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Archaeological Trial Trenching at
Shardlow Quarry (southern
extension),
Weston-upon-Trent, Derbyshire.
2001



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Contents

1.0	Summary	1
2.0	Introduction	2
3.0	Site Location and Description	2
4.0	Archaeological Background	2
5.0	Summary of Evaluative Surveys Undertaken to Date	4
6.0	Aims	5
7.0	Method	6
8.0	Summary results of trial trenching	6
9.0	Finds by Annette Hancocks	8
10.0	Environmental Assessment by Marina Ciaraldi	8
11.0	Assessment of pollen by James Greig	14
12.0	Discussion	16
13.0	Acknowledgements	17
14.0	References	18
Appendix	Detailed Results of Trial Trenching	

List of Figures

Fig. 1	Site Location
Fig. 2	Trench Location
Fig. 3	Trench 4 Plan
Fig. 4	Trench 6 Plan
Fig. 5	Trench 49 Plan
Fig. 6	Selected Sections

Archaeological Trial-Trenching at Shardlow Quarry (southern extension), Weston-upon-Trent, Derbyshire. 2001

1.0 Summary

Archaeological trial trenching was undertaken by Birmingham University Field Archaeology Unit at Shardlow Quarry, in the parish of Weston-upon-Trent, Derbyshire (NGR SK 423286) in November and December 2001. This followed a desk-based assessment, fieldwalking, geophysical survey, and an aerial photographic assessment in conjunction with a palaeochannel survey of the site. Although the results of the fieldwalking were largely negative, geophysical survey and cropmarks on aerial photographs suggested the presence of archaeological features in the north of the area along an elevated gravel ridge, and a number of palaeochannels across the floodplain of the River Trent. Immediately to the north of the site is the Aston Cursus, a Scheduled Ancient Monument (SAM County No DR-185), a double ditched linear earthwork of at least 1.8 km length, of which the southern end forms a well-defined square terminus to the north of the study area.

A series of 52 trial trenches were excavated to test potential features and palaeochannels within the study area. Evidence was obtained for two concentrations of archaeological features on the elevated gravel rise on the northern edge of the area. The most significant of these was found in the area of a rectilinear cropmark enclosure located on Geophysical Plot 2. An Iron Age gully and two Roman ditches were recorded, as well as a number of undated ditches and pits. These remains cannot be tied to the geophysical survey results, but are likely to be related. A ditch terminal, which contained a single sherd of Roman pottery, was located to the east of this area.

Further remains were found to the west, in an area containing another cropmark enclosure identified by aerial photography. Four linear features were located in two trenches, although neither of these could be dated. Again, the remains did not match the cropmark locations, but were in close proximity and likely to be related. Further linear features were found towards the eastern end of the site, under alluvial deposits. These features were sparsely spread and undated, making interpretation difficult. The only other features located were isolated, undated pits, tree bowls, natural channels and plough furrows.

Palaeoenvironmental sampling revealed the changing climate and landuse, with evidence of reforestation, beginning in the late Mesolithic period. Radiocarbon dating confirmed the beginning of alluviation in the late Bronze Age, but failed to clarify the beginning of the infilling of the palaeochannel, which was thought to have begun in the late glacial period. The evaluation illustrated the potential for further palaeoenvironmental study to enhance our knowledge of the development and use of this part of the River Trent landscape.

2.0 Introduction

The following report details the results of the trial trenching phase of an archaeological evaluation at land directly to the southwest of the present Shardlow Quarry in the parish of Weston-upon-Trent, Derbyshire (centred on NGR SK 423286, Fig. 1). It was undertaken following the submission of a planning application for the southern extension of the Quarry. The work was commissioned by Phoenix Consulting on behalf of Hanson Aggregates and was undertaken by Birmingham University Field Archaeology Unit in November and December 2001. The trial trenching followed a desk-based assessment, an aerial photographic assessment, a fieldwalking survey and surface collection and a geophysical survey (Richmond, 2000). The programme of trial trenching was based on a scheme of investigation prepared by Phoenix Consulting (Richmond 2001).

3.0 Site Location and Description (Fig. 1)

The site comprises c. 65 hectares of land immediately southwest of the present Shardlow Quarry, in the parish of Weston-upon-Trent, Derbyshire. Topographically, it comprises two blocks of land: an area of low-lying permanent pasture to the south of the railway line and bordering the River Trent, which covers c. 25 hectares; and an area of predominately arable fields on slightly higher ground, to the north of the railway line covering c. 40 hectares. The pasture meadows to the south of the railway are susceptible to complete inundation from the river during periods of severe flooding. The geology consists of alluvium and river gravels overlying Mercia Mudstone.

4.0 Archaeological Background

The archaeological contribution to the environmental statement (Richmond 2000) details the extent of the known archaeology within and around the potential development area. It included a comprehensive documentary and cartographic survey and a review of previous archaeological work in the immediate area. It also includes the results of the fieldwalking survey, the geophysical survey, the palaeochannel and alluvial investigations, the aerial photographic assessment and field investigations in to sub-surface topography and depth of alluvium. The following summarises the main archaeological points associated with the site.

The site is located in an area where there are relatively dense scatters of archaeological features, which have been predominately recorded from the as cropmarks following aerial photography. The landscape of the site forms part of a broader pattern of ancient settlement present within the major river valleys of south Derbyshire. Many of the known archaeological remains of this region have been recorded upon the gravel terraces and associated alluvial deposits of the River Trent. As well as aerial photographs, several evaluations and excavations have been undertaken in the area (Garton 1998, Garton and

Elliot 1998, Garton *et al* 1998, Gibson and Loveday, 1989, Guilbert and Taylor 1995, Hughes 1999, Knight 1998, Knight and Howard 1994,1995, May 1970, Reaney, 1966).

Whilst there is relatively dense scatters of archaeological activity in the surrounding area, the site, itself, has few known sites of archaeological interest. The Sites and Monuments Record (SMR) contains only three entries:

- SMR 27708 - 'three parallel lines showing on an aerial photograph' and believed to represent the remains of medieval ridge-and-furrow.
- SMR 27714 - Ridge-and-furrow in the two extreme western fields of the site, being part of a concentrated area of medieval cultivation marks to the east of the village of Weston-upon-Trent.
- SMR 27709 – a cropmark collection of what appears to be a series of small enclosures associated with linear features. The location of these cropmarks, along the north edge of the site, suggests they may be related to a cropmark complex of reputed prehistoric date close to Birdcage Wood.

Outside the site there is a considerable concentration of archaeological evidence, the majority relating to prehistoric activity:

- Devensian – An isolated mammoth tusk found during quarrying at Shardlow.
- Neolithic – The most significant archaeological evidence in the area is the Aston Cursus (SMR 16601 and 27710, SAM County No DR-185), which is a double ditched linear earthwork of at least 1.8km length, of which the southern end forms a well-defined squared terminal to the immediate north of the site. Within and around the cursus are a large number of other archaeological features; including an ovate ditch, a double line of pits or postholes, over 70m in length, and at least six ring-ditches (probable former burial mounds), of which two have been excavated (SMR 16608) (Reaney, 1966, 1968). One of the ring ditches was radiocarbon dated to the early Neolithic (2890+/- 150 BC). Other features included a complex series of lanes, enclosures and field boundaries.
- Bronze Age – Within the cropmark complex to the north of the site are a number of ring-ditches, three of which have been excavated in the 1960's. Two of these excavations located the circular ditch, but no mound or burial evidence (SMR 27706) (Reaney, 1964). The other identified a mound, 0.5m high, containing a primary burial with a Bell Beaker, a stone wrist guard and a flint arrowhead, and a secondary burial with a Necked Beaker (SMR 16608) (Reaney 1966, 1968). A 30m-diameter ring-ditch was excavated more recently (Gibson and Loveday, 1989) and a triple ring ditch was excavated at Hicken's Bridge (SMR 25202) (Knight 1998) although no burials were found with these. A Bronze Age log boat and its cargo of sandstone blocks was recovered during a watching brief at Shardlow Quarry (Richmond 2000). Near the boat were 2,300 wooden stakes driven into the former riverbank, radiocarbon dated to 1390 Cal B.C., and an assemblage of brushwood. This is assumed to be a brushwood and oak-post wharf.
- Iron Age – The period is assumed to be represented by many of the cropmark complexes that have been revealed through aerial photography. Excavations at Foxcovert Farm (SMR 16606) (Hughes, 1999) identified cropmarks relating to a small Iron Age farmstead and excavations at Acre Lane in the 1960's (May, 1970) revealed that

cropmarks next to the cursus were a group of Iron Age enclosures, thought to be funerary in function.

- Roman – It is probable that a number of cropmark sites in the area are Roman, but have not been securely dated. About 0.5km to the northeast of the site, a number of features excavated contained Romano-British pottery and brick (Garton *et al*, 1998). Romano-British ceramics were also recovered during Reaney's (1964) excavations of cropmarks to the east of Weston-upon-Trent, during May's (1070) excavations at Aston and during Hughes' (1999) excavations at Foxcovert Farm.
- Post-Roman – Shardlow is referred to as *Serdelau* in the Domesday Book, but the nearest Saxon remains have been found 1km to the east, where a possible occupation site is known close to Willows Farm.
- Medieval – A suggested medieval 'training weir' has been identified at Shardlow Quarry during a watching-brief. A waterfront structure of stone and timber has been identified on the other side of the river. To the west of Weston-upon-Trent are earthwork remains of a 'shrunk medieval village' (SMR 27705), and similar remains are recorded to the north in the parish of Ash at Alkmonton (SMR 16401).

5.0 Summary of Evaluative Surveys Undertaken to Date

5.1 Fieldwalking Survey

Approximately one third of the site was under permanent pasture and could not be walked. The remaining 42ha were under arable use and were fieldwalked in 20m squares. Apart from relatively modern brick and tile, 17 pieces of prehistoric flintwork, 31 pieces of medieval pottery and 501 pieces of post-medieval pottery and other artefacts were collected. The flintwork consisted of one scraper, six cores and a core fragment, eight flakes and a struck chunk. The only dateable pieces were four 'blade cores' of either later Mesolithic or Early Neolithic date. No overall pattern of flint distribution was noted. The medieval pottery consisted of mainly unabraded sherds of 13th/14th-century date, and was mainly distributed along the gravel ridge, on the northern edge of the site.

5.2 Geophysical Survey

The survey consisted of twelve plots. Plots 1 and 2 were positioned to coincide with cropmark features thought to represent the remains of small enclosures and associated linear features to the south of the canal. The results showed a number of positive, linear magnetic anomalies broadly relating to the cropmark information. Plot 5 was located to the east of Plot 1, to see whether the potential archaeological features continued in that direction. The findings were minimal, although some possible pit-like features were detected. Plot 6 was located to test for the possible continuation of the Aston Cursus to the south. Several positive magnetic linear anomalies were noted, although the quality of data was poor. The remaining plots (3, 4, 7, 8, 9, 10, 11 and 12) were positioned randomly as a control, but failed to detect any geophysical anomalies of archaeological interest.

5.3 Palaeochannel and Alluvial Investigations

This consisted of the plotting of palaeochannels across the site using aerial photographic and borehole evidence, to determine the sites sub-surface topography. A programme of sampling was also undertaken for radiocarbon dating and to determine whether such deposits had the potential for the preservation of palaeo-environmental remains.

The aerial photographic survey identified an extensive pattern of former branching stream channels. The visible extent of these was confined to the south and east parts of the site. The extent and morphology of the channels suggests that during their active phase, the river valley would have been a more marshy environment, inhospitable to human settlement. The survey also suggested small cropmark enclosures along the northern boundary of the site.

Analysis of the borehole and topographic data has enabled a plot of the gravel surface to be compiled. The major feature identified was a large palaeochannel running along the northern side of the present floodplain, up to 2m deep and 150m wide. The channel was radiocarbon dated to 10,390+/- 70BP, indicating that the channel was of glacial date, spanning from the end of the Lake Windermere Interstadial, through the Loch Lomond Stadial, into the beginning of the post-glacial. A sequence contemporary with late Palaeolithic and early Mesolithic activity in Central England. A further depression in the southwest corner could be a contemporaneous palaeochannel. The gravel rises from these channels to the northwest. This depression was radiocarbon dated to 6,107+/- 60 B.P., suggesting that it was infilled during the late Mesolithic period. The gravels in the southern half of the site appear to form a slightly higher plateau which has been cut by the present River Trent. A palaeochannel occurs opposite the mouth of Mill Stream, which was radiocarbon dated to 2,880+/- 60 B.P., a late Bronze Age date. The gravels at the north-eastern end of the site rise to a level that may have remained above ground in all but the most severe flooding. A number of small channels were also plotted over the site. These channels do not follow the line of the main palaeochannels but are concentrated on the gravel plateaus, and could have drained the land in times of flooding. The channels could vary in date, from as early as the 1st millennium B.C.

The surface of the sands and gravels were recorded as varying in depth across the site, from a minimum of 0.2-0.3m along the northwest of the site, to a maximum depth of 3.3m within the main palaeochannel. The gravel is up to 2.9m deep in the sites southwestern depression, whilst most of the area south of the railway line is covered by between 1m and 2.2m of alluvium.

6.0 Aims

The objective of the programme of trial trenching was to characterise any archaeological sites identified by aerial photographic survey, fieldwalking survey and geophysical survey. The trial trenching aimed to assess the presence, extent, absence, depth, quality, date and condition of preservation of archaeological remains and palaeo-environmental deposits that lie within areas identified as of potential archaeological significance.

7.0 Method (Fig. 2)

A total of 52 trenches were excavated (see Appendix). The rationale for each of the trench locations was principally based on the results of the fieldwalking survey, the geophysical survey and the results of the palaeochannel and alluvial investigations including the aerial photographic appraisal. Each of the trenches was located using a Total Station Theodolite and the ploughsoil was removed using a mechanical excavator, fitted with a 1.8m toothless ditching bucket, and under archaeological supervision. Where appropriate, the subsoil surface was hand cleaned. A representative sample of the features identified were hand excavated to provide information concerning the survival and complexity of feature fills, and to recover artefactual evidence. A detailed context record on individual pro-forma record cards was maintained and all features and trenches were photographed using both colour slide and black and white film. Trench plans were drawn at a scale of 1:50 or 1:20 as necessary. Excavated sections of individual features were drawn at a scale of 1:10 or 1:20. This comprises the site archive which is stored at the Birmingham University Field Archaeology Unit, at the time of writing.

8.0 Summary results of trial trenching (Figs. 2-7)

Detailed results of the trial trenching, including the objectives of each trench and descriptions of features and stratigraphy, are provided in the appendix. The following is a brief summary describing the principal features recorded.

The ploughsoil over most of the site varied between 0.2m and 0.4m deep. Alluvial and channel deposits varied across the site from 0.4m to 4.2m in depth. The natural subsoil comprised brown, orange and grey river gravels.

The majority of archaeological features were identified on the gravel rise along the northern edge of the site. The most significant archaeology was encountered in the trenches positioned over Geophysical Plot 2 (Trenches 4 and 6; figs. 3 and 4). A small gully (F45) in Trench 4 contained a large amount of grog-tempered pottery that could be dated to the late Iron Age period. A ditch in Trench 4 (F41) contained a single Mancetter-Hartshill mortarium base of 2nd/3rd century date. Three pits (F40, 42 & 43), a ditch (F44) and a gully (F46) were also located within the trench, although these features were undated. A shallow ditch (F62) was located in Trench 6, which contained a body sherd of Roman greyware pottery. Two further ditches (F60 & F69) and two pits (F61 & F63) were also located in the trench, but were undated. To the east of this area a ditch terminal (F90) was located in Trench 9, containing a single sherd of Roman greyware pottery. In the area of Geophysical Plot 1, a gully and a ditch terminal were located in Trench 2, but neither contained any dateable artefacts. Trenches 1 and 3, also positioned over Geophysical Plot 1 did not locate any significant archaeology. Two undated ditches were recorded in Trench 7, directly to the south of Geophysical Plot 1. There were no features identified to the south of the Aston Cursus (Trenches 11-14), other than traces of plough furrows.

Away from the areas targeted by aerial photography and geophysics, only a few possible archaeological features were located, none of which could be dated. Trench 49 (Fig. 5) contained two small ditches (F490 & F491) and three postholes (F492-4). To the west, a single ditch was located in Trench 23 and two gullies were recorded in Trench 51. The foundation of a stone wall, or a stone drain was recorded at the southeastern end of Trench 20. However, this feature was cut through the alluvium and therefore was likely to have been relatively modern. A small hearth and a small pit were located in Trench 45. Again these features were cut through the alluvium and likely to be post-medieval in date.

On the southern side of the railway, a ditch and a ditch terminal were located in Trench 39, well stratified under 1.45m of alluvium. These features were isolated, however no other trenches were positioned within 100m of the trench. In the southeastern area of the site, a possible posthole was recorded in Trench 34 and two shallow pits were noted in Trench 36. These features were shallow and could have been natural geological occurrences.

The main palaeochannel was located along the northern part of the site in Trenches 6, 8, 9, 10, 14, 16, 17, 18, 21, 22, and 50. The palaeochannel could be over 150m wide and over 1.5m deep in places. The fills of the channel appeared to be relatively sterile and were not sampled for environmental purposes. Another palaeochannel was located in Trenches 15, 26 and 45 (Fig. 6). The exact position and width of the channel could not be determined due to the positioning of the trenches, but would have been over 50m wide and aligned approximately NE-SW. In Trench 15, the deposits were 4.2m deep, and contained well-preserved organic deposits that were sampled for environmental processing and radiocarbon dating (see environmental assessment, below).

Trench 24 (Fig. 6) located the oblong depression at the southwestern end of the site. The deposits in this trench contained particularly well preserved organic remains. In Trenches 43, 46 and 48 (Fig.6), similar deposits were located, although they did not appear to correspond with any known palaeochannels. Samples for environmental processing and radiocarbon dating were taken from Trenches 24, 46 and 48 (see environmental assessment, below).

Smaller channels were located in Trenches 5, 14, 16. These channels appeared to be cut through the upper fills of the main palaeochannel, and are likely to be relatively recent. A 40m wide channel was also located in Trench 20, cut through the gravel, although this does not correspond with any known palaeochannels. The fills from these channels were sandier and more sterile than the fills of the large channels and so were not sampled for environmental purposes. The depth of alluvium varies significantly across the site, from 2.6m at the eastern edge of the site, to none along the western edge.

In several of the trenches along the gravel ridge, on the northern edge of the site, there was evidence for late-medieval/post-medieval agricultural furrows. Evidence of earlier, medieval, ridge-and-furrow was not identified in any of the trenches.

Organic-rich deposits were observed only in a few trenches, particularly in Trenches 15, 26 and 24 (Fig. 6). The first two represent the infill of the main palaeochannel, identifiable by the gravel contour map, and which cut the site in direction northeast-southwest. The presence of peaty deposit reported from Auger 12 was not observed in the nearby Trench 25. The other organic deposit came from Trench 24 located in the southwestern corner of the site and which cut across a large, oval depression, almost parallel to the main palaeochannel. Organic material was also observed in the layer in direct contact with the gravel in Trenches 46 and 48.

10.2 Methodology

Small sub-samples (300cc.) were taken from waterlogged samples and were wet sieved on a 0.3 mm mesh. The fraction caught on the 0.3 mm sieve was then scanned under the microscope. A modern reference collection was used for the identifications which, however, have to be considered only as tentatively.

10.3 Sample description

Trench 15

The depth of the deposit in Trench 15 exceeded the 3.3 m depth predicted by the evaluation report (Rackham 2000) and, in fact, reached 4.3 metres depth. It was decided that, instead of sampling by augering along a transect, as suggested by the scheme for a similar area near Auger 12 (Richmond 2001), it would have been more productive to machine excavate a deep trench and collect bulk samples in spits. The deposit cut deep into the gravel and through the red Pleistocenic sandstone. It was decided to dig a smaller trench at the eastern extremity of the main trench, which corresponded with a depression that was very visible on the surface and that followed the channel alignment. This area roughly corresponded to the central part of the palaeochannel as suggested by the gravel contour. Six samples were collected from the top of the organic-rich deposit to the bottom of the trench:

<u>Sample</u>	<u>Depth</u>	<u>Description</u>
Sample 1	2.1 m	grey clay with manganese concretion
Sample 2	2.3 m	Compacted dark-grey silty clay. Very plastic. No organic macroremains visible
Sample 3	2.7 m	same as 2 but darker and sandier
Sample 4	3.2 m	peat alternating with layers of sand
Sample 5	3.7 m	peat alternating with well-defined layers of sand
Sample 6	4.3 m	very loose sandy soil of a dark, almost black colour immediately in contact with red/yellow sand of bedrock

A description of the plant macroremains recorded in the six samples is reported in Table 2.

The organic macroremains are well preserved throughout the sequence observed in the six samples and they can provide important information not only about the evolution of the palaeochannel itself, but also about the surrounding environment. This is the main evidence that seems to emerge from this preliminary analysis:

- 1) Water was present in the channel until late stages of its history (Sample 2).
- 2) There is evidence of the presence of cultivated/disturbed land since the early stages (from Sample 5).
- 3) There are episodes of reforestation (Samples 4 and 5)
- 4) There is evidence of possible changes in the river deposits probably due to climatic or landuse changes (alternation of peat and sandy deposits).

Seeds from Samples 1 and 6 were submitted for radiocarbon dating so that they could provide information on the beginning of the infilling of the palaeochannel and the upper limit of the organic deposit. The date obtained for Sample 6 (deposit at the bottom of the sequence) was 6124 ± 57 BP (Wk - 10525 calibrated: 5260 - 4900 BC at 2σ and 5080 - 4940 BC at 1σ). This is a much more recent date than the one obtained from Auger 12 (10390 ± 70 BP - Richmond 2000). A second date from the top of the sequence was still not available at the time this report was written.

Trench 26

Trench 26 cut the main palaeochannel further south. A sondage opened in the middle of the trench exposed organic deposits that reached a depth of c. 2 m. The stratigraphy and the content of the bottom sample (Table. 2) suggests that these layers correspond to the upper deposits observed in Trench 15. The location of the trench, closer to the bank of the palaeochannel, probably accounts for the reduced depth of the organic deposit as opposed to that observed in Trench 15. Column samples were taken from the section and a single bulk sample was collected from the bottom layer. The sample contained mainly fragments of small twigs but no seeds or other biological remains.

Trench 24

Trench 24 cut through an oval-shaped depression of the gravel contour. The depression was very visible on the modern surface and corresponded to an area containing a concentration of sedges. The trench was 1.7 m deep and had the following stratigraphic sequence:

<u>Depth</u>	<u>Description</u>
0 to 94 cm	Alluvium
94 to 124 cm	brown /grey clay with manganese concretions
124 to 157 cm	yellow/grey mottled clay
157 to 165 cm	grey clay with organic
165 to 170 cm	grey-sandy clay in direct contact with gravel and containing organic remains.

The deposit in direct contact with the gravel, contained several, decomposed wood fragments of which some have been identified as alder (*Alnus glutinosa* L.) or hazelnut (*Corylus avellana* L.) (Gale pers comm). One of this fragments was radiocarbon dated to the 3774 ± 58 BP (Wk - 10528 calibrated: 2290 - 2130 BC at 1σ and 2360 - 2020 BC at 2σ). This was quite different from the radiocarbon date obtained from a similar organic deposit associated with the nearby Auger 11 (6.107 ± 70 BP, Beta - 143281). The

discrepancy between the two radiocarbon dates is puzzling. It is possible that, the sample collected from Trench 24 corresponded to the roots of plants growing in the depression at a much later time. Unfortunately, due to the poor preservation of the wood, it was not possible to ascertain whether the wood belonged to the roots or an arial part of the tree.

Trench 46

The trench cuts through a thick alluvial deposit and is located in a part of the site where the gravel follows an anomalous contour, which interrupts the line of the main palaeochannel. No evidence of palaeochannel deposits, however, were identified in the trench which reached a depth of 1.8 m. Column samples were collected from one of the sections and a single bulk sample was taken from the layer in contact with the gravel. This contained plant and other macroremains (Table 2). A sample collected from this layer has provided the following radiocarbon date: 2538 ± 60 BP (Wk - 10527 calibrated: 810 - 480 BC at 2σ and 700 - 540 BC at 1σ). The date provides important information on the initial stages of the alluvial deposition in this area and suggests that there is no relationship between the gravel anomaly and the presence of the Mill Stream on the opposite side of the modern river channel. Mill Stream was thought to be of medieval date (Richmond 2000). A radiocarbon date obtained from Auger 2, close to Trench 46, produced a very similar date of 2889 ± 60 BP (Beta 143279) supporting a Late Bronze Age date for the initial deposition of the alluvial deposit.

Trench 48

Trench 48 was located in an area of the site where a number of linear features, thought to be palaeochannels, were clearly visible from the aerial photography. The excavation of Trenches 41 and 44 however, revealed a very shallow alluvial deposit. On the basis of this evidence, it would seem that their formation is quite recent and that they probably represent short streams that drained the floodplain, as also suggested by Rackham (2000). Interestingly, the orientation of the small depression/stream intercepted in Trench 41 suggests that it might have linked the nearby little pond/marshy area to the Aston Brook. Its course was probably cut by the construction of the railways.

Trench 48 cut through a thick alluvial clay deposit. A column sample was taken from the section as well as a bulk sample from the bottom layer. Unfortunately, no organic remains were observed in this deposit and, therefore, no sample was available for radiocarbon dating.

Shardlow Quarry	Plant macroremains	Other	Sample description	Main habitats represented
Trench 15 #1 - 2.1 m	<i>Urtica dioica</i> , <i>Polygonum</i> sp., <i>Chenopodium album</i> , Umbelliferae	Rootlets, insects	manganese concretions, very silty	Arable/disturbed land
Trench 15 #2 - 2.3 m	<i>Chara</i> sp. (very abundant), <i>Chenopodium</i> sp., <i>Sonchus</i> sp., <i>Plantago major</i> , several fragments of leaves	Caddi fly cases, insects, bivalve shells	Sandy	Water environment - either a pond or river edge. Cultivated/disturbed land
Trench 15 #3 - 2.7 m	<i>Ceratophyllum demersum</i> , <i>Rumex</i> sp., <i>Carex</i> sp., <i>Ranunculus acris/repens</i> , <i>Chara</i> sp.	Caddi fly cases, bivalves, insects, particularly larva cases	No sandy component and organic particles very minute	Ponds, ditches or slow-flowing water
Trench 15 #4 - 3.2 m	<i>Polygonum</i> sp., Labiatae, <i>Lychnis flos-osculi</i> , <i>Carduus/Cirsium</i> , <i>Chenopodium</i> , <i>Sambucus nigra</i> , <i>Carex</i> sp., <i>Rumex</i> sp., <i>Stellaria media</i> , <i>Vaccinium</i> sp., <i>Sparganium</i> sp., <i>Montia fontana</i> sbsp. <i>minor</i> , <i>Urtica dioica</i> , <i>Ilex aquifolium</i> leaves, fragments of other leaves	Caddi fly cases, insects (few)	Organic rich deposit almost peat like deposit. Sandy	Cultivated land, disturbed land, wetland woodland
Trench 15 #5 - 3.7 m	<i>Polygonum</i> sp., <i>Carex</i> sp., <i>Rumex</i> sp., <i>Chenopodium album</i> , <i>Ranunculus</i> sp., <i>Corylus avellana</i> shells, <i>Carduus/Cirsium</i> , <i>Cyperus</i> sp., Umbelliferae, <i>Stellaria</i> sp., <i>Atriplex</i> sp., <i>Rubus</i> sp., Mosses fragments of leaves	Caddi fly cases, insects (few), lots of fragments of twigs	Organic material present in compacted bands - peat like deposit	Cultivated land, disturbed land, wetland woodland
Trench 15 #6 - 4.2 m	<i>Rumex</i> sp., <i>Carex</i> sp., <i>Atriplex</i> sp., <i>Urtica dioica</i>	Insects and bivalves	Dark sandy deposit. Only a small concentration of organic material	Wetland Disturbed land
Trench 24		Lots of twigs		
Trench 26		Some twigs and lots of rootlets		

Trench 46	Umbelliferae, <i>Ranunculus acris/repens</i> , <i>Glyceria</i> sp., <i>Carex</i> sp.,	Caddi fly cases, cocoon		
Trench 48		Vivianite, rootlets		

Table 2 Shardlow Quarry. List of soil samples assessed for plant macroremains

12.0 Assessment of pollen and plant macrofossils by James Greig

12.1 Summary

Four out of five pollen samples contained fairly abundant and well preserved pollen showing that nearby dry land had grassland, possibly pasture. The sampling site itself had alder and willow carr, together with swamp vegetation.

12.2 Samples

Samples were collected during the excavation by Marina Ciaraldi and the excavation team. The following were selected for assessment for pollen:

1. Trench 24 bottom layer (3774 +/- 58 uncal BP)
2. Trench 46 bottom layer (2538 +/- 60 uncal BP)
3. Trench 15, (Sample 2) - 2.3 m
4. Trench 15, (Sample 4) - 3.2 m
5. Trench 15, (Sample 6) - 4.2 m (6124 +/- 57 uncal B.P.)

12.3 Laboratory work

Pollen analysis

Pollen samples were processed using the standard method; about 1 cm³ subsamples were dispersed in dilute NaOH and filtered through a 70µm mesh to remove coarser material, which was then scanned under a stereo microscope. The finer organic part of the sample was concentrated by swirl separation on a shallow dish. Fine material was removed by filtration on a 10µm mesh. The material was acetolysed to remove cellulose, stained with safranin and mounted on microscope slides in glycerol jelly. Counting was done with a Leitz Dialux microscope. Identification was using the writer's pollen reference collection, seen with a Leitz Lablux microscope. Standard reference works were used, notably Fægri and Iversen (1989) and Andrew (1984). The pollen types have been listed in taxonomic order according to Kent (1992), in Table 3.

12.4 Results

12.41 Trench 24 bottom layer (3774 +/- 58 uncal BP)

A little pollen present, including *Tilia* (lime).

12.42 Trench 46 bottom layer (2538 +/- 60 uncal BP)

Plenty of well-preserved pollen present, mainly Poaceae (grasses), *Trifolium repens* (white clover) and *Plantago lanceolata* (plantain) indicating an occupied, dry grassland landscape nearby. There seems to be no cereal pollen (although the whole slide was scanned for it), so no arable land nearby. Some trees are present such as *Corylus* (hazel), *Quercus* (oak) and *Ulmus* (elm), representing a partly wooded landscape, and carr woodland with *Alnus* and *Salix* (willow) in the wetter land where this organic deposit formed as well as Cyperaceae (sedges etc.). Could be informative on the Iron Age landscape.

12.43 Trench 15 (Sample 2) - 2.3 m

Fairly good pollen similar to 12.42, above.

12.44. Trench 15 (Sample 4) - 3.2 m

Fairly good pollen similar to 12.42 and 12.43, above.

12.45. Trench 15 (Sample 6) at 4.2 m (6124 +/- 57 uncal B.P.)

Fairly good pollen similar to 12.42, 12.43 and 12.44, above

The results can be correlated with those from other nearby sites in the Trent valley, as well as with another pollen sequence, which the writer collected from the current Shardlow quarry gravel excavations. There is good potential for obtaining results showing the development of the occupied landscape alongside the Trent.

Table 3 Pollen and Spores

Sample No	1	2	3	4	5	
spores						
<i>Pteridium</i>	1	-	-	1	-	bracken
<i>Polypodium</i>	-	1	-	-	1	polypody
pollen						
<i>Pinus</i>	-	+	-	-	-	pine
<i>Ranunculus</i> -tp. crowfoot	-	2	-	-	-	buttercup,
<i>Ulmus</i>	-	1	-	-	-	elm
<i>Quercus</i>	-	4	5	1	-	oak
<i>Betula</i>	1	2	-	-	-	birch
<i>Alnus</i>	-	4	4	+	6	alder
<i>Corylus</i>	-	11	2	4	2	hazel
Chenopodiaceae	-	+	-	-	-	goosefoot
Caryophyllaceae family	-	+	-	-	-	stitchwort
<i>Rumex</i> -tp. sorrels	-	1	-	-	-	docks and
<i>Tilia</i>	2	+	-	-	-	lime
<i>Salix</i>	-	3	-	-	-	willow
<i>Sanguisorba minor</i>	-	+	-	-	-	salad burnet
<i>Trifolium repens</i>	-	2	-	-	1	white clover
Apiaceae	-	+	-	-	-	umbellifers
<i>Plantago lanceolata</i> plantain	-	10	1	-	-	ribwort
Lactuceae composites	-	1	-	-	-	a group of
<i>Aster</i> -tp	-	+	-	-	-	daisies etc
Cyperaceae	-	10	2	3	-	sedges
Poaceae	1	34	7	4	3	grasses
<i>Typha</i>	-	-	1	-	-	reedmace

12.0 Discussion

The archaeology appears to be mainly concentrated along the gravel ridge along the northern edge of the site. The most significant archaeology was recorded in Trenches 4 and 6, where the concentration of features, and stratified late Iron Age and Roman pottery could indicate a multi-phase settlement. The results from Geophysical Plot 2 do not match with the excavated features, but because only a small portion of the geophysics plot was tested, the archaeology is likely to be related. The ditch terminal located in Trench 9 could also be related, but as it is approximately 100m away from Trench 6, this cannot be assumed. Because of the relatively small area evaluated, it is impossible to determine the size, function or significance of the remains. A more positive identification of the features can only be made by opening much larger areas in the vicinity of the trenches.

The group of linear features in Trenches 2 and 7 are likely to be related to the cropmarks recorded in the vicinity. The lack of other archaeological features and their fragmentary nature in these trenches could indicate an agricultural function. However only a small portion of the cropmarked area was evaluated, so denser settlement could be present.

The features recorded in Trenches 49, 23 and 51 could be related to each other, but this area is difficult to interpret due to the lack of dating evidence and scarcity of the archaeology. However the features could be significant as they are well-stratified under alluvium and are positioned on a gravel rise. Without further archaeological investigation, the presence and significance of the archaeology cannot be assumed. Little else of archaeological significance was recorded, other than occasional undated pits, tree bowl, natural geological features and plough furrows.

The detailed palaeoenvironmental study that has taken place during this evaluation exercise has expanded our knowledge from the previous programme of palaeoenvironmental study. Samples taken from Trench 15, situated across the main palaeochannel, revealed change in the local environment, which may have been caused by climatic changes and/or landscape use. There was certainly evidence for the reforestation of the area and the later cultivation of the land. The radiocarbon date obtained for the bottom of this sequence would appear to date the earliest deposits in the channel to the late Mesolithic period and is a much earlier date than had been previously obtained from the auger survey. This dated the earliest infilling of the palaeochannel to the late glacial period. This discrepancy is difficult to resolve at this stage. The integrity of either of the radiocarbon samples may have been compromised or there may be a more complicated explanation and sequence for the infilling of the paleochannel itself. Perhaps, areas of the channel remained open for much longer periods. A further programme of investigation during any overburden removal could clarify this problem.

Trench 24 sampled a gravel depression that had previously been dated to the late Mesolithic period. The radiocarbon date obtained during this investigation indicated a date associated with the late Neolithic and early Bronze Age. This may be explained by

the nature of the actual carbon sample itself (see Ciaraldi, above) or, again, there may be a complicated sequence of infilling of this gravel. Only further investigation in this area will clarify the radiocarbon dating discrepancy.

The date of beginning of alluviation across the site appears to have been confirmed as the late Bronze Age, as a radiocarbon date obtained from the alluvial deposits sampled from Trench 46 corresponds well with a auger date obtained nearby in the previous survey.

Trench 48 revealed evidence of short streams draining the flood plain, as had been suggested by Rackham (Rackham 2000) and did not suggest the presence of further palaeochannels.

This evaluation exercise has presented a picture of the development of this site from the glacial period to the Roman period. There is evidence for archaeology activity along the northern edge of the site, which appears to be in the form of Iron Age and Roman farming activity bordering the edge of the floodplain. Whilst the dating evidence from the palaeoenvironmental sampling appears to contradict earlier work, we do have clear evidence for the formation of the palaeochannel and the beginning of alluviation. It remains possible that islands of archaeology have survived within the floodplain that were not encountered during the trial trenching. The potential for further palaeoenvironmental study is very high.

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Appendix

Detailed results of Trial Trenching

Trench 1

Aim: To coincide with an area where cropmarks are recorded, and where the Geophysical Plot 1 identified two parallel ditches running at right angles to canal.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (102) was encountered at a depth of 0.4m, comprising an orange-yellow sand and gravel. This was overlain by a brown-orange sand-clay subsoil (101), 0.25m thick, which, in turn was overlain by a mid-dark brown silt-clay topsoil (100), 0.15m thick.

Features: Two NW-SE plough furrows were noted.

Interpretation: No significant archaeology encountered. Parallel ditches recorded in the geophysical survey were on the same alignment as the plough furrows recorded in the trench.

Trench 2

Aim: To encounter linears and potential enclosures as identified on aerial photographs and Geophysical Plot 1.

Method: Machine excavated trench 1.8m wide and 50m long orientated E-W.

Stratigraphy: The natural subsoil (203) was encountered at a depth of 0.87m, comprising an orange sand. This was overlain in places by brown alluvial gravel (202), a maximum of 0.11m thick. The entire trench was capped with an orange-brown sand-clay subsoil (201), 0.36m thick and a mid-dark brown silt-clay topsoil (200), 0.3m thick.

Features:

F20: Narrow linear feature at eastern end of trench, filled with grey-brown sand-silt (204). V-shaped in plan, U-shaped in profile, 0.4m wide and 0.2m deep. No finds.

F21: Terminal of linear feature at western end of trench, filled with a grey-brown sand-silt (205). U-shaped in profile, 0.6m wide and 0.35m deep. No finds.

F22: Oval pit at western end of trench, filled with dark brown-grey sand-silt (206). Irregularly shaped in profile, 0.6m wide and 0.4m deep. Numerous large horse bones and post-medieval pottery were found within the fill.

Interpretation: F20 was probably part of the enclosure complex identified on the AP survey, although the feature could not be dated. F21 could also have been associated with this, but is further north than the enclosures identified on the AP survey. F22 was probably a modern horse burial.

Trench 3

Aim: To characterise extent of cropmarks and linears identified in Geophysical Plot 1.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (303) was encountered at a depth of 0.67m, comprising a red-brown gravel. This was overlain by a 0.12m thick band of mid brown silt-clay alluvium (302), which in turn was overlain by a brown clay-silt subsoil (301), 0.2m thick. The trench was capped by a 0.35m thick layer of dark brown silt topsoil (300).

Features: No features identified.

Interpretation: No significant archaeology encountered.

Trench 4 (Fig. 3)

Aim: To encounter area of cropmarks and geophysical readings (Plot 2) running parallel to canal.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (402) was encountered at a depth of 0.7m at the SE end of the trench, rising to 0.35m at the NW end of the trench. It comprised various bands of yellow-brown to mid-brown sands and gravels. Overlying the natural was a light-mid- brown clay-silt subsoil (401), a maximum of 0.4m thick. The trench was capped with a dark brown clay-silt topsoil (400), 0.35m thick.

Features:

F40: Large, shallow, sub-circular pit at NW end of trench, filled with a mid-dark brown silt-sand-gravel (403). Bowl-shaped in profile, 1.9m in diameter, 0.26m deep. No finds.

F41: NE-SW orientated linear feature, returning NW-SE along the trench for 16m, filled with a mid brown gravel-sand (404). Stepped profile, 1.5m wide, 0.44m deep. Single Mancetter-Hartshill mortarium base of 2nd/3rd century date found in fill. Cut by F44 on SE side of return.

F42: Small circular pit on NE side of trench, filled with a dark brown sand-silt (405). Bowl shaped in profile, 1.25m in diameter, 0.33m deep. No finds.

F43: Small circular pit on NE side of trench, filled with a dark brown sand-silt (406). Bowl shaped in profile, 0.8m in diameter, 0.31m deep. No finds.

F44: NW-SE orientated linear feature, running for 14m along the trench, filled with a dark brown gravel-sand-silt (407). U-shaped in profile, 0.9m wide, 0.23m deep. No finds.

F45: Shallow NE-SW orientated linear feature, filled with a dark grey-brown sand-silt-clay (408). U-shaped in profile, 1.25m wide, 0.24m deep. Significant amounts of grog-tempered Iron Age pottery retrieved from the fill of the feature. Cut by F44 on NE side of trench.

F46: Shallow NE-SW orientated linear feature, filled with a dark grey-brown silt-clay (409). V-shaped in profile, 0.8m wide, 0.09m deep. No finds. Cuts F44 on NE side of trench.

Interpretation: It is likely that F45 was associated with an Iron Age settlement, especially because of the large amount of Iron Age pottery retrieved from the feature. F41 would appear to have been an enclosure ditch or field boundary of Roman date. This appeared to match with Geophysical Plot 2 and possibly with ditch F62 in Trench 6. Pits F40, F42 and F43 could have been associated with the enclosure, but the lack of dating evidence makes it impossible to confirm this. Gullies F44 and F46 do not seem to have been significant archaeological features. The trench sloped towards the SE, away from the gravel ridge. The edge of the main palaeochannel was located at the SE end of the trench.

Trench 5

Aim: To characterise extent of evidence encountered in Geophysical Plot 2 and see whether such evidence continued south under the alluvium.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (503) was encountered at a depth of 0.9m, comprising a light brown gravel. This was overlain by a 0.6m thick band of mid brown silt-clay alluvium (501), which in turn was overlain by a 0.35m thick layer of dark brown silt topsoil (500).

Features:

F50: NE-SW orientated linear feature filled with a dark brown sand (502). U-shaped in profile, 3m wide and 0.4m deep. No finds.

Interpretation: The feature appeared to be a natural channel.

Trench 6 (Fig. 4)

Aim: To encounter area of cropmarks and geophysical readings (Plot 2) running parallel to canal.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NE-SW.

Stratigraphy: The natural subsoil (603) was encountered at a depth of 0.35m, comprising a red brown gravel. Overlying the natural was a brown silt-clay alluvium (602), 0.05m thick, which in turn was overlain by a mid-brown clay silt subsoil (601), a maximum of 0.1m thick. The trench was capped with a dark brown clay-silt topsoil (600), 0.2m thick. The trench sloped towards the SW end.

Features:

F60: NW-SE orientated linear feature, filled with a dark brown sand-silt (603). U-shaped in profile, 1.2m wide, 0.4m deep. No finds. Cut by posthole F61.

F61: Circular pit, filled with a dark brown sand-gravel (604). Bowl shaped, 0.7m in diameter, 0.5m deep. No finds. Cuts ditch F60.

F62: NW-SE orientated linear feature, filled with a dark brown sand-silt-gravel (605). U-shaped in profile, 2m wide, 0.4m deep. One piece of Roman greyware pottery was recovered from the fill.

F63: Circular pit, filled with a dark brown silt-sand-gravel (606). Bowl shaped in profile, 0.75m in diameter, 0.45m deep. No finds.

F64: Shallow NW-SE orientated linear feature, filled with a dark brown sand-silt-gravel (607). U-shaped in profile, 3.8m wide, 0.13m deep. No finds.

F65: Shallow NW-SE orientated linear feature, filled with a dark brown sand-silt-gravel (608). U-shaped in profile, 4.65m wide, 0.12m deep. No finds.

F66: NW-SE orientated linear feature, filled with a dark brown sand-silt-gravel (609). Not excavated.

F67: Shallow NW-SE orientated linear feature, filled with a dark brown sand-silt-gravel (610). U-shaped in profile, 3.2m wide, 0.12m deep. No finds. Cuts ditch F69.

F68: Narrow, shallow, N-S orientated linear feature filled with a black sand-silt-gravel (611). U-shaped in profile, 0.3m wide, 0.12m deep. No finds. Cuts ditch F69.

F69: Shallow NE-SW orientated linear feature, filled with a black sand-silt-gravel (612). U-shaped in profile, 3.8m wide, 0.13m deep. No finds.

Interpretation: Ditches F60, F62 and F69 could have been associated with the enclosure ditches identified in the geophysical survey. The piece of Roman pottery from F62 dated it to the same period as the possible enclosure ditch in Trench 4 (F41). Pits F61 and F63 were undated but could be associated with the ditches. F68 was undated, and does not appear to be a significant archaeological feature. F64, F65, F66 and F67 were plough furrows. The slope of the trench is likely to be the northern edge of the main palaeochannel.

Trench 7

Aim: To characterise area to south of Geophysical Plot 1, along the south-facing slope of palaeochannel.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (702) was encountered at a depth of 0.5m, comprising a pale grey sand-gravel. This was overlain by a 0.2m thick layer of orange-brown clay subsoil (701), which in turn was overlain, by a 0.3m thick layer of dark brown silt-clay topsoil (700).

Features:

F70: Shallow E-W orientated linear feature, located at the NE end of the trench. Filled with a grey-brown sand-clay (703). U-shaped in profile, 1.4m wide, 0.23m deep. No finds.

F71: Sub-circular pit, located at the NE end of the trench. Filled with a black-brown sand-clay (704). Irregularly-shaped in profile, 1.6m in diameter, 0.12m deep. No finds.

F72: E-W orientated linear feature, located towards the NE end of the trench. Filled with a light grey-blue clay (705). U-shaped in profile, 0.8m wide, 0.32m deep. No finds.

Interpretation: The features were located towards the NE end of the trench, near Geophysical Plot 1, and therefore were likely to be associated with the anomalies recorded. F70 and F72 are ditches of unknown function; F71 is likely to be a tree bowl.

Trench 8

Aim: To characterise area along south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (805), comprising a orange-brown gravel, was encountered at a maximum depth of 1.5m at the NW end of the trench, rising to 0.7m at the SE end of the trench. 20m of the natural at the NW end was overlain by a 0.5m thick layer of orange-brown clay (804), which in turn was overlain by a 0.2m thick layer of mid brown gravel (803). The entire trench was covered by a mid brown clay-silt alluvium (802), a maximum of 0.3m thick, which was, in turn, overlain by a mid brown clay-silt subsoil (801), 0.2m thick. The trench was capped by a 0.3m thick dark brown silt-clay topsoil (800).

Features: No features identified.

Interpretation: The dip towards the NW end of the trench would appear to be the north-facing slope of the palaeochannel.

Trench 9

Aim: To characterise area along the south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (904), was an orange-brown gravel at the NW end, and a blue-grey gravel at the SE end. The natural was encountered at a maximum depth of 1m at the SE end of the trench, rising to 0.4m at the NW end of the trench. A 25m length of the natural at the SE end was overlain by a 0.1m thick layer of orange-brown clay subsoil (903), which in turn was overlain by a 0.3m thick layer of mid brown silt-clay (902). This was overlain by a mid brown clay-silt subsoil (901), 0.3m thick. The trench was capped by a 0.3m thick dark brown silt-clay topsoil (900).

Features:

F90: Terminal of ditch located towards the SE end of the trench, filled by grey silt-clay (905) and red-brown sand (906). U-shaped in profile, 1.8m wide, 0.5m deep. One piece of Romano-British greyware pottery retrieved from the fill.

Interpretation: Romano-British ditch found under the south-facing upper slope of the palaeochannel. Romano-British pottery was well stratified and unabraded suggesting that it was not intrusive, and therefore the upper fills of the palaeochannel must be later.

Trench 10

Aim: Trench orientated along contour of south-facing upper slope of palaeochannel and to the south of the recognised activity along the floodplain.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NE-SW.

Stratigraphy: The natural subsoil (1004) was encountered at a depth of 1.3m, comprising an orange-brown gravel. Overlying the natural was a light brown clay alluvium (1003), 0.2m thick, which in turn was overlain by a mid brown silt-clay alluvium (1002), a maximum of 0.5m thick. Sealing this was a 0.3m thick layer of mid brown clay-silt subsoil (1001). The trench was capped with a dark brown clay-silt topsoil (1000), 0.2m thick.

Features: No features identified.

Interpretation: Alluvial layers likely to be part of upper slope of palaeochannel.

Trench 11

Aim: Positioned to cover area to south of cursum terminal and in an area where Geophysical Plot 6 identified some possible features.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NE-SW.

Features:

F140: Large NE-SW orientated linear in middle of trench, filled with a sterile orange-brown silt-sand (1406). U-shaped in profile, 7.5m wide, 0.85m deep. No finds.

F141: Small sub-circular posthole on NE side of trench, filled with dark brown clay-silt (1405). Bowl shaped in profile, 0.35m long, 0.25m wide, 0.45m deep. No finds, cut through subsoil and alluvial layers.

F142: Large NE-SW orientated linear at SE end of trench, filled with a grey-brown silt-clay (1407), continuing beyond the trench to the SE. U-shaped in profile, 8m wide, 1m deep. No finds.

Interpretation: F142 would appear to be the south-facing slope of the palaeochannel. F140 is also a natural channel, although it was not located in any of the trenches nearby. F141 is a modern posthole.

Trench 15 (Fig. 6)

Aim: To characterise area along the south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge. Also in an area where AP's survey noted some tentative cropmark features.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE. Machine excavated sondage, 1.8m wide and 5m long excavated to the NE of the trench for environmental sampling.

Stratigraphy: The trench was excavated to a depth of 1m. Sondages were excavated to a depth of 3m at either end and in the middle of the trench, but the natural subsoil was not reached. Machine excavated sondage reached the natural subsoil, red-yellow sand (1511), at a depth of 4.2m. Directly over the natural was a loose, black sandy deposit (1510), 0.6m thick, which was overlain by a 0.5m thick layer of black peat with layers of yellow sand (1509). This was sealed by a lighter peat layer with layers of sand (1508), 0.5m deep, which, in turn, was overlain by a 0.4m thick band of dark grey sand-silt-clay (1507). This was overlain by a dark-grey silt-clay (1506), 0.2m deep. This was sealed by a 0.3m thick layer of dark grey clay with manganese (1505), which was overlain by a mid brown clay (1504), a maximum of 0.5m deep. This was overlain by a mid brown-orange clay with orange grit (1503), 0.3m thick, which was sealed by a mid-light brown silt-clay alluvium layer (1502), 0.5m deep. This was sealed with a 0.25m thick mid brown clay-silt subsoil (1501), capped with a dark brown clay-silt topsoil (1500), 0.25m thick.

Features: No features identified.

Interpretation: The depth of the trench indicates the presence of a large palaeochannel. The depth and organic nature of the fills suggests that it was not the same palaeochannel as the one running parallel to the gravel ridge at the northern side of the site. It is more likely to be part of the same channel located in Trenches 26 and 45. Samples were taken for environmental processing and radiocarbon dating (see environmental assessment for details).

Trench 16

Aim: To characterise area along the south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (1612) was encountered at a depth of 1.3m, comprising an orange-brown gravel. Overlying the natural was a mid brown clay-sand alluvium (1611), 0.6m thick, which in turn was overlain by a grey-brown clay-sand alluvium (1610), a maximum of 0.2m thick. Sealing this was a 0.25m

thick layer of mid brown clay-silt subsoil (1609). The trench was capped with a dark brown clay-silt topsoil (1600), 0.25m thick.

Features:

F160: Large NE-SW orientated linear located 12m from the NW end of the trench. The lowest fill of the feature was a 0.35m thick layer of yellow-orange sand-gravel (1607) which was overlain by a 0.45m thick light-mid brown sand (1606). A light brown sand (1605), 0.35m thick, overlay 1606. The upper fill of the feature was a grey-black clay-sand (1604), 0.55m thick. Bowl-shaped in profile, 6.6m wide, 1.7m deep. No finds, the feature was cut through the subsoil and alluvial layers, lying directly under the topsoil. Cut by F161 on NW side.

F161: NE-SW orientated linear located 12m from the NW end of the trench. The lowest fill of the feature was a 0.1m thick layer of mid-dark grey clay-sand (1603) which was overlain by a 0.45 thick light grey clay (1602). The upper fill of the feature was a mid brown clay-silt (1601), 0.25m thick. Bowl-shaped in profile, 2.5m wide, 0.8m deep. No finds, the feature was cut through the subsoil and alluvial layers, lying directly under the topsoil. Cuts F160 on its NW side.

Interpretation: Both features are large and had sterile fills, suggesting they were natural channels. Obviously both are relatively modern as they cut through the alluvium. The trench was positioned over the main palaeochannel.

Trench 17

Aim: To characterise area along the south-facing upper slope of palaeochannel with in-filling date of Late Mesolithic and to the south of the recognised activity along the gravel ridge. Also general area of several pieces of worked flint. Parallel to channel.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NE-SW.

Stratigraphy: The natural subsoil (1703) was encountered at a depth of 0.82m, comprising a grey-brown gravel. Overlying the natural was a mid brown clay alluvium (1702), 0.12m thick, which in turn was overlain by a 0.4m thick layer of mid brown clay-silt subsoil (1701). The trench was capped with a dark brown clay-silt topsoil (1700), 0.3m thick.

Features: Modern field boundary containing brick located 10m from SW end of trench.

Interpretation: No significant archaeology encountered. The depth of alluvium suggests that the trench was positioned over the south-facing upper slope of the palaeochannel.

Trench 18

Aim: To characterise area along the south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge. Also general area of several pieces of worked flint.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (1804) was encountered at a depth of 1.2m, comprising an orange-brown gravel. Overlying the natural was a blue-grey clay alluvium (1803), 0.2m thick, which in turn was overlain by a mid brown silt-clay alluvium (1802), a maximum of 0.5m thick. Sealing this was a 0.2m thick layer of mid brown clay-silt subsoil (1801). The trench was capped with a dark brown clay-silt topsoil (1800), 0.3m thick.

Features: No features identified.

Interpretation: Probably located within the main palaeochannel. No other significant archaeology encountered.

Trench 19

Aim: To characterise area along the south-facing upper slope of palaeochannel and to the south of the recognised activity along the gravel ridge. Trench parallel to channel.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NE-SW.

Stratigraphy: The natural subsoil (1902) was encountered at a depth of 0.5m, comprising an orange-brown gravel. This was overlain by a 0.2m thick band of mid brown silt subsoil (1901) which in turn was overlain by a 0.3m thick layer of dark brown silt topsoil (1900).

Features: No features identified.

Interpretation: No significant archaeology encountered.

Trench 20

Aim: Northern-most corner of site on gravel terrace and just to the south of Scheduled Ancient Monument (SAM DR 185).

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (2006) was encountered at a depth of 0.6m, comprising an orange-brown gravel, changing to a grey gravel at the SE end. The natural gravel was overlain by a 0.3m thick band of orange-brown silt subsoil (2002) which in turn was overlain by a 0.3m thick layer of dark brown clay-silt topsoil (2001).

Features:

F200: NE-SW orientated linear located 3m from the SE end of the trench, filled with rough limestone blocks (2000). U-shaped in profile, 0.7m wide, 0.4m deep. No finds, the feature is cut through the alluvial subsoil.

F201: Small oval scoop at SE end of trench, filled with a grey clay (2005). Irregular-shaped profile, 0.5m long, 0.3m wide, 0.05m deep. No finds.

F202: Very large channel covering 40m of trench, filled with a blue-grey clay (2004), 0.65m thick, overlain by an orange clay (2003), 0.55m thick. U-shaped in profile, 40m wide, a maximum of 1.1m deep.

Interpretation: F202 was likely to be a large channel, although it appears to be too small to be the main palaeochannel. F200 was the foundations of a relatively modern wall, or a stone land drain. F201 was a tree-bowl.

Trench 21

Aim: Positioned in an archaeologically 'blank' area to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (2103) was encountered at a depth of 1m, comprising an orange-brown gravel, changing to a grey gravel at the NW end of the trench. The natural gravel was overlain by a layer of brown-silt clay (2102), 0.4m thick. This was sealed by a 0.3m thick band of mid brown clay-silt subsoil (2101) which in turn was overlain by a 0.3m thick layer of dark brown clay-silt topsoil (2100).

Features: No features identified.

Interpretation: No significant archaeology encountered.

Trench 22

Aim: Positioned in an archaeologically 'blank' area to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long and orientated NW-SE.

Stratigraphy: The natural subsoil (2204) was encountered at a depth of 1.05m, comprising a red-brown gravel. Overlying the natural was a brown clay alluvium (2203), 0.1m thick, which in turn was overlain by a mid brown silt-clay alluvium (2202), a maximum of 0.3m thick. Sealing this was a 0.3m thick layer of mid brown clay-silt subsoil (2201). The trench was capped with a dark brown clay-silt topsoil (2200), 0.35m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered.

Trench 23

Aim: Positioned in an archaeologically 'blank' area to act as a control, but also on southern side of a gentle depression that characterises course of former palaeochannel with infilling date of Late Mesolithic.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (2303) was encountered at a depth of 0.65m, comprising a red-brown gravel. The natural gravel was overlain by a layer of red-brown clay (2302), 0.15m thick. This was sealed by a 0.2m thick band of brown silt-clay subsoil (2301) which in turn was overlain by a 0.3m thick layer of dark brown clay-silt topsoil (2300).

Features:

F230: Shallow, N-S orientated linear feature, 16m exposed at SE end of trench, filled with a brown sand-silt-clay (2304). U-shaped in profile, 1m wide, 0.19m deep. No finds.

Interpretation: F230 of unknown function or date, probably archaeological, could be related to features encountered in trenches 49 and 51 to the east and west of the trench.

Trench 24 (Fig. 6)

Aim: Positioned in an archaeologically 'blank' area to act as a control, but also crossing a gentle depression that characterises course of former palaeochannel with infilling date of Late Mesolithic.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (2406) was reached at a depth of 1.7m, rising to 1.4m at the SE end. Overlying the natural was a blue-grey organic clay (2405), of which 0.4m was excavated. This was sealed by a 0.25m thick layer of pale grey silt-clay (2404), which was overlain by a mid-dark grey silt-clay (2403), a maximum of 0.25m deep. This was overlain by a pale orange-brown clay-silt (2402), 0.2m thick, which was sealed by a mid-grey clay-silt alluvium layer (2401), 0.3m deep. This was sealed with a 0.3m thick dark brown clay-silt topsoil (2400).

Features: No features identified

Interpretation: The trench is positioned over the large palaeochannel or depression found in the southwestern corner of the site, possibly contemporaneous with the main palaeochannel, with one of the slopes located at the SE end of the trench. Samples were taken for environmental processing and radiocarbon dating (see environmental assessment for details)

Trench 25

Aim: Positioned in an area of identified medieval ridge-and-furrow and also on gentle side of palaeochannel with late glacial date for infilling.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (2502), a mid brown gravel, was encountered at a depth of 0.95m at the SE end, rising to 0.55m at the NW end. The natural at the south-easternmost 10m of the trench was covered by a mid grey-brown clay (2503). Overlying 2503 and the rest of the trench was a 0.3m thick band of mid brown clay-silt subsoil (2501) which in turn was overlain by a 0.25m thick layer of dark brown clay-silt topsoil (2500).

Features: No features identified.

Interpretation: The edge of a palaeochannel was located at the SE end of the trench, which corresponds with the palaeochannel with late glacial date for infilling.

Trench 26 (Fig. 6)

Aim: Positioned on southern side of gentle palaeochannel with late glacial date for infilling, rising up to gravel island.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The trench was excavated to a depth of 1.2m. Sondages were excavated to the natural subsoil (2604) at either end and in the middle of the trench. The natural subsoil, comprising a grey gravel, was reached at 2.1m at the NW end of the trench, 2.35m in the middle of the trench and 2.5m at the SE end of the trench. The natural gravel was sealed by a 0.7m thick layer of blue-grey clay (2603), which was overlain by an orange-brown clay (2602), a maximum of 0.9m deep. This was overlain by a mottled orange-brown clay (2601), 0.35m thick, which was sealed by a dark brown clay-silt topsoil (2600), 0.35m thick.

Features: No features identified.

Interpretation: The depth of the trench indicates the presence of a large palaeochannel. The depth and organic nature of the fills suggests that it was not the same palaeochannel as the one running parallel to the gravel ridge at the northern side of the site. It is more likely to be part of the same channel located in Trenches 15 and 45 (see environmental assessment for details).

Trench 27

Aim: Positioned on southern side of palaeochannel with late glacial date for infilling. Trench parallel to channel.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The trench was excavated to a depth of 1.6m. Sondages were excavated to the natural subsoil (2704) at either end and in the middle of the trench. The natural subsoil, comprising a grey gravel, was reached at 2m within the sondages. The natural gravel was sealed by a 0.7m thick layer of blue-grey clay (2703), which was overlain by a mid-light brown clay (2702), a maximum of 0.5m deep. This was overlain by a mid brown orange clay-silt (2701), 0.5m thick, which was sealed by a dark brown clay-silt topsoil (2700), 0.3m thick.

Features:

F270: Shallow, sub-circular feature, located in middle of trench, filled with decomposed wood. Irregularly-shaped in profile, 1.1m in diameter, 0.1m deep. No finds, appears to be contemporary with F271.

F271: Shallow, sub-circular feature, located in middle of trench, filled with decomposed wood. Irregularly-shaped in profile, 2m in diameter, 0.15m deep. No finds, appears to be contemporary with F270.

Interpretation: Trench located towards edge of large palaeochannel located in trench 26. Features appear to be tree bowls.

Trench 28

Aim: Positioned on southern side of palaeochannel with late glacial date for infilling, rising up to gravel island.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the SE end of the trench to the natural subsoil (2807), a brown gravel, located at a depth of 2.6m. The natural gravel was sealed by a 0.65m thick layer of brown clay (2803), which was overlain by an orange clay (2806), a maximum of 0.15m deep. This was overlain by a mid brown silt-clay (2802), 0.5m thick, which was sealed by a 0.7m thick layer of mid brown silt-clay (2801). The trench was capped by a dark brown clay-silt topsoil (2800), 0.3m thick.

Features:

F280: N/S orientated linear cut through alluvium, located towards NW end of trench, filled with a pink clay (2804). Irregularly-shaped in profile, 1m wide, 0.1m deep. No finds.

F281: Small, oval feature cut through alluvium, located towards SE end of trench, filled with brown clay (2805). U-shaped in profile, 0.22m in diameter, 0.12m deep. No finds.

Interpretation: Thick alluvium covering the trench suggests that the trench is located over a depression within the floodplain. F281 was a relatively recent posthole; F280 is likely to be a recent natural channel.

Trench 29

Aim: Positioned on elevated gravel rise within floodplain.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately N-S.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the S end of the trench down to the natural subsoil (2905), a grey sand-gravel, located at a depth of 2m. The natural gravel was sealed by a 0.2m thick layer of grey-brown (2904), which was overlain by a yellow sand (2903), a maximum of 0.6m deep. This was overlain by a mid brown silt-clay (2902), 0.4m thick, which was sealed by a 0.4m thick layer of mid brown clay-silt (2901). The trench was capped by a dark brown clay-silt topsoil (2900), 0.4m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 30

Aim: Positioned on elevated gravel rise within floodplain.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the SE end of the trench to the natural subsoil (3003), a light grey sand-gravel, located at a depth of 1.8m. The natural gravel was sealed by a 1.1m thick layer of mid brown silt-clay (3002), which was sealed by a 0.3m thick layer of mid brown clay-silt (3001). The trench was capped by a dark brown clay-silt topsoil (3000), 0.4m thick.

Features:

F300: Irregularly shaped feature cut in to alluvium, located towards NW end of trench, filled with a brown sand (3004). Irregularly-shaped in profile, 1m wide, 0.12m deep. No finds.

Interpretation: F300 was a tree bowl. Trench positioned on floodplain.

Trench 31

Aim: Positioned in an archaeologically 'blank' area to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately N-S.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the S end of the trench down to the natural subsoil (3104), a grey gravel, located at a depth of 2.1m. The natural gravel was sealed by a 0.45m thick layer of blue-grey clay (3103), which was overlain by a mid orange-brown clay alluvium (3102), 0.55m thick. This was overlain by a mottled orange-brown clay alluvium (3101), 0.45m thick. The trench was capped by a dark brown clay-silt topsoil (3100), 0.35m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain

Trench 32

Aim: Positioned in an archaeologically 'blank' area to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately N-S.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the N end of the trench down to the natural subsoil (3205), a grey gravel, located at a depth of 2m. The natural gravel was sealed by a 0.1m thick layer of blue-grey sand (3204), which was overlain by a light yellow-brown sand (3203), 0.55m thick. Sealing this was a 0.6m thick band of mid grey-brown silt-clay alluvium (3202), which was overlain by a mid brown silt-clay subsoil (3201), 0.4m thick. The trench was capped by a dark brown clay-silt topsoil (3200), 0.35m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 33

Aim: Positioned in a generally 'blank' area, but where some post-medieval tile was identified in an earlier walkover survey.

Method: Machine excavated trench 1.8m wide and 50m approximately N-S.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the S end of the trench down to the natural subsoil (3304), a grey gravel, located at a depth of 2.1m. The natural gravel was sealed by a 0.6m thick layer of blue-grey clay (3303), which was overlain by a mid orange-brown clay alluvium (3302), 0.35m thick. This was overlain by a mottled orange-brown clay alluvium (3301), 0.4m thick. The trench was capped by a dark brown clay-silt topsoil (3300), 0.35m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 34

Aim: Positioned on an elevated gravel rise within the floodplain, but almost imperceptible on the ground.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (3404) was encountered at a depth of 1m, comprising a grey-brown gravel. Overlying the natural was a dark brown clay alluvium (3403), 0.15m thick, which in turn was overlain by a yellow clay alluvium (3402), a maximum of 0.4m thick. Sealing this was a 0.15m thick layer of mid brown clay-silt subsoil (3401). The trench was capped with a dark brown clay-silt topsoil (3400), 0.3m thick.

Features:

F340: Small, circular feature, filled with dark grey-black clay (3405). Bowl-shaped in profile, 0.36m in diameter, 0.12m deep. No finds.

Interpretation: F340 was a possible posthole, although undated. Trench positioned on floodplain.

Trench 35

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The natural subsoil (3503) was encountered at a depth of 0.9m, comprising a grey-brown gravel. Overlying the natural was a dark brown clay alluvium (3502), 0.3m thick. Sealing this was a 0.3m thick layer of mid brown clay-silt subsoil (3501). The trench was capped with a dark brown clay-silt topsoil (3500), 0.3m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 36

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated N-S.

Stratigraphy: The natural subsoil (3603) was encountered at a depth of 0.85m, comprising an orange sand-gravel. Overlying the natural was a dark brown clay alluvium (3602), 0.2m thick. Sealing this was a 0.35m thick layer of mid brown-orange sand-clay subsoil (3601). The trench was capped with a dark brown clay-silt topsoil (3600), 0.3m thick.

Features:

F360: Circular, shallow scoop located towards S end of trench, filled with a brown silt-clay. Bowl shaped in profile, 1.8m in diameter, 0.09m deep. No finds.

F361: Oblong, shallow scoop located towards S end of trench, filled with a light grey-brown sand-clay. Bowl shaped in profile, 0.55m wide, 0.1m deep. No finds.

Interpretation: Both features are very shallow and could be the remains of tree bowls. Trench positioned on floodplain.

Trench 37

Aim: Placed on an imperceptible area of higher gravel close to river's edge and above an infilled channel dated to the Late Bronze Age.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (3703) was encountered at a depth of 1.2m, comprising a yellow sand-gravel. Overlying the natural was a mid brown clay alluvium (3702), 0.2m thick. Sealing this was a 1m thick layer of mid brown-orange sand-clay alluvium (3701). The trench was capped with a dark brown clay-silt topsoil (3700), 0.3m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 38

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The trench was excavated to a depth of 1.2m. A sondage was excavated at the S end of the trench down to the natural subsoil (3802), a blue-grey sand-gravel, located at a depth of 1.9m. The natural gravel was sealed by a 0.65m thick layer of blue-grey clay alluvium (3804), which was overlain by a light brown clay alluvium (3803), 0.65m thick. This was overlain by a mid brown clay-silt subsoil (3301), 0.4m thick. The trench was capped by a dark brown clay-silt topsoil (3800), 0.3m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 39

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control. Some possible ridge-and-furrow noted during the walkover survey.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The natural subsoil (3904) was encountered at a depth of 1.45m, comprising a grey gravel. Overlying the natural was a dark blue-grey gravel-clay (3903), 0.3m thick, which in turn was overlain by a light orange-brown clay alluvium (3902), a maximum of 0.5m thick. Sealing this was a 0.4m thick layer of mid-light orange-brown clay-silt subsoil (3901). The trench was capped with a dark brown clay-silt topsoil (3900), 0.25m thick.

Features:

F390: Terminal of N/S orientated ditch located towards the E end of the trench, filled by dark grey-brown clay (3906) and blue clay (3905). U-shaped in profile, 0.85m wide, 0.25m deep. No finds.

F391: N/S orientated linear cut through alluvium, located towards NW end of trench, filled with a dark grey sand-clay (3907). Irregularly-shaped in profile, 0.55m wide, 0.1m deep. No finds.

Interpretation: The two linear features are located in close proximity to each other and are likely to be associated with each other. However the lack of finds means that the archaeological significance is uncertain. Trench positioned on floodplain.

Trench 40

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (4006) was encountered at a depth of 1.4m, comprising a grey-brown gravel. Overlying the natural was a dark blue-grey clay (4003), 0.2m thick, which in turn was overlain by a light orange-brown clay alluvium (4002), a maximum of 0.5m thick. Sealing this was a 0.5m thick layer of mid-light orange-brown clay-silt subsoil (4001). The trench was capped with a dark brown clay-silt topsoil (4000), 0.3m thick.

Features:

F400: Circular, shallow scoop located towards the middle of the trench, filled with a orange-grey clay (4004). Bowl shaped in profile, 1.3m in diameter, 0.17m deep. No finds.

F401: Small sub-circular pit located towards the SW end of the trench, filled with a black-grey clay (4005). Bowl shaped in profile, 0.62m in diameter, 0.21 deep. No finds.

Interpretation: Both features appeared to be 'natural'. Trench positioned on floodplain.

Trench 41

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately N-S.

Stratigraphy: The natural subsoil (4104), comprising an light grey gravel, was encountered at a depth of 1.65m at the S end of the trench, rising to 0.7m at the N end. Overlying the natural at the south end was an orange-brown, flecked clay alluvium (4103), 0.2m thick, which in turn was overlain by a brown-orange clay alluvium (4102), a maximum of 0.5m thick. Sealing this was a 0.6m thick layer of orange-brown silt-clay subsoil (4101). The trench was capped with a dark brown clay-silt topsoil (4100), 0.3m thick.

Features: No features identified.

Interpretation: Slope of trench is likely to show a natural slope within the floodplain.

Trench 42

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The natural subsoil (4204) was encountered at a depth of 1.35m, comprising an grey-brown gravel. Overlying the natural was a mid-light grey clay alluvium (4203), 0.15m thick, which in turn was overlain by a mid brown silt-clay alluvium (4202), a maximum of 0.5m thick. Sealing this was a 0.5m thick layer of mid-light orange-brown clay-silt (4201). The trench was capped with a dark brown clay-silt topsoil (4200), 0.2m thick.

Features: No features identified.

Interpretation: No significant archaeology encountered. Trench positioned on floodplain.

Trench 43

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control, but where undulations in ground have been noted of former ridge-and-furrow cultivation.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The natural subsoil (4302) was encountered at a depth of 1.4m, comprising a mid blue-grey gravel. Overlying the natural was a dark brown organic band of material (4305) containing some preserved pieces of wood. This was sealed by a mid grey-brown clay alluvium (4304), 0.5m thick, which in turn was overlain by a mid brown silt-clay alluvium (4303), a maximum of 0.3m thick. Sealing this was a 0.25m

thick layer of mid brown clay-silt subsoil (4301). The trench was capped with a dark brown clay-silt topsoil (4300), 0.25m thick.

Features: No features identified.

Interpretation: The trench contained significant alluvial deposits, although it does not correspond with a known palaeochannel. Ridge-and-furrow was not noted within the stratigraphy of the trench.

Trench 44

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The natural subsoil (4402) was encountered at a depth of 0.7m, comprising an orange-brown gravel. This was overlain by a 0.5m thick band of orange-brown silt-clay subsoil (4401) which in turn was overlain by a 0.2m thick layer of dark brown silt topsoil (4400).

Features: No features identified.

Interpretation: No significant archaeology encountered. Possible gravel rise in the floodplain in this area.

Trench 45

Aim: Positioned toward the base of palaeochannel where late glacial date for infilling was obtained. Stream still runs along channel.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE.

Stratigraphy: The trench was excavated to a depth of 1m. Sondages were excavated to the natural subsoil (4504) at either end of the trench. The natural subsoil, comprising a grey gravel, was reached at 2.4m within the sondages. The natural gravel was sealed by a 0.7m thick layer of black clay (4503), which was overlain by a mid-light brown clay (4502), a maximum of 0.8m deep. This was overlain by a mid brown clay-silt subsoil (4501), 0.4m thick, which was sealed by a dark brown clay-silt topsoil (4500), 0.2m thick.

Features:

F450: Small circular hearth, cut into alluvium, located towards the SE end of the trench, filled with ash and burnt stones (4505). Bowl-shaped in profile, 0.5m in diameter, 0.07m deep. No finds.

F451: Small circular pit, cut into alluvium, located towards the NW end of the trench, filled with a black-grey clay (4506). U-shaped in profile, 0.3m in diameter, 0.05 deep. No finds.

Interpretation: Both features were cut into the alluvium and therefore likely to be relatively modern. The sondages showed that the trench was positioned over the palaeochannel located in Trenches 15 and 26. See environmental report for details.

Trench 46 (Fig. 6)

Aim: Positioned toward the base of palaeochannel where late glacial date for infilling was obtained. Area is close to present day stream channel.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The natural subsoil (4605) was encountered at a depth of 1.8m, comprising a mid blue-grey gravel. Overlying the natural was a dark grey gravel clay alluvium (4604) containing some preserved pieces of wood, 0.1m deep. This was sealed by an orange-brown clay alluvium (4603), 0.6m thick, which in turn was overlain by a blue-grey alluvium (4602), a maximum of 0.2m thick. Sealing this was a 0.6m thick layer of orange clay-silt subsoil (4601). The trench was capped with a dark brown clay-silt topsoil (4600), 0.3m thick.

Features: No features identified.

Interpretation: Trench encountered significant alluvial deposits, although the trench does not seem to correspond with a palaeochannel. The deposits towards the base of the trench contained well-preserved organic remains, and were sampled for environmental processing and radiocarbon dating (see environmental assessment for details).

Trench 47

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (4703) was encountered at a depth of 1.25m, comprising an orange clay-gravel. Overlying the natural was a brown-orange gravel-clay alluvium (4702), 0.3m thick. Sealing this was a 0.7m thick layer of mid brown-orange silt-clay subsoil (4701). The trench was capped with a dark brown clay-silt topsoil (4700), 0.25m thick.

Features: No features identified.

Interpretation: No archaeology encountered. Trench positioned on floodplain.

Trench 48 (Fig. 6)

Aim: Positioned in an archaeologically 'blank' area of the floodplain to act as a control.

Method: Machine excavated trench 1.8m wide and 50m long orientated approximately E-W.

Stratigraphy: The trench was excavated to a depth of 1.2m. Sondages were excavated to the natural subsoil (4804) at either end of the trench. The natural subsoil, comprising a grey gravel, was reached at 2.3m within the sondages. The natural gravel was sealed by a 0.8m thick layer of dark blue silt-clay (4803), which was overlain by a light orange-brown clay (4802), a maximum of 0.4m deep. This was overlain by a mid-light orange-brown silt-clay subsoil (4801), 0.8m thick, which was sealed by a dark brown clay-silt topsoil (4800), 0.3m thick.

Features: No features identified.

Interpretation: Trench encountered significant alluvial deposits, although the trench does not seem to correspond with a palaeochannel. The deposits towards the base of the trench contained well-preserved organic remains, and were sampled for environmental processing (see environmental assessment for details).

Trench 49 (Fig. 5)

Aim: Positioned on northern side of palaeochannel, being parallel to channel in order to maximise the sample area of the channel side.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (4903) was encountered at a depth of 0.45m, comprising a red-brown gravel. Overlying the natural was a mid brown silt-clay alluvium (4902), 0.05m thick. Sealing this was a 0.15m thick layer of mid brown clay-silt subsoil (4901). The trench was capped with a dark brown clay-silt topsoil (4900), 0.25m thick.

Features:

F490: E/W orientated linear, located towards SW end of trench, filled with a dark grey sand-clay (4904). U-shaped in profile, 0.8m wide, 0.2m deep. No finds.

F491: NE/SW orientated linear, located towards the middle of trench, filled with a dark brown sand-silt-clay (4905). U-shaped in profile, 0.79m wide, 0.33m deep. No finds.

F492: Small, circular feature, located towards NE end of trench, filled with grey-brown sand-clay (4906). Bowl shaped in profile, 0.55m in diameter, 0.12m deep. No finds.

F493: Small, circular feature, located towards NE end of trench, filled with dark grey-black clay (4907). Bowl-shaped in profile, 0.41m in diameter, 0.16m deep. No finds.

F494: Small, circular feature, located towards SW end of trench, filled with dark grey-black sand-clay (3405). Bowl-shaped in profile, 0.36m in diameter, 0.1m deep. No finds.

Interpretation: F490 and F491 were small ditches and F492, F493 and F494 were postholes. This seems to be a focus for features, but the lack of dating evidence makes interpretation difficult. Although no archaeology was found to the north or east of the trench, the features recorded to the west in Trenches 23 and 51 could be related. Palaeochannel was not located within the trench.

Trench 50

Aim: Positioned on southern side of palaeochannel, being parallel to channel in order to maximise the sample area of the channel side.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (5003) was encountered at a depth of 0.9m, comprising an orange-brown gravel. Overlying the natural was a mid brown clay alluvium (5002), 0.3m thick. Sealing this was a 0.3m thick layer of mid brown clay-silt subsoil (5001). The trench was capped with a dark brown clay-silt topsoil (5000), 0.3m thick.

Features: No features identified

Interpretation: No significant archaeology encountered. Trench positioned on slope of main palaeochannel.

Trench 51

Aim: Positioned on northern side of palaeochannel, being parallel to channel in order to maximise the sample area of the channel side.

Method: Machine excavated trench 1.8m wide and 50m long orientated NE-SW.

Stratigraphy: The natural subsoil (5103) was encountered at a depth of 0.6m, comprising an orange-brown gravel. Overlying the natural was a mid brown clay alluvium (5102), 0.1m thick. Sealing this was a 0.25m thick layer of light brown clay-silt subsoil (5101). The trench was capped with a dark brown clay-silt topsoil (5100), 0.25m thick.

Features:

F510: NW/SE orientated linear, located towards SE end of trench, filled with a dark grey sand-silt-clay (5104). U-shaped in profile, 0.5m wide, 0.2m deep. No finds.

F511: Curvilinear feature orientated approximately NE-SW, filled with an orange-yellow clay (5105). Irregularly shaped in profile, 0.25m wide, 0.1m deep. No finds.

Interpretation: Both linears appear to have been small gullies, but again the lack of finds makes their archaeological significance uncertain, could be related to features located in trenches 23 and 49 to the east. Palaeochannel not located within the trench.

Trench 52

Aim: Positioned in vicinity of Borehole 2, being the base of palaeochannel where a Late Bronze Age date for infilling was obtained.

Method: Machine excavated trench 1.8m wide and 50m long orientated NW-SE

Stratigraphy: The natural subsoil (5202) was encountered at a depth of 1.9m, comprising an grey-brown gravel. Overlying the natural was a blue-grey clay alluvium (5204), 0.4m thick, which in turn was overlain by a mid brown silt-clay alluvium (5203), a maximum of 1m thick. Sealing this was a 0.3m thick layer of mid-light orange-brown clay-silt subsoil (5201). The trench was capped with a dark brown clay-silt topsoil (5200), 0.2m thick.

Features: No features identified.

Interpretation: Trench encountered significant alluvial deposits, although the trench does not seem to correspond with a palaeochannel.

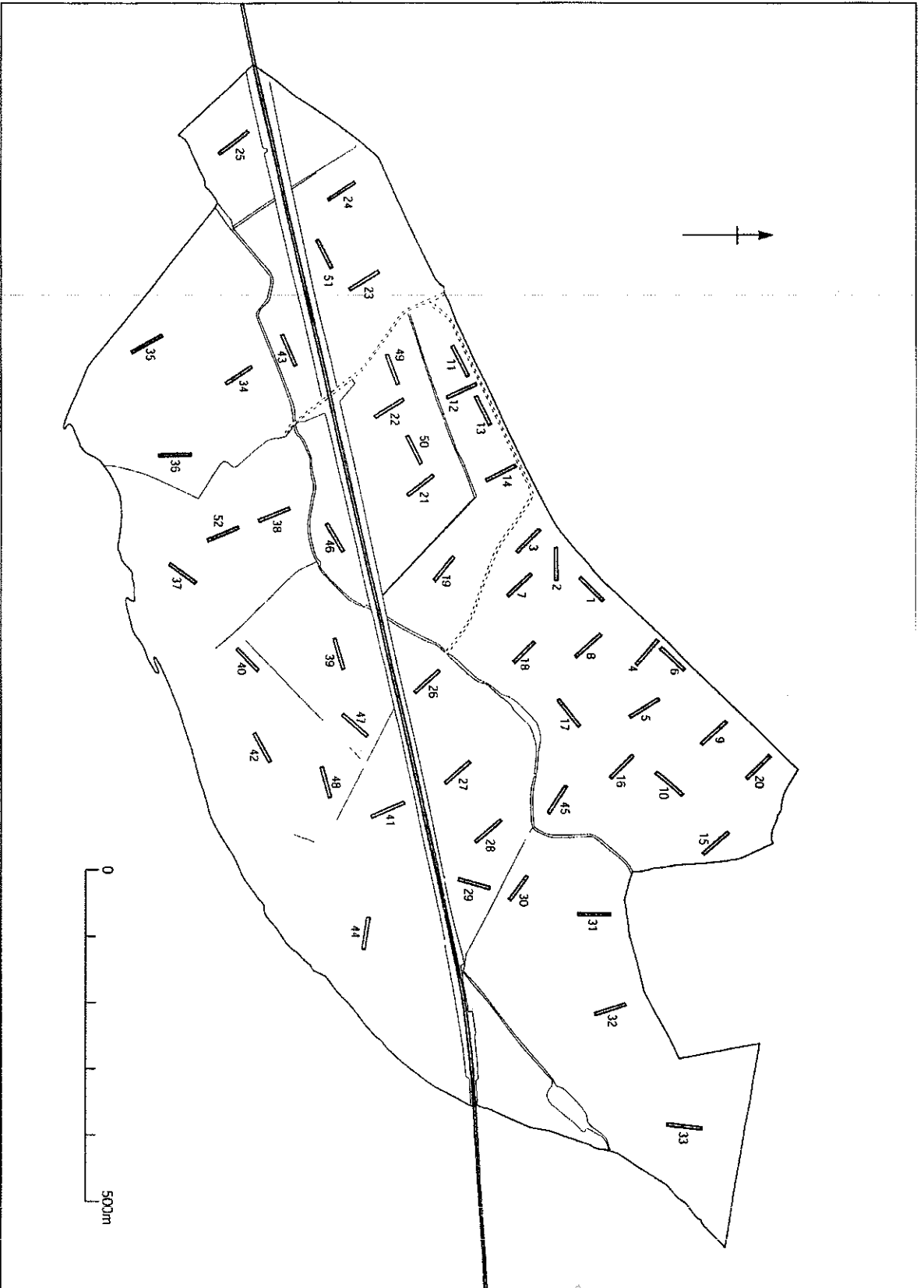


Fig.2