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AREAS 1 & 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

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NGR: TL 8855 6430	Report No: 4756
District: St Edmundsbury	Site Code: BRG 077
Approved: Claire Halpin CMIfA Signed:	Project No: P4383
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In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Areas 1 & 2, Land East of Moreton Hall, Suffolk (NGR TL 8855 6430; Figs. 1-2). The evaluation was commissioned by Taylor Wimpey and was carried out as part of a requirement for further information to be provided prior to the determination of a planning application (DC/14/1881/HYB) for residential development. The evaluation is required by the Local Planning Authority, based on advice from SCC AS-CT. *The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Prehistoric remains are known in and around the site (HER BRG 009, BRG 024 and RGH 065), along with Roman, Saxon and medieval sites being known in similar topographic locations to the immediate west and north (HER BRG 024-7 and RGH 031). A geophysical survey has been carried out this year on Areas 2 and 3 of the proposed development (Stratascan 2014). Anomalies of potential archaeological interest were recorded within Area 2, which may be associated with the edge of the medieval Catshall Green.* *Twenty five features were recorded, principally ditches. An undated pit (F1008 (Tr.3)) and an undated posthole (F1062 (Tr.24)) were recorded. The other discrete features (Pits F1006 (Tr.3) and F1025 (Tr.7) and Quarry Pit F1014 (Tr.3)) were modern. Three dated, medieval, features were recorded (Ditch F1022 (Tr. 15), Ditches F1049 and F1057 (Tr. 24). The ditches in Trench 24 were associated with a series of ditches traceable in Trenches 24, 25, and 27. These boundary ditches were identified by the geophysical survey.* *Settlement evidence associated with the medieval Catshall Green was recorded and the features in Trenches 15 and 30 have the most potential in this respect.*		
Project dates (fieldwork)	*15-23 December 2014*		
Previous work (Y/N/?)	*N*	Future work (Y/N/?)	*TBC*
P. number	*4383*	Site code	*BRG 077*
Type of project	*Archaeological Trial Trench Evaluation*		
Site status	-		
Current land use	*Agricultural land*		
Planned development	*Residential development*		
Main features (+dates)	*Medieval Ditches* *?Medieval Kiln (unexcavated)*		
Significant finds (+dates)	*Medieval Pottery*		
Project location			
County/ District/ Parish	*Suffolk*	*St Edmundsbury*	*Rushbrooke with Rougham*
HER for area	*Suffolk County Council Historic Environment Record*		
Post code (if known)	-		
Area of site	c. *91.039 ha*		
NGR	*TL 8855 6430*		
Height AOD (min/max)	*c. 50/60m*		
Project creators			
Brief issued by	*Suffolk County Council Archaeological Service Conservation Team*		
Project supervisor/s (PO)	*Monahan, V.*		
Funded by	*Taylor Wimpey UK Ltd*		
Full title	*Areas 1 & 2, Land East of Moreton Hall, Great Barton, Suffolk. Archaeological Trial Trench Evaluation*		
Authors	*Monahan, V., Mustchin, A.R.R. and Peachey, A.*		
Report no.	*4756*		
Date (of report)	*06 January 2015 (29/01/2015)*		

AREAS 1 & 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

SUMMARY

In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Areas 1 & 2, Land East of Moreton Hall, Suffolk (NGR TL 8855 6430; Figs. 1-2). The evaluation was commissioned by Taylor Wimpey and was carried out as part of a requirement for further information to be provided prior to the determination of a planning application (DC/14/1881/HYB) for residential development. The evaluation is required by the Local Planning Authority, based on advice from SCC AS-CT.

The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Prehistoric remains are known in and around the site (HER BRG 009, BRG 024 and RGH 065), along with Roman, Saxon and medieval sites being known in similar topographic locations to the immediate west and north (HER BRG 024-7 and RGH 031). A geophysical survey has been carried out this year on Areas 2 and 3 of the proposed development (Stratascan 2014). Anomalies of potential archaeological interest were recorded within Area 2, which may be associated with the edge of the medieval Catshall Green.

Twenty five features were recorded, principally ditches. An undated pit (F1008 (Tr.3)) and an undated posthole (F1062 (Tr.24)) were recorded. The other discrete features (Pits F1006 (Tr.3) and F1025 (Tr.7) and Quarry Pit F1014 (Tr.3)) were modern. Three dated, medieval, features were recorded (Ditch F1022 (Tr. 15), Ditches F1049 and F1057 (Tr. 24). The ditches in Trench 24 were associated with a series of ditches traceable in Trenches 24, 25, and 27. These boundary ditches were identified by the geophysical survey.

Settlement evidence associated with the medieval Catshall Green was recorded and the features in Trenches 15 and 30 have the most potential in this respect.

1 INTRODUCTION

1.1 In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Areas 1 & 2, Land East of Moreton Hall, Suffolk (NGR TL 8855 6430; Figs. 1-2). The evaluation was commissioned by Taylor Wimpey and was carried out as part of a requirement for further information to be provided prior to the determination of a planning application (DC/14/1881/HYB) for residential development. The evaluation is required by the Local Planning Authority, based on advice from SCC AS-CT.

1.2 This evaluation comprises the trial trench evaluation of Areas 1 and 2. A geophysical survey has been carried out on Areas 2 and 3 of the proposed development (Stratascan 2014). Anomalies of potential archaeological interest were

recorded within Area 2, which may be associated with the edge of the medieval Catshall Green.

1.3 The evaluation was conducted in accordance with a brief issued by Suffolk County Council Archaeological Service Conservation Team (SCC AS-CT, dated 24 November 2014), and a specification compiled by AS (dated 24 November 2014). The archaeological evaluation followed the procedures outlined in the Institute for Archaeologists' *Code of Conduct* and *Standard and Guidance for Archaeological Field Evaluation* (revised 2008) and *Standards for Field Archaeology in the East of England* (Gurney 2003).

1.4 The principal objectives for the evaluation were:

- To establish whether any archaeological deposit exists in the area, with particular regard to any which are of sufficient importance to merit preservation *in situ;*

- To identify the date, approximate form and purpose of any archaeological deposit within the application area, together with its likely extent, localised depth and quality of preservation;

- To evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits, along with the potential for the survival of environmental evidence; and

- To provide sufficient information to construct an archaeological conservation strategy dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.

Planning Policy Context

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

1.6 The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject

to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE (Figs. 1 – 2; DPs 1-4)

2.1 Bury St Edmunds is a former county town in west Suffolk, situated at the confluence of the Rivers Lark and Linnet. The small town of Great Barton situated *c*. 4km to the north-east, and the villages of Rushbrooke and Rougham Green *c*. 4km to the south-west. The historic core of the town is situated adjacent to the cathedral and ruins of the medieval abbey in the centre of the modern town. Modern residential and industrial estates have developed around the outskirts of the town, including the Moreton Hall estate on the eastern side of the town.

2.2 The assessment site is to the east of the Moreton Hall estate on agricultural land that was formerly Rougham Airfield. Great Barton is situated *c*.1.5 km to the north and Rushbrooke and Rougham Green *c*.1.5km to the south.

3 TOPOGRAPHY, GEOLOGY AND SOILS

3.1 The assessment site is predominantly situated on a very slightly undulating plateau above the north-western slope of the valley of the River Lark. The elongate rectangular parcel of land to the north of Mount Road rises from *c*.58m on its southern edge bordering the road, to *c*.60m on its northern edge. The larger area of land to the south of Mount Road rises from *c*.58m on its northern edge, to *c*.63m in the centre of the site, before dropping to *c*.62m on the southern edge adjacent to the A14. However in all cases the gradient of slope is very shallow. The surrounding landscape is gently undulating and the northern part of the assessment site slopes down to *c*.50m AOD. The River Lark passes *c*.1.3km to the south-west of the assessment site on a north-west to south-east course.

3.2 The solid geology of the assessment site comprises Upper Cretaceous Chalk, overlain by drift geology of Quaternary Cover Sands with Head deposits that comprise orange sands and clay in varying proportions. Soils typically comprise sandy loams or sandy clay loams, with the sands generally calcareous in origin with a flint/stone content of 1-10%. Excavations on land adjacent to the west have recorded a homogenous dark brown silt plough soil to depths of *c*.0.3-0.5m, overlying sandy orange subsoils (Duffy 2006; Gill 2005).

3.3 In 2012 an archaeological evaluation was conducted across the centre of the assessment area (Beverton 2012), in advance of proposals for the construction of a football ground adjacent to the east to Lady Miriam Way, Skyliner Way and Primack Road (for location see Fig.13). The evaluation confirmed the presence of fine clay loams and patches of sand and gravel, and also recorded numerous peri-glacial scars aligned north-west to south east, and filled with fine sandy silts.

4 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

An Archaeological Desk-Based Assessment

4.1 An archaeological desk-based assessment has been undertaken (Peachey 2013). In summary:

Archaeological investigations on land surrounding the assessment site have recorded only sparse features of prehistoric, Roman and medieval date. However an archaeological evaluation within the centre of the assessment site has demonstrated the survival of a shallow archaeological horizon of early to middle Iron Age date. The character of prehistoric activity remains poorly defined, but appears to be of dispersed and peripheral character. Nevertheless the size of the assessment area leads to a high probability that features of these dates; however sparse, may be encountered and have the potential to clarify the understanding of this part of the poorly understood historic landscape overlooking the Lark Valley. The area of the assessment site appears to have remained as agricultural land that was part of the Eldo Estate throughout the post-medieval period and field boundaries of this date, notably on the southern and eastern edges may remain. Cartographic sources indicate that at least one field may have been associated with kilns and extraction pits that were part of a local brick or pottery manufacturing industry.

The history of the assessment site is dominated by Rougham Airfield, which was constructed in 1941/2 and was a major USAAF airbase involved in bombing missions in the Second World War. The assessment area encompasses at least one third of the flying field, including significant lengths of all three runways, parts of the perimeter track, at least 14 dispersal points and two small structures as indicated by surviving plans and aerial photos of the air base. The airfield was closed in 1948, with the runways broken up and returned to agricultural land in the 1950s, although parch marks within the assessment site follow the course of one runway.

The assessment site has probably only been subject to a limited degree of truncation, primarily through post-medieval and modern agricultural processes, and the establishment of the Second World War runways and perimeter track of Rougham Airfield. The salvaging of the hard standing materials from the runways and airbase in the 1950s may also have had an impact. This archaeological desk-based assessment is to support the Master Plan for the development of residential schemes that will expand the Moreton Hall estate. The proposed development will have a very high impact on any archaeological remains, if present. Previous excavations within and adjacent to the assessment site have demonstrated how areas of archaeological features could be identified through evaluation trenches, and preserved by record through archaeological excavation.

Geophysical Survey

4.2 A geophysical survey of Areas 2 and 3 has been undertaken (Richardson 2014; and Appendix 3). In summary:

The survey identified a former field boundary or enclosure and a few other possible archaeological anomalies.

5 METHODOLOGY

5.1 Twenty seven trenches were proposed, each 40m long. Following a site monitoring visit when all the trenches were open an additional three trenches (Nos. 28 - 30) were excavated based on the advice of the planning archaeologist, Dr Matthew Brudenell.:

- Trench 28 examined the gap between Trench 1 and the western boundary of the site;

- Trench 29 examined the area between Trenches 4 and 5: the evidence from Trench 24 suggests that the medieval `core' of Catshall Green on this side of the green-edge probably lies towards the northern end of the field and therefore it was thought worthwhile to confirm the presence/ absence of settlement adjacent i.e. by inserting a trench between Trenches 4 and 5 to examine the possibility of green-edge settlement. The green-edge boundary seems to have been picked up in Trenches 4 and 5 but there is modern disturbance in Trench 4 so more information was sought; and

- Trench 30 was excavated in a bid to trace a ditch recorded in Trench 15 but not observable in Trench 14.

5.2 The trenches were excavated using a mechanical excavator fitted with a toothless ditching bucket (Fig. 2).

5.3 Undifferentiated overburden was removed under close archaeological supervision using a 180° back acting mechanical excavator fitted with a 1.60m wide toothless ditching bucket. Thereafter, all further investigation was undertaken by hand. Exposed surfaces were cleaned as appropriate and examined for archaeological features and finds. Deposits were recorded using *pro forma* recording sheets, drawn to scale and photographed.

6 DESCRIPTION OF RESULTS

Individual trench descriptions are presented below:

Trench 1 (Figs. 2 - 3)

Sample section: 1A *0.00 = 57.47m AOD*		
0.00 – 0.31m	L1000	Topsoil. Dark brown, friable, slightly silty sand
0.31 – 0.91m	L1001	Subsoil. Mid reddish brown, frialbe, silty sand with moderate chalk and flint
0.91m+	L1002	Natural. Mid reddish brown , loose, sand and gravel

Sample section: 1B *0.00 = 55.51m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above
0.31 – 0.71m	L1001	Subsoil. As above
0.71m+	L1002	Natural. As above

Description: Trench 1 contained no archaeological features or finds

Trench 2 (Figs. 2 - 3)

Sample section: 2A *0.00 = 57.23m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.81m	L1001	Subsoil. As above, Trench 1.
0.81m+	L1002	Natural. As above, Trench 1.

Sample section: 2B *0.00 = 58.51m AOD*		
0.00 – 0.26m	L1000	Topsoil. As above, Trench 1.
0.26 – 0.45m	L1001	Subsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Description: Trench 2 contained no archaeological features or finds

Trench 3 (Figs. 2 - 4)

Sample section: 3A *0.00 = 59.51m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 3B *0.00 = 57.39m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.71m	L1001	Subsoil. As above, Trench 1.
0.71m+	L1002	Natural. As above, Trench 1.

Description: Trench 3 contained undated Pit F1008 and undated Ditch F1011, and modern Pit F1006 and modern Quarry Pit F1014.

Pit F1006 was sub-rectangular (1.00 x 2.16 x 0.14). It had steep sides and a flat base. Its fill, L1007, was a mid yellowish brown, firm, silty sand which contained modern finds.

Pit F1008 was sub-circular (0.97 x 0.76 x 0.42). It had steep sides and a concave base. Its basal fill, L1010, was a mid yellowish brown, firm, chalky clay. It contained pottery and struck flint. Its upper fill, L1009, was a mid yellowish brown, firm, chalky clay. It contained no finds.

Ditch F1011 was linear in plan (2.00+ x 1.00 x 0.41m), orientated E/W. It had moderately sloping sides and a flattish base (DP5). Its upper fill, L1012, was a dark yellowish brown, firm, clay. It contained no finds. Its basal fill, L1013 was a mid yellowish brown, firm, clay. It contained animal bone (1g) and CBM (3g).

Quarry Pit F1014 was elongated (2.00+ x 2.00 x 0.42). It had moderately steep sides and a flattish base. Its fill, L1015, was a dark orange brown, friable, silty sand. It was a modern feature.

Trench 4 (Figs. 2 - 4)

Sample section: 4A *0.00 = 59.01m AOD*		
0.00 – 0.46m	L1000	Topsoil. As above, Trench 1.
0.46m+	L1002	Natural. As above, Trench 1.

Sample section: 4B *0.00 = 58.48m AOD*		
0.00 – 0.45m	L1000	Topsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Description: Trench 4 contained no archaeological features or finds. Some modern disturbance was apparent.

Trench 5 (Figs. 2 - 3)

Sample section: 5A *0.00 = 56.61m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Sample section: 5B *0.00 = 56.66m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.46m	L1001	Subsoil. As above, Trench 1.
0.46m+	L1002	Natural. As above, Trench 1.

Description: Trench 5 contained no archaeological features or finds

Trench 6 (Figs. 2 - 3)

Sample section: 6A *0.00 = 57.40m AOD*		
0.00 – 0.51m	L1000	Topsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 6B *0.00 = 55.93m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 6 contained no archaeological features or finds

Trench 7 (Figs. 2 - 4)

Sample section: 7A *0.00 = 55.95m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31m+	L1002	Natural. As above, Trench 1.

Sample section: 7B *0.00 = 55.52m AOD*		
0.00 – 0.46m	L1000	Topsoil. As above, Trench 1.
0.46 – 0.56m	L1001	Subsoil. As above, Trench 1.
0.56m+	L1002	Natural. As above, Trench 1.

Description: Trench 7 contained modern Pit F1025

Pit F1025 was sub-circular (1.00 x 0.20 x 0.60m). It had steep sides and a concave base. Its fill, L1026, was a mid reddish brown, firm, silty sand which contained modern (late 18th – 19th century) pottery (4g) and CBM (107g).

Trench 8 (Figs. 2 - 3)

Sample section: 8A *0.00 = 56.61m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 8B *0.00 = 55.01m AOD*		
0.00 – 0.50m	L1000	Topsoil. As above, Trench 1.
0.50 – 0.81m	L1001	Subsoil. As above, Trench 1.
0.81m+	L1002	Natural. As above, Trench 1.

Description: Trench 8 contained no archaeological features or finds

Trench 9 (Figs. 2 - 3)

Sample section: 9A *0.00 = 54.71m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 9B *0.00 = 55.24m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 9 contained no archaeological features or finds

Trench 10 (Figs. 2 - 3)

Sample section: 10A *0.00 = 55.51m AOD*		
0.00 – 0.29m	L1000	Topsoil. As above, Trench 1.
0.29 – 0.41m	L1001	Subsoil. As above, Trench 1.
0.41m+	L1002	Natural. As above, Trench 1.

Sample section: 10B *0.00 = 55.34m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41m+	L1002	Natural. As above, Trench 1.

Description: Trench 10 contained no archaeological features or finds

Trench 11 (Figs. 2 - 3)

Sample section: 11A *0.00 = 54.88m AOD*		
0.00 – 0.29m	L1000	Topsoil. As above, Trench 1.
0.29 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Sample section: 11B *0.00 = 56.51m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.41m	L1001	Subsoil. As above, Trench 1.
0.41m+	L1002	Natural. As above, Trench 1.

Description: Trench 11 contained no archaeological features or finds

Trench 12 (Figs. 2 - 3)

Sample section: 12A *0.00 = 55.29m AOD*		
0.00 – 0.39m	L1000	Topsoil. As above, Trench 1.
0.39 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 12B *0.00 = 55.38m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 12 contained no archaeological features or finds

Trench 13 (Figs. 2 - 3)

Sample section: 13A *0.00 = 55.35m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.41m	L1001	Subsoil. As above, Trench 1.
0.41 – 0.72m	L1016	Colluvium. Pale grey brown, friable, silty sand.
0.72m+	L1002	Natural. As above, Trench 1.

Sample section: 13B *0.00 = 56.00m AOD*		
0.00 – 0.29m	L1000	Topsoil. As above, Trench 1.
0.29 – 0.51m	L1016	Colluvium. As above.
0.51 – 0.71m	L1001	Subsoil. As above, Trench 1.
0.71 m+	L1002	Natural. As above, Trench 1.

Description: Trench 13 contained no archaeological features or finds

Trench 14 (Figs. 2 - 3 & 5)

Sample section: 14A *0.00 = 55.44m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.52m	L1001	Subsoil. As above, Trench 1.
0.52m+	L1002	Natural. As above, Trench 1.

Sample section: 14B *0.00 = 55.83m AOD*		
0.00 – 0.46m	L1000	Topsoil. As above, Trench 1.
0.46 – 0.85m	L1001	Subsoil. As above, Trench 1.
0.85m+	L1002	Natural. As above, Trench 1.

Description: Trench 14 contained no archaeological features or finds. A possible gully (F1027) was investigated but judged to be natural.

Trench 15 (Figs. 2 - 3 & 5)

Sample section: 15A *0.00 = 55.60m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.71m	L1001	Subsoil. As above, Trench 1.
0.71m+	L1002	Natural. As above, Trench 1.

Sample section: 15B *0.00 = 55.05m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0. 91m	L1001	Subsoil. As above, Trench 1.
0.91m+	L1002	Natural. As above, Trench 1.

Description: Trench 15 contained Ditch F1022. The latter contained medieval pottery. Trench 15 also contained a possible kiln (DP6) which was recorded in plan but not excavated.

Ditch F1022 was linear in plan (2.00+ x 1.85 x 0.85m), orientated N/S. It had moderately sloping sides and a concave base. Its basal fill, L1024, was a pale yellowish brown, friable, silty sand. It contained no finds. Its upper fill, L1023, was a mid greyish brown, friable, silty sand. It contained nine sherds of medieval (mid 12th – mid 13th century) pottery (89g), animal bone (115g) and oyster shell (121g).

Trench 16 (Figs. 2 - 3)

Sample section: 16A *0.00 = 57.07m AOD*		
0.00 – 0.21m	L1000	Topsoil. As above, Trench 1.
0.21 – 0.45m	L1001	Subsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Sample section: 16B *0.00 = 56.79m AOD*		
0.00 – 0.29m	L1000	Topsoil. As above, Trench 1.
0.29 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 16 contained no archaeological features or finds. Modern land drains were present.

Trench 17 (Figs. 2 - 3 & 6)

Sample section: 17A *0.00 = 56.40m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 - 0.71m	L1001	Subsoil. As above, Trench 1.
0.71m+	L1002	Natural. As above, Trench 1.

Sample section: 17B *0.00 = 57.88m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 17 contained undated Ditch F1020 which was also recorded in Trench 18.

Ditch F1020 was linear in plan (2.00+ x 1.20 x 0.34m), orientated E/W (DP7). It had steep sides and a concave base. Its fill, L1021, was a mid reddish brown, friable, silty sand. It contained no finds. Ditch F1020 was also recorded in Trench 18.

Trench 18 (Figs. 2 - 3 & 6)

Sample section: 18A *0.00 = 57.25m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.70m	L1001	Subsoil. As above, Trench 1.
0.70 – 0.92m	L1016	Colluvium. As above Trench 13.
0.92m+	L1002	Natural. As above, Trench 1.

Sample section: 18B *0.00 = 57.41m AOD*		
0.00 – 0.26m	L1000	Topsoil. As above, Trench 1.
0.26 – 0.45m	L1001	Subsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Description: Trench 18 contained undated Ditch F1020 which was also recorded in Trench 17.

Ditch F1020 was linear in plan (2.00+ x 1.00 x 0.39m), orientated E/W (DP8). It had moderately sloping sides and a concave base. Its fill, L1021, was a mid reddish brown, friable, silty sand. It contained no finds. Ditch F1020 was also recorded in Trench 17.

Trench 19 (Figs. 2 - 3)

Sample section: 19A *0.00 = 57.41m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 19B *0.00 = 57.44m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 19 contained no archaeological features or finds

Trench 20 (Figs. 2 - 3)

Sample section: 20A *0.00 = 57.97m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41m+	L1002	Natural. As above, Trench 1.

Sample section: 20B *0.00 = 58.95m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 20 contained no archaeological features or finds

Trench 21 (Figs. 2 - 3)

Sample section: 21A *0.00 = 58.53m AOD*		
0.00 – 0.36m	L1000	Topsoil. As above, Trench 1.
0.36 – 0.45m	L1001	Subsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Sample section: 21B *0.00 = 58.73m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 21 contained no archaeological features or finds

Trench 22 (Figs. 2 - 3)

Sample section: 22A *0.00 = 58.07m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 22B *0.00 = 58.73m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 22 contained no archaeological features or finds

Trench 23 (Figs. 2 - 3)

Sample section: 23A *0.00 = 57.90m AOD*		
0.00 – 0.51m	L1000	Topsoil. As above, Trench 1.
0.51 – 0.66m	L1001	Subsoil. As above, Trench 1.
0.66m+	L1002	Natural. As above, Trench 1.

Sample section: 23B *0.00 = 58.19m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Description: Trench 23 contained no archaeological features or finds

Trench 24 (Figs. 2 - 3 & 6)

Sample section: 24A *0.00 = 59.05m AOD*		
0.00 – 0.21m	L1000	Topsoil. As above, Trench 1.
0.21 – 0.51m	L1001	Subsoil. As above, Trench 1.
0.51m+	L1002	Natural. As above, Trench 1.

Sample section: 24B *0.00 = 59.90m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.60m	L1001	Subsoil. As above, Trench 1.
0.60m+	L1002	Natural. As above, Trench 1.

Description: Trench 24 contained Ditches F1047, F1049, F1055, F1057 and F1060, and Posthole F1062. Ditches F1049 and F1057 contained medieval pottery.

Ditch F1047 was linear in plan (1.00+ x 1.74 x 0.47m), orientated N/S. It had steep sides and a concave base. Its fill, L1048, was a mid greyish brown, friable, silty sand. It contained animal bone (14g).

Ditch F1049 was linear in plan (1.00+ x 0.91 x 0.18m), orientated N/S. It had irregular sides and a flattish base. Its fill, L1050, was a mid orange brown, friable, silty sand. It contained a medieval (12^{th} – 13^{th} century) pottery sherd (159g) and fired clay (690g).

Ditch F1055 was linear in plan (1.00+ x 1.10 x 0.34m), orientated N/S. It had irregular sides and a concave base. Its fill, L1056, was a mid greyish brown, friable, silty sand. It contained no finds.

Ditch F1057 was linear in plan (1.00+ x 0.47 x 0.74m), orientated N/S. It had steep sides and a concave base. Its basal fill, L1058, was a mid dark grey brown, friable, silty sand. It contained a medieval (mid 12^{th} – 13^{th} / 14^{th} century) pottery sherd (10g). Its upper and principal fill, L1059, was a mid orange brown, friable, silty sand. It contained animal bone (45g) and an iron fragment (51g). Ditch F1057 was cut by Ditch F1060.

Ditch F1060 was linear in plan (1.00+ x 2.47 x 0.53m), orientated N/S. It had steep sides and a concave base. Its fill, L1061, was a mid greyish brown, friable, silty sand. It contained no finds. F1060 cut Ditch F1057, and F1060 was recorded in Trench 25 (F1066)

Posthole F1062 was sub-circular in plan (0.53 x 0.47 x 0.09m). It had moderately sloping sides and a flattish base. Its fill, L1063, was a mid greyish brown, friable, silty sand. It contained no finds.

Trench 25 (Figs. 2 - 3 & 7)

Sample section: 25A *0.00 = 56.10m AOD*		
0.00 – 0.51m	L1000	Topsoil. As above, Trench 1.
0.51 - 80m	L1001	Subsoil. As above, Trench 1.
0.80m+	L1002	Natural. As above, Trench 1.

Sample section: 25B *0.00 = 57.93m AOD*		
0.00 – 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 25 contained undated Ditches F1039, F1041, F1043, F1045, F1064 and F1066, all orientated SW/NE.

Ditch F1039 was linear in plan (1.00+ x 0.46 x 0.18m), orientated SW/NE. It had moderately steep sides and a concave base. Its fill, L1040, was a mid reddish brown, friable, silty sand. It contained no finds. F1039 was cut by Ditch F1041.

Ditch F1041 was linear in plan (1.00+ x 0.60 x 0.26m), orientated SW/NE. It had steep sides and a concave base. Its fill, L1042, was a mid grey brown, friable, silty sand. It contained no finds. F1041 cut Ditch F1039.

Ditch F1043 was linear in plan (1.00+ x 0.59 x 0.38m), orientated SW/NE. It had steep sides and a narrow concave base. Its fill, L1044, was a mid reddish brown, friable, silty sand. It contained animal bone (154g).

Ditch F1045 was linear in plan (1.00+ x 0.68 x 0.24m), orientated SW/NE. It had moderately steep sides and an uneven base. Its fill, L1046, was a mid reddish brown, friable, silty sand. It contained no finds.

Ditch F1064 was linear in plan (1.00+ x 0.49 x 0.16m), orientated N/S. It had steep sides and a concave base. Its fill, L1065, was a mid greyish brown, friable, silty sand. It contained no finds. Ditch F1064 was also recorded in Trench 24 (F1057).

Ditch F1066 was linear in plan (1.00+ x 2.37 x 0.57m), orientated SW/NE. It had moderately steep sides and a flattish base. Its fill, L1067, was a mid greyish brown, friable, silty sand. It contained no finds. Ditch F1066 was also recorded in Trench 24 (F1060).

Trench 26 (Figs. 2 - 3)

Sample section: 26A *0.00 = 58.58m AOD*		
0.00 – 0.45m	L1000	Topsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Sample section: 26B *0.00 = 56.63m AOD*		
0.00 – 0.51m	L1000	Topsoil. As above, Trench 1.
0.51 - 80m	L1001	Subsoil. As above, Trench 1.
0.80m+	L1002	Natural. As above, Trench 1.

Description: Trench 26 contained no archaeological features or finds

Trench 27 (Figs. 2 - 3 & 7)

Sample section: 27A *0.00 = 56.78m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 - 081m	L1001	Subsoil. As above, Trench 1.
0.81m+	L1002	Natural. As above, Trench 1.

Sample section: 27B *0.00 = 56.36m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.75m	L1001	Subsoil. As above, Trench 1.
0.75m+	L1002	Natural. As above, Trench 1.

Description: Trench 27 contained undated Ditches F1051 and F1053.

Ditch F1051 was linear in plan (1.00+ x 1.87 x 0.48m), orientated SE/NW. It had steep sides and a concave base. Its fill, L1052, was a dark reddish brown, friable, silty sand. It contained no finds. F1051 was possibly a continuation of a ditch recorded in Trenches 24 and 25.

Ditch F1053 was linear in plan (1.00+ x 1.16 x 0.22m), orientated NW/SE. It had moderately steep sides and an uneven base. Its fill, L1054, was a mid - light reddish brown, friable, silty sand. It contained no finds. F1053 was possibly a continuation of a ditch recorded in Trenches 24 and 25

Trench 28 (Figs. 2 - 3)

Sample section: 28A *0.00 = 56.16m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Sample section: 28B *0.00 = 56.58m AOD*		
0.00 – 0.36m	L1000	Topsoil. As above, Trench 1.
0.36 – 0.55m	L1001	Subsoil. As above, Trench 1.
0.55m+	L1002	Natural. As above, Trench 1.

Description: Trench 28 contained no archaeological features or finds

Trench 29 (Figs. 2 - 3)

Sample section: 29A *0.00 = 57.51m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 – 0.62m	L1019	Made ground. Pale yellow, friable, silty sand.
0.62 – 0.91m	L1000	Topsoil. As above, Trench 1.
0.91 – 1.01m	L1001	Subsoil. As above, Trench 1.
1.01m+	L1002	Natural. As above, Trench 1.

Sample section: 29B *0.00 = 57.10m AOD*		
0.00 – 0.31m	L1000	Topsoil. As above, Trench 1.
0.31 - 61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 29 contained no archaeological features or finds

Trench 30 (Figs. 2 - 3 & 7)

Sample section: 30A *0.00 = 55.60m AOD*		
0.00 – 0.40m	L1000	Topsoil. As above, Trench 1.
0.40 – 0.81m	L1001	Subsoil. As above, Trench 1.
0.81 m+	L1002	Natural. As above, Trench 1.

Sample section: 30B *0.00 = 56.05m AOD*		
0.00 – 0.29m	L1000	Topsoil. As above, Trench 1.
0.29 – 0.81m	L1001	Subsoil. As above, Trench 1.
0.81m+	L1002	Natural. As above, Trench 1.

Description: Trench 30 contained undated Ditches F1033, F1035 and F1037. Possible gullies (F1029 and F1031) were investigated but judged to be natural.

Ditch F1033 was linear in plan (1.00+ x 0.98 x 0.31m), orientated NW/SE. It had moderately sloping sides and a concave base. Its fill, L1034, was a mid reddish brown, friable, silty sand. It contained no finds.

Ditch F1035 was linear in plan (1.00+ x 1.21 x 0.22m), orientated NW/SE. It had moderately sloping sides and a flattish base. Its fill, L1036, was a mid reddish brown, friable, silty sand. It contained no finds.

Ditch F1037 was linear in plan (1.00+ x 1.00+ x 0.58m), orientated N/S. It had steep sides and a concave base. Its fill, L1038, was a mid reddish brown, friable, silty sand. It contained no finds.

7 CONFIDENCE RATING

7.1 It is not felt that any factors inhibited the recognition of archaeological features or finds present.

8 DEPOSIT MODEL

8.1 Uppermost was Topsoil L1000, a dark grey brown, friable, silty sand with occasional medium and large sub-angular and sub rounded flint (*c*. 0.25 – 0.40m thick). L1000 overlay Subsoil deposit L1001, a mid reddish brown, firm, silty sand with occasional medium and large sub-angular and sub rounded flint. The subsoil overlay the natural, L1002, a mid reddish brown, loose, sand and gravel (*c*. 0.45 – 0.90m below the current ground surface).

9 DISCUSSION

9.1 The recorded features are tabulated:

Trench	Context	Description	Date
3	F1006	Pit	Modern
	F1008	Pit	-
	F1011	Ditch	-
	F1014	Quarry Pit	Modern
7	F1025	Pit	Modern
15	F1022	Ditch	Medieval
	-	?Kiln	
17	F1020 (=Tr.18)	Ditch	-
18	F1020 (=Tr.17)	Ditch	-
24	F1047	Ditch	-
	F1049	Ditch	Medieval
	F1055	Ditch	-
	F1057	Ditch	Medieval
	F1060 (= 1066)	Ditch	-
	F1062	Posthole	-
25	F1039	Ditch	
	F1041	Ditch	
	F1043	Ditch	
	F1045	Ditch	
	F1064	Ditch	
	F1066 (=1060)	Ditch	-
27	F1051 (= Trs. 24 & 25)	Ditch	-
	F1053 (= Trs. 24 & 25)	Ditch	-
30	F1033	Ditch	-
	F1035	Ditch	-
	F1037	Ditch	-

9.2 Twenty six features were recorded, principally ditches. A ?kiln (Tr.15), an undated pit (F1008 (Tr.3)) and an undated posthole (F1062 (Tr.24)) were recorded.

The other discrete features (Pits F1006 (Tr.3) and F1025 (Tr.7) and Quarry Pit F1014 (Tr.3)) were modern.

9.3 Three dated medieval features – collectively spanning the 12th to 13th/ 14th centuries – were encountered (Ditch F1022 (Tr. 15) and Ditches F1049 and F1057 (Tr. 24)). Five parallel ditches recorded in Trench 24 (including F1049 and F1057) appeared to form part of a series of ditched boundary features also encountered to the south in Trenches 25 and 27 (Area 2; Figs. 3 and 6-7). The alignments of Ditches F1057/ F1060 (Tr. 24) and F1051/ F1053 (Tr. 27) corresponded to linear anomalies identified by the previous geophysical survey, perhaps forming the primary cut and recut of a rectilinear boundary alignment running *c.* N-S/ ESE-WNW (Fig. 3; Appendix 3). Based on the spot dates of parallel features in Trench 24, there is a strong possibility that this boundary was medieval in date; thus corresponding to previously excavated evidence in the area (Craven 2005; see below). The N-S element of this boundary mirrored the alignment of an existing track and field boundary a short distance to the west. Ditches F1039 and F1041 (Tr. 25) were found close to the location of another linear geophysical anomaly, albeit on a different alignment. The same anomaly ran across Trench 26 (to the south-east), but no corresponding archaeological feature(s) was present; it is possible that evidence has been lost through ploughing or other human agencies since the medieval period.

9.4 Further linear features, including medieval Ditch F1022 (Tr. 15) were identified in Area 1 of the site. The *c.* N-S alignment of F1022 also mirrored the modern track/ field boundary discussed above, although was at odds to the *c.* NW-SE alignment of undated linear features in Trench 30, some 20m to the east. Further undated features comprising ditches and a pit were identified in Trenches 3 and 18, *c.* 80m to the north and west of Trench 15 respectively (Fig. 3). It is possible that many of the undated features, like the previously outlined ?boundary features, were related to local medieval activity.

9.5 Of intrinsic interest was a possible kiln and nearby ?gully encountered in the south-western end of Trench 15 (Fig. 5; DP6). These unexcavated features were located some 42m to the south-west of medieval Ditch F1022. The Gully was curvilinear in plan and appeared to partially enclose the ?kiln to the north-west. Although unexcavated, it is probable that the ?kiln was of medieval date, associated with similar features reported a short distance to the west (Craven 2005). Excavation by Suffolk County Council Archaeological Service at that site revealed a complex medieval (chiefly 12th to 15th century) landscape including a series of ditched enclosures and two spatially related kilns or ovens (*ibid.* 8). The location of 'Kiln Field', marked on the 1842 Sale Plan of Eldohouse Farm, some 330m to the south of the current site, had previously suggested the erstwhile presence of a kiln site or similar in the area (medieval Catsale Green; after Finch 1999, appendix IV, map 2).

9.6 It is probable that the majority of features at the current site derive from the medieval settlement of Catsale Green (Craven 2005; see above) and nearby Cattishall, less than 200m to the north. The latter was the meeting place of the court of the Abbott of Bury St Edmunds and the location of an Anglo-Saxon 'moot' with probable roots in the Romano-British period (Great Barton Parish Council 2012, 5).

The excavation of a former tumulus at this site in 1957 recovered Roman and medieval pottery (*ibid.*). The site was latterly an agricultural settlement as evidenced by the historic cartographic sources (*ibid.*).

9.7 Additional trenches were excavated to clarify the results of the evaluation:

- Trench 28 examined the gap between Trench 1 and the western boundary of the site. No archaeological features were present.

- Trench 29 examined the area between Trenches 4 and 5: the evidence from Trench 24 suggested that the medieval `core' of Catshall Green on this side of the green-edge probably lies towards the northern end of the field. It was therefore thought worthwhile to confirm the presence/ absence of settlement adjacent. No archaeological features were present.

- Trench 30 was excavated in a bid to trace medieval Ditch F1022, recorded in Trench 15 but not observable in Trench 14. Three undated ditches were recorded in Trench 30.

10 DEPOSITION OF THE ARCHIVE

10.1 Archive records, with an inventory, will be deposited with the finds from the site, at Suffolk County Store. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. In addition to the overall site summary, it will be necessary to produce a summary of the artefactual and ecofactual data.

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APPENDIX 1 CONCORDANCE OF FINDS

Feature	Context	Trench	Description	Spot Date	Pottery	CBM (g)	A.Bone (g)	Other
1011	1013	3	Fill of Ditch			3	1	
1022	1023	15	Fill of Ditch	Mid 12th-mid 13th C	(9) 89g		115	Mussel Shell - 1g O. Shell - 121g
1025	1026	7	Fill of Modern Pit	Late 18th-19th C	(2) 4g	107		
1043	1044	25	Fill of Ditch				154	
1047	1048	24	Fill of Ditch				14	
1049	1050	24	Fill of Ditch	12th-13th C	(5) 159g			F. Clay - 690g
1057	1058	24	Fill of Ditch	Mid 12th-13th/14th C	(1) 10g			
	1059		Fill of Ditch				45	Fe. Frag (1) - 51g

APPENDIX 2 SPECIALIST REPORTS

The Pottery

Peter Thompson

Introduction

The evaluation recovered 17 sherds weighing 261g recovered from four features, of which 15 sherds (255g) were medieval. The pottery was all in a bracket of lightly abraded to good condition suggesting a primary state of deposition.

Methodology

The sherds were examined under x35 binocular microscope and recorded according to the Medieval Pottery Research Group Guidelines for fabrics and forms (Slowikowski et al 2001 & MPRG 1998). The pottery is quantified by ware and period below (Appendix A).

Description of the Pottery by Feature

Pit F1049 (L1050) contained 5 sherds (158g) probably all deriving from the same handmade vessel. This included a large fragment of a round shouldered cooking pot with pale brown surfaces and grey core, containing moderate to common white shell with moderate medium to coarse quartz, occasional burnt organics and small voids, and rare red iron mineral fragments. The vessel is an early medieval shelly ware dated to the 12th-13th centuries (Anderson 2006).

Pit F1022 (L1023) contained 9 sherds weighing 87g, all bar one were sandy medieval coarse wares, including two Bury coarse sandy wares with pale buff surfaces heavily sooted on one side. Another slightly micaceous sherd containing clay lenses is similar to Hollesley 1 type ware. The remaining sherd was a micaceous Hedingham fine ware containing splashes of pale green glaze and a line of red slip decoration which would suggest a date of mid 12th/ 13th-mid 13th century (Cotter 2000).

Ditch F1057 (L1058) contained a single grey sandy sherd including medium to coarse rounded white quartz grain inclusions which matches the description of a Bury medieval coarse ware, and is probably broadly contemporary with the other medieval pottery.

Pit F1025 (L1026) contained two modern sherds of white earthenware and stoneware indicating a date centred on the 19th century.

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Appendix A

Key:
EMWS: Early medieval shelly ware 12th-13th
MCW1: Medieval coarse ware 1 12th-14th
MCW3: Medieval coarse ware 3 12th-14th
HFW1: Hedingham fine ware mid 12th-13th
BMCW: Bury medieval coarse ware mid 12th-14th
BCSW: Bury medieval coarse sandy ware mid 12th-14th
HOLL1: Hollesley 2 type ware 13th-14th
ENGS: English stoneware 18th- 19th
PEAR: Pearlware late 18th – mid 19th

Feature	Context	Quantification	Date	Comment
Ditch 1022	1023	3x21g MCW1	Mid 12th-mid 13th	MCW1: x1 sherd with vertical finger impressed cordon
		2x35g MCW3		MCW3: cooking pot base with external sooting 26 cm diam, 0.06 REVE
		2x16g BCSW		BCSW: external sooting
		1x8g HOLL1		
		1x7g HFW		HFW: pitted pale green glaze and red slip line
Pit 1025	1026	1x5g ENGS	Late 18th-19th	ENGS: lustrous brown glaze with roulette decoration
		1x1g PEAR		PEARL: scalloped plate rim with Transfer Printed Ware
Pit 1049	1050	5x158g MSHW	12th-13th	Large fragment of round shouldered cooking pot with external sooting. No rim
Ditch 1057	1058	1x10g BMCW	Mid 12th-13th/14th	

The Ceramic Building Materials
Andrew Peachey

Pit F1025 (L1026) contained seven fragments (107g) of highly abraded and highly fragmented late post-medieval to modern tile. Several of the small fragments exhibit a slight curve to their surfaces suggesting they are derived from pantile, manufactured in an orange sandy fabric, probably produced in the 19th-20th centuries.

The Daub

Andrew Peachey

Ditch F1049 (L1050) contained seven fragments (690g) of daub that appear to be derived from a single structure, however the fragments are slightly friable and abraded preventing any cross-joins being identified. The daub had a single 'external' pale orange-brown surface, which is broadly flat, fading to an orange red 'interior' and with a maximum preserved thickness of 40mm. The daub was manufactured using local boulder clay, with inclusions of common poorly-sorted rounded chalk (1-8mm) and incidental small 'gravel' stones. This type of clay building material was utilised in the region from the middle Iron Age to Tudor periods, though the association with 12th-13th century pottery and apparent surfaces suggests it may have formed part of a daub panel, used to infill the wooden frame of a medieval structure.

The Animal Bone

Dr Julia E.M. Cussans

A total of 34 bones and bone fragments were recovered from five contexts during trial trench excavations at Moreton Hall (Table 1). Bone preservation was rated from poor (little or no identifiable material and quite abraded) to good (a good quantity of identifiable material and not too abraded). Fresh breaks and abrasion were fairly common throughout the sample and dog gnawing was observed on a single bone from context L1023. Cattle, sheep/ goat, pig and horse bones were all identified, sheep/ goat being the most common. The majority of the sample was however made up of bones that could only be assigned as large (cattle or horse sized) or medium (sheep or pig sized) mammal. A single bird long bone was also present; this belonged to a young individual of a relatively large (goose sized) species. The only butchery observed was a small cut mark on a sheep/goat tibia (L1023) and the only ageable elements present were two sheep/ goat lower third molars, both in wear, from contexts L1023 and L1059. No pathologies or any other modifications were noted on any of the other bones.

Feature	Context	Description	Cattle	Sheep/ goat	Pig	Horse	Large mammal	Medium mammal	Bird	Total
1011	1013	Fill of Ditch						1		1
1022	1023	Fill of Ditch		3	1		3	5	1	13
1043	1044	Fill of Gully				1	9			10
1047	1048	Fill of Ditch					4			4
1057	1059	Fill of Ditch	1	2		1		2		6
		Total	*1*	*5*	*1*	*2*	*16*	*8*	*1*	*34*

Table 1: Bone quantification

The Shell
Dr Julia E.M. Cussans

Marine mollusc remains were recovered from a single context (L1023, Ditch F1022) during trial trench excavations at Moreton Hall. Oyster shells were most numerous and were represented by two lower valves, four upper valves and a fragment. Mussels were also represented by one right hand valve and a fragment. The preservation was good and there were no signs of human or parasitic modification. Some of the upper oyster valves were measurable. There were no other features of note in this small sample of shells.

APPENDIX 3 AREAS 2 & 3 GEOPHYSICAL SURVEY REPORT

GEOPHYSICAL SURVEY REPORT

STRATASCAN™

SUMO Survey Services
SUMO Group Member

Project name:

Moreton Hall, Bury St.Edmunds

Client:

Archaeological Solutions

November 2014

Job ref:

J6961

Report author:

Thomas Richardson MSc AIfA

GEOPHYSICAL SURVEY REPORT

Project name:
Moreton Hall, Bury St.Edmunds
Client:
Archaeological Solutions

Job ref:
J6961

Techniques:
Detailed magnetic survey – Gradiometry

Survey date:
3rd-5th September & 12th-13th November 2014

Site centred at:
TL 884 648

Post code:
IP31 2QU

Field team:
Joshua Jones BSc (Hons) PIfA, **Tim Coombs** MSc PIfA, **Robert Knight** BSc (Hons), **Ben Stevens**, **Steven Chetwynd** BA (Hons)

Project manager:
Simon Haddrell BEng(Hons) AMBCS PIFA

Report written By:
Thomas Richardson MSc AIfA

CAD illustrations by:
Thomas Richardson MSc AIfA

Checked by:
David Elks MSc AIFA

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1 SUMMARY OF RESULTS

A detailed gradiometry survey was conducted over approximately 14.2 hectares of arable land. The survey has identified a former field boundary or enclosure, as well as anomalies relating to Rougham Airfield. Two possible archaeological anomalies have been identified; however it is not possible to determine their origin with any degree of confidence. The remaining anomalies are of natural or modern origin, relating to an underground service, made ground, ferrous objects and fencing.

2 INTRODUCTION

2.1 *Background synopsis*

Stratascan were commissioned to undertake a geophysical survey of an area outlined for residential development. This survey forms part of an archaeological investigation being undertaken by Archaeological Solutions.

2.2 *Site location*

The site is located at OS ref. TL 884 648, either side of Mount Road, Bury St. Edmunds, Suffolk.

2.3 *Description of site*

The survey area is approximately 20.5 hectares, however the north western field being under crop reduced the surveyable area to 14.2 hectares of arable land. The site is generally flat with no further obstructions.

2.4 *Geology and soils*

The underlying geology is Lewes Nodular, Seaford, Newhaven and Culver Chalk Formations (British Geological Survey website). The drift geology is Lowestoft Formation – Diamicton and Head – Clay, Silt, Sand and Gravel across the north of the site, with Croxton Sand And Gravel Member – Sand And Gravel and Cover Sand – Sand across the south (British Geological Survey website).

The overlying soils for the majority of the site are known as Melford, which are typical argillic brown earths. These consist of deep fine loamy clayey, coarse loamy over clayey and fine loamy soils. An area of Swaffham Prior soils area also present in the north of the site. These are typical brown calcareous earths, and consist of calcareous coarse and fine loamy soils over chalk rubble (Soil Survey of England and Wales, Sheet 4 Eastern England).

2.5 *Site history and archaeological potential*

Extract from 'Land at Moreton Hall, Bury St. Edmunds, Suffolk Archaeological Desk-Based Assessment' (Archaeological Solutions 2013), which covers a wider assessment area:

The assessment site is situated on a relatively flat plateau, comprising orange clay and sand geology overlooking the Lark Valley. Excavations within and to the west have recorded sparse prehistoric features, notably a shallow horizon of early to middle Iron Age date, indicating a range of dispersed and peripheral activities. The historic character of this site remains relatively poorly understood. The area of the assessment site appears to have remained as agricultural land that was part of the Eldo Estate throughout the post-medieval period, although cartographic sources indicate that at least one field (to the south of the surveyed area) *may have been associated with kilns and extraction pits that were part of a local brick or pottery manufacturing industry. The history of the assessment site is dominated by Rougham Airfield, which was a major USAAF airbase constructed in 1941/2 and closed in 1948. The assessment area encompasses at least one third of the flying field, including significant lengths of all three runways, parts of the perimeter track, at least 14 dispersal points and two small structures as indicated by surviving plans and aerial photos of the air base. The airfield was closed in 1948, and the runways broken up and returned to agricultural land in the 1950s.*

2.6 *Survey objectives*

The objective of the survey was to locate any features of possible archaeological origin in order that they may be assessed prior to development.

2.7 *Survey methods*

This report and all fieldwork have been conducted in accordance with both the English Heritage guidelines outlined in the document: *Geophysical Survey in Archaeological Field Evaluation, 2008* and with the Institute for Archaeologists document *Standard and Guidance for Archaeological Geophysical Survey.*

Given the potential for archaeology from a number of periods, detailed magnetic survey (gradiometry) was used as an efficient and effective method of locating archaeological a wide variety of anomalies. More information regarding this technique is included in Appendix A.

2.8 *Processing, presentation and interpretation of results*

2.8.1 *Processing*

Processing is performed using specialist software. This can emphasise various aspects contained within the data but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'flattening' the background levels with respect to adjacent traverses and adjacent grids. Once the basic processing has flattened the background it is then possible to carry out further processing which may include low pass filtering to reduce 'noise' in the data and hence emphasise the archaeological or man-made anomalies.

The following schedule shows the basic processing carried out on all minimally processed gradiometer data used in this report:

1. *Destripe* (Removes striping effects caused by zero-point discrepancies between different sensors and walking directions)
2. *Destagger* (Removes zigzag effects caused by inconsistent walking speeds on sloping, uneven or overgrown terrain)

2.8.2 Presentation of results and interpretation

The presentation of the data for each site involves a print-out of the minimally processed data both as a greyscale plot and a colour plot showing extreme magnetic values. Magnetic anomalies have been identified and plotted onto the 'Abstraction and Interpretation of Anomalies' drawing for the site.

3 RESULTS

The detailed magnetic gradiometer survey conducted at Moreton Hall has identified a number of anomalies that have been characterised as being either of a *probable* or *possible* archaeological origin.

The difference between *probable* and *possible* archaeological origin is a confidence rating. Features identified within the dataset that form recognisable archaeological patterns or seem to be related to a deliberate historical act have been interpreted as being of a probable archaeological origin.

Features of possible archaeological origin tend to be more amorphous anomalies which may have similar magnetic attributes in terms of strength or polarity but are difficult to classify as being archaeological or natural.

The following list of numbered anomalies refers to numerical labels on the interpretation plots.

*3.1 **Probable Archaeology***

1 A positive curvi-linear anomaly in the northern field. This is indicative of a former cut feature and is likely to relate to a former field boundary or enclosure ditch.

2 Areas of scattered magnetic debris related to former airfield roads.

3.2 *Possible Archaeology*

3 Positive linear anomalies in the northern field. These are indicative of cut features and may be of archaeological origin. However, they could also be of natural or related to agricultural activity.

3.3 *Other Anomalies*

4 A high amplitude bipolar linear anomaly in the west of the southern field. This is indicative of an underground service.

5 Areas of magnetic variation across the site. These anomalies are likely to be of geological or pedological origin.

6 Areas of high amplitude dipolar responses. These are indicative of modern made ground, such as filled in ponds.

7 Areas of magnetic disturbance are the result of substantial nearby ferrous metal objects such as fences and underground services. These effects can mask weaker archaeological anomalies, but on this site have not affected a significant proportion of the area.

8 A number of magnetic 'spikes' (strong focussed values with associated antipolar response) indicate ferrous metal objects. These are likely to be modern rubbish.

4 CONCLUSION

The survey at Moreton Hall has identified a number of probable and possible archaeological anomalies. A former field boundary or enclosure has been identified, which may relate to the prehistoric activity seen in the surrounding area by previous investigations (Archaeological Solutions 2013). Anomalies relating to Rougham Airfield can also be seen. Two possible archaeological anomalies have been identified; however it is not possible to determine their origin with any degree of confidence. The remaining anomalies are of modern or natural origin. The modern anomalies relate to an underground service, made ground, ferrous objects and fencing.

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APPENDIX A – METHODOLOGY & SURVEY EQUIPMENT

Grid locations

The location of the survey grids has been plotted together with the referencing information. Grids were set out using a Leica 705auto Total Station and referenced to suitable topographic features around the perimeter of the site or a Leica Smart Rover RTK GPS.

An RTK GPS (Real-time Kinematic Global Positioning System) can locate a point on the ground to a far greater accuracy than a standard GPS unit. A standard GPS suffers from errors created by satellite orbit errors, clock errors and atmospheric interference, resulting in an accuracy of 5m-10m. An RTK system uses a single base station receiver and a number of mobile units. The base station re-broadcasts the phase of the carrier it measured, and the mobile units compare their own phase measurements with those they received from the base station. A SmartNet RTK GPS uses Ordnance Survey's network of over 100 fixed base stations to give an accuracy of around 0.01m.

Survey equipment and gradiometer configuration

Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.2 nanoTeslas (nT) in an overall field strength of 48,000nT, can be accurately detected using an appropriate instrument.

The mapping of the anomaly in a systematic manner will allow an estimate of the type of material present beneath the surface. Strong magnetic anomalies will be generated by buried iron-based objects or by kilns or hearths. More subtle anomalies such as pits and ditches can be seen if they contain more humic material which is normally rich in magnetic iron oxides when compared with the subsoil.

To illustrate this point, the cutting and subsequent silting or backfilling of a ditch may result in a larger volume of weakly magnetic material being accumulated in the trench compared to the undisturbed subsoil. A weak magnetic anomaly should therefore appear in plan along the line of the ditch.

The magnetic survey was carried out using a dual sensor Grad601-2 Magnetic Gradiometer manufactured by Bartington Instruments Ltd. The instrument consists of two fluxgates very accurately aligned to nullify the effects of the Earth's magnetic field. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background. The Grad601-2 consists of two high stability fluxgate gradiometers suspended on a single frame. Each gradiometer has a 1m separation between the sensing elements so enhancing the response to weak anomalies.

Sampling interval

Readings were taken at 0.25m centres along traverses 1m apart. This equates to 3600 sampling points in a full 30m x 30m grid.

Depth of scan and resolution

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m, though strongly magnetic objects may be visible at greater depths. The collection of data at 0.25m centres provides an optimum methodology for the task balancing cost and time with resolution.

Data capture

The readings are logged consecutively into the data logger which in turn is daily down- loaded into a portable computer whilst on site. At the end of each site survey, data is transferred to the office for processing and presentation.

APPENDIX B – BASIC PRINCIPLES OF MAGNETIC SURVEY

Detailed magnetic survey can be used to effectively define areas of past human activity by mapping spatial variation and contrast in the magnetic properties of soil, subsoil and bedrock.

Weakly magnetic iron minerals are always present within the soil and areas of enhancement relate to increases in *magnetic susceptibility* and permanently magnetised *thermoremanent* material.

Magnetic susceptibility relates to the induced magnetism of a material when in the presence of a magnetic field. This magnetism can be considered as effectively permanent as it exists within the Earth's magnetic field. Magnetic susceptibility can become enhanced due to burning and complex biological or fermentation processes.

Thermoremanence is a permanent magnetism acquired by iron minerals that, after heating to a specific temperature known as the Curie Point, are effectively demagnetised followed by re-magnetisation by the Earth's magnetic field on cooling. Thermoremanent archaeological features can include hearths and kilns and material such as brick and tile may be magnetised through the same process.

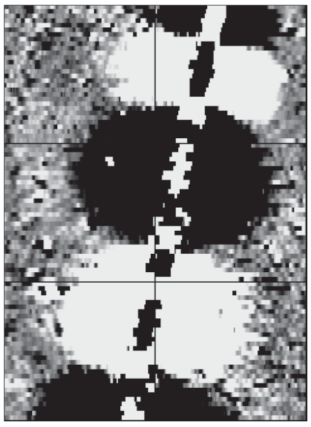
Silting and deliberate infilling of ditches and pits with magnetically enhanced soil creates a relative contrast against the much lower levels of magnetism within the subsoil into which the feature is cut. Systematic mapping of magnetic anomalies will produce linear and discrete areas of enhancement allowing assessment and characterisation of subsurface features. Material such as subsoil and non-magnetic bedrock used to create former earthworks and walls may be mapped as areas of lower enhancement compared to surrounding soils.

Magnetic survey is carried out using a fluxgate gradiometer which is a passive instrument consisting of two sensors mounted vertically 1m apart. The instrument is carried about 30cm above the ground surface and the top sensor measures the Earth's magnetic field whilst the lower sensor measures the same field but is also more affected by any localised buried field. The difference between the two sensors will relate to the strength of a magnetic field created by a buried feature, if no field is present the difference will be close to zero as the magnetic field measured by both sensors will be the same.

Factors affecting the magnetic survey may include soil type, local geology, previous human activity, disturbance from modern services etc.

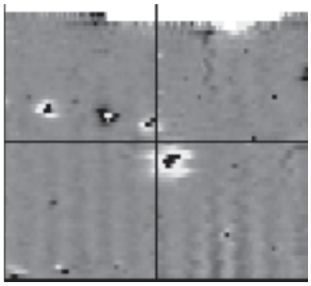
APPENDIX C – GLOSSARY OF MAGNETIC ANOMALIES

Bipolar



A bipolar anomaly is one that is composed of both a positive response and a negative response. It can be made up of any number of positive responses and negative responses. For example a pipeline consisting of alternating positive and negative anomalies is said to be bipolar. See also dipolar which has only one area of each polarity. The interpretation of the anomaly will depend on the magnitude of the magnetic field strength. A weak response may be caused by a clay field drain while a strong response will probably be caused by a metallic service.

Dipolar

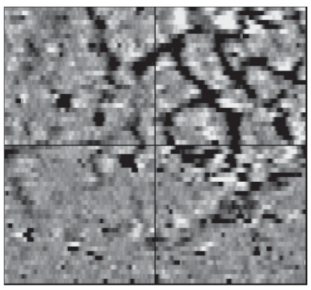


This consists of a single positive anomaly with an associated negative response. There should be no separation between the two polarities of response. These responses will be created by a single feature. The interpretation of the anomaly will depend on the magnitude of the magnetic measurements. A very strong anomaly is likely to be caused by a ferrous object.

Positive anomaly with associated negative response

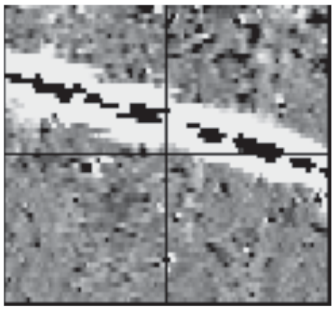
See bipolar and dipolar.

Positive linear



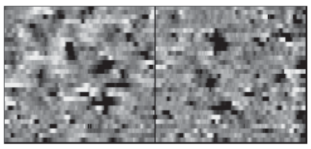
A linear response which is entirely positive in polarity. These are usually related to in-filled cut features where the fill material is magnetically enhanced compared to the surrounding matrix. They can be caused by ditches of an archaeological origin, but also former field boundaries, ploughing activity and some may even have a natural origin.

Positive linear anomaly with associated negative response



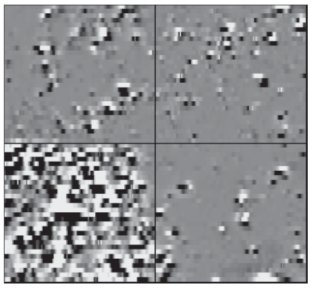
A positive linear anomaly which has a negative anomaly located adjacently. This will be caused by a single feature. In the example shown this is likely to be a single length of wire/cable probably relating to a modern service. Magnetically weaker responses may relate to earthwork style features and field boundaries.

Positive point/area



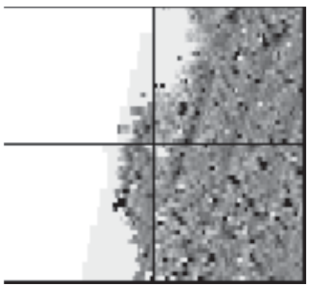
These are generally spatially small responses, perhaps covering just 3 or 4 reading nodes. They are entirely positive in polarity. Similar to positive linear anomalies they are generally caused by in-filled cut features. These include pits of an archaeological origin, possible tree bowls or other naturally occurring depressions in the ground.

Magnetic debris



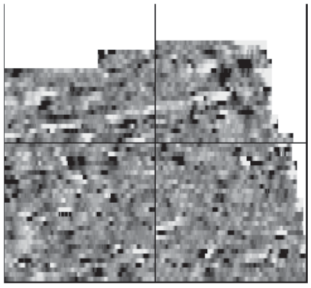
Magnetic debris consists of numerous dipolar responses spread over an area. If the amplitude of response is low (+/-3nT) then the origin is likely to represent general ground disturbance with no clear cause, it may be related to something as simple as an area of dug or mixed earth. A stronger anomaly (+/-250nT) is more indicative of a spread of ferrous debris. Moderately strong anomalies may be the result of a spread of thermoremanent material such as bricks or ash.

Magnetic disturbance



Magnetic disturbance is high amplitude and can be composed of either a bipolar anomaly, or a single polarity response. It is essentially associated with magnetic interference from modern ferrous structures such as fencing, vehicles or buildings, and as a result is commonly found around the perimeter of a site near to boundary fences.

Negative linear

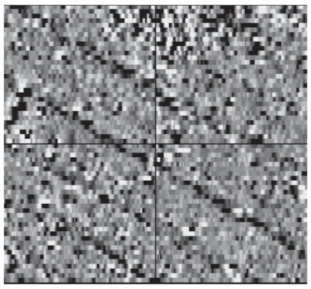


A linear response which is entirely negative in polarity. These are generally caused by earthen banks where material with a lower magnetic magnitude relative to the background top soil is built up. See also ploughing activity.

Negative point/area

Opposite to positive point anomalies these responses may be caused by raised areas or earthen banks. These could be of an archaeological origin or may have a natural origin.

Ploughing activity



Ploughing activity can often be visualised by a series of parallel linear anomalies. These can be of either positive polarity or negative polarity depending on site specifics. It can be difficult to distinguish between ancient ploughing and more modern ploughing. Clues such as the separation of each linear, straightness, strength of response and cross cutting relationships can be used to aid this, although none of these can be guaranteed to differentiate between different phases of activity.

Polarity

Term used to describe the measurement of the magnetic response. An anomaly can have a positive polarity (values above 0nT) and/or a negative polarity (values below 0nT).

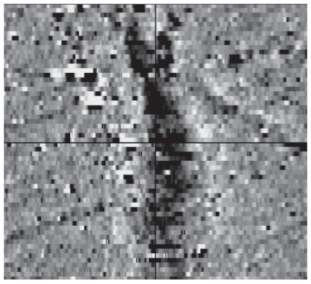
Strength of response

The amplitude of a magnetic response is an important factor in assigning an interpretation to a particular anomaly. For example a positive anomaly covering a 10m^2 area may have values up to around 3000nT, in which case it is likely to be caused by modern magnetic interference. However, the same size and shaped anomaly but with values up to only 4nT may have a natural origin. Colour plots are used to show the amplitude of response.

Thermoremanent response

A feature which has been subject to heat may result in it acquiring a magnetic field. This can be anything up to approximately +/-100 nT in value. These features include clay fired drains, brick, bonfires, kilns, hearths and even pottery. If the heat application has occurred in situ (e.g. a kiln) then the response is likely to be bipolar compared to if the heated objects have been disturbed and moved relative to each other, in which case they are more likely to take an irregular form and may display a debris style response (e.g. ash).

Weak background variations



Weakly magnetic wide scale variations within the data can sometimes be seen within sites. These usually have no specific structure but can often appear curvy and sinuous in form. They are likely to be the result of natural features, such as soil creep, dried up (or seasonal) streams. They can also be caused by changes in the underlying geology or soil type which may contain unpredictable distributions of magnetic minerals, and are usually apparent in several locations across a site.

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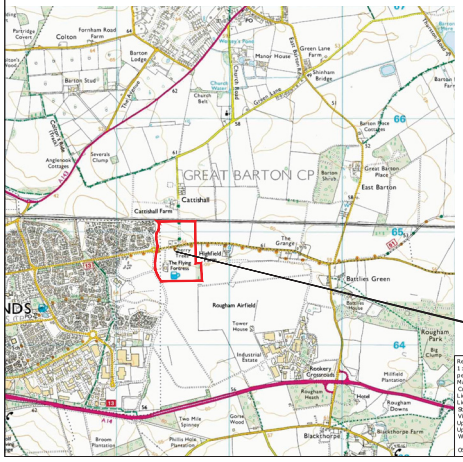

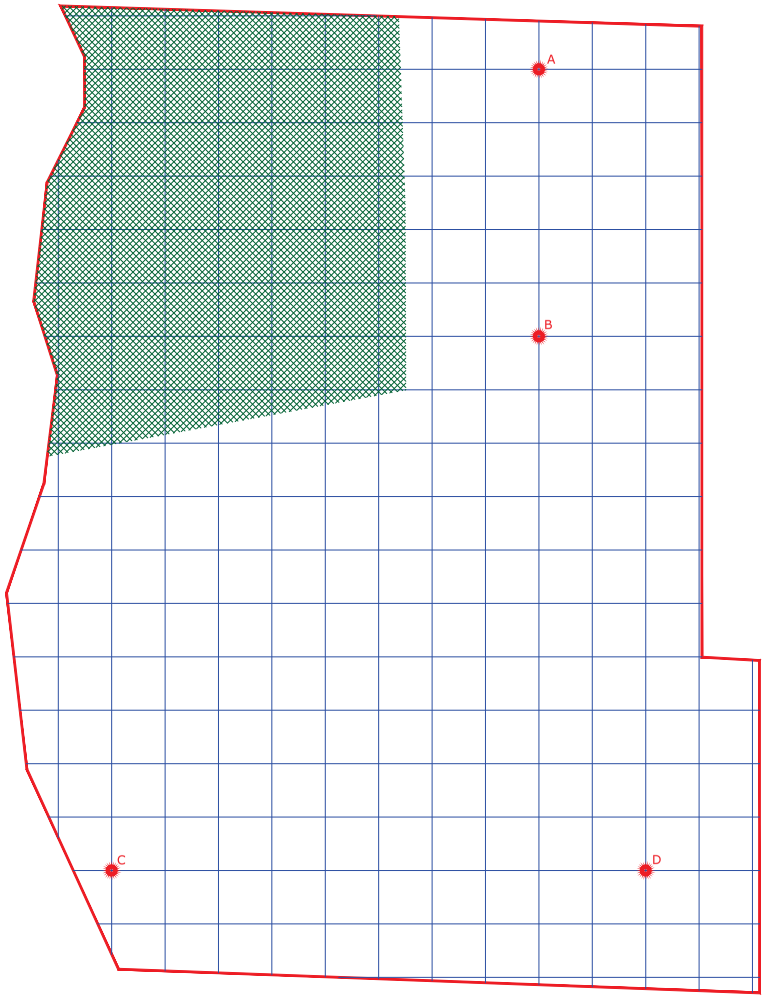

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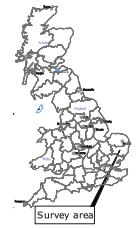

Site centred on NGR TL 884 648

KEY

Area unsurveyable - crop

OS REFERENCING INFORMATION

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B	588636.32, 264916.79
C	588396.32, 264616.79
D	588696.32, 264616.79

Job No.	Survey Date
J6961	SEPT-NOV 14

Client

ARCHAEOLOGICAL SOLUTIONS

Project Title

MORETON HALL, BURY ST.EDMUNDS

Subject

SITE LOCATION, SURVEY AREA & REFERENCING

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Scale 1:1500 (0m 10 20 30 40 50 60 70 80 90m)

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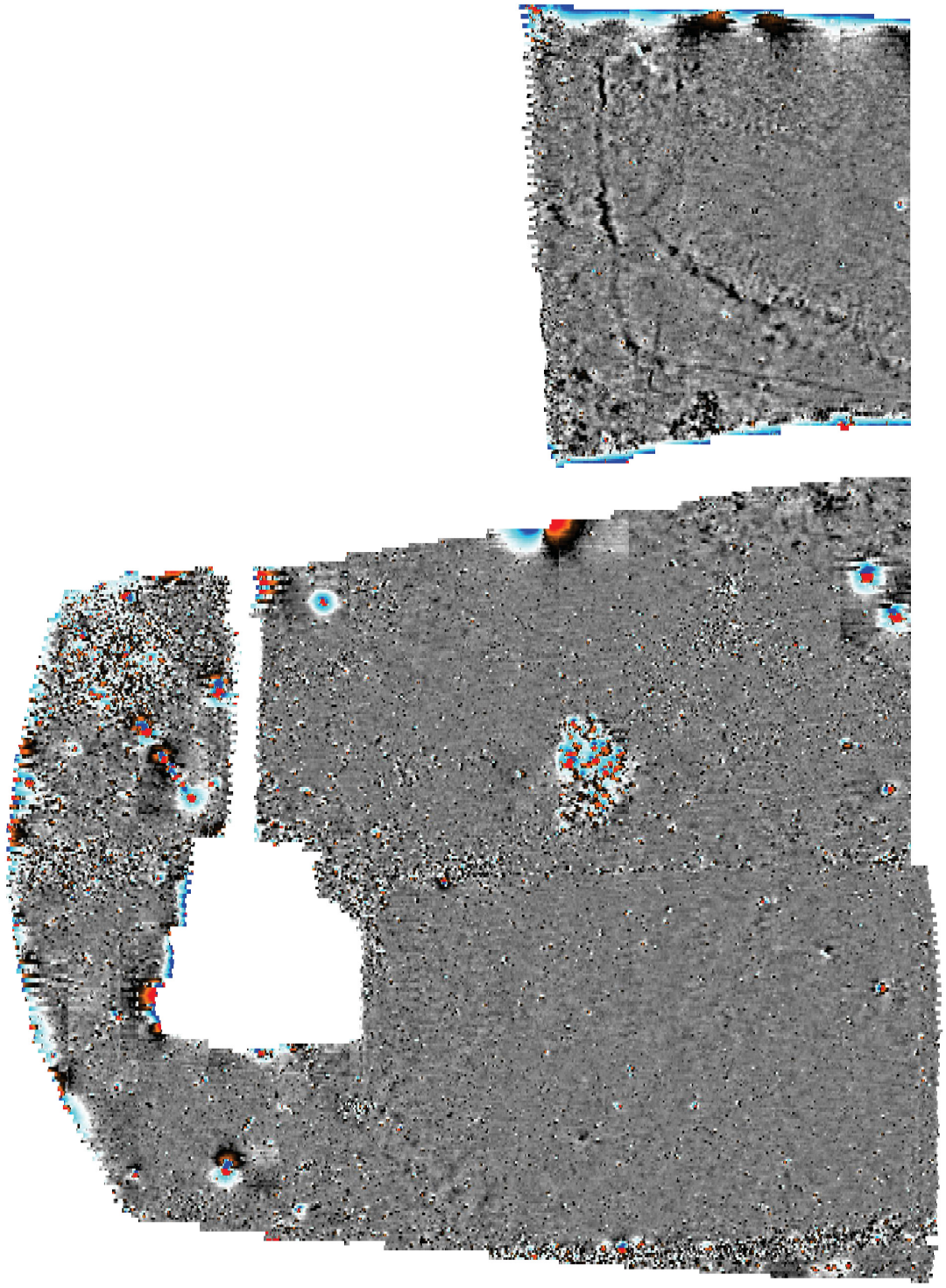
Date	Drawn by	Figure No.
NOV 14	TR	01



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Issue No.	Date	Description
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-	-	-

Plotting parameters

Maximum +100nT (red)
Minimum -100nT (blue)

+100nT
+10nT
-10nT
-100nT

Job No.	Survey Date
J6961	SEPT-NOV 14

Client

ARCHAEOLOGICAL SOLUTIONS

Project Title

MORETON HALL, BURY ST.EDMUNDS

Subject

COLOUR PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA SHOWING EXTREME VALUES

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Scale 1:1000 (0m 10 20 30 40 50 60m)

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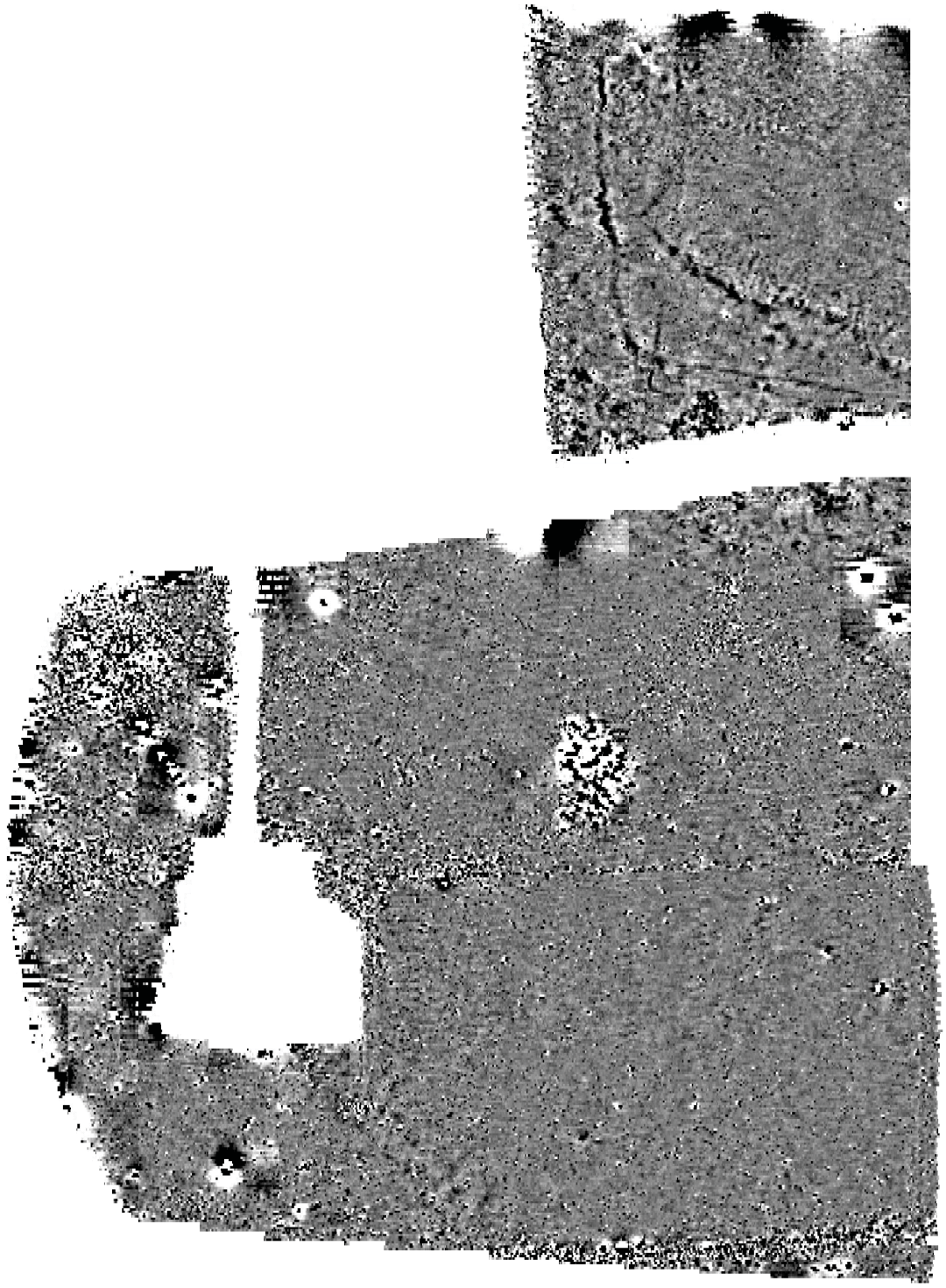

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Plotting parameters

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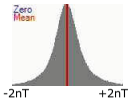
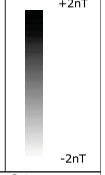
Minimum -2nT (white)





Job No.	Survey Date
J6961	SEPT-NOV 14

Client

ARCHAEOLOGICAL SOLUTIONS

Project Title

MORETON HALL, BURY ST.EDMUNDS

Subject

PLOT OF MINIMALLY PROCESSED GRADIOMETER DATA

STRATASCAN™
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SUMO GROUP MEMBER

Scale 1:1000 (0m 10 20 30 40 50 60m)

Plot	Checked by	Issue No.
A1	DGE	01
Date	Drawn by	Figure No.
NOV 14	TR	03

Amendments

Issue No.	Date	Description
-	-	-
-	-	-

KEY

PROBABLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - probable cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - probable bank or earthwork of archaeological origin
- Scattered magnetic debris related to former airfield road visible on aerial photography
- Widely spaced curving parallel linear anomalies - probably related to ridge-and-furrow

POSSIBLE ARCHAEOLOGY

- Positive anomaly / weak positive anomaly - possible cut feature of archaeological origin
- Negative anomaly / weak negative anomaly - possible bank or earthwork of archaeological origin

OTHER ANOMALIES

- Closely spaced parallel linear anomalies - probably related to agricultural activity such as ploughing
- Linear anomaly - probably related to pipe, cable or other modern service
- Linear anomaly - possibly related to land drain
- Magnetic disturbance associated with nearby metal object such as service or field boundary
- Strong magnetic debris - possible disturbed or made ground
- Area of amorphous magnetic variation - probable natural (e.g. geological or pedological) origin
- Magnetic spike - probable ferrous object

Job No.	Survey Date
J6961	SEPT-NOV 14

Client: ARCHAEOLOGICAL SOLUTIONS

Project Title: MORETON HALL, BURY ST.EDMUNDS

Subject: INTERPRETATION

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SUMO GROUP MEMBER

Scale 1:1000 (0m 10 20 30 40 50 60m)

Plot	Checked by	Issue No.
A1	DGE	01
Date	Drawn by	Figure No.
NOV 14	TR	04

APPENDIX 4 SPECIFICATION

AREAS 1 & 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK

WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL EVALUATION

24th November 2014

AREAS 1 & 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

1 INTRODUCTION

1.1 This specification has been prepared in response to a brief issued by Suffolk County Council Archaeological Service Conservation Team (SCC AS-CT) (dated 24th November 2014). It provides for an archaeological trial trench evaluation to be carried out as part of a requirement for further information to be provided prior to the determination of a planning application (DC/14/1881/HYB) for residential development of land East of Moreton Hall, Great Barton, Suffolk (NGR TL 885 649). The evaluation is required by the LPA, based on advice from SCC AS-CT.

1.2 It is understood that the programme of archaeological investigation should comprise an initial archaeological field evaluation of Areas 1 and 2, to comply with the planning requirement of the local planning authority (on advice from SCC AS-CT). This WSI for archaeological evaluation has been prepared for the approval of SCC AS-CT.

2 COMPLIANCE

2.1 If AS carried out the evaluation, AS would comply with SCC AS-CT's requirements.

3 SITE & DEVELOPMENT DESCRIPTION ARCHAEOLOGICAL BACKGROUND

3.1 It is proposed to construct a new residential development on the site.

3.2 The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Prehistoric remains are known in and around the site (HER BRG 009, BRG 024 and RGH 065), along with Roman, Saxon and medieval sites being known in similar topographic locations to the immediate west and north (HER BRG 024-7 and RGH 031). A geophysical survey has been carried out this year on Areas 2 and 3 of the proposed development (Stratascan 2014). Anomalies of potential archaeological interest were recorded within Area 2, which may be associated with the edge of the mediebal Catshall Green.

3.3 The wider Moreton Hall site has been subject to an archaeological desk-based assessment by AS (Peachey 2013).

In summary:

The assessment site is situated on a relatively flat plateau, comprising orange clay and sand geology overlooking the Lark Valley. Excavations within and to the west have recorded sparse prehistoric features, notably a shallow horizon of early to middle Iron Age date, indicating a range of dispersed and peripheral activities, but the historic character of this part of the landscape remains relatively poorly understood. The area of the assessment site appears to have remained as

agricultural land that was part of the Eldo Estate throughout the post-medieval period, although cartographic sources indicate that at least one field may have been associated with kilns and extraction pits that were part of a local brick or pottery manufacturing industry. The history of the assessment site is dominated by Rougham Airfield, which was a major USAAF airbase constructed in 1941/2 and closed in 1948. The assessment area encompasses at least one third of the flying field, including significant lengths of all three runways, parts of the perimeter track, at least 14 dispersal points and two small structures as indicated by surviving plans and aerial photos of the air base. The airfield was closed in 1948, and the runways broken up and returned to agricultural land in the 1950s.

The assessment site has been disturbed primarily by post-medieval ploughing and the establishment and closure of the Second World War runways and perimeter track of Rougham Airfield.

An archaeological evaluation in 2012 on land in the southern half of the development area proposed for a community football pitch revealed Iron Age settlement remains (SCC AS Report 2012/164).

3.4 The proposed works will cause significant ground disturbance that has the potential to damage any archaeological deposits that exist. The archaeological and historical background of the site will be discussed in the project report and the HER will be consulted.

4 BRIEF FOR THE ARCHAEOLOGICAL EVALUATION SPECIFICATION FOR TRIAL TRENCH EVALUATION GENERAL MANAGEMENT

4.1 The principal objectives for the evaluation include:

- To establish whether any archaeological deposit exists in the area, with particular regard to any which are of sufficient importance to merit preservation *in situ*

- To identify the date, approximate form and purpose of any archaeological deposit within the application area, together with its likely extent, localised depth and quality of preservation.

- To evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits, along with the potential for the survival of environmental evidence

- To provide sufficient information to construct an archaeological conservation strategy dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.

4.2 Research Design

4.2.1 The research priorities for the region are set out in Glazebrook (1997) and Brown & Glazebrook (2000) and updated by Medlycott and Brown (2008) and Medlycott (2011).

4.2.2 The key issues for the Neolithic and Bronze Age (as set out by Brown & Murphy in Brown & Glazebrook 2000, 9-13) centre on the theme of the development of farming and the attendant development and integration of monuments, fields and settlements. Medlycott & Brown (2008) and Medlycott (2011, 13) suggest that future research on the Neolithic should include synthetic and regional studies for the region; an examination of the Mesolithic/Neolithic transition through radiocarbon dates; the establishment of a chronology for Neolithic ring-ditches; improved understanding of the chronological development of pottery; the excavation and study of cropmark complexes; greater understanding of burial practices; a study of the inter-relationships of settlements; greater use of scientific methods of dating and modelling of the environmental conditions during this period; targeted programmes of sedimentological, palynological and macrofossil analyses of sediment sequences in valley bottoms, lakes or the intertidal zone; and the human impact on the natural landscape during this period. The nature of Neolithic burial in the region and the pattern of burial practice, including the relationship between settlement sites and burial, require further research. Settlement sites themselves also form part of an important research subject as there is a requirement to identify if a consensus exists on the subject of non-permanent settlement in the Neolithic (Medlycott 2011, 13). Further work on understanding the effects of plough damage on Neolithic sites is considered to be an important research subject for the region (Medlycott 2011, 13).

4.2.3 Inter-relationships between settlements and greater understanding of patterns of burial practice are important areas of research for the Bronze Age (Medlycott & Brown 2008). Medlycott (2011, 21) identifies artefact studies as of particular importance for the study of the Bronze Age in the region; the typological identification of later Bronze Age pottery linked to close radiocarbon dating, the further study of Bronze Age flintworking and the significance of hoarding and other depositional practices are all identified as being key research subjects. Artefact studies can contribute to the refinement of chronologies for the period and to an assessment of the reasons behind the marked divide in research results between the northern and southern parts of the region, which are identified by Medlycott (2011, 21) as important research areas. Like the Neolithic, sedimentological, palynological and macrofossil analyses of sediment sequences are considered to be important areas of research as are the effects of colluviation and the possibility that colluvial deposits mask some significant sites (Medlycott 2011, 21).

4.2.4 Research topics for the Iron Age set out by Bryant (in Brown & Glazebrook 2000, 14-18) include further research into chronologies, precise dating and ceramic assemblages, further research into the development of the agrarian economy (particularly with regard to field systems), research into settlement chronology and dynamics, research into processes of economic and social change during the late Iron Age and Romano-British transition (particularly with regard to the development of Aylesford/Swarling and Roman culture, and also regional differences and tribal polities in the late Iron Age and further research into *oppida* and ritual sites), further analysis of development of social organisation and settlement form/function in the early and middle Iron Age, further research into artefact production and distribution and the Bronze Age/Iron Age transition. Medlycott & Brown (2008) and Medlycott (2011, 29-32) build on these themes, paying particular attention to chronological and spatial development and variation and adding subjects as the Bronze Age/Iron Age transition and manufacturing and industry.

4.2.5 Research topics for the Iron Age set out by Bryant (in Brown & Glazebrook 2000, 14-18) include further research into chronologies, precise dating and ceramic assemblages, further research into the development of the agrarian economy (particularly with regard to field systems), research into settlement chronology and dynamics, research into processes of economic and social change during the late Iron Age and Romano-British transition (particularly with regard to the development of Aylesford/Swarling and Roman culture, and also regional differences and tribal polities in the late Iron Age and further research into *oppida* and ritual sites), further analysis of development of social organisation and settlement form/function in the early and middle Iron Age, further research into artefact production and distribution and the Bronze Age/Iron Age transition. Medlycott & Brown (2008) and Medlycott (2011, 29-32) build on these themes, paying particular attention to chronological and spatial development and variation and adding subjects as the Bronze Age/Iron Age transition and manufacturing and industry.

4.2.6 Medlycott (2011, 47) identifies regional variation and tribal distinctions as underlying themes for research in the Roman period. Research topics for the Roman period previously set out by Going & Plouviez (in Brown & Glazebrook 2000, 19-22) include analysis of early and late Roman military developments, further analysis of large and small towns, evidence of food consumption and production, further research into agricultural production, landscape research (in particular further evidence for potential woodland succession/regression and issues of relict landscapes, as well as further research into the road network and bridging points), further research into rural settlements and coastal issues. Medlycott (2011, 47-48) states that these research areas remain valid and presents updated consideration of them. To these themes Medlycott & Brown (2008) and Medlycott (2011, 47-48) add rural settlements and landscapes, the process of Romanisation in the region, the evidence for the Imperial Fen Estate, and the Roman/Saxon transition.

4.2.7 Wade (in Brown & Glazebrook 2000, 23-26) identifies research topics for the rural landscape in the Saxon and medieval periods. These include examination of population during this period (distribution and density, as well as physical structure), settlement (characterisation of form and function, creation and testing of settlement diversity models), specialisation and surplus agricultural production, assessment of craft production, detailed study of changes in land use and the impact of colonists (such as Saxons, Danes and Normans) as well as the impact of the major institutions such as the Church.

4.2.8 Medlycott (2011, 57) states that he study of the Anglo-Saxon period still requires further cooperation between historians and archaeologists. Important research issues for this period comprise: the Roman/Anglo-Saxon transitional period; settlement distribution, which suffers from problems associated with the identification of Saxon settlement sites; population modelling and demographics, which has the potential to be advanced by modern scientific methods; differences within the region in terms of settlement type and economic practice and subjects related to this such as links with the continent, trading practices and cultural influences; rural landscapes and settlements, including detailed study of the changes and developments in such settlements over time and the influence of Saxon landscape organisation and settlements on these issues in the medieval period; towns and their relationships with their hinterland; infrastructure, including river management, the identification of ports and harbours and the role of existing infrastructure in shaping the Saxon period landscape; the economy, based on palaeoenvironmental studies; ritual and religion; the effect of the Danish occupation; and artefact studies (Medlycott 2011, 57-59).

4.2.9 The issues identified by Ayers (in Brown & Glazebrook, 2000) and Wade (in Brown & Glazebrook, 2000) remain valid research subjects (Medlycott 2011, 70) for the medieval period. The study of landscapes is dominated by issues such as water

management and land reclamation for large parts of the region, the economic development of the landscape and the region's potential to reveal information regarding field systems, enclosures, roads and trackways. Linked to the study of the landscape are research issues such as the built environment and infrastructure; the main communication routes through the region need to be identified and synthesis needs to be carried out regarding the significance, economic and social importance of historic buildings in the region (Medlycott 2011, 70-71). Also considered to be important research subjects for the medieval period are rural settlements, towns, industry and the production and processing of food and demographic studies (Medlycott 2011, 70-71).

4.2.10 The principal research issues for the site will be to identify and characterise any early activity on this large, mainly greenfield site.

References

Brown, N & Glazebrook, J (eds), 2000, *Research and Archaeology: A Framework for the Eastern Counties. 2. Research Agenda and Strategy*, East Anglian Archaeology Occasional Papers 8

Glazebrook, J (eds), 1997, *Research and Archaeology: A Framework for the Eastern Counties. 1. Resource Assessment,* East Anglian Archaeology Occasional Papers 3

Medlycott, M & Brown, N, 2008, *Revised East Anglian Archaeological Research Frameworks,* www.eaareports/algaoee

Medlycott, M. (ed.) 2011, *Research and Archaeology revisited: a revised framework for the East of England*, ALGAO East of England Region, East Anglian Archaeology Occasional Papers 24

Peachey, A, 2013, *Land at Moreton Hall, Bury St Edmunds, Suffolk; An Archaeological Desk-based Assessment,* AS Report 3818

5 SPECIFICATION
TRENCHED EVALUATION

5.1 Details of Senior Project Staff

5.1.1 AS has developed a professional and well-qualified team who have undertaken numerous archaeological projects (both desk-based and field evaluations) on all types of developments, including commercial, residential, road schemes and golf courses. AS is a Registered Organisation of the IfA.

5.1.2 Profiles of key project staff are provided (Appendix 2).

A Method Statement is presented
Trial Trench Evaluation Appendix 1

5.1.3 The evaluation will conform with the guidelines set down in the brief and the Institute for Archaeologists *Standard and Guidance for Archaeological Evaluations (revised 2008) and Standard and Guidelines for Historic Environment Desk-based Assessment (revised 2012).* It will also adhere to the document *Standards for Field Archaeology in the East of England* (Gurney 2003) and the requirements of the SCC document *Requirements for a Trenched Evaluation* 2011 Ver. 1.3.

5.1.4 SCC AS-CT require a programme of archaeological trial trenching of the site, as below:

Area 1 (Detailed/full application area)
A 5 % sample of the site (4% initial sample and 1% held as a contingency to further clarify any revealed remains) is required in Area 1. The trenching is required to comprise c.1022 linear metres of trenching at 1.8m width as the original sample. 25 trenches each 40m x 1.8m area therefore proposed. A 1% sample (to allow for a further c.255 linear metres of 1.8m wide trenches) is also allowed for, if required. A trench plan is appended. AS is happy to review the scale/location of the trenches following comment from the client and/or SCC AS-CT.

Area 2 (Outline application area)
A 1% sample, to comprise c.166 linear metres of trenching at 1.8m width is required to sample anomalies identified by the geophysical survey and also test 'blank' area. This will comprise 4 trenches each 40m x 1.8m. A trench plan is appended. AS is happy to review the scale/location of the trenches following comment from the client and/or SCC AS-CT.

5.1.5 The environmental strategy will adhere to the guidelines issued by English Heritage (*Environmental Archaeology; A guide to the theory and practice of methods, from sampling and recovery to post-excavation,* Centre for Archaeology Guidelines, 2011). An environmentalist will be invited to visit the site if remains of interest are found. Dr Rob Scaife will be the Environmental Coordinator for the project. The specialist will make his/her results known to Zoe Outram who co-ordinates environmental archaeology in the region on behalf of English Heritage. It will be particularly important on this project to identify any palaeoenvironmental remains and to identify any waterlogged remains present on the site.

5.1.6 Estimate of time and resources required for each phase, to complete the trial trenching, project archive and the production of an evaluation report.
Trial Excavation
Processing, Cataloguing and Conservation of Finds
Preparation of Report and Archive *c.*10-15 Days

Staff on site: a Project Officer and Site Assistant/s (as necessary)

5.1.7 In advance of the field work AS will liaise with the County HER to fulfil their requirements for the long term deposition of the project archive. These will encompass: their collection policy, and their financial and technical requirements for

long term storage. The resources include provision for the long term-deposition of the project archive.

5.1.8 Details of staff and specialist contractors are provided (Appendix 2). The project will be managed by Claire Halpin MIFA /Jon Murray MIFA.

5.1.9 AS is a member of FAME formerly the Standing Conference of Archaeological Unit Managers (SCAUM) and operates under the `Health & Safety in Field Archaeology Manual'. A risk assessment and management strategy will be completed prior to the start of works on site.

5.1.10 AS is a member of the Council for British Archaeology and is insured under their policy for members.

6 SERVICES

6.1 The client is to advise AS of the position of any services which traverse the site.

7 SECURITY

7.1 Throughout all site works care will be taken to maintain all existing security arrangements, and to minimise disruption.

8 REINSTATEMENT

8.1 No provision has been made for reinstatement, excepting simple backfilling.

9 REPORT REQUIREMENTS

9.1 The report will include (as a minimum):

a) the archaeological background
b) a consideration of the aims and methods adopted in the course of the recording
c) a detailed account of the nature, location, extent, date, significance and quality of any archaeological evidence recorded.
d) Excavation methodology and detailed results including a suitable conclusion and discussion
e) plans and sections of any recorded features and deposits
f) discussion and interpretation of the evidence. An assessment of the projects significance in a regional and local context and appendices.
g) All specialist reports or assessments
h) A concise non-technical summary of the project results
i) A HER summary sheet
j) An OASIS summary sheet

9.2 Draft hard and digital PDF copies of the report will be submitted to SCC AS-CT for approval. If any revisions are required, final hard and digital PDF copies will be supplied to SCC AS-CT for deposition with the HER

9.3 The project details will be submitted to the OASIS database, and the online summary form will be appended to the project report.

9.4 A summary report will be submitted suitable for inclusion in the annual roundups of *Proceedings of the Suffolk Institute of Archaeology and History*, dependent on the results of the project.

10 ARCHIVE

10.1 The requirements for archive storage will be agreed with the County HER.

10.2 The archive will be deposited within six months of the conclusion of the fieldwork. It will be prepared in accordance with the UK Institute for Conservation's *Conservation Guideline No.2* and according to the document *Deposition of Archaeological Archives in Suffolk* (SCC AS Conservation Team, 2010). A unique event number will be obtained from the County HER Officer.

10.3 The full archive of finds and records will be made secure at all stages of the project, both on and off site. Arrangements will be made at the earliest opportunity for the archive to be accessed into the collections of Suffolk HER; with the landowner's permission in the case of any finds. It is acknowledged that it is the responsibility of the field investigation organisation to make these arrangements with the landowner and HER. The archive will be adequately catalogued, labelled and packaged for transfer and storage in accordance with the guidelines set out in the United Kingdom Institute for Conservation's *Conservation Guidelines No.2* and the other relevant reference documents.

10.4 Archive records, with inventory, are to be deposited, as well as any donated finds from the site, at the county HER and in accordance with their requirements. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency. In addition to the overall site summary, it will be necessary to produce a summary of the artefactual and ecofactual data. A unique accession number will be obtained from the HER.

APPENDIX 1
METHOD STATEMENT

Method Statement for the recording of archaeological remains

The archaeological evaluation will be conducted in accordance with the project brief, and the code of the Institute of Field Archaeologists.

1 Mechanical Excavation

1.1 A mechanical excavator fitted with a wide toothless bucket will be used to remove the topsoil/overburden. The machine will be powerful enough for a clean job of work and be able to mound spoil neatly, at a safe distance from the trench edges.

1.2 The mechanical stripping will be controlled, and the mechanical excavator will only operate under the full-time supervision of an experienced archaeologist.

2 Site Location Plan

2.1 On conclusion of the mechanical excavation, a `site location plan', based on the current Ordnance Survey 1:1250 map and indicating site north, will be prepared. This will be supplemented by an `area plan' at 1:200 (or 1:100) which will show the location of the area(s) investigated in relationship to the development area, OS grid and site grid.

3 Manual Cleaning & Base Planning of Archaeological Features

3.1 Exposed areas will be hand-cleaned to define archaeological features sufficient to produce a base plan.

4 Full Excavation

Excavation of Stratified Sequences

The trenches will be excavated according to phase, from the most recent to the earliest, and the phasing of features will be distinguished by their stratigraphic relationships, fills and finds.

Deep features e.g. quarry holes, may incorporate stratified deposits which will be excavated by hand-dug sections and recorded.

Excavation of Buildings

Building remains are likely to comprise stake holes, postholes and slots/gullies, masonry foundations and low masonry walls. Associated features may be present e.g. hearths.

The features comprising buildings will be excavated fully and in plan/phase, to a level sufficient for the requirements of an evaluation.

Full Excavation

Industrial remains and intrinsically interesting features e.g hearths, burials will clearly merit full excavation, though will be excavated sufficient to characterise such deposits within the context of an evaluation. Discrete features associated with possible structures and/or settlement will be fully excavated, again sufficient to characterise them for the purposes of an evaluation.

Ditches

The ditches will be excavated in segments up to 2m long, and the segments will be placed to provide adequate coverage of the ditches, establish their relationships and obtain samples and finds.

5 Written Record

5.1 All archaeological deposits and artefacts encountered during the course of the excavation will be fully recorded on the appropriate context, finds and sample forms.

5.2 The site will be recorded using AS.'s excavation manual which is directly comparable to those used by other professional archaeological organisations, including English Heritage's own Central Archaeological Service.

6 Photographic Record

6.1 An adequate photographic record of the investigations will be made. It will include black and white prints and colour transparencies (on 35mm) illustrating in both detail and general context the principal features and finds discovered. It will also include `working and promotional shots' to illustrate more generally the nature of the archaeological operations. The black and white negatives and contacts will be filed, and the colour transparencies will be mounted using appropriate cases. All photographs will be listed and indexed.

7 Drawn Record

7.1 A record of the full extent, in plan, of all archaeological deposits encountered will be drawn on A1 permatrace. The plans will be related to the site, or OS, grid and be drawn at a scale of 1:50 or 1:20, as appropriate. In addition where appropriate, e.g. recording an inhumation, additional plans at 1:10 will be produced. The sections of all archaeological contexts will be drawn at a scale of 1:10 or, where appropriate, 1:20. The OD height of all principal strata and features will be calculated and indicated on the appropriate plans and sections.

8 Recovery of Finds

GENERAL

The principal aim is to ensure that adequate provision is made for the recovery of finds from all archaeological deposits.

The Small Finds, e.g. complete pots or metalwork, from all excavations will be 3-dimensionally recorded.

A metal detector will be used to enhance finds recovery. The metal detector survey will be conducted on conclusion of the topsoil stripping, and thereafter during the course of the excavation. The spoil tips will also be surveyed. Regular metal detector surveys of the excavation area and spoil tips will reduce the loss of finds to unscrupulous users of metal detectors (treasure hunters). All non-archaeological staff working on the site should be informed that the use of metal detectors is forbidden.

WORKED FLINT

When flint knapping debris is encountered large-scale bulk samples will be taken for sieving.

POTTERY

It is important that the excavators are aware of the importance of pottery studies and therefore the recovery of good ceramic assemblages.

The pottery assemblages are likely to provide important evidence to be able to date the structural history and development of the site.

The most important assemblages will come from `sealed' deposits which are representative of the nature of the occupation at various dates, and indicate a range of pottery types and forms available at different periods.

`Primary' deposits are those which contain sherds contemporary with the soil fill and in simple terms this often means large sherds with unabraded edges. The sherds have usually been deposited shortly after being broken and have remained undisturbed. Such sherds are more reliable in indicating a more precise date at

which the feature was `in use'. Conversely, `secondary' deposits are those which often have small, heavily abraded sherds lacking obvious conjoins. The sherds are derived from earlier deposits.

HUMAN BONE

Any human remains present would not normally be excavated at the stage of an evaluation, but would be protected and preserved in situ, on advice from SCC AS-CT. Should human remains be discovered and be required to be removed, the coroner will be informed and a licence from the Ministry of Justice sought immediately; both the client and the monitoring officer will also be informed. Any excavation of human remains at the stage of an evaluation would only be carried out following advice from SCC AS-CT. Excavators would be made aware, and comply with, provisions of Section 25 of the Burial Act of 1857 and pay due attention to the requirements of Health & Safety.

ANIMAL BONE

Animal bone is one of the principal indicators of diet. As with pottery the excavators will be alert to the distinction of primary and secondary deposits. It will also be important that the bone assemblages are derived from dateable contexts. All animal bone will be collected.

ENVIRONMENTAL SAMPLING

The sampling will adhere to the guidelines prepared by English Heritage, and the specialist will make his/her results known to Zoe Outram who co-ordinates environmental archaeology in the region on behalf of English Heritage. The project will also accord with the recent guidelines of the English Heritage document *Environmental Archaeology, a guide to the theory and practice of methods, from sampling and recovery to post-excavation*, Centre for Archaeology Guidelines 2011.

Provision will be made for the sampling of appropriate materials for specialist and/or scientific analysis (e.g. radiocarbon dating, environmental analysis). The location of samples will be 3-dimensionally recorded and they will also be shown on an appropriate plan. AS has its own environmental sampling equipment (including a pump and transformer) and, if practical, provision will be made to process the soil samples during the fieldwork stage of the project.

If waterlogged remains are found advice on sampling will be obtained on site from Dr Rob Scaife. Dr Rob Scaife and AS will seek advice from the EH Regional Scientific Advisor if significant environmental remains are found.

The study of environmental archaeology seeks to understand the local and near-local environment of the site in relation to phases of human activity and as such is an important and integral part of any archaeological study. .

Environmental remains, both faunal and botanical, along with pedological and sedimentological analyses may be used to understand the environment and the impact of human activity.

There may be a potential for the recovery of a range of environmental remains (ecofacts) from which data pertaining to past environments, land use and agricultural economy should be forthcoming.

Sampling strategies on evaluations aim to determine the potential of the site for both biological remains (plants, small vertebrates) and small sized artefacts which would otherwise not be collected by hand. The number/range of samples taken will represent the range of feature types encountered, but with an aim of at least three samples from each feature type.

For plant remains, the samples taken at evaluation stage would aim to characterise:
- The range of preservation types (charred, mineral-replaced, waterlogged) and their quality
- Any differences in remains from dated/undated features
- Variation between different feature types/areas

To realise the potential of the environmental material encountered, a range of specialists from different disciplines is likely to be required. The ultimate goal will be the production of an interdisciplinary environmental study which can be of value to an understanding of, and integrated with, the archaeology.

Organic remains may allow study of the contemporary landscape (occupation/industrial/agricultural impact and land use) and also changes after the abandonment of the site.

The nature of the environmental evidence

Aspects of sampling and analysis may be divided into four broad categories; faunal remains, botanical remains, soils/sediments and radiocarbon dating measurements.

a) Faunal remains: These comprise bones of macro and microfauna, birds, molluscs and insects.

a.i) Bones: The study of the animal bone remains, in particular domestic mammals, domestic birds and marine fish will enhance understanding of the development of the settlement in terms of the local economy and also its wider influence through trade. The study of the small animal bones will provide insight into the immediate habitat of any settlement.

The areas of study covered may include all of the domestic mammal and bird species, wild and harvested mammal, birds, marine and fresh water fish in addition to the small mammals, non-harvest birds, reptiles and amphibia.
Domestic mammalian stock, domestic birds and harvest fish

The domestic animal bone will provide insight into the different phases of development of any occupation and how the population dealt with the everyday aspect of managing and utilising all aspects of the animal resource.

Small animal bones

Archaeological excavation has a wide role in understanding humans' effect on the countryside, the modifications to which have in turn affected and continue to affect their own existence. Small animals provide information about changing habitats and thereby about human impact on the local environment.

a.ii) Molluscs: Freshwater and terrestrial molluscs may be present in ditch and pit contexts which are encountered. Sampling and examination of molluscan assemblages if found will provide information on the local site environment including environment of deposition.

a.iii) Insects: If suitable waterlogged contexts (pit, pond and ditch fills) are encountered (which can potentially be expected to be encountered on the project), sampling and assessment will be carried out in conjunction with the analysis of waterlogged plant remains (primarily seeds) and molluscs. Insect data may provide information on local site environment (cleanliness etc.) as well as proxies for climate and vegetation communities.

b) Botanical remains: Sampling for seeds, wood, pollen and seeds are the essential elements which will be considered. The former are most likely to be charred but possibly also waterlogged should any wells/ponds be encountered.

b.i) Pollen analysis: Sampling and analysis of the primary fills and any stabilisation horizons in ditch and pit contexts which may provide information on the immediate vegetation environment including aspects of agriculture, food and subsistence. These data will be integrated with seed analysis.

b.ii) Seeds: It is anticipated that evidence of cultivated crops, crop processing debris and associated weed floras will be present in ditches and pits. If waterlogged features/sediments are encountered (for example, wells/ponds) these will be sampled in relation to other environmental elements where appropriate (particularly pollen, molluscs and possibly insects).

c) Soils and Sediments: Characterisation of the range of sediments, soils and the archaeological deposits are regarded as crucial to and an integral part of all other aspects of environmental sampling. This is to afford primary information on the nature and possible origins of the material sampled. It is anticipated that a range of 'on-site' descriptions will be made and subsequent detailed description and analysis of the principal monolith and bulk samples obtained for other aspects of the environmental investigation. Where considered necessary, laboratory analyses such as loss on ignition and particle size may also be undertaken. A geoarchaeologist will be invited to visit the site as necessary to advise on sampling.

d) Radiocarbon dating: Archaeological/artifactual dating may be possible for most of the contexts examined, but radiocarbon dating should not be ruled out

Sampling strategies

Provision will be made by the environmental co-ordinator that suitable material for analysis will be obtained. Samples will be obtained which as far as possible will meet the requirements of the assessment and any subsequent analysis.

a) Soil and Sediments: Samples taken will be examined in detail in the laboratory. An overall assessment of potential will be carried out. Analysis of particle size and loss on ignition, if required would be undertaken as part of full analysis if assessment demonstrates that such studies would be of value.

b) Pollen Analysis: Contexts which require sampling may include stabilisation horizons and the primary fills of the pits and ditches, and possibly organic well/pond fills. It is anticipated that in some cases this will be carried out in conjunction with sampling for other environmental elements, such as plant macrofossils, where these are also felt to be of potential.

c) Plant Macrofossils: Principal contexts will be sampled directly from the excavation for seeds and associated plant remains. It is anticipated that primarily charred remains will be recovered, although provision for any waterlogged sequences will also be made (see below). Sampling for the former will, where possible (that is, avoiding contamination) comprise samples of an average of 40-60 litres which will be floated in the AS facilities for extraction of charred plant remains. Both the flot and residues will be kept for assessment of potential and stored for any subsequent detailed analysis. The residues will also be examined for artifactual remains and also for any faunal remains present (cf. molluscs). Where pit, ditch, well or pond sediments are found to contain waterlogged sediments, principal contexts will be sampled for seeds and insect remains. Standard 5 litre+ samples will be taken which may be sub-sampled in the laboratory for seed remains if the material is found to be especially rich. The full sample will provide sufficient material for insect assessment and analysis.

d) Bones: Predicting exactly how much of what will be yielded by the excavation is clearly very difficult prior to excavation and it is proposed that in order to efficiently target animal bone recovery there should be a system of direct feedback from the archaeozoologist to the site staff during the excavation, allowing fine tuning of the excavation strategy to concentrate on the recovery of animal bones from features which have the highest potential. This will also allow the faunal remains to materially add to the interpretation as the excavation proceeds. Liaison with other environmental specialists will need to take place in order to produce a complete interdisciplinary study during this phase of activity. In addition, this feedback will aid effective targeting of the post-excavation analysis.

e) Insects: If contexts having potential for insect preservation are found, samples will be taken in conjunction with waterlogged plant macrofossils. Samples of 5 litres will suffice for analysis and will be sampled adjacent to waterlogged seed samples and pollen; or where insufficient context material is available provision will be made for exchange of material between specialists.

f) Molluscs: Terrestrial and freshwater molluscs. Samples will be taken from a column from suitable ditches. Pits may be sampled, based on the advice of the Environmental Consultant and / or English Heritage Regional Advisor. Provision will also be made for molluscs obtained from other sampling aspects (seeds) to be examined and/or kept for future requirements.

g) Archiving: Environmental remains obtained should be stored in conditions appropriate for analysis in the short to medium term, that is giving the ability for full analysis at a later date without any degradation of samples being analysed. The results will be maintained as an archive at AS and supplied to the EH regional co-ordinator as requested.

Waterlogged Deposits/Remains

Should waterlogged deposits (such as wells/deep ditches) be encountered, provision has been made for controlled hand excavation and sampling. Dr Rob Scaife will visit to advise of sampling as required, and AS will take monolith samples as necessary for the recovery of palaeoenvironmental information and dating evidence.

Scientific/Absolute Dating

- Samples will be obtained for potential scientific/absolute dating as appropriate (eg Carbon-14).

Provision will be made for the sampling of appropriate materials for specialist and/or scientific analysis (e.g. radiocarbon dating, environmental analysis). The location of samples will be 3-dimensionally recorded and they will also be shown on an appropriate plan. AS has its own environmental sampling equipment (including a pump and transformer) and, if practical, provision will be made to process the soil samples during the fieldwork stage of the project.

If waterlogged remains are found they will be sampled by Dr Rob Scaife. Dr Rob Scaife and AS will seek advice from the EH Regional Scientific Advisor (Zoe Outram) if significant environmental remains are found.

FINDS PROCESSING

The project director will have overall responsibility for the finds and will liaise with AS's own finds personnel and the relevant specialists. A person with particular responsibility for finds on site will be appointed for the excavation. The person will ensure that the finds are properly labelled and packaged on site for transportation to AS's field base. The finds processing will take place in tandem with the excavations and will be under the supervision of AS's Finds Officer.

The finds processing will entail first aid conservation, cleaning (if appropriate), marking (if appropriate), categorising, bagging, labelling, boxing and basic

cataloguing (the compilation of a Small Finds Catalogue and quantification of bulk finds) i.e. such that the finds are ready to be made available to the specialists. The Finds Officer, having been advised by the Project Officer and relevant specialists, will select material for conservation. AS's Finds Officer, in conjunction with the Project Officer, will arrange for the specialists to view the finds for the purpose of report writing.

ARCHAEOLOGICAL SOLUTIONS LIMITED: PROFILES OF STAFF & SPECIALISTS

DIRECTOR
Claire Halpin BA MIfA

Qualifications: Archaeology & History BA Hons (1974-77). Oxford University Dept for External Studies In-Service Course (1979-1980). Member of Institute of Archaeologists since 1985: IFA Council member (1989-1993)
Experience: Claire has 25 years' experience in field archaeology, working with the Oxford Archaeological Unit and English Heritage's Central Excavation Unit (now the Centre for Archaeology). She has directed several major excavations (e.g. Barrow Hills, Oxfordshire, and Irthlingborough Barrow Cemetery, Northants), and is the author of many excavation reports e.g. St Ebbe's, Oxford: *Oxoniensia* 49 (1984) and 54 (1989). Claire moved into the senior management of field archaeological projects with Hertfordshire Archaeological Trust (HAT) in 1990, and she was appointed Manager of HAT in 1996. From the mid 90s HAT has enlarged its staff complement and extended its range of skills. In July 2003 HAT was wound up and Archaeological Solutions was formed. The latter maintains the same staff complement and services as before. AS undertakes the full range of archaeological services nationwide.

DIRECTOR
Tom McDonald MIfA

Qualifications: Member of the IfA
Experience: Tom has twenty years' experience in field archaeology, working for the North-Eastern Archaeological Unit (1984-1985), Buckinghamshire County Museum (1985), English Heritage (Stanwick Roman villa (1985-87) and Irthlingborough barrow excavations, Northamptonshire (1987)), and the Museum of London on the Royal Mint excavations (1986-7)., and as a Senior Archaeologist with the latter (1987-Dec 1990). Tom joined HAT at the start of 1991, directing several major multi-period excavations, including excavations in advance of the A41 Kings Langley and Berkhamsted bypasses, the A414 Cole Green bypass, and a substantial residential development at Thorley, Bishop's Stortford. He is the author of many excavation reports, exhibitions etc. Tom is AS's Health and Safety Officer and is responsible for site management, IT and CAD. He specialises in prehistoric and urban archaeology, and is a Lithics Specialist.

OFFICE MANAGER
Rose Flowers

Experience: Rose has a very wide range of book-keeping skills developed over many years of employment with a range of companies, principally Rosier Distribution Ltd, Harlow (now part of Securicor) where she managed eight accounts staff. She has a good working knowledge of both accounting software and Microsoft Office.

OFFICE ADMINISTRATOR
Sarah Powell

Experience: Sarah is an experienced and efficient administrative assistant with more than ten years' experience of working in a variety of office environments. She is IT literate and proficient in the use of Microsoft Word, particularly Microsoft Excel. She has completed NVQ 2 & 3 in Administration and Office Skills. She recently attended and completed a course in Microsoft Excel – Advanced Level.

SENIOR PROJECTS MANAGER
Jon Murray BA MIfA

Qualifications: History with Landscape Archaeology BA Hons (1985-1988).
Experience: Jon has been employed by HAT (now AS) continually since 1989, attaining the position of Senior Projects Manager. Jon has conducted numerous archaeological investigations in a variety of situations, dealing with remains from all periods, throughout London and the South East, East Anglia, the South and Midlands. He is fluent in the execution of (and now projectmanaes) desk-based assessments/EIAs, historic building surveys (for instance the recording of the Royal Gunpowder Mills at Waltham Abbey prior to its rebirth as a visitor facility), earthwork and landscape surveys, all types of evaluations/excavations (urban and rural) and environmental archaeological investigation (working closely with Dr Rob Scaife), preparing many hundreds of archaeological reports dating back to 1992. Jon has also prepared numerous publications; in particular the nationally-important Saxon site at Gamlingay, Cambridgeshire (*Anglo-Saxon Studies in Archaeology & History*). Other projects published include Dean's Yard, Westminster (*Medieval Archaeology*), Brackley (*Northamptonshire Archaeology*), and a medieval cemetery in Haverhill he excavated in 1997 (*Proceedings of the Suffolk Institute of Archaeology).* Jon is a member of the senior management team, principally preparing specifications/tenders, co-ordinating and managing the field teams. He also has extensive experience in preparing and supporting applications for Scheduled Monument Consent/Listed Building Consent

PROJECT OFFICER
Zbigniew Pozorski MA

Qualifications: University of Wroclaw, Poland, Archaeology (1995-2000, MA 2003)
Experience: Zbigniew has archaeological experience dating from 1995 when as a student he joined an academic group of excavators. He was involved in numerous archaeological projects throughout the Lower Silesia region in southwest Poland and a number of projects in old town of Wroclaw. During his university years he specialized in medieval urban archaeology. He had his own research project working on an early/high medieval stronghold in Pietrzykow. He was a member of a University team which located and Excavated an unknown high medieval castle in Wierzbna, Poland. Zbigniew has worked for archaeological contractors in Poland on several projects as a supervisor where he gained experience in all types of evaluations and excavations in urban and rural areas. Recently he worked in Ireland where he completed two large long-term projects for Headland Archaeology Ltd. He joined AS in January 2008 as a Project Officer. Zbigniew is qualified in the Construction Skills Certification Scheme (CSCS) and is a qualified in First Aid at Work (St Johns Ambulance).

SUPERVISOR
Gareth Barlow MSc

Qualifications: University of Sheffield, MSc Environmental Archaeology & Palaeoeconomy (2002-2003)
King Alfred's College, Winchester, Archaeology BA (Hons) (1999-2002)
Experience: Gareth worked on a number of excavations in Cambridgeshire before pursuing his degree studies, and worked on many archaeological projects across the UK during his university days. Gareth joined AS in 2003 and has worked on numerous archaeological projects throughout the South East and East Anglia with AS. Gareth was promoted to Supervisor in the Summer 2007. Gareth is qualified in the Construction Skills Certification Scheme (CSCS) and is a qualified in First Aid at Work (St Johns Ambulance).

SUPERVISOR
Kamil Orzechowski BA, MA

Experience: Kamil Orzechowski joined AS in 2012, as an experienced field archaeologist after spending five years in various commercial archaeology units working on large-scale construction projects including railways and pipelines. Before becoming a field archaeologist, Kamil graduated from the Institute of Ethnology and Cultural Anthropology, Adam Mickiewicz University, Poznan, Poland. Kamil is qualified in the Construction Skills Certification Scheme (CSCS).

SUPERVISOR
James Earley

Experience: James' site experience dates from 2002 – 2006 when he was a Project Assistant with Suffolk County Council Archaeological Service. From Suffolk he was an Archaeological Officer with Thames Valley Archaeological Service (2006 – 2013), and more recently the University of Leicester Archaeological Service. James has over 10 years' field experience on both urban and rural sites. He has supervised staff, supervised topsoil and subsoil stripping for evaluations and excavations, and has surveyed sites using both GPS and Total Station.

SUPERVISOR
Julie Walker BSc MA PIfA

Qualifications: Queens University Belfast: BSc Archaeology (2007-2010)
University of Southampton: MA Osteoarchaeology (2010-2011)
Experience: Julie is a member of the Institute for Archaeologists (PIfA grade) and the British Association for Biological Anthropology and Osteoarchaeology. Professionally, Julie has worked for organisations including Albion Archaeology (2014) and Oxford Archaeology East (2014). Julie has a thorough knowledge and experience of archaeological fieldwork and post-excavation practice. Julie's personal research interests include congenital and developmental defects in the Romano-British and Anglo-Saxon periods and she has made several conference presentations on this subject.

SUPERVISOR
Matthew Baker BA MA

Qualifications: Cardiff University: BA Archaeology (2008-2011)
Cardiff University: MA Archaeology (2012-2013)
Experience: Since concluding his higher education, Matthew has worked for a number of archaeological projects and organisations including GeoArch (Cardiff), the Damerham Archaeology Project and Cambridge University. He has a gained a varied experience of archaeological fieldwork and post-excavation practice including geophysical survey/ interpretation and isotopic analysis.

SUPERVISOR
Kerrie Bull BSc

Qualifications: University of Reading: BSc Archaeology (2008-2011)
Experience: During her undergraduate degree at the University of Reading Kerrie worked on the Lyminge Archaeological Project (2008), the Silchester 'Town Life' Project (2009) and the Ecology of Crusading Research Programme (2011). Through her academic and professional career, Kerrie has gained good experience of archaeological fieldwork and post-excavation techniques.

SUPERVISOR
Thomas Muir BA MSc

Qualifications: University of Edinburgh: BA Archaeology (2007-2011)
University of Edinburgh: MSc Mediterranean Archaeology (2011-2012)

Experience: Thomas is an affiliate member of the Institute for Archaeologists. Throughout his higher education, Thomas volunteered on research excavations at sites including Port Sec Sud, Bourges (France; 2008), the Hill of Barra (the Hillforts of Strathdon Project; 2010) and Prastio Mesorotsos, Cyprus (2010-2012). In 2013 Thomas returned to Prastio Mesorotsos – a research project run by the Cyprus American Archaeological Institute – in a supervisory capacity. Professionally, Thomas has worked for CFA Archaeology (2013) and thereafter AS Ltd. Through his academic and professional career, Thomas has gained a broad working knowledge of archaeological fieldwork and post-excavation techniques including environmental sampling, on-site recording and digital archiving.

SUPERVISOR
Vincent Monahan BA

Qualifications: University College Dublin: BA Archaeology (2007-2012)

Experience: Professionally, Vincent has worked for various archaeological groups and projects including the Stonehenge Riverside Project (Site Assistant/ Supervisor; 2008), University College Dublin Archaeological Society (Auditor; 2009-2010) and the Castanheiro do Vento Research Project (Site Assistant/ Supervisor; 2009-2010 (seasonal)). Vincent has gained good experience of archaeological fieldwork including excavation, various sampling techniques and on-site recording. He also gained experience of museum-grade curatorial practice during his undergraduate degree.

PROJECT OFFICER
(DESK-BASED ASSESSMENTS) Kate Higgs MA (Oxon)

Qualifications: University of Oxford, St Hilda's College Archaeology & Anthropology MA (Oxon) (2001-2004)

Experience: Kate has archaeological experience dating from 1999, having taken part in clearance, surveying and recording of stone circles in the Penwith area of Cornwall. During the same period, she also assisted in compiling a database of archaeological and anthropological artefacts from Papua New Guinea, which were held in Scottish museums. Kate has varied archaeological experience from her years at Oxford University, including participating in excavations at a Roman amphitheatre and an early church at Marcham/ Frilford in Oxfordshire, with the Bamburgh Castle Research Project in Northumberland, which also entailed the excavation of human remains at a Saxon cemetery, and also excavating, recording and drawing a Neolithic chambered tomb at Prissé, France. Kate has also worked in the environmental laboratory at the Museum of Natural History in Oxford, and as a finds processor for Oxford's Institute of Archaeology. Since joining AS in November 2004, Kate has researched and authored a variety of reports, concentrating on desk-based assessments in advance of archaeological work and historic building recording.

ASSISTANT PROJECTS MANAGER (POST-EXCAVATION)
Andrew Newton MPhil PIFA

Qualifications: University of Bradford, MPhil (2002-04)
University of Bradford, BSc (Hons) Archaeology (1998-2002)
University of Bradford, Dip Professional Archaeological Studies (2002)

Experience: Andrew has carried out geophysical surveys for GeoQuest Associates on sites throughout the UK and has worked as a site assistant with BUFAU. During 2001 he worked as a researcher for the Yorkshire Dales Hunter-Gatherer Research Project, a University of Bradford and Michigan State University joint research programme, and has

carried out voluntary work with the curatorial staff at Beamish Museum in County Durham. Andrew is a member of the Society of Antiquaries of Newcastle-upon-Tyne and a Practitioner Member of the Institute for Archaeologists. Since joining AS in early Summer 2005, as a Project Officer writing desk-based assessments, Andrew has gained considerable experience in post-excavation work. His principal role with AS is conducting post-excavation research and authoring site reports for publication. Significant post-excavation projects Andrew has been responsible for include the Ingham Quarry Extension, Fornham St. Genevieve, Suffolk – a site with large Iron Age pit clusters arranged around a possible wetland area; the late Bronze Age to early Iron Age enclosure and early Saxon cremation cemetery at the Chalet Site, Heybridge, Essex; and, Church Street, St Neots, Cambridgeshire, an excavation which identified the continuation of the Saxon settlement previously investigated by Peter Addyman in the 1960s. Andrew also writes and co-ordinates EnvironmentalImpact Assessments and has worked on a variety of such projects across southern and eastern England. In addition to his research responsibilities Andrew undertakes outreach and publicity work and carries out some fieldwork.

PROJECT OFFICER (POST-EXCAVATION)
Antony Mustchin BSc MSc DipPAS

Qualifications: University of Bradford BSc (Hons) Bioarchaeology (1999-2003)
University of Bradford MSc Biological Archaeology (2004-2005)
University of Bradford Diploma in Professional Archaeological Studies (2003)
Experience: Antony has over 14 years' experience in field archaeology, gained during his higher education and in the professional sector. Commercially in the UK, Antony has worked for Archaeology South East (2003), York Archaeological Trust (2004) and Special Archaeological Services (2003). He has also undertaken a six-month professional placement as Assistant SMR Officer/ Development Control Officer with Kent County Council (2001-2002). Antony's academic interests have led to his gaining considerable research excavation experience across the North Atlantic region. He has worked for projects and organisations including the Old Scatness & Jarlshof Environs Project, Shetland (2000-2003), the Viking Unst Project, Shetland (2006-2007), the Heart of the Atlantic Project Føroys Fornminnissavn, Faroe Islands (2006-2008) and City University New York/ National Museum of Denmark/ Greenland National Museum and Archives, Greenland (2006 & 2010). Shortly before Joining Archaeological Solutions in November 2011, Antony spent three years working for the Independent Commission for the Location of Victims Remains, assisting in the search for and forensic recovery of 'the remains of victims of paramilitary violence ("The Disappeared") who were murdered and buried in secret arising from the conflict in Northern Ireland'. Antony has a broad experience of fieldwork and post-excavation practice including specialist (archaeofauna), teaching, supervisory and directing-level posts.

POTTERY, LITHICS AND CBM RESEARCHER
Andrew Peachey BA MIfA

Qualifications: University of Reading BA Hons, Archaeology and History (1998-2001)
Experience: Andrew joined AS (formerly HAT) in 2002 as a pottery researcher, and rapidly expanded into researching CBM and lithics. Andrew specialises in prehistoric and Roman pottery and has worked on numerous substantial assemblages, principally from across East Anglia but also from southern England. Recent projects have included a Neolithic site at Coxford, Norfolk, an early Bronze Age domestic site at Shropham, Norfolk, late Bronze Age material from Panshanger, Hertfordshire, middle Iron Age pit clusters at Ingham, Suffolk and an Iron Age and early Roman riverside site at Dernford, Cambridgshire. Andrew has worked on important Roman kiln assemblages, including a Nar Valley ware production site at East Winch Norfolk, a face-pot producing kiln at Hadham, Hertfordshire and is currently researching early Roman Horningsea ware kilns at Waterbeach, Cambridgeshire. Andrew is an enthusiastic member of the Study Group for Roman Pottery, and also undertakes pottery

and lithics analysis as an 'external' specialist for a range of archaeological units and local societies in the south of England.

POTTERY RESEARCHER
Peter Thompson MA

Qualifications: University of Bristol BA (Hons), Archaeology (1995-1998)
University of Bristol MA; Landscape Archaeology (1998-1999)
Experience: As a student, Peter participated in a number of projects, including the excavation of a Cistercian monastery cemetery in Gascony and surveying an Iron Age promontory hillfort in Somerset. Peter has two years excavation experience with the Bath Archaeological Trust and Bristol and Region Archaeological Services which includes working on a medieval manor house and a post-medieval glass furnace site of national importance. Peter joined HAT (now AS) in 2002 to specialise in Iron Age, Saxon and medieval pottery research and has also produced desk-based assessments. Pottery reports include an early Iron pit assemblage and three complete Early Anglo-Saxon accessory vessels from a cemetery in Dartford, Kent.

PROJECT OFFICER (OSTEOARCHAEOLOGY)
Dr Julia Cussans

Qualifications: University of Bradford, PhD (2002-2010)
University of Bradford, BSc (Hons) Bioarchaeology (1997-2001)
University of Bradford, Dip. Professional Archaeological Studies (2001)
Experience: Julia has over 14 years of archaeozoological experience. Whilst undertaking her part time PhD she also worked as a specialist on a variety of projects in northern Britain including Old Scatness (Shetland), Broxmouth Iron Age Hillfort and Binchester Roman Fort. Additionally Julia has extensive field experience and has held lead roles in excavations in Shetland and the Faroe Islands including, Old Scatness, a large multi-period settlement centred on an Iron Age Broch; the Viking Unst Project, an examination of Viking and Norse houses on Britain's most northerly isle; the Laggan Tormore Pipeline (Firths Voe), a Neolithic house site in Shetland; the Heart of the Atlantic Project, an examination of Viking settlement in the Faroes and Við Kirkjugarð, an early Viking site on Sanday, Faroe Islands. Early on in her career Julia also excavated at Sedgeford, Norfolk as part of SHARP and in Pompeii, Italy as part of the Anglo-American Project in Pompeii. Since joining AS in October 2011 Julia has worked on animal bone assemblages from Beck Row, a Roman agricultural site at Mildenhall, Suffolk and Sawtry, an Iron Age, fen edge site in Cambridgeshire. Julia is a full and active member of the International Council for Archaeozoology, the Professional Zooarchaeology Group and the Association for Environmental Archaeology.

ENVIRONMENTAL ARCHAEOLOGIST
Dr John Summers

Qualifications: 2006-2010: PhD "The Architecture of Food" (University of Bradford)
2005-2006: MSc Biological Archaeology (University of Bradford)
2001-2005: BSc Hons. Bioarchaeology (University of Bradford)
Experience: John is an archaeobotanist with a primary specialism in the analysis of carbonised plant macrofossils and charcoal. Prior to joining Archaeological Solutions, John worked primarily in Atlantic Scotland. His research interests involve using archaeobotanical data in combination with other archaeological and palaeoeconomic information to address cultural and economic research questions. John has made contributions to a number of large research projects in Atlantic Scotland, including the Old Scatness and Jarlshof Environs Project (University of Bradford), the Viking Unst Project (University of Bradford) and publication work for Bornais Mound 1 and Mound 2 (Cardiff University). He has also worked with plant remains from Thruxton Roman Villa, Hampshire, as part of the Danebury Roman

Environs Project (Oxford University/ English Heritage). John's role at AS is to analyse and report on assemblages of plant macro-remains from environmental samples and provide support and advice regarding environmental sampling regimes and sample processing. John is a member of the Association for Environmental Archaeology.

SENIOR GRAPHICS OFFICER
Kathren Henry

Experience: Kathren has over twenty-five years' experience in archaeology, working as a planning supervisor on sites from prehistoric to late medieval date, including urban sites in London and rural sites in France/ Italy, working for the Greater Manchester Archaeological Unit, Passmore Edwards Museum, DGLA and Central Excavation Unit of English Heritage (at Stanwick and Irthlingborough, Northamptonshire). She has worked with AS (formerly HAT) since 1992, becoming Senior Graphics Officer. Kathren is AS's principal photographer, specializing in historic building survey, and she manages AS's photographic equipment and dark room. She is in charge of AS's Graphics Department, managing computerised artwork and report production. Kathren is also the principal historic building surveyor/illustrator, producing on-site and off-site plans, elevations and sections.

HISTORIC BUILDING RECORDING
Tansy Collins BSc
Qualifications: University of Sheffield, Archaeological Sciences BSc (Hons) (1999-2002)
Experience: Tansy's archaeological experience has been gained on diverse sites throughout England, Ireland, Scotland and Wales. Tansy joined AS in 2004 where she developed skills in graphics, backed by her grasp of archaeological interpretation and on-site experience, to produce hand drawn illustrations of pottery, and digital illustrations using a variety of packages such as AutoCAD, Corel Draw and Adobe Illustrator. She joined the historic buildings team in 2005 in order to carry out both drawn and photographic surveys of historic buildings before combining these skills with authoring historic building reports in 2006. Since then Tansy has authored numerous such reports for a wide range of building types; from vernacular to domestic architecture, both timber-framed and brick built with date ranges varying from the medieval period to the 20th century. These projects include a number of regionally and nationally significant buildings, for example a previously unrecognised medieval aisled barn belonging to a small group of nationally important agricultural buildings, one of the earliest surviving domestic timber framed houses in Hertfordshire, and a Cambridgeshire house retaining formerly hidden 17th century decorative paint schemes. Larger projects include The King Edward VII Sanatorium in Sussex, RAF Bentley Priory in London as well as the Grade I Listed Balls Park mansion in Hertfordshire.

FINDS AND ARCHIVE ASSISTANT
Adam Leigh

Experience: Adam joined AS in January 2012. In his time with the company he has helped process hundreds of finds from a variety of sites going on to concord them. Adam has helped prepare a large number of sites for deposition with museums making sure that the finds are prepared in strict accordance with the guidelines and requirements laid out by the receiving museum.

ASSISTANT ARCHIVES OFFICER
Karen Cleary

Experience: Karen started her administrative career as Youth Training Administrator for a training company (TSMA Ltd) in 1993, where she provided administrative support for NVQ Assessors' of trainees and apprentices on the youth training scheme and in work

placements they'd helped set up. Amongst her administrative duties she was principally in charge of preparing the Training Credits Claims and sending off for government funding. She gained NVQ's Level's 2 and 3 in Administration whilst working in this role. Karen started out with AS as Office Assistant in February 2009 and within a few months was promoted to Archives Assistant. Principally her role involves the preparation of Archaeological archives for long term deposition with museums. She has developed a good understanding of the preparation process and follows each individual museum's guidelines closely. She has a good working knowledge of Microsoft Office and is competent with *FileZilla*- Digital File Transfer software and *Fastsum*-Checksum Creation software.

ARCHAEOLOGICAL SOLUTIONS: PRINCIPAL SPECIALISTS

GEOPHYSICAL SURVEYS	Sam Egan Dr John Summers
AIR PHOTOGRAPHIC ASSESSMENTS	Air Photo Services
PHOTOGRAPHIC SURVEYS	Ms K Henry
PREHISTORIC POTTERY	Mr A Peachey
ROMAN POTTERY	Mr A Peachey
SAXON & MEDIEVAL POTTERY	Mr P Thompson
POST-MEDIEVAL POTTERY	Mr P Thompson
FLINT	Mr A Peachey
GLASS	H Cool
COINS	British Museum, Dept of Coins & Medals
METALWORK & LEATHER	Ms Q Mould, Ms N Crummy
SLAG	Ms J Cowgill
ANIMAL BONE	Dr J Cussans
HUMAN BONE:	Ms S Anderson
ENVIRONMENTAL CO-ORDINATOR	Dr R Scaife
POLLEN AND SEEDS:	Dr R Scaife
CHARCOAL/WOOD	Dr J Summers
SOIL MICROMORPHOLOGY	Dr R MacPhail, Dr C French
CARBON-14 DATING:	English Heritage Ancient Monuments Laboratory (for advice).
CONSERVATION	University of Leicester

APPENDIX 5 OASIS DATA COLLECTION FORM

OASIS DATA COLLECTION FORM: England

Printable version

OASIS ID: archaeol7-197683

Project details

Project name	AREAS 1 and 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK
Short description of the project	In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Areas 1 and 2, Land East of Moreton Hall, Suffolk (NGR TL 8855 6430; Figs. 1-2). The evaluation was commissioned by Taylor Wimpey and was carried out as part of a requirement for further information to be provided prior to the determination of a planning application (DC/14/1881/HYB) for residential development. The evaluation is required by the Local Planning Authority, based on advice from SCC AS-CT. The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Prehistoric remains are known in and around the site (HER BRG 009, BRG 024 and RGH 065), along with Roman, Saxon and medieval sites being known in similar topographic locations to the immediate west and north (HER BRG 024-7 and RGH 031). A geophysical survey has been carried out this year on Areas 2 and 3 of the proposed development (Stratascan 2014). Anomalies of potential archaeological interest were recorded within Area 2, which may be associated with the edge of the medieval Catshall Green. Twenty five features were recorded, principally ditches. An undated pit (F1008 (Tr.3)) and an undated posthole (F1062 (Tr.24)) were recorded. The other discrete features (Pits F1006 (Tr.3) and F1025 (Tr.7) and Quarry Pit F1014 (Tr.3)) were modern. Three dated, medieval, features were recorded (Ditch F1022 (Tr. 15), Ditches F1049 and F1057 (Tr. 24). The ditches in Trench 24 were associated with a series of ditches traceable in Trenches 24, 25, and 27. These boundary ditches were identified by the geophysical survey. Settlement evidence associated with the medieval Catshall Green was recorded and the features in Trenches 15 and 30 have the most potential in this respect.
Project dates	Start: 15-12-2014 End: 23-12-2014
Previous/future work	No / Not known
Any associated project reference codes	P4383 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Other 15 - Other
Monument type	DITCHES Medieval
Monument type	KILN Medieval
Significant Finds	POTTERY Medieval
Methods & techniques	"Sample Trenches","Targeted Trenches"
Development type	Rural residential

Prompt	Planning condition
Position in the planning process	Pre-application

Project location

Country	England
Site location	SUFFOLK ST EDMUNDSBURY BURY ST EDMUNDS AREAS 1 and 2, LAND EAST OF MORETON HALL, GREAT BARTON, SUFFOLK
Study area	91.00 Hectares
Site coordinates	TL 8855 6430 52.2440665438 0.762100867572 52 14 38 N 000 45 43 E Point
Height OD / Depth	Min: 50.00m Max: 60.00m

Project creators

Name of Organisation	Archaeological Solutions Ltd
Project brief originator	Suffolk County Council Archaeological Service Conservation Team
Project design originator	Jon Murray
Project director/manager	Jon Murray
Project supervisor	Vincent Monahan
Type of sponsor/funding body	Taylor Wimpey

Project archives

Physical Archive recipient	Suffolk County Archaeological Store
Physical Contents	"Ceramics"
Digital Archive recipient	Suffolk County Archaeological Store
Digital Contents	"Survey"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	Suffolk County Archaeological Store
Paper Contents	"Survey"
Paper Media available	"Drawing","Photograph","Plan","Report","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Land East of Moreton Hall, Great Barton, Suffolk
Author(s)/Editor(s)	Monahan, V

Author(s)/Editor(s)	Mustchin, A
Author(s)/Editor(s)	Peachey, A
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Entered on	6 January 2015

OASIS:

Please e-mail English Heritage for OASIS help and advice

PHOTOGRAPHIC INDEX

DP1: View N of the north-western corner of site (pre-excavation), with Mount Road and the driveway to the Flying Fortress in the foreground

2: View N of the road from Mount Road to Cattishall (pre-excavation), with the railway in the background

DP3: View NW of the fields to the north of Cherry Tree Cottages (pre-excavation), with the Moreton Hall East development in background

DP4: View E from the road to Cattishall of fields to the north of Mount Road (pre-excavation)

DP5: Ditch F1011 (Trench 3), looking west

DP6: Unexcavated Kiln (Trench 15), looking NW

DP7: Ditch F1020 (Trench 17), looking W

DP8: Ditch F1020 (Trench 18), looking SE

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Fig. 1 Site location plan

Scale 1:25,000 at A4

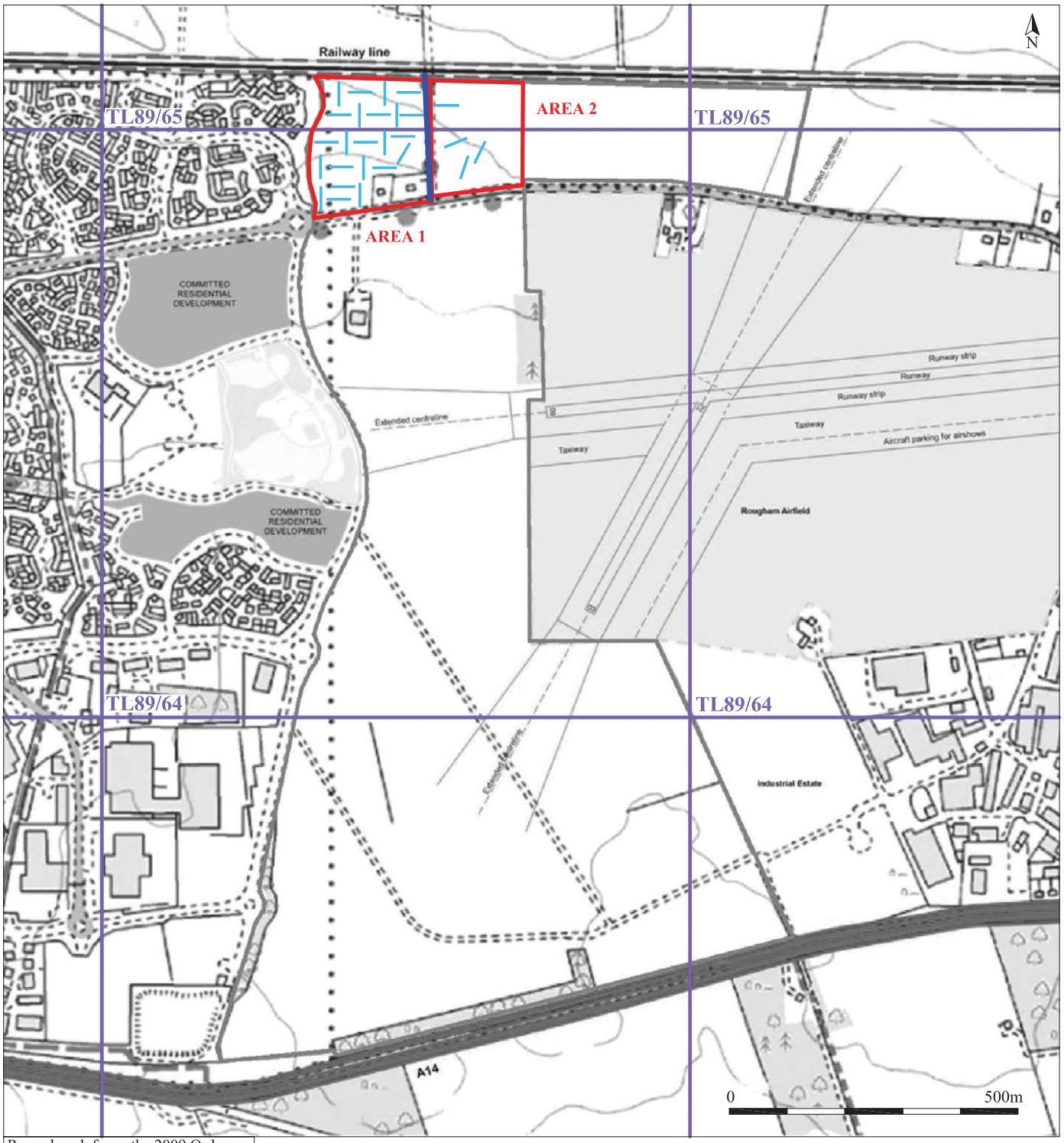

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Fig. 2 Detailed site location plan

Scale 1:10,000 at A4

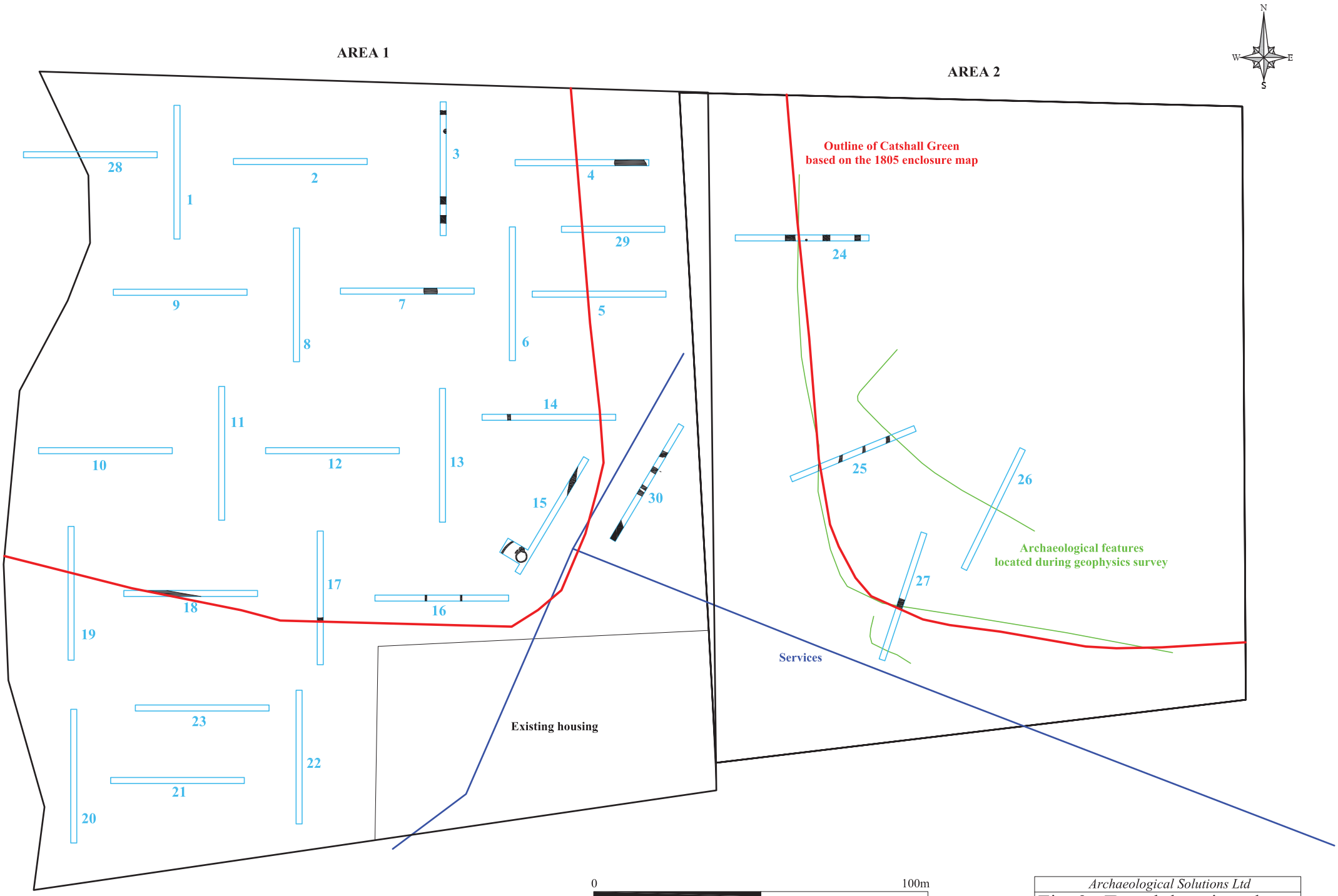

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Fig. 3 Trench location plan

Scale 1:1000 at A3

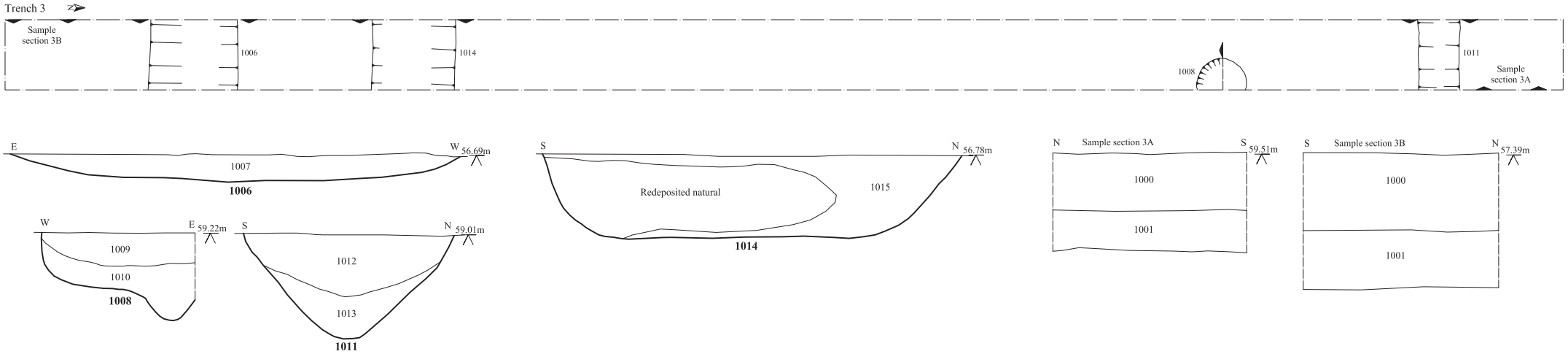

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Fig. 4 Trench plans and sections

Scale Plans 1:100, sections 1:20 at A3

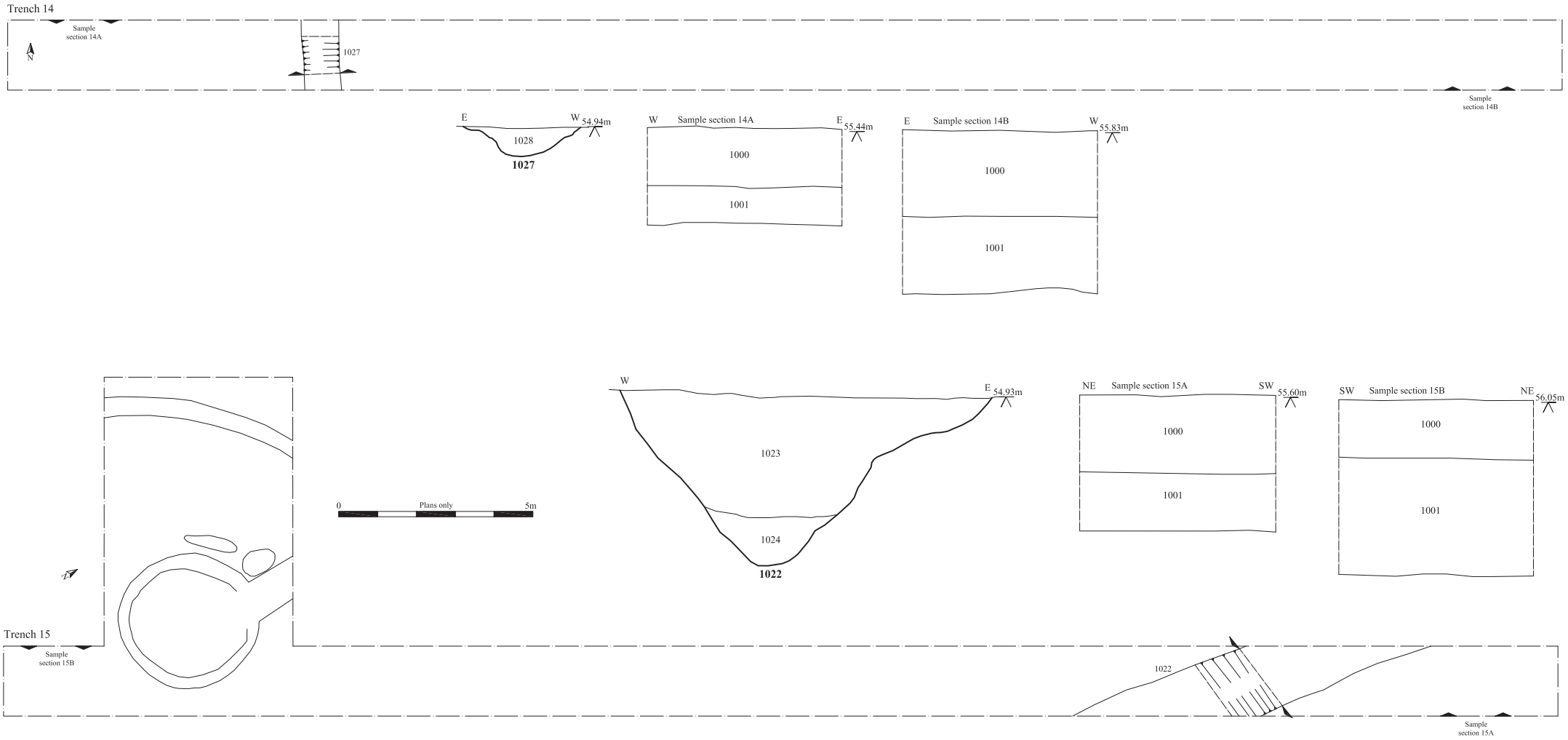

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Fig. 5 Trench plans and sections

Scale Plans 1:100, sections 1:20 at A3

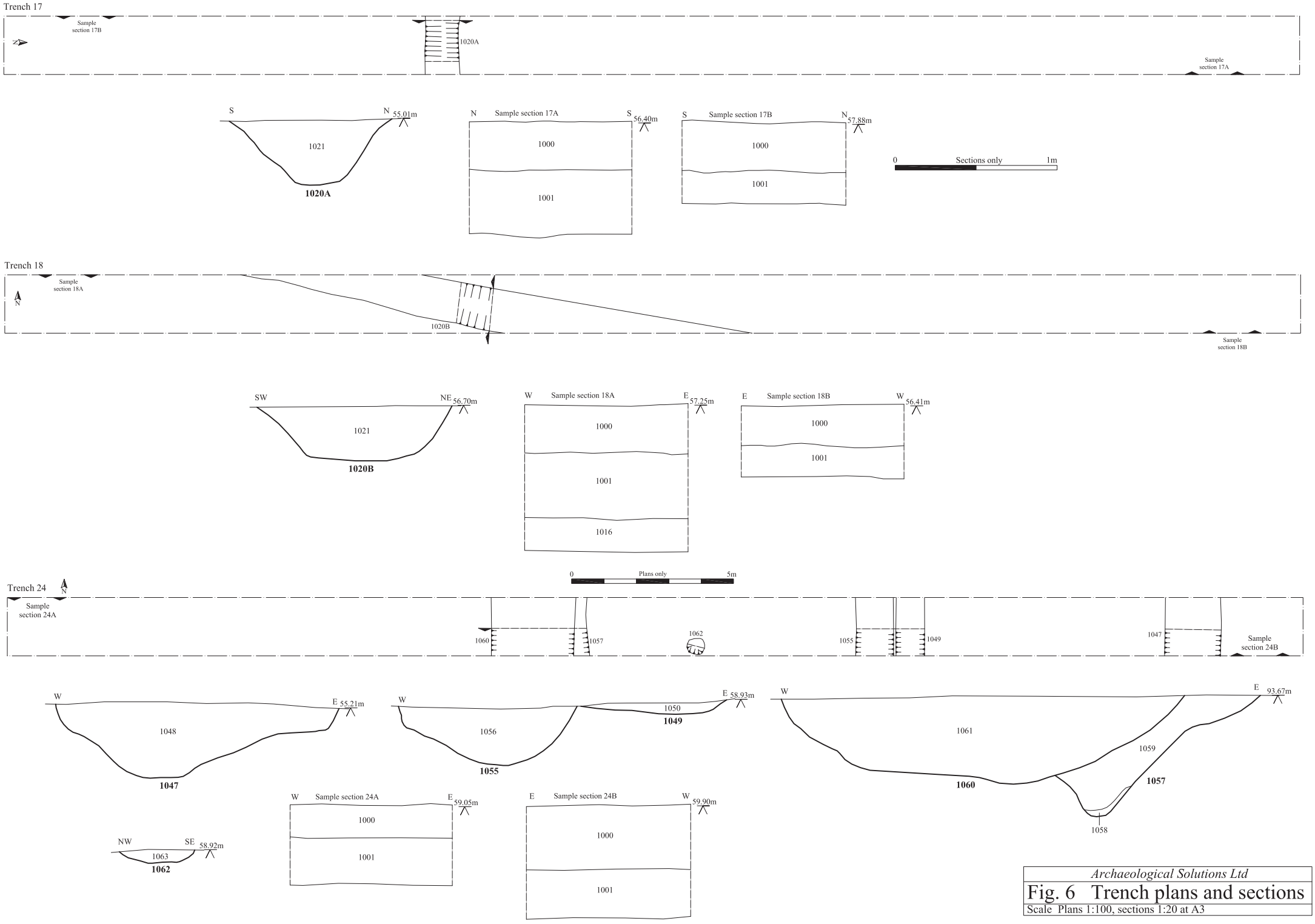

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Fig. 6 Trench plans and sections

Scale Plans 1:100, sections 1:20 at A3

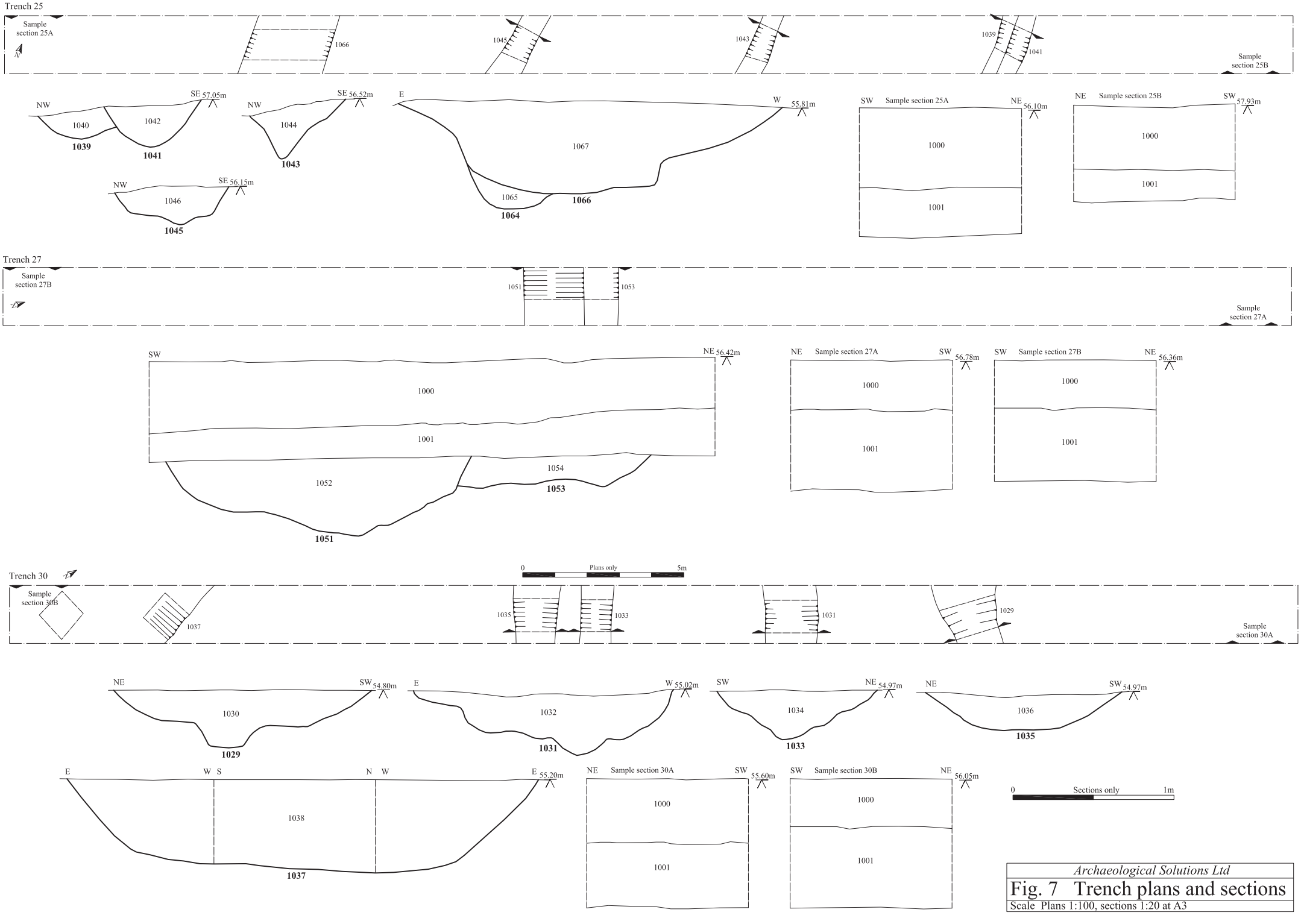

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Fig. 7 Trench plans and sections

Scale Plans 1:100, sections 1:20 at A3