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**ARCHAEOLOGICAL SOLUTIONS LTD**

**LAKE LOTHING THIRD CROSSING,  
LOWESTOFT, SUFFOLK**

**AN ARCHAEOLOGICAL EVALUATION**

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NGR: 653843 292985	Report No: 6116
District: West Suffolk	Site Code: LWT411
Approved: Claire Halpin MCIfA	Project No: 8421
	Date: 5 October 2020 Revised: 29 October 2020

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**PROJECT SUMMARY SHEET**

<b>Project details</b>			
Project name	<i>Lake Lothing Third Crossing, Lowestoft, Suffolk</i>		
<p><i>In September 2020, Archaeological Solutions Ltd (AS) carried out an archaeological evaluation at the Lake Lothing Third Crossing Lowestoft, Suffolk (NGR 653843 292985; Figs. 1 &amp; 2). The evaluation was undertaken in compliance with the initial requirement of a planning condition attached to planning approval for the construction of a new lake crossing (Suffolk County Council Planning Ref. SCC/0040/20). It was required by Suffolk County Council based on the advice of Suffolk County Council Archaeological Service (SCC AS).</i></p> <p><i>The evaluation revealed a significant depth of made ground in the eastern sector of the site overlying organic alluvial deposits approximately 2m below the current ground surface. The western side of the site appears to have been truncated, rather than raised, with only 0.40m of made ground directly overlying the natural sands. The only features present were of modern date. The organic alluvial deposits likely relate to a former inlet or area or marshland, as has been suggested by local historians, within the vicinity of the older core of Lowestoft prior to the medieval development of the High Street.</i></p> <p><i>The organic silty deposits appeared to oxidise upon being exposed, which may theoretically suggest that the conditions would favour the preservation of potential wooden remains associated with the exploitation of marsh channels (e.g. boats and structures). Nonetheless, the previous borehole surveys did not indicate that significant peat deposits are present within the area. The evaluation enables the extent of the inlet or marsh on the site to be understood so that appropriate mitigation can be implemented, taking into account the overall limited archaeological potential, the conditions present on the site, and the impacts of the development.</i></p>			
Project dates (fieldwork)	<i>24<sup>th</sup> – 30<sup>th</sup> September 2020</i>		
Previous work (Y/N/?)	<i>N</i>	Future work	<i>TBC</i>
P. number	<i>8421</i>	Site code	<i>LWT411</i>
Type of project	<i>Archaeological evaluation</i>		
Site status	<i>-</i>		
Current land use	<i>Former Industrial</i>		
Planned development	<i>Lake crossing</i>		
Main features (+dates)	<i>Modern made ground. Alluvial deposits</i>		
Significant finds (+dates)	<i>-</i>		
<b>Project location</b>			
County/ District/ Parish	<i>Suffolk</i>	<i>West Suffolk</i>	<i>Lowestoft</i>
HER/ SMR for area	<i>Suffolk Historic Environment Record</i>		
Post code (if known)	<i>-</i>		
Area of site	<i>c.12.5ha</i>		
NGR	<i>TL 85064 65569</i>		
Height AOD (min/max)	<i>c.10m AOD</i>		
<b>Project creators</b>			
Brief issued by	<i>Suffolk County Council Archaeological Service</i>		
Project supervisor/s (PO)	<i>Gareth Barlow</i>		
Funded by	<i>Suffolk County Council</i>		
Full title	<i>Lake Lothing Third Crossing, Lowestoft, Suffolk. An Archaeological Evaluation</i>		
Authors	<i>Barlow, G. &amp; Bescoby, D.</i>		
Project No.	<i>6116</i>		
Date (of report)	<i>October 2020</i>		

# LAKE LOTHING THIRD CROSSING, LOWESTOFT, SUFFOLK

## AN ARCHAEOLOGICAL EVALUATION

### SUMMARY

*In September 2020, Archaeological Solutions Ltd (AS) carried out an archaeological evaluation at the Lake Lothing Third Crossing Lowestoft, Suffolk (NGR 653843 292985; Figs. 1 & 2). The evaluation was undertaken in compliance with the initial requirement of a planning condition attached to planning approval for the construction of a new lake crossing (Suffolk County Council Planning Ref. SCC/0040/20). It was required by Suffolk County Council based on the advice of Suffolk County Council Archaeological Service (SCC AS).*

*The site lies within an area of archaeological potential recorded on the Suffolk Historic Environment Record. The area of the proposed bridge was likely affected by marine transgression during the Roman period. The site was likely peripheral land in the Saxon and earlier medieval period, and Lake Lothing was formed as an extensive area of medieval peat cutting. The area is close to the earliest part of the settlement at Lowestoft though, and local historians suggest there may have been an inlet to the north of Denmark Road which may have been exploited during this time. Significant land reclamation then took place in the 19<sup>th</sup> century in this part of Lowestoft.*

*The evaluation revealed a significant depth of made ground in the eastern sector of the site overlying organic alluvial deposits approximately 2m below the current ground surface. The western side of the site appears to have been truncated, rather than raised, with only 0.40m of made ground directly overlying the natural sands. The only features present were of modern date. The organic alluvial deposits likely relate to a former inlet or area of marshland, as has been suggested by local historians, within the vicinity of the older core of Lowestoft prior to the medieval development of the High Street.*

*The organic silty deposits appeared to oxidise upon being exposed, which may theoretically suggest that the conditions would favour the preservation of potential wooden remains associated with the exploitation of marsh channels (e.g. boats and structures). Nonetheless, the previous borehole surveys did not indicate that significant peat deposits are present within the area. The evaluation enables the extent of the inlet or marsh on the site to be understood so that appropriate mitigation can be implemented, taking into account the overall limited archaeological potential, the conditions present on the site, and the impacts of the development.*

## 1 INTRODUCTION

1.1 In September 2020, Archaeological Solutions Ltd (AS) carried out an archaeological evaluation at the Lake Lothing Third Crossing Lowestoft,

Suffolk (NGR 653843 292985; Figs. 1 & 2). The evaluation was undertaken in compliance with the initial requirement of a planning condition attached to planning approval for the construction of a new lake crossing (*Suffolk County Council Planning Ref. SCC/0040/20*). It was required by Suffolk County Council based on the advice of Suffolk County Council Archaeological Service (SCC AS).

1.2 The archaeological evaluation was carried out in accordance with the ARUP document (*Lake Lothing Third Crossing; Scope of Services for Archaeological Trial Trench Evaluation (Denmark Road)*, 2019) which was agreed with Suffolk County Council Archaeological Service (SCC AS). The document formed part of an agreed scheme of archaeological works as set out in the WSI submitted with the Lake Lothing Third Crossing DCO application (*Lake Lothing Third Crossing Written Scheme of Investigation (Interim), Doc TLL3RC-ARP-ZZ-ZZ-RP-EN-00002, Revision P04*). It provided for archaeological evaluation of land forming part of the proposed Lake Lothing Third Crossing, Lowestoft, Suffolk (Land south of Denmark Road) (NGR 653843 292985).

1.3 The principal objectives for the evaluation included:

- 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*

1.4 The National Planning Policy Framework (NPPF 2019) 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**

2.1 The site is located on the southern side of Denmark Way on the northern side of Lake Lothing, Lowestoft, and comprises a parcel of land of c.12.5ha formerly in industrial/commercial use and since demolished to slab level. It will form part of the access for the Lake Lothing Third Crossing.

## **3 TOPOGRAPHY, GEOLOGY AND SOILS**

3.1 The site overlies the southern margins of a substantial glacial sand deposit forming the Happisburgh Glacigenic Formation, a detrital meltwater deposit of Quaternary age. To the south, the glacial sands are bisected east-west by what is today the inner harbour of the Port of Lowestoft (Known as Lake Lothing, the product of peat cutting in the Middle Ages), which forms a saltwater body open to the North Sea. The inner harbour channel is flanked by alluvial deposits, the upper reaches of which underly the current site.

3.2 While the former industrial site contains little in the way of naturally developed soils, those occurring locally over the glacial sands are loamy, freely draining and slightly acidic (for example Mendham series). More fen-like soils are likely to develop over alluvium (for example Waveney series).

## **4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

4.1 The site lies within an area of archaeological potential recorded on the Suffolk Historic Environment Record. The Cromer Forest Bed Formation, a geological formation which includes the earliest known evidence of pre-modern humans in Europe, may be present at depth below the scheme, deeply buried beneath later alluvial, marine and glacial deposits. Sparse

evidence of Mesolithic and Neolithic activity is known locally, along with cropmarks of Bronze Age and Iron Age activity some distance to the north west. Episodes of marine transgression are known from this area in the later Neolithic/early Bronze Age and later Iron Age and activity of these periods may be buried by marine deposits, alluvium and peat. In the Roman period local find spots include two coins and the closest settlement evidence may be some 700m to the north east. The area of the proposed bridge was likely affected by marine transgression at this time. The site was likely peripheral land in the Saxon and earlier medieval period, and Lake Lothing was formed as an extensive area of medieval peat cutting. The area is close to the earliest part of the settlement at Lowestoft though, and local historians suggest there may have been an inlet to the north of Denmark Road which may have been exploited during this time. Significant land reclamation then took place in the 19<sup>th</sup> century in this part of Lowestoft.

4.2 A series of geoarchaeological investigations and a watching brief during ground investigation has been completed to date, resulting in the production of an interim geoarchaeological deposit model (Wessex Archaeology 2019) which has been used to inform evaluation trench locations. Across the site area, there is variability in the deposit sequence, which is likely to represent a dynamic environment in terms of deposit formation.

- Based on the geotechnical investigations and the Wessex Archaeology (2019) deposit model, the uppermost deposits on the site can be characterised as made ground, probably representing reclaimed land adjacent to Lake Lothing where numerous developments have been constructed.
- In the east of the present site, the made ground layers are generally seen to overlie alluvial deposits. These are largely heterogeneous minerogenic alluvium, comprising silts, with variable components of gravel and clay. Within these layers were intermittent records of 'organic alluvium', which have the potential for AMS radiocarbon dating and palaeoenvironmental investigations
- In the west of the site, made ground layers generally directly overlie coarse sands and gravels of the Happisburgh Glacigenic Formation, which are also present below the alluvium. These have lower geoarchaeological potential but could have been cut by archaeological features.

## 5 METHODOLOGY

5.1 SCC AS required a c.2% sample of the site to be investigated by trial trenching. Six trenches each 25m x 2m (at base) were required. The upper levels of these trenches were stepped because the trenches were expected to be c.2m deep (based on the deposit modelling). The trenches were, therefore, c.28m x 5m at the upper level (Fig. 3).

5.2 Below a depth of approximately 1m below the current surface the ground was too unstable to safely allow the continuation of the excavation of

the trenches to their full depth. Consequently, rather than stepping and excavating a narrower full-length trench, a series of c.2m square test pits were excavated, photographed and recorded at intervals along the trenches. The test pits were unstable and were immediately backfilled for reasons of safety.

5.3 The archaeological evaluation comprised the inspection of the subsoil and natural deposits for archaeological features, the examination of spoil heaps and the recording of soil profiles. Encountered features and deposits were cleaned by hand and recorded using *pro forma* recording sheets, drawn to scale and photographed as appropriate.

5.4 The open trenches and excavated spoil were manually / visually searched and scanned by metal detector to enhance the recovery of archaeological finds.

## 6 DESCRIPTION OF RESULTS

6.1 The individual trench descriptions are presented below:

### Trench 1 Figs. 3 - 4

Sample section 1A 0.00 = 10.08m AOD		
0.00 – 0.18m	L1000	Pale grey concrete slabs
0.18 – 0.27m	L1009	Made Ground. Compact, mid brown orange silty sand and medium sub-rounded stones.
0.27m+	L1008	Natural deposits. Friable, pale yellow silty sand in far west, becoming friable, pale greenish grey silty sand eastwards.

Sample section 1B 0.00 = 10.05m AOD		
0.00 – 0.16m	L1000	Concrete. As Sample Section 1A.
0.16 – 0.36m	L1009	Made Ground. As Sample Section 1A.
0.36m+	L1002	Natural deposits. As Sample Section 1A.

### Test Pit

Test Pit 1(1) 0.00 = 9.81m AOD		
0.00 – 1.20m+	L1008	Natural deposits. As Sample Section 1A.

*Description: Trench 1 contained no archaeological features or finds.*

**Trench 2** Figs. 3 & 5

Sample section 2 0.00 = 9.96m AOD		
0.00 – 0.15m	L1000	Concrete. As Sample Section 1A.
0.15 – 0.35m	L1015	Made Ground. Compact, mid brown orange silty sand and medium and large sub-rounded and rounded flints.
0.35 – 0.56m	L1010	Made Ground. Friable, black silty sand.
0.56m+	L1008	Natural deposits. As Sample Section 1A.

Sample section 2B 0.00 = 10.18m AOD		
0.00 – 0.15m	L1000	Topsoil. As Sample Section 1A.
0.15 – 0.35m	L1015	Made Ground. As Sample Section 1A.
0.35 – 0.56m	L1010	Made Ground. As Sample Section 1A.
0.56m+	L1002	Natural deposits. As Sample section 1A.

**Test Pits**

Test Pit 2(1) 0.00 = 9.62m AOD		
0.00 – 1.20m+	L1008	Natural deposits. As Sample Section 1A.

Test Pit 2(2) 0.00 = 9.57m AOD		
0.00 – 1.20m+	L1008	Natural deposits. As Sample Section 1A.

*Description: Trench 2 contained a large modern linear feature (F1011) and a modern ?footing trench (F1013). It also contained modern features.*

F1011 was a large linear feature (5.00+ x 4.00+ x 0.25m). It had a shallow southern side and a flat base. Its fill (L1012) was a friable, dark brown grey silty sand with occasional medium sub-angular and sub-rounded flints. It contained glass and coal.

?Footing Trench F1013 was a linear (5.00+ x 1.20 x 1.20m), orientated east/west. It had a vertical southern side and a flat base. Its fill (L1014) comprised mixed patches of friable pale brown yellow and pale brown silty sand. A concrete beam was present at the base.

**Trench 3** Figs. 3 & 6

Sample section 3A 0.00 = 10.01m AOD		
0.00 – 0.04m	L1000	Pale grey concrete slabs
0.04 – 0.44m	L1019	Made Ground. Concrete and CBM rubble in mid brown orange and pale brown silty sand.
0.44 – 0.54m	L1021	Made Ground. Friable, very dark brown grey silty sand.
0.54 – 0.64m	L1020	Made Ground. Friable, mid yellow brown silty sand with

		occasional medium sub-angular flints.
0.64 – 0.66m	L1022	Made Ground. Friable, black silty sand.
0.66 – 0.84m	L1023	Made Ground. Firm, dark grey brown silty sand.
0.84m+	L1035	Made Ground. Friable, mid orange, with patches of mid brown, coarse sand.

Sample section 3B 0.00 = 10.09m AOD		
0.00 – 0.20m	L1000	Concrete. As Sample Section 1A.
0.20 – 0.32m	L1016	Made Ground. Firm, mid yellow brown silty sand with moderate medium sub-rounded stones.
0.32 – 0.58m	L1017	Made Ground. Friable, very dark brown grey silty sand.
0.58 – 0.62m	L1023	As Sample Section 3A.
0.62m+	L1035	Made Ground. As Sample Section 3A.

### Test Pits

Test Pit 3(1) 0.00 = 9.17m AOD		
0.00 – 1.20m	L1035	Made Ground. As Sample Section 3A.
1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt.

Test Pit 3(2) 0.00 = 9.22m AOD		
0.00 – c.1.00m+	L1035	Made Ground. As Sample Section 3A.

Test Pit 3(3) 0.00 = 9.47m AOD		
0.00 – 1.00m	L1035	Made Ground. As Sample Section 3A.
1.00 - 1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt.

*Description: Trench 3 contained no archaeological features or finds. The excavation of Test Pit 3(2) ceased due to large influx of water and the collapse of the sides.*

### Trench 4 Figs. 3 & 7

Sample section 4A 0.00 = 10.13m AOD		
0.00 – 0.25m	L1000	Pale grey concrete slabs
0.25 – 0.34m	L1001	Made Ground. Compact, mid brown orange coarse sand and gravel.
0.34 – 0.39m	L1002	Made Ground. Pale grey concrete.
0.39 – 0.55m	L1003	Made Ground. Firm, dark brown grey silty sand with moderate small sub-angular and sub-rounded flints.
0.55 – 0.78m	L1004	Made Ground. Friable, pale grey silty sand with frequent

		small and medium sub-rounded flints.
0.78 – 0.98m	L1006	Made Ground. Firm, mid yellow brown silty clay.
0.98m+	L1037	Made Ground. Friable, pale mid yellow sand with patches of firm, pale mid grey clay with occasional chalk flecks.

Sample section 4B 0.00 = 10.01m AOD		
0.00 – 0.31m	L1000	Concrete. As Sample Section 1A.
0.31 – 0.41m	L1024	Made Ground. Compact, mid orange brown silty sand with frequent medium sub-rounded stones.
0.41 – 0.73m	L1025	Made Ground. Friable, black silty sand.
0.73 – 1.04m	L1026	Made Ground. Friable, mid orange brown silty sand.
1.04m+	L1036	Made Ground. Patches of friable, pale yellow, pale orange, and pale mid brown silty sand.

### Test Pits

Test Pit 4(1) 0.00 = 8.97m AOD		
0.00 – 0.40m	L1036	Made Ground. As Sample Section 4B.
0.40 – 1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt. It contained coal within the uppermost 100mm.

Test Pit 4(2) 0.00 = 9.00m AOD		
0.00 – 1.00m+	L1036	Made Ground. As Sample Section 4B.

Test Pit 4(3) 0.00 = 9.07m AOD		
0.00 – 1.05m+	L1036	Made Ground. As Sample Section 4B.

Test Pit 4(4) 0.00 = 9.11m AOD		
0.00 – 1.18m+	L1037	Made Ground. As Sample Section 4A.

Test Pit 4(5) 0.00 = 9.15m AOD		
0.00 – 1.20m	L1037	Made Ground. As Sample Section 4A.
1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt.

*Description: Trench 4 contained no archaeological features or finds. A large area of much hydrocarbon contamination was present in Test Pit 4(2)*

**Trench 5** Figs. 3 & 8

Sample section 5A 0.00 = 10.01m AOD		
0.00 – 0.14m	L1000	Pale grey concrete slabs
0.14 – 0.48m	L1027	Made Ground. Compact, concrete and CBM rubble in mid orange brown silty sand.
0.48 – 0.73m	L1028	Pale grey concrete slab.
0.73 – 0.94m	L1029	Made Ground. Firm, very organic black sandy silt.
0.94 – 1.14m	L1030	Made Ground. Firm, dark grey brown sandy silt.
1.14m+	L1038	Made Ground. Made ground, mixed patches of friable, pale brown yellow and mid orange brown sand, and firm pale blue grey sandy silt.

Sample section 5B 0.00 = 10.10m AOD		
0.00 – 0.16m	L1000	Concrete. As Sample Section 1A.
0.16 – 0.50m	L1027	Made Ground. As Sample Section 5A.
0.50 – 0.75m	L1028	Made Ground. As Sample Section 5A.
0.75 – 0.97m	L1029	Made Ground. As Sample Section 5A.
0.97 – 1.18m	L1030	Made Ground. As Sample Section 5A.
1.18m+	L1038	Made Ground. As Sample Section 5A.

**Test Pits**

Test Pit 5(1) 0.00 = 8.87m AOD		
0.00 – 1.20m	L1038	Made Ground. As Sample Section 5A.
1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt.

Test Pit 5(2) 0.00 = 8.96m AOD		
0.00 – 1.20m	L1038	Made Ground. As Sample Section 5A.
1.20m+	L1007	Alluvium. Firm, dark blue grey clay silt.

*Description: Trench 5 contained no archaeological features or finds. Modern concrete footings and a service trench were present.*

**Trench 6** Figs. 3 & 9

Sample section 6A 0.00 = 10.00m AOD		
0.00 – 0.07m	L1000	Pale grey concrete slabs
0.07 – 0.32m	L1031	Concrete and CBM rubble in mid brown orange silty sand.
0.32 – 0.70m	L1032	Made Ground. Friable dark grey brown silty sand with occasional small sub-rounded flints.
0.70 – 0.73m	L1033	Made Ground. Friable, pale grey silty sand.
0.73 – 1.13m	L1034	Made Ground. Friable, black silty sand.
1.13m+	L1039	Made Ground. Mixed patches of friable, mid grey and mid brown sand.

Sample section 6B 0.00 = 10.53m AOD		
0.00 – 0.10m	L1040	Current ground surface. Pale blue grey soft sandy cement and gravel mix.
0.10 – 0.32m	L1031	Concrete and CBM rubble. As Sample Section 6A.
0.32 – 0.64m	L1032	Made Ground. As Sample Section 6A.
0.64m+	L1008	Natural deposits. As Sample Section 1A.

### Test Pits

Test Pit 6(1) 0.00 = 8.87m AOD		
0.00 – 0.20m	L1039	Made Ground. As Sample Section 6A.
0.20 – 1.20m+	L1008	Natural deposits. As Sample Section 1A.

Test Pit 6(2) 0.00 = 9.19m AOD		
0.00 – 1.20m+	L1008	Natural deposits. As Sample Section 1A.

*Description: Trench 6 contained no archaeological features or finds. Modern services were present within the trench.*

## 8 DEPOSIT MODEL

8.1 In the western part of the site, made ground layers directly overlie the natural sands. In the eastern part of the site a much deeper sequence of made ground deposits overlay dark blue grey silty alluvium. It was not possible to determine the depths of this alluvial deposit.

8.2 In the western sector of the site uppermost was c.0.18m thick layer (L1000) of pale grey reinforced concrete slab. This overlay a 0.20m thick layer (L1009) of made ground comprising a compact, mid brown orange silty sand and medium sub-rounded stones. L1009 directly overlay the natural deposits (L1008) of friable, pale yellow silty sand in far west, becoming friable, pale greenish grey silty sand further east.

8.3 In the eastern sector of the site the concrete slab (L1000) was up to 0.31m thick. Below L1000 were varied made ground deposits typified by a 0.09m thick layer (L1001) of compact, mid brown orange coarse sand and gravel. Below L1001 was a 0.16m thick layer (L1003) of firm, dark brown grey silty sand with moderate small sub-angular and sub-rounded flints. Below L1003 was a 0.23m thick layer (L1004) of friable, pale grey silty sand with frequent small and medium sub-rounded flints. Below L1004 was a 0.20m thick layer (L1006) of firm, mid yellow brown silty clay. Below L1006 was a 1.20m thick layer (L1037) of friable, pale mid yellow sand with patches of firm, pale mid grey clay with occasional chalk flecks. The top of an alluvial deposit (L1007), comprising a firm, dark blue grey clay silt, was encountered at a depth of 2.18m below the current ground surface.

## 9 DISCUSSION

9.1 The site lies within an area of archaeological potential recorded on the Suffolk Historic Environment Record. The area of the proposed bridge was likely affected by marine transgression during the Roman period. The site was likely peripheral land in the Saxon and earlier medieval period, and Lake Lothing was formed as an extensive area of medieval peat cutting. The area is close to the earliest part of the settlement at Lowestoft though, and local historians suggest there may have been an inlet to the north of Denmark Road which may have been exploited during this time. Significant land reclamation then took place in the 19<sup>th</sup> century in this part of Lowestoft.

9.2 A series of geoarchaeological investigations and a watching brief during ground investigation has been completed to date, resulting in the production of an interim geoarchaeological deposit model (Wessex Archaeology 2019). Based on these investigations and the Wessex Archaeology (2019) deposit model, the uppermost deposits on the site can be characterised as made ground, probably representing reclaimed land adjacent to Lake Lothing where numerous developments have been constructed. In the east of the present site, the made ground layers are generally seen to overlie alluvial deposits. These are largely heterogeneous minerogenic alluvium, comprising silts, with varying clay and gravel fractions. Within these layers were intermittent records of 'organic alluvium'. In the west of the site, made ground layers generally directly overlie coarse sands and gravels of the Happisburgh Glacigenic Formation, which are also present below the alluvium.

9.3 The results of the trial trench evaluation accord with the borehole investigations. In the western sector of the site, made ground layers directly overlie the natural sands encountered c.0.40m below the current ground surface. The absence of any soils or a weathered upper surface of the natural sands indicates that the ground has been reduced on this side of the site. Archaeological features, if present, on this side of the site would consequently have been removed.

9.4 In the eastern half of the site organic alluvial deposits were encountered at a depth of approximately 2m below made ground layers. The presence of coal in the top 100mm of this alluvial deposit suggest the land was made up relatively recently, probably in the 19<sup>th</sup> century during land reclamation associated with the establishment of the inner harbour.

9.5 Bore Hole TM595W133 (Wessex Archaeology, 2019) indicates the presence of organic-rich alluvial deposits present in the northern half of the eastern side of the site, although no peat deposits were recorded within the bounds of the current site. The test pits within the trial trenches similarly record the presence of alluvial deposits over a large proportion of the eastern side of the site. These sediments often have an organic-rich composition, indicating the reworking of channel-edge deposits. Unsafe ground conditions meant that it was not possible to determine the depth of these deposits during this evaluation.

9.6 The alluvial deposits are recorded at a lower elevation than the top of the natural sands to the west, suggesting this area was subject to former channel edge activity. The deposits themselves are comparable with the upper silts and clays of the Breydon Formation, laid down during estuarine conditions against a backdrop of rising sea-level since the onset of the Holocene c. 11,500 years BP (See Morlock et al., 2000). The last widespread return to marine conditions locally occurred about 2,200 years BP although the drivers of this episode of marine flooding have not been fully determined (see Alderton, 1983).

9.7 The organic alluvial deposits likely relate to a former inlet or area or marshland, as has been suggested by local historians, within the vicinity of the older core of Lowestoft prior to the medieval development of the High Street. Significantly, the organic silty deposits appeared to oxidise upon being exposed, which may theoretically suggest that the conditions would favour the preservation of potential wooden remains associated with the exploitation of marsh channels (e.g. boats and structures). Nonetheless, the previous borehole surveys did not indicate that significant peat deposits are present within the area. The evaluation enables the extent of the inlet or marsh on the site to be understood so that appropriate mitigation can be implemented, taking into account the overall limited archaeological potential, the conditions present on the site, and the impacts of the development.

9.8 No archaeological features or finds were present other than those of modern date.

## **DEPOSITION OF THE ARCHIVE**

The requirements for archive storage will be agreed with the Suffolk Archaeological Archives. Archive records, with an inventory, will be deposited with the local museum. The archive will be quantified, ordered, indexed, cross referenced and checked for internal consistency.

## **ACKNOWLEDGEMENTS**

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AS is pleased to acknowledge the advice and input of Dr Abby Antrobus of Suffolk County Council Archaeological Service (SCC AS).

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**APPENDIX 1      SPECIFICATION**

**LAKE LOTHING THIRD CROSSING, LOWESTOFT, SUFFOLK**

**WRITTEN SCHEME OF INVESTIGATION FOR  
ARCHAEOLOGICAL EVALUATION**

**9<sup>th</sup> September 2020  
Rev 21<sup>st</sup> September 2020**

Archaeological Solutions is an independent archaeological contractor providing the services which satisfy all archaeological requirements of planning applications, including:

*Desk-based assessments and environmental impact assessments*  
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# **LAKE LOTHING THIRD CROSSING, LOWESTOFT, SUFFOLK ARCHAEOLOGICAL EVALUATION**

## **1 INTRODUCTION**

1.1 This specification (written scheme of investigation) has been prepared in response to the ARUP document (*Lake Lothing Third Crossing; Scope of Services for Archaeological Trial Trench Evaluation (Denmark Road)*, 2019) which has been agreed with Suffolk County Council Archaeological Service (SCC AS) and forms part of an agreed scheme of archaeological works as set out in the WSI submitted with the Lake Lothing Third Crossing DCO application (*Lake Lothing Third Crossing Written Scheme of Investigation (Interim), Doc TLL3RC-ARP-ZZ-ZZ-RP-EN-00002, Revision P04*). It provides for archaeological evaluation of land forming part of the proposed Lake Lothing Third Crossing, Lowestoft, Suffolk (Land south of Denmark Road) (NGR 653843 292985). The proposed crossing will link Lowestoft from Waveney Drive on the south side to Denmark Road/Peto Way on the north side of Lake Lothing. This specific WSI has been prepared for the approval of SCC AS.

1.2 It is understood that the programme of archaeological investigation should comprise an archaeological field evaluation (on advice from SCC AS). This WSI for archaeological evaluation has been prepared for the approval of SCC AS and the LPA. Further archaeological works/mitigation may be required by SCC AS following the evaluation, should remains be present, for which an additional brief/WSI will be required.

## **2 COMPLIANCE**

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

## **3 SITE & DEVELOPMENT DESCRIPTION ARCHAEOLOGICAL BACKGROUND**

3.1 The site is located on the southern side of Denmark Way on the northern side of Lake Lothing in Lowestoft, and comprises a parcel of land of c.12.5ha formerly in industrial/commercial use and since demolished to slab level. It will form part of the access for the Lake Lothing Third Crossing. A programme of archaeological evaluation is required in order to identify any archaeological remains for which further mitigation may be required.

3.2 The site lies within an area of archaeological potential recorded on the Suffolk Historic Environment Record. The Cromer Forest Bed Formation, a geological formation which includes the earliest known evidence of pre-modern humans in Europe, may be present at depth below the scheme, deeply buried beneath later alluvial, marine and glacial deposits. Sparse

evidence of Mesolithic and Neolithic activity is known locally, along with cropmarks of Bronze Age and Iron Age activity some distance to the north west. Episodes of marine transgression are known from this area in the later Neolithic/early Bronze Age and later Iron Age and activity of these periods may be buried by marine deposits, alluvium and peat. In the Roman period local find spots include two coins and the closest settlement evidence may be some 700m to the north east. The area of the proposed bridge was likely affected by marine transgression at this time. The site was likely peripheral land in the Saxon and earlier medieval period, and Lake Lothing was formed as an extensive area of medieval peat cutting. The area is close to the earliest part of the settlement at Lowestoft though, and local historians suggest there may have been an inlet to the north of Denmark Road which may have been exploited during this time. Significant land reclamation then took place in the 19<sup>th</sup> century in this part of Lowestoft.

3.3 A series of geoarchaeological investigations and a watching brief during ground investigation has been completed to date, resulting in the production of an interim geoarchaeological deposit model (Wessex Archaeology 2019) which has been used to inform evaluation trench locations. Across the site area, there is variability in the deposit sequence, which is likely to represent a dynamic environment in terms of deposit formation.

- Based on the geotechnical investigations and the Wessex Archaeology (2019) deposit model, the uppermost deposits on the site can be characterised as made ground, probably representing reclaimed land adjacent to Lake Lothing where numerous developments have been constructed.
- In the east of the present site, the made ground layers are generally seen to overlie alluvial deposits. These are largely heterogeneous minerogenic alluvium, comprising silts, with variable components of gravel and clay. Within these layers were intermittent records of 'organic alluvium', which have the potential for AMS radiocarbon dating and palaeoenvironmental investigations
- In the west of the site, made ground layers generally directly overlie coarse sands and gravels of the Happisburgh Glacigenic Formation, which are also present below the alluvium. These have lower geoarchaeological potential but could have been cut by archaeological features.

A significant aim of the investigation is to determine the extent of truncation of these underlying deposits (sands/ alluvium) prior to reclamation, in addition to the investigation of their archaeological potential.

3.4 The site thus has a potential for evidence of multi-period activity, and in particular for prehistoric palaeoenvironmental remains.

3.5 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 regional research frameworks are set out in Glazebrook (1997 and Brown & Glazebrook (2000) and updated by Medlycott and Brown (2008) and Medlycott (2011). For the Palaeolithic and Mesolithic periods, Austin (in Brown & Glazebrook 2000) notes research topics of landscape study (particularly environmental archaeology and site/territory dynamics), study into period transitions, human behaviour and study of contemporary occupation sites. Medlycott & Brown (2008) and Medlycott (2011) note the importance of identifying well-provenanced Palaeolithic artefactual assemblages and that particular regard should be paid to mapping their spatial distribution and the geological deposits in which they are found. Medlycott (2011, 7) states that further work is required to underpin current thinking on the Palaeolithic resource contained in sand/gravel aggregates to establish the pattern of distribution of lithic artefacts in such deposits. The importance of seeking further evidence for pre-Anglian occupation is noted by Medlycott (2011, 8) as is the importance of seeking Lower and Middle Palaeolithic artefactual and palaeoenvironmental evidence in the various channel deposits in the region.

4.2.2 Medlycott & Brown (2008) and Medlycott (2011) note the importance of characterising Upper Palaeolithic and early Mesolithic settlement in the region and gaining a clearer understanding of the environment during these periods. A predictive model is required for identifying important sites of this date (Medlycott 2011) They also note that further work is required on Mesolithic technology, especially with regard to the exploitation of flint sources and analysis of use-wear patterns.

4.2.3 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).

4.2.4 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).

4.2.5 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 the 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 research subjects identified as important for the post-medieval and modern periods (see Medlycott 2011, 72-80) expand on those set out by Gilman *et al* (in Brown & Glazebrook, 2000) which focussed on the subjects of fortifications, parks and gardens and industrialisation and manufacture. Medlycott (2011) stresses the importance of the built and environment and the use of the Listed Buildings databases and thematic surveys in understanding this. The subject of industry and infrastructure, which is clearly of great importance for this period, remains a key research subject for the region with particular attention being paid to rural industries, the processing of food for urban markets and the development and character of the region's primary communication routes. Landscapes, and the effect of social changes, such as the Dissolution and the enclosure of greens and commons, on them are considered to be an area of research. The region's military sites and their impact on the development of eastern England, on its landscapes and on its appearance are also considered to be of importance. Towns, their development and their impact on the landscape, require further study. Issues such as economic and social influences of towns on their hinterlands and neighbours are identified as being of importance, as are the development of specific urban forms.

4.2.11 As set out above, the principal research objectives will be to identify any archaeological remains which may be affected by the works for the new bridge, and in particular any prehistoric palaeoenvironmental remains.

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Wessex Archaeology, 2019, *Lake Lothing Third Crossing; Interim Deposit Modelling Report*

## **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 CIfA.

5.1.2 Profiles of key project staff are provided (Appendix 3).

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 Chartered Institute for Archaeologists *Standard and Guidance for Archaeological Evaluations (revised 2014)* and *Standard and Guidelines for Historic Environment Desk-based Assessment (revised 2017)*. It will also adhere to the document *Standards for Field Archaeology in the East of England* (Gurney 2003), the requirements of the SCC document *Requirements for a Trenched Evaluation 2019* and the SCC document *Additional Requirements for a Palaeoenvironmental Assessment (updated Dec 2018)*.

5.1.4 SCC AS require a programme of archaeological evaluation by trial trenching of the development area and require a sample of the site to be subject to trial trenching.

5.1.5 The advice requires a c.2% sample of the 1.5ha site to be investigated by trial trenching. 6 trenches of 25m x 2m (at base) are required. A trench plan is appended for the approval of SCC AS. AS is happy to review the scale/location of the trenches following comment from the client and/or SCC AS. A programme of metal detecting will also be undertaken as part of the evaluation. The trenches will be excavated to the depth of the geological horizon or the upper interface of archaeological features/deposits, whichever occurs first. The upper levels of the trenches will be stepped as the trenches are expected to be c.2m deep (based on the previous deposit modelling). The trenches will therefore be c.28m x 5m at the upper level. Provision is made for review of the surface of each layer /deposit that may be anticipated from the deposits modelling (see 3.3 above).

5.1.6 The environmental strategy will adhere to the guidelines of the Historic England document *Environmental Archaeology; A guide to the theory and practice of methods, from sampling and recovery to post-excavation*, Centre for Archaeology Guidelines (revised 2011) and SCC document *Additional Requirements for a Palaeoenvironmental Assessment* (updated Dec 2018). An environmentalist, Dr David Bescoby/Dr John Summers, will visit the site and appropriate column/bulk sampling will be undertaken and the samples processed and assessed. The specialist will make his/her results known to the regional science advisor who co-ordinates environmental archaeology in the region on behalf of Historic England.

5.1.7 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 2Site Assistant/s (as necessary), for up to 8 days after trenches are open, plus geoarchaeologist and environmental archaeologist as required.

5.1.8 In advance of the field work AS will liaise with the Suffolk Archaeological Archive 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.

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

5.1.10 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.

5.1.11 AS maintains relevant public/employers liability and professional indemnity insurances.

## **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 digital PDF copies of the report will be submitted to SCC AS for approval. If any revisions are required, final digital PDF copies will be supplied to SCC AS 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 Suffolk Archaeological Archives.

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, 2019). A unique event number and monument number will be obtained from the County HER Officer. The Parish Code will be included on all documentation for the project.

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 Archaeological Archives; 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 Suffolk Archaeological Archives. 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 Suffolk Archaeological Archives 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 event number for the report and monument number for any finds will be obtained from the HER.

## 11 MONITORING

11.1 It is understood that SCC AS will monitor the project on behalf of the local planning authority.

11.2 **Notification** Archaeological Solutions will give SCC AS notification prior to the commencement of the project on site (10 days is required). A site monitoring meeting will be booked with SCC AS prior to the start of works.

11.3 **Monitoring** SCC AS will be responsible for monitoring progress and standards throughout the project, both on site and during the post-survey/report stages, to ensure compliance with the planning requirement, the

approved WSI and any subsequent Brief and approved WSI for further fieldwork, analyses and publication.

11.4 Any variations to the WSI will be agreed in advance with SCC AS prior to them being carried out.

11.5 No trenches will be backfilled until signed off by SCC AS

## **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 Chartered Institute for 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**

All features will be investigated and recorded unless otherwise agreed with SCC AS. If any complex/unexpected features/deposits are identified, then a strategy for their investigation will be agreed with SCC AS before implementation.

If deep, 'urban' type deposits are encountered, or significant deposits of made ground/waterlogged ground/alluvium are encountered (which is likely on this site) the upper levels of the trench will be stepped as necessary, within layers of later post-medieval/modern date only, in order to ensure safe working practices. The trenches will be no less than 2m wide at base.

An auger will be used as necessary to characterise deeper deposits/features and further mechanical excavation may be required by agreement with SCC AS

### **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. Otherwise discrete features (eg pits) will be half-sectioned.

### **Ditches**

The ditches will be excavated in segments up to 2m long (and at least 1m minimum), and the segments will be placed to provide adequate coverage of the ditches, establish their relationships and obtain samples and finds.

### **Buried Soils**

If buried soils are encountered, the surfaces will be cleaned and examined for features/finds, which will be investigated/recorded before any further excavation takes place.

## **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. Digital images will also be taken (Nikon Coolpix L29 16.1 megapixel cameras). 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. Any metal finds from the metal detector survey will be located by GPS.

A metal detector will be used to enhance finds recovery. The metal detector survey will be conducted prior to and on conclusion of the topsoil stripping, and thereafter during the course of the excavation. It is proposed that Graham Brandeys / Geoff Stribling will undertake the metal detecting. 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.

In the event of items considered as being defined as treasure being found, then the requirements of the Treasure Act 1996 (with subsequent amendments) will be followed. Any such finds encountered during the investigation will be reported immediately to the Suffolk Portable Antiquities Scheme Finds Liaison Officer who will in turn inform the Coroner within 14 days

## **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. If human remains are found SCC AS will be informed immediately. 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. 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 (now Historic England), and the specialist will make his/her results known to the regional science advisor who co-ordinates environmental archaeology in the region on behalf of Historic England. The project will also accord with the guidelines of the English Heritage (now Historic England) 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 John Summers. Dr Rob Scaife/Dr Summers and AS will seek advice from the HE 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 Historic England 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 HE 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/Dr John Summers will visit to advise on 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 John Summers. Dr Rob Scaife and AS will seek advice from the HE Regional Scientific Advisor 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 MCifA**

*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 BSc MCifA**

*Qualifications:* Member of the CfA

*Experience:* Tom has over 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 (ACCOUNTS)**

## **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 MANAGER (LOGISTICS)**

### **Jennifer O'Toole**

*Experience:* Jennifer's professional career has included a variety of roles such as PA to the Operations Director with The Logistics Network Ltd, Tutor/Trainer & Deputy Manager with Avanta TNG and Training and Assessment Consultant with PDM Training and Consultancy Ltd. Jennifer's career history emphasises her organisational and interpersonal skills, especially her ability to efficiently liaise with and manage individuals on various levels, and provide a range of supportive/ administrative services. Jennifer holds professional qualifications in a number of subjects including recruitment practice, customer service, workplace competence and health and safety. In her role with Archaeological Solutions Ltd, Jennifer has assisted in the delivery of the company's services on a variety of projects as well as co-ordinating recruitment and providing a range of complex administrative support.

## **SENIOR PROJECTS MANAGER**

### **Jon Murray BA MCIfA**

*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 project manages) 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

## **SENIOR PROJECTS MANAGER** **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)). This background has provided Vincent with a 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. Since joining Archaeological Solutions Ltd, Vincent has managed various large and complex excavation projects including a number of sites associated with the onshore element of the East Anglia One project (Scottish Power Renewables). His duties include overall project management (fieldwork), the management of staff and timescales, and professional liaison with clients, local authority representatives and other organisations as necessary. Vincent also assists in the dissemination of project outcomes through contributions to 'grey' and published literature, and through the organisation and delivery of site open days. He is CSCS qualified (expires June 2020) and has successfully completed the Emergency First Aid at Work course (January 2018).

## **SENIOR PROJECT OFFICER** **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 Lydinge 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. Since joining Archaeological Solutions Ltd, Kerrie has gained enhanced experience of commercial archaeological practice, and has managed the fieldwork elements of various large projects, including the excavation of Chilton Leys, Stowmarket. Kerrie's other responsibilities include the training and management of field staff, and professional liaison with clients and local authority representatives. Kerrie has contributed towards the dissemination of project outcomes through the production of 'grey' literature and published works. She is CSCS qualified (expires February 2019).

## **PROJECT OFFICER** **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**  
**Keeley-Jade Diggons BA**

*Qualifications:* University of Southampton, BA Archaeology and Geography (2014-2017)

*Experience:* Keeley's higher education at the University of Southampton provided her with a good, working understanding of archaeological fieldwork method and theory through the completion of modules including *Archaeological Survey*, *Geophysics* and *Advanced GIS*. She also gained valuable excavation and finds administration experience through participation on British and overseas field projects. Since joining Archaeological Solutions Ltd, Keeley has participated on a number of fieldwork projects, including elements of the East Anglia One infrastructure project (Scottish Power Renewables), and has coordinated geophysical survey projects, including cart-based surveys. Keeley has also contributed to the production of archaeological reports through the collation and assessment of site data and she holds a qualification in Remote Outdoor First Aid.

**SUPERVISOR**  
**Isak Ekberg BA MA**

*Qualifications:* Lund University (2009–11), BA (Hons) Archaeology  
Lund University (2011–13), MA (Hons) Archaeology

*Experience:* Isak's higher education at the Lund University has provided him with a good practical understanding of the archaeology of northern Europe and a firm grounding in various vocational skills, through the completion of modules including *GIS in Archaeology* and *Virtual Reality in Archaeology*. Isak has also gained valuable and extensive experience in digital archaeology through his participation in the *Skånes Hembyggsdörening Project*, *Ygdrasil Project* and the *Siena University Spatial Analysis Project*. Since joining Archaeological Solutions Ltd, Isak has worked on a variety of commercial fieldwork projects, developing his practical skills and gaining a good

understanding of various archaeological periods across the East of England. Isak is CSCS certified.

**SUPERVISOR**  
**John Haygreen**

*Experience:* John has extensive experience of working within the construction sector, including as a company director of a landscaping business. His duties and responsibilities in these posts included the supervision and coordination of co-workers, liaising with stakeholders to determine specific project design elements and managing projects to ensure deadlines were realised. Since joining Archaeological Solutions Ltd John has worked on a variety of commercial fieldwork projects, developing his knowledge and excavation, surveying and supervisory skills. John is a CPCS trained operator of 360 Excavators. John is also CSCS certified, passed the CITB Health and Safety Awareness Course and is trained in Emergency First Aid.

**SUPERVISOR**  
**Becky Randall BA MA**

*Qualifications:* University of Wales Trinity St David (2013–16), BA (Hons) Mediterranean Archaeology  
University of Wales Trinity St David (2016–17), MA Mediterranean Archaeology

*Experience:* Becky's education at the University of Wales Trinity St David provided her with a good, working understanding of archaeological fieldwork method and theory. During her time at university she gained valuable excavation, archiving and finds administration experience through participation in the *Tell es-Safi Archaeological Project* and as a volunteer with numerous British fieldwork projects. Since joining Archaeological Solutions Ltd, Becky has participated on a number of fieldwork projects, including elements of the East Anglia One infrastructure project (Scottish Power Renewables). Becky has also contributed to the production of archaeological reports through the collation and assessment of site data. Becky is CSCS certified.

**SUPERVISOR**  
**Daniel Ryan BA**

*Qualifications:* University of Leicester (2014-17) BA (Hons) History

*Experience:* Dan's higher education at the University of Leicester has provided him with a good understanding of the history of Britain, researching the interaction between the Britons and the Saxons (500-830 AD) for his dissertation project. In 2018 Dan became a trustee of the *Burwell Museum and Windmill Trust*, assisting with management of finances while contributing

to the general upkeep of the site and improving visitor experience. Since joining Archaeological Solutions Ltd Dan has worked on a variety of commercial fieldwork projects, developing his knowledge and excavation, surveying and supervisory skills. Dan is CSCS certified.

## **SUPERVISOR**

### **Samuel Thomelius BA MA**

*Qualifications:* Bachelor Programme in Archaeology and Ancient History, Archaeology (Uppsala University 2012–15)  
Master Programme in the Humanities, Archaeology (Uppsala University 2015–17)

*Experience:* Samuel's higher education has provided him with a good, practical understanding of the archaeology of northern Europe and a firm grounding in various vocational skills. Samuel's practical experience encompasses archaeological excavation duties and post-excavation curation, including a lead role in digital documentation at Uppsala University (2016). His principle research interests are landscape archaeology and digital methods in archaeology. Since joining Archaeological Solutions Ltd, Samuel has worked on a variety of commercial fieldwork projects, developing his practical skills and gaining a good understanding of various archaeological periods across the East of England. Samuel is CSCS certified.

## **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 PCIFA**

*Qualifications:* University of Bradford, MPhil (2002-04)  
University of Bradford, BSc (Hons) Archaeology (1999-2003)  
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. Andrew joined AS in 2005 as Project Officer writing desk-based assessments, he has since gained considerable experience in post-excavation work and his principal role is conducting post-excavation research and authoring site reports for publication. Significant post-excavation projects he 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, the high status Anglo-Saxon cemetery at Burwell Road, Exning, Suffolk. Andrew's work on the Iron Age settlement at Black Horse Farm, Sawtry, Cambridgeshire was recently published by BAR and he co-authored the recent *East Anglian Archaeology* monograph on the Romano-British industrial site at East Winch, Norfolk. Andrew also writes and co-ordinates Environmental Impact 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)**  
**Lindsay Lloyd-Smith BSc MPhil PhD**

*Qualifications:* Institute of Archaeology, UoL, BSc (Hons) Archaeology (1989-1992)  
University of Cambridge, MPhil Archaeological Research (2004-2005)  
University of Cambridge, PhD Archaeology (2005-2008)

*Experience:* Lindsay has over 25 years' experience in archaeology working on a wide variety of contract and research projects. As well as working in East Anglia for the Norfolk Archaeological Unit (1992), the Cambridge Archaeology Unit (repeatedly between 1995 and 2010), and most recently for Pre-

Construct Archaeology (2016-2018), Lindsay's work and research has taken him to Belize (1992), the Netherlands (1992-1995), Sweden (1997-2004), India (1996-2005), Egypt (2002-2004), Malaysia (2000-2017), the Philippines (2006), Vietnam (2009), and South Korea (2011-2015). He was a member of the Niah Caves Project, Borneo (University of Cambridge, 2000-2004), which led on to his post-graduate research (MPhil, PhD) into later prehistorical mortuary practice in Island Southeast Asia. Following this, he was a Post-Doctoral Research Associate on the Cultured Rainforest Project, University of Cambridge (2007-2011), responsible for archaeological fieldwork investigating the prehistory of the central highlands of Borneo. He spent four years (2011-2015) working as an Assistant Professor at the Institute for East Asian Studies, Sogang University, Seoul, South Korea, where he taught Area Studies and Southeast Asian Archaeology and directed the Early Central Borneo Project (2013-2016). During this time he also was lead editor for the newly launched journal *TRANS: Trans –Regional and –National Studies of Southeast Asia* published by Cambridge University Press. Returning to the UK in 2015, Lindsay worked at Leicester University as an Associate Tutor in the School of Archaeology and Ancient History where he designed and wrote a Distance Learning Masters Module in Archaeology and Education. Lindsay joined AS in June 2018 and is responsible for the post-excavation management of large excavation projects, from the assessment, interpretation and synthesis of site data to the production of archaeological reports from assessment to publication level.

## **POTTERY, LITHICS AND CBM RESEARCHER**

### **Andrew Peachey BA MCIfA**

*Qualifications:* University of Reading BA Hons, Archaeology and History (1998-2001)

*Experience:* Andrew has been working as a specialist across East Anglia and adjacent regions since 2002, with a particular interest in prehistoric and Roman pottery and ceramic building materials, as well as in the prehistoric technology and use of struck flint. Working as an internal specialist for Archaeological Solutions and accepting work as an external specialist for other contracting archaeological units has afforded Andrew a diverse and wide-ranging portfolio of projects and experience. Projects have included Neolithic pit groups at Coxford and flint assemblages from Blakeney Norfolk, extensive Neolithic to Iron Age assemblages from a riverside site at Dernford, Cambs and an important fenland occupation and ritual site at Sawtry, Cambs. Significant Roman pottery and CBM assemblages have included a large farmstead complex and pottery production site at Stowmarket, Suffolk and a Roman villa at Bottisham, Cambs; as well as from intensive agro-industrial sites at Soham, Cambs; Beck Row and Newmarket, Suffolk. A large pottery production and industrial site at East Winch Norfolk has recently been published as an East Anglian Archaeology monograph, while other kiln sites have included early Roman production at Snape, Suffolk (published in the *Journal of Roman Pottery Studies*) and Horningsea, Cambs (published in the *Proceedings of the Cambridge Antiquarian Society*). Andrew is a long-

standing committee member and contributor to the Study Group for Roman Pottery.

**POTTERY RESEARCHER**  
**Peter Thompson MA**

*Qualifications:* University of Bristol BA (Hons), Archaeology (1995-1998)  
University of Bristol MA; Landscape Archaeology (1998-1999)

*Experience:* Peter has over two years commercial site excavation experience mainly with Bristol and Region Archaeological Services and the Bath Archaeological Trust. Peter joined HAT (now AS) in 2002 to specialise in Anglo-Saxon and Medieval pottery research covering East Anglia and the Greater London areas, and also has good knowledge of Prehistoric pottery identification. Publications include pottery assemblages from a Late Bronze Age and Early Iron Age enclosure and Early Saxon cemetery at Heybridge, Essex (*Essex Archaeology and History 2008, Vol 39*); Saxon and Medieval settlement at Marham, Norfolk (*Norfolk Archaeology 2012, Vol 46*); Iron Age settlement and burials and Early Anglo-Saxon settlement from Harston Mills, Cambs (*East Anglian Archaeology 2016 Vol 157*); two rural Suffolk Anglo-Saxon sites at Snape and Oulton (*Anglo-Saxon Studies in Archaeology and History 2018, Vol 21*); A Medieval Grimston ware pottery assemblage at Pott Row, Norfolk (*Norfolk Archaeology 2014 Vol 48*); a medieval rural landscape at Stone, Bucks (*Records of Buckinghamshire 2018, Volume 58 part 1*); and a late medieval kiln site at Stowmarket, Suffolk (*forthcoming*). Peter has also written more than 100 Desk-Based Assessments primarily for commercial developers in both rural and urban locations. These include particularly archaeologically sensitive sites such as a double Scheduled Ancient Monument site at Kings Langley, Herts, and The Great Hospital in Norwich.

**ENVIRONMENTAL ARCHAEOLOGIST**  
**Dr John Summers PhD**

*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. He has undertaken archaeobotanical analyses for numerous excavations, mainly in the Eastern region, including assemblages from a number of large Romano-British, medieval and multi-phased sites. In addition to work on AS projects, John undertakes archaeobotanical assessment and analysis for a number of other archaeological units. He also maintains a connection with research projects in Scotland, including recent work with the University of Bradford's Covesea

Caves Project. In addition to archaeobotanical investigations, John is responsible for co-ordinating field survey with GPS and total station, as well as in house magnetic gradiometer surveys. With AS, he has co-ordinated and written up a number of gradiometer surveys, including a number of large areas (up to 140ha) and cart-based surveys, in conjunction with our external consultant.

## **HISTORIC BUILDING RECORDING**

### **Tansy Collins BSc MSt**

*Qualifications:* University of Cambridge, MSt Building History (2013-2015)  
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 is a historic building specialist with over ten years experience investigating and recording historic buildings, and is skilled in all aspects of such projects including technical analysis, research, drawn and photographic surveys. Tansy's knowledge was consolidated by completing, with Distinction, the MSt in Building History at the University of Cambridge. Her dissertation focused on the under-researched topic of the marking of Baltic timber imported into Britain in the 18<sup>th</sup> and 19<sup>th</sup> centuries.

She has authored over 150 historic building reports from pre-application appraisals and impact assessments through to condition-based recording with monitoring during planned works that adhere to Levels 1 to 4 as outlined in guidance documents by Historic England. These projects include a number of regionally and nationally significant buildings, for example a previously unrecognised medieval aisled barns belonging to a small group of nationally important agricultural buildings, one of the earliest surviving domestic timber framed houses in Hertfordshire, a Cambridgeshire house retaining formerly hidden 17<sup>th</sup> 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.

## **HISTORIC BUILDING RECORDING**

## **Liam Podbury BA**

*Qualifications:* Newcastle University (2013-16) BA (Hons) Archaeology

*Experience:* Throughout his higher education, Liam has gained extensive practical archaeological experience, assisting in the excavation of the Hasting Hill Neolithic Monument Complex in Sunderland and the excavation of an early Bronze Age metallurgy site in Sicily with the *Case Bastione Project*. After graduating Liam trained in the practical conservation of historic structures with the *National Heritage Training Group* and went on to work as a project manager, restoring and renovating numerous listed historic buildings. Liam joined Archaeological Solutions as a field archaeologist, working on a variety of commercial fieldwork projects, developing his practical skills and gaining a good understanding of various archaeological periods across the East of England. In 2019 he joined the historic buildings team, since then Liam has authored reports for a wide range of building types; both timber-framed and brick-built buildings with date ranges varying from the medieval period to the 20th century. Liam also conducts background research and contributes to archaeological report writing. He is CSCS certified and is trained in Emergency First Aid at Work.

## **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.

## **GRAPHICS OFFICER**

### **Danielle Hall MA**

*Qualifications:* University of Edinburgh, Archaeology MA (Hons) (2014 - 2018)

*Experience:* Since joining the Graphics Department at AS, Danielle has been involved multiple tasks including digitising site records, compiling geo-physics surveys, and creating visual figures for desk-based assessments. Danielle has participated in various field excavations from Romania to Cyprus and has worked alongside the University of Edinburgh and Archaeology Scotland. She has also worked in conjunction with Historic Environment Scotland, the

University of Glasgow, and the Society of Antiquaries Scotland using her designs to promote archaeology to local communities.

## **ARCHIVES CO-ORDINATOR**

**Luke Harris**

*Qualifications:* Northampton College, A-Level History, English Literature and Language and AS-Level Government and Politics (2006)

*Experience:* Since completing his advanced education, Luke has held a number of professional administrative roles with companies and institutions including Nationwide Building Society (2007–2011) and Civica (2013–2014). His duties and responsibilities in these posts included the supervision and coordination of co-workers, the handling of customer enquiries and the categorisation, collation and digitalisation of paper records. Luke has also gained valuable clerical experience through voluntary roles and work experience. Since joining Archaeological Solutions Ltd, Luke has received training in finds recognition, finds and environmental processing/ storage, archiving and the deposition of archaeological archives.

## **ARCHIVES ADMINISTRATOR**

**Sam Bellotti**

*Qualifications:* BA Hons degree American Studies (UEA)

*Experience:* Sam is a highly organised and dedicated archivist and has extensive experience of working in the heritage sector. He has an affinity for working with large volumes of information and collections throughout his previous roles with the Norfolk Museums Service. He is trained in curatorial practices that include data and collections management, exhibition development, and project management. He has trained and worked with volunteers on many collection and digitisation projects. Sam gained valuable experience when creating and managing an archive for the Edith Cavell Collection owned by The Church of St Mary the Virgin, Swardeston. He has a good overall knowledge of archiving, administration, as well as maintaining databases.

## **ASSISTANT ARCHIVES ADMINISTRATOR**

**Suzanne Fletcher**

*Qualifications:* University of Central Lancashire - BSc (Hons) Degree in Archaeology

*Experience:* Throughout her higher education, Suzanne has gained extensive practical and theoretical archaeological experience, excelling in a range of

excavations and report writing; resulting in her gaining her first class degree. Such University projects included excavating an Anglo-Saxon settlement/graveyard complex at Oakington, Cambridgeshire, a Roman fort at Ribchester, Lancashire and a Prehistoric enclosure at Whitewell, Lancashire. After University, Suzanne dedicated a year to volunteering full-time at a variety of historic establishments in order to further broaden her knowledge of archaeological processes. Such establishments included: Cambridgeshire County Council Historic Environment Team; Suffolk County Council Archaeology Service; Norfolk Museums Service; The Museum of Technology, Cambridgeshire; Norfolk Record Office, Felixstowe Museum and more. Since joining Archaeological Solutions Ltd, Suzanne has contributed primarily to archiving and depositing projects by county, as well as reports; producing tabulations for projects to further report writing processes and assisting further through proof-reading, editing and final checks of tabulations and reports.

## **ADMINISTRATOR**

### **Hollie Wesson**

*Qualifications:* Stowmarket High School, A Level Applied Business  
Studies and OCR

Cambridge Technical Diploma Health and Social Care Level 3

*Experience:* Hollie is an effective administrator with a broad range of skills gained from her previous experience of working in a busy office and customer service environment with Thrifty car and van rental and variety of employers within the retail sector. She is hardworking and reliable and pays great attention to detail whilst setting up project files and disseminating reports to clients and maintaining office supplies. Amongst other things, Hollie also tracks metrics for success including customer satisfaction; overall she is a very efficient member of the team and contributes to an improved service for our clients.

## **ARCHAEOLOGICAL SOLUTIONS: PRINCIPAL SPECIALISTS**

GEOPHYSICAL SURVEYS	Dr David Bescoby Dr John Summers
AIR PHOTOGRAPHIC ASSESSMENTS	Aerial-Cam Ltd – SUMO Aerial Surveys
PHOTOGRAPHIC SURVEYS	K Henry
PREHISTORIC POTTERY	A Peachey MCIfA
ROMAN POTTERY	A Peachey MCIfA
SAXON & MEDIEVAL POTTERY	P Thompson
POST-MEDIEVAL POTTERY	P Thompson
FLINT	A Peachey MCIfA
GLASS	H Cool
COINS	British Museum, Dept of Coins & Medals
SMALL FINDS	R Sillwood
SLAG	A Newton
ANIMAL BONE	J Curl
HUMAN BONE:	S Anderson
ENVIRONMENTAL CO-ORDINATOR	Dr J Summers
POLLEN AND SEEDS:	Dr R Scaife
CHARCOAL/WOOD	Dr J Summers
SOIL MICROMORPHOLOGY	Dr R MacPhail, Dr C French
CARBON-14 DATING:	SUERC Radiocarbon Laboratory
CONSERVATION	Drakon Heritage and Conservation

# OASIS DATA COLLECTION FORM: England

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## Printable version

**OASIS ID: archaeol7-405032**

### Project details

Project name	Lake Lothing Third Crossing - TRIAL TRENCH EVALUATION
Short description of the project	In September 2020, Archaeological Solutions Ltd (AS) carried out an archaeological evaluation at the Lake Lothing Third Crossing Lowestoft, Suffolk (NGR 653843 292985; Figs. 1 and 2). The evaluation was undertaken in compliance with the initial requirement of a planning condition attached to planning approval for the construction of a new lake crossing (Suffolk County Council Planning Ref. SCC/0040/20). It was required by Suffolk County Council based on the advice of Suffolk County Council Archaeological Service (SCC AS). The evaluation revealed a significant depth of made ground in the eastern sector of the site overlying organic alluvial deposits approximately 2m below the current ground surface. The western side of the site appears to have been truncated, rather than raised, with only 0.40m of made ground directly overlying the natural sands. The only features present were of modern date. The organic alluvial deposits likely relate to a former inlet or area or marshland, as has been suggested by local historians, within the vicinity of the older core of Lowestoft prior to the medieval development of the High Street. The organic silty deposits appeared to oxidise upon being exposed, which may theoretically suggest that the conditions would favour the preservation of potential wooden remains associated with the exploitation of marsh channels (e.g. boats and structures). Nonetheless, the previous borehole surveys did not indicate that significant peat deposits are present within the area. The evaluation enables the extent of the inlet or marsh on the site to be understood so that appropriate mitigation can be implemented, taking into account the overall limited archaeological potential, the conditions present on the site, and the impacts of the development.
Project dates	Start: 24-09-2020 End: 30-09-2020
Previous/future work	No / Not known
Any associated project reference codes	P8421 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Industry and Commerce 1 - Industrial
Monument type	ALLUVIAL DEPOSITS Uncertain
Monument type	MADE GROUND Modern
Significant Finds	- None
Methods & techniques	""Targeted Trenches""
Development type	Port Development

Development type Lake Crossing  
 Prompt Planning condition  
 Position in the planning process Pre-application

### Project location

Country England  
 Site location SUFFOLK WAVENEY LOWESTOFT Lake Lothing Third Crossing  
 Study area 12.5 Hectares  
 Site coordinates TL 85064 65569 52.256651961546 0.711791738164 52 15 23 N 000 42 42 E Point

### Project creators

Name of Organisation Archaeological Solutions Ltd  
 Project brief originator Suffolk County Council Archaeological Service  
 Project design originator Jon Murray  
 Project director/manager Jon Murray  
 Project supervisor Archaeological Solutions Ltd  
 Name of sponsor/funding body Suffolk County Council

### Project archives

Physical Archive Exists? No  
 Digital Archive recipient Local Museum  
 Digital Contents "none"  
 Digital Media available "Database","Images raster / digital photography","Spreadsheets","Survey","Text"  
 Paper Archive recipient Local Museum  
 Paper Contents "none"  
 Paper Media available "Context sheet","Drawing","Map","Photograph","Plan","Report","Section","Survey "

### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)  
 Title Lake Lothing Third Crossing, Lowestoft, Suffolk. An Archaeological Evaluation  
 Author(s)/Editor(s) Barlow, G.  
 Author(s)/Editor(s) Bescoby, D.  
 Author(s)/Editor(s) Henry, K.

Other bibliographic details	Report No: 6116
Date	2020
Issuer or publisher	Archaeological Solutions Ltd
Place of issue or publication	Bury St Edmunds
Entered by	Suzanne Fletcher ( <a href="mailto:archives@ascontracts.co.uk">archives@ascontracts.co.uk</a> )
Entered on	28 October 2020

## OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

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## PHOTOGRAPHIC INDEX (P8421)



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Trench 1 looking north-west



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Sample section 1A in Trench 1



3  
Sample section 1B in Trench 1



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Test Pit 1 in Trench 1



5  
Trench 2 looking south-west



6  
Sample section 2A in Trench 2



7  
Sample section 2B in Trench 2



8  
Test Pit 1 in Trench 2



9  
Test Pit 2 in Trench 2



10  
Trench 3 looking north-east



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Sample section 3A in Trench 3



12  
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13  
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14  
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21  
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22  
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23  
Test Pit 5 in Trench 4



24  
Trench 5 looking south-east



25  
Sample section 5A in Trench 5



26  
Sample section 5B in Trench 5



27  
Test Pit 1 in Trench 5



28  
Test Pit 2 in Trench 5



29  
Trench 6 looking south-east



30  
Sample section 6A in Trench 6



31  
Sample section 6B in Trench 6



32  
Test Pit 1 in Trench 6



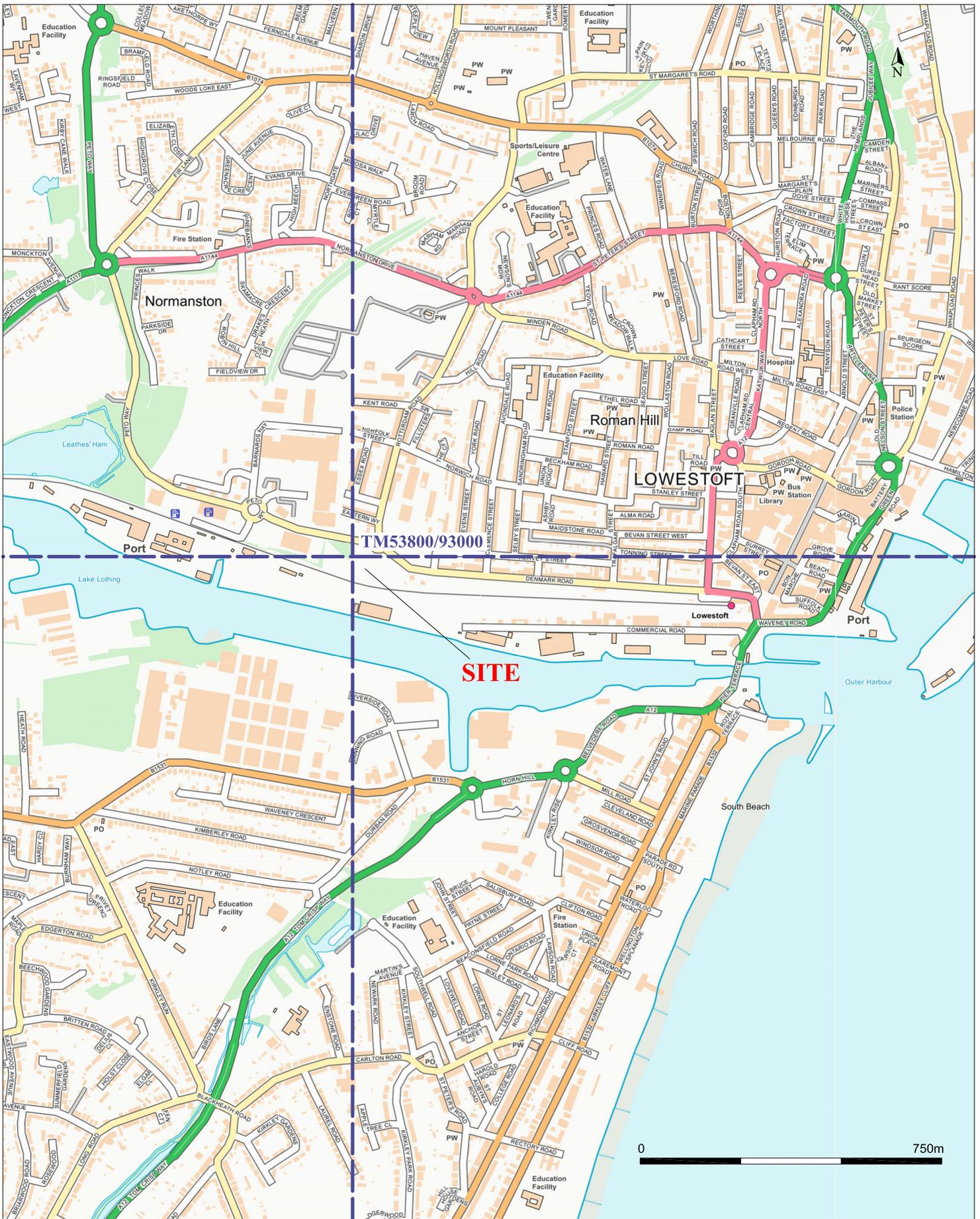
33

Test Pit 2 in Trench 6



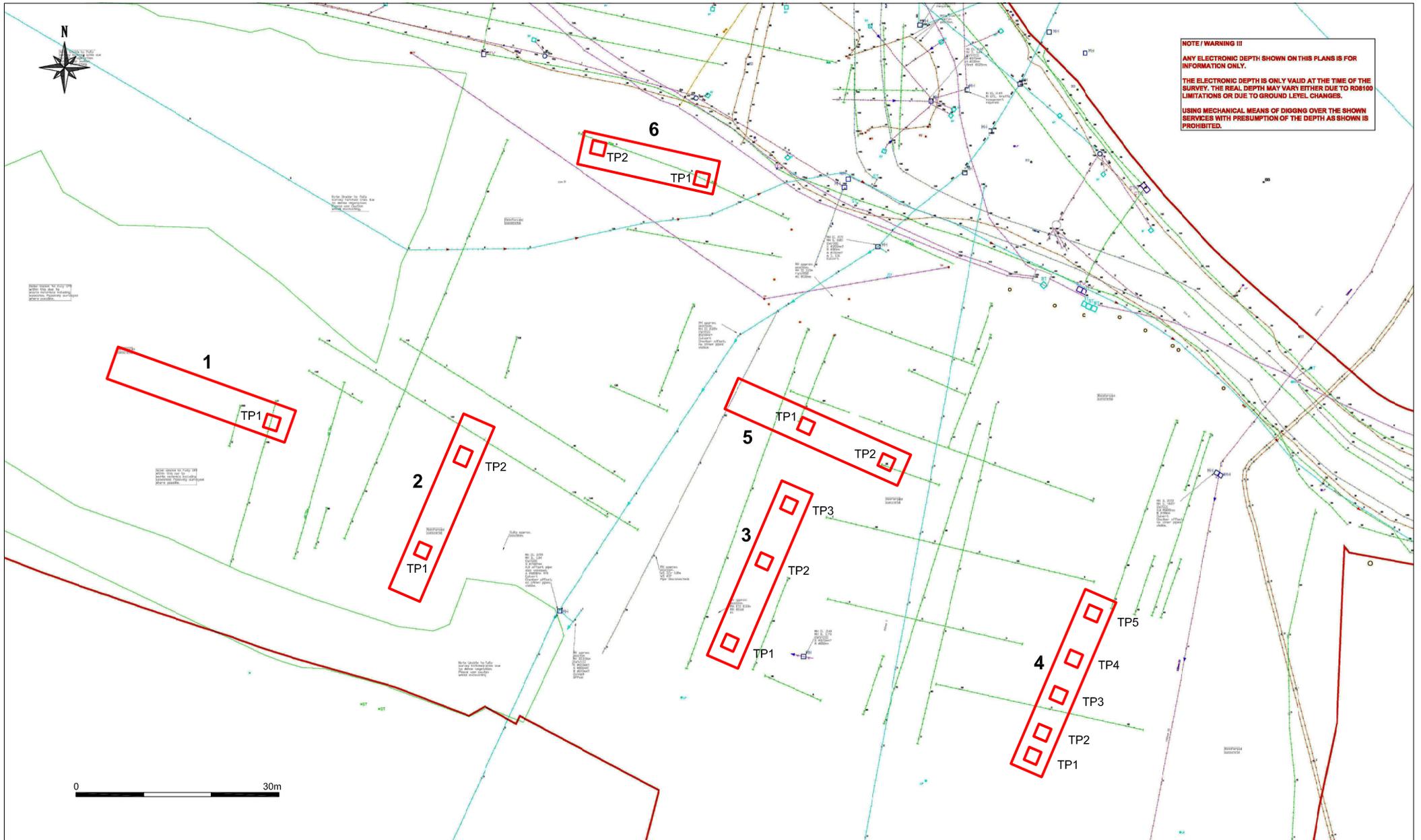
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**Fig. 1 Site location plan**  
 Scale 1:25,000 at A4  
 Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)



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**Fig. 2 Detailed site location plan**  
 Scale 1:12,500 at A4  
 Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)

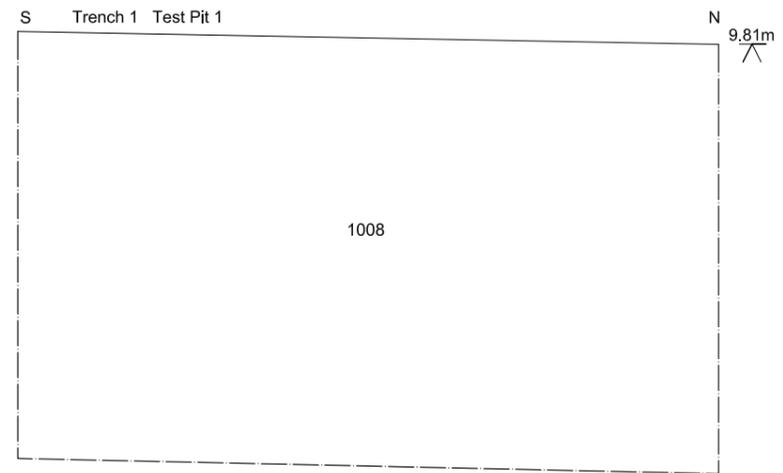
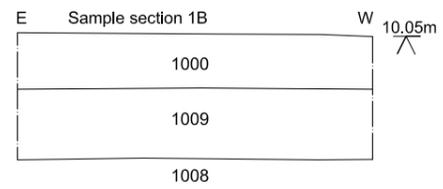
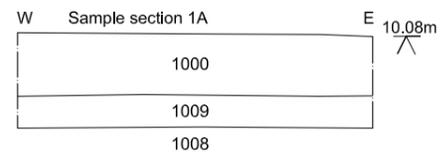


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**Fig. 3 Trench location plan**

Scale 1:750 at A4

Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)

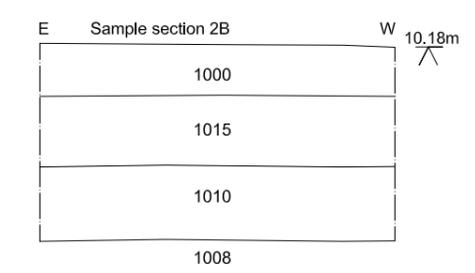
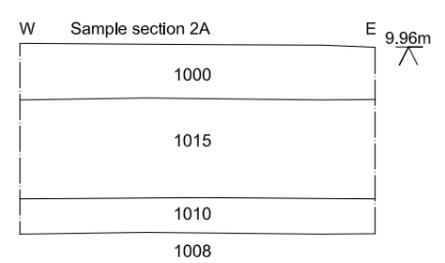
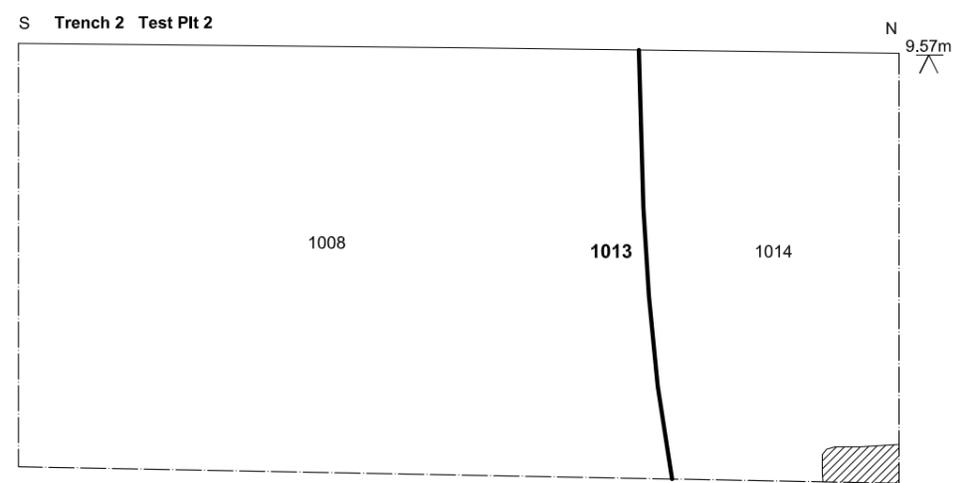
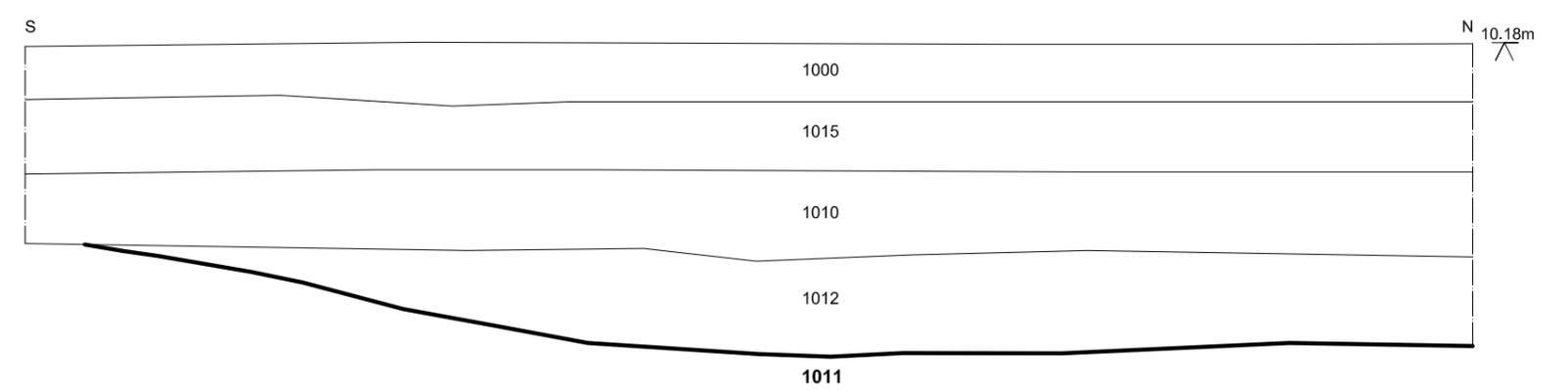
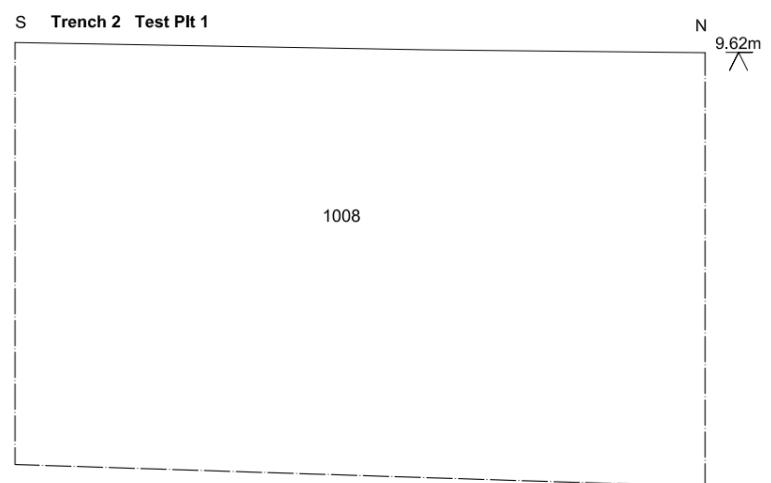
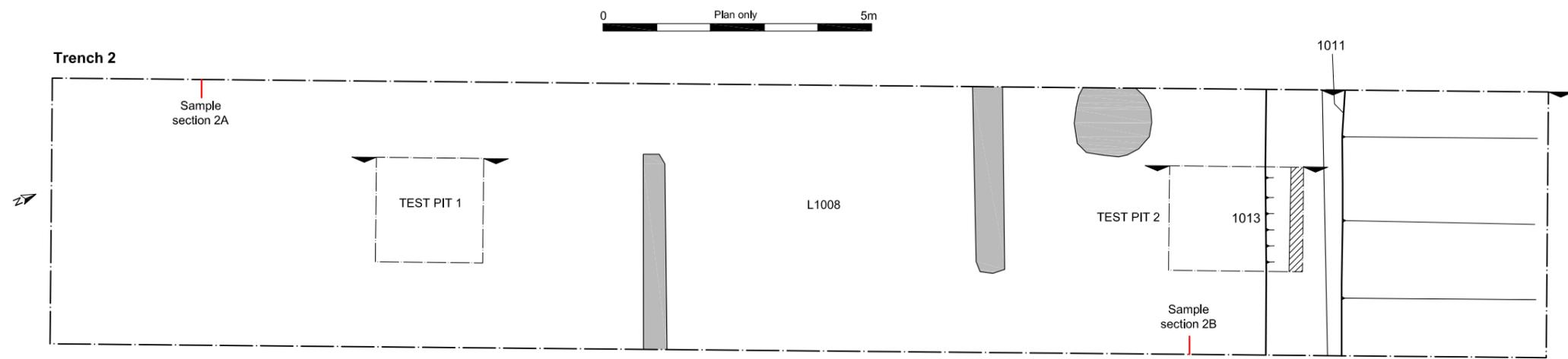


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**Fig. 4 Plan and sections**

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

Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)



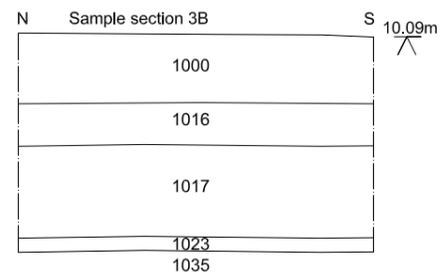
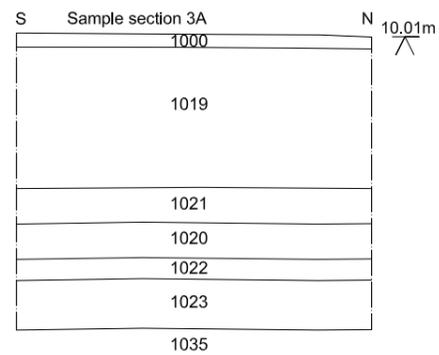
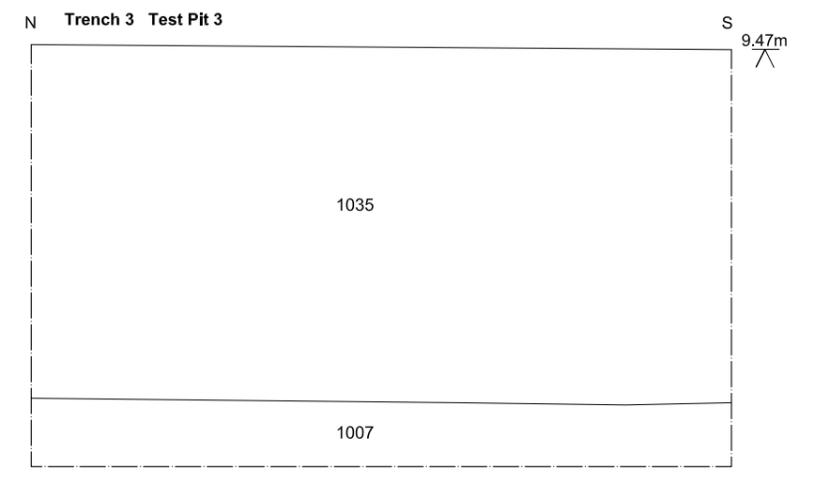
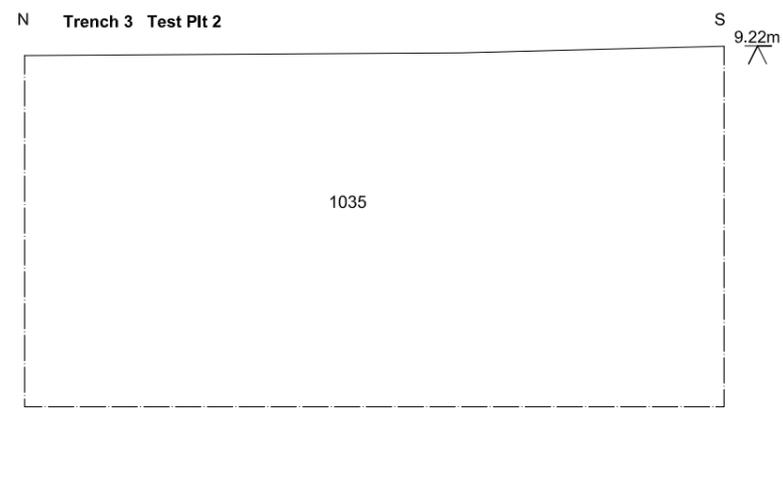
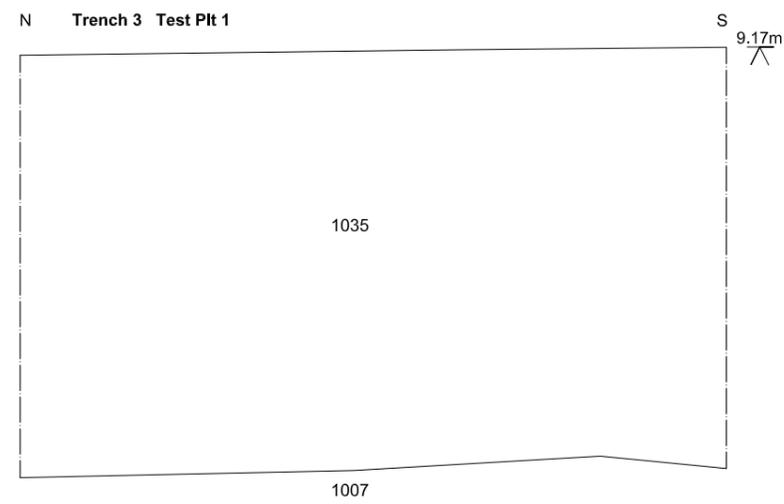
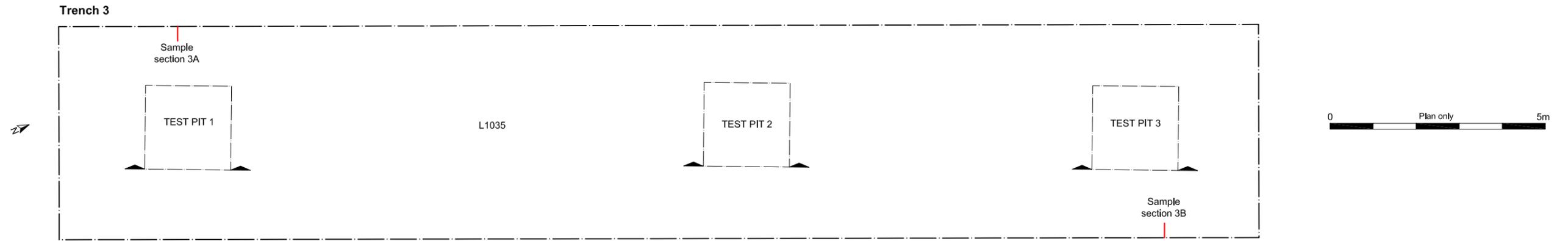
- Concrete
- Modern features

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**Fig. 5 Plan and sections**

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

Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)



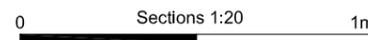
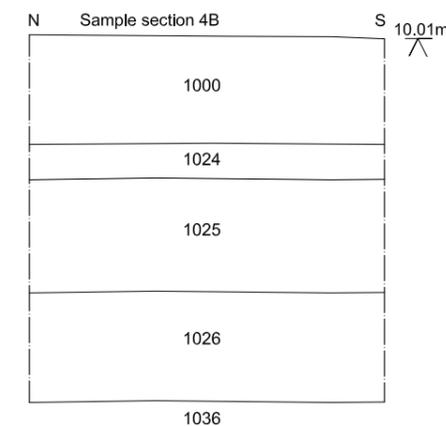
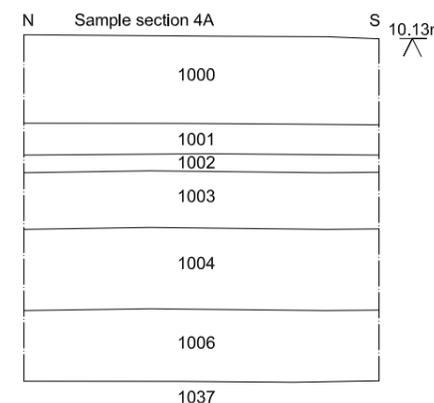
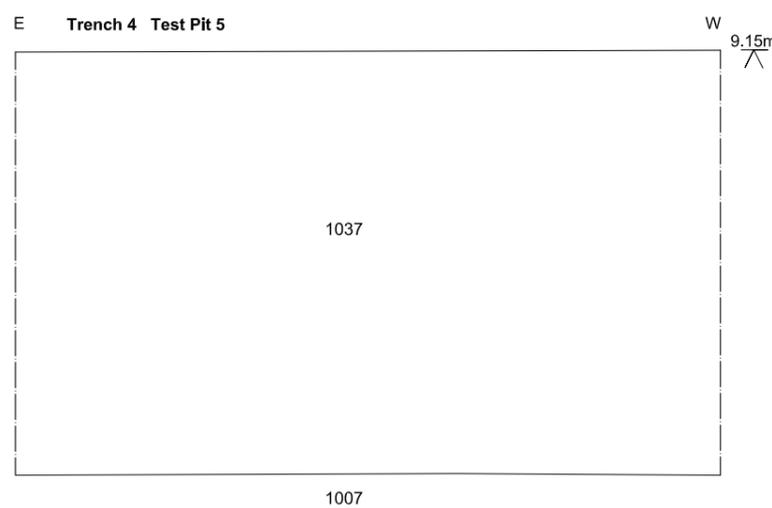
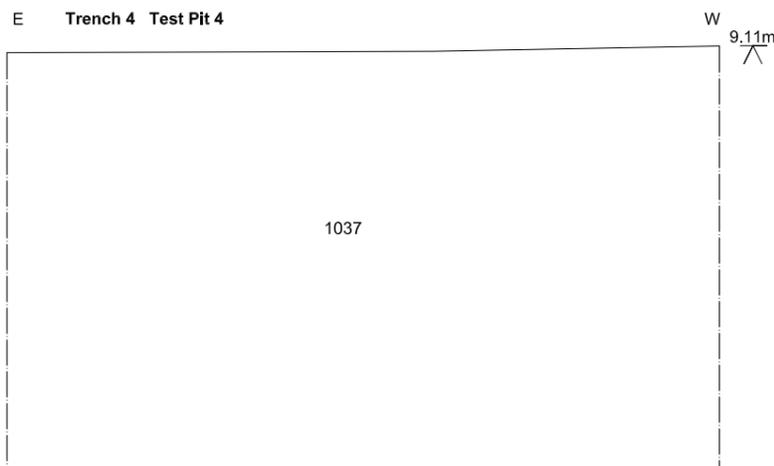
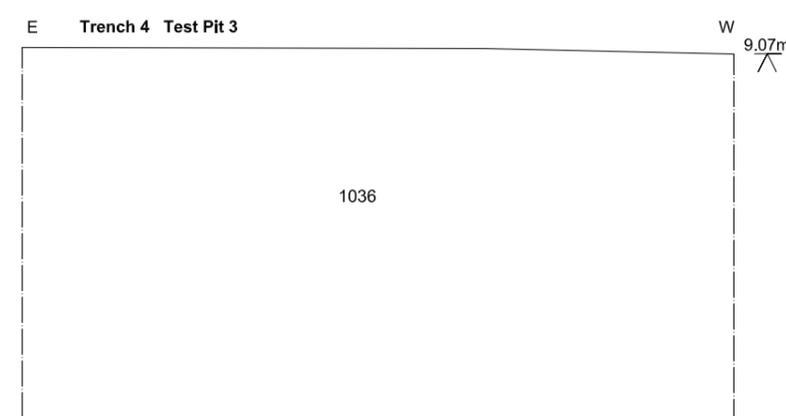
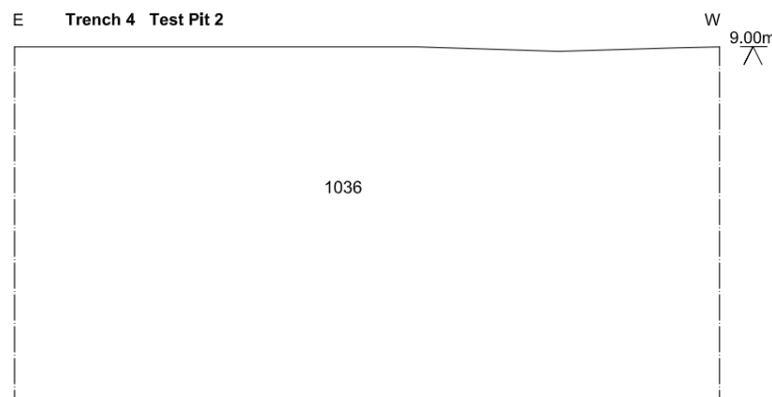
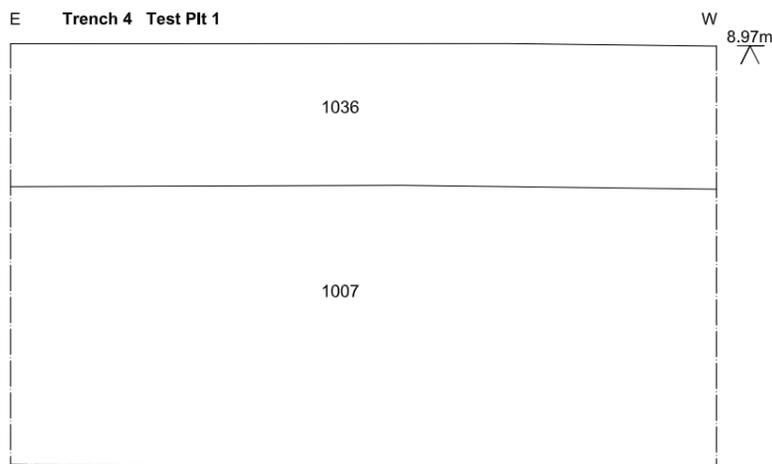
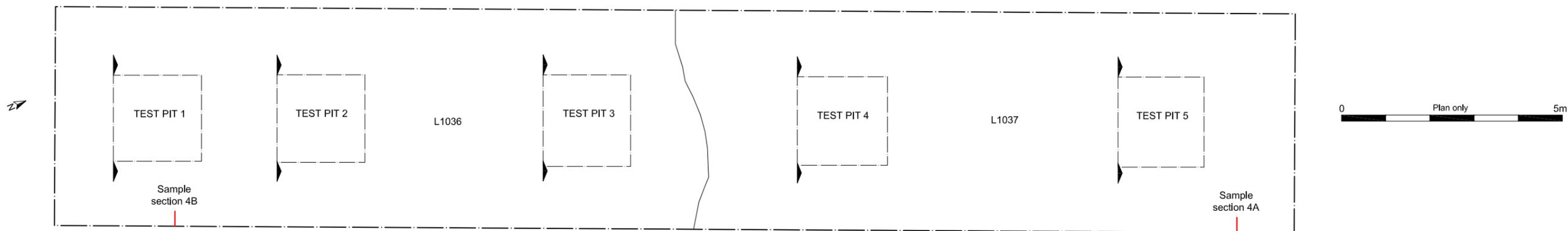
*Archaeological Solutions Ltd*

**Fig. 6 Plan and sections**

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

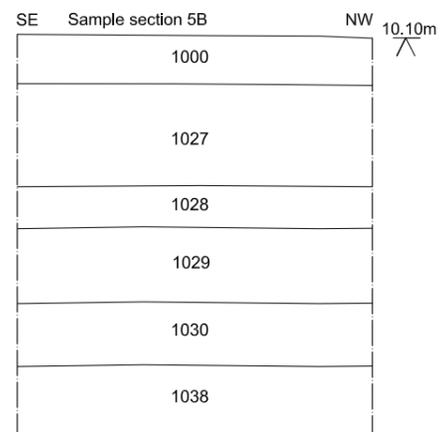
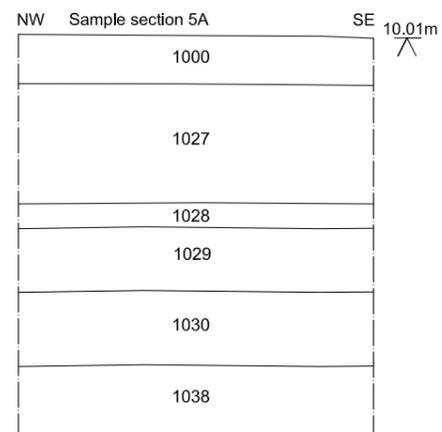
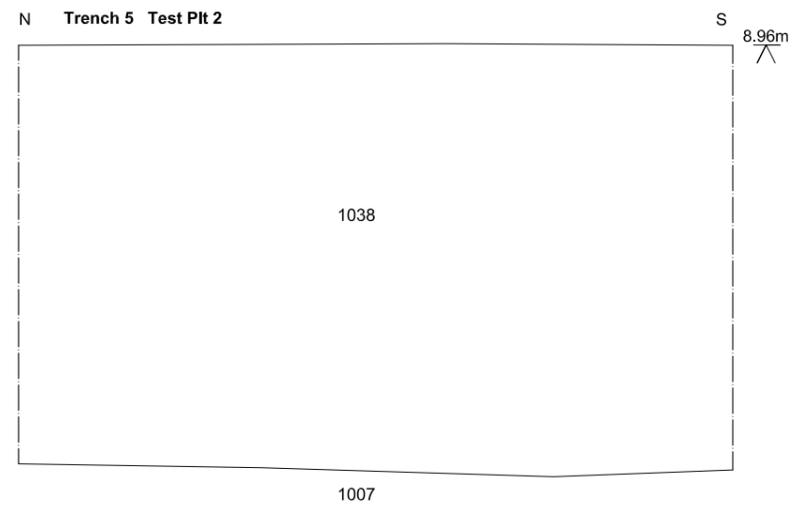
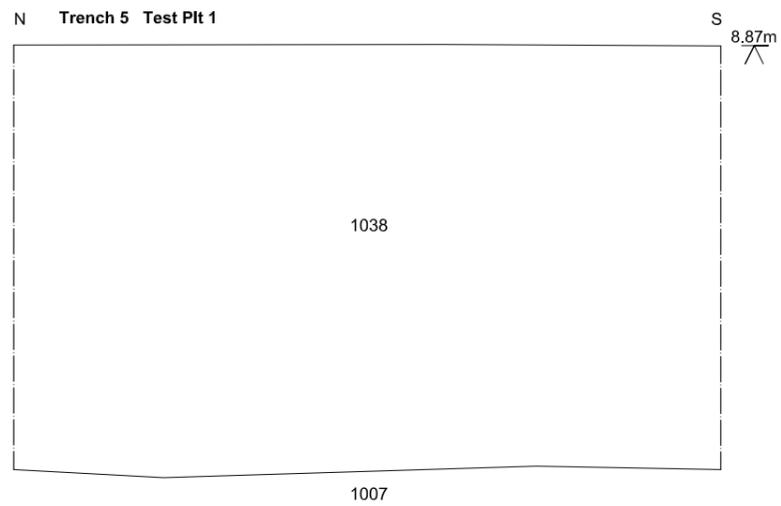
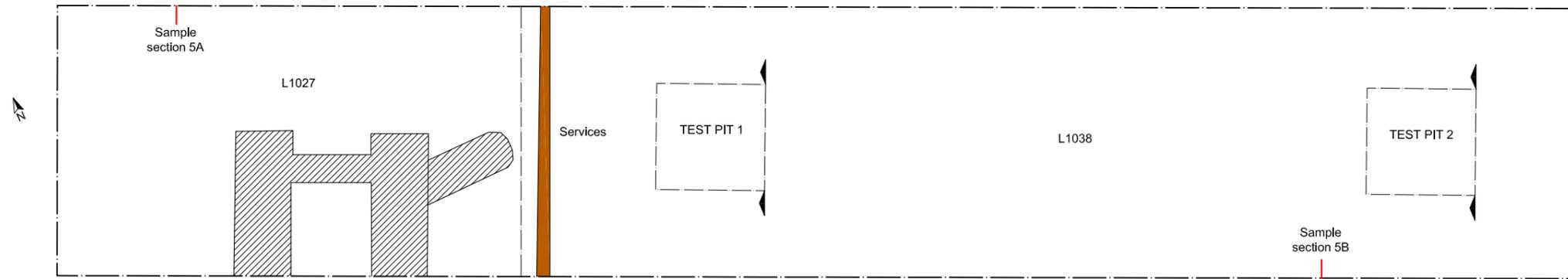
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Trench 4



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**Fig. 7 Plan and sections**  
 Scale Plans 1:100, sections 1:20 at A3  
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**Trench 5**



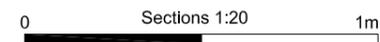
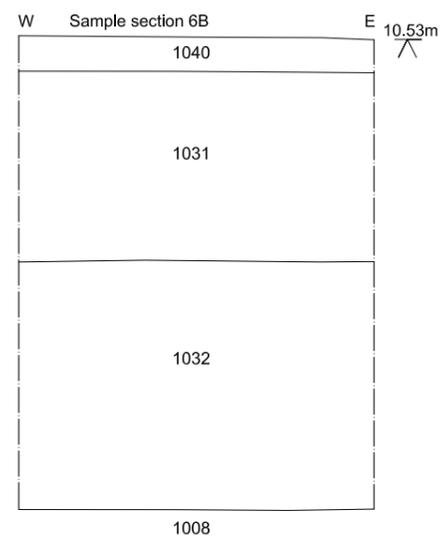
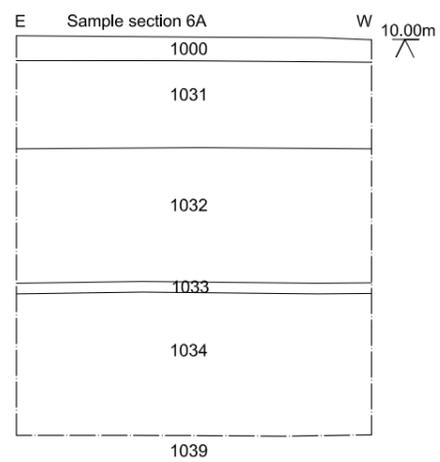
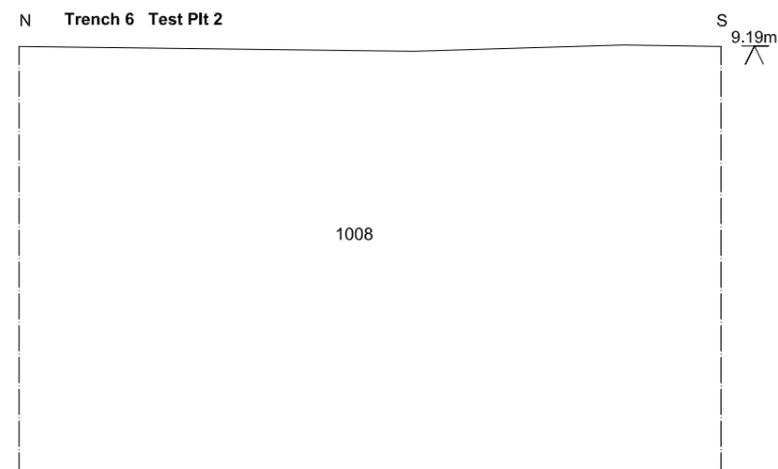
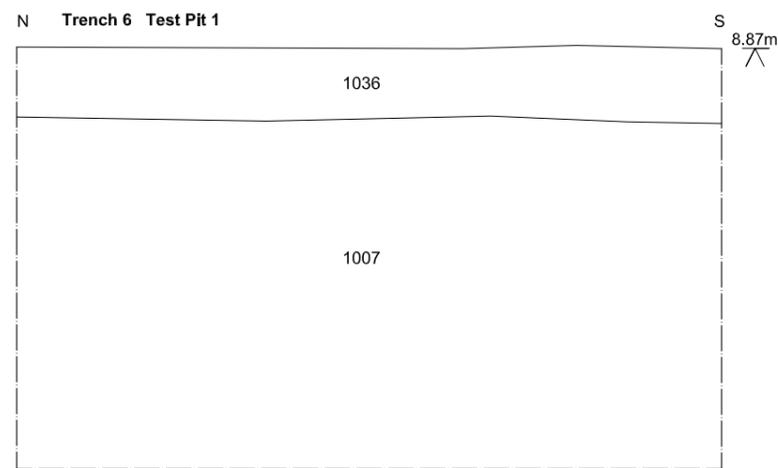
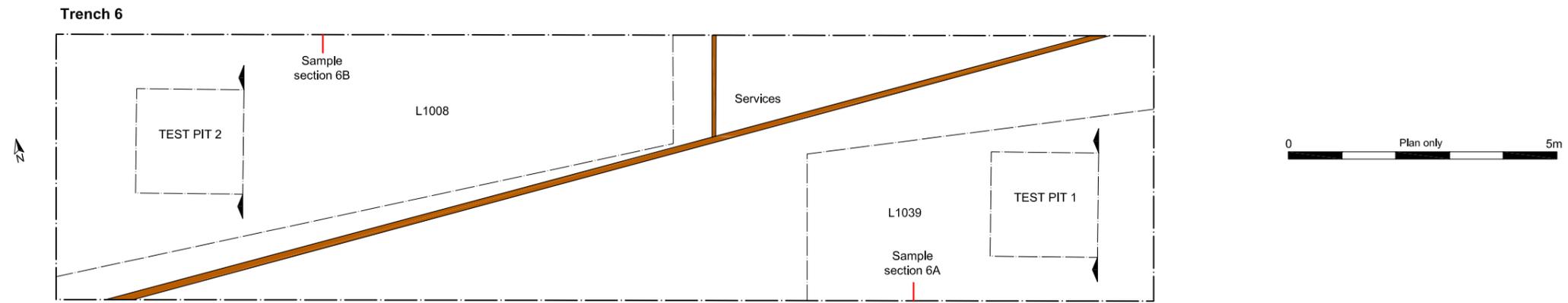
-  **Modern services**
-  **Concrete footings**

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**Fig. 8 Plans and sections**

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

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 Modern services

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**Fig. 9 Plans and sections**

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

Lake Lothing, Third Crossing, Lowestoft, Suffolk (P8421)