

Chittering Farm, Green End, Stretham, Cambridge

An Archaeological Evaluation



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with contributions by Anne de Varielles

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Contents

	Page
INTRODUCTION	1
Geology and Topography	1
Archaeological and Historical background	1
FIELD SURVEY	4
Methodology	4
Results	5
<i>Flint</i>	5
<i>Pottery</i>	5
<i>Metal detecting</i>	5
Conclusion	5
TRIAL TRENCHING	6
Methodology	6
Results	6
DISCUSSION AND CONCLUSION	10
Acknowledgements	10
Bibliography	11
APPENDICES	
Bulk environmental samples – Anne de Varielles	12
Oasis Data Collection Record	13

List of Figures

	Page
Figure 1 PDA location	2
Figure 2 Trench Plan	3
Figure 3 Pit, F. 7, Trench 11	7
Figure 4 Trenches with buried soil remnants	9

List of Tables

		Page
Table 1	Trench Summary	8
Table 2	Plant Macro-Remains	12

INTRODUCTION

An archaeological survey and evaluation was undertaken by Cambridge Archaeological Unit (CAU), between the 11th and the 14th February 2008. The work was commissioned by F. C. Palmer and Sons to identify the potential archaeology of the Proposed Development Area (PDA), prior to the excavation and construction of two reservoirs on 6.89 hectares of land southeast of Chittering Farm, Green End, Stretham. The PDA is centred on NGR TL 5147 7150, and situated east of the A10, between the River Great Ouse to the north and west, the River Cam to the east, with the villages of Stretham to the north and Waterbeach to the southwest.

Geology and Topography

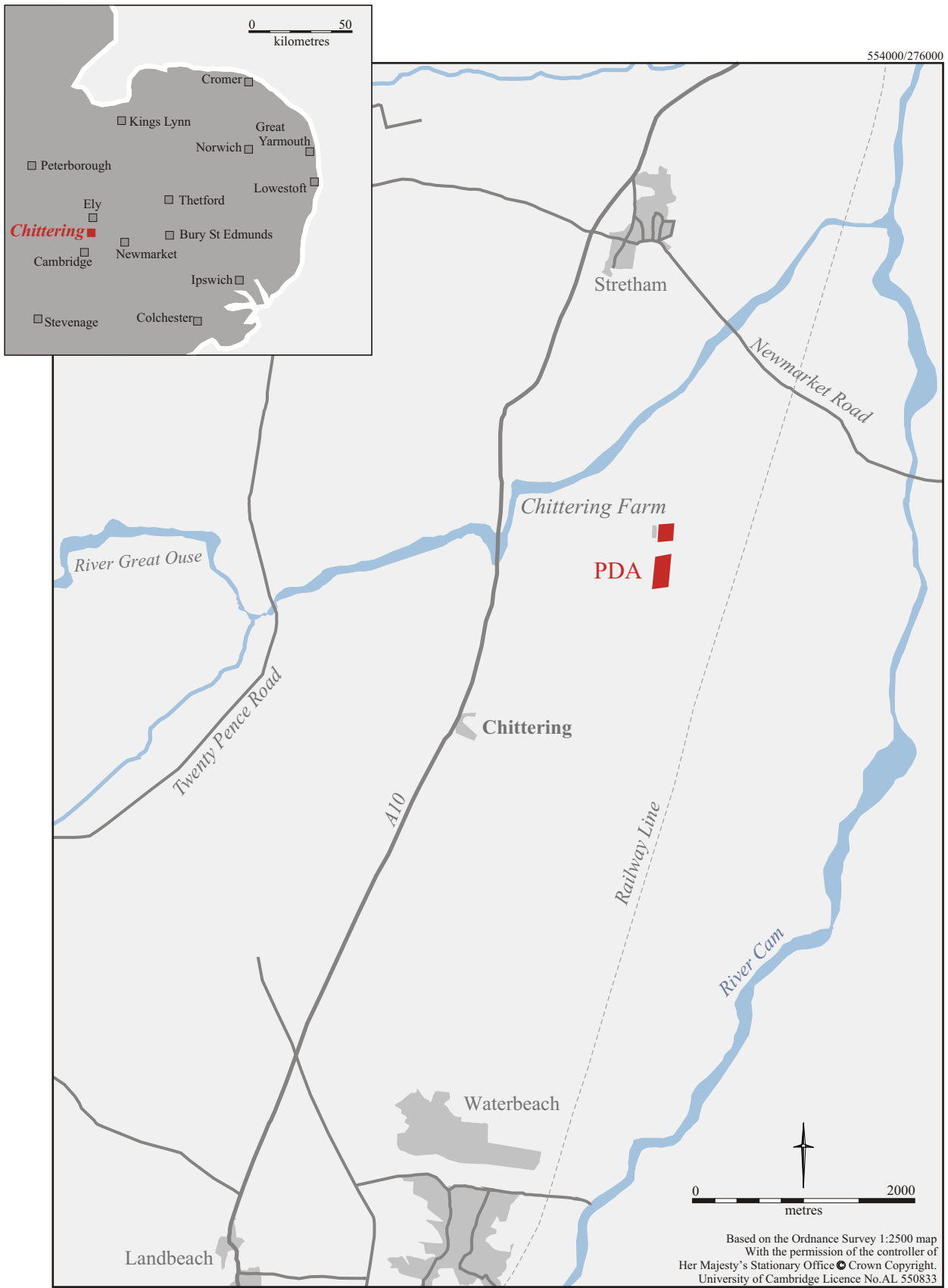
The PDA is sited on a low lying flat fen edge landscape (between 1.01m OD and -1.09m OD) on Gault Clay with overlying Woburn sands and 1st Terrace River gravels in the north (Institute of Geological Sciences 1978).

Archaeological and Historical Background

The location of the PDA, just to the south of where the River Great Ouse and the River Cam meet and along the edge of the fen, has yielded prehistoric flint scatters, the majority of which date to the Neolithic (CHER 06914, CHER 06904, CHER 06936, CHER 06887-9, CHER 06893 and CHER 06878).

Further worked flints and stone axes have also been identified at Chittering, south of the PDA (Appleby *et al* 2007) as well as Early Neolithic to Bronze Age material from Bannold Lodge, also in Chittering (Whittaker 1997) and a Bronze Age barrow and ring ditch near to Denny Abbey south of the PDA. A small, later Bronze Age settlement was excavated at the fen edge along the River Great Ouse (Masser 2000), whilst occupation activity extending into the Iron Age has also been identified along the gravel terraces of the River Great Ouse, as well as Iron Age settlement evidence further south towards Milton and Waterbeach (Masser 2000; Conner 1999 and Dickens *et al* 2003).

Extensive Roman activity has been recorded in the landscape and around the site, including a potential settlement and villa identified from aerial photographs to the northeast of the PDA, along with a Roman hoard (CHER 06915) and Samian pottery (dating to AD 120-130), also collected from the area (CHER 06957, CHER 06916, SAM 257). A probable Roman settlement has also been identified to the northwest of the PDA (CHER 05670), with further evidence for Roman settlement identified from upstanding earthworks (SAM 13605) at Chittering, to the southwest and at Bannold Lodge south of the PDA, with Romano-British burials (Whittaker 1997). Denny Abbey, also to the south of the PDA, yielded potential Roman earthworks that were utilised again in the medieval period (Whittaker 1997). In the wider landscape, the development area is located north of the Car Dyke (SAM 224), a probable Roman canal linking the River Great Ouse and River Cam south of Waterbeach and the major north south Roman road – Ermine Street, under the current A10 to the west.



546000/265000

Figure 1. PDA location



Figure 2. Trench plan

The village of Stretham just to the north of the PDA forms the southern tip of the Isle of Ely, in a prominent position alongside the A10, which allowed continual occupation from the Anglo Saxon period through to the present day. The occupation of any higher ground was important in the fens as the lower lying levels experienced seasonal flooding from the end of Roman Britain, due to the subsequent neglect of the Roman drainage systems. Stretham was mentioned in the Anglo-Saxon Chronicle of 975 AD as Straetham and in the Domesday Book as Stradhham in 1086 AD (Hoyland 1991). Additional Anglo Saxon activity has been focused further south at the present villages of Waterbeach and Cottenham with further artefacts recovered by metal detectorists and dredged from sections of the River Cam (Appleby *et al* 2007). Anglo Saxon huts, pits and associated artefacts were also recovered from Denny Abbey at Waterbeach (Mortimer 1996).

Early medieval activity has been recorded at Bannold Lodge Chittering, south of the PDA, in the form of quarrying, with an additional driveway that was probably a continuation of the Denny Causeway leading into Denny Abbey, founded in the 12th century on a fen island (Whittaker 1997). Much of the low lying fen land, including the development area, would probably have been inaccessible marshland, although evidence for medieval field systems has been identified further south at Waterbeach, which may have been utilised within the PDA (Diez 2005). Widespread drainage schemes in the fens were not introduced until the 18th century at which time the PDA was probably incorporated into an agricultural regime. There is unlikely to be any modern disturbances within the PDA.

FIELD SURVEY (Katie Anderson and Andrew Hall)

Two fields, one north of the current reservoir and one to the south, were fieldwalked and metal detected. A total of 145 transect points were laid out, covering an area of 4.44 hectares; the northern field was 1.28 hectares and the southern field measured approximately 3.16 hectares.

Methodology

A 20m grid, aligned on the National Grid, was laid out over the two fields under investigation. The fields were then walked north-south, in 20m transects, collecting artefacts at 20m intervals; the transect points. The 2m wide collection corridors along transects supplied a 10% sample of the whole area.

A metal detecting survey was carried out in order to retrieve artefacts from the topsoil prior to the machine striping of the excavation area. As well as contributing datable finds, assessing the topsoil assemblage can also pinpoint activities that may not register with traditional earth-fast archaeological features. The metal detecting utilised the same transects as the field walking, using Tesoro detectors at a slow pace, covering a 1.5-2.0m sweep. The survey was carried out over one day by two experienced detectorists from the Cambridge Archaeological Unit.

Throughout the survey, small iron objects were discriminated out, and very recent objects of little or no archaeological significance, such as milk bottle tops, ring pulls,

shotgun cartridges and small caliber bullet cases etc, were collected but discarded prior to finds assessment.

The conditions for fieldwalking and metal detecting were good, as the fields were ploughed, and weathered, and no crop was present. The furrows had weathered sufficiently to provide a relatively flat detecting surface. The weather conditions were also preferable; the overcast day made visibility good.

Results

Flint (Emma Beadsmoore)

A single flint was recovered from transect H9 D60; a secondary flake (21g) that is potentially Neolithic.

Pottery

One Nene Valley colour-coated sherd, weighing 14g was recovered from transect H6 C20, the sherd is probably from a jar, thus dating it to the late Roman period (3rd-4th century AD). This sherd is the only evidence of Roman activity from the fieldwalking, and is more likely to be connected to the known Roman archaeology in the area rather than implying definite Roman activity on the site itself.

Two sherds of glazed red-earthen ware, from two different vessels, were recovered from transects H9 E20 and H6 C20, both broadly dating to the 16th-18th centuries AD (Newman pers comm.). The sherds were separated by some distance and thus unlikely to have any association with potential features at the site.

Metal Detecting

No finds of archaeological significance were retrieved. Several fragments of iron farm machinery were found, including sections of plough and harrows, as was a rectangular iron buckle, most likely from a horse harness. A recent copper alloy winding handle, (again, most likely from agricultural machinery) and a halfpenny dating to 1925, were the only two non-ferrous finds recovered. All finds date to the 19th-20th century.

Conclusion

Overall only a very small quantity of material was collected from the field survey, and therefore there was no apparent clustering, a situation reflected in the limited number of archaeological features exposed when the site was trenched (see below).

The recovery of just one worked flint is perhaps surprising given the known activity in the area and the potential prehistoric buried soil from the trenching of the site (see below). The single sherd of Roman pottery is most likely to be related to archaeology beyond the site, where there is evidence of extensive Roman activity, and certainly

more material would be expected, had any significant Roman activity have taken place on this site.

TRIAL TRENCHING

Methodology

Twenty one trenches, measuring a total of 515.75m, were positioned to evaluate the internal deep excavations of the proposed reservoirs. A further 12 trenches (300m) were held in reserve along the outer boundary of both reservoirs.

The trenches were excavated by a tracked 360° machine using a 1.85m wide toothless ditching bucket, with topsoil and underlying deposits being removed under archaeological supervision and scanned by eye. The exposed archaeological features were immediately planned and a minimum of 50% of each discrete feature was excavated.

The excavation of all archaeological features was carried out by hand and all finds were retained. The recording followed a CAU modified MoLAS system (Spence 1990); whereby numbers (fill), or [cut] were assigned to individual contexts and feature numbers, F. to stratigraphic events. Sections were drawn at 1:10, base plans at 1:50. The photographic archive comprises digital images, whilst appropriate features were bulk sampled following guidelines outlined by English Heritage (2002). All work was carried out in strict accordance with statutory Health and Safety legislation and with the recommendations of SCAUM (Allen & Holt 2002). The site code is CFS 08.

Results

Twenty one trenches were machined, six of which were in the northern field (north of the current reservoir) whilst 15 were situated in the southern field (south of the current reservoir). The 21 trenches were located within the inner boundary of the proposed reservoirs and no extra trenching underneath the proposed reservoir banks was required. Only one trench exposed archaeological features. Trench 11 was situated in the southern field along the western limit of the excavation area. The descriptions of the trenches have been summarised in Table 1.

A small oval pit, F. 7 was excavated 10.5m from the western end of Trench 11, measuring 0.6m in length, 0.43m in width and 0.12m in depth, the pit had moderately sloping sides to a rounded base [21]. The pit was filled with (20), a mid greyish brown firm clayey silt with occasional charcoal flecking and gravel inclusions increasing with depth. Highly degraded animal bone was also found and the charcoal and rootlets identified in the feature are probably intrusive rather than *in situ* remains (de Varielles – Appendix 1).



Figure 3: Pit, F. 7, Trench 11.

Twelve trenches (7, 9, 11, 13, 14, 15, 16, 17, 18, 19, 20 and 21) in the southern field yielded evidence of a potentially prehistoric soil, which survived as pockets of buried soil in natural hollows and geological features in the clay natural. The charcoal rich grey silt was also identified in isolated patches under the top soil, but was not visible along the entire lengths of these trenches, where the majority of the buried soil had been ploughed away. The locations of the trenches with traces of buried soil are illustrated in Figure 4.

Trench	Orientation	Length (m)	Depth (m)	Top Soil	Natural	Archaeology
1	N-S	24.6	0.49 N – 0.46 S	Mid greyish brown clayey silt	Yellowish grey clayey silt gravel	No
2	E-W	29.5	0.5 E – 0.48 W	Mid greyish brown clayey silt	Orangey grey and yellow clayey gravelly silt	No
3	N-S	24.6	0.45 N – 0.54 S	Mid greyish brown silty clay	Mixed orange brown clayey gravel	No
4	N-S	24	0.44 N – 0.44 S	Mid greyish brown clayey silt	Greyish yellow gravelly clay	No
5	E-W	29.5	0.47 E – 0.48 W	Mid greyish brown clayey silt	Yellowish grey clayey gravelly sand	No
6	N-S	24.2	0.47 N- 0.55 S	Mid greyish brown silty clay	Brownish green grey clay	No
7	E-W	24.5	0.54 E – 0.5 W	Brownish grey clayey silt	Orangey mottled grey clayey silt	No
8	N-S	24.3	0.43 N – 0.5 S	Mid – dark brownish grey clayey silt	Grey with orange mottling clayey silt	No
9	E-W	24.1	0.5 E – 0.56 W	Mid – dark brownish grey clayey silt	Mid grey silty clay with orange mottling	No
10	N-S	24.2	0.49 N – 0.47 S	Mid – dark brownish grey clayey silt	Mid grey silty clay with orange mottling	No
11	E-W	23.9	0.51 E – 0.44 W	Mid – dark greyish brown clayey silt	Orangey grey sandy silt with clay patches	Yes
12	N-S	19.45	0.49 N – 0.87 S	Dark brown/black clayey silty peat	Mottled orange/grey/blue silty clay	No
13	E-W	24.4	0.48 E – 0.51 W	Mid- dark greyish brown/black clayey silty peat	Mottled orange/grey/blue silty clay	No
14	N-S	24.4	0.47 N – 0.5 S	Mid – dark greyish brown clayey silt, slightly peaty	Mottled orange/grey/blue clayey silt and occasional gravels	No
15	E-W	24.7	0.48 E – 0.54 W	Dark greyish brown clayey silty peat	Mottled orange/grey/blue silty clay	No
16	N-S	24.3	0.55 N – 0.58 S	Dark greyish brown clayey silt, slightly peaty	Mottled orange/grey/yellow clayey silt	No
17	E-W	24	0.61 E – 0.56 W	Dark greyish brown clayey silty peat	Grey orange mottled clayey silt	No
18	N-S	24.4	0.51 N – 0.44 S	Dark brown/black clayey silty peat	Greyish mottled orange/yellow/blue clayey silt	No
19	E-W	24.2	0.57 E – 0.51 W	Mid – dark greyish brown/black clayey silty peat	Grey mottled orange clayey silt	No
20	N-S	24.4	0.58 E – 0.58 W	Soft black clayey silty peat	Grey orange mottled silty clay	No
21	E-W	24.1	0.55 E – 0.63 W	Dark greyish brown clayey silty peat	Grey orange mottled silty clay	No

Table 1: Trench Summary

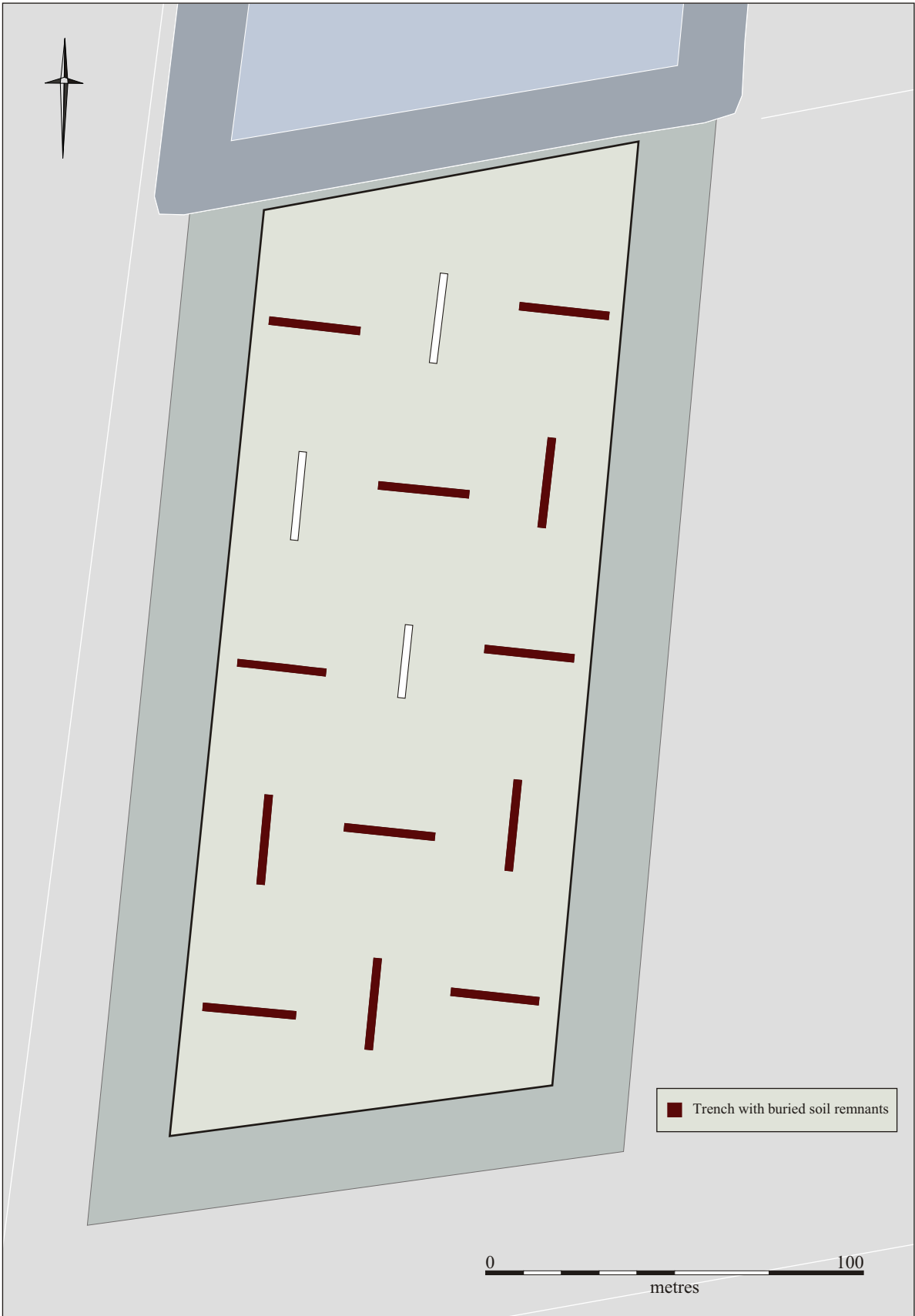


Figure 4. Trenches with buried soil remnants

DISCUSSION AND CONCLUSION

The isolated pit exposed by the evaluation in Trench 11 was potentially part of dispersed occupation activity along the edge of the fens and close to the two rivers. The location of F. 7 in the west of the PDA on slightly higher ground (-0.3m OD) away from the peat formations to the east, may suggest that this part of site was moderately drier land, enabling isolated areas to be periodically occupied. Although no dating evidence was recovered, the feature is potentially prehistoric.

The remnants of a potentially prehistoric buried soil revealed in pockets in the natural contained large amounts of charcoal, which provides possible evidence for tree and shrub clearance by burning. Large areas of land were cleared for farming and the need for additional land space. However, the buried soil was only visible in the southern field, in 12 out of the 15 trenches, on the lower part of the site, suggesting that possible buried soil in the higher areas of the site was ploughed away, in the northern field and the north eastern quarter of the southern field.

The similarity of the fills between the F. 7 and the buried soil could be because the deposits were broadly contemporary, although the remnants of charcoal identified in F. 7 could have been intrusive into the pit. The clearance of the land therefore, may well have taken place after F. 7 was originally cut and the charcoal was later incorporated into the feature through probable root actions.

The small quantity of finds recovered from the field survey suggests that the lack of material is due to a lack of archaeological activity, rather than severe plough damage, which indicates that the limited evidence for archaeological activity exposed by the trial trenching, also reflects limited archaeologically activity rather than subsequent processes.

The PDA lies close to the River Cam and River Great Ouse on the very edge of the fens, in a potentially wet and peaty area. The limited evidence for archaeological activity recovered from the field survey and the trial trenching at the site demonstrates that the area was very sporadically occupied during the prehistoric period and was then potentially marshland until the comprehensive draining of the fens in the 18th century.

Acknowledgments

The work was commissioned by F. C. Palmer and Sons and the site was monitored by Kasia Gdaniec (CAPCA). Emma Beadsmoore was the project manager and thanks go to Laura James and Dave Strachan for assisting the author. Jane Matthews surveyed the trenches and produced the report graphics with Bryan Crossan.

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APPENDIX 1

Assessment of Bulk Environmental Samples *Anne de Vareilles*

Methodology

The bulk soil sample taken on site was processed using an Ankara-type flotation machine at the Cambridge Archaeological Unit. The flot was collected in a 300µm mesh and the remaining heavy residue washed over a 1mm mesh. The flot was dried indoors and scanned for the presence of charred plant macro remains.

Sorting and identification of macro-remains were carried out under a low power binocular microscope in the George Pitt-Rivers Laboratory, McDonald Institute, University of Cambridge. All archaeological remains are listed in table 2.

Preservation

The plant macro-remains are all charred and heavily broken up into small fragments. They have suffered physical damage, probably from lying on the surface before ending up in the pit. The sample was full of intrusive modern rootlets, indicative of bioturbation through which archaeological contexts may have been mixed. It is therefore possible that the charcoal is also intrusive.

Results

Table2: Plant Macro-Remains from Sample 1

		Sample 1, 6L
		F.7 [20]
Charcoal	2-4mm	+
	<2mm	+++

Key: '-' 1 or 2, '+' <10, '++' 10-25, '+++' 25-50 items.

Conclusion

Nothing was found that could unquestionably be related to the pit's use or activities contemporary with the site. Preservation is poor and the pit does not appear to have contained any *in situ* archaeobotanical deposits.