British sites in the North East, the animal remains recovered from East Wideopen Farm are restricted in range, with many of the commonly recovered mammals absent, including pig (*Sus domesticus*) and dog (*Canis lupus familiaris*), with none of the rarer species represented either (such as cat (*Felis catus*), fox (*Vulpes vulpes*) or red deer (*Cervus elaphus*)). The usual bird species were also absent, such as domestic fowl (*Gallus gallus domesticus*) and goose (*Anser anser*).

In conclusion, the small assemblage of animal remains from East Wideopen Farm provide evidence that supports the current understanding of the role of the main domestic animal taxa in Britain during the Iron Age/Romano-British period.

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TABLES

Table F1: Numbers of Identified (countable) Specimens (NISP) from the faunal assemblage, including teeth and material from samples

Context	Equus	Bos taurus	Bos taurus/	Ovis aries/	Large mammal	Medium mammal	Total
			Cervus elaphus	Capra hircus			
	Horse/donkey/mule	Cattle	Cattle/red deer	Sheep/goat			
426		1					1
450		1					1
466		1					1
469		1					1
494		1					1
504	1			1			2
505	1			1			2
625		1					1
694	1	1					2
724		1					1
725		1					1
779					1		1
3121		1					1
3137				1			1
3535		1					1
3561					1	1	2
3578		1					1
3643		1					1
3660	1						1
3794				1			1
3880			1				1
Total	4	13	1	4	2	1	25

Table F2: Animal bones with evidence for burning/exposure to high temperatures

Context	Burnt	Burnt/calcined	Calcined	Total
350			4	4
356			2	2
456			1	1
476			1	1
505			1	1
521			3	3
591			1	1
3137			1	1
3191			1	1
3481			1	1
3507			1	1
3521	1			1
3738			1	1
3763		1	4	5
3764			1	1
3793			3	3
Total	1	1	26	28

APPENDIX G

PALAEOENVIRONMENTAL

The palaeoenvironmental reports of each phase of mitigation works will be presented here in two parts.

2016 PHASE PALAEOENVIRONMENTAL

Lynne F Gardiner

INTRODUCTION

This report presents the results of the analysis of the palaeobotanical, charcoal and mollusc remains in accordance with Campbell *et al*. (2011) and English Heritage (2008).

During the first phase of archaeological excavation at East Wideopen Farm, Wide Open, North Tyneside, 100 bulk environmental samples were taken. As the sediments were clay-rich a part-processing strategy was employed as clayey sediments have a tendency to not yield much palaeoenvironmental material. Forty-five of the flots from the processing of the samples were submitted to for specialist assessment and the remainder were examined in-house by NAA.

The dearth of plant remains (two brome (Bromus sp.) seeds, one from sample **554** AA from RG 17 and the other, **334** AA, from fill of pit **333** meant that no meaningful discussion is possible. The molluscan assemblage was also sparse and the flat oyster (*Ostrea edulis*) umbo fragments present were from relatively modern contexts (fill of furrow **622** (**623**) and a sheep burial **723**).

The charcoal yield was a little better (13.09g from 15 samples) but the majority of the fragments were small, with some mineralisation or vitrification occurring. The most significant species was oak (*Quercus* sp.), then willow/poplar (*Salix/Populus*). Some fragments of cf. heather (*Calluna vulgaris*) were observed as well as possible conifer-type species and a single fragment of cherry (*Prunus* sp.). The small size of the assemblage offered no potential for discussion.

Two fragments of willow/poplar were suitable for radiocarbon AMS dating; from fill of linear **187** (**188** AA) and primary fill of ditch **354** (**356** AA). The assemblage offered no potential for further work and may be discarded (mollusca, plant remains, charcoal and magnetic matter).

METHODOLOGY

The bulk environmental samples (from a variety of contexts, see Table G1.3) were processed at NAA. The colour, lithology, weight and volume of each sample was recorded using standard NAA pro forma recording sheets (Table G1.2). Due to the heavy silty clays, all were pre-soaked in warm water prior to processing and the majority of the samples only had a sub-sample processed. The samples were then processed with 500µ retention and flotation meshes using the Siraf method of flotation (Williams 1973). Once dried, the residues from the retention mesh were sieved to 4mm and the artefacts and ecofacts removed. The smaller fraction was scanned with a magnet in order to recover any micro-slags, such as hammerscale, and then sorted. Any artefactual and ecofactual material was removed and forwarded to the relevant specialists (see Table G1.3).

The resulting flot was sorted using a stereo microscope (up to x45 magnification). Any non-palaeobotanical finds were noted on the pro forma. The result of the sort is in Table G1.4.

The plant remains and charcoal were identified to species as far as possible, using Cappers *et al*. (2006), Cappers and Bekker (2013), Cappers and Neef (2012), Hather (2000) and Schoch *et al*. (2004) and the NAA reference collection. Nomenclature for plant taxa followed Stace (2010) and cereals followed Cappers and Neef (2012). The mollusca were also identified to species as far as possible using Hayward and Ryland (1998), which also provided the nomenclature.

RESULTS

Fifty-five of the 100 samples processed had their flots examined in-house, the remainder were forwarded to the Historic England Science Advisor. The total weight of the sediments processed was 1,532kg (1150l).

Magnetic matter

The magnetic matter was scanned using a stereo microscope (x45). No micro-slags were observed.

Molluscs (Table G1.5)

Samples **377** AD and **417** AA yielded very small fragments of shell. Three fragments of flat oyster (*Ostrea edulis*) were hand-collected during the excavation. One from fill of ditch **585** (**591**) weighed <1g while right-hand valve fragments (mostly umbo) were observed from fill of furrow **622** (**623**) and a modern sheep burial **723**.

Plant remains

Only two charred plant 'seeds' were observed: one from sample **554** AA from ring-gully 17 and the other, **334** AA, from fill of pit **333**, both brome (*Bromus* sp.).

Charcoal (Table G1.6)

Overall, the site yielded 13.09g of charcoal from 15 samples, and identification was attempted for 47 fragments. For the most part they were either vitrified or mineralised and all were very small fragments. The most prolific species identified was oak (*Quercus* sp.) closely followed by willow/poplar (*Salix/Populus*). Some very small twig-like fragments of cf. heather (*Calluna vulgaris*) were observed in the samples from fill of RG 11 (**322** AA), fill of pit **333** (334 AA) and fill (**370**AA) of ring-gully terminal **369** (RG 19)). Possible conifer-type species were identified in primary fill of ditch **354** (**356** AA) and fill of ditch terminal **743** (**754** AA). The only other species present was a single cherry (*Prunus* sp.) fragment from fill of ring-gully terminal **449** (**450**AC).

The pit fill (**334** AA) charcoal fragments were all thought to possibly be heather but these were mineralised and their pore arrangement was slightly skewed. The sample which yielded the most charcoal was from the fill (**322**AA) of ring-gully terminal **321** (RG 21) with 10.11g of charcoal recovered, with the majority identified as oak.

DISCUSSION

Molluscs

The smaller fragments offer no potential for discussion. The larger umbo fragments from **623** and **723** are likely to be more modern intrusions and therefore have no archaeological significance.

Plant remains

The paucity of plant remains offered no discussion.

Charcoal

The majority of the charcoal-bearing samples (53%, n=8) were from deposits relating to terminal ends, either ring-gully terminal or ditch terminal). Another six (40%) were from ditches while only one pit yielded charcoal fragments. The majority of the terminal and ditch charcoals were most likely to be there through aeolian deposition as they were so small, or through bioturbation as all the flots were significantly rooty.

Collectively the charcoal assemblage offered no scope for further discussion as the presence of charcoal fragments cannot be securely linked to the feature fills.

Table G1.1: context descriptions

C	SC	Context description
53	AA	fill of segment 52 [ditch 199]
72	AA	fill of segment 71 [ditch 195]
94	AA	fill of segment 93 [ditch 196]
98	AA	fill of segment 97 [ditch 196]
104	AA	fill of segment 103 [ditch 199]
105	AA	fill of posthole 101
128	AA	fill of segment 127 [ditch 196]
130	AA	fill of segment 129 [ditch 199]
138	AA	secondary fill of ditch 137
139	AA	primary fill of ditch 137
142	AA	primary fill of ditch 140
165	AA	fill of segment 164 [ditch 195]
177	AA	primary fill of segment 176 [ditch 195]
180	AA	fill of segment 179 [ditch 195]
184	AA	fill of terminal 183 [ditch 200]
188	AA	fill of segment 187 [ditch 199]
202	AA	fill of segment 201 [ditch 196]
208	AA	fill of segment 207 [ditch 195]
212	AA	fill of segment 211 [ditch 196]
214	AA	fill of segment 213 [ditch 197]
230	AA	fill of segment 229 [ditch 196]
253	AA	fill of segment 252 [ditch 199]
257	AA	fill of segment 256 [ditch 195]
258	AA	fill of segment 256 [ditch 195]
322	AA	fill of ring-gully terminal 321 [RG 21]
324	AA	fill of ring-gully segment 323 [RG 20]
326	AA-AE	fill of segment 325 [ditch 195]
330	AA	fill of ring-gully segment 329 [RG 20]
332	AA	fill of ring-gully segment 331 [RG 20]
334	AA	fill of pit 333
336	AA	fill of ring-gully segment 340 [RG 21]
338	AA	fill of ring-gully segment 337 [RG 21]
350	AA-AE	fill of ring-gully segment 349 [RG 19]
356	AA	primary fill of segment 354 [ditch 346]
370	AA	fill of ring-gully terminal 369 [RG 19]
373	AA	secondary fill of segment 371 [ditch 346]
377	AA-AE	fill of segment 376 [ditch 195]
402	AA-AE	secondary fill of segment 394 [ditch 195]
417	AA-AE	fill of ring-gully segment 416 [RG 19]
426	AA	quaternary fill of segment 428 [ditch 195]
440	AA	tertiary fill of segment 425 [ditch 195]
450	AA-AE	fill of ring-gully terminal 449 [RG 15]
452	AA	fill of ring-gully terminal 451 [RG 11]
473	AA	fill of ring-gully segment 472 [RG 18]
480	AA	tertiary fill of pit 477
483	AA	blue clay fill in segment 474 [ditch 750]
504	AA	primary fill of segment 503 [ditch 750]
505	AA	secondary fill of segment 503 [ditch 750]
513	AA-AE	fill of ring-gully terminal 512 [RG 17]
520	AA	primary fill of ring-gully segment 519 [RG 17]
521	AA	upper fill of ring-gully segment 519 [RG 17]
525	AA-AE	upper fill of ring-gully segment 523 [RG 17]
527	AA	fill of possible posthole 526
530	AA-AE	upper fill of ring-gully segment 528 [RG 17]
554	AA	fill of ring-gully segment 552 [RG 17]
580	AA	fill of stake hole 579
590	AA	fill of segment 585 [ditch 822]
591		fill of segment 585 [ditch 822]
623		fill of furrow 622
625		fill of ring-gully segment 624 [RG 12]

641	AA	fill of segment 634 [ditch 750]
694	AA	lowest fill of segment 687 [ditch 749]
696	AA	upper fill of segment 687 [ditch 749]
705		modern sheep burial
723		Terminal of ditch 749. Sample incorrectly numbered
752	AA	fill of terminal segment 743 [ditch 750]
754	AA	fill of terminal segment 743 [ditch 750]
791	AA	fill of ring-gully segment 790 [RG 18]
798	AA	fill of ring-gully segment 797 [RG 21]

Key: **C**= context, **SC**= sample code

Table G1.2: sample data

C	SC	TQ	NP	CP	TP	MP	PW	PV	CS	Components (sorting)	A	SA	SR	R	SW	SV	>SW	>SV
53	AA	2	1	Mid yellowish grey	Compacted	Clay	12	7	Pale yellowish grey	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	√	-	-	273	200	130	100
72	AA	4	2	Dark greyish brown	Sticky	Clay	20	14	Dark greyish brown	Stone>1cm 20%: stone<1cm 60%: sand 20%	-	-	-	√	1385	1000	593	400
94	AA	2	1	Dark yellowish brown	Sticky	Clay	12	9	Pale grey	Stone>1cm 30%: stone<1cm 55%: sand 15%	-	-	√	-	1005	600	693	3650
98	AA	2	1	Dark yellowish brown	Soft	Clay	9	8	Dark yellowish brown	Stone>1cm 25%: stone<21cm 65%: sand 10%	-	-	√	-	543	375	233	150
104	AA	2	1	Dark greyish brown	Sticky	Clay	12	10	Mid brown	Stone>1cm 10%: stone<1cm 75%: sand 15%	-	-	-	√	364	250	96	75
105	AA	1	All	Dark greyish brown	Sticky	Clay	7	7	Mid brown	Stone<1cm 70%: sand 30%	-	-	-	√	140	100	63	75
128	AA	2	1	Mid greyish yellow	Compressed	Clay	10	7	Pale yellowish grey	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	√	-	-	322	150	172	50
130	AA	2	1	Dark reddish brown	Soft	Clay	10	8	Pale yellowish grey	Stone>1cm 15%: stone<1cm 65%: sand 20%	-	-	√	-	242	150	166	100
138	AA	1	All	Dark yellowish grey	Sticky	Clay	9	7	Pale grey	Stone>1cm 10%: stone<1cm 75%: sand 15%	√	-	-	-	284	200	79	50
139	AA	1	All	Dark reddish black	Sticky	Clay	8	7	Grey	Stone>1cm 20%: stone<1cm 50%: sand 30%	√	-	-	-	185	100	77	50
142	AA	1	All	Dark brownish black	Sticky	Clay	8	5	Grey	Stone>1cm 20%: stone<1cm 40%: sand 40%	-	-	-	√	167	125	59	50
165	AA	4	2	Dark greyish brown	Sticky	Clay	18	18	Mid brown	Stone>1cm 10%: stone<1cm 80%: sand 10%	-	-	-	√	698	500	171	100
177	AA	4	2	Dark reddish brown	Sticky	Clay	17	15	Dark greyish brown	Stone>1cm 15%: stone<1cm 70%: sand 15%	√	-	-	-	957	750	378	200
180	AA	2	1	Dark brownish grey	Sticky	Clay	11	9	Dark brown	Stone>1cm 20%: stone<1cm 65%: sand 15%	-	-	-	√	433	325	149	175
184	AA	1	All	Dark greyish brown	Sticky	Clay	11	10	Mid brown	Stone>1cm 15%: stone<1cm 80%: sand 5%	-	-	-	√	653	550	103	100
188	AA	2	1	Mid yellowish brown	Sticky	Clay	9	8	Pale yellowish brown	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	258	150	125	50

202	AA	2	1	Dark greyish brown	Sticky	Clay	9	8	Dark greyish brown	Stone>1cm 35%: stone<1cm 50%: sand 15%	-	√	-	-	917	650	438	250
208	AA	4	2	Dark greyish brown	Sticky	Clay	15	14	Dark greyish brown	Stone>1cm 25%: stone<1cm 60%: sand 15%	-	-	-	√	635	500	249	200
212	AA	2	1	Dark greyish brown	Sticky	Clay	10	9	Mid-greyish yellow	Stone>1cm 30%: stone<1cm 55%: sand15%	√	-	-	-	313	200	127	75
214	AA	2	1	Dark yellowish brown	Sticky	Clay	8	8	Pale grey	Stone>1cm 20%: stone<1cm 50%: sand 30%	-	-	-	√	228	150	522	50
230	AA	2	1	Mid greyish yellow	Sticky	Clay	9	7	Pale yellowish grey	Stone>1cm 10%: stone<1cm 10%: sand 80%	-	-	√	-	212	150	79	70
253	AA	1	All	Dark reddish grey	Sticky	Clay	10	7	Dark brown	Stone>1cm 20%: stone<1cm 70%: sand 10%	-	-	-	√	434	300	154	100
257	AA	4	2	Dark yellowish grey	Sticky	Clay	20	16	Pale greyish brown	Stone>1cm 10%: stone<1cm 60%: sand 30%	-	-	-	√	537	400	156	125
258	AA	1	All	Dark reddish brown	Soft	Clay	10	8	Dark blackish grey	Stone>1cm 10%: stone<1cm 80%:sand 10%	-	√	-	-	684	600	207	200
322	AA	4	2	Dark reddish grey	Sticky	Silty clay	20	13	Pale reddish-brown	Stone>1cm 30% stone<1cm 25%: sand 45%	-	√	-	-	1480	1100	651	400
324	AA	4	2	Pale reddish grey	Soft	Silty clay	18	14	Pale reddish grey	Stone>1cm 15%: stone<1cm 40%: sand 45%	-	√	-	-	1520	1000	720	400
326	AA	4	All	Dark yellowish brown	Crumbly	Silty clay	31	20	Pale yellowish brown	Stone>1cm 10%: stone<1cm 40%: sand 50%	-	-	√	-	1198	800	513	400
326	AB	1	All	Dark yellowish grey	Compressed	Clay	8	6	Pale yellowish brown	Stone>1cm 10%: stone<1cm 30%: sand 60%	-	-	√	-	308	200	125	50
326	AC	1	All	Dark yellowish brown	Sticky	Clay	8	6	Pale grey	Stone>1cm 30%: stone<1cm 30%: sand 40%	-	-	√	-	423	300	203	100
326	AD	1	All	Dark greyish brown	Sticky	Clay	5	3	Pale yellowish grey	Stone>1cm 10%: stone<1cm 25%: sand 65%	-	-	√	-	163	100	56	30
326	AE	1	All	Dark yellowish brown	Crumbly	Silty clay	7	5	Pale yellowish brown	Stone>1cm 10%: stone<1cm 30%: sand 60%	-	-	√	-	246	200	110	75
330	AA	2	1	Dark yellowish grey	Soft	Silty clay	10	7	Pale reddish grey	Stone>1cm 10%: stone<1cm 20%: sand 70%	-	-	√	-	660	650	260	350
332	AA	4	2	Dark greyish brown	Friable	Silty clay	20	15	Pale brown	Stone>1cm 25%: stone<1cm 20%: sand 55%	-	-	√	-	1903	1700	661	600
334	AA	4	2	Dark grey	Friable	Silty clay	20	17	Dark grey	Stone>1cm 5%: stone<1cm 20%: sand 25%: charcoal 50%	-	√	-	-	2685	3200	1065	1400

336	AA	3	2	Dark yellowish grey	Plastic	Silty clay	17	10	Pale yellowish brown	Stone>1cm 15%: stone<1cm 25%: sand 60%	-	√	-	-	1209	900	523	200
338	AA	4	2	Dark yellowish brown	Sticky	Silty clay	17	13	Pale reddish brown	Stone>1cm 20%: stone<1cm 35%: sand 45%	-	-	√	-	1091	750	561	400
350	AA	4	All	Dark greyish brown	Compressed	Clay	41	27	Pale brown	Stone>1cm 105: stone<1cm 35%: sand 55%	-	-	√	-	2039	1600	662	1400
350	AB	1	All	Dark grey	Sticky	Silty clay	8	5	Pale yellowish brown	Stone>1cm 10%: stone<1cm 20%: sand 70%	-	√	-	-	535	400	171	100
350	AC	1	All	Dark greyish brown	Sticky	Silty clay	7	4	Pale yellowish brown	Stone>1cm 20%: stone<1cm 10%: sand 50%: coal 20%	-	-	√	-	616	450	271	200
350	AD	1	All	Dark greyish brown	Sticky	Silty clay	12	5	Pale yellowish brown	Stone>1cm 15%: stone<1cm 25%: sand 60%	-	-	√	-	507	350	160	100
350	AE	1	All	Dark yellowish grey	Soft	Silty clay	11	7	Pale yellowish brown	Stone>1cm 15%: stone<1cm 20%: sand 65%	-	-	√	-	495	400	179	150
356	AA	5	All	Dark greyish brown	Soft	Silty clay	44	35	Pale grey brown	Stone>1cm 30%: stone<1cm 25%: sand 45%	-	-	√	-	2507	1800	926	400
370	AA	4	2	Dark brownish grey	Sticky	Silty clay	18	13	Pale greyish black	Stone>1cm 15%: stone<1cm 25%: sand 60%	-	√	-	-	1314	1200	468	300
373	AA	4	2	Mid yellowish brown	Sticky	Clay	23	16	Pale yellowish grey	Stone>1cm 30%: stone<1cm 15%: sand 55%	-	-	√	-	1656	1100	758	450
377	AA	4	All	Dark brownish grey	Sticky	Clay	40	29	Pale reddish-grey	Stone>1cm 20%: stone<1cm 30%: sand 50%	-	-	√	-	1343	1000	519	300
377	AB	1	All	Dark greyish brown	Sticky	Clay	10	7	Pale yellowish brown	Stone>1cm 10%: stone<1cm 20%: sand 70%	-	√	-	-	228	100	114	25
377	AC	1	All	Dark brownish grey	Friable	Silty clay	9	7	Pale yellowish brown	Stone>1cm 25%: stone<1cm 25%: sand 50%	-	√	-	-	423	300	120	100
377	AD	1	All	Dark greyish brown	Sticky	Silty clay	9	6	Pale greyish brown	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	558	400	194	100
377	AE	1	All	Dark yellowish brown	Sticky	Silty clay	10	6	Pale brown	Stone>1cm 5%: stone<1cm 15%: sand 80%	-	-	√	-	1008	800	546	400
402	AA	4	All	Dark yellowish grey	Sticky	Silty clay	39	30	Pale yellowish brown	Stone>1cm 30%: stone<1cm 20%: sand 50%	-	-	√	-	1083	800	396	400

402	AB	1	All	Dark yellowish brown	Compressed	Silty clay	10	8	Pale yellowish grey	Stone>1cm 5%: stone<1cm 15%: sand 80%	-	-	√	-	235	150	63	50
402	AC	1	All	Dark reddish brown	Sticky	Silty clay	11	8	Pale yellowish brown	Stone>1cm 20%: stone<1cm 30%: sand 50%	-	-	√	-	277	300	111	200
402	AD	1	All	Mid reddish brown	Compressed	Silty clay	10	9	Pale yellowish grey	Stone>1cm 10%: stone<1cm 25%: sand 65%	-	-	√	-	420	250	203	125
402	AE	1	All	Dark reddish brown	Soft	Silty clay	10	8	Pale grey	Stone>1cm 10%: stone<1cm 45%: sand 45%	-	√	-	-	231	125	31	25
417	AA	4	All	Dark greyish brown	Sticky	Silty clay	45	27	Pale brown	Stone>1cm 5%: stone<1cm 35%: sand 60%	-	-	√	-	3480	3000	1047	700
417	AB	1	All	Dark brownish grey	Friable	Silty clay	11	8	Pale grey	Stone>1cm 15%: stone<1cm 35%: sand 50%	-	-	√	-	810	700	227	200
417	AC	1	All	Dark reddish brown	Plastic	Silty clay	10	8	Pale yellowish grey	Stone>1cm 10%: stone<1cm 30%: sand 60%	-	√	-	-	987	800	323	200
417	AD	1	All	Dark greyish brown	Sticky	Silty clay	12	8	Pale brown	Stone>1cm 0%: stone<1cm 25%: sand 75%	-	-	√	-	1029	800	249	200
417	AE	1	All	Dark yellowish grey	Sticky	Clay	10	8	Pale brown	Stone>1cm 5%: stone<1cm 25%: sand 70%	-	-	√	-	975	800	285	200
426	AA	4	2	Dark yellowish grey	Sticky	Clay	18	13	Pale grey	Stone>1cm 25%: stone<1cm 35%: sand 40%	-	-	√	-	568	350	263	200
440	AA	4	2	Dark brownish black	Compressed	Clay	19	14	Pale grey	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	190	100	63	5
450	AA	4	All	Dark brownish grey	Sticky	Clay	49	37	Pale grey	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	6387	4400	2441	1200
450	AB	1	All	Dark greyish brown	Sticky	Silty clay	11	8	Mid yellowish brown	Stone>1cm 40%: stone<1cm 30%: sand 30%	-	-	√	-	1391	1000	482	400
450	AC	1	All	Very dark yellowish brown	Sticky	Silty clay	10	7	Pale grey	Stone>1cm 20%: stone<1cm 60%: sand 20%	-	√	-	-	1117	800	432	400
450	AD	1	All	Dark reddish grey	Sticky	Silty clay	10	8	Pale brownish grey	Stone>1cm 15%: stone<1cm 65%: sand 20%	√	-	-	-	1226	900	461	400
450	AE	1	All	Dark yellowish brown	Sticky	Silty clay	10	7	Pale brownish grey	Stone>1cm 5%: stone<1cm 85%: sand 10%	√	-	-	-	1168	900	435	400

452	AA	4	2	Dark reddish grey	Soft	Clay	21	12	Mid reddish brown	Stone>1cm 20%: stone<1cm 30%: sand 50%	-	-	√	-	2265	1800	909	500
473	AA	4	2	Dark yellowish grey	Sticky	Silty clay	18	15	Mid reddish brown	Stone>1cm 20%: stone<1cm 40%: sand 40%	-	-	√	-	1230	700	494	200
480	AA	4	2	Dark greyish black	Sticky	Silty clay	25	16	Mid reddish brown	Stone>1cm 30%: stone<1cm 30%: sand 40%	-	√	-	-	3254	2600	1212	1000
483	AA	4	2	Mid greyish brown	Sticky	Clay	12	10	Pale yellowish brown	Stone>1cm 10%: stone<1cm 30%: sand 60%	-	√	-	-	680	400	193	100
504	AA	4	2	Dark yellowish grey	Sticky	Clay	22	18	Pale reddish brown	Stone>1cm 10%: stone<1cm 30%: sand 60%	-	-	√	-	1222	1100	422	300
505	AA	4	2	Dark yellowish brown	Soft	Silty clay	23	14	Mid reddish brown	Stone>1cm 30%: stone<1cm 20%: sand 50%	-	√	-	-	4320	3200	1449	1100
513	AA	4	All	Dark reddish brown	Sticky	Silty clay	35	28	Pale yellowish grey	Stone>1cm 20%: stone<1cm 30%: sand 50%	-	-	√	-	2265	1600	1120	800
513	AB	1	All	Dark greyish black	Sticky	Clay	8	7	Pale grey	Stone>1cm 10%: stone<1cm 60%: sand 30%	√	-	-	-	596	400	265	150
513	AC	1	All	Dark reddish brown	Sticky	Silty clay	11	8	Mid grey	Stone>1cm 15%: stone<1cm 70%: sand 15%	-	√	-	-	609	400	253	150
513	AD	1	All	Dark greyish brown	Sticky	Silty clay	9	8	Mid brown	Stone>1cm 30%: stone<1cm 40%: sand 30%	-	√	-	-	628	400	286	125
513	AE	1	All	Dark greyish brown	Soft	Silty clay	8	6	Pale greyish brown	Stone>1cm 50%: stone<1cm 45%: sand 5%	-	-	√	-	925	700	529	400
520	AA	3	2	Dark greyish black	Sticky	Silty clay	17	11	Mid reddish brown	Stone>1cm 20%: stone<1cm 40%: sand 40%	-	√	-	-	1088	900	426	300
521	AA	4	2	Dark reddish black	Friable	Clayey silt	20	17	Mid reddish brown	Stone>1cm 20%: stone<1cm 30%: sand 50%	-	√	-	-	2060	1800	975	1000
525	AA	4	All	Dark yellowish grey	Sticky	Silty clay	38	31	Greyish brown	Stone>1cm 20%: stone<1cm 50%: sand 30%	√	-	-	-	3646	2800	1476	1100
525	AB	1	All	Dark brownish grey	Sticky	Silty clay	8	7	Mid grey	Stone>1cm 15%: stone<1cm 65%: sand 20%	√	-	-	-	869	600	357	300
525	AC	1	All	Dark grey	Sticky	Silty clay	10	7	Mid grey	Stone>1cm 30%: stone<1cm 60%: sand 10%	√	-	-	-	1181	900	510	450
525	AD	1	All	Very dark blackish grey	Sticky	Silty clay	9	7	Mid greyish brown	Stone>1cm 15%: stone<1cm 65%: sand 20%	√	-	-	-	699	500	221	200
525	AE	1	All	Very dark grey	Sticky	Clay	10	7	Pale greyish brown	Stone>1cm 30%: stone<1cm 50%: sand 20%	√	-	-	-	830	600	332	250
527	AA	1	All	Mid greyish yellow	Soft	Clayey silt	2	1	Pale yellowish brown	Stone>1cm 30%: stone<1cm 30%: sand 40%	-	-	√	-	212	125	105	35

530	AA	4	All	Dark grey	Sticky	Clay	39	29	Mid grey	Stone>1cm 25%: stone<1cm 60%: sand 15%	√	-	-	-	2295	1500	926	500
530	AB	1	All	Dark grey	Sticky	Silty clay	11	9	Mid grey	Stone>1cm 5%: stone<1cm 70%: sand 25%	√	-	-	-	759	600	248	200
530	AC	1	All	Dark greyish brown	Soft	Silty clay	8	6	Pale yellowish grey	Stone>1cm 30%: stone<1cm 50%: sand 20%	-	-	√	-	463	300	166	100
530	AD	1	All	Dark grey	Sticky	Clay	6	5	Mid brown	Stone>1cm 25%: stone<1cm 65%: sand 10%	-	-	√	-	796	400	457	150
530	AE	1	All	Dark greyish brown	Soft	Silty clay	10	8	Mid brown	Stone>1cm 25%: stone<1cm 60%: sand 15%	-	√	-	-	400	300	142	125
554	AA	4	2	Dark blackish grey	Sticky	Silty clay	19	13	Mid reddish brown	Stone>1cm 10%: stone<1cm 40%: sand 50%	-	√	-	-	1258	1000	482	400
580	AA	4	2	Dark yellowish brown	Sticky	Silty clay	20	19	Mid reddish brown	Stone>1cm 10%: stone<1cm 40%: sand 50%	-	√	-	-	1637	1000	620	400
590	AA	2	1	Dark brownish grey	Sticky	Silty clay	12	8	Pale yellowish-grey	Stone>1cm 10%: stone<1cm 20%: sand 70%	-	-	√	-	435	300	170	100
641	AA	4	2	Dark yellowish brown	Sticky	Silty clay	23	18	Pale brown	Stone>1cm 20%: stone<1cm 70%: sand 10%	√	-	-	-	598	400	234	100
694	AA	4	2	Dark greyish brown	Soft	Clay	20	14	Pale grey	Stone>1cm 40%: stone<1cm 30%: sand 30%	√	-	-	-	687	400	319	125
696	AA	4	2	Black	Soft	Silty clay	16	13	Dark grey	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	1388	1400	463	600
752	AA	1	All	Greyish brown	Sticky	Clay	<1	<1	Very dark brown	Stone>1cm 0%: stone<1cm 20%: sand 80%	-	√	-	-	24	75		
754	AA	4	2	Dark yellowish grey	Sticky	Silty clay	21	15	Mid-yellowish-grey	Stone>1cm 10%: stone<1cm 50%: sand 40%	-	-	√	-	1267	1000	467	300
791	AA	4	2	Dark greyish brown	Sticky	Silty clay	19	17	Pale reddish-brown	Stone>1cm 10%: stone<1cm 40%: sand 50%	-	-	√	-	1760	1500	550	500
798	AA	2	1	Very dark brown	Friable	Clayey silt	11	8	Pale greyish-brown	Stone>1cm 20%: stone<1cm 20%: sand 60%	-	-	√	-	1421	1400	586	800

Key: **C**= context, **SC**= sample code, **TQ**=quantity of tubs in sample, **NP**=number of tubs processed, **CP**=colour of pre-processed sediment, **TP**= texture of pre-processed sediment, **MP**=matrix of pre-processed sediment, **PW**=weight (kg) of pre-processed sediment, **PV**=volume (l) of pre-processed sediment, **CS**= colour of dried residues, shape of stone majority in sediment (**A**=angular, **SA**= sub-angular, **SR**= sub-rounded, **R**= rounded), **SW**= weight (g) of dried residues, **SV**= volume (ml) of dried residues, >**SW**= weight (g) of >4mm residues, >**SV**= volume (ml) of >4mm residues, purple highlights had their flot shorted by Jaqui Huntley

Table G1.3: finds from samples

C	SC	Charcoal	MM (g)	Coal (g)	Shell (g)	Ind. waste *	Pottery *	Bone (g)	F.clay (g)	CBM (g)	Glass *	Flint *
53	AA		<1	3								
128	AA		<1									
130	AA		1									
138	AA		4									
139	AA		4									
165	AA		3									
177	AA		1									
188	AA	yes	<1									
230	AA	yes	<1			6						
257	AA		2									
322	AA	yes	1	13			8 (45g)					
324	AA		1	9								
326	AB	yes	<1	1								
326	AD		<1	4								
326	AE		<1									
330	AA		1	15								
332	AA		<1	52								
334	AA	yes	1									
336	AA		1	1								
338	AA		1	7								
350	AA		2	68			9 (57g)					
350	AB		1	13			1 (7g)	<1				
350	AC		1	74			3 (19g)	<1		<1		
350	AD		<1	14			1 (<1g)	<1				
350	AE		<1	14			4 (20g)					
356	AA	yes	1					<1				
370	AA	yes	1	60				<1				
373	AA		<1									
377	AA	yes	1	3						<1	1 (<1g)	
377	AB		<1									
377	AC		<1									
377	AD		<1	1	<1							
402	AA		1	1								
402	AB		<1									
402	AC		<1	1								
402	AD		<1									

402	AE		<1	3								1 (<1g)
417	AA		1	14	<1							
417	AB		<1	3								1 (2g)
417	AC		1	12								
417	AD		1									
417	AE		<1	9								
426	AA		<1									
450	AA		1	36				2	<1			
450	AB	yes	<1	8								
450	AC	yes		4								
450	AD		1	7								
450	AE		1	6								
452	AA		3	13					1			
473	AA		1	9								
480	AA		<1	9								
504	AA			3				5				
513	AA		4	38					135			
513	AB		2	5					25			
513	AC		3	7					10			
513	AD	yes							19			
513	AE	yes	3	10			1 (3g)		85			
520	AA		2	44					7			
521	AA		3	97				4	4			
525	AA			83			1 (<1g)					
525	AB		1	20								
525	AC		2	14								
525	AD		1	22								
525	AE		1	46								
527	AA			1								
530	AA			39								
530	AB		2									
530	AC		<1	11								
530	AD	yes	1	8								
530	AE			11					4			
554	AA		4	27					10			
590	AA			1								
641	AA		<1					1				
696	AA		2	7								
754	AA	yes	<1					4	1			
791	AA			11								

798	AA		<1	11					1			

Key: **C**= context, **SC**= sample code, **MM**= magnetic matter, **Ind. waste**= industrial waste, **F. clay**= fired clay, **CBM**= ceramic building material, *= actual count

Table G1.4: flot and palaeobotanical data

C	SC	WF	Mscope	Mm	CPR	AMS?	CI	Components	EWC	Comments	FD
53	AA	1.09	x45	-	-	no	-	Very fine rootlets 95%: sand 3%: very small coal chips 2%	-	-	√
72	AA	0.92	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
94	AA	1.21	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
98	AA	0.42	x45	-	-	no	-	Very fine rootlets 99%: very small coal chips 1%	-	-	√
104	AA	0.37	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
105	AA	0.74	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
128	AA	1.33	x45	-	-	no	-	Very fine rootlets 95%: sand 3%: very small coal chips 2%	-	-	√
130	AA	1.04	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
138	AA	1.19	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
139	AA	0.61	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
142	AA	0.58	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
165	AA	3.65	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
177	AA	1.68	x45	-	-	no	-	Very fine rootlets 98%: very small coal chips 2%	-	-	√
180	AA	0.95	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
184	AA	0.51	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
188	AA	1.54	x45	-	-	yes	-	Very fine rootlets 90%: sand 4%: very small coal chips 5%: charcoal 1%	-	-	√
202	AA	1.24	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
208	AA	0.79	x45	-	-	no	-	Very fine rootlets 98%: very small coal chips 2%	-	-	√
212	AA	1.08	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
214	AA	0.41	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
230	AA	1.18	x45	-	-	no	<0.01	Very fine rootlets 95%: sand 3%: very small coal chips 2%	-	-	√
253	AA	0.69	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
257	AA	1.94	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
258	AA	0.94	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
322	AA	0.98	x45	-	-	no	-	Very fine rootlets 95%: sand 2%: very small coal chips 3%	-	-	√
324	AA	1.02	x45	-	-	no	-	Very fine rootlets 95%: sand 2%: very small coal chips 3%	-	-	√
330	AA	0.83	x45	-	-	no	-	Very fine rootlets 95%: sand 3%: very small coal chips 2%	-	-	√
332	AA	2.01	x45	-	-	no	-	Very fine rootlets 95%: sand 3%: very small coal chips 2%	-	-	√
334	AA	29	x45	2mm	-	no	-	Sand 30%: coal 70%	-	-	√
334	AA.R	140.05	x45	2mm	1	no	0.52	Coal 100%	-	-	√

336	AA	1.6	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
338	AA	3.98	x45	-	-	no	-	Very fine rootlets 80%: sand 18%: very small coal chips 2%	-	-	√
356	AA	3.02	x45	-	-	yes	0.25	Very fine rootlets 90%: charcoal 2%: sand 7%: very small coal chips 1%	-	-	√
370	AA	3.07	x45	-	-	no	-	Very fine rootlets 80%: sand 18%: very small coal chips 2%	-	uc Rumex sp. x 1	√
373	AA	3.6	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
426	AA	0.48	x45	-	-	no	-	Very fine rootlets 90%: sand 10%	-	-	√
440	AA	0.66	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
452	AA	1.76	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	uc Sambucus nigra x 1	√
473	AA	1.01	x45	-	-	no	-	Very fine rootlets 90%: very small coal chips 5%: sand 5%	-	-	√
480	AA	1.29	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	-	√
483	AA	0.42	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	-	√
504	AA	0.59	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
505	AA	0.34	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	-	√
520	AA	0.98	x45	-	-	no	-	Very fine rootlets 90%: very small coal chips 5%: sand 5%	-	-	√
521	AA	3.83	x45	-	-	no	-	Very fine rootlets 70%: sand 25%: very small coal chips 5%	-	-	√
527	AA	0.05	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
554	AA	2.43	x45	-	1	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	2	-	√
580	AA	1.11	x45	-	-	no	-	Very fine rootlets 100%	-	-	√
590	AA	5.68	x45	-	-	no	-	Very fine rootlets 10%: sand 90%	-	-	√
641	AA	0.83	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	-	√
694	AA	1.24	x45	-	-	no	-	Very fine rootlets 80%: sand 15%: very small coal chips 5%	-	-	√
696	AA	4	x45	-	-	no	-	Very fine rootlets 95%: sand 4%: very small coal chips 1%	-	-	√
752	AA	6.8	x45	-	-	no	-	Cinder 20%: sand 80%	-	-	√
754	AA	0.83	x45	-	-	no	<0.01	Very fine rootlets 80%: sand 15%: very small coal chips 5%	-	-	√
791	AA	1.64	x45	-	-	no	-	Very fine rootlets 90%: small coal chips 5%: sand 5%	-	-	√
798	AA	1.43	x45	-	-	no	-	Very fine rootlets 90%: sand 5%: very small coal chips 5%	-	-	√

Key: **C**= context, **SC**= sample code, **WF**= weight (g) of flot, **Mscope**= magnification used, **Mm**= size of mesh used in flot sorting, **CPR**= charred plant material (actual quantities), **AMS?**= any suitable material for radiocarbon AMS dating?, **CI**= material suitable for charcoal identification (in g), **EWC**= earthworm capsules (actual quantity), **uc**= uncharred, **FD**= flot discarded after sorting. NB the highlight AA.R denoted the re-flot from the samples fine fraction.

Table G1.5: mollusc data

C	SC	Context description	Wt (g)	Species	Comments
377	AD	Fill of ditch 376	<1	indet.	very small fragments
417	AA	Fill of ring-gully segment 416 [RG 19]	<1	indet.	very small fragments
591		Fill of ditch 585	<1	Ostrea edulis	very small fragment
623		Fill of furrow 622	11.6	Ostrea edulis	mostly umbo, right-hand valve

705		Modern sheep burial	13.9	Ostrea edulis	mostly umbo, right-hand valve

Key: **C**= context, **SC**= sample code

Table G1.6: wood and charcoal identification

C	SC	Context description	Weight (g)	Frags identified	% sorted	Binomial	Common	Qty
188	AA	fill of linear 187	0.12	2	100	Quercus sp.	Oak	1
						Salix/Populus	willow/poplar	1
230	AA	fill of ditch segment 229 [ditch 196]	<0.1	4	100	indet.	indet.	4
322	AA	fill of ring-gully terminal 321	10.11	10	25	Quercus sp.	Oak	7
						cf. Calluna vulgaris	cf. heather	1
326	AB	fill of ditch 325	0.06	1	100	Quercus sp.	Oak	1
334	AA	fill of pit 333	0.52	10	50	cf. Calluna vulgaris	cf. heather	7
356	AA	primary fill of ditch 354	0.2	4	100	Salix/Populus	willow/poplar	1
						cf. conifer-type	cf. conifer-type	1
370	AA	fill of ring-gully terminal 369	0.27	5	50	Quercus sp.	Oak	1
						cf. Calluna vulgaris	cf. heather	1
377	AA	fill of ditch 376	0.35	1	100	indet.	indet.	1
450	AB	fill of ring-gully terminal 449	0.17	1	100	indet.	indet.	1
450	AC	fill of ring-gully terminal 449	0.1	1	100	Prunus sp.	cherry	1
513	AD	fill of ring-gully terminal 512	0.16	1	100	Salix/Populus	willow/poplar	1
513	AE	fill of ring-gully terminal 512	0.13	2	100	Quercus sp.	Oak	1
530	AD	upper fill of ring ditch 528	0.8	2	100	Quercus sp.	Oak	1
705	HC	modern sheep burial		1	100	Corylus avellana	Hazel	1
752	AA	fill of ditch terminal 743	0.1	1	100	Quercus sp.	Oak	1
754	AA	fill of ditch terminal 743	<0.1	1	100	cf. conifer-type	cf. conifer-type	1

N.B. where qty does not match frags id'd the remaining fragments were indeterminate species

Key: **C**= context, **SC**= sample code, % sorted= percentage of fragments identified, highlighted row was hand-collected wood (not charcoal)

2017 PHASE PALAEOENVIRONMENTAL

Jonathan Baines and Hannah Russ

INTRODUCTION

A deceptively broad floral diversity, from a rather slim assemblage, was recovered from the environmental samples taken at East Wideopen Farm 2017. Although no pulses, fruit or herbs were identified, the excavated features did reveal a number of cereal grains, arable weeds and representatives of the wider surrounding vegetation. Oak and coal dominated the fuel remains. Most of the charcoal was roundwood rather than larger timbers or artefactual remains. One terrestrial snail shell was found and the archaeobotanical record suggests soil conditions for agriculture were poor and leaning towards acidic.

METHOD

The bulk environmental samples were processed at NAA. The samples were processed with 500µ retention and flotation meshes using the Siraf method of flotation (Williams 1973). Once dried, the residues from the retention mesh were sieved to 0.5 mm and the ecofacts forwarded to the relevant specialists. The plant remains and charcoal were identified to species as far as possible, using Schweingruber (1990), Hather (2000), Cappers *et al*. (2006), Jacomet (2006) and the NAA reference collections. The mollusc was identified using Pfleger's guide (2000) and the nomenclature is consistent with the zoological online database AnimalBase: http://www.animalbase.uni-goettingen.de.

RESULTS

Charcoal

Though the charcoal assemblage is dominated by oak (*Quercus*), eight other taxa were identified, two of which – apple subfamily (*Maloideae*) and cherry/plum (*Prunus*) – occurred only once and poplar/willow (*Populus/Salix*) occurred just twice. This poor diversity does not indicate a particular preference or dedicated exploitation of one or two taxa, rather it highlights the abundance of oak trees in the surrounding woodland. All recovered fragments are from native species.

Seed and fruit

Pit **3491** revealed an assemblage that was compiled through the deposition of refuse from different domestic activities and plant usage. The 243 spelt grains (*Triticum spelta*) reflect the discard of cereals that accidentally charred during the dehusking process. The absence of barley (*Hordeum*) suggests the crop was dried alone. The arable weeds, such as wild radish (*Raphanus raphanistrum*) and knotweeds (*Polygonum aviculare* and *Persicaria* sp.) represent a different rubbish disposal. The third distinct component represents various ecologies, and while these plant remains may be one dump, it could be multiple events. Heathgrass (*Danthonia decumbens*) prefers poor and more acidic soils, it forms tussocks and is not good animal fodder. This species, the four sedge taxa (*Carex* sp.), the blinks (*Montia fontana*) and the rushes (*Scirpus* sp. and *Eleocharis palustris*) were probably laid down as bedding for animals and humans alike. They are typical of the verges between agricultural plots, abandoned ground and nearby wetlands, but not

really cultivated fields or pastures. The grassleaf orach seeds (*Atriplex littoralis*) suggest the previous taxa may have been collected at the coast, or hint at saline soil conditions. Regardless, because the overall ecological mixture of this pit indicates poor agricultural land in the vicinity, the spelt wheat may have been cultivated further away, and hence in need of on-site dehusking. The many large-seeded grasses and the fescue-ryegrass suggest forage waste was disposed of through fire, possibly enveloping local weeds like ribwort (*Plantago lanceolata*) and other on-site flora, in yet another activity preserved in this pit. The wetland character of the site is further evinced in the recovery of gypsywort (*Lycopus europaeus*) from ring-gully terminal **3385**.

Ring-gully segment **3792** (RG 10) presents a contrasting picture. The chaff of both barley and wheat were identified alongside a more homogenous agricultural assemblage of arable weeds and cereals. Curly dock (*Rumex crispus*) may have been consumed, or like the ubiquitous heathgrass (perhaps it was used as thatch) its seeds were plentiful in the local environment and preserved in the various on-site rubbish burning events. Flora arbitrarily caught up in these events is further evinced in the recovery of thistle (*Carduus/Cirsium*), woodland germander (*Teucrium scorodonia*), buttercups and violets.

Ring-gully segment **3540** (RG 4) preserved the traces of two other edible plants: onion (*Allium cepa*) and vetch (*Lathyrus/Vicia*).

The presence of emmer (*Triticum dicoccum*) on site is evinced in pit fill **3400**.

So far the discussion has concentrated on charred-plant remains, but there was considerable occurrence of the rare, uncharred, corn buttercup (*Ranunculus arvensis*) and the cinquefoil specimens (*Potentilla* sp.). They, as well as the many goosefoot, knotweeds and potamogeton, are more likely to be modern contamination.

Coal

Bituminous or anthracite coal fragments were recovered from all types of excavated archaeological features (see Table G2.1). The bulk of these finds probably represent contamination from modern deposits. However, recovery of substantial coal fragments from postholes, for example **3473** and **3772**, and 1.585kg from pit fill **3400**, suggest coal was exploited on site in antiquity (Travis 2008).

Molluscs

One snail shell in the Enidae family, either *Ena montana* (Draparnaud 1801) or *Merdigera obscura* = *Ena obscura* (Müller 1774) was found.

Table G2.1: Coal fragments, weight is recorded in grams.

Context	Sample	Weight	Context	Sample	Weight	Context	Sample	Weight
2472	aa	0.1	3384	Aa	7.9	3676	aa	1.4
3020	aa	8	3386	Ad	0.2	3678	aa	0.1
3124	aa	2.1	3386	Ad	14.7	3678	aa	3
3124	aa	0.5	3386	Ac	13.2	3691	aa	10
3128	aa	1.3	3386	Aa	5.4	3700	aa	4
3128	aa	0.5	3386	Ab	8.6	3721	aa	2.6
3139	aa	0.2	3386	Ae	22.9	3724	aa	4.3
3155	aa	2.3	3386	Ae	1.5	3727	aa	2

3157	aa	4.9	3388	Aa	0.8	3728	aa	4
3161	aa	0.3	3402	Aa	1585	3729	aa	1.2
3161	aa	0.3	3402	Aa	6	3735	aa	11
3163	aa	0.6	3402	Aa	5.9	3736	aa	4.6
3172	aa	0.3	3412	Aa	0.3	3738	ac	4.9
3176	aa	2.6	3412	Ae	31.5	3738	aa	10.6
3184	aa	8	3412	Aa	1.7	3748	aa	0.6
3187	aa	0.1	3414	Aa	45.6	3752	aa	3.7
3188	aa	18.9	3415	Aa	2.5	3752	aa	0.4
3189	aa	3.4	3415	Aa	4.5	3758	aa	1.5
3191	aa	7.4	3417	Aa	6	3759	aa	116
3193	aa	2.4	3419	Aa	4.5	3759	aa	25
3194	aa	0.1	3423	Aa	28.9	3759	aa	0.3
3221	aa	0.3	3441	Aa	0.1	3761	aa	0.1
3221	aa	3.2	3448	Aa	8.4	3763	ab	8
3246	aa	0.3	3450	Aa	1.8	3763	aa	14.1
3248	aa	0.2	3461	Aa	3	3764	aa	8
3253	aa	0.1	3469	Aa	15.6	3769	aa	8.1
3255	aa	0.2	3470	Aa	4	3769	aa	0.1
3255	aa	6.6	3471	Aa	5.7	3771	aa	29.6
3257	aa	0.2	3472	Aa	1.7	3773	aa	0.4
3276	aa	0.8	3472	Aa	0.8	3773	aa	5.3
3276	aa	0.1	3474	Aa	2.9	3773	aa	2.1
3284	aa	0.4	3481	Aa	32	3776	aa	5.3
3284	aa	0.1	3490	Ac	7.9	3786	aa	0.3
3284	aa	1	3490	Ab	13.6	3786	aa	1.9
3295	aa	0.1	3500	Aa	17	3786	aa	3.9
3304	aa	0.6	3502	Aa	0.2	3790	aa	1.1
3304	aa	0.1	3507	Aa	80	3790	aa	0.5
3306	aa	0.5	3507	Aa	1	3791	aa	0.1
3306	aa	0.1	3510	Aa	5.7	3791	aa	5.4
3310	aa	0.2	3510	Aa	3.6	3793	ad	46
3311	aa	0.1	3515	Aa	12.6	3793	ae	46.7
3313	aa	1.4	3521	Ad	31.8	3793	ae	1
3315	aa	1.3	3525	Aa	10.7	3793	ac	36.5
3315	aa	0.1	3527	Aa	1.1	3793	ab	192
3321	aa	0.3	3533	Aa	2	3795	aa	4.5
3325	aa	2.4	3541	Aa	0.3	3797	aa	0.2
3327	aa	1.5	3561	Aa	7	3797	aa	35
3327	aa	0.2	3564	Aa	17	3798	aa	15.7
3327	aa	0.1	3566	Aa	0.4	3798	aa	10.5
3331	aa	1	3570	Aa	4.8	3799	aa	3.6
3332	aa	1.8	3570	Aa	1.4	3800	aa	1.2
3332	aa	0.4	3570	Aa	0.1	3801	aa	2.1
3337	aa	19.8	3572	Aa	9	3801	aa	0.3
3337	aa	0.1	3576	Aa	3.8	3815	aa	2.8
3343	aa	1.2	3578	Aa	0.3	3815	aa	0.1
3343	aa	0.2	3596	Aa	0.6	3822	aa	0.3
3349	aa	3.7	3597	Aa	0.7	3822	aa	43.3
3360	aa	10	3603	Aa	17	3823	aa	2.2
3362	aa	0.9	3624	Aa	0.4	3835	aa	1.2
3362	aa	0.1	3624	Aa	0.3	3842	aa	0.2
3364	aa	2	3636	Aa	1.8	3842	aa	1.7
3364	aa	1.3	3641	Aa	0.5	3857	aa	1
3365	aa	18.8	3642	Aa	21.7	3864	aa	2.9
3373	aa	0.3	3642	Aa	0.2	3864	aa	0.5
3374	aa	2.1	3644	Aa	7.4	3874	aa	0.4
3374	aa	0.1	3647	Aa	1.3	3874	aa	0.3
3376	aa	4.3	3657	Aa	0.5	3875	aa	0.1
3377	aa	2.3	3657	Aa	1	3875	aa	0.5
3377	aa	0.2	3662	Aa	7	3880	aa	1.5
3379	aa	1.8	3662	Aa	0.5	3883	aa	0.3

3379	aa	0.1	3662	Aa	0.1	3904	aa	0.2
3382	aa	0.5	3671	Aa	3.7	3904	aa	0.1
3383	aa	0.1	3672	Aa	0.2	3918	aa	2
3383	aa	0.6						

Table G2.2: Charred seed and fruit

Context	Sample	Identification	Amount	Context	Sample	Identification	Amount
3126	aa	Spergula arvensis	1	3581	aa	Triticum spelta	1
3155	aa	Fabaceae indet.	1	3585	aa	Fabaceae indet.	1
3155	aa	Fallopia convolvulus	1	3601	aa	Chenopodium sp.	1
3184	aa	Potamogeton sp.	2	3603	aa	tuber	1
3191	aa	Asteraceae indet.	1	3605	aa	indet. Cerealia	1
3191	aa	Brassica sp.	1	3610	aa	Danthonia decumbens	2
3304	aa	Polygonum aviculare	1	3610	aa	Triticum spelta	1
3315	aa	Chenopodium sp.	1	3642	aa	Hordeum (straight)	1
3321	aa	Fabaceae indet.	1	3642	aa	Lathyrus/Vicia sp.	1
3321	aa	Poaceae indet 2-5mm	1	3642	aa	Teucrium scorodonia	1
3332	aa	Chenopodium sp.	7	3656	aa	Potamogeton sp.	12
3337	aa	Chenopodium sp.	2	3671	aa	Carex sp. (trigonous)	30
3362	aa	Poaceae indet > 5 mm	1	3671	aa	chaff dicoccum	1
3386	ae	Arrhenatherum elatius	1	3671	aa	Danthonia decumbens	2
3386	ac	Carex sp. (trigonous)	1	3691	aa	Carduus/Cirsium	3
3386	ac	Danthonia decumbens	3	3691	aa	Triticum sp.	1
3386	ac	Lycopus europaeus	1	3735	aa	Danthonia decumbens	1
3386	ad	Poaceae indet 2-5mm	1	3736	aa	tuber	1
3386	ae	Poaceae indet 2-5mm	1	3738	aa	Festuca/Lolium sp.	1
3386	ac	Spergula arvensis	1	3738	aa	Hordeum (straight)	1
3388	aa	Fallopia convolvulus	1	3738	ac	indet. Cerealia	1
3388	aa	Teucrium scorodonia	1	3738	aa	Poaceae indet 2-5mm	1
3402	aa	Festuca/Lolium sp.	4	3759	aa	Astragalus/Medicago/Trifolium	1
3402	aa	indet. Cerealia	4	3759	aa	Bromus sp.	1
3402	aa	Poaceae indet 2-5mm	2	3759	aa	Carex sp. (trigonous)	8
3402	aa	Triticum dicoccum	2	3759	aa	Danthonia decumbens	1
3402	aa	Triticum spelta	3	3759	aa	Fabaceae indet.	2
3402	aa	Tuber	1	3759	aa	indet. Cerealia	4
3412	aa	Polygonum aviculare	1	3759	aa	Poaceae indet 1-2mm	1
3414	aa	Hordeum (straight)	1	3759	aa	Poaceae indet 2-5mm	3
3414	aa	Plantago lanceolata	1	3759	aa	Triticum sp.	3
3414	aa	Triticum sp.	1	3759	aa	Triticum spelta	2
3414	aa	undetermined 1-2mm	2	3759	aa	undetermined > 5 mm	1
3448	aa	Poaceae indet 2-5mm	1	3764	aa	Carex sp. (trigonous)	3
3448	aa	Triticum sp.	1	3764	aa	Danthonia decumbens	3
3469	aa	indet. Cerealia	1	3764	aa	Poaceae indet 2-5mm	1
3471	aa	Rubus saxatilis	3	3764	aa	Viola sp.	1
3481	aa	Poaceae indet 2-5mm	3	3769	aa	Fumaria officinalis	1
3500	aa	Astragalus/Medicago/Trifolium	2	3773	aa	Hordeum (straight)	5
3500	aa	Danthonia decumbens	1	3773	aa	Persicaria sp.	1
3500	aa	indet. Cerealia	1	3773	aa	Poaceae indet 2-5mm	3
3500	aa	Persicaria sp.	1	3773	aa	Triticum sp.	4
3500	aa	Poaceae indet 2-5mm	1	3773	aa	Triticum spelta	4
3500	aa	Rumex crispus	1	3786	aa	Poaceae indet 2-5mm	2
3502	aa	Danthonia decumbens	1	3791	aa	Arrhenatherum elatius	1
3507	aa	Astragalus/Medicago/Trifolium	1	3791	aa	Danthonia decumbens	1
3507	aa	Atriplex littoralis	3	3793	ac	Bromus sp.	1
3507	aa	Bromus sp.	5	3793	ae	Carex (trigonous)	1
3507	aa	Carex sp. (flat)	2	3793	aa	Carex sp. (flat)	1
3507	aa	Carex sp. (trigonous)	47	3793	ac	Carex sp. (trigonous)	1

3507	aa	Caryophyllaceae indet.	2	3793	ae	Carex sp. (trigonous)	1
3507	aa	chaff triticum	5	3793	ae	chaff triticum	3
3507	aa	Chenopodium sp.	5	3793	aa	chaff triticum	10
3507	aa	Danthonia decumbens	10	3793	aa	chaff hordeum	1
3507	aa	Eleocharis palustris	1	3793	ad	Chenopodium sp.	1
3507	aa	Festuca/Lolium sp.	3	3793	ae	Danthonia decumbens	12
3507	aa	Montia fontana	6	3793	aa	Danthonia decumbens	8
3507	aa	Persicaria sp.	1	3793	ad	Danthonia decumbens	4
3507	aa	Plantago lanceolata	1	3793	aa	Fabaceae indet.	1
3507	aa	Poaceae indet > 5 mm	2	3793	aa	Hordeum (straight)	1
3507	aa	Poaceae indet 1-2mm	17	3793	aa	indet. Cerealia	1
3507	aa	Poaceae indet 2-5mm	44	3793	ae	indet. Cerealia	4
3507	aa	Polygonum aviculare	1	3793	aa	indet. Cerealia	1
3507	aa	Ranunculus sp.	1	3793	ad	indet. Cerealia	3
3507	aa	Raphanus raphanistrum	3	3793	ad	Poaceae indet 1-2mm	3
3507	aa	Scirpus sp.	2	3793	ac	Poaceae indet 2-5mm	2
3507	aa	Silene sp.	2	3793	aa	Poaceae indet 2-5mm	5
3507	aa	Triticum sp.	18	3793	ae	Poaceae indet 2-5mm	3
3507	aa	Triticum spelta	243	3793	ae	Raphanus raphanistrum	1
3507	aa	undetermined 2-5mm	4	3793	ac	Rumex crispus	1
3515	aa	Danthonia decumbens	1	3793	aa	Rumex crispus	1
3521	ad	Astragalus/Medicago/Trifolium	1	3793	ad	Rumex crispus	2
3521	ae	Carex (trigonous)	1	3793	ad	Scirpus sp.	1
3521	ad	Carex sp. (trigonous)	2	3793	ac	Triticum sp.	1
3521	ab	Chenopodium sp.	1	3793	ad	Triticum spelta	1
3521	ad	Danthonia decumbens	5	3793	ae	undetermined 1-2mm	1
3521	ad	Hordeum (straight)	1	3793	aa	Danthonia decumbens	2
3521	aa	indet. Cerealia	1	3798	aa	Raphanus raphanistrum	1
3521	aa	Poaceae indet 2-5mm	1	3798	aa	Poaceae indet 2-5mm	3
3521	ad	Poaceae indet 2-5mm	2	3799	aa	Poaceae indet 2-5mm	1
3521	ad	Teucrium scorodonia	1	3800	aa	Hordeum (straight)	1
3541	aa	Allium cepa	1	3811	aa	indet. Cerealia	2
3541	aa	Hordeum (straight)	1	3811	aa	Lamiaceae indet.	1
3541	aa	Lathyrus/Vicia sp.	1	3811	aa	Carex sp. (trigonous)	1
3556	aa	Poaceae indet > 5 mm	2	3822	aa	Danthonia decumbens	1
3570	aa	Tuber	1	3822	aa	Poaceae indet 1-2mm	1
3576	aa	Tuber	1	3822	aa	Danthonia decumbens	1

Table G2.3: Charcoal fragments, weight is recorded in grams.

Context	Sample	Weight	Identification	Amount	Context	Sample	Weight	Identification	Amount
3067	aa	0.1	Fraxinus	100%	3558	aa	1.9	Alnus/Corylus	100%
3155	aa	76.4	Quercus	100%	3559	aa	1.2	Quercus	100%
3184	aa	0.3	Quercus	100%	3566	aa	5.8	Maloideae	50%
3191	aa	0.6	Quercus	100%	3566	aa		Quercus	50%
3246	aa	0.6	Prunus	100%	3566	aa	0.8	Quercus	100%
3266	aa	0.2	Quercus	100%	3574	ac	0.2	Alnus/Corylus	100%
3347	aa	0.4	Quercus	100%	3576	aa	5.4	Betula	50%
3373	aa	0.9	Quercus	100%	3576	aa		Alnus/Corylus	50%
3374	ab	0.4	Quercus	100%	3578	aa	0.2	Quercus	100%
3377	aa	0.2	Acer campestre	100%	3581	aa	0.2	Betula	100%
3383	aa	0.1	undet. Hardwood	100%	3585	aa	0.1	undet. Hardwood	100%
3384	aa	0.2	Quercus	100%	3589	aa	4	Quercus	100%
3386	aa	0.7	Quercus	100%	3597	aa	0.1	Quercus	100%

3386	ab	0.5	Betula	100%	3601	aa	0.5	undet. Hardwood	100%
3386	ac	0.5	Quercus	100%	3603	aa	0.5	roundwood	100%
3402	aa	6.7	Quercus	50%	3642	aa	0.8	Quercus	100%
3402	aa		Fraxinus	50%	3644	aa	0.2	Quercus	100%
3412	ad	0.3	Calluna vulgaris	100%	3647	aa	0.9	Quercus	100%
3412	aa	0.2	Populus/Salix	100%	3657	aa	0.1	Quercus	100%
3441	aa	0.1	roundwood	100%	3671	aa	0.2	Prunus	100%
3448	aa	0.3	undet. Hardwood	100%	3672	aa	0.2	Quercus	100%
3461	aa	0.1	undet. Hardwood	100%	3683	aa	0.3	undet. Hardwood	100%
3507	aa	37	Cornus	50%	3735	aa	0.1	roundwood	100%
3507	aa		Betula	50%	3738	aa	0.1	Quercus	100%
3521	ae	5	undet. Hardwood	40%	3741	aa	25	Fraxinus	100%
3521	ae		Calluna vulgaris	60%	3763	aa	0.9	undet. Hardwood	100%
3521	ac	3.3	Calluna vulgaris	100%	3763	ab	0.6	Quercus	100%
3521	ab	1.9	Calluna vulgaris	100%	3773	aa	0.4	Calluna vulgaris	100%
3521	ad		root indet.	5%	3793	ae	16.8	Fraxinus	100%
3521	ad	5.1	Fraxinus	45%	3793	aa	13.5	Fraxinus	100%
3521	ad		roundwood	50%	3794	ab	0.2	Populus/Salix	100%
3521	aa	2	Betula	100%	3815	aa	0.1	undet. Hardwood	100%
3525	aa	3	Quercus	100%	3822	aa	0.6	undet. Hardwood	100%
3535	aa	0.1	Quercus	100%	3904	aa	0.3	undet. Hardwood	100%
3556	ab	4.5	Alnus/Corylus	100%	3918	aa	0.3	Quercus	100%

Table G2.4: material suitable for radiocarbon samples

Context	sample		ID	
3402	aa	charcoal	Fraxinus	Ash
3448	aa	Grain	Triticum	Wheat
3507	aa	Grain	Triticum spelta	Spelt
3507	aa	Grain	Triticum spelta	Spelt
3541	aa	Grain	Hordeum	Barley
3556	ab	charcoal	Alnus/Corylus	alder/hazel
3576	aa	charcoal	Alnus/Corylus	alder/hazel
3738	aa	Grain	Hordeum	Barley
3759	aa	Grain	Triticum spelta	Spelt
3773	aa	Grain	Hordeum	barley
3793	aa	grain	Hordeum	barley

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APPENDIX H

RADIOCARBON DATING

Gav Robinson

INTRODUCTION

The importance of radiocarbon dating is clearly stated in all current regional, national and thematic research framework documents (for example, Spikins 2010, 10; Vyner 2008, 24; Chadwick 2009, 7-9; Manby, King and Vyner 2003, 42; Haselgrove *et al*. 2001, 3-7; Petts and Gerrard 2006, 130-1, 136-7; Brennand 2007, e.g. 34, 38-9; EH 2010, 12; Blinkhorn and Milner 2014, 33-4). Most of these guideline documents also highlight that multiple dating of the same material or context and the use of statistical analysis to refine the date ranges achieved are routine requirements for most projects (Chadwick 2009, 9; Manby, King and Vyner 2003, 42; Haselgrove *et al*. 2001, 3-7; Petts and Gerrard 2006, 130-1, 136-7). This need for modelling is further stated by Whittle *et al*. (2011, 18-9) in their extensive analysis of Neolithic enclosures of southern Britain.

With the East Wideopen project, the significance of the later prehistoric remains and the paucity of dateable artefacts meant there was a clear need for independent dating. Furthermore, there was a need to date the regionally significant unenclosed and enclosed phases of settlement. However, due to unfavourable ground conditions, there was a paucity of suitable material. The majority of the sampled contexts produced only small amounts of charcoal, charred grain or animal bone, and there was a high level of truncation of the features. Nine samples (four from the 2015/2016 phase and five from the 2017 phase of works) were submitted to the Scottish Universities Environmental Research Centre AMS Facility (SUERC) for radiocarbon dating (Table H1).

All but one of the samples of animal bone sent failed due to a lack of collagen. Unfortunately, these contexts did not contain suitable replacement material; small fragments of charcoal were present, but these were deemed unsuitable due to a high probability of residuality.

During the analysis associated with this project Bayesian modelling (Naylor and Smith 1988; Bayliss 2009; Whittle *et al*. 2011, 19-59; Bayliss 2015) of three of the radiocarbon dates was undertaken using OxCal v4.3.2 (Bronk Ramsey 2017). The aims and objectives of this and the models utilised are detailed below. The brackets and keywords used in the associated diagram define the OxCal models used. Within the text (and tables) the models and queries used are indicated by keywords in bold. Calculated posterior ranges were rounded outwards to 5 years (Bayliss *et al*. 2011, 21).

The measured 14C ages presented in Table H1 are quoted in conventional years BP (before 1950 AD). The associated error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error. The calibrated age ranges were determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4.3.2; Bronk Ramsey 1995; 2009) using the IntCal 13 atmospheric curve (Reimer *et al*. 2013).

All calibrated radiocarbon dates reproduced in the text, unless stated otherwise, represent calibrated calendar years (cal AD or cal BC) at a probability of 95.4%. Modelled 'posterior density estimates' (Whittle *et al*. 2011, 21) are presented in italics.

Table H1: Radiocarbon dating results

Context	Interpretative description	Lab code	Material	δ 13C relative to VPDB (‰)	Radiocarbon result BP	Calibrated date range (at 95.40%) (cal. BC)
426	Fill of field boundary ditch 195 (segment 425)	n/a	bone	n/a	FAIL	-
591	Fill of boundary ditch 585	n/a	bone	n/a	FAIL	-
641	Fill of enclosure ditch 750 (segment 634)	n/a	bone	n/a	FAIL	-
694	Fill of enclosure ditch 749 (segment 687)	n/a	bone	n/a	FAIL	-
3624	Fill of enclosure ditch 3933 (segment 3623)	n/a	bone	n/a	FAIL	-
3561	Fill of RG 5 (segment 3560)	SUERC-84741	bone	-7.6	154±26	cal AD1666-1914
3556	Fill of RG 2 (segment 3555)	SUERC-84740	charcoal: alder	-25.5	2185±26	360-176 cal BC
3507	Fill of pit 3491	SUERC-84739	seed: spelt wheat	-22.1	1966±26	cal 40BC-AD83
3793	Fill of RG 10 (segment 3792)	SUERC-84742	seed: barley	-22.7	1967±26	cal 40BC-AD82

AIMS AND OBJECTIVES

The aim of the Bayesian modelling was linked to that of the initial radiocarbon analysis, which was to provide a chronology for the recorded remains and ecofacts recovered to aid their interpretation. The updated objectives of both of these programmes of analysis were to:

- help understand the length of activity on the site;
- attempt to date the unenclosed and enclosed phases of settlement;
- compare the chronologies of both areas of settlement; and
- enable a comparison of the recorded remains within the local and wider region.

METHODOLOGY

The selection of material for submission and an understanding of the depositional processes that led to their inclusion within the contexts are both crucial to achieving a meaningful interpretation of the returned measurements (see Bayliss 1998; Ashmore 1999; Gibson and Bayliss 2009, 41, 67-72; Haselgrove *et al.* 2001, 5; Bayliss 2009, 129; Bayliss 2015, 683-90). Where possible, the material dated was from relatively short-lived items (including animal bone and grain) and short-lived charcoal was favoured over longer-lived species; timbered or heartwood fragments were

avoided. In this way, potentially artificially old dates created by the 'old wood effect' (Waterbolk 1971; Gillespie 1984; Aitken 1990) were minimised.

The pool of material available from the later prehistoric East Wideopen contexts was poor. It comprised small amounts of animal bone and charred material with only two moderately sized accumulations (pit **3491** and RG 10). This issue increased the chance that any material chosen for dating was intrusive from later activity or residual from earlier. For instance, charred material may have been 'stored', either in a former soil or an above-ground pile (or midden) for some considerable time before entering a context selected for dating.

Based on the available material and the significance of the phases of unenclosed and enclosed later prehistoric settlement, samples were chosen from contexts from the two occupation areas (Table H2). Only contexts that produced larger fragments or larger concentrations of material were selected and, from these, only samples that would answer chronological questions were submitted.

Four samples of animal bone were selected from the southern area, including two of the primary fills (**641** and **694**) of the Phase 3 settlement enclosure ditches (**750** and **749**), the fill of a ditch (**195**) associated with the field system (Phase 4), and fill **591** of ditch **822** late in the stratigraphical sequence (also Phase 4).

For the northern settlement, five samples were selected including animal bone from the fill (**3624**) of the Phase 2a enclosure ditch (**3933**) and the fill (**3561**) of Phase 2b RG 5. Additionally, a fragment of alder charcoal from the fill (**3556**) of Phase 1 or 2a RG 2, a charred spelt wheat grain from the fill (**3507**) of pit **3491** (uncertainly Phase 2b) and a barley grain from the fill (**3793**) of Phase 2c RG 10 were submitted.

Table H2: sample details

Context	Description	Material chosen	All finds from context	Q*
426	Primary fill of boundary ditch 195	Animal bone	23 x animal bone (67g)	3
641	Primary fill of main enclosure ditch 750	Animal bone	6 x animal bone (17g) (mandible fragments)	3
591	Main (secondary) fill of ditch 822 that cuts main enclosure ditch	Animal bone	oyster shell, 16 x animal bone (53g)	3
694	Primary fill of main enclosure ditch 749	Animal bone	5 x animal bone (52g)	3
3507	Fill of pit 3491 (?Phase 2b)	Spelt grain	243 x spelt grains, 18 x wheat grains, 5 x wheat chaff, various weed species, 37g birch charcoal	2
3556	Fill of RG 2 (Phase 1 or 2a)	alder/hazel charcoal	2 x alder/hazel (4.5g), <1g industrial waste	3
3561	Fill of RG 5 (Phase 2b)	Animal bone	Animal bone (17g)	3
3624	Fill of ditch 3933 (Phase 2a)	Animal bone	Animal bone (36g)	3
3793	Secondary fill of RG 10 (Phase 2c)	Barley grain	13.1g of animal bone, 30g ash charcoal, 13 x wheat chaff, 1 x barley chaff, 6.2g fired clay, various weed species, 1 x barley grain, 1 x wheat grain, 1 x spelt grain, 9 x indet grain	2

*Q=Quality order: 1=very good; 4=very poor

Bayesian modelling

Three of the measured radiocarbon dates from the northern settlement area were tested using Bayesian chronological modelling (Naylor and Smith 1988; Bayliss 2009; Whittle *et al*. 2011, 19-59; Bayliss 2015). This allowed the combination of the dates with archaeological data ('prior information') such as stratigraphical relationships using a formal statistical methodology. This modelling also allowed the calculation of statistical probabilities of the span of certain events to investigate the speed and, hence, the nature of deposition.

It should be noted, however, that the low number of radiocarbon determinations available potentially restricted the accuracy of the model tested. Furthermore, some of the measured dates were likely only broad indications of a terminus post quem (TPQ) for deposition. Both of these factors must be taken into account during interpretation of the results.

The model was produced within the OxCal online facility (OxCal v4.3.2; Bronk Ramsey 2017) using the '**Sequence**' and '**Phase**' models. The '**Span**' query was also used to calculate a probabilistic range of activity.

RESULTS

All but one of the samples of bone submitted failed due to a lack of carbon and the material selected from RG 5 proved to be intrusive. Unfortunately, there was no further suitable material from these contexts and hence, replacement samples were not sent.

Of the four dated samples, three returned dates likely to be contemporary with the features that produced the material. These dates (SUERC-84739, SUERC-84740 and SUERC-84742) were modelled (Fig. H1) as a simple '**Sequence**' of two '**Phases**' (Table H3).

Table H3: Bayesian modelling data

Am=94.6, Ao=94.3	**Unmodelled (BC/AD)**						**Modelled (BC/AD)**							
	from	**to**	**%**	**from**	**to**	**%**	**from**	**to**	**%**	**from**	**to**	**%**	**A**	**C**
Sequence settlement														
Boundary Start 1							-500	-190	68.2	-1060	-175	95.4		97.1
Sequence 1														
Phase 1 or 2a														
R_Date SUERC-84740	-354	-198	68.2	-360	-176	95.4	-350	-180	68.2	-360	-165	95.4	91.3	99.4
Phase ?2b and 2c														
R_Date SUERC-84739	5	67	68.2	-40	83	95.4	5	65	68.2	-40	80	95.4	99.4	99.7
R_Date SUERC-84742	5	66	68.2	-40	82	95.4	5	65	68.2	-40	80	95.4	99.5	99.7
Span settlement							255	775	68.2	205	1565	95.4		97.5
Boundary End 1							20	280	68.2	1	890	95.5		98.2

A=individual agreement indices; C=convergence test; Am=A (model); Ao=A (overall)

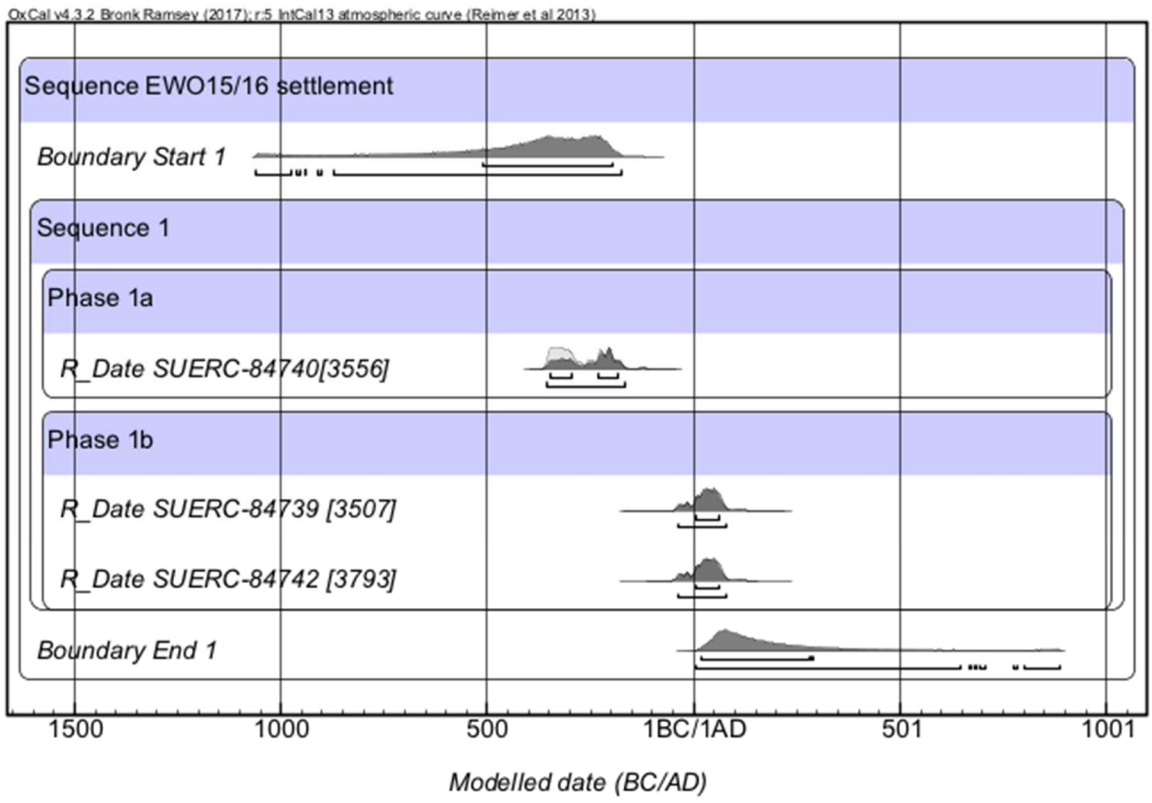

Figure H1: Probability distributions of dates as a 'Sequence' of two 'Phases'

NOTE Figure H1 was prepared prior to the site being re-phased, so 'Phase 1a' should be read as Phase 1 or 2a, and 'Phase 1b' as Phase ?2b and 2c

This model had good overall agreement (Amodel=94.6 and Aoverall=94.3) and produced a statistical '**Span**' of activity of between *205* and *1565* years (*95.4% probability*) or between *255* and *775* years (*68.2% probability*) (Fig. H2).

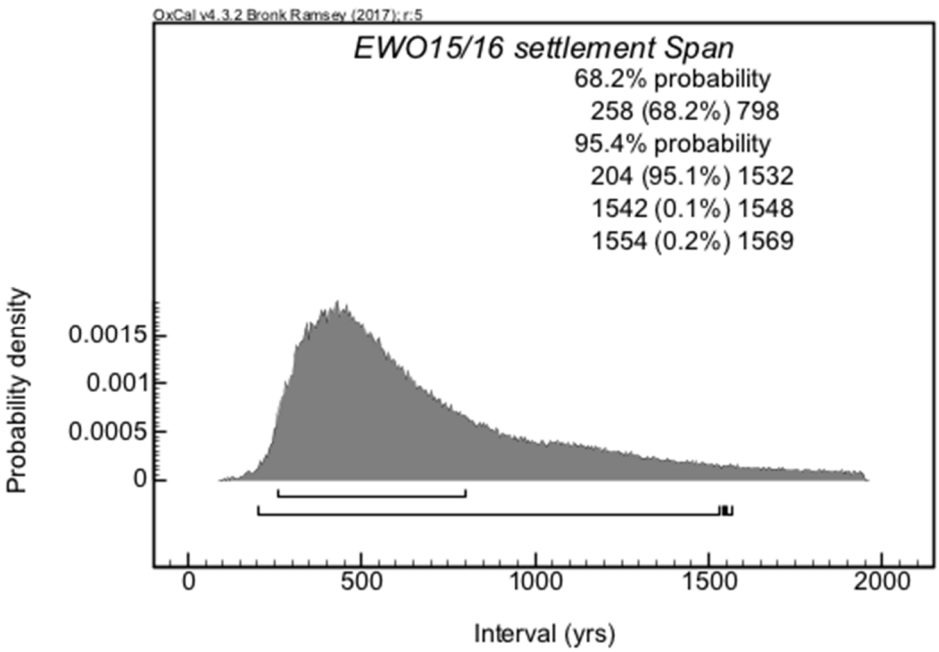

Figure H2: probability distribution of the total number of years of activity

The posterior density estimates for the start of this activity was *1060-175 cal BC* (*95.4% probability*) or *500-190 cal BC* (*68.2% probability*), or likely within the Early or Middle Iron Age. The modelled estimate for the end of activity was potentially within the Late Iron Age or Roman period, at *cal AD 1-890* (*95.4% probability*), or *cal AD 20-280* (*68.2% probability*).

This model indicates that the activity that produced the charred material was probably undertaken during the Early or Middle Iron Age and the Late Iron Age or early Roman period. The three dates, however, represent a small sample of the theoretical nearby activity that produced the charred grain and charcoal. Therefore, these dates may only provide a broad measure of the span of the infilling of the features. The measured dates are, however, considered a reasonably reliable (broad) date for some of the activity associated with the northern settlement.

CONCLUSION

Even with the high number of failed samples, the radiocarbon dating and the limited Bayesian modelling were generally successful in refining the chronologies of the northern settlement. Furthermore, the modelling has provided some information regarding the span of activity associated with this settlement and has confirmed activity on the site during the Early or Middle Iron Age and the Late Iron Age or early Roman period.

However, due to the potential residuality of some of the samples in combination with the small numbers of measured dates, the modelling, should be taken as tentative.

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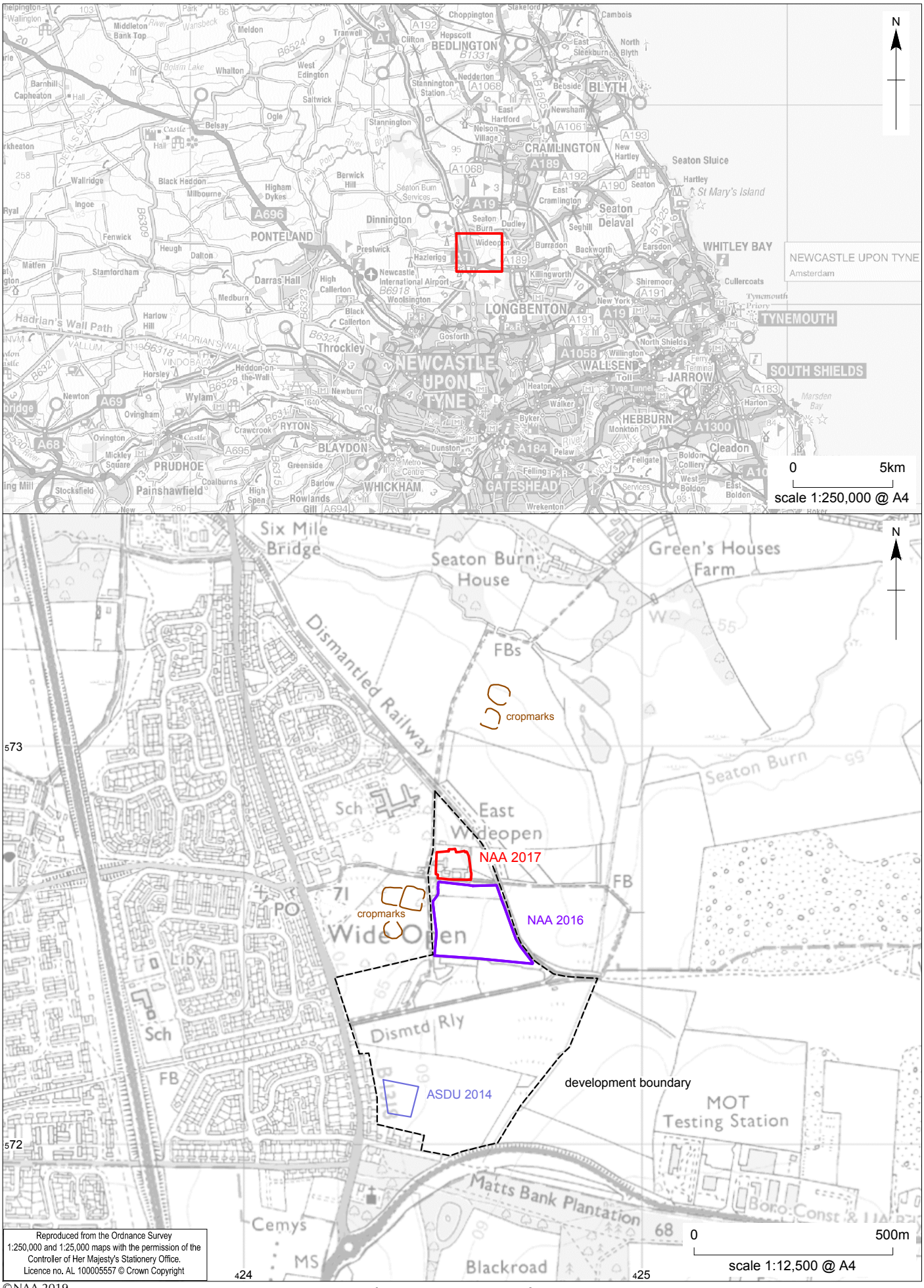
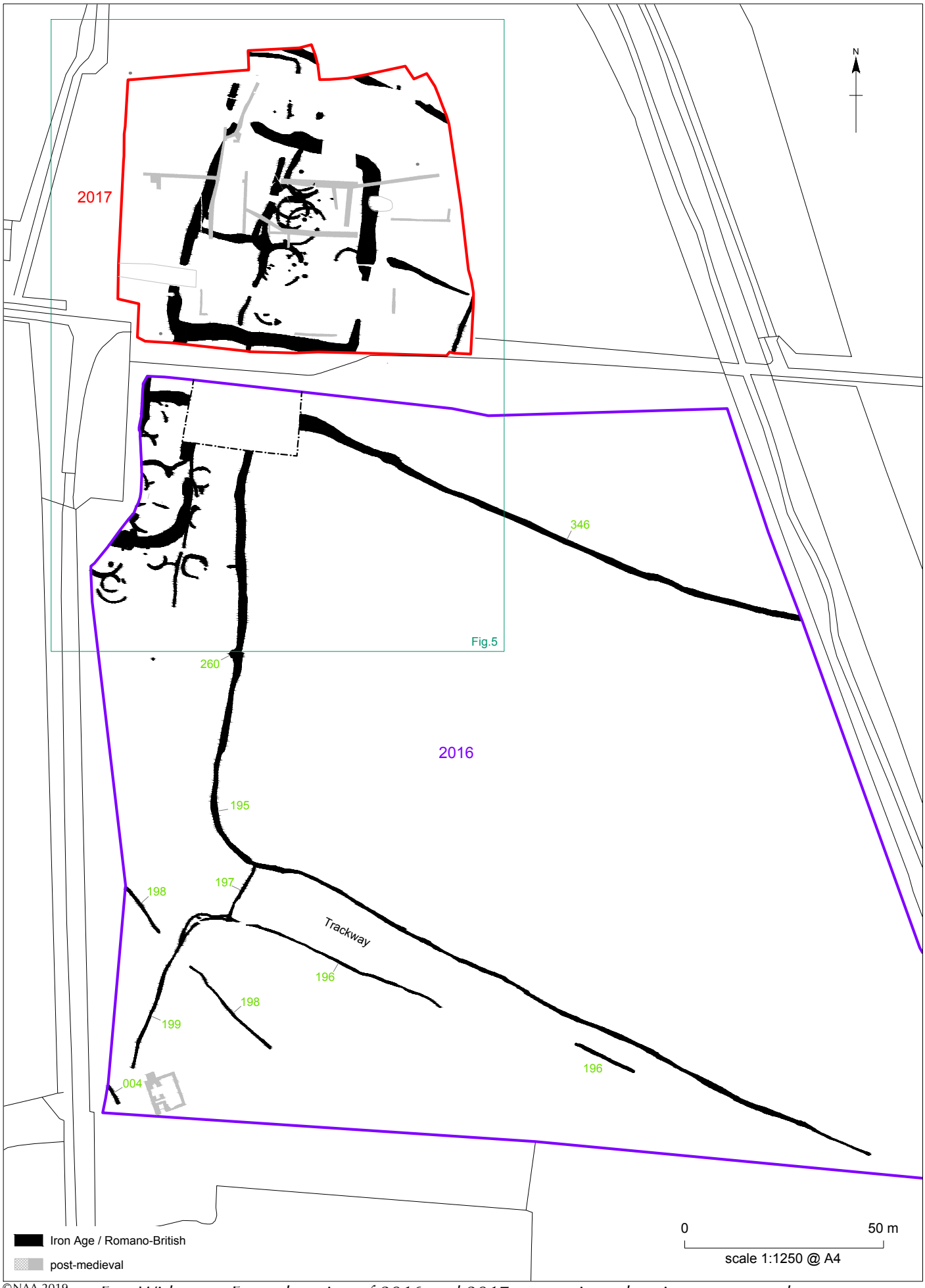
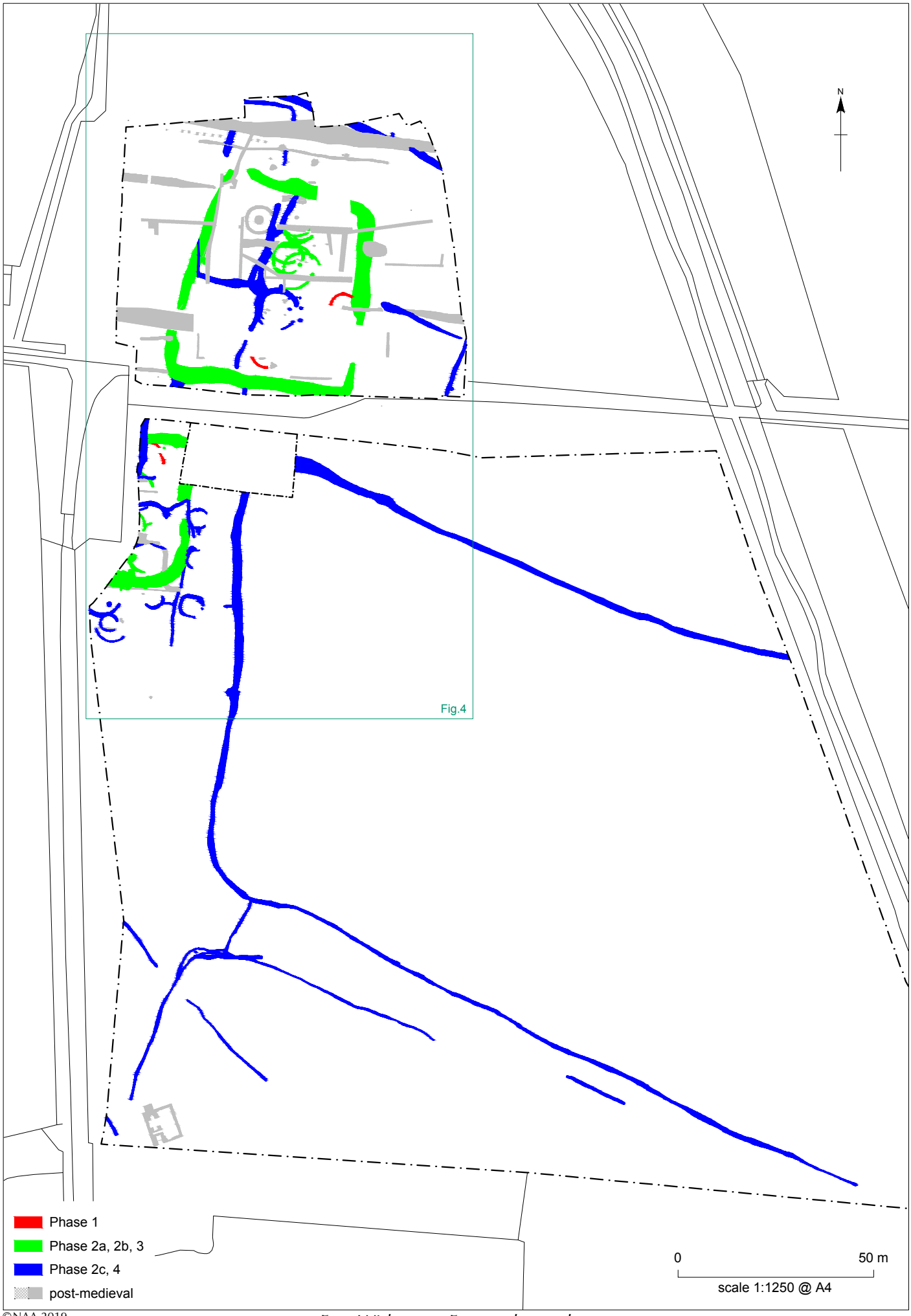


East Wideopen Farm: site location *Figure 1*

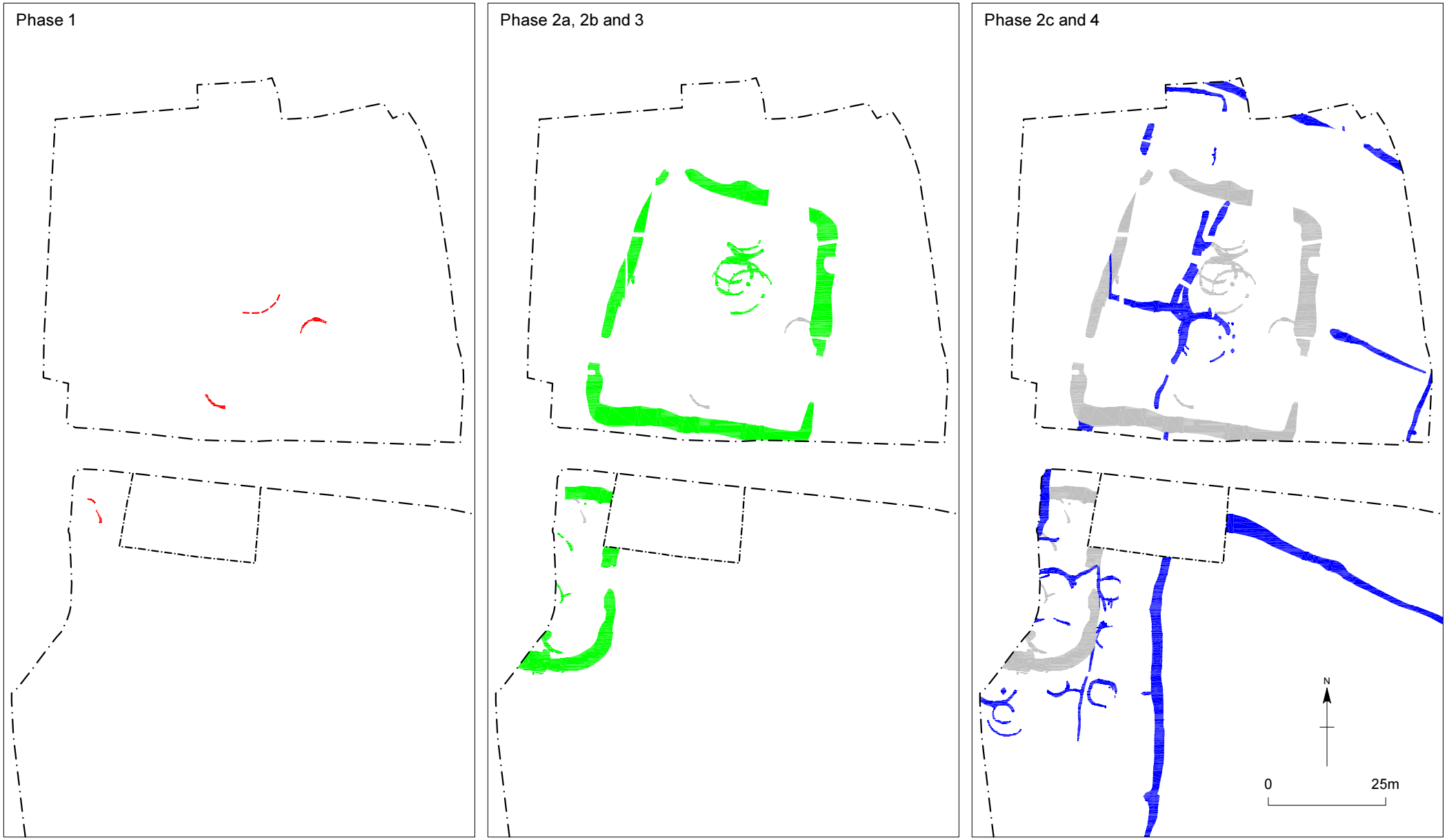


East Wideopen Farm: location of 2016 and 2017 excavations showing group numbers *Figure 2*



East Wideopen Farm: phase plan

Figure 3

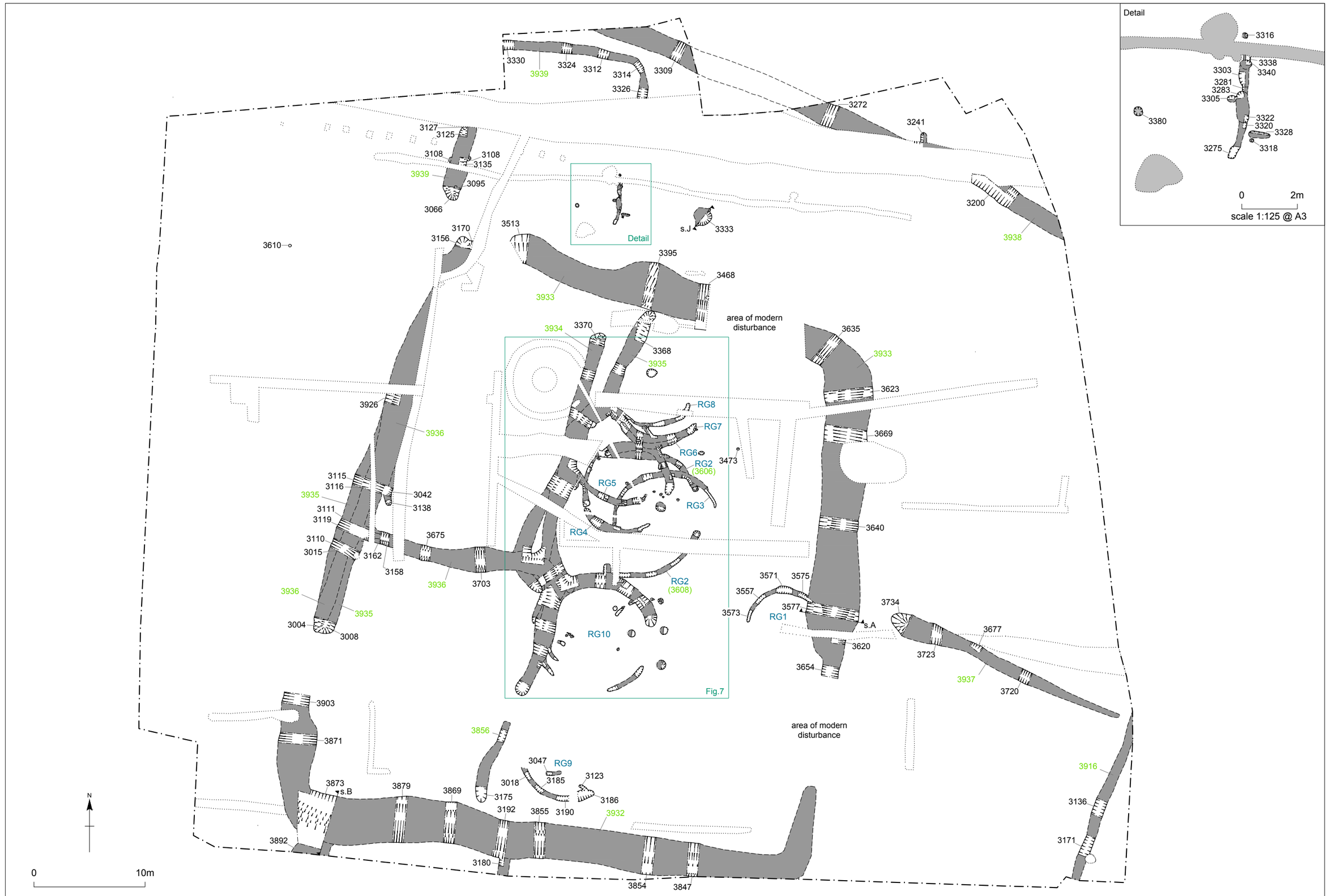


East Wideopen Farm: phase plan detail

Figure 4

East Wideopen Farm: detail of excavations showing group numbers

Figure 5



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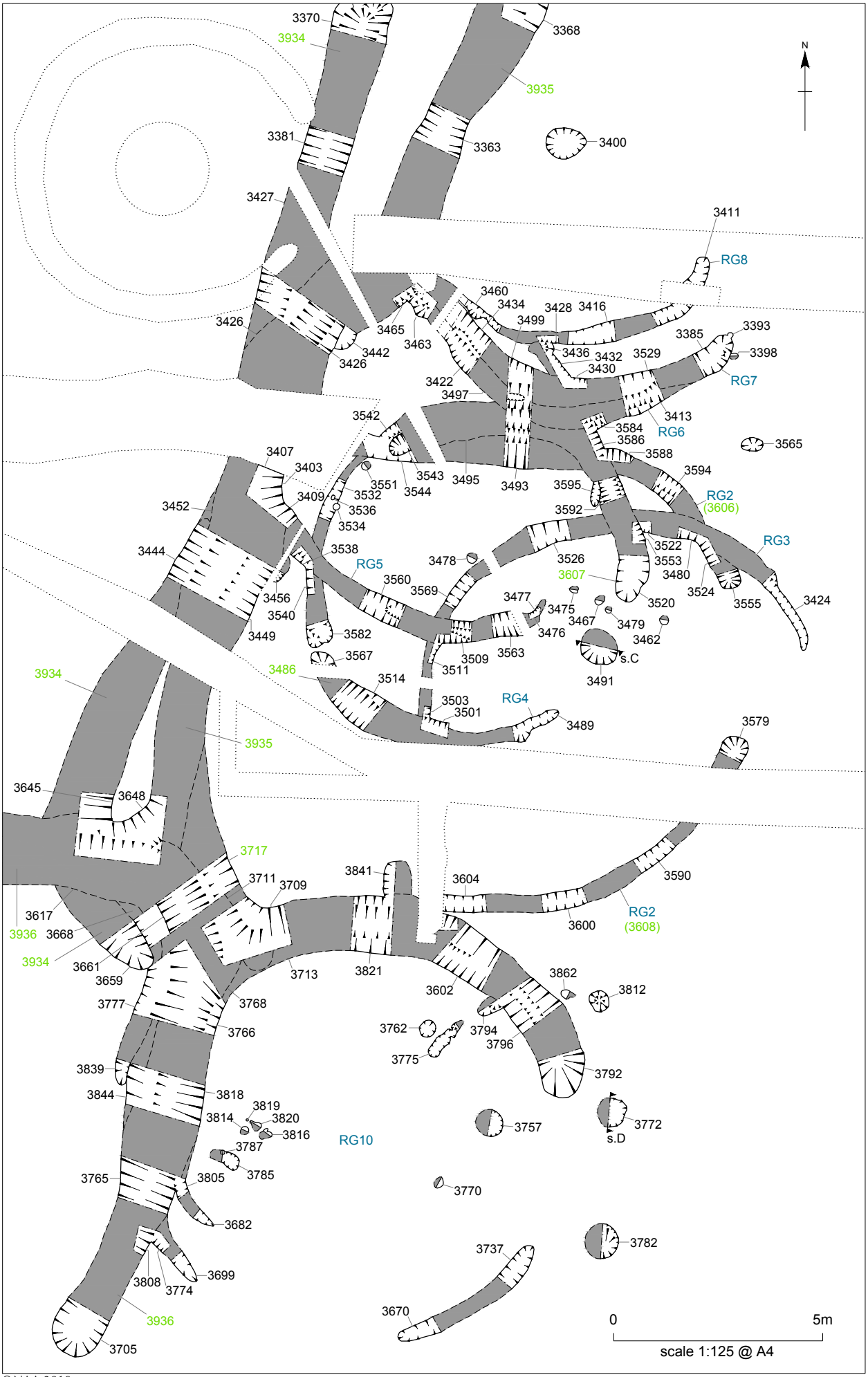
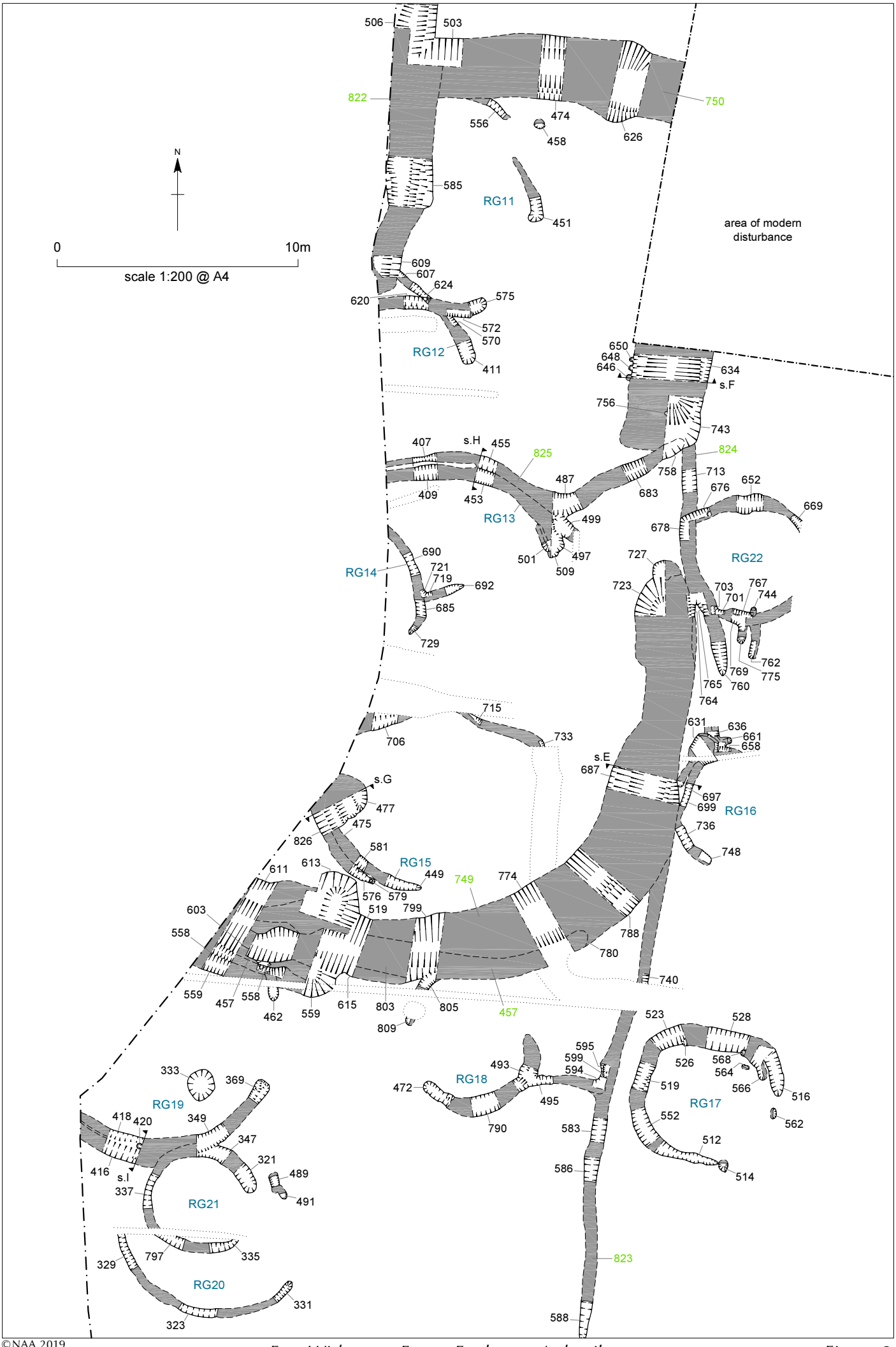
East Wideopen Farm: Enclosure B detail

Figure 6

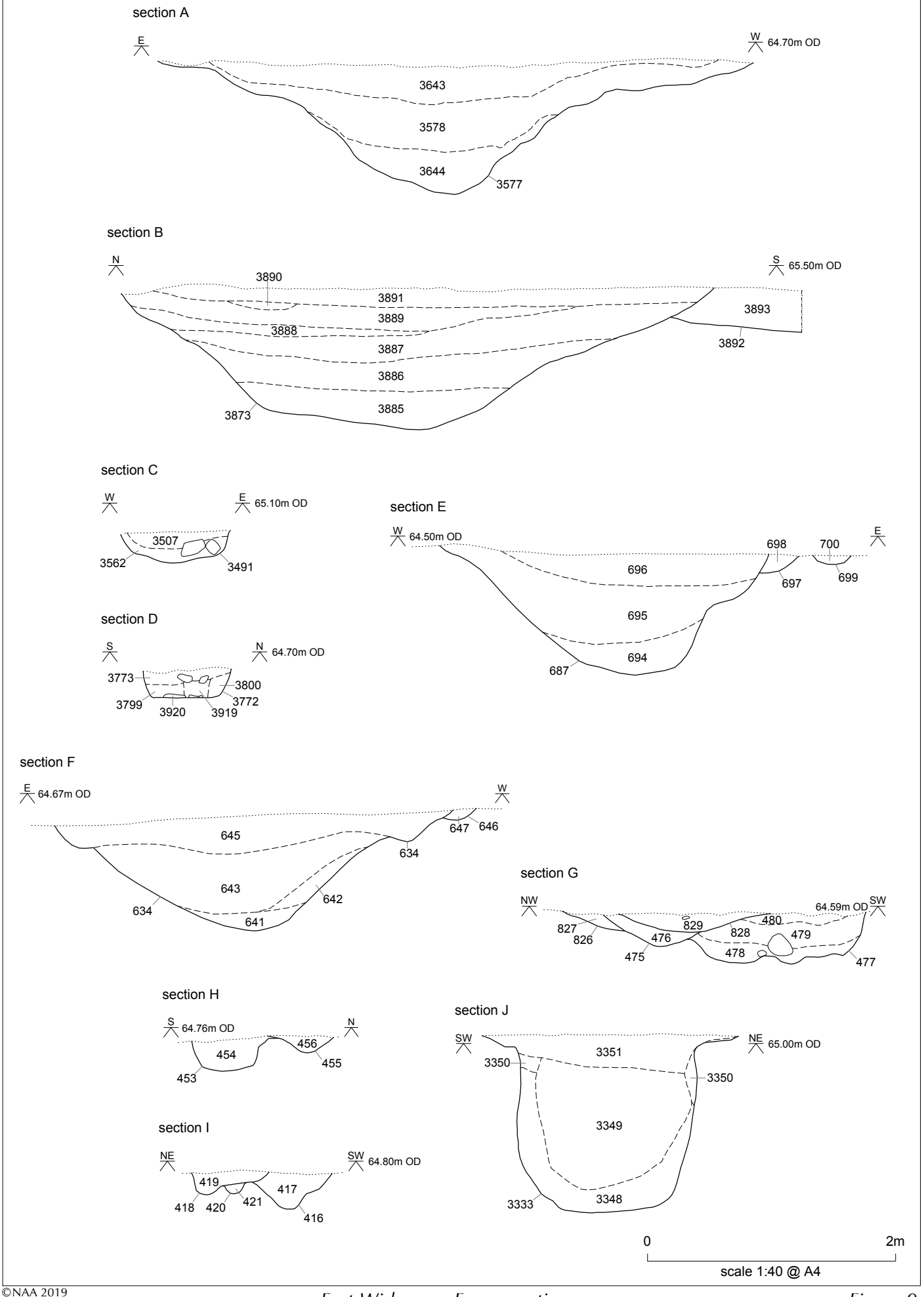


East Wideopen Farm: detail of ring gullies in Enclosure B *Figure 7*



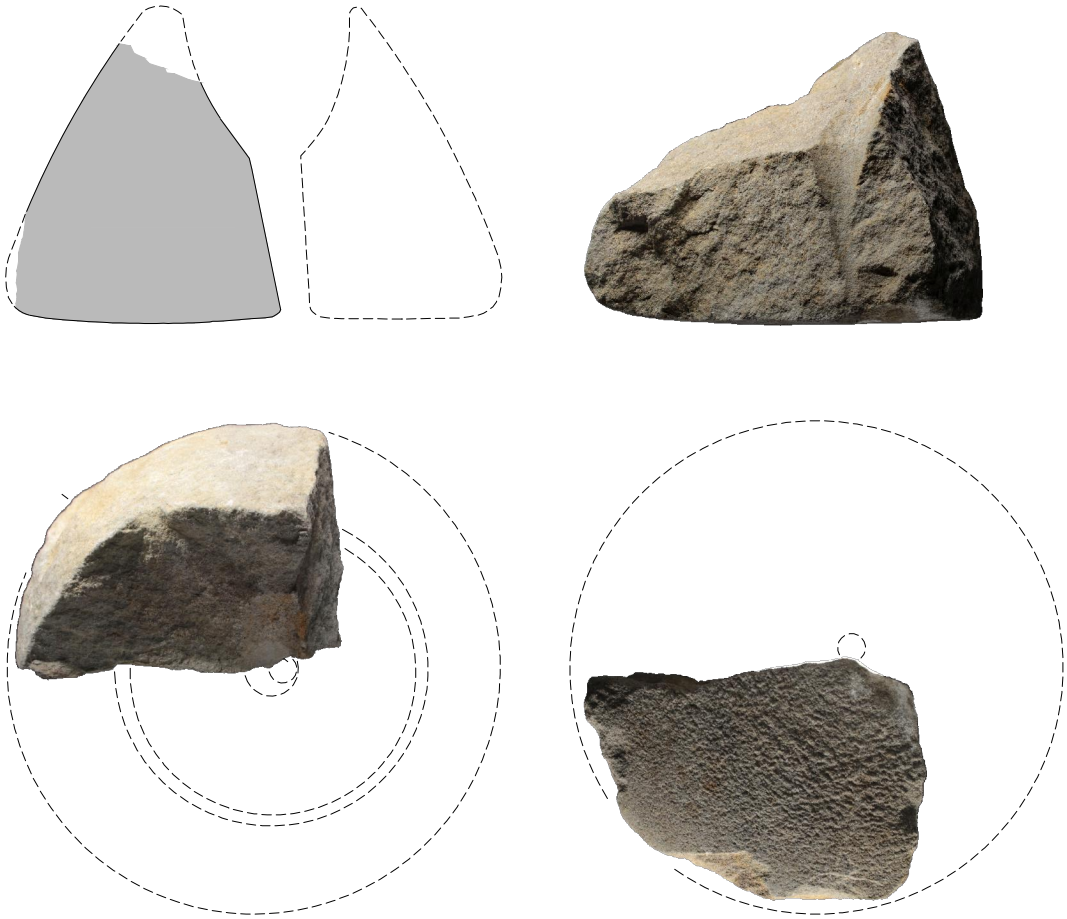
East Wideopen Farm: Enclosure A detail

Figure 8



East Wideopen Farm: sections *Figure 9*

East Wideopen Farm: sites mentioned in text *Figure 10*



East Wideopen Farm: RF001 beehive quern upper from ring gully fill 3593 *Figure 11*