

Norwich Northern Distributor Road



Post-Excavation Assessment & Updated Project Design Volume 1: Summary of Results, Finds and Environmental Reports



May 2017

**Client: Balfour Beatty on behalf of
Norfolk County Council**

OA East Report No: 1984

OASIS No: oxfordar3-276603

NGR: TG 14345 15573 (western end) to

TG 29009 08951 (south-eastern end)

Site Codes: ENF139693 to ENF139712

Norwich Northern Distributor Road, Norfolk

Post-excavation Assessment and Updated Project Design

Volume I: Summary of Results, Finds and Environmental Reports

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Table of Contents

Summary.....	9
1 Introduction.....	11
1.1 Project Background.....	11
1.2 Report Structure.....	11
1.3 Geology and Topography.....	11
1.4 Archaeological and Historical Background.....	11
1.5 Acknowledgements.....	15
2 Project Scope.....	16
3 Interfaces, Communications and Project Review.....	16
4 Original Research Aims and Objectives.....	17
4.1 General Research Objectives.....	17
4.2 Area Specific Research Objectives.....	17
5 Summary of Results.....	18
5.1 Introduction.....	18
5.2 Area 1 (ENF139693).....	20
5.3 Areas 2a and 2b (ENF139694 & ENF139695).....	31
5.4 Area 3 (ENF139696).....	32
5.5 Area 4 (ENF139697).....	52
5.6 Area 5 (ENF139698).....	57
5.7 Area 6 (ENF139699).....	62
5.8 Area 7 (ENF139700).....	63
5.9 Area 8 (ENF139701).....	68
5.10 Area 9 (ENF139702).....	69
5.11 Area 10 (ENF139703).....	81
5.12 Area 11 (ENF139704).....	89
5.13 Area 12 (ENF139705).....	92
5.14 Area 13 (ENF139706).....	98
5.15 Area 14 (ENF139707).....	102
5.16 Area 15 (ENF139708).....	103
5.17 Area 16 (ENF139709).....	105
5.18 Area 17 (ENF139710).....	107
5.19 Area 18 (ENF139711).....	122
5.20 Area 19 (ENF139712).....	130
6 Factual Data and Assessment of Archaeological Potential.....	139

6.1	Structural Data.....	139
6.2	Documentary Research.....	140
6.3	Artefact Summaries.....	140
6.4	Environmental Summaries.....	144
7	Updated Research Aims and Objectives.....	146
7.1	General Research Objectives.....	146
7.2	Site Specific Research Objectives.....	147
8	Methods Statements for Analysis.....	149
8.1	Stratigraphic Analysis.....	149
8.2	Illustration.....	149
8.3	Documentary Research.....	149
8.4	Artefactual Analysis.....	149
8.5	Ecofactual Analysis.....	151
9	Report Writing, Archiving and Publication.....	152
9.1	Report Writing.....	152
9.2	Storage and Curation.....	152
9.3	Publication.....	153
10	Resources and Programming.....	155
10.1	Project Team Structure.....	155
10.2	Stages, Products and Tasks.....	156
11	Ownership.....	158
	Appendix A. Product Description.....	159
	Appendix B. Risk Log.....	160
	Appendix C. Bibliography.....	161
	Appendix D. OASIS Report Form.....	165

List of Figures

Fig. 1	Site location
Fig. 2	Area 1
Fig. 3	Areas 2a and 2b
Fig. 4	Area 3
Fig. 4a	Area 3 Bronze Age features
Fig. 5	Area 4
Fig. 6	Area 5
Fig. 7	Area 6
Fig. 8	Area 7
Fig. 9	Area 8
Fig. 10	Area 9
Fig. 11	Area 10
Fig. 11a	Area 10 detail plan of Feature Groups
Fig. 12	Area 11
Fig. 13	Area 12
Fig. 14	Area 13
Fig. 15	Area 14
Fig. 16	Area 15
Fig. 17	Area 16
Fig. 18	Area 17
Fig. 19	Area 18
Fig. 20	Area 19
Fig. 21	Selected Sections

List of Plates

Plate 1	Area 1, Boundary Ditch 1141 , looking north-east
Plate 2	Area 3, Enclosure 3008 , palisade 3685 and posthole alignment 3503 , looking north-east.
Plate 3	Area 3, posthole alignments 21110 , 21154 and pit alignment 21014 , looking north-west.
Plate 4	Area 9, Structure 9461 during excavation, looking south-east
Plate 5	Area 11, Charcoaling pit 11009 , looking north
Plate 6	Area 17, recording of Trackway 17510 , looking north-east

List of Tables

Table 1: Summary of project archive	20	Table 33: Area 3 samples from Middle Bronze Age ditch fills	50
Table 2: Provisional Phasing	21	Table 34: Area 3 Late Bronze Age cremation samples	51
Table 3: Area 1, finds from Early Bronze Age features	22	Table 35: Area 3 pit fill samples	52
Table 4: Area 1, finds from Middle Bronze Age features	23	Table 36: Area 3 structural posthole samples	53
Table 5: Area 1, finds from high medieval features	24	Table 37: Area 4, Finds from Iron Age features	54
Table 6: Area 1, Prehistoric pottery	25	Table 38: Area 4, Find from Romano-British Features	55
Table 7: Area 1 Post-Roman pottery	26	Table 39: Area 4 Prehistoric pottery	55
Table 8: Area 1 Glass	26	Table 40: Roman pottery from Area 4	55
Table 9: Area 1, Quantification of lithic material	27	Table 41: Area 4 Roman pottery	56
Table 10: Area 1 Stone	28	Table 42: Area 4 Clay tobacco pipe	57
Table 11: Area 1 disarticulated human skeletal remains	29	Table 43: Area 4, Quantification of lithic material	57
Table 12: Area 1 Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.	30	Table 44: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.	58
Table 13: Area 1 Totals noted of taphonomic states, demonstrating a high prevalence of surface root etching amongst the contexts	30	Table 45: Area 4 environmental samples	58
Table 14: Area 1 prehistoric deposit samples	31	Table 46: Area 5, finds from undated features	59
Table 15: Area 1 medieval deposit samples	32	Table 47: Area 5, finds from Middle Bronze Age features	60
Table 16: Area 1 undated deposit samples	32	Table 48: Area 5 Prehistoric pottery	60
Table 17: Area 3, Finds from Early Neolithic features	34	Table 49: Area 5 Clay Tobacco Pipe	61
Table 18: Area 3 Average posthole alignment dimensions	35	Table 50: Area 5, Quantification of lithic material	62
Table 19: Area 3 Average structural posthole dimensions	36	Table 51: Area 5 samples	63
Table 20: Area 3, Finds from Bronze Age features	38	Table 52: Area 7, Finds from Romano-British features	65
Table 21: Area 3, Finds from Romano-British features	39	Table 53: Area 7 Roman pottery	66
Table 22: Area 3 Radiocarbon Results (95.4% probability; SUERC-69925 (GU42123))	40	Table 54: Area 7 Roman pottery fabrics, listed in descending order of weight (g)	67
Table 23: Area 3 Prehistoric pottery	43	Table 55: Area 7 Clay tobacco pipe	68
Table 24: Area 3 Roman pottery	43	Table 56: Area 7 Environmental samples	69
Table 25: Area 3 Post-Roman pottery	44	Table 57: Area 8 Environmental Samples	70
Table 26: Area 3 Glass	44	Table 58: Area 9, Finds from Prehistoric Features	71
Table 27: Area 3 Metalworking waste	45	Table 59: Area 9, Finds from Early and high medieval features	73
Table 28: Area 3, Quantification of lithic material	46	Table 60: Area 9, Finds from late medieval features	74
Table 29: Area 3 Worked Stone	48	Table 61: Area 9, Finds from post-medieval features	75
Table 30: Summary of fired clay structural fragments from Area 3 (fs=flattened surfaces, w=wattle impressions)	49	Table 62: Area 9 Post-Roman pottery	76
Table 31: Area 3 Cremated human skeletal remains	49	Table 63: Area 9 Metalworking Waste	78
Table 32: Area 3 Summary of calcined bone from other features	50	Table 64: Area 9 diagnostic CBM	79
		Table 65: Area 9, Quantification of lithic material	80
		Table 66: Area 9 Worked Stone	80
		Table 67: Area 9 Environmental samples from prehistoric features	81
		Table 68: Area 9 Environmental samples from medieval features	82
		Table 69: Area 10, Finds from prehistoric features	83

Table 70: Area 10 Charcoaling Pits	84	Table 106: Totals noted of taphonomic states, demonstrating the prevalence of surface root etching amongst some of the contexts from this area.	121
Table 71: Area 10, finds from early medieval features	85	Table 107: Area 17 Environmental Samples from Prehistoric Features	122
Table 72: Area 10, Finds from high medieval features	85	Table 108: Area 17 Environmental Samples from Early Medieval features	123
Table 73: Area 10 Post-Roman pottery	86	Table 109: Area 17 Environmental Samples from Late Medieval Features	123
Table 74: Area 10 Metalworking waste	88	Table 110: Area 18, Finds from Neolithic features	124
Table 75: Area 10 Environmental Samples	90	Table 111: Area 18, finds from high medieval features	125
Table 76: Area 11 Charcoaling Pits	91	Table 112: Area 18, Finds from late medieval features	125
Table 77: Area 11 metalworking waste	92	Table 113: Area 18, finds from post-medieval features	126
Table 78: Area 11 Environmental Samples	93	Table 114: Area 18 Prehistoric pottery	126
Table 79: Area 12 Charcoaling Pits	94	Table 115: Area 18 Post-Roman Pottery	127
Table 80: Area 12, Finds from early medieval features	95	Table 116: Area 18 Small Finds	127
Table 81: Area 12 Post-Roman pottery	96	Table 117: Composition of the Lithic Assemblage from Area 18	128
Table 82: Summary of Fired Clay from Area 12 (fs=flattened surface, c=corner)	97	Table 118: Area 18 Worked Stone	129
Table 83: Quantification and composition of lithic material from NDR Area 12	98	Table 119: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.	130
Table 84: Area 12 worked stone	99	Table 120: Area 18: Totals noted of taphonomic states. The horse (mandible), although fragmented is represented by some large fragments with reasonable surface preservation (at "Grade 3" following Brickley and McKinley, 2004). Other fragments are in a poor state that limits their zooarchaeological potential.	130
Table 85: Area 12 Environmental Samples	99	Table 121: Area 18 Environmental Samples	131
Table 86: Area 13 charcoaling pits	100	Table 122: Area 19, finds from Neolithic features	132
Table 87: Area 13. Finds from early medieval features	101	Table 123: Area 19, Finds from high medieval features	134
Table 88: Area 13 Worked Stone	102	Table 124: Area 19 Prehistoric Pottery	134
Table 89: Area 13 Environmental Samples	103	Table 125: Area 19 Post-Roman pottery	135
Table 90: Area 14 Environmental Samples	104	Table 126: Area 19 Small Finds	136
Table 91: Area 15 Environmental Samples	106	Table 127: Composition of the Lithic Assemblage from NDR Area 19 (N.B. percentage figures are only given for assemblages containing in excess of 100 pieces)	137
Table 92: Area 16 Post-Roman pottery	108	Table 128: Area 19 Worked Stone	139
Table 93: Area 16 Environmental Samples	108	Table 129: Area 19 Prehistoric Feature Samples	139
Table 94: Area 17, Finds from Early Bronze Age features	109	Table 130: Area 19 Medieval Samples	140
Table 95: Area 17, Finds from Middle/Late Bronze Age features	110	Table 131: Artefactual and Environmental Quantification	141
Table 96: Area 17, Finds from early medieval features	111	Table 132: Correlating Site Code for each Area	153
Table 97: Area 17, Finds from high medieval features	112	Table 133: Project Team Structure	156
Table 98: Area 17, Finds from late medieval features	113	Table 134: Task list for further work	158
Table 99: Area 17, Finds from post-medieval features	114		
Table 100: Area 17 Prehistoric pottery	114		
Table 101: Area 17 Post-Roman pottery	115		
Table 102: Area 17 Metalworking Waste	116		
Table 103: Composition of the Lithic Assemblage from Area 17	117		
Table 104: Area 17 Worked Stone	119		
Table 105: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable	120		

Summary

Between 4th January and 16th September 2016, Oxford Archaeology East (OA East) carried out archaeological excavations along the 20km route of the Norwich Northern Distributor Road, Norfolk (TG 14345 15573 to TG 29009 08951). In total, 19.72 ha was stripped by machine under archaeological supervision across 20 discrete areas that were identified as requiring further investigation after evaluation.

Archaeological remains were uncovered ranging in date from the Early Neolithic to the Second World War. A significant background scatter of residual flints was recovered from the majority of sites, and prehistoric features occurred throughout the excavations. The most significant of these was found at Area 3, near Horsford, where a large Middle to Late Bronze Age settlement was excavated. This settlement consisted of a large three-sided enclosure, 15 posthole and pit alignments and a number of circular posthole structures.

A large portion of the remaining features ranged in date from the early medieval through to the high medieval period. Some early medieval industrial activity and high medieval rural roadside settlement and industrial activity was recorded along the route, particularly around Rackheath and Beeston where numerous charcoaling pits and a small number of smelting furnaces were excavated. High medieval roadside enclosures were found at the western end (Furze Lane) and south-eastern end (Smee Lane and Middle Road) of the route. Structures were rarely evident, with only small groups of postholes occasionally being recorded.

The latest archaeological remains from the site were from a crashed Second World War American Mustang aeroplane, recovered from near the village of Rackheath in an area previously part of Rackheath Airfield.

Finds assemblages from the excavations were variable in quantity and quality. A total of approximately 15.539kg of prehistoric pottery was recovered from the route, along with 0.835kg of Roman pottery and 20.09kg of medieval and post-medieval pottery. Other finds included 45kg of metalworking debris, 42.783kg of ceramic building material and fired clay, 10.5kg of worked stone, 2286 worked flints, two silver medieval coins and a post-medieval crotal bell.

Overall, a large and varied range of stratigraphical, artefactual and environmental data was recovered during excavation which has been assessed as having good potential for further analysis that will enable a number of research questions of regional importance to be addressed.

1 INTRODUCTION

1.1 Project Background

- 1.1.1 Between 4th January and 16th September 2016, Oxford Archaeology East (OA East) undertook excavations along the 20km route of the Norwich Northern Distributor Route (NDR) (Fig. 1). These excavations took place in 20 discrete areas totalling just under 20 ha that were stripped, targeting locations deemed to require further investigation by the Norfolk County Council Historic Environment Service (NCC HES) and Mott MacDonald Archaeological Consultants, following the evaluations undertaken by NPS Archaeology during 2009/2010 (Ames & Sillwood 2012) and OA East between April and September 2015 (Pooley 2015).
- 1.1.2 This assessment has been conducted in accordance with the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment*, specifically *The MoRPHE Project Manager's Guide* (2015) and *PPN3 Archaeological Excavation* (2008).

1.2 Report Structure

- 1.2.1 This post-excavation assessment is split into two volumes. The first volume contains all information pertaining to each excavation area along with finds specialist report summaries and technical information regarding further post-excavation work. The second volume contains the context inventory, full finds specialist reports & catalogues and all figures and plates.

1.3 Geology and Topography

- 1.3.1 The route is located on gently undulating agricultural land to the north and east of Norwich, situated at between 18mOD and 35mOD. All the land has been farmland or pasture throughout the modern period, apart from areas around Rackheath, that were part of Rackheath airfield during the Second World War.
- 1.3.2 The route had variable geology, with its western end, around Taverham, located on a bedrock geology of Wroxham crag formation sand and gravel overlain by mid-Pleistocene glaciofluvial deposits of sand and gravel. The Wroxham Crag formation is replaced by brick earth deposits around Spixworth and Horsham St Faith and as the route progresses east, at Rackheath, the route runs over alluvium deposits along a tributary stream of the River Bure. The final stretch of the route towards Heath Farm is on a bedrock comprising Happisburgh Glacigenic Diamicton deposited over Crag Group sand and gravel (BGS Geology of Britain Viewer; <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>, accessed 21/09/16).
- 1.3.3 Due to the length of the route, a more localised description of the topography and geology is provided at the start of each excavation areas results section.

1.4 Archaeological and Historical Background

Introduction

- 1.4.1 The archaeological desk-based assessment (DBA; Mott MacDonald 2013) and Environmental Statement (Norfolk County Council 2013) evaluated the archaeological and historical background of the proposed route of the NDR. Information from the Norfolk Historic Environment Record (NHER) and Norfolk National Mapping Programme (NMP) was also consulted. Various phases of previous evaluation work have been carried out along the route, including geophysical survey and several stages

of evaluation including fieldwalking and trenching (Ames & Silwood 2012 & Pooley 2015).

- 1.4.2 The following is a brief synopsis of the archaeological and historical background based on these pieces of previous work, in particular the DBA (Mott MacDonald 2013), which also includes figures showing the location of the sites mentioned in the following sections.

Palaeolithic to Mesolithic (c. 500,000BC – c.4000BC)

- 1.4.3 The route lies within a landscape that was utilised from the early prehistoric period. A few Palaeolithic and Mesolithic finds have been found within the DBA search area. Palaeolithic flints have been recovered from areas of river terrace gravels, which were not within their original depositional context (Trimble and Watkins 2008, 4). A much broader spread of Mesolithic finds has been found in the vicinity, although no significant concentrations have been identified (Ames and Silwood 2012, site 123960 at Broadland Gate). Palaeolithic and Mesolithic remains were also recorded during excavations for the Postwick Park and Ride (Crawley 2016, NHER ENF134156).

Neolithic (c. 4000BC – c. 2500BC)

- 1.4.4 Important prehistoric funerary monuments or henges have been located and evaluated as part of the previous archaeological works for NDR or within the vicinity of the route, such as at Postwick Park and Ride (*ibid.*). Various ring-ditches have also been identified in the NHER at various locations within the vicinity of the route (MNF 21766 to the south of Heath Farm; MNF 36413 – near Area 5; MNF 51924 – north-east of Area 14; MNF 53610 – to the north of Norwich airfield; MNF 54396 – south-east of Area 5; MNF 51939 – near Area 15; MNF 51972 – Area 19, MNF 49758 – excavated south of Heath Farm).
- 1.4.5 Archaeological evaluation trenches identified postholes with associated Bronze Age pottery and worked flints (Ames and Silwood 2012; Site 124468, near Area 1).
- 1.4.6 Trenching in the parish of Sprowston (Trimble and Watkins 2008; Site 49748, near Area 10) revealed a series of ditches interpreted as former land divisions, the most significant of which contained Early Neolithic pottery. The location of this site poses questions about the use of shallow valleys for the siting of prehistoric settlement in the Broadland region. To the west of the site further possible archaeological features have been identified through geophysical survey (Harrison 2013; near Areas 8 and 9).
- 1.4.7 Work within the Postwick Hub area of the scheme was assessed through a number of pieces of archaeological work (Sabin and Donaldson 2007, Trimble and Watkins 2008). The works confirmed the presence of a large prehistoric enclosure and other cropmark features of Neolithic to Bronze Age date. The latter included a ring-ditch, possibly a henge or barrow monument.
- 1.4.8 A number of findspots of Neolithic flint tools also have been identified within the DBA search area (MNF 12306 – south-east of Area 5, MNF 22223 – west of Areas 16 and 17, MNF 19714 – near Area 9, MNF 23971, MNF 24239 – north-west of Area 15, 24240 – west of Area 17, 24924 – East of Area 3 and MNF 7858 – south-east of Area 5).

Bronze Age (c. 2500 – c. 800BC)

- 1.4.9 A cluster of cropmarks falls partly within the road scheme in the parish of Horsford. Two archaeological trenches confirmed the location of a large rectilinear enclosure at Bell Farm (Area 3), on Reephram Road (Trimble and Watkins 2008; Site 18131). Dating evidence recovered from this evaluation suggested the site is of Bronze Age date,

although a series of pits present within the enclosure are believed to be of Neolithic date. Further geophysical work suggests that the area of occupation extended for some distance to the west of the enclosure (Ames and Sillwood 2012; Site 124223, Area 3).

- 1.4.10 Ten targeted trenches were excavated across Site 35669 (Ames and Sillwood 2012, Area 7) in the parish of Spixworth. Several ditches and pits were identified; a single pit contained Roman material whilst the remaining ditches and pits contained prehistoric pottery and worked flints.
- 1.4.11 Fifteen trenches were excavated (Ames and Sillwood 2012; Site 35668, Field HF10) with the aim of providing contextual data for material recovered from fieldwalking (Morgan and Hoggart 2008). The works revealed a small amount of archaeological activity. Two pits were identified with similar fills, from which four sherds of Bronze Age pottery were recovered. Further Bronze Age activity is known to the west at Horsford (MNF 18131 near to Areas 3 and 4).
- 1.4.12 Three ring-ditch cropmarks were identified on a 1996 aerial photograph, in the region of Broadland Lane, the two smaller features are now under Broadland Road whilst the larger is still partially extant. Further Neolithic or Bronze Age cropmarks are identified within the DBA search area but lie outside the proposed route.

Iron Age (c.800BC – AD43)

- 1.4.13 Previous evaluation trenching near Area 1 (Trimble and Watkins 2008; Site 30315), in Taverham, revealed a substantial linear earthwork. Research has established that the boundary runs for a considerable distance and is similar to other linear earthworks, such as Fossditch, the Bichamditch, the Panworth Ditch, Launditch and Devils Dyke. Although undated it is believed that this style of ditch is either of Iron Age or Anglo-Saxon date. The presence of disarticulated human remains within the vicinity of the Taverham ditch might suggest it dates to the Iron Age, as disarticulated human remains are often found in Iron Age ditches. Geophysical survey also found a D-shaped enclosure with associated pits and postholes to the west of Taverham and adjacent to Site 30315 (Harrison 2013, west of Area 1).
- 1.4.14 Trenching in the area of Lagoon 14 (Ames and Sillwood 2012; Site 123748, near Areas 6 and 7) revealed a compact layer of material containing Iron Age pottery. This is believed to represent an earlier phase of a postulated Roman road between Brampton and Thorpe St Andrew.
- 1.4.15 A number of cropmarks that probably represent Iron Age or Roman enclosures have been identified within the road corridor (MNF 57647, MNF 51955 – Area 17, MNF 52380 – west of Area 1, MNF 52383 – Area 1, MNF 52384 – east of Area 1, and MNF 53240 – Area 5). Further enclosures have also been identified within the search area but are outside the route (MNF 40486, 57625 and 57631, for example). The sites outside of the route have not been tested archaeologically and the Iron Age date is not confirmed. Further Iron Age remains found within the search area include a linch pin (MNF 28620), pottery (MNF 32782), flints (MNF 33482) and coins (MNF 20913).

Roman (AD 43 – AD410)

- 1.4.16 Limited evidence for Roman activity has been located along the route, including excavation work by the Norfolk Archaeological Unit (NAU), which revealed Roman pottery kilns at the Broadland Business Park (MNF 31108 – west of Area 19; Bates *et al* 2003).

- 1.4.17 The route also crosses the postulated line of a Roman road between Brampton and Thorpe St Andrew (MNF 7598). This site was evaluated (Ames and Sillwood 2012, Site 123748, east of Area 7), although no evidence for the road was uncovered.
- 1.4.18 A possible Roman marching camp was identified from aerial photographs within the area of Spixworth (MNF 16451 – near to Areas 6 and 7). A second square enclosure was also identified to the north, and although undated may also be Roman as a Roman coin was found nearby (MNF 19644 – north-west of Norwich Airport).

Saxon (AD 410 – AD1066)

- 1.4.19 Several strap ends and stirrups of Saxon date have been recorded as findspots within the vicinity of the proposed route. Previous trenching has also revealed two Early Saxon pits and a ditch (Ames and Sillwood 2012). In addition, an Early Saxon pottery sherd was recovered from the area of the deserted medieval village at Rackheath, which may indicate an outlying precursor settlement (Ames and Sillwood 2012, Site 50501 – Area 13).
- 1.4.20 Two possible *Grubenhäuser* (MNF 10219 and 52046) have been identified near to Heath Farm.

Medieval (AD 1066 – AD1500)

- 1.4.21 Medieval findspots, from fieldwalking, are common along the route and include a number of coins, horse harnesses and pottery.
- 1.4.22 Medieval settlement has also been identified along the route, including the deserted medieval village at Rackheath. Sites 51049 and 50501 revealed features associated with the deserted village, dated to the 13th to 14th centuries (Ames and Sillwood 2012, Areas 12 and 13).
- 1.4.23 The probable site of Holy Trinity Church, Little Rackheath, abandoned in the 16th century, has been identified to the west of Site 51049. The features found at this site are likely to have been part of the deserted medieval settlement, with the nucleus around or close to the parish church. Pottery recovered during the evaluation works was dated to the 11th to 12th century and also 13th to 14th century. It is suggested that the village was abandoned during the reshaping of Rackheath Park (Ames and Sillwood 2012).
- 1.4.24 Medieval field boundaries were also identified at Site 124298, although there was no evidence for occupation of the site (Ames and Sillwood 2012).
- 1.4.25 The site of the fair at St Faith's Fairstead lies just to the north of the route and has produced copious amounts of metal finds, although evaluation trenching of the densest concentration of finds failed to identify any archaeological features associated with the fair. The concentrations of medieval findspots along the route suggests further activity of this period is likely to have occurred in the vicinity.
- 1.4.26 Evaluation and excavation by PCA at Laurel Farm, Broadland Business Park, west of the routes eastern end, found evidence for medieval industry in the form of charcoaling pits and ore roasting pits (Bishop & Proctor 2011)

Post-medieval (AD 1500 – 1750) to modern

- 1.4.27 Post-medieval archaeology has been investigated along the route, including ditches and a single pit from Site 124299 (Mott MacDonald 2013 – south-east of Area 5). Evidence uncovered at Site 35668 (Field HF10, Mott MacDonald 2013), included several pits and ditches dated to the 16th to 17th centuries. Evaluation by OA East in

2015 uncovered numerous features of probable post-medieval date, including the corner of a flint and mortar structure (now located in Area 9) and a post-medieval trackway (now located in Area 19)

- 1.4.28 A number of post-medieval findspots of coins, pottery and other metalwork have been identified along the route. Other post-medieval records relate to two railway bridges (MNF 13584 and 20138), a ruinous house (MNF 23986), crofts (MNF 58439) and trackways (MNF 48447 and 58537) (Mott MacDonald 2013).
- 1.4.29 A possible World War One airfield has been identified along the route and is recorded at TG 161 159. Further Second World War evidence includes a domestic airfield at Rackheath Park and a Second World War training area (MNF 50741).

1.5 Acknowledgements

- 1.5.1 This final phase of archaeological work related to the NDR was undertaken by a large group of people, all of whom greatly contributed to the successful completion of site works. The job was managed by Tom Phillips and fieldwork was directed by Pat Moan. Anthony Haskins directed fieldwork on Areas 1, 2, and 4 and sites were supervised by Simon Birnie, Andrew Greef and Ashley Pooley. Excavation and recording of features was undertaken by Anne-Laure Bollen, Tom Brook, Sofia Colquhoun, Dan Firth, Lindsey Kemp, Rich Kevill, Gosia Kwiatkowska, Neal Mason, Stephen Morgan, Neus Esparsa Nogues, John Percival, Amy Revans, Tom Sigsworth, Ben Slader and Ben Sorril. Site survey was completed by Dave Brown, Andrew Greef, Gosia Kwiatkowska and Pat Moan. Survey data was processed by Dave Brown and Gareth Rees and figures were compiled by Charlotte Walton.
- 1.5.2 Specialists involved in the identification and dating of finds from the sites were: Sue Anderson (Post-Roman pottery), Barry Bishop (lithics), Carole Fletcher (glass and clay tobacco pipe), Rachel Fosberry (charred plant remains), Chris Howard-Davis (small finds), Ted Levermore (ceramic building material and fired clay), Alice Lyons (Roman pottery), Sarah Percival (Prehistoric pottery and metalworking debris), Ruth Shaffrey (worked stone), Ian Smith (faunal remains) and Zoe Ui Choilleann (human skeletal remains)
- 1.5.3 The site was visited and monitored by Ken Hamilton of NCC HES, Josh Williams and Phillippa Adams of Mott MacDonald, who conversed with the client Balfour Beatty and Norfolk County Council. Both David McCarthy and Karl Looney of Balfour Beatty were instrumental in the successful completion of the works, organising the required plant and access to areas during the excavations.

2 PROJECT SCOPE

- 2.1.1 This assessment describes the results from the excavations undertaken during 2016. Results from the 2015 OA East evaluation will be amalgamated during the analysis stage for presentation in the final report. The two phases of evaluation by NPS (2010 and 2012) will be referenced during analysis when they aid in the interpretation of the archaeology found during excavation.

3 INTERFACES, COMMUNICATIONS AND PROJECT REVIEW

- 3.1.1 This Post-Excavation Assessment has been undertaken principally by Pat Moan (PM) and edited and Quality Assured in-house by Project Manager Tom Phillips (TP) and post-excavation manager Elizabeth Popescu (EP). It will be distributed to Norfolk County Council, Balfour Beatty, Jame Albone (JA) from the Norfolk Historic Environment Services and Phillippa Adams (PA) for comment and approval.
- 3.1.2 Following approval of the Post-Excavation Assessment an agreement will be made between PM, TP, EP, PA and JA on the post-excavation analysis and publication time frame.
- 3.1.3 In addition, following approval of the Post-Excavation Assessment, a timetable for the analysis stage of the work will be discussed. Following these discussions, a post-excavation analysis and publication timetable will be produced. Updates by email will be sent to all relevant parties during the analysis phase.

4 ORIGINAL RESEARCH AIMS AND OBJECTIVES

4.1 General Research Objectives

4.1.1 The aims identified below are referenced from the Written Scheme of Investigation compiled by Mott MacDonald (Adams 2015) which were in turn derived from *Research and Archaeology Revisited: A Revised Framework for the East of England* (Medlycott 2011). The principal objective of this archaeological investigation was to determine the character (nature, date, complexity and extent) of any features recorded through previous investigations and any new features recorded.

4.1.2 The excavations were undertaken with the following general aims:

- Identify the date, approximate form and purpose of any archaeological deposit, together with its likely extent, localised depth and quality of preservation;
- Establish whether burnt mounds can be identified within the route;
- Establish whether it is possible to identify patterns of landscape change between, and within, archaeological periods;
- Identify whether it is possible to assign a specific function (i.e. domestic, funerary, industrial metallurgy, crop processing, quarrying) for different types of enclosures within different periods.
- Provide further information regarding Middle Bronze Age field systems in Norfolk and compare with the results at Ormesby St Michael (Gilmour *et al* 2014);
- Identify whether the furnaces can be assigned a contemporary or broadly contemporary date; and
- Establish the date and nature of any crop and grain processing recorded throughout the route

4.2 Area Specific Research Objectives

4.2.1 Many area specific aims were highlighted within the Written Scheme of Investigation compiled by Mott MacDonald (Adams 2015). These aims were generally excavation aims, targeting features of interest and establishing whether they can be dated with confidence along with trying to identify their function and purpose.

5 SUMMARY OF RESULTS

5.1 Introduction

5.1.1 Along the 20km route of the NDR, a total of 20 sites were investigated, totalling 19.7ha. Certain areas were not excavated to the full dimensions stated in the WSI, due to services or restrictions in spoil storage. For example, Areas 9 and 10 were both made smaller due to certain parts of the excavation areas being built up to form soil bunds, rather than being stripped during the construction of the road. Similarly, Area 1 was not fully stripped due to services running through the area and limited space for spoil storage. Others sites were marginally smaller than the size specified in the WSI, due to on-site limitations.

5.1.2 The excavation results are discussed below, separated by site and starting from the western-most area excavated (Area 1). Finds and environmental data has been tabulated for groups of features within specific periods for each site and an overall quantification of material recovered from all sites is presented in Table 1.

Stratigraphic		Artefactual and environmental	
Context registers	157	Prehistoric pottery (kg)	15.539
Context numbers	6524	Roman pottery (kg)	0.835
Section registers	47	Post-Roman pottery (kg)	20.09
Sections	1406	Worked flint (kg)	28.656
Digital photos	4858 (70GB)	Burnt flint (kg)	52.997
Photo registers	105	Ceramic building material (kg)	30.782
Sample Registers	40	Fired clay (kg)	12.001
		Metalworking debris (kg)	44.765
		Glass (kg)	0.777
		Lava quern (kg)	14.513
		Human skeletal remains (kg)	0.177
		Animal bone (kg)	3.999
		Samples (10L sample tub)	546

Table 1: Summary of project archive

5.1.3 On each site, an overall feature number has been used in cases where more than one intervention has been recorded through a feature (e.g. a ditch), the number generally being taken from the lowest cut number used during excavation of the feature. Features have also been grouped where appropriate (e.g. by structure, pits within an area, or ditches forming an enclosure) and will be described as that group rather than separately. These feature and group numbers are annotated on the figures for each site (Figs 2-20).

5.1.4 The archaeological features have been assigned to chronological periods where possible on the basis of their stratigraphic relationships and any datable artefacts or radiocarbon dating of environmental remains (see Table 2 for periods used in this report). Any feature excavated lacking datable material or physical relationships with dated features have been left as undated. All context data organised by area, period and group, along with full specialist reports and catalogues of finds assemblages can be found in Volume 2 appendices.

- 5.1.5 A number of preliminary radiocarbon dates have been undertaken during assessment. These are mentioned when relevant in the results text, and copies of the certificates can be found in Volume 2, Appendix D.

Period	Sub-Period	Date
Undated	0	N/A
Neolithic	1	4000-2500 BC
Bronze Age	2.1	2500-1600 BC (Early)
	2.2	1600-1200 BC (Middle)
	2.3	1200-800 BC (Late)
Iron Age	3	800BC – AD 43
Romano-British	4	AD 43-410
Anglo-Saxon	5	AD 410-1066
Medieval	6.1	AD 1066-1250 (Early)
	6.2	AD 1250-1400 (High)
	6.3	AD 1400-1500 (Late)
Post-Medieval	7	AD 1500-1750
Modern	8	AD 1750-present

Table 2: Provisional Phasing

- 5.1.6 A number of features across the sites have been dated as prehistoric and at this stage cannot be placed within a specific prehistoric period (sub-periods 1-3). The features will be included in a period during analysis.

5.2 Area 1 (ENF139693)

5.2.1 Area 1 (Fig. 2) was located either side of Furze Lane, off Reepham Road in the parish of Taverham (TG 16575 15871). A total of 2.752ha was excavated, approximately 1ha less than originally planned. This was due to services located in the western half of the site preventing stripping and the practicalities of spoil storage meant part of the site was investigated through trenching prior to storing spoil within the area. Features excavated on the site consisted of a large prehistoric boundary ditch on a north-east to south-west alignment, from which a small amount of Bronze Age pottery and worked flint was recovered. Other possible prehistoric features include a pair of ditches and a possible posthole alignment. High medieval activity was also recorded across site in the form of roadside enclosure ditches, postholes and pits.

Period 2.1: Early Bronze Age

5.2.2 A number of features were found to contain Late Neolithic to Early Bronze Age pottery, such as tree throw **1049** which contained 21g of grooved ware pottery, tree throw **1052** which contained 13g of possible Early Bronze Age pottery and tree throw **1265** which contained 44g of Beaker pottery and 3g of early Bronze Age pottery. Many of the other discrete features within the area probably date to this same period.

Feature No	Feature Type	Pottery, sherds/g	Worked (Frag.)	Flint	Burnt Flint (g)	Enviro. results
1049	Tree Throw	9/21				
1052	Tree Throw	1/13			14	
1265	Tree Throw	20/53	22		1181	Barley grains

Table 3: Area 1, finds from Early Bronze Age features

Period 2.2: Middle Bronze Age

5.2.3 Boundary ditch **1141** (Plate 1) was located within the western half of the excavation area, on a north-east to south-west alignment, running for 169.8m. The ditch measured between 3.6m and 7.33m wide and 1.08m to 1.71m deep. A total of 186g of Bronze Age pottery, 4204g of burnt and struck flint and 9g of animal bone were recovered from the fills. A radiocarbon test was undertaken on charred grain from the ditch, which failed (Sample 20, context 1260; Volume 2, Appendix D). Another test will be attempted during analysis.

5.2.4 Ditch **1002** was on a north-west to south-east alignment, curving slightly to run west-north-west to east-south-east, running across the entirety of the area (292m). This small ditch varied between 0.39m to 0.81m wide and 0.08m to 0.35m deep. A single struck flint was recovered from the fill.

5.2.5 Ditch **1190** was located in the north-west corner of the excavation on the same alignment as ditch **1002** and possibly truncated by boundary ditch **1184**. The ditch ran for 88m and varied in width between 0.4m and 1.07m and 0.2m to 0.42m deep. The fill was a mid greyish brown silty sand from which 105g of struck flint was recovered.

5.2.6 Despite limited dating evidence from both ditch **1002** and **1190**, it is possible these formed part of a Bronze Age field system.

5.2.7 Posthole group **1028** was located in the south-east corner of the excavation and on a north-east to south-west alignment. These postholes were between 0.21m and 0.65m in diameter and 0.11 to 0.26m deep. The fill was a mid brown sand, from which no finds were recovered. Despite the lack of finds, since the postholes respected ditch **1002** and

had a similar form to the postholes found in Area 3, they have tentatively been placed in the Middle Bronze Age period.

Feature No	Feature Type	Pottery, sherds/g	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results
1141	Ditch	12/186	19	1014	Barley, spelt
1002	Ditch		1		
1190	Ditch			104	
1028	Posthole group				

Table 4: Area 1, finds from Middle Bronze Age features

Period 6.2: High Medieval

Enclosures

- 5.2.8 Enclosure **1072** was located in the southern part of the western area and formed by three arms of ditches with an open front towards Furze Lane. The enclosure measured 41m long and 40m wide. The ditches were between 0.81m to 2.06m wide and 0.1m to 0.64m deep. A total of 96g of animal bone, 72g of 11th to 13th century pottery as well as 30g of burnt and struck flint.
- 5.2.9 Enclosure **1066** was located north of Enclosure **1072** and formed by three arms of ditches with an open front towards Furze Lane, with another ditch forming a sub-division within the main enclosure area (**1242**), and another creating a small addition to the enclosure to the west (**1203**). The overall size of this enclosure was 58m long and 40m wide. The enclosure's northern arm was formed by boundary **1184**. The ditches measured between 0.4m to 1.75m wide and 0.13m to 0.65m deep. A total of 169g of 11th to 14th century pottery, 110g of animal bone, 97g of human bone and 355g of burnt and struck flint were recovered from the secondary fills.

Boundaries

- 5.2.10 Boundary **1164** was located near the northern boundary of the excavation area and on a west-north-west to east-south-east alignment, running for 107m. The ditch varied in width between 2.26m to 2.55m and 0.4m to 0.65m deep. A total of 4g of late 12th to 14th century pottery, 7g of glass vessel and 96g of struck and burnt flint were recovered from the secondary fills.
- 5.2.11 Boundary **1166** ran parallel to boundary **1164**, on the same west-north-west to east-south-east alignment and ran for 131m. The ditch varied in width between 0.63m to 0.93m and was between 0.13m to 0.48m deep. No finds were recovered.
- 5.2.12 Boundary **1184** ran parallel to boundary ditches 1164 and 1166, 24m to the south on the same west-north-west to east-south-east alignment, running for 118.5m. Enclosure **1066** used this boundary as its northern arm. The ditch measured between 1.7m to 2.65m wide and 0.3m to 0.65m deep. The secondary fills were a mid greyish brown silty sand, from which 25g of 11th to 13th century pottery was recovered.

Pits and Postholes

- 5.2.13 Posthole group **1317** was located inside enclosure **1066** and consisted of 18 postholes or pits varying in size from 0.45m to 1.12m in diameter and 0.11m to 0.46m deep. The features do not making a clear structural shape, but are thought to relate to a building. A total of 14g of 13th to 14th century pottery, 2 struck flints and 127g of animal bone was recovered from them.

- 5.2.14 Well **1270**, (within enclosure **1066**) measured 2.6m in diameter and was augered to 2.57m deep. The lower fill was a mid grey silty sand, overlain by a dark brown silty sand. A total of four sherds of residual late Saxon pottery and three sherds of 11th to 12th century pottery was recovered along with 4g of animal bone, 4g of fired clay and 26g of worked flint.
- 5.2.15 Pit **1279** was located within enclosure **1066** and measured 1.04m long, 0.7m wide and 0.5m deep. The dark greyish brown backfill contained 844g of fired clay, possibly fragments of kiln furniture.

Feature No	Feature Type	Pottery, sherds/g	Worked & burnt Flint (g)	Animal Bone (g)	Enviro. results	Other Finds
1066	Enclosure	17/169	355	110		HSR (97g)
1072	Enclosure	11/72	30	96		Fragment of polished stone axe
1164	boundary	1/4	96			Glass (7g)
1166	boundary					
1184	boundary	2/25				Fe. Nail fragment (SF3)
1270	Well	7/63	26	4	Stinking mayweed.	
1279	Pit					Fired Clay (844g)
1317	Posthole group	2/14	2	127		

Table 5: Area 1, finds from high medieval features

Finds Reports

Prehistoric Pottery

- 5.2.16 Area 1 produced a small assemblage of 67 sherds weighing 365g and including rims from three vessels (Table 6).

Group	Feature	Feature type	Spot Date	Vessel type	Quantity	Weight (g)	No. of vessels
	1008	Pit	Middle Bronze Age		4	13	
	1019	Pit	Middle Bronze Age	Jar	1	11	1
					9	52	
	1049	Tree throw	Later Neolithic	Grooved Ware	9	21	
	1052	Tree throw	?Early Bronze Age		1	13	
	1265	Tree throw	Early Bronze Age Later Neolithic Early Bronze Age		1	3	
				Beaker	18	44	
					1	5	
	1270	Well	Early Bronze Age	Jar	1	8	1
					4	17	
	1329	Pit	Not closely datable		1	1	
Boundary 1141	1141	Ditch	Later Bronze Age		1	19	
			Middle Bronze Age		2	27	
	1178	Ditch	Middle Bronze Age	Jar	1	4	1
	1212	Ditch	?Early Bronze Age		3	27	

Group	Feature	Feature type	Spot Date	Vessel type	Quantity	Weight (g)	No. of vessels
	1240	Ditch	Later Bronze Age		5	78	
Enclosure 1072	1152	Ditch	Earlier Iron Age		2	2	
			Not closely datable		2	2	
	1162	Ditch	Earlier Iron Age		1	18	
Total					67	365	3

Table 6: Area 1, Prehistoric pottery

- 5.2.17 Earlier prehistoric pottery was recovered from a series of tree throws and from well **1270**. The pottery from the tree throws includes nine sherds of highly abraded Later Neolithic Grooved Ware with characteristic grooved channels from **1049** and Later Neolithic Early Bronze Age Beaker, some with comb-impressed decoration, from tree throw **1265**. Well **1270** contained five sherds including a pointed rim from a barrel shaped vessel probably of Early Bronze Age date. Grooved Ware has been found locally at Markshall, Caistor St Edmund (Ashwin and Bates 2000, fig.161, P133) and comparable Beaker at Trowse with Newton (Ashwin and Bates 2000, fig.124).
- 5.2.18 Boundary **1141** produced twelve sherds weighing 155g in a mix of Bronze Age fabrics including a rim in sandy flint-tempered fabric decorated with fingertip impressions along the rim top of mid Bronze Age date similar to examples from Grimes Graves (Longworth *et al.* 1988, fig.43, 576). Two Grog-tempered sherds may be Earlier Bronze Age.
- 5.2.19 Enclosure **1072** contained five body sherds weighing 22g in sand and flint-tempered fabrics probably of Earlier Iron Age date.

Post-Roman Pottery

- 5.2.20 Seventy-two sherds (867g) were recovered from 21 contexts in this area. Table 7 shows the quantities by fabric.
- 5.2.21 With the exception of a small quantity of Late Saxon pottery, most of which was residual in later contexts, and a single sherd of 18th-century stoneware, most of the pottery in this assemblage is medieval. The most frequently occurring fabrics are the local medieval unglazed Norwich-type LMU (probably made in Potter Heigham), a similar but finer micaceous variant (MCW7) and early medieval ware. Rimsherds of nine medieval vessels are present, of which six are jars, two are bowls and one is a jug. Rim types include both simple and developed types, suggesting that activity continued into the 13th century, if not beyond. The lack of late medieval wares may indicate a decline or cessation of activity by the mid to late 14th century.
- 5.2.22 Much of the pottery in this group was recovered from ditch fills, particularly enclosure ditches **1066** and **1072** and boundaries **1164** and **1184**.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Thetford-type ware	THET	10th-11th	9	180	0.15	6
'Early medieval' sandwich wares	EMSW	11th-12th	1	3		1
Early medieval ware	EMW	11th-12th	11	44		11
Local medieval unglazed	LMU	11th-14th	27	346	0.38	23
Medieval coarseware 1	MCW1	12th-14th	2	9		1
Medieval coarseware 2	MCW2	12th-14th	1	9		1
Medieval coarseware 3	MCW3	12th-14th	2	45	0.24	2
Medieval coarseware 4	MCW4	12th-14th	1	2		1
Medieval coarseware 7	MCW7	12th-14th	14	171		5
Medieval coarseware 9	MCW9	12th-14th	1	6		1
Grimston-type ware	GRIM	L.12th-14th	2	22		2
Staffordshire white salt-glazed stonewares	SWSW	18th	1	30		1
Totals			72	867	0.77	55

Table 7: Area 1 Post-Roman pottery

Glass

- 5.2.23 A single shard of glass weighing 0.007kg was recovered from ditch **1187**. The shard is from the base angle of a natural black glass, relatively small, cylindrical bottle with a dull matt surface. The glass is likely to be the result of casual loss or agricultural processes incorporating the material into the features. Although not closely datable, the glass is likely to be 18th century or later.

Context	Cut	Count	Weight (kg)	Form	Description	Date
1186	1187	1	0.007	Vessel-utility bottle	Body shard and fragment of basal edge from a cylindrical dark olive green-natural black glass bottle. There are some faults within the glass and the outer surface is pitted from contact with the mould, indicating it is a mould-blown or part mould-blown vessel.	Not closely datable

Table 8: Area 1 Glass

Small Finds

- 5.2.24 Two small fragments of ironwork came from Area 1, representing the same number of objects. Both are fragmentary and in poor condition. It is often impossible to assign a precise date to small fragments of ironwork such as these, as iron artefact types are frequently simple and long-lived. They are, however, very unlikely to derive from the Bronze Age activity on the site (as iron was not in use during the period), and the likelihood is that they are of later medieval or post-medieval/modern date. Large-headed nail SF 3 is from a fill (1304) of boundary ditch **1184**, and SF 2 is a small fragment of nail shaft from well **1270**.

Ceramic Building Material

- 5.2.25 Three fragments (143g) of CBM were recovered from Area 1. Ditch **1141** produced two fragments of tile (32g) with scorched faces which date very broadly to the medieval to post-medieval periods. A flange fragment of a Roman tegula tile (111g) was recovered from ditch **1242**, with sanded outer surfaces and finger smoothing marks on the inner face.
- 5.2.26 This material is probably related to manuring and discard within the agricultural landscape. The tegula fragment may suggest the existence of a Roman building of some significance located within the Roman settlement directly to the north-east.

Fired Clay

- 5.2.27 One fragment, 4g, of amorphous and five fragments, 1031g, of structural fired clay were recovered from Area 1. The structural fragments were recovered from pits **1008** and **1279** and tree throw **1092**. These fragments exhibit flattened surfaces and appear to be fragments of kiln or oven furniture. Tree throw **1092** produced a fragment of an oblong ceramic artefact (171g). It has rounded outer surface with partial surviving butt end and a surviving width. Possibly the top of a cylindrical/flaring kiln pedestal typical of Late Iron Age/Early Roman pottery kilns. Pit **1279** produced two fragments of chalky fired clay (842g), each with a flattened, and darkened, surface. Their reverse is an uneven surface. Their colouration lightens from the flattened surface to the uneven surface, indicating a firing direction. The surfaces have concentration of smaller angular flint grit. These fragments appear to have been used as a lining for a kiln or oven.
- 5.2.28 Whilst the amorphous fragments provide little information the structural fragments accord with other evidence from Area 1. The probable late prehistoric pedestal and kiln/oven lining suggest a fairly permanent use of the site in this period.

Lithics

- 5.2.29 The excavations in Area 1 resulted in the recovery of 195 pieces of struck flint and just under 3.5kg of unworked burnt stone (Table 9).

	Decortication flake	Decortication blade	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Flake fragment <15mm	Retouched implement	Core-tool	Core	Conchoidal chunk	Shattered cobble	Pounder/Hammerstone /	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Tree-throw 1265	1		4	7	1			3	1	2		1	2			22	57	1181
Ditch 1212	9	2	1	16			1			6	1	1	2			39	3	122
Ditch 1240	13	2	2	40			3			5	3	2	1	2		73	6	249
Ditch 1141	3		1	3				1		1		5	1	1		16	46	1014
Other contexts	7	1	1	12		2	6	1		4		5	3	2	1	45	54	928
Total no.	33	5	9	78	1	2	10	5	1	18	4	14	9	5	1	195	166	3494
<i>Total struck %</i>	<i>16.9</i>	<i>2.6</i>	<i>4.6</i>	<i>40</i>	<i>0.5</i>	<i>1.0</i>	<i>5.1</i>	<i>2.6</i>	<i>0.5</i>	<i>9.2</i>	<i>2.1</i>	<i>7.2</i>	<i>4.6</i>	<i>2.6</i>	<i>0.5</i>			

Table 9: Area 1, Quantification of lithic material

- 5.2.30 The struck assemblage broadly represents two periods of flintworking at this area, a small component representing Mesolithic or Early Neolithic activity but with the majority dating to the later prehistoric period and quite possibly associated with boundary ditch **1141**.
- 5.2.31 The earlier material is predominantly blade-based and was found scattered across the site, mostly residually deposited but with some of the material possibly focussing on a series of tree-throw hollows. The most substantial assemblage of this date came from tree-throw **1265** whose two fills furnished 22 pieces of Mesolithic or Early Neolithic struck flint and a large quantity of unworked burnt flint amounting to over 1kg. The struck assemblage is dominated by unusable knapping waste including micro-debitage (flakes and flakes fragments measuring less than 15mm in maximum dimension) but it

also contains a bifacially retouched blade-like flake, a burnt side-and-end scraper and a multi-platformed narrow flake core. The quantity of unworked burnt flint is substantial and suggests the deliberate dumping of hearth waste

- 5.2.32 The bulk of the struck flint from Area 1 is, however, much more typical of later prehistoric industries. These pieces were scattered in low numbers across a variety of feature types but with more substantial collections coming from boundary ditch **1141**. Sections **1240** and **1212** cut through the ditch furnished the largest assemblages at 73 and 39 pieces respectively, these alone accounting for over half of the struck flint from this area. These pieces are in a good or only very slightly chipped condition and, although representing the reduction of several cobbles, many came from the same cores and it is likely that the material was dumped or eroded into the ditch not long after manufacture. The assemblages are dominated by variably shaped but usually thick and broad hard-hammer struck flakes which retain significant amounts of cortex and have wide and often notably obtuse striking platforms. Nearly 10% of the flakes have retouch and a further four core-tools are present. Many other flakes have traces that may have accrued from being utilised. The retouched implements are mostly non-formal types and include a variety of irregular scrapers, edge retouched implements, denticulated pieces and notched tools. Section **1141** of the same ditch produced 16 struck pieces that are technologically very similar to those from sections **1240** and **1212**, although this assemblage is dominated by cores, which contribute nearly a third of the total. These are similar to the three that were recovered from the other sections and are all irregularly or minimally worked examples. A further 15 pieces of struck flint were recovered from other sections of this ditch. Whilst a few of these are likely to be earlier and residually deposited long after manufacture, the majority are technologically homogeneous and can be dated to the 2nd or early 1st millennium BC. Flintworking during this period is usually low key with raw materials knapped on an opportunistic basis and readily discarded. The quantities from this ditch are consistent with this scenario but do suggest that flintworking remained an important aspect of subsistence activity and that the ditch formed a focus for deposition during that period.
- 5.2.33 Other important finds from the vicinity include a fragment of a finely polished greenstone macehead found in an adjacent field (Trench 4 Field T8) during the evaluation phase. Maceheads were produced from the Mesolithic onwards but finely crafted examples made from exotic stone like this are most likely to belong to the Later Neolithic or Early Bronze Age.

Other Worked Stone

- 5.2.34 Four pieces of lava from the same rotary quern were found in a fill of pit **1238** (fill 1239). Given the medieval enclosure on this site, the quern is likely to be of medieval date.

SF	Ctx	Cont_Type	Function	Notes	Size	Wt
4	1239	Fill of pit 1238	Rotary quern fragments, probably lower stone	Four adjoining fragments. The larger one is grooved but the other three are pecked, which suggests that the three smaller fragments were perhaps reworked after being broken from the larger one. The lower face is crudely dressed. All the edges are worn, including the circumference so it is not possible to estimate the diameter	Measures >360mm diameter x 39mm max thickness	1217

Table 10: Area 1 Stone

Environmental Reports

Human Skeletal Remains

- 5.2.35 A small collection of disarticulated human bone was retrieved from Area 1. The bone was recovered from enclosure ditch **1066** and from ditch **1325**. Both features were high medieval in date.
- 5.2.36 The overall condition of the bone represented McKinley's grade two, where erosion is extensive but does not cover the entire surface of the bone (Brickley and McKinley; 2004,16). The fragments were determined to be adult based upon general size and robustness.

Cut	Fill	Feature	Element	Condition	Age
1231	1230	Enclosure	Femur	Grade 2	Adult
1325	1326	Ditch	Femur	Grade 2	Adult

Table 11: Area 1 disarticulated human skeletal remains

Faunal Remains

- 5.2.37 Eighty-eight fragments of animal bone were counted. The remains of cattle, horse and sheep/goat are amongst these remains (Table 12) but there is relatively little potential here. Only four specimens are judged to be countable in that they include at least one zone of Serjeantson (1996). These zones relate to identifiable parts of bones which are not complete. There are two cattle mandibles but these are in a fragmentary condition and the teeth present are judged to be in association. In context 1308 (posthole **1307**, group **1317**) one of these cattle mandibles consists of associated adult third and fourth premolars and a first molar. The second cattle mandible is from 1248 (gully **1247**, part of enclosure **1066**) and consists of an adult fourth premolar, and first, second and third molars. The latter specimen is in a poor state but judged "adult" following Halstead (1985). Much of the material is badly eroded (Table 13) and root etching (which may obscure butchery and hinders interpretation generally) is present in a majority of specimens.

Context	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Measured specimens
Cattle	62	2	7	0	1	3	2	1
1201	1	0	0	0	1	0	0	0
1248	35	1	4	0	0	0	0	0
1287	1	0	0	0	0	1	0	0
1295	11	0	0	0	0	1	1	0
1308	13	1	3	0	0	0	0	0
1350	1	0	0	0	0	1	1	1
Horse	5	0	3	0	0	0	0	2
1077	1	0	1	0	0	0	0	0
1153	4	0	2	0	0	0	0	2
Large mammal	17	0	0	0	0	0	0	0
1077	12	0	0	0	0	0	0	0
1130	4	0	0	0	0	0	0	0
1153	1	0	0	0	0	0	0	0

Context	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Measured specimens
Medium mammal	1	0	0	0	0	1	0	0
1239	1	0	0	0	0	1	0	0
Med/lge mammal	1	0	0	0	0	0	0	0
1271	1	0	0	0	0	0	0	0
Sheep/goat	1	0	0	0	1	0	0	0
1308	1	0	0	0	1	0	0	0
Unidentified mammal	1	0	0	0	0	0	0	0
1144	1	0	0	0	0	0	0	0
Grand Total	88	2	10	0	2	4	2	3

Table 12: Area 1 Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.

Species/context	Total frags	Complete	Root etched	Burnt	Average of Erosion
cattle	62	1	36	0	4.2
1201	1	0	1	0	4
1248	35	0	20	0	5
1287	1	0	1	0	4
1295	11	0	0	0	4
1308	13	0	13	0	4
1350	1	1	1	0	4
horse	5	0	3	0	4
1077	1	0	1	0	4
1153	4	0	2	0	4
large mammal	17	0	15	0	4.3
1077	12	0	12	0	4
1130	4	0	3	0	4
1153	1	0	0	0	5
medium mammal	1	0	0	0	3
1239	1	0	0	0	3
medium/large mammal	1	0	0	0	4
1271	1	0	0	0	4
sheep/goat	1	0	1	0	4
1308	1	0	1	0	4
unidentified mammal	1	0	0	0	4
1144	1	0	0	0	4
Grand Total	88	1	55	0	4

Table 13: Area 1 Totals noted of taphonomic states, demonstrating a high prevalence of surface root etching amongst the contexts

Environmental samples

- 5.2.38 Samples were taken from prehistoric, Bronze Age and high medieval features. Preserved plant remains were sparse from the prehistoric deposits and the Bronze Age ditch fills with only occasional charred cereal grains occurring in a few of the features. They are in such sparse quantities that they could be later intrusions. Fill 1144 of boundary ditch **1141** produced a significant volume of charcoal in addition to a single charred barley (*Hordeum vulgare*) grain, a single spelt/emmer wheat (*Triticum spelta/dicoccum*) grain and three indeterminate grains. Occasional barley grains were also recovered from tree throw **1265**.
- 5.2.39 The high medieval deposits were generally more productive; early medieval pit **1270** produced occasional, mixed charred cereals and charred seeds of stinking mayweed (*Anthemis cotula*) and cornflower (*Centaurea* sp.). Charcoal volumes are low and there is no evidence of mineralised remains which would have suggested an interpretation of this feature as a cess pit. Gully **1284** is undated but it produced the largest assemblage of charred grain which is comprised of oats (*Avena* sp.), free-threshing wheat (*T. aestivum* s.l.), barley and rye (*Secale cereale*). A similar, although smaller assemblage was recovered from fill 1287 of high medieval ditch **1288** and it is likely that gully **1284** is contemporary.

Cut No.	Context No.	Sample No.	Feature Type	Period	Volume processed (L)	Flot volume (ml)	cereals	Legumes 2-4mm	Weed seeds	Estimated charcoal volume (ml)
1007	1006	1	Pit	Prehistoric	9	15				15
1008	1009	2	Pit/posthole	Prehistoric	9	20	#			2
1019	1018	3	Pit	Prehistoric	7	2				<1
1030	1031	6	Pit	Prehistoric?	8	10		#		<1
1036	1037	7	Posthole	Prehistoric?	9	15				2
1049	1048	4	Tree throw	Prehistoric	9	30	#			4
1058	1059	5	Tree throw	Prehistoric	8	20				<1
1141	1144	13	Ditch	Bronze Age	10	70	#		#	100
1212	1213	16	Ditch	Bronze Age	7	5				<1
1240	1241	27	Ditch	Bronze Age	8	5				<1
1226	1244	18	Ditch	Bronze Age	8	5				0
1226	1245	17	Ditch	Bronze Age	7	5				0
1178	1260	21	Ditch	Bronze Age	7	20	#		#	<1

Table 14: Area 1 prehistoric deposit samples

Cut No.	Context No.	Sample No.	Feature Type	Period	Volume processed (L)	Flot volume (ml)	Cereals	Legumes	Weed seeds	Estimated charcoal volume (ml)
1270	1271	19	Cess pit	Early Med	7	15	#	#	#	4
1270	1271	24	Cess pit	Early Med	8	5	#			2
1082	1084	11	Ditch	High Med	10	1				<1
1093	1094	9	Ditch	High Med	8	1				<1
1095	1097	12	Ditch	High Med	9	10		#	#	<1
1129	1130	10	Ditch	High Med	9	5		#		<1
1152	1153	14	Ditch	High Med	8	10	#			<1
1197	1200	15	Ditch	High Med						0
1265	1267	20	Tree throw	High Med	10	45	#			7
1288	1287	23	Ditch	High Med	9	5	#			1

Table 15: Area 1 medieval deposit samples

Cut No.	Context No.	Sample No.	Feature Type	Volume processed (L)	Flot volume (ml)	Cereals	Estimated charcoal volume (ml)
1092	1091	8	Tree throw	9	20		7
1284	1285	22	Gully	7	20	####	5
1329	1330	25	Burnt pit	7	65		65
1319	1320	26	Burnt pit	9	10		20

Table 16: Area 1 undated deposit samples

5.3 Areas 2a and 2b (ENF139694 & ENF139695)

5.3.1 Areas 2a and 2b (Fig. 3) were located directly north of Reepham Road in the parish of Horsford (TG 17005 16030). A total of 0.283ha was stripped and the geology was a mixture of sands and gravels. A number of pits and postholes were found in the area.

Period 0: Undated

5.3.2 Spread 2020 was approximately 17.8m in diameter and measured 0.28m thick. The deposit was a light yellowish brown silty sand, from which 8g of shale, 8g of burnt flint and 1g of post-medieval pottery was recovered. This spread was truncated by ditch **2022**.

5.3.3 Ditch **2022** was on a north-north-west to south-south-east alignment and ran through Area 2a for 31.4m and measured 0.55m wide and 0.13m deep. The fill was a light brownish yellow silty sand from which 3g of burnt flint and 12g of worked flint were recovered. This ditch truncated spread 2020.

5.3.4 A number of pits were located within both areas (**2000, 2006, 2014, 2024**). These pits varied between 0.45m to 2.25m in diameter and 0.18m to 0.8m deep. The fills were all a light to mid brown silty sand from which 3g of ceramic building material was recovered.

5.3.5 A number of postholes were also recorded (**2002, 2004, 2008, 2010, 2012, 2016, 2018**) which varied in diameter between 0.45m to 0.55m and 0.46m to 0.55m deep. The fills were a mid yellowish brown silty sand from which 33g of Late Iron Age pottery was recovered.

Finds Reports

Prehistoric Pottery

5.3.6 Two Later Iron Age body sherds weighing 33g in sandy fabrics came from posthole **2004**.

Post-Roman Pottery

5.3.7 One small sherd (1g) of glazed red earthenware (GRE, 16th–18th century) was recovered from spread 2020.

Ceramic Building Material

5.3.8 A single fragment of post-medieval tile (27g) was recovered from pit **2014** in Area 2b. This material is most likely related to manuring and discard within the agricultural landscape.

Lithics

5.3.9 Only two struck flints and three pieces of unworked burnt stoneware were found, weighing 13g. The struck flint comprises an undiagnostic decortication flake from ditch **2022** and the proximal end of a large cortical blade that has been steeply retouched, possibly to form a backed knife or a scraper, from the sub-soil in Area 2b. Neither is easily dateable and both are chipped and clearly residually deposited. Two small fragments of unworked burnt flint were found in spread 2020 and a further small fragment came from ditch **2022**.

Environmental Reports

Environmental Samples

5.3.10 The single fill (2015) of pit **2014** produced 250ml of wood charcoal.

5.4 Area 3 (ENF139696)

5.4.1 Area 3 (Figs 4 and 4a) was located north of Reephram Road in the parish of Horsford (TG1801 1557). Geology was a mixture of sands and gravels. A total of 2.044ha was stripped, uncovering significant Middle to Late Bronze Age activity in the form of a large enclosure ditch, 15 posthole alignments, two pit alignments and at least 13 posthole structures (totalling over 1000 discrete postholes and pits) along with a number of pits containing burnt flint, struck flint and Middle to Late Bronze Age pottery. Early Roman activity was noted in the form of a system of shallow boundary ditches on a north-east to south-west axis and the south-west corner of an enclosure related to a farmstead seen in cropmarks directly north-east of the excavation. A small amount of medieval activity is attested to by some minor quarrying in the north-east corner of the site and a modern boundary ran through its centre.

Period 1: Neolithic

5.4.2 Pit **20387** measured 1.89m in diameter, 0.41m deep and was located near the north-east corner of the excavation area. A total of 5700g of Early Neolithic pottery and a large flint assemblage was recovered from the two fills. The pottery slumped into the pit on its northern edge, rather than being placed within the pit.

Feature No	Feature Type	Pottery, sherds/g	Worked (Frag.)	Flint	Burnt (g)	Flint	Enviro. results	Other Finds
20387	Pit	314/5700	414		1755			SF102: Flint blade

Table 17: Area 3, Finds from Early Neolithic features

Period 2.1: Early Bronze Age

5.4.3 A small number of postholes located in the north-western part of the site were found to contain small amounts of residual Beaker pottery (Posthole Group **3900**). Residual sherds of Early Bronze Age pottery were also recovered from Pit Group **20230**. These features are probably not of this date, with the pottery probably being residual.

Period 2.2/3: Middle/Late Bronze Age

5.4.4 Ditches

5.4.5 Located within the central area of the excavation, Enclosure **3008** (Fig. 4a, Plate 2) measured 75.6m long, 52.2m wide and had an internal area of 0.353ha. The ditch itself measured 1.42m to 3.2m wide and 0.7m to 1.42m deep. The fills were generally sterile, with very little charcoal, charred plant remains or other finds being recovered. A mix of Early/Middle and Late Bronze Age pottery (24g), burnt flint (5494g) and struck flint (1533g) was recovered from the secondary and tertiary fills. The ditched elements of the enclosure only formed three of the four sides, with the eastern arm being formed by posthole alignment **21110**. The southern arm of the enclosure was formed by a ditch running for 44m before terminating. A continuation of the enclosure began 8m after the terminus, running for 25.01m before terminating at Pit Alignment **21014**. Two possible cremations (**3002** and **20263**) were cut into the top of the enclosure ditch fills, one on the southern corner and the other on the south-eastern terminus.

5.4.6 Palisade ditch **3685** was located parallel to the northern ditch of Enclosure **3008** (Plate 2), running for 33.75m which measured 0.85m wide. The ditch had near vertical sides and a flat base was recorded in three interventions. No finds were recovered from the ditch, although as a result of its close proximity to, and similar alignment as, Enclosure **3008**, it can be confidently said to be contemporary in date.

Posthole and pit alignments

- 5.4.7 A total of 14 posthole and three pit alignments were found in Area 3 (Fig. 4a), all on the same north-east to south-west/north-west to south-east axis as the enclosure ditch (Plate 3). Average dimensions, feature count and length of the alignments appears in Table 18. Posthole alignments **3503** and **20140** bounded the western and northern arm of Enclosure **3008**, posthole alignments **3411**, **3493** and **3565** ran off alignment **3503** on a north-west to south-east alignment with a 9.23m and 12.3m gap between them respectively. Alignment **3643** then returned off the end of alignment **3411**, on a north-east to south-west alignment. Posthole alignment **21110** formed the eastern arm of Enclosure **3008**, and included a small segment of 'palisade' (**20568**) that consisted of numerous postholes packed within a small gully, presumably erected within a gap in the posthole alignment. Alignment **3920** formed a sub-division within the enclosure itself, located in the middle of the enclosure on a north-east to south-west alignment.
- 5.4.8 Pit alignment **21014** was located in the south-eastern corner of the excavation area, and continued outside of the area to the south-east. The pits were on a north-west to south-east alignment and terminated where alignment **3920** and **21562** began, coinciding with the gap in alignment **21110** was located.
- 5.4.9 The remaining alignments (**21154**, **21308**, **21452**, **21476**, **21562**, **21650** and **21674**) lay in the south-eastern portion of the excavation area, forming rectilinear field systems, with an internal area of approximately 700m to 750m squared. Structures **20400** and **20500** were located within these fields.

<i>Alignment</i>	<i>Feature count</i>	<i>Average diameter (m)</i>	<i>Average depth (m)</i>	<i>Length (m)</i>
3411	30	0.348	0.166	32.49
3493	51	0.486	0.191	40.24
3503	101	0.431	0.16	143.40
3565	26	0.34	0.15	21.77
3643	15	0.56	0.175	26.09
3920	16	0.437	0.16	42.96
20140	49	0.45	0.206	91.61
21014 (pit)	47	0.665	0.2	51.30
21110	40	0.643	0.19	55.01
21154	76	0.4	0.176	50.79
21308	61	0.48	0.25	48.9
21452	26	0.36	0.19	29.04
21476 (pit?)	15	0.44	0.23	7.8
21484	9	0.52	0.23	12.68
21562 (pit)	56	0.712	0.27	58.8
21650	18	0.38	0.14	16.9
21674	18	0.53	0.16	0.66

Table 18: Area 3 Average posthole alignment dimensions

- 5.4.10 Finds from the posthole alignments were relatively sparse. A large (110g) fragment of loomweight was recovered from alignment **3503** and a total of 40g of Early/Middle Bronze Age pottery was recovered from alignments **3493**, **21110**, **21154**, **21308** and **21154**. In addition, 521g of burnt flint and 103g of worked flint was recovered from the

alignments. The pit alignments yielded a similar assemblage, with 211g of burnt flint and eight worked flints being recovered from alignment **21014**. Alignment **21562** contained a sherd of Middle Bronze Age pottery, 2328g of burnt flint and eight worked flints.

Structures

- 5.4.11 The identified structures were spread across the area, generally concentrated within and to the north of Enclosure **3008**. These structures were circular or sub-circular in shape, although some examples, such as **3299**, are a cluster of postholes that do not form a particular shape. Finds assemblages from the structural postholes appear to be slightly later than those found in the enclosure or posthole alignments, dating to the Late Bronze Age. A total of 63g of Late Bronze Age pottery was recovered from Structure **3269**, and 727g of pottery and 35g of fired clay was recovered from Structure **3240**, along with a spindle whorl (SF103). The only finds recovered from the other structures consisted of 945g of burnt flint and 23g of worked flint. The function of the structures is currently unclear, with no associated features such as kilns to help identification of use, though it is probable they were domestic in function.
- 5.4.12 Structure dimensions and a count of how many postholes relate to each structure group are given in Table 19, below.

Structure	Feature count	Structure diameter (m)	Posthole diameter (m)	Average depth (m)
3200	14	6.8	0.34	0.15
3240	8	5.8	0.38	0.14
3269	6	8.61	0.27	0.21
3317	16	5.55	0.53	0.15
3331	6	6.33	0.28	0.142
3401	15	10.28	0.395	0.16
3711	11	4.45	0.233	0.222
3807	10	4.75	0.338	0.132
3829	12	6.5	0.336	0.28
20400	8	5.57	0.366	0.13
20430	19	6.1	0.35	0.13
20500	22	6.43	0.37	0.131
20582	16	7.76	0.46	0.15
21976	5	N/A	0.338	0.166

Table 19: Area 3 Average structural posthole dimensions

Pits

- 5.4.13 A number of other pits dated to the Bronze Age period were located within Area 3, generally scattered across the site, although many contained a good assemblage of Late Bronze Age material.
- 5.4.14 Pit Group **3350** was located just north of posthole alignment **3643**, near the site's north-western boundary, and consisted of eight pits and postholes. A total of 820g of Late Bronze Age pottery was recovered, including a rim sherd with finger impressions. A total of 91g of fired clay was also recovered from the backfills, along with 373g of burnt flint.

- 5.4.15 Pit Group **20475** was located just west of structure **20400**, within the rectilinear fields formed by the posthole alignments in the south-east corner of the excavation area. The group consisted of five pits. These pits were relatively sterile, with only 26g of Middle Bronze Age pottery, 26g of burnt flint and a worked flint being recovered.
- 5.4.16 Pit Group **20674** was located north of Posthole Alignment **21562**, consisting of six pits, similar in form to a number of those in Pit Group **20475**. Only a single flint flake was recovered from the pits.
- 5.4.17 Pit **3132** was located near the north-west limit of excavation, adjacent to ditch **3106**. The pit measured 1.12m long, 0.86m wide and 0.26m deep. The dark greyish brown silty sand fill contained 3852g of Middle Bronze Age pottery and 340g of fired clay, along with 742g of burnt flint and 104g of worked flint.
- 5.4.18 Pit **3152** was located directly north of structure **3240**, near the western boundary of the excavation area. This pit measured 2.16 long, 1.26m wide and 0.36m deep. The backfill contained 252g of burnt flint, 45g of worked flint, 2152g of fired clay loom weight and 10g of Late Bronze Age pottery. A large amount of charred barley and spelt grain was also recovered from the fill, a sample from which was radiocarbon dated to the Late Bronze Age (972 – 823 BC, 95.4% probability).

Cremations

- 5.4.19 A number of features are interpreted as possible cremations, of these, only one can be identified with certainty, with the others containing little surviving cremated bone. Cremation pit **20263** was cut into the terminal end of the south-eastern ditch of Enclosure **3008**. A total of 41g of cremated human bone was recovered from the pit including fragments of skull, femur and humerus.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay (g)</i>	<i>Worked (Frag.)</i>	<i>Flint</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
3008	Enclosure	7/33		69		5074		
3411	Posthole Alignment							
3493	Posthole Alignment	1/<1		5				
3503	Posthole Alignment		110	1		360		
3565	Posthole Alignment							
3643	Posthole Alignment			1				
3920	Posthole Alignment							
20140	Posthole Alignment							
20263	Cremation pit							Calcined bone (41g)
21014	Pit Alignment			8		211		
21110	Posthole Alignment	1/6		1				
21154	Posthole Alignment	2/9		1				
21308	Posthole Alignment	1/15		1				
21452	Posthole Alignment			1				
21476	Posthole Alignment			1				
21484	Posthole Alignment							
21562	Pit Alignment	1/10	300	8		2328		
21650	Posthole Alignment							
21674	Posthole Alignment							
3200	Posthole Structure			1		351		

Feature No	Feature Type	Pottery, sherds/g	Fired Clay (g)	Worked (Frag.)	Flint	Burnt Flint (g)	Enviro. results	Other Finds
3240	Posthole Structure	125/727	35	1		174		Spindle whorl (SF103)
3269	Posthole Structure	9/63		1		45		
3317	Posthole Structure			1		214		
3331	Posthole Structure							
3401	Posthole Structure							
3711	Posthole Structure		37	1		35		
3807	Posthole Structure			1				
3829	Posthole Structure							
20400	Posthole Structure					48		
20430	Posthole Structure					78		
20500	Posthole Structure			8				
20582	Posthole Structure							
21976	Posthole Structure							
3132	Pit	212/3852	340			742		
3152	Pit	2/10	2152	1		252	Barley, Spelt	
3350	Pit Group	79/820	91			373		
20475	Pit Group	2/26		1		26		
20674	Pit Group			1				

Table 20: Area 3, Finds from Bronze Age features

Period 3: Iron Age

- 5.4.20 Only two features on the site have tentatively been dated to the Iron Age period, with a small pit (**20054**) found to contain 47g of Later Iron Age pottery and 4g of Later Iron Age pottery was recovered from ditch **3858**, which was extremely truncated and survived in three separate segments on a north-north-east to south-south-west alignment.

Period 4: Romano-British

Ditches

- 5.4.21 A number of truncated ditches dating to the Roman period were located across the site, on a north-east to south-west alignment. The majority relate to a field system that extended outside of the excavation area. The corner of a small enclosure relating to a Roman farmstead was also located in the north-eastern corner of the excavation area, cropmarks of which are described in HER records as possible medieval crofts (NHER 53232).
- 5.4.22 The boundary ditches (**3033**, **3106**, **3192**, **3267**, **3329**, **3854** and **3964**) were all on a north-east to south-west or north-west to south-east alignment, respecting the layout of the farmstead to the north-east, apart from ditch **3267**, which was on a north-north-east to south-south-west alignment. These ditches were all clearly truncated by ploughing, with only parts of the ditches surviving in plan, averaging 0.42m wide and 0.17m deep. The ditches were poorly dated, with a total of 6g of pottery, 4g of animal bone, 168g of burnt flint and 79g of worked flint being recovered from the fills, although their stratigraphic relationships and alignment with known Roman features to the north-east support their Roman date.

- 5.4.23 Enclosure **20300** was located in the northern limit of the excavation area, on a north-east to south-west/north-west to south-east axis and consisted of four ditches. These ditches measured between 0.3m and 1.95m wide and 0.23m to 0.43m deep. A total of 19g of Roman pottery and 4g of residual Middle Bronze Age pottery were recovered from the ditches along with 3g of ceramic building material, 498g of metalworking debris, 12g of worked flint and 285g of burnt flint.

Postholes

- 5.4.24 Postholes **20340** were located within Enclosure **20300** and in a sub-rectangular shape in plan, across a 10m by 7m area. The postholes measured between 0.37m 0.65m in diameter and 0.07m to 0.39m deep. No finds were recovered but their location and alignment with Enclosure **20300** suggest a Roman date.

Pits

- 5.4.25 Pit Group **20230** was located near the southern limit of the excavation area and truncated corner of enclosure **3008**. A mixed assemblage of finds were recovered from the cluster, with residual prehistoric pottery being recovered alongside a small amount of Roman pottery. Other finds included 8g of slag and five worked flints.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Other Finds</i>
3033	Boundary ditch			2	253	
3106	Boundary ditch			3	46	
3192	Boundary ditch					
3267	Boundary ditch					
3329	Boundary ditch				31	
3854	Boundary ditch				92	
3964	Boundary ditch					
20300	Enclosure	3/13			165	
20340	Posthole Group					
20230	Pit Group	2/11		5		MWD (8g)

Table 21: Area 3, Finds from Romano-British features

Period 6: Medieval

- 5.4.26 Pit Group **20280** was a cluster of intercutting pits located within, and truncating, Enclosure **20300**. The pits varied in size between 0.7m and 2.84m and 0.18m to 0.79m deep. A moderate assemblage of 257g of Roman and medieval pottery, 366g of metalworking debris, 107g of burnt flint, 16g of worked flint and 12g of animal bone were recovered.
- 5.4.27 A substantial ditch (**20577**) ran through the centre of the excavation underneath the location of the modern trackway. This ditch measured between 1.48m and 3.2m in width and 0.54m to 0.97m deep. A varied finds assemblage was recovered from the fills, such as 3g of Roman pottery, 446g of burnt flint, 60g of ceramic building material and 234g of worked flint.

Period 8: Modern

- 5.4.28 A single ditch (**3015**) ran the length of the site north-east to south-west, truncating Bronze Age and Roman features. No finds were recovered from the ditch, but it was located directly adjacent to the modern trackway and its stratigraphic relationship with other features would suggest a modern date.

Radiocarbon Dates

- 5.4.29 As a number of radiocarbon dates were undertaken on charred plant remains from Area 3. The results have been tabulated below for ease of reference. Copies of the certificates can be found in Volume 2, Appendix D.

Fill No.	Feature No.	Feature Group	Feature Type	Enviro. Sample	Radiocarbon age BP	Date
3081	3082	20140	Posthole	103	3719 ± 33	2206-1985BC
3154	3152	-	Pit	107	2745 ± 28	972-823BC
20264	20263	-	Cremation	1024	3113 ± 33	1448-1283BC
20390	20389	3008	Enclosure	-	3360 ± 29	1742-1559BC
20563	20561	3008	Enclosure	1016	3077 ± 33	1422-1260BC
20622	20621	3008	Enclosure	1023	FAILED	-
21039	21038	21014	Pit	1101	3346 ± 29	1734-1523BC
21987	21986	21154	Posthole	1116	4561 ± 28	3487-3109BC
21585	21584	21562	Pit	1118	3149 ± 29	1500-1311BC

Table 22: Area 3 Radiocarbon Results (95.4% probability; SUERC-69925 (GU42123))

Finds Reports

Prehistoric Pottery

- 5.4.30 Area 3 produced the largest prehistoric assemblage found during the NDR excavations, from a site with complex and intriguing archaeology (Table 23). It comprised a total of 878 sherds weighing 12,308g and including rims from nineteen vessels.
- 5.4.31 The earliest pottery recovered is of Earlier Neolithic date. A large assemblage of 313 sherds (weighing 5,686g) including rims from three vessels, all round-based Plain Bowls, was recovered from a single pit (**20387**). The assemblage includes substantial sherds from a large ledge-shouldered bowl with a bead rim. A second rim is from a similar bowl with rolled rim and the third came from a large abraded rim from a bag-shaped vessel.
- 5.4.32 Twelve later Neolithic to early Bronze Age Beaker sherds weighing 96g and including two rims were recovered in small dispersed quantities in the fills of four postholes in posthole group **3900**, pit **3157** in pit group **20230**, posthole **20616** and ditch/pit **20041**. The rims are flat, from straight necked vessels decorated with techniques typical of local domestic assemblages including incised lines forming a net or lattice motif, square-toothed comb impressed decoration and fingernail impressions in bands. The range of decoration and fabrics, which are sandy, flinty and groggy, compare well with local examples from Harford Farm and Harford Park and Ride amongst others (Ashwin and Bates 2000, Percival 2003).
- 5.4.33 Middle Bronze Age pot forms a significant proportion of the assemblage. A total of 238 sherds weighing 3,962g are Middle Bronze Age. The majority of these came from a

single feature, (pit **3132**) which produced 212 sherds weighing 3,683g including two of the four rims found. The remainder of the Middle Bronze Age assemblage was dispersed in small quantities through the fills of ditches forming Enclosure **3008** and various postholes including some from the posthole alignments (**21132**, posthole alignment **21110**; **21224**, posthole alignments **21154** and **21358**, posthole alignment **21308**) and some from ungrouped postholes (**21039**, **21304**, **21972** and **22070**).

- 5.4.34 The Middle Bronze Age assemblage includes rim and body sherds from three bucket-shaped vessels in coarse grog-tempered fabric with pinched or applied cordons decorated with deep fingertip impressions. Two rims are decorated with fingernail or fingertip impressions on the rim top. The vessels are very similar to the Middle Bronze Age forms found at Grimes Graves, as well as Cromer Road, Antingham and Witton, near North Walsham (Longworth *et al.* 1988, fig.37, 373-395; Wilson *et al.* 2012, fig.33, 5; Lawson 1983, fig.25; Longworth *et al.* 1988). One rim, from pit **3132** is from a shell-tempered jar with a wide, finger-dragged band on the neck (Longworth *et al.* 1988, fig.24, 60-63).
- 5.4.35 A total of 294 sherds weighing 2,455g and including nine rims are Later Bronze Age. This pottery was mainly recovered from un-grouped pits and from postholes associated with structures, in particular structures **3240** and **3269**.
- 5.4.36 A range of vessel types are present including tripartite jars, ellipsoid jars and jars with high rounded shoulders, all typical vessel forms for the region (Brudenell 2012). The vessels are well made and often have smoothed or burnished surfaces but there is a notable absence of decoration, with only one fingertip-impressed body sherd being present within the assemblage. Fabrics contain a variety of fine to coarse flint inclusions or are sandy sometimes with organic voids. These characteristics suggest that the Later Bronze Age assemblage belongs to the 'mature' Plainware group dating to c.1000/ 800BC and locally comparable with pottery found on the line of Alysham Bypass (Brudenell 2012, 164).
- 5.4.37 The pottery suggests a background of Later Neolithic Early Bronze Age activity with sherds from surface deposits finding their way into a variety of later features. Middle Bronze Age pottery appears to be largely associated with pit **3132** and enclosure **3008**, whilst Later Bronze Age pot was recovered from structures and domestic features related to the main occupation of the site. There is almost no prehistoric pottery post-dating the Later Bronze Age.

Group	Feature	Feature type	Spot Date	Vessel type	Quantity	Weight (g)	Vessel No
	3132	Pit	Middle Bronze Age	Jar	13	1064	2
					199	2619	
	3152	Pit	Later Bronze Age		2	10	
	3160	Gully	Later Bronze Age		1	3	
	3347	Pit	Later Bronze Age		11	24	
	3351	Posthole	Later Bronze Age		5	32	
	3805	Posthole	Not closely datable		1	1	
	3946	Posthole	Later Bronze Age		7	31	
	3969	Pit	Later Bronze Age		1	5	
	20041	Ditch/ pit	Later Neolithic Early Bronze Age	Beaker	1	21	
					4	29	

Group	Feature	Feature type	Spot Date	Vessel type	Quantity	Weight (g)	Vessel No
	20054	Pit	Later Iron Age		6	47	
	20249	Ditch	Iron Age		1	4	
	20387	Pit	Early Neolithic	Plain Bowl	38	954	3
					275	4732	
					1	14	
	20398	Pit	EBA/MBA		7	76	
	20616	Posthole	Later Neolithic Early Bronze Age	Beaker	1	4	1
					1	14	
	20625	Pit	Later Bronze Age		12	134	
	21039	Posthole	Middle Bronze Age		2	21	
	21304	Posthole	Middle Bronze Age		1	5	
	21972	Posthole	Middle Bronze Age		1	57	
	22022	Posthole	Later Bronze Age		1	1	
	22070	Posthole	Middle Bronze Age		1	5	
Enclosure 3008	3108	Ditch	Later Bronze Age		1	1	
	3168	Ditch	Middle Bronze Age		2	10	
	3792	Ditch	Middle Bronze Age		1	5	
	20561	Ditch	Middle Bronze Age		1	13	
	20621	Ditch	Earlier Iron Age?		1	3	
			Not closely datable		1	1	
PA21562	21618	Posthole	Middle Bronze Age		1	10	
PG20230	3128	Pit	Middle Bronze Age	Jar	1	8	1
	3157	Pit	Later Neolithic Early Bronze Age	Beaker	1	3	1
	20179	Pit	EBA/MBA		3	14	
PG20475	20426	Pit	Middle Bronze Age		1	18	
					1	8	
PG3350	3354	Posthole	Later Bronze Age	Jar	2	25	2
					15	109	
	3356	Cremation?	Later Bronze Age	Jar	5	82	2
					57	604	
PG3900	3896	Posthole	Later Neolithic Early Bronze Age		1	6	
	3898	Posthole	Later Neolithic Early Bronze Age	Beaker	1	2	
	3900	Posthole	Later Neolithic Early Bronze Age		1	15	
	3932	Posthole	Later Neolithic Early Bronze Age	Beaker	1	2	
PH3232	3236	Pit	Later Bronze Age		3	26	
PHA21110	21132	Posthole	Middle Bronze Age		1	6	
PHA21154	21224	Posthole	Middle Bronze Age	Jar	1	8	1
	21986	Pit	Not Closely Datable		1	1	
PHA21308	21358	Posthole	Middle Bronze Age		1	15	
PHA3493	3860	Posthole	Later Bronze Age		1	2	
ST3240	3238	Posthole	Later Bronze Age		1	7	

Group	Feature	Feature type	Spot Date	Vessel type	Quantity	Weight (g)	Vessel No
	3240	Posthole	Later Bronze Age		17	82	
	3242	Posthole	Later Bronze Age	Jar	14	66	4
					93	572	
ST3269	3275	Posthole	Later Bronze Age		9	63	
U/S	U/S	U/s	Post Deverel Rimbury		9	38	
	3358	Posthole	Later Bronze Age		3	11	
	3477	Pit	Later Bronze Age	Jar	1	30	1
					31	528	
					1	7	
Total					878	12308	18

Table 23: Area 3 Prehistoric pottery

Roman Pottery

- 5.4.38 A small assemblage of Romano-British pottery totalling 27 sherds, weighing 276g, was recovered from pits, ditches and a gully (Table 24).

Feature Type	Cut	Sherd Count	Weight (g)
Ditch	3957	1	3
	20289	1	3
	20295	1	4
	20299	1	8
	20316	1	6
Gully	20385	1	6
Pit	3959	1	8
	20280	1	5
	20297	3	28
	20312	16	205
Total		27	276

Table 24: Area 3 Roman pottery

- 5.4.39 The Area 3 Roman pottery assemblage consists entirely of locally produced Sandy grey ware (SGW) utilitarian globular jar and storage jar fragments. The fabric is blue/grey in colour, with some silver mica and white quartz which is typical of the pottery made in central Norfolk, specifically the Brampton kilns (Green 1977) and satellite industries (Lyons in prep). Most of the pottery was found as individual sherds, the only exception to this being the upper part of a SGW carinated jar found in pit **20312**. Where the material can be closely dated it is of early Roman date (mid AD 1st to 2nd century). The pottery is severely abraded with an average sherd weight of only 10g. No surface residues survive.

Post-Roman Pottery

- 5.4.40 Twelve sherds (231g) of post-Roman pottery were found in this area. Table 25 shows the quantities by fabric. Identified forms in this group comprise five sherds of a Glazed

red earthenware dish with an everted rim from pit 20216, and a beaded rim from a pearlware vessel.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early medieval ware	EMW	11th-12th	3	9		3
Medieval coarseware 3	MCW3	12th-14th	1	6		1
Late medieval and transitional	LMT	15th-16th	2	8		2
Glazed red earthenware	GRE	16th-18th	5	206	0.11	1
Pearlware	PEW	L. 18th- m. 19th	1	2	0.05	1
Totals			12	231	0.16	8

Table 25: Area 3 Post-Roman pottery

- 5.4.41 This small group comprises pottery with a very broad date range. Much of it was from features located in the northern part of the site, although there is no particular concentration by date and sherds of early and late medieval and post-medieval and modern date were found. One early medieval body sherd came from gully **3163** to the west of the site.

Glass

- 5.4.42 A single shard of glass was recovered from pit **20666**, a body shard from a natural black glass bottle with a dull surface. The glass is likely to be the result of casual loss or agricultural processes incorporating the material into the features, and although not closely datable, the glass is likely to be 18th century or later.

Ctxt	Cut	Count	Weight (kg)	Form	Description	Date
20567	20666	1	0.016	Vessel-utility bottle	Body shard from dark olive green-natural black glass bottle. There are some bubbles within the glass and the outer surface is pitted from contact with the mould, indicating it is a mould-blown or part mould-blown vessel. The shard has suffered some more recent damage. Approximately 7mm thick.	Not closely datable

Table 26: Area 3 Glass

Small Finds

- 5.4.43 The site produced 11 fragments of ironwork (probably representing no more than five objects) and two fragments of copper alloy, representing a like number of objects. The metalwork is fragmentary and in generally poor condition. A complete ceramic spindle whorl in very good condition was also recovered.
- 5.4.44 It is often impossible to assign a precise date to small fragments of ironwork such as these, as artefact types are frequently simple and long-lived. They are, however, unlikely to derive from prehistoric activity on the site, and are most likely to be of later medieval or post-medieval date, although the existence of a Roman field system means that a Roman date cannot be entirely ruled out. Two amorphous fragments (SF 105, SF 108) come from pit **20280** (Pit Group **20280**, medieval period), and a third (SF 106) is from ditch **20289** (fill 20287) part of Enclosure **20300** (phased to the Roman period). A single intrusive nail fragment (SF 104) is from the fill 20645 of pit **20644**, within pit group **20674** (Bronze Age period). A group of seven small, closely associated fragments of sheet, sufficiently poorly-preserved to offer no indication of their purpose, came from pit **20179** (fill 20183, Pit Group **20230**, Roman period).
- 5.4.45 The two fragments of copper alloy (SF 100, SF 101) are well-preserved, although somewhat fragmentary. SF 100, from pit **20017** (fill 20018) is possibly part of a flat-cast

buckle (although this cannot be said with complete confidence) and thus more likely to be of medieval or post-medieval date, whilst SF 101 is a riveted fragment of modern date (from topsoil 3000).

- 5.4.46 Spindle whorl SF 103, from post-hole **3242** (fill 3243) within Structure **3240** is most likely to be broadly contemporary with the structure from which it derives, and can thus be regarded as of Bronze Age date.

Metalworking Waste

- 5.4.47 A little under a kilo of metalworking debris was collected from nine features in Area 3. The assemblage comprises a small quantity of smithing slag associated with Roman pottery in the fills of ditch **20289** and pit **20297**, tap slag from pit **20280** which produced a mixed pottery assemblage and hearth debris from posthole **22056** and from pit **20280** which also contained pottery of mixed dates. No features relating to metal working (*i.e.* furnaces) were found, so the assemblage must be redeposited.

Trench	Cut	Feature Type	Context	Type	Pot Date	Weight (Kg)
Area 3	3157	Pit	3159	Undiagnostic	No pot	0.008
	20280	Pit	20281	Undiagnostic	No pot	0.010
	20289	Ditch	20287	Smithing	MC1-C4	0.498
	20297	Pit	20298	Smithing	MC1-C4	0.143
	20307	Pit	20309	Hearth	No pot	0.067
	20280	Pit	20278	Tapping	MC1-MC2, 11th- 16th c.	0.128
	20299	Ditch	20299	Undiagnostic	LC1-C4	0.020
	20280	Pit	20278	Hearth	MC1-MC2, 11th- 16th c.	0.018
	22056	Posthole	22056	Hearth	No pot	0.023
Total						0.915

Table 27: Area 3 Metalworking waste

Ceramic Building Material

- 5.4.48 Four fragments of CBM (784g) were recovered from this area. Pit **3166** produced half (688g) of a 15th century brick (106mm wide, 50mm thick). In section it is wedge shaped and the streaking of the fabric shows the folding typical of the moulding process. This poorly mixed fabric has a range of inclusions and most notably a fragment of glass added as temper. Ditch **20638**, (fill 20640), produced two fragments (59g) of probable medieval to post-medieval brick and pit **20651** produced an undated fragment of abraded undiagnostic CBM (37g). This material is probably related to manuring and discard within the agricultural landscape.

Lithics

- 5.4.49 The excavations in Area 3 resulted in the recovery of a substantial lithic assemblage amounting to 646 pieces of struck flint and nearly 24kg of unworked burnt flint (Table 28).

	Decortication flake	Decortication blade	Core rejuvenation flake	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Flake fragment <15mm	Retouched implement	Core-tool	Flint quern fragment	Core	Conchoidal chunk	Shattered cobble	Hammerstone	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Pit 20387 no.	30	7	4	27	143	34	44	35	29	16	24			12	7	2		414	36	1755
Pit 20387 %	7.2	1.7	1.0	6.5	34.5	8.2	10.6	8.5	7.0	3.9	5.8			2.9	1.7	0.5		100		
Pit 3132 no.					5			1	3		1		2			2		14	8	212
Enclosure 3008 no.	10	1			33		2	2	3		10			6	3		2	72	146	5302
Other features no.	17	1		13	73	3	6	3	3	6	13	1		2	3	2		146	779	16699
Other features %	11.6	0.7	0.0	8.9	50.0	2.1	4.1	2.1	2.1	4.1	8.9	0.7	0.0	1.4	2.1	1.4	0.0	100		
Total	57	9	4	40	254	37	52	41	38	22	48	1	2	20	13	6	2	646	969	23968
Total struck %	8.8	1.4	0.6	6.2	39.3	5.7	8.0	6.3	5.9	3.4	7.4	0.2	0.3	3.1	2.0	0.9	0.3	100		

Table 28: Area 3, Quantification of lithic material

- 5.4.50 The struck flint from this area represents activity over a long period, from at least the Mesolithic/Early Neolithic and through to the end of the Bronze Age. The largest individual assemblage, contributing nearly three-quarters of all the struck flint from the area, came from a single pit that can be dated to the Early Neolithic period. The rest of the struck flint came from a variety of features many of which date to the later prehistoric period. A few pits also contained relatively substantial quantities of unworked burnt stone.
- 5.4.51 One of the earliest assemblages from this area (and also the largest from any individual feature excavated during the NDR investigations) was recovered from pit **20387**. Virtually all came from fill 20489 whilst its other fill (20388) produced a small collection of technologically similar pieces, including two blade cores, which almost certainly derives from the same source as the larger collection in fill 20489. The assemblage from the pit represents all stages in the reduction sequence, from the preparation of raw materials to the manufacture and discard of retouched implements. Similarities in flint colour and cortex indicate that it was generated from the reduction of only a small number of cores; a limited refitting exercise was unsuccessful but it is thought that a more-sustained attempt is likely to prove productive. The raw materials used comprised large nodular shaped cobbles of translucent fine-grained grey-brown flint with occasional lighter cherty patches, a weathered but still rough thin cortex and occasional heavily recorticated thermal (frost fractured) surfaces.
- 5.4.52 Although the assemblage is large and all elements in the knapping sequence are present, it is probable that it only represents a proportion of what must have been generated, it presumably having been selected from a larger accumulation. This is supported by the condition of the assemblage. Whilst most pieces are in a sharp condition, a small proportion exhibit post-deposition chipping and rubbing, around 13% of the pieces have been burnt and many have broken to some extent. The overall condition of the assemblage (along with the relatively low proportions of micro-debitage present) suggest the assemblage had experienced a complex history between manufacture and final deposition within the pit.
- 5.4.53 Surviving cores and conchoidally fractured fragments indicate that relatively large nodules were worked down and possibly quartered to produce cores that were carefully

shaped. The ultimate objective of the reduction strategy was clearly oriented towards the production of blades and, although a high proportion are prismatic and indicate repeated production, the wide variety of core types show that reduction also involved a degree of expediency. This was at least partly occasioned by the thermally flawed nature of the raw materials which resulted in the generation of high numbers of poorly detached flakes, shattered pieces and other irregular waste throughout the reduction sequence. Interestingly, although the cores started off considerably in excess of 100mm in maximum dimension, very few blades exceed 50mm in length. This suggests a bipartite process, with the earlier stages in reduction involving the mass reduction of raw materials and the careful shaping of cores through the removal of large thick flakes. However, use was made of these chunky and irregular flakes with some being converted into retouched implements, such as the larger bifacially worked pieces, the inversely flaked pieces and some of the scrapers. The efforts at mass reduction and shaping resulted in the creation of blade cores which were then further reduced to produce small and thin regularly shaped blades and flakes, of which many show evidence of light retouch, serration and use-wear indicative of light scraping and cutting uses.

- 5.4.54 The other features in this area produced much smaller quantities of struck flint. Some of the other pits contained flintwork of a similar date and condition to the flint-rich pit **20839**, such as pit **3237** which produced four struck pieces, all in good condition with two having been struck from same core, although all of these assemblages are small and their contained flintwork could be residually deposited. Pit **3132** contained a relatively large assemblage of 14 struck pieces. Whilst the dating of this material is difficult as all of the pieces are either burnt or have been stained black, probably from contact with soot, it does include a burnt fragment of a serrated prismatic blade which can be dated to the Mesolithic or Early Neolithic. There are also two fragments of flint querns and two of the flakes are heavily chattermarked and may have been struck from a hammerstone or pounder. Flint querns were made throughout the prehistoric period although perhaps the majority do come from later Bronze Age or Iron Age contexts, which might indicate that the serrated blade is residual. The assemblage is still interesting, however, as it represents a collection of broken quern fragments and burnt flintworking debris that appears to have been deliberately deposited.
- 5.4.55 A number of the other pits also produced relatively large quantities of unworked burnt flint. These include flint-rich pit **20389** which produced 1.7kg but also some others that contained little or no struck flint. Pit **3234** held over 3kg, pit **3856** nearly 4kg, pit **20652** over 1.6kg and **20208** over 1.1kg. Smaller but still not insignificant quantities of unworked burnt flint were found in many other features across the site. Much of this material probably derives from domestic hearth use but the larger deposits may have been generated from cooking or craft-based activities.
- 5.4.56 Other relatively large quantities of struck flint came from many of the enclosures and other settlement features. Enclosure **3008** provided the largest assemblage amounting to 72 struck flints and over 5kg of unworked burnt flint. The struck flint is undoubtedly chronologically mixed but a high proportion probably dates to the later 2nd or 1st millennium BC, and are likely to be contemporary with the enclosure. There are many thick squat flakes including a high proportion that have been retouched to form simple cutting flakes, denticulated implements and irregular scrapers. The assemblage also contains a high proportion of cores, most of which are either irregularly worked or minimally reduced. Although the pieces were distributed in low densities throughout many fills and probably represent casually discarded material eroded or discarded into the open ditch, it does suggest sustained and, for that period, fairly intensive episodes

of flintworking and tool use in the vicinity. Similarly, many of the other features contained struck flint that is likely to be contemporary with the settlement.

Other Worked Stone

- 5.4.57 Three fragments of lava rotary querns were recovered from two postholes (**3240** and **3242**, fills 3241 and 3243 respectively). Given the presence of a Roman field system in Area 3, and the lack of later activity, these are most likely to represent Roman activity but they may be medieval, as with most other quern fragments along the route.

Ctxt	Ctxt Type	Function	Notes	Weight
3241	Fill of posthole 3240	Undiagnostic rotary quern fragments	Two rounded weathered samples	3
3243	Fill of posthole 3242	Undiagnostic rotary quern fragments	One rounded weathered sample	2

Table 29: Area 3 Worked Stone

Fired Clay

- 5.4.58 Excavations produced a large assemblage of fired clay from Area 3 (212 fragments, 5179g) from 13 contexts. Within this assemblage 105 fragments, 736g, are amorphous pieces; these are not informative beyond their weight and count. A further 107 fragments, 4442g, of structural fired clay were recovered from eight features. The whole assemblage is summarised in Volume 2, Appendix C.8.
- 5.4.59 The structural fragments exhibit flattened surfaces and wattle impressions and many fragments of diagnostic artefacts. These fragments comprise of daub, possible kiln furniture and loom weights. For the sake of expediency this part of the assemblage is summarised in Table 30.
- 5.4.60 None of this fired clay or the ceramic objects were found *in situ*. Nevertheless, the quantity and types of objects within this assemblage reflect the level of permanence and a level of sophistication to the later prehistoric settlement from which they derive. The loom weights are clear evidence of textile manufacture within a domestic setting and the possible kiln/oven furniture suggests craft activities. The daub and less diagnostic structural fragments are not datable but are still indicators of domestic activity.

Context	Cut	Feature Type	Fragment type	Structural type	Object Form	Date/Period	Frag Count	Weight (g)	Notes
3144	3132	pit	s	w			1	8	
3144	3132	pit	s	fs	Kiln/Oven Furniture		5	262	Flattened ceramic object with organic impressions on surface. Reminiscent of LIA/ERB kiln plate.
3153	3152	Furnace Pit	s	fs/w	Loom weight	LIA/ERB	3	563	Fragment of LIA/ERB Loomweight. Probably fragment of triangular loomweight; only one face and remnant of turn to perpendicular face remain. Central perforation (15mm diameter) runs parallel to the remaining face and would have been made through the perpendicular face. Type 1 (After C. Poole).
3153	3152	Furnace Pit	s	fs	Loom weight	LIA/ERB	28	1052	Fragments of probably LIA/ERB loomweight. Most exhibit a flattened and rounded surface, some don't but are clearly of the same object. No clear evidence of any perforations found.

Context	Cut	Feature Type	Fragment type	Structural type	Object Form	Date/Period	Frag Count	Weight (g)	Notes
									Probably Type 1 (After C. Poole)
3153	3152	Furnace Pit	s	fs/w	Loom weight	LIA/ERB	5	514	Fragment of a LIA/ERB Loomweight. Corner fragment from a triangular loom weight with related pieces, two perpendicular faces and a rounded corner with a central perforation (10mm). In F6, but less crumbly. Type 1 (After C. Poole)
3355	3354	posthole	s	fs			1	12	very smooth surface
3357	3356	cremation?	s	fs			2	55	
3530	3529	posthole	s	fs			11	110	Rounded surface with break. Might be the corner of a loom weight
20050	20049	pit	s	fs/?w			4	13	One fragment may have a wattle impression
20055	20054	pit	s	fs/w	Daub		25	900	Fragments of daub. Multiple wattle and withie impressions on each and each has a flattened surface.
20055	20054	pit	s	w	Daub		13	399	Fragments of daub. Multiple wattle and withie impressions. Likely fragments from within original structure
20055	20054	pit	s	fs/w	Loom weight	LIA/ERB	2	201	Corner fragment of LIA/ERB triangular loomweight. Lateral perforation remaining in broken face - hour glass shaped impression. (10mm). Type 1 (After C. Poole)
20055	20054	pit	s	fs/w	Loom weight	LIA/ERB	2	210	Corner fragment of LIA/ERB triangular loomweight. Vertical break prevents full width measurement. Lateral perforation remaining in broken face. (15mm). A large Type 1 (After C. Poole). Made of five fragment glued together (B72).
20491	20490	posthole	s	fs/w	Daub		3	83	
20491	20490	posthole	s	fs			2	60	More silty than hand recovered pieces

Table 30: Summary of fired clay structural fragments from Area 3 (fs=flattened surfaces, w=wattle impressions)

Environmental Reports

Human Skeletal Remains

- 5.4.61 A single confirmed cremation pit (**20263**, Bronze Age period) was recorded in Area 3, although other possible cremations were noted. There were no repeated elements within the cremated bone from pit **20263** suggesting a minimum number of one individual. The bone was determined to be adult based on size and robustness.
- 5.4.62 The colour of the bone was primarily oxidised white. Colour reflects the degree of heat used during cremation, with bone that was exposed to the highest temperatures having a buff white appearance (Holck, 2008 110-115). This implies that all of the bone was exposed to a consistent heat. All of the cremated bone displays a mixture of transverse and curved transverse fractures and longitudinal fractures. Such fractures are the result of bone heating then cracking as soft tissues and muscles shrink (Schmid 2008, 43).
- 5.4.63 The total bone weights are presented below. The highest percentage of bone was in the 5-10mm fraction and therefore potential for extracting information is limited.

Cut	Deposit	Sample	>10mm frags	Weight (g)	10-4mm frags	Weight (g)
20263	20264	141	Humerus, femur,	27	Skull, long bone	14

Table 31: Area 3 Cremated human skeletal remains

5.4.64 Several features contained a minimal amount of unidentified calcined bone. Weights are presented in Table 32, below.

Cut	Deposit	Feature	Weight (g)	Comments
20049	20050		<1g	Unidentified cremated bone
20616	20617		<1g	Unidentified cremated bone
20387	20489		<1g	Unidentified cremated bone
3002	3003		<1g	Unidentified cremated bone
3242	3243		<1g	Unidentified cremated bone
3977	3978		<1g	Unidentified cremated bone

Table 32: Area 3 Summary of calcined bone from other features

Environmental Samples

5.4.65 Samples taken from Middle Bronze Age ditches; Enclosure **3008** and palisade ditch **3685** were generally unproductive with only two charred grains recovered from Enclosure **3008**.

Sample No.		104	143	144	147	1015	1023	1024	1027	146	1016
Context No.		3111	20273	20296	20419	20567	20622	20624	20640	20391	20563
Cut No.		3108	20272	20295	20418	20566	20621	20621	20638	20389	20561
Feature Type		Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch	Ditch terminus	Ditch terminus
Volume processed (L)		9	7	9	7	10	8	9	8	8	8
Flot volume (ml)		2	2	3	2	10	2	25	50	1	10
Estimated charcoal volume (ml)		<1	<1	<1	<1	<1	2	1	2	1	2
<i>Hordeum vulgare</i> L. caryopsis	domesticated Barley grain									#	
cereal indet. caryopsis	indeterminate grain					#					
<i>Arrhenatherum elatius</i> ssp. <i>Bulbosus</i> (Willd.) tuber	Onion couch grass										
Chenopodiaceae indet. seed								#	#		
<i>Fallopia convolvulus</i> (L.) Á. Löve achene	Black-bindweed										
<i>Polygonum</i> sp. Achene	knotgrasses					#					

Table 33: Area 3 samples from Middle Bronze Age ditch fills

5.4.66 Cremations **3002** and **20263** both contained calcined bone and pottery. Charcoal volumes are low suggesting the cremation had been picked out of the pyre. A charred tuber of onion couch grass (*Arrhenatherum elatius* ssp. *bulbosus*) was recovered from cremation pit **20263** and is a common find in prehistoric cremations, thought to be the result of burnt turf.

Sample No.		141	100
Context No.		20264	3003
Cut No.		20263	3002
Volume processed (L)		32	9
Flot volume (ml)		15	2
Estimated charcoal volume (ml)		5	2
<i>Arrhenatherum elatius</i> ssp. <i>Bulbosus</i> (Willd.) tuber	Onion couch grass	#	
<i>Fallopia convolvulus</i> (L.) Á. Löve achene	Black-bindweed		#

Table 34: Area 3 Late Bronze Age cremation samples

- 5.4.67 Samples were taken from pits and post holes that comprised the numerous alignments that characterised this particular area, in addition to a number of presumed structures. Recovery of preserved plant remains from these features is scarce and when they do occur there is a high chance that they may not be contemporary as mainly single specimens are present.
- 5.4.68 Twenty-four pits were sampled. Neolithic pit **20387** did not contain any preserved plant remains other than sparse charcoal. The most productive sample from Area 3 came from the lower fill 3154 of Later Bronze Age pit **3152** located within a group of two or three structures, outside of the enclosure. It produced a 1200ml flot that is entirely comprised of hulled wheat and barley grains with an estimation of 4850 grains per litre of soil (based on quantification of a sub-sample). The wheat grains have the morphological appearance of emmer (*Triticum dicoccum*) wheat and the barley is likely to be the 6-row variety. Approximately a quarter of the barley grains are fractured. There was no evidence of chaff elements or weed seeds in the sub-sample that was examined indicating that the sample represents fully processed, clean grain.
- 5.4.69 Pit **3356** is noteworthy as it was originally thought to be a cremation and was 100% sampled (and processed). No calcined bone was recovered but several charred flax (*Linum* sp.) seeds are present. They are small in size and poorly preserved meaning that it is not clear whether they are the cultivated variety (*L. usitassimum*) or fairy flax (*L. catharticum*). Flax is a useful plant that is known to have been cultivated in the East of England since the Bronze Age for both the fibres (for making linen) and the seeds for oil and flavouring. Occasional barley grains are also present in this sample.
- 5.4.70 Of the remaining pits that were sampled, only pits **3132**, **3142**, **3236**, **3441**, **3977** and **20054** contain preserved plant remains and these are charred grains of wheat and/or barley and are mainly present as single specimens.

Sample No.	Context No.	Cut No.	Volume processed (L)	Flot volume (ml)	Estimated charcoal volume (ml)	Charred cereal grain	Charred flax
102	3056	3056	9	5	1		
101	3062	3061	10	3	1		
103	3081	3082	8	5	1		
106	3144	3132	8	30	20	#	
105	3143	3142	9	20	7	#	
107	3154	3152	9	1200	0	#####	
108	3237	3236	7	5	<1	#	
112	3255	3254	9	50	20	#	
116	3357	3356	18	30	5	##	###
118	3442	3441	7	30	20	##	
119	3478	3477	7	5	<1		
134	3978	3977	8	20	4	#	
135	20050	20049	4	3	5		
137	20055	20054	8	13	9	#	
140	20203	20202	10	800	1100		
145	20319	20318	8	30	3		
1002	20489	20387	<1	<1	<1		
1003	20489	20387	7	<1	<1		
148	20399	20398	9	1	<1		
1001	20427	20426	8	1	<1		
1020	20617	20616	5	15	2		
1022	20626	20625	8	2	3		
1025	20653	20652	9	110	120		
1028	20667	20666	8	4	1		
1101	21039	21038	8	5	3		

Table 35: Area 3 pit fill samples

5.4.71 Postholes from structures frequently contained poorly-preserved charred cereal grains, usually as single specimens, that could have accumulated in the void around the post during the use of the structure.

Structure	Cut No.	Context No.	Sample No.	Volume processed (L)	Flot volume (ml)	Estimated charcoal volume (ml)	Cereal grain	Weed seeds
3240	3238	3239	109	5	5	2	#	
3240	3240	3241	110	6	2	<1		
3240	3242	3243	139	9	10	3	##	##
3240	3242	3243	111	6	30	5	#	
3269	3275	3276	113	5	25	3	#	
3317	3325	3326	114	6	15	6	#	
3401	3667	3668	120	4	60	60	#	
3401	20290	20291	142	16	15	5	#	
3711	3715	3716	125	2	3	1		
3711	3717	3718	124	2	5	3		

Structure	Cut No.	Context No.	Sample No.	Volume processed (L)	Flot volume (ml)	Estimated charcoal volume (ml)	Cereal grain	Weed seeds
3711	3719	3720	126	4	1	1	#	
3711	3723	3724	121	5	6	2	#	
3711	3726	3728	122	2	5	3	#	##
3711	3729	3730	123	1	7	7	#	
3807	3807	3808	131	4	2	1		
3807	3825	3826	129	2	1	<1		
3829	3829	3830	127	6	1	<1		
3829	3833	3834	128	7	5	<1		
20400	20400	20401	149	7	2	<1	#	
20400	20410	20411	1000	6	30	<1		
20430	20428	20429	1007	7	<1	<1		
20430	20432	20433	1006	7	<1	<1	#	#
20430	20464	20465	1005	7	<1	<1	#	
20500	20492	20493	1010	4	<1	<1		
20500	20496	20497	1011	4	<1	0		
20500	20500	20501	1012	6	<1	<1		
20500	20512	20513	1014	7	<1	<1		
20500	20524	20525	1013	5	<1	<1		
20582	20584	20585	1017	5	1	<1		
20582	20592	20593	1018	15	1	<1		
20582	20610	20611	1019	8	20	<1		
Poss (not grouped)	20542	20543	1008	4	<1	<1		

Table 36: Area 3 structural posthole samples

5.5 Area 4 (ENF139697)

5.5.1 Area 4 (Fig. 5) was located to the north of Reepham Road in the parish of Horsford (TG 18625 15191). Geology was a mixture of sands and silts. A total of 1.46ha was stripped, uncovering an Iron Age posthole structure, a number of Romano-British boundary ditches and a large pond.

Period 0: Undated

5.5.2 Pond **4215** was located in the north-east corner of the excavation area and measured at least 31m in diameter. The alluvial silty sand fill was 0.45m thick and found to contain 145g of burnt flint.

Period 3: Iron Age

Postholes

5.5.3 Posthole Group **4007** was located in the south-east corner of the excavation area and consisted of 26 postholes in an irregular rectangular shape. The features measured between 0.24m and 0.48m in diameter and 0.23m to 0.41m deep. A total of 16g of Iron Age pottery was recovered from the features, along with 1041g of burnt flint and 25 residual worked flints. These postholes clearly formed a structure pre-dating the Roman ditches (**4073**), although no clear footprint can be determined and probably relate to more than one structure over a number of phases of activity.

5.5.4 Posthole group **4114** was located in the south-west corner of the excavation area and consisted of six postholes. A total of 8g of fired clay and 610g of burnt flint was recovered from the features. Four of the postholes may relate to a four-post structure, with approximately 1.3m spacing between each posthole.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pre Pottery, sherds/g</i>	<i>Fired Clay (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>
4007	Posthole Group	3/16		25	1041	Black-Bindweed
4114	Posthole Group	1/5	8		610	

Table 37: Area 4, Finds from Iron Age features

Period 4: Romano-British

Ditches

5.5.5 A group of boundary ditches was located in the north-western section of the excavation area on a north-north-east to south-south-west alignment (Ditch Group **4129**). These ditches measured between 0.2m and 0.7m wide and 0.03m to 0.2m deep. Only 7g of worked flint was recovered from the ditches, but the alignment of the features is on the same axis as Roman cropmarks to the south-west of site, 130m away from the excavation area and these ditches probably form part of the field system for that farmstead.

5.5.6 Similarly, ditches **4004**, **4032** and **4073** were located within the central area of the excavation area, on an east to west alignment. These ditches measured 0.24m to 1.1m wide and 0.06m to 0.29m deep. Early Roman pottery (245g) was recovered from the ditches, along with 3g of ceramic building material and 906g of burnt flint.

Feature No	Feature Type	Pre Pottery, sherds/g	Roman Pottery, sherds/g	Post-Rom Pottery sherds/g	CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro results	Other Finds
4129	Ditch Group					3			
4004	Ditch	21/245		1/103	5		7		
4032	Ditch		1/110						
4073	Ditch	2/11	11/148			1	831		2x ironwork

Table 38: Area 4, Find from Romano-British Features

Finds Reports

Prehistoric Pottery

- 5.5.7 A small assemblage of 27 sherds of prehistoric pottery weighing 277g was collected from five features (Table 39). The assemblage comprises five earlier Iron Age body sherds in sand and flint tempered fabrics from ditch **4073** and posthole structure **4007** and 22 sandy micaceous later Iron Age sherds from ditch **4004** and posthole group **4114**. The assemblage from ditch **4004** includes an 'S' profile jar with everted rim with sooting beneath the rim similar to examples found at Saham Toney dated to the late 1st century BC (Bates 2000, fig.6, 4).

Group	Feature	Feature type	Spot date	vessel type	Quantity	Weight (g)	No. of vessels
PH4114	4118	Posthole	Iron Age		1	5	
Ditch4004	4184	Ditch	Iron Age	Jar	4	90	1
					17	155	
Ditch4073	4073	Gully	Earlier Iron Age		2	11	
PH4007	4023	Posthole	Earlier Iron Age		2	10	
	4041	Posthole	Earlier Iron Age		1	6	
Total					27	277	1

Table 39: Area 4 Prehistoric pottery

Roman Pottery

- 5.5.8 A very small assemblage of Romano-British pottery totalling 12 sherds, weighing 258g, was recovered from a gully and a ditch in Area 4 (Table 40). The pottery has survived well within these features, with an average sherd weight of 21.5g.

Feature Type	Cut	Sherd Count	Weight (g)
Ditch	4073	11	148
Ditch	4075 (4032)	1	110
Total		12	258

Table 40: Roman pottery from Area 4

- 5.5.9 Although single sherds of locally produced Sandy grey ware (SGW) and Sandy red ware (SREDW) undiagnostic jar/bowl fragments were found, of particular interest are the fragmentary remains of a central Gaulish samian bowl (SAM: Tyers 1996, 113-114).

The upper part of this highly decorated vessel (Dr 37) could be tentatively attributed to an individual potter (?DIVIXTVS) who worked at Lezoux between AD145 and 175. The bowl (SF151) had been used and the slip worn thin on the rim, before it was broken and thrown away.

Context	Cut	Feature Type	Feature Number	Fabric	Form	Sherd count	Weight (g)	Spot date
4074	4073	Ditch	4073	SAM	Bowl (Dr37)	9	141	AD145-75
4074	4073	Ditch	4073	SGW	Jar	1	5	1st century AD
4074	4073	Ditch	4073	SREDW	Jar	1	2	Mid-1st to 2nd century AD
4076	4075	Ditch	4032	SGW	Bowl	1	110	Mid-1st to 2nd century AD

Table 41: Area 4 Roman pottery

Post-Roman Pottery

- 5.5.10 Two sherds (115g) of post-Roman pottery were found. An intrusive, heavily abraded, stem fragment of a Thetford-type ware baluster lamp (late 9th–11th century) was recovered from ditch fill 4096 (ditch **4004**), and a body sherd of Frechen (or possibly London) stoneware (16th–17th century) was found in subsoil layer 4221.

Small Finds

- 5.5.11 Five relatively large fragments of ironwork were found, representing three objects. All are in fair condition. It is impossible to assign a precise date to iron objects such as these, as the artefact types are simple and long-lived. They are, however, unlikely to derive from prehistoric activity on the site, as finds such as these are rare in a prehistoric context, and are most probably of Roman or later date. Two of the three items (SF 151, SF 152) come from ditch **4073** (fill 4207) and are clearly structural items. One (SF 152) is a wall-hook or pintle, the other (SF 151) more likely to have supported guttering or similar. There are numerous Roman and later parallels for both types, but similar objects remain in current use, so establishing a firm date is effectively impossible. SF 153 from ditch group **4129** (fill 4202) is a featureless fragment of strip.

Ceramic Building Material

- 5.5.12 A single fragment of undiagnostic CBM (5g) was recovered from ditch **4004**. This material probably relates to manuring and discard within the agricultural landscape in the post-medieval period.

Fired Clay

- 5.5.13 Two amorphous fragments (8g) of fired clay were recovered from a feature that is part of Posthole Group **4114**. These provide little information on the date of the features and are residual indicators of activity in the area.

Clay Tobacco Pipe

- 5.5.14 Three fragments of a single stem from a white ball clay tobacco pipe, weighing 0.010kg, was recovered from gully **4093**. The pipe fragments do little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900.

Context	Cut	Form	Weight (kg)	No. Pipe stem fragments	Description	Date
4094	4093	Fragments of pipe stem and mouthpiece	0.010	3	The mouthpiece is present and complete and the stem survives to a length of 156mm, the stem having broken before the heel/bowl. The stem is slightly curved and slightly oval in shape. Mould seams are visible for most of the length of the stem, slightly trimmed in the centre.	Not closely datable

Table 42: Area 4 Clay tobacco pipe

Lithics

- 5.5.15 The excavations in Area 4 resulted in the recovery of 93 pieces of struck flint and 4.4kg of unworked burnt flint (Table 43).

	Decortication flake	Decortication blade	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Flake fragment <15mm	Retouched implement	Core-tool	Core	Conchoidal chunk	Shattered cobble	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Subsoil 4221	7	1	1	24	4	7	4	7	2	6					63		
Posthole 4041	2			3				4	2	3	2	1	4	21	47	963	
Other Features			4	2			1		1		1			9	340	3438	
Total	9	1	5	29	4	7	5	11	2	9	3	3	1	4	93	387	4401

Table 43: Area 4, Quantification of lithic material

- 5.5.16 Very little struck flint was present across most of the area with the assemblage being concentrated within two contexts, which between them accounted for 84 pieces or 90% of the total. Most of this, amounting to 63 pieces, came from subsoil 4221 and comprised a chronologically mixed assemblage reflecting flint-using activities dating from the Mesolithic or Early Neolithic through to at least the end of the Bronze Age. It is generally in an abraded condition.
- 5.5.17 The most informative collection came from posthole **4041** (Posthole Group **4007**) and amounts to 21 pieces of technologically homogeneous Middle Bronze Age to Iron Age flintwork which is generally in a good condition. It includes a number of badly struck or 'squat' flakes along with an irregularly worked core and five tools that comprise three coarsely denticulated core-tools, a similarly coarsely denticulated flake and a flake with a heavily crushed edge. Posthole **4041** also produced almost 1kg of unworked burnt flint and many of the other features within Posthole Group **4114** also provided relatively large quantities, with the largest quantities from the site coming from adjacent natural feature **4000** which produced nearly 1.5kg. The unworked burnt flint from this site is nearly all intensely and uniformly heated large fragments which, along with the similar material recovered from this area during the evaluation phase, suggest that activities involving its deliberate production, perhaps for cooking or craft activities, were important element of the occupation here.

Environmental Report

Faunal Remains

- 5.5.18 From Area 4 there are a group of large mammal bone fragments from pit fill 4195 (pit **4196**). One horse scapula with bicipital tuberosity fused is the only element for which there is a secure identification. The smallest length of the colum scapulae (SLC; von den Driesch 1976) of this scapula is 53.7mm. The points for the greatest length of the processors articularis (GLP) measurement are damaged, meaning the height of the horse is no obtainable. Several fragmented ribs are present, identified to the level of "large mammal" and these are also plausibly from horse according to their morphology at Serjeantson zones 1,3,4.

	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Meas specimens
horse	1	0	0	0	0	1	1	1
4195	1	0	0	0	0	1	1	1
large mammal	50	0	0	0	0	3	0	0
4195	50	0	0	0	0	3	0	0
Grand Total	51	0	0	0	0	4	1	1

Table 44: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.

Environmental Samples

- 5.5.19 Fill 4161 of possible prehistoric cremation pit **4160** did not contain any significant charcoal although an indeterminate charred cereal grain and a single charred seed of the knotgrass (Polygonaceae) family was recovered from the flot. Calcined bone was recovered, which is to be catalogued during analysis.
- 5.5.20 Samples from Iron Age post holes were generally unproductive although a charred seed of black-bindweed (*Fallopia convolvulus*), a scrambling weed of disturbed ground, was noted in posthole **4007**. Ditch **4069** and pit **4114** contained only sparse charcoal.

Sample No.	150	151	152	153	154	155	156	157
Context No.	4161	4006	4024	4050	4070	4113	4126	4121
Cut No.	4160	4007	4025	4051	4069	4114	4127	4122
Feature Type	Cremation	Posthole	Posthole	Posthole	Ditch	Pit	Posthole	Posthole
Volume processed (L)	20	6	4	6	9	8	5	4
Flot volume (ml)	1	<1	1	1	80	1	<1	1
cereal indet. caryopsis	1							
<i>Fallopia convolvulus</i>		1						
<i>Polygonum sp.</i>	1							
Estimated Charcoal volume (ml)	0	1	1	1	1	1	0	1
Modern contaminants					+++	+		

Table 45: Area 4 environmental samples

5.6 Area 5 (ENF139698)

5.6.1 Area 5 (Fig. 6) was approximately 170m south-east of Area 4, located to the north of Reepham Road in the parish of Horsford (TG 18933 14923). A total of 0.509ha was stripped revealing a small prehistoric enclosure. A significant portion of the enclosure had been truncated during recent drainage works by contractors.

Period 0: Undated

5.6.2 The only archaeological features within the enclosure were a pit and posthole (**5026**, **5028**), from which no finds were recovered.

5.6.3 Three other ditches were found within the area (**5006**, **5036**, **5068**). These ditches were on a north to south or east to west alignment and measured 0.45m to 0.61m wide and 0.15m to 0.23m deep. The fills were a mid yellowish brown silty sand from which a total of 94g of burnt flint and 78g of struck flint was recovered. Ditch **5036** must be Middle Bronze Age or later, as it truncated the top of Enclosure **5007**. The relationship of the other two ditches with the enclosure was unclear due to the modern service cut truncating away the features.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
5026	Pit					Hazlenut	
5028	Posthole						
5006	Ditch				14		
5036	Ditch			8	80		
5068	Ditch						

Table 46: Area 5, finds from undated features

Period 2.2: Middle Bronze Age

Enclosure Ditch

5.6.4 Enclosure ditch **5007** was formed by two L-shaped ditches on a north to south axis. The enclosure measured 49m long and 40.5m wide, with an internal area of approximately 0.196ha. The ditch measured 1.35m to 2.6m wide and 0.44m to 1.14m deep. The variable fills were mid orangey brown silty sands and light to mid greyish brown clayey silts from which 645g of Middle Bronze Age pottery, 9g of fired clay, 13857g of burnt flint, 5689g of worked flint, including three possible scrapers, an arrowhead and two hammerstones (SF's 201, 202, 203, 204, 205, 209, 210, 211, 212, 213, 215). A fragment of a sandstone macehead was also recovered. A significant portion of the western half of the enclosure had been truncated by a modern service cut. A radiocarbon test was undertaken on charred grain from the ditch, which returned a date of 1385-1128BC (radiocarbon age BP 3010 ± 29; 95.4%; SUERC-71673 (GU42882); Volume 2, Appendix D)

Feature No	Feature Type	Pottery, sherds/g	Fired Clay (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
5007	Enclosure	47/645	9	293	13857		Tobacco pipe (intrusive), CuAl fragment (SF215)

Table 47: Area 5, finds from Middle Bronze Age features

Period 6.1: Early Medieval

- 5.6.5 Solution hollow **5071** was located near the eastern limit of excavation and measured 7.4m long, 6.6m wide and 1.05m deep with an irregular profile. A total of four sherds of 11th to 13th century pottery was recovered from the mixed fill as well as 43 weathered worked flints and 1316g of burnt flint. The feature was recorded as having one very mixed fill and the finds would suggest that the flints are residual, having been deposited within the feature from surrounding topsoil as the feature infilled over a long period of time, before being completely sealed by some point in the early medieval period.

Finds Reports

Prehistoric Pottery

- 5.6.6 All of the prehistoric pottery from Area 5 came from the fills of Enclosure **5007**. All is of Middle Bronze Age date. A total of 47 sherds weighing 645g were collected including rims from four vessels. The majority of the sherds are made of coarse grog-tempered fabrics though some contain fine grog inclusions and some have added flint or quartz sand. A direct flattened rim from ditch **5007** is from a barrel-shaped vessel with a pinched-out knob on the neck similar to examples from Grimes Graves (Longworth *et al.* 1988, fig.39, 459-467). A second similar barrel-shaped jar has a pinched out cordon with deep fingertip impressions, a decorative trait found on contemporary vessels from Grimes Graves, Cromer Road, Antingham and Witton, near North Walsham (Longworth *et al.* 1988, fig.37, 373-395; Wilson *et al.* 2012, fig.33, 5; Lawson 1983, fig.25), whilst a third jar has a plain cordon (Longworth *et al.* 1988, fig.41, 517-519). The remaining rim is small and pointed.

Group	Feature	Feature type	Spot date	Vessel type	Quantity	Weight (g)	No. of vessels
Enclosure 5007	5007	Ditch	Middle Bronze Age	Jar	1	10	1
					9	138	
	5009	Ditch	Middle Bronze Age	Jar	1	129	1
					3	54	
	5012	Ditch	Middle Bronze Age		6	41	
	5014	Ditch	Middle Bronze Age	Jar	1	9	1
					9	109	
	5048	Ditch	Middle Bronze Age		3	25	
	5052	Ditch	Middle Bronze Age		3	34	
	5062	Ditch	Middle Bronze Age	Jar	1	7	
					7	79	
				Jar	1	2	1
	5066	Ditch	Middle Bronze Age		2	8	
Total					47	645	4

Table 48: Area 5 Prehistoric pottery

Post-Roman Pottery

- 5.6.7 Pit or solution hollow **5071** (fill 5072) contained three sherds of early medieval ware and one of local medieval unglazed ware (total weight 9g), suggesting an 11th–13th-century date.

Small Finds

- 5.6.8 A single item of copper alloy came from Area 5 (SF215). It is fragmentary and in very poor condition (somewhat corroded), but appears to be a small droplet, presumably generated by the handling of molten metal, which is not impossible if the feature is Bronze Age in origin. It is, however, insufficient to suggest metalworking on or near the site and its position, within fill 5064 of ditch **5066** (enclosure **5007**) might mean that it has arrived at the site from elsewhere.

Fired Clay

- 5.6.9 A small assemblage of fired clay (7 fragments, 114g) was collected from six features in Area 5. Five fragments, 43g, were amorphous and uninformative. Two fragments (71g) of structural fired clay were collected from ditch **5066** exhibiting flattened surfaces and corners. One fragment (60g) is part of a rounded ceramic object; it has external and internal rounded edges. This may be a fragment of kiln furniture but it is too fragmentary for any certainty. The other (11g) is a corner fragment of a hand-formed object.
- 5.6.10 Little can be concluded about this assemblage, however it does tentatively point to prehistoric domestic activity in the vicinity.

Clay Tobacco Pipe

- 5.6.11 A mouthpiece and stem fragment of a white ball clay tobacco pipe, weighing 0.001kg, was recovered from ditch **5042** (Enclosure **5007**). The pipe fragment does little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900.

Context	Cut	Form	Weight (kg)	No. Pipe stem fragments	Description	Date
5046	5042	Pipe stem mouthpiece	0.001	1	The mouthpiece is complete and the stem survives to a length of 37mm. The stem is slightly oval in shape. One mould is trimmed the other untrimmed. The fragment is discoloured and grey, most likely having been burnt in a fire a technique commonly used to clean out the pipe.	Not closely datable

Table 49: Area 5 Clay Tobacco Pipe

Lithics

- 5.6.12 The excavations in Area 5 produced 358 struck flints, a fragment of a ground sandstone object and nearly 16.5 kg of unworked burnt stone. Virtually all of the lithic material came from enclosure **5007** with most of the remainder coming from a large pit or natural solution hollow **5071** (Table 50).

	Decorification flake	Decorification blade	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Flake fragment <15mm	Retouched implement	Core-tool	Flint quern fragment	Core	Conchoidal chunk	Shattered cobble	Hammerstone	Total	Burnt Stone (no.)	Burnt Stone (wt:g)
Enclosure 5007 no.	31	3	4	115	1	1	11	25	1	42	8	1	13	16	19	2	293	495	13857
Enclosure 5007 %	10.6	1.0	1.4	39.2	0.3	0.3	3.8	8.5	0.3	14.3	2.7	0.3	4.4	5.5	6.5	0.7	100		
Pit 5071 no.	7		1	22				4		1				6	2		43	55	1316
Other features no.	1			10	1		2	1		4				2	1		22	79	1296
Total no.	39	3	5	147	2	1	13	30	1	47	8	1	13	24	22	2	358	629	16469
Total struck %	10.9	0.8	1.4	41.1	0.6	0.3	3.6	8.4	0.3	13.1	2.2	0.3	3.6	6.7	6.1	0.6	100		

Table 50: Area 5, Quantification of lithic material

- 5.6.13 The assemblage from this area is chronologically mixed with a small quantity of Mesolithic and/or Neolithic flint present in low quantities across many of the features. The bulk of the struck flint, however, can be dated to the middle or later parts of the Bronze Age. This includes the greater part of the assemblage from enclosure **5007**. This material was distributed widely throughout the ditch's fills but some notable concentrations were noted, such as those from sections **5014**, **5051** and **5063**. The material from these sections is in a variable but mostly good condition and many of the pieces from the individual fills appear to have come from the same pieces of raw material, although limited refitting attempts were unsuccessful.
- 5.6.14 Very few small flakes or fragments were recovered and the slight variations in condition and lack of refittable pieces indicate that it probably originated from a larger accumulation, possibly a midden, and was redeposited into the ditch. Some earlier and clearly residual pieces are present in the assemblages from the other sections although the majority are of a similar date and condition to the larger assemblages. The assemblage contains a high proportion of retouched pieces and core-tools. These are dominated by scrapers and edge-retouched implements although they do vary somewhat in form and the quality of manufacture; some of the scrapers for example, are made on well-struck blanks and have carefully retouched and symmetrically arched working edges, whilst others are crude examples made on thick and badly struck flakes.
- 5.6.15 Of note are two fragments with ground surfaces. One, from section **5007**, is a piece of burnt and yellow-stained white sandstone that appears to have a finely ground domed surface. Its size suggests it may be a fragment from a ground stone axe or, more probably given the stone it was made from, a macehead. The other is from section **5009** and comprises the butt end of an opaque, light grey flint axehead. Both of its faces comprise c. 50% ground surface and 50% flake scars, and there are at least two episodes of flaking followed by a polishing. It is oval in section with rounded but fairly acute lateral margins and it has a squared-off butt. Its break resembles an 'end-shock' fracture. Ground implements such as these were made from throughout the Neolithic and into the Early Bronze Age. There are also two complete hammerstones or pounders with heavily 'chattermarked' surfaces, a number of flakes or conchoidally fractured chunks that have come from similar implements and a fragment from a flint quern which has a pecked but worn surface.

- 5.6.16 The enclosure also produced a large quantity of unworked burnt flint which had been heated to a very high degree, causing it to become 'fire crazed' and a uniform grey-white colour. It has fragmented but many substantial pieces, weighing up to 200g, are present and these indicate that large nodular flint had been selected for deliberate burning.
- 5.6.17 These assemblages from the enclosure are technologically interesting in that they contain elements that would normally be considered to be Early Bronze Age in date alongside others that are more typical of Middle or Late Bronze Age industries. The former would include the ground implements which are unlikely to have been made after the Early Bronze Age, although they could have been of some antiquity when deposited, along with some of the more competently detached flakes and carefully crafted retouched implements. Probably the majority of the assemblage, however, is typical of the latter periods and consists of thick and often poorly detached squat flakes, crudely retouched tools and minimally or irregularly reduced cores. This technological variability could be taken to indicate that the accumulations from which the dumps of material were gathered had been formed over a long period, perhaps as a midden that began life during the Early Bronze Age and continued through to the later Bronze Age when the main depositional events occurred. Alternatively, the assemblages could represent a transitional industry that dates either to the later parts of the Early Bronze Age or earlier parts of the Middle Bronze Age. Technologically and in the circumstances under which it was deposited, it is reminiscent of the large flintworking deposits found in the fills of an Early Bronze Age barrow at Fordham in Cambridgeshire (Bishop 2014).
- 5.6.18 Natural solution hollow or pit **5071** produced a large assemblage similar to those from enclosure **5007** although these are mostly in a weathered condition and must have been exposed on the surface for some time. It also contained a substantial quantity of unworked burnt flint and together these suggest the possibility that both the material from this feature and the later prehistoric material found in Enclosure **5007** shared the same source.

Environmental Reports

Environmental Samples

- 5.6.19 The sample from the sole fill (5027) of prehistoric pit **5026** contains only a small fragment of charred hazelnut (*Corylus avellana*) shell. The samples from ditch fills did not contain any significant preserved plant remains.

Sample No.	200	201	202	203	204	205
Context No.	5027	5056	5022	5047	5008	5064
Cut No.	5026	5025	5009	5042	5007	5066
Feature Type	Pit?	Ditch	Ditch	Enclosure ditch	Enclosure ditch	Enclosure ditch
Volume processed (L)	8	7	8	8	9	8
Flot volume (ml)	1	1	1	10	1	1
<i>Corylus avellana</i> L. shell fragments	+					
Estimated Charcoal volume (ml)	<1	<1	<1	10	<1	<1

Table 51: Area 5 samples

5.7 Area 6 (ENF139699)

5.7.1 Area 6 (Fig. 7) was located 300m to the west of Area 7 (TG 23387 14149) and a total of 0.151ha was stripped, uncovering a number of tree throws, pits and ditches.

Period 2: Bronze Age

5.7.2 Natural hollow **6021** was located near the eastern baulk of the excavation area, and measured 8.34m wide and at least 9.02m long, with a depth of 0.26m. A total of 41g of Late Bronze Age/earlier Iron Age pottery was recovered from the feature along with 33g of burnt flint and one struck flint.

5.7.3 Pits **6014** and **6020** were located 31m apart, but were similar in form and backfill. The pits were 1.82m in diameter and 0.32m deep and 1.53m in diameter and 0.26m deep respectively. No finds were recovered, but the form and fills of the features are similar to other prehistoric pits recorded throughout the route.

Period 4: Romano-British

5.7.4 Ditches **6004**, **6006** and **6010** were located in the northern half of the excavation area, north of ditch **6018**. The ditches measured between 0.38m and 1.1m wide and 0.07m to 0.22m deep. No finds were recovered from the fills, but because of the ditches' similar alignment to known Roman ditches in Area 7, these ditches have been tentatively dated to the Romano-British period.

Period 8: Modern

5.7.5 Ditch **6018** was centrally located within the excavation area on an east to west alignment. The feature measured 2.15m wide and 0.6m deep. There were no finds, but the feature is seen as cropmarks between Areas 6 and 7, and this ditch is clearly the same as ditch **7011** within Area 7, which was dated to the modern period.

Finds Reports

Prehistoric Pottery

5.7.6 Natural hollow **6021** produced 13 Late Bronze Age/earlier Iron Age sherds weighing 41g. All of the sherds are made of fine flint-tempered fabric, one is burnished and one has impressed fingernail decoration forming a herringbone motif similar to a vessel found on the Norwich Southern Bypass at Trowse (Ashwin and Bates 2000, fig.140, P114).

Ceramic Building Material

5.7.7 A single fragment of post-medieval tile (4g) was recovered from pit **6014**. This material is most likely related to manuring and discard within the agricultural landscape.

Lithics

5.7.8 The only lithic material recovered from Area 6 comprises a flint flake which is well struck but not otherwise diagnostic, and a single fragment of unworked burnt flint weighing 33g, both pieces coming from natural hollow **6021**.

5.8 Area 7 (ENF139700)

5.8.1 Area 7 (Fig. 8) was located west of Buxton Road, in the parish of Spixworth, 280m east of Area 6 (TG 23760 14128). A total of 0.425ha was excavated revealing a number of Late Roman boundary ditches and pits and post-medieval/modern ditches and pits.

Period 4: Romano-British

Ditches

5.8.2 Ditches **7050** and **7052** were located within the western half of the excavation area, and consisted of two parallel ditches that were extremely truncated that possibly formed part of a trackway. Ditch **7050** consisted of two segments of surviving ditch that were seen for 7m and 10m before being truncated by ditch **7011**. Ditch **7052** entered the excavation area near the south-west corner and terminated just north of ditch **7011**. Ditch **7052** truncated Late Roman pit **7069** and both ditches were truncated by modern boundary **7011**.

5.8.3 Ditch **7050** was 0.9m wide and 0.26m deep, from which a 16g sherd of Early Roman pottery was recovered. Ditch **7052** measured 0.88m wide and 0.22m deep and contained one sherd of Late Roman pottery.

Pits and postholes

5.8.4 Pit **7069** (**7071**) was irregular in plan, measuring 2.2m in diameter and 0.18m deep. A total of 212g of ceramic building material and 85g of Late Roman pottery were recovered from the fills.

5.8.5 Pit Group **7045** consisted of eight features spread across a small area within the central part of the site, either side of ditch **7011**. These pits varied in size between 0.5m and 1.05m in diameter and 0.15m to 0.25m deep. A total of 177g of Late Roman pottery, 72g of ceramic building material and 183g of residual worked flint were recovered from the features.

5.8.6 Posthole group **7060** was located directly south of ditch **7050**, near the southern limit of excavation and consisted of four features. These postholes measured 0.72m to 0.87m in diameter and 0.17m to 0.3m deep. A total of four sherds of Late Roman pottery weighing 20g was recovered during sample processing, although not assessed.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>CBM (g)</i>	<i>Fired Clay (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
7045	Pit Group	12/177		85		189	Barley & wheat	
7050	Ditch	1/3						
7052	Ditch	1/16				17		
7060	Posthole Group	4/20					Barley & wheat	
7069	Pit	6/85	212					

Table 52: Area 7, Finds from Romano-British features

Period 7/8: Post-Medieval/Modern

Ditches

- 5.8.7 Aligned east to west for 110m across the site, ditch **7011** measured 1.3m wide and 0.5m deep. Find recovered from the feature included 5g of residual prehistoric pottery, 23g of ceramic building material, 2g of 18th century pottery and 126g of vitrified clay. This ditch aligned with cropmarks leading west to Area 6 and ditch **6018**. Similarly, the same alignment can still be seen in use east of Buxton Road.
- 5.8.8 Ditch **7005** ran perpendicular to ditch **7011** for 19m, continuing out of the excavation area. This feature measured between 0.9m and 1.4m wide and 0.3m to 0.51m deep. A residual (2g) fragment of prehistoric pottery was recovered from the fill as well as 12g of 16th to 18th century pottery, 91g of burnt flint, one worked flint, a 372g fragment of brick and 3g of ceramic building material.
- 5.8.9 Interestingly, both ditches were approximately aligned on the Ordnance Survey National Grid, which would suggest they were dug in the 20th century.

Pits

- 5.8.10 Pit group **7007** consisted of four pits aligned parallel with ditch **7005** near the northern limit of excavation. These pits were sub-circular in plan and varied in diameter between 0.35m and 1m with a depth between 0.15m and 0.4m. No closely datable finds were recovered from the pits, though due to their alignment with ditch **7005** are presumed to be modern in date, possibly a fence line pre-dating ditch **7005**. A total of two worked flints and 128g of burnt flint were recovered from the pits.

Finds Reports

Prehistoric Pottery

- 5.8.11 Three earlier Iron Age date sherds weighing 13g in sand and flint-tempered fabrics were recovered as single sherds from the fills of ditches **7005** and **7011** and posthole **7036**. One sherd is decorated with fingertip impressions similar to contemporary pottery from Longham (Ashwin and Flitcroft 1999, fig.23, P46).

Roman Pottery

- 5.8.12 A small assemblage totalling 24 sherds, weighing 301g, of Romano-British pottery was recovered from a range of Area 7 features including ditches and pits (Table 53). The pottery is severely abraded with an average sherd weight of 12.5g. No surface residues survive.

Feature Type	Cut	Sherd Count	Weight (g)
Ditch	7050	1	16
	7067	1	3
Pit Group 7045	7029	2	13
	7033	2	24
	7039	4	105
	7042	4	35
	7013	1	3
Pit 7069	7069	6	85
	7071	2	6
Subsoil	7001	1	11
Total		24	301

Table 53: Area 7 Roman pottery

- 5.8.13 This site assemblage, although small, contains the widest range of Romano-British pottery fabrics and forms found during the NDR excavations (Volume 2, Table 2). Locally made Sandy grey ware (SGW) utilitarian coarse wares are the most prolific and found in a limited range of jar and storage jars, alongside mortaria with flint trituration grits (Tyers 1996, 117-135). Other coarsewares found include Sandy oxidised ware (SOW) dishes and bowls, including flanged examples and Sandy red ware (SREDW) jar and lid fragments. All of this coarse ware material, both oxidised (white or red) and grey (reduced), is consistent with production in the Brampton area (Green 1977).
- 5.8.14 A single fragment of a non-local shelly ware (STW) coarse jar was retrieved, probably manufactured in the kilns at Harrold, Bedfordshire (Tyers 1996, 192-193).
- 5.8.15 Non-local fine wares include a Nene Valley colour coat (NVCC) flanged dish (Tyers 1996, 173-175) and Oxfordshire red slip ware (OXRED) mixing bowl or mortarium (Tyers 1996, 175-178). Also found was a small abraded fragment of South Gaulish samian undiagnostic bowl (Tyers 1996, 12-113).
- 5.8.16 With the exception of the (probably residual) Early Roman samian, the fabrics and forms that are dateable within this site assemblage are typical of the later Roman period.

Fabric	Abbreviation	Vessel form	Sherd count	Weight (g)
Sandy grey ware	SGW	Jar, storage jar, mortaria	13	161
Sandy oxidised ware	SOW	Dish, flanged dish, flanged bowl, storage jar	4	94
Sandy red ware	SREDW	Jar, lid	2	20
Nene Valley colour coat	NVCC	Flanged dish	2	11
Oxfordshire red colour coat	OXRED	Mortarium	1	7
Shelly ware	STW	Jar	1	5
South Gaulish samian	SAM	Bowl	1	3
Total			24	301

Table 54: Area 7 Roman pottery fabrics, listed in descending order of weight (g)

Post-Roman Pottery

- 5.8.17 A small sherd of creamware (2g; 18th century) was found in ditch fill 7008 (ditch **7011**). Ditch fill 7073 (ditch **7005**) contained a rimsherd from a Glazed red earthenware dish or platter (12g; 16th–18th century).

Ceramic Building Material

- 5.8.18 Nine fragments of CBM (706g) were recovered from features in Area 7, the majority of which were undiagnostic and/or not datable (6 fragments, 107g). A fragment of post-medieval tile (16g) was collected from the subsoil and an 18th century brick fragment was recovered from ditch **7005**. Context 7070, from pit **7071**, produced a possible end fragment of a Roman tile. It has a very slight curve suggesting it is from a large tile and both outer faces are sanded – these characteristics suggest this fragment may be from an imbrex.
- 5.8.19 This material is most likely related to manuring and discard within the agricultural landscape.

Fired Clay

- 5.8.20 Nine fragments, 79g, of fired clay were collected from two contexts in Area 7. Pits **7030** and **7039** (Pit Group **7045**) produced amorphous and structural fragments respectively (8 pieces, 25g and 1 piece, 54g). The structural fragment has a flattened surface. This assemblage provides little information about its origin, it is particularly small and fragmentary and is very unlikely to be *in situ* material.

Clay Tobacco Pipe

- 5.8.21 A single stem fragment from a white ball clay tobacco pipe, weighing 0.005kg, was recovered from subsoil layer 7001. The pipe fragment does little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900.

Context	Cut	Form	Weight (kg)	No. Pipe stem fragments	Description	Date
7001		Fragment of pipe stem	0.005	1	The stem survives to a length of 51mm, is slightly oval in shape and slightly abraded. One mould seam is trimmed, the other untrimmed.	Not closely datable

Table 55: Area 7 Clay tobacco pipe

Lithics

- 5.8.22 The excavations in Area 7 resulted in the recovery of only six struck flints, these being found scattered in five separate features. They are all likely to be residually deposited and none are particularly diagnostic although, with the possible exception of a badly struck decortication flake from ditch **7011**, all have been relatively competently produced and probably pre-date the Middle Bronze Age.

Environmental Reports

Faunal Remains

- 5.8.23 There are too few animal bone fragments from Area 7 to warrant the inclusion of a table. The six fragments, all from fill 7006 (pit **7007**) include one badly damaged probable cattle (*Bos taurus*) mandibular molar. The other fragments are from large mammal but there is poor potential for a more specific level of identification based on morphology.

Environmental Samples

- 5.8.24 Samples were taken from Roman pits that had obvious charcoal-rich fills during excavation. Charred cereal remains were recovered from each of the pits and include barley (*Hordeum vulgare*), hulled wheat (*Triticum dicoccum/spelta*) and oats (*Avena* sp.). Chaff elements are rare with only a single spelt glume base noted. Occasional weed seeds are present and include bromes (*Bromus* sp.), black bindweed, docks (*Rumex* sp.) and goosefoots (*Chenopodium* sp.). It is possible that the oats grains are also weed contaminants as it is not possible to distinguish between the cultivated and wild varieties from the seed alone.
- 5.8.25 The features have been interpreted as fire pits. Cereal processing waste was frequently used as fuel in the Roman period but this does not appear to be the case in these pits as chaff is infrequent.

Sample No.		300	301	302	303
Context No.		7029	7033	7055	7037
Cut No.		7030	7034	7054	7039
Volume processed (L)		8	8	10	9
Volume of flot (mls)		20	25	20	25
<i>Avena</i> sp. caryopsis	Oats [wild or cultivated]				##
<i>Hordeum vulgare</i> L. caryopsis	domesticated Barley grain	##	###	#	###
<i>Triticum dicoccum</i> Schübl./ <i>spelta</i> L. caryopsis	Emmer/Spelt Wheat grain		##	#	###
cereal indet. caryopsis		##	##	#	##
<i>Triticum spelta</i> L. glume base	Spelt Wheat chaff				#
<i>Bromus</i> spp. caryopsis	Bromes				##
Chenopodiaceae indet. seed	Goosefoot Family				#
<i>Fallopia convolvulus</i> (L.) Á. Löve achene	Black-bindweed	#	#		##
<i>Rumex</i> sp. achene	small-seeded Docks	#			
Estimated Charcoal volume (ml)		15	40	45	45

Table 56: Area 7 Environmental samples

5.9 Area 8 (ENF139701)

5.9.1 Area 8 (Fig. 9) was located north of Beeston Lane in the parish of Spixworth, south-east of the village and 260m west of Area 9 (TG 26109 14221). Area 8 consisted of 3 x 20m trenches on a west-north-west to east-south-east alignment, targeting a small ditch found during the evaluation phase of works.

Period 2: Bronze Age

Ditches

5.9.2 Ditch **8000** was located within all three trenches, on a north-north-east to south-south-west alignment and measured 0.58m to 0.91m wide and 0.19m to 0.42m deep with a U-shaped profile. The fill was a sterile mid to dark yellowish brown silty sand from which 19g of Early Bronze Age pottery and a small worked flint assemblage were recovered. Similar flints were recovered from the ditch during the evaluation phase, but this was the first pottery to be recovered.

Pits and other features

5.9.3 A total of six other features were present in the trenches, consisting of pits or natural features. These features were undated although presumed to be prehistoric. Pit **8015** contained two sherds of prehistoric pottery.

Finds Reports

Prehistoric Pottery

5.9.4 A small assemblage of six sherds weighing 20g was recovered from three features in Area 8. Three undecorated body sherd in grog-tempered fabric from ditch **8000** are probably Early Bronze Age. The three remaining sherds are prehistoric but otherwise undatable. These include two sherds from the fill of ditch **8008** in fine flint-tempered fabric and two flinty body sherds from pit **8015**.

Lithics

5.9.5 The only lithic material recovered from Area 8 comprises a blade-like flake, three small core trimming chips and a small flake fragment, all recovered from fill 8009 of ditch **8000**. The assemblage represents knapping debris of probable Mesolithic or Early Neolithic date and indicates core reduction occurring in the vicinity, although it is probably residually deposited.

Environmental Reports

Environmental Samples

5.9.6 Fill 8009 of prehistoric ditch **8008** produced only sparse charcoal.

Sample No.	350
Context No.	8009
Cut No.	8010
Feature Type	Ditch
Volume processed (L)	8
Flot volume (ml)	1
Estimated Charcoal volume (ml)	<1

Table 57: Area 8 Environmental Samples

5.10 Area 9 (ENF139702)

- 5.10.1 Area 9 (Fig. 10) was located north-east of Beeston Lane in the parish of Spixworth (TG 26401 14077). A total of 1.932ha was stripped, revealing a large palaeochannel, boundary ditches, Neolithic pits, medieval charcoaling pits, extraction pits and a post-medieval building. The majority of activity was found to be north of the palaeochannel.
- 5.10.2 Due to the topography of the site (straddling two sides of a valley), the central area of the site, near the palaeochannel, was extremely waterlogged. As a result, and the weather conditions during stripping, it was decided between OAE, Mott MacDonald and Ken Hamilton of Norfolk County Council not to undertake excavation of the palaeochannel or the modern features cut into the top of it.

Prehistoric

- 5.10.3 A small amount of prehistoric activity was recorded on the crest of the hill in a small, separate trench to the south-east, where a group of three small pits were excavated along with a number of tree throws, pits and a ditch.
- 5.10.4 Pit Group **9008** consisted of three small pits (**9008**, **9010**, **9012**) measuring between 0.5m and 0.8m in diameter and 0.14m to 0.3m deep. Two of the pits contained a total of 6 sherds of Beaker pottery along with 13 worked flint.
- 5.10.5 Pit Group **9020** consisted of ten pits spread across the crest of the hill at the eastern end of Area 9. These features ranged in size from 1.2m to 2.6m in diameter and 0.23m to 1m in depth. The only finds recovered consisted of a 7g fragment of residual ceramic building material and 48g of flint.
- 5.10.6 Ditch **9035** was located directly east of a group of Tree Throws (**9065**) on a north-east to south-west alignment. Despite limited dating evidence, due to its close proximity to prehistoric features and lack of other features of a later date nearby, the ditch has been dated to the prehistoric period.
- 5.10.7 A group of tree throws (**9065**) were located directly next to ditch **9035** and consisted of six amorphous tree throw features. An 18g sherd of Early Neolithic pottery and a flint core were recovered from one of the features and one sherd of Beaker pottery from another.
- 5.10.8 A further five residual sherds of Beaker pottery were recovered from pit **9332** at the northern end of the excavation area, which also contained 947g of 12th to 13th century pottery.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
9008	Pit	4/25		13		hazelnut	
9010	Pit	2/7		2		hazelnut	
9012	Pit			3			
9020	Pit Group		7	3			
9035	Ditch			6			
9065	Tree Throw Group	2/20		5			Flint core SF403

Table 58: Area 9, Finds from Prehistoric Features

Periods 6.1 and 6.2: Early and High Medieval

- 5.10.9 Generally, the medieval features consisted of pits and boundary ditches following the contours of the valley. Many of the ditches had little dating evidence within them, but when considered with the other nearby medieval features, it is likely many were contemporary.

Enclosure Ditches

- 5.10.10 Enclosure **9132** was located east of the palaeochannel, forming a small square with an internal area of 491 square metres. The northern and western half of the enclosure were truncated by post-medieval boundaries **9100** and **9300**. The enclosure ditches measured between 1m and 1.9m wide and 0.6m to 0.78m deep. No finds were recovered from the fills, although would appear to fit stratigraphically within the medieval period.
- 5.10.11 Ditch Group **9320** were located near the northern limit of the excavation, within an area of pitting. These ditches were very truncated but would probably have formed small stock enclosures. Two east-north-east to west-south-west ditches formed the northern arm of the enclosure (**9190** and **9214**), with a roughly north to south ditch forming a division (**9309**). The southern half of the enclosure was no longer visible, having been truncated by ploughing although remnants of other east to west ditches survived which may represent further sub-divisions in the enclosure (ditches **9373** and **9376**). The ditches measured between 0.66m and 1.25m, widening significantly to the west where the ditch was 2.6m wide. The ditches varied in depth between 0.19m and 0.43m deep. A total of 299g of 13th to 14th century pottery was recovered from the fills of the ditches, along with five residual worked flints.

Boundary Ditches

- 5.10.12 Ditches **9045**, **9106** **9125** were located directly south of the palaeochannel and followed the contours at the edge of the channel. These ditches varied in size between 0.5m and 1.52m wide and 0.15m to 0.53m deep. The only find from their fills was a single residual flint in ditch **9125**.
- 5.10.13 Ditch Group **9205** consisted of three curvilinear ditches (**9207**, **9211** and **9218**) located in the north-eastern-most limit of the excavation area. The ditches varied in size between 0.4m and 1.5m wide and 0.1 to 0.87m deep, with the central ditch (**9211**) being the largest. A small assemblage of 11th to 13th century pottery was recovered from the ditches along with a sherd of residual Late Saxon pottery. A total of 691g of tapping slag and 3g of fired clay were also recovered from the fills along with 9g of residual flint.
- 5.10.14 Ditches **9520** consisted of four intercutting ditches running along the northern edge of the palaeochannel. These ditches varied in size between 0.81m and 3.06m wide and 0.13m to 0.98m deep. The ditches curved around to the south-west until they were truncated by quarry pits (**9422**). On the western side of these pits another group of four intercutting ditches (**9451**) were probably a continuation of the same boundary. These ditches measured between 1.11m and 2.62m wide and 0.28m to 0.46m deep. A moderate assemblage of 11th to 14th century pottery was recovered from the fills of all ditches along with three worked flints.
- 5.10.15 At the western corner of the excavation area, ditch **9470** ran on a north to south alignment, before turning to run east to west for 9m prior to terminating adjacent to post-medieval structure **9461**. This ditch contained 11g of 13th to 14th century pottery and 420g of metalworking waste.

Pits and Postholes

- 5.10.16 Pits **9077** and **9172** were both located near the eastern limit of the excavation area approximately 50m apart. Both were sub-circular in plan and the lower fills had charcoal rich deposits. Pit **9077** measured 2.44m in diameter and 0.78m deep. Pit **9172** was 3.38m in diameter and 0.6m deep. No datable finds were recovered from either pit, but the form of the features was very similar to dated charcoaling pits, such as pit **9332**. The latter was located directly south of ditch **9451** and measured 2.7m in diameter and 0.32m deep. The lower fill was a 0.04m thick deposit of charcoal, overlain by heat affected natural sands and dark grey sands. A total of 947g of pottery was recovered from the feature, most of which dated to the 12th to 13th century. Worked flint and animal bone was also recovered from the fill. Interestingly, a small assemblage (31g) of residual Beaker (Early Bronze Age) pottery was also recovered from the fills.
- 5.10.17 Pit Group **9265** was directly west of ditches **9320** and only partially uncovered, with the majority of the features continuing outside of the northern limit of the excavation area. This group of five intercutting pits measured between 2.6m and 3.4m in diameter and 0.23m to 0.31m deep. A total of 588g of late 12th to 14th century pottery was recovered from the backfill along with 18g of animal bone, 12g of ceramic building material and a large fragment of lava quern (SF405).
- 5.10.18 Pit Group **9220** consisted of 8 pits located in the north-eastern limit of the excavation area, near ditches **9205**. These pits varied in diameter between 0.51m and 1.35m and 0.13m to 1.05m deep. Little was recovered from the pits, with only 12g of late 11th to 14th century pottery and 20g of metalworking waste being found.
- 5.10.19 Pit Group **9443** consisted of nine pits varying in size between 1.7m and 4.24m in diameter and 0.14m to 1m deep. A total of 412g of generally 14th/15th century pottery was recovered from the fills along with 24g of animal bone and 4g of ceramic building material.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
9045	Boundary						
9077	Pit						
9106	Boundary						
9125	Boundary			1			
9132	Enclosure						
9172	Pit						
9205	Ditch Group	10/28	3	1	7		MWD (691g)
9220	Pit Group	2/12					MWD (20g)
9265	Pit Group	44/581					
9320	Enclosure	27/299		5			
9332	Pit	114/947		1	10		
9443	Pit Group	23/412	4				
9451	Ditch Group	14/146		1			
9470	Ditch	2/11					MWD (420g)
9520	Ditch Group	3/68		3			

Table 59: Area 9, Finds from Early and high medieval features

Period 6.3: Late Medieval

Pits and Postholes

- 5.10.20 Pit Group **9254** was located just south of ditches **9320** and consisted of 15 shallow pits varying in size between 0.8m and 5.8m in diameter and 0.07m to 0.38m deep. A total of 883g of pottery was recovered from the features, varying in date between the 14th and 16th centuries. Other finds recovered include 428g of animal bone, 527g of metalworking waste and 3267g of ceramic building material, over 3kg of which came from one pit (**9254**).
- 5.10.21 Posthole Group **9449** was located directly west of Pit Group **9254** and consisted of 14 postholes in a north-west to south-east alignment. The features were found to contain 780g of ceramic building material and 54g of late 14th to 16th century pottery.
- 5.10.22 Pit Group **9426** was located directly west of Posthole Group **9449** and consisted of intercutting pits measuring 11m by 11m in an 'L' shape and a maximum depth of 0.9m. A total of 262g of 16th to 18th century pottery was recovered along with 9g of late 14th to 16th century pottery. Animal bone (288g) and ceramic building material (1205g) were also recovered.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
9254	Pit Group	48/883	3363	2	22		MWD (527g)
9426	Pit Group	3/262					
9449	Posthole Group	6/27	780				

Table 60: Area 9, Finds from late medieval features

Period 7: Post-medieval

Structures

- 5.10.23 Barn **9461** was located in the western corner of the excavation area, having previously been located during the evaluation phase of works. This structure consisted of a 16m long, 7m wide 'pit' with a maximum depth of 0.4m. This pit was cut into the valley side, to form a level platform for the structure to be built, with the northern and western foundation walls (9499) still surviving, consisting of flint nodules and mortar. The pit backfill was found to contain 37g of 17th to 18th century pottery along with tobacco pipe, 181g of lava quern and 58g of ceramic building material.

Ditches

- 5.10.24 Boundary ditches **9100**, **9300** and **9307** were located in the southern half of the excavation area on a north-north-east to south-south-west alignment and formed part of a boundary that is still in use to the south of the excavation area. Ditch **9100** measured between 2m and 2.9m wide and 0.52 to 0.95m deep. The fills were found to contain a small amount of residual worked flint, 9g of 11th to 14th century pottery and a fragment of clay tobacco pipe. Ditches **9300** and **9307** returned off the northern end of ditch **9100** on a west-north-west to east-south-east alignment. A total of 7g of late 14th to 16th century pottery and 963g of ceramic building material were recovered from the fills of the ditches.

Pits and Postholes

- 5.10.25 Pit Groups **9422** and **9532** were located north of the palaeochannel near Structure **9461**. Pit Group **9422** as a whole was approximately 34m long, 22m wide, and varied between 0.7m and 1.22m deep. A total of 167g of ceramic building material and 803g of pottery was recovered, dating to the 17th to 19th century. No finds were recovered from Pit Group **9532**, although its similar form and size would suggest a similar date. Overall, the pits measured approximately 23m long, 11m wide and at least 0.3m deep.
- 5.10.26 Well **9402** was located directly east of Pit Group **9426**, 83m north-east of possibly contemporary structure **9461**. This well measured 2.02m in diameter and was lined with bricks and mortar. The feature was excavated to a depth of 1m. The well had been backfilled with flint and mortar rubble material as well as ceramic building material, 14848g of which was kept for assessment. This generally dated to the 16th century, and may have derived from the demolition of structure **9461**. A total of 105g of 19th century pottery was also recovered from the fill, together with 47g of animal bone.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frag./g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
9100	Boundary Ditch	2/9		2		Clay pipe
9300	Boundary Ditch					
9307	Boundary Ditch	1/2	963			
9402	Well	7/105	14848			
9422	Pit Group	2/83				
9461	Structure	2/37			Occ. grains & legumes	Lava quern (181g)
9532	Pit Group					

Table 61: Area 9, Finds from post-medieval features

Period 8: Modern

- 5.10.27 A bottle dump (**9420**) truncated the north-west corner of Pit Group **9422**, measuring 15m by 10m and at least 1.2m deep. Numerous early to mid 20th century bottles were recovered from the fill as well as other modern artefacts. The items were assessed as modern on site and discarded.

Finds Reports

Prehistoric Pottery

- 5.10.28 Area 9 produced 13 sherds of prehistoric pottery weighing 77g. A rim in coarse flint-tempered fabric with piercings below the rim from tree throw **9086** is of Earlier Neolithic date. Twelve Beaker sherds were also recovered; one from the fill of tree throw **9074** and eleven from pits **9332**, **9008** and **9010**. The sherds recovered from pit **9332** are likely residual as medieval pot was also recovered from the pit. The Beaker sherds are decorated with fingernail, fingertip and tool-impressed decoration including one sherd with a fingertip raised cordon similar to examples from Valley Belt, Trowse (Ashwin and Bates 2000, fig.124, P66).

Post-Roman Pottery

5.10.29 A total of 325 sherds (4118g) was collected from this area. Table 62 presents the quantities by fabric. A further 69 sherds were recovered from this area (Field S16) during the evaluation (Anderson 2015a).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Thetford-type ware	THET	10th-11th	4	47	0.12	3
Early medieval ware	EMW	11th-12th	8	19		1
Yarmouth-type ware	YAR	11th-12th	28	205	0.18	2
Local medieval unglazed	LMU	11th-14th	111	1044	0.63	19
Medieval coarseware 1	MCW1	12th-14th	25	223	0.15	13
Medieval coarseware 2	MCW2	12th-14th	6	46	0.05	4
Medieval coarseware 3	MCW3	12th-14th	2	69	0.25	2
Medieval coarseware 4	MCW4	12th-14th	1	42	0.06	1
Medieval coarseware 5	MCW5	12th-14th	2	9		2
Medieval coarseware 6	MCW6	12th-14th	2	55		2
Medieval coarseware 7	MCW7	12th-14th	16	129		1
Medieval coarseware 9	MCW9	12th-14th	1	23	0.09	1
Grimston-type ware	GRIM	L.12th-14th	36	625	0.20	15
Unprovenanced glazed 1	UPG1	Med	2	40		2
Scarborough Phase II	SCAR2	E.13th-M.14th	1	62		1
Yarmouth-type glazed wares	YARG	13th-15th	6	154		2
Late Grimston-type ware	GRIL	14th-15th?	1	22		1
Late medieval and transitional	LMT	15th-16th	24	482	0.37	22
Raeran/Aachen Stoneware	GSW3	L.15th-16th	1	63		1
Martincamp Ware Type I	MART1	L.15th-M.16th	1	7		1
Dutch-type whitewares	DUTW	15th-17th	2	59		1
Glazed red earthenware	GRE	16th-18th	32	506	0.71	29
Cologne/Frechen Stoneware	GSW4	16th-17th	2	23	0.16	2
Speckle-glazed Ware	SPEC	L.17th-18th	1	1		1
Staffordshire-type Slipware	STAF	L.17th-18th	1	5		1
Tin glazed earthenwares	TGE	16th-18th	2	12		2
English Stoneware	ESW	17th-19th	2	57		2
Late slipped redware	LSRW	18th-19th	2	82	0.04	2
Refined white earthenwares	REFW	L.18th-20th	2	5		2
Staffordshire white salt-glazed stonewares	SWSW	18th	1	2		1
Totals			325	4118	3.01	139

Table 62: Area 9 Post-Roman pottery

5.10.30 The majority of pottery in this assemblage is of medieval date, although the large sherd quantities of local medieval unglazed (LMU) and Grimston-type ware (GRIM) both represented significantly fewer vessels. The medieval coarsewares are dominated by LMU and Medieval coarseware 1 (MCW1), but most other types are also present. Grimston-type (including the similar Unprovenanced glazed 1 (UPG1)) is the most common glazed ware of the period. Identified vessels comprised jars, bowls and jugs. The Scarborough ware sherd was a fragment of the bridge from a bridge-spouted pitcher (*cf.* McCarthy and Brooks 1988 no. 659).

5.10.31 A small but significant group comprises the later medieval and early post-medieval wares, which includes local redwares and some imported wares. Of particular note is a piece of Martincamp flask, examples of which are not common in the county outside the urban and port centres.

5.10.32 Much of the pottery was recovered from the central part of the northern arm of the site, particularly from Pit Group **9254** and surrounding pits and ditches. See Volume 2, Appendix C.3 for spotdates.

Glass

- 5.10.33 Five shards of vessel glass were recovered from four contexts within this area. None of these can be particularly closely dated. The shards are all relatively small, with that recovered from ditch **9035** being only a flake. The shards from pits **9271** and **9488** may be 18th century or later, while the remainder are 19th or 20th century. The glass is likely to be the result of casual loss or agricultural processes incorporating the material into the features. Numerous glass bottles were found within bottle dump **9420**, which all dated to the mid 20th century. The artefacts were identified on site as modern and not retained.

Small Finds

- 5.10.34 Twenty-five fragments of ironwork were recovered from this site. All are in poor condition. The most immediately identifiable object is a scale tang blade (SF 423) with the choil and an expanded bolster marking the transition between blade and tang. It is one of the few items of ironwork from the site that can be dated with any precision. The shape of the blade, taken together with the presence of both bolster and choil, suggest a relatively late date for the object, probably no earlier than the mid-18th century (Moore 1999). It comes from pit **9254** (fill 9255); other less diagnostic blade fragments (SF 408, SF 404) come from pit **9363** (fill 9364) and pit **9234** (fill 9235). It is possible that the latter is possibly an upright rim fragment rather than a blade. A single very worn horseshoe fragment (SF 424) is also from pit **9254** (fill 9255), and seems to be of similar date to the knife blade described above.
- 5.10.35 The remainder of the ironwork is probably structural in purpose, and effectively undateable. There is an L-shaped pintle or wall-hook (SF 410) from layer 9437, and fragments of wide strapping (SF 409, SF 413), possibly originating from door hinges, from pit **9426** (fill 9431) and 9467, an occupation layer within building 9461. There are also 17 nails (SF 407, SF 411, SF 412, SF 414 – SF 422, SF 425, SF 426). Seven of these (SF 414 – SF 418, SF 411, SF 412) are from contexts associated with Structure **9461**, with five from construction cut **9513** (fill 9492) and two from deposit 9467 within it. All of these nails seem to be hand-made. Others are from pits **9267** (pit group **9265**), **9438**, **9428** (pit group **9422**), and **9413** (pit group **9461**), and ditch **9468**. A single nail (SF 419) is from the rubble backfill of well **9402**. An undiagnostic fragment of bar (SF 406) came from pit **9265** (fill 9266).

Metalwork Waste

- 5.10.36 A little over 3kg of metalworking debris including tap slag and hearth lining with adhering smithing debris was collected from Area 9. The site, which lay within Beeston Park, produced evidence of low intensity industrial activity including charcoal pits and a furnace (found during evaluation). The metalworking debris assemblage suggests iron production and possible secondary working was taking place at the site during the medieval period. The adjacent site, Area 10, also produced significant evidence for medieval iron production and two finds of metalworking debris in the parish of Beeston St Andrew are listed in the NHER (NHER8143 and NHER19299).

Trench	Cut	Feature Type	Context	Type	Pot date	Weight (kg)
Area 9	9254	Pit/ hollow	9255	Hearth	15th-16th c.	0.527
	9026	Ditch	9027	Hearth	No pot	1.625
	9207	Gully	9207	Tapping	No pot	0.691
	9470	Ditch	9472	Tapping	11th-14th c.	0.420
	9225	Pit/ posthole	9224	Tapping	No pot	0.020
Total						3.283

Table 63: Area 9 Metalworking Waste

Ceramic Building Material

- 5.10.37 Area 9 produced the majority of the CBM from the entire assemblage (122 fragments, 21948g). Just under half of this material (52 fragments, 2807g) could not be identified or dated and is summarised in Volume 2, Appendix C.7. This material is very abraded and fragmentary and is probably related to manuring and discard within the agricultural landscape. Some of these fragments bear similarities to the diagnostic fragments discussed below.
- 5.10.38 The diagnostic portion of the assemblage (69 fragments, 19141g) from Area 9 is probably related to the late medieval and post-medieval use of this landscape as part of the Beeston Estate. The recovery of mostly 16th century wall brick fragments from pit/hollow **9254** in combination with medieval/post-medieval flat tile fragments, from well **9402**, are evidence of the disuse and discard of buildings that were in the area. In relation to the CBM was flint clearly used as building material, the fragments assessed have gravelly lime mortar adhering to the surface. Table 62 provides a summary of the diagnostic building material from Area 9.
- 5.10.39 Some of the brick fragments show the same grey vitrification/overfired glaze present on material found in relation to the furnace discussed in the evaluation report. It would appear that these are a variant of the wall bricks recovered during the excavation. In contrast to the conclusions made in the evaluation report, it seems unlikely that they present evidence of use-firing – instead they are most likely the bricks fired at the bottom of the kiln where the fumes were hotter. These brick and tile fragments point, instead, to the presence of a well-planned late medieval construction in the vicinity of, or indeed part of, the barn and the well uncovered in this area. The furnace was not excavated during this phase, but its presence in the vicinity suggests industrial activity was taking place here.

Context	Cut	Feature	Form	Descr	Date	Count	Weight (g)	Comment
9255	9254	pit/ hollow	Brick	Wall Brick	16th	2	756	Patches of grey and white glazing on some surfaces, the patterns of the glaze suggests it comes from the over firing of the brick rather than any decorative intention. Mould made, moderate/coarse sanding and wiped upper bed. Brick is quite thin, a floor brick?
9255	9254	pit/ hollow	Brick	Fragment	Med? Post Med?	2	1053	
9255	9254	pit/ hollow	Brick	Wall Brick	16th	1	961	Very even shape. Over firing glaze evident.
9255	9254	pit/ hollow	Brick	Wall Brick	16th	1	436	Very even shape. Over firing glaze evident.
9285	9285	ditch	Tile	Flat Tile	Post Med	1	23	
9331	9330	ditch	Tile	Flat Tile	Post Med	1	35	
9346	9347	posthole	Brick	?Floor Brick	18th?	1	364	Thin red brick, floor brick?
9346	9347	posthole	Tile	Flat Tile	Late Med- Post Med	1	239	Corner of a flat tile. Warped and overfired. Use or during firing, not clear

Context	Cut	Feature	Form	Descr	Date	Count	Weight (g)	Comment
9356	9357	posthole	Tile	Fragment	Late Post Med?	2	40	
9362	0	colluvium	Tile	Flat Tile	Post Med	1	109	
9403	9402	Well	Tile	Flat Tile	Post Med	2	448	"Tile Sample". Fragments of same flat tile.
9403	9402	Well	Tile	Flat Tile	Post Med	13	1515	"Tile Sample". Fragments of at least four tiles.
9403	9402	Well	Tile	Peg Tile	Post Med	18	1415	"Tile Sample". Fragments of at least three tiles. One square peg hole seen.
9403	9402	Well	Brick	Wall Brick	16th	3	4920	Two and a half bricks. Two complete bricks have reduced surfaces. All have remains of lime mortar on all long faces. The same form and appearance of the wall bricks from 9255.
9403	9402	Well	Brick	Wall Brick	16th	2	1860	Two brick fragments with lime mortar remains, similar style to others in this context and those in 9255
9403	9402	Well	Brick	Wall Brick	16th	1	898	Half brick fragment with gravelly lime mortar remains on all faces apart from the stretchers.
9403	9402	Well	Flint	Flint Mortar	+			Triangular lump of squared flint with lime mortar. 110x110x116 and 120m thick.
9403	9402	Well	Brick	Square	late 15th?	1	1027	A square brick. Chalkier fabric than others in the context. Mortar on most faces. Poorly formed. Possibly earlier - late 15th? A five inch square, probably made for a specific purpose
9403	9402	Well	Brick	Fragment	16th	1	1356	Brick fragment, lower bed has sheered off, but probably 45-50mm thick. Covered on all other faces by gravelly lime mortar with cbm inclusions
9431	9426	pit	Brick	?Floor Brick	18th/19th?	4	291	Patches of grey and white glazing on some surfaces, the patterns of the glaze suggests it comes from the over firing of the brick rather than any decorative intention. Mould made, moderate/coarse sanding and wiped upper bed. Brick is quite thin, a floor brick?
9431	9426	pit	Tile	Flat Tile	Post Med	9	435	At least two tiles
9542	9531	ditch	Brick	Floor Brick	Late Med-Post Med	2	960	Two fragments of a large floor brick. Upper bed is smoothed/polished probably through use with very rough lower bed face.
					Total	69	19141	

Table 64: Area 9 diagnostic CBM

Fired Clay

5.10.40 A small assemblage of amorphous fired clay (9 fragments, 11g) was collected from four contexts in Area 9. These pieces are small, fragmentary and undiagnostic.

Clay Tobacco Pipe

5.10.41 Ten fragments of white ball clay tobacco pipe, weighing 0.044kg, were recovered from three features in Site 9. The fragments of clay tobacco pipe recovered from features **9100** and **9234**, probably represent casually discarded pipes. The pipe fragments do little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900. However, feature **9513** contained a datable pipe bowl fragment of c.1700 or later and it is likely that the assemblage from this site is all 18th century.

Lithics

5.10.42 The excavations at Area 9 produced 60 struck flints and a small quantity of unworked burnt flint (Table 65).

	Decorative flake	Decorative blade	Crested blade	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Retouched implement	Core	Conchoidal chunk	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Pit 9008				2	9		1		1				13		
Other features	3	1	1	1	17	2	6	3	1	9	1	2	47	5	39
Total	3	1	1	3	26	2	7	3	2	9	1	2	60	5	39

Table 65: Area 9, Quantification of lithic material

5.10.43 The struck assemblage comprises a scatter of chronologically mixed flintwork found in low densities across the site, with few individual contexts containing more than single or small quantities of pieces. No diagnostic pieces are present but the technological attributes of the material suggests that a relatively high proportion is of Mesolithic or Neolithic date. The assemblage is generally in a good condition, suggesting little post-depositional movement, but the low densities make it difficult to assess the extent to which the pieces have been incorporated into later features.

5.10.44 The largest assemblage from any single feature consists of a small group of 13 flakes and one prismatic blade recovered from pit **9008**. These are all of similar raw materials and include two flakes that refit, suggesting that these originate from a single knapping episode, although they only represent a small proportion of the debris that must have been generated. Flintwork was also found in a few of the other pits although only in very small quantities. These include prismatic blades as well as crude retouched implements and thick flakes that suggest chronological mixing. Ditch **9049** contained four struck pieces, all retouched implements that came from its terminus. Three of these are quite crudely produced scrapers or denticulates of probable Bronze Age or later date, the other a finely made long-end scraper that is more likely to be Neolithic or earlier. Tree-throw **9051** contained three blades, two of which may have been struck from the same core, and also a flake, whilst tree-throw **9086** produced a 'classic' blade core with two platforms set at right angles, which is of Mesolithic or Early Neolithic date. Of a similar date are the burin and blade-like flake recovered from pit **9172**. Ditch **9520** contained a notably large non-systematic blade that measures in excess of 110mm and which could potentially be of Early Mesolithic or perhaps even late glacial date.

Other Worked Stone

5.10.45 Nine fragments of lava rotary quern were recovered from two contexts in Area 9. One fairly large fragment from a lower stone with radial grooving was found in pit **9265** (9266, SF 405). Eight undiagnostic rounded fragments were found in a fill of occupation deposit 9513 (Structure **9467**). Lava rotary quern fragments such as this could date to the Roman period, but are more likely to be medieval in origin due to the date of the features they were recovered from.

SFNO	Ctx	Ctxt Type	Function	Notes	Size	Wt (g)
405	9266	Fill of pit 9265	Lower rotary quern fragment	Central fragment with part of eye surviving but not enough to determine size. Radial grooves, which don't look segmented. Roughly worked base. Both faces are flat	Measures 25mm thick x >320mm diameter	890
	9467	Part of Structure 9461	Undiagnostic rotary quern fragments	Eight rounded weathered samples	Measures	186

Table 66: Area 9 Worked Stone

Environmental Reports

Faunal Remains

- 5.10.46 This area is dominated by the bones of “large mammal”, then cattle and then sheep/goat. The extent of erosion of bone surfaces amongst the assemblage from Area 9 varies from good to poor. Root etching is the most common taphonomic evidence recognised amongst the remains (obvious excavation damage has not been quantified here) and many fragments have an appearance corresponding to the erosion grades (amongst human bones) illustrated by Brickley and McKinley (2004, 16). In Area 9 the material spans grades 2 to 5 and on average is close to grade 4 meaning “All of the bone surface affected by erosive action (in this case predominantly root activity); general profile maintained and depth of modification not uniform across whole surfaces” (Brickley and McKinley 2004, 16). Erosion grades were assessed following Brickley, and McKinley, 2004.
- 5.10.47 A group of pig bones from Area 9 (9417, Pit Group **9426**) are certainly from a single pig and comprise three lumbar vertebrae and part of the sacrum (all adjoining), parts of the apparently unfused pelvis and both unfused femora. The bones' surface preservation is generally relatively good (judged on average to be at Grade 2 but in places at Grade 1 following Brickley and McKinley 2004, 16) and preservation of the metaphyses is excellent. The pelvis may have been at the point of fusion and appears possibly to have fractured across partly fused points of fusion. This suggests that the pig was aged around one year old (Silver 1969, Habermehl 1975, 151). The fact that the context was sand is perhaps surprising given the relatively good state of surface preservation.

Environmental Samples

- 5.10.48 Samples taken from Area 9 produced a sparse scatter of charred plant remains. Prehistoric pits **9008** and **9010** both contained charred hazelnut shells, possibly representing the burnt remnants of a collected wild food resource. Hazelnut shells survive particularly well once charred and are often the only evidence of food waste in very early features. Single charred grains recovered from prehistoric pit **9008** and ditch **9074** may not be contemporary.

Cut No.	Context No.	Sample No.	Feature Type	Volume processed (L)	Volume of flot (mls)	Cereals	Corylus avellana L. shell fragments	Estimated Charcoal volume (ml)
9008	9009	400	Pit	8	25	#		2
9010	9011	401	Pit	9	25		###	5
9012	9013	402	Pit	7	5		##	1
9035	9036	403	Ditch	9	10			<1
9049	9050	404	Ditch	7	1			<1
9074	9076	406	Ditch	8	1	#		<1

Table 67: Area 9 Environmental samples from prehistoric features

5.10.49 Medieval deposits were mainly unproductive and occasional charred cereal grains probably derived from wind blown rubbish into the open features. Building **9461** produced sparse evidence of food waste in the form of occasional charred grains and legumes.

5.10.50 Undated pits **9090** and **9152** are devoid of preserved remains

Cut No.	Context No.	Period	Sample No.	Feature Type	Vol. processed (L)	Vol. of flot (mls)	Cereals	Legume <2mm	Legume 2-4mm	Seeds	Estimated Charcoal volume (ml)
9211	9212	Early Med	413	Ditch	7	2				#	<1
9238	9240	Early Med	414	Pit	7	1					0
9238	9239	Early Med	415	Pit	7	2					<1
9323	9324	Early Med	417	Lined pit	8	10	#				<1
9323	9325	Early Med	418	Lining of pit	7	1					<1
9332	9335	Early Med	419	Pit	6	1					<1
9332	9336	Early Med	420	Pit	7	20					15
9332	9337	Early Med	421	Pit	8						
9127	9128	Medieval	407	Ditch	8	1					<1
9172	9173	Medieval	409	Pit	8	100					100
9177	9178	Medieval	410	Pit	8	10					<1
9225	9224	Medieval	411	Pit	8	1	#	#			<1
9259	9260	Medieval	412	Ditch	7	5	#				<1
9451	9452	High Medieval	422	Ditch	9	15					10
9254	9255	Late Medieval	416	Pit or hollow	8	5					1
9513	9461	Post-medieval	424	Building	9	5	##		#	#	1

Table 68: Area 9 Environmental samples from medieval features

5.11 Area 10 (ENF139703)

5.11.1 Area 10 (Fig. 11) was located north-west of Wroxham Road and north of Beeston Lane in the parish of Crostwick (TG 27040 13901). A total of 1.916ha was stripped, revealing early medieval extraction pits, charcoaling pits, a posthole structure and a number of possible smelting furnaces along with a high medieval enclosure. The full area was not excavated, with the centre of the high medieval enclosure remaining undisturbed, due to the area being preserved *in situ*.

Undated

5.11.2 Large swathes of the western half of the excavation area contained numerous tree throws and natural features. A percentage of these features was excavated and found to have no artefacts within the fills, although are probably prehistoric – some of the excavated tree throws are included within Pit Group **10510**.

Prehistoric

Pits

5.11.3 Pit Group **10510** consists of 18 pits and tree throws located near the western limit of the excavation area. These features varied in size between 0.82m and 3.54m in diameter and 0.1m to 0.67m deep. A small worked flint assemblage was recovered from two of the features (25g) and three were found to contain a total of 70g of Late Neolithic and 45g of Early Bronze Age pottery as well as 25g of worked flint.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
10510	Pit Group	6/115		2			

Table 69: Area 10, Finds from prehistoric features

Period 6.1: Early Medieval

5.11.4 The majority of features dating to the early medieval period consisted of extraction and charcoaling pits as well as a small cluster of probable smelting furnaces. Limited dating evidence was recovered from most of the pits, although many have been assigned to the early medieval period due to their proximity to other early medieval features. Pits have been grouped by location as opposed to function.

5.11.5 A total of 20 pits on Area 10 are interpreted as charcoaling pits. These pits were all sub-circular in plan and measured between 0.6m to 2.9m in diameter and 0.2m to 0.51m deep. They all usually had a thick lens of charcoal-rich material at the base of the feature and some contained a central posthole. The natural sand the pits cut into was also often heat affected. These pits were assigned to pit groups **10199**, **10290**, and **10370**.

Context	Length	Breadth	Depth	Shape in Plan	Group
10001	0	2.57	0.35	circular	
10004	0	1.7	0.4	sub-circular	PG10199
10034		1.37	0.5	Sub-circular	PG10199
10081	1.43	1.4	0.41	sub-circular	PG10199
10188		2.92	0.45	sub-circular	PG10199
10197		1.44	0.26	sub-circular	PG10199

Context	Length	Breadth	Depth	Shape in Plan	Group
10225		3.8	0.76	Sub-circular	PG10199
10290	2.25	1.2	0.28	sub-rectangular	PG10290
10299	2	2	0.26	circular	PG10290
10303	0	2.11	0.51	circular	PG10290
10312	1.06	1	0.28	sub-circular	PG10290
10316	1.3	1.2	0.4	sub-rectangular	PG10290
10325	2.05	2.05	0.42	circular	PG10290
10327	1.55	1	0.34	sub-circular	PG10290
10329	2	2	0.34	circular	PG10290
10336	0.8	0.6	0.31	circular	
10348	1.2	1	0.2	sub-circular	PG10370
10365	0	2.9	0.52	sub-circular	PG10290
10378	2.4	2.3	0.41	sub-circular	PG10370
10457	0	2.08	0.33	circular	

Table 70: Area 10 Charcoaling Pits

- 5.11.6 Pit Group **10199** consisted of 37 pits spread across a large portion of the south-eastern part of the excavation area (all pits south of high medieval enclosure **10201** and east of late medieval boundary **12035**). The pits varied in form and function with the majority being interpreted as extraction pits and four as charcoaling pits. A total of 8g of 5th to 7th century pottery was recovered from two features and 4g of late 18th century pottery was recovered from another. A radiocarbon date was undertaken on charcoal from one of the charcoaling pits within this group (**10188**) which returned a date of AD 689-881 (radiocarbon age date 1231 ± 29 95.4% probability; SUERC-71675 (GU42884)).
- 5.11.7 Pit Group **10290** consisted of 18 pits and located centrally within the excavation area, west of late medieval boundary **10245**. Out of these pits, 10 are interpreted as charcoaling pits, one of which contained 179g of late 11th to 12th century pottery.
- 5.11.8 Pit Group **10370** was located just north of Pit Group **10290** within the central portion of the excavation area nearby Posthole Group **10280**. Out of these 10 features, two were interpreted as charcoaling pits and others as probable extraction pits. No datable finds were recovered from the features.
- 5.11.9 Posthole Group **10280** was located in the central northern half of the excavation area, near the northern baulk. These 11 postholes appeared to form a small sub-rectangular structure. Although undated, this structure is likely to have been contemporary with nearby features, such as the charcoaling pits. These postholes varied in diameter from 0.2m to 0.6m and 0.09m to 0.5m deep.
- 5.11.10 Pit Group **10413** was located near the southern limit of excavation, east of late medieval ditch **10460**. In total, seven features were excavated and interpreted as possible smelting furnaces, including one just north of the main group of six features. These pits measured between 0.5m and 1.3m long, 0.28m to 0.6m wide and 0.31m to 0.8m deep and were backfilled with slag and fired clay-rich deposits. A total of 9053g of metalworking waste and 363g of fired clay was recovered from the features.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
10199	Pit Group	3/12		5	2		
10290	Pit Group	16/179		2			
10280	Posthole Group						
10370	Pit Group			1			
10413	Pit Group		363				MWD (9053g)

Table 71: Area 10, finds from early medieval features

Period 6.2: High Medieval

Ditches

- 5.11.11 Enclosure **10201** and ditch **10011** were located in the south-eastern half of the excavation area and formed an enclosure fronting onto the old medieval road, now a farm track, directly north of the area. The centre of the enclosure was not stripped by machine, due to the area being preserved *in situ* by the developer. Ditch **10011** formed an outer ditch for the main enclosure ditch (**10201**). The ditch measured between 0.6m and 1.8m wide and 0.28m to 0.6m deep and was found to contain 21g of 11th to 14th century pottery along with 202g of metalworking debris, 234g of ceramic building material and 15g of animal bone. The main enclosure ditch group (**10201**) consisted of at least three intercutting ditches varying in size between 1m and 3.95m wide and 0.26m to 1.08m deep. The ditches contained 283g of pottery ranging in date from the late 11th to the 15th century, along with 3842g of metalworking debris, 181g of ceramic building material and 21g of animal bone. A total of 109g of residual worked flint was also found.

Pits

- 5.11.12 Extraction Pit **10345** was truncated by ditches **10235** and **10245** and measured approximately 18m long, 8m wide and 1.26m deep. No datable finds were recovered from the backfills, but 1477g of metalworking waste was recovered.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
10011	Ditch	3/21	234				MWD (202g)
10201	Enclosure Ditch	23/283	181	4			MWD (3842g)
10345	Extraction Pit						MWD (1447g)

Table 72: Area 10, Finds from high medieval features

Period 6.3: Late Medieval

A total of four other boundaries were recorded across the site which dated to the late medieval period (ditches **10235**, **10245**, **10460** and **10472**). All four ditches were on a north-north-east to south-south-west alignment. The only find recovered from the features was a single worked flint. The ditches measured between 0.2m and 1.7m wide and 0.04m to 0.51m deep. Ditches **10235** and **10245** both truncated high medieval ditch **10011**. Ditch **10460** was truncated by modern extraction pit **10460**.

Period 8: Modern

- 5.11.13 A large extraction pit was located within the western half of the area (Pit Group **10453**). This cluster of pits measured over 23m in diameter and 1.42m deep. The cluster truncated late medieval ditch **10460** and the backfill contained 23g of modern pottery.

Finds Reports

Prehistoric Pottery

- 5.11.14 Six sherds of prehistoric pottery weighing 115g include a single sherd of Grooved Ware in grog-tempered fabric with elaborate applied fingertip-impressed cordon and incised channels from pit **10475**. The Grooved Ware is probably of the Durrington Walls substyle (Longworth 1971). Five Beaker sherds in sandy, flint-tempered fabric and including two with fingernail-impressed decoration came from natural feature **10448**. Beaker and Grooved Ware are believed to overlap chronologically, with Beaker being current from around 2600 until 1800 BC (Kinnes *et al.* 1990). Grooved Ware dates broadly from the period 3000–2000 BC (Garwood 1999, 152). The sherds represent a background scatter of earlier prehistoric activity in the area.

Post-Roman Pottery

- 5.11.15 Seventy-two sherds (860g) of post-Roman pottery were collected in Area 10. Table 73 shows the quantities by fabric. A further 88 sherds were recovered from this area (Field C1) during the evaluation (Anderson 2015a).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early Saxon fine sand	ESFS	ESax	2	5		2
Thetford-type ware	THET	10th-11th	16	210	0.58	12
Early medieval ware	EMW	11th-12th	13	47		7
Local medieval unglazed	LMU	11th-14th	18	240	0.27	17
Medieval coarseware 3	MCW3	12th-14th	1	68		1
Medieval coarseware 5	MCW5	12th-14th	3	36	0.03	3
Medieval coarseware 6	MCW6	12th-14th	1	9		1
Medieval coarseware 9	MCW9	12th-14th	1	9		1
Grimston-type ware	GRIM	L. 12th-14th	1	33		1
Unprovenanced glazed 1	UPG1	Med	1	36		1
Unprovenanced glazed 4	UPG4	Med	3	55		1
Late medieval and transitional	LMT	15th-16th	1	31		1
Glazed red earthenware	GRE	16th-18th	3	15		3
Creamwares	CRW	1730-1760	1	1		1
Late blackwares	LBW	18th-E.20th	1	38		1
Late post-medieval unglazed earthenwares	LPME	18th-20th	1	1		1
Late slipped redware	LSRW	18th-19th	1	6		1
European porcelain	PORC	18th-20th	1	2		1
Refined white earthenwares	REFW	L. 18th-20th	3	18	0.12	3
Totals			72	860	1.00	59

Table 73: Area 10 Post-Roman pottery

- 5.11.16 Late Saxon and medieval wares were the most frequent in this assemblage, with only a small quantity of later material. Identifiable forms in this group included three Thetford-type ware jars, medieval coarseware jars, bowls and jugs, and a refined ?whiteware bowl.
- 5.11.17 Several sherds of Thetford-type ware were found in pits at the centre of the site (Pit Group **10290**). Medieval and later wares were recovered from enclosure ditch **10201** and a few other pits and ditches. See Volume 2, Appendix C.3 for spot dates.

Glass

- 5.11.18 A single shard of glass was recovered from pit **10199**; it is unclear if this shard is vessel or window glass and it cannot be closely dated. The unstratified glass is from a pharmaceutical bottle dating to the 19th-20th century. The glass is probably the result of casual loss or agricultural processes incorporating the material into the features.

Small Finds

- 5.11.19 There were, in all, eleven fragments of ironwork and three of copper alloy came from this site. The ironwork is in poor condition, whilst the copper alloy is fair to good. A relatively large fragment from a knife blade (SF 454) came from ditch **10235**. The shape of the blade, taken together with the presence of both bolster and choil, suggest a relatively late date for the object, placing it probably no earlier than the mid-18th century. SF 463, from pit **10055** (fill 10056), appears to be the decorative terminal from a strap hinge (SF 463), and, although not easy to date, is reminiscent of mid-17th to mid-18th century forms (Alcock and Hall 1994). It is possible that SF 467, from ditch **10433** (fill 10434), a curved fragment of square-sectioned bar, is a drop handle from a relatively large vessel, perhaps a bucket, although it cannot be dated. A substantial ring, ferrule, or collar (SF 457) is from ditch **10333** (fill 10334), which forms part of enclosure **10201**. A fragment of wrought iron, perhaps a decorative terminal (SF 452), comes from the same enclosure (ditch **10076** (fill 10077) and a second fragment (SF 459) is from ditch **10427** (fill 10426). There is, in addition, a fragmentary horseshoe (SF 464) from ditch **10139** (fill 10141), another element of enclosure **10201**, which seems to be post-medieval in date.
- 5.11.20 There are also four nails (SF 451, SF 456, SF 465, SF 466). It is possible that SF 451, from pit **10004** (fill 10003; pit group **10191**) is a cut nail of 19th century or more recent date, and similarly SF 465, from furnace **10240** (fill 10241) appears to be a drawn or machine-made nail.
- 5.11.21 There are three copper alloy items. Two of them (SF 458 and SF 461) from pit **10325** (fill 10323; pit group **10290**) and ditch **10215** (fill 10216), part of enclosure **10201** are small looped plates which could have served as escutcheons for drop handles, or small fixing plates. They cannot be dated with any precision, and, as such fixing plates are still made today (for invisible fixing, for instance mirrors to walls), they cannot be used to date the features from which they derive. The third copper alloy object (SF 460), however, is a fragment of medieval buckle plate or strap-end with incised decoration. It resembles examples from London dated to the first half of the 15th century (Egan and Pritchard 1991, 134, no 619).

Metalworking Waste

- 5.11.22 Area 10 produced a significant assemblage of a little less than 33kg of metalworking debris including 25.62kg of tap slag and 6.048kg of furnace debris (Table 74). The tapping slag includes large flowing runs and prills, formed as the slag flowed from the furnace, as well as dense blocks removed from the base of the furnace. The hearth debris comprises highly fired clays with green glassy vitrified surfaces and slags adhering. Possible furnace **10240** produced only 180g of tapping slag with the majority being redeposited in the fills of a series of pits and ditch fills. The bulk of the furnace debris came from furnace **10240** and ditch **10096**. Pottery found at the site suggest activity there from the 11th to 14th centuries indicating medieval iron production contemporary with metalworking debris found at Areas 9 and 11 and locally on Mousehold Heath (Bishop and Proctor 2011). At Mousehold Heath the ore used for iron smelting was suggested to be ironstone from the pebble beds of the glacial Corton

Formation exposed at Thorpe St Andrew (Hayward 2011) and a similar ore was probably being exploited here.

<i>Trench</i>	<i>Cut</i>	<i>Feature Type</i>	<i>Context</i>	<i>Type</i>	<i>Pot date</i>	<i>Weight (kg)</i>
Area 10	10240	Furnace	10247	Tapping	No pot	0.211
			10298	Tapping	No pot	0.946
			10307	Tapping	No pot	2.666
			10309	Furnace	No pot	2.446
	10050	Ditch	10049	Furnace	11th-14th c.	0.476
	10074	Ditch	10075	Tapping	No pot	0.691
			10084	Undiagnostic	No pot	1.113
	10076	Ditch	10077	Tapping	10th-11th c.	0.524
	10077	Ditch	10085	Tapping	No pot	0.461
	10096	Ditch	10097	Furnace	No pot	0.717
	10159	Ditch	10160	Tapping	No pot	0.386
	10161	Ditch	10162	Tapping	11th-14th c.	0.253
	10199	Pit	10200	Tapping	12th-14th c.	0.003
	10240	Furnace	10241	Tapping	No pot	0.180
	10261	Ditch	10262	Tapping	No pot	0.202
	10345	Pit	10390	Tapping	No pot	1.477
	10353	Pit	10354	Tapping	No pot	0.034
	10421	Pit	10423	Tapping	No pot	1.090
	10427	Ditch	10426	Undiagnostic	No pot	0.110
	10430	Pit	10432	Tapping	No pot	1.182
	10433	Ditch	10434	Tapping	No pot	2.839
	10438	Pit	10439	Tapping	No pot	6.781
	10145	Ditch	10144	Tapping	12th-14th c.	0.072
	10042	Pit	10043	Tapping	Early Saxon	2.778
	10240	Furnace	10248	Furnace	No pot	0.882
			10307	Tapping	No pot	1.753
			10309	Furnace	No pot	0.963
	10333	Natural	10335	Furnace	No pot	0.339
	10502	Flume way	10503	Furnace	No pot	0.225
	10225	Pit	10229	Tapping	No pot	1.091
Total						32.891

Table 74: Area 10 Metalworking waste

Ceramic Building Material

5.11.23 A small assemblage of CBM was recovered from Area 10 (15 fragments, 632g). It was largely undiagnostic and undated (10 fragments, 307g). Ditch **10139** produced a similar fragment of 16th/17th century brick as those recovered in Area 9. Fragments of post-medieval tile from ditch **10427** and the subsoil make up the rest of the diagnostic fragments. This CBM is probably related to the material in Area 9. It relates to manuring and discard within the agricultural landscape.

Fired Clay

- 5.11.24 A small assemblage of amorphous fired clay (12 fragments, 368g) was collected from three contexts in Area 10. Whilst amorphous, the fragments from **10240** and **10421** are of note. The pieces from furnace **10240** seem to be baked lumps of clay (4 pieces, 322g) that were accidentally dropped into firing conditions, judging by their flattened bases but amorphous as a whole. Possible furnace **10421** produced what seems to be fragments of lining from a hearth, (5 pieces, 41g) as they exhibit reduced patches.

Clay Tobacco Pipe

- 5.11.25 Two stem fragments from white ball clay tobacco pipes, weighing <0.004kg, were recovered from features **10202** and **10314**. The fragments of clay tobacco pipe recovered most likely represent casually discarded pipes that have subsequently been fragmented and reworked as the site was developed. The pipe fragments do little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900.

Lithics

- 5.11.26 The excavations in Area 10 produced 29 struck flints and a single small fragment of unworked burnt flint. The struck flint was present in small quantities within a variety of features and with no evidence for *in situ* working or the contemporary disposal of flintwork. The largest quantity from any single feature was five pieces recovered from pit **10402**. This assemblage included an end-scraper but many of the pieces are in a chipped condition and have been residually incorporated long after manufacture. There are few chronologically diagnostic pieces but variations in the technological approaches suggest the assemblage was made over a long period with the majority probably belonging to the Neolithic.
- 5.11.27 Perhaps the most notable aspect of the assemblage is the high proportion of retouched implements that account for over a third of the assemblage, all but one of which are scrapers. These are varied in form and morphology but include some unusual types such as a double-ended example and several have carefully formed symmetrically arched working edges, traits often seen in Later Neolithic examples. The other retouched implement comprises an edge-trimmed narrow flake which is not closely dateable but would comfortably fit with Neolithic industries.
- 5.11.28 Only a single very small fragment of unworked burnt flint which weighs 2g was found in this area, it deriving from pit **10168**.

Other Worked Stone

- 5.11.29 Six undiagnostic lava quern fragments were recovered from ditch **10263** (fill 10265). Given the extensive evidence for medieval activity in Area 10, the quern fragments are probably of medieval origin.

Environmental Reports

Faunal Remains

- 5.11.30 The faunal data from Area 10 is very limited and has not been tabulated. There are two incisors of horse (*Equus* sp) from fill 10118 (ditch **10011**). Two fragments from fill 10067 (ditch **10011**) are from medium sized mammal, possibly sheep or goat and include a maxillary fragment. From fill 10294 (Enclosure **10201**) there are 27 bones from a single mole (*Talpa europaea*). Given that moles spend most of their time underground, there is a high probability that the mole is intrusive.

Environmental Samples

5.11.31 Samples that were taken from medieval pits that had evidence of burning on excavation all produced charcoal. In many cases the charcoal volumes were very large. Charred plant remains occur infrequently, mainly as poorly-preserved cereal grains, some of which can be identified as barley. Three charred tubers of false oat grass (*Arrhenatherum elatium* ssp. *bulbosus*) were recovered from fill 10301 of pit **10299** (Pit Group **10290**) probably relating to the burning of turf, possibly used on the roof structure of a furnace.

Cut No.	Context No.	Sample No.	Period	Feature Type	Volume processed (L)	Volume of flot (mls)	Cereal grain	Charred tubers	Estimated Charcoal volume (ml)
10042	10043	454	Anglo-Saxon?	Pit	8	330	#		500
10044	10045	455	Anglo-Saxon?	Pit	7	290			450
10001	10002	451	Early Med	Pit	7	1200			1500
	10003	452	Early Med	Pit	8	600			670
10034	10089	453	Early Med	Pit	5	280			310
10064	10065	458	Early Med	Pit	7	10			10
10081	10083	459	Early Med	Pit	8	1500			1500
10070	10071	463	Early Med	Pit	9	250			340
10152	10153	464	Early Med	Pit	6	1750			1750
10225	10229	467	Early Med	Pit	7	15	#		30
10240	10241	468	Early Med	Furnace	8	25			50
10255	10256	469	Early Med	Furnace	7	2	#		0
10255	10257	470	Early Med	Pit	7	5			0
10240	10249	471	Early Med	Furnace	9	100			210
10299	10301	473	Early Med	Pit burning	9	495		#	550
10348	10349	475	Early Med	Pit	8	900			1100
10378	10379	476	Early Med	Pit	9	1850			2500
10421	10422	478	Early Med	Furnace	8	170			200
10428	10429	479	Early Med	Pit	7	1200			1800
10435	10456	480	Early Med	Pit	7	30			5
10438	10439	481	Early Med	Furnace	7	2			0
10430	10431	482	Early Med	Furnace pit	8	775			1500
10440	10449	483	Early Med	Furnace pit?	8	5			5
10487	10488	484	Early Med	Pit	8	150			250
10500	10501	485	Early Med	Pit	7	170			250
10087	10086	462	Med	Ditch	9	1	#		1
10288	10289	472	Med?	Posthole	8	165			195
10062	10063	456	Med?	Pit	7	250			355
10313	10414	477	Med?	Furnace	8	30			50
10050	10049	457	High Med	Ditch	8	15	#		30
10074	10084	460	High Med	Ditch	9	2	##		2
10076	10077	461	High Med	Ditch	9	5	#		5

Table 75: Area 10 Environmental Samples

5.12 Area 11 (ENF139704)

5.12.1 Area 11 (Fig. 12) was located south-east of Wroxham Road in the parish of Rackheath (TG 27508 13518). A total of 0.778ha was stripped, revealing a small number of medieval charcoaling pits and industrial features as well two phases of post-medieval boundary systems.

Period 6.1: Early Medieval

5.12.2 The majority of discrete pits within Area 11 were probably early medieval in date, despite a lack of datable finds due to their similarity in form and function to the charcoaling pits and smelting furnaces located on Area 10 to the north. A total of 13 pits within the area were interpreted as charcoaling pits, the majority of which were sub-circular, except for three which were rectangular (see Volume 2, Plate 5 for an example).

Context	Length	Breadth/diameter	Depth	Shape in Plan
11001	1.45	2.4	0.34	rectangular
11004	2.1	1.06	0.32	rectangular
11007	2	1.75	0.25	sub-circular
11009	2.41	2.28	0.39	sub-circular
11020	2.28	1.25	0.24	rectangular
11029	2.02	2.02	0.16	circular
11060	2.72	1.1	0.82	circular
11065		1.1	0.25	circular
11068	2.1	1.02	0.18	sub-circular
11078		2.08	0.42	sub-circular
11093	1.98	1.25	0.22	sub-circular
11107	2.3	2.3	0.52	sub-circular
11118	1.52	1.52	0.19	sub-circular

Table 76: Area 11 Charcoaling Pits

5.12.3 The fills of these pits were similar to those found on Area 10, where a lens of charcoal varying in thickness was seen at the base of the feature, overlain by redeposited natural. Very often the geology the feature was cut into was also heat affected.

5.12.4 A small furnace (**11126**), initially identified during evaluation, was 100% excavated during the excavation phase and a further 4706g of metalworking waste and 3868g of fired clay was recovered.

5.12.5 The remnants of two gullies, possibly representing the surviving evidence of an earlier field system were located directly south of a post-medieval ditch (**11025**) in the form of four segments of very shallow gully (**11016** & **11114**). Three sherds of late 9th to 11th century pottery were recovered from the fill.

Period 7: Post-Medieval

5.12.6 Ditches **11012** and **11025** formed part of a field system in the centre of the excavation area. Ditch **11025** ran approximately east to west, with ditch **11012** returning off the western end of the ditch, running north to south. A total of 84g of metalworking waste, 242g of 18th century glass and 230g of ceramic building material were recovered from the ditches.

- 5.12.7 Ditches **11027** and **11039** were located near the southern limit of excavation. Ditch **11039** was on a north-west to south-east alignment and ditch **11027** returned off **11039** on a north-east to south-west alignment. A total of 30g of post-medieval to modern pottery was recovered from the fills, along with 23g of metalworking waste and 9g of ceramic building material.

Finds Reports

Post-Roman Pottery

- 5.12.8 Three sherds of a Thetford-type ware vessel with applied thumbled strips were found in 11017 (gully **11016**). A body sherd of brown-glazed English white stoneware (15g; 18th–19th century) was found in ditch fill 11028 (ditch **11027**). Ditch fill 11040 (ditch **11039**) contained a base fragment (15g) of orange-glazed Glazed red earthenware (16th–18th century).

Glass

- 5.12.9 Area 11 produced a small assemblage of vessel glass, recovered from three features. Ditch **11025** produced a base from an 18th century bottle while the glass from ditch **11039** was not closely datable. Finally, posthole **11097** produced a complete Co-operative Wholesale Society (CWS) 1/3 pint wide mouthed milk bottle, and a further eight shards from a second bottle; both bottles are 20th century. The glass from **11097** may represent primary deposition.

Small Finds

- 5.12.10 There were, in all, seven relatively well-preserved items of copper alloy and one of lead from this site. All are in fair condition. They derive from context 11000 (topsoil), and the group is notable for the lack of ironwork, which might suggest selective collection. The group of copper alloy items are probably of late 17th to 18th century date at the earliest. They have no particular coherence as a group, although it is likely that key SF 500 and escutcheon SF 501 derive from the same object, presumably a small lockable box or drawer. SF 503 is a clog or shoe clasp, of a type current from the late 17th century but probably still in use in the early 20th century. Harness fitting SF 504 is again probably of late 17th or 18th century date, and there is no reason to believe that other objects from the site, including lead weight SF 502, differ in date.

Metalworking Waste

- 5.12.11 Area 11 produced further evidence for medieval iron smelting. A total of 4.9kg of metalworking debris was recovered, 96% (4.7kg) from pit/furnace **11126** (Table 77) including runs and prills of tapping slag some with wood impressions and fired clay with vitrified green glassy surfaces probably from the furnace or tapping pit.

<i>Trench</i>	<i>Cut</i>	<i>Feature Type</i>	<i>Context</i>	<i>Type</i>	<i>Pot date</i>	<i>Weight (kg)</i>
Area 11	11039	Ditch	11040	Tapping	16th-18th c.	0.023
	11001	Pit	11003	Hearth	No pot	0.076
	11025	Ditch	11026	Undiagnostic	No pot	0.084
	11126	Pit/ furnace	11124	Tapping	No pot	0.934
			11125	Tapping	No pot	3.772
Total						4.889

Table 77: Area 11 metalworking waste

Ceramic Building Material

- 5.12.12 A small assemblage of CBM was recovered from Area 11 (3 fragments, 239g). Ditch **11025** produced an undiagnostic fragment of CBM and a brick fragment broadly dated to the medieval and post-medieval period (70g and 160g respectively). Ditch **11039** produced a post medieval tile fragment (9g).

Fired Clay

- 5.12.13 A moderate sized assemblage (37 fragments, 3868g) of fired clay was collected from pit/furnance **11126** in Area 11. These comprise amorphous fragments (5 pieces, 113g) and structural fragments (32 pieces, 3755g) which exhibit signs of functioning as part of the lining or superstructure for this feature. These structural fragments are reduced or darkened with metalworking waste and/or vitrified green glaze-like material attached. Some fragments have finger impressions, impressions of burnt out organic material also present (possibly wattle or rod impressions). This is very much indicative of a high temperature metal-working processes.

Lithics

- 5.12.14 Area 11 produced only four struck pieces and two fragments of unworked burnt flint. The struck flint came from four separate features and includes a lightly burnt prismatic blade from pit **11060** and a possible fragment of another from ditch **11025**, both of which can be dated to the Mesolithic or Early Neolithic periods. The other two pieces, which came from pit **11007** and ditch **11027**, are undiagnostic. Both pieces of unworked burnt flint which weighed a total of 41g came from pit **11060**.

Environmental Reports

Environmental Samples

- 5.12.15 Samples from early medieval pit fills produced moderate amounts of charcoal with no evidence of any other preserved plant remains.

Cut No.	Context No.	Sample No.	Volume processed (L)	Flot volume (ml)	Estimated Charcoal volume (ml)
11020	11021	500	8	180	180
11009	11001	501	9	60	60
11001	11003	503	10	40	50
11004	11006	505	9	180	200

Table 78: Area 11 Environmental Samples

5.13 Area 12 (ENF139705)

5.13.1 Area 12 (Fig. 13) was located south of Area 11 and west of Green Lane West in the parish of Rackheath, (TG 27617 13165). Topographically, the site was situated on a relatively steep, north-facing hillside. The southern end of the excavation sat at approximately 30mOD, lowering to 18mOD by the northern limit. A total of 1.16ha was stripped, revealing a medieval enclosure and boundary ditches, a number of early medieval charcoaling pits and a curvilinear palisade gully. A small area outside of the originally agreed excavation area was excavated north-east of the main area (contained ditch **12000**) due to a miscommunication between on-site staff.

Period 0: Undated

- 5.13.2 Ditch **12000** was located in the north-east corner of the excavation area, on a north-north-east to south-south-west alignment before turning to run west-north-west to east-south-east and terminating. The ditch probably formed part of a small enclosure. No finds were recovered from the fills of the ditch and the feature does not match the medieval to modern alignments nearby.
- 5.13.3 Another small ditch was located in the north-west corner of the excavation area (**12157**), truncated by large charcoaling pit **12094** and post-medieval ditches **12140** and **12142**. The ditch measured 0.52m wide and 0.13m deep with a wide U-shape profile. No finds were recovered from the sterile fills.
- 5.13.4 A further three north-north-west to south-south-east aligned sections of ditch (Ditch Group **12295**) were located close the centre of the site were found to contain a small amount of worked flint. The ditches measured between 0.5m and 1.05m wide and 0.15m to 0.33m deep with a U-shaped profile.

Period 6.1: Early Medieval

Pits

- 5.13.5 A total of 15 early medieval charcoaling pits were excavated in Area 12 and were similar in form to the pits seen on Areas 10 and 11 (Table 79). The vast majority of the charcoaling pits were found in the northern half of the excavation, near the bottom of the hillside (part of Pit Groups **12095** and **12233**), with only a few found at the top of the hill within the southern half of site (part of Pit Group **12015**). As with charcoaling pits on other sites, these features had little datable evidence, although 84g of 11th century pottery was recovered from charcoaling pit **12154** along with 16g of animal bone and 92g of fired clay. Fired clay (5g) was also recovered from pit **12195**.

Context	Length	Breadth/diameter	Depth	Shape in Plan	Group
12015	1.5	1.16	0.35	circular	PG12015
12044		1.8	0.28	circular	PG12015
12094	1.74	1.68	0.6	circular	PG12095
12132	1.7	1.7	0.21	circular	PG12015
12154		2.7	0.56	circular	PG12233
12195	2.24	0.62	0.3	sub-rectangular	PG12233
12201		1.7	0.34	circular	PG12233
12204		1.56	0.14	sub-circular	PG12233
12208	2.24	0.53	0.12	sub-rectangular	PG12233
12217		2.4	0.96	circular	PG12233
12233		3.24	0.48	sub-circular	PG12233

Context	Length	Breadth/diameter	Depth	Shape in Plan	Group
12242		3.2	0.36	sub-circular	PG12233
12249		1	0.1	sub-circular	PG12233
12251		1.45	0.28	sub-circular	PG12233
12260		1.9	0.3	circular	PG12233

Table 79: Area 12 Charcoaling Pits

- 5.13.6 Pit Group **12015** was located in the southern half of the excavation, consisting of nine pits scattered across the hillside, three of which were interpreted as charcoaling pits. Any pit dated to the early medieval period within the southern half of the site (in and around enclosure **12308**) belong to this group. The others had variable functions of either extraction or perhaps retting. A total of 47 sherds (224g) of 11th to 12th century pottery were recovered from the pits along with 2g of fired clay, 32g of ceramic building material and 82g of lava quern.
- 5.13.7 Pit Group **12095** consisted of 6 pits near the northern baulk, two of which were used for charcoal production. The other features were probably extraction pits. Very few finds were recovered from the features, apart from 4g of fired clay and eleven worked flints.
- 5.13.8 Pit Group **12233** consisted of 15 pits spread over a large portion of the central area of excavation, 11 of which were interpreted as charcoaling pits. The others are probably extraction pits. A total of 62g of burnt flint, 96g of fired clay, 16g of animal bone and 84g of pottery was recovered from the features.

Ditches

- 5.13.9 Ditch Group **12018**, located next to the western baulk in the southern half of the excavation consisted of four curvilinear gullies and 33 postholes that were cut into the base of the ditch. One of these ditches and corresponding postholes was 100% excavated, with a total of four sherds (22g) of late 9th to 12th century pottery being recovered from the features along with 42g of fired clay and 106g of lava quern. Three of the pottery sherds were recovered from the postholes.
- 5.13.10 Enclosure **12308** was located on the top of the hillside in the southern half of the excavation area. This group broadly includes all ditches within the area that form two or three phases of ditched enclosures. Finds from the ditches were sparse, with 54 sherds (343g) of pottery generally dating to the 11th to 13th century and 420g of fired clay being recovered.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
12015	Pit Group	47/224	34				Lava quern (82g)
12095	Pit Group		4	11	386		
12233	Pit Group	16/84	96		62		
12018	Ditch Group	4/22	42	2	28		Lava quern (106g)
12308	Enclosure	54/343	420				

Table 80: Area 12, Finds from early medieval features

Period 7: Post-Medieval

- 5.13.11 Ditch **12238** was located in the southern half of the excavation area. It ran on a north-west to south-east alignment and measured 1.2m to 1.6m wide and 0.49m to 0.6m deep with a U-shaped profile. No finds were recovered from the fills, but the ditch would

fit well with the alignment of the post-medieval field system located in Area 11. The ditch was truncated by modern ditch **12142**.

Period 8: Modern

- 5.13.12 Ditches **12140**, **12142** and **12143** were all located within the northern half of the excavation area and the features measured between 0.3m to 1.6m wide and 0.05m to 0.6m deep with a U-shaped profile. A small group of residual flints was recovered from the fills along with 90g of ceramic building material and 13g of 19th to 20th century pottery.

Finds Reports

Post-Roman Pottery

- 5.13.13 Table 81 shows the quantities of post-Roman pottery from Area 12 by fabric.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Thetford-type ware	THET	10th-11th	18	49	0.04	13
Thetford-type ware (Grimston)	THETG	10th-11th	2	15		2
'Early medieval' sandwich wares	EMSW	11th	3	27		3
Early medieval ware	EMW	11th-12th	54	228	0.35	34
Yarmouth-type ware	YAR	11th-12th	1	2		1
Pingsdorf Ware	PING	10th-13th	1	2		1
Local medieval unglazed	LMU	L.11th-14th	18	147	0.05	6
Medieval coarseware 1	MCW1	12th-14th	14	104	0.04	8
Medieval coarseware 2	MCW2	12th-14th	4	36		2
Medieval coarseware 5	MCW5	12th-14th	1	3		1
Medieval coarseware 6	MCW6	12th-14th	1	2		1
Medieval coarseware 8	MCW8	12th-14th	15	73		5
Grimston-type ware	GRIM	L.12th-14th	1	45		1
Late post-medieval unglazed earthenwares	LPME	18th-20th	1	12	0.09	1
Totals			134	745	0.57	79

Table 81: Area 12 Post-Roman pottery

- 5.13.14 This group contains a high proportion of Late Saxon and early medieval sherds, with fewer high medieval wares and almost no late or post-medieval material. Several jar rims are present, and there is part of the body of a Grimston-type face jug. Most of this assemblage came from the area of the enclosure ditches and pits in the south of the site.

Small Finds

- 5.13.15 There is a single item of ironwork from the site. It is possibly complete, but in poor condition. SF 550 is a single apparently complete nail, from pit **12260** (fill 12261). It is effectively undateable.

Ceramic Building Material

- 5.13.16 A small assemblage of CBM was recovered from Area 12 (4 fragments, 122g). Ditch **12262** produced a post-medieval flat tile fragment and a tile fragment that is broadly medieval to post-medieval in date (72g and 18g). Pit **12097** produced a post-medieval tile fragment (31g).

Fired Clay

- 5.13.17 A moderate sized assemblage of fired clay (39 pieces, 560g) was recovered from Area 12. This assemblage comprises amorphous (12,103g) and structural (27, 457g) fragments. The assemblage is made up of a number of small hand-squeezed objects.

These objects were not identifiable and seem somewhat *ad hoc*. Of note, some fragments possess traits that suggest they may be briquetage. Combined with the assemblage of spacer/prop-like objects this seems an adequate conclusion. However, the inland placement of the site may negate this somewhat. The whole assemblage is summarised in Table 82, below.

Context	Cut	Feature Type	Sample	Fragment type	Structural type	Object Form	Notes	No. Fragments	Weight (g)
12043	12042	gully		a				2	3
12050	12050	Posthole		s	fs	Misc Objects	Fragments with rounded surfaces and evidence of hand forming. Spacers? Props?	5	42
12155	12154	pit	555	a				4	7
12156	12154	pit		a		?Briquetage	Small fragment of fired clay with a greenish white crust. Possibly indicative of briquetage	1	15
12156	12154	pit		a		Object	Fragment of a larger object, poss kiln furniture. Very abraded and rounded	2	69
12160	12097	pit		s	fs			1	2
12165	12097	pit		a				1	1
12173	12172	ditch		s		Briquetage/ Kiln Furniture	Small spacer or prop with thumb impression	1	35
12173	12172	ditch		s	fs		Possibly all fragments of the same object, or at least two. Flattened and curved surfaces. 1 refit.	16	238
12190	12188	ditch		s	c/fs	Kiln Furniture?	Corner fragment of a clay object, slightly everted perpendicular sides. There are organic impressions that possibly indicate third face parallel to the most extant face. Kiln bar? Or thick kiln plate?	3	57
12190	12188	ditch		s	c/fs	Object	Ceramic partefact with reduced surfaces. Partially pyramidal, with isosceles base, in shape although abrasion prevents certainty of face identification.	1	83
12196	12195	pit	557	a				1	4
12235	12237	natural		a				1	4

Table 82: Summary of Fired Clay from Area 12 (fs=flattened surface, c=corner)

Lithics

5.13.18 The excavations in Area 12 produced 17 struck flints and 658g of unworked burnt flint (Table 83).

	Decorated flake	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Retouched implement	Core	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Pit 12237 Fill 12235	1	1	1	1	1			2	7	33	325
Pit 12237 Fill 12236										7	61
Other features	2	2		3		2	1		10	15	272
Total	3	3	1	4	1	2	1	2	17	55	658

Table 83: Quantification and composition of lithic material from NDR Area 12

5.13.19 The largest collection of struck flint and over half of the unworked burnt flint came from the two fills of pit **12237** (Pit Group **12095**). Its fill 12235 produced seven struck pieces that are in a good condition and they include two blade cores, a prismatic blade with a deep dorsal hinge scar and a blade-like flake, which refits to one of the cores. The core is a carefully prepared single platform 'front' type micro-blade core, the other is a large thick flake or quartered cobble that has a few blades removed from one edge. Whilst it is entirely possible that the assemblage is contemporary with the infilling of the pit, it can only represent a very small proportion of the flintwork generated during the reduction of the cores and appears to consist of a selection of waste which may have been purposely deposited. This pit also contained a relatively large quantity of unworked burnt flint, amounting to 40 pieces weighing 386g, most of which came from the same fill as the struck flint. Although the quantities may not be of the scale seen elsewhere along the scheme, it is by far the largest amount from any single feature at this site.

5.13.20 The remainder of the worked flint and unworked burnt flint from the site was found in small quantities in a variety of features. Much of the worked flint could easily be at least broadly contemporary with that from pit **12237** although there are no indications that any of this was deliberately deposited and it may have been residually deposited.

Other Worked Stone

5.13.21 A total of 36 fragments of lava rotary quern was recovered from six contexts. These are all undiagnostic fragments about which little can be said but they probably date to the medieval period, in keeping with the other excavated evidence.

Ctxt	Ctxt Type	Function	Notes	Wt (g)
12019	Fill of ditch 12018	Undiagnostic rotary quern fragments	13 rounded weathered samples	109
12130	Fill of ditch 12129	Undiagnostic rotary quern fragments	2 rounded weathered samples	47
12145	Fill of ditch 12143	Undiagnostic rotary quern fragments	3 rounded weathered samples	162
12266	Fill of pit 12264	Undiagnostic rotary quern fragments	5 rounded weathered samples	84
12299	Fill of ditch 12298	Undiagnostic rotary quern fragments	2 rounded weathered samples	90

<i>Ctxt</i>	<i>Ctxt Type</i>	<i>Function</i>	<i>Notes</i>	<i>Wt (g)</i>
12307	Fill of ditch 12306	Rotary quern or millstone fragment	11 frags in total, almost certainly from same object, but only four could be certainly reconstructed	1274

Table 84: Area 12 worked stone

Environmental Reports

Faunal Remains

5.13.22 There are just three bones from Area 12, comprising shaft fragments of what may possibly have been a single large mammal long bone (plausibly a tibia). These fragments are in a poor state, approximately Grade 5 following Brickley and McKinley (2004) and no specific identification will be possible.

Environmental Samples

5.13.23 Charcoal volumes from early medieval pits associated with charcoaling were extremely large. Single poorly-preserved charred cereal grains were also recovered from pits **12015** and **12094**. Charcoal analysis has the potential to identify the wood species with regards to specialised charcoal burning.

<i>Cut No.</i>	<i>Context No.</i>	<i>Sample No.</i>	<i>Feature Type</i>	<i>Volume processed (L)</i>	<i>Flot Volume (ml)</i>	<i>Cereal grain</i>	<i>Estimated charcoal volume (ml)</i>
12015	12017	550	Pit	8	1100	#	3600
12044	12045	551	Pit	7	3050	0	3650
12094	12098	552	Pit	8	575	0	6200
12094	12100	553	Pit	7	500	#	3300
12097	12161	554	Pit	6		0	
12154	12155	555	Pit	8	310	0	500
12180	12181	556	Posthole	6	1	0	60
12195	12196	557	Pit	8	380	0	580
12208	12209	558	Pit	6	50	0	70
12242	12243	559	Pit	6	2	0	0
12272	12275	560	Pit	7	2	0	0
12264	12265	561	Pit	8	4	0	0

Table 85: Area 12 Environmental Samples

5.14 Area 13 (ENF139706)

- 5.14.1 Area 13 (Fig. 14) was located south of Area 12 and west of Green Lane West in the parish of Rackeath (TG 27700 12967). A total of 0.844ha was stripped, revealing early medieval boundary ditches and enclosures along with a small number of charcoaling pits.
- 5.14.2 The remains of a P51 D-10 Mustang aeroplane were excavated prior to the stripping of the excavation area, the results of which are reported separately (Haskins 2016).

Period 0: Undated

Ditches

- 5.14.3 Ditch **13230** was located near the central part of the excavation on an east-north-east to west-south-west alignment and measured 0.5m to 1.36m wide and 0.11m to 0.46m deep. No finds were recovered, although the ditch could possibly be an early medieval boundary delineating the enclosures seen to the south.
- 5.14.4 Three truncated ditches on a north-west to south-east alignment were located near the northern limit of the excavation area (Ditch Group **13014**). These ditches contained no finds and measured between 0.55m to 1.22m wide and 0.07m to 0.32m deep. One of the ditches (**13043**) was truncated by early medieval charcoaling pit **13036**.
- 5.14.5 A number of pits were scattered across the excavation area which were sub-circular in plan and generally under 1m in diameter and between 0.11m and 0.27m deep. No finds were recovered and many could be naturally formed.

Period 6.1: Early Medieval

Pits

- 5.14.6 A total of five early medieval charcoaling pits were spread across the site (Table 86), three within the activity to the south and two outliers near Ditch Group **13014**. These features were similar in form to those seen on Areas 10, 11 and 12, although less charcoal was noted within the backfills.

<i>Context</i>	<i>Length</i>	<i>Breadth/diameter</i>	<i>Depth</i>	<i>Shape in Plan</i>
13002		1.95	0.24	circular
13036	1.57	1	0.25	sub-circular
13038	1.6	1.58	0.28	sub-circular
13063	1.57	1.52	0.15	sub-circular
13075		1.68	0.2	circular

Table 86: Area 13 charcoaling pits

Ditches

- 5.14.7 Located near the southern limit of excavation, Enclosure **13157** consisted of two main ditches on an east-north-east to west-south-west alignment and three north-north-west to south-south-east aligned ditches forming three small enclosed spaces. A further three truncated ditches were located directly north of these enclosures, and may have linked the enclosure system with Enclosure **13097** to the north. The ditches measured 0.43m to 1.28m wide and 0.1m to 0.43m deep. A total of 309g of lava quern, 10g of Bronze Age pottery, 3g of early medieval pottery, 29g of fired clay and two worked flints were recovered from the features.

- 5.14.8 Enclosure **13097** was located centrally within the excavation area and consisted of seven ditches forming a sub-rectangular enclosure with a small sub-division within the centre. It is possible that the ditches would have originally continued and joined with Enclosure **13157**, forming a group of stock enclosures. The feature was truncated by Ditch Group **13013**. The ditches were between 0.4m and 1.61m wide and 0.07m to 0.62m deep and contained a small assemblage of 3g of 11th to 12th century pottery, 964g of lava quern and 4g of fired clay.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Other Finds
13097	Enclosure	1/2	4		23	Lava quern (964g)
13157	Enclosure	2/13	29	2	51	Lava quern (309g)

Table 87: Area 13. Finds from early medieval features

Period 7: Post-Medieval

- 5.14.9 Ditch Group **13013** consisted of four ditches, all generally on an east-north-east to west-south-west alignment, two of which ran across the excavation area, whilst two terminated. Two of the features truncated ditches associated with Enclosure **13097** and one of the ditches was truncated by impact crater **13232**. These features measured 0.35m to 1.2m wide and 0.19m to 0.53m deep. A total of 10g of early medieval pottery was recovered from the ditches along with 1595g of ceramic building material, 34g of fired clay and 301g of horse bone.

Period 8: Modern

- 5.14.10 Impact crater **13232** was located near the south-eastern limit of the excavation area, truncating Ditch Group **13013**. The feature measured approximately 5.3m long by 2.3m wide and contained the remains of an American P51-D10 Mustang Aeroplane (Haskins 2016).

Finds Reports

Prehistoric Pottery

- 5.14.11 A single sherd of grog-tempered pottery weighing 10g from fill 13158 (gully **13157**) is of Early to Middle Bronze Age date.

Post Roman Pottery

- 5.14.12 Five sherds (14g) of medieval pottery were recovered from this area. Ditch fill 13139 (Enclosure **13157**) contained a sherd of early medieval ware (early medieval ware, 11th–12th century). Ditch fill 13179 contained a small piece of an everted jar rim of early medieval ware, and a body sherd of medieval coarseware 1 (MCW1; L.11th–14th century), and gully fill 13181 (cut **13180**) contained a small sherd of local medieval unglazed ware (late 11th–14th century), both in Ditch Group **13013**. A small sherd of early medieval ware was found in fill 13217 of enclosure **13097**.

Small Finds

- 5.14.13 There were three items of ironwork and two of lead from the site, and six of copper alloy, one of 'silver' or more strictly cupro-nickel, from metal detecting related to the remains of the plane. All are in fair to good condition. Only the iron nails were from a stratified context, the remainder being assigned no context number and thus presumably unstratified.

5.14.14 There are three small nails, a single piece of lead shot, and a small lead weight. Only the nails (SF 611), which are undateable, are from pit **13027**. The strong likelihood that they were deposited whilst still within wood, could have some implication for the presence of a lining within the pit. The spherical lead shot (SF 608) can only be broadly dated to the post-medieval or early modern period. The weight (SF 609) has no diagnostic features to allow dating.

5.14.15 The material from metal detecting the topsoil comprises five low-denomination coins, one button and a probable harness mount. The coins comprise two farthings (SF 605, SF 601, the former probably attributable to George II, the latter to William IV), one halfpenny (George V: SF 603), one penny (Edward VII; SF 604) and a sixpence of George VI (dated 1943; SF 600). A small stamped four-hole sew-through button (SF 602) falls into a similar date range to the coins. The final item, SF 606, is a cast decorative harness stud, its design suggesting a post-medieval date.

Ceramic Building Material

5.14.16 Two brick fragments and a floor tile were recovered from Ditch **13013** in Area 13 (1579g). The bricks seem to be of an earlier form of medieval brick than the examples found in the preceding area, suggesting a date of 15th-16th century.

Fired Clay

5.14.17 A small assemblage of mostly amorphous fired clay (18 pieces, 103g) was collected from Area 13. A single piece of structural fired clay (24g) with a flattened surface was collected from ditch **13140**.

Lithics

5.14.18 Area 13 produced only five struck flints and a small quantity of unworked burnt flint. All of the struck flints came from different contexts and had been residually deposited. The assemblage comprises four undiagnostic struck flints which can only be broadly dated to the Neolithic or Bronze Age periods, and a lightly burnt denticulated scraper made on a poorly detached flake that probably belongs to the later Bronze Age or possibly even the Iron Age. The unworked burnt flint comprises six pieces that were found in three separate fills of the enclosures and indicates low levels of hearth use at the site.

Other Worked Stone

5.14.19 A total of 14 fragments of undiagnostic lava rotary quern was recovered from three contexts. These are probably of medieval date.

<i>Ctxt</i>	<i>Ctxt Type</i>	<i>Function</i>	<i>Notes</i>	<i>Wt (g)</i>
13054	Fill of ditch 13053	Upper rotary quern fragment	Four adjoining fragments	967
13211	Fill of ditch 13210	Undiagnostic rotary quern fragments	4 rounded weathered samples	297
13215	Fill of ditch 13214	Undiagnostic rotary quern fragment	Rounded weathered fragment	21

Table 88: Area 13 Worked Stone

Environmental Reports

Faunal Remains

- 5.14.20 From Area 13 fill 13191 of ditch **13190**, there are five fragments from a horse's (*Equus*) right hand side fused pelvis.

Environmental Samples

- 5.14.21 Samples taken from early medieval pits with evidence of burning all produced charcoal. Enclosure ditch **13077** did not contain any preserved plant remains in fill 13078.

<i>Cut No.</i>	<i>Context No.</i>	<i>Sample No.</i>	<i>Period</i>	<i>Feature Type</i>	<i>Volume processed (L)</i>	<i>Flot volume (ml)</i>
13002	13003	600	EM	Pit	8	40
13063	13064	602	EM	Pit	9	110
13077	13078	603	EM	Enclosure	7	<1
13075	13076	604	EM	Pit	8	15
13038	13040	601	?	Pit	7	40

Table 89: Area 13 Environmental Samples

5.15 Area 14 (ENF139707)

5.15.1 Area 14 (Fig. 15) was located south-east of Salhouse Road in the parish of Rackheath (TG 28443 12033). The area consisted of four trenches measuring 7x2m, targeting a ditch seen in cropmarks and evaluated during previous stages of work.

Period 0: Undated

5.15.2 Ditch **14002** ran on a north-east to south-west alignment, before turning to run north to south. It measured 0.3m to 1.01m wide and 0.25m to 0.33m deep with a wide U-shaped profile. The fills were very leached with few inclusions and only contained a single sherd of prehistoric pottery. It is probable the ditch was prehistoric in date.

Finds Reports

Prehistoric Pottery

A single undated prehistoric sherd weighing 11g came from cut **14008** of ditch **14002**. The sand-with-flint fabric suggests that sherd is of Post Deverel-Rimbury date.

Environmental Reports

Environmental Samples

5.15.3 Fill 14007 of probable prehistoric ditch cut **14006** (**14002**) did not contain any preserved plant remains although several magnetic spheroids of hammerscale provide evidence of metalworking debris.

Sample Number	650
Context No.	14007
Cut No.	14006
Feature Type	Ditch
Volume processed (L)	7
Volume of flot (mls)	5
Estimated Flot charcoal volume (ml)	0
Estimated Residue charcoal volume (ml)	0

Table 90: Area 14 Environmental Samples

5.16 Area 15 (ENF139708)

- 5.16.1 Area 15 (Fig. 16) was located south of Plumstead Road in the parish of Great and Little Plumstead (TG 28739 11487). A total of 0.139ha was stripped over a previous evaluation trench within which a pair of medieval pits had been found. A single ditch, three pits, a tree throw and a modern posthole were found within the area.

Period 0: Undated

- 5.16.2 Three pits and a ditch were recorded in the excavation area which contained no datable finds. Pits **15000** and **15004** were intercutting and may represent an irregularly shaped tree throw. The features were 3m in diameter and had a maximum depth of 0.66m. A single worked flint was recovered from the mid yellowish brown silty sand fill.
- 5.16.3 Ditch **15011** was in the south-western corner of the excavation area running for approximately 8.5m before terminating. Pit or posthole **15015** truncated the terminus. The ditch was 0.8m wide and 0.15m deep with a wide, shallow U-shaped profile. No finds were recovered from the fill. Pit **15015** was sub-circular in plan with a U-shaped profile and measured 0.9m in diameter and 0.2m deep.

Period 2.2: Middle Bronze Age

- 5.16.4 Tree throw **15009** was sub-circular in plan, 1.9m in diameter and 0.4m deep with a wide U-shape profile. The fill was a mid yellowish brown silty sand from which a single sherd of Middle Bronze Age pottery (9g) was recovered along with one worked flint.

Period 8: Modern

- 5.16.5 Posthole **15007** was located just north-east of tree throw **15009** and measured 0.64m in diameter and 0.4m deep. The dark brownish grey silty sand fill was found to contain a 2g sherd of 19th to 20th century pottery along with a very small sherd of prehistoric pottery and an iron nail fragment.

Finds Reports

Prehistoric Pottery

- 5.16.6 Area 15 produced two prehistoric sherds. A rim sherd weighing 9g from a Middle Bronze Age bucket-shaped vessel is made of coarse grog-tempered fabric. The rim, which came from natural feature **15009**, has fingertip-impressed decoration along the rim top. A small scrap of fine flint-tempered pottery from posthole **15007** may be Earlier Iron Age.

Post-Roman Pottery

- 5.16.7 A small fragment (1g) of a refined whiteware (19th/20th century) moulded handle base was recovered from post-hole fill 15008 (**15007**).

Small Finds

- 5.16.8 There is a single item of ironwork from the site. It is incomplete and in poor condition. SF 700 is a single incomplete nail, from posthole **15007** (fill 15008). It is effectively undateable.

Lithics

- 5.16.9 The excavations in Area 15 produced just two struck flints but no unworked burnt flint. The struck pieces comprise a thermally (frost) shattered core fragment that had probably produced blades and which can be dated to the Mesolithic or Early Neolithic periods from natural feature **15009**, and a small waste flake from pit **15004**.

Environmental Reports

Environmental Samples

5.16.10 Samples were taken from unphased features. Fill 15012 of ditch **15011** produced a significant amount of charcoal. Pit/hollow **15004** contained magnetic spheroids of hammerscale. This deposit and posthole **15007** did not contain any preserved plant remains.

Sample No.	700	701	702
Context No.	15012	15006	15008
Cut No.	15011	15004	15007
Feature Type	Ditch	Pit/hollow	Posthole
Volume processed (L)	5	4	4
Volume of flot (mls)	60	1	1
Estimated charcoal volume (ml)	240	<1	<1

Table 91: Area 15 Environmental Samples

5.17 Area 16 (ENF139709)

- 5.17.1 Area 16 (Fig. 17) was located south of, and adjacent to, Middle Road and just west of Area 17, in the parish of Great and Little Plumstead (TG 28492 10483). A total of 0.116ha was stripped revealing a number of high medieval boundaries and pits.

Period 0: Undated

- 5.17.2 A large natural hollow was located within the centre of the site (**16025**) which measured at least 15m long, 16.7m wide and 0.21m deep. No finds were recovered from the sterile mid greyish brown sandy silt. The feature was truncated by high medieval ditch **16027**.
- 5.17.3 Ditch Group **16053** was located east of hollow **16025** and consisted of two parallel north to south ditches with two east to west sections joining the north to south ditches together. These ditches measured between 0.6m and 1.76m wide and 0.1m to 0.38m deep with a U-shaped profile. No finds were recovered from any interventions in the ditches.

Period 6.2: High Medieval

Pits

- 5.17.4 Pit Group **16039** was located between Ditch Group **16053** and natural hollow **16025** and consisted of seven features interpreted as extraction pits varying between 1.2m and 2.4m in diameter and 0.08m to 0.51m deep. The fills were a mid greyish or yellowish brown and a total of 104g of 13th to 14th century pottery was recovered from them along with a worked flint.
- 5.17.5 Pit Group **16005** was located between ditch **16029** and **16001** in the western half of the excavation area. These features had an unclear function apart from one (**16021**) that was similar in form to other charcoaling pits excavated in other areas. These pits measured between 0.94m and 2.36m in diameter and 0.11m to 1.1m deep. A total of four sherds (13g) of high medieval pottery were recovered from one of the pits. A few barley grains were also recovered from the environmental samples.

Ditches

- 5.17.6 Ditches **16027** and **16029** were located within the central part of the excavation area. Ditch **16027** was east-north-east to west-south-west aligned near the northern limit of excavation and truncated by later boundary ditch **16001**. Ditch **16029** was north-north-west to south-south-east aligned and terminated approximately 2m south of **16027**. Ditch **16027** was 0.94m wide and 0.26m deep with a U-shaped profile. Ditch **16029** measured between 0.6m to 0.86m wide and 0.13m to 0.46m deep with a U-shaped profile. Both had sterile sandy fills that contained no finds. It is likely these features were medieval in date, however, due to the presence of nearby features of this date.
- 5.17.7 Ditches **16001** and **16012** lay in the western half of the excavation area on an east-north-east to west-south-west alignment. Ditch **16001** had evidence of a re-cut and measured 3.03m at maximum width and 0.63m deep. A single 10g sherd of late 11th to 14th century pottery was recovered from the ditch. This feature was truncated by later ditch **16012**, which measured 2.02m wide and 0.6m deep. The light grey sandy silt fill contained no finds. These ditches have been assigned to the high medieval period, although may well post-date this period.

Finds Reports

Post-Roman Pottery

5.17.8 Table 92 shows the quantities of pottery in Area 16 by fabric.

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early medieval ware	EMW	11th-12th	1	1		1
Local medieval unglazed	LMU	11th-14th	1	2		1
Medieval coarseware 1	MCW1	12th-14th	6	64	0.15	6
Medieval coarseware 4	MCW4	12th-14th	1	48	0.05	1
Medieval coarseware 6	MCW6	12th-14th	1	5		1
Medieval coarseware 7	MCW7	12th-14th	1	6		1
Totals			11	126	0.2	11

Table 92: Area 16 Post-Roman pottery

5.17.9 All pottery from this site was of medieval date. There were two developed jar rims in MCW1 and a developed bowl rim in MCW4. Most of the pottery came from pit groups **16005** and **16039**.

Lithics

5.17.10 The excavations in Area 16 produced a single residual struck flint flake and no unworked burnt stone. The flake was recovered from pit **16040** and the flake can only be broadly dated to the Neolithic or Bronze Age periods.

Environmental Reports

Environmental Samples

5.17.11 Samples taken from high medieval pit fills produced occasional charred plant remains; fill 16008 of pit **16005** contained barley and wheat grains and a pea-sized legume. Fill 16022 of pit **16021** yielded four barley grains. Medieval boundary ditches **16001** and **16059** did not contain preserved plant remains.

Cut No.	Context No.	Sample No.	PHASE	Feature Type	Volume processed (L)	Volume of flot (mls)	Cereal grain	Legumes 2-4mm	Estimated Charcoal volume (ml)
16001	16002	750	EM	Ditch	8	1			<1
16005	16008	751	MED?	Pit	9	10	#	#	<1
16021	16022	752	MED?	Pit	8	90	#		90
16059	16060	753	MED	Ditch	7	10			<1

Table 93: Area 16 Environmental Samples

5.18 Area 17 (ENF139710)

5.18.1 Area 17 (Fig. 18) was located between Middle Road and Low Road in the parish of Great and Little Plumstead (TG 28912 10367). A total of 2.84ha was stripped, uncovering a number of prehistoric pits, medieval enclosures fronting onto Low Road with accompanying road-side activity and a late medieval/post-medieval trackway. The geology within the south-western part of the excavation area was a greyish brown sand, that made discerning certain features in plan within the area of medieval activity quite difficult.

Period 2.1: Early Bronze Age

Pit Groups

- 5.18.2 Pit Group **17074** was located in the southern half of the excavation area directly west of Enclosure **17006**. The group consisted of 12 pits varying between 0.5 and 1.15m in diameter and 0.06m to 0.36m deep. The fills were generally a dark greyish sand with a high charcoal content and many of the pits were interpreted as 'fire-pits' on site. A total of 241g of worked flint was recovered from the features along with 24 sherds (179g) of Late Neolithic/Early Bronze pottery.
- 5.18.3 Pit Group **17212**, located within the central eastern part of the excavation area, consisted of 13 pits and tree throws that varied between 0.7m to 2.6m in diameter and 0.2m to 0.49m deep. Few finds were recovered, apart from 9 sherds (13g) of prehistoric pottery.
- 5.18.4 Numerous other tree throws and fire-pits were located across the excavation area, particularly to the north (Pit Group **17520**). The only finds recovered from any of the features consisted of occasional worked flint. Despite lack of dating, it is probable that many of the features are prehistoric in date, probably Bronze Age.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Enviro. results	Other Finds
17074	Pit Group	24/179		21			
17212	Pit Group	9/13		3	10		

Table 94: Area 17, Finds from Early Bronze Age features

Period 2.2/3: Middle/Late Bronze Age

Pits

- 5.18.5 Pit **17061** was located near the southern limit of excavation, truncating ditch **17047**. The pit was 2.04m in diameter and 0.7m deep with a U-shaped profile. The fills were sterile silty sands, one of which contained a near complete Later Bronze Age bowl (52 sherds, 253g).

Ditches

- 5.18.6 Ditches **17116** and **17160** were both on a roughly north-east to south-west alignment running through Pit Group **17212**. Both ditches were approximately 0.5m wide and between 0.11m to 0.3m deep with a U-shaped profile. No finds were recovered but the form and alignment of the ditches would suggest a prehistoric, possible Bronze Age date.
- 5.18.7 Ditches **17047** and **17105** were part of the same roughly north to south aligned ditch, that straddled either side of a tree throw in the southern part of the excavation area.

The ditch measured between 0.88m to 1.92m wide and 0.26m to 0.44m deep with a U-shaped profile. The silty sand fill contained a 3g intrusive sherd of early medieval pottery and 65g of worked flint.

- 5.18.8 Ditch **17183** was on a west-north-west to east-south-east alignment, terminating just prior to ditch **17105**. No dating evidence was recovered from the feature, but its alignment would suggest that it was contemporary with ditch **17105**.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag./g)	Burnt Flint (g)	Enviro. results
17047(= 17105)	Ditch	1/3		5		
17061	Pit	52/253				
17116	Ditch			10		
17160	Ditch					
17183	Ditch					

Table 95: Area 17, Finds from Middle/Late Bronze Age features

Period 3: Iron Age

- 5.18.9 A single, Late Iron Age cremation was located in the south-eastern half of the excavation, near early medieval enclosure **17006** (cremation **17150**). This feature measured 0.65m in diameter, 0.22m deep and contained 392g of Late Iron Age pottery and small amount of calcined bone.

Period 6.1: Early Medieval

Ditches

- 5.18.10 A large part of an enclosure (Enclosure **17006**) on a roughly north to south axis was recorded in the south-east part of the excavation area, that consisted of a ditch measuring between 1.68m to 2.38m wide and 0.7m to 0.92m deep with a V-shaped profile enclosing approximately 2056sqm. A smaller ditch formed a sub-division within the enclosure. A total of 8 sherds (47g) of 11th to 14th century pottery was recovered from the enclosure along with 29g of metalworking waste and 239g of residual worked flint.
- 5.18.11 A number of other ditches dating to the early medieval period were located within the southern corner of the excavation area, where there was a large number of features dating from the early medieval through to late medieval period.
- 5.18.12 Ditch **17275** was on a north to south alignment, truncated by early medieval enclosure **17011** and high medieval enclosure **17078**. The ditch measured 0.91m to 1.58m wide and 0.3m to 0.56m deep with a U-shaped profile. Finds were sparse, with 3 sherds of late 11th to 14th century pottery being recovered from the fill along with 127g of metalworking waste.
- 5.18.13 Ditch **17011** formed two sides of a small enclosure presumably fronting on the medieval road. The ditch measured 1.32m to 1.7m wide and 0.31m to 0.88m deep with a U-shaped profile. A 9g sherd of 11th to 12th century pottery and a 6g sherd of mid 14th to 15th century pottery were recovered from the ditch. No evidence for a western arm to the enclosure was seen. The terminus to the west was truncated by high

medieval ditch **17294** and the ditch truncated early medieval ditch **17275**. Other relationships with early medieval ditches have been lost due to late medieval pitting.

- 5.18.14 Ditch **17269** was formed by two ditches forming a 'T' shape within ditch **17011**. Relationships with nearby ditches are unclear due to later pitting, although they probably formed part of sub-divisions within the early medieval enclosures. A total of 24g of late 11th to 14th century pottery and 246g of metalworking waste were recovered from the ditches.
- 5.18.15 At the north-eastern end of the excavation area, two segments of ditch survived (**17600** and **17162**) that probably formed small plots fronting onto the original Middle Road. A single sherd (1g) of 11th to 12th century pottery was recovered from the ditches along with 50g of lava quern.

Pits

- 5.18.16 Pit Group **17431** consisted of nine pits of varying size between 0.7m and 1.4m in diameter and 0.15m to 0.37m deep that contained 3 sherds (16g) of late 11th to 14th century pottery. These features probably relate to backyard activity for structures fronting onto Low Road.
- 5.18.17 Pit **17051** was located near the south-easternmost corner of the site within Enclosure **17006**. This pit measured 2.42m in diameter and 0.32m deep and had a thick charcoal deposit on the base. No finds were recovered, although the feature is thought to be early medieval due to its similarities with other early medieval features in Areas 9 to 11.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
17006	Enclosure	8/47		9	93		MWD (29g)
17011	Ditch	2/15					
17051	Pit						
17162	Ditch						
17269	Ditch	5/24					MWD (246g)
17275	Ditch	3/44					MWD (127g)
17431	Pit Group	3/16		9	526		
17600	Ditch	1/1		1			Lava quern (50g)

Table 96: Area 17, Finds from early medieval features

Period 6.2: High Medieval

Ditches

- 5.18.18 Ditches **17294** and **17322** lay within the south-west corner of the excavation area and formed part of an enclosure pre-dating Enclosure **17078**. These ditches measured between 0.79m and 2.4m wide and 0.22m to 0.65m deep and contained 12 sherds (100g) of 13th to 16th century pottery.
- 5.18.19 Enclosure **17078** formed a sub-rectangular enclosure fronting onto Low Road to the south, which had an internal area of 1134sqm. The enclosure was formed by multiple ditches, with numerous re-cuts noted, particularly within the northern arm of the enclosure, where at least four ditches were recorded in some interventions. A relatively large assemblage of pottery (614g) was recovered from the enclosure ditches, which mostly dated to the 13th century. Lava quern (1405g) and metalworking waste (2433g) were also recovered. A small amount of residual Iron Age pottery was also recovered.

from the fills. The enclosure truncated ditch **17322**, part of another high medieval enclosure, as well as numerous early medieval ditches.

5.18.20 Ditch **17368** was located north of late medieval enclosure **17078**, within the southern half of the excavation area. This small ditch ran for approximately 33m and measured 0.5m to 0.64m wide and 0.13m to 0.23m deep. A single 12g sherd of 11th to 12th century pottery was recovered from the fill. This ditch appeared to form the east-west arm of a truncated enclosure extending off the northern limit of enclosure **17078**.

5.18.21 Ditches **17000**, **17002** and **17004** were located just east of Enclosure **17078** and formed parts of a field system outside the settlement area. All three were on a north-north-west to south-south-east alignment, the same axis as enclosure **17078**, and measured 0.28m to 0.46m wide and 0.11m to 0.21m deep. A total of 83g (1 sherd) of 13th century pottery was recovered from ditch **17000** along with 205g of worked flint.

Pits

5.18.22 Pits **17246** and **17370** were located just west of Pit Group **17431** within Enclosure **17078**. Pit **17246** measured 4.2m long, 2m wide and 0.82m deep with a wide, flat bottomed U-shape profile. A total of 166g of 14th century pottery was recovered from the fills. Pit **17370** was similar in size and shape, although no finds were recovered from it.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frag.)</i>	<i>Burnt Flint (g)</i>	<i>Enviro. results</i>	<i>Other Finds</i>
17000	Ditch	1/84		16			
17002	Ditch						
17004	Ditch						
17078	Enclosure Ditch	60/614	15	13			Lava (1405g), (2433g) Quern MWD
17246	Pit	14/166					
17294	Ditch	11/94					
17322	Ditch	1/6	755	1			
17368	Ditch	1/12					
17370	Pit						

Table 97: Area 17, Finds from high medieval features

Period 6.3: Late Medieval

5.18.23 Late medieval activity took the form of two pit groups truncating the early and high medieval activity at the southern end of the excavation area. Some features within the two pit groups are likely to relate to the two earlier medieval periods, and will be separated during the analysis stage.

5.18.24 Pit Group **17057** consisted of 17 pits within the south-west corner of the excavation area. Many of the pits were intercutting and most were cut through an area of grey sand geology that made it difficult to identify the features in plan. The features varied in size between 0.6m and 2.12m in diameter and 0.17m to 0.84m deep. A total of 40 sherds (661g) of late 14th to 16th century pottery was recovered from the pits along with 45g of ceramic building material and 121g of lava quern. Many of the features are

interpreted as being extraction pits, though one (**17031**) consists of a small pit lined with flint nodules – possibly a form of trough.

- 5.18.25 Features that formed Pit Group **17296** were found within the confines of enclosure **17078** and consisted of 13 pits varying in size from 0.8m to 4.03m in diameter and 0.32m to 1.07m deep. Many pits were interpreted as extraction pits, or had an unknown function. A total of 1137g of pottery were recovered from the features, dating from the 13th to 16th century as well as 841g of lava quern.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag)	Burnt Flint (g)	Enviro. results	Other Finds
17057	Pit Group	40/661	45				Lava quern (121g)
17296	Pit Group	88/1137		9	526		Lava quern (841g)

Table 98: Area 17, Finds from late medieval features

Period 7: Post-Medieval

- 5.18.26 Within the extreme south-western corner of the excavation area, a possible track (**17019**) ran for approximately 14m, measuring 6.3m wide and 0.2m deep. The remains of metallurgy was observed on the base of the feature. A total of 99g of 16th century pottery was recovered from the trackway along with a large cast crotal bell (SF 808), with a similar date to the pottery.
- 5.18.27 Ditches **17461** and **17516** were located within the northern part of the excavation area, on a north-north-east to south-south-west alignment, both terminating either side of a track (**17510**). Ditch **17461** measured 0.52m to 0.62m wide and 0.12m to 0.17m deep and contained a 32g fragment of 18th century glass, a 7g sherd of 18th century pottery and 16g of ceramic building material. A 645g dump of 13th to 14th century pottery was also recovered from one intervention. Ditch **17516** was 1.1m wide, 0.4m deep and contained a 3g sherd of bottle glass, 26g of 19th century pottery and 46g of ceramic building material.
- 5.18.28 The main feature located within the northern half of the excavation area was trackway **17510**. This feature consisted of two curvilinear ditches, which entered the excavation area in its north-eastern-most corner on a roughly north-east to south-west alignment, and gradually turned to run north-west to south-east by the point where the trackway exits the excavation area in its north-westernmost corner. In between the two ditches was a surviving layer of soil (17571) which overlaid areas of metallurgy (17566). A total of 14g of 19th century pottery and 169g of ceramic building material was recovered from 17571.
- 5.18.29 The northern trackside ditch (**17540**) measured 0.5m to 2.26m wide and 0.19m to 0.74m deep with a U-shaped profile. A total of 1898g of ceramic building material was recovered from the fills. The southern trackside ditch **17483** contained 179g of bottle glass, 122g of 12th to 18th century pottery and 57g of roofing tile. This ditch measured 0.98m to 3.1m wide and 0.25m to 1.05m deep. Both ditches showed evidence of re-cuts at certain points along the lengths. The moderate amount of medieval pottery from the trackway ditches would suggest that the track probably has medieval origins before falling into disuse in the modern period.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag)	Burnt Flint (g)	Enviro. results	Other Finds
17019	Track	1/99					
17461 & 17516	Ditches	59/659	62				Glass (35g),
17510	Trackway	16/180	2438	1			Lava quern (50g), glass (181g)

Table 99: Area 17, Finds from post-medieval features

Finds Reports

Prehistoric Pottery

- 5.18.30 The earliest pottery found in Area 17 consisted of 24 sherds of Later Neolithic/Early Bronze Age Beaker weighing 182g found in the fills of three pits and a natural feature in Pit Group **17074** (Table 100).
- 5.18.31 The Beaker assemblage includes rims from two vessels, both East Anglian style globular Beakers with everted rims. One rim is decorated with a pinched out cordon and fingernail impressions all over and the second with indistinct impressed decoration. Further sherds have square-toothed comb impressed filled bands and triangles or all-over fingernail impressed decoration. The style and decoration of the Beaker is typical of local domestic assemblages such as those found along the Norwich Southern Bypass at Harford Farm and Bixley (Ashwin and Bates 2000) and in larger quantity at Harford Park and Ride (Percival 2003).
- 5.18.32 A total of 52 large sherds from the rim and body of a Later Bronze Age bowl came from pit **17061**. The bowl is round bodied with an everted neck and has a pinched-out rim and simple base similar to examples from Alysham Bypass (Brudenell 2012, fig.41. form K4).
- 5.18.33 A partially complete Later Iron Age 'S' profile jar from cremation **17150** is made of micaceous sandy fabric. Several sherds exhibit evidence for having been burnt.

Group	Feature	Feature type	Spot date	Vessel type	Quantity	Weight (g)	No. of vessels
	17061	Pit	Later Bronze Age	Bowl	52	253	1
	17116	Natural	Not Closely Datable		1	1	
	17150	Pit	Later Iron Age	Jar	60	392	1
Enclosure17078 (residual)	17256	Ditch	Iron Age		1	17	
	17412	Ditch terminus	Not Closely Datable		1	1	
PG17074	17071	Pit	Later Neolithic Early Bronze Age	Beaker	19	111	1
	17100	Natural	Later Neolithic Early Bronze Age	Beaker	2	28	1
	17120	Pit	Later Neolithic Early Bronze Age	Beaker	1	38	
	17135	Pit	Later Neolithic Early Bronze Age		2	5	
PG17212	17319	Natural	Not closely datable		9	13	
Total					148	859	4

Table 100: Area 17 Prehistoric pottery

Post-Roman Pottery

5.18.34 This large assemblage comprises 472 sherds (6234g), and is quantified by fabric in Table 101. A further 106 sherds were recovered from this area (Field G6) during the evaluation (Anderson 2015a).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early medieval ware	EMW	11th-12th	37	177	0.24	21
Early medieval gritty with shell	EMWSG	11th-13th	1	1		1
Yarmouth-type ware	YAR	11th-12th	1	4		1
Grimston coarseware	GRCW	11th-M.13th	1	13		1
Local medieval unglazed	LMU	11th-14th	133	1760	1.88	63
Medieval coarseware 1	MCW1	12th-14th	79	1293	0.89	33
Medieval coarseware 2	MCW2	12th-14th	1	16		1
Medieval coarseware 3	MCW3	12th-14th	20	247	0.14	4
Medieval coarseware 4	MCW4	12th-14th	10	156	0.31	6
Medieval coarseware 5	MCW5	12th-14th	4	34		4
Medieval coarseware 6	MCW6	12th-14th	6	58	0.05	6
Medieval coarseware 7	MCW7	12th-14th	45	397	0.48	11
Grimston-type ware	GRIM	L.12th-14th	36	464	0.44	14
Unprovenanced glazed 1	UPG1	Med	1	183		1
Unprovenanced glazed 5	UPG5	L.12th-14th?	1	2		1
Yarmouth-type glazed wares	YARG	13th-15th	3	39		2
Siegburg Stoneware	GSW1	E.14th-17th	2	70		2
Late medieval and transitional, gritty	LMTG	M.14th-15th	1	5		1
Late medieval and transitional	LMT	L.14th-16th	61	858	0.64	43
Langerwehe Stoneware	GSW2	L.14th-15th	1	52		1
Dutch-type redwares	DUTR	15th-17th	1	15	0.11	1
Raeran/Aachen Stoneware	GSW3	L.15th-16th	2	96	0.25	2
Glazed red earthenware	GRE	16th-18th	7	41	0.08	7
Cologne/Frechen Stoneware	GSW4	16th-17th	3	159		3
Speckle-glazed Ware	SPEC	L.17th-18th	1	5		1
Staffordshire-type Slipware	STAF	L.17th-18th	1	2		1
Westerwald Stoneware	GSW5	E.17th-19th	1	8		1
Creamwares	CRW	18th	5	45		5
Pearlware	PEW	L.18th-M.19th	2	9	0.08	1
Refined white earthenwares	REFW	L.18th-20th	4	16	0.18	3
Unidentified	UNID		1	9		1
Totals			472	6234	5.77	243

Table 101: Area 17 Post-Roman pottery

5.18.35 Although still dominated by medieval coarsewares, this group also contains a high proportion of late medieval pottery. Several coarsewares are present, with Norwich-type Local medieval unglazed (LMU) the most frequent, followed by medieval coarseware 1 (MCW1) and medieval coarseware 7 (MCW7). The early medieval wares include several simple everted jar rims, and a few of these also occur in LMU, but the majority of medieval rims are developed types. There is also a relatively high proportion of Grimston ware at this site. Together with the late medieval wares, this suggests a *floruit* for the site of broadly 13th–15th century, with minor earlier and later activity. Some of the Late medieval and transitional (LMT) is in a coarse fabric and may have been made at the recently-excavated production site at Hare Road, Plumstead (Anderson 2015b). Identified LMT vessel forms mainly comprise jars and jugs.

5.18.36 Several imported wares are present in the later medieval and early post-medieval groups, but these are Dutch redwares or German stonewares, all of which are frequently found in Norwich itself.

5.18.37 The majority of medieval and late medieval pottery appears to be from the southern half of the site, with only small quantities of mainly post-medieval pottery from the trackway in the northern part of the area.

Glass

- 5.18.38 Archaeological works produced a small assemblage of vessel glass, eight shards representing seven bottles, recovered from four ditches, a pit and from the surface of a trackway. Ditch **17516** and surface 17544 produced glass that could not be closely dated. Ditches **17461** and **17491** both produced vessels from the 18th century, with ditch **17461** and pit **17455** also yielding glass that may be 17th-18th century. The glass is likely to be the result of casual loss and may have become incorporated into features as a result of agricultural processes.

Small Finds

- 5.18.39 There were 13 fragments of ironwork representing a similar number of items, and seven of copper alloy from this site. The ironwork is in poor to fair condition, and the copper alloy fair to good. All of the ironwork is stratified, but only four of the copper alloy objects are from stratified contexts.
- 5.18.40 There are seven nails (SF 810, SF 813 - SF 817) amongst the group, from a range of pits in pit groups **17057** (SF 810, SF 813), and **17296** (SF 814), pit **17610** (SF 815) and a ditch associated with trackway **17510** (SF 817), and layer 17587 (SF 816). The fill (17029) of possible track **17019** produced what could be the turned-over rim of a sheet vessel (SF 805), and ditch **17036** (fill 17091) produced a large fragment from what might be the handle of a bucket or similar vessel (SF 806). Finally there are two horseshoe fragments; SF 811 from trackway deposit 17545, and SF 818 from trackway deposit 17544, although neither is complete, the broad web might suggest a late medieval or early post-medieval date, assuming that both were lost by horses using the trackway. Two more fragments (SF 812 from pit 127473, and SF 819 from trackway ditch **17380** (fill 17376) remain unidentified at this stage.
- 5.18.41 None of the three jettons recovered from the site are stratified (SF 800 – SF 802) but all three clearly bear, on the obverse, the imperial orb surmounted by cross patteé, within a tressure, typical of Nuremburg issues, and are thus likely to be of late 16th and 17th century date. A large cast crotal bell (SF 808) from trackway **17019** is of similar date. A large tinned or silvered button (SF 809) from layer 17571 could be as early as the 18th century, but the type persisted well into the 19th century. One small fragment from possible track **17019** (fill 17020; SF 804) is unidentified.

Metalworking Waste

- 5.18.42 Area 17 produced an assemblage of 3kg of iron smelting debris, all tapping slag, from a series of ditches and a pit (Table 102). Associated pottery showed that iron production was probably taking place during the 12th to 14th centuries.

<i>Cut</i>	<i>Feature Type</i>	<i>Context</i>	<i>Type</i>	<i>Pot date</i>	<i>Weight (kg)</i>
17365	Ditch	17366	Tapping	No pot	0.127
17468	Pit	17467	Tapping	11th-14th	0.125
17261	Ditch	17263	Tapping	12th-14th	0.029
17191	Ditch	17192	Tapping	11th-14th	2.433
17292	Ditch	17293	Tapping	11th-14th	0.246
17463	Ditch	17464	Tapping	11th-14th	0.067
Totals					3.027

Table 102: Area 17 Metalworking Waste

Ceramic Building Material

- 5.18.43 A moderately sized assemblage of CBM was recovered from Area 17 (27 fragments, 3066g) consisting mostly of medieval to post-medieval tile fragments (see Volume 2, Appendix C.7 for a summary). Ditches **17510**, **17535**, **17614** produced closely datable brick fragments (1506g, 381g and 754g), including a bull-nose header from **17614**, of the 17th to 18th centuries. This suggests a generally later date than the medieval to post-medieval material from previous areas.

Fired Clay

- 5.18.44 A small assemblage of largely structural fired clay (33 pieces, 523g) was recovered from five contexts in Area 17. Pit **17304** produced 29 fragments of fired clay, 114g, one of which has wattle and withie impressions (16g). Ditch **17418** produced fragments of a small hand formed object (2 pieces, 171g) with no obvious function; it is probably an *ad hoc* spacer or a prop. Pit **17468** produced a single amorphous fragment (5g).
- 5.18.45 Trackway **17510** (**17545**) produced a sub-rectangular object in a buff fabric and with pinkish surfaces. The upper and lower faces part surviving and an intermediary face perpendicular survives – which is notably smoothed and squared. This briquette has no clear function, although its use as a spacer, prop or in an oven or kiln cannot be ruled out.

Clay Tobacco Pipe

- 5.18.46 A single stem fragment from a white ball clay tobacco pipe, weighing 0.002kg, was recovered from feature 17027. The pipe fragment does little other than to indicate the consumption of tobacco on or in the vicinity of the site, between c.1580-1900.

Lithics

- 5.18.47 The excavations in Area 17 resulted in the recovery of 104 pieces of struck flint and 0.6kg of unworked burnt flint (Table 103).

	Decortication flake	Decortication blade	Crested blade	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Retouched implement	Core	Conchoidal chunk	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Pit Group 17074	1				13					6	1		21		
Pit 17189	1				7			1		1			10		
Pit 17496					3				2	1		1	7	26	515
Other features	6	1	1	5	30	4	3	1	1	12	2		66	6	114
Total no.	8	1	1	5	53	4	3	2	3	20	3	1	104	32	629
<i>Total struck %</i>	<i>7.7</i>	<i>1.0</i>	<i>1.0</i>	<i>4.8</i>	<i>51.0</i>	<i>3.8</i>	<i>2.9</i>	<i>1.9</i>	<i>2.9</i>	<i>19.2</i>	<i>2.9</i>	<i>1.0</i>	<i>100</i>		

Table 103: Composition of the Lithic Assemblage from Area 17

- 5.18.48 Although this is a relatively large assemblage, it mostly reflects a low density of flintworking with small quantities of pieces being recovered from many features scattered across the site. The technological characteristics of the assemblage as a whole indicate that it was manufactured over a long period, from at least the Early Neolithic through to the latter parts of the Bronze Age. However, it contains a notable proportion of large and sturdy but often narrow and generally well struck flakes and non-prismatic blades that are most typical of Later Neolithic industries; some even being reminiscent of Piggott's 'Secondary Neolithic Heavy Flint Industry' (1954, 279, 282-284). Similar material has been found in the Norwich area, such as at Great Melton (Clark and Halls 1918), although there are none of the large bifacially worked core-tools characteristic of these industries present here.
- 5.18.49 The assemblage as a whole contains a high proportion of retouched implements, which account for nearly a fifth of the struck pieces. Half of these comprise a variety of scraper types with most of the others being narrow edge retouched flakes, many of which were probably used as cutting implements. Whilst none of these is diagnostic, many could easily be Later Neolithic in date and this is particularly true for the pieces from Pit Group **17074**, with a number of these pits furnishing well-made scrapers with symmetrical working edges or edge retouched narrow flakes. Four of the pits in this group contained struck flint assemblages and although they are small it is perhaps notable that all included at least one retouched implement, suggesting the possibility that they all represent small deliberately deposited 'tool kits' or the residues from the undertaking of specific tasks. One of the pits (**17120**), also contained one of only three cores recovered from the site. This is an odd lenticular core of similar shape to the end-and-side scraper from the same fill and it may actually have been intended to be used as such. Although situated at some distance, pit **17496** contained an assemblage of seven pieces in a generally good condition and which were technologically similar to those from Pit Group **17074**. It also contained a retouched implement consisting of an edge trimmed narrow flake with bifacial retouch and damage along the opposite margin consistent with having been used as a knife. Whilst not completely diagnostic, it is most reminiscent of Later Neolithic implements. This pit also produced a relatively large quantity of unworked burnt flint, amounting to just over 0.5kg which represents more than 80% of the total from this area, and two heavily burnt struck flake fragments weighing a further 25g were also present. The burnt flint comprises large fragments that had been intensively and uniformly heated, raising the possibility that this had been

done deliberately, although the quantities involved indicate that this was not part of any extensive or industrially scaled activities.

- 5.18.50 With the possible exemption of these assemblages, most of the remaining struck pieces are likely to have been residually deposited with even the larger individual feature assemblages comprising pieces of mixed condition, raw materials and technological attributes. A possible exception to this is the collection of ten pieces from ditch **17189** which are mostly in a good condition and include some made from very similar raw materials. The majority are quite thick 'squat' flakes of which one has been retouched to form an awl-like piercer. Some of the others also have a few flakes detached from their edges and, if deliberately done, may constitute informal tools. This assemblage can be dated to between the Middle Bronze Age and Iron Ages and, although probably residually deposited, indicates flintworking having occurred in the vicinity. A small part of the remaining assemblages as well as a few of the retouched implements that are more irregularly and crudely produced are likely to be of a similar date and suggests widespread if not intensive flint use at the site during the later prehistoric periods.

Other Worked Stone

- 5.18.51 A total of 64 fragments of lava rotary quern was recovered from nine contexts. Most of these are small or undiagnostic fragments, but two adjoining fragments from ditch **17332** (17333) are from a quern measuring over 32cm diameter whilst two grooved fragments (probably not from the same quern) were recovered from pit **17476** (17475).

<i>Ctxt</i>	<i>Ctxt ype</i>	<i>Function</i>	<i>Notes</i>	<i>Wt</i>
17040	Fill of ditch 17038	Rotary quern fragment	Edge fragment with straight vertical edges, pecked flat grinding surface and flat worn other surface	313
17143	Fill of ditch 17141	Rotary quern fragments	40 undiagnostic fragments	847
17202	Fill of ditch 17201	Undiagnostic rotary quern fragments	Rounded weathered sample	88
17257	Fill of ditch 17256	Undiagnostic rotary quern fragments	20 rounded weathered samples	175
17333	Fill of ditch 17332	Rotary quern fragments	Two adjoining fragments. Flat faces, one pecked and one roughly dressed so probably lower stone. Circumference survives but is damaged so diameter cannot be measured	1360
17364	Fill of pit 17362	Undiagnostic rotary quern fragments	One rounded weathered sample	122
17398	Fill of ditch 17396	Undiagnostic rotary quern fragments	Eight rounded weathered samples	287
17475	Fill of pit 17476	Rotary quern fragment	grooved on one flat face and roughly dressed on other. Impossible to tell if upper or lower stone. No edges or centre	225
17475	Fill of pit 17476	Rotary quern fragment	grooved on one flat face and roughly dressed on other. Impossible to tell if upper or lower stone. Part of edge, but no centre	606
17554	Fill of ditch 17553	Undiagnostic rotary quern fragments	9 rounded weathered samples	52

Table 104: Area 17 Worked Stone

Environmental Reports

Faunal Remains

- 5.18.52 Most of the assemblage from Area 17 is unidentified to species. Large mammal dominates the fragment count if one excludes a group of associated bones. The latter from 17429 (high medieval pit **17428**), comprise much from a single pig skeleton. Parts of the left and right maxillae, mandibles, humeri, femora and tibiae survive. There are also parts of the skull, axis (the dens), a radius, an ulna and fragmentary metapodials. No signs of butchery (or pathology or of carnivore gnawing) were noted (it must be noted that the bone surface condition is generally not good meaning that signs of fine cuts marks would be difficult to recognise if present). However it appears most probable that this pig was never butchered. All of the replicated anatomical elements are from opposite sides (left and right elements are represented in each case), all are at the same states of development and thus, as recognised on site, this is undoubtedly a single skeleton.
- 5.18.53 The description given on site might be considered definitive in this regard and was as follows, “articulated skeleton of an animal laying on its back with head to north, bone in very poor condition. Skull and limbs present, but no spinal column and ribs visible”. The skeleton was in a condition that meant it was possible to lift the skull, fore-limbs and hind limbs independently. Inspection of these bagged groups suggests that the skeleton was undisturbed after burial (and prior to excavation).
- 5.18.54 All of the long bones are “cylinders” with eroded, damaged and missing ends. One metapodial epiphysis is unfused but no other fusion evidence was noted. The first and second mandibular molars have erupted but the third molars clearly were still in the crypts and are not fully developed. The second molars are characterised by very small (barely visible) points of dentine exposure. Based on this dental evidence this pig's age at death was approximately 12 to 24 months (following Halstead 1992). The skeletal parts that have survived in a recognisable condition are long-bone mid-shafts, maxillae, mandibles, loose teeth and some harder and thicker parts of the skull. The fact that vertebrae and ribs were not “visible” during excavation is almost certainly due to taphonomic processes which have discriminated against these relatively delicate spongy parts. It is judged that this pig was buried whole.

Species/ctxt	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Meas specimens
cattle	3	0	0	0	0	1	0	0
17042	2	0	0	0	0	0	0	0
17126	1	0	0	0	0	1	0	0
large	18	0	0	0	0	0	0	0
17083	2	0	0	0	0	0	0	0
17419	11	0	0	0	0	0	0	0
17544	4	0	0	0	0	0	0	0
17547	1	0	0	0	0	0	0	0
medium mammal	1	0	0	0	0	0	0	0
17419	1	0	0	0	0	0	0	0
med/large mammal	15	0	0	0	0	0	0	0
17419	15	0	0	0	0	0	0	0
sheep/goat	2	0	0	0	1	1	0	0
17020	1	0	0	0	1	0	0	0

Species/ctxt	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Meas specimens
17583	1	0	0	0	0	1	0	0
unidentified mammal	1	0	0	0	0	0	0	0
17020	1	0	0	0	0	0	0	0
pig	38	2	7	2	5	11	0	4
17419	3	0	3	0	0	0	0	0
17429	35*	2	4	2	5	11	0	4
cf pig	>500*	0	0	0	0	0	0	0
17429	>500*	0	0	0	0	0	0	0
Grand Total	>578	2	7	2	6	13	0	4

Table 105: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable

* The pig bones in (17429) are confirmed (35 fragments) and probable (>500 including many tiny fragments excluded from totals) associated parts of the skeleton of a single pig. With all such pig skeletal parts excluded the total fragment count is 43.

Species/ctxt	Total frags	Complete	Butchered	Gnawed	Root etched	Burnt	Average of Erosion
cattle	3	0	0	0	0	0	4.5
17042	2	0	0	0	0	0	5
17126	1	0	0	0	0	0	4
large	18	0	0	0	1	0	4.4
17083	2	0	0	0	0	0	4
17419	11	0	0	0	0	0	4.5
17544	4	0	0	0	1	0	4
17547	1	0	0	0	0	0	5
medium mammal	1	0	0	0	0	0	4
17419	1	0	0	0	0	0	4
med/large mammal	15	0	0	0	0	0	5
17419	15	0	0	0	0	0	5
sheep/goat	2	0	0	0	0	0	3.5
17020	1	0	0	0	0	0	3
17583	1	0	0	0	0	0	4
pig	38	0	0	0	16	0	3.5
17419	3	0	0	0	0	0	3
17429	35	0	0	0	16	0	4
cf pig	0	0	0	0	12	0	4.5
17429	0	0	0	0	12	0	4.5
unidentified mammal	1	0	0	0	0	0	4
17020	1	0	0	0	0	0	4
Grand Total	78	0	0	0	29	0	4.2

Table 106: Totals noted of taphonomic states, demonstrating the prevalence of surface root etching amongst some of the contexts from this area.

5.18.55 Environmental Samples

5.18.56 Samples from prehistoric features were largely unproductive other than moderate charcoal from pits **17137** (Pit Group **17074**), **17169** and **17440**. Cremation **17150** also produced a moderate amount of charcoal (approximately 50ml) in addition to calcined bone.

Cut No.	Context No.	Sample No.	Period	Feature Type	Volume processed (L)	Flot volume (ml)	Cereal grain	Estimated Charcoal volume (ml)
17120	17121	809	?	Pit	9	1		1
17122	17123	810	?	Pit	9	1		1
17496	17495	833	?	Pit	9	1 #		2
17150	17151	813	Bronze Age?	Cremation	53	1		50
17061	17035	804	Early Bronze Age	Pit	9	1		1
17061	17035	805	Early Bronze Age	Pit	8	1		10
17071	17072	806	Early Bronze Age	Pit	9	1 #		1
17071	17073	807	Early Bronze Age	Pit	8	110		1
17137	17138	812	Prehistoric?	Pit	8	10		25
17160	17160	814	Prehistoric?	Ditch	7	1		1
17169	17168	815	Prehistoric?	Burning pit	10	20		50
17440	17439	825	Prehistoric?	Pit	8	45		55

Table 107: Area 17 Environmental Samples from Prehistoric Features

5.18.57 The results from medieval samples were more productive, particularly in the high medieval period. Pit **17304** (fill 17305, Pit Group **17431**) produced a mixed cereal assemblage of oats (*Avena* sp.), barley, wheat and rye (*Secale cereale*) and fill 17413 of the terminus of ditch **17412** (enclosure **17078**) also produced an assemblage of mixed cereals along with occasional peas and beans (*Fabaceae*).

5.18.58 Samples from late medieval deposits were unproductive other than occasional small vetches/wild peas (*Vicia/Lathyrus* sp.) in pits **17246** and **17476** (Pit Group **17296**).

Sample No.		834	818	817	819	821	822	829	824	828	832	820	803
Context No.		17107	17263	17272	17284	17315	17347	17349	17413	17467	17492	17305	17059
Cut No.		17108	17261	17271	17285	17313	17346	17348	17412	17468	17493	17304	17057
Feature Type		Ditch terminus	Ditch	Pit	Ditch	Ditch	Pit	Pit	Ditch	Pit/hollow	Pit	Pit	Pit
Period		High Med	High Med	High Med	High Med	High Med	High Med	High Med	High Med	High Med	High Med	Med	Post-Med
Volume processed (L)		9	8	9	10	9	9	8	10	8	9	8	8
Flot volume (ml)		1	1	1	10	1	40	1	20	2	1	15	1
Cereals													
<i>Avena</i> sp. caryopsis	Oats [wild or cultivated]											12	
<i>Hordeum vulgare</i> L. caryopsis	domesticated Barley grain							1	8	2		1	3
<i>Secale cereale</i> L. caryopsis	Rye grain								1			2	
free-threshing <i>Triticum</i> sp. Caryopsis	free-threshing Wheat grain								1			1	2
cereal indet. caryopsis	indeterminate								5		1	4	3

Sample No.		834	818	817	819	821	822	829	824	828	832	820	803
Legumes													
small Vicia/Lathyrus sp. [<2mm] seed	small-seeded Vetches/Peas /Garden Peas						1						
medium Vicia/Lathyrus sp. [2-4mm] seed	medium- seeded Vetches/Peas /Garden Peas								2		1		
large Vicia/Lathyrus/ Pisum sp. [>4mm] seed	large-seeded Vetches/Peas /Garden Peas								3	1			
Dry land herbs													
<i>Anthemis cotula</i> L. seed	Stinking Chamomile											1	
<i>Bromus</i> sp. caryopsis	Bromes				1							1	
<i>Fallopia convolvulus</i> (L.) Á. Löve achene	Black- bindweed												1
<i>Galium aparine</i> L. nutlet	Cleavers												1
<i>Raphanus raphanistrum</i> ssp. <i>raphanistrum</i> L. mericarp	Wild Radish seed-case segment											2	
<i>Silene</i> sp. Seed	Campions											1	
Other plant macrofossils													
Estimated Charcoal volume (ml)		1	<1	1	1	0	20	<1	50	1	1	1	25

Table 108: Area 17 Environmental Samples from early medieval features

Cut No.	Context No.	Sample No.	Feature Type	Volume processed (L)	Flot volume (ml)	Legumes	Estimated Charcoal volume (ml)
17027	17028	800	Pit	9	1		0
17051	17052	801	Pit	7	20		80
17053	17054	802	Pit	8	40		120
17074	17075	808	Pit	8	1		110
17135	17136	811	Pit	9	2		80
17246	17249	816	Pit	8	5	#	2
17332	17333	823	Ditch	7	1		0
17428	17430	827	Pit	9	1		<1
17441	17442	826	Pit	7	180		460
17473	17474	830	Pit	8	1		0
17476	17478	831	Pit	9	1	#	<1

Table 109: Area 17 Environmental Samples from late medieval features

5.19 Area 18 (ENF139711)

5.19.1 Area 18 (Fig. 19) was located south of Low Road, either side of a trackway leading to Smee Lane in the parish of Great and Little Plumstead (TG 28898 10029). A total of 0.53ha was stripped, revealing a number of late medieval and post-medieval boundaries, extraction pits and evidence of industrial activity.

Period 1: Neolithic

- 5.19.2 A total of two pits and a sizeable tree throw were excavated that were found to contain Early Neolithic pottery and flintwork – a group of other smaller pits are also possibly Neolithic/prehistoric though no datable finds were recovered. Three throw **18122** was located against the eastern baulk, measuring 3.4m long, 2.85m wide and was irregular in plan and profile, with a maximum depth of 0.92m. The fill was found to contain 10 sherds of Early Neolithic pottery (128g) and 98g of worked flint.
- 5.19.3 Pit **18060** was directly east of ditch **18009** in the eastern half of the excavation area, measuring 1.26m long, 0.9m wide and 0.25m deep. A single sherd (6g) of Early Neolithic pottery and 7g of worked flint were recovered from the fill.
- 5.19.4 Pit Group **18034** consisted of five pits within the southern limit of the eastern excavation area, **18104** was larger than the other pit in the group, measuring 1.88m in diameter and 0.64m deep. A total of 41 sherds (268g) of Early Neolithic pottery and 313g of worked flint was recovered from the fills. A total of 13g of worked flint was also recovered from one of the other pits in the group, all of which measured between 0.5m and 0.98m in diameter and 0.08m to 0.24m deep. The fills were charcoal rich and they were interpreted on site as small prehistoric fire-pits.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Worked Flint (Frag)</i>	<i>Burnt Flint (g)</i>
18034	Pit Group	41/268	9	5
18060	Pit	1/6	1	
18122	Tree Throw	10/128	8	

Table 110: Area 18, Finds from Neolithic features

Period 6.2: High Medieval

- 5.19.5 High medieval activity was recorded in the southern half of the western excavation area, consisting of two groups of extraction pits (Pit Groups **18001** and **18100**). Pit Group **18001** measured 18.3m long by 6.7m wide, consisting of at least eight pits, with a maximum depth of 1m. A total of 183 sherds (2100g) of medieval to late medieval pottery was recovered from the fills as well as 25g of ceramic building material and 1094g of lava quern.
- 5.19.6 Pit Group **18100** was at least 12.3m long, 8.3m wide and consisted of at least 6 pits, with a maximum depth of 0.41m. A total of 375g (36 sherds) of 14th to 15th century pottery was recovered from the fills along with 10g of residual flint. Interestingly, nine lead objects were also recovered from the backfill of the pit group (SF's 851 to 860), three of which are identified as spindle whorls and the other being quite amorphous and difficult to identify. A fragmentary silver coin was also recovered (SF854)

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag.)	Burnt Flint (g)	Other Finds
18001	Pit Group	183/2100	25	2		Lava quern (1094g)
18100	Pit Group	36/375		1		Lead objects (9)

Table 111: Area 18, finds from high medieval features

Period 6.3: Late Medieval

- 5.19.7 The majority of late medieval features consisted of boundary ditches forming field systems, though one group of pits with a possible windbreak were recorded within the western excavation area.
- 5.19.8 The boundary ditches (**18056** and Ditch Group **18005**) were located within the northern half of the excavation areas and formed parts of a late medieval field system. Few finds were recovered from the features, with 2g of residual Saxon pottery, 1g of ceramic building material and 13g of animal bone being recovered from Ditch Group **18005**. Ditch **18056** contained one sherd (60g) of late medieval pottery and a fragment of worked stone.
- 5.19.9 Pit Group **18031** consisted of four postholes, overlain by a spread of midden-like material within a shallow pit or hollow, with an associated curvilinear gully directly north-west (**18048**). The four postholes and curvilinear gully did not contain any finds, but the fill of the hollow overlying the postholes contained three sherds (93g) of late 14th to 15th century pottery, 2865g of lava quern and 71g of fired clay along with a silver long-cross penny (SF850).

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frag./g)	Burnt Flint (g)	Enviro. results	Other Finds
18005	Ditch Group	1/2	1				
18031	Pit Group	3/93	71			Barley grains, chaff	Silver penny, lava quern (2865g)
18056	Ditch	1/60					

Table 112: Area 18, Finds from late medieval features

Period 7: Post-Medieval

- 5.19.10 Post-medieval ditches and a large pit or pond were recorded in the eastern half of the excavation. Ditch **18009** ran along the edge of the trackway that split the site in half, and ditches **18025**, **18052** and **18109** were roughly east to west alignment at the southern end of the excavation, two of which were truncated by pond **18071** and the other (**18025**) terminating just prior to the pond. A total of 1014g of animal bone was recovered from ditch **18109** and a total of 87g (7 sherds) of late 14th to 18th century pottery, 343g of ceramic building material and 17g of animal bone was recovered from all four post-medieval ditches.
- 5.19.11 Pond **18071** was at least 15m in diameter and 0.4m deep, which only contained a 2g sherd of not closely datable pottery, though stratigraphically the feature was clearly post-medieval. The feature continued underneath the trackway left running through the centre of the site.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Enviro. results	Other Finds
18009	Ditch	4/9	257		
18025	Ditch				
18052	Ditch	1/15	86		
18071	Pond?	1/2			
18109	Ditch	1/2			horse bone (1041g)

Table 113: Area 18, finds from post-medieval features

Finds Reports

Prehistoric Pottery

5.19.12 Area 18 produced a quantity of Earlier Neolithic Plain Bowl (Table 114). The assemblage includes rims from three ledge-shouldered, bag-shaped vessels all in flint-tempered fabrics. One rim is externally thickened, one rolled and one finely beaded. The interior of one bowl is reduced or slipped leaving a fine black surface and the exteriors of all the bowls have been burnished. The assemblage compares well to local Earlier Neolithic pottery from Eaton Heath and Laurel Farm (Wainwright 1972, Percival 2003).

Group	Feature	Feature type	Spot date	Vessel type	Quantity	Weight (g)	No. of vessels
	18060	Pit	Earlier Neolithic		1	6	
	18122	Natural	Earlier Neolithic	Bowl	10	128	1
PG18034	18104	Pit	Earlier Neolithic	Bowl	4	23	2
					37	245	
Total					52	402	3

Table 114: Area 18 Prehistoric pottery

Post-Roman Pottery

5.19.13 Table 115 shows the quantities by fabric found in Area 18. A further 17 sherds were recovered from this area (Field G7) during the evaluation (Anderson 2015a).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early Saxon medium sandy	ESMS	ESax	1	1		1
Thetford-type ware	THET	10th-11th	1	5		1
Early medieval ware	EMW	11th-12th	2	2		2
Local medieval unglazed	LMU	11th-14th	25	240	0.15	8
Medieval coarseware 1	MCW1	12th-14th	13	135	0.09	6
Medieval coarseware 2	MCW2	12th-14th	2	14		2
Medieval coarseware 3	MCW3	12th-14th	70	836		3
Medieval coarseware 4	MCW4	12th-14th	2	23		1
Medieval coarseware 5	MCW5	12th-14th	15	366	0.09	8
Medieval coarseware 6	MCW6	12th-14th	12	104		4
Grimston-type ware	GRIM	L. 12th-14th	7	197		6
Heddingham Ware	HFW1	M. 12th-M. 13th	1	13		1
Unprovenanced glazed 1	UPG1	Med	2	3		1
Unprovenanced glazed 2	UPG2	Med	2	19		2
Gritty Rhenish stoneware	RHSW	13th-14th	1	21		1
Late Grimston-type ware	GRIL	14th-15th	3	72		1
Late medieval and transitional, gritty	LMTG	M. 14th-15th	54	312		1
Siegburg Stoneware	GSW1	E. 14th-17th	2	31		1
Langerwehe Stoneware	GSW2	L. 14th-15th	3	93		2

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Late medieval and transitional	LMT	15th-16th	15	132		3
Glazed red earthenware	GRE	16th-18th	1	16		1
Staffordshire-type Slipware	STAF	L.17th-18th	2	7		1
Unidentified	UNID		1	1		1
Totals			237	2643	0.33	58

Table 115: Area 18 Post-Roman Pottery

5.19.14 Although the assemblage is relatively large in terms of sherd count, the number of vessels represented is fairly small. This is mainly due to the presence of several sherds of three vessels, an MCW jug (68 sherds), an LMU bowl (18 sherds) and an LMTG jug (54 sherds). Medieval pottery is more common than early or late medieval, but there is still a significant proportion of the latter, and like Area 17 this area seems to have been most active in the 13th to 15th centuries. Jugs and bowls were the most frequent identifiable vessels, and German stonewares the most common imports, with only early examples present.

5.19.15 The majority of pottery in this area came from large pit groups **18001** and **18100** to the west of the site.

Small Finds

5.19.16 There were four fragments of ironwork, four of silver (representing two coins), and 13 of lead from this site. The ironwork is in poor condition, whilst one of the two coins is in good condition and the other fragmentary, and the lead in fair to good condition. All of the artefacts are stratified, most coming from context 18065 (Pit Group **18100**).

5.19.17 There are three nails (SF 862) from pit/pond **18071**, all are undiagnostic shaft fragments. A large, badly corroded object (SF 861) from ditch **18052** (fill 18050) is probably a relatively recent washer or fragment of modern agricultural equipment.

5.19.18 One of the two silver coins (SF 850) from pit **18031** (fill 18032) has been provisionally identified as a long cross penny, probably of Edward I's 'New' coinage, issued from 1279 onwards. The other coin (SF 854) will require cleaning and conservation before identification can be attempted.

5.19.19 All of the lead items are from pit **18064** (fill 18065) in pit group 18100. Most are amorphous fragments (SF 856, SF 859, SF 860) or small drips of solidified molten lead (SF 855, SF 857, SF 858), but there are three small spindle whorls (SF 851-SF 853), two sub-conical and one closer to bun-shaped. Although widely used through the medieval period, these items cannot be closely dated.

Area	Context	SF no	Material	Description
18	18050	861	Iron	Large ?washer obscured by corrosion products (Diam: c 50mm)
18	18072	862	Iron	Three nails, all shaft only fragments (L: c 43mm; c 42mm; c 32mm)
18	18065	854	Silver	Complete but fragmentary coin, in three pieces
18	18032	850	Silver	Long cross penny, probably Edward I 'New Coinage' after 1279
18	18065	851	Lead	Cast sub-conical spindle whorl. (Diam: 22mm; Ht: 10mm)
18	18065	852	Lead	Cast low bun-shaped spindle whorl. (Diam: 22mm; Ht: 7mm)
18	18065	853	Lead	Cast sub-conical spindle whorl (Diam: 17mm; Ht: 12mm)
18	18065	855	Lead	Solidified spill? (L: 24mm)
18	18065	856	Lead	Rectangular fragment. (L: 30mm)
18	18065	857	Lead	Small solidified spills. No relevant dimensions
18	18065	858	Lead	Solidified spill? (L: 35mm)
18	18065	859	Lead	Fragment of twisted sheet. (L: 38mm)
18	18065	860	Lead	Roughly rectangular cast fragment. (L: 67mm)

Table 116: Area 18 Small Finds

Ceramic Building Material

- 5.19.20 A small largely undiagnostic assemblage of CBM was recovered from Area 18 (7 fragments, 369g). This assemblage is fragmentary and abraded and not archaeologically informative. A piece of medieval-post-medieval flat tile (254g) was collected from ditch **18017**. This material is related to the CBM collected from the field system in Area 17, by fabric and preservation. It presents little more than background noise in the agricultural landscape.

Fired Clay

- 5.19.21 A small assemblage of fired clay (29 fragments, 154g) was collected from Area 18. Pit **18031** produced amorphous (10, 29g) and structural (2, 39g) fragments. The latter comprises two small hand squeezed objects each with a single anomalous edge. This edge suggests they were squeezed up against a surface as a prop, commonly but not solely used for supporting salt pans. Ditch **18052** produced a single amorphous fragment (10g). Pit **18053** produced structural fragments that were probably part of a floor or lining. These fragments each have a greyish flattened surface and a rounded orange surface suggesting a single firing direction. Whilst the prop and lining suggest the presence of domestic or light industrial activities there is little more to be said about the assemblage.

Lithics

- 5.19.22 The excavations in Area 18 resulted in the recovery of 23 struck flints and a single fragment of unworked burnt flint (Table 117).

	Decortication flake	Decortication blade	Flake	Blade-like flake	Prismatic blade	Retouched implement	Core	Conchoidal chunk	Total Struck	Burnt Stone (no.)	Burnt Stone (wt.g)
Tree throw 18122	2		3		2	1			8		
Pit 18104		1	2		1	1	1		6		
Other pits	1	1	3	2	1			1	9	1	5
Total	3	2	8	2	4	2	1	1	23	1	5

Table 117: Composition of the Lithic Assemblage from Area 18

- 5.19.23 The largest quantities of struck flint came from tree throw **18122** which produced eight pieces from four different fills. These include a prismatic blade which can be dated to the Mesolithic or Early Neolithic periods and a well-made end-scraper which is probably Neolithic, but overall the assemblage appears to be of mixed date. A range of different raw materials is represented and most pieces are in a fairly chipped and abraded condition, indicating that most, if not all, of the pieces were residually deposited.
- 5.19.24 Pit **18104** contained six struck pieces which also includes a prismatic blade, a single platform narrow flake core and a denticulated scraper. The condition of the pieces from this feature is generally good and, if they are all contemporary, most probably date to the Early Neolithic. Some if the other pits in this area also contained struck flint of Mesolithic or Early Neolithic date although all the pit assemblages are very small and the possibility that they are residually deposited cannot be excluded.

Other Worked Stone

- 5.19.25 A total of 14 fragments of lava quern was recovered from three contexts. These were mostly larger than fragments from other areas. A large thick fragment was found in pit

18001 (18002) along with seven other pieces. Two adjoining fragments with a grooved face and two other fragments were found in gully **18029** (18030) whilst two adjoining fragments with segmented grooving were found in pit **18031** (18032). These measure over 52cm diameter and are therefore likely to be from a millstone. All are likely to be medieval in date in keeping with most of the activity in this area. It is possible, perhaps even likely, that all the lava fragments from this area are in fact from millstones, rather than rotary querns, although the lava fragments from the NDR excavations are, without exception, too small for their diameter to be determined. Watermills were numerous during medieval times in and around Norwich, at (for example) Horsham St Faith, in between Areas 6 and 7, Taverham on the River Wensum, to the south of Areas 1 and 3, Hellesdon to the south of Areas 5 and 6 and in the centre of Norwich at New Mills.

Ctxt	Ctxt Type	Function	Notes	Size	Wt (g)
18002	Fill of pit 18001	Rotary quern fragments	Larger thick fragment, cannot determine diameter	Measures 60mm thick	430
18002	Fill of pit 18001	Rotary quern fragments	three larger fragments and four smaller ones		668
18030	Fill of gully 18029	Rotary quern fragments	One large, one tiny. Larger one has flat faces, both flat, one pecked and one roughly worked	Measures 29mm thick	565
18030	Fill of gully 18029	Rotary quern fragments	two adjoining fragments. One grooved face, probably grinding surface but could be edge as surviving fragments together are roughly cube shaped	Measures 40mm thick	192
18032	Fill of pit 18031	probable millstone fragments	Two adjoining fragments of flat stone with slightly curved segmented radial grooves on one face and roughly worked on flat base. One section of the larger fragment is heavily blackened from burning	Measures >520mm diameter x 34mm	2118

Table 118: Area 18 Worked Stone

Environmental Reports

Faunal Remains

- 5.19.26 No zones from Serjeantson (1996) are present and there is no fusion evidence. From fill 18051 (ditch **18052**) there is a fragmentary *Equus* sp mandible. This specimen undoubtedly accounts for the majority of the fragment count from the area, although extensive refitting has not been attempted. The median part of the mandible, parts of both “angles” (the left largely complete), one loose condyle and much of the right hand side tooth-row are present. A fractured loose right hand side premolar (P2) refits into its alveolus. The left hand side is more fragmentary but loose four teeth (including part of the P2 and an undamaged M3 clearly relate to this side). Identification to the level of horse, donkey, mule is problematic but the tooth occlusal surfaces are a source of evidence. Here, some of the tooth occlusal surfaces are characterised by deep ectoflexids which tentatively indicates that this Equid mandible is more probably from horse rather than donkey.
- 5.19.27 Cattle teeth from Area 18 include a first and second mandibular molar in a fragmentary condition. The latter according to advanced occlusal wear stages, may have come from a “senile” animal following the terminology of Halstead (1992). However both teeth, and many other fragments are in a poor state and with the horse excluded they average “Grade 4”, meaning “All of the bone surface affected by erosive action (in this case predominantly root activity); general profile maintained and depth of modification not uniform across whole surfaces” (Brickley and McKinley 2004, 16).

Species/context	Total frags	Mand rows	Loose mand teeth	Max rows	Loose max teeth	Serjeantson	Fusion	Meas specimens
cattle	6	0	2	0	0	0	0	0
18016	6	0	2	0	0	0	0	0
horse	40	2	5	0	0	0	0	1
18051	40	2	5	0	0	0	0	1
large	1	0	0	0	0	0	0	0
18018	1	0	0	0	0	0	0	0
med/large mammal	3	0	0	0	0	0	0	0
18012	1	0	0	0	0	0	0	0
18016	2	0	0	0	0	0	0	0
Grand Total	50	2	7	0	0	0	0	1

Table 119: Totals by context of mandibles, maxillae, loose teeth and of specimens with least one zone counted by Serjeantson (1996) (not a zone count), numbers of specimens bearing fusion evidence and numbers of measurable specimens. Mand= mandibular, Max= maxillary, Meas=measurable.

Species/context	Total frags	Complete	Butchered	Gnawed	Root etched	Burnt	Average of Condition
cattle	6	0	0	0	0	0	4
18016	6	0	0	0	0	0	4
horse	40	0	0	0	0	0	3
18051	40	0	0	0	0	0	3
large	1	0	0	0	1	0	4
18018	1	0	0	0	1	0	4
med/large mammal	3	0	0	0	0	0	4
18012	1	0	0	0	0	0	4
18016	2	0	0	0	0	0	4
Grand Total	50	0	0	0	1	0	3.8

Table 120: Area 18: Totals noted of taphonomic states. The horse (mandible), although fragmented is represented by some large fragments with reasonable surface preservation (at "Grade 3" following Brickley and McKinley, 2004). Other fragments are in a poor state that limits their zooarchaeological potential.

Environmental Samples

5.19.28 The most productive sample from Area 18 was taken from fill 18032 of a high medieval, possibly natural depression (**18031**) which contains 21 barley grains and three barley chaff fragments along with seeds of stinking mayweed (*Anthemis cotula*), wild radish (*Raphanus raphanistrum* ssp. *raphanistrum*) and cornflower-type (*Centaurea* sp.) plants that were most probably associated with the barley crop. The prehistoric and post-medieval pit fills from this area were unproductive.

Sample No.	853	855	851	852	850	854	856
Context No.	18062, 18063	18107	18054	18055	18032	18098	18117
Cut No.	18060	18104	18053	18053	18031	18087	18116
Feature Type	Pit	Pit	Pit	Pit	Natural	Pit	Pit

Sample No.		853	855	851	852	850	854	856
						hollow?		
PHASE		PH	PH			LM	HM	HM
Volume processed (L)		7	8	7	6	9	7	8
Flot volume (ml)		1	1	1	1	80	1	1
Cereals								
<i>Hordeum vulgare</i> L. caryopsis	domesticated Barley grain					21		
<i>Hordeum vulgare</i> L. chaff	domesticated Barley chaff					3		
<i>Triticum</i> sp. caryopsis	Wheat grain						1	
Dry land herbs								
<i>Anthemis cotula</i> L. seed	Stinking Chamomile					1		
<i>Centaurea</i> sp. Seed	Cornflowers					2		
<i>Polygonum</i> sp. Achene	Goosefoots							
<i>Raphanus raphanistrum</i> ssp. <i>raphanistrum</i> L. mericarp	Wild Radish seed-case segment			1		1		
<i>Rumex</i> sp. achene	small-seeded Docks					2		
Estimated Charcoal volume (ml)		1	1	<1	5	425	<1	<1

Table 121: Area 18 Environmental Samples

5.20 Area 19 (ENF139712)

5.20.1 Area 19 (Fig. 20) was located south of Smee Lane in the parish of Great and Little Plumstead (TG 29197 09534). A total of 1.724ha was stripped, revealing a number of Neolithic pits and tree throws, a possible Bronze Age field system and high medieval roadside activity that consisted of enclosure ditches and pits.

Period 1: Neolithic

- 5.20.2 Pit Group **19400** consisted of 8 pits and tree throws located near the western baulk of the site, west and south of ditch **19061**. In total, two of the pits contained Earlier Neolithic pottery and five had small assemblages of Neolithic worked flint.
- 5.20.3 Pit Group **19432** was located south-east of Pit Group **19400**, consisting of 21 pits and tree throws, all located within the southern half of the excavation area, south of enclosure **19106**. Many of the pits contained worked flint and one contained Neolithic pottery. One feature of note in the group was tree throw **19412**, directly east of ditch **19347**. This feature contained a substantial assemblage (118 fragments) of relatively fresh struck flint. Two features within the group were found to contain 2 sherds (4g) of intrusive medieval pottery.
- 5.20.4 Pit **19232** and tree throw **19139** were located near the northern baulk of the excavation area and contained some of the most impressive prehistoric finds. Pit **19232** contained a complete Late Neolithic/Early Bronze age bowl. Tree throw **19139** contained the second largest flint assemblage from all undertaken excavations along the route, consisting of 281 struck flints that provide evidence for the manufacture of bifacial core implements, probably axes.
- 5.20.5 Pit Group **19055** consisted of four small pits within the north-east portion of the excavation area. In total, three sherds of Late Neolithic to Early Bronze Age pottery and 48 worked flints were recovered from the pits.
- 5.20.6 Numerous other ungrouped pits and tree throws were located within the southern half of the excavation area and were undated, although probably prehistoric in date.

<i>Feature No</i>	<i>Feature Type</i>	<i>Pottery, sherds/g</i>	<i>Fired Clay/CBM (g)</i>	<i>Worked Flint (Frgs.)</i>	<i>Burnt Flint (g)</i>	<i>Other Finds</i>
Pit Group 19055	Pit Group	3/20		48		
19139	Pit			281		
19232	Pit	14/184				
Pit Group 19400	Pit Group	11/101		109		
Pit Group 19432	Pit Group	10/37		166	360	

Table 122: Area 19, finds from Neolithic features

Period 2: Bronze Age

- 5.20.7 Ditches **19242**, **19247**, **19315** and **19347** were located in the southern half of the excavation area, forming a field system on an east-north-east to west-south-west axis. Ditches **19315** and **19242** ran off ditch **19247** towards Smee Lane to the north. Ditch **19242** was truncated by the high medieval activity to the north. All of the ditches had leached, sterile fills with no finds that could aid in dating apart from a small assemblage of Bronze Age flintwork from **19242**. Ditches **19319** and **19431** were located south of **19247** and on a slightly different east to west alignment. Interestingly, both ditches turned just prior to terminating adjacent to each other, forming a bend in the boundary. A total of four worked flints of mixed date were recovered from the ditches. The fact that

the field system did not align with any of the high medieval features, the ditches have tentatively been dated to the Bronze Age.

- 5.20.8 Similarly, Posthole Group **19234** had no dating evidence apart from two Bronze Age flints. This group of five postholes was located east of ditch **19242** and on the same north-north-west to south-south-east alignment so it has therefore been assigned to the Bronze Age period.

Period 6.2: High Medieval

- 5.20.9 A significant proportion of the archaeology on Area 19 related to a high medieval enclosure that fronted onto Smee Lane to the north and associated pitting and domestic activity.

Ditches

- 5.20.10 The main high medieval feature within the excavation was Enclosure **19106**. This consisted of a main enclosure formed by multiple phases of recut ditches that created an enclosure with an internal area of approximately 3790 square metres. Numerous ditches were located within this enclosure forming smaller sub-divisions. A total of 100g of late 11th to 15th century pottery and a small assemblage of worked flint was recovered from the features forming the enclosure.
- 5.20.11 Another enclosure (**19061**) was attached to the western side of the Enclosure **19106** and had a smaller internal area of approximately 1203 square metres. Again, this enclosure had an internal ditch forming smaller sub-divisions. A small (147g) assemblage of 11th to 14th century pottery and a number of residual worked flints was recovered from the ditches.
- 5.20.12 Ditches **19022** were located in the north-west corner of the excavation area and appeared to form a small truncated enclosure. A total of 2 sherds (89g) of 13th century pottery was recovered from the features.

Pits

- 5.20.13 Pit **19073** was found near the northern limit of the excavation, within Enclosure **19106**. The pit was 2.2m in diameter and 0.74m deep with a U-shaped profile. A total of 3 sherds (10g) of late 12th to 14th century pottery was recovered from the fill along with residual worked flints.
- 5.20.14 Pit Group **19050** consisted of 12 pits of varying sizes, many of which had an unknown function, though some were interpreted as extraction pits. The group was located in the north-east corner of the excavation area, close to the eastern limit of excavation and straddled either side of the north to south arm of enclosure **19106**. A moderate assemblage (989g) of generally 12th to 14th century pottery was recovered from the pits.
- 5.20.15 Located against the north-eastern baulk, Pit Group **19040** was a cluster of intercutting pits or a possible pond that was found to only contain a single 3g sherd of late 11th to 14th century pottery.
- 5.20.16 Pit Group **19255** is likely to be high medieval in date, though only 4 sherds (20g) of 11th to 14th century pottery were recovered from the 11 pits that make up the group. They were found within Enclosure **19106** and varied in form and function, although many are likely to relate to medieval backyard activity.
- 5.20.17 There were many other currently ungrouped pits within the area that provide possible evidence of high medieval backyard activity, such as pit **19331**, located in the nor-

western part of the excavation, within Enclosure **19061**. This pit contained a degraded copper alloy strap end (SF911), 2 sherds of 13th to 14th century pottery, a fragment of green glazed roof tile and a single worked flint.

Feature No	Feature Type	Pottery, sherds/g	Fired Clay/CBM (g)	Worked Flint (Frgs.)	Burnt Flint (g)	Other Finds
19022	Ditches	2/89		1		
19040	Pit Group	1/3				
19050	Pit Group	87/989		7		
19061	Enclosure	7/100				
19073	Pit	3/10		5	20	
19106	Enclosure	12/147				
19255	Pit Group	4/20				
19331	Pit	2/36	253	1		CuAl Strap end (SF911)

Table 123: Area 19, Finds from high medieval features

Finds Reports

Prehistoric Pottery

- 5.20.18 The assemblage from Area 19 includes 21 sherds of Earlier Neolithic Plain Bowl including rims from two vessels, three sherds, 20g, of Later Neolithic Early Bronze Age Beaker and a single Iron Age sherd (Table 124). In addition a complete vessel, probably contemporary with the Beaker pottery was recovered from pit **19232**.
- 5.20.19 The Earlier Neolithic assemblage contains at least two Plain Bowls in a mix of coarse and fine flint-tempered fabrics. One vessel has a rolled rim; the second rim is pointed and everted. Many of the sherds have burnishing to the exterior. The assemblage is comparable to the Earlier Neolithic pottery found at John Innes Centre Colney (Percival 2003). The Earlier Neolithic pottery is found in pits from Pit Groups **19400** and **19432**.
- 5.20.20 The Beaker assemblage comprises three sherds 20g from pit **19063** (Pit Group **19055**). These are made of sandy fabric with sparse flint and include impressed and fingernail impressed body sherds. The complete bowl, found in pit **19232** is made of sandy fabric with grog and sparse small flint and is similar to a series of Later Neolithic bowls found at Grimes Graves associated with Grooved Ware pottery (Longworth *et al.* 1988, fig.5, N35). A similar bowl was also found at Flixton in Suffolk associated with Beaker pot (S. Boulter pers. comm.).

Group	Feature	Feature type	Spot date	Vessel type	Quantity	Weight (g)	No. of vessels
	19006	Pit	Iron Age		1	10	
	19315	Ditch	Not closely datable		1	2	
PG19055	19063	Pit	Later Neolithic Early Bronze Age	Beaker	3	20	
PG19255	19232	Pit	Later Neolithic Early Bronze Age	Bowl	1	184	1
PG19400	19332	Pit	Earlier Neolithic	Bowl	3	45	1
			Earlier Neolithic		7	40	
	19364	Pit	Earlier Neolithic		1	16	
PG19432	19432	Pit	Earlier Neolithic	Bowl	4	17	1
			Earlier Neolithic		6	20	
Total					27	354	3

Table 124: Area 19 Prehistoric Pottery

Post-Roman Pottery

5.20.21 The largest group of Post-Roman pottery was recovered from Area 19, as shown in Table 125 A further 38 sherds were recovered from this area (Field P1) during the evaluation (Anderson 2015a).

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Early medieval ware	EMW	11th-12th	25	122		23
Local medieval unglazed	LMU	11th-14th	199	1176	0.66	36
Medieval coarseware 1	MCW1	12th-14th	35	235	0.14	24
Medieval coarseware 2	MCW2	12th-14th	76	404	0.13	31
Medieval coarseware 3	MCW3	12th-14th	104	941	0.98	58
Medieval coarseware 4	MCW4	12th-14th	13	79		4
Medieval coarseware 5	MCW5	12th-14th	6	29	0.05	6
Medieval coarseware gritty	MCWG	L.11th-13th?	1	18		1
Grimston-type ware	GRIM	L.12th-14th	18	297	0.66	10
Scarborough Phase I	SCAR1	M./L.12th-E.13th	1	52		1
Unprovenanced glazed 1	UPG1	Med	37	478		10
Unprovenanced glazed 2	UPG2	Med	1	3		1
Unprovenanced glazed 3	UPG3	Med	5	22	0.14	4
Saintonge ware	SAIN	12th-13th	1	14		1
Yarmouth-type glazed wares	YARG	13th-15th	9	40		5
Langerwehe Stoneware	GSW2	L.14th-15th	3	32		1
Late medieval and transitional	LMT	15th-16th	11	84	0.08	6
Glazed red earthenware	GRE	16th-18th	1	1		1
Late slipped redware	LSRW	18th-19th	1	19		1
Unidentified	UNID		3	11		2
Totals			550	4057	2.84	226

Table 125: Area 19 Post-Roman pottery

5.20.22 The majority of pottery in this large assemblage was of high medieval date, dominated by LMU and MCW3 in particular, with high proportions of other coarsewares and Grimston/UPG1. This group was the most abraded of any of the areas, making identification of fabrics difficult. Identified vessels were largely jars, bowls and jugs. There were few simple early rim forms and the group was dominated by developed forms of 13th/14th-century date, but with less late medieval pottery than Areas 17 and 18.

Small Finds

- 5.20.23 Four fragments of ironwork were recovered together with three of copper alloy and seven of lead. The ironwork is in poor condition, with both the copper alloy and the lead in fair to good condition. Much of the lead is unstratified.
- 5.20.24 Nail fragments (SF 915, SF 916) were recovered from pit **19154** (fill 19155) and pit **19135** (fill 19136) respectively. Two small corroded lumps come from ditch **19285** (fill 19294), part of Enclosure **19106**.
- 5.20.25 A heavily corroded copper alloy strap end (SF 911) from pit **19331** (fill 19330) is possibly medieval in date, but the other two items of copper alloy are more recent, a plain shoe buckle (SF 903) and a domed button (SF 907) are both likely to be of mid 18th century or more recent date; both are unstratified.
- 5.20.26 All but one of the lead items are unstratified. SF 914, from context 19999 (unstrat) is a large cast fragment with a number of nail or screw holes. Its function is not obvious. The unstratified lead objects comprise two pot mends (SF 900, SF 904), a spindle whorl or perforated weight (SF 908), a fragment of cast round-sectioned wire (SF 902), and two solidified 'spills' of molten metal (SF 901, SF 905). None can be dated.

Area	Context	SF no	Material	Description
19	19155	915	Iron	Nail fragment. Shaft only (L: c 35mm)
19	19136	916	Iron	Joining fragments badly obscured hand-wrought nail (L: c 34mm)
19	19294	917	Iron	Two similarly-sized amorphous fragments (L: 27mm)
19	topsoil	903	Cu alloy	Plain shoe buckle with separate bar (now missing). (L: 47mm; WL 36mm)
19	19024	907	Cu alloy	Domed button with wire loop to rear. Cap is thin sheet, crimped on to rear plate. (Diam: 16mm)
19	19330	911	Cu alloy	Rectangular strap end, possibly embossed or incised. Two perforations at one end. (30mm; W: 14mm)
19	topsoil	900	Lead	Large but thin cast pot mend. (L: 53mm; W: 50mm; Th: 4mm)
19	topsoil	901	Lead	Small solidified spill (L: 11mm)
19	topsoil	902	Lead	Folded wire (L: 45mm)
19	topsoil	904	Lead	Small cast pot mend. (L: 24mm; W: 15mm; Th: 7mm)
19	topsoil	905	Lead	Angular 'lump' which appears to be a solidified spill (L: 37mm)
19	topsoil	908	Lead	Perforated disc, possibly spindle whorl or weight. (Diam 21mm)
19	19999	914	Lead	Large cast fragment, uneven, with a marked median ridge. (125mm)

Table 126: Area 19 Small Finds

Ceramic Building Material

- 5.20.27 A small assemblage of CBM was recovered from Area 19 (8 fragments, 1159g). Notably, pit **19331** produced a green glazed roof tile fragment which is dated to the medieval-late medieval period. A single fragment of flat tile was collected from the fill of natural feature **19271**. This CBM suggests the presence of medieval constructions in the vicinity. The glazed roof tile and tentative evidence of a cellar suggests investment in and significance of these structures.

Lithics

- 5.20.28 Area 19 produced a substantial lithic assemblage comprising 735 pieces of struck flint along with just over 0.6kg of unworked burnt flint. Two-thirds of the struck assemblage came from three individual features, pits **19332** and **19412**, and natural feature **19139**, with the latter alone providing 281 pieces (Table 127).

	Decortication flake	Decortication blade	Crested blade	Core rejuvenation flake	Chip <15mm	Flake	Blade-like flake	Prismatic blade	Non-prismatic blade	Flake fragment >15mm	Flake fragment <15mm	Retouched implement	Core	Conchoidal chunk	Shattered cobble	Total Struck	Burnt Stone (no.)	Burnt Stone (wt:g)
Natural Feature 19139 no.	30		2		18	150		7	7	51	16					281		
Natural Feature 19139 %	10.7		0.7		6.4	53.4		2.5	2.5	18.1	5.7					100		
Pit 19412 no.	8	3				52	9	16	9	4	4		2	9	2	118	4	68
Pit 19412 %	6.8	2.5				44.1	7.6	13.6	7.6	3.4	3.4		1.7	7.6	1.7	100		
Pit 19332 no.	5	1			8	27		8	13	8	11	12	1	3		97		
Pit 19432 no.						9	2	3	1	2		1				18		
Pit 19063 no.	3				5	5				3	1	3		1		21		
Ditch 19347no.	1					9	1			2						13		
Pit 19364					1	2	1			2			1			7		
Other Features no.	17	7	1	2	3	81	12	15	11	11	3	13	2	1	1	180	59	574
Other Features %	9.4	3.9	0.6	1.1	1.7	45.0	6.7	8.3	6.1	6.1	1.7	7.2	1.1	0.6	0.6	100		
Total no.	64	11	3	2	35	335	25	49	41	83	35	29	6	14	3	735	63	642
Total %	8.7	1.5	0.1	0.3	5	46	3	7	5.6	11.3	4.8	3.9	1	1.9	0.4	100		

Table 127: Composition of the Lithic Assemblage from NDR Area 19 (N.B. percentage figures are only given for assemblages containing in excess of 100 pieces)

- 5.20.29 Natural feature **19139** produced the largest assemblage from the site and the second largest from any single feature encountered during the investigations along the road scheme. The material is in a slightly variable condition but most pieces are good or even sharp. It is technologically homogeneous, representing the reduction of perhaps even a single nodule, and its essential integrity being demonstrated by the identification of at least two refitting sequences. Despite no end-products being present, it appears to represent the debris from the manufacture of bifacial core implements, most probably axes; it consists entirely of flakes along with a few blades with no cores or retouched pieces present. The raw materials used consist of large nodular cobbles of fine grained flint that is predominantly opaque grey but which becomes translucent black towards the edges. It is very similar to that used for axe manufacture at the Harford Park and Ride site to the south of Norwich (Bishop 2012) and it is possible that this type of flint was specifically selected for this purpose. Most elements in the manufacturing sequence are present, including large decortication flakes, core preparation and mass reduction flakes and many small, thin but wide 'shaping' and thinning flakes; but the preforms have been removed, probable for finishing elsewhere. The assemblage is easily contrasted with those from the other features; only a very few other flakes from the site could represent thinning or other bifacial reduction flakes. It appears that this assemblage represents the deliberately deposited waste from a limited number, and perhaps only a single, knapping episode, rather than material incorporated from wider spreads of debris.
- 5.20.30 The assemblage from pit **19412** in Pit Group **19432** also produced a substantial assemblage of struck flint and a small quantity of unworked burnt flint. It also contains refitting sequences and is in a good condition, the raw materials present suggesting it represents the reduction of as few as two different nodules; one of translucent dark brown flint with occasion small light yellow cherty patches, the other an opaque mid

brown flint with lighter speckling. Both have a thin unweathered cortex but also heavily recorticated ancient thermal (frost) scars. Most stages in the reduction sequence are present including decortication and core shaping flakes, but there are no retouched implements (although a few pieces do have edge damage possibly accruing from utilisation). Reduction was clearly geared towards blade production although the relative paucity of these suggests many may have been removed for use elsewhere. Along with the absence of retouched implements, this would suggest that the assemblage represents the production of cores and other pieces for use elsewhere, rather than activities associated with tool use that might be more settlement orientated.

- 5.20.31 Many of the others pits within the same Pit Group as pit **19412** also contained struck flint. The next largest assemblage comes from pit **19432** (Pit Group **19432**) which produced 18 pieces that are technologically comparable to those from **19412**. These are also geared towards the production of blades from a small number of cores, and are also in a mostly good if slightly variable condition. The only retouch implement present is a backed blade. The other pits in the group produced small numbers or single pieces of struck flint, much of which is of a broadly similar Neolithic date but others contain thicker flakes that could be later in date, and the small sizes of the assemblages could indicate their residual incorporation from surface scatters or middens.
- 5.20.32 Pit **19332** of Pit Group **19400** also contained a large assemblage that is in a variable but predominantly good condition, although a few pieces have been burnt and four seemingly unworked burnt flints were also recovered. The struck assemblage is technologically homogeneous and represents the reduction of a limited number of cores, perhaps only one. The flint used is translucent black and interspersed with irregular opaque grey cherty patches and has a thin but rough cortex and frequent thermal (frost) surfaces. All stages in the reduction sequence are presented, from the decortication of raw materials through to the manufacture, use and discard of tools, of which there are a high proportion. These mostly comprise lightly retouched narrow flakes that were probably used as cutting implements, with one finely made scraper also present. The reduction strategy clearly focussed on the manufacture of blades but most are non-prismatic and few can be described as truly systematically produced. This would be more consistent with industries dating to the latter parts of the Neolithic and would also accord with the single core that was recovered. This is centripetally worked and has a large 'main' flake removed in a manner reminiscent of the 'Levallois' method. Four of the other pits in the same Pit Group as pit **19332** also contained struck flint although the only one with more than a single piece was pit **19364** which produced seven. This includes a single platform pyramidal blade core of Mesolithic or Early Neolithic date but the other pieces were all of different raw materials and their condition suggests they had all been residually deposited.
- 5.20.33 Pit **19063** of Pit Group **19050** contained 21 struck flints mostly comprising well struck flakes but also three scrapers, two of which are slightly 'nosed'. A few of the flakes may have been struck from the same core and the assemblage's condition is mostly good, suggesting it may have been selected from the debris generated during a limited number of knapping episodes. None of the assemblage is particularly diagnostic although a Later Neolithic or Early Bronze Age is perhaps the most likely date of manufacture.
- 5.20.34 Fill 19348 of ditch **19347** produced 13 struck flints that are mostly in a good condition and are technologically homogeneous, with similarities in the raw materials indicating they may have been produced during the reduction of a small number of cobbles. The

assemblage comprises all flakes with no retouched implements or cores present. The flakes are mostly thick and often rather crudely produced, suggesting a later prehistoric date, probably during the later Bronze Age or even Iron Age.

- 5.20.35 Just over 0.6kg of unworked burnt flint was recovered during the excavation of Area 19. This was found mostly in small quantities and scattered across a number of the pits and ditches with the only substantial amount, comprising 326g, came from **19387**, one of the same group as pit **19412**. This had been variably burnt and probably represents the dumping of hearth waste.

Other Worked Stone

- 5.20.36 A total of 23 lava rotary quern fragments was recovered from 3 contexts. Two from pit **19046** (19047, Pit Group **19050**) are flat and pecked, whilst the others are undiagnostic. Other activity on this site is of medieval date and it is thus likely that the querns are also of medieval date.

Ctxt	Ctxt Type	Function	Notes	Size	Wt
19047	Fill of pit 19046	Rotary quern fragments	2 fragments, flat and pecked on one side/roughly worked on the other	Measures 22m thick	474
19176	Fill of pit 19175	Rotary quern fragments	4 undiagnostic fragments		333
19294	Fill of ditch 19285	Rotary quern fragments	17 undiagnostic fragments		149

Table 128: Area 19 Worked Stone

Environmental Reports

Faunal Remains

- 5.20.37 A single unidentifiable large mammal fragment was recovered from solution hollow **19144**.

Environmental Samples

- 5.20.38 The samples from this area produced small flot volumes and a background scatter of occasional charred grains and pulses. Late Neolithic pit **19063** (Pit Group **19055**) also contained charred hazelnut shells which may indicate a collected wild food resource and is supports the prehistoric date.

Cut No.	Context No.	Sample No.	Period	Volume processed (L)	Flot volume (ml)	Cereal grains	Legumes	Corylus avellana L. shell	Estimated Charcoal volume (ml)
								Hazelnut shell	
19232	19233	913	PH	8	1				0
19232	19233	915	PH	1	1				<1
19331	19330	919	PH?	9	1	#			<1
19332	19334	920	PH	8	5				2
19364	19365	921	PH	8	15		#		5
19412	19415	924	PH	7	1				0
19063	19064	903		8	1	#		##	<1
19097	19098	904		1	1				<1
19402	19403	923		7	60				<1

Table 129: Area 19 Prehistoric Feature Samples

- 5.20.39 Medieval pits **19112** and **19123** (Pit Group **19040**) were unproductive. Solution hollow **19144** yielded untransformed elderberry seeds in the lower fill. These seeds are likely to be contemporary with the deposits as they are extremely durable and resistant to decay.
- 5.20.40 Undated pit **19152** (Pit Group **19050**) contains a similar assemblage which could indicate contemporaneity. Occasional wheat and barley grains were recovered from the high medieval deposits but not in any significant quantities.



Sample No.		906	907	900	901	902	905	909	910	911	912	914	916	917	918	922	925	908
Context No.		19110	19124	19007	19023	19056	19109	19150	19151	19185	19201	19236	19264	19268	19284	19203	19039	19153
Cut No.		19112	19123	19006	19022	19055	19108	19144	19183	19158	19200	19237	19263	19267	19283	19202	19037	19152
Period		EM	EM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM?	?
Feature Type		Pit	Pit	Pit	Pit	Pit	Gully	Pit	Ditch	Pit	Pit	Ditch	Ditch	Ditch	Ditch	Pit	Pit	Pit
Volume processed (L)		9	9	9	6	8	8	7	6	8	9	9	6	7	9	7	20	7
Flot volume (ml)		1	1	1	1	2	1	1	1	1	1	1	1	1	5	1	1	1
<i>Hordeum vulgare</i> L. caryopsis	domesticated Barley grain																	1
<i>Triticum</i> sp. Caryopsis	Wheat grain			1				1		1					3			
cereal indet. caryopsis	indeterminate				1										1			
medium <i>Vicia/Lathyrus</i> sp. [2-4mm] seed	medium-seeded Vetches/Peas/Garden Peas			2														1
<i>Sambucus nigra</i> L. seed	Elderberry							###u										###u
Estimated Charcoal volume (ml)		<1	<1	<1	<1	<1	<1	0	0	<1	<1	0	<1	<1	<1	0	0	<1

Table 130: Area 19 Medieval Samples

6 FACTUAL DATA AND ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

6.1 Structural Data

The Excavation Record

- 6.1.1 Quantification of site records appears in Summary of Results, above (Table 1). All hand written records have been collated and checked for internal consistency and transcribed onto an MS Access database. Contexts are assigned to a phase based on their stratigraphic and spatial relationships with dating provided where possible by the artefactual evidence. Site plans and relevant feature sections have been digitised in AutoCAD and Adobe Illustrator. Analysis of the stratigraphic evidence is important, as the finds assemblages are generally small and limited in their potential.

Finds and Environmental Quantification

- 6.1.2 A moderate assemblage of artefacts was recovered from the excavations along the route of the Norwich Northern Distributor Road Scheme, quantification of which is given in Table 131, below.

<i>Artefactual and environmental</i>	
Prehistoric Pottery (kg)	15.539
Roman Pottery (kg)	0.835
Post-Roman Pottery (kg)	20.09
Worked flint (kg)	28.656
Burnt flint (kg)	52.997
Ceramic building material (kg)	30.782
Fired Clay (kg)	12.001
Metalworking debris (kg)	44.765
Glass (kg)	0.777
Lava quern (kg)	14.513
Human Skeletal Remains (kg)	0.177
Animal bone (kg)	3.999
Samples (10L sample tub)	546

Table 131: Artefactual and Environmental Quantification

- 6.1.3 All finds have been washed, quantified and bagged or boxed. Environmental bulk samples were taken from features across the 19 sites to aid in retrieval of plant remains and provide information on the palaeoenvironment. Attention was given to any deposits where preservation of ecofacts was apparent.
- 6.1.4 Faunal and charred plant remains were poorly preserved on all areas, due to the acidity of the sand geology. Poor ecofactual evidence is due to this environmental condition as opposed to a lack of ecofact deposition during a features backfilling. Similarly, no pollen samples were taken from any areas, due to the poor soil conditions not allowing for pollen preservation.

Range and Variety

- 6.1.5 Features across the areas consisted of boundary and enclosure ditches, pits of various function, industrial features such as smelting furnaces, postholes relating to structures,

fence lines or alignments and natural features such as tree throws or solution hollows. Features varied in date from the Neolithic through to the modern period.

Condition

- 6.1.6 Very little subsoil was noted in the majority of areas, with only topsoil overlying the archaeological level. Modern agricultural activity had clearly impacted the archaeological level on many sites, with plough scarring visible at the machined level. Modern truncation had also occurred on Areas 5 and 11, where services had been installed prior to archaeological investigation, damaging archaeological features, particularly on Area 5. Areas were mostly dry, due to well draining sand geology,. Only Area 9 had standing water, which impacted on the ability to investigate the palaeochannel located within the centre of the site.

6.2 Documentary Research

- 6.2.1 Cartographic and documentary evidence will be consulted where appropriate, to place the sites, and route as a whole, into their context within the landscape.

6.3 Artefact Summaries

- 6.3.1 A detailed area by area statement of potential of the assemblages can be found in Volume 2, Appendix A. The potential of each assemblage is summarised below.

Prehistoric Pottery

Summary

- 6.3.2 A total of 1,293 sherds weighing 15,539g and including rims from 38 vessels were collected from sixteen of nineteen areas along the route. The pottery ranged in date from the Early Neolithic to Iron Age and exhibits many variations in form and fabrics.

Statement of Potential

- 6.3.3 The earlier prehistoric pottery from the route is of some interest, demonstrating the presence of Earlier Neolithic activity in Areas 3, 9, 18 and 19 to the east of Norwich. Finds of Plain Bowl are reasonably common around Norwich being found for example at Colney and Thorpe St Andrew (Whitmore 2004, Bishop *et al.* 2011). The small quantity of Grooved Ware from Areas 1 and 10 is unusual, rarely being found around Norwich. Later Neolithic/Early Bronze Age pottery, such as the Beaker pottery from Areas 1, 3, 9, 10, 17 and 19 are much more common finds within Norfolk and the Norwich Environs – all Beaker pottery recovered is domestic and typical of non-funerary assemblages.
- 6.3.4 The Middle Bronze Age pottery recovered from Areas 1, 3 and 5 (plus 1 sherd from Area 15) is the most important assemblage recovered during the excavations, as the period is relatively under-represented and comparisons to other known sites in Norfolk would be advantageous.

Roman Pottery

Summary

- 6.3.5 A total of 63 Roman pottery fragments, weighing 835g, were found from three excavated areas (3, 4 & 7). The assemblage was in a poor, very abraded condition.

Statement of Potential

- 6.3.6 Although a small, abraded assemblage in poor condition, the use of both local coarse wares and imported finewares inform on the lifestyles and trade networks adopted by the communities who deposited this material. The varying dates of the site assemblages highlight chronological differences within Roman activity along the length of the survey area. Because of the limited stratigraphic evidence from the features containing Roman pottery, there is very little potential in the assemblage.

Post-Roman Pottery

Summary

- 6.3.7 A total of 20.09kg (1905 sherds) of Post-Roman pottery was recovered from 297 contexts in sixteen of the nineteen excavated areas along the route. The majority of the pottery dates to the early and high medieval periods, but late medieval, post-medieval and modern pottery is also present.

Statement of Potential

- 6.3.8 Post-Roman pottery recovered from Areas 2A, 3, 4, 5, 7, 11, 13, 15 and 16 appears to be widely scattered and mostly of late date. It is likely to represent manuring activity and the deposition of night soil in the post-medieval and modern periods. The same may apply to some of the small and abraded sherds of medieval date which were also recovered from these areas.
- 6.3.9 The larger medieval assemblages were recovered from Areas 1, 9, 10, 12, 17, 18 and 19, which correspond with several of the larger groups recovered during the evaluation. It is noticeable that in most of these groups the number of sherds significantly outweighs the number of vessels represented, suggesting that larger sherds have been broken up *in situ* or nearby and have not moved far from their original place of deposition. This is more typical of settlement assemblages than material scattered across open fields. Any rural groups of medieval pottery from the county are valuable in adding to the corpus of data regarding fabrics and forms in use outside Norwich. Whilst the Norwich corpus is well-established, knowledge about the pottery made and used in its hinterland is still developing. The larger assemblages recovered during this project, and to some extent the stray finds, have potential to complement and add to recent work on excavated material from north and east Norfolk.

Small Finds

Summary

- 6.3.10 A relatively small group of metalwork and other finds were found during the excavations. A total of 80 iron, 29 copper alloy, 23 lead, 4 silver, 1 cupro-nickel and 1 ceramic small find were found from all sites. The silver and 8 copper alloy objects are coins and the majority of ironwork is structural in form, as is much of the lead. The remaining copper alloy objects are small, easily lost personal items.

Statement of Potential

- 6.3.11 Generally, the small assemblage has limited potential for aiding in the understanding of past land use across the excavated areas. The coins can help with dating of the sites, although in a limited manner as many are unstratified finds from the topsoil.

Ceramic Building Material

Summary

- 6.3.12 The excavations along the route produced 30782g, 208 fragments of ceramic building material from 14 areas. The assemblage is largely medieval to post-medieval in date with some Roman fragments found in some areas. Much of the CBM is fragmentary and abraded and cannot be closely dated.

Statement of Potential

- 6.3.13 Most areas have little potential for any informative analysis. Area 9, and by extension Area 10, have potential to provide an insight into the activities being conducted on Beeston Estate lands. There is evidence of significant structures and kiln/furnace work and therefore potential to characterise this area of the estate.
- 6.3.14 The majority of this CBM can be discarded, namely the undiagnostic fragments, those that are not closely datable and post-medieval fragments from all areas.

Fired Clay

Summary

- 6.3.15 A total of 413 fragments of fired clay (12001g) was recovered from 13 of the excavated areas. The assemblage comprises 213 amorphous pieces (1627g) and 200 structural fragments (10374g). Within the structural group there are diagnostic objects consisting mostly of loom weights, kiln furniture and possible briquetage.

Statement of Potential

- 6.3.16 Most areas have little potential for any informative analysis. There are however some areas whose assemblages that should be taken into account during further work to characterise and investigate those sites; namely, Area 1, 3, 5, 10, 11, 12, 17 and 18. The first few sites consist largely of fired clay that point towards production activities within a domestic/settlement setting including kiln furniture and loom weights typically associated with the Iron Age (Lyons, 2016; Poole, 1984)

Metalworking Waste

Summary

- 6.3.17 A total of 45kg of metalworking waste was collected from Areas 3, 9, 10, 11 and 17. The majority of the assemblage is tapping slag, with some hearth and furnace slag identified.

Statement of Potential

- 6.3.18 The evidence of early medieval metalworking across sites 9, 10 and 11 along with metalworking waste in a number of the medieval enclosures across sites is of interest. Further analysis may allow for characterising of the industrial activities being undertaken in the area.

Lithics

Summary

- 6.3.19 In total, 2286 struck flints, a ground stone implement and over 51kg of unworked burnt flint was recovered from the 19 excavation areas. The artefacts within the assemblage date from the Mesolithic through to the Bronze Age. Many are found residually in later features, although a small but important number of the assemblages were found *in situ*.

Statement of Potential

- 6.3.20 The assemblages indicate the widespread and, in some locations, intensive production and use of flint that in many respects concords with the high density of prehistoric occupation previously recorded throughout much of East Anglia. Much of this is likely to be residual material that had been casually discarded onto the surface and subsequently incorporated into the fills of later features. It represents a palimpsest of activities spanning many periods from at least the Early Neolithic and through to the later Bronze Age or Iron Age. The difficulties in assigning precise dates and the lack of contextual associations means that the interpretational value of the assemblages from the separate areas is limited. Nevertheless, taken together these assemblages do have the potential to provide important insights into the intensity and organisation of settlement and other activities across the varied sections of this landscape during the Neolithic and Bronze Age periods.
- 6.3.21 The assessment has also identified a number of significant assemblages from a variety of features with which they are at least broadly contemporary. Notable are a number of Neolithic pit and natural feature depositions identified at Areas 1, 3, 9, 12, 17, 18 and 19 which together can be considered as regionally important. Some of these contained substantial assemblages of lithic material, others include only relatively small numbers of pieces, but all have the potential to contribute considerably to understandings of landscape occupation, flintworking technologies and deposition practices.
- 6.3.22 Additionally, there are a number of later prehistoric assemblages that were recovered from enclosures, field-systems and settlement features in Areas 1, 3, 4 and 5. These can be regarded as of local if not regional significance in that they provide relatively integral lithic assemblages that have the potential inform on a number of aspects of later prehistoric lithic practices, including the technologies and chronology of production, depositional practices and the role, utility and organisation of lithic use.

Worked Stone

Summary

- 6.3.23 A total of 173 fragments of worked stone were recovered from the excavation areas. All fragments of lava stone and were generally found in medieval contexts spanning the length of the route. Mostly, the artefacts are in poor condition and identification could not go further than rotary quern fragment. However, two adjoining fragments from Area 18 may be part of a millstone however.

Statement of Potential

- 6.3.24 The quernstone fragments have moderate potential to contribute to the overall picture of activity in the area around Norwich during the medieval period. However, they have only limited potential to contribute to the individual stories of each excavated area

because they are fragmentary and most are non-diagnostic so it is impossible to determine their original sizes or functions.

- 6.3.25 Lava does not typically survive well in soil conditions such as those in Norfolk, so the recovery of a number of fragments is worthy of publication. In addition, one of the fragments is large enough to be identified as a probable millstone, and it is possible, if not likely, that all the fragments are from millstones rather than rotary querns. The assemblage therefore has the potential to contribute to our understanding of milling and the supply of millstones in the Norfolk area.

6.4 Environmental Summaries

Human Skeletal Remains

Summary

- 6.4.1 A very small assemblage of human skeletal remains was recovered from the excavation area, with fragments of femur being recovered from Area 1, and small amounts of calcined bone being found in cremations on Area 3 and 17.

Statement of Potential

- 6.4.2 The small amount of bone recovered has little potential to add to each site's narrative. The cremated bone may help inform on past land uses when looked at in conjunction with other activity on the sites.

Faunal Remains

Summary

- 6.4.3 The faunal remains recovered from excavations along the route are generally in very poor condition, due to the acidity of the soils. A partially complete pig skeleton was recovered from a medieval pit on Area 17 and most other surviving faunal remains are also from medieval features.

Statement of Potential

- 6.4.4 The faunal assemblage from the sites has very limited potential to add to the knowledge of activity on site. The assemblage is far too small and fragmentary to be worthy of further analysis.

Environmental Remains

Summary

- 6.4.5 Results from environmental samples were generally poor, with preserved plant remains rarely being found. This is probably due to the poor preservation quality of the sandy geology within Norfolk. Certain samples from prehistoric features were productive and a few samples from the medieval features were also successful in obtaining charred plant remains.

Statement of Potential

- 6.4.6 Despite extensive sampling, preservation of plant remains has proven to be rare in the sites excavated along the Norwich Northern Distributor Road, likely due to the acidic soil conditions. A surprisingly large number of charcoal-rich pit fills were excavated from

Areas 9, 10 and 11. Charcoal has the potential for identification of wood species which may provide information on woodland management. Other bulk samples from features have also been identified as having potential to inform on the past land use and function of certain features due to the presence of charred plant remains, such as samples from pit **3152**, Area 3.

7 UPDATED RESEARCH AIMS AND OBJECTIVES

7.1 General Research Objectives

- 7.1.1 The general research objectives identified in the Written Scheme of Investigation (Adams 2015) still apply, though many have been answered during the excavation and assessment stages. Further research aims have been identified during this assessment with reference to the original and revised framework for the east of England (Brown & Glazebrook 2000, Medleycott 2011). Objectives identified from the frameworks are italicised below. These objectives cover a broad range of subjects and analysis of the excavations undertaken along the Northern Distributor Road can add to the data sets from the region in an attempt to address them.
- 7.1.2 In summary, the excavations along the Northern Distributor Road have uncovered Bronze Age archaeology that can be deemed as nationally important. In particular, the Middle Bronze Age enclosure and Late Bronze Age settlement excavated in Area 3 was exceptionally well preserved, with seemingly unique evidence for posthole alignments forming what appeared to be a field system. Contemporary with the posthole alignments were at least thirteen post-built structures. A Late Bronze Age settlement on this scale has not been excavated before within the county. The importance of this exceptionally well preserved site, which shows continuation of activity from the Middle through to the Late Bronze Age cannot be understated and will add greatly to our understanding of Bronze Age Norfolk.
- 7.1.3 The artefactual evidence from the route was generally sparse and environmental remains were very poor due to the acidic soil conditions. Of the assemblages, the prehistoric pottery, medieval pottery and the large lithics assemblages are all worthy of further analysis to add to our understanding of the local regions, prehistoric and medieval past.

Neolithic

- 7.1.4 The Neolithic remains are sparse, but were found across a number of sites – with large assemblages of Early Neolithic pottery and lithics recovered from one pit on Area 3. Further analysis and publication of the Early Neolithic ceramics and flintwork recovered from the excavations, particularly those from Areas 3 and 19, will add to our knowledge of Early Neolithic development in the region.

Bronze Age

- 7.1.5 As mentioned above, the discovery of a Middle Bronze Age enclosure superceded by Late Bronze Age post alignments and settlement at Area 3 is of national significance. There are a few sites in East Anglia and further afield where Bronze Age posthole alignments have been discovered, sometimes extending over long distances. There are an even smaller number of sites where enclosures have been formed by convincing fencelines, including an example in Norfolk at Redgate Hill, Hunstanton (Bradley *et al.* 1993) and another example at Chigborough Farm, Essex (Wallis and Waughman 1998) However, there are no known direct comparisons for the rectilinear layout of closely spaced posthole alignments found at Area 3 in Horsford. When contemporary features from the surrounding landscape are also considered (including the large boundary ditch at Area 1 and the rectangular enclosure at Area 5) the results should add greatly to the knowledge of the Bronze Age in the vicinity of Norwich.
- 7.1.6 *'The regionalisation of settlement patterns needs further study.'* Investigate how the Bronze Age features are situated within the wider landscape, particularly the settlement

identified in Area 3 and the enclosure in Area 5. Comparisons should be made with other regionally known Middle Bronze Age enclosures, such as that at Ormesby St Michael, Norfolk (Gilmour *et al.* 2014) and Late Bronze Age settlements. In particular, the posthole alignments identified at Area 3 appear to be a very unusual form of landscape division. What function did these alignments have and is this form of land division unique?

- 7.1.7 The large Middle Bronze Age boundary ditch at Area 1 appears to have survived as a landscape feature over a long period of time, evidenced by its survival as a present-day boundary in fields to the north and as the parish boundary between Drayton and Felthorpe. This suggests its significance is long-lived and may have been an important boundary when it was constructed in the Bronze Age.
- 7.1.8 *'Study of the development, frequency and significance of flint-working throughout the Bronze Age would be useful.'* Further analysis and descriptive work on the Bronze Age flint assemblage recovered from the route would add to regional knowledge regarding the development of Bronze Age flint working.

Medieval

- 7.1.9 *'The origins and development of the different rural settlement types need further research, also the dynamics of medieval settlement'*. There were at least four locations where there was medieval land use adjacent to medieval lanes/roads and further stratigraphic analysis and comparisons with other excavated sites will aid in identifying possible regional variations in medieval rural activity. Identification during analysis of any Anglo-Saxon and early medieval origins of the activity will also be important.
- 7.1.10 Documentary research may help identify relationships with known manorial complexes, such as the Beeston Estate for Areas 9 and 10. Similarly, certain areas (such as 10) may relate to the abandoned medieval village of Rackheath.
- 7.1.11 The evidence of medieval charcoal production and iron smelting has been seen on many sites within the hinterlands of Norwich, (e.g. Mousehold Heath, excavated by PCA 900m west of Area 19; Bishop 2011). The evidence identified through many of the areas excavated (particularly Areas 9 to 12) shows a widespread distribution for the activity. This evidence can be seen to be of regional importance when incorporated with other known medieval charcoal production and ironworking sites within the Norwich environs.
- 7.1.12 Further analysis of the industrial features and assemblages will add information to the activities taking place in the hinterlands around Norwich during the medieval period. Dating of the charcoaling and ore smelting activity on Areas 9 through 12 is important, as it is possible that the activity originated during the Anglo-Saxon period. Synthesis of the evidence with that found at Mousehold Heath will add to the regional understanding of industrial practices during the medieval period.

7.2 Site Specific Research Objectives

- 7.2.1 The majority of area-specific research aims have been answered during the excavation and assessment phases. Other site-specific aims have also been identified during assessment and are listed below.
- 7.2.2 Whether the small enclosure excavated on Area 5 is domestic or funerary in function is unclear – comparison to other similar features will help identify its function.
- 7.2.3 The medieval curvilinear gullies/palisade in the southern half of Area 12 are of currently unknown function – further analysis will attempt to identify the function of the feature.

- 7.2.4 The post-medieval barn excavated on Area 9 is worthy of further analysis, with comparisons to other similar structures to help understand its form and function.
- 7.2.5 The post-medieval trackway located at the northern end of Area 17 may be the original route of Middle Road that probably has medieval origins. Documentary and cartographic research may help in understanding the origins of the trackway and identify why it went out of use.

8 METHODS STATEMENTS FOR ANALYSIS

8.1 Stratigraphic Analysis

- 8.1.1 Contexts, finds and environmental data will be analysed using an MS Access database. The specialist information will be integrated to aid dating and complete the further phasing of the sites.

8.2 Illustration

- 8.2.1 Archive report and publication figures will be created in AutoCAD and Adobe Illustrator. Finds recommended for illustration will be hand drawn, or photographed as appropriate.

8.3 Documentary Research

- 8.3.1 Relevant documentary research will be undertaken where appropriate. Historic maps, aerial photographs and reports for relevant comparable sites (both regional and national) will be consulted to aid in interpretation of the archaeology excavated along the route.

8.4 Artefactual Analysis

- 8.4.1 The artefact assemblages from the excavation areas were generally small and of limited potential. The prehistoric pottery, medieval pottery and lithics assemblages are all relatively large and have very good potential for further work. The majority of other assemblages are of limited potential and need little further work apart from a short note suitable for publication.

Prehistoric Pottery

- 8.4.2 A full catalogue has been completed at assessment stage. A full report is required that fully describes the fabrics and forms found and integrates any phasing for discussion by site. The report should examine and discuss local and regional parallels and consider the implications of any radiocarbon dates achieved. Fifteen sherds have been selected for illustration and a full illustrated sherd catalogue is required. A further 6 days (estimate) are required for analysis.

Roman Pottery

- 8.4.3 A full catalogue has been completed at assessment stage. Analysis of the pottery will be combined in a full report, describing all fabrics and forms found and integrating site phasing for discussion. A total of 2.25 further days (estimate) are required to complete the full report.

Post-Roman Pottery

- 8.4.4 A full quantification by fabric, context and feature has already been completed, and a catalogue of this data will be prepared for the archive. Summary reports have been prepared for post-Roman pottery from individual areas in the excavation. The assemblages from related contexts in the evaluation should be included with this material to produce a final archive/publication report. The following work is required:

Areas 1, 9, 10, 12, 17, 18 and 19

- 8.4.5 More detailed descriptions of the medieval groups will be written.
- 8.4.6 The evaluation pottery from the main sites should be re-evaluated and Medieval coarseware fabrics assigned.

- 8.4.7 The groups will be placed in context using updated stratigraphic data, site plans and phasing.
- 8.4.8 The majority of medieval and late medieval forms can be paralleled in the Norwich corpus, but up to 20 vessels will require illustration.
- 8.4.9 Comparisons between the groups and with other East Anglian sites will be required, particularly those recently excavated in North Norfolk (e.g. Anderson 2009).
- 8.4.10 A report will be prepared on each assemblage for archive and/or publication.
- 8.4.11 Chemical and/or thin-section analysis of medieval coarsewares would be valuable for comparison with other local wares.

Other Areas

- 8.4.12 These groups are small and have already been fully recorded. The summary descriptions from this report should be included in the final report if relevant, but otherwise no further work is required.
- 8.4.13 New forms and fabrics will require more detailed description and illustration.
- 8.4.14 A further 7 days of work is needed to complete analysis and 2 to 3 to illustrate the pottery.

Small Finds

- 8.4.15 Further work required includes X-radiography of certain iron objects for addition to the archive, illustration of certain objects, completing catalogue entries and writing a report suitable for archiving. A total of 7 days of further work (estimate) is required to complete analysis.
- 8.4.16 X-Radiography of metalwork that requires it will take approximately 15 plates.

Ceramic Building Material

- 8.4.17 A full catalogue has been completed at assessment stage. Further work on the fabric series generated will tie the assemblages together from each excavation area and the evaluation. Further analysis and comparison to other local assemblages, particularly the assemblages from Areas 9 and 10 once final phasing is complete, should be undertaken and a report suitable for archiving should be produced. Undiagnostic fragments and those which are not closely datable or post-medieval can be discarded once full analysis is complete. A further 4 days (estimate) is required to complete to analysis.

Fired Clay

- 8.4.18 A full catalogue has been completed at assessment stage. Further work on the fabric series generated will tie the assemblages together from each excavation area and the evaluation. Comparison to other local excavation assemblages should also be undertaken and a report suitable for archiving should be produced. The majority of amorphous fired clay can be discarded. Illustrations of selected structural fragments is also required. A further 4 days (estimate) is required to complete the analysis.

Metalworking Waste

- 8.4.19 A full catalogue has been completed at assessment stage. An archive report and comparison to other local assemblages is required during analysis. A further two days (estimate) is required to complete the analysis.

Lithics

- 8.4.20 A full catalogue has been completed at assessment stage. The importance of the Neolithic and later prehistoric assemblages warrants them being examined in closer detail, including employing metrical and technological analyses where appropriate. A limited refitting exercise should also be conducted on the larger assemblages, to attempt to elucidate their pre-depositional history. Following this work, a description of these assemblages and a discussion of their relationship with the flintwork from other contemporary sites in the region should be compiled for the purposes of publication, which should also include illustrations of suitable pieces. Petrological provenance of the greenstone macehead recovered during evaluation (Trench 4, Field T8) would also be beneficial.
- 8.4.21 No further analytical work is recommended for the remaining lithic material but a descriptive account and discussion of its significance in terms of wider landscape use should also be compiled for inclusion in any published accounts of the excavations. A further fifteen days is required to completed the analysis.

Worked Stone

- 8.4.22 An archive report should be written that includes local comparisons and final phasing for all sites. The catalogue should also be finalised and two fragments of worked stone require illustration. A further 3 days (estimate) is required to complete the work.

8.5 Ecofactual Analysis

Human Skeletal Remains

- 8.5.1 The assemblage has been fully catalogued at assessment stage. No further work is required. Any further cremated bone identified during analysis stage will need to be recorded and added to the current catalogue.

Faunal Remains

- 8.5.2 The assemblage has been fully catalogued at assessment stage. No further work is required.

Environmental Remains

- 8.5.3 A full catalogue of charred plant remains has been completed at assessment stage. This will be added to during analysis when further samples are processed. The charcoal recovered from many medieval charcoaling pits along the route could be identified to species. The remaining buckets from sample 107, pit **3152**, Area 3 and sample 303, pit **7039** in area 7 are recommended for further processing and analysis (a total of four buckets).
- 8.5.4 A further four buckets of soil are to be processed, sorted and analysed, requiring a further two days of work. The results should be integrated with the assessment and a report written suitable for a grey literature report. This would take a further 2 days (estimate).

9 REPORT WRITING, ARCHIVING AND PUBLICATION

9.1 Report Writing

Tasks associated with report writing are identified in Table 134.

9.2 Storage and Curation

- 9.2.1 Excavated material and records will be deposited with, and curated by, Norfolk County Council in appropriate county stores under multiple county HER codes (Table 132). A digital archive will be deposited with OA Library/ADS. During analysis and report preparation, OA East will hold all material and reserves the right to send material for specialist analysis.

<i>Excavation Area</i>	<i>Site code</i>
Area 1	ENF 139693
Area 2a	ENF 139694
Area 2b	ENF 139695
Area 3	ENF 139696
Area 4	ENF 139697
Area 5	ENF 139698
Area 6	ENF 139699
Area 7	ENF 139700
Area 8	ENF 139701
Area 9	ENF 139702
Area 10	ENF 139703
Area 11	ENF 139704
Area 12	ENF 139705
Area 13	ENF 139706
Area 14	ENF 139707
Area 15	ENF 139708
Area 16	ENF 139709
Area 17	ENF 139710
Area 18	ENF 139711
Area 19	ENF 139712

Table 132: Correlating Site Code for each Area

- 9.2.2 The archive will be prepared in accordance with current OA East guidelines, which are based on current national guidelines.

9.3 Publication

9.3.1 It is proposed that the results of the project should be published as an East Anglian Archaeology monograph under the title “The Norwich Northern Distributor Road, Norfolk: Bronze Age Settlement and Medieval Industry” by Pat Moan & Tom Phillips.

9.3.2 This monograph with focus on the key findings of the excavations, specifically the Middle and Late Bronze Age activity located on Areas 1, 3 and 5 and the medieval industrial activity on Areas 9 to 12. The Second World War P51-D Mustang excavated in Area 13 will be published in a separate specialist publication.

9.3.3 Report Structure:

Front matter Summary, listings, acknowledgements, list of contributors *etc.*
(c. 5 pages)

Chapter 1 **Introduction**
I. Introduction, Project Background
II. Geology and Topography
III. Archaeological and Historical Background
IV. Methodologies
(c. 10 text pages, c. 4 figures, c. 2 plates)

Chapter 2 **Neolithic**
I. Overview
(c. 5 text pages, c.2 figures, c. 1 plate)

Chapter 3 **Bronze Age**
I. Introduction
II. Archaeological Sequence
III. Finds & Environmental
IV. Discussion
(c. 20 text pages, c. 8 tables, c. 10 figures, c. 5 plates)

Chapter 4* **Anglo Saxon/Early Medieval***
I. Introduction
II. Archaeological Sequence
III. Finds & Environmental
IV. Discussion
(c. 10 text pages, c.5 tables, c. 4 figures, c. 1plate)

Chapter 5 **High and Late Medieval**
I. Introduction
II. Archaeological Sequence
III. Finds & Environmental
IV. Discussion
(c. 20 text pages, c. 5 tables, c.4 figures, c. 3 plates)

Chapter 6 **Discussion & Conclusions**
I. Introduction
II. Bronze Age Settlement
III. Early Medieval Industry
IV. High and Late Medieval
(c. 10 text pages)

Back Matter (bibliography, index, *etc.*)
(c. 15 pages)

*Chapter 4 may be separated during analysis, if more Anglo-Saxon remains are apparent.

9.3.4 Volume Summary

Sub-total	No. pages
Total front matter	5
Total text pages	90
Total figures	24
Total plates	12
Total tables	18
Back material	15
Volume Total	95

10 RESOURCES AND PROGRAMMING

10.1 Project Team Structure

10.1.1 All members of the project team and their role are found in Table 133. Any work assigned to each member is recorded in Table 134, which sets out the further tasks required for analysis and publication and the associated days required to complete.

Name	Initials	Project Role	Establishment
Tom Phillips	TP	Project Manager	OA
Elizabeth Popescu	EP	Post-Excavation Manager	OA
Pat Moan	PM	Project Officer	OA
Sue Anderson	SA	Post-Roman Pottery Specialist	Freelance
Alice Lyons	AL	Roman Pottery Specialist	OA
Sarah Percival	SP	Prehistoric Pottery & MWD Specialist	Freelance
Chris Howard-Davis	CHW	Small Finds Specialist	OA
Barry Bishop	BB	Flint Specialist	OA
Ted Levermore	TL	CBM Specialist	OA
Simon Timberlake	ST	Finds specialist	Freelance
Rachel Fosberry	RF	Environmental Specialist	OA
Hayley Foster	HF	Animal Bone Specialist	OA
Charlotte Walton	CW	Illustrator	OA
Katherine Hamilton	KH	Archives Supervisor	OA

Table 133: Project Team Structure

10.2 Stages, Products and Tasks

Task No.	Task	Product No.*	Staff	No. Days
Project Management				
1	Project management	-	TP	2
2	Team meetings	-	TP, PM, EP	1 per pers.
3	Liaison with relevant staff and specialists, distribution of relevant information <i>etc.</i>	-	PM, TP	2
Stage 1: Stratigraphic analysis				
4	Integrate ceramic/artefact dating with site matrix	1	PM	4
5	Update database and digital plans/sections to reflect any changes	1	PM/CW	3
6	Finalise site phasing	1	PM	3
7	Add final phasing to database	1	PM	3
8	Review, collate and standardise results of all final specialist reports and integrate with stratigraphic text and project results	1	PM	7
Illustration				
9	Digitise selected sections	1	CW	3
10	Illustrate/photograph selected artefacts	1	CW	23
11	Prepare draft phase plans, sections and other report figures	1	CW	10
12	Select photographs for inclusion in report	1	PM	1
Documentary research				
13	General local area background research	1/2	PM	5
14	Research comparable Bronze Age sites	1/2	PM	5
15	Research comparable Medieval sites	1/2	PM	5
16	Assess historic maps for the route	1/2	PM	3
Artefact studies				
17	Prehistoric pottery analysis & full report	1	SP	6
18	Roman pottery analysis & full report	1	AL	1.5
19	Post-Roman pottery analysis & full report	1	SA	7
20	Small finds cataloguing	1	CHW	3.25
21	Small finds analysis & full report	1	CHW	3.75
22	Ceramic building material analysis & full report	1	TL	4
23	Fired clay analysis & full report	1	TL	4
24	Metalworking waste analysis & full report	1	ST/SP	2
25	Lithics analysis & full report	1	BB	15
26	Worked stone analysis & full report	1	RS	3
27	Pottery thin section analysis	1	ST/SA	1 (+£25 per slide)
28	Petrological Analysis of Greenstone Axehead	1	ST/BB	1
29	X-Radiography of Ironwork	1	£25 per plate (15 required)	
Environmental Remains				
30	Processing, sorting & analysis of additional environmental samples	1	RF	2
31	Compile grey lit. environmental report	1	RF	2
Stage 2: Grey Literature Report Writing				
32	Integrate documentary research	1	PM	5
33	Write historical and archaeological background text	1	PM	3

Task No.	Task	Product No.*	Staff	No. Days
34	Compile group and phase text	1	PM	12
35	Compile overall stratigraphic text and site narrative to form the basis of the full/archive report	1	PM	25
36	Edit phase and group text	1	PM/TP	3
37	Compile list of illustrations/liaise with illustrators	1	PM	1
38	Write discussion and conclusions	1	PM	5
39	Prepare report figures and plates	1	PM/CW	3
40	Collate/edit captions, bibliography, appendices etc	1	PM	2
41	Produce draft report	1	PM	7
42	Internal edit	1	EP/TP	7
43	Incorporate internal edits	1	PM/TP	2
Stage 3: Publication Writing				
44	Write site narratives	2	PM/TP	25
45	Integrate specialist publication reports	2	PM	3
46	Write discussion and conclusions	2	PM/TP	10
47	Select photos for publication	2	PM/TP	2
48	Produce figures and plates	2	PM/CW	5
49	Final edit of publication	2	EP	10
50	Send to publisher for refereeing	2	EP	2
51	Post-refereeing revisions	2	PM/EP	6
52	Copy edit queries	2	EP	4
53	Proof-reading	2	EP	2
Stage 4: Archiving				
54	Compile paper archive	3	KH	3
55	Archive/delete digital photographs	3	KH	3
56	Compile/check material archive	3	KH	3

Table 134: Task list for further work

* See Appendix A for product details and Appendix B for the project risk log.

11 OWNERSHIP

- 11.1.1 The Project Archive is currently in possession of Oxford Archaeology East and will be deposited with Norfolk County Council Stores once full analysis is completed. Transferral of Ownership will be undertaken during archiving to facilitate future study and ensure proper preservation of all artefacts. It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.

APPENDIX A. PRODUCT DESCRIPTION

Product number: 1

Product title: Archive Report

Purpose of the Product: Analyse the excavation results and answer research aims

Composition: Technical report presenting analysis results suitable for archiving

Derived from: Stratigraphic and specialist analysis, background research

Format and Presentation: Grey literature report, paper copy in archive & uploaded to OA Library

Allocated to: PM

Quality criteria and method: Internal editing

Person responsible for quality assurance: TP

Person responsible for approval: EP

Planned completion date: 2018

Product number: 2

Product title: Publication

Purpose of the Product: Disseminate results to wider public audience

Composition: EAA Monograph

Derived from: Analysis results

Format and Presentation: Published Monograph

Allocated to: PM, TP

Quality criteria and method: Internal & External editing

Person responsible for quality assurance: EP

Person responsible for approval: EP

Planned completion date: 2019

Product number: 3

Product title: Archive completion

Purpose of the Product: Collation of paper & physical archive for deposition

Composition: Paper records, artefacts, ecofacts

Derived from: Original records, artefacts & ecofacts collected on site.

Allocated to: KH

Person responsible for quality assurance: KH

Person responsible for approval: EP

Planned completion date: 2019

APPENDIX B. RISK LOG

Risk Number: 1

Description: Specialists unable to deliver analysis report due to over running work programmes/ ill health/other problems

Probability: Medium

Impact: Variable

Countermeasures: OA has access to a large pool of specialist knowledge (internal and external) which can be used if necessary.

Estimated time/cost: Variable

Owner: TP

Date entry last updated: 05/04/17

Risk Number: 2

Description: non-delivery of full report due to field work pressures/ management pressure on Co-authors

Probability: Medium

Impact: Medium - High

Countermeasures: Liaise with OA Management team

Estimated time/cost: Variable

Owner: TP/EP

Date entry last updated: 05/04/17

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APPENDIX D. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	<input type="text"/>		
Project Name	<input type="text"/>		
Project Dates (fieldwork)	Start <input type="text"/>	Finish	<input type="text"/>
Previous Work (by OA East)	<input type="text"/>	Future Work	<input type="text"/>

Project Reference Codes

Site Code	<input type="text"/>	Planning App. No.	<input type="text"/>
HER No.	<input type="text"/>	Related HER/OASIS No.	<input type="text"/>

Type of Project/Techniques Used

Prompt

Please select all techniques used:

<input type="checkbox"/> Field Observation (periodic visits)	<input type="checkbox"/> Part Excavation	<input type="checkbox"/> Salvage Record
<input type="checkbox"/> Full Excavation (100%)	<input type="checkbox"/> Part Survey	<input type="checkbox"/> Systematic Field Walking
<input type="checkbox"/> Full Survey	<input type="checkbox"/> Recorded Observation	<input type="checkbox"/> Systematic Metal Detector Survey
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Remote Operated Vehicle Survey	<input type="checkbox"/> Test Pit Survey
<input type="checkbox"/> Open-Area Excavation	<input type="checkbox"/> Salvage Excavation	<input type="checkbox"/> Watching Brief

Monument Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Project Location

County	<input type="text"/>	Site Address (including postcode if possible) <input type="text"/>	
District	<input type="text"/>		
Parish	<input type="text"/>		
HER	<input type="text"/>		
Study Area	<input type="text"/>	National Grid Reference	<input type="text"/>

Project Originators

Organisation	
Project Brief Originator	
Project Design Originator	
Project Manager	
Supervisor	

Project Archives

Physical Archive	Digital Archive	Paper Archive

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media	Paper Media
<input type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input type="checkbox"/> Correspondence
<input type="checkbox"/> Images	<input type="checkbox"/> Diary
<input type="checkbox"/> Illustrations	<input type="checkbox"/> Drawing
<input type="checkbox"/> Moving Image	<input type="checkbox"/> Manuscript
<input type="checkbox"/> Spreadsheets	<input type="checkbox"/> Map
<input type="checkbox"/> Survey	<input type="checkbox"/> Matrices
<input type="checkbox"/> Text	<input type="checkbox"/> Microfilm
<input type="checkbox"/> Virtual Reality	<input type="checkbox"/> Misc.
	<input type="checkbox"/> Research/Notes
	<input type="checkbox"/> Photos
	<input type="checkbox"/> Plans
	<input type="checkbox"/> Report
	<input type="checkbox"/> Sections
	<input type="checkbox"/> Survey

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