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RATHMOY STABLES, HAMILTON ROAD, NEWMARKET, SUFFOLK

ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

Authors: Andrew Peachey MCIfA (Desk-based research) Gareth Barlow (Fieldwork & report)				
NGR: TL 628 635	Report No: 4753			
District: Forest Heath	Site Code: NKT059			
Approved: Claire Halpin CMIfA	Project No: P6053			
Signed:	Date: 23 December 2014			

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Project details							
Project name	Rathmoy	Stables,	Hamilton	Road,	Newmarket,	Suffolk:	An
	Archaeolo	gical Trial	Trench Eva	luation			

In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Rathmoy Stables, Hamilton Road, Newmarket, Suffolk (NGR TL 628 635). The evaluation was commissioned by KWA Architects (Cambridge) Ltd as a requirement of a planning condition attached to planning approval to re-develop the existing stables into new stables and equine facilities. The evaluation was required to provide information prior to the determination of the planning application (Forest Heath District Council, Planning Approval Ref. DC/14/1970/FUL).

The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Within 100m of the site are previously recorded Bronze Age burials (HER EXG 027) and another find spot of a prehistoric artefact (HER EXG 026).

In the event the evaluation revealed an undated ditch, first recorded in Trench 3 (F1003) and then traced in Trench 8 (F1006). The ditch is undated. It contained animal bone, burnt flint and prehistoric struck flint; the latter not thought to be within a primary deposit. The finds within the ditch are suggestive of a prehistoric date.

Project dates (fieldwork)	December 2	2014	
Previous work (Y/N/?)	N	Future work	TBC
P. number	6053	Site code	NKT059
Type of project	Archaeologi	ical Trial-Trench Evaluat	tion
Site status	-		
Current land use	Trainer/Hea Paddock	d Lads house, Stable	e barns, Barns, Stanle Block &
Planned development	New stables	and equine facilities	
Main features (+dates)	Undated dit	ch, possibly prehistoric	
Significant finds (+dates)	Sparse strue	ck flint, burnt flint and ar	nimal bone
Project location			
County/ District/ Parish	Suffolk	Forest Heath	Newmarket
HER/ SMR for area	Suffolk HER	?	
Post code (if known)	-		
Area of site	1.734 ha		
NGR	TL 628 635		
Height AOD (max/ min)	25m AOD		
Project creators			
Brief issued by	Suffolk Cou	nty Council Archaeologi	ical Conservation Team
Project supervisor(PO)	Gareth Barle	OW	
Funded by	KWA Archite	ects (Cambridge) Ltd	
	_		
Full title	,	Stables, Hamilton R	· · ·
		ical Trial-Trench Evaluat	tion
Authors	Barlow, G. 8	R Peachey, A.	
Report no.	4753		
Date (of report)	December 2	2014	

RATHMOY STABLES, HAMILTON ROAD, NEWMARKET, SUFFOLK AN ARCHAEOLOGICAL TRIAL-TRENCH EVALUATION

SUMMARY

In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Rathmoy Stables, Hamilton Road, Newmarket, Suffolk (NGR TL 628 635; Figs. 1-2). The evaluation was commissioned by KWA Architects (Cambridge) Ltd as a requirement of a planning condition attached to planning approval to re-develop the existing stables into new stables and equine facilities. The evaluation was required to provide information prior to the determination of the planning application (Forest Heath District Council, Planning Approval Ref. DC/14/1970/FUL).

The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Within 100m of the site are previously recorded Bronze Age burials (HER EXG 027) and another find spot of a prehistoric artefact (HER EXG 026).

In the event the evaluation revealed an undated ditch, first recorded in Trench 3 (F1003) and then traced in Trench 8 (F1006). The ditch is undated. It contained animal bone, burnt flint and prehistoric struck flint; the latter not thought to be within a primary deposit. The finds within the ditch are suggestive of a prehistoric date.

1 INTRODUCTION

- 1.1 In December 2014 Archaeological Solutions Ltd (AS) conducted an archaeological trial trench evaluation at Rathmoy Stables, Hamilton Road, Newmarket, Suffolk (NGR TL 628 635; Figs. 1-2). The evaluation was commissioned by KWA Architects (Cambridge) Ltd as a requirement of a planning condition attached to planning approval to re-develop the existing stables into new stables and equine facilities. The evaluation was required to provide information prior to the determination of the planning application (Forest Heath District Council, Planning Approval Ref. DC/14/1970/FUL) (Fig.5).
- 1.2 The evaluation was conducted in accordance with a brief issued by Suffolk County Council Archaeological Service Conservation Team (SCC AS-CT, dated 14/11/2014), and a specification compiled by AS (dated 18/11/2014). The archaeological evaluation followed the procedures outlined in the Institute for Archaeologists' Code of Conduct and Standard and Guidance for Archaeological Desk-Based Assessment (revised 2012), as well as those highlighted in the IFA

Standard and Guidance for Archaeological Field Evaluation (revised 2008) and Standards for Field Archaeology in the East of England (Gurney 2003).

1.3 The evaluation aimed to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. The evaluation also aimed to identify area of previous ground disturbance on the site.

Planning policy context

- 1.4 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.
- 1.5 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)

2.1 The site is located on the south-west side of Hamilton Road, which connects the A1304 with the B1103, on the south-western edge of Newmarket, between a sub-urban residential area and the grounds of Newmarket Race Course. The entrance to Rathmoy Stables is approximately opposite Phillips Close, with the site between Diomed Stables to the north-west, Calder Park stables to the south-east, with an exercise track (part of the race course)

bordering the south-west. The site is approximately rectangular (c.1.734ha) with the Trainer's House and Head Lads House fronting on to Hamilton Road, Stable Barns and Barns in the central area, and a Stable Block and Paddock in the south-western part of the site.

3 METHODOLOGY (Desk-based assessment)

3.1 Archaeological databases

The Suffolk Historic Environment Record (SHER) was consulted in order to identify any local archaeological finds or remains in the area that might be affected by the development. Secondary sources were also consulted either at the Suffolk Record Office (Bury St Edmunds) or from AS' own library.

4 THE EVIDENCE

4.1 Topography, geology and soils

4.1.1 The site is situated at *c*.25m AOD on relatively flat ground, with the surrounding landscape sloping up at a very slight gradient from the north-west to south-east. The River Snail passes through Newmarket *c*.1.4km to the north-east. The local soil comprises loam overlying mixed subsoils of silty sand and gravel with chalk beneath. Archaeological investigations *c*.500m to the north-east at Charlcombe Lodge recorded a topsoil and buried topsoil with a thickness of *c*.30-40cm over the natural chalk bedrock (Thompson & Schofield 2010, 10).

4.2 Archaeological and historical background

Prehistoric (c. 700,000 BC – AD 43)

4.2.1 Evidence for prehistoric occupation or activity in the vicinity of the site is focussed on the Bronze Age, notably on seven burials recorded on Edinburgh Road c.100m to the east of the site (HER EXG027). The burials included one adult, five children and one baby; associated with early Bronze Age Beaker pottery and a radiocarbon date if 1570+/-bc. This date is consistent with an early Bronze Age barbed-and tanged arrowhead recorded c.100m to the north-east of the site (HER EXG026), and close to the burials; while a ring ditch c.1km to the south depicted on historic maps may also be contemporary (HER EXG030). Other archaeological investigations in the vicinity have recorded only sparse features, including those that contain burnt and struck flint, and flint-gritted pottery, but these remain poorly-dated, probably within the Bronze Age to early Iron Age. These include a hollow c.1km to the west (HER EXG075), peroglacial features c.1km to the east (HER NKT043); while postholes and a chalk wall foundation recorded c.500m to the north-east at Gainsborough Stable are

possibly of prehistoric origin (HER EXG087).

Romano-British (AD 43 – 410)

4.2.2 While a fairly large amount of evidence, including a villa, graves and wells, is known to the north around Exning, very little evidence for the period has been recorded in the vicinity of the site. Roman artefacts are limited to a scatter of coins and a spiral headed bronze pin (possibly Iron Age) recovered by metal-detecting c.900m to the north-west (HER EXG030).

Anglo-Saxon and Medieval (AD 411 – 1539)

4.2.3 Similar to the Roman period, Exning was a centre of Saxon and medieval settlement, probably with royal associations in the earlier period, but evidence is virtually absent in the vicinity of the assessment site. A singular medieval annular brooch with a missing pin has been recorded *c*.1km to the west (HER EXG029).

Post-medieval (AD 1540 – 1900)

4.2.4 Gaps cut into the Devils's Dyke mainly relate to the horse racing on Newmarket Heath that developed to the south-west from the 17th century. During WW II No. 3 Group Bomber Command had its Headquarters at Exning House, and New Market Heath was used as an airfield during which another cut was made through the Devil's Dyke for heavily laden aircraft to taxi through. A series of large rectangular cropmarks c.700m to the west, noted from aerial photography but undated, may be connected to the airfield, possibly including anti-glider ditches (HER EXG035).

5 METHODOLOGY

- 5.1 Seven trenches were proposed; six 40m long (Nos.1 6) and one 10m long (No.7). An additional trench (No.8) was excavated to trace the ditch recorded in Trench 3. The trenches were excavated using a mechanical excavator fitted with a toothless ditching bucket (Fig. 2).
- 5.2 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 RESULTS

Individual trench descriptions are presented below:

Trench 1 (Fig. 2)

Sample section	: 1A	
0.00 = 23.70m	4 <i>OD</i>	
0.00 – 0.18m	L1009	Topsoil. Dark grey brown, friable, slightly silty sand
0.18 – 0.34m	L1010	Made Ground. Mid yellow brown, friable, slightly silty sand
		with sparse medium rounded flint
0.34 – 0.45m	L1011	Buried Topsoil. Dark grey brown, firm, silty sand with
		occasional medium and large subangular and sub rounded
		flint
0.45 – 0.86m	L1001	Subsoil. Mid orange brown, firm, silty sand with occasional
		medium and large subangular and sub rounded flint
0.86m+	L1002	Natural. White small and medium sub angular chalk
		fragments with patches of dark brown silty sand with
		occasional medium and large subangular and sub rounded
		flint

Sample section 0.00 = 23.66m		
0.00 – 0.31m	L1000	Topsoil. Dark grey brown, firm, silty sand with occasional medium and large subangular and sub rounded flint
0.31 - 49m	L1001	Subsoil. As above
0.49m+	L1002	Natural. As above

Description: Trench 1 contained no archaeological features or finds

Trench 2 (Fig. 2)

Sample section. 0.00 = 23.66m A		
0.00 - 0.19m	L1000	Topsoil. As above, Trench 1.
0.19 - 36m	L1001	Subsoil. As above, Trench 1.
0.36m+	L1002	Natural. As above, Trench 1.

Sample section	: 2B	
0.00 = 24.05m AOD		
0.00 - 0.32m	L1000	Topsoil. As above, Trench 1.
0.32 - 43m	L1001	Subsoil. As above, Trench 1.
0.43m+	L1002	Natural. As above, Trench 1.

Description: Trench 2 contained no archaeological features or finds

Trench 3 (Figs. 2 & 3)

Sample section	: 3A	
0.00 = 24.59m	4 <i>OD</i>	
0.00 - 0.33m	L1000	Topsoil. As above, Trench 1.
0.33 - 89m	L1001	Subsoil. As above, Trench 1.
0.89m+	L1002	Natural. As above, Trench 1.

Sample section	: 3B	
0.00 = 24.23m	4 <i>OD</i>	
0.00 - 0.32m	L1000	Topsoil. As above, Trench 1.
0.32 - 61m	L1001	Subsoil. As above, Trench 1.
0.61m+	L1002	Natural. As above, Trench 1.

Description: Trench 3 contained Ditch F1003, a continuation of Ditch F1006 recorded in Trench 8. The ditch was undated. It contained animal bone, burnt flint and a struck flint.

Ditch F1003 was linear in plan (2.00+ x 2.40 x 1.00m), orientated NW/SE. It had moderately sloping sides and a narrow flattish base. Its basal fill, L1004, was a pale yellow brown, firm, silty sand with moderate chalk fragments and occasional flint. It contained no finds. Its upper fill, L1005, was a mid reddish brown, firm silty sand with moderate flint and occasional chalk. It contained animal bone (103g), a struck flint (1g) and burnt flint (58g). F1003 was a continuation of Ditch F1006 recorded in Trench 8.

Trench 4 (Fig. 2)

Sample section 0.00 = 24.19m A		
0.00 - 0.36m	L1000	Topsoil. As above, Trench 1.
0.36 - 69m	L1001	Subsoil. As above, Trench 1.
0.69m+	L1002	Natural. As above, Trench 1.

Sample section.	Sample section: 4B		
0.00 = 24.00 m A	4 <i>OD</i>		
0.00 - 0.33m	L1000	Topsoil. As above, Trench 1.	
0.33 - 42m	L1001	Subsoil. As above, Trench 1.	
0.42m+	L1002	Natural. As above, Trench 1.	

Description: Trench 4 contained no archaeological features or finds

Trench 5 (Figs. 2 & 3)

Sample section 0.00 = 24.59m A		
0.00 - 0.27m	L1000	Topsoil. As above, Trench 1.
0.27 - 48m	L1001	Subsoil. As above, Trench 1.
0.48m+	L1002	Natural. As above, Trench 1.

Sample section	: 5B	
0.00 = 24.77m	4 <i>OD</i>	
0.00 - 0.32m	L1000	Topsoil. As above, Trench 1.
0.32 - 46m	L1001	Subsoil. As above, Trench 1.
0.46m+	L1002	Natural. As above, Trench 1.

Description: Trench 5 contained no archaeological features or finds. A modern service was present.

Trench 6 (Fig. 2)

Sample section. 0.00 = 24.20m A		
0.00 - 0.24m	L1000	Topsoil. As above, Trench 1.
0.24 - 38m	L1001	Subsoil. As above, Trench 1.
0.38m+	L1002	Natural. As above, Trench 1.

Sample section.	: 6B	
0.00 = 4.12m A	OD	
0.00 - 0.28m	L1000	Topsoil. As above, Trench 1.
0.28 - 46m	L1001	Subsoil. As above, Trench 1.
0.46m+	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 = 24.45m A	4 <i>OD</i>	
0.00 - 0.27m	L1000	Topsoil. As above, Trench 1.
0.27 - 45m	L1001	Subsoil. As above, Trench 1.
0.45m+	L1002	Natural. As above, Trench 1.

Sample section. 0.00 = 24.63m A		
0.00 - 0.29m	L1000	Topsoil. As above, Trench 1.
0.29m+	L1002	Natural. As above, Trench 1.

Description: Trench 7 contained no archaeological features or finds. Modern services were present.

Trench 8 (Figs. 2 & 4)

Sample section.	: 8A	
0.00 = 24.19m A	4 <i>OD</i>	
0.00 - 0.41m	L1000	Topsoil. As above, Trench 1.
0.41 - 50m	L1001	Subsoil. As above, Trench 1.
0.50m+	L1002	Natural. As above, Trench 1.

Description: Trench 8 contained Ditch F1006, a continuation of Ditch F1003 recorded in Trench 3. The ditch was undated. It contained animal bone and burnt flint.

Ditch F1006 was linear in plan (2.00+ x 2.40 x 1.00m), orientated NW/SE. It had moderately sloping sides and a narrow flattish base. Its basal fill, L1007, was a pale yellow brown, firm, silty sand with moderate chalk fragments and occasional flint. It contained no finds. Its upper fill, L1008, was a mid reddish brown, firm silty sand with moderate flint and occasional chalk. It contained animal bone (35g) and burnt flint (28g). F1006 was a continuation of Ditch F1003 recorded in Trench 3.

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, firm, silty sand with occasional medium and large subangular and sub rounded flint (c.25mm thick). L1000 overlay Subsoil deposit L1001, a mid orange brown, firm, silty sand with occasional medium and large subangular and sub rounded flint. The subsoil overlay the natural, L1002, white small and medium sub angular chalk fragments with patches of dark brown silty sand with occasional medium and large subangular and sub rounded flint (0.29 – 0.89m below the current ground surface).

9 DISCUSSION

9.1 The Suffolk Historic Environment Record records that the site lies within an area of archaeological potential. Within 100m of the site are previously

recorded Bronze Age burials (HER EXG 027) and another find spot of a prehistoric artefact (HER EXG 026).

9.2 In the event the evaluation revealed an undated ditch, first recorded in Trench 3 (F1003) and then traced in Trench 8 (F1006). The ditch is undated. It contained animal bone, burnt flint and prehistoric struck flint; the latter not thought to be within a primary deposit (Struck Flint Report below). The finds within the ditch are suggestive of a prehistoric date.

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.

ACKNOWLEDGEMENTS

AS is grateful to KWA Architects (Cambridge) Ltd for their co-operation and funding of the project (in particular Meghan Bonner for their assistance).

Archaeological Solutions Limited would like to thank James Rolfe of Suffolk Historic Environment Office.

AS is pleased to acknowledge the advice and input of Dr. Matthew Brudenell of Suffolk County Council Archaeological Service Conservation Team.

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FINDS CONCORDANCE **APPENDIX 1**

NKT059, Rathmoy, Newmarket Concordance of finds by feature

					Spot		CBM	A.Bone	
Feature Context	Context	Segment	Trench	Segment Trench Description	Date	Pottery (g)	(g)	(g)	Other
									Str. Flint (1) -
1001			2A	Subsoil					19g
				Upper Fill of					
1003	1005		က	Ditch				103	B. Flint - 58g
									Str. Flint (1) -
									19
				Upper Fill of					
1006	1008		8	Ditch				35	B. Flint - 28g

APPENDIX 2

SPECIALIST REPORT

The Struck Flint

Andrew Peachey CMIfA

The trial trench evaluation recovered two pieces of struck flint (22g), comprising debitage flakes in L1001 (19g) and L1005 (3g). Both flakes were removed with hard-hammer percussion and have a sub-ovoid profile, tentatively suggesting a date of origin in the later Neolithic to early Bronze Age; however both flakes also exhibit a moderate degree of white patination suggesting they are not from a primary context and have been subject to a considerable degree of redeposition/weathering.

APPENDIX 3 SPECIFICATION

RATHMOY STABLES, HAMILTON ROAD, NEWMARKET, SUFFOLK CB8 0NY

WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL EVALUATION

18th November 2014

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RATHMOY STABLES, HAMILTON ROAD, NEWMARKET, SUFFOLK CB8 0NY 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 14th November 2014). It provides for an archaeological trial trench evaluation to be carried out as a requirement of a planning condition on approval for the proposed erection of new stables and other equine facilities on land at Rathmoy Stables, Hamilton Road, Newmarket, Suffolk CB8 0NY (NGR TL 628 635). The evaluation is required by Forest Heath District Council, based on advice from SCC AS-CT (Planning Approval Ref. DC/14/1970/FUL).
- 1.2 It is understood that the programme of archaeological investigation should comprise an archaeological field evaluation, 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 new stables and other equine facilities at Rathmoy Stables on the western side of Hamilton Road, Newmarket.
- 3.2 The Suffolk Historic Environment Record confirms that the site lies within an area of archaeological potential. Within 100m of the site are previously recorded Bronze Age burials (HER EXG 027) and another find spot of a prehistoric artefact (HER EXG 026).
- 3.3 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). 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).

- 4.2.2 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).
- 4.2.3 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.
- 4.2.4 The principal research issues for the site will be to identify and characterise any further evidence of the known prehistoric activity of the local area.

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

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 and stipulate that a 5% sample of the site, equal to 250 linear metres of trenching at 1.8m width, be excavated on the site. Six trenches each 40m x 1.8m, and a seventh trench of 10m x 1.8m are therefore proposed. 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 coordinates 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, post holes 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.

APPENDIX 2 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)

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 postexcavation 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)

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 excayated 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 macroremains 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 timberframed 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 Air Photo Services

ASSESSMENTS

PHOTOGRAPHIC SURVEYS
PREHISTORIC POTTERY
ROMAN POTTERY
SAXON & MEDIEVAL POTTERY
POST-MEDIEVAL POTTERY
Mr A Peachey
Mr P Thompson
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
ANIMAL BONE
HUMAN BONE:
ENVIRONMENTAL CO-ORDINATOR
POLLEN AND SEEDS:
Ms J Cowgill
Dr J Cussans
Ms S Anderson
Dr R Scaife
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

PHOTOGRAPHIC INDEX



Trench 1 looking south-east





Trench 2 looking north-east



4 Trench 4 looking south-east



5 Trench 5 looking south-east



7 Trench 7 looking south-east



6 Trench 6 looking south-east



8 Trench 8 looking north-east



9 F1003 in Trench 3 looking north-west



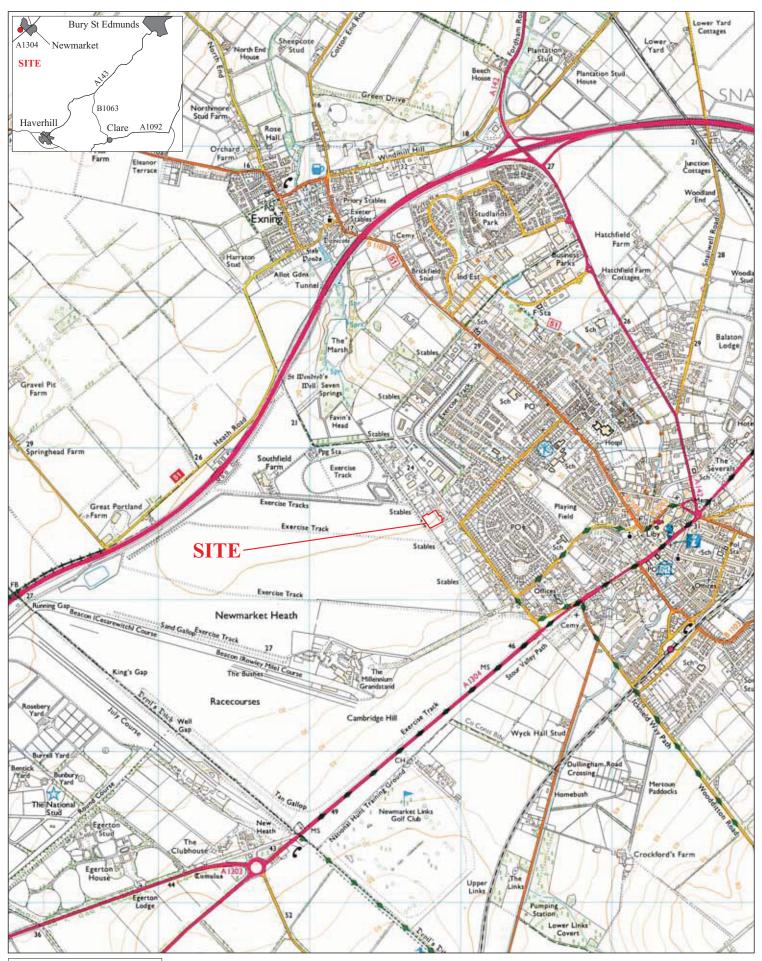
10 F1006 in Trench 8 looking north-west



Sample section 1A looking north-east



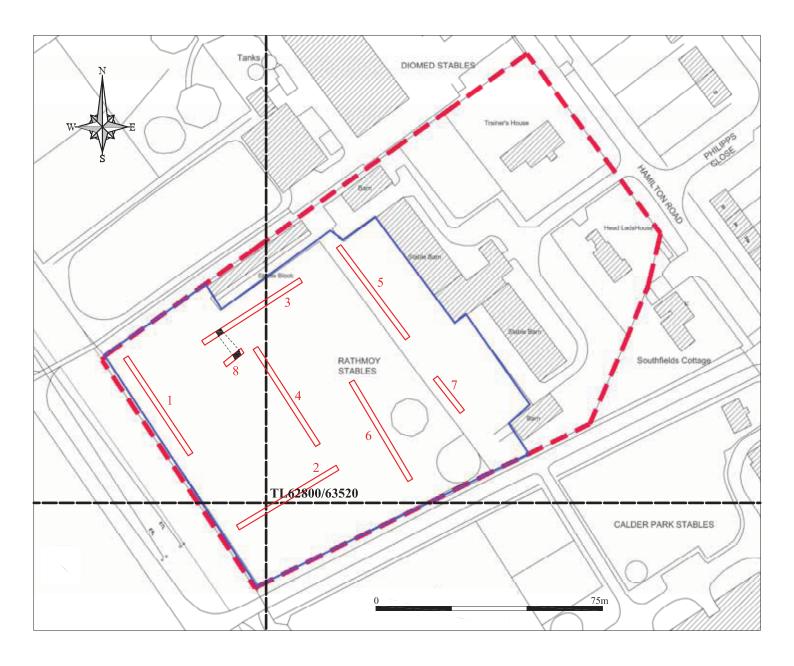
12 Sample section 5B looking south-east



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Fig. 1 Site location plan
Scale 1:25,000 at A4



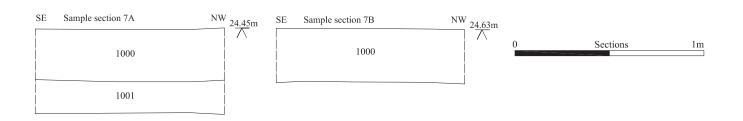
Archaeological Solutions Ltd

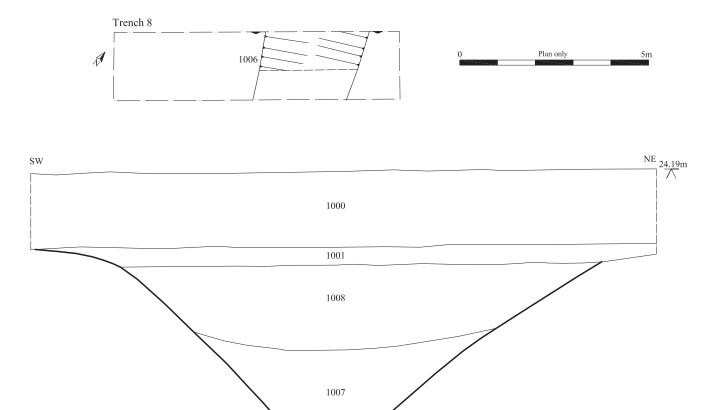
Fig. 2 Detailed site location plan

Scale 1:1250 at A4

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Fig. 3 Trench plans and sections
Scale 1:100 and 1:20 at A3







1006

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Fig. 4 Trench plans and sections

Scale 1:100 and 1:20 at A4

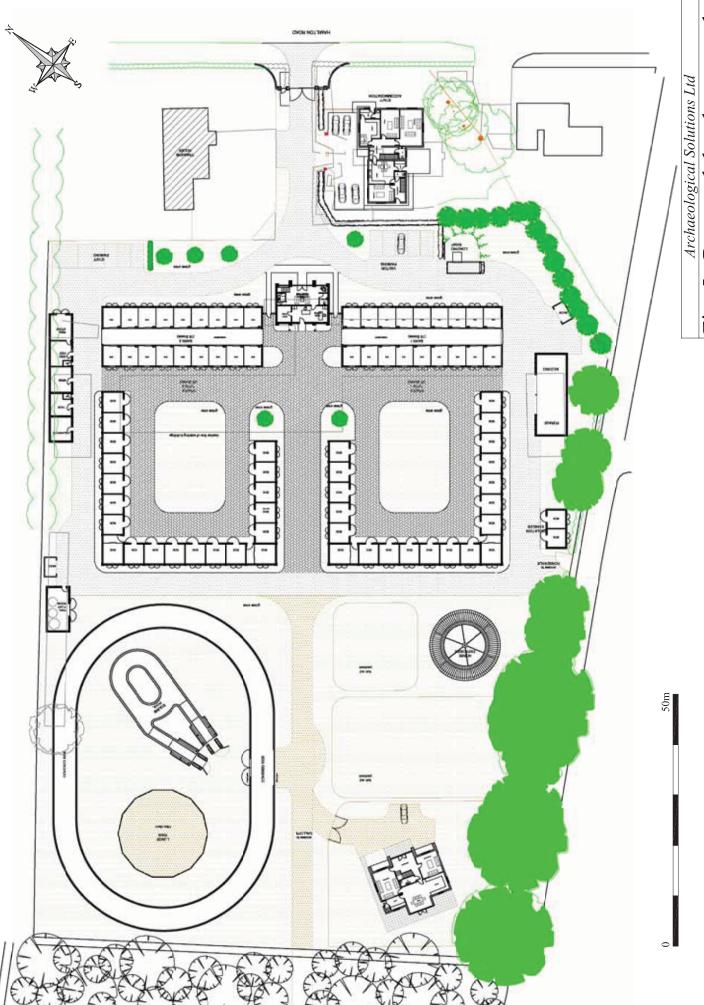


Fig. 5 Proposed development plan
Scale 1:750 at A4