

Clay Farm Rising Main Sewer, Cambridge



Excavation And Monitoring



November 2012

Client: Anglian Water (Barhale)

OA East Report No: 1422

OASIS No: oxfordar3-136640

NGR: TL 46582 54681

Clay Farm Rising Main Sewer, Cambridge

Archaeological Excavation and monitoring

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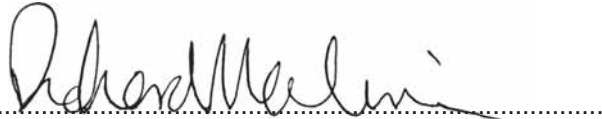
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Date of Works: October 2012
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Summary

During October 2012 Oxford Archaeology East was commissioned by Anglian Water to carry out archaeological excavation and monitoring on the installation of a rising main sewer by directional drill between the pumping station at Clay Farm and the main sewer on Babraham Road, Cambridge, centred at TL 46582 54681. The work was carried out in two stages. Firstly, excavation took place within a continuous trench measuring 480m in length and 8m wide (Area A), which was machine stripped prior to the installation of the sewer. Secondly, a series of test-pits (1 – 8) were monitored along the eastern part of the sewer, where topsoil was to remain intact. The test pits related to the locations of the drill pits.

The western part of the sewer route, within Area A, passed through an area of known cropmarks. A number of ditches, postholes and pits were discovered which correlate with the cropmarks. All the features were undated making it difficult to assign them a specific period. Given the dating of some of the closest field systems a Late Iron Age or Roman date is most likely although a Middle Bronze Age date cannot be ruled out. Only one noteworthy feature was uncovered outside Area A; a ditch in Test Pit 5, also undated. Considering the density of settlement and occupation in the surrounding landscape, the excavation and monitoring produced low level archaeological remains.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 Archaeological excavation and monitoring was carried out prior to the installation of a rising main sewer by directional drill between the pumping station at Clay Farm, Addenbrooke's Access Road, and the main sewer on Babraham Road, Cambridge (Fig. 1).
- 1.1.2 This archaeological excavation and monitoring was undertaken in accordance with a specification prepared by Project Manager Richard Mortimer following discussions with Barhale, Jo Everitt of Anglian Water and Andy Thomas of Cambridgeshire County Council.
- 1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government March 2012). The results will enable decisions to be made by CCC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

- 1.2.1 According to the British Geological Survey (2002), the underlying geology of the area is West Melbury Marly Chalk Formation at the west of the site, rising over the Tottenham Stone onto the Zig Zag Chalk Formation. An area of River Terrace Gravels lies atop the Zig Zag Chalk.
- 1.2.2 The site is located on the eastern side of a wide, shallow valley rising from 15m AOD at the west to 22m AOD at the east.

1.3 Archaeological and historical background

- 1.3.1 The surrounding area has a high density of archaeological remains, which have been summarised previously (Dickens 2002, Evans *et. al.* 2008). A brief summary of the closest excavations geographically are included below.

Clay Farm excavations

- 1.3.2 The most relevant excavations are those at Clay Farm to the west (Phillips and Mortimer 2011). The excavations, conducted by Oxford Archaeology East, lasted for a year and saw a total of 16.8ha investigated. The excavation revealed multi-period archaeological remains from the Neolithic through to modern times. The earliest finds included Mesolithic microliths along with Mesolithic or Early Neolithic blades and cores. The earliest cut features included a small Early Neolithic pit and a number of Earlier Bronze Age pits. The most surprising discovery was the existence of a series of Middle Bronze Age field systems, enclosures and settlements that covered large areas of the site, in a part of region where such activity had not previously been recorded. Discrete

areas of settlement were established within the system of fields and enclosures (three were identified across the site). These settlement areas contained large assemblages of finds: the densest of these contained nearly 4kg of Middle Bronze Age Deverel-Rimbury pottery, 20kg of animal bone, 10kg of struck flint and numerous worked bone implements indicative of craft activities.

- 1.3.3 An extensive area of Early Iron Age settlement was located within the Middle Bronze Age field system in the northern most area. The settlement was characterised by post built sub-circular structures, 4-post granaries or stores and pits of varying sizes. The main focus of Middle Iron Age activity was on the higher ground in the centre of the site and consisted of a series of curvilinear ditches forming the eastern side of an enclosure or system of enclosures. Inside the enclosures to the west were a number of roundhouse structures, an oven and areas of pitting. This area of settlement showed continuity into the Late Iron Age. There were also extensive Late Iron Age field systems with evidence of nearby settlement in Areas B and E. In the latest Iron Age, immediately pre-Conquest, two high-status cremation burials were placed in pits in the central area of the site. One was excavated during the evaluation, the other during the excavation. The latter contained at least eleven vessels, mostly imported fine tablewares, and accompanying grave goods. The cremated bone had been placed within a wooden box.
- 1.3.4 Early Roman land use focused on the central and southern parts of the site and consisted mainly of small fields. The principal Late Roman feature was a double ditched sub-circular enclosure or monument in the far south of the site. It showed no evidence of domestic or agricultural use but the inner ditch contained the disarticulated remains of several adults, along with five Late Roman bracelets, large iron nails and butchered animal bones.
- 1.3.5 There was no major land use following the Roman period until relatively recently. Post medieval quarrying was intensive in parts of the site. During World War Two a series of ring ditches were constructed south of Long Road, to create banked enclosures for the housing of searchlights and associated stores.

Addenbrooke's Access Road 2007: Site 7

- 1.3.6 The closest excavation to the current site was carried out by Cambridge Archaeological Unit along the route of the Addenbrooke's Access Road, specifically Site 7 (Armour and Collins 2008). This small area is located only 100m to the north of the western end of the sewer, underneath the location of the new roundabout. The excavation revealed a total of 41 features of which 24 were ditches or ditch re-cuts. The ditches represented part of a rectilinear field system; they were poorly dated by three stratified and three unstratified potsherds of Late Iron Age to later Romano-British pottery. Associated with the field system was a well or watering hole dated to the Iron Age from which a fragment of saddle quern was retrieved. The remaining features consisted of eight very small rectangular structures, measuring only 4m x 2.5m. A number of similar examples were found during the Clay Farm excavations and were interpreted as some form of hayrick.

The Bell Language School evaluation

- 1.3.7 Directly to the north of Test Pits 1 – 8 is an area of land, 7.5ha in size, which was evaluated in 2005 (Brudenell 2005). The evaluation found evidence of Iron Age occupation that shifted/was abandoned in the Early Roman period and was replaced by a mix of market garden and paddock/field enclosures slightly later. The eastern end of the development area had evidence of large quarry pits, which might further the claim

for the Via Devana's proximity. Earlier features (Late Bronze Age) were also found which may provide a greater context for the numerous stray lithic find spots known from the local archaeological record.

1.4 Acknowledgements

- 1.4.1 The author would like to thank Anglian Water and Barhale for commissioning the work. The project was managed by Richard Mortimer. Tom Phillips, Pete Boardman, Helen Stocks-Morgan and Andrew Greef assisted in the excavations. The site surveys were carried out by Gareth Rees, Lucy Offord and Louise Bush. Andy Thomas monitored the project on behalf of Cambridgeshire County Council.

2 AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The objective of this excavation and monitoring was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.
- 2.1.2 Specific site research objectives relate principally to attempting to understand the presence, extent and layout of any Middle Bronze Age field systems within the area.

2.2 Methodology

- 2.2.1 Two specifications were produced following on-site discussions with Barhale, Jo Everitt of Anglian Water and Andy Thomas of Cambridgeshire County Council. The first specification stated that the western part of the pipeline be stripped of topsoil to the level of the underlying natural substrata (at between 400 and 500mm depth) and archaeological features investigated (Mortimer 2012a). This was decided because the client required the removal of topsoil within the ploughed field to enable the safe running of the drill rig. The second specification stated that to the east, where topsoil would not be removed along more firm field boundaries, monitoring of the drill pits would suffice (Mortimer 2012b).
- 2.2.2 Machine excavation was carried out under constant archaeological supervision with a wheeled JCB-type excavator using a toothless ditching bucket.
- 2.2.3 The site survey was carried out by Lucy Offord, Gareth Rees and Louise Bush using a Leica GPS 1200 system.
- 2.2.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.
- 2.2.5 Six environmental samples were collected from the excavation in Area A to assess the potential for archaeo-botanical remains.
- 2.2.6 The ground conditions on site were generally dry; the weather was overcast with occasional light showers.

3 RESULTS

3.1 Introduction

- 3.1.1 The results are divided into the excavation trench (Area A) and watching brief (Test pits 1 – 8) elements of the project.

3.2 Excavation trench: Area A

- 3.2.1 Area A extended for 482m from the most westerly point of the site, close to the Addenbrooke's Access Road, to its centre, orientated north-east to south-west (Figs. 2 – 3). A total of 100 features were uncovered, of which 46 were excavated. Features comprised ditches, pits and postholes, as well as a large number of natural hollows or tree throws. The features, not including tree throws, are listed below in order of location, going from west to east. A context summary can be found in Appendix A.
- 3.2.2 Ditch **104** was located in the western end of the trench, orientated north-north-west to south-south-east. It truncated tree throw **106**, measuring 0.87m wide and 0.64m deep (Fig. 7, section 2). Ditch **104** was part of the post-medieval/modern system of drainage ditches which fed in to the field boundary (**133**).
- 3.2.3 Ditch **122** was orientated north to south. It measured 1.34m wide and 0.26m deep with gently sloping sides and a flat base (Fig. 7, section 3). Its single fill was a dark greyish brown silty loam with inclusions of small stones. Ditch **122** lined up with one of the linear cropmark features.
- 3.2.4 Ditch **129** was located directly to the east of ditch **122**. It was orientated north-north-west to south-south-east, a slightly different alignment to ditch **122**. It measured 0.7m wide and 0.62m deep. Ditch **129** was part of the post-medieval/modern system of drainage ditches which fed in to the field boundary (**133**).
- 3.2.5 Ditch **133** was a post-medieval/modern field boundary, which was orientated north-east to south-west and extended parallel to the modern field boundary directly to the south. It ran for 300m along the southern trench edge. The ditch measured 1.25m wide and 0.66m deep with a V-shaped profile. A field drain extended along the base.
- 3.2.6 Ditch **139** was orientated north-north-west to south-south-east. It measured 0.94m wide and 0.4m deep. Ditch **139** was part of the post-medieval/modern system of drainage ditches which fed in to the field boundary (**133**).
- 3.2.7 Ditch **147** was located approximately one third of the way along the trench and was orientated north-west to south-east. It extended for 7.6m from the northern baulk before terminating to the south. At its maximum dimensions the ditch measured 0.9m wide and 0.23m deep with a shallow concave profile. Fill (146), a dark greyish brown silty sand with occasional small gravel contained no dating evidence. Ditch **147** was the most westerly of a group of three boundary ditches (with **154=156** and **160**) which indicated the densest area of features and equate to known cropmarks.
- 3.2.8 Ditch **154=156** was orientated north-east to south-west and extended at an acute angle for 20m across the entire trench (Plate 1). It measured between 0.58 and 0.76m wide and between 0.3 and 0.36m deep with a flat bottomed V-shaped profile. Cut **154** (Fig. 7, section 8) contained two fills; primary fill (153), a mid greyish brown sandy silt, and upper fill (152), a dark brown sandy silt, both with occasional small gravel inclusions,

provided no dating evidence despite the slot being extended. Cut **156** truncated tree throw **158** (Fig. 7, section 9 and Plate 2).

- 3.2.9 Ditch **160** was perpendicular to **156**, orientated north-west to south-east and extending across the width of the trench. It measured 0.7m wide and 0.24m deep with a U-shaped profile. Single fill (159), a light greyish brown silty clay, contained no finds despite an additional slot being dug.
- 3.2.10 Pit **162** was located 7.5m to the east of ditch **160**. It was sub-circular in plan, measuring 0.85m wide and 0.2m deep with an irregular profile. Fill (161), a light greyish brown silty clay, provided no finds to date this feature.
- 3.2.11 Postholes **165** and **167** were located 20m north-east of pit **162**. Both were sub-circular in plan, measuring up to 0.4m wide and 0.17m deep with U-shaped profiles. Posthole **165** contained two fills, while posthole **167** contained a single fill; no postpipes were present. Neither posthole contained any dating evidence.
- 3.2.12 Possible posthole **177** was located 22m north-east of postholes **165** and **167**. It measured 0.4m wide and 0.12m deep with a U-shaped profile. Its single fill did not contain any finds.
- 3.2.13 Ditch **189** extended at an acute angle across the trench, orientated north-east to south-west. It measured 2.3m wide and only 0.06m deep. Its single mid brownish-yellow sandy silt fill (190) was heavily disturbed by field drains and ploughing. No finds were recovered to date this shallow feature. Ditch **190** was similar; it was located 30m to the north-east although was orientated north-north-east to south-south-west. It measured 1.22m wide and 0.14m deep with an irregular profile.
- 3.2.14 Ditch terminus **185** protruded for 1.35m from the northern limit of excavation, located to the west of ditch **190**. It measured 1.15m wide and 0.32m deep with steep sides and a concave base. No dating evidence was recovered from the 3 fills.
- 3.2.15 Ditch **188** was the most easterly feature in Area A. It was orientated north-west to south-east and extended across the width of the trench. The ditch measured 1.05m wide and 0.42m deep with a flat bottomed V-shaped profile (Fig. 7, section 15 and Plate 3). Primary fill (187) was a mid greyish brown silty clay. Secondary fill (186), a light greyish brown silty clay, produced one fragment of rabbit bone. This boundary ditch was heavily truncated by field drains.
- 3.2.16 The remainder of the excavated features were natural hollows or tree throws, most dense at the western end of Area A. These features measured between 0.2 and 2.2m wide and between 0.1 and 0.3m deep with generally irregular profiles. The fills of the tree throws were consistent along most of the trench, being a dark greyish brown loam with an organic component. On the slightly higher ground in the centre and east end of Area A the fills were a mid greyish brown clayey sand. The most noteworthy of the tree throws/natural hollows was tree throw **101** at the extreme western end. It was irregular in plan, measuring 0.96m wide and 0.33m deep with steep sides and an irregular base. An environmental sample collected from the fill produced two charred cereal grains tentatively identified as a hulled wheat namely spelt (*Triticum spelta*) or emmer (*T. dicoccum*).

3.3 Watching brief: Test Pits 1 – 8

3.3.1 Eight Test Pits were monitored along the eastern section of the pipeline (Fig. 4). The test pits were located in the approximate locations of the drill pits. The only test pits to contain any archaeological remains were Test Pits 5 and 7.

Test Pit 5

3.3.2 Test Pit 5 was located mid-way along the eastern half of the pipeline. It measured 3.1m long, 1.8m wide and approximately 0.45m deep. A ditch (**193**) was partially exposed in the base of the trench, orientated north-east to south-west (Plate 4). It measured 0.9m wide and 0.22m deep with a concave profile. No dating evidence was recovered from the fill (194), a light grey silty sand with occasional stone inclusions.

Test Pits 1 – 4 and 6 – 8

3.3.3 These 7 test pits contained no archaeology. Test Pits 1 – 3 and 6 measured between 0.3 and 0.45m deep. Trench 4 measured 0.5m deep and contained a modern field drain running north-west to south-east, which cut a buried soil layer (200). Test pits 6 and 8 contained subsoil measuring between 0.15 and 0.25m thick, which was sealed by topsoil measuring between 0.3 and 0.35m thick. Test Pit 7 contained a modern ditch (**195**), cut from the top of subsoil.

3.4 Finds Summary

3.4.1 Finds were extremely rare, comprising a single fragment of rabbit bone from ditch **188** (fill 186) in Area A and one fragment of brick from modern ditch **195** (fill 196) in Test Pit 7.

3.5 Environmental Summary

3.5.1 Six bulk samples were collected during fieldwork. Samples were taken from undated ditch deposits and two possible pits or tree throws. Sample 1, fill (100) of pit/tree-throw **101** contained two charred cereal grains. Preservation is poor and the grains are abraded but have been tentatively identified based on their morphology as a hulled wheat namely spelt (*Triticum spelta*) or emmer (*T. dicoccum*). The rest of the samples were found to be devoid of any ecofacts or artefacts other than sparse charcoal.

4 DISCUSSION AND CONCLUSIONS

4.1 Discussion

- 4.1.1 A concentration of features were uncovered in the centre of Area A on a slightly raised area of land. This comprised ditches **147**, **154=156** and **160**, pit **162**, and postholes **165** and **167**. None of these features produced any dating evidence. Ditch **147** matches the alignment of a north-west to south-east aligned cropmark in this location (Fig. 5). Ditch **160** was roughly parallel to ditch **147** and may equate to another cropmark, also aligned north-west to south-east, whilst ditch **154=156** extends perpendicular to ditches **147** and **160** and sub-divides the space between them. The two postholes were located slightly to the east of the ditched system but still on the ridge of higher ground. This group of features obviously extend further to the north-west and south-east along the higher ridge, evidenced by the cropmarks. Although there was no dating evidence within the features it is possible to propose a late prehistoric (possibly Late Iron Age) or Roman date for the ditched field system (Fig. 6). These dates correlate with the field system investigated in the Addenbrooke's Access Road Site 7 excavation at the western end of Area A (Armour and Collins 2008) and with the evaluation to the east at the Bell Language School (Brudenell 2005). However, the excavations at Clay Farm (Phillips and Mortimer 2011) have proved there is a far greater amount of Middle Bronze Age field system in this landscape than previously thought and therefore a similar date for the field system on the current site cannot be ruled out.
- 4.1.2 Ditch **122** towards the western end of Area A also correlates with a known cropmark. Within this area of lower ground the fill of this ditch, and the fills of the surrounding tree throws, was of a organic, loamy nature, suggesting a wetter area.
- 4.1.3 East of the central concentration of archaeology in Area A, three further ditches were uncovered. Ditch **188** was the most easterly feature in Area A and correlated with a known cropmark. Ditch **189** extended perpendicular to ditch **188** and was unlike all other ditches on site. It was relatively wide but very shallow (0.06m) and possibly relates to an episode of de-turfing to create a low bank. Although undated, similar examples have been found on Middle – Late Bronze Age sites along the Fordham bypass (Mortimer 2005), at Broom in Bedfordshire (Cooper and Edmonds 2007) and at Brigg's Farm, Thorney (Pickstone and Mortimer 2011). The low bank, possibly with a hedge on top, is a different form of boundary from a deeper ditch and bank or a fence line but would still have formed an effective land division between farmed fields.
- 4.1.4 The only noteworthy feature within any of the test pits, ditch **193** in Test Pit 5, was an undated boundary ditch, which correlates with a linear cropmark in this location, orientated north-east to south-west (Fig. 4).

4.2 Conclusion

- 4.2.1 The sewer pipeline excavation uncovered low level archaeological remains. It confirmed the presence of features within an area of known cropmarks and has shown that no additional areas of activity exist. The complete lack of dating for the archaeological features makes it difficult to assign a period although Late Iron Age or Roman has been proposed as the most likely date, with an outside chance of them being Middle Bronze Age. The lack of finds also suggests this area was separate from any related settlement.

APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Area A						
General description				Orientation	NE-SW	
The trench had a limited amount of archaeology spread along the length with a small concentration on a raised area central to the strip.				Avg. depth (m)	0.6-0.85	
				Width (m)	10	
				Length (m)	482.14	
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
100	Fill	0.96	0.33	Fill of treethrow		
101	Cut	0.96	0.33	Cut for treethrow		
102	Fill	0.87	0.28	Fill of ditch		
103	Fill	0.7	0.34	Fill of ditch		Post-med/Modern
104	Cut	0.87	0.64	Cut for ditch		Post-med/Modern
105	Fill	0.66	0.14	Fill of treethrow		
106	Cut	0.66	0.14	Cut for treethrow		
107	Fill	0.6	0.32	Fill of treethrow		
108	Cut	0.6	0.32	Cut for treethrow		
109	Fill	0.52	0.1	Fill of treethrow		
110	Cut	0.52	0.1	Cut for treethrow		
111	Fill	0.34	0.04	Fill of treethrow		
112	Cut	0.34	0.04	Cut for treethrow		
113	Fill	0.52	0.08	Fill of treethrow		
114	Cut	0.52	0.08	Cut for treethrow		
115	Fill	0.42	0.08	Fill of treethrow		
116	Cut	0.42	0.08	Cut for treethrow		
117	Fill	0.84	0.18	Fill of treethrow		
118	Cut	0.84	0.18	Cut for treethrow		
119	Fill	0.52	0.09	Fill of treethrow		
120	Cut	0.52	0.09	Cut for treethrow		
121	Fill	1.34	0.26	Fill of ditch		
122	Cut	1.34	0.36	Cut for ditch		
123	Fill	0.8	0.17	Fill of treethrow		
124	Fill	0.92	0.1	Fill of treethrow		
125	Cut	0.98	0.22	Cut for treethrow		
126	Fill	1.22	0.13	Fill of treethrow		
127	Cut	1.22	0.13	Cut for treethrow		
128	Fill	0.7	0.62	Fill of ditch		Post-med/Modern

context no	type	Width (m)	Depth (m)	comment	finds	date
129	Cut	0.7	0.62	Cut for ditch		Post-med/Modern
130	Fill	2.26	0.35	Fill of treethrow		
131	Cut	2.26	0.35	Cut for treethrow		
132	Fill	1.25	0.66	Fill of ditch		Post-med/Modern
133	Cut	1.25	0.66	Cut for ditch		Post-med/Modern
134	Fill	0.8	0.1	Fill of treethrow		
135	Cut	0.8	0.1	Cut for treethrow		
136	Fill	1.18	0.34	Fill of treethrow		
137	Cut	1.18	0.34	Cut for treethrow		
138	Fill	0.94	0.4	Fill of ditch		Post-med/Modern
139	Cut	0.94	0.4	Cut for ditch		Post-med/Modern
140	Fill	1.02	0.18	Fill of treethrow		
141	Cut	1.02	0.18	Cut for treethrow		
142	Fill	1.02	0.26	Fill of treethrow		
143	Cut	1.02	0.26	Cut for treethrow		
144	Fill	0.88	0.26	Fill of treethrow		
145	Cut	0.88	0.26	Cut for treethrow		
146	Fill	0.9	0.23	Fill of ditch		Late Iron Age/Roman?
147	Cut	0.9	0.23	Cut for ditch		Late Iron Age/Roman?
148	Fill	2.2	0.1	Fill of treethrow		Late Iron Age/Roman?
149	Cut	2.2	0.1	Cut for treethrow		Late Iron Age/Roman?
150	Fill	1.4	0.5	Fill of treethrow		
151	Cut	1.4	0.5	Cut for treethrow		
152	Fill	0.58	0.3	Fill of ditch		
153	Fill	0.58	0.3	Fill ditch		Late Iron Age/Roman?
154	Cut	0.58	0.3	Cut for ditch		Late Iron Age/Roman?
155	Fill	0.76	0.36	Fill of ditch		Late Iron Age/Roman?
156	Cut	0.76	0.36	Cut for ditch		Late Iron Age/Roman?
157	Fill	0.58	0.3	Fill of treethrow		
158	Cut	0.58	0.3	Cut for treethrow		
159	Fill	0.7	0.24	Fill of ditch		Late Iron Age/Roman?
160	Cut	0.7	0.24	Cut for ditch		Late Iron Age/Roman?
161	Fill	0.55	0.2	Fill of pit		
162	Cut	0.55	0.2	Cut for pit		
163	Fill	0.2	0.08	Fill of posthole		
164	Fill	0.4	0.17	Fill of posthole		
165	Cut	0.4	0.17	Cut for posthole		

context no	type	Width (m)	Depth (m)	comment	finds	date
166	Fill	0.4	0.17	Fill of posthole		
167	Cut	0.4	0.17	Cut for posthole		
168	Fill	0.8	0.18	Fill of treethrow		
169	Cut	0.8	0.18	Cut for treethrow		
170	Fill	0.52	0.15	Fill of treethrow		
171	Cut	0.52	0.15	Cut for treethrow		
172	Fill	0.65	0.16	Fill of treethrow		
173	Cut	0.65	0.16	Cut for treethrow		
174	Fill	1.22	0.34	Fill of treethrow		
175	Cut	1.22	0.34	Cut for treethrow		
176	Fill	0.4	0.12	Fill of pit		
177	Cut	0.4	0.12	Cut for pit??		
178	Fill	0.22	0.17	Fill of posthole		
179	Cut	0.22	0.17	Cut for posthole??		
180	Fill	0.7	0.2	Fill of treethrow		
181	Cut	0.7	0.2	Cut for treethrow		
182	Fill	0.45	0.15	Fill of ditch		
183	Fill	0.85	0.32	Fill of ditch		
184	Fill	0.4	0.32	Fill of ditch		
185	Cut	1.15	0.32	Cut for ditch		
186	Fill	1.05	0.3	Fill of ditch	Bone	
187	Fill	0.75	0.3	Fill of ditch		
188	Cut	1.05	0.42	Cut for ditch		
189	Cut	2.3	0.06	Cut for ditch		Bronze Age?
190	Cut	1.22	0.14	Hedgeline?		
191	Fill	2.3	0.06	Fill of ditch		Bronze Age?
192	Fill	1.22	0.14	Fill of hedgeline		
197	Layer		0.6-.85	Topsoil		
199	Layer			Natural		

Test Pit 1						
General description				Orientation		NE-SW
Blank trench.				Avg. depth (m)		0.45
				Width (m)		1.5
				Length (m)		3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.45	Topsoil		
199	Layer			Natural		

Test Pit 2						
General description				Orientation		E-W
Blank trench				Avg. depth (m)		0.33
				Width (m)		1.5
				Length (m)		3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.33	Topsoil		
199	Layer			Natural		

Test Pit 3						
General description				Orientation		E-W
Blank trench				Avg. depth (m)		0.3
				Width (m)		1.5
				Length (m)		3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.3	Topsoil		
199	Layer			Natural		

Test Pit 4						
General description				Orientation		E-W
No archaeology. Modern field drain runs NW-SE truncates fill of natural hollow.				Avg. depth (m)		0.5
				Width (m)		1.5
				Length (m)		3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.32	Topsoil		
200	Layer		0.18	Buried soil. Dark brownish grey clayey silt, no inclusions, organic.		
199	Layer			Natural		

Test Pit 5						
General description				Orientation		NE-SW
One undated ditch runs NE-SW				Avg. depth (m)		0.45
				Width (m)		1.8
				Length (m)		3.1
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.45	Topsoil		
193	Cut	0.9	0.22	Cut for ditch		
194	Fill	0.9	0.22	Fill of ditch		

Test Pit 6						
General description				Orientation		E-W
Blank trench				Avg. depth (m)		0.5
				Width (m)		1.5
				Length (m)		0.3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.35	Topsoil		
198	Layer		0.15	Subsoil		
199	Layer			Natural		

Test Pit 7						
General description				Orientation		E-W
No archaeology. Large modern truncation N-S, ditch?				Avg. depth (m)		0.62
				Width (m)		1.5
				Length (m)		3.8
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197	Layer		0.35	Topsoil		
195	Cut	1.2	?	Ditch. Vertical sides, not bottomed.		Modern
196	Fill	1.2	?	Ditch. Very loose and clean redeposited natural.	CBM	Modern
198	Layer		0.27	Subsoil		
199	Layer			Natural		

Test Pit 8						
General description				Orientation		NE-SW
Blank trench				Avg. depth (m)		0.55
				Width (m)		1.5
				Length (m)		3
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
197			0.3	Topsoil		
198			0.25	subsoil		
199				Natural		

APPENDIX B. ENVIRONMENTAL REPORT

By Rachel Fosberry

B.1 Introduction

- B.1.1 Six bulk samples were taken during the excavations in order to assess the quality of preservation of plant remains, bones and artefacts and their potential to provide useful data as part of further archaeological investigations. Samples were taken from undated ditch deposits and two possible pits or tree throws.
- B.1.2 One bucket (up to ten litres) of each sample were processed by tank flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.3mm nylon mesh and the residue was washed through a 0.5mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x16 magnification.

B.2 Results

- B.2.1 Sample 1, fill (100) of pit/tree-throw **101** contains two charred cereal grains. Preservation is poor and the grains are abraded but have been tentatively identified based on their morphology as a hulled wheat, namely spelt (*Triticum spelta*) or emmer (*T. dicoccum*). The rest of the samples were found to be devoid of any ecofacts or artefacts other than sparse charcoal.

B.3 Further Work and Methods Statement

- B.3.1 The general lack of plant remains suggests that either the soil conditions at the site do not favour preservation or that there is no evidence of any nearby settlement or of any agricultural practices such as crop processing.
- B.3.2 In the absence of any other dating evidence it should be possible to radiocarbon date the two cereal grains from Sample 1. However, any result should be considered as tentative due to the possibility that the remains may be residual or intrusive.
- B.3.3 No further work on these samples is required.

APPENDIX C. BIBLIOGRAPHY

Armour, N. and Collins, M., 2008, *The Addenbrooke's Access Road, Clay Farm, Trumpington, Cambridge, The 2008 Investigations: Sites 4 and 7*. Cambridge Archaeological Unit Report No. 843

British Geological Survey, 2002, *Saffron Walden. England and Wales Sheet 205 Solid and Drift Geology. 1:50 000*. (Keyworth, Nottingham: British Geological Survey).

Brudenell, 2005, *Land Adjacent to The Bell Language School, Cambridge: An Archaeological Evaluation*. Cambridge Archaeological Unit

Cooper, A. & Edmonds, M., 2007, *Past and Present. Excavations at Broom, Bedfordshire 1996-2005*. Cambridge Archaeological Unit. Oxbow Books, Oxford.

Evans, C., Mackay, D. and Webley, L., 2008, *Borderlands. The Archaeology of the Addenbrooke's Environs, South Cambridge*. Cambridge Archaeological Unit Landscape Archives. Oxbow Books

Mortimer, R., 2005, *Neolithic, Bronze Age, Iron Age and Romano-British Occupation along the route of the Fordham Bypass, Fordham, Cambridge. Post-Excavation Assessment*. CCC AFU Report 816

Mortimer, R., 2012a, *Specification for Archaeological Excavation: Clay Farm Rising Main Sewer, Cambridge*. Oxford Archaeology East. Unpublished document.

Mortimer, R., 2012b, *Specification for Archaeological Watching and Recording brief: Clay Farm Rising Main Sewer, Cambridge*. Oxford Archaeology East. Unpublished document.

Pickstone, A. & Mortimer, R., 2011, *The Archaeology of Brigg's Farm, Prior's Fen, Thorney, Peterborough – Archaeological Excavation*. OAE Report No. 1094

APPENDIX D. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-136640		
Project Name	Clay Farm Rising Main Sewer		
Project Dates (fieldwork) Start	08-10-2012	Finish	30-10-2012
Previous Work (by OA East)	Yes	Future Work	Unknown

Project Reference Codes

Site Code	CAMCFS'12	Planning App. No.	
HER No.	CHER ECB3899	Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPS 5
Development Type	Pipelines/Cables

Please select all techniques used:

<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 checked="" 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 type="checkbox"/> Targeted Trenches
<input type="checkbox"/> Dendrochronological Survey	<input 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 Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Ditch	Uncertain	bone	Uncertain
Post hole	Uncertain	brick	Post Medieval 1540 to 1901
Tree throw	Uncertain		Select period...

Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	
District	Cambridge City	Addenbrooke's Road, Cambridge, CB2	
Parish	Cambridge City		
HER	Cambs		
Study Area	1.4 x 0.01 km	National Grid Reference	TL 46582 54681

Project Originators

Organisation	OA EAST
Project Brief Originator	Andy Thomas
Project Design Originator	Richard Mortimer
Project Manager	Richard Mortimer
Supervisor	Julian Newman

Project Archives

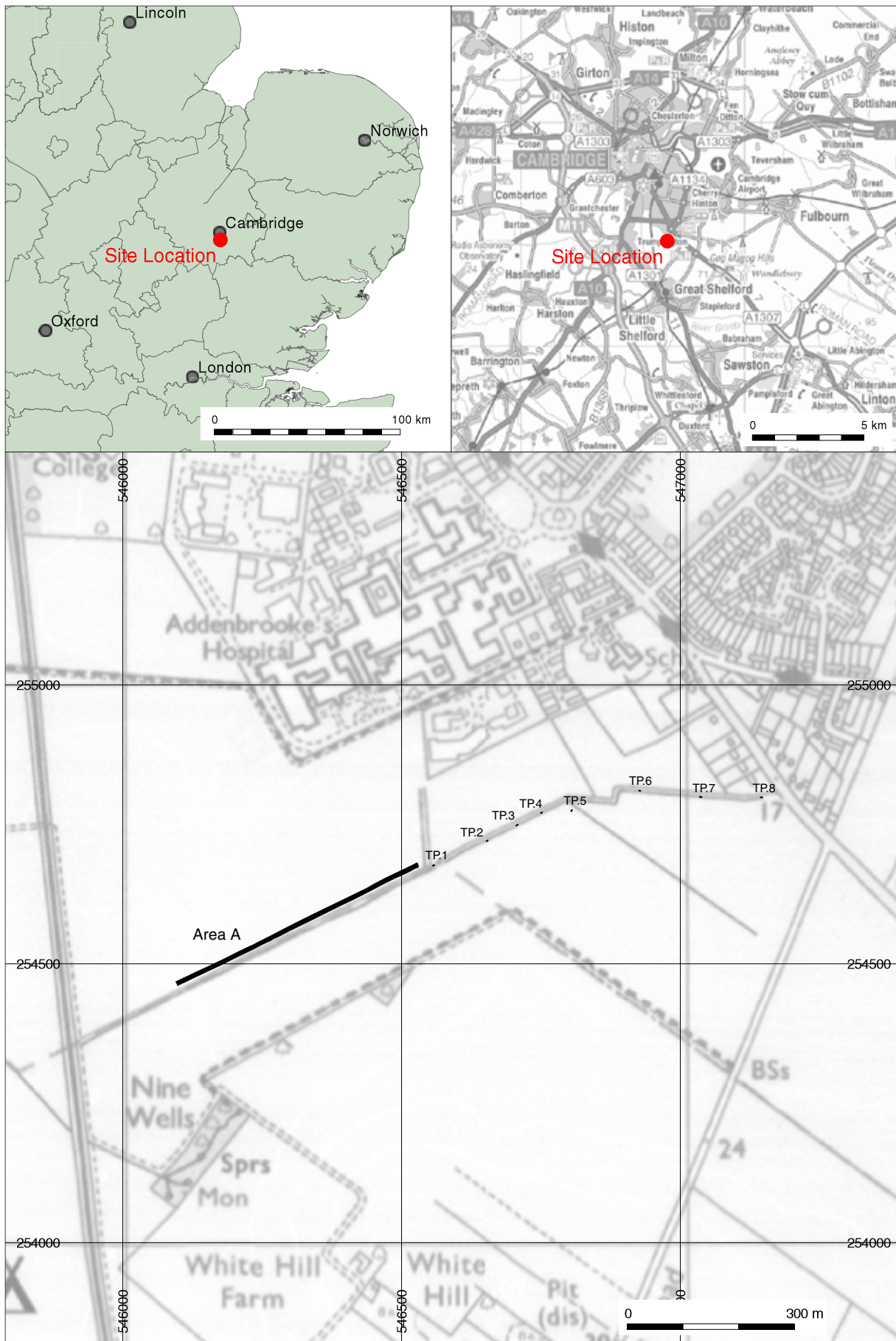
Physical Archive	Digital Archive	Paper Archive
Cambs County Store	OA East	Cambs County Store
CAMCFS12	CAMCFS12	CAMCFS12

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<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"/>
None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media	Paper Media
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<input checked="" type="checkbox"/> Survey	<input type="checkbox"/> Matrices
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	<input type="checkbox"/> Research/Notes
	<input checked="" type="checkbox"/> Photos
	<input checked="" type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input checked="" type="checkbox"/> Sections
	<input type="checkbox"/> Survey

Notes:



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Figure 1: Site location

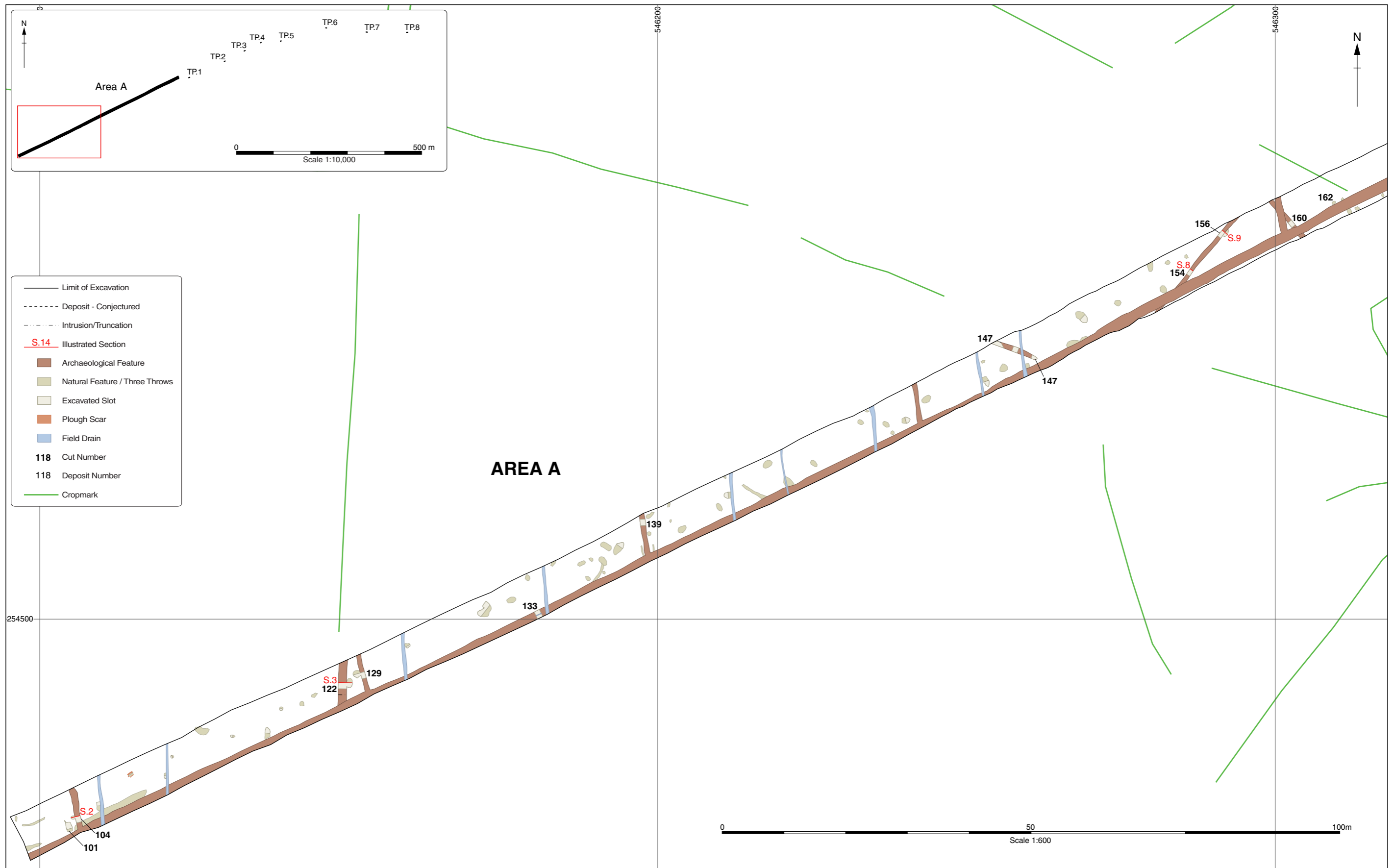


Figure 2: Western end of Area A

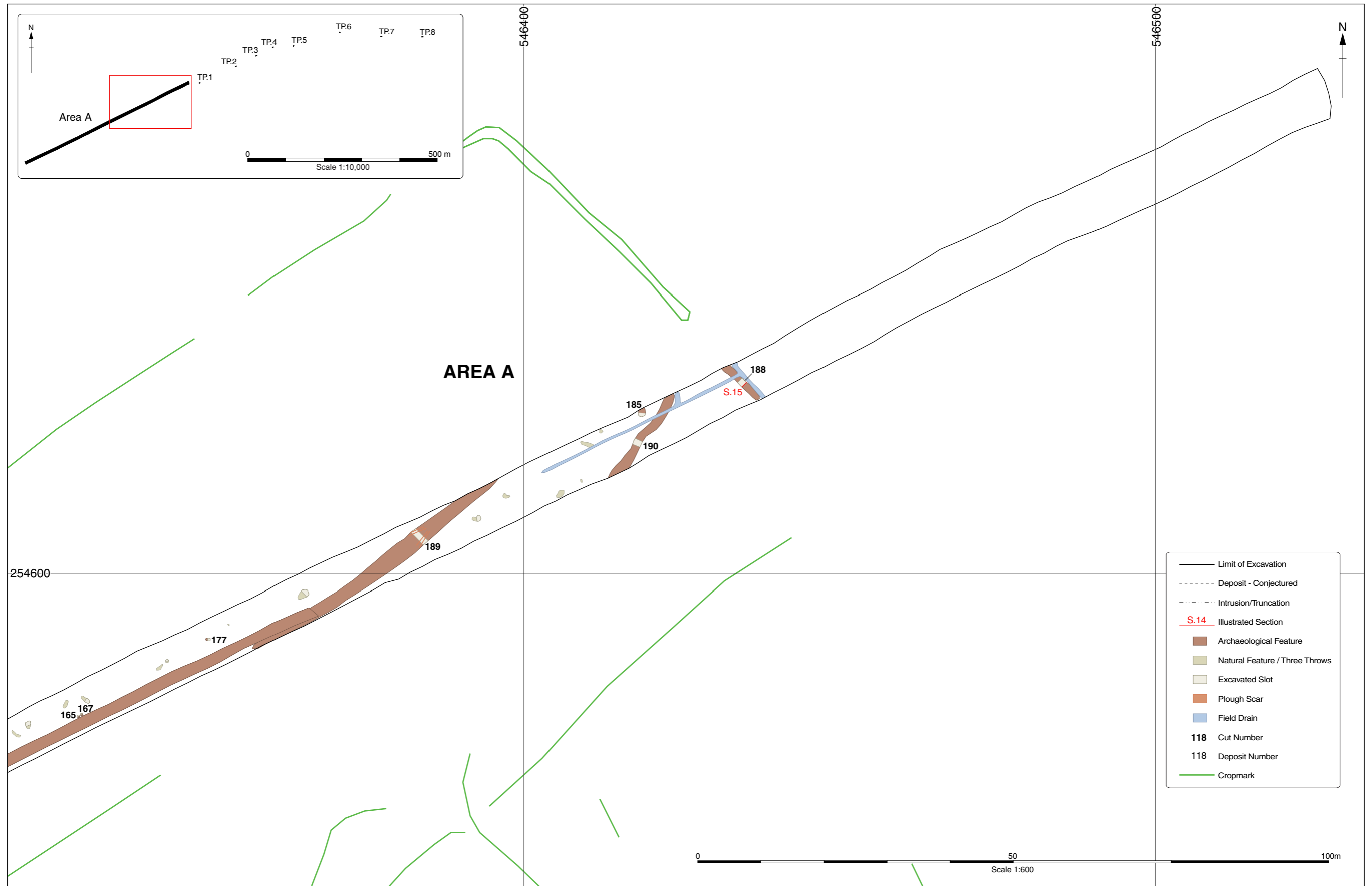


Figure 3: Eastern end of Area A

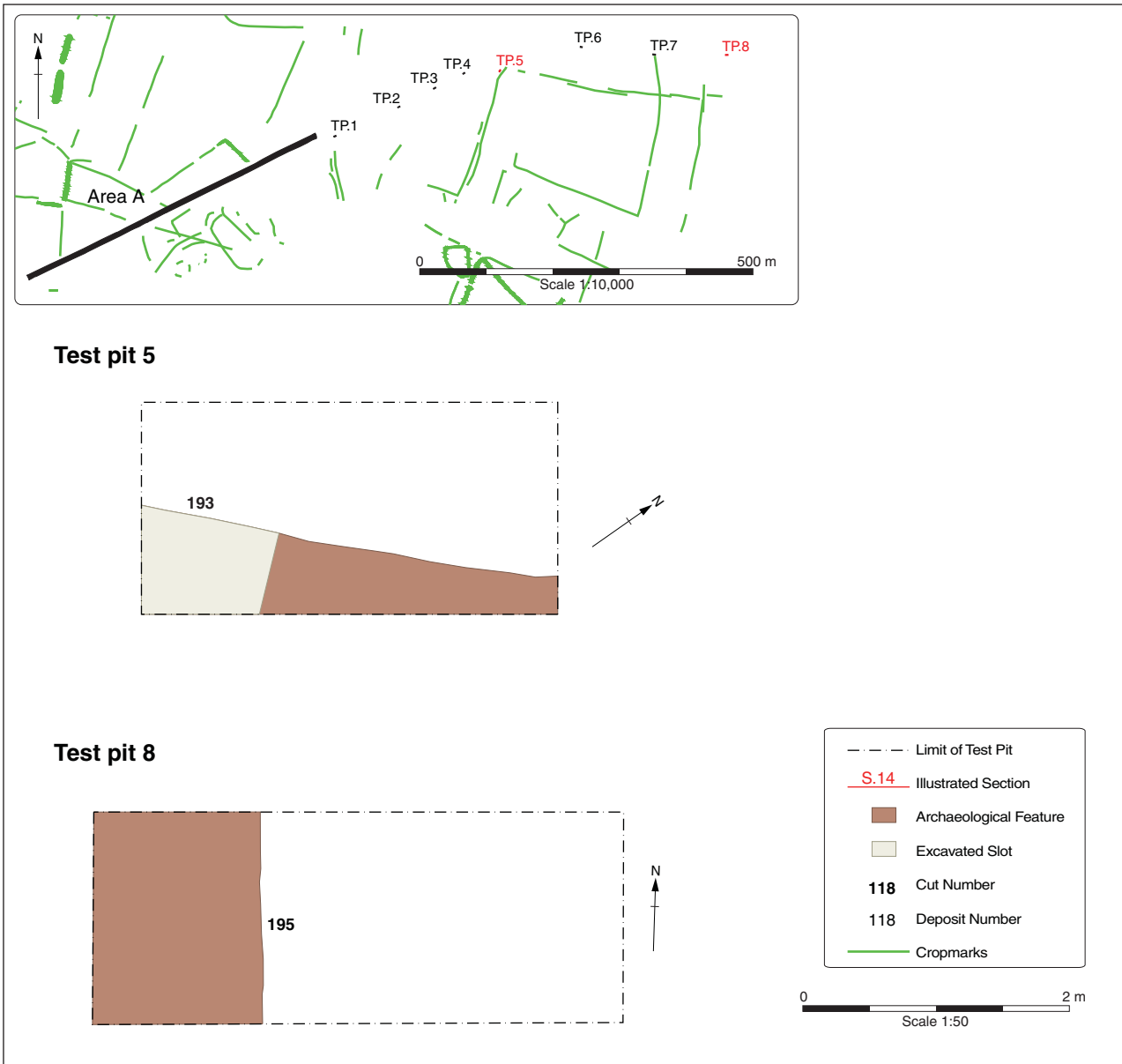


Figure 4: Test pits 5 and 8

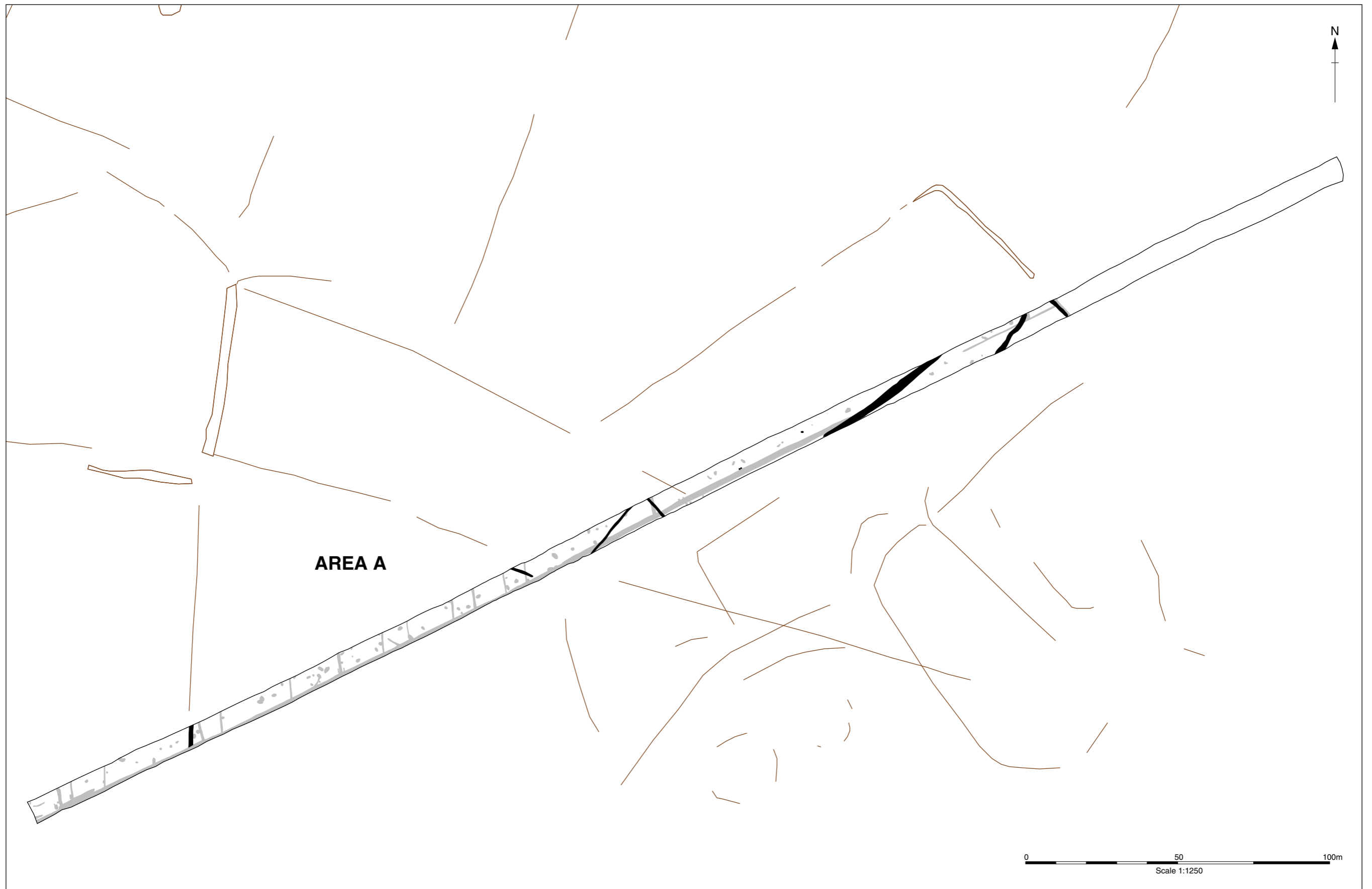


Figure 5: Significant features (black) in Area A in relation to cropmarks (brown)

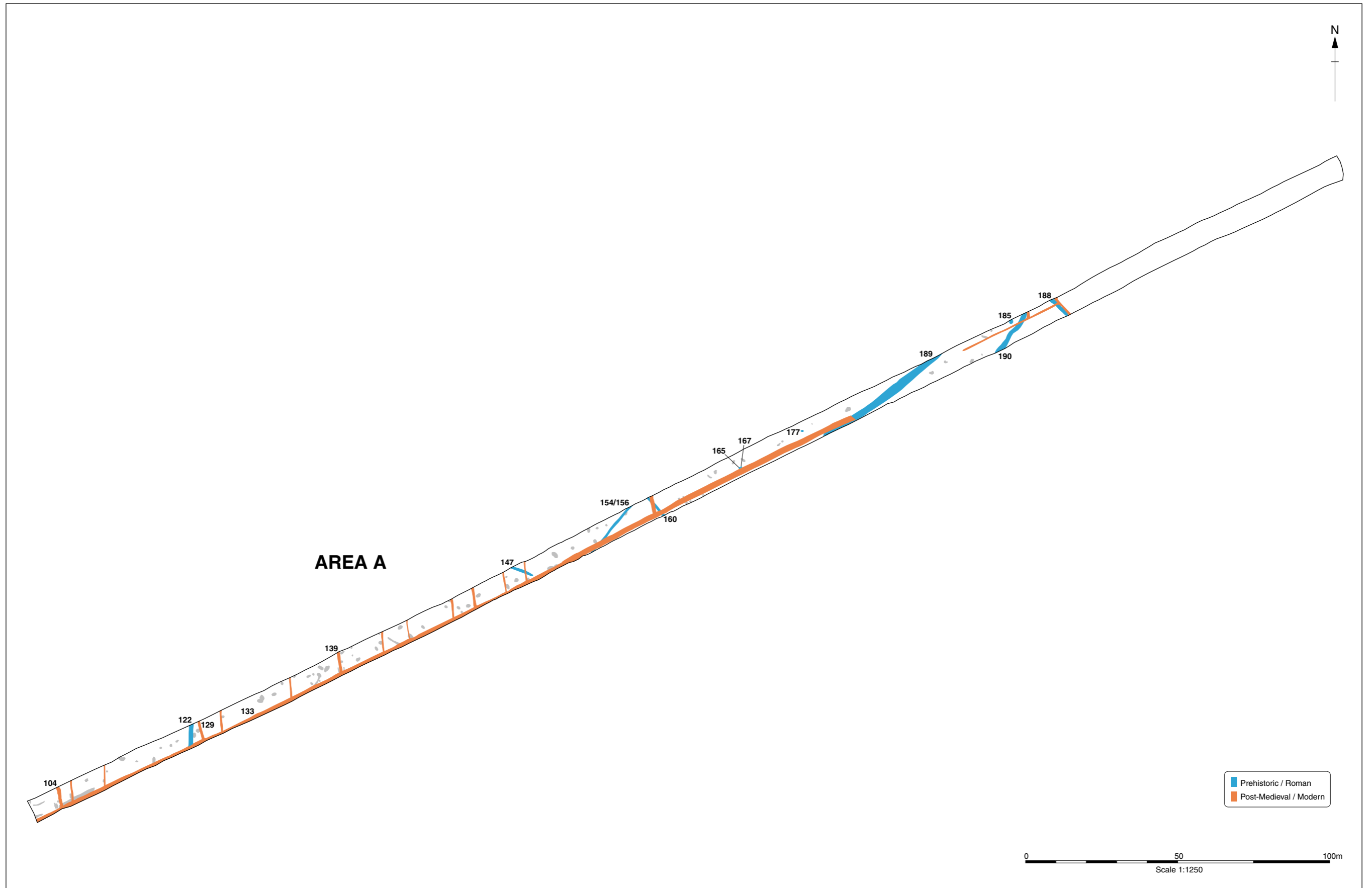


Figure 6: Phase plan of Area A

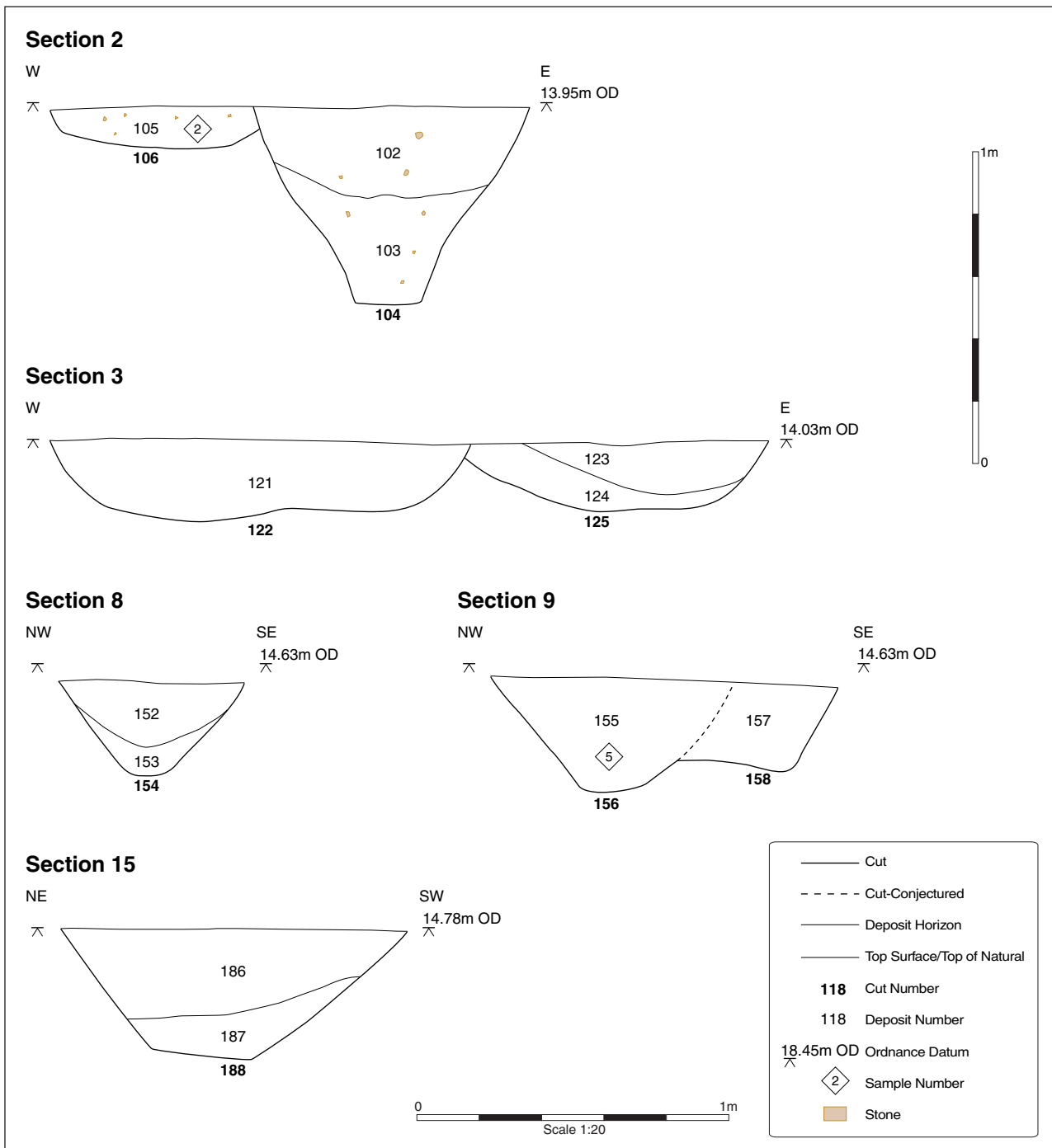


Figure 7: Selected sections



Plate 1: Area A during excavation. Ditch **154=156** can be seen extending across the trench



Plate 2: Ditch **156** and tree-throw **158** looking north-east. 1m scale



Plate 3: Ditch **188** looking south. 1m scale



Plate 4: Test Pit 5 with ditch **193** visible, looking north-east. 1m scale



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