Fulmodeston to Barney S101a Scheme, Norfolk

Archaeological Fieldwork Report (Trial Trenching and Strip, Map and Sample)

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Prepared by:	Toby Knight (Supervisor)
Checked by:	Tom Phillips (Senior Project Manager)
Edited by:	Tom Phillips (Senior Project Manager)
Approved for Issue by:	Paul Spoerry (Regional Manager)
Signature:	

OA South
Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 263 800

OA East
15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SG

t. +44 (0)1223 850 500

OA North
Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD
t. +44 (0)1524 880 250

e. info@oxfordarch.co.uk
w. oxfordarchaeology.com
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Fulmodeston to Barney S101a Scheme, Norfolk

Archaeological Fieldwork Report (Trial Trenching and Strip, Map and Sample)

Written by Toby Knight BA

With contributions from Rachel Fosberry ACIfA, Richard Mortimer MCIfA, Simon Timberlake PhD, Zoe Ui Choileain MA MSc and illustrations by Séverine Bézie BA MA

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Summary

Between 8th and 9th May 2018, Oxford Archaeology East (OAE) carried out archaeological trial trenching on a plot of land to the east of The Street and Rectory Row, Barney, Norfolk. The trial trenching was carried out on behalf of Anglian Water, in advance of the construction of an access road. The access road is part of a wider project which includes a new rising main, gravity sewer and a pumping station between the villages of Fulmodeston and Barney. Two trenches, each measuring 15m x 2m, were investigated, one in the western field and one in the eastern field.

A single east to west aligned boundary ditch was present in Trench 1, within the western field and close to the western site boundary. The upper fill of the ditch was midden-like in its appearance and yielded all the finds from the ditch, comprising three sherds (165g) of Middle Saxon pottery, an unusual whetstone, which may originally have been a prehistoric polishing stone, and 51g of animal bone. An environmental sample from the same fill yielded abundant charred grain, with lesser quantities of chaff, weed seeds and charcoal, suggestive of occupation nearby. Trench 2 contained no archaeological features.

Due to the presence of significant remains in Trench 1, a second stage of fieldwork – a Strip, Map and Sample excavation (SMS) – was undertaken at the western end of the site between 30th May and 1st June 2018. Two additional trenches were opened in the western field, revealing another 2m of the Middle Saxon ditch in Trench 3, with further inclusions of Middle Saxon pottery (89g) and lava quern (111g) recovered. No other features were encountered. Trench 4 was excavated directly to the east of overhead cables but only natural hollows were present.

The limited scale of the trial trenching and SMS makes it difficult to know exactly what the ditch in Trenches 1 and 3 is associated with, but the presence of the pottery, along with the midden-like upper fill and the location of the site – between St Mary's Church to the west and a medieval moated site directly to the east – make it likely that the ditch is very close to, if not within, a Middle Saxon settlement. The absence of features in Trenches 2 and 4 suggests that such a settlement was restricted to an area close to The Street. Equally, the narrow width of the proposed development means that any associated settlement features may lie to the north or south and therefore outside of the proposed access road.

Acknowledgements

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The project was managed for Oxford Archaeology by Tom Phillips. The fieldwork was directed by the author. Survey was carried out by Gareth Rees and digitising was carried out by Séverine Bézie. Thanks go to OA staff that cleaned and packaged the finds under the management of Natasha Dodwell and processed the environmental remains under the management of Rachel Fosberry. Machining was carried out by Bryn Williams Plant Hire and LG Construction Ltd.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology East (OAE) was commissioned by Anglian Water to undertake an initial phase of post-determination trial trenching and a second phase of Strip, Map and Sample excavation (SMS) on land to the east of The Street and Rectory Row, Barney, Norfolk (Fig. 1), as part of the Fulmodeston to Barney S101a Scheme (planning ref. SEW -10105).

1.1.2 The trial trenching and SMS was undertaken by a statutory undertaker (Anglian Water) that commissions archaeological work following best practice. A brief was set by David Robertson of Norfolk County Council Historic Environment Service outlining the Local Authority's requirements for work necessary to inform the planning process (Norfolk HES ref: CNF47213). A written scheme of investigation was produced by OAE detailing the methods by which OAE proposed to meet the requirements of the brief.

1.2 Location, topography and geology

The site is situated on chalk bedrock overlain with clay, silt, sand and gravels of Sheringham Cliffs Formation (British Geological Survey http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html accessed on 13/12/2017).

1.2.1 The site is in permanent pasture with loamy, clayey and slowly permeable soils around 80m OD.

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background is based on information from a search (a 1km radius) of the Norfolk Historic Environment Record (NHER), summarised in the WSI (Tsybaeva and Phillips 2018).

Prehistoric and Roman

1.3.2 No prehistoric finds have been recorded within the 1km search area. Fragments of Roman pottery were found in fields 400m to the south-west (Fig. 2; HER 60930) and Late Roman pottery dating to the 3rd and 4th century AD (HER 19188) has been recovered during fieldwalking *c*. 700m north-west of the site. Closer by, re-used Roman bricks have been used in the construction of the nave at St Mary's church (HER 2181), located 130m west-south-west of the site.

Saxon and medieval

1.3.3 A large fragment of a Late Saxon or medieval pottery rim (HER 17874) was found in a field around 500m north-west of the site.

1.3.4 The earthworks of several rectangular medieval moats have been recorded within the 1km search area of the site including a small medieval homestead moat (HER 28091) immediately to the north-east, located between the north-eastern limits of the proposed development and Little Barney Lane. The homestead measures approximately 38m north to south, 60m east to west with a 4.5m wide moat preserved in pasture. Approximately 250m to the south of this is another moated site (HER 12159), associated with two oval ponds (HER 51887), possibly medieval fishponds, about 600m to the south. Further moated sites are located 700m south of the development site (HER 12158) and 900m to the north-west in Thursford (HER 32228).

1.3.5 St Mary's church (HER 2181) located just west of the site along The Street probably dates to the Saxo-Norman period. In the south wall near the porch is a blocked 10th century doorway, with jambs made from re-used Roman tiles. The east wall of the south transept is also made from tiles. Elements of the church have been rebuilt in the 13th, late 15th and early 16th centuries. The proximity of the site to St Mary's Church and a moated homestead can potentially reveal information on any connection between the two monuments.

Post-medieval

1.3.6 A post medieval pound or livestock enclosure (HER 15203) was marked on Faden's 1797 map of Norfolk about 350m north of the site.

1.3.7 A number of 19th century brickworks and kilns (HER 15223, 15290, 15291) are located between Brick Kiln Road and Little Barney Lane approximately 900m north-east of the site. Another post medieval brick kiln (HER 15224) is located about 800m west-north-west according to Faden's map.

1.3.8 The Midland and Great Northern Joint Railway link between Great Yarmouth and Sutton Bridge (HER 13581) skirts to the north of Barney, *c*. 900m away from the site. Opened in the late 19th century, it was closed on 2 March 1959. A nearby two storey station farmhouse (HER 47385) dates to around AD 1700. A mid-17th century end stack house (HER 19775) is near the railway about 800m west of the site.

1.3.9 Several notable 17th-19th century buildings (HER 19774, 58110, 47236, 37322, 19773) can be found along the main street of Barney south of the site, including a Wesleyan or United Free Methodist Chapel (HER 58110). A possible 14th or 15th century decorative terracotta head (HER 2169) possibly of St John the Baptist was found in the wall of a demolished cottage along the main street.

Modern

1.3.10 A ring of WWII fortifications (HER 30787) at the crossroads *c*. 1km north of the site today survives in the form of a pillbox, 1940 spigot mortar gun emplacement and a Home Guard shelter. Nearby loopholes in the rear wall of the inn car park indicate a WWII defensive position.

2 AIMS AND METHODOLOGY

2.1 Aims

Trial trenching

2.1.1 The principal project aim of the trial trenching was to establish the character, date and state of preservation of any buried non-designated heritage assets that may be present within the development area, thus aiding in the decision-making process of the District Planning Department on whether further archaeological mitigation is required prior to redevelopment of the site.

2.1.2 The trial trenching took place within, and contributed to, the goals of Regional Research Frameworks relevant to this region:

- Research and Archaeology Revisited: A Revised Framework for the East of England (Medlycott 2011, East Anglian Archaeology Occasional Papers 24);
- Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment (Glazebrook 1997, East Anglian Archaeology Occasional Papers 3);
- Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy (Brown & Glazebrook 2000, East Anglian Archaeology Occasional Papers 8).

Strip, Map and Sample

2.1.3 The overall aim of the SMS excavation was to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context.

2.1.4 Based on the results of the evaluation, more specific aims and research questions were formulated:

- does the Middle Saxon ditch relate to a wider area of contemporary settlement?
- Does the artefactual and environmental evidence suggest occupation in the immediate vicinity, even if most of the activity lies beyond the proposed development?
- How do the results compare to what is known locally during the Middle Saxon period?

2.1.5 The SMS excavation took place within, and contributed to the goals of Regional Research Frameworks relevant to this area (see section 2.1.2).

2.2 Methodology

2.2.1 The Written Scheme of Investigation (Tsybaeva and Phillips 2018) stated that initially two trenches, each measuring 15m in length and 2m wide were to be excavated, equivalent to a 5% sample of the area. The trenches were to be laid out as ground conditions and/or services dictated. Trench 1 was extended by 4m to the east as approximately 4m was lost at the western end due to a modern service trench being present.

2.2.2 For the SMS excavation the full width of the proposed track (*c*. 4m) was to be stripped across the western field, to the depth of geological horizons, or to the upper interface of archaeological features or deposits, whichever was encountered first. Overburden was excavated in spits not greater than 0.1m thick. However, if the top/subsoil strip was to start in the west (where archaeological remains were identified in Trench 1) and work eastwards, NCCES would be willing to call a halt to the SMS once 10m of blank trench had been revealed (*ie* when the trench has been stripped for 10m east of the last observed archaeological feature). Due to the presence of overhead and buried services this meant the stripping of two separate additional trenches (3 and 4), a total of 80 sq. metres.

2.2.3 Service plans were checked before work commenced on site. Before trenching, the footprint of each trench was scanned by a qualified and experienced operator using a CAT and Genny with a valid calibration certificate.

2.2.4 All machine excavation took place under the supervision of a suitably qualified and experienced archaeologist.

2.2.5 All trenches were excavated by a tracked 360° excavator to the depth of geological horizons. A toothless ditching bucket with a bucket width of 2.0m was used to excavate the trenches. Overburden was excavated in spits not greater than 0.1m thick.

2.2.6 Spoil was stored alongside trenches. Topsoil, subsoil, and archaeological deposits were kept separate during excavation, to allow for sequential backfilling of excavations. Trenches were not backfilled without the approval Norfolk Historic Environment Team.

2.2.7 The top of the first archaeological deposit was cleared by machine, then cleaned off by hand. Exposed surfaces were cleaned by trowel and hoe as necessary, in order to clarify located features and deposits.

2.2.8 All features were investigated and recorded to provide an accurate evaluation of archaeological potential, whilst at the same time minimising disturbance to archaeological structures, features, and deposits.

2.2.9 All excavation of archaeological deposits was done by hand, with discrete features being half-sectioned.

Recording of archaeological deposits and features

2.2.10 Records comprise survey, drawn, written, and photographic data.

Survey

2.2.11 Surveying was done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.

2.2.12 The site grid is accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area. Elevations are levelled to the Ordnance Datum.

Written records

2.2.13 A register of all trenches, features, and photographs was kept.

2.2.14 All features, layers and deposits were issued with unique context numbers. Each feature was individually documented on context sheets, and hand-drawn in section and plan. Written descriptions are recorded on pro-forma sheets comprising factual data and interpretative elements.

Plans and sections

2.2.15 Site plans were drawn at 1:50.

2.2.16 Sections of features or short lengths of trenches were drawn at 1:10 or 1:20. All section levels will be tied in to Ordnance Datum.

2.2.17 All site drawings will include the following information: site name, site code, scale, plan or section number, relevant context or feature numbers, orientation, date and the name or initials of the archaeologist who prepared the drawing.

Photographs

2.2.18 The photographic record comprises of high resolution digital photographs.

Photographs include both general site shots and photographs of specific features. Every feature was photographed at least once. Photographs include a scale, north arrow, site code, and feature number (where relevant), unless they are to be used in publications. The photograph register records these details, and photograph numbers are listed on corresponding context sheets.

Metal detecting and the Treasure Act

2.2.19 Metal detector searches were undertaken at all stages of the excavation by an experienced metal detector user. Excavated areas were detected immediately before and after mechanical stripping. Both excavated areas and spoil heaps were checked. To prevent losses from night-hawking, features were metal detected immediately after stripping.

2.2.20 Metal detectors were not set to discriminate against iron.

Environmental Sampling

2.2.21 A single environmental sample was taken for flotation processing, to look for any charred or mineralised ecofacts (plant remains).

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 Archaeological features were present in Trenches 1 and 3 and consisted of an east to west aligned ditch, of Middle Saxon date (Fig. 3).

3.1.2 The results of the trial trenching and SMS are presented below, and include a stratigraphic description of the trenches which contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits for the content of Appendix A. Finds data and spot dates are tabulated in Appendix B.

3.2 General soils and ground conditions

3.2.1 Natural geology in Trenches 1 and 3 comprised a mid-orange brown silty sand, while in Trenches 2 and 4 it was a mid brown silty sand with seams of flint pebbles visible in places. In all trenches the natural geology was overlain by a mid-greyish brown subsoil, which in turn was overlain by loamy topsoil.

3.2.2 Ground conditions throughout the trial trenching and SMS were generally good, and the trenches remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 Western field

Trench 1

3.3.1 This trench was located at the western end of the development area, on a north-east to south-west alignment. The trench was machine excavated to a depth of 0.55m at the western end, which included 0.25m of subsoil and 0.3m of topsoil. At the eastern end it was machine excavated to a depth of 0.45m, including 0.2m of subsoil and 0.25m of topsoil. The trench was originally meant to be 15m in length, but a modern capped service was found at the western end extending north-east to south-west for approximately 4m. The decision was made to extend the trench by 4m at the eastern end to adequately meet the 5% sample area.

3.3.2 A single boundary ditch was present in the trench (**4** and **8**), extending from the western end in an easterly direction, before turning slightly south-east where it exited the trench (Fig. 3 and Plates 1-2). The ditch measured between 0.95 and 1.1m wide and between 0.3 and 0.6m deep (being deeper at the western end) with gently sloping sides and a concave base (Fig. 3, section 1 and 2). Neither excavated intervention extended across the entire width of the feature but in the centre of the trench it measured *c*. 2m wide. The ditch contained three fills in the western intervention (**4**). The upper fill (7) comprised a dark brown sandy silt, which was midden-like in its appearance (Plate 2) and yielded all the finds from the ditch. The finds consisted of three sherds (165g) of Middle Saxon pottery including one sherd of Ipswich Ware (Appendix B.1), 51g of animal bone (Appendix C.2) and an unusual whetstone (SF 1, Plate 3; see 3.5 below and Appendix B.2).

3.3.3 An environmental sample from the upper fill (7) produced abundant charred cereal grains, particularly free-threshing wheat, and lesser quantities of chaff, weed seeds and wood charcoal (see 3.6 below and Appendix C.1).

Trench 3

3.3.4 Trench 3 was located to the south of Trench 1, orientated east to west. The trench was machined to a depth of 0.4m. The ditch identified in Trench 1 (**4** and **8**) was visible at the eastern end of Trench 3. A decision was made to extend Trench 3 by *c*. 1m to the north, to expose the full width of the ditch. The ditch (**10**) was excavated to a width of 1.6m, although due to the angle of the ditch and a lack of space the full width could not be excavated. The depth of ditch **10** was 0.9m with steep sides and a concave base (Fig. 3, section 3 and Plate 5). It contained three fills, which were very similar in formation to the western intervention (**4**) in Trench 1. The upper fill (13) was a mid greyish brown silty sand, which was midden-like in its appearance, similar to the upper fill (7) of ditch **4** in Trench 1. A small amount of fragmented lava quern (111g) was recovered from the upper fill. Four sherds (89g) of Middle Saxon pottery were recovered from the secondary fill (12), a brownish grey silty sand. The pottery included two base/body sherds, possibly from an early smooth Ipswich Ware jar (Appendix B.1).

Trench 4

3.3.5 Trench 4 was located to the east of Trenches 1 and 3, and to the east of overhead cable which crossed the western field in a north-west to south-east direction. The trench measured 4m wide by 12m long and was orientated east to west. No archaeological features were present. Natural geology was encountered at a depth of 0.45m.

3.4 Eastern field

Trench 2

3.4.1 Trench 2 was located in the east of the site, orientated north-north-west to south-south-east. No archaeological features were present (Plate 4). Natural geology was encountered at a depth of 0.6m.

3.5 Finds summary

3.5.1 Middle Saxon pottery totalled seven sherds (244g) recovered from the same ditch in Trenches 1 and 3 (Appendix B.1). The upper fill (7) of ditch **4** in Trench 1 yielded three sherds (155g) including a sherd of Ipswich Ware, while the secondary fill (12) of ditch **10** in Trench 3 contained four sherds (90g). A small amount of highly fragmented lava quern (111g) was recovered from the upper fill (13), also in ditch **10**.

3.5.2 A whetstone (SF 1) formed from micaceous sandstone was recovered from the upper fill (7) in ditch **4** (Plate 3 and Appendix B.2). It has been worked on five sides, with the top face possessing four sub-parallel grooves between 1-4mm deep and 1-4mm wide. In longitudinal profile these are in fact very slightly crescentic (concave) in shape

suggesting the sharpening of a slightly curved blade which may not have been much more than 40-50mm in length, and thicker than a knife, most likely that of an axe. The other three remaining grooves clearly had not been used in this way, and might just relate to the activity of stone polishing, likewise the three main (concave) polished faces. There is very little resemblance between typical Anglo-Saxon whetstones and the example found at Barney. Either this is an opportunistic and unusual use of a suitable stone, or else it is a curated item, possibly an earlier whetstone (*i.e*. a Roman example), or else something quite different, such as a small Neolithic? polissoir stone which has been picked-up and re-used, almost certainly for the sharpening of knives.

3.6 Environmental summary

3.6.1 A single bulk sample (Sample 1) was taken during the post-determination trial trenching from the upper fill (7) of a Middle Saxon ditch (**4**) in Trench 1 (Appendix C.1). The same ditch in Trench 3 (**10**) was sampled during the subsequent SMS excavation (Sample 3). Within sample 1 from ditch **4** cereal grains are abundant with free-threshing wheat (*Triticum aestivum/turgidum*) predominant. Smaller quantities of barley (*Hordeum vulgare*), rye (*Secale cereale*) and oats (*Avena* sp.) are also present. Two fragments of cereal rachis (barley and wheat) were noted along with occasional small legumes (*Vicia/Lathyrus/Pisum* sp.) and single seeds of stinking mayweed (*Anthemis cotula*) and knotgrasses (*Polygonum* sp.). Wood charcoal is also evident. Sample 3, from the secondary fill (12) in ditch **10** contains an almost identical assemblage to Sample 1 and is most likely the same deposit.

3.6.2 Animal bone totalled 51g and consisted of a badly fragmented cattle humerus and a burnt pig phalanx (Appendix C.2).

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 The results of the trial trenching and SMS are considered reliable, with archaeological features and deposits being clearly visible in contrast to the lighter, sandy geology. Similarly, any truncation of the underlying geology was also clear.

4.2 Objectives and results

4.2.1 The results have demonstrated a presence within the development area during the Saxon period, With no other archaeological deposits present. The results can aid in the decision-making process by the Norfolk County Council Historic Environment Team on whether further mitigation is required before the planning condition is satisfied.

4.3 Interpretation

4.3.1 Based on the ceramic evidence, Ditch **4** in Trench 1 dates to the first half of the 8th century, firmly within the Middle Saxon period (*c*. AD 650 – 850). The dark upper fill of ditch **4** was midden-like and contained inclusions of charred grain, chaff, weed seeds and charcoal, suggestive of occupation nearby. The presence of the heavily worked whetstone (SF 1) is further evidence of domestic activity.

4.3.2 Given the location of the site, with St Marys Church 130m to the west (MNF12158) and a known medieval moated site (MNF28091) directly to the east, it is not surprising to find evidence of boundary ditches relating to the early development of the village. It has been noted that the Middle Saxon period saw exploitation of most of upland Norfolk, with all modern parishes outside of the peat fen probably containing a settlement during the eighth and ninth centuries (Rogerson 2005, 32).

4.3.3 Ditch **4** extended roughly east to west, perpendicular to The Street. Many of the field boundaries radiating away from The Street appear to respect its course and the road is also likely to date to the early development of the village. The limited scale of the trial trenching and SMS makes it difficult to know exactly what the ditch is associated with, but the presence of the pottery, along with the midden-like upper fill and its location, make it likely that the ditch is very close to, if not within, a Middle Saxon settlement. The absence of any features in Trench 2 suggests that such a settlement did not extend far from The Street. Equally, the narrow width of the proposed development means that any associated settlement features may lie to the north or south and therefore outside of the proposed access road.

4.3.4 It is worth noting that a boundary on the same alignment and in the same location as ditch **4**=**8** in Trench 1, is depicted on the Ordnance Survey Six Inch dated 1888-1913 (http://maps.nls.uk/geo/explore/#zoom=17&lat=52.8556&lon=0.9636&layers=6&b=1 accessed 16/05/18). The boundary extends across the centre of the field, parallel with the two field boundaries which exist today. However, even if the boundary

depicted on the Ordnance Survey map is marking the position of something much older, the ditch encountered in Trench 1 was not of post-medieval date.

4.4 Significance

4.4.1 The trial trenching and SMS has revealed evidence, albeit limited, for the early development of Barney in the Middle Saxon period. The discovery of the whetstone is a significant find in its own right, as well as an item which aids interpretation of the site.

APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					**Orientation**	E-W
Trench contained one ditch, running in an approximately east-west direction along the length of the trench. At the western end of the trench, the ditch is truncated by a modern, capped service running south-west to north-east. The feature is overlain by subsoil and topsoil and cuts into the silty sand geology.					**Length (m)**	19
					Width (m)	2
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
2	Layer	-	0.30	Subsoil	-	-
3	Layer	-	-	Natural	-	-
4	Cut	1.10	0.60	Boundary ditch	-	-
5	Fill of **4**		0.10	Mid grey brown silty sand, firm compaction		
6	Fill of **4**		0.10	Light orange brown silt sand, firm compaction		
7	Fill of **4**		0.40	Dark greyish brown silty sand, friable compaction	Pottery, Animal Bone and SF1 Whetstone	Middle Saxon
8	Cut	0.95	0.30	Boundary ditch		
9	Fill of **8**		0.30	Mid grey brown silty sand, firm compaction		

Trench 2						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of silty sand, with flint outcrops.					**Length (m)**	15
					Width (m)	2
					Avg. depth (m)	0.6
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
2	Layer	-	0.23	Subsoil	-	-
3	Layer	-	-	Natural	-	-

Trench 3						
General description					**Orientation**	E-W
Trench contained one ditch, running approximately NW-SE. The feature is overlain by subsoil and topsoil and cuts into the silty sand geology.					**Length (m)**	12
					Width (m)	2
					Avg. depth (m)	0.6
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
2	Layer	-	0.23	Subsoil	-	-
3	Layer	-	-	Natural	-	-
10	Cut	1.60	0.90	Boundary ditch.		
11	Fill of 1**0**		0.10	Light brownish yellow soft, silty sand		
12	Fill of **10**		0.10	Dark brownish grey, soft, silty sand	Pottery	Middle Saxon
13	Fill of **10**		0.70	Mid greyish brown, firm, silty sand.	Lava Quern	?
Trench 4						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of silty sand, with flint outcrops.					**Length (m)**	12
					Width (m)	4
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
2	Layer	-	0.20	Subsoil	-	-
3	Layer	-	-	Natural	-	-

APPENDIX B FINDS REPORTS

B.1 Anglo-Saxon Pottery

By Richard Mortimer

Introduction

B.1.1 The trial trenching and SMS yielded seven sherds (244g) of Middle Saxon pottery (Table 1). The pottery was recovered from the upper fill (7) of a ditch (**4**) in Trench 1 and from the secondary fill (12) of the same ditch in Trench 3 (**10**). The pottery dates from the Middle Anglo-Saxon period (*c*. AD 650-850).

Context	Cut	No.	Weight (g)	Type	Comment
7	4	1	47	Hand-made Middle Saxon, base sherd	Sandy grey-black fabric, 'flat'-base, good quantity of burnt residue on the inside.
7	4	1	43	Hand-made Middle Saxon, rim/body sherd	Small jar, brown-grey sandy fabric with rounded quartz inclusions., 2cm upright rim with flat top.
7	4	1	65	Ipswich Ware, body sherd	Very small jar, thick-walled in smooth, grey sandy fabric, faintly rilled.
12	10	2	13	Hand-made Middle Saxon, body sherds	Small jar, brown-grey sandy fabric with rounded quartz inclusions.,
12	10	2	76	Two base/body sherds – possibly early smooth Ipswich Ware jar.	Small jar, hard, fine, grey slightly sandy fabric.
Total		7	244		

Table 1. Quantification of pottery by context

Methodology

B.1.2 Rapid recording was carried out using OA East's in-house. All sherds have been counted, classified, weighed and recorded on a context-by-context basis in an Access database. Pottery was recorded following the minimum standards laid out in the MPRG guidelines (Slowikowski 2001).

The assemblage

B.1.3 All seven sherds are in good condition, relatively unabraded and with residue still accreting and therefore not considered residual within their context. They form a coherent group of Middle Anglo-Saxon pottery and as a contemporary assemblage would date to the first half of the 8th century when Ipswich Wares were being imported but local handmade wares were still widely in use. Apart from being found alongside clearly hand-made ceramics, both the Ipswich Ware jars are of very small diameter, another indication that they are early forms.

B.2 Worked Stone

By Simon Timberlake

Introduction

B.2.1 A single whetstone/ polishing stone made of micaceous sandstone (weight 484g) was recovered from the fill (7) of a Middle Saxon ditch (**4**) within Trench 1 (Plate 3).

Methodology

B.2.2 The stone was examined visually using an illuminated x3 magnifying lens, and compared with similar lithologies from an archaeological worked stone reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock. The surface of the polishing stone was further examined using a Vickers binocular microscope at a magnification of x10 – x30.

Artefact description

Lithology and provenance

B.2.3 The polishing stone has been fabricated from a small sub-cylindrical/ rectangular-shaped cobble slab of medium-coarse grained micaceous sandstone, possibly a fine-grained Carboniferous arkosic grit. The absence of a calcareous cement excludes the Hythe Beds (Kentish Rag) and also the Upper Greensand Reigate Stone (both lithologies sourced and used for making whetstones during the Mid-Late Saxon and Early Medieval periods); rather it seems likely that this stone was sourced locally and could have been a glacial erratic cobble transported from the North of England.

Description of the stone and its wear pattern

B.2.4 The stone (length 160mm x width 40-45mm x depth 40-30mm) has been worked on five sides; the most highly worn/ polished faces all being strongly concave, both on the base and the two long sides, with the top face possessing four sub-parallel grooves between 1-4mm deep and 1-4mm wide. In longitudinal profile these are in fact very slightly crescentic (concave) in shape suggesting the sharpening of a slightly curved blade which may not have been much more than 40-50mm in length, and thicker than a knife, most likely that of an axe. Lateral scratches can be seen upon the sides of the deepest groove, suggesting a lateral sharpening or grinding/polishing action, but perhaps also the re-use of this stone for sharpening of metal knives. The other three remaining grooves clearly had not been used in this way, and might just relate to the activity of stone polishing, likewise the three main (concave) polished faces. However, one of these (*i.e.* the most uneven of them) does possess a few areas of more recent polish, which also suggests some minor re-use in the re-sharpening of knives. The same can be said of the narrow polished end which is similarly concave. Here the faint traces of further sub-parallel grooving can be seen which has largely been erased by

later re-use. The subtleties of the surface patina (or absence of it) upon the main grooved face further confirms the later re-use of this possible small polissoir as a whetstone.

Discussion

B.2.5 There are numerous well-documented descriptions of Early-Late Saxon whetstones alongside recent illustrated Saxon-Early Medieval finds (Portable Antiquities Scheme), as well as petrographic studies such as those of Evison's (1975) Pagan Saxon Whetstones, which refer to the common lithologies and the sources of these stones, but which also look at their typology. It seems clear that most of these would have been fashioned to some degree, commonly perforated at one end, and most likely to have been made of slate, Kentish Ragstone or greywacke, or after 900 AD (*i.e.* commencing with the Viking trade) from quartz schist imported from Norway (Evison 1987, 111). Thus, there is very little resemblance between these and the example found in the Middle Saxon ditch (**4**) at Barney. Either this is an opportunistic and unusual use of a suitable stone, or else it is a curated item, possibly an earlier whetstone (i.e. a Roman example), or else something quite different, such as a small ?Neolithic polissoir stone which has been picked-up and re-used, almost certainly for the sharpening of knives.

B.2.6 Roman whetstones vary from the common narrow cylindrical forms to small flat slabs, although typically these don't possess any perforations for hanging these from a belt. Just occasionally they do exhibit polishing grooves; some examples of these including those recovered from the forum-basilica at Silchester (Allen 2014, p.91, figure 12.3). Allen's study of the Silchester whetstones provides us with an idea of the range of lithologies and sources of whetstone used in Roman Britain. This includes whetstones made of Pennant (micaceous) sandstone as well as those of Kentish Rag and the various greensand rocks of South-East England. However, there are no examples with such strongly concave polishing faces, and so whilst we cannot completely exclude a Roman origin, an earlier first use of the stone seems possible.

B.2.7 Stone polissoirs possessing axe sharpening grooves as well as shallow concave polishing surfaces are known to be associated with rock outcrops and earth-fast boulders, for example the sarsen at Fyfield Down, Wiltshire (Fowler 2000; figure 9), West Kennet Long Barrow (Edmonds 1995), 'arrow stone' outcrops near to Graig Lwyd (the Penmaenmawr axe factory site in North Wales (Evans 1897; Lowe 1927), plus polissoir 'groove stones' at Fechan, Halling and Grand Pressigny in Northern France (SEE Megalithic Portal: www.megalithic.co.uk/), but also with small portable axe-polishing stones, an example of this being the quartzitic sandstone polissoir recently excavated by OAE at Long Melford in Suffolk (Timberlake forthcoming). To the author's knowledge, Neolithic polissoir finds from East Anglia are rare, and include just one from the primary flint axe production site at Grimes Graves (SEE Varndell 1991, figure 5.9) and another from the Etton causewayed enclosure (Pryor 1998, 257), though neither closely resemble the Long Melford example, and still less the narrower polishing stone recovered from Barney. A closer parallel with this might be the small (140mm long) polissoir made of micaceous sandstone found by John Evans at Burwell

Fen in Cambridgeshire alongside two small flint axes and some greenstone rough-out axes of approximately the same size – the implication being that all these objects were linked, and that the polissoir had been designed specifically for the grinding and polishing of this particular size and shape of axe (Evans 1897, 263).

Summary conclusion

B.2.8 We cannot be certain of the previous history of this object, yet it is possible that it began life as a polissoir, but then was re-discovered and curated for expedient re-use in the Middle Saxon period, most likely for the sharpening of iron knives. The option for this being a Roman whetstone seems slim, given that it shows very little resemblance to any of the well-documented examples, the probability instead is that its first use was much earlier than this, with its origins in prehistory.

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental Samples

By Rachel Fosberry

Introduction

C.1.1 A single bulk sample was taken during the post-determination trial trenching from the upper fill (7) of a Middle Saxon ditch (**4**) in Trench 1. The same ditch in Trench 3 (**10**) was sampled during the subsequent SMS excavation. Samples were taken in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations.

Methodology

C.1.2 The total volume of each sample was processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.1.3 The dried flot was scanned using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 2. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al*. 2006) and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.1.4 For the purpose of this initial assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

C.1.5 Items that cannot be easily quantified such as charcoal and molluscs have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.1.6 Preservation of plant remains is by carbonisation (charring). Cereal grains are abundant with free-threshing wheat (*Triticum aestivum/turgidum*) predominant.

Smaller quantities of barley (*Hordeum vulgare*), rye (*Secale cereale*) and oats (*Avena* sp.) are also present. Two fragments of cereal rachis (barley and wheat) were noted along with occasional small legumes (*Vicia/Lathyrus/Pisum* sp.) and single seeds of stinking mayweed (*Anthemis cotula*) and knotgrasses (*Polygonum* sp.). Wood charcoal is also evident. Occasional fragments of calcined bone were recovered from the residue which was otherwise devoid of finds.

C.1.7 Sample 3, from the secondary fill (12) in ditch **10** contains an almost identical assemblage to Sample 1 and is most likely the same deposit.

C.1.8 Mollusc shells were not preserved.

Sample No.	Context No.	Feature No.	Feature Type	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Weed Seeds	Charcoal	Calcined bone
1	7	4	Ditch	18	75	####	#	#	++++	#
3	12	10	Ditch	30	15	##	0	0	++++	0

Table 2: Environmental samples

Discussion

C.1.9 The recovery of charred grain, chaff, weed seeds and charcoal indicates that there is good potential for the preservation of plant remains at the site. The cereal varieties recovered are consistent with a Middle Saxon date for this deposit, when free-threshing wheat was commonly cultivated along with rye, which became increasingly common throughout the medieval period. The recovery of almost identical assemblages from the same ditch encountered in both Trench 1 and Trench 3 suggests the presence of charred midden-like material along the length of the ditch. This would indicate a significant burning event in which the resultant burnt material has accumulated in the ditch (either naturally or through deliberate deposition). If the assemblage consisted only of charred cereals and included the remains (culm nodes) of straw it would be plausible to consider the *in-situ* burning of a cultivated cereal crop immediately prior to harvest. Culm nodes are not present in either sample and the inclusion of wood charcoal, including oak (*Quercus* sp.) is more likely to have originated from hearth waste or the burning of a nearby storage building.

C.2 Animal Bone

By Zoe Ui Choileain

C.2.1 Two fragments (51g) of animal bone were recovered from the upper fill (7) of a ditch (**4**) in Trench 1. These represent a badly fragmented cattle humerus and a burnt pig phalanx. The surface condition of the bone was fair and the size and robustness of the bone suggest the material is adult. Due to the small size of this assemblage and the high fragmentation levels no further work is required.

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APPENDIX E OASIS DATA COLLECTION FORM

OASIS DATA COLLECTION FORM: England

Printable version

OASIS ID: oxfordar3-303812

Project details

Project name	Fulmodeston to Barney S101a Scheme, Norfolk
Short description of the project	Between 8th and 9th May 2018, Oxford Archaeology East (OAE) carried out archaeological trial trenching on a plot of land to the east of The Street and Rectory Row, Barney, Norfolk. The trial trenching was carried out on behalf of Anglian Water, in advance of the construction of an access road. A single east to west aligned boundary ditch was present in Trench 1, within the western field and close to the western site boundary. The upper fill of the ditch was midden-like in its appearance and yielded all the finds from the ditch, comprising three sherds (165g) of Middle Saxon pottery, an unusual whetstone, which may originally have been a prehistoric polishing stone, and 51g of animal bone. An environmental sample from the same fill yielded abundant charred grain, with lesser quantities of chaff, weed seeds and charcoal, suggestive of occupation nearby. Trench 2 contained no archaeological features. Due to the presence of significant remains in Trench 1, a second stage of fieldwork - a Strip, Map and Sample excavation (SMS) - was undertaken at the western end of the site between 30th May and 1st June 2018. Two additional trenches were opened in the western field, revealing another 2m of the Middle Saxon ditch in Trench 3, with further inclusions of Middle Saxon pottery (89g) and lava quern (111g) recovered. No other features were encountered.
Project dates	Start: 08-05-2018 End: 01-06-2018
Previous/future work	No / Not known
Any associated project reference codes	CNF47213 - HER event no.
Any associated project reference codes	ENF143037 - HER event no.
Any associated project reference codes	ENF144471 - HER event no.
Any associated project reference codes	ENF143037 - Sitecode
Any associated project reference codes	ENF144471 - Sitecode
Any associated project reference codes	SEW-10105 - Planning Application No.

Any associated project reference codes	NWHCM2018.97 - Museum accession ID
Type of project	Recording project
Monument type	BOUNDARY DITCH Early Medieval
Significant Finds	POTTERY Early Medieval
Significant Finds	WHETSTONE Uncertain
Significant Finds	ANIMAL REMAINS Early Medieval
Investigation type	"Open-area excavation"
Prompt	Water Act 1989 and subsequent code of practice

Project location

Country	England
Site location	NORFOLK NORTH NORFOLK FULMODESTON Fulmodeston to Barney S101a Scheme
Postcode	NR21 0FB
Study area	0.1 Hectares
Site coordinates	TF 9971 3280 52.855168725888 0.966581054168 52 51 18 N 000 57 59 E Line
Site coordinates	TF 9956 3281 52.855314405551 0.964362260836 52 51 19 N 000 57 51 E Line

Project creators

Name of Organisation	Oxford Archaeology East
Project brief originator	David Robertson
Project design originator	Daria Tsybaeva and Tom Phillips
Project director/manager	Tom Phillips
Project supervisor	Toby Knight
Type of sponsor/funding body	Water Authority/Company
Name of sponsor/funding body	Anglian Water

Project archives

Physical Archive recipient	Norfolk Museums and Archaeology Service
Physical Archive ID	NWHCM2018.97
Physical Contents	"Animal Bones","Ceramics","Environmental","Worked stone/lithics"
Digital Archive recipient	Norfolk Museums and Archaeology Service
Digital Archive ID	NWHCM2018.97
Digital Contents	"Animal Bones","Ceramics","Environmental","Worked stone/lithics"

Digital Media available	"Database","Images raster / digital photography","Images vector","Text"
Paper Archive recipient	Norfolk Museums and Archaeology Service
Paper Archive ID	NWHCM2018.97
Paper Contents	"none"
Paper Media available	"Context sheet","Drawing","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Fulmodeston to Barney S101a Scheme, Norfolk
Author(s)/Editor(s)	Knight, T.
Other bibliographic details	OAE report 2208
Date	2018
Issuer or publisher	Oxford Archaeology East
Place of issue or publication	Bar Hill, Cambridgeshire
Description	A4 paper bound report. Incorporates trial trenching and strip,map and sample phases of work.
URL	http://library.thehumanjourney.net/3905/

Entered by	Katherine Hamilton (katherine.hamilton@oxfordarch.co.uk)
Entered on	18 July 2018

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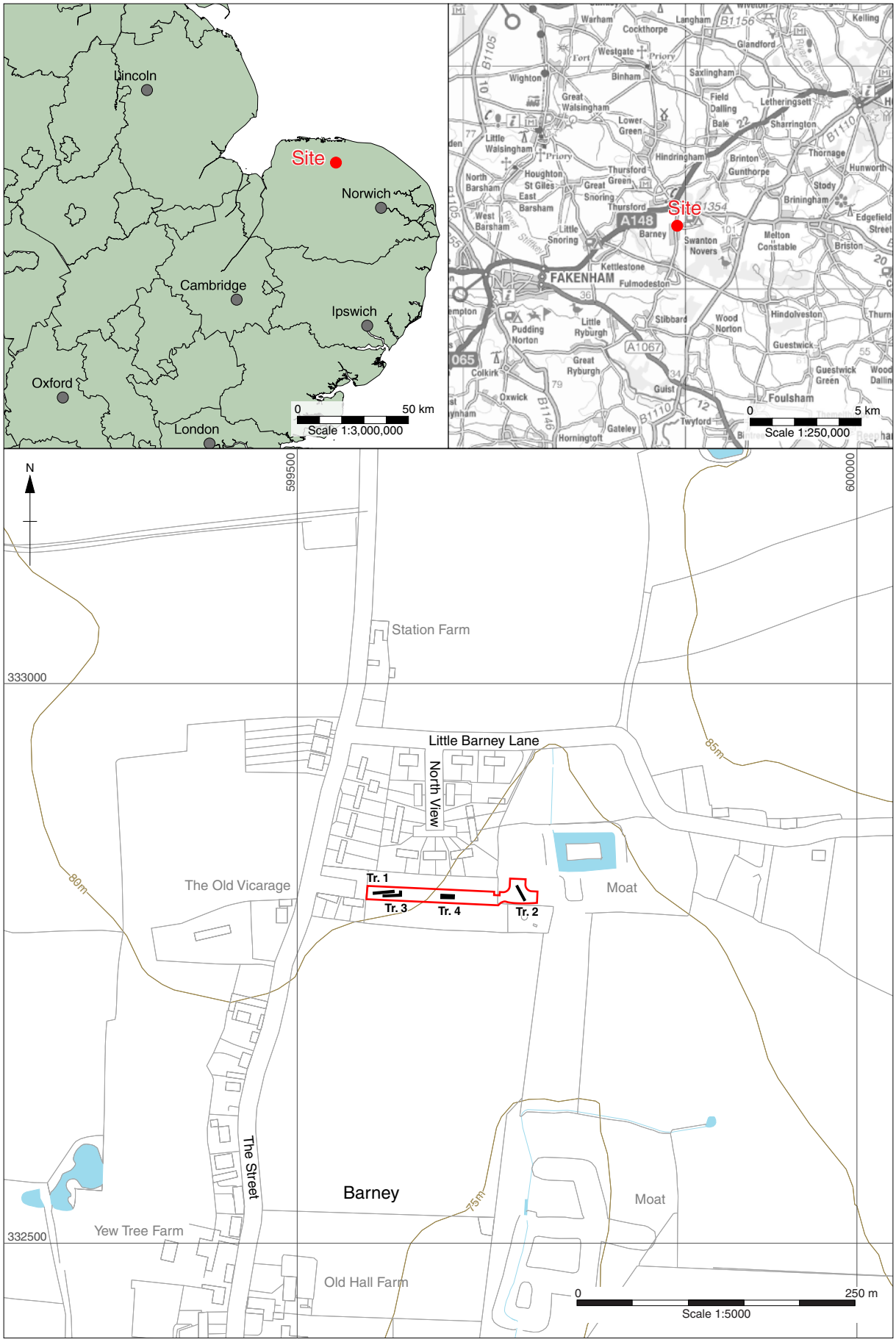

Figure 1: Site location showing archaeological trenches (black) in development area (red)

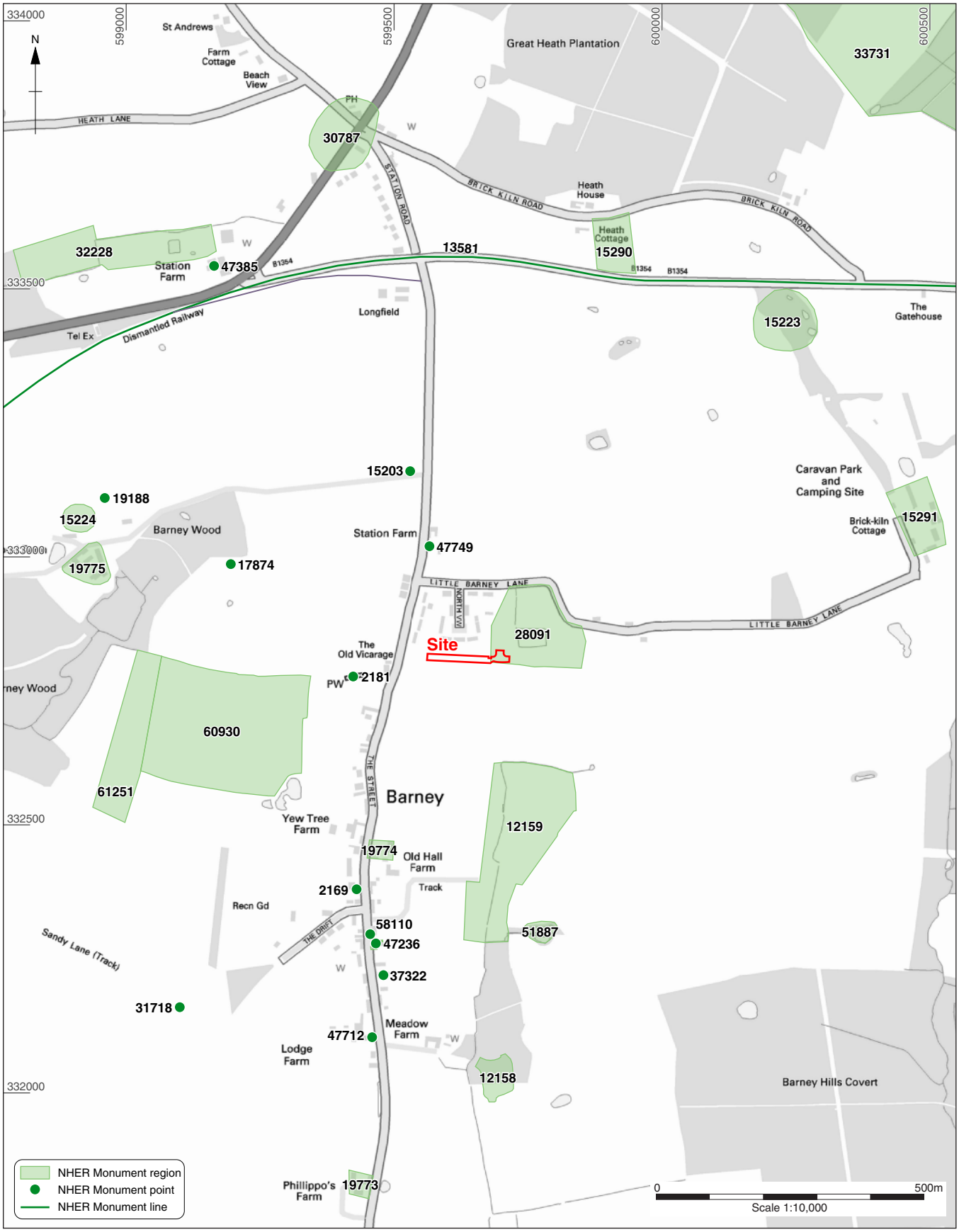

Figure 2: Relevant NHER entries within a 1km radius

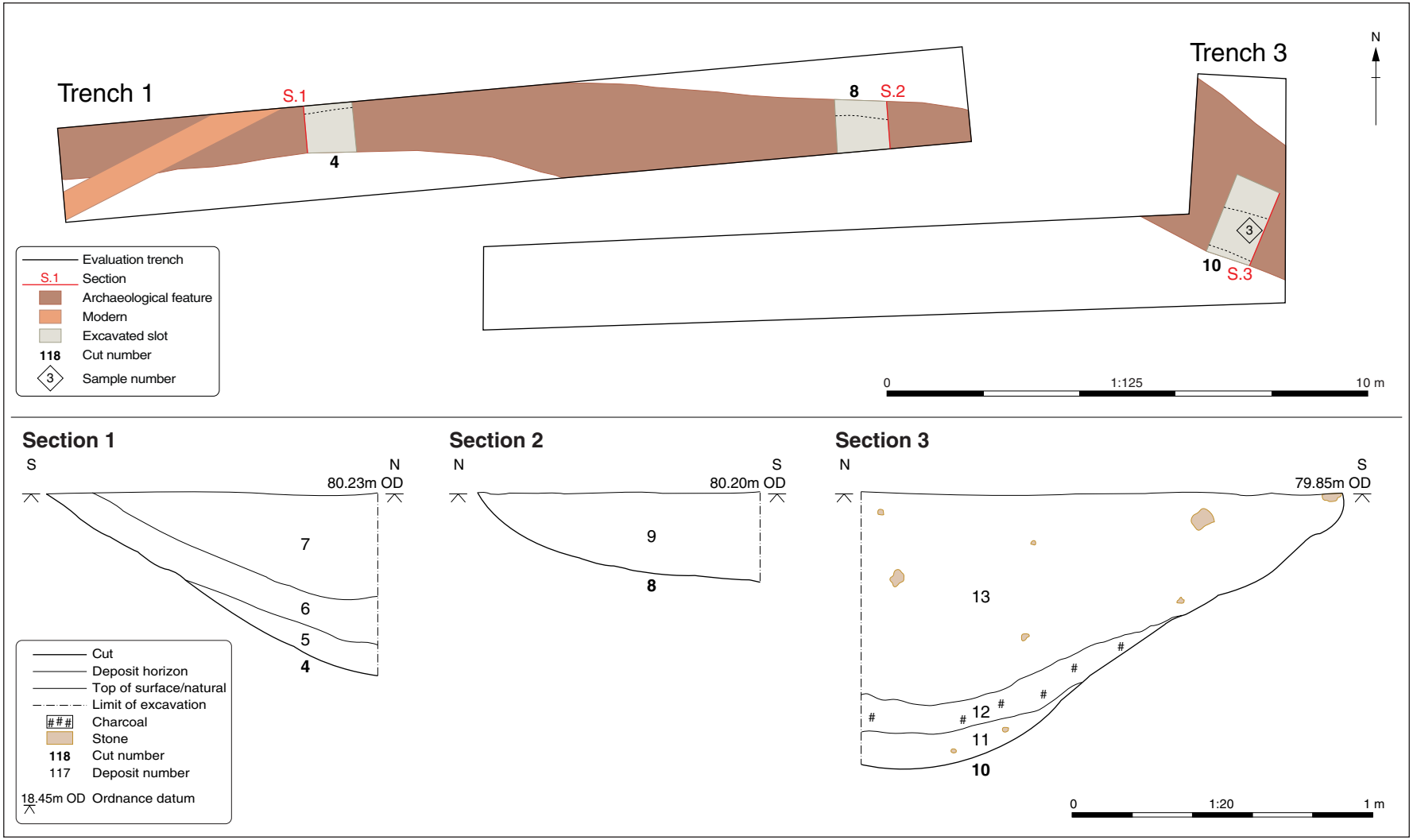

Figure 3: Plan of Trenches 1 and 3, with sections

Plate 1: Trench 1 looking north-east

Plate 2: Ditch **4** in Trench 1 looking north-west

Plate 3: Whetstone SF 1 from Ditch **4**

Plate 4: Trench 2 looking north-west

Plate 5: Ditch **10** Trench 3 looking east

oxfordarchaeology

Head Office/Registered Office/ OA South

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: oanorth@oxfordarchaeology.com
w: http://oxfordarchaeology.com

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: oaeast@oxfordarchaeology.com
w: http://oxfordarchaeology.com