



# Leighton Linlade PH1 Mains Replacement Scheme WAT- 06833

## Archaeological Evaluation and Strip, Map and Sample Report

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Prepared by: Dan Firth (Supervisor) & Nick Cox (Supervisor)  
Checked by: Stephen Macaulay (Deputy Regional Manager)  
Edited by: Lawrence Billington (Post-excavation Project Officer)  
Approved for Issue by: Dr Paul Spoerry (Regional Manager)  
Signature: 

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**OA South**  
Janus House  
Osney Mead  
Oxford  
OX2 0ES

t. +44 (0)1865 263 800

**OA East**  
15 Trafalgar Way  
Bar Hill  
Cambridge  
CB23 8SG

t. +44 (0)1223 850 500

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

e. [info@oxfordarch.co.uk](mailto:info@oxfordarch.co.uk)  
w. [oxfordarchaeology.com](http://oxfordarchaeology.com)

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# Leighton Linlade PH1 Mains Replacement Scheme WAT-06833

## *Archaeological Evaluation and Strip, Map and Sample Report*

*Written by Dan Firth BSc (Hons) MSc and Nicholas Cox BSc*

*With contributions from Carole Fletcher HND BA (Hons), Rachel Fosberry ACIfA and Zoë Ui Choileáin MA MSc BABAO*

*Illustrations by Séverine Bézie BA MA and David Brown BA*

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## Summary

*Between 16th and 23rd May 2018 Oxford Archaeology East (OA East) was commissioned by Anglian Water to carry out trial trench evaluation along the route of the proposed Leighton Linlade PH1 Mains Replacement Scheme, within the parish of Steppingley, Bedfordshire. Following this, between the 19th and 23rd of July 2018, an area of 784m<sup>2</sup> was subject to a Strip Map and Sample investigation where the trenching had identified a concentration of medieval features.*

*During the initial evaluation phase, twenty trenches measuring 25m x 2m were opened up along the route of the pipeline (TL 00256 34515 to TL 01459 35252), with a further four 10m x 2m trenches placed at the site of a proposed compound (TL 01463 35210). The evaluation revealed archaeological features and deposits in thirteen of the twenty-four trenches. Many of the features encountered were either natural features or furrows. A series of colluvial deposits were encountered in the central area of the pipeline route, whilst trenching at the northern end of the pipeline route revealed a number of probable furrows. However, a small number of features concentrated in Trench 12 yielded a significant assemblage of medieval pottery indicative of settlement of this period in the immediate vicinity.*

*Subsequent strip, map and sample excavation of the area surrounding Trench 12 revealed ditches or gullies and a number of pits, several of which produced quantities of medieval pottery. The earlier extent of an existing pond was also identified. During the later medieval period this area of the pipeline route was within the enclosure of a large deer park, and the medieval remains described here are likely to attest to settlement pre-dating the park.*

## Acknowledgements

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The project was managed for Oxford Archaeology by Stephen Macaulay. The fieldwork was directed by Dan Firth, who was supported by Adele Lord, Hannah Blannin and Lauren Carpenter. The subsequent excavation around Trench 12 was directed by Nicholas Cox, supported by Paddy Lambert and Tom Collie. Survey and digitizing was carried out by Gareth Rees, Katie Hutton and Sarita Louzolo. Thank you to the teams of OA staff that cleaned and packaged the finds under the management of Natasha Dodwell, processed the environmental remains under the management of Rachel Fosberry, and prepared the archive under the supervision of Kat Hamilton.

## 1 INTRODUCTION

### 1.1 Scope of work

- 1.1.1 Oxford Archaeology East (OAE) was commissioned by Anglian Water to undertake a trial trench evaluation together with subsequent excavation at the proposed site of the Anglian Water Leighton Linlade PH1 mains replacement scheme WAT-06833
- 1.1.2 Both phases of work were undertaken in reference to briefs set by the local planning authority, Central Bedfordshire Council (Central Bedfordshire Council 2017; 2018), outlining the Local Authority's requirements for the work. A written scheme of investigation was produced by OAE (Macaulay 2018) detailing the methods by which OA proposed to meet the requirements of the brief.

### 1.2 Location, topography and geology

- 1.2.1 The proposed site (Fig. 1), runs from land immediately east of the M1 motorway (TL 00256 34515), heads northeast along Eversholt Road towards Steppingley and terminates at a compound (TL 01459 35252) which is adjacent to the pumping station of Flitwick Road (TL 01463 35210).
- 1.2.2 The area of proposed development is situated on the gently undulating slopes of the Greensand Ridge, the height varies between c.92m OD to c.110m OD.
- 1.2.3 The geology of the area is mapped as Woburn Sands Formation sandstone. There are no superficial deposits at either end of the proposed route, however the middle section of the pipeline does cross diamicton deposits of the Oadby Member (British Geological Survey, 2017)

### 1.3 Archaeological and historical background

- 1.3.1 The following section gives a brief overview of known heritage assets in the immediate vicinity of the site. This is based on a search (carried out in July 2018) of the Central Bedfordshire Historic Environment Record. The location of relevant HER entries (monuments and events) are plotted in Fig. 2.

#### Prehistoric and Roman

- 1.3.2 No definite prehistoric sites are recorded in the immediate environs of the site, but large multi-period (Mesolithic to Bronze Age) assemblages of worked flint have been recovered by surface collection in the wider landscape, most notably at Priestly Farm (HER 15844; not mapped; approximately 1800m south of the site). Other flint scatters have been recorded to the west along the M1 motorway (HER 15835; 15836; not mapped).
- 1.3.3 At the western end of the development, adjacent to the M1, geophysical survey identified a series of linear anomalies, potentially of prehistoric date (HER 13488). It is possible that a square enclosure on high ground to the west (HER 8296) may also be of prehistoric date.
- 1.3.4 The suggested route of a Roman Road between Woburn and Dunton passes immediately to the north of the site, on an east to west alignment (HER 5342; Viatores



No. 176). Although no other evidence of Roman activity is known in the immediate area of the site, a Roman enclosure (HER 564; not mapped) has been recorded at Manor Way, southwest of Steppingley Road on the edge of Flitwick. Additional Roman archaeology has been recorded northeast of Steppingley (HER 18198; not mapped).

### **Saxon, medieval and post-medieval**

- 1.3.5 No Saxon activity has been in the area to date, however Steppingley was mentioned in Domesday (AD 1086) and it is thus likely the village has Late Saxon, or earlier, origins. The historic core of Steppingley, as mapped in the HER (HER 16997), surrounds the church of St Lawrence, some 350m north of the central/northern part of the pipeline route, and there have been finds of medieval pottery from several findspots within this area (HER 16013; 7359). There are, however, clear indications that medieval settlement was somewhat more extensive, with earthworks of an area of deserted medieval settlement on the western edge of the modern village (HER 11464). The eastern part of the pipeline route itself crosses two potential medieval sites, the location of a possible hollow way recorded on early maps (HER 11463) and, more significantly the cropmarks of a rectangular ditched feature – potentially representing a moated site (HER 955). A series of cropmark and earthwork features, some of which may represent medieval enclosures, and another possible moat, are located to the south of the proposed route around Park Farm (HER 560; not mapped).
- 1.3.6 The eastern part of the pipeline route lies within the area of what was an extensive deer park – known as Steppingley or Priestly Park (HER 9444). The park was enclosed in the mid-19th century, but its form and extent is fossilised, particularly in its southern part, by an existing road and by surviving earthworks in Flitwick Wood. As mapped in the HER, the park has a highly characteristic oval shape and covers an area of some 250ha – which would have originally been enclosed by a substantial ditch and fenced bank (pale). The first documented reference to the park is in the reign of Henry VIII (recording the sale of the park to the King in 1541).
- 1.3.7 Such medieval deer parks are common on the Greensand Ridge of this part of Bedfordshire, in part probably reflecting the agriculturally marginal soils of the lower Greensand. During the medieval period this area had larger areas of grazing, wood pasture and woodland than on other more productive soils of the county. This is also reflected in the high density of ancient (pre-1600) woodland still remaining in the area, including two within the immediate environs of the pipeline route, Kingshoe Wood (HER 13075; to the south west of the western end of the pipeline route) and Rod Wood (HER 13165; immediately north of the western part of the pipeline route).
- 1.3.8 Many of the entries in the Historic Environment Record for the area immediately surrounding the pipeline route are associated with the post-medieval and early modern periods, including a large number of extant buildings within the village of Steppingley (HER 6818; 4392; 3766; 15178; 13845; 11470; 11459; 11458; 10589; 10060).

## 2 EVALUATION AIMS AND METHODOLOGY

### 2.1 Aims

2.1.1 The primary aim of the initial evaluation, as outlined in the WSI (Macaulay 2018) was to seek to establish the character, date and state of preservation of archaeological remains within the proposed development area. The work aimed to:

- Establish the presence or absence of archaeological remains on the site, characterise where they were found (location, depth and extent) and establish the quality of the preservation of any archaeological and environmental remains.

2.1.2 In addition, the following site specific objective was outlined:

- Determine, if possible, the nature and dating of the rectilinear enclosure (HER 955) that may be investigated during the trenching at the eastern end of the pipeline route.

2.1.3 The trial trench evaluation recorded a discrete area of medieval activity in trench 12 which was subsequently targeted for further investigation through a programme of Strip, Map and Sample excavation. The following broad research theme/objective was identified for the Strip Map and Sample excavation, in reference to the brief issued by the local authority (Central Bedfordshire Council 2018) and to relevant regional/county-based research frameworks and agendas (Oake et al 2007; Medlycott 2011):

- *Medieval settlement and village development.* The investigation of rural medieval settlement to examine the diversity of settlement form and to the formation, growth and shifts of settlement over time has been consistently highlighted as a key local and regional research objective (Oake 2007, 14; Edgeworth 2007, 100-101; Medlycott 2011, 70; Martin 2018). In this context, further investigation of the medieval remains recorded in Trench 12 has the potential to provide evidence on the extent and character of medieval settlement outside the historic core of the village of Steppingley, and it should be possible to relate this evidence to broader regional-scale patterns in medieval settlement.

### 2.2 Methodology

2.2.1 The methodology used followed that set out in the WSI (Macaulay 2018)

2.2.2 A total of twenty trenches measuring 25m x 2m were excavated within the 8m easement of the proposed pipeline route. Additionally, four trenches measuring 10m x 2m were excavated within the compound area. A number of trenches were moved in order to avoid obstructions; the affected trenches were resurveyed. The subsequent Strip Map and Sample (SMS) area covered 784m<sup>2</sup>, adjacent to and surrounding Trench 12.

- 2.2.3 Machine excavation of the trenches and SMS area took place under the supervision of a suitably qualified and experienced archaeologist, using a mechanical excavator with a toothless ditching bucket. Excavation of overburden was done in spits of 0.1m thickness.
- 2.2.4 Spoil was stored alongside the trenches, and deposits were kept separate to allow for sequential backfilling once approval had been acquired from the CBC archaeology team.
- 2.2.5 All excavation of archaeological features was done by hand. Hand dug slots through linear features were 1m in width, and discrete features were half-sectioned.
- 2.2.6 Surveying was done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.
- 2.2.7 A register of all trenches, features, photographs, drawings, small finds and samples was kept.
- 2.2.8 All features and layers were issued unique context numbers and documented on context sheets and hand drawn in plan and section.
- 2.2.9 Plans of all the trenches were drawn at 1:50 scale, and sections at 1:20 or 1:10 scale.

## 3 RESULTS

### 3.1 Introduction and presentation of results

3.1.1 The results of the evaluation and Strip Map and Sample excavation have been integrated and are presented below by trench number (the SMS area designated as Trench 12.2). The results include a stratigraphic description of the trenches which contained archaeological remains. Trenches that were blank and contained no archaeological remains are not described here. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A. Finds data and environmental data are tabulated and reported on in Appendices B and C.

### 3.2 General soils and ground conditions

3.2.1 The natural geology encountered varied across the site, with the geology at the east and west ends of the scheme (Trenches 1-7 and trenches 16-24) being a natural sand that was overlain by a thin layer of subsoil and then the topsoil. The geology within the central area of site (Trenches 8-15) was a stiff clay, over which was a thin band of sandy subsoil and then the topsoil.

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

### 3.3 Bucket Sampling

3.3.1 Bucket sampling was undertaken at all of the trenches, with ninety litres of soil from each trench being sorted through for finds, especially flints. The results of this were entirely negative, with no finds of any archaeological interest being recovered.

### 3.4 Trench 1 (Fig. 3)

3.4.1 Trench 1 (Plate 1) contained two features; a ditch (37) and tree throw (35).

3.4.2 Ditch 37 was a northwest-southeast aligned linear feature, with moderate sloping sides, that gradually broke onto a concave base, forming a round bottomed V-shaped profile. The ditch measured 1.92m wide and 0.42m in depth. Ditch 37 was filled solely by (38), a mid brown, silty sand, with frequent medium-large stone inclusions as well as sandstone and ironstone. The ditch yielded a single piece of slag (0.231kg) and a single tooth (0.017kg) from a horse.

3.4.3 Natural feature 35 was a tree throw which was sub-circular in plan, with steep sides, gradually breaking onto a concave base, the feature had a U-shaped profile, and measured 1.19m in length. 0.6m wide and 0.3m in depth. Tree throw 35 was filled solely by (36), a mid greyish brown, sand, with occasional ironstone inclusions and rare charcoal flecks.

### 3.5 Trench 4

3.5.1 Trench 4 revealed no archaeological features, only a natural tree throw (39) was observed and recorded. Tree throw 39 was a sub-circular feature with a flat bottomed U-shaped profile, measuring 1.2m in length and 0.4m wide and 0.4m in depth, had a

sole fill (40) a mid reddish brown, sand, with frequent ironstone throughout the fill of varying sizes.

### 3.6 Trench 6 (Fig. 4)

3.6.1 Trench 6 contained no archaeological features, however a colluvial deposit (21), sealed by the subsoil, was recorded extending across the whole width of the trench for 10.3m from the southwest end. The layer was mechanically removed and was mid yellowish sand up to 0.44m thick.

### 3.7 Trench 7 (Fig. 4)

3.7.1 Trench 7 also had no archaeological features, though a colluvial deposit (22), sealed by the subsoil, was recorded which extended over 7.25m at the southwest end of the trench. The deposit was a mid brownish yellow, silty sand, measuring 0.22m in thickness.

### 3.8 Trench 9 (Fig. 4)

3.8.1 No archaeological features were recorded in Trench 9 (Plate 2), however a colluvial deposit (23) was recorded extending across the whole trench for 19m from the northeast end (Plate 7). Layer 23, was a mid brownish red, silty sand, measuring up to 0.6m in thickness.

### 3.9 Trench 11 (Figs 4 & 5)

3.9.1 Trench 11 (Plate 3) contained two features, a ditch (30) overlain by a modern, roughly cobbled surface (32). Ditch 30, was a linear ditch terminus, with gentle sloping sides, breaking onto an uneven base, giving a wide shallow U-shaped profile. This feature measured 0.7m in length, 0.83m wide and 0.04m in depth, and was filled by a single deposit (31), a mid grey clay, with occasional angular stone inclusions.

3.9.2 Feature 32 is believed to be a modern working surface that extends through the central portion of the trench on a north-south alignment, overlying ditch 30. The surface lay in a broad, shallow hollow with an irregular shape in plan with very gently sloping sides and a flat base, measuring just 0.07m in depth, and was filled by a single deposit (33=34), a mid brown, clay, with frequent angular stone and rounded pebble inclusions which may have been deliberately laid. Modern confectionary wrappers and fragments of plastic sheeting/tarpaulin were noted within this deposit.

### 3.10 Trench 12 (Fig. 5)

3.10.1 Trench 12 (Plate 4), contained the majority of archaeological features identified during the evaluation and the surrounding area was subsequently investigated during the Strip Map and Sample phase of works.

3.10.2 Towards the southern end of the trench a north-south aligned gully (15) was exposed. This feature had steeply sloping sides and a narrow concave base, measuring 0.45m wide and 0.26m in depth (Fig. 7, Section 6). It was filled by a single deposit (16), a light brownish grey, clay, with occasional sub-angular small-medium sized stone inclusions. Eighty-nine sherds (0.401kg) of medieval pottery (App. B) were recovered from this feature.

- 3.10.3 Located immediately to the northwest of gully 15, was a somewhat irregular sub-circular feature (17) with gradually sloping sides and an irregular base, which measured 1.54m in length, 1.02m wide and 0.16m in depth. This has been interpreted as a naturally formed tree throw feature rather than a pit, but its mid brownish grey, clay fill (18) produced notable finds assemblage of 77 sherds of medieval pottery (0.491kg) and a single sheep tooth weighing 0.004kg.
- 3.10.4 To the north a further discrete feature (19) interpreted as a natural tree throw was exposed. This feature had gently sloping sides, an irregular base, and measured 1.2m in length, 0.68m wide and 0.07m in depth. The feature was filled by a single deposit (20), a light grey clay, with occasional stony inclusions. Three fragments of long bone of large mammal size (0.002kg) and 14 sherds of medieval pottery (0.054kg) were recovered from this feature.
- 3.10.5 Further to the north a pit (24) was partially exposed on the northeast edge of the trench; it was sub-circular in plan, with moderately sloping sides and a concave base, and measured 0.75m in length, 1.35m wide and 0.2m in depth, it was filled solely by a mid grey brown sandy clay (25), with occasional flint, ironstone and charcoal fleck inclusions. Ninety sherds of medieval pottery (0.879kg) were recovered from this feature.
- 3.10.6 A shallow linear feature, probably a furrow (26) was exposed towards the northern end of the trench. This north-east to south-west aligned feature had shallow sides that broke gently onto a flat base, it had dimensions of 0.93m wide and 0.07m in depth, it was filled by a single deposit (27), a mid greyish brown, sandy clay, and had occasional medium sized angular ironstone inclusions. Sixteen sherds of medieval pottery (0.056kg) were recovered from this feature.
- 3.10.7 Aa modern field drain (28), containing a ceramic pipe, was exposed on a northwest-southeast alignment at the north-western end of the trench.

### 3.11 Trench 12.2: Strip, Map and Sample area (Fig. 5)

- 3.11.1 Trench 12.2, the Strip, Map and Sample excavation, was an L-shaped area around the corner of the pipeline between Trenches 11 and 13, incorporating Trench 12. It measured 84m north-west to south-east, 47m north-east to south-west and 7.1m at its widest point, with a total area of 784m<sup>2</sup> (Fig. 5).
- 3.11.2 At the north-western end of the area were several features. A sub-circular pit (43) was partially exposed in the northern corner of the area. This being at least 3.5m long and 1.4m wide, with a depth of 0.33m, and filled by a mid yellow brown clay (44). This fill contained 16 sherds (0.149kg) of medieval pottery. This feature was heavily disturbed by modern field drains.
- 3.11.3 About a metre to the south east of this pit was a narrow north to south aligned gully (45), 0.52m wide and 0.14m deep. This had a mid yellow brown clay fill (46), which produced no finds.
- 3.11.4 Eight metres to the south was a north to south aligned ditch (41), 1.2m wide and 0.58m deep. This contained a dark reddish brown sand (42) and produced no finds.

- 3.11.5 South of ditch 41 were a cluster of sub-circular pits (47, 51, 53 and 55). Pit 51 was 0.95m long, 0.9m wide and 0.24m deep, filled by a mid grey brown sandy silt (52); which produced no finds. Pit 47 was 3.5m to the south, 1.7m long, 1.45m wide and 0.18m deep. Its fill was a dark brown sandy silt (48), which contained 17 sherds (0.15kg) of medieval pottery, and 0.032kg of slag. Pit 53 was 1.4m long by 1.2m wide and 0.23m deep (Fig. 7, Section 6). Its fill (54) was a mid grey brown sandy silt, which produced 11 sherds (0.09kg) of medieval pottery. The smallest pit, possibly a posthole, was pit 55. This was 0.63m by 0.6m and 0.12m deep, filled by a mid brown grey silty sand (56), devoid of finds.
- 3.11.6 Around 15m south of this cluster of features the continuation of possible furrow 26, investigated in Trench 12 (see above) was exposed. Further south, the terminus of a ditch (62), aligned east to west, was exposed 3.7m on the south-western edge of the excavation. This was 1.02m wide and 0.43m deep, filled by a mid orange brown clay (63) (Fig. 7, Section 23; Plate 10). This context produced 133 sherds (1.11kg) of medieval pottery and an iron artefact (SF1), identified as a medieval fiddle key horseshoe nail with an oval head (C. Fletcher pers comm).
- 3.11.7 At the middle of the excavation area where its alignment changed to follow the pipeline route, a north-east to south-west aligned ditch was recorded (49; Fig. 7, Section 18). This was 0.85m wide and 0.3m deep with a U-shaped profile. The ditch was filled by a mid grey brown clay (50), which produced two sherds (0.01kg) of medieval pottery.
- 3.11.8 To the east of ditch 49 a short length of ditch (57) was recorded, cut by a large pond feature (59). The ditch was aligned north to south and was 1.03m wide and 0.43m deep, with a U-shaped profile (Fig. 7, Section 22). It contained a fill of mid brown grey clay (58), which produced seven sherds (0.08kg) of medieval pottery and 0.273kg of slag.
- 3.11.9 The pond (59) was a large feature partially exposed on the northern edge of the excavation measuring 9.42m wide (east to west). The pond appears to represent the earlier extent of an existing pond immediately across the field boundary to the north. This feature was not fully excavated but its upper fill was a mid brown grey clay (60). Partially revealed against the northern baulk was an area of dark reddish brown burnt clay (61), 2m long by more than a 1m wide and 0.04m deep, possibly a dump of burnt material dumped into the top of the pond. No finds were recovered from either fill.

## 3.12 Trench 18 (Fig. 6)

- 3.12.1 The only feature present in trench 18, was a small sub-circular pit (13), it had gradual sloping sides, that gently broke into a concave base, and measured 0.88m in length 0.35m wide and was 0.10m in depth (Fig. 7, Section 5). The pit was filled by a single deposit (14), a dark brownish grey, sand, with occasional sandstone inclusions.
- 3.12.2 Two sherds of post medieval pottery (0.006kg) were recovered from the topsoil of this trench.

### 3.13 Trench 19

- 3.13.1 A single tree throw (11) was recorded in trench 19 (Plate 5), an irregular sub-circular shaped feature in plan, with gentle sloping sides and a concave base, measuring 1.43m in length, 0.49m wide and 0.11m in depth. The feature was filled by a single deposit (12), a mid greyish brown, sand.

### 3.14 Trench 20

- 3.14.1 Trench 20 revealed two shallow parallel linear features interpreted as furrows, aligned north-northwest to south-southeast.
- 3.14.2 Furrow (9) was linear in plan, with gradually sloping sides, breaking gently onto an irregular base, measuring 1.84m wide and 0.12m in depth. It was filled solely by a mid greyish brown, silty sand, with rare sub angular stone inclusions (10).
- 3.14.3 Furrow (7) was a linear feature on a northwest-southeast alignment, with gently sloping sides, that gradually broke onto a flat base, and measured 0.85m wide and 0.07m in depth. It was filled solely by a mid greyish brown, silty sand (8). This feature was only visible in the trench section.

### 3.15 Trench 22

- 3.15.1 Trench 22 contained a single linear feature, a probable furrow (3), on a north-west to south-east alignment. This feature had gradually sloping sides, an irregular base and measured 0.93m wide and 0.05 in depth. It was filled solely by a light brownish grey, silty sand, with rare small-medium sized sub angular stones and occasional charcoal fleck inclusions (4). Three fragments of animal bone belonging to a large mammal (0.001kg) were recovered from this feature.

### 3.16 Trench 24

- 3.16.1 Probable furrow (5), almost certainly the continuation of furrow 3 in Trench 22, was the only feature present in Trench 24. This a linear feature was on a northwest to southwest alignment and had moderately sloping sides with concave base, measuring 0.65m wide and 0.1m deep. The furrow was filled solely by a mid greyish brown silty sand, with frequent charcoal flecks and rare chalk and flint inclusions (6). Two sherds of post medieval pottery (0.005kg) were recovered from this feature.

### 3.17 Finds summary

- 3.17.1 Across most of the site finds were sparse and the vast majority of material was recovered from Trench 12 and SMS area Trench 12.2.
- 3.17.2 A total of 542 sherds of pottery weighing 3.6kg was recovered. With the exception of four sherds of post-medieval pottery from Trenches 18 (from the topsoil) and 24 (from furrow 5), the assemblage was derived from features in Trenches 12 and 12.2, the vast majority of which could be dated to between the 12th to 15th century, consistent with an assemblage derived from settlement restricted to the 14th century.



- 3.17.3 A small assemblage of slag (13 fragments; 0.539g) was recovered, mostly from features in Trench 12.2. The assemblage included tap slag and suggests that some iron smelting was carried out close to the site.
- 3.17.4 A single iron horseshoe nail (of fiddle key form) was recovered from ditch 62, Trench 12.2.
- 3.17.5 Five fragments of animal bone weighing 25g were recovered from the site, again largely from Trenches 12 and 12.2. This small assemblage includes a sheep tooth and a horse tooth alongside unidentifiable long bone fragments.
- 3.17.8 Six bulk samples were processed for the recovery of environmental remains. Preservation was very poor and only sparse charcoal and a single charred cereal grain was recovered from the sampled deposits.

## 4 DISCUSSION

### 4.1 Reliability of field investigation

- 4.1.1 Archaeological features were distinguished by their mid to dark grey and brown colours and were clearly visible during the fieldwork.
- 4.1.2 All of the trenches were free draining, and the absence of rain and good ground conditions ensured that standing water did not hinder the archaeological investigation.
- 4.1.3 Any potential changes in the natural geology across a trench were tested to ensure they were indeed geological changes and not large areas of colluvium or archaeological deposits.
- 4.1.4 Accordingly, the results of this the archaeological investigations are believed to have a high level of reliability.

### 4.2 Interpretation

#### The evaluation trenching

- 4.2.1 Over the majority of the evaluated area few archaeological features or deposits were recorded. The most significant archaeological remains encountered were those of medieval date in Trench 12 (discussed below). In terms of the original site specific research objective to investigate the possible enclosure crossed by the eastern part of the pipeline route (HER 955, Fig. 2), the trenching did not reveal any features that could have been associated with this enclosure and it has not been possible to confirm its presence.
- 4.2.2 Along the western part of the pipeline route, the only significant feature was ditch **37** (Trench 1), although, unfortunately, no datable finds were recovered from this feature. The ditch is located only a few metres from, and is aligned parallel to, the current modern field boundary. It is possible that ditch **37** represents an earlier (but relatively recent) field boundary that went into disuse when the field boundary changed location to its current position.
- 4.2.3 For the most part the trenches in the central part of the pipeline route were blank. Colluvial deposits were observed in Trenches 6, 7 and 9; no finds were recovered from these deposits and sampling showed them to be devoid of preserved environmental remains. Given the undulating nature of the terrain, it is likely that these deposits represent hill-wash that has been deposited at the base of localised slopes or within natural hollows.
- 4.2.4 Trench 11 contained a single undated ditch (**30**) which underlay an extensive modern stone surface within a shallow hollow (**32**). This shallow feature was filled mostly with stones and gravels and had the appearance of a cobbled/hardcore surface. The only finds associated with this feature were modern and it is possible that that it may be related to the installation of the nearby high pressure gas main that runs through the field this trench was situated in.

- 4.2.5 Leaving aside Trench 12 (see below), the only other features of note were a series of probable furrows encountered at the eastern end of the pipeline route (Trenches 20, 22 and 24). These were all aligned broadly north to south. The only dating evidence for these ephemeral features was two sherds of post-medieval (late 18th to 19th century) pottery from furrow 5 (Trench 24).

#### Medieval remains in Trenches 12 and 12.2

- 4.2.6 Evaluation Trench 12 and the subsequent SMS area (Trench 12.2) revealed a relatively discrete set of features, including ditches, pits and a pond, in the central part of the pipeline route. Where dated, these features all appear to relate to medieval activity sometime during the 13th to 15th centuries. Several of the ditches (45 & 41) in the northern part of Trench 12.2 were devoid of finds and remain essentially undated but those in the southern part of Trench 12.2 (62, 49 and 57) all produced medieval pottery. Fairly substantial assemblages of pottery were also recovered from many of the small discrete features exposed in this area, especially from features 17, 19, 24, 47 and 53. Several of these have been interpreted as naturally formed tree throw features, but it is clear that infilled, and in some cases were probably intentionally backfilled, during the medieval period.
- 4.2.7 It was not possible to identify any structures associated with this activity, nor did the relatively narrow exposure of the excavation area allow the layout of ditches to be reconstructed in any detail. However, the relatively rich finds assemblages from these features strongly suggests that they lie close to or within an area of settlement, perhaps representing a backyard area with associated pitting and rubbish disposal, with the ditches representing plot boundaries of some kind. Analysis of the pottery suggests it represents a domestic assemblage with storage and cooking vessels typical of material from other rural settlements in the county (App. B.2). With a date range between the 12th to 15th century, as a whole the pottery assemblage is consistent with representing material generated during occupation in the 14th century.
- 4.2.8 This putative area of medieval settlement lies within a 100m of the southern edge of the modern village, and historic core, of Steppingley (Fig 2). A greater extent for settlement of the edge of the village during the medieval period is also indicated by the earthworks of an area of deserted medieval settlement to the west of the village (HER 11464; see Section 1.3, archaeological and historic background, above). This evidence may relate to much wider, regional-scale, trends in medieval settlement patterns. Across much of eastern England there is a well-documented expansion of settlement prior to c. 1350 followed by a decline occasioned by depopulation and agricultural and economic recession over the course of the later 14th century - resulting in the shrinkage and desertion of settlements – especially in agricultural marginal areas such as the Greensand Ridge (Edgeworth 2007, 101).
- 4.2.9 Beyond this, it is also significant that the area of medieval settlement identified during the fieldwork lies within the boundaries (as mapped in the HER) of Steppingley deer park (HER 9444; Fig. 2) As noted above (Section 1.3), such deer parks are relatively common on the poorer soils of the Lower Greensand, with Edgeworth (2007, 102) noting that 11 of the 40 or so examples from the county are located on the Greensand Ridge. The tradition of enclosed parks of this kind may have Anglo-Saxon origins but

they increased dramatically in number following the Norman conquest and, although their heyday appears to have been reached in late 13th/early 14th century, they were a long-lived phenomenon, with new parks continuing to be laid out in the 16th and 17th centuries (Rackham 1986, 122). The first documented reference to the park at Steppingley is in the mid-16th century (Section 1.3), but the date of its origin is unknown. In this context, the settlement evidence revealed in Trenches 12 and 12.2 – assuming it definitely lies within the park boundaries – may provide a broad *terminus post quem* for the layout of the park, i.e. after the probable 14th century date of the medieval activity.

### 4.3 Concluding summary

- 4.3.1 Along much of the pipeline route, the evaluation trenching revealed only natural features, colluvial deposits and possible agricultural furrows. A discrete area of medieval remains, consisting a number of pits and ditches, investigated in the central part of the pipeline route provided good evidence for medieval settlement just outside of the modern village of Steppingley. This relatively short-lived episode of settlement may have been restricted to the 14th century and the area was later incorporated into a late medieval deer park, first documented in the 16th century.

## APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench revealed a single northwest-southeast aligned ditch and a tree throw. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.46
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.38	Topsoil	-	-
2	Layer	-	0.14	Subsoil	-	-
35	Cut	0.60	0.30	Tree throw	-	-
36	Fill	-	0.30	Fill of 35	-	-
37	Cut	1.92	0.42	Ditch	-	-
38	Fill	-	0.42	Fill of 37	1x slag, 1x Animal bone	Uncertain

Trench 2						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.46
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.28	Topsoil	-	-
2	Layer	-	0.18	Subsoil	-	-

Trench 3						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.55
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.38	Topsoil	-	-
2	Layer	-	0.26	Subsoil	-	-

Trench 4						
<b>General description</b>					<b>Orientation</b>	E-W
Trench revealed a single tree throw. Consists of topsoil and subsoil overlying natural geology of silty sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.55
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
100	Layer	-	0.30	Topsoil	-	-
101	Layer	-	0.18	Subsoil	-	-
39	Cut	0.40	0.40	Tree throw	-	-
40	Fill	-	0.40	Fill of 39	-	-

Trench 5						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of silty sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.51
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.28	Topsoil	-	-
2	Layer	-	0.18	Subsoil	-	-

Trench 6						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand, with a colluvial deposit at the southwest end of the trench					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.9
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.36	Topsoil	-	-
2	Layer	-	0.46	Subsoil	-	-
21	Layer	-	0.44	Colluvium	-	-

Trench 7						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand, with a colluvial deposit at the southwest end of the trench					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.38
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.34	Topsoil	-	-
2	Layer	-	0.08	Subsoil	-	-
22	Layer	-	0.22	Colluvium	-	-

Trench 8						
<b>General description</b>					<b>Orientation</b>	N-S
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.37
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.24	Topsoil	-	-
2	Layer	-	0.15	Subsoil	-	-

Trench 9						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay, with a colluvial deposit at the northeast end of the trench.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.77
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.28	Topsoil	-	-
2	Layer	-	0.20	Subsoil	-	-
23	Layer	-	0.60	Colluvium	-	-

Trench 10						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench revealed two natural features that were not excavated. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.36
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.26	Topsoil	-	-
2	Layer	-	0.10	Subsoil	-	-

Trench 11						
<b>General description</b>					<b>Orientation</b>	SE-NW
Trench revealed a surface and possible ditch. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.5
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.38	Topsoil	-	-
2	Layer	-	0.10	Subsoil	-	-
30	Cut	0.83	0.04	Possible ditch cut	-	-
31	Fill	-	0.04	Fill of 30	-	-
32	Cut	0.35	0.07	Cut for surface	-	-
33	Fill	-	0.07	Fill of 32	-	-
34	Layer	-	0.12	Surface (same as (33))		

Trench 12						
<b>General description</b>					<b>Orientation</b>	SE-NW
Trench revealed a gully on a north-south alignment, two tree throws, a pit, a furrow on a northeast-southwest alignment and a modern drain. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.46
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.27	Topsoil	-	-
2	Layer	-	0.15	Subsoil	-	-
15	Cut	0.45	0.26	Gully	-	-
16	Fill	-	0.26	Fill of 15	89x Pottery	Medieval

17	Cut	1.02	0.16	Tree throw	-	-
18	Fill	-	0.16	Fill of 17	1x Animal bone, 77x Pottery	Medieval
19	Cut	0.68	0.07	Tree throw	-	-
20	Fill	-	0.07	Fill of 19	3x Animal bone, 14x Pottery	Medieval
24	Cut	1.35	0.20	Pit	-	-
25	Fill	-	0.20	Fill of 24	90x Pottery	Medieval
26	Cut	0.93	0.09	Furrow	-	-
27	Fill	-	0.09	Fill of 26	16x Pottery	Medieval
28	Cut	1.00	0.14	Drain	-	-
29	Fill	-	0.14	Fill of 28	1x Animal bone, 28x Pottery	Medieval (residual)

Trench 12.2						
General description					Orientation	SE-NW/ SW-NE
Trench was L-shaped and revealed five ditches/gullies, four pits and a large pond. Numerous modern field drains were also revealed Consists of topsoil and subsoil overlying natural geology of clay.					Length (m)	131
					Width (m)	7.1
					Avg. depth (m)	0.46
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.27	Topsoil	-	-
2	Layer	-	0.15	Subsoil	-	-
41	Cut	1.20	0.58	Ditch cut	-	-
42	Fill	-	0.58	Fill of 41	-	-
43	Cut	3.50	0.33	Pit cut	-	-
44	Fill	-	0.33	Fill of 43	16x Pottery	Medieval
45	Cut	0.52	0.14	Gully cut	-	-
46	Fill	-	0.14	Fill of 45	-	-
47	Cut	1.70	0.18	Pit cut	-	-
48	Fill	-	0.18	Fill of 47	17x Pottery, 2x Slag	Medieval
49	Cut	0.85	0.30	Ditch cut	-	-
50	Fill	-	0.30	Fill of 49	2x Pottery	Medieval
51	Cut	0.95	0.24	Pit cut	-	-
52	Fill	-	0.24	Fill of 51	-	-
53	Cut	1.4	0.23	Pit cut	-	-
54	Fill	-	0.23	Fill of 53	11x Pottery	Medieval
55	Cut	0.63	0.12	Posthole cut	-	-
56	Fill	-	0.12	Fill of 54	-	-
57	Cut	1.03	0.42	Ditch cut	-	-
58	Fill	-	0.42	Fill of 57	7x Pottery, 9x Slag	Medieval
59	Cut	9.42	-	Pond	-	-
60	Fill	-	-	Fill of 59	-	-
61	Fill	2.00	0.04	Fill of 59	-	-
62	Cut	1.02	0.43	Ditch cut	-	-



63	Fill	-	0.43	Fill of 62	133x Pottery, 1x Iron Artefact	Medieval
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Trench 13						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.54
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.43	Topsoil	-	-
2	Layer	-	0.15	Subsoil	-	-

Trench 14						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.47
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.38	Topsoil	-	-
2	Layer	-	0.13	Subsoil	-	-

Trench 15						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of clay.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.55
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.44	Topsoil	-	-
2	Layer	-	0.08	Subsoil	-	-

Trench 16						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	25
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.53
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1	Layer	-	0.40	Topsoil	-	-
2	Layer	-	0.10	Subsoil	-	-

Trench 17						
General description					Orientation	NE-SW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					Length (m)	25
					Width (m)	1.8
					Avg. depth (m)	0.60
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.40	Topsoil	-	-
2	Layer	-	0.20	Subsoil	-	-

Trench 18						
General description					Orientation	NE-SW
Trench revealed a single pit. Consists of topsoil and subsoil overlying natural geology of sand.					Length (m)	25
					Width (m)	1.8
					Avg. depth (m)	0.40
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.24	Topsoil	2x Pottery	Post medieval
2	Layer	-	0.16	Subsoil	-	-
13	Cut	0.35	0.10	Pit	-	-
14	Fill	-	0.10	Fill of 13	-	-

Trench 19						
General description					Orientation	NE-SW
Trench revealed a single tree throw. Consists of topsoil and subsoil overlying natural geology of sand.					Length (m)	25
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.24	Topsoil	-	-
2	Layer	-	0.12	Subsoil	-	-
11	Cut	0.49	0.11	Tree throw	-	-
12	Fill	-	0.11	Fill of 11	-	-

Trench 20						
General description					Orientation	NE-SW
Trench revealed two furrows. Consists of topsoil and subsoil overlying natural geology of sand.					Length (m)	25
					Width (m)	1.8
					Avg. depth (m)	0.50
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.37	Topsoil	-	-
2	Layer	-	0.13	Subsoil	-	-
7	Cut	0.85	0.07	Furrow	-	-
8	Fill	-	0.07	Fill of 7		Uncertain
9	Cut	1.84	0.12	Furrow		
10	Fill		0.12	Fill of 9		

Trench 21						
<b>General description</b>					<b>Orientation</b>	SE-NW
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	10
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.52
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.42	Topsoil	-	-
2	Layer	-	0.10	Subsoil	-	-

Trench 22						
<b>General description</b>					<b>Orientation</b>	N-S
Trench revealed a single furrow. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	10
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.48
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.38	Topsoil	-	-
2	Layer	-	0.12	Subsoil	-	-
3	Cut	0.93	0.05	Furrow	-	-
4	Fill	-	0.05	Fill of 3	3x Animal bone	Uncertain

Trench 23						
<b>General description</b>					<b>Orientation</b>	N-S
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	10
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.50
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.36	Topsoil	-	-
2	Layer	-	0.12	Subsoil	-	-

Trench 24						
<b>General description</b>					<b>Orientation</b>	E-W
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand.					<b>Length (m)</b>	10
					<b>Width (m)</b>	1.8
					<b>Avg. depth (m)</b>	0.55
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.40	Topsoil	-	-
2	Layer	-	0.14	Subsoil	-	-
5	Cut	0.65	0.10	Furrow	-	-
6	Fill	-	0.10	Fill of 5	2x Pottery	Post Medieval

## APPENDIX B FINDS REPORTS

### B.1 Slag

*By Carole Fletcher*

#### *Introduction and Methodology*

B.1.1 Thirteen fragments of slag, weighing 0.539kg, were collected by hand from Trench 1 and Trench 12.2. The slag was weighed and rapidly recorded, with basic description and weight recorded in the text.

#### *Assemblage*

B.1.2 Slag was recovered from ditch 37 in Trench 1. It consists of a single irregular piece of moderately dense tap slag, weighing 0.223kg, externally purplish-black to black, internally reddish-black, with numerous small, and occasional larger, vesicles. The presumed upper surface has the typical, somewhat 'liquid', appearance of tap slag and the lower surface is rough (English Heritage 2015 23, fig 16).

B.1.3 Two features in Trench 12.2 produced slag. From pit 47, two re-joining fragments (0.032kg) were recovered, consisting of irregular pieces of near-black, moderately dense tap slag with numerous small, and occasional larger, vesicles. The presumed upper surface has the typical, somewhat 'liquid', appearance of tap slag and the lower surface is rough (English Heritage 2015 23, fig 16). Ten fragments of similar tap slag (0.284kg) were recovered from ditch 57. The slag exhibits some abrasion and appears to have been deliberately broken up, possibly for ease of disposal. Seven of the fragments conform closely to the description given above for the slag recovered from pit 47, with varying quantities of vesicles; the remaining three lack them entirely. One of these three pieces is over 40mm thick, which is an outlier for this assemblage.

#### *Discussion*

B.1.4 The slag recovered from ditch 37 may indicate iron smelting on, or close to, the area excavated. The tap slag recovered from pit 47 and ditch 57 reinforces this view, however, it represents the disposal of waste, as only a small quantity was recovered. The slag itself is not closely datable, although both features produced medieval pottery, suggesting a medieval date by association.

#### *Retention, dispersal or display*

B.1.5 The slag assemblage is fragmentary and its significance is uncertain, other than to possibly indicate metalworking. Should further work be undertaken, additional metalworking deposits may be recovered. If no further work is undertaken, this statement acts as a full record and the slag may be deselected prior to archive deposition.

## B.2 Pottery

*By Carole Fletcher*

### *Introduction*

- B.2.1 Archaeological works produced a moderate pottery assemblage of medieval pottery, 542 sherds, weighing 3.602kg, recovered from features in Trenches 12, 12.2, 18 and 24. The bulk of the pottery was recovered from features in Trench 12 and 12.2.
- B.2.2 The pottery is mainly medieval and appears to be mostly composed of the sandy fabrics common to Bedfordshire. A single sherd of Creamware in ditch **24** is likely to be intrusive. The condition of the overall assemblage is moderately abraded with some abraded sherds.

### *Methodology*

- B.2.3 The Prehistoric Ceramics Research Group (PCRG), Study Group for Roman Pottery (SGRP), The Medieval Pottery Research Group (MPRG), *A Standard for Pottery Studies in Archaeology* (2016) and the MPRG *A guide to the classification of medieval ceramic forms* (MPRG 1998) act as standards.
- B.2.4 Recording was carried out using OA East's in-house system, based, for the medieval pottery, on that previously used at the Museum of London. Previously described medieval and post-medieval types, are named where possible using Bedfordshire fabric codes (Albion Archaeology 2002) and the Cambridgeshire fabric types (Spoerry 2016). It should be noted that all medieval fabric identifications are tentative and that much of the pottery has been grouped as C01 Sandy with some C03 Fine sandy, C04 Coarse sand and C05, with the many of the sherds being recorded as C non-specific medieval ware due to the rapid recording. A few sherds appear to be late medieval in form, although the bulk of the assemblage is likely to be 14th century.
- B.2.5 All sherds have been counted, classified and weighed on a context-by-context basis. Some pottery was recovered from samples, however, this material comes from features that produced reasonable assemblages of pottery and the additional sample material is not discussed in this report. The assemblage is recorded in the catalogue at the end of this report. The pottery and archive are curated by Oxford Archaeology East until formal deposition or dispersal.

### *Assemblage*

- B.2.6 A series of 25 trenches were excavated, of which four trenches, 12, 12.2, 18 and 24, produced pottery from features within the trenches. The bulk of the pottery was recovered from Trenches 12 and 12.2, from 11 features, of which, **17** and **19** are described as tree boles. The pottery recovered from **17** (76 sherds, 0.487kg) is moderately abraded, mostly body sherds with several jar rim sherds. The medieval sherds are relatively large, suggesting that they may be from a pit or other disturbed feature that perhaps the tree bole truncated.
- B.2.7 Gully **15** produced a moderately large assemblage (89 sherds, 0.395kg) that appears to have undergone some reworking post-deposition. The assemblage produced a

- sherd from a ?C60 Hertfordshire-type Greyware jug, a C body sherd and jar rim sherds, alongside several rim sherds from C01 Sandy ware jars.
- B.2.8 Pit **24** produced the bulk of the Trench 12 assemblage (111 sherds, 0.865kg) and contained some large relatively unabraded medieval rim sherds from three Sandy (C01) jars and a Sandy (C01) abraded jug rim sherd with a pulled or pinched lip, alongside body sherds from (possibly several) other vessels. The feature also produced the only glazed medieval sherd in the assemblage, an abraded sherd from a Hedingham-type (C17) decorated jug. The pit assemblage has undergone some reworking and is not primary deposition, with an ?intrusive mid 18th-early 19th Creamware sherd suggesting mid 18th century or later disturbance of the feature.
- B.2.9 Furrow **26** also contains medieval pottery (41 sherds, 0.194kg) and, although somewhat abraded, some of the material in contexts 27 and 29 are from the same, or similar, vessels. The material does not seem abraded enough to be a manuring scatter, therefore the furrow may have disturbed an earlier feature.
- B.2.10 Pit **43** produced 15 sherds of pottery (0.149kg), mostly undiagnostic medieval body sherds, including a possible sherd from an East Anglian Redware vessel. Pit **47** produced a similar number of sherds (17 sherds, 0.152kg), however, the assemblage included a large sherd from a rounded bowl, which appears to be a possible earlier late medieval ware, being somewhere between C01 and E01, similar to fabrics and vessels discussed by Anna Slowikowski in *Genius in a Cracked Pot* (Slowikowski and Vince 2011).
- B.2.11 Pit **53** contained sherds from a Late Medieval Reduced (E01) flared bowl (c.1350-1500), alongside earlier Bedfordshire fabrics, indicating the continuation of pottery deposition into the 14th century.
- B.2.12 Ditches **49**, **57** and **62** also contained pottery. From ditch **49**, two sherds (0.010kg) of undiagnostic Sandy (red margins) C05 were recovered. The assemblage from ditch **57** (7 sherds, 0.081kg) included two large sherds from the neck and rim of a Sandy (C01) jug were found. Ditch **62** produced the bulk of the Trench 12.2 assemblage, 146 sherds weighing 1.119kg, which included rims from four separate jars and a rim from a rounded bowl, or possibly dripping dish. Like the bowl recovered from pit **43**, the latter is likely to be an earlier late medieval ware, being somewhere between C01 and E01, similar to fabrics and vessels discussed above (Slowikowski and Vince 2011).
- B.2.13 Topsoil in Trench 18 produced two late 18th-mid 19th century slip-decorated Pearlware sherds. A single furrow, **5**, in Trench 25 produced a late 18th-mid 19th Pearlware sherd and a sherd of 19th century refined whiteware with black transfer-printed decoration. The material in both Trench 18 and 24 is likely to be the result of low levels of 18th and 19th century rubbish deposition and subsequent ploughing.

## Discussion

- B.2.14 The post-Roman pottery is likely to be domestic in origin, with occupational rubbish deposition centred around Trench 12 and 12.2. The moderately large sherds recovered from pit **24** and ditch **62** suggest some level of deliberate medieval rubbish deposition. Furrow **26** may have truncated a second medieval feature, ploughing having dragging

pottery from the feature. The vessels recovered represent storage and cooking vessels, most commonly jars in sandy fabrics, mostly from Bedfordshire. Overall, the assemblage dates from the mid 12th to the 15th century. Only a single glazed sherd was recovered, an abraded sherd from a Hedingham-type ware jug, some earlier late medieval pottery and late medieval sherds were identified, suggesting the assemblage represents 14th century occupation, perhaps from a single dwelling.

B.2.15 The paucity of sherds elsewhere indicates low levels of rubbish disposal across the site, suggesting the land away from Trenches 12 and 12.2 was used only for agricultural purposes. The furrows indicate some degree of ploughing, however, the land could also have spent time as pasture.

### *Retention, dispersal or display*

B.2.16 The assemblage from Trenches 12 and 12.2 indicates medieval occupation close to this area of the pipeline scheme, and should further work be undertaken, the pottery should be incorporated into any later catalogue and compared with the Bedfordshire type series. If no further work is undertaken, the pottery should be retained, as identifications are only tentative.

### *Pottery Catalogue*

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
12	16	15	?C60 Hertfordshire Greyware jug, body sherd with partial strap handle, remains of plastic decoration in the form of deep thumb impressions and holes stabbed into base of handle	1	1	0.042	1140-1350
			Non-specific medieval ware (C), moderately abraded jar rim and body sherd. Rim, sharply everted, near-square with rounded outer edge diameter 160mm EVE 10%	1	3	0.027	1150-1400
			Non-specific medieval ware (C), moderately abraded body sherd with throwing grooves	1	1	0.004	1150-1400
			Sandy (C01), moderately abraded jar rim, sharply everted near-square rim. Diameter 180mm EVE 10%	1	1	0.020	1150-1300
			Sandy (C01), moderately abraded jar rim, everted, slight external thickening. Diameter 180mm EVE 6%	1	1	0.010	1150-1300
			Sandy (C01), moderately abraded to abraded jar rim, everted, slight external thickening, uncertain of diameter	1	1	0.009	1150-1300
			Sandy (C01), abraded rim sherd, too small to be certain of form		1	0.002	1150-1300
			Sandy (C01), moderately abraded body sherds, various vessels		10	0.057	1150-1300
			Non-specific medieval ware (C), reduced, moderately abraded body sherd with throwing grooves		1	0.004	1150-1400
			Non-specific medieval ware (C), reduced, moderately abraded to		1	0.006	1150-1400

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			abraded rim, everted flat-topped and too small to be certain of diameter				
			Non-specific medieval ware (C), moderately abraded to abraded base angle sherds		5	0.023	1150-1400
			Non-specific medieval ware (C), moderately abraded body sherds, some with light sooting, slightly oxidised and reduced sherds		18	0.084	1150-1400
			Non-specific medieval ware (C), reduced, moderately abraded body sherds, with horizontal incised lines with slight sooting		5	0.018	1150-1400
			Non-specific medieval ware (C), abraded body sherds, some with light sooting, slightly oxidised and reduced sherds		40	0.089	1150-1400
	18	17	Sandy (C01), moderately abraded jar rim, sharply everted near-square rim, applied, thumbed cordon below rim. Diameter approximately 220mm, EVE 6%	1	1	0.034	1150-1300
			Sandy (C01), moderately abraded base angle, convex, obtuse and body sherds.	1	4	0.066	1150-1300
			Fine sandy (C03), moderately abraded body sherds, slightly sooted	0	3	0.011	1150-1300
			Fine sandy (C03), moderately abraded jar rim sherd, sharply everted, flat-topped	1	1	0.005	1150-1300
			Fine sandy (C03), moderately abraded body sherds with shallow lines or throwing grooves	1	2	0.021	1150-1300
			Coarse sand (C04), moderately abraded base angle, small slashes (decoration) on base angle	1	1	0.004	1150-1300
			Non-specific medieval ware (C), reduced, moderately abraded jar rim, short neck with sharply everted square rim. Diameter 200mm, EVE 11%, body sherds, including one sherd with incised horizontal lines and base angle convex, obtuse	1	5	0.055	1150-1400
			Non-specific medieval ware (C), reduced, body sherds, with horizontal incised lines		6	0.025	1150-1400
			Non-specific medieval ware (C), reduced, base angle convex obtuse		1	0.005	1150-1400
			Non-specific medieval ware (C), possibly C01, moderately abraded and some abraded body sherds		13	0.081	
			Non-specific medieval ware (C), reduced body sherds, moderately abraded and externally sooted		11	0.055	1150-1400
			Non-specific medieval ware (C), moderately abraded and some abraded body sherds		28	0.125	1150-1400
	20	19	Sandy (C01), moderately abraded body sherd		1	0.006	1150-1300



Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			Sandy (C01), moderately abraded base angle, slightly convex, obtuse		2	0.007	1150-1300
			Sandy (C01), abraded body sherd		2	0.004	1150-1300
			Red quartz (C02), moderately abraded body sherd with throwing grooves		1	0.004	1150-1300
			Fine sandy (C03), moderately abraded to abraded body sherds, slightly sooted		4	0.008	1150-1300
			Fine sandy (C03), moderately abraded body sherds. Single sherd has an incised line	2	4	0.008	1150-1300
			Non-specific medieval ware (C), moderately abraded to abraded base angle, slightly convex obtuse. Oxidised surfaces and reduced core and inner surface		4	0.008	1150-1400
			Non-specific medieval ware (C), moderately abraded to abraded body sherd pale grey, single incised line on body		4	0.008	1150-1400
	25	24	Creamware (P38), moderately abraded to abraded	1	1	0.003	1740-1830
			Hedingham type (C17), abraded body sherd, white and red slip decoration with traces of olive green glaze	1	1	0.003	1250-1400
			Sandy (C01), moderately abraded jug rim. Rim everted, externally thickened, internally bevelled pulled or pinched lip. Diameter 100mm EVE 30%	1	2	0.029	1150-1300
			Sandy (C01), moderately abraded jar rim. Rim sharply everted, slightly externally thickened. Diameter 180mm EVE 9%	1	1	0.018	1150-1300
			Sandy (C01), moderately abraded jar rim. Rim everted, externally thickened, slight internal bevel, impressed decoration on outer edge of rim. Diameter 180mm EVE 5%	1	1	0.015	1150-1300
			Sandy (C01), moderately abraded jar rim. Rim everted. Diameter 200mm EVE 7%	1	1	0.015	1150-1300
			Sandy (C01), moderately abraded body sherds		6	0.039	1150-1300
			Sandy (C01), moderately abraded base angle		1	0.005	1150-1300
			Sandy (C01), moderately abraded body sherd, horizontal incised lines on body		1	0.004	1150-1300
			Fine sandy (C03), moderately abraded base angle, slightly convex obtuse		1	0.034	1150-1300
			Coarse sand (C04), moderately abraded body sherd	1	1	0.005	1150-1300
			Non-specific medieval ware (C) moderately abraded body sherds and rim from a reduced, sooted jar. Rim everted, externally thickened, near-square, diameter 220mm, EVE 37%	1	22	0.249	1150-1400
			Non-specific medieval ware (C), moderately abraded reduced, jar rim,	1	21	0.101	1150-1400

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			everted externally thickened and rounded, internally bevelled, diameter 320mm, EVE 11%, with an applied thumbed strip horizontally on the shoulder of the vessel				
			Non-specific medieval ware (C), moderately abraded jar rim, everted, internally thickened (internally lid-seated) diameter 200mm, EVE 6%	1	1	0.019	1150-1400
			Non-specific medieval ware (C), moderately abraded, base angles, slightly convex and obtuse		4	0.094	1150-1400
			Non-specific medieval ware (C), moderately abraded reduced body sherds with horizontal incised lines on body		5	0.031	1150-1400
			Non-specific medieval ware (C), moderately abraded base angle, small slashes (decoration) on base angle		1	0.006	1150-1400
			Non-specific medieval ware (C), moderately abraded buff-grey, body sherds, one with traces of an applied thumbed strip		2	0.020	1150-1400
			Non-specific medieval ware (C), moderately abraded and some abraded body sherds, with slight sooting on some sherds		38	0.175	1150-1400
	27	26	Sandy (C01), abraded body sherd		2	0.005	1150-1300
			Sandy (C01), moderately abraded body sherd	1	1	0.017	1150-1300
			Fine sandy (C03), moderately abraded to abraded body sherd	1	1	0.003	1150-1300
			Non-specific medieval ware (C), moderately abraded body sherds, dull grey-brown external surfaces and margins, oxidised core. (same fabric or vessel in context 29)	1	11	0.028	1150-1400
	29	26	Non-specific medieval ware (C), moderately abraded body sherds, dull grey-brown external surfaces and margins, oxidised core. (same fabric or vessel in context 27)		3	0.004	1150-1400
			Sandy (C01), moderately abraded to abraded base angle, convex obtuse, externally lightly sooted	1	1	0.012	1150-1300
			Sandy (C01), abraded body sherds		4	0.013	1150-1300
			Non-specific medieval ware (C), possibly C01. Abraded rim sherd, everted flat-topped with slight internal and external thickening. Diameter could not be firmly established due to abrasion, however is at least 120mm (EVE 10%)	1	1	0.012	1150-1400
			Non-specific medieval ware (C), possibly C01. Abraded, reduced (traces of oxidised surfaces) base angle sherd		1	0.004	1150-1400
			Non-specific medieval ware (C), moderately abraded, reduced, base angle		1	0.004	1150-1400

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			Non-specific medieval ware (C), moderately abraded, reduced body sherds and possible base angle sherd		10	0.044	1150-1400
			Non-specific medieval ware (C), moderately abraded, reduced, externally sooted body sherd		1	0.017	1150-1400
			Non-specific medieval ware (C), abraded, reduced, externally and internally, sooted body sherd		1	0.017	1150-1400
			Non-specific medieval ware (C), moderately abraded to abraded body sherds		3	0.014	1150-1400
12.2	44	43	Sandy (red margins) (C05), moderately abraded body sherds and base angle, which is slightly convex and obtuse	1	3	0.031	1150-1300
			Non-specific medieval ware (C), moderately abraded to abraded body sherds, slight base angle, grey-buff surfaces and margins, mid grey core	1	4	0.051	1150-1400
			Non-specific medieval ware (C), moderately abraded to abraded body sherds. Base angle is slightly convex and obtuse, grey-buff surfaces, dull orange-red margins and mid grey core	1	5	0.052	1150-1400
			Sandy (C01), moderately abraded to abraded body sherds		2	0.007	1150-1300
			Moderately abraded to abraded dull red body sherd with slight base angle, fine smooth fabric, wheel-made, possibly an East Anglian Redware	1	1	0.008	1200-1400
	48	47	Non-specific medieval ware (C), possibly C01, moderately abraded and some abraded body sherds		6	0.033	1200-1400
			Non-specific medieval ware (C), possibly C01, moderately abraded body sherd		1	0.019	1200-1400
			Non-specific medieval ware (C), base angle and body sherds, reduced, moderately abraded		5	0.026	1200-1400
			Non-specific medieval ware (C), reduced abraded body sherds		4	0.008	
			Sandy-Late Medieval Reduced (C1-E01), bowl rim sherd, fabric somewhat C1 but form moving towards E01, likely transitional. Rounded bowl, rim sharply everted, near-square with slight thickening to the external edge, shallow incised or combed grooves on body. Diameter 340mm EVE 9%	1	1	0.066	1300-1400+
	50	49	Sandy (red margins) C05, moderately abraded body and base sherd		2	0.010	1150-1300
	54	53	Late Medieval Reduced (E01), moderately abraded bowl rim, diameter c.400mm, EVE 8%, and body sherd. Rim is sharply everted and near-square from a ?flared bowl	1	2	0.053	1350-1500
			Late Medieval Reduced (E01), moderately sooted base angle, which is flat and obtuse		1	0.007	1350-1500

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			Sandy (red margins) C05, moderately abraded body sherds with traces of a thumbbed applied strip and vertical shallow incised or combed lines	1	3	0.011	1150-1300
			Sandy (red margins) C05, moderately abraded body sherd		1	0.003	1150-1300
			Coarse sand (C04), moderately abraded body sherd		2	0.002	1150-1300
			Non-specific medieval ware (C), abraded body reduced body sherd		1	0.006	1150-1400
			Non-specific medieval ware (C), moderately abraded, pale grey hard-fired body sherd		1	0.004	1150-1400
	58	57	Sandy (C01), moderately abraded rim sherd and body sherds from a jug. Rim is everted, internally bevelled and slightly rounded, with the beginnings of a pulled or pinched lip and scar from a handle that was applied directly to the neck and held by a clay plug. Traces of the hole that held the clay plug survive and the neck shows throwing grooves. Diameter 100mm, EVE 42%	1	4	0.064	1150-1300
			Non-specific medieval ware (C), moderately abraded to abraded body sherds, both somewhat oxidised and reduced sherds		3	0.017	1150-1400
	63	62	Sandy (C01), moderately abraded jar rim, which is everted, slightly externally thickened and rounded above a short neck. Diameter 180mm, EVE 6%	1	1	0.014	1150-1300
			Sandy (C01), moderately abraded body sherds incised or combed horizontal grooves and thin applied thumbbed strip	1	2	0.021	1150-1300
			Fine sandy (C03), moderately abraded body sherd with incised lines	1	1	0.006	1150-1300
			Sandy (C01), moderately abraded body sherds	1	3	0.024	1150-1300
			Non-specific medieval ware-Late Medieval Reduced (C-E01) reduced rounded bowl or possibly dripping dish rim, diameter uncertain. Fabric somewhat C1 but form moving towards E01, likely transitional. The rim is slightly internally thickened and continually thumbbed to give a pie crust rim; the vessel is externally sooted	1	1	0.041	1300-1400
			Non-specific medieval ware (C), rim and body sherd from a rounded jar. Reduced sherds, with incised horizontal lines or fine throwing grooves on the body. The rim is sharply everted and near-square, above a short upright neck. Diameter 140mm, EVE 24%	1	3	0.050	1150-1400

Trench	Context	Cut	Fabric and form	MNV	No. of Sherds	Weight (kg)	Pottery Date
			Non-specific medieval ware (C), rim sherd from a jar. Reduced sherd, the vessel is near-neckless, the rim being sharply everted, near-square but with a slight thickening of the upper edge of the rim. Diameter 200mm, EVE 13%	1	1	0.023	
			Non-specific medieval ware (C), rim sherd from a jar, reduced sherd, with pale grey core, the rim is everted, slightly thickened and rounded, above a short neck. Diameter 180mm EVE 8%	1	1	0.017	
			Non-specific medieval ware (C), possibly C01. Various moderately abraded to abraded body sherds		8	0.040	
			Non-specific medieval ware (C), reduced undiagnostic body sherds, moderately abraded		59	0.360	1150-1400
			Non-specific medieval ware (C), reduced moderately abraded body sherds, with incised or combed horizontal lines on the body, and base angle sherds that are slightly convex and obtuse, including a large base sherd; the base sherds are mostly sooted. Represents several vessels		65	0.520	1150-1400
			Medieval Shelly (B07), abraded sherd		1	0.003	1150-1300
18	1	Topsoil	Pearlware (P43), moderately abraded ?bowl rim with annular slip decoration externally (blue, white and pink)	1	1	0.002	1770-1840
			Pearlware (P43), annular painted decoration externally, blue and fine black line, moderately abraded	1	1	0.004	1770-1840
24	6	5	Refined White Earthenware (P55), body sherd, moderately abraded, internal black transfer-print	1	1	0.003	1810-1900
			Pearlware (P43), moderately abraded body sherd	1	1	0.002	1770-1840
<b>Total</b>				<b>49</b>	<b>542</b>	<b>3.602</b>	

Table 1: Pottery

## APPENDIX C ENVIRONMENTAL REPORTS

### C.1 Animal bone

*By Zoe Ui Choileain*

- C.1.1 Five fragments of animal bone weighing 25g were recovered from the site. Two teeth are identifiable to element and taxon; a sheep mandibular molar from tree throw **17** (fill 18, Trench 12) and a horse mandibular cheek tooth from ditch **37** (fill 38, Trench 1). Three other contexts (4, fill of furrow **3**, Trench 22; 20, fill of tree throw **19**, Trench 12; 29, fill of field drain **28**, Trench 12) contain fragments of long bone only identifiable as large mammal. Although in good condition the bone is highly fragmented and can provide no further information.

### C.2 Environmental Samples

*By Rachel Fosberry*

#### *Introduction*

- C.2.1 Six bulk samples were taken from features within the evaluated area at Leighton Linlade PH1 mains replacement scheme WAT-06833 in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations. Samples were taken from features encountered within trenches 6, 7, 9, 11 and 12 from medieval and modern deposits.

#### *Methodology*

- C.2.2 The samples were soaked in a solution of sodium carbonate for 24hrs prior to processing to break down the heavy clay matrix. The total volume of each of the samples was processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.
- C.2.3 The dried flots were scanned using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 1.

#### *Quantification*

- C.2.4 For the purpose of this initial assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

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

- C.2.5 Items that cannot be easily quantified such as charcoal has been scored for abundance  
+ = rare, ++ = moderate, +++ = abundant

Key to tables:

f=fragmented

## Results

C.2.6 Preservation of plant remains is poor with only sparse charcoal and a fragment of cereal grain in gully 15 that may be intrusive. The remaining samples all contain modern plant material, predominantly straw and rootlets.

Context No.	Trench /area no.	Cut No.	Sample No.	Feature type	Volume processed (L)	Flot Volume (ml)	Cereals	Charcoal <2mm	Charcoal >2mm	Pottery	Metal Fe
21	6		2	Buried Soil	14	10	0	0	0	0	0
22	7		3	Buried Soil	12	10	0	0	0	0	0
23	9		4	Buried Soil	12	10	0	0	0	0	0
34	11		6	Hardcore Surface	16	2	0	0	0	0	0
16	12	15	1	Gully	16	20	#f	+	+	##	#
25	12	24	5	Ditch/Pit	12	5	0	0	+	##	0

Table 2: Environmental samples

## Discussion

C.2.7 The environmental samples do not contain any preserved plant remains that could provide further information about the deposits sampled, however, if further excavation is planned for this area, it is recommended that environmental sampling is carried out in accordance with Historic England guidelines (2011).

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## APPENDIX E OASIS REPORT FORM

### Project Details

OASIS Number	oxfordar3-318684		
Project Name	Leighton Linlade PH1 Mains Replacement Scheme WAT-06833		
Start of Fieldwork	16/05/2018	End of Fieldwork	23/07/2018
Previous Work	No	Future Work	No

### Project Reference Codes

Site Code	XBDLEL18	Planning App. No.	
HER Number		Related Numbers	LTMG1325

Prompt	Water Act 1989 and subsequent code of practice
Development Type	Water pipeline
Place in Planning Process	Not known/Not recorded

### Techniques used (tick all that apply)

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aerial Photography – interpretation | <input type="checkbox"/> Grab-sampling              | <input type="checkbox"/> Remote Operated Vehicle Survey         |
| <input type="checkbox"/> Aerial Photography - new            | <input type="checkbox"/> Gravity-core               | <input type="checkbox"/> Sample Trenches                        |
| <input type="checkbox"/> Annotated Sketch                    | <input type="checkbox"/> Laser Scanning             | <input type="checkbox"/> Survey/Recording of Fabric/Structure   |
| <input type="checkbox"/> Augering                            | <input type="checkbox"/> Measured Survey            | <input checked="" type="checkbox"/> Targeted Trenches           |
| <input type="checkbox"/> Dendrochronological Survey          | <input checked="" type="checkbox"/> Metal Detectors | <input checked="" type="checkbox"/> Test Pits                   |
| <input type="checkbox"/> Documentary Search                  | <input type="checkbox"/> Phosphate Survey           | <input type="checkbox"/> Topographic Survey                     |
| <input checked="" type="checkbox"/> Environmental Sampling   | <input type="checkbox"/> Photogrammetric Survey     | <input type="checkbox"/> Vibro-core                             |
| <input type="checkbox"/> Fieldwalking                        | <input type="checkbox"/> Photographic Survey        | <input type="checkbox"/> Visual Inspection (Initial Site Visit) |
| <input type="checkbox"/> Geophysical Survey                  | <input type="checkbox"/> Rectified Photography      |   |

Monument	Period	Object	Period
Pit	Uncertain	Pottery	Medieval (1066 to 1540)
Pit	Medieval (1066 to 1540)	Pottery	Post Medieval (1540 to 1901)
Gully	Medieval (1066 to 1540)	Slag	Uncertain
Furrow	Uncertain	Animal Bone	Uncertain
Ditch	Medieval (1066 to 1540)		
Ditch	Uncertain		
Natural feature	Uncertain		

Insert more lines as appropriate.

### Project Location

County	Bedfordshire	Address (including Postcode)
District	Central Bedfordshire	
Parish	Steppingley	
HER office	CBC	
		Flitwick Road
		Steppingley
		Bedfordshire

Size of Study Area	1.70ha	MK45 5BA
National Grid Ref	TL 00256 34515-TL 01459 35252 and TL 01463 35210	

## Project Originators

Organisation	CBC
Project Brief Originator	Slawek Utrata
Project Design Originator	Stephen Macaulay
Project Manager	Stephen Macaulay
Project Supervisor	Dan Firth

## Project Archives

	Location	ID
Physical Archive (Finds)	Luton Culture	LTMG 1325
Digital Archive	OAE	XBDLEL18
Paper Archive	Luton Culture	LTMG 1325

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Remains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Metal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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## Digital Media

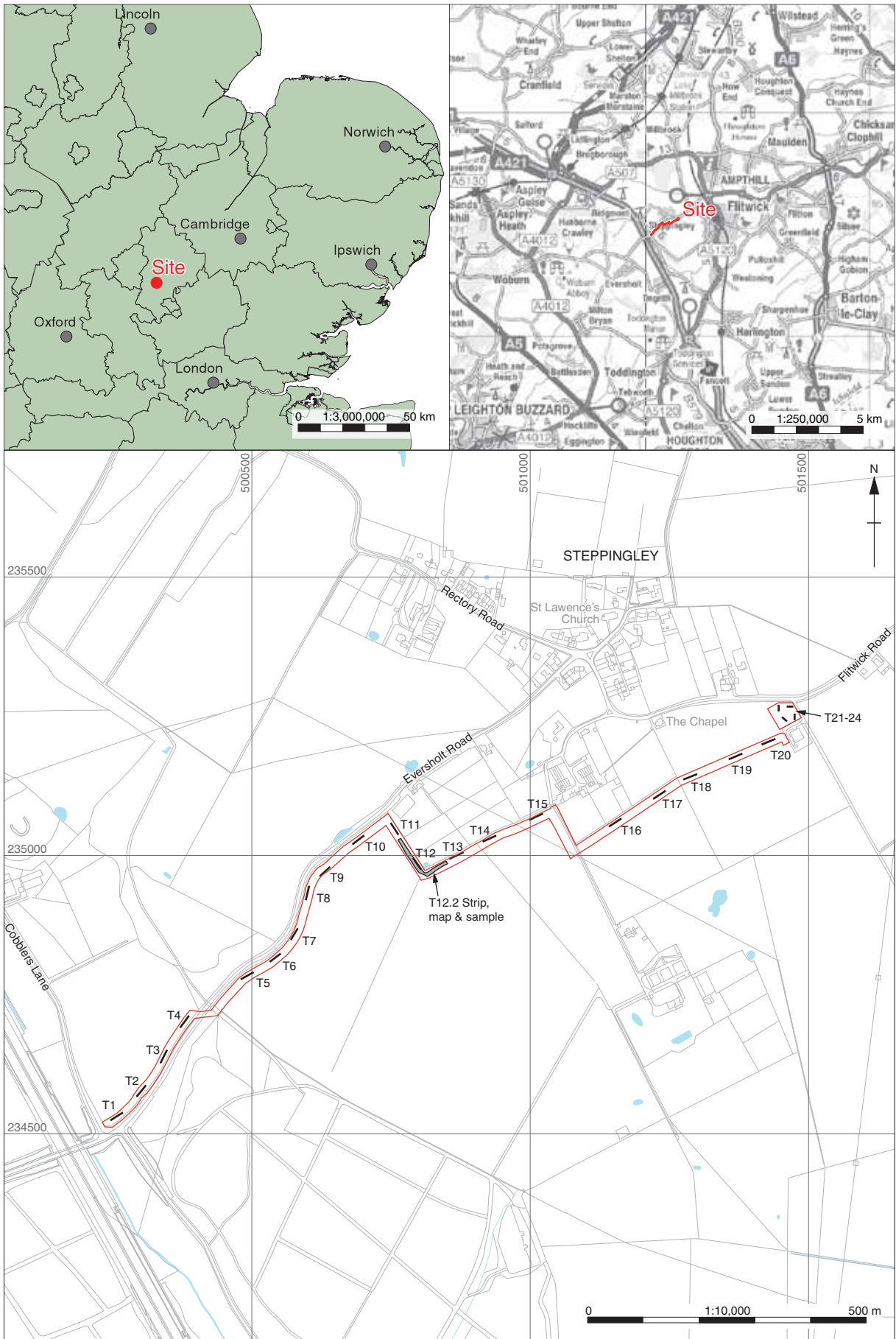
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Survey	<input type="checkbox"/>
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## Paper Media

Aerial Photos	<input type="checkbox"/>
Context Sheets	<input checked="" type="checkbox"/>
Correspondence	<input type="checkbox"/>
Diary	<input type="checkbox"/>
Drawing	<input type="checkbox"/>
Manuscript	<input type="checkbox"/>
Map	<input type="checkbox"/>
Matrices	<input type="checkbox"/>
Microfiche	<input type="checkbox"/>

Virtual Reality	<input type="checkbox"/>	Miscellaneous	<input type="checkbox"/>
		Research/Notes	<input type="checkbox"/>
		Photos (negatives/prints/slides)	<input type="checkbox"/>
		Plans	<input checked="" type="checkbox"/>
		Report	<input checked="" type="checkbox"/>
		Sections	<input checked="" type="checkbox"/>
		Survey	<input type="checkbox"/>

## Further Comments



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Figure 1: Site location with trenches (black), strip, map and sample area (grey) and the development area outline (red)



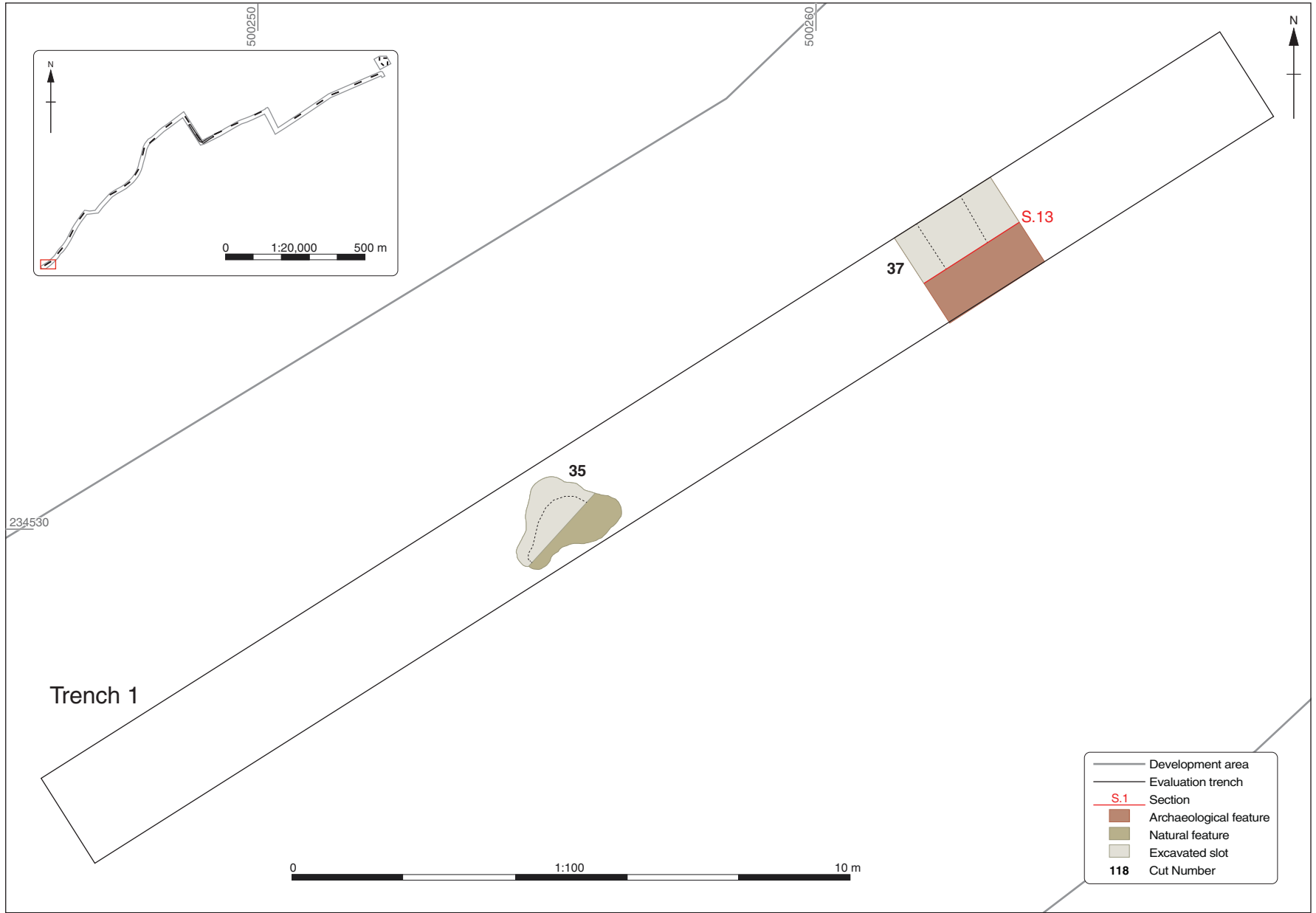


Figure 3: Trench 1 plan

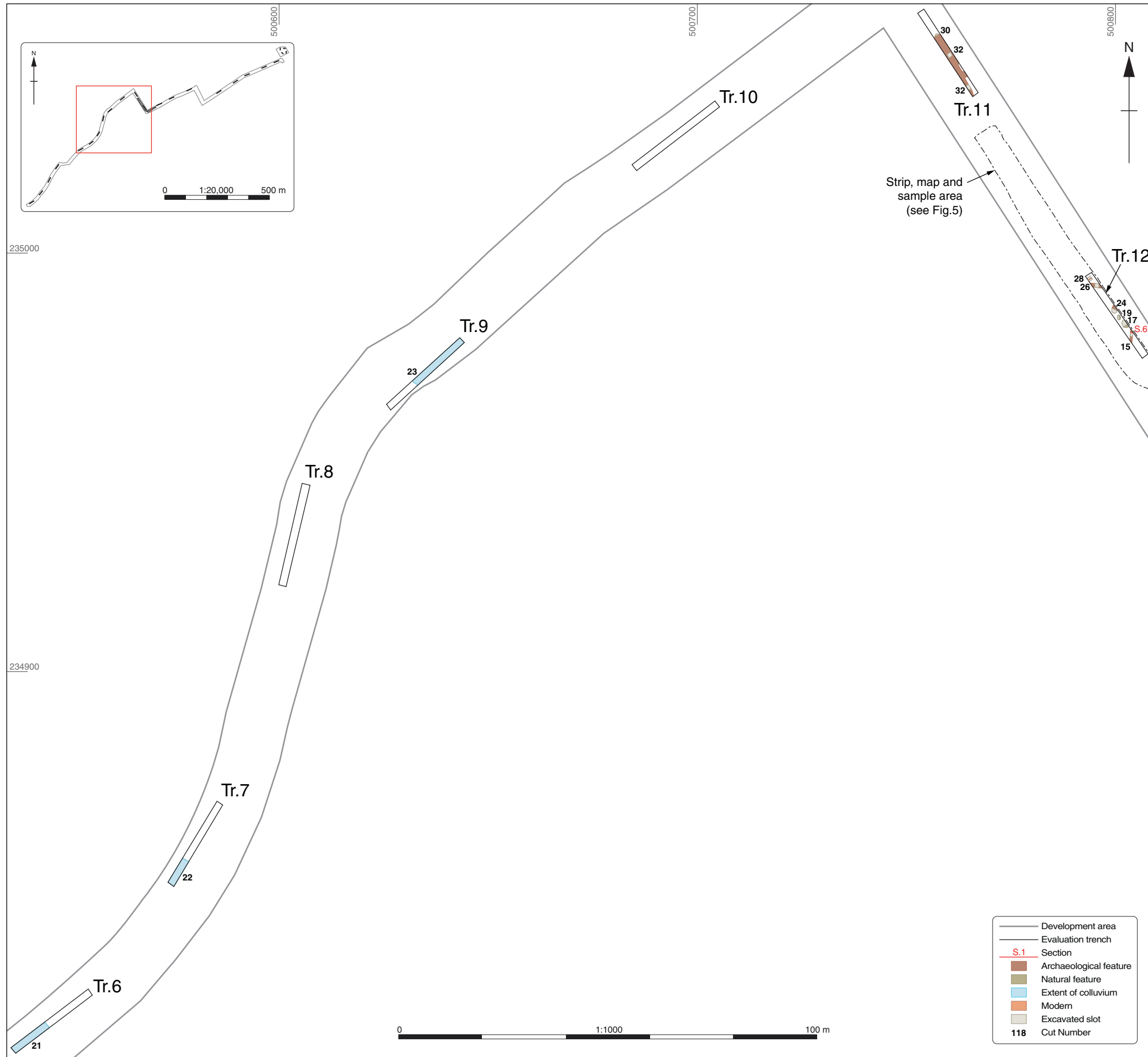


Figure 4: Plan of Trenches 6-12



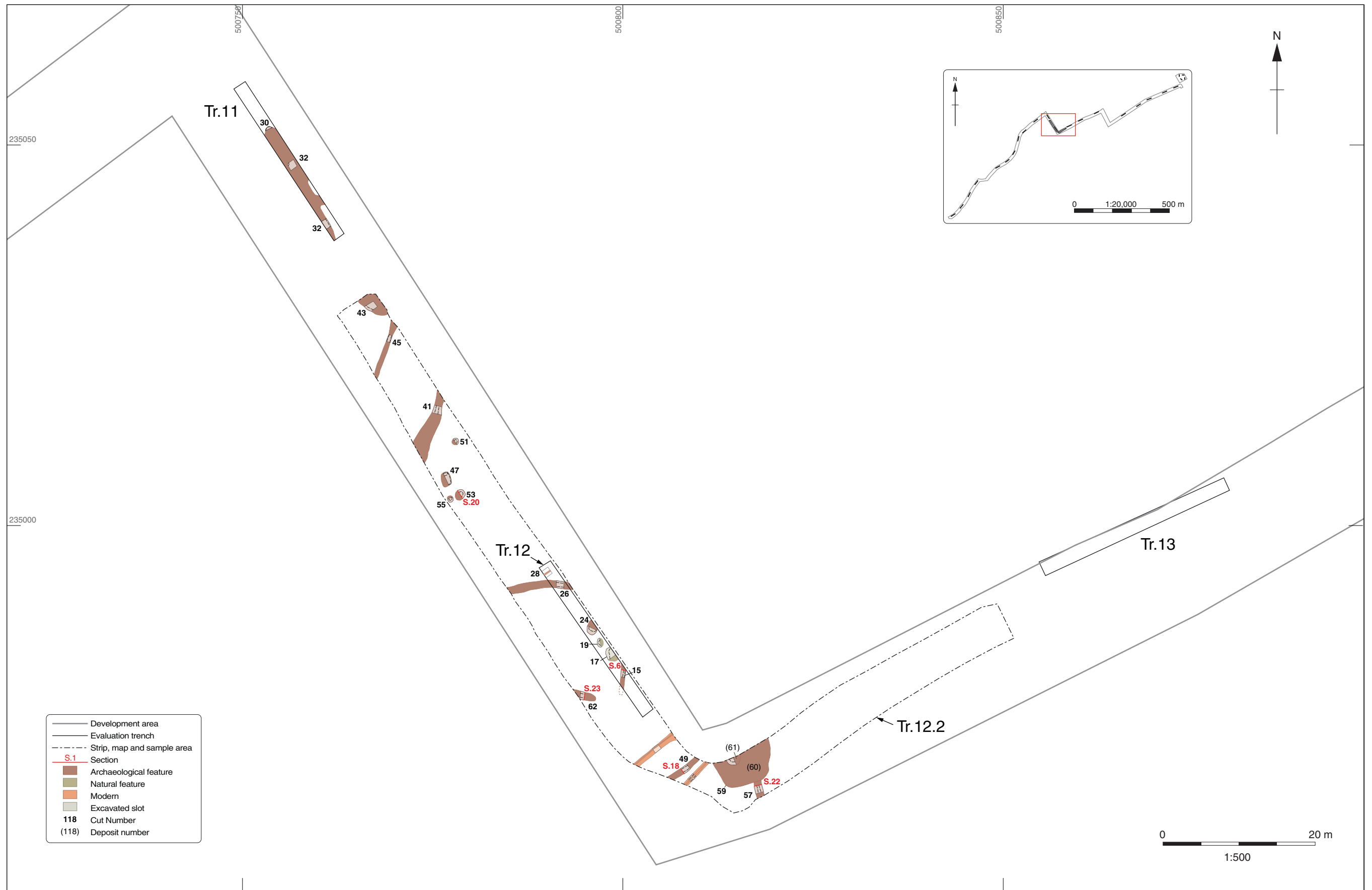


Figure 5: Plan of Trench 12.2 (strip, map and sample area)

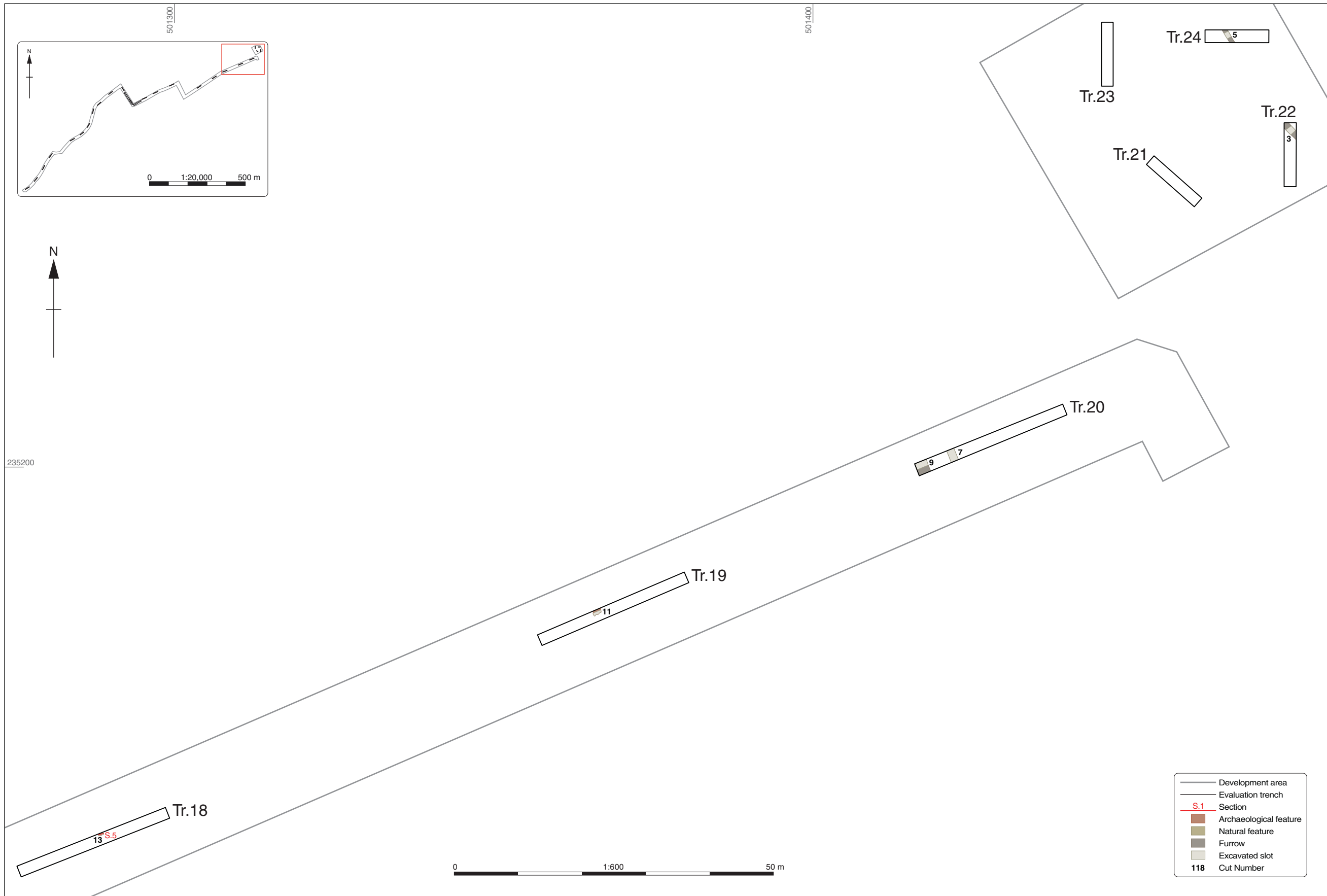


Figure 6: Plan of Trenches 18-24

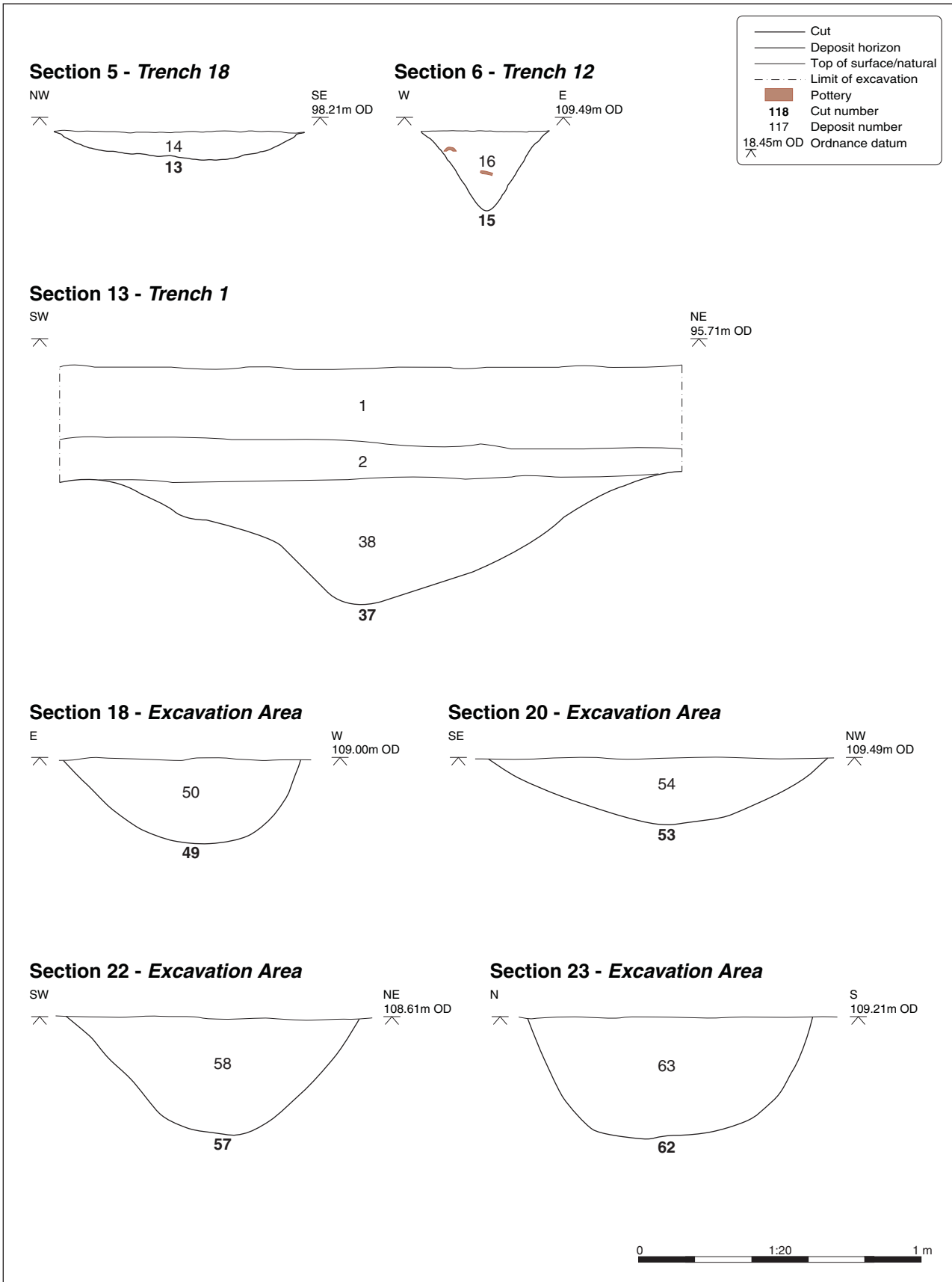


Figure 7: Selected sections



Plate 1: Trench 1, looking southwest



Plate 2: Trench 9, looking southwest



Plate 3: Trench 11, looking southeast



Plate 4: Trench 12, looking southeast



Plate 5: Trench 19, looking southwest



Plate 6: Ditch 37, Trench 1, looking northwest



Plate 7: Colluvium 23, Trench 9, looking northwest



Plate 8: Gully 15, Trench 12, looking north



Plate 9: Ditch 62, Trench 12.2, looking southeast



Plate 10: Pond 59, Trench 12.2, looking northeast





Plate 11: Ditch 57, Trench 12.2, looking north



Plate 12: Pit 13, Trench 18, looking northwest



**Head Office/Registered Office/  
OA South**

Janus House  
Osney Mead  
Oxford OX2 0ES

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

**OA North**

Mill 3  
Moor Lane  
Lancaster LA1 1QD

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

**OA East**

15 Trafalgar Way  
Bar Hill  
Cambridgeshire  
CB23 8SQ

t: +44 (0) 1223 850500  
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)  
w: <http://oxfordarchaeology.com>



**Director:** Gill Hey, BA PhD FSA MCIfA  
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