LAND OFF COWPER'S GATE (SOUTH), LONG SUTTON, LINCOLNSHIRE:

AN ARCHAEOLOGICAL EVALUATION

PCA Report Number: R16709

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Land off Cowper's Gate (South), Long Sutton, Lincolnshire PE12 9AY: An Archaeological Evaluation

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CONTENTS

1 Introduction 4
2 Geology and Topography 5
3 Archaeological and Historical Background 5
4 Project Aims and Research Objectives 5
5 Methodology 5
6 Results 7
7 Discussion and Conclusion 11
8 Personnel 12
9 Acknowledgements 12
10 Bibliography 12

FIGURES

Figure 1: Site Location 14
Figure 2: Detailed Site and Trench Location 15
Figure 3: Trenches and Archaeological Features overlain on the Geophysical Survey Results 16
Figure 4: Detailed Plan of Trenches 1 and 2 17
Figure 5 : Sections 18
Figure 6 : Section 12 19
Figure 7 : Section 18 20

APPENDICES

Appendix 1 : Site Photographs 21
Appendix 2: Context Index 27
Appendix 3: The Finds 33
Appendix 4: The Environmental Samples 48
Appendix 5: OASIS Form 54

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SUMMARY

This report describes the results of an archaeological evaluation carried out by Pre-Construct Archaeology on land at Cowper's Gate (South), Long Sutton, Lincolnshire. The work was commissioned by Robert Doughty Consultancy Ltd, on behalf of Nationwide Produce plc, and took place from 15th to 18th April 2024. The aim of the work was to evaluate the archaeological potential of the proposed development area and to inform possible mitigation measures, as required for the determination of a planning application for extensions to existing agricultural buildings on the site.

The site lies in an area that had been reported during the Second World War to contain a substantial stone building and skeleton in the western area of the site. It was speculated to be a church as referred to in the Domesday book of 1086. Geophysical survey of the site identified a probable drainage channel traversing the area from east to west, and a possible enclosure.

Archaeological remains were largely confined to the western fringes of the site. Abundant medieval artefacts were retrieved from a number of ditches or elongated pits and indicate occupation and other activity in the area in the medieval period. The ditches or pits may have commenced as quarries for sand extraction and were then used for waste disposal.

The dating of the artefacts seems to suggest an initial phase of occupation in the 11th-12th centuries and then, following a brief interruption, continuing through the 13th to 15th centuries. Several substantial fragments of querns were recovered in the northwestern part of the site and suggest this area was possibly used for specialised food processing in the medieval period. A glass linen smoother, perhaps as early as the 12th century, was found in the same area and may indicate fabric smoothing. More general domestic refuse, mostly represented by pottery fragments, was abundant in the southwestern corner of the site, suggesting that settlement activity was focussed in this area.

Occupation seems to have ended in the 15th century. The area was re-utilised in the 17th century, probably for agricultural purposes. The drainage channel previously identified by geophysics was located and dated to the post-medieval period. A burial of a horse, again of post-medieval date, was also found. The magnetic anomalies located on the west side of the site were revealed to be a series of medieval pits but there was no evidence of a possible enclosure suggested by the geophysics.

No masonry or human remains, as recorded on the Historic Environment Record, were located.

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1 Introduction

1.1 General Background

1.1.1 Pre-Construct Archaeology Ltd (PCA) was commissioned, Robert Doughty Consultancy Ltd, on behalf of Nationwide Produce plc, to undertake an archaeological evaluation on land off Cowper's Gate (South), Long Sutton, Lincolnshire (Figure 1). The evaluation took place from 15th to 18th April 2024.

1.1.2 Long Sutton is a village located *c*. 19km east of Spalding in the administration of South Holland District Council, Lincolnshire. The investigation site lies about 1.2km south-southwest of the centre of the village, on the east side of Cowper's Gate (South), immediately south of the A17, centred on National Grid Reference (NGR) TF 4280 2184 (Figure 1). A planning application (H11-1084-23) for proposed extensions to existing agricultural buildings has been submitted to South Holland District Council.

1.1.3 During the investigation 4 trenches were excavated, each measuring approximately 50m in length and 1.8m wide.

1.1.4 All works were undertaken in accordance with the following documents:

- The Lincolnshire Archaeological Handbook (LCC 2019)
- The Written Scheme of Investigation;
- Management of Archaeological Projects (English Heritage, 1990);
- Management of Research Projects in the Historic Environment (Historic England, 2015);
- Standard and Guidance for Archaeological Field Evaluation (Chartered Institute for Archaeologists, 2023).

Pre-Construct Archaeology Limited is a Registered Organisation (number 23) with the Chartered Institute for Archaeologists and will operate within the Institute's 'Code of Conduct' (CIfA 2022).

1.1.5 The archaeological works sought to determine the location, date, extent, character, condition and quality of any archaeological remains on the site, to assess the significance of any such remains in a local, regional, or national context, as appropriate, and to assess the potential impact of the development proposals on the site's archaeology.

1.1.6 This report describes the results of the archaeological evaluation. The site archive will be deposited with Lincolnshire Museums Service (The Collection) under accession number LCNCC: 2024.70.

1.2 Planning Background

1.2.1 The site is the subject of a Planning Application (H11-1084-23) submitted to South Holland District Council for proposed extensions to existing agricultural buildings. The Planning Archaeologist, archaeological advisor to South Holland District Council, has advised that trial trenching is required, and the results may necessitate further archaeological mitigation.

1.2.2 National Planning Policy on archaeology and built heritage is set out in National Planning Policy Framework (NPPF). Revised in December 2023, National Planning Framework: Planning for the Historic Environment (NPPF) provides guidance for planning authorities, property owners, developers and others on the investigation and preservation of archaeological remains.

1.2.3 The archaeological works were carried out in accordance with a Written Scheme of Investigation (WSI) prepared by Pre-Construct Archaeology Ltd (PCA 2024) following consultation with the Planning Archaeologist, archaeological advisor to South Holland District Council.

2 Geology and Topography

2.1 Geology

2.1.1 The solid geology at the site is Ampthill Clay Formation mudstone of the Jurassic Period. These are overlain by superficial deposits of Tidal Flat Deposits, clay and silt deposited between 11800 years ago and the present during the Quaternary period (British Geological Survey).

2.2 Topography

2.2.1 The site is on fairly flat land of the Lincolnshire Fenland at about 2m OD. A canalized watercourse, Fall Drain, forms the eastern boundary of the site.

3 Archaeological and Historical Background

3.1.1 Details and records of archaeological sites and finds in the area are maintained in the Lincolnshire Historic Environment Record.

3.1.2 Undated

3.1.3 It has been reported that a substantial stone building was uncovered during the Second World War, along with the remains of a human skeleton. These finds are reported to have been found in the western part of the proposed development site. Both the building and skeleton were undated. It has been speculated that the structure may have been a church referred to in the Domesday Book of 1086.

3.1.4 Geophysical Survey

3.1.5 A geophysical (magnetometer) survey was undertaken across the southern half of the site (the area not currently occupied by buildings and hardstanding). This identified magnetic anomalies of uncertain origin close to the western edge of the site; magnetic disturbance along the northern edge of the survey area; a drainage channel running east-west through the centre of the site; and a sub-rectangular enclosure apparently containing possible structural remains towards the southwest corner of the site (SUMO 2024).

4 Project Aims and Research Objectives

4.1 Project Aims

4.1.1 The archaeological evaluation aimed to address the following objectives:

- To record the nature, extent, date, character, quality, significance and state of preservation any archaeological remains affected by the investigation.
- To assess where appropriate any ecofactual and palaeo-environmental potential of archaeological deposits and features from within the site.

4.1.2 The aims of the investigation are in line with *The Archaeology of the East Midlands, An Archaeological Resource Assessment and Research Agenda*, Leicester Archaeology Monograph **13**, ed. N Cooper (2006), along with the *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands,* ed. D. Knight, B. Vyner & C. Allen (2012).

5 Methodology

5.1.1 The evaluation consisted of the mechanical excavation of four 50m by 1.8m trenches, which were excavated to the top of the geological natural, at which point archaeological remains became evident.

5.1.2 All machine excavation of trial trenches was carried out under constant archaeological direction by a suitably experienced archaeologist familiar with the ground conditions anticipated on the site.

5.1.3 Machine excavation of the trial trenches was undertaken by a mechanical excavator using a flat-bladed bucket. No mechanical excavators, earthmoving or other vehicles travelled within any excavated trench until it had been signed off by the Historic Environment Officer.

5.1.4 Machine-excavated deposits and the exposed surface were regularly scanned for the presence and collection of artefacts. Exposed surfaces and excavated spoil were scanned by metal detector.

5.1.5 The excavation by machine was taken down to the top of any significant archaeological level or to the top of natural deposits where no archaeological deposits have been found at a higher level. Machine excavation from the surface was taken down in spits of no more than 100mm thickness to ensure that deposits and features were not over-excavated and that any artefacts or biological evidence in the soil were collected or recorded.

5.2 Recording Methodology

5.2.1 The limits of excavations, heights above Ordnance Datum (m OD) and the locations of archaeological features and interventions were recorded using a Geomax GPS rover unit with RTK differential correction, giving three-dimensional accuracy of 20mm or better.

5.2.2 Manual plans and section drawings of archaeological features and deposits were drawn at an appropriate scale (1:10, 1:20 or 1:50).

5.2.3 Deposits or the removal of deposits judged by the excavating archaeologist to constitute individual events were each assigned a unique record number (often referred to within British archaeology as 'context numbers') and recorded utilising PCAs Digital Recording system.

5.2.4 High-resolution digital photographs were taken at all stages of the evaluation process, including of all archaeological features and deposits.

5.2.5 All finds were collected by hand and assigned to the record number of the deposit from which they were retrieved, receiving appropriate care prior to removal from the site.

5.3 Post-Fieldwork Methodology

5.3.1 Historic England's *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers Guide* (HE 2015) was used as the framework for post-excavation work.

5.3.2 The stratigraphic data for the project comprises written, drawn and photographic records. A total of 100 archaeological contexts were defined within the 4 trenches. Post-excavation work involved checking and collating site records and phasing the stratigraphic data (**Appendix 1**). A written summary of the archaeological finds was then compiled, as described in Section 6 with a discussion and chronological sequencing of the site in Section 7.

5.3.3 Artefactual material from the evaluation consisted of 728 pottery sherds dating from the Early Medieval to Post-Medieval periods, 548 animal bones, 144 fired clay and daub, 104 shell, 2 worked stone, 1 glass, 1 clay tobacco pipe, and isolated pieces of metal and slag.

5.3.4 None of the material recovered during the evaluation required specialist stabilisation or an assessment of its potential for conservation research.

5.3.5 The complete site archive will be packaged for long-term storage and curation. In preparing the site archive for deposition, all relevant standards and guidelines documents referenced in the Archaeological Archives Forum guidelines document (Brown 2011), the United Kingdom Institute for Conservation (UKIC) document (Walker 1990), and the relevant CIfA publication (CIfA 2020b) will be adhered to. As detailed in *Lincolnshire County Council Archaeology Handbook'* (Lincolnshire County Council 2019), the depositional requirements of the body to which the site archive will be ultimately transferred will be met in full.

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6 Results

6.1 Natural Deposits

6.1.1 Natural deposits across the site consisted of mid yellowish orange, firm, sand with infrequent blue grey clay patches. Subsoil deposits across the site consisted of mid brownish orange sand.

6.1.2 Archaeological features were present in Trenches 1, 2 and 3; these are discussed below. The remaining trench contained natural deposits overlain by subsoil and topsoil. Full details of all the trenches can be found in Appendix 2.

6.2 Trench 1

6.2.1 Twenty-three Archaeological features were discovered throughout this trench.

6.2.2 In the most north-western part of this trench was a pit [32], which was elongated in plan and it had steep sloping sides and a flat base. The full extent of this pit extended into the baulk, but the exposed part measured c.0.5m long, 0.55m wide, and 0.56m deep. The composition of fill (33) was firm sandy silt and was dark greyish brown in colour. This fill possibly represents a deliberate backfill from which were recovered pottery of the 14th-15th centuries, quern stone, and animal bone. This was cut by a later ditch [30]. This ditch was linear in plan, and it had steep sloping sides and a flat base. It measured c.1.63m long, 0.33m wide, and 0.18m deep. The composition of fill (31) was firm sandy silt and was dark orangish brown in colour. This fill was likely created by a process of natural infilling and yielded a single piece of 11th-12th century pottery and a large piece of quern stone. This ditch was also cut by pit [28]. This pit had an undetermined shape in plan, and it had moderate sloping sides and a flat base. It measured c.1.75m long, 0.44m wide, and 0.2m deep. The composition of fill (29) was firm sandy silt and was dark greyish brown in colour. This fill likely represents a natural infilling process but it recovered 14th-15th century pottery, animal bone and fired clay.

6.2.3 Within the centre of this trench was a series of intercutting features which have all been recorded in a 19.85m wide slot. These features are described in sequence of their position within the trench going from north to south with their stratigraphic sequence kept in consideration.

6.2.4 At the most northern part of this series of intercutting features was pit [36] which was elongated in plan, with steep sloping sides and a concave base. It measured 1.27m wide, and 0.64m deep. It contained 2 fills. Fill (91) was soft, with a dark greyish black colour and silty sand composition and possibly represents a dump of rubbish. Overlaying this was fill (37) which was soft light brownish grey silty sand which may have represented a deliberate backfill. This fill yielded a couple of fragments of 15th-16th century pottery.

6.2.5 To the southeast, cutting pit [36], was another pit [99] which was elongated in plan; it extended beyond the trench limits and was not fully exposed but was 1.32m wide. It had steep sloping sides; the base was not reached but it was at least 0.39m deep. The composition of fill (100), which appeared to be a dump of rubbish, was soft clayey sand and was black in colour.

6.2.6 Continuing southeast, pit [99] was cut by a later pit [38] which was elongated in plan and extending beyond the trench baulk. Measuring 2.26m wide, it had steep sloping sides and its base was not reached but it was at least 0.43m deep. This pit contained 2 fills, the lower fill (92) being firm, black clayey sand and was likely a result of refuse dumping. Overlaying this was a similar fill (39) which was firm black clayey sand and also formed from a dumping of rubbish event. Finds of 14th-15th century pottery, decayed fragments of quern, and animal bone were recovered from this fill.

6.2.7 Pits [99] and [38] were overlain by a layer (40) of light grey soft silty sand that contained 14th-15th century pottery. It measured 3.98m wide, and 0.51m deep and was likely formed as a result of natural infilling, possibly alluvial processes.

6.2.8 Pits [36], [99] and [38] and layer (40) were all truncated by a later pit [63] located immediately northeast of these features. This pit was elongated in plan and extended into the baulk. It was 1.75m wide, had steep sloping sides; the base was not reached but it was at least 1.1m deep. It contained 2 fills. Lower fill (94) was firm black clayey sand and upper

fill (95) was firm mid grey silty sand. Both of these fills likely represent different events of dumping of rubbish.

6.2.9 To the southeast cutting pit [38] was pit [43] which was elongated in plan and extending beyond the trench. It had near vertical sides, but the base of this feature was not reached. It measured 1.12m wide, and 0.8m deep and contained 3 fills. The lower fill (44) was firm, mid greyish black clayey sand and was likely the result of a dumping of rubbish event. The second fill (45) was also firm, mid greyish black clayey sand, similarly likely the result of a dump of rubbish. The uppermost fill (68) was firm light grey silty sand and was possibly formed by natural infilling processes, potentially alluvial movements.

6.2.10 Continuing southeast along this trench, Pit [43] was cut by ditch [41] which was linear in plan and was aligned northeast-southwest. It had near vertical sides and a flat base. It measured 1.3m wide, and 0.6m deep. It contained 2 fills. The lower fill (69) was firm, with a light brownish grey colour and silty sand composition and was potentially the result of initial natural infilling. The upper fill (42) was firm, with a mid-brownish grey colour and was composed of silty sand and possibly represents a deliberate backfill.

6.2.11 Ditch [41] also cut another pit [46] immediately southeast, and was elongated in plan, extending into the baulk. It had steep sloping sides and a flat base. It measured 1.5m wide, and 0.62m deep and contained 3 fills. The lowest fill (70) was soft light greyish brown silty sand and was possibly a result of initial infilling from natural processes. The second fill (71) was soft dark greyish black sandy silt and was likely the result of dumping of rubbish. The uppermost fill (47) was firm mid brownish grey sandy silt, seemingly the result of natural infilling, likely alluvial processes.

6.2.12 Continuing southeast, overlaying pit [46] was a layer (72) of mid brownish grey soft silty sand. It measured 2.5m wide, and 0.3m deep and likely formed due to natural alluvial processes. However, it did yield a small quantity of 11th-12th century pottery.

6.2.13 Layer (72) also overlaid pit [55] which was just southeast of [46]. This was elongated in plan, extending into the baulk. It had steep sloping sides but its base was not reached. It measured 2.12m wide, and at least 0.69m deep and contained 5 fills. The lowest fill (73) was soft light greyish white sand. This fill recovered small amounts of 11th-12th century pottery. The second fill (74) was soft, mid blueish grey sandy silt, likely representing a dump of rubbish. This fill recovered quantities of 12th century pottery, animal bone, and fired clay. Fill (96) is equivalent in the stratigraphic sequence to (74). This fill was soft light brownish grey sand and likely represented a dump of rubbish. The fourth fill (75) was friable, mid brownish red silty sand and likely represents another dumping of rubbish. This fill yielded 12th century pottery, animal bone, fired clay and daub and a glass linen smoother of probable 16th-18th century but perhaps 12th-14th century date. The final fill in the stratigraphic sequence (76) was soft, mid brownish grey silty sand. This fill was also identified as a possible dumping of rubbish event abundant 12th century pottery and animal bone, and two large fragments of quern.

6.2.14 Truncating pit [55] was pit [56] which was elongated in plan, with gradual sloping sides and a concave base. It measured 0.82m wide, and 0.42m deep. The composition of fill (77) was firm sandy silt and was dark yellowish black. This fill recovered finds of 12th century pottery, and animal bone.

6.2.15 Southeast of pit [55] was pit [64]. The stratigraphic relationship between these two pits could not be determined within this slot. This pit was elongated in plan, and it had steep sloping sides and a concave base. It measured 1.25m wide, and 0.35m deep. The composition of fill (93) was firm sandy clay and was light brownish grey in colour. This fill likely represented a deliberate backfilling event.

6.2.16 Overlaying both pits [55] and [56] was layer (72) which was mid brownish grey soft silty sand. It measured 2.5m wide, and 0.3m deep. This layer did recover a little 11th-12th century pottery but is possibly the result of natural infilling processes, likely as consequence of alluvial movements.

6.2.17 Continuing southeast and cutting layer (72) and pit [64] was pit [57]. This pit was elongated in plan, with steep sloping sides and a concave base. It measured 1.57m wide, and 0.52m deep. Its fill (78) was mid greyish brown firm sandy silt and it yielded a single sherd of 11th-

12th century pottery.

6.2.18 Continuing southeast within this intervention slot, pit [58] was identified. This pit was elongated in plan, and it had moderate sloping sides and a concave base. It measured 0.9m wide, and 0.49m deep. The composition of fill (80) was firm silty sand and was light brownish grey in colour. This deposit was possibly a deliberate backfill and contained 13th-14th century pottery and abundant sea shells, mostly cockle.

6.2.19 Immediately southeast and cutting pit [58] was pit [59]. This pit was elongated in plan, and it had steep sloping sides and a concave base. It measured 1.68m wide, and 0.63m deep. The composition of fill (81) was firm silty clay and was light greyish brown in colour. This fill possibly represents a deliberate backfilling event.

6.2.20 Cutting pit [59] immediately to the southeast was pit [60] which was elongated in plan, with steep sloping sides and a concave base. It measured 0.77m wide, and 0.51m deep and contained 5 fills. The lowest fill in the stratigraphic sequence (82) was soft, light yellowish grey sand, likely representing an initial silting. The second fill (83) was soft, dark - black sandy silt and possibly represents a dump of rubbish. The third fill (84) was soft, dark brownish grey sandy silt that also possibly represents a dump of rubbish. The fourth fill (85) was firm, dark yellowish black sandy silt, also likely the result of a dumping of rubbish. It contained small quantities of 11th-12th century pottery, fired clay, and animal bone. The uppermost fill (86) was firm, mid brownish grey silty clay. This fill likely represented a deliberate backfill.

6.2.21 Pit [60] was cut by pit [61] to the southwest. This was elongated in plan, with moderate sloping sides and a flat base. It measured 2.09m wide, and 0.43m deep and contained 3 fills. The initial fill (87) was firm, light brownish grey sandy silt identified as a possible dump of rubbish. The second fill (88) was soft, black silty sand, also possibly the result of a dump of rubbish. Fill (89) was firm, mid brownish grey sandy silt. This fill possibly represents a final silting event, likely due to alluvial processes.

6.2.22 Southeast beyond this intervention slot of intercutting features 4 other features were discovered. Located within the centre of the trench just southeast of pit [62] was ditch terminus [51]. This was linear in plan with the terminus being square in shape and was aligned east-west. It had steep sloping sides and a flat base and measured 1.34m wide, and 0.23m deep. Fill (52) was light greyish brown soft silty sand, likely the result of natural infilling processes, though contained moderate quantities of fired clay and a little 13th-14th century pottery. This ditch terminus had no stratigraphic relationship with ditch [53] perhaps suggesting that these ditches were contemporary. Ditch [53] was linear and aligned north-south. It had moderate sloping sides and a concave base and measured c.1m long, 1.07m wide, and 0.3m deep. Its fill (54) was firm, mid brownish grey sandy silt which yielded a little 13th-15th century pottery, and animal bone. Located between ditches [51] and [53], was sub-circular pit [48]. This had near vertical sloping sides with a flat base and measured 1.12m wide, and 0.71m deep. It contained 2 fills, the lower (49) being firm, mid brownish grey sandy silt. This was likely to be an initial dump into the base of the pit. Above this was fill (50), a dark - grey sandy silt, likely a backfill event. It yielded a single piece of 13th-14th century pottery.

6.2.23 The drainage channel identified by the geophysical survey was located south of [48]. It was c.6.8m wide and contained modern pottery on the surface of the deposit. It remained unexcavated within this trench.

6.2.24 A gully [34] was truncated by the drainage channel. It had moderate sloping sides and a flat base and measured c.1m long, 0.34m wide, and 0.1m deep. Its fill (35) was firm, mid greyish brown silty sand which yielded a single sherd of 11th-14th century pottery. This gully continued into Trench 2.

6.3 Trench 2

6.3.1 West of the centre of Trench 2 was a continuation of a gully from Trench 1 ([34]). Gully [6] measured 0.49m wide, and 0.2m deep. Its fill (7) was soft, light yellowish brown silty sand representing a natural silting event.

6.3.2 Ditch [8], aligned N-S, was located to the west of gully [6]. It had moderate sloping sides and a concave base and measured c.1m long, 1.28m wide, and 0.71m deep. The composition of fill (9) was soft silty sand and was mid greyish brown in colour. It contained a little animal bone and fired clay. Ditch [8] was truncated by a modern feature.

6.3.3 West of ditch [8], a horse burial [10] truncated medieval pits [21] and [22] (**Figure 6: Section 12; Plates 9 and 10**). It measured 1.98m long, 0.92m wide, and 0.98m deep. It contained 3 fills. Horse skeleton (26) was buried on its side with the head at the southern end of the cut. Basal fill (27) was soft, with a mid greenish grey colour and silty sand composition and was located around the bones. It contained 17th-18th century pottery. Fill (11) was firm, mid brownish grey silty sand and was a backfill event. It contained possibly intrusive brick. Fill (20) was soft, light brownish grey silty sand, likely a natural silting event.

6.3.4 Pit [12] was elongated in plan, with moderate sloping sides and a concave base, and measured 0.73m wide, and 0.37m deep. Its fill (13) was soft, light orangish white sand that contained 12th century pottery. This was truncated by pit [21] in the west. Pit [21] was elongated in plan, with moderate sloping sides and a concave base and measured c.1m long, 1.57m wide, and 0.35m deep. Its fill (14) was firm, mid - grey silty sand which contained abundant 12th century pottery and some animal bone and fired clay. An environmental sample was taken from this fill; this contained abundant charcoal particles and frequent carbonised seeds of grasses, wheat, including spelt, and barley (**Appendix 4**). Truncating this was pit [22], which had steep sloping sides and a concave base. It measured 2.24m wide, and 0.38m deep and contained 2 fills. Lower fill (16) was soft, light brownish grey sand. Upper fill (19) was firm, mid reddish grey silty sand that yielded a large quantity of probable 12th century pottery, fired clay and animal bones. An environmental sample was taken from the upper fill (19); this yielded little archaeobotanical material though a fairly frequent amount of charcoal and occasional carbonised seeds including barley and rare wheat, though most was indeterminate charred grain (**Appendix 4**).

6.3.5 Linear [17] truncated pit [22] on its eastern side. It had steep sloping sides and a concave base. It measured c.1m long, 2.49m wide, and 0.76m deep. Its fill (18) was firm mid greyish brown silty sand which contained animal bone and 14th-15th century pottery. On its western side, this ditch truncated pit [23]. This pit [23] had steep sloping sides and a concave base and measured 1.51m wide, and 0.53m deep. Its fill (24) was mid greyish brown soft silty sand from which 13th-14th century pottery and animal bone was recovered.

6.3.6 Layer (25) was soft sandy silt in composition and was mid greyish brown in colour. It measured c.1m long, 5.23m wide, and 0.41m deep. It continued towards the end of the trench, before being truncated by modern disturbance at the western end of the trench. This modern disturbance was shallow.

6.4 Trench 3

6.4.1 In the central part of Trench 3 was an east to west aligned ditch [97] measuring 5.1m wide and 1.5m deep (**Plate 11**). This is the drainage channel that also appears in Trenches 1 and 4. This feature was machine excavated due to size and depth and its fill (98) contained a little animal bone and 17th century clay tobacco pipe.

6.4.2 To the southeast end of the trench was a single linear [4] measuring 1.9m wide and 0.44m deep. This feature did not continue into Trench 4 and its fill (5) was devoid of artefacts.

6.5 Trench 4

6.5.1 In the western part of Trench 4 was, corresponding to the drainage channel detected on the geophysical survey, was an east to west aligned ditch. This was unexcavated.

6.6 Additional Deposits

6.6.1 Topsoil across the site consisted of a mid-greyish brown sandy silt measuring 0.14m – 0.4m thick (1). Little subsoil (2) was present in any of the trenches, probably due to the site's recent usage as agricultural land. The subsoil consisted of a mid-brownish orange sand measuring 0.1m thick.

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7 Discussion and Conclusion

7.1 Summary

7.1.1 The archaeological sequence is described by placing stratigraphic sequences within broad phases, assigned on a site-wide basis in this case. Interpretation has been added to the data, and these phases have been correlated with recognised historical and geological periods. The following describes the archaeological sequence as determined by the relative dates of the finds.

7.2 Phase 1: Natural Sub-Stratum

7.2.1 Phase 1 represents the natural geological material exposed within the trenches. This geological material is represented by firm yellowish-orange sand and patches of an overlaying greyish-blue clay. These are natural Tidal Flat deposits.

7.3 Phase 2: Medieval

7.3.1 Several ditches or elongated pits were revealed in the west of the site, in Trenches 1 and 2, and contained ceramics of 11th-12th century date. These linear features were aligned east-northeast to west-southwest and north to south and may indicate the land was partitioned into rectilinear enclosures or, alternatively, the features may initially have functioned as sand quarries. The pottery was particularly abundant in Trench 2 in the southwestern part of the site and may suggest domestic occupation of the period was focussed in this area.

7.3.2 In addition to the ceramics, the linear features also yielded several substantial fragments of quern, all from Trench 1 in the northwest of the site. The quantity of these latter items perhaps indicate that this region of the site had a specific function in the grinding of grain at this time.

7.3.3 A glass linen smoother was also found in Trench 1. This may date to about the 12th century, but similar examples seem to be more prevalent in the 16th-18th centuries.

7.3.4 An absence of ceramics dating to the 12th-13th centuries may indicate a brief interruption in the use of the site at this time, but pottery suggests that occupation was resumed in the 13th century and continued probably to the 15th century. This phase of occupation was again confined to the western part of the site and was still represented mainly by linear ditches and gullies, probably representing further land parcelling. In this later medieval phase of occupation the ceramics of the period were more evenly distributed between the northwestern and southwestern parts of the site. However, as with the earlier phase, all the querns were restricted to the northwestern part of the site. This may indicate that the food-processing activities indicated by the querns continued to be focussed in this area during the high medieval period. However, the querns are quite widely dated, and it is possible that examples found in these later medieval deposits are redeposited from the 11th-12th century horizons.

7.4 Phase 3: Post-medieval

7.4.1 Following the 15th century the site seems to have been abandoned for about 2 centuries. Use of the area appears to have recommenced in the 17th century. A large drainage channel observed in Trenches 1, 3 and 4 corresponds to both the cropmarks and geophysical survey. The surface finds from this feature suggest a post-medieval date, and the 17th century clay pipe found during the machine slot of this feature supports this.

7.4.2 Also dating from the post-medieval period, a juvenile horse burial was revealed in Trench 2.

7.5 Conclusion

7.5.1 The main aim of the evaluation was to inform the Local Planning Authority, as advised by South Holland District Council's archaeological advisor, and the client regarding the extent, depth and nature of archaeological deposits within the location of the proposed development.

7.5.2 In summary, archaeological features were present in 2 of the 4 trenches, with two main concentrations of archaeological features, in the northwest of the site and in the southwestern corner. Both concentrations represent a similar phases and types of activity. A number of ditches or large elongated pits, perhaps excavated as boundaries or for sand extraction, have been used as midden deposits from the 11th to 12th century and then again, after a possible brief hiatus, in the 13th to 15th centuries. Fragments of several querns suggest food processing activities were undertaken in the northwestern part of the site. In the same area a glass linen smoother was recovered and indicates that fabric was being smoothed in this area from as early as the 12th century but possibly later. In contrast, pottery, particularly of the 11th-12th centuries, was much more abundant in Trench 2 in the southwestern part of the site than in the northwest. This perhaps indicates that domestic occupation was focussed in or near this southwestern area.

7.5.3 Occupation I the area seems to have ceased in the 15th century. Later usage of the site was probably for agricultural purposes and includes a 17th to 18th century drainage channel running east to west across the centre of the site. There was also a horse burial truncating some of the early medieval pits.

7.5.4 Based on the results of the evaluation, further archaeological works, localised on the western boundary of the site, may be required. Any decision regarding further archaeological work will be at the discretion of South Holland District Council's archaeological advisor.

8 Personnel

Rebecca Nichols of PCA Newark managed the evaluation and Gary Taylor of PCA Newark edited this report. The evaluation was carried out by the fieldwork team at PCA Newark. Figures accompanying this report were prepared by Mark Roughley of PCA's CAD department. The finds were examined by Jane Young, Dr Hannah Russ and Gary Taylor and the environmental samples were analysed by Sophie Pallett and Tegan Abel.

9 Acknowledgements

Pre-Construct Archaeology Ltd would like to thank Robert Doughty Consultancy Ltd, for commissioning the work on behalf of Nationwide Produce plc. The Historic Environment Officer, Gregor Robertson-Morris, monitored the investigation on behalf of the Planning Authority.

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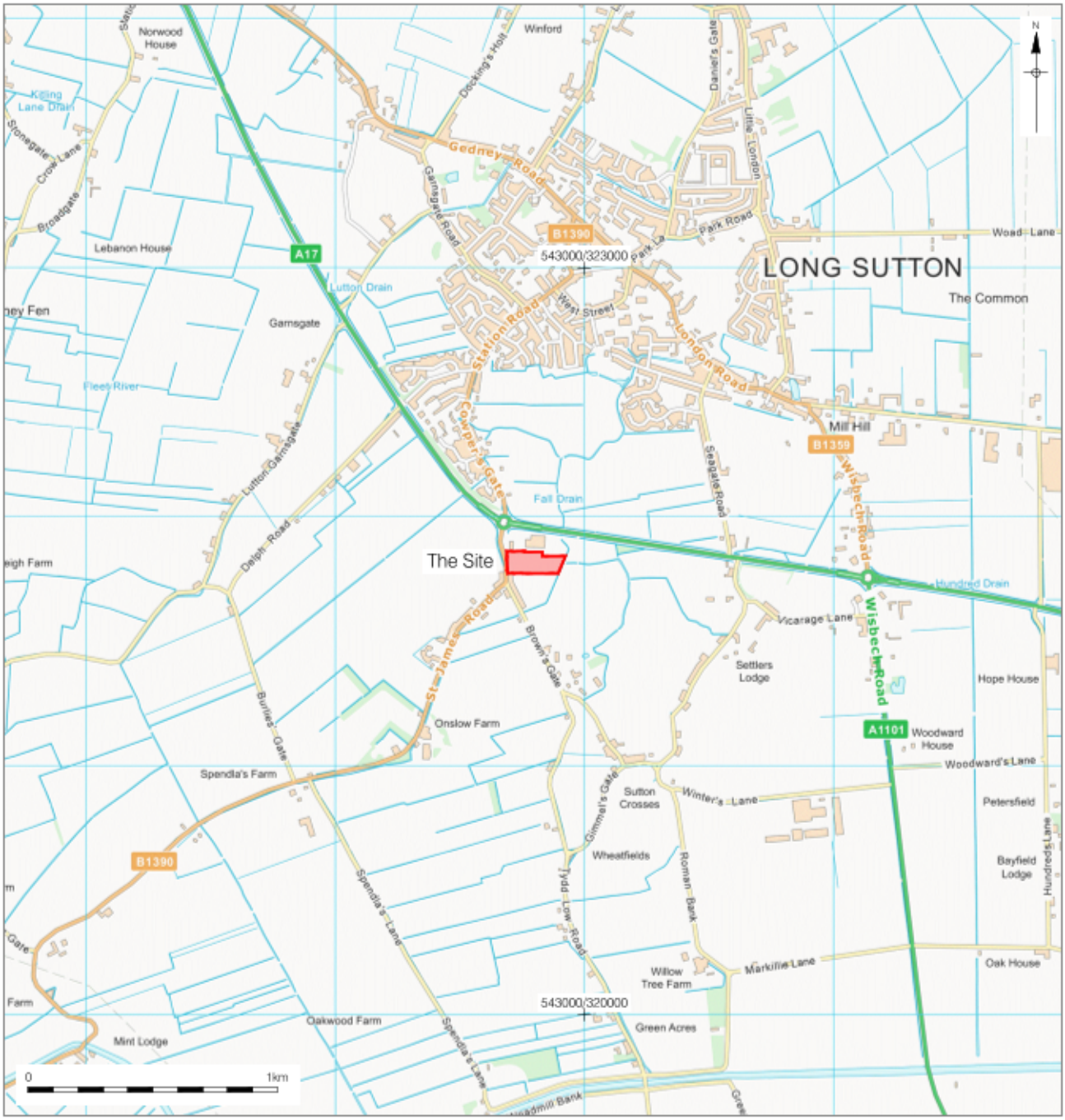
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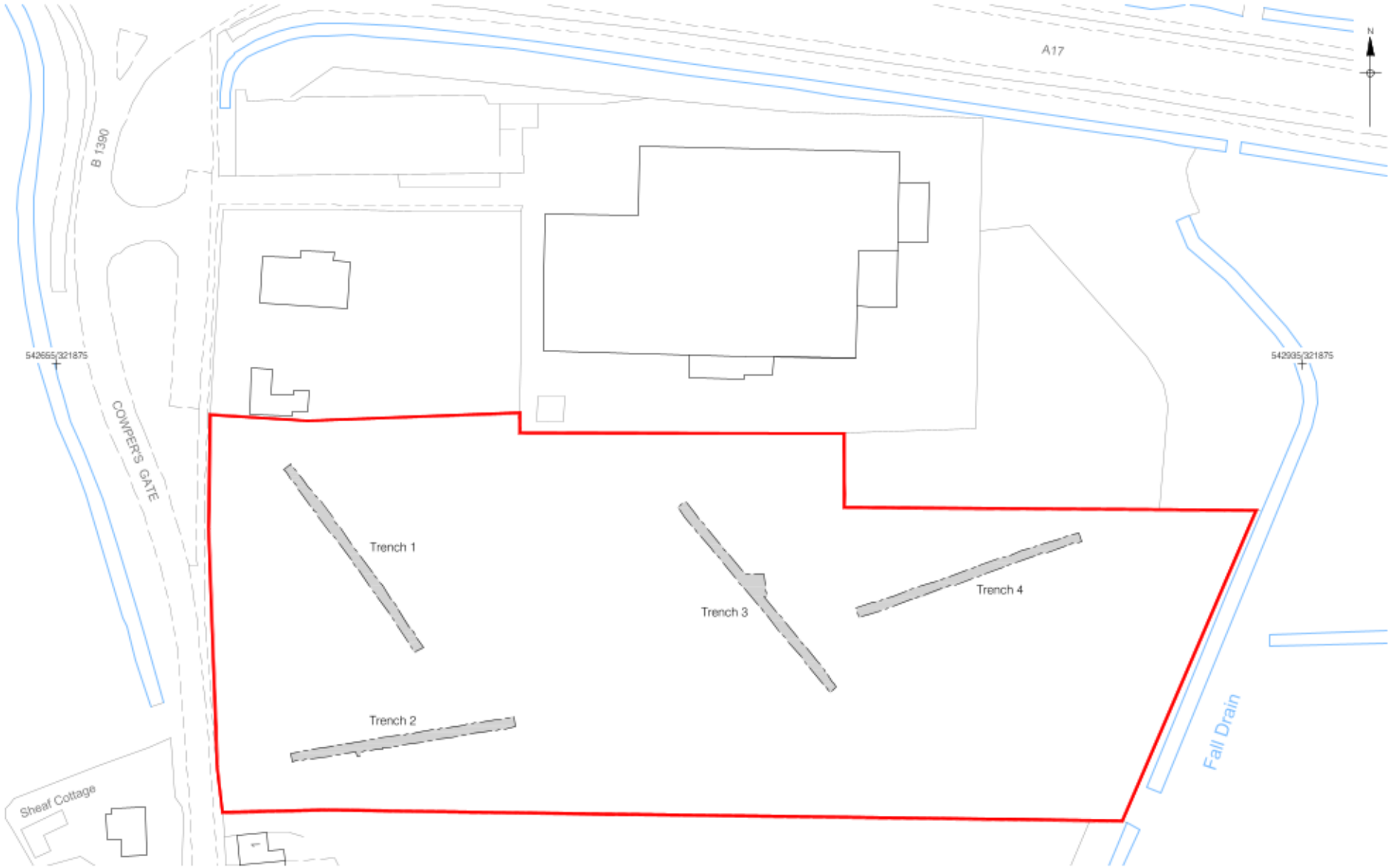




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Figure 1
Site Location
1:2,000,000, 1:250,000, 1:25,000 at A4

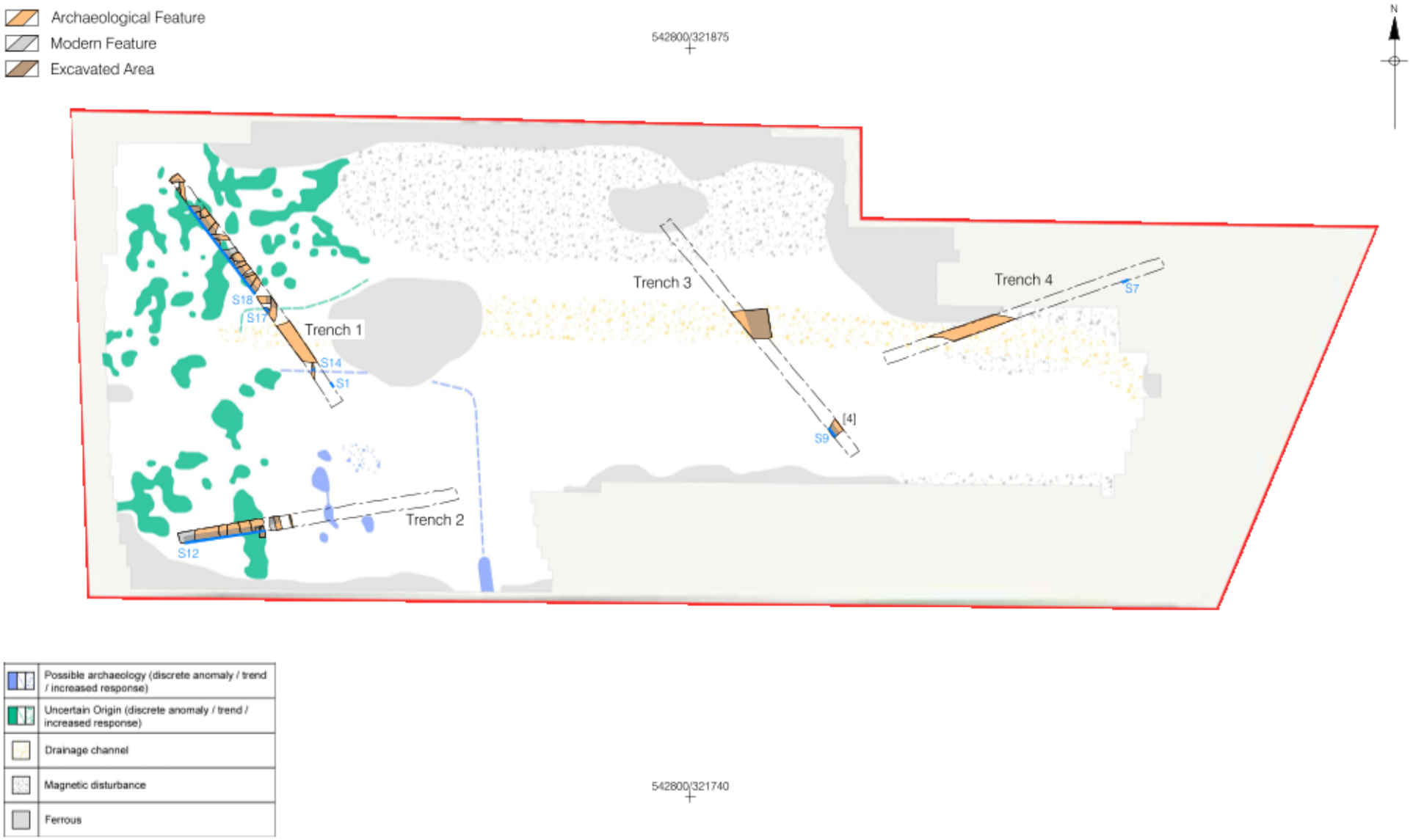
P:\PROJECT DATA\Out of London\Lincolnshire\Land off Cowper's Gate (South), Long Sutton\CAD\EVAL\Fig 02_Detailed Site Location.dwg



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Figure 2
Detailed Site and Trench Location
1:1,250 at A4

P:\PROJECT DATA\Out of London\Lincolnshire\Land off Cowper's Gate (South), Long Sutton\CAD\EVAL\Fig 03_Trenches and Features on Geophysics.dwg



Geophysical survey results reproduced from a drawing by SUMO GeoSurveys Ltd. (March 2024)

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Figure 3
Trenches and Archaeological Features overlain on the Geophysical Survey Results
1:1,000 at A4

P:\PROJECT DATA\Out of London\Lincolnshire\Land off Cowper's Gate (South), Long Sutton\CAD\EVAL\Fig 04_Detailed Plan of Trenches 1 and 2.dwg

Archaeological Feature
Modern Feature
Excavated Area

N

[28]
[32]
[30]
[36]
[63]
[99]
[43]
[38]
[41]
[46]
[55]
[64]
[56]
[58]
[57]
[59]
[60]
[62]
[61]
S18
[51]
[53]
S17
[48]
Trench 1
drainage channel
[34]
S14
S1

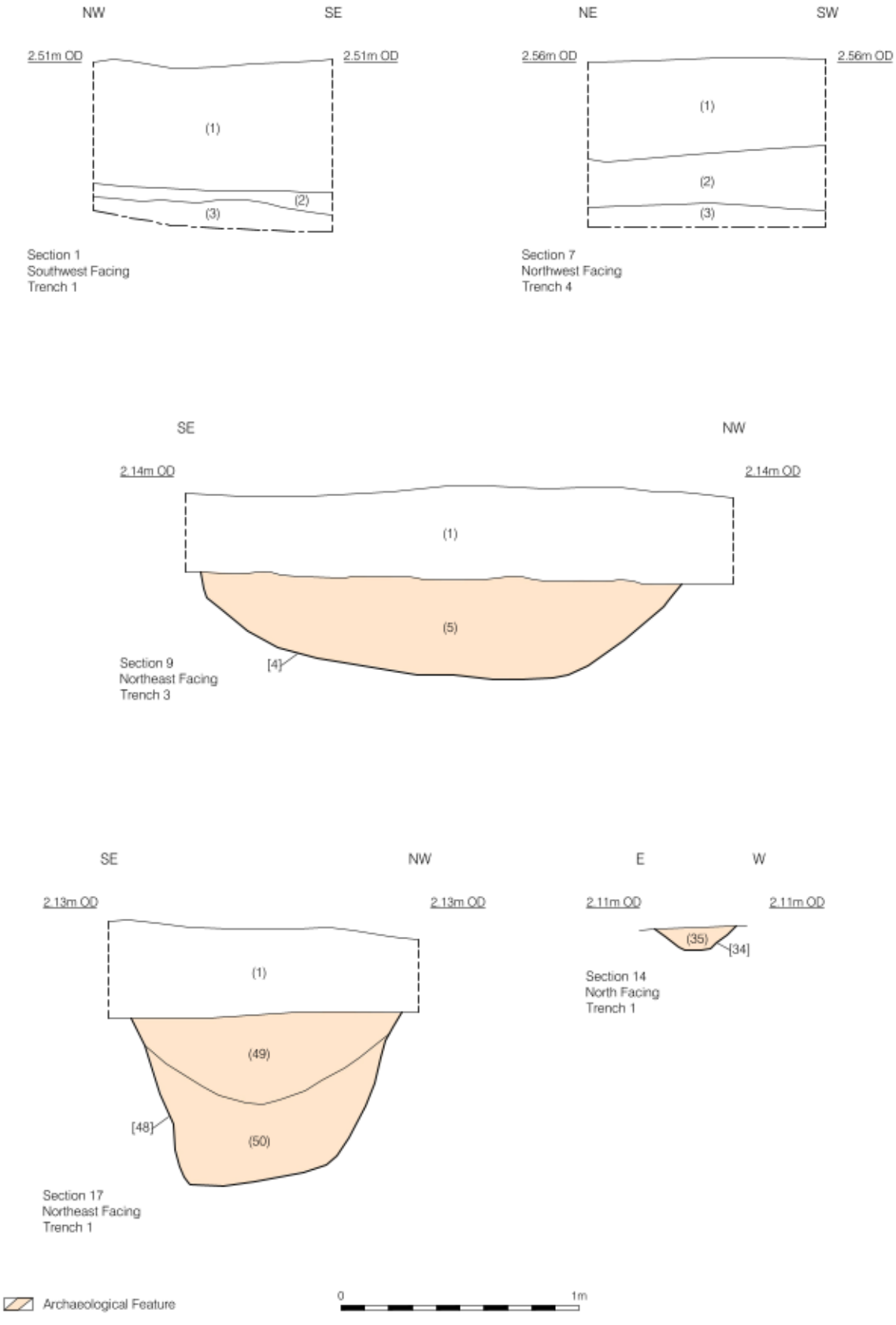
[8]
[22]
[21]
[23]
[6]
[12]
[17]
[10]
horse burial
[25]
S12
Trench 2

	Possible archaeology (discrete anomaly / trend / increased response)
	Uncertain Origin (discrete anomaly / trend / increased response)
	Drainage channel
	Magnetic disturbance
	Ferrous

0 10m

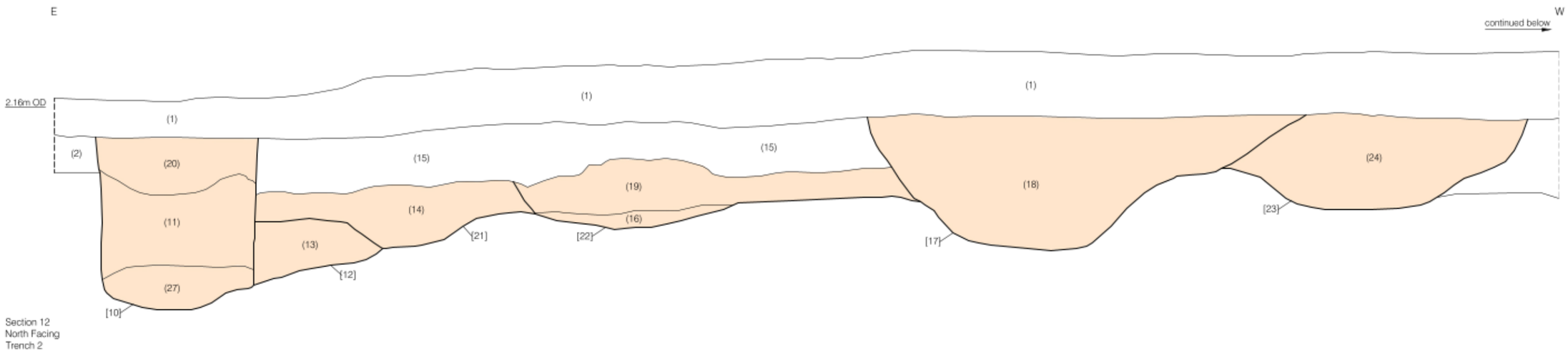
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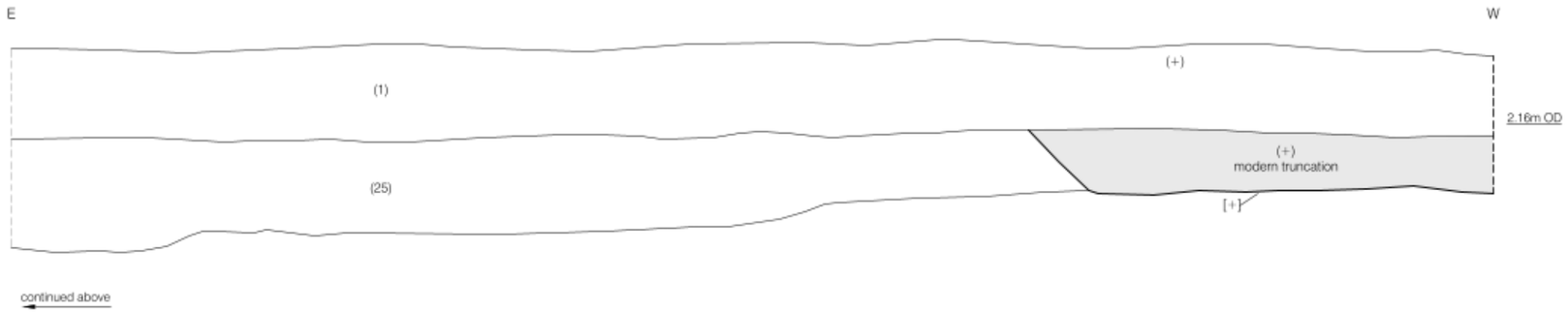
Figure 4
Detailed Plan of Trenches 1 and 2
1:250 at A3



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Figure 5
Sections
1:25 at A4





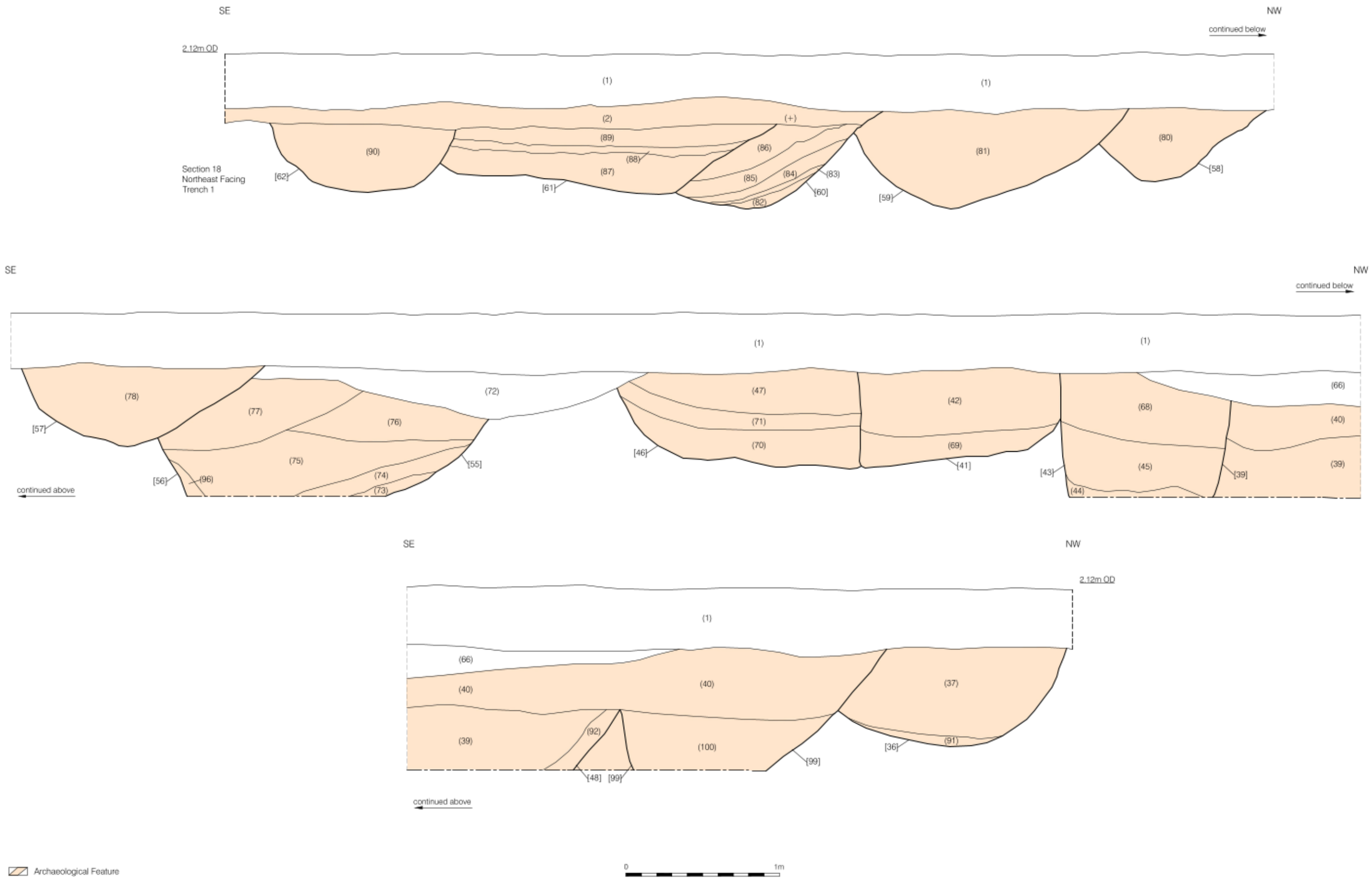
Archaeological Feature
Modern Feature

0 1m

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Figure 6
Section 12
1:25 at A3

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Figure 7
Section 18
1:25 at A3

Appendix 1 : Site Photographs



Plate 1: Trench 1 looking south-east, showing the natural deposits on the site. Scale: 2 x 1m.



Plate 2: Trench 2 looking east, showing the natural deposits on the site. Scale: 2 x 1m.

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Plate 3: Trench 3 looking north-west, showing the natural deposits on the site. Scale: 2 x 1m.



Plate 4: Trench 4 looking north-east, showing the natural deposits on the site. Scale: 2 x 1m.

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Plate 5: Representative section of Trench 1, looking south. Scale: 1m.



Plate 6: Sequence of intercutting pits [62], [61] and [60] in Trench 1, looking west. Scale: 2m x2

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Plate 7: Pit [57] in Trench 1, looking southwest. Scale: 2m.



Plate 8: Sequence of intercutting pits [43], [38] [99] and [36] in Trench 1, looking west. Scale: 2m x2.



Plate 9: Horse burial (Upper half) (26) in Trench 2, looking south-east. Scale: 1mx 0.5m.



Plate 10: Horse grave [10] cutting pits [21] and [22] in Trench 2, looking south. Scale: 2m.

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Plate 11: Machine slot through post-med drainage channel [97] in Trench 3, looking west. Scale: 2m.



Plate 12: Linen Smoother found in (75). Scale 15cm.

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Appendix 2: Context Index

Abbreviations: UE means 'unexcavated'; N/A means 'not applicable'; > means 'greater than'; < means 'up to'; Context numbers are followed by a brief description and interpretation; their dimensions in metres (in the order length x width x depth; or diameter x depth); and their critical stratigraphic relationships.

Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
1	1,2,3,4	-	-	Layer	Friable mid greyish brown sandy loam with infrequent small stones and very infrequent farm debris	Topsoil	0.57	0
2	1,2,3,4	-	-	Layer	Soft mid-brownish orange sand with infrequent flecks of topsoil and natural.	Subsoil	0.1	0
3	1,2,3,4	-	-	Layer	There are patches of brownish orange sand across the trenches and also areas of reddish brown clay with blue grey streaks. The clay band is a thin horizon, average 15-20cm onto the clay. Likely extracted/ ploughed away	Natural	0.11	0
4	3	-	5	Cut	This is a shallow ditch of unknown function. No dating. Runs in parallel to footpath on historic maps.	NE-SW Linear	0.41	2.01
5	3	4	-	Fill	Firm mid-brownish grey silty sand with frequent dark red sand streaks due to bioturbation	Natural infilling	0.41	2.01
6	2	-	7	Cut	This is a shallow gully likely used for drainage. Continues into trench 1		0.2	0.49
7	2	6	-	Fill	Soft light yellowish brown silty sand with occasional natural flecks	Natural infilling	0.2	0.49
8	2	-	9	Cut	Concave ditch potentially a boundary ditch for an area containing for the saxo norman and medieval rubbish pits to the west. No dateable finds east of this linear and high concentrations of pits in the west.	N-S Linear	0.71	1.28
9	2	8	-	Fill	Soft mid greyish brown silty sand occasional dark red sand flecks due to bioturbation and infrequent natural flecks.	Natural infilling	0.71	1.28
10	2	-	20,26, 27	Cut	Grave cut for horse burial.	Grave	0.98	0.92
11	2	10	-	Fill	Firm mid brownish grey silty sand very infrequent charcoal flecks and mussels and occasional small natural patches.	Deliberate backfill	0.61	0.87

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Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
12	2	-	13	Cut	Probable remains of an early medieval midden pit. Looks natural but contained large amount of pottery.	Pit	0.37	0.73
13	2	12	-	Fill	Soft light orangish white sand with no inclusions.	Deliberate backfill	0.37	0.73
14	2	21	-	Fill	Deliberate semi-industrial midden deposit.	Dump of rubbish	0.34	1.57
15	2	-	-	Layer	Soft light yellowish grey silty sand with occasional natural patches	Colluvium	0.36	3.49
16	2	22	-	Fill	Soft light brownish grey sand with occasional natural flecks	Natural infilling	0.09	0.96
17	2	-	18	Cut	Likely medieval midden pit.	Pit	0.76	2.49
18	2	17	-	Fill	Firm mid greyish brown silty sand with no inclusions.	Natural infilling	0.76	2.49
19	2	22	-	Fill	Firm mid reddish grey silty sand with occasional streaks of charcoal and patches of burnt material	Midden deposit	0.29	2.24
20	2	10	-	Fill	Soft light brownish grey silty sand with occasional flecks of fired clay and occasional natural patches.	Natural infilling	0.34	0.92
21	2	-	14	Cut	Likely the remains of an early medieval midden pit.	Pit	0.35	1.57
22	2	-	16,19	Cut	Likely the remains of an early medieval midden pit.	Pit	0.38	2.24
23	2	-	24	Cut	Likely medieval midden pit.	Pit	0.53	1.51
24	2	23	-	Fill	Soft mid greyish brown silty sand with occasional natural patches due to bioturbation	Dump of rubbish	0.53	1.51
25	2	-	-	Layer	Soft mid greyish brown sandy silt with no inclusion.	Natural infilling	0.41	5.23
26	2	10	-	Skeleton	Horse burial on side in deliberate cut. Unfused epiphysis indicates juvenile and greenish colour surrounding bones shows an articulated burial.	Horse Skeleton	0	0
27	2	10	-	Fill	Soft mid greenish grey silty sand with no inclusions.	Deliberate backfill	0.25	0.86
28	1	-	29	Cut	Shallow pit	Pit	0.2	0.44
29	2	28	-	Fill	Firm dark greyish brown sandy silt with no inclusions.	Natural infilling	0.2	0.44
30	1	-	31	Cut	Shallow ditch	Ditch	0.18	0.33
31	1	30	-	Fill	Firm dark orangish brown sandy silt with frequent natural patches.	Natural infilling	0.18	0.33
32	1	-	33	Cut	Cut of possible midden pit	Pit	0.56	0.55
33	1	32	-	Fill	Firm dark greyish brown sandy silt with no inclusions.	Dump of rubbish	0.56	0.55

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Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
34	1	-	35	Cut	This is a very shallow drainage gully.	Gully	0.1	0.34
35	1	34	-	Fill	Firm mid greyish brown silty sand with no inclusions.	Natural infilling	0.1	0.34
36	1	-	37, 91	Cut	Medieval midden pit	Pit	0.64	1.27
37	1	36	-	Fill	Soft light brownish grey silty sand frequent patches of natural	Deliberate backfill	0.58	1.27
38	1	-	39, 92	Cut	Medieval midden pit	Pit	0.43	2.26
39	1	38	-	Fill	Firm dark - black clayey sand with occasional fired clay flecks	Dump of rubbish	0.42	2.15
40	1	-	-	Layer	Soft light - grey silty sand with infrequent flecks of fired clay and industrial waste	Natural infilling	0.51	3.98
41	1	-	42, 69	Cut	Steep sided ditch of unknown function cutting the medieval midden pits.	Pit	0.6	1.3
42	1	41	-	Fill	Firm mid brownish grey silty sand with very frequent natural mottling.	Deliberate backfill	0.41	1.3
43	1	-	44 45	Cut	Medieval midden pit.	Pit	0.8	1.12
44	1	43	-	Fill	Firm mid greyish black clayey sand with infrequent fired clay flecks.	Dump of rubbish	0.13	0.87
45	1	43	-	Fill	Firm mid greyish black clayey sand with infrequent patches of burnt material and shell.	Dump of rubbish	0.38	1.12
46	1	-	47 70 71	Cut	Probable medieval midden pit.	Pit	0.62	1.5
47	1	46	-	Fill	Firm mid brownish grey sandy silt with no inclusions.	Natural infilling	0.3	1.4
48	1	-	49 50	Cut	Likely a small medieval midden pit.	Pit	0.71	1.12
49	1	48	-	Fill	firm mid brownish grey sandy silt with occasional fired clay flecks.	Natural infilling	0.36	1.12
50	1	48	-	Fill	Firm dark - grey sandy silt with frequent charcoal and fired clay pieces	Dump of rubbish	0.41	0.87
51	1	-	52	Cut	Shallow ditch, maybe a drainage ditch.	Ditch	0.23	1.34
52	1	51	-	Fill	Soft light greyish brown silty sand with occasional charcoal and fired clay flecks.	Natural infilling	0.23	1.34
53	1	-	54	Cut	Small ditch, maybe a drainage ditch	Ditch	0.3	1.07
54	1	53	-	Fill	Firm mid brownish grey sandy silt with frequent small natural patches	Natural infilling	0.3	1.07

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Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
55	1	-	73, 74, 75, 76, 96	Cut	This is a midden pit with multiple deposition events.	Pit	0.69	2.12
56	1	-	77	Cut	Recut midden put truncating the top of pit 55	Pit	0.42	0.82
57	1	-	78	Cut	Possible midden pit, part of the series of pits.	Pit	0.52	1.57
58	1	-	80	Cut	Possible midden pit, deliberately backfilled.	Pit	0.49	0.9
59	1	-	81	Cut	Possible midden pit, backfilled.	Pit	0.63	1.68
60	1	-	82, 83, 84, 85, 86	Cut	Midden pit containing multiple deposition events.	Pit	0.51	0.77
61	1	-	87, 88, 89	Cut	Medieval midden with multiple dumping events.	Pit	0.43	2.09
62	1	-	90	Cut	Medieval midden pit	Pit	0.43	1.21
63	1	-	94, 95	Cut	Medieval midden pit	Pit	1.1	1.75
64	1	-	93	Cut	Probable medieval midden pit	Pit	0.35	1.25
65	-	-	-	Void	Void	Void	-	-
66	1	-	-	Layer	Firm, mid greyish black clayey sand with no inclusions	Natural infilling	0.23	3.2
67	-	-	-	Void	Void	Void	-	-
68	1	43	-	Fill	Firm light - grey silty sand with no inclusions	Natural infilling	0.45	1.12
69	1	41	-	Fill	Firm light brownish grey silty sand none	Natural infilling	0.2	1.26
70	1	46	-	Fill	Soft light greyish brown silty sand with occasional natural patches	Natural infilling	0.27	1.4
71	1	46	-	Fill	Soft dark greyish black sandy silt with occasional flecks of fired clay	Dump of rubbish	0.14	1.32
72	1	-	-	Layer	Soft mid brownish grey silty sand with no inclusions	Natural infilling	0.3	2.5
73	1	55	-	Fill	Soft light greyish white sand with no inclusions	Dump of rubbish	0.8	0.2
74	1	55	-	Fill	Soft mid blueish grey sandy silt with frequent industrial waste flecks charcoal flecks and natural flecks.	Dump of rubbish	0.13	0.35
75	1	55	-	Fill	Friable mid brownish red silty sand with frequent charcoal flecks	Dump of rubbish	0.34	2.12

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Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
76	1	55	-	Fill	Soft mid brownish grey silty sand with frequent burnt sand natural and charcoal patches"	Dump of rubbish	0.34	1.04
77	1	56	-	Fill	Firm dark yellowish black sandy silt with occasional burnt flecks fired clay flecks and natural flecks	Dump of rubbish	0.42	0.82
78	1	57	-	Fill	Firm mid greyish brown sandy silt none	Natural infilling	0.52	1.57
79	-	-	-	Void	Void	VOID	-	-
80	1	58	-	Fill	Firm light brownish grey silty sand with frequent natural patches	Deliberate backfill	0.49	0.9
81	1	59	-	Fill	Firm light greyish brown silty clay with frequent natural patches	Deliberate backfill	0.63	1.68
82	1	60	-	Fill	Soft light yellowish grey sand with no inclusions	Natural infilling	0.08	0.19
83	1	60	-	Fill	Soft dark - black sandy silt with frequent charcoal	Dump of rubbish	0.03	0.05
84	1	60	-	Fill	Soft dark brownish grey sandy silt with frequent charcoal	Dump of rubbish	0.1	0.15
85	1	60	-	Fill	Firm dark yellowish black sandy silt with frequent charcoal and burnt flecks	Dump of rubbish	0.12	0.31
86	1	60	-	Fill	Firm mid brownish grey silty clay with no inclusions	Deliberate backfill	0.21	0.45
87	1	61	-	Fill	Firm light brownish grey sandy silt with frequent natural patches	Dump of rubbish	0.24	1.65
88	1	61	-	Fill	Soft dark - black silty sand with very frequent small charcoal pieces	Dump of rubbish	0.06	1.9
89	1	61	-	Fill	Firm mid brownish grey sandy silt with occasional natural patches	Natural infilling	0.14	2.09
90	1	62	-	Fill	Firm light brownish grey clayey silt with frequent natural patches	Backfill	0.43	1.21
91	1	36	-	Fill	Soft dark greyish black silty sand with frequent charcoal and natural flecks	Dump of rubbish	0.06	0.51
92	1	38	-	Fill	Firm dark - black clayey sand with frequent flecks of industrial waste and fired clay	Dump of rubbish	0.16	0.18
93	1	64	-	Fill	Firm light brownish grey sandy clay frequent natural flecks	Deliberate backfill	0.35	1.25
94	1	63	-	Fill	Firm dark - black clayey sand occasional patches of industrial waste	Dump of rubbish	0.6	1.35
95	1	63	-	Fill	Firm mid - grey silty sand occasional charcoal and infrequent industrial waste flecks	Dump of rubbish	0.5	1.75

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Context No	Trench	Fill of	Filled By	Type	Description (soil colour and texture/ cut description)	Interpretation	Depth/ Thickness (m)	Max Width/ Diameter (m)**
96	1	55	-	Fill	Soft light brownish grey sand none	Dump of rubbish	0.13	0.12
97	3	-	98	Cut	Large drainage channel of post-medieval date.	Ditch	1.8	5.4
98	3	97	-	Fill	Firm mid greyish brown silty sand with no inclusions	Colluvium	1.8	5.4
99	1	-		Cut	Medieval midden pit with an irregular base, dipping down in two places.	Pit	0.39	1.32
100	1	99	-	Fill	Soft dark - black clayey sand with frequent patches of industrial waste and fired clay flecks	Dump of rubbish	0.39	1.32

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Appendix 3: The Finds

Post-Roman Pottery Ceramic Spot-Date

By Jane Young

site code	context	date	comments
lscg 24	09	medieval to early modern	2 small CBM flakes only
lscg 24	11	mid 12th ? Pottery;14th to 16th brick	poss primary discard with intrusive CBM;;some large frags;cross joins to 14 & 19
lscg 24	13	mid 12th ?	cross join to 14 & 19
lscg 24	14	mid 12th ?	poss primary discard;multi cross joins to 11 13 & 19
lscg 24	15	12th	single vessel
lscg 24	18	late 14th to mid 15th ?	mixed;brick 14th to 18th
lscg 24	19	mid 12th ? Or 14th to mid 15th	poss intrusive material into a mid 12th group;cross joins to 11 & 14
lscg 24	24	13th to 14th	mixed
lscg 24	27	late 17th to 18th	mixed
lscg 24	29	mid 14th to 15th ?	mixed;14th to 16th brick frags
lscg 24	31	late 11th to 12th	single sherd
lscg 24	33	14th to 15th ?	14th to 16th ? Brick frag
lscg 24	35	late 11th to 14th	single small sherd
lscg 24	37	mid 15th to 16th	
lscg 24	39	14th to 15th	
lscg 24	40	14th to 15th	
lscg 24	50	13th to 14th ?	single sherd
lscg 24	52	13th to early/mid 14th ?	
lscg 24	54	13th to 15th	
lscg 24	72	late 11th to 12th	2 sherds
lscg 24	73	late 11th to 12th	2 sherds
lscg 24	74	12th	single vessel ?
lscg 24	75	12th	most single vessl ?
lscg 24	76	12th	few vessels
lscg 24	77	12th	few vessels
lscg 24	78	late 11th to 12th	single sherd
lscg 24	79	late 13th to 15th	
lscg 24	80	late 13th to 14th	
lscg 24	85	late 11th to 12th	
lscg 24	90	13th to 15th	

The full ceramic report is to follow.

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Assessment of animal bone from Land off Cowper's Gate (South), Long Sutton, Lincolnshire LSCG24

Dr Hannah Russ FSA MCIfA

11 Introduction

Mammal, bird, fish and amphibian remains (852 fragments weighing 22.9kg) were recovered via hand collection and bulk environmental samples taken during archaeological trial trench evaluation at Land off Cowper's Gate (South), Long Sutton, by Pre-Construct Archaeology Ltd in 2024 (LSCG24; NGR (centered): TF 4280 2184). During excavation, animal bone was recovered from multiple pits, some of which also contained medieval (11-12th) century pottery. A complete equid burial was also excavated, with pottery dating it to the post-medieval period (17/18th century). This assessment includes quantification of the animal bone assemblage, identification at species level where possible, an assessment of significance and recommendation(s) for any further work.

12 Methods

The animal remains were identified to element, side and to as low a taxonomic level as possible using the archaeology.biz reference collection and published and online identification guides (Cohen and Serjeantson 1996; Hillson 2003; 2005). Quantification for mammal remains used the diagnostic zone method as presented by Dobney and Rielly (1988), with bird remains quantified using the method presented by Cohen and Serjeantson (1996). Fish remains were identified to element, side and to as low a taxonomic level as possible using the archaeology.biz reference collection and identification guides (Archaeological Fish Resource; Camphuysen and Henderson 2017). A taphonomic assessment of each fragment was undertaken, recording the presence and absence of butchery (specified as cut, chop and/or saw marks), burning and calcination, any evidence for animal activity (canid or rodent gnawing), any abnormal features or bone formation (pathology and non-metric traits), and surface preservation; any other surface modifications of note were also recorded. At this stage, no attempt was made to sex any of the remains, or to measure any elements. Sheep (*Ovis aries*) and goat (*Capra hircus*) distinctions were also not considered. Fragments of bones that could be identified to element but not any specific species were grouped as far as possible using size and class categories (i.e., mammal/bird/fish). Results were recorded in an electronic proforma in Microsoft Excel.

This assessment has been undertaken in line with published standards and guidelines (Baker and Worley 2019; CIfA 2014; 2021), a written scheme of investigation (Taylor 2024), and with reference to the East Midlands Historic Environment Research Framework (Accessed May 2024). Site information was provided by Pre-Construct Archaeology.

13 Results

Vertebrate remains (n=852), including mammal, bird, fish and amphibians, were recovered via hand collection and bulk environmental samples taken during archaeological trial trench evaluation at Land off Cowper's Gate (South), Long Sutton, Tables 1 and 2.

Mammal remains (n=712) included equid (*Equus* sp. horse/donkey/mule), cattle (*Bos taurus*), domestic pig (*Sus domesticus*), sheep/goat (*Ovis aries/Capra hircus*), dog (*Canis familiaris*) and cat (*Felis catus*), Table 1. Bird remains (n=14) included goose (*Anser* sp.), mallard (duck – *Anas platyrhynchos*), chicken (domestic fowl – *Gallus gallus domesticus*) and remains representing birds in the landfowl order Galliformes, Table 1. Fish remains (n=124) represented mainly marine fish including Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*), whiting (*Merlangius merlangus*) and remains identified as cod order fish (Gadiformes), Atlantic herring (*Clupea harengus*), possible conger eel (*Conger conger*), scad/horse mackerel (*Trachurus trachurus*) and flatfish (right-eyed flounders – Pleuronectidae); migratory fish included European eel (*Anguilla anguilla*) and salmon/trout (*Salmo* sp.), Table 2. Two frog or toad bones (Anura) were recovered from the bulk environmental sample from Midden pit [22] (context 19, sample <1>), Table 2.

Other vertebrate remains were identified at high taxonomic level (e.g. ungulate/mammal/bird/fish) within size categories. Remains identified at high taxonomic level formed 31.6% of the assemblage (by count, n=269), Tables 1 and 2.

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			Fish													
			Cods				Other marine fish				Migratory		Fish			
Context	Sample	Feature	Atlantic cod	Haddock	Whiting	Cod order	Atlantic herring	Conger eel?	Scad	Flatfish	European eel	Salmon /trout	Large	Medium	Frog /toad	Total
14	2	Midden pit [21]	11						2	7	2	1	2			25
19	1	Midden pit [22]	2	3	1	1				10	19			12	2	50
	HC		15													15
39	3	Midden pit [38]					1	1						2		4
74	HC	Midden pit [55]	1			4										5
75	4		1	1		2							18	1		23
76	HC		2			2										4
		Total	32	4	1	9	1	1	2	17	21	1	20	15	2	126

Table 2: Fish and amphibian remains from Long Sutton, count.

Multiple bones representing individual animals, associated bone groups (ABGs), were recorded in nine instances, Table 3. Equid burial [10] included the complete remains of a young equid, likely a domestic horse (*Equus caballus*); pottery dated this burial to the 17-18th century. Of note were near complete juvenile cat and partial juvenile cattle from medieval Midden pit [55], partial dog from medieval Midden pit [17] and the cod skull from medieval Midden pit [22].

A large proportion of the remains were recovered from ten medieval midden pits, Tables 1 and 2.

ABG	Count	Context	Feature	Species; comments
1	288	26	Equid burial [10]	Equid, complete skeleton of a juvenile equid (likely domestic horse (*Equus caballus*)). 17/18th century.
	3	27		
2	2	9	Boundary ditch [8]	Equid. Phalanges 2 and 3 of an equid, definitely not part of ABG1 (above).
3	23	18	Midden pit [17]	Dog. Aged around 1 year at death. Abnormal bone growth around humerus distal epiphysis.
4	10	76	Midden pit [55]	Cat. Recorded as two individual ABGs (4 and 7) but are all part of the same, near complete, juveile cat.
7 (4?)	11	74		
5	31	77		Cattle. Skull and partial left forelimb of juveile cattle.
6	2	39	Midden pit [38]	Likely chicken. Left and right coracoid of a juvenile
8	2	19	Midden pit [22]	Sheep/goat. Left and right mandible of a sheep/goat aged 6-8 years at death.
9	15	19		Cod. Cranial elements from a single large cod plus on caudal vertebra.
10	8	14	Midden pit [21]	Sheep/goat. Tibia, phalanx 1 and vertebra of perinate.

Table 3: Associated bone groups (ABGs) at Long Sutton.

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			Mammals											Birds					
Context	Sample	Feature	Equid	Cattle	Pig	Sheep /goat	Dog	Cat	Ungulate	Large	Medium /large	Medium	Medium /small	Goose	Duck	Chicken	Landfowl	Medium /large	Total
9	HC	Boundary ditch [8]	2	2		5													9
11	HC	Equid burial [10]		8		2			1			2					1		14
26	HC		288																288
27	HC		3			3				5									11
14	2	Midden pit [21]				8				7		18							33
	HC			1		6			1	5									13
18	HC	Midden pit [17]		1	1		23			2		2							29
19	1	Midden pit [22]				1				1		6	102						110
	HC			1	1	7				1		8			1				19
24	HC	Midden pit [23]		3		2						1		1					7
29	HC	Pit [28]		4	1	9			1	8	5	4				1			33
33	HC	Midden pit [32]		4	1							1							6
35	HC	Drainage gully [34]				1													1
37	HC	Midden pit [36]								1									1
39	3	Midden pit [38]			3							15					1	3	22
	HC		1		3												2		6
40	HC	Layer (40)		1						1									2
54	HC	Ditch [53]					2		1										3
73	HC	Midden pit [55]				1													1
74	HC		1	7				11		2		1				1			23
75	4											3						1	4
	HC																1		1
76	HC			16		2		10		1	2	6		1					38
77	HC			31						1		2							34
85	5	Midden pit [60]										11							11
90	HC	Midden pit [62]				2				2									4
98	HC	Drainage channel [98]	1	1		1													3
Total			296	80	10	50	25	21	4	37	7	80	102	2	1	2	5	4	726

Table 1: Mammal and bird remains from Long Sutton, count.

13.1 Taphonomic assessment

13.1.1 Bone surface preservation and fragmentation

Bone surface preservation varied throughout the assemblage from 'very good' to 'very poor' (categories 1-5). Most specimens had 'very good' (1) or 'good' (2) surface preservation, 83.9% by count (n=715). Fragmentation was moderate to low throughout the assemblage with occasional partial bones recovered and some re-fitting fragments of single specimens.

13.1.2 Butchery

Evidence for carcass processing in the form of cut- and/or chop-marks was recorded on 30 specimens throughout the assemblage. Cut- and/or chop marks were noted on the remains of cattle, sheep/goat, goose and Galliformes remains, likely a result of butchery and/or removal of meat from the bone in preparation for or after cooking. Two refitting fragments of a dog femur from an animal under 18 months at death (unfused proximal and distal epiphyses) displayed cut-marks across the diaphysis on the cranial surface at the proximal and distal ends. While under 18 months, the femur was from a large dog, comparing in size with a greyhound reference specimen. This find is discussed further, below.

13.1.3 Animal interaction

Evidence for carnivore gnawing was observed on nine specimens from six contexts. No rodent gnawing activity was observed within the assemblage.

13.1.4 Pathology

Four specimens displayed abnormal bone growth possibly resulting from disease, injury or age. From context 18 (Midden pit [17]) a dog humerus had abnormal bone growth around distal and a cattle ulna showed pathological bone growth around the proximal epiphysis. From context 19, Midden pit [22], a sheep/goat mandible had reabsorbed bone around the tooth line suggesting an infection around the M2 tooth and from context 35 (Drainage gully [34]) a sheep/goat metacarpal had pathological bone growth on the diaphysis surface.

13.1.5 Burning and calcination

Burnt bone was recovered from 12 contexts, 56 fragments in total, plus four specimens with scorch marks. Most of the burnt bones could not be identified at species level, but a few identifiable specimens included remains of cattle, pig, chicken and haddock.

13.1.6 Potential for measurements

Nine bones were suitably complete to allow measurement for size estimation. These included three carpal bones and two phalanges of equid, two cattle phalanges, a duck humerus and a Galliformes radius. While the assemblage was in good condition many of the specimens represented juvenile animals with unfused epiphyses that preclude the use of measurements in shape and size estimation.

13.1.7 Potential for ageing and sexing

Bone fusion data for estimation of age at death was recorded for one or both epiphyses of 89 specimens including equid, cattle, pig, sheep/goat, dog, cat, goose, duck and chicken. Six sheep/goat, two cattle, one dog and one cat mandibles and one equid tooth were suitable for providing age at death data. The equid from context 26 (equid burial [10]) also had dentition suitable for estimating age at death. None of the animal remains were suitable for estimating sex.

14 Discussion

The animal bone assemblage includes the main domestic livestock species associated with meat production cattle, pig, and sheep/goat, as well as goose, duck, and chicken, with some of these displaying cut- and/or chop marks, suggesting that some of these remains represent food waste. While no detailed analysis was undertaken, the sheep/goat remains did not appear to fit the expected age at death profile expected when meat is the primary resource; further work may allow a consideration of age at death for sheep/goat and the possibility that these sheep were kept for their

fleeces as a primary resource, as was common in this region during the medieval period (East Midlands Regional Research Framework, Accessed May 2024).

Equids provided transportation for people and goods as well as serving roles in traction and being used in hunting and military contexts. Aside from the 291 specimens that represented an equid buried at some point in the 17-18th centuries, equid remains were rare at the site.

Dogs and cats were kept mainly to serve roles as working animals though companion animals/pet and feral/semi-feral animals are also possibilities. Dogs served many roles including protection, farming aids, pest control and hunting, while cats were kept, or at least tolerated as semi-feral animals, for their roles in pest control. Two dogs are represented at the site, a large dog under 18 months of age by a single femur with cut-marks to the distal and proximal ends of the diaphyses from Ditch [53] and the partial skeleton of a medium-sized dog aged around 1 year at death from Midden pit [17]. It is not very common to find dog remains with cut-marks; where these are observed they are usually linked with the production/use of dog pelts. A near complete cat, aged 9-10 months at death was recovered from two contexts in Midden pit [55]. Further research on the role of dogs and cats in the 11th to 12th century is needed to further understand these findings.

By the medieval period domestic geese, ducks and chickens were kept regularly as livestock for their eggs, meat and/or feathers. For geese and ducks, it is difficult to say with certainty that the remains represented domestic varieties and it is possible that they instead represent the exploitation of wild ducks and geese. Overall, the frequency of remains suggest that resources from birds played only a small role in the diet and economy of those living close to the site.

The fish remains are broadly consistent with those recovered from sites of similar dates in England (Serjeantson and Woolgar 2006, 111), though some variation is seen in the types of fish present. It is during the 11th to 12th centuries that the marine fishing industry begins its expansion and fish remains become increasingly common finds on archaeological sites in England. As well as marine fish, European eels were exploited; while eels spend parts of their lifecycle in both freshwater and marine environments (migratory), they are most often fished during their freshwater phase, or in freshwater during their migration out to sea to spawn.

It is clear that the animal remains from the medieval pits represent animals that served a range of different roles in the lives of those living close to the excavation area and disposing of their waste in pits there. The animal remains have significant potential to further our understanding of human diet, animal roles and human-animal relationships in the 11-12th century in Lincolnshire and further work is recommended (see below).

15 Recommendations for future analysis and dissemination

The equid burial (context 26, Equid burial [10]) is recent in date; no further work is recommended, and the skeleton can be discarded or repurposed as a reference specimen.

The animal remains recovered from medieval pits at the site have potential to inform further on the roles of animals and human/animal relationships during the 11-12th centuries in Long Sutton. Further analysis work is recommended; this work could be undertaken at a later stage if further excavations are required at the site. Analysis level work is likely to be needed on the animal remains recovered during any subsequent excavations at the site and this could be undertaken on both assemblages at the same time. Analysis tasks should consider quantification by minimum number of individuals, skeletal part representation, age at death as well as including research that places the findings in their chronological and regional context.

This report and associated data should be integrated into any site-wide grey literature or publication reporting and retained within the site archive.

The material from the medieval pits should be retained for analysis work as recommended.

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Other Miscellaneous Finds

Metal Finds

By Gary Taylor

Introduction

Metal artefacts were recovered during archaeological investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA standards and guidance (2020), and the Lincolnshire Archaeological Handbook (LCC 2019).

Seven metal items together weighing a total of 57g were recovered.

Results

Table 1, the metal items

Context	Material	Description	No.	Wt(g)	Context date
14 ◊2	iron	nail, rectangular-sectioned shaft	1	10	
19	iron	Nail, rectangular-sectioned shaft, encrusted	1	4	
	iron	Nail, rectangular-sectioned shaft	1	4	
	iron	Possible nail, very encrusted	1	7	
24	iron	Unidentified thick sheet, linear, 57mm x 23mm x 10mm	1	26	
29	iron	Nail, tapering rectangular-sectioned shaft	1	4	
75	iron	Nail, tapering rectangular-sectioned shaft, slightly curved	1	2	
TOTALS			**7**	**57**	

Note:

◊ = recovered from environmental sampling (and sample number)

Provenance

The metal finds were retrieved from pit fills (14, 19, 24, 29, 55).

Discussion

Most of the small collection of metal items are probably nails. Where it is evident all are smithed examples with rectangular-sectioned shafts. They perhaps indicate structures in the area.

An approximately linear piece of thick iron sheet was also recovered. It is of unclear identity.

Potential and Recommendations

The nails provide a little functional evidence but are of limited potential. No further work is required. The items could be discarded.

The Glass

By Gary Taylor

Introduction

Artefacts recovered during investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA standards and guidance (2020), and the Lincolnshire Archaeological Handbook (LCC 2019).

A single piece of glass weighing 385g was recovered.

Results

Table 1: The Glass

Context	Description	No.	Wt(g)	Context date
75 Δ2	Opaque 'mushroom' head of linen smoother, 88mm diameter, 38mm high	1	385	12th-14th, or 16th-18th century

Note: Δ = Small/Special Recorded Find **Provenance**

The glass was recovered from pit fill (75).

Discussion

The mushroom head of linen smoother was recovered. The object is lacking its handle but has a pontil scar, a 'dimple', where the handle (also in glass) would have been affixed. Also known as slick stones, they were used from the Viking period until well into the 19th century. Handled versions, like the present example seems to have been, appeared in the 16th century (Roman Glassmakers nd). Substantial parts of a handled linen smoother very similar to the present example was recovered from a 17th century glasshouse excavated at Denton near Manchester (Vose 1995, 33-4). Others from Britain and mainland Europe have been found and date from the 16th to 18th centuries. However, an illustrated similar example from Exeter, with a pontil scar like the present find, was dated from the 12th to early 14th century (Roman Glassmakers nd).

Potential and Recommendations

The glass is of moderate potential and provides functional evidence of the smoothing of clothing and also tentative dating evidence. The object has been illustrated (photographed – Plate 12) but otherwise no further work is required. The object is archive stable and should be retained for long-term storage.

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The Clay Tobacco Pipe

By Gary Taylor

Introduction

Clay tobacco pipes were recovered during archaeological investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA guidelines (2020), the Lincolnshire Archaeological Handbook (LCC 2019), and with the procedures prepared by Davey (1981).

A single fragment of clay pipe weighing 2g was recovered.

Condition

The clay pipe is in good condition.

Results

Table 1, The Clay Tobacco Pipe

Context	Bore diameters, /64"						Total	Wt(g)	Comments	Context date
	9	8	7	6	5	4				
98							1	2	Bowl fragment, probably Oswald's general type 4 or 5	c. 1600-60

Provenance

The tobacco pipe was recovered from ditch fill (98). It is probably a local product.

Discussion

A single piece of clay tobacco pipe bowl was recovered. It is probably a fragment is Oswald's general type 4 or 5, dating from c. 1600-1660 (Oswald 1975).

Potential and Recommendations

Other than providing dating evidence the clay pipe assemblage is of limited potential. No further work is required, and the material can be discarded.

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The Stone Finds

By Gary Taylor

Introduction

Artefacts were recovered during archaeological investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA standards and guidance (2020), and the Lincolnshire Archaeological Handbook (LCC 2019).

Several stones together weighing 1350g were recovered. The assemblage includes 4 moderately substantial pieces and a quantity of very small fragments, these latter items recovered by environmental sampling. Because of their quantity and smallness these latter pieces were weighed and not counted.

Results

Table 1: The Stone Finds

Context	Description	No.	Wt(g)	Context date
31	Lava quern, radial grooves on worn grinding surface	1	269	8th-14th century
33	Barnack rag/ mill stone quern, topstone, rim worn	1	194	
39 ◊3	Lava quern, decayed fragments	-	17	8th-14th century
76	Lava quern, worn grinding surface, possible topstone, 8th-14th century	1	150	8th-14th century
76 Δ1	Lava quern, worn grinding surface, roughly dressed outer rim, topstone, 8th-14th century	1	720	
Totals		**4+**	**1350**	

Notes:

◊ = recovered from environmental sampling (and sample number)

Δ = Small/Special Recorded Find

Provenance

The stones were retrieved from a ditch fill (31), and pit fills (33, 39, 76). most of the assemblage is on material imported from the Rhineland of Germany and adjacent parts. One piece is much more local, on stone from the Peterborough area, about 40km from the site.

Discussion

Most of the stone items are pieces of Rhenish lava quern. Such material was traded widely around

Europe in the Roman period, and then, after a hiatus, resumed in the 8th century, thereafter continuing well into the medieval period (Mann 1982, 21-2; Pohl 2010, 149). The recovered pieces lack discriminatory features but are likely to be Late Saxon-medieval rather than Roman.

The remaining piece of stone is also from a quern. This, however, is formed on a relatively local limestone, Barnack Rag or Barnack Mill Stone. The source rock was obtained from Barnack near Peterborough.

The relative abundance of these quern fragments may indicate specialised food grinding processes at the site during the Late Saxon-medieval period, whereas such food processing was generally a domestic activity.

Potential and Recommendations

The stone finds are of moderate potential; they provide functional evidence of food grinding at the site. No further work is required. The material is archive-stable and should be retained for long-term storage.

Other Finds

By Gary Taylor

Introduction

Artefacts were recovered during archaeological investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA standards and guidance (2020), and the Lincolnshire Archaeological Handbook (LCC 2019).

Three items together weighing a total of 112g were recovered.

Results

Table 1: The Other Finds

Context	Material	Description	No.	Wt(g)	Context date
14	Ferrous encrustation	ferrous encrustation, slightly magnetic	1	87	
24	Ferrous encrustation	ferrous encrustation, slightly magnetic	1	6	
76	Fired clay?	Fired clay or baked silt	1	19	
Totals			**3**	**112**	

Provenance

The items were recovered from pit fills (14, 24, 76).

Discussion

Pieces of ferrous encrustation were recovered. These may be natural.

A fragment of fired clay or silt was also retrieved. This contains very dark grey twig or reed fragments. It may be from an oven or daub.

Potential and Recommendations

The other finds are of negligible potential. No further work is required, and the material can be discarded.

Mollusc Shells

By Gary Taylor

Archaeological items were recovered during investigations on land at Cowper's Gate, Long Sutton, Lincolnshire (LSCG24). These finds were examined and reported, during May 2024, in accordance with CIfA standards and guidance (2020), and the Lincolnshire Archaeological Handbook (LCC 2019).

Introduction

A moderately-sized group of mollusc shell fragments, 104 items together weighing a total of 181g was recovered from stratified contexts.

Methodology

The mollusc shells were laid out in context order and were counted and weighed, and where possible identified to species. Also, any evidence of transformation was noted when present.

Provenance

The shells were retrieved from pit fills (11, 14, 19, 76, 77, 80), and ditch fill (54).

Condition

The overall condition of the remains was moderate-good, with most of the small assemblage surviving as complete or near-complete pieces.

Results

Table 1, fragments Identified to taxa

Cxt	Taxon	Number	W(g)	Comments
11	mussel, unlinked valves from same shell	2	7	complete
14	mussel	4	13	Complete/near-complete
19	mussel	1	3	fragment
54	cockle	1	1	Complete, medium
76	mussel	1	2	fragment
77	mussel	1	1	fragment
80	cockle	91	149	Mostly complete; mostly medium-large
	mussel	2	4	fragments
	tellin	1	1	Near-complete, medium
Totals		104	181	

Summary

A relatively large quantity of cockle shells was recovered from pit fill (80), the same context also yielding a few other shells, of mussel and tellin. A moderate amount of these mollusc shells are from medium-sized creatures; while all these marine species are potential human food resources the size of them may suggest they were collected for another function, perhaps as bait in fishing.

A few other mollusc shells, mostly mussel, were also collected. Fairly large, these are probably food waste. The collection is of limited potential; no further work is required, and the assemblage can be discarded.

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Abbreviations

CIfA Chartered Institute for Archaeologists

Cxt Context

W(g) Weight (grams)

Appendix 4: The Environmental Samples

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Introduction

This report presents the environmental findings from an archaeological evaluation at Long Sutton, Lincolnshire. Five samples of under 40L were taken from a series of pits onsite.

Aims

The aims of this assessment are threefold: to give an overview of the contents and abundances of the assessed samples, to determine the environmental potential of the assessed samples, and to recommend further analysis of the assessed samples, if necessary.

Methodology

Five samples of under 40L were processed through floatation; material was collected using a 300 µm mesh for the flot and a 1mm mesh for the heavy residue. The heavy residue was dried and sieved through 10mm, 5mm, and 2mm fractions before being sorted. Archaeological material was extracted, labelled and recorded from these residues. The abundance of each material type was recorded using a non-linear scale: "1" showing occasional occurrence (1-10 items found), "2" showing fairly frequent occurrence (11-30 items found), "3" showing frequent occurrence (31-100 items found), and "4" showing an abundant presence of material (>100 items found).

The flot was dried, labelled and scanned under a low power binocular microscope in order to identify the presence and quality of environmental material, such as seeds, chaff, grain, molluscs, charcoal and modern material. It was separated into sieve fractions of >4mm, 2-4mm and <2mm. Abundances of material were recorded in the same manner as detailed above within the heavy residue.

Results

Sample <1>- (19), [22], pit

Sample <1> [22] contained occasional charcoal >4mm, and abundant charcoal 2-4mm and <2mm. Additionally, the sample also contained <2 pieces of charcoal of potentially identifiable size as well as frequent examples of amorphous charred material and occasional vitrified material. Sample <1> [22] contained occasional large Poaceae sp. (grasses), Persicaria sp. (knotweed) and Triticum sp. (wheat), as well as fairly frequent instances of Hordeum vulgare (barley), indeterminate charred seeds, and abundant indeterminate charred grain. The sample also contained frequent modern plant material and terrestrial molluscs, fairly frequent roots/tubers and uncharred seeds, and occasional insect eggs/worm cases and insect remains. Also recorded were small amounts of pottery, as well as larger quantities of animal bone and burnt clay.

Sample <2>- (14), [21], pit

Sample <2> [21] contained occasional charcoal >4mm, fairly frequent 2-4mm and abundant <2mm. Additionally, the sample contained frequent instances of amorphous charred material and occasional vitrified material. Sample <2> contained occasional small Poaceae sp. (grasses), Triticum spelta (spelt wheat), and charred cereal waste material, as well as frequent examples of large Poaceae sp. (grasses), indeterminate charred seeds, Triticum sp. (wheat) and Hordeum vulgare (barley). The sample also contained fairly frequent indeterminate charred cereal grain. Also included within the sample were frequent instances of uncharred seeds and terrestrial molluscs, in addition to fairly frequent modern plant material, and occasional roots/tubers and insect remains. Also noted were small quantities of burnt clay, animal bone and metal, as well as relatively larger amounts of marine shell and animal bone.

Sample <3>- (39), [38], pit

Sample <3> [38] contained occasional charcoal >4mm, frequent 2-4mm and abundant <2mm, as well as frequent instances of amorphous charred material. The sample contained abundant large Poaceae sp. (grass) and abundant indeterminate charred seeds. Sample <3> [38] contained abundant Triticum sp. (wheat) and indeterminate charred cereal grains, as well as occasional Hordeum vulgare (barley), Secale sp. (rye), and charred cereal waste material. The sample also included frequent uncharred seeds, fairly frequent modern plant material and occasional terrestrial molluscs. Also noted within the sample were small amounts of pottery, marine shell and animal bone, along with relatively higher levels of pumice and CBM.

Sample <4>- (75), [55], pit

Sample <4> [55] contained occasional charcoal >4mm, fairly frequent 2-4mm and abundant <2mm, in addition to fairly frequent examples of amorphous charred material. Also included within the sample was fairly frequent instances of large Poaceae sp. (grasses) and occasional Fabaceae sp. (legumes), along with abundant indeterminate charred seeds. The sample also contained abundant Triticum sp. (wheat) and indeterminate charred grain, frequent Hordeum vulgare (barley) and occasional Secale sp. (rye) and charred cereal waste material. Sample <4> [55] also included abundant uncharred seeds, occasional modern plant material and insect remains, as well as frequent terrestrial molluscs. Also recorded were small amounts of animal bone and pottery as well as relatively higher amounts of burnt clay.

Sample <5>- (85), [60], pit

Sample <5> [60] contained occasional charcoal >4mm and 2-4mm, and abundant <2mm, as well as frequent instances of amorphous charred material. The sample also contained fairly frequent large Poaceae sp. (grasses), occasional Fabaceae sp. (legumes), and frequent indeterminate charred seeds. Additionally, the sample included frequent Triticum sp. (wheat) and indeterminate charred cereal grains, as well as occasional Secale sp. (rye) and Hordeum vulgare (barley). Sample <5> [60] also included fairly frequent uncharred seeds, occasional modern plant material, terrestrial molluscs, insect remains,

and roots/tubers. Also noted were small amounts of burnt clay, pottery, animal bone, as well as relatively higher amounts of marine shell and pumice.

Conclusions and Recommendations for Further Work

The preservation of charred remains across the sample set recovered from Long Sutton, Lincolnshire, is generally poor to fair. Many of the samples contained identifiable charred archaeobotanical remains with a particularly high concentration in samples <2> [21], <3> [38] and <4> [55] that, if further work is undertaken, should be a focus going forward. There is evidence of bioturbation in the samples, predominantly in the form of modern plant material, roots/tubers, terrestrial molluscs, and uncharred seeds. Radiocarbon dating may be possible across a selection of the archaeobotanical remains and should further work be undertaken on the site an effort should be taken to take samples from sealed contexts. If phasing for this site is undertaken the contents of this report should be revised.

Table 1, abundance data

Sample Number	1	2	3	4	5
Context Number	19	14	39	75	85
Feature Number	22	21	38	55	60
Feature type	Pit	Pit	Pit	Pit	Pit
Period					
Volume of flot (mililitres)	15	18	59	26	27
Volume of sample (litres)	31	27	33	34	26
FLOT RESIDUE:					
Charcoal					
Charcoal >4mm	1	1	1	1	1
Charcoal 2-4mm	3	2	1	2	1
Charcoal <2mm	4	4	4	4	4
Charcoal of ID size	<2				
Seeds					
Small *Poaceae* sp.		1			
Large *Poaceae* sp.	1	3	3	2	2
Fabaceae sp.					1
Persicaria sp.	1				
Indeterminate charred seed	2	3	4	4	3
Uncharred	2	3	3	4	2
Indeterminate seed					
Cereals					
Triticum spelta		1			
Triticum sp.	1	3	4	4	3
Hordeum vulgare	2	3	1	3	1
Secale sp.			1	1	

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Sample Number	1	2	3	4	5
Charred cereal waste material		1		1	1
Indeterminate charred grain	4	2	4	4	3
Other plant macrofossils					
Modern plant material	3	2	2	1	1
Roots/ tubers	2	1			1
Molluscs					
Freshwater molluscs					
Marine shell					
Terrestrial molluscs	3	3	1	3	1
Broken shell					
Other remains					
Insect eggs/ worm cases	1				
Insect remains	1	1		1	1
Amorphous charred material	3	3	3	2	3
Vitrified material	1	1			
Industrial waste- hammerscale					
Industrial waste- bloom					
Pottery		1			
Burnt Clay	2	1		4	
Burnt flint					
Pumice			4		4
Animal bone	1	2		1	
HEAVY RESIDUE:					
Charcoal					
Charcoal >4mm			1	1	1
Charcoal 2-4mm	3		3	1	1
Charcoal of ID size					
Cereal					
Triticum sp.			1	1	1
Charred cereal waste material			1		
Indeterminate charred grain	2	1	3	1	1
Charred seed					
Large *Poaceae* sp.			2		
Fabaceae sp.				1	
Indeterminate charred seed		1	2		
Building Material					
Burnt Clay	4	1		4	2
CBM			3		
Finds					
Pottery	2	3	2	1	1

Sample Number	1	2	3	4	5
Animal bone	4	2	2	2	1
Human bone					
Metal		1			
Struck flint					
Burnt Flint					
Glass					
Pumice			3		
Industrial waste					
Hammerscale					
Slag					
Shell					
Marine shell		3	2		3
Nutshell					

The Marine Molluscs from Samples

A small assemblage of fragmented Mussel shell (*Mytilus edulis*) and Common cockle (*Cerastoderma edule*) shell was recovered from the environmental samples. This material was collected from pit features [60], [38] and [12].

The only shell present in the assemblage was Common Mussel and Common Cockle shell, with 47 whole cockle shells and 25 mussel shells retrieved from across this sample-set. Fragmented oyster shell noted in low abundances in all contexts. In total the assemblage produced a combined weight of 206.2 grams. No anthropological or predation markings were present in this assemblage.

The small size of the assemblage means it is of limited interpretive value. This assemblage has been fully quantified, and no further analysis is recommended prior to publication, however if further work is carried out at this site the potential for the recovery of mollusc remains should be considered in the environmental sampling strategy.

Table 2, summary of the marine mollusc shells from samples

Site code	Feature Number []	Context number ()	Sample Number <>	Feature type	Mussel shell (*Mytilus edulis*) complete left	Mussel shell (*Mytilus edulis*) incomplete	Mussel shell (*Mytilus edulis*) complete	Mussel shell (*Mytilus edulis*) incomplete	Mussel shell fragments (abundance*)	Weight (grams)	Common cockle (*Cerastoderma edule*) whole shell	Common cockle (Cerastoderma edule) incomplete shell	Fragments (abundance*)	Weight (g)
LSCG24	60	85	5	Pit					xxx	1.5	40		xxx	88.5
LSCG24	38	39	3	Pit							7	1	xx	20
LSCG24	12	14	2	Pit	6	6	4	9	xxx	96			x	0.2
Total					6	6	4	9		97.5	47	1		108.7

OASIS Summary for preconst1-525774

OASIS ID (UID)	preconst1-525774
Project Name	Evaluation at Land off Cowper's Gate (South), Long Sutton, Lincolnshire
Sitename	Land off Cowper's Gate (South), Long Sutton, Lincolnshire
Sitecode	LSCG24
Project Identifier(s)	Land off Cowper's Gate (South), Long Sutton, Lincolnshire
Activity type	Evaluation
Planning Id	H11-1084-23
Reason For Investigation	Planning: Between application and determination
Organisation Responsible for work	Pre-Construct Archaeology Ltd
Project Dates	15-Apr-2024 - 18-Apr-2024
Location	Land off Cowper's Gate (South), Long Sutton, Lincolnshire NGR : TF 42800 21840 LL : 52.775269425533374, 0.115488847644797 12 Fig : 542800,321840
Administrative Areas	Country : England County/Local Authority : Lincolnshire Local Authority District : South Holland Parish : Long Sutton
Project Methodology	4 x 50m x 1.8m trenches were excavated during this phase of work.
Project Results	Medieval artefacts were retrieved from a number of ditches or elongated pits and indicate occupation and other activity in the area in the medieval period. The ditches or pits may have commenced as quarries for sand extraction and were then used for waste disposal. Occupation seems to have ended in the 15th century. The area was re-utilised in the 17th century, probably for agricultural purposes.
Keywords	Rubbish Pit - MEDIEVAL - FISH Thesaurus of Monument Types Drainage Ditch - POST MEDIEVAL - FISH Thesaurus of Monument Types Ditch - MEDIEVAL - FISH Thesaurus of Monument Types Animal Burial Pit - POST MEDIEVAL - FISH Thesaurus of Monument Types Linen Smoother - MEDIEVAL - FISH Archaeological Objects Thesaurus
Funder	Private or public corporation Nationwide Produce plc
HER	Lincolnshire HER - unRev - STANDARD
Person Responsible for work	Rebecca Nichols
HER Identifiers	
Archives	

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