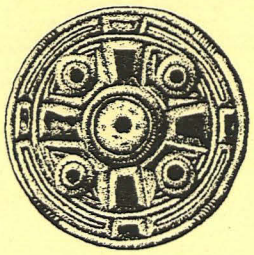

Archaeological Field Unit

Partney By-Pass, Lincolnshire: Post-Excavation Assessment and Updated Project Design

VOLUME 1

Rob Atkins

July 2005

Cambridgeshire County Council

Report No.788

Commissioned by *Lincolnshire County Council*

Partney By-Pass, Lincolnshire: Post-Excavation Assessment and Updated Project Design

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Fig 19 - Narrow?

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Summary

The Archaeological Field Unit of Cambridgeshire County Council (CCC AFU) conducted excavations along the Partney By-Pass, Lincolnshire during 2003 and 2004. Nine separate excavations and a watching brief took place along the two arms of the new road which to the east and west by-passed the present village of Partney (Fig. 1).

Along the western arm of the road, the excavation found a nationally important prehistoric and Iron Age/Roman ritual landscape to the west of Partney. In the Middle to Late Iron Age and Roman period there was a large settlement c.*150 BC to the 4th century AD, possibly of hamlet or village size covering an area* c.*500m by 300m. It was located on three banks of two palaeochannels which met at a T-junction. Both these palaeochannels were sampled and parts of the settlements on the three banks were excavated. The two former river channels appear to have silted up since the Neolithic period. Bulk samples show evidence of alder and hazel woodland with dry scrubland in the area around the channels in the Neolithic to Iron Age. There was some evidence of parts of animals being thrown into the channel in the Neolithic period. The few prehistoric features of this period included a possible ritual shaft sealed with a crouched burial.*

On the north-east bank of The Beck was a Late Iron Age/Early Roman wooden shrine surrounded by a small rectangular enclosure at the junction of the two former streams, next to springs. Four burials lay parallel to the east side of the enclosure ditch, in one of which were late 1st century AD grave goods. Two four-post structures were uncovered on slightly higher ground to north of the temple which possibly provided platforms where the dead were laid or may have been granaries of the adjacent settlement to the north. Here, the corner of a farmstead was found within the road corridor, enclosed by a large ditch which had been recut up to seven times. On the southern bank of The Beck excavation located another large enclosed sub-rectangular farmstead c.60m by 55m in size, whose ditch was recut twice. Within the excavation area was a roundhouse. Unenclosed settlement continued to the north beyond this farmstead with structures, kilns, pits and ditches found towards The Beck. The edge of the settlement on the north-western bank was found within the road corridor and consisted of several intercutting ditches. Evidence from bulk samples indicates that cereals were being processed.

Excavation 100m to the south-east of this ritual site sampled the same palaeochannels as well as features relating to the northern periphery of the medieval settlement of Partney which went out of use by c.*AD1350. There were relatively sparse numbers of early medieval archaeological features consisting of a few ditches, pits and possible postholes as well as early medieval quarrying.*

Excavation to the south to this site found part of the nationally important St Mary Magdalene hospital complex which had been founded c.*AD1115 and became a cell of Bardney Abbey, which it remained until the mid 15th century. A small rectangular*

12th-century stone chapel (12.6m by 6.6m) was uncovered along with 44 associated burials. The single-celled chapel was built with at least four types of different stone to make an aesthetic statement. Features such as windows would have been made to stand out from the rest of the building. In the 13th or 14th century at least one stained glass window was inserted and an internal dividing wall built in the chapel. The surrounding burial area was planned with a central pathway leading from the roadway to the chapel. Shallow shroud burials lay to the north of the path, possibly all male lay people of varying ages from adolescents to elderly. Anthropomorphic type burials lay to the south of the pathway and were probably all monks/priests. Amongst these were four burials with chalices and a possible abbot buried with an adze (mattock) and a knife. Three probable lay burials along the south wall of the chapel consisted of a child, an adolescent and an adult, with one burial placed within the chapel.

At least two timber buildings were found, one directly to the west of the chapel, the other downslope to the south which was possibly of kitchen or domestic origin. Associated with these structures there were two wells, a cesspit and a hearth with cereal processing waste. Several rubbish pits had been backfilled with domestic waste. There were also many medieval quarry pits dating from c.12th century to immediate post-demolition of the chapel in the later 15th century.

On the eastern arm of the road, a third, separate palaeochannel, also a tributary of the River Lymn, was sampled. Infilling of this channel seems to have occurred from the Early Neolithic to the Bronze Age. The landscape was also alder and hazel woodland with dry scrubland. Only one bulk sample found evidence of farming with cereals being grown in the Neolithic period. Overlooking this palaeochannel to the north was an area of burnt trees with possibly contemporary flint knapping debris in the backfills of treebowls dating to the Mesolithic to Early Neolithic period (c.5000-3000BC).

To the north, part of a Late Iron Age/Roman settlement was continuously occupied from c.1st century BC into the very late 4th century AD or early 5th century. The site was heavily truncated by ploughing although there were fragmentary remains of domestic features including structures and six ovens/hearths. The majority of features were boundary or enclosure ditches. Several of the enclosures were rectilinear in shape. There was some evidence that the settlement was based on mixed farming with charred grain and some animal bone surviving. Pottery, metalwork, roof tile, quern stones and other finds demonstrate that the site was of average status with limited access to high status goods.

To the north, next to the junction of the Skegness Road, a cow burial may have related to a 6th to 7th century Early Saxon family burial site found in the early 1950s.

1 INTRODUCTION

Excavation by CCC AFU along the Partney By-Pass was completed during 2003 and 2004. The work was commissioned by Lincolnshire County Council with Jacobs Babtie (previously Babtie Group) acting as the consultants.

Lincolnshire County Council obtained planning permission to construct the A16 and A158 Partney By-Pass, as part of the A158/C541 Coastal Access Improvement Scheme. Jacobs Babtie were commissioned to design and manage mitigation excavations in connection with the advancement of the scheme. A detailed desk-based assessment was undertaken which identified a number of known or potential sites of archaeological interest (Babtie Group 2002; Fig. 2). Following consultation with the County Archaeological Section, further evaluation works took the form of a staged programme of geophysical survey (Fig. 3; Whittingham 2002a and 2002b; and Bunn 2003). The result of the geophysical surveys and the desk-top investigation was that trial trenching was largely targeted on areas of interest (Fig. 4; McDaid 2003). Following trial trenching a strategy of excavation and watching brief was devised. The excavations were conducted in accordance with a specification by Jacobs Babtie (Babtie Group 2003).

2 GEOLOGY AND TOPOGRAPHY

Partney, situated in the valley of the River Lymn, lies in the ancient administrative district of Lindsey (east), on the south-eastern edge of the Lincolnshire Wolds. From the south the ground level rises gradually to form a small gravel hill or island upon which the village is sited. Three tributaries of the River Lymn cross the study area, one flowing west to east, one north to south and the other following the main river valley, flowing south. The geology for the various sites is described in each of the site summaries below.

3 PROJECT BACKGROUND

3.1 Archaeological and Historical Background

The information presented below utilises the Jacobs Babtie desktop of the area (Babtie Group 2002) and SMR records. This indicates that Lincolnshire possesses a rich and varied archaeological record, with the upland areas of the Wolds and Cliff being particularly rich in archaeological remains, including agricultural and settlement complexes, religious sites and funerary monuments.

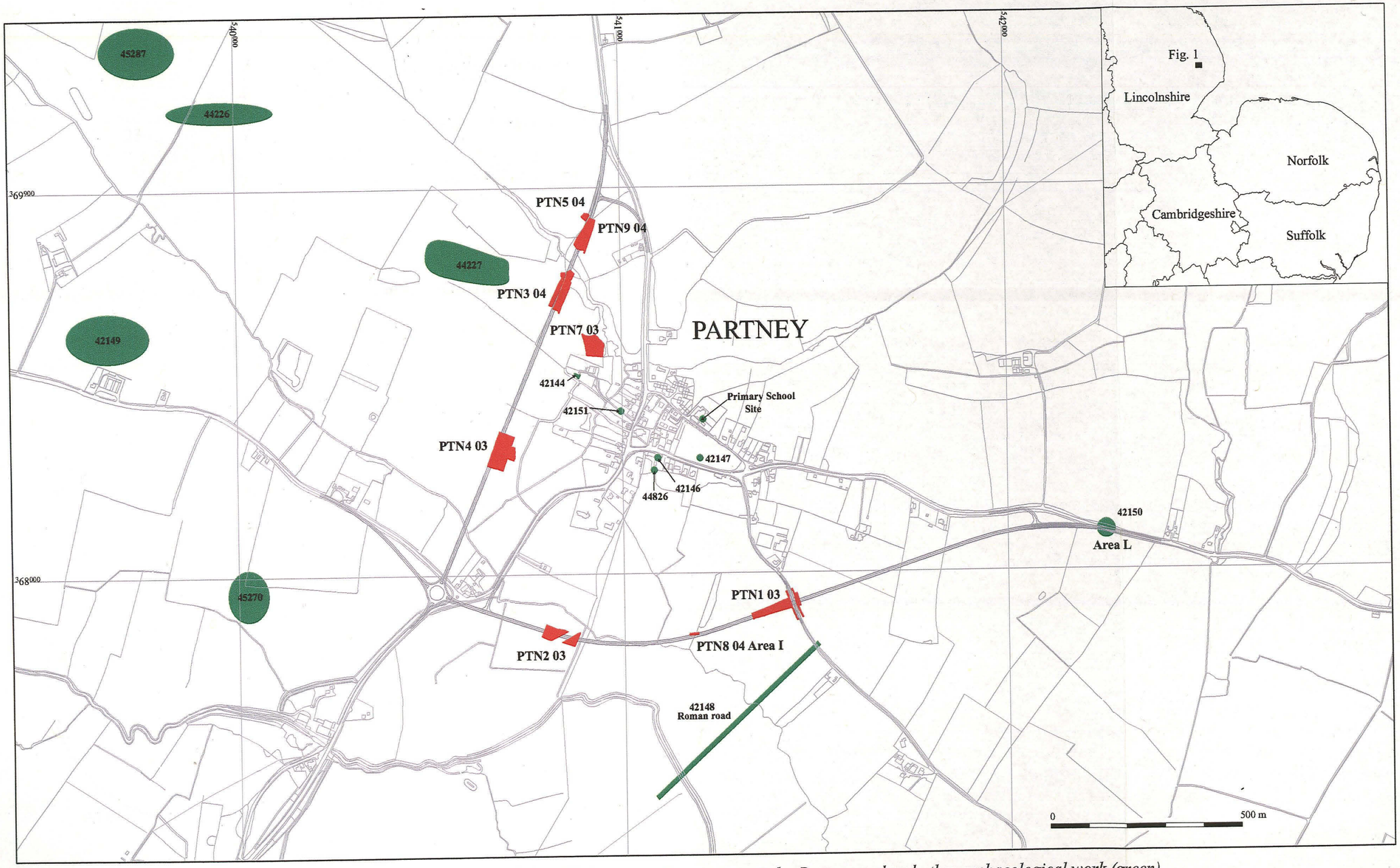


Figure 1 *Location of Excavation Areas (red) within By-Pass route with possible known settlement cropmarks, Roman road and other archaeological work (green)*

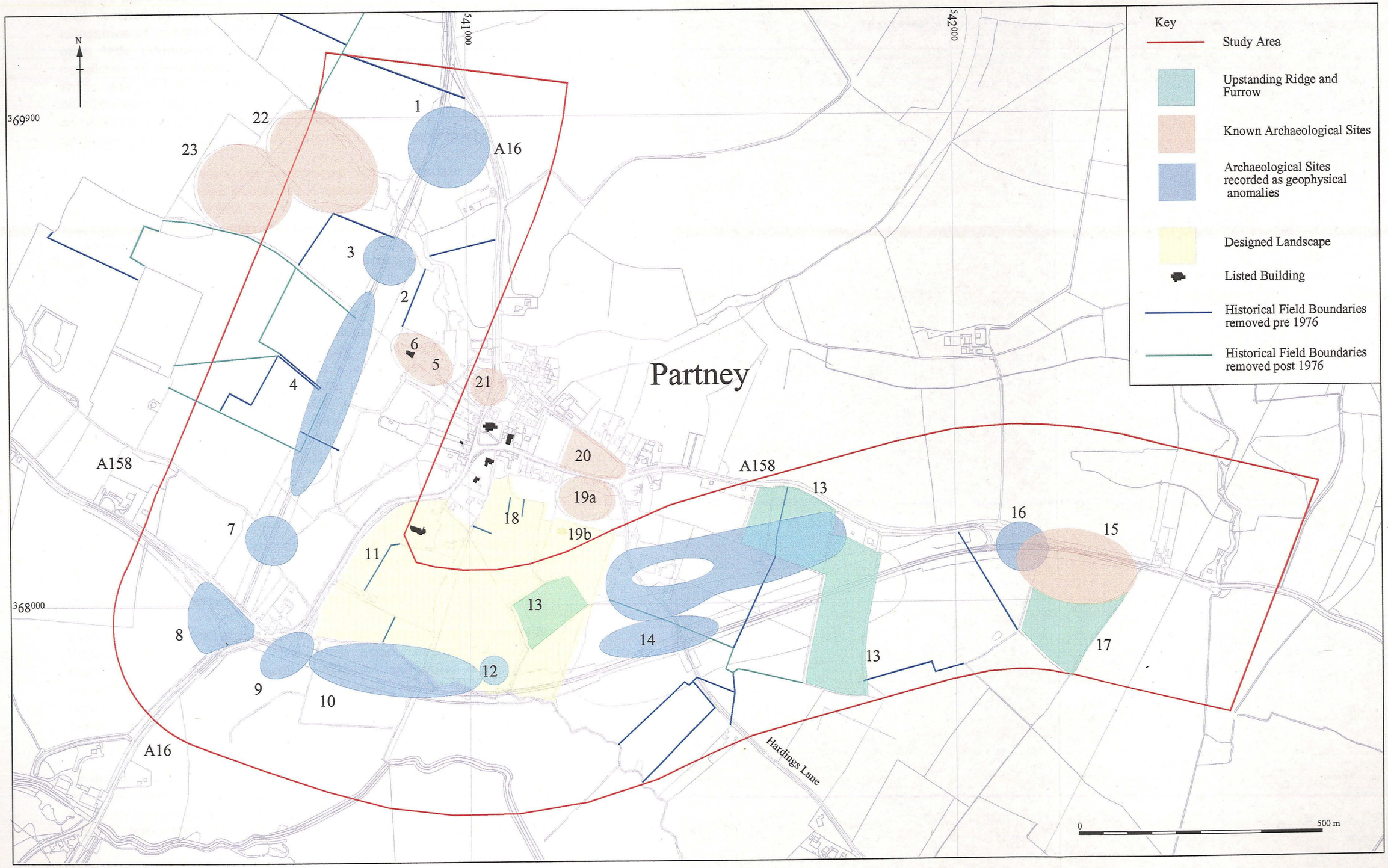


Figure 2 *Archaeological sites within Partney By-Pass, based on Jacobs Babtie map (Babtie Group 2002)*

Many of these sites are no longer visible as upstanding earthworks, having been levelled by ploughing, and have only been detected through the recognition of cropmark features on aerial photographs. As a result, there is often little information available regarding the internal composition or complexity of these features, as few have been archaeologically tested. The fertile soils of Lincolnshire encouraged the development of farming at a relatively early date (*c.*4000 BC) with finds of Neolithic stone axes suggesting an extensive programme of woodland clearance across the Wolds and Cliff, although evidence for contemporary settlement is still comparatively scarce.

For the next three thousand years, successive Neolithic, Bronze Age and Iron Age communities cleared woodland for agriculture and stock grazing. It is thought that by the Late Iron Age, the landscape had largely been cleared and was only marginally less open than today (Babtie Group 2002). The Wolds are known for the density of burial monuments in the Neolithic (long barrows) and Bronze Age (round barrows). English Heritage has recently funded Oxford Archaeology to survey plough damage to these barrows (Laura Hindmarch, pers. comm.).

There is little datable evidence for the earliest phases of human activity within the study area. As noted above, the Wolds are generally rich in archaeological remains, although this is more likely to be a reflection of the relatively small transect examined by the survey corridors, rather than a true reflection of previous settlement patterns (Babtie 2002). There are five possible barrows *c.*0.5km to the north-west of the village (SMR No. 44227; Fig. 1), immediately outside the study corridor. Further barrows are recorded just over 1km to the north-west (SMR No. 44226).

Iron Age Lincolnshire formed part of the much larger tribal territory of the *Corieltauvi*, stretching from the Humber to the River Nene. A socio-economic model has been suggested for the *Corieltauvi* based upon a high status elite concerned with horse and cattle raising on the Wolds, where soils were thinner, supported by an agriculturalist underclass exploiting the lower ground and valley bottoms (Babtie Group 2002, 7). Known sites of this period include those at Horncastle, Ulceby Cross and Ludford.

Evidence suggests that Lincolnshire was a prosperous region at the time of the Roman conquest in AD43. The Ninth Legion overran Lincolnshire, establishing a fortress at Lincoln *c.*AD54-68 and villas were quickly established on the limestone uplands and chalk Wolds. However, rural settlement patterns often show little variation between the Iron Age and Romano-British period, with much evidence to suggest continuity of occupation.

To the west of Partney a series of Romano-British pottery findspots have been recorded (SMR No. 42144) adjacent to The Grange and from two fields further to the west on the periphery of the A16 By-pass Study Corridor. These suggest some form of settlement in the area at this time (Fig. 1).

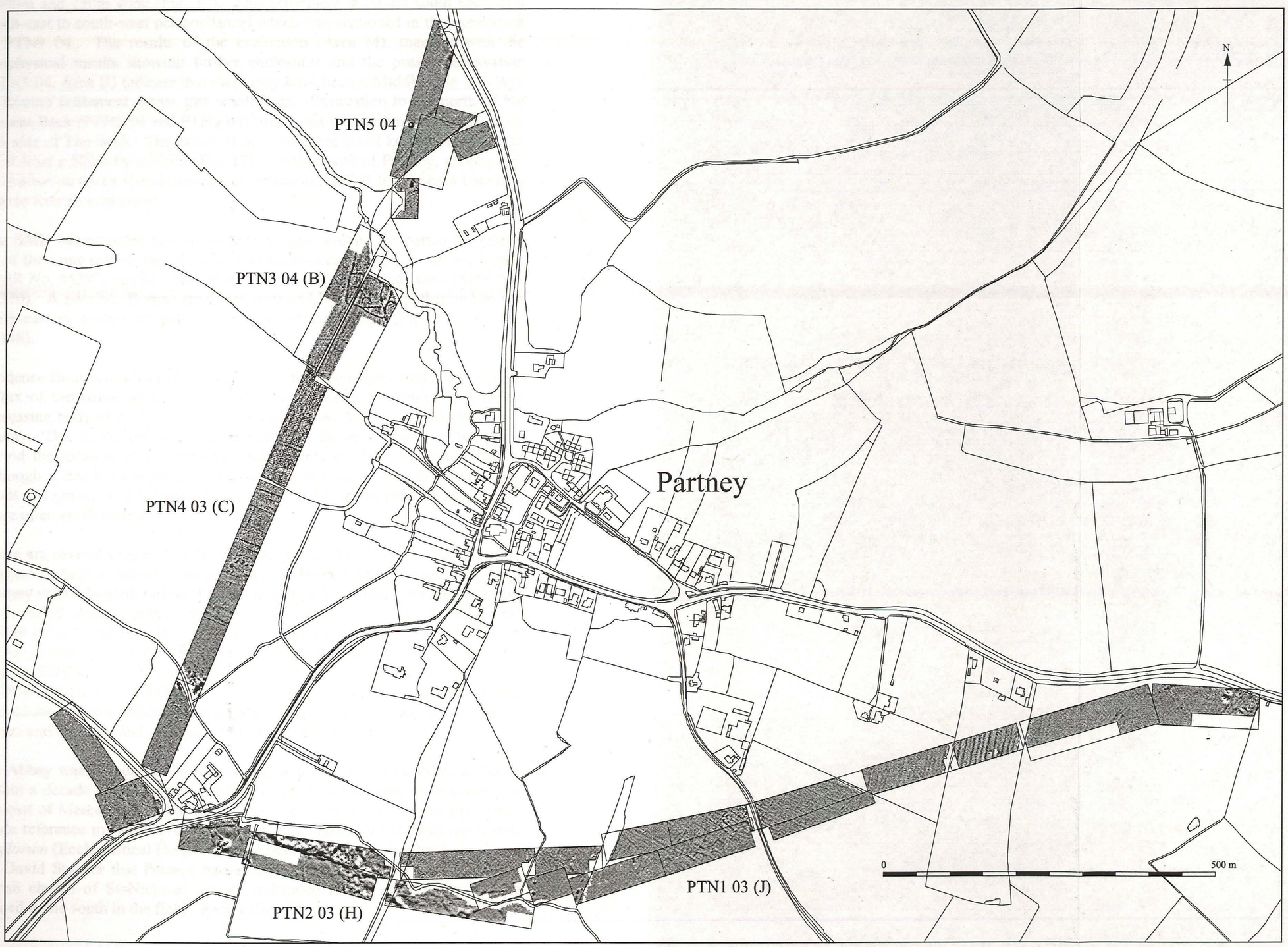


Figure 3 *Survey location information showing composite of processed greyscale gradiometer data [WYAS fig.3 (Whittingham 2002b)]*

The aerial photographs held at the SMR (ABK.78) show cropmarks in an area *c.*400m and 250m wide (Fig. 17). This settlement is on the south bank of a north-east to south-west palaeochannel which was sectioned in the excavation at PTN9 04. The results of the evaluation (Area M), together with the geophysical results showing further enclosures and the present excavation (PTN3 04, Area B) indicate that there may have been a Middle/Late Iron Age to Roman settlement across this whole area. Excavation to the north of the present Beck (PTN5 04 and PTN9 04) found that this settlement continued on this side of The Beck. The extent of the settlement is not known but seems to be at least *c.*500m by *c.*300m (Fig. 17). To the south of Partney, geophysics, an evaluation (Area J) and subsequent excavation (PTN1 03) found a Late Iron Age to Roman settlement.

The SMR has recorded several other cropmarks around the parish thought to be of the same period, including Roman enclosures *c.*1.5km to the north-west (SMR No. 45287) and an undated cropmark 1km to the south-west (SMR No. 45270). A possible Roman road was seen and has been hypothesised to run north-east to south-west just to the south of the village (Fig. 1; SMR No. 42148).

Evidence from across Lincolnshire suggests that the county may have seen an influx of Germanic settlers in the late 4th and early 5th centuries, with an increasing body of evidence to suggest widespread Anglian occupation of the county. Due to the often-ephemeral nature of the archaeology of this early period the location of contemporary settlements is often difficult to detect, although it has been suggested that occupation tended towards lighter soils, sands and gravels and the uplands. Evidence for funerary practice is however, more often encountered.

There are several sites within the study area that, collectively, would seem to suggest an Anglian presence from at least the 6th century onwards. The name Partney in Old English means 'Pearta's island', whilst other sites and findspots in the SMR include pottery finds from an inhumation cemetery within the village (Figs.1 and 2; SMR 42151) and the remains of a large round barrow *c.*12m in diameter, at the eastern end of the proposed A158 improvements (Fig. 1; SMR 42150; Thompson 1954). Both sites were purportedly destroyed in 1950. Dated to *c.*AD 600, the latter barrow contained the remains of at least two adults and two children, accompanied by pottery and weapons (including spears and a shield) and a quantity of bronze jewellery and pottery.

An Abbey was founded at Partney in the middle of the 7th century probably within a decade or two of the founding of the first independent monastery in the east of Mercia at Peterborough (Coppack, Section 4.3, this report). Bede made reference to two abbots of Partney in his *Historia Ecclesiastica Gentis Anglorum* (Ecclesiastical History of the English People). It has been suggested by David Stocker that Partney had at least two centres later marked by the parish church of St Nicholas and an unlocated chapel of St Mary that he placed to the south in the field Chantry Close

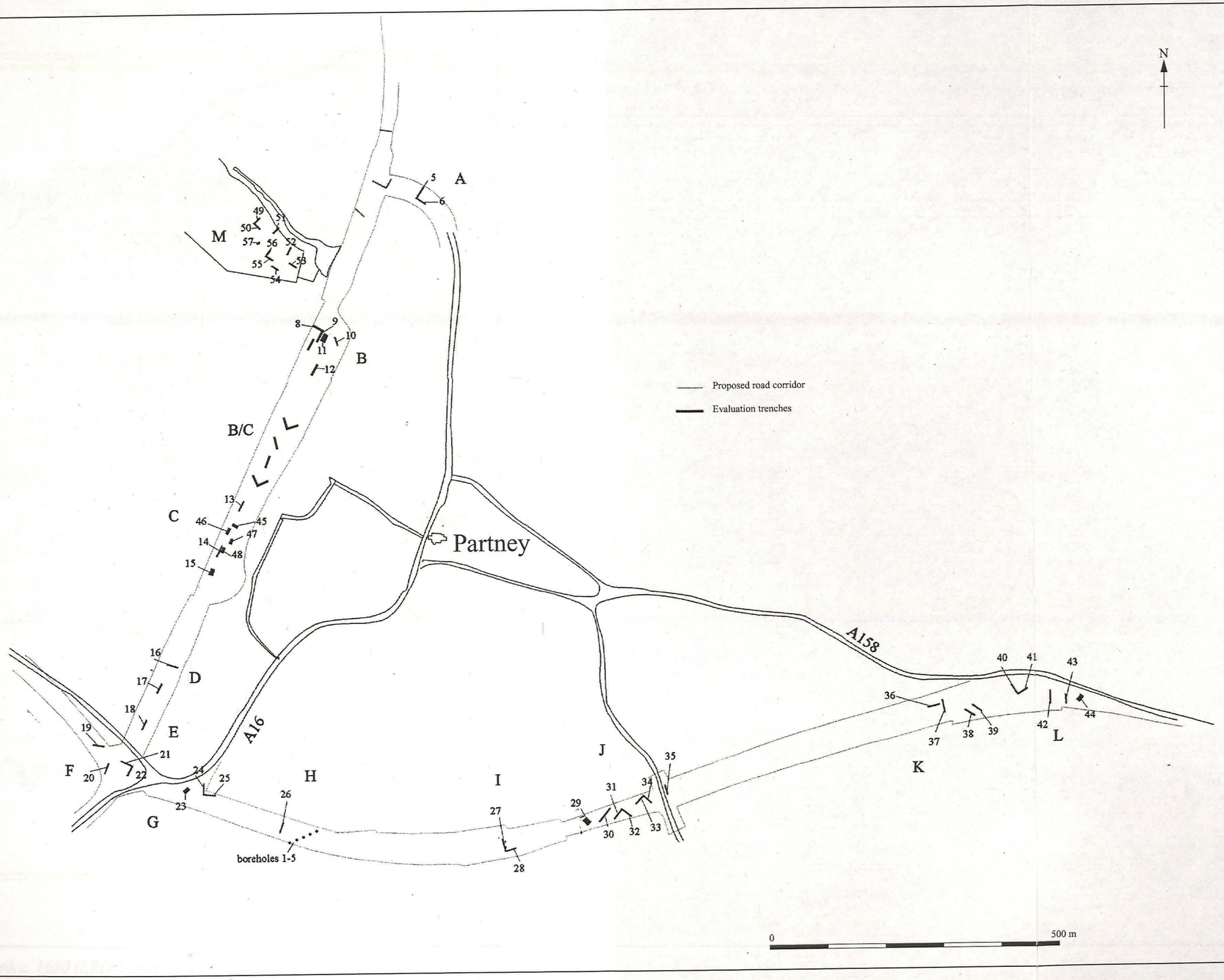


Figure 4 *Location of Areas and Trenches along the By-Pass (McDaid 2003)*

Figure 5 *Acre Book c. 1630 (LRO 2 Brack 2/1)*

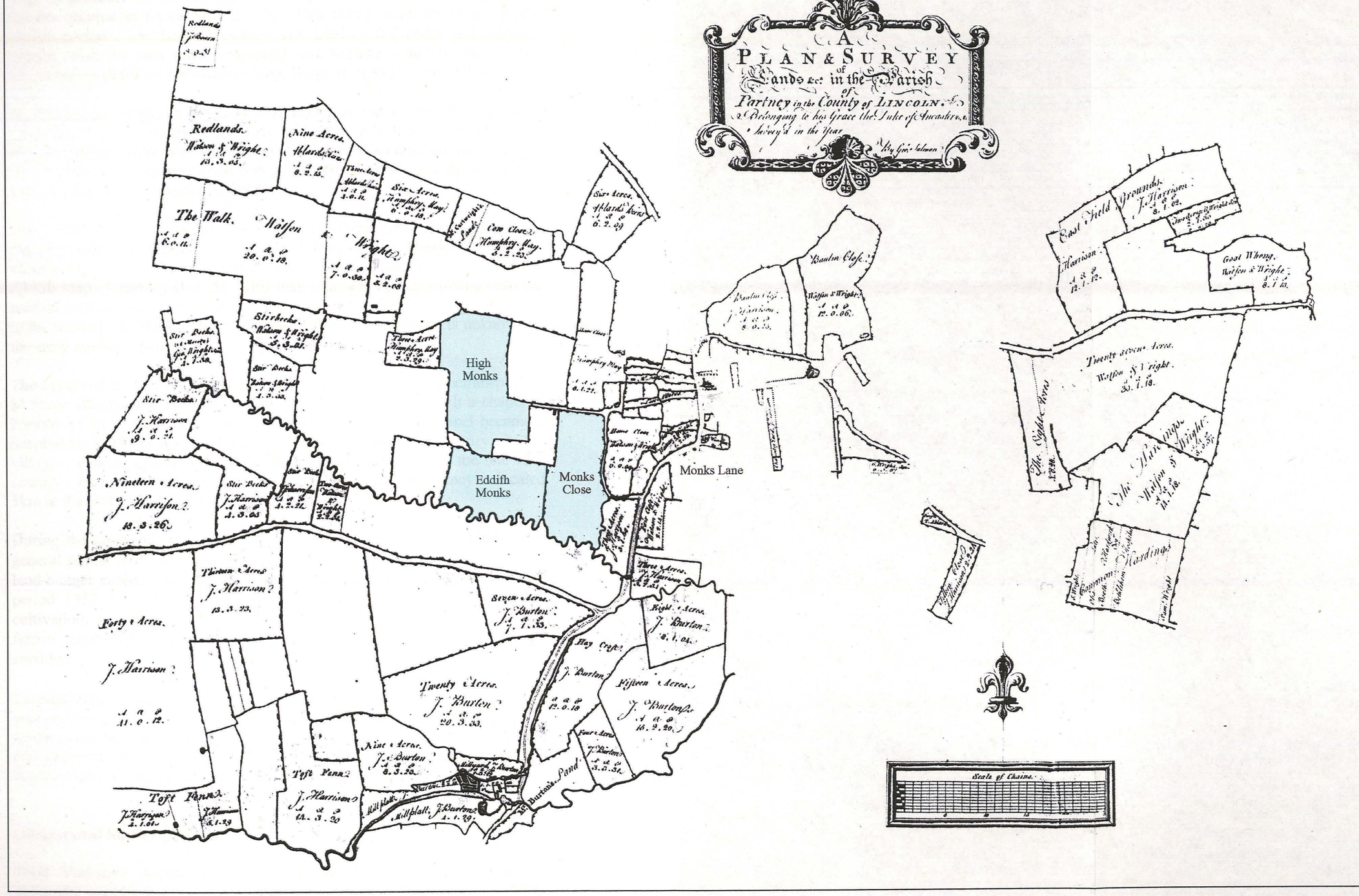


Figure 6 *Willoughby Estate N. D. (c. 1771) (LRO 5 ANC 5/A/1/1)*

(Stocker 1991, 110-112). Glyn Coppack argues that the Abbey was probably located to the west of the village at Highe Monks Close on the *c.*1771 map (Fig. 6) probably on the site that that has produced evidence of high status Roman occupation (Area M; Fig. 17). This abbey went out of use in the Danish period. The late 9th century saw Lindsey fall under Scandinavian control, with the area now comprising Lincolnshire ceded to the Vikings following the defeat of the Mercian king, Burgred, at Repton in AD874.

Archaeological evidence suggests that many of the nucleated villages of Lincolnshire came into existence early in the Anglo-Scandinavian period. If, as noted above, there was probably already a well-established settlement at Partney before the Scandinavian conquest, it could be suggested that Partney is one of the oldest villages in Lincolnshire.

The 1771 Willoughby Estate Map contains three field names that have possible monastic connections: Monks Close, Highe Monks and Eddifh Monks (Fig. 6). A green lane or track, known as Monks Lane, is shown on the *c.*1630 Map of Partney (Fig. 5). This map indicates houses fronting onto the road as well as some empty burgage plots of the medieval Partney settlement to the west of The Beck. The size of this part of the settlement is unknown in the early medieval period.

The excavations at PTN4 03 (Area C) excavated part of the chapel/hospital of St Mary Magdalene. Gilbert de Gant, the local landowner, built a chapel in Partney by 1115 which was given to Bardney Abbey. The chapel became a hospital by 1138 but was abandoned by around the mid 15th century. In the village a church, dedicated to St Nicholas was founded during the late 11th century. Part of a small peripheral medieval settlement of Partney is located 1km to the west (SMR No. 42149; Fig. 1).

During the economic and social upheaval of the 14th and 15th centuries, a general retreat from marginal land took place as the population declined and land-hunger eased. On the Wolds, large-scale tax relief was granted in the period 1352–54 and a considerable amount of land passed out of arable cultivation, reverting to pasture. Surviving parcels of medieval ridge and furrow earthworks are still extant at several locations within the study corridors.

As population levels began to rise again in the late 16th century mixed farming was encouraged, with sheep reared principally for wool and cereal production common on the lighter soils of the Wolds. The texture and acidity of the soil was improved through the addition of mineral clays: small ponds, indicative of former marl pits, are found along the route of the By-Pass.

3.2 Geophysical Survey (Fig. 3)

West Yorkshire Archaeological Service (WYAS) was commissioned to undertake geophysical surveys of the route between April and June 2002, following preliminary selection of preferred route options for both the A158

and A16. Gradiometer surveys covered a 40m wide corridor based on the centreline of the preferred routes, with a larger area of survey at the junction of the A16/A158. The survey area was subsequently enlarged to include a suggested re-route to the preferred A158 option and in order to determine more fully the possible extent of a large cropmark enclosure detected by the initial survey for the A16 (Fig. 2).

The survey revealed an enclosure (Site B) and three other areas of possible significance, including an extensive field system on the A158 By-Pass (Site J), and a palaeochannel (Site H). There were other sites containing some linear anomalies and the remains of ridge and furrow cultivation (Whittingham 2002a; 2002b). Prior to trial trenching, Jacobs Babtie produced a map using desk-based assessment and geophysical data defining twenty-three areas of significant archaeological remains within and just outside the road corridor (Fig. 2). The 23 sites consisted of:

1. weak geophysical anomalies representing possible enclosures;
2. cropmarks showing enclosures;
3. cropmarks showing possible barrows;
4. geophysical linear anomalies and cropmark field boundaries;
5. Neolithic flint scatter at The Grange (SMR No. 42145);
6. The Grange. Grade II listed building;
7. non-linear magnetic anomalies, possibly of natural origin;
8. linear geophysical anomalies, possibly relict field boundaries;
9. linear and other geophysical anomalies;
10. geophysical anomaly, possible palaeochannel;
11. post-medieval historic park of Partney Hill;
12. area of magnetic enhancement of unknown origin;
13. ridge and furrow;
14. geophysical anomalies or 'ladder' settlement;
15. round barrow excavated in 1950 (SMR No. 42150);
16. an area of strong magnetic point anomalies of unclear origins;
17. ridge and furrow;
18. earthwork and cropmark field boundaries;
19. Red Lion public house. In 1826 worked sandstone blocks and skeletal remains found (SMR No. 42146);
20. post-medieval pottery scatter within earthworks (SMR No. 42147);
21. possible Anglo-Saxon cemetery (SMR No. 42151);
22. undated rectilinear enclosures intersected by circular cropmarks;
23. multi-phased settlement enclosures.

Further geophysical survey was commissioned in 2003 following the trial trench evaluation undertaken by Lindsey Archaeological Services (below, Section 3.3). This was in the area to the west of Areas B and C (Bunn 2003). In both areas there was evidence of activity/occupation continuing in this direction. These areas have not been added to WYAS geophysical survey results (Fig. 3).

3.3 Trial Evaluation

Lindsey Archaeological Services excavated 53 trial trenches; five hand-augered boreholes along the route of the proposed By-Pass and adjoining areas were also opened in two stages between October 2002 and January 2003 (Fig. 4; McDaid 2003). The positions of the trenches targeted the known sites and linear anomalies identified by geophysics (Fig. 3). Trenches were also spaced at greater intervals along the corridor in blank areas. Trenches were numbered, with investigation areas identified by letter (Areas A-L). In the CCC AFU excavations, five of the areas evaluated by Lindsey Archaeological Services (B, C, H, I, and J) were subject to further work.

Evaluation confirmed the presence of a large multi-period enclosure of probable Late Bronze Age/Iron Age date (PTN 3 04; Area B), a series of palaeochannels (PTN2 03; Area H) and a multi-phase co-axial Romano-British field system dating from the late 2nd to early 3rd century and late 3rd to early 4th century (PTN1 03; Area J). It also found a previously unknown Christian inhumation cemetery of mid-13th century date, with a number of potentially associated linear/boundary features (PTN 4 03; Area C). Other trenches found isolated ditches and clay extraction features, while the remains of ploughed-out ridge and furrow were also noted within the road corridor. A further multi-phase Romano-British field system (Area M) lay outside the road corridor in the proposed location of a new badger sett: this was subsequently omitted from the scheme (Fig. 17).

3.4 Other Archaeological Work in the Partney Area (Figs. 2 and 3)

Very little archaeological work has been carried out in Partney village itself. A watching brief in 2003 at the back of the Red Lion Public House found a single late medieval or early post-medieval pit (Bray 2003; Fig. 1 SMR No. 44826). In 1826 worked sandstone blocks and human bones were found during excavation of the Red Lion Public House's foundations (SMR No. 42146). Recent work at the Red Lion in 2005 located further undated burials. A watching brief at the primary school (Fig. 1), Maddison Lane found only natural and modern deposits (Cope-Faulkner 2004).

4 METHODOLOGY

4.1 Introduction

Three excavations on Sites H, J and C took place in 2003 in areas previously evaluated by Lindsey Archaeological Services. In addition two archaeological evaluations were conducted in areas not archaeologically investigated by Lindsey Archaeological Services. In one area (B/C; PTN6 03) no archaeological remains were found whilst at Site PTN7 03 an evaluation found evidence which resulted in an area excavation (Fig. 1). Area B, previously

evaluated by Lindsey Archaeological Services, was excavated in two stages in 2004 (PTN3 04). After compulsory purchase of the land within the road corridor, the remainder of Area A (PTN5 04) was evaluated (part having been evaluated by Lindsey Archaeological Services). After discovery of archaeological remains an area measuring 20m by 20m was excavated including a section through a north to south palaeochannel. A further palaeochannel was found directly to the north of Area B. In sampling this channel a new archaeological site was found on its northern bank which immediately led to an open area excavation (PTN9 04).

In excavation areas the topsoil and subsoil were removed separately under archaeological supervision by a 360° tracked or wheeled excavator fitted with a flat-bladed ditching bucket. The soil was removed from the site by dumper. The exposed subsoil was metal detected and subsequently removed to expose archaeological features or layers. Within all excavation areas there was selective cleaning by hand in preparation for planning and excavation. In some areas the majority of the excavation area was cleaned. All features and deposits were recorded using the CCC AFU's single context *pro forma* recording sheets. Plans were hand drawn unless otherwise stated at 1:50 and then digitized with the aid of AutoCAD. Sections were generally drawn at a scale of 1:10 or 1:20. Monochrome, colour slide and digital photographs were taken. The site and spoil heap were subjected to metal detector sweeps throughout the excavation.

Local people as well as other interested individuals were invited to help in the excavation. Local residents regularly visited the excavations and came to talks in the Village Hall. There were two open days at PTN4 03, one for the local primary school and another for all residents. Due to the site's importance, there were press releases with visits from local newspapers and regional TV cameras. A video record of all sites was maintained by local resident Rob Johnson. Several talks have been given in the local area to inform people of the findings from Partney. Links have been established with the Skendleby Community Group (through Mr Jim Hoff) who is excavating Partney's sister chapel.

4.2 Site Methodologies

The methodology utilised at each site is explained below individually in order of excavation date.

4.2.1 PTN2 03 (Area H): 8th to 19th September 2003

An overhead electricity cable crossed the proposed excavation area. As a result there was no machining within a 7m buffer zone on either side of the cable (Fig. 8). The excavation therefore took place in two areas. To avoid compaction on the site, a combination of a 360° tracked excavator with a flat-bladed ditching bucket and a tracked bulldozer was used. Archaeological trenches and test pits were excavated across the palaeochannels to natural geology. Due to the extreme depth of the channels the trenches were stepped

outwards. The site was planned at 1:200 and one side of the trenches was cleaned by hand and drawn at 1:50. Dr Steven Boreham, a quaternary palaeoenvironmentalist, took pollen samples during the excavation (see Section 6.3.1).

4.2.2 PTN1 03 (Area J): September 15th 2003 to 24th October 2003

This excavation was undertaken in two separate areas which were divided by a modern road, Hardings Lane (Fig. 7). Excavation to the west of the road took place first. The remains proved to be more settlement-related than evaluation had suggested and therefore more time was therefore spent on excavation. The discovery of ovens/hearths meant that environmental sampling was particularly significant: Val Fryer, environmental specialist, visited the excavation and gave on-site advice.

4.2.3 PTN6 03 (Evaluation Area B/C): 22nd and 23rd September 2003

A mechanical excavator with a 1.6m wide flat-bladed ditching bucket was used to excavate the trial trenches at this site, under archaeological supervision (Fig. 4). The trenches were machined to natural but no archaeological features were exposed.

4.2.4 PTN4 03 (Area C): 27th October 2003 to 23rd December 2003

This excavation took place in two phases (Fig. 14). The proposed excavation area was opened up and human burials were found along the eastern baulk of the site. After consultation between Jim Bonnor (Senior Built Environment Officer, Lincolnshire County Council) and Adrian Scruby (Jacobs Babtie), the excavation area around the burial ground was extended as this area was to be affected by landscaping. In addition to metal detecting on site, a metal detector survey was conducted over the stubble field around the excavation area in order to ascertain whether finds distribution indicates that archaeological remains continue outside the excavation area.

4.2.5 PTN7 03: Evaluation 29th to 31st October 2003 and Excavation between the 17th and 24th November 2003

This site was initially evaluated by trial trenching, which found an early medieval quarry pit, a few ditches, some postholes (including a possible fence line) and a former palaeochannel. After consultation between relevant parties, it was decided to excavate the whole area around the proposed new badger sett (Fig. 15). At a later date, in April 2004, an auger sample was taken through the palaeochannel (Section 8.4.2). As part of the excavation, an earthwork survey of the surrounding area was undertaken (Fig. 16).

4.2.6 *PTN5 04 (Area A): Evaluation 22nd to 24th March 2004 and Excavation 29th March to 7th April 2004*

This area was initially evaluated by trial trenching. A palaeochannel ran through all three trenches with settlement remains being present in the southernmost trench. After consultation, it was decided to excavate an area of 20m² around this latter trench (Fig. 19). Due to the significant depth of the palaeochannel, a stepped trench was excavated from which pollen samples were taken (Section 9.4.4).

4.2.7 *PTN3 04 (Area B): Excavation of first area from 23rd March 2004 to 6th April 2004 and second area from 27th July to 16th August*

The specification proposed to excavate the whole enclosure within this site (Babtie Group 2003). It was to be excavated in two parts due to the presence of a badger sett within the eastern part of the site (Fig. 18). The western area was examined first and, after the rehousing of the badgers, the eastern side was excavated.

First Area

The first area to be excavated was to the west of an existing field boundary, at least 30m from the nearest badger sett. Within this first area, Lincolnshire County Council and Jacobs Babtie decided to reduce the area proposed in the specification and not to excavate the extreme western part of the cropmarked enclosure outside the road corridor (Fig. 18). Archaeological remains including structures were found in the extreme north of the site implying that the settlement continued beyond the excavation area. After consultation between Jim Bonnor and Jacobs Babtie the area of excavation on this side was extended.

Second Area

The excavation in the area of landscaping to the east of the road corridor had to be abandoned due to it being used for foraging by badgers. After advice from English Nature, Lincolnshire County Council and Jacobs Babtie decided to reduce the area proposed in the specification with the excavation was solely confined to the road corridor.

Archaeological remains including a possible pottery kiln in the extreme north of the excavation area were found. This implied that settlement remains were likely to continue beyond the excavation area. After consultation between Jim Bonnor and Jacobs Babtie the area of excavation on this side was extended once trees had been removed. Excavation of this part showed that there were settlement features continuing to The Beck. After further consultation, it was decided to attempt to discover if there was any relationship between the settlement, The Beck and any possible occupation on the northern bank.

4.2.8 *PTN8 04 (Watching Brief): Conducted intermittently between 22nd March 2004 and 18th October 2004*

A requirement of the specification was to monitor all earthwork movements along the By-Pass and associated works. This included watching the rerouting of The Beck during March/April 2004 and the setting up of the compound area in April. The watching brief on the road itself took place intermittently from 1st July 2004 to 18th October. The watching brief included observing badger fence installation, road access areas, geotechnical pits and topsoil stripping. The watching brief found evidence of burnt tree throws at Area I and this resulted in a small excavation (10m by 30m) in this area (Fig. 40).

Metal detecting was carried out along the whole By-Pass route. The objects found during metal detecting (as well as pottery and other artefacts) were given a chainage point recorded on the By-Pass route (Fig. 37).

4.2.9 *PTN9 04 (Evaluation and Excavation): 23rd to 24th August and 26th August to the 14th September*

An evaluation trench was excavated through The Beck. This took place over two days as part of the watching brief. The palaeochannel was sampled and a trench more than 90m long put through the further bank. The presence of archaeological features led to further consultation which determined that an area on the further bank was to be excavated. The excavation found spring deposits which led to the north to south palaeochannel located at Site PTN5 04. The main spring was pollen sampled and augered and pollen samples were also taken from a burnt flint feature (Section 9.4.5). Lincolnshire County Council soil laboratories augered three samples at 10m intervals through the east to west palaeochannel and these samples were sent for assessment (Section 9.4.6).

4.3 The Site Record

The site record for all sites has been checked for internal consistency and preliminary interpretation, and has been fully cross-referenced. Drawn records have been fully checked and cross-referenced with the context record. The drawn record has also been combined with electronic survey data to produce a definitive site plan using ProCAD and Adobe Illustrator software. The photographic record has been labelled and fully cross-referenced with the context record. All site records are held currently at the CCC AFU headquarters at Fulbourn. Some of the artefacts are currently held by the relevant specialists and stored under the relevant site code (PTN1 to 9 and ending in the 03 or 04 suffix depending on when the individual site was excavated). Records and artefacts from the Lindsey Archaeological Service's evaluation trenches have been referred to where relevant in this document and will be fully incorporated at full report stage.

4.4 Assessment

During assessment master numbers (**M**) were assigned to major features in several of the excavation areas in order to facilitate phasing and interpretation. The pottery assessments were useful during the creation of preliminary phasing, based on a combination of stratigraphic relationships and finds. This provisional site phasing was generally distributed to the other specialists prior to assessment although at the analytical stage phasing may change once specialists have provided their final reports and radiocarbon dates have been obtained. Presentation of a stratigraphic matrix for each site is therefore not considered appropriate at this assessment stage: at full report stage a group matrix of complex areas will be produced for the archive once all specialist analysis is complete.

Individual sites are discussed below in turn, with the exception of Sites PTN3 04, PTN5 04 and PTN9 04 which have been amalgamated as they appear to form part of the same Iron Age to Roman settlement.

4.5 Finds Cleaning and Conservation

Recommendations presented in this document for finds cleaning and conservation have taken into account the requirements presented in Sections 5.2.10 and 5.2.11 of the WSI (Babtie Group 2003, 12-13), which stipulates that all metalwork should be x-rayed. It also requires that an assessment be made of the conservation needs of all finds, in addition to their potential for further investigation. All finds will be stabilised and packaged in accordance with the receiving museum's requirements.

The procedures for the deposition of archives with the Lincoln City and County Museum are laid out in the archaeological handbook of Lincolnshire County Council (Lincolnshire County Council 1998). This handbook stipulates that, as part of the prerequisite to depositing the finds at Lincolnshire Museum, registered finds should be packed for long term storage and should be physically and chemically stable (Lincolnshire County Council 1998, annex III, section 3, point 3).

Celia Honeycombe (conservator at Cambridgeshire County Council) and conservators at Colchester Borough Council were asked to assess the state of the finds. The often acidic soil conditions mean that conservation is particularly important and twenty-nine items were prioritised for immediate stabilisation.

Nina Crummy (freelance Small Finds specialist) assessed all the Small Finds from the Partney sites, recommending that a minimum of all silver, copper alloy and lead objects of any interest should be cleaned. This cleaning will aid the analytical stage: with coins, for example, mint marks are often only evident after cleaning (and not through x-rays).

5 SUMMARY OF RESULTS FOR PTN1 03 (AREA J)

5.1 Introduction (Fig. 7)

The Iron Age to Roman settlement found here was on a west-facing valley side overlooking the flood plain. The excavation site lies at 24m OD by Hardings Lane, gently falling to 21.5m OD at the westernmost point although the land begins to fall away sharply to the south (Fig. 7). The site is on stiff boulder clay. Evidence for human activity comprised features from the Late Iron Age, Roman, medieval and post-medieval periods (Phases 1-5). Earlier prehistoric activity in the vicinity is attested by a scatter of six worked flints. Occupation began around the later 1st century BC or early 1st century AD and ended around the late 4th century or early 5th century AD. Medieval ridge and furrow ran north-west to south-east across the site. A few post-medieval quarry pits were found just to the south of Hardings Lane. The following text provides a summary of the major features, although many more were recorded and will be fully reported at the analytical stage.

5.1.1 Phase 1: Late Iron Age and Transitional period (c. later 1st century BC or early 1st century AD)

A very small number of Late Iron Age and Transitional (Late Iron Age to Early Roman) features were located at the extreme western end of the site. Only twenty-five prehistoric and 300 Transitional pottery sherds were recovered out of a total of 1837 sherds. The large majority of the Transitional sherds were found in Phase 2 (Early Roman) features. A few features containing only pre-Roman pottery lay at the extreme western end of the excavation.

A fragmentary eaves drip gully (**M656**) measured *c.*12m in diameter. It was sampled three times in the excavation and once in the evaluation. Twenty-two Transitional pottery sherds weighing 0.393kg were recovered from the ring ditch. A few very fragmentary and shallow ditches may date to this period on the basis of stratigraphy and/or the few sherds of pottery recovered from their fills. Two of the ditches display the north-west to south-east and the north-east to south-west alignments which continue throughout the occupation on the site. A few of the ditches intercut implying that there were at least two sub-phases in this period but none of the ditches formed any meaningful pattern.

5.1.2 Phase 2: Early Roman (mid 1st century to mid 2nd century AD)

Early Roman features were concentrated mainly in the western part of the excavation area. A trackway (**M688**), which continued in use into Phase 3, ran north-east to south-west and slightly curved to the west across the eastern half of the site, where it was cut by the present Hardings Lane. The trackway was defined by external ditches which ran roughly parallel for at least 68m and it had an internal measurement of up to 12.5m. The route followed the contour of the site, with the ground falling away more steeply to the south.

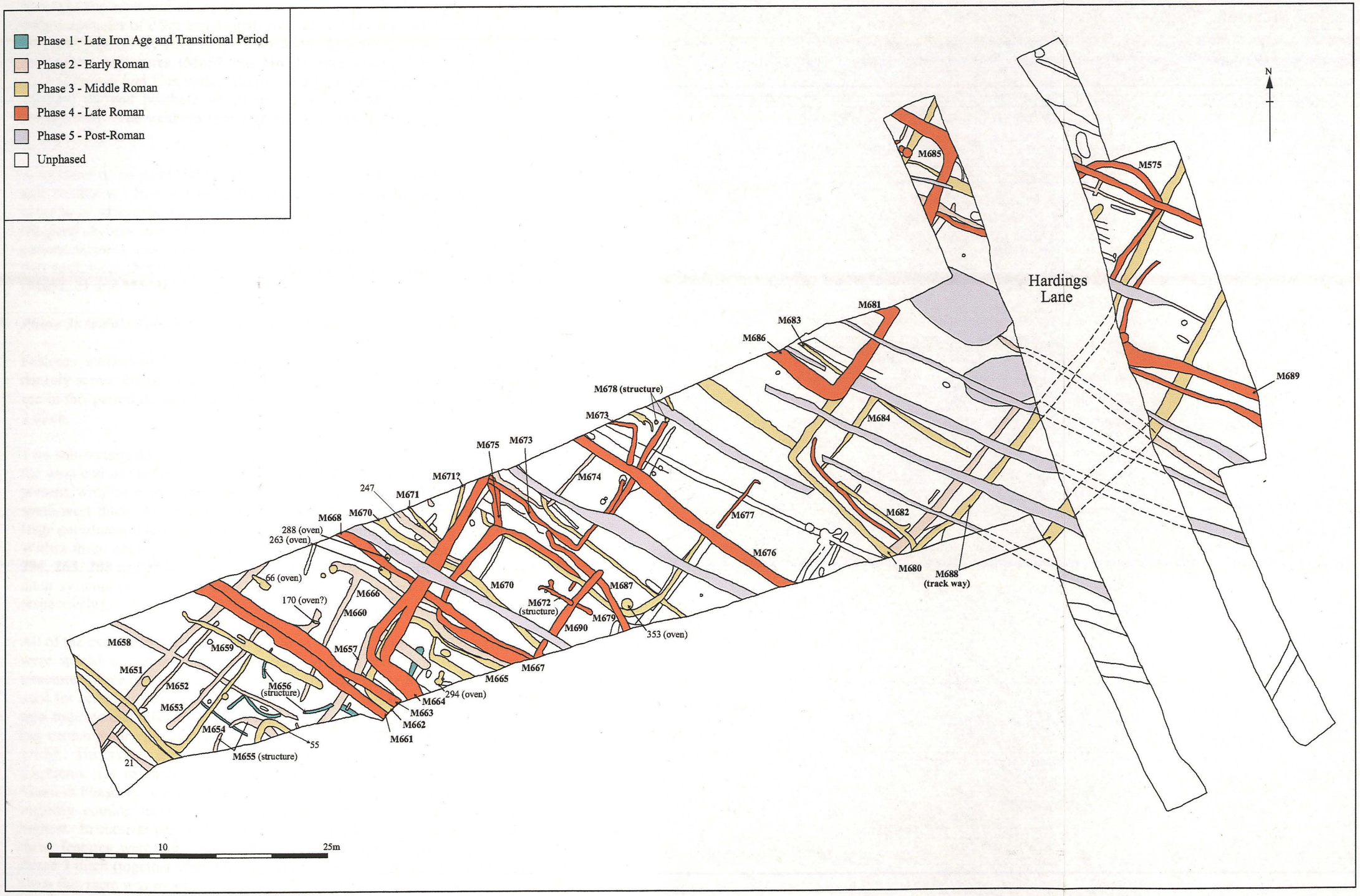


Figure 7 Phased plan of PTN1 03

Towards the west end of the excavation area, a possible ring gully (**M655**), with a diameter of *c.*9m and a small entrance *c.*1.1m wide in its northern side extended beyond the edge of the excavation. Fragments of two possible sub-rectangular enclosures (**M657** and **M674**) were found. The former was at least 16m long and 13m wide. There was a butt end on the south side with an adjacent pit and posthole which may have formed part of the enclosure entranceway. The southern corner of enclosure **M674** consisted of two ditches 10m by 9.5m long.

A plethora of co-axial field boundaries was recorded, along with a few pits and postholes. It is probable that these represent fields with fragmentary remains of structures within. There may be at least two sub-phases based on marginal changes in north-west to south-east field alignment. Tentatively, the earliest features may consist of four ditches (**M666**, **M660**, **M658**, **247**) and two enclosures (**M657** and **M674**). Three slightly later ditches may be later (**M651, 21** and **M653**).

5.1.3 Phase 3: Middle Roman (late 2nd century to mid 3rd century AD)

Features attributable to the Middle Roman period were found relatively densely across the excavation area. The earlier trackway (**M688**) continued in use in this period though its northern ditch was recut to the south of the Phase 2 ditch.

Two sub-rectangular enclosures appeared to extend beyond the south baulk at the west end of the site (**M665** and **55**). Probable field boundaries were also present, with the continuation of north-west to south-east and the north-east to south-west ditch alignments across the site. In the centre of the site was a large curvilinear ditch (**M679**) which may be the remains of a large enclosure. Within these enclosures and field systems were six ovens/hearths (**66**, **170**, **294**, **263**, **288** and **353**), a few of which may relate to specific enclosures and ditch systems (such as **294** and **353**, linked to enclosures **M665** and **M679** respectively).

All of the excavated hearths/ovens appear to date to this phase. These features were spread across the excavation area and may have been within former structures (none of which have survived). The ovens/hearths were possibly all used for cereal processing. The predominance of chaff within one oven (**294**) may indicate that this waste was being used as fuel, a practise which certainly has contemporary parallels elsewhere within eastern England (Fryer, Section 5.4.2). This tallies with evidence from other finds: five of the seven quern fragments, for example, came from Phase 3 features (the remainder were found in Phase 4). Only a small amount of fired clay was recovered, the vast majority coming from Phase 3 features with Phase 4 producing the next highest. In contrast very little iron slag was found implying that all or most of these features were not associated with ironworking. Copper slag from a Phase 3 ditch (together with the remains of copper offcuts in a Phase 4 ditch) show that there was small scale non-ferrous metalworking was taking place.

The excavation found occasional pits and postholes but none could be made into a meaningful plan. Three postholes in a row (**M678**) in the middle of the site may represent part of a former building or a fence line (the easternmost posthole was sealed by the furrow). A few pieces of Roman roof tile including tegula and a possible box tile were found but there was no evidence of a high status structure. Most of the tile was found in the north-eastern part of the main excavation area and the associated structure may therefore lie to the north.

5.1.4 Phase 4: Late Roman (late 3rd century to later 4th century AD)

Late Roman features were found across the excavation area, although two ditches (**M661** and **M663**) may delimit the extent of the western boundary of the settlement in this period. At least three sub-phases were evident and will be fully detailed at the analytical stage.

The longstanding trackway (**M688**) had now gone out of use. Curvilinear ditches (**M675** and **M687**) and north-west to south-east aligned ditch (**M668**) formed some of the earliest features within this phase.

These were followed by a probable sub-square enclosure (**M667/M690**) and up to six sub-rectangular enclosures which either survived in fragmentary form or only lay partly within the excavation area (**M673**, **M681**, **M686**, **M575**, **M689** and ?**M685**). A few truncated ditches and pits were found across the site. Stratigraphically, a large sub-rectangular enclosure and its recut (**M663/M664;** possible return **M676**), along with a structure (**M672**) may constitute the latest features attributable to this phase. The former contained a coin of AD364-378 in its backfill. Structure **M672** was a slot and posthole construction more than 8m in long and of uncertain width.

5.1.5 Phase 5: Post-Roman

After Roman occupation, the site was abandoned. Ridge and furrow developed across most of the site, following broadly the same north-west to south-east alignment as the former Iron Age and Roman features. In contrast, the later road, Hardings Lane, cut across the excavation in a broadly north to south alignment. The layout of the ridge and furrow field system therefore predated this medieval road. At least two phases of furrows may survive, the best surviving phase indicating that they were ploughed at 17m intervals. In the 18th and 19th century two large quarry pits were dug just to the west of Hardings Lane.

5.2 Assessment

5.2.1 Quantification of the Archive

20 sheets of context lists
608 context records

2 sheets of plan register
46 plans at 1:50

3 sheets of section register
57 sections at 1:10
57 sections at 1:20

4 sheets of sample register
31 bulk environmental samples consisting of 2 at 40L, 13 at 30L, 6 at 20L, 9 at 10L and 1 at 5L

1 sheet of site objects register
66 individual numbered objects

3 sheets of photographic index
18 photographic register sheets
6 black and white print films
7 Colour print films
5 Digital camera sheets

5.2.2 Stratigraphy and Phasing

The activity revealed through excavations has been attributed to five phases:

Phase 1:	Late Iron Age and Transitional (*c.*later 1st century BC or early 1st century AD)
Phase 2:	Early Roman (mid 1st century to mid 2nd century AD)
Phase 3:	Middle Roman (late 2nd century to mid 3rd century AD)
Phase 4:	Late Roman (late 3rd century to later 4th century AD)
Phase 5:	Post-Roman

5.2.3 Range and Variety

Archaeological remains were found across the whole excavation area. In some places these were comparatively dense with relatively complicated stratigraphy, although in others the remains comprised scattered features, with few stratigraphic relationships especially in the area at the southern part of site adjacent to Hardings Lane where the land fell away steeply. The excavation comprised only a small part of the former Iron Age/Roman settlement and many features extended beyond the excavation area. This made interpretation of some features problematic.

The excavation revealed a limited number of feature types which varied over time. There were fragments of a ring gully and ephemeral ditches in the Late Iron Age/Transitional period. The Early Roman features comprised a trackway, ring gully, sub-rectangular enclosures, some co-axial field boundaries and a few pits. In the Middle Roman period the trackway continued in use although there was an increase in the number of enclosures and settlement-related field boundaries. In this phase six oven/hearths were scattered across the site along with occasional rubbish pits and postholes. In

the Late Roman phase, the trackway and hearths seem to have gone out of use and a new field system was established comprising boundary ditches and sub-rectangular enclosures, a slot and posthole structure and a few rubbish pits. The post-Roman features largely consisted of a medieval ridge and furrow, although two late post-medieval quarry pits were also found.

The majority of features of the Iron Age and Roman periods were ditches, often backfilled in one episode. Intercutting or recut features were almost exclusively boundary or enclosure ditches. There were no positive features surviving on the site, and features were cut directly into the underlying geology, thereby placing a heavy reliance on the stratigraphic record and artefact assemblages for dating and phasing the sequence.

5.2.4 Condition

The surviving archaeological remains were in a poor condition. There was no evidence of floor levels surviving and shallow negative features such as postholes/slot structures survived only in truncated form. Larger negative features such as ovens/hearths and ditches have also only survived partially, often to only 0.1m to 0.2m in depth. There was widespread ploughing on the same alignment as the Iron Age/Roman settlement. The fact that medieval road, Hardings Lane, cut into the furrows may imply that the ploughing commenced as early as the Anglo-Saxon period. Ploughing in recent years has been deeper and has dug into the clay, having also affected artefact positioning. A high proportion of the pottery recovered was abraded with high levels of residuality and intrusiveness. The post-medieval quarrying evident next to Hardings Lane cut into earlier features.

Local soil conditions (clay) have affected the artefacts and ecofacts. Animal bone survival was especially poor. On the whole only large bones and some animal teeth survived in poor condition and these often crumbled into pieces on excavation. Metal artefacts recovered were in average to poor condition, with several requiring emergency conservation. Charred seeds are generally well-preserved, although some specimens are both puffed and distorted, as well as heavily abraded.

5.3 The Finds

5.3.1 Metal Objects

by Nina Crummy

Summary

A total of fifty-three objects was recovered (Table 1); items are catalogued in Volume 2, Appendix 1. In general they range in date from Roman to post-medieval, but at least one glass sherd may be modern. The range of functional categories represented is very limited.

Condition

In general the preservation of both the metal and non-metal objects is good. The objects are packed to a good standard of storage in either polythene bags or small crystal boxes supported by pads of foam. The bags and boxes are stored in crystal boxes or airtight Stewart boxes with silica gel.

Assemblage

The assemblage can be divided by material thus:

Silver	2
Copper alloy	30
Iron	9
Lead(-alloy)	7
Shale	1
Glass	4
Total	**53**

Table 1: PTN1 03 Objects by material category

The categories represented in Table 2 are: dress accessories (category 1); textile manufacture (3); household equipment (4); weighing (6); transport (8); general fittings (11); religion (14); metal-working (15); and miscellaneous (18). The categories are those defined in Crummy 1983 and 1988. Object types that occur in both the Roman and medieval periods are defined here as 'Roman', apart from two lead weights and a lead plug repair, which are more likely to be medieval. Other objects that can be even less specifically dated, such as iron nails, are defined as 'date uncertain'.

Date	**Category**									
	Coins	1	3	4	6	8	11	14	15	18
Roman	9	5	-	1	-	1	10	1	-	-
Medieval	1	2	-	1	2	-	-	-	-	-
Late medieval/ post-medieval	-	5	1	-	-	-	3	-	-	3
Post-medieval	1	1	-	-	-	-	1	-	-	-
?Modern	-	-	-	-	-	-	-	-	-	-
Date uncertain	-	-	-	1	-	-	-	-	2	2

Table 2: PTN1 03 Objects by categories

Most of the coins are Roman, ranging in date from the very late 3rd century to the late 4th century; most are from topsoil, with the only two stratified items dating to the 4th century (see Appendix 1). The late date of the group is typical of rural sites. The Roman dress accessories are two armlet fragments (SF 10, unstratified; SF 36, context 434), two beads (SF 37 & 66; ditch fills 559 (**M686**) and 188 (**M665**)), one only a small fragment, and an unstratified finger-ring (SF 14), though the latter may be medieval. At least one of the beads is a late form, typical of the last part of the 4th century, perhaps running into the early 5th. The other four items may also date to the 4th century, but they may be earlier. The only household object is a sherd of glass, but a second fragment from the same context may be modern (both SF 60). An unstratified lead V-shaped fitting (SF 13) is similar in form, though larger, to copper alloy attachment loops for Roman cavalry harness pendants. It is

therefore placed here in the category for transport, but the metal seems inappropriate for use on harness, and it may perhaps be better placed with general fittings.

All the Roman general fittings listed are nails, nine of iron, one a copper alloy furniture nail. No study of these latter items, which have a distinctive sub-globular slightly faceted head, has yet been undertaken and their precise period of use remains undefined, but they occur in the 1st-century AD at Pompeii and are probably a long-lived form. The iron nails (where the head survives) are all of Manning's Type 1b (1985, 134), of short to medium length with a roughly flat round head.

The final item listed in the table as Roman is a simple well-formed disc of lead with a hole for suspension close to the edge, and was probably used as an amulet (unstratified). White-metal and copper alloy pendants in the form of a crescent moon were used as prophylactic images throughout the Roman period, often in combination with either a phallus or a solar wheel symbol. Pierced coins and plain discs (both copper alloy and white-metal) are usually interpreted as solar amulets or votives, but an alternative interpretation for pierced *denarii* and plain white-metal discs, such as this lead example, may be that they represent the full moon.

Other objects that might be Roman from among the undated material are a fragment of copper alloy slag and a pair of copper alloy offcut strips, both of which cannot be closely dated but which suggest that there was copper alloy working in the immediate area.

The Roman assemblage therefore conforms to the most common pattern, with the best represented categories being dress accessories and general fittings. A more individual character for the assemblage is provided by the V-shaped fitting and the amulet, and possibly by the metal-working items.

The medieval objects, all from topsoil, are a cut farthing of Henry III (SF 22), a bar-mount (SF 24), a fragment of a composite strap-end (SF 38), a lead plug repair (SF 26) and two lead weights (SF 1 & 20). The three latter may be Roman rather than medieval, but cannot be closely dated and are probably more likely to belong to the later period.

Five dress accessories date to the late medieval or early post-medieval periods, as well as several fittings and miscellaneous objects. Again all are unstratified in topsoil. One of the fittings, a domed boss with lobate corners, may be from a book cover (SF 15). A well-preserved two-piece cloth seal (SF 39) points to the importance of sheep-rearing and the wool-trade at this period. This group of material is broadly contemporary with a half-groat of Elizabeth I (SF 40). A decorated buckle fragment and a ?handle fragment are more likely to be of 17th-century date or later.

Recommendations

Recommendations for individual finds are listed in Appendix 1 and follow comments on cleaning and conservation presented in Section 4.5. Amongst the copper alloy finds, four have been identified as having a priority for conservation. The twelve objects recommended for illustration are either unusual (as, for example, in the case of the copper alloy strip off-cuts) and/or relate to the use of the site, adding significantly to site interpretation.

Further analysis of the Small Finds will:

1. add to the understanding of the nature of the site, its function and status;

2. allow comparison with the other sites along the road corridor.

It is recommended that:

1. all the silver, copper alloy and lead objects should be cleaned (38 items) and all the iron nails should be X-rayed (9 items);

2. should the lead cloth seal prove to retain any textile between its two discs, specialist reports on both the fabric and the seal should be commissioned;

3. a report on the coin assemblage should form part of the published site report, providing full references and a brief discussion of comparable assemblages;

4. a report on the Roman objects should form part of the published site report, together with a brief summary of the later material. The report should include a detailed catalogue and discussion and should refer to similar material and assemblages where appropriate;

5. a maximum of twelve objects should be drawn, mostly from the Roman material, but also a few objects that are of either Roman or medieval date, and a few medieval or early post-medieval objects, in particular the cloth seal.

5.3.2 Metalworking Debris

by Tom Eley

Two contexts contained slag weighing 0.020kg. Context 202 (Phase 2, pit **204**) contained a small quantity (<0.001kg) of non-diagnostic slag and 0.019kg of copper alloy slag was found in context 91 from a Phase 3 ditch (**92**). Although it is not possible to conclude that metalworking was taking place in the locality based on the small amount of slag present, this remains a possibility.

Recommendations

XRF will determine whether the copper slag derives from non-ferrous metallurgical practices.

5.3.3 Lithics from PTN1 03, PTN4 03 and PTN7 03

by Barry Bishop

Introduction

This flint assessment considers the assemblages from three of the Partney sites (PTN 1 03, PTN 4 03 and PTN 7 03). The majority (43 pieces) came from PTN4 03, with six pieces recovered from PTN1 03 and four from PTN7 03. No structural features of prehistoric date were identified, and it is assumed that the lithics were residually introduced into later features. Due to the small size of the assemblages, their similarities and the absence of contemporary contextual information, the material has been examined as a single assemblage.

Raw Material

The range of raw materials used is similar at all of the three sites. The majority of pieces are manufactured from a light opaque grey or translucent yellowish grey flint, typical of the pre-Ipswichian tills found south of the Humber (Brooks in Guirr *et al.* 1989). Also present are a number of pieces made from translucent black flint, typical of the Devensian tills found along the Humberside coast, whilst a few pieces are a matt opaque grey which may have derived from the Lincolnshire chalk (ibid.). Surviving cortex, where present, varies from thick weathered chalky to smooth-rolled pebble types. Thermal scars, often heavily recorticated, are evident on pieces of all flint types.

The struck pieces are relatively small, rarely exceeding 50mm maximum dimension, and were probably made from small thermally fractured or water-worn pebbles and cobbles. Despite the differences in the raw material types, there is no reason to suppose that all could not be obtained from local alluvial or glacial till deposits (*e.g.* Henson 1985), and there is no evidence that any raw materials obtained directly from the parent chalk were exploited, despite the proximity of outcropping chalk with its potential for producing larger sized and better knapping quality nodules. Although more than one chronological period is represented by the material (see below), no chronological preferences could be identified in the type of raw material selected.

Technology

Most of the pieces, including all of the material from PTN1 03 and PTN7 03, represent knapping waste of limited diagnostic value. Two cores were recovered from Site PTN4 03, both of which are exhausted blade or narrow flake cores. Many of the pieces of debitage from this site consist of blades or

narrow flakes, which are the product of a carefully considered blade-based reduction strategy. Systematic blade production is also testified to by the presence of a crested blade, and a concern for platform maintenance by core rejuvenation flakes. Other pieces present include more crudely produced, short and thick, flakes (*cf* Martingell 1990). One of the flakes, of an opaque light grey flint, possibly from the Lincolnshire chalk, has been struck from a polished implement. Twelve pieces show evidence of secondary working, four of which consist of flakes or flake fragments exhibiting short stretches of edge trimming or blunting. A further four consist of scrapers, including three short-end scrapers made on flakes and a blade core with a steeply retouched end, apparently reused as a scraper. The other four consist of a blade with several burin spalls removed longitudinally from a snap; a notch made on a blade-like flake; a piercer made by minimally modifying the distal end of a blade, and a thick flake that has been bifacially retouched along one side, possibly for use as a chisel-type implement. In addition, two pebbles appear to have been modified, possibly for use as tools. Both consist of small lenticular pebbles that have been centripetally worked, one possibly for use as a cutting or scraping type tool and the other apparently used as a piercing tool.

Dating

The assemblage is evidently the product of mixed technological strategies spanning a considerable period of time. The chronological mixing of the material is most evident within the largest assemblage, from PTN4 03, as the assemblages from PTN1 03 and PTN7 03 are too small to identify any chronologically diagnostic technological patterning confidently.

The majority of pieces, including the blade cores, blades and blade-like flakes, and probably the burin, are most likely to date to the Mesolithic period, although similar technological strategies continue into the Early Neolithic. The flake struck from a polished implement is likely to be Neolithic or Early Bronze Age in date, whilst the more crudely produced pieces, including some of the squat, thick flakes and possibly the pebble tools, reflect a more opportunistic and *ad hoc* approach to flintworking, and would be most characteristic of Middle Bronze Age or later industries (*e.g.* Herne 1991; Young and Humphrey 1999).

Discussion

The assemblage, although small and with few diagnostic implements, indicates activity at the sites probably spanning the Mesolithic to Middle Bronze Age and perhaps later, not otherwise represented in the structural record. The few cores present, combined with the high retouched component, suggests that tool use rather than manufacture predominated, although the small size of the assemblage and the long time-span over which it was created suggests that activity remained sporadic and transient. This indicates that throughout the Holocene people repeatedly passed through the area, undertook occasional tasks, and proceeded on again, rather than settled in or exploited the area for any great length of time. Such use of the landscape is perhaps most characteristic of the Mesolithic and earlier parts of the Neolithic,

although it is notable that here such non-intensive use of the landscape continued well into the Bronze Age.

Mesolithic activity is generally not particularly well-represented in Lincolnshire, with fewer than 100 sites recorded during a recent survey, all of which consist of small transitory surface scatters of lithics, mainly confined to the higher ridges (Membury 2000a). The Neolithic period is better represented, numerous monuments, settlement sites and lithic scatters are recorded, demonstrating widespread occupation across the county, including settlements at Salmonby and Tetford further up the River Lymm valley, and at Kirkby and Tattershall Thorpe to the south-east (Membury 1999). Despite the large number of funerary monuments recorded from Lincolnshire, there is a surprising lack of settlement evidence, the principal concentrations being in the southern parts of the county, especially the fen-edge and Welland valley (ibid.). As with this site, most Bronze Age activity in Lincolnshire has been identified through lithic scatters.

Recommendations

The general lithic scatter from the three sites (listed above) provides evidence for Mesolithic to Bronze Age activity in the area with contemporary religious activity at the palaeochannels at PTN9 04, along with flint working and tree clearance at Area I. The total number of flints from all the Partney sites is significant and comparisons can be made with other sites in the area (see above) from the Mesolithic to Bronze Age. It is therefore recommended that this material should be integrated with the other flints from the Partney excavations with illustrations drawn of the more unusual and diagnostic pieces.

5.3.4 Iron Age and Roman Pottery from Area J (PTN1 03)

by Alice Lyons

Summary

This is a relatively large and well-recorded multi-period assemblage of pottery, most of which (79.03%) is Romano-British. The catalogue of the pottery and pottery fabric codes used are presented in Volume 2, Appendix 2.

Much of the material is abraded and there is also a significant element of residuality. A high proportion of the pottery shows evidence of burning after breakage which is consistent with the sherds having been burnt in antiquity, probably with general household waste before disposal.

Although some of this pottery is Transitional between the Late Iron Age and Early Roman periods (19.29%) what is of particular interest is the pottery in the Dales ware tradition. In addition to the well-known later Roman shell tempered Dales ware and the sandy tempered Dales-type ware, some of the shell tempered sherds also contain grog temper. If this is indeed grog (and not the clay pellets previously recorded; Tomber and Dore 1998, 157) this is potentially of interest. It may suggest that the Early Roman grog tempered tradition continued into the later part of the 2nd century when this Dale-type

ware pottery is known to have been produced. This aspect of the assemblage is worthy of further research.

Fine wares and specialist wares are not well represented within this assemblage indicating this is a largely utilitarian coarseware group of pottery from a community with some limited access to imported goods. As previous evidence of Roman occupation in this vicinity is rare (Precious 2003) this assemblage has the potential to increase current knowledge of pottery manufacture and use in this region between the 1st and 5th centuries AD.

Introduction

A total of 1,837 sherds of pottery, weighing 30.235kg, was recovered from Area J (PTN 1 03). This is a multi-period assemblage (Table 3) although the majority of pottery found is Romano-British.

Period	Sherd quantity	Weight (kg)	Weight (%)
Prehistoric	25	0.347	1.15
Transitional (between the late Iron Age and Early Roman periods)	300	5.832	19.29
Romano-British	1500	23.897	79.03
Post-Roman	12	0.159	0.53
Total	**1837**	**30.235**	

Table 3: PTN1 03 The pottery quantified by period

Condition

The pottery is generally abraded and has an average sherd size of 16.5g (similar to that recovered in the same area previously (Precious 2003) during the evaluation). A significant proportion of the pottery has been fumed after breakage, which is consistent with it having been burnt during the rubbish disposal process in antiquity. Although some evidence of decoration, sooting and lime has survived this process, much surface evidence has been lost due to post-depositional disturbance.

Methodology

The Roman pottery was analysed using the recording system described in the *Norfolk Archaeological Unit Pottery Recording Manual* (Shepherd 1999) and in accordance with the guidelines for analysis and publication laid down by the Study Group for Roman Pottery (Webster 1976; Darling 1994). The total assemblage was studied and a full catalogue was prepared. The sherds were examined using a binocular microscope (x10 magnification) and were divided into fabric groups defined on the basis of inclusion types present. The sherds were counted and weighed to the nearest whole gramme and recorded by context. Decoration and abrasion were also noted. No contextual data was supplied at this stage of analysis.

The pottery reported on in this report is in addition to the pottery recovered during evaluation which is reported on separately (Precious 2003). The pre-Roman and post-Roman pottery has been provisionally identified at this time.

The Transitional and Roman Pottery

A total of twenty-eight pottery fabrics were retrieved during this intervention (Table 4), several of which were found in both Transitional and Romano-British versions.

Period	Fabric	Code	Sherd No	Wt (kg)	Wt (%)
Transitional	Groggy grey ware	GW grog	91	1.872	6.30
	Grog tempered reduced ware (handmade)	HM grog	115	2.427	8.16
	Sandy reduced ware (handmade)	HM sandy	8	0.187	0.63
	Shell tempered reduced ware (handmade)	HM shell	9	0.259	0.87
	Grog tempered oxidised ware	OW grog	2	0.029	0.10
	Sandy grey ware	SGW	64	1.001	3.37
	Organic tempered sandy grey ware	SGW (o)	2	0.009	0.03
	Sandy grey wares with micaceous inclusions	SGW mica	2	0.009	0.03
	Sandy oxidised ware	SOW	3	0.021	0.07
Roman	?Hadham redware	?HAD	1	0.004	0.01
	Colour coat	CC	10	0.178	0.60
	Colchester white ware	Col WW	2	0.105	0.35
	Dales-type ware	DAL SGW	14	0.202	0.68
	Dales ware	DLA SH	89	1.154	3.88
	Fine grey ware	GW fine	8	0.080	0.27
	Groggy grey ware	GW grog	4	0.054	0.18
	Nene Valley colour coat	NVCC	18	0.185	0.62
	Nene Valley oxidised ware mortaria	NVOWM	4	0.367	1.23
	Oxfordshire red (and white) colour coats	OXRCC OXWCC	8	0.082	0.28
	Reduced ware with micaceous inclusions	RW mica	1	0.011	0.04
	Samian	SAM	32	0.380	1.28
	Sandy grey ware	SGW	1265	20.687	69.59
	Sandy grey ware with micaceous inclusions	SGW mica	4	0.111	0.37
	South Midland shell tempered ware	SMSTW	3	0.034	0.11
	Sandy oxidised ware	SOW	32	0.180	0.61
	Shell tempered ware	STW	1	0.002	0.01
	White ware	WW	7	0.062	0.21
	White ware with micaceous inclusions	WW mica	1	0.037	0.12
Total			1800	29.729	

Table 4: PTN1 03 The Transitional and Roman pottery, by period and alphabetical order of fabric code

Most of the pottery consists of locally (unsourced) produced sandy grey wares with Dales ware and Dales-types wares also common. Moreover, some of the shell tempered sherds, in the form of the distinctive Dales-type lid-locating medium mouthed jar (type 4.4.1), also contain grog temper. This is potentially of interest as it suggests that the Early Roman tradition of using grog as a temper may have continued in this region until at least the later part of the 2nd century when the Dales ware tradition of pottery making is thought have begun (Tyers 1996, 190).

Fine wares are rare with samian only representing 1.28% (by weight) of the assemblage by weight and other colour-coats (Nene Valley, Oxfordshire red and white colour coats and unsourced colour coats) only representing 1.5%. Specialist wares are also uncommon with no amphora recovered and only sparse mortarium (six sherds, weighing 0.472kg), representing 1.56% of the assemblage by weight.

This suggests a utilitarian assemblage from a community with limited access to imported ceramic goods. Since no site data has been integrated at this stage an alternative explanation (such as marginal settlement or industrial area) may also explain the lack of higher status fine and specialist wares.

This is a significantly different assemblage than that recorded during the previous phase of archaeological work (Precious 2003) which was predominantly a Late Roman assemblage with a higher proportion of non-local wares, suggesting a more affluent community.

Recommendations

It is recommended that the evaluation and excavation pottery assemblages should be integrated, with a full publication report produced for the group. The report will supplement the existing catalogue with detailed form and fabric descriptions and will integrate site phasing and context data once these have been finalised. It is important to examine (by thin-section) the Iron Age pottery for comparison with the ritual site where a possible pottery kiln was found as well as the Dales ware and Dales-type wares to establish if a new fabric type (grog tempered) for these forms is indeed contained within this assemblage.

5.3.5 *Roman Roof and Box Tile*

by Carole Fletcher

A small collection of twenty-three pieces of Roman roof tile weighing 2.271kg was recovered from the excavations from eleven different contexts (Table 5). The roof tile consisted of five tegula pieces, a possible imbrex fragment, with the remainder being undiagnostic. There was also a possible box flue tile fragment.

The tiles were found in Early Roman contexts onwards with no concentration in any phase. The box flue tile comprised two joining sherds, one from a Phase 3 ditch (**M688**) and the other from a Phase 4 ditch (**M673**).

Phase	Context/ feature	Qty	Weight (kg)	Comments
2	68	3	0.289	
3	M669	1	0.016	
3	427	1	0.438	1 Tegula with finger signature
3	455	3	0.246	1 Tegula
3	M688	1	0.095	1 ?Box flue =348
4	M673	1	0.048	
4	M673	4	0.421	1 Tegula; 1?Box flue (right angle) =465
4	483	1	0.020	?imbrex
4	M686	6	0.295	1 Tegula
5	317	1	0.372	1 Tegula
U	611	1	0.031	
	Total	23	2.271	

Table 5: PTN1 03 Roof by no. of pieces, weight and phase

Recommendations

No further work is recommended on the tile.

5.3.6 *Fired Clay*

by Rob Atkins and Carole Fletcher

A small collection of 75 fired clay pieces (not counting tiny fragments) weighing 1.523kg was recovered from the site from 37 separate contexts consisting of 28 different features (Table 6). The majority came from hand collection though a significant minority (0.681kg) came from soil samples (see Appendix 3 for full table).

Phase	Qty	Weight (kg)	No. of Features
1	1	0.007	1
2	18	0.183	4
3	26	0.888	11
4	22	0.350	10
Uncertain	8	0.095	2
Total	**75**	**1.523**	**28**

Table 6: PTN1 03 Fired clay pieces by number and weight

Recommendations

No further work is recommended on the fired clay.

5.3.7 *Stone Objects*

by Steve Critchley

Introduction

Seven millstone fragments and one honestone fragment were recovered from seven separate contexts. All fragments, except one unstratified find, were from Middle and Late Roman contexts (Table 7). Some of the millstones were recovered as multiple fragments. The furrow decoration on the worked faces and the thickness of the pieces implies that the samples are from millstones or flat querns. No diagnostic hopper or handle was associated with the stones.

Petrological analysis

Macroscopic examination showed the millstone samples to be composed of coarse grained, occasionally pebbly, sandstones with a high feldspar content. The latter gave rise to their reddish brown colour. They are semi-arkosic/arkosic arenites and would have been traded from the Carboniferous Millstone Grit and Coal Measure outcrops of the Southern Pennines. The single honestone fragment is made from a very fine-grained sandstone composed predominantly of quartz with significant amounts of feldspar and rock fragments. Petrologically this rock could be classed as a lithic arkosic arenite.

It is noticeable that there is an absence of Spilsby Sandstone samples – perhaps the local outcrops proved unsuitable. Certainly in the northern part of the Wolds, near Caistor, the Romans quarried the outcrop for quern stones although none of this type appears in this small collection.

Phase	Context/ Feature	Feature Type	Function	Comments
3	M665	Ditch	Millstone (6 fragments)	Worked areas
3	263	Oven	Millstone	Worked area
3	401	Ditch	Millstone (2 fragments)	-
3	455	Enc ditch	Honestone	Worked areas to 4 sides
3	455	Enc ditch	Millstone	Worked area
4	364	Ditch	Millstone	Worked face, pecked and grooved
4	M673	Enc ditch	Millstone? (3 fragments)	Worked areas
	99999	Unstrat.	Millstone	Worked area

Table 7: PTN1 03 Stone objects

Recommendations

No further work is recommended on the stone objects.

5.3.8 *Molluscs*

by Rob Atkins and Rachel Fosberry

Only eleven oyster shells were recovered from four contexts ranging from Phase 2 to Phase 4 in date. From Phase 2 ditches **37** and **305** came a single and two oyster shells recovered respectively, while four additional shells were each found in ditches **M663** (Phase 3) and **M662** (Phase 4).

Recommendations

No further work is recommended on the molluscs.

5.4 Zoological and Environmental Evidence

5.4.1 *Animal Bone*

by Ian L Baxter

The Assemblage

The assemblage recovered is small with only seventy-five countable bone fragments, including a few bone fragments recovered from soil samples (Table 8). Any conclusions to be drawn are necessarily tentative. Most of the material is derived from the infills of boundary ditches. Cattle are the dominant domestic species at the site accounting for 74% of bone fragments. An adult horncore found in a sample taken from Phase 3 (ditch **455**) came from a shorthorned beast. No suitable cattle bones were sufficiently complete to calculate withers heights. Apart from two unfused metapodial metaphyses all the cattle long bones recovered were fused, suggesting that the majority of cattle survived into adulthood and were primarily used for traction. It is possible that cattle from the farmstead site were supplied to the nearby temple site for sacrifice (see Site PTN9 04; Section 9) . Sheep/goats account for only 11% of the domestic species by numbers of identified fragments (NISP). The only specimen identifiable to species is a sheep distal tibia from Phase 3 (ditch **427**). Pig remains are infrequent accounting for only 1% of domestic animal remains.

Taxon	**PTN1 03 (includes sample bone)**				
	Phase 1 LIA/RB	**Phase 2 ERB**	**Phase 3 MRB**	**Phase 4 LRB**	**Total**
Cattle (*Bos* f. domestic)	1	3	13	38	55
Sheep/Goat (*Ovis/Capra* f. domestic)	-	2	5	1	8
Sheep (*Ovis* f. domestic)	(-)	(-)	(1)	(-)	(1)
Red Deer (*Cervus elaphus*)	-	-	-	+	+
Pig (*Sus scrofa*)	-	1	-	-	1
Horse (*Equus caballus*)	-	1	3	6	9
Total	**1**	**7**	**22**	**45**	**75**

Table 8: PTN1 03 Animal Bone number of identified specimens (NISP)

"Sheep/ Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted".

The bones of horses are much more frequent and account for 13.5% of domestic species. This is a very high proportion, although the bones of the larger domesticates are relatively more frequent in features peripheral to occupation areas (Wilson 1996). The horse bones have been treated the same way as those of cattle and some have certainly been butchered. As with the cattle, it is probable that horses from this farmstead were supplied to the adjacent temple site for sacrifice (see Section 9). No teeth or bones of young animals were found providing no evidence for on-site breeding. A P_2 and a M_1 found in ditch **M667**, and probably belonging to the same individual, came from a horse aged approximately 6 years old based on the wear curves published by Levine (1982). A tibia found in (ditch fill 521, ditch **M676**) came from an animal around 13½ hands high based on the multiplication factors of Kiesewalter (1888). A 1st phalanx from ditch **M661** has multiple exostoses indicative of high ring bone (Baker and Brothwell 1980). A red deer (*Cervus elaphus*) antler tine was also found in ditch **M661**.

Discussion

Cattle and to a lesser extent horses are the most frequent species recovered from the ditches of the site. It is unknown to what extent this is representative of the original farm stock population as the bones of the larger mammals tend to be disposed of in features peripheral to the main focus of occupation of a site (Wilson 1996).

Recommendations

A small amount of animal bone was recovered from the Lindsey Archaeological Service's evaluations (but not recorded in their report). It is recommended that this assemblage should be examined to establish whether the unusual number of horse remains was also found in the evaluation. No further work is recommended on the bone from the excavation: the report included here will be summarised for publication.

5.4.2 *Charred Plant Macrofossils and Other Remains*

by Val Fryer

Thirty samples from features of Late Iron Age to post-Roman date were taken and processed. The samples were bulk floated by the CCC AFU team, and flots were collected in a 500 micron mesh sieve. In most instances the flots were air dried prior to submission for assessment. All flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x16. The plant macrofossils and other remains noted are listed in tables (Volume 2, Appendix 4). Although most were well preserved, some specimens were both puffed and distorted (possibly as a result of combustion at extremely high temperatures) and heavily abraded.

Site PTN1 03 recorded features associated with a probable Late Iron Age to Roman farmstead. Samples were taken from a variety of contexts including

pits, boundary and enclosure ditches, an eaves-drip gully and an oven. Although all the recovered assemblages were small (i.e. <0.1 litres in volume), most appeared to contain cereal processing debris including chaff (most notably spelt (*Triticum spelta*) glume bases), weed seeds and occasional grains. The predominance of such material within oven **294** (Samples 11, 12 and 13) may indicate that this waste was being used as fuel, a practise which certainly has contemporary parallels elsewhere within eastern England. Other fuel sources appear to have included wood/charcoal and possibly heather (*Ericaceae*) stems.

Although a number of the assemblages appeared to be primarily composed of scattered refuse and/or wind-blown detritus, there was some indication that discrete dumps of material were being placed in available open features on the site of all phases, most notably within the ditches as well as a Phase 3 pit (**170**).

Recommendations

Understanding the use of ovens within a Roman settlement is significant as little work has yet been undertaken to address this issue in North Lincolnshire and should be viewed as of regional importance. Further work should prove whether fuel was being used and definition of fuel types may indicate the function of the ovens at Site PTN1 03. This will aid understanding of the local economy as if, as may be the case, cereal processing waste was being used as a fuel, it implies that such cereal processing was taking place on site.

The following are therefore recommended for full quantitative analysis:

Samples 11, 12 and 13	Fills within oven **294**	Possible fuel

6 SUMMARY OF RESULTS FROM PTN2 03 (Area H)

6.1 Introduction (Fig. 8)

Within the excavation of the palaeochannel discovered at this site there were seven separate 'packages' of sediment each representing a discrete depositional episode. This palaeochannel meandered in a roughly east to west direction along the bottom of the valley, forming a tributary of the River Lymm. The former channel was largely infilled during the Early Neolithic to Bronze Age periods. The site lay at *c.*13.8mOD, the channels being sealed below topsoil 0.3m thick and subsoil 0.15m thick.

6.1.1 Phase 1: Late Glacial Terrace Deposits?

The earliest palaeochannel deposits comprised three layers (collectively *c.*0.3m thick) of coarse grade terrace deposits. Though undated these deposits probably date to the Late Glacial period. There was no organic material in these layers.

6.1.2 Phase 2: c. *Early Neolithic*

The second oldest 'package' comprises horizontally bedded overbank flood deposits consisting of three layers. This package directly overlies Phase 1, apparently without erosion. The upper layer has been carbon dated as 4040 to 3790 BC (to 2 standard deviations).

6.1.3 Phase 3: Early to Middle Neolithic

The complex channel-fill sequences of Phase 3 appeared to fill a channel-form cut into the floodplain deposits of Phase 2. This channel survived to more than 8m wide and 1m deep comprising 13 different lenses/deposits. These were a series of fining-upward sequences probably representing episodic changes in discharge. This channel dates sometime between the radiocarbon dates of 4040 to 3790 BC (to 2 standard deviations) of Phase 2 and Middle Neolithic date 3650 to 3380 BC (to 2 standard deviations) of Phase 4 (below). Environmental samples (Samples 2 and 3) from this phase provide some evidence of charcoal and cereal grain in this period, when crops were evidently grown nearby.

6.1.4 Phase 4: Middle Neolithic

A second complex of channel-fills occurred in Phase 4. This channel cut the Phase 3 channel on the east side and consisted of at least seven lenses/deposits. As in the preceding phase, this comprised fining-upwards sequences with abundant organic material including wood and hazel nuts. From Sample 1 came galls of *Eriophyes laevis inangulis*, the alder leaf mite (Mark Robinson pers. comm.). Phase 4 was dated as Middle Neolithic 3650 to 3380 BC (to 2 standard deviations).

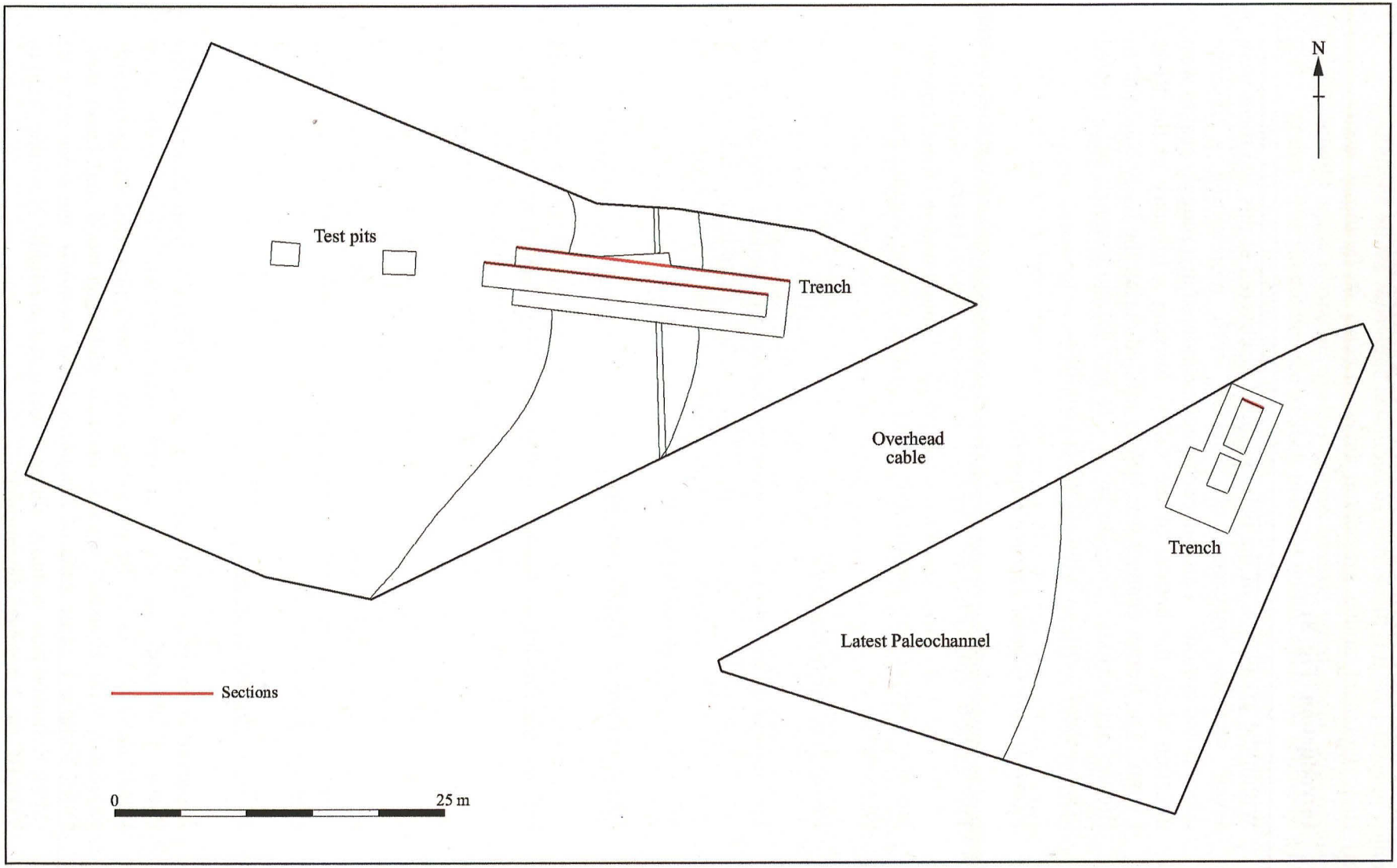


Figure 8 *Plan of PTN2 03*

6.1.5 Phase 5: Middle?/Late Neolithic

Phase 5 consists of three channel fill deposits dominated by sand. These deposits cut across Phase 3 and 4 channel fills.

6.1.6 Phase 6: Middle?/Late Neolithic

Phase 6 appears to represent horizontal bands of overbank alluvium deposition more than 30m in width and more than 1m deep. This was recorded across the excavation trench and the test pits adjacent to the east and west. The eastern test pit recorded these layers as being *c*.1.3m thick while the two test pits to the west demonstrate that this layer continued throughout the excavation area although it shallowed out slightly to only 0.9m thick in the westernmost test pit. The layers in the main trench consisted of at least nine separate deposits of silt and clays often with a significant organic component. These seem to mark substantial flooding across the valley base in this period.

6.1.7 Phase 7: Early Bronze Age +

Cutting this overbank deposit was a channel fill deposit, 13m wide and more than 1.3m thick. A lower layer of this channel was dated to the Early Bronze Age date 2300 to 1950 BC (to two standard deviations). It is likely that the upper layers of this channel had been filled in the Bronze or Iron Age. A thin (0.15m thick) subsoil layer sealed the channel deposits.

6.2 Assessment

6.2.1 Quantification of the Archive

Excavation

64 context numbers recorded

1 sheet of plan register
2 plans at 1:200

1 sheet of section register
3 sections at 1:50

1 sheet of sample register
3 bulk samples at 30L, 1 at 20L and 1 at 10L
4 column pollen samples
Spot pollen samples were taken

6.2.2 *Stratigraphy and Phasing*

The activity revealed through excavations can be attributed to seven periods:

Phase 1: Late Glacial terrace deposits?
Phase 2: *c.*Early Neolithic
Phase 3: Early to Middle Neolithic
Phase 4: Middle Neolithic
Phase 5: Middle?/Late Neolithic
Phase 6: Middle?/Late Neolithic
Phase 7: Early Bronze Age +

6.2.3 *Range and Variety*

The remains of the palaeochannel were found across the whole excavation area although on the western side only Phase 6 flooding/overbank deposits were found. The western edge of the palaeochannels was located whereas the eastern edge of the palaeochannel was not. Overhead telegraph cables running across the eastern part of the site determined a *c.*15m wide gap between the main excavation area and the test pit to the east. The similarities in the sequences between the main excavation area and this eastern test pit show that the basic stratigraphy was the same. The eastern test pit was slightly deeper than the main excavation area indicating that deeper channels continued in this direction. It is possible that earlier and/or later phases of the palaeochannel lay outside the excavation area. The three radiocarbon dates from Phases 2, 4 and 7 deposits imply that the vast majority of the palaeochannel within the excavation area was infilled over a *c.*1500 year period between the Early Neolithic and Early Bronze Age.

The trenches were excavated at right angles to the last river channel sequence within the excavation area (Phase 7), although the meandering nature of palaeochannels means that it is unlikely that the excavation trench was excavated at right angles to the other channels: the extent of river channels shown in the sections (for example, of Phase 3 and 4 features) therefore needs to be treated with caution.

Within the main excavation trench was dense and complicated stratigraphy. The drawing and phasing of the sequences was assisted by the presence of Dr Steve Boreham from the Department of Geography of Cambridge University. Sufficient evidence survives to permit an interpretation of distinct phases including channel features and overbank deposits.

6.2.4 *Condition*

The palaeochannel consisted of up to 2.5m of deposits (below 0.5m of topsoil and subsoil). The permanent water table was fairly high, lying about a metre below the present ground level. This resulted in over 2m of deposits which contained well-preserved organic remains. The excavation found that ecofacts such as hazelnut shells survived in good condition. The bulk sample evidence is therefore very good and there is strong possibility that the pollen evidence

will be equally as good. The combination of physical evidence, radiocarbon dates, and pollen and bulk samples provides the potential to understand the environment of the area during the different phases.

6.3 Environmental Evidence

6.3.1 Sedimentology and Pollen Analysis

by Steve Boreham

Introduction

This report describes an investigation of a palaeochannel initially identified from geophysical investigations, which revealed a sinuous channel-like form crossing the line of the proposed route. A north-west to south-east aligned excavation (TF 4080 6780) some 16m long and 2m deep across the channel-like feature, revealed a complex of channel and floodplain sediments resting on a gravel terrace surface. It quickly became apparent that the clay-filled channel-form detected by the geophysical investigations was only the most recent phase of deposition in this floodplain environment. The stratigraphy of the sediments indicated a complicated depositional history, with a wide variety of lithologies including sand, silt, clay and organic beds. The lithology of the strata encountered in the north-east face of the section was recorded in the field, and four detailed logs (A-D) were described and sampled using monolith tins. It appeared that the sequence became thicker towards the south-east, and consequently a separate stepped pit was sunk some 15m from the end of the trench. A detailed 3m log from this pit (Z) was described at 5cm intervals.

Stratigraphy of logs A-D from the Trench, and log Z from the Pit. A descriptive section of the trench is shown in Fig. 9.

Log A – described bottom-up

0-5cm	Gravel beneath water level in trench.
5-14cm	Matrix supported medium gravel with flint and chalk; coarse black sand matrix.
14-29cm	Grey/brown silty medium sand with pebbles.
29-36cm	Black/grey silty sand with occasional bivalve shells.
36-47cm	Yellow/grey silty medium sand with wood fragments.
47-65cm	Brown organic silt with wood and shells.
65-85cm	Grey silty clay with rootlets and shell fragments.
85cm	Top of step in trench.

Monolith A 35-85cm

Log B – described bottom-up

0-19cm	Black/grey organic silt (mottled yellow at base).
19-27cm	Grey mottled silt with sand inclusions.
27-49cm	grey/brown mottled clay.
49-63cm	Orange/brown mottled clay with thin sandy lenses.
63-100cm	Grey/orange slightly mottled clay.

Monolith B 15-65cm

Log C – described bottom-up

0-15cm	Black medium matrix to clast supported gravel; black coarse sand matrix.
15-28cm	Grey/brown silty sand with pebbles.
28-46cm	Grey/brown organic silt and sand with pebbles.
46-56cm	Grey/yellow mottled silt with wood fragments.
56-68cm	Soft yellow/brown mottled silty clay with organic material.
68-90cm	Soft grey/brown organic silty clay with wood fragments.
90cm	Top of step in trench.

Monolith C 60-90cm

Log D – described bottom-up

0-8cm	Black matrix supported medium gravel; black coarse sand matrix.
8-23cm	Black organic medium sand.
23-40cm	Grey/yellow sand and silt with abundant plant fragments (hazel nuts &c).
40-49cm	Yellow medium sand with silt and occasional plant fragments.
49-62cm	Black organic fragments, wood, twigs and thin sand lenses.
62-69cm	Grey/yellow organic sand.
69-83cm	Grey/brown organic material with silt.
83-92cm	Soft yellow silty clay.

Monolith D 40-90cm

Log Z – described bottom-up

0-8cm	Gravel beneath water level in trench.
8-11cm	Matrix supported gravel; medium sand matrix.
11-24cm	Grey medium sand with mollusc fragments.
24-67cm	Black/grey sandy organic silt.
67-84cm	Yellow/grey mottled organic silt with wood fragments (hazel nuts &c).
84-94cm	Black/grey sandy organic silt.
94-99cm	Black organic silty medium sand.
99-109cm	Grey slightly silty medium sand.
109-110cm	Grey/black organic silt drape.
110-116cm	Blue/grey silty clay with shells.
116-131cm	Blue/grey mottled silty clay with shells and wood fragments.
131-134cm	Blue/grey/orange mottled silty medium sand.
134-150cm	Clue/grey mottled organic silty clay with rootlets, wood fragments and shells.
50-220cm	Orange/grey mottled silty clay.
220-290cm	Orange mottled clay.
290cm	Top of section (c.45cm of plough soil removed).

Spot samples at 5cm intervals

Lithology

Although Fig. 9 shows a descriptive section of the trench, the shear complexity of the cross-bedding and nested-channels described makes understanding the sequence a daunting task. In order to aid this process, Fig. 4 shows a colour-coded lithological section. Coarse grade sediments (gravel and sand) are shaded red-orange, whilst finer grade sediments are shaded green-blue. Organic beds are shaded violet and other beds with a significant organic component are shown with violet hatching. Using this technique, it is clear that there is a general transition from coarser sediments at the base of the section to finer sediments at the top of the trench. This generalised fining-upward sequence is also shown in Log Z from the adjacent pit. However, it is also clear that there is much internal complexity with very dissimilar sediment types resting adjacent to one another. In order to understand and interpret this sequence it is necessary to investigate the stratigraphy of these sediments.

Stratigraphy

Once stratigraphic method is applied to the sediments described in Figs. 9 and 10, the sequence of deposition becomes clear, and the depositional history can be determined. Figure 11 shows seven separate packages of sediment (A-G) each representing a discrete depositional episode. The lithological units in each sediment package are indicated by Roman numerals in order of deposition. Figure 12 shows the depositional history of these sediments. In general, sand and gravel are deposited in high-energy environments, whilst clay and organic material accumulate in low-energy environments. Figure 13 shows a sequence of likely depositional events leading to the formation of the Partney palaeochannel sediments.

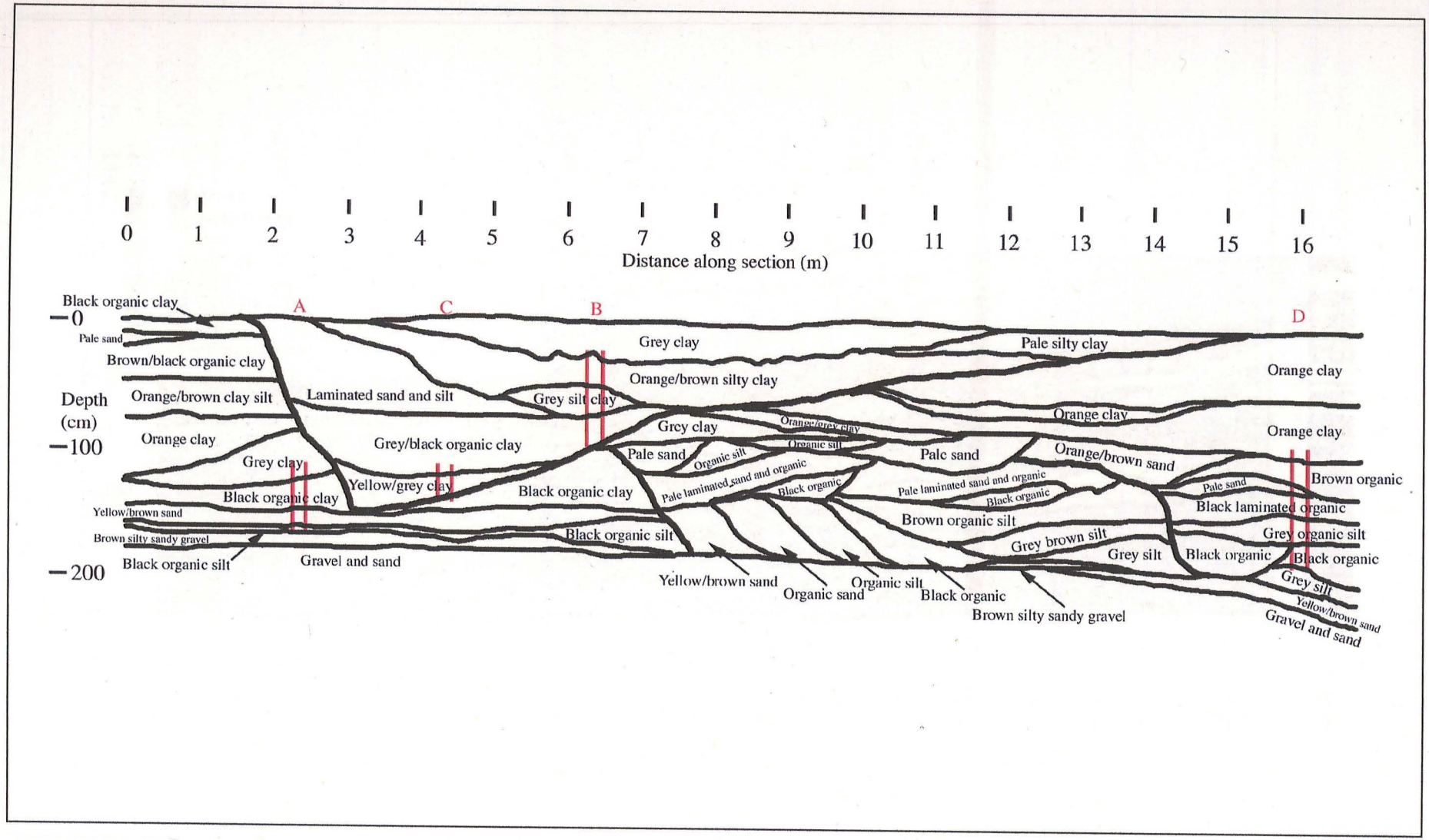


Figure 9 *Descriptive section of PTN2 03 trench showing the location of logs A-D*

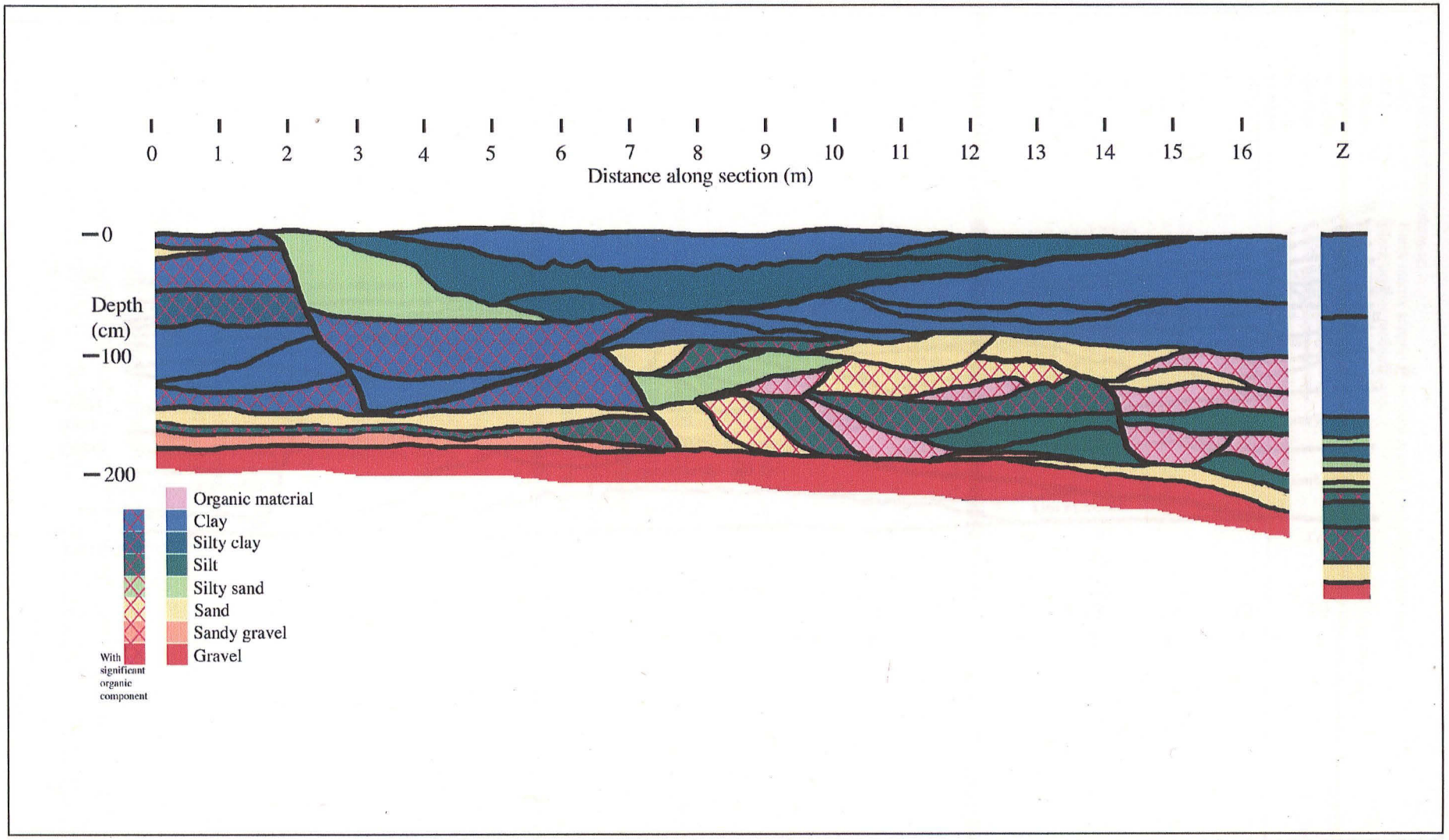


Figure 10 *Lithological section of PTN2 03 trench and Eastern test pit*

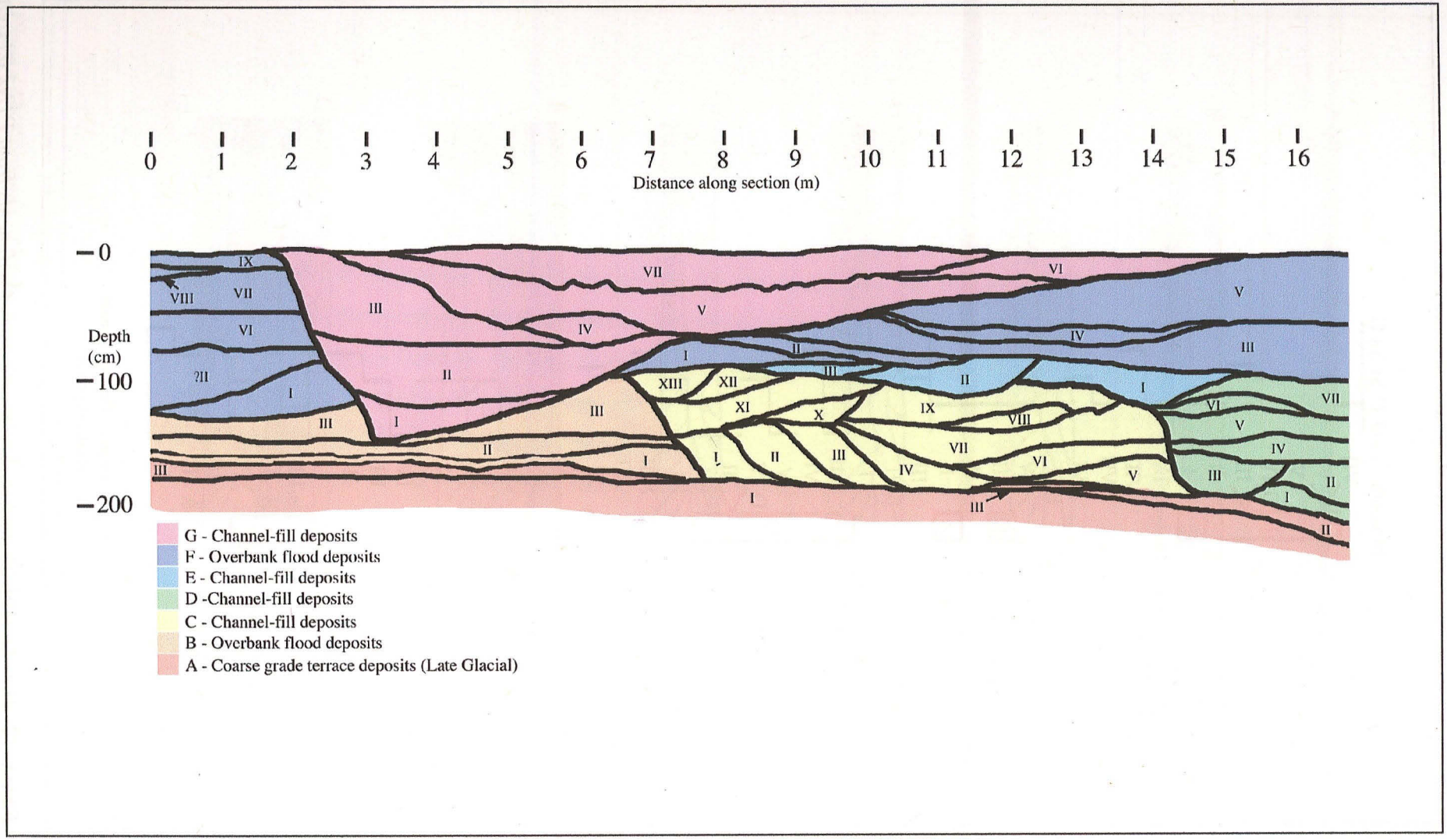
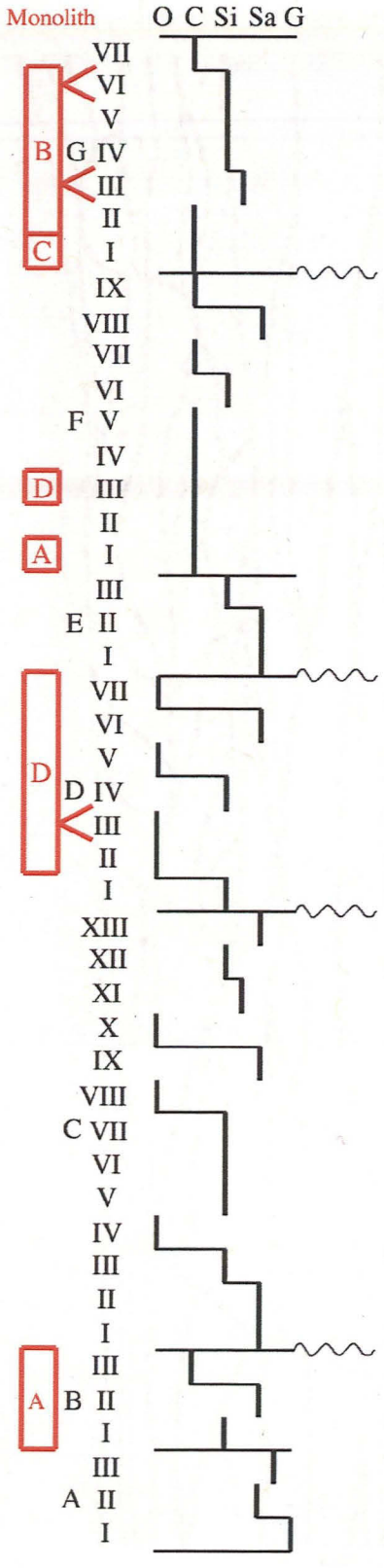


Figure 11 *Stratigraphy of PTN2 03 trench*



Key: O=organic, C=clay, Si=silt,
Sa=sand, G=gravel

Figure 12 *The changing depositional environment of sediments from PTN2 03 trench*

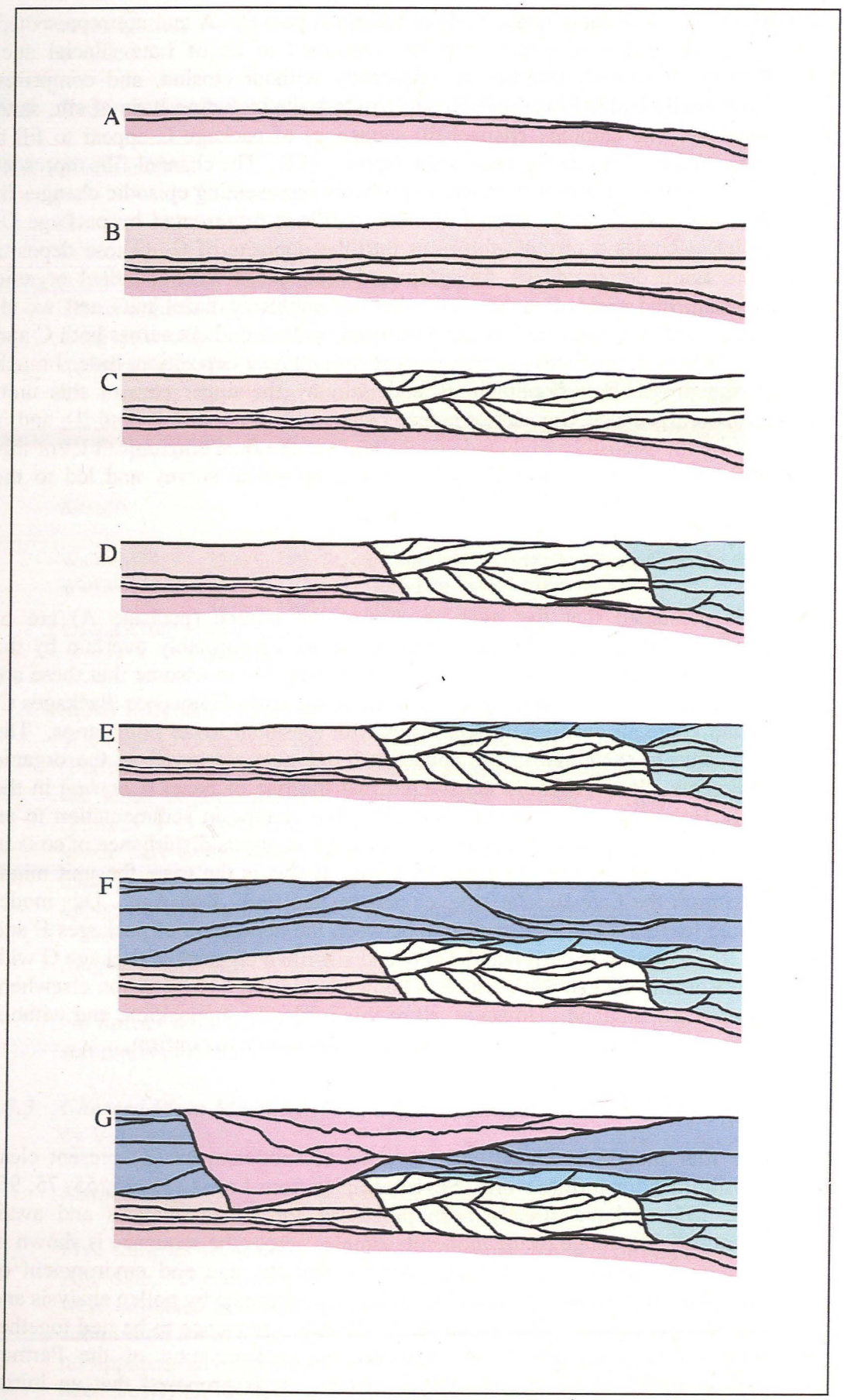


Figure 13 *Sequence of likely depositional events from PTN2 03 trench*

The oldest sediments in the section belong to package A and are represented by gravel and sand terrace deposits presumed to be of Late Glacial age. Package B directly overlies A, apparently without erosion, and comprises horizontally bedded overbank floodplain deposits including beds of silt, sand and clay. The complex channel-fill sequences of package C appear to fill a channel-form cut into the floodplain deposits of B. The channel-fills represent a series of fining-upward sequences probably representing episodic changes in discharge. A second complex of channel-fills is represented by package D, which occupies a channel-form cut into the deposits of C. These deposits were again dominated by fining-upwards sequences with abundant organic material, and yielded some of the best examples of hazel nuts and wood. Channel-fills of package E were dominated by sand and cut across both C and D. Package F appears to represent overbank alluvial deposition. Indeed much of the present-day floodplain is underlain by the upper part of this unit. However, package G occupies a deep channel-form cut into F (and B), and is filled with ostensibly fine-grade deposits. It is the final clay unit (VII) of this channel-filling that was detected by the geophysical survey and led to the original excavation.

Age of the Deposits

It is presumed that the river gravels of the terrace (package A) are of Devensian (Last Glacial) age. Since these are conformably overlain by the overbank deposits of package B it seems reasonable to assume that these are either also Late Glacial in age, or belong to the early Holocene. Packages C, D and E are all channel-fill sequences with erosional lower boundaries. The only clue to their age is the abundant hazel nuts preserved in the organic sediments. It is generally considered that the rise of hazel (*Corylus*) in the early Holocene was at about 9000 BP. The change in sedimentation to an overbank clay-dominated regime in package F suggests disturbance of soils in the catchment, perhaps by tree clearance. If this is the case, the unit might date from the Late Bronze Age, or perhaps the Early Iron Age. This model would leave a significant time-gap between the deposition of packages E and F. It is tempting to correlate the clay and silt-filled channel of package G with the 'Romano-British Silt', which is known to exhibit basal incision elsewhere in southern England. However, all of this is clearly supposition, and without radiocarbon dating or pollen evidence it is impossible to confirm.

Recommendations

The four monoliths (A-D) and sequence of spot-samples (Z) present clear possibilities for further work. Seven samples from Log Z (15, 35, 55, 75, 95, 115, 135cm) have already been processed for pollen analysis and await counting. The range of the monolith samples across the sequence is shown in Fig. 6. It seems reasonable to suppose that the age and environment of deposition of packages B, D and G could be determined by pollen analysis and radiocarbon dating. This would allow the entire sequence to be tied together with a firm chronology, which would aid interpretation of the Partney palaeochannel in an archaeological context. It is proposed that an initial

investigation would entail a total of 24 pollen samples being prepared and counted.

6.3.2 *Radiocarbon Dates from Palaeochannels*

Introduction

On the request of Mr Jim Bonnor (Senior Built Environment Officer, Lincolnshire County Council) it was decided to assess the dates of the palaeochannels. These dates were obtained after the above report was written. Three organic deposits (prepared by Dr Steve Boreham) from the channels were sent off to the University of Waikato for carbon dates. These three samples span the Neolithic to Bronze Age (*c*.4000 to *c*.2000BC). On two of the samples there is a double peak in the calibrated date suggesting two possible date ranges. Both peaks are recorded with their likelihood within the 95.4% probability (to 2 standard deviations).

Results

Waikato15959	2300 to 1950 BC (to 2 standard deviations)
Waikato15960	3650 to 3500 BC (84.4%) (to 2 standard deviations)
	3430 to 3380 BC (11%) (to 2 standard deviations)
Waikato15961	4040 to 4010 BC (4.2%) (to 2 standard deviations)
	4000 to 3790 BC (91.2%) (to 2 standard deviations)

Steve Boreham commented on where the samples taken. The first sample, Waikato 15959 came from a black organic clay from sediment package B (Partney_I_A_55-65cm). The second sample, Waikato 15960, was taken from the black organic material from sediment package D (near the hazel nuts) (Partney_I_D_46-53cm). The third sample, Waikato 15961, came from the lower part of the channel-fill from sediment package G (Partney_I_B_15-23cm). This supports the earlier report, with the exception of the fact that it appears that the upper parts of the channel-fill are Bronze Age and Iron Age.

Recommendations

No further work is required on these particular radiocarbon dates, other than to summarise the results for publication.

6.3.3 *Charred Plant Macrofossils and Other Remains*

by Val Fryer

Methods

Five samples were taken from palaeochannel deposits of Neolithic to Bronze Age date. The samples were bulk floated by the CCC AFU team, and flots were collected in a 500 micron mesh sieve. The flots were air-dried prior to submission for assessment. As air drying of the waterlogged assemblages had no apparent adverse effect on the macrofossils, these samples have now also been slowly air dried to facilitate long term storage.

All flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x 16. The plant macrofossils and other remains noted are listed in tables (Appendix 5). Nomenclature within the tables follows Stace (1997). Both waterlogged/de-watered and charred plant remains were recorded and, where appropriate, the status of the material is noted within the tables. The degree of modern contamination within the waterlogged/de-watered assemblages is not known, but is probably quite low due to the nature of the deposits.

Preservation

Waterlogged/de-watered macrofossils were noted in the assemblages, but although roots and twigs were generally abundant, seeds, fruits and other remains were often surprisingly rare. The reason for this is not clear at present, but it is not thought to be a result of the drying of the material prior to assessment as both the dried assemblages and the wet retents were similarly composed with the recorded material being robust and easy to identify.

Results

The five samples from this excavation were all removed from waterlogged fills within a series of palaeochannels. Carbon dating has established a Neolithic to Bronze Age date range for these deposits. The recovered assemblages indicated that the local environment comprised open woodland, with alder (*Alnus* sp.) and hazel (*Corylus avellana*) being the predominant species, although other shrub taxa, including elderberry (*Sambucus nigra*) and bramble (*Rubus* sect. *Glandulosus*), were also recorded. Floral macrofossils were not common, but seeds of dry-land herbs including stinging nettle (*Urtica dioica*), buttercup (*Ranunculus* sp.) and chickweed (*Stellaria media*) were recorded throughout. Evidence for human activity in the form of charcoal and charred seeds/cereals was noted in only two samples (2 and 3), both Middle Neolithic in date.

As with channels from PTN5 04 and PTN9 04 there seems to be a blanket hazel/alder and scrub dry grassland across the Partney sites in the Bronze Age and Neolithic periods. Information from the pollen will be more informative (than bulk samples) if there is any change in the habitat over the different periods.

Recommendations

The waterlogged plant remains from Sample 1 were the most productive sample on this site for habitat (see Table 14 in Volume 2, Appendix 5). Further analysis of this sample would be useful and act as a support to the potential pollen profile obtained.

The following sample is therefore recommended for full quantitative analysis:

Sample 1	Local habitat	Middle Neolithic

7 SUMMARY OF RESULTS OF PTN 4 03 (AREA C)

7.1 Introduction (Fig. 14)

This excavation located the part of a nationally important rural hospital complex – St Mary Magdalene – linked to Bardney Abbey, the documentary history and parallels for which are presented in Section 7.3. The site has been described as unique, forming the 'missing link' between monastic infirmaries and true hospitals (Barney Sloane, pers. comm.). Two main grave types were found, one possibly representing those serving the hospital and estate and the other priests.

The hospital site lies on the brow of a west-facing valley side overlooking the flood plain. The northern half of the site was on fairly level ground falling away gently from the end of the chapel to the south (at 22m OD on the north side and 19m OD on the south). The geology exposed in the excavation consisted of natural silty sand with Spilsby sandstone outcrops exposed in places.

Evidence for human occupation comprised features dating from the early medieval to the post-medieval periods (Phases 1 to 4). There was a scatter of 43 worked flint pieces which may imply some earlier prehistoric activity in the vicinity. Apart from one piece of Middle Saxon pottery there is no evidence for Anglo-Saxon activity. Continuous occupation occurred from *c.*1100 to the middle of the 15th century. There was little post-medieval or later activity with only a boundary ditch and some 20th-century drainage pipes present.

7.1.1 Phase 1: Early medieval (c.12th century)

The major feature discovered was the stone chapel which survived only as wall foundations with the above-ground remains having been entirely robbed and removed from the site. All surviving chapels of this period (for example, the leper chapel hospital of St Mary Magdalene at Cambridge) comprise single storey buildings of various sizes. The foundations at Partney can be extrapolated to suggest a modest rectangular building, measuring 12.6m long by 6.6m wide with external buttresses. Originally the chapel consisted of one room. Features directly to the south a burial (Sk18) which lay within the chapel may have been structural. All the surviving architectural stonework, apart from one piece, is 12th century (Glyn Coppack pers. comm.). At least four types of stone were used in its construction, apparently to give the building a pleasant appearance (Andrew Brown pers. comm.).

To the east of the chapel were at least a dozen quarry pits, three of which are dated by pottery recovered from their backfills. Three burials cut into four of the pits assigned to this period. To the west of the chapel, several ditches had been cut by later postholes and ditches. Very little pottery was recovered from the ditches and the phasing is therefore tentative.

Figure 14 Phased plan of PTN4 03

7.1.2 *Phase 2: Medieval (mid 12th to mid 15th century)*

Introduction

Several of the burials included in this phase may relate to earlier activities, while several medieval features such as wells were probably long-lived, only being backfilled in the middle 15th century, just before or perhaps even contemporary with the hospital's destruction (Phase 3). During the analytical stage, the attribution of features to this phase will be reviewed.

The hospital complex seems to have been well-planned. An unstratified stone burial marker proves that at least some of the burial plots were defined. A pathway leading to the chapel (flanked by burials) presumably ran from the road recorded in the *c.*1630 map of Partney . Different types of burials were positioned in specific areas of the cemetery with shallow graves to the north of the pathway, along the southern wall and within the chapel. Anthropomorphic graves lay to the south of the pathway. Most of the burials, regardless of location, were in north to south rows.

Burials

A north to south road is shown on the *c.*1630 plan of Partney, about 20m to the east of the excavation area (Fig. 5). The *c.*2.5m wide east to west pathway found during the excavation presumably led from this roadway to the east wall of the chapel, where it may have turned northwards and then westwards to run alongside the building, leading to a probable doorway in the north wall. Recent excavations at Partney's sister chapel at Skendleby demonstrate that this structure had an entranceway on the north side.

At Partney, a group of fourteen shallow burials was laid out along the north side of the pathway. There was no evidence for any of these skeletons being placed in coffins and presumably these were simple earth-cut graves with the body placed in shrouds. One grave (Sk.1) had been disturbed by later burials (Sk.8 and Sk.12) with the remains possibly dumped in a sack (see Section 7.5.1 below). Radiocarbon dating of Sk.3 gave a calibrated date of AD 1030-1280 (to 2 standard deviations). The cemetery's occupants yielded a range of ages including three adolescents, two young to middle aged, one middle aged and two old. Where the skeletons could be sexed, all appeared to be male.

To the south of the pathway were twenty-six burials in four north to south rows. While the cemetery was fairly well-planned, there were a few empty spaces within the rows, with two intercutting burials (Sk.33 and Sk.29) and another example of burials made on top of each other (Sk.16 beneath Sk.13).

Burials to the south of the pathway may have been those of priests associated with the hospital as four contained the remains of pewter chalices (Sk. 32, Sk. 35, Sk. 38 and Sk. 41). It may be significant that all the burials were adults with the youngest classified as young to middle age. Where the skeletons could be sexed all appeared to be male, with the exception of Sk.29 which survived in poor condition and was classified as possibly female. At least

twenty-one of these twenty-six burials consisted of deep planked graves with head niches (*i.e.* anthropomorphic), two containing iron nails (Sk.14 and Sk.40). Burial 14 also contained an adze or mattock and a knife and could represent an abbot burial (Barney Sloane, pers. comm.). One individual had been wearing a garment since a buckle was found *in situ* (Sk.29).

One burial was found inside the chapel, possibly indicating status. In the Statutes of Chichester 1292, there was an injunction that there should be no indiscriminate burials in the church or chancel except for those of the lords of the village, patrons of the church, and their wives, and the rectors and vicars. By the 15th century, burial of lay people in the nave and aisles of the church was common (Daniell 1997, 187). Two burials along the south wall of the chapel consisted of a child burial (Sk. 19) and an adolescent (Sk. 15). The presence of a third burial along the south wall can be surmised by the remains of human bone found in a post-dissolution quarry pit (**111**).

Chapel

The chapel's initial cell (see above) was later sub-divided with an interior north to south wall built, possibly with a rood screen or raised chancel. This may have been built at the same time as at least one new window was inserted. A few fragments of 13th- or 14th-century stained glass and lead cames were recovered. Despite these small changes, the chapel was not extended or altered from its original design.

Other Features

To the north of the chapel were very few features, those present generally consisting of east to west boundary ditches and shallow quarry pits. The lack of features here seems to imply that this area was perhaps used for agriculture or a garden with no hospital-related structures in this area. To the west of the chapel were several small pits/postholes in approximate east to west rows/alignments which seem to relate to a former building measuring *c.*15m long and *c.*8m wide. To the south-west of the chapel were larger pits/quarries, the backfills of which were largely sterile, although a few were infilled with domestic and other refuse including a two-tined hoe, which may be residual (see Section 7.4.1).

Between 10m and 25m to the south of the chapel were a few domestic features including the fragmentary remnants of another posthole structure on an east to west alignment measuring *c.*12m by *c.*5m. A possible hearth (**422**) directly to the east of the posthole structure would probably have lain within a structure but no related postholes survived to identify its position.

Other features included two wells (**405** and **521**) and a few rubbish pits, along with a stone-lined well or cess pit (**495**). Some of these features had been backfilled with moderate to large amounts of 15th-century domestic rubbish including animal and fish bones and molluscs. Cereal processing waste was found in three pits or wells. The immediate areas to the east, south and west contained further quarry pits which were fairly sterile.

Enclosure and field boundaries were found in the extreme south of the site. These fields are likely to have been part of the hospital estate as they are clearly within the Monks Close field owned by J. Harrison on the *c.*1771 map (Fig. 6). Dr Coppack has argued that all the Harrison land on this map formerly belonged to the hospital (see Section 7.3 below). The agricultural nature of these features is further confirmed by the relatively few artefacts recovered from this part of the site.

7.1.3 Phase 3: Late Medieval (mid 15th century)

The remains of robber trenches were seen above the western wall of the chapel. Definite quarry features (presumably extracting sand) lay adjacent to the chapel to the south-west (**111**) and west (**171**). Fills contained small pieces of painted glass and worked stone fragments. The large southern quarry cut through one burial and human bones were recovered from three of its backfills. At the extreme eastern part of the site a few quarry pits were dug across the former pathway.

7.1.4 Phase 4: Post-medieval

A post-medieval field boundary ditch aligned east to west to the north of the chapel dates to this period. It was backfilled in the 20th century when hedges were removed to make fields larger and more economically sustainable. In the mid 20th century a series of field drains was mechanically dug across the field.

7.2 Assessment

7.2.1 Quantification of the Archive

Excavation

20 Sheets of context lists
640 context records

2 sheets of plan register
28 plans at 1:10, 6 at 1:20 and 38 at 1:50

4 sheets of section register
62 sections at 1:10 and 66 at 1:20

4 sheets of sample register
18 bulk samples were taken, 1 at 40L, 10 at 30L, 3 at 20L, 3 at 10L and 1 at 5L
There were also 20 small samples from burials

5 sheets of site objects register
195 individually numbered Small Finds numbers (multiple nails not included)

2 sheets of human burial register
43 human burial sheets

3 sheets of photographic index
16 photographic register sheets
8 B&W print films
2 colour print films
6 digital camera sheets

7.2.2 Stratigraphy and Phasing

The activity revealed through excavation can be attributed to four phases:

Phase 1: Early Medieval (12th century)
Phase 2: Medieval (mid 12th to mid 15th century)
Phase 3: Late Medieval (mid 15th century)
Phase 4: Post-medieval

7.2.3 Range and Variety

Archaeological remains were largely found within the central and southern parts of the site, with very sparse evidence in the northern area. Although archaeological features to the south were comparatively dense, there were very few stratigraphic relationships. The excavation revealed a limited number of feature types. The site appears only to have been occupied for approximately 350 years. At this stage, only features very likely to date before *c.*1200 were assigned to Phase 1, the lack of stratigraphy and the relatively few well-dated features meaning that many features could only be assigned to a broad medieval phase (mid 12th to 15th century). Radiocarbon dates and the full artefactual reports should permit a more detailed phasing during analysis.

The early medieval phase consisted of the chapel foundations, field enclosure ditches, some quarry pitting and a few pits. In the broad 'medieval' phase, a cross-wall was built within the chapel. Contemporary features included 43 individual burials, two posthole structures, two wells, boundary ditches, a possible stone-lined cess pit, rubbish pits and quarry pits. In the demolition period, robber trenches were dug through the chapel's western walls and quarry pits excavated to the south and west of the chapel. The wells were backfilled with domestic material.

7.2.4 Condition

The surviving archaeological remains were in generally good condition. No floor levels survived, even within the chapel, where only stone rubble wall foundations were encountered. The posthole structures largely survived to provide partial building plans. There was little evidence of plough damage (*i.e.* plough scaring marks) and deep topsoil and subsoil layers protected features.

Local soil conditions (silty sand) affected the archaeological remains. Animal and human bone survival was variable depending on where the bone had been deposited. Some of the human remains had totally dissolved in the acidic soil. Metalwork suffered damage in these acidic conditions and most of the metal finds have been categorised by a conservator as in need of emergency conservation. Charred seeds survived well within the deposits.

7.3 Documentary History and Parallels

by Glyn Coppack

Pre-Christian Settlement

The Saxon placename *Partenau*, first recorded *c.*700 by Bede in his *Historia Ecclesiastica Gentis Anglorum* (Ecclesiastical History of the English People) (*HE* ii, 16), means *Pearta's island* (Gelling 1993), though the site was not an island in the strictest sense. It was, however, partially separated from surrounding areas by streams that fed the River Lymm on all sides, shallow valleys defining an 'island' 1.55km by 0.75km in extent now demonstrated by the 20m contour. As such, it can be identified as a potential early monastic site of the type defined by David Stocker (Stocker 1991, 110-112).

Post-Roman and pre-Christian settlement is evidenced by the apparent existence of an inhumation cemetery producing Anglian pottery, and a large round barrow (see Section 3.1), both of which lay to the south-east of the existing settlement and which were destroyed or at least seriously damaged in 1950. Cultural material suggested a date around 600 (Thompson 1954).

The Middle Saxon Monastery and its Associations

When a Middle Saxon monastery was established at Partney is not recorded. Bede had corresponded with two abbots, Deda (*HE* ii, 16) and Aldwyn (HE iii, 11 and 17). Deda was his source for the conversion of Lindsey by Bishop Paulinus begun with the conversion of Blæcca, *praefectus* of Lincoln, and the baptism of a great many people in the River Trent near *Tiovulfingacestir* (usually identified with Littleborough on the Nottinghamshire bank of the Trent) in the presence of King Edwin in about 628. His source was an old man who had been present at the mass baptism and so Deda was simply relating earlier memories. Aldwyn appears at Bardney where he met Osthryth, Queen of Mercia, some time after her undated translation of St Oswald there, and before her death in 697. Aldwyn was a member of the Lindsey aristocracy. His sister Æthelhild was abbess of another monastery 'near Partney', and his brothers were Æthelwyn, the bishop of Lindsey appointed by Æthelred in about 680 (Foot 1991, 136), and Æthelhun, a monk who was educated (and died) at *Rathmelsigi* (Clonmelsh) with Bede's correspondent Egbert from *c.*664. Barbara Yorke (1991, 144) places Æthelhun originally in a Northumbrian monastery that he left after the Synod of Whitby, preferring the Irish tradition. Bishop Æthelwyn had also studied in Ireland (*HE* iii, 27), and a Northumbrian / Irish monastic connection seems to be well established. Aldwyn is likely to have been the abbot of a male community, his sister

Æthelhild abbess of a double community, in the 680s or 90s and, given the likely date of Bede working on the *Historia Ecclesiae Gentis Anglorum* (Ecclesiastical History of the English People), Deda cannot have preceded Aldwyn by more than a decade, suggesting that Partney was established in the decade or so following the foundation of the first independent monastery in the east of Mercia at *Medeshamstede* (Peterborough) in 654.

The form and location of the monastery at Partney (and that of the monastery 'near Partney') is unknown, though it should follow the model of the near-contemporary monastery at Bardney. Stocker has suggested (1991, 107-10) that Bardney was polyfocal, its *foci* marked by later churches and chapels. This, however, presupposes that all Middle Saxon monasteries in Lincolnshire followed the same model or were established at the same scale. He suggested that Partney (*ibid* 110-112) had several centres later marked by the parish church of St Nicholas and an unlocated chapel of St Mary that he placed to the south in the field *Chantry Close*. There is, however, a second model for Middle Saxon monasteries in Lincolnshire, best seen at Stowe Green, Threekingham (Roffe 1986). Here the site, identified to a lost church of St Ætheldreda, lies on the south side of a shallow, dry valley marked by the 20m contour and has only a single centre. The monastery was established by St Ætheldreda prior to her settling at Ely in about 673, making it closely contemporary with Partney. A comparable setting at Partney can be identified with Highe Monks Close (see below) that has produced evidence of high status Roman occupation.

The relationship between the monasteries of Partney and 'near Partney' and their relationship to Bardney has yet to be resolved. Bardney itself seems to have begun life as a dependency of *Medeshamstede*, and was certainly recorded as such in 675 (Swanton 1997, 36-37). In about 704, Æthelred of Mercia retired to Bardney as abbot. The abbey was now independent and went on to play a central part in the religious politics of Mercia. Both Æthelred and Osthryth were enshrined there as saints, and Oswald's shrine was richly restored by Offa, probably in 792 when his daughter married Æthelred of Northumbria. Both Stocker (1991, 118) and Richard Gem (1991, 126) suggested that Bardney was possibly the non-urban seat of the Bishop Æthelwyn of Lindsey. Given his connections with Partney and 'near Partney', it is not difficult to see a familial connection between this group of Middle Saxon monasteries. Later events might suggest that 'near Partney' was, in fact, Skendleby.

The Danelaw

The failure of the Saxon monastery at Partney is not recorded historically, though it cannot have long survived the settlement of the Danish raiding army in 872-3 and the defeat of Burhred of Mercia in that year. Though the Anglo-Saxon Chronicle records no attacks on monasteries in Lincolnshire, the loss of their economic base would have ensured that they succumbed fairly rapidly and their sites deserted. It is perhaps significant in this context that monks from Gloucester were able to retrieve Oswald's body from Bardney in about 909 (*HE* iii, 11-13). Though Lindsey was recovered by the mid 10th century,

neither the Bardney or Partney monasteries were refounded, indeed Crowland was the only monastery in Lincolnshire to be re-established.

Domesday and the Re-foundation of Bardney

At Domesday, Partney was sokeland of Bardney, held by Gilbert I de Gant, the Conqueror's nephew (Foster and Longley 1924, 109), and sokeland of Ingoldmells, held by Robert Despenser (*ibid*, 158). The greater holding was clearly Gilbert's, with 5 carrucates of land assessed for tax, 17 sokemen and 27 bordars with five plough-teams. There was also 100 acres of meadow. Significantly there was a market rendering 10s. Salway has noted (1998, 174) the association of markets with Middle Saxon monastic sites. The sokeland of Bardney was extensive, comprising additionally Skendleby, Scremby, Great Steeping, Candlesby, Burgh le Marsh, Addlethorpe, Wainfleet, and Hagworthingham (Foster and Longley 1924, 109-110). The pre-conquest owner was Ulf Fenisc of Fünen, one of the great landowners of the Danelaw, most of whose holdings were transferred to the Gant fee, and the spread of Bardney sokeland suggests a substantial pre-conquest estate.

Gilbert I de Gant established an alien priory at Bardney, traditionally in 1087, a dependency of Charroux. Though the foundation charter is recorded in the house's 14th-century cartulary it is not in its original form. It can at least be partially reconstructed. From a later confirmation of his son Walter de Gant associated with the raising of Bardney to the status of an independent abbey in 1115, it is clear that part of the early endowment of the house was the grant of Gilbert I's demesne churches at Partney and Skendleby with all the tithe of his demesnes (Page 1906, 102; Thompson 1913-14, 38). No chapels are mentioned in association with the original grant. William de Gant increased his father's endowment in a charter granted to Bardney between November 1115 and Lady Day 1115/16 (*ibid*, 41), specifically with 'the hospital of St Mary Magdalene with all its rights and appurtenancies, the church of the same town (Partney) and the chapel of St Mary in the same town with all their appurtenancies'. The separation of chapel and hospital is curious but not an uncommon form of wording. A similar chapel of St James was added to the holding in Skendleby. Both chapels were to be developed by Bardney Abbey in the early 12th century, that at Partney being recorded as a hospital by 1138 (Walker 1898, 53; Clay 1909, 303). The establishment of the hospital must fall before 1115 and probably after Gilbert I's death. Skendleby was to be similarly developed as a dependent cell of Bardney. The granting of the sites as part of Bardney's endowment is typical of the post-Conquest generation.

Why Walter de Gant should establish chapels at Partney and Skendleby in addition to parish churches is unclear, though his father's establishment of a cell of Charroux at Bardney clearly falls into a pattern of re-establishing lost monasteries, real or supposed. By the late 11th century, York Abbey had established cells at Lincoln and Boston on sites supposedly linked with St Botolph's monastery of *Icanho*, Durham cathedral priory was to establish a cell at Stamford on the supposed site of St Wilfrid's monastery there, and the King or Roger of Poitou had established monks of Sées at Winghale in the parish of South Kelsey on a site that is producing Middle Saxon pottery and

which fits Stocker's classic model of a Middle Saxon monastery. Bardney was an attempt to return lost monastic property to the monastic church, initially on a limited scale. Gilbert I was also closely associated with William II's foundation of York Abbey on the site of the Saxon monastery of *Galmanho* in about 1088, and it comes as no surprise that he founded Bardney because of its association with St Oswald as recorded by Bede. The establishment of chapels at Partney and Skendleby might be seen as memorialising the lost monasteries of Partney and 'near Partney' within de Gant's holdings where the site was not certain but where folk memory placed them. David Stocker (1991, 110), following Alexander Hamilton Thompson (1913-14, 94) identifies the endowment at Partney with the estate of *Monkthorpe* recorded in the *Valor Ecclesiasticus* of 1534-5. This may be identified with three closes identified on an estate map of *c*.1771 (Lincs Record Office 5 Anc 5/A/1/1): High Monks, Eddish (or Low) Monks, and Monks Close, all lying to the west of the village, and comprising a block of 32.75 acres held by one J. Harrison who also farmed a block of 104.5 acres on the west side of the parish separated from the smaller holding by land farmed in hand by the Ancaster estate (Fig. 6). The *Valor Ecclesiasticus* of 1534/5 (Caley and Hunter 1836, 81) values the income from the temporalities of Partney as £7, suggesting a large holding as the contemporary rental value of agricultural land was roughly 1s an acre. The spiritualities of the parish church amount only to 25s 8d. The excavated chapel and cemetery of St Mary Magdalene lies conveniently towards the centre of Monks Close.

The Hospital and Later Monastic Cell of Partney

If the foundation date of the Partney hospital is uncertain, so is its function. Medieval hospitals had three distinct functions: places of refuge for wayfarers, homes for the feeble and destitute, and places for the spiritual and medical care of the sick or insane (and especially lepers). Excavation has demonstrated that the Partney hospital cared neither for the old or destitute nor for lepers; its cemetery is small and thus suggests that it did not serve the terminally ill who would have been buried there. More probable is the use by poor travellers from the coast and the lightly sick who were likely to recover and depart. A parallel can be found in the house outside the precinct at Battle in Sussex – the 'house of the pilgrims which is called the hospital' (Clay 1909, 3) – and St Nicholas' Hospital Salisbury, where the inmates are described as passengers (*transuentes*) and as sick and infirm (*egroti et infirmi*) (*ibid*, 5).

The hospital was governed by a master, almost certainly a monk of Bardney. Only one , Osbert (in 1208), is known by name. Critically, it had its own estate at this time, and that estate was being modified. In 1208, Osbert admitted that two bovates and a toft with appurtenancies at Grainby, and a half bovate at Laisingthorpe of the fee of Henry Bec, originally granted in frank almoigne had been exchanged for an estate of 30 acres and a farmstead at Laisingthorpe (Walker 1898, 56 quoting Dugdale 1830, 630). Other land was undoubtedly held directly and was significantly managed by the master and not by the abbot and convent of Bardney. Some indication of the estate and its extent can be recovered from the Bardney cartulary. From 1138, William of Roumare, Earl of Lincoln, and his son William gave land in Raithby and

Holton Holgate (Thompson 1913, 45), and after 1156, Gilbert III de Gant increased the endowment of the hospital with lands in the township, in Dalby, Ashby, Grainby, Laisingthorpe and 'spiteldeile' in Burgh le Marsh (*ibid* 49).

The hospital was quite distinct from the parish church of St Nicholas which was owned by Bardney Priory / Abbey from its foundation in *c.* 1087. The revenues of the parish church and that of Skendleby were used specifically to support the abbot and his establishment. Thus there was no inter-relationship between the two Bardney properties in Partney.

The hospital had ceased to function by the early 14th century and became a cell of Bardney by 1318 (Knowles and Hadcock 1953, 73). Its estate also transferred to the monastery where it was accounted as a direct holding in 1534/5 (Caley and Hunter 1836, 81).

The cell at Partney was to feature in the retirement of Abbot Robert Wainfleet of Bardney who was deprived of his abbacy in 1303 but spent the next 14 years squandering the abbey's resources challenging the Bishop of Lincoln in the papal courts. He finally agreed to retire in January 1317/18, 'worn out with age and infirmity', and was granted for life the manors of Steeping and Firsby (where he was to live), as well as the income of the cells of Partney and Skendleby. If he was to re-enter the monastery he was to have the new chamber in the infirmary (Page 1906,100, n. 18). Wainfleet was to find from his income of £61 3s 10½d the support of a monk as chaplain to the cell of Partney (Thompson 1913-14, 369-70). The suggestion that Wainfleet lived at Partney (Knowles and Hadcock 1953, 73) followed a misreading of the Bardney cartulary by the Victoria County History (Page 1906, 232) subsequently corrected by Hamilton Thompson (1913-14, 370).

Bardney had three cells: Hartsholme south west of Lincoln, Skendleby (see above), and Partney which were treated as extensions of the abbey with monks detached as required. It is unlikely that there were ever more than two monks present at any time, one of whom would normally be a priest. Bardney itself was in serious financial difficulties throughout the 14th century, with a declining community, and this caused some difficulty by the 1380s when Bishop Buckingham discovered that the custom had changed to a single monk being present. In 1379 he instructed that there must always be two present, though one could be a servant rather than a religious (Thompson 1913-14, 374). It appears that the bishop's injunction had no affect and it was repeated in 1383 (*ibid*, 376).

The *Clerical Subsidy* of 1327 records the presence of Simon the chaplain, associated with the cell of Partney (Walker 1898, 32). Partney caused no obvious problems for it was never referred to in the Bishop's regular visitations of Bardney, and no member of the community can have criticised the running of the cell. When it ceased to function is not clear. It was clearly long abandoned in 1491 when an inquisition at Partney observed that the chapel was totally ruinous, and the monks had withdrawn more than 30 years previously (*ibid*, 33 quoting *Chancery Inquisitions* 6HyVII). The jurors claimed that the abbot of Bardney ought to find annually monks to celebrate

divine service and pray for the good estate of the king, his ancestors and successors.

The Planning of Hospital and Cell Buildings

Hospitals fall into four general types: a hall with a terminating chapel, a hall with detached chapel, a group of buildings with a detached chapel, and buildings around a court or cloister. A fifth group were hospitals built on a cruciform plan (Clay 1909, 106-125). The hospital at Partney belongs either to the second or third type. The single-cell chapel is typical of smaller hospitals. Insufficient of the site has been seen within the road corridor to determine whether there was a series of buildings including a hall, or simply a hall and a kitchen. Whichever type of hospital Partney was, there should have been some form of enclosure and potential boundary ditches have been identified to north and south. The size of the enclosure would suggest that there are further buildings to east and west. The number of people, be they master (who probably had separate accommodation), servants, *transuentes* or *egroti et infirmi*, probably did not exceed ten at any time. The master may have been a priest, or a chaplain would be required.

Typically, a small cell would have two or more monks, one of whom was required to be a priest. The monks would probably have servants, though they need not have been resident. The plan form of monastic cells is far less well known than those of hospitals, but in Lincolnshire there are two cells for which a partial plan is known, the Priory of St Mary Magdalene in Lincoln (Stocker 1984) and the Priory of St James of Skendleby (Masters 2004), both Benedictine. Skendleby is in any case closely related to Partney throughout its history. Neither was claustral but comprised a chapel, a detached residential building, and possibly other buildings or enclosures. The chapel at Skendleby was approximately 12m by 7m (Partney measures externally 12.4m by 6.6m) and has produced high quality architectural detail of the mid 12th century. There is every chance that the two buildings were built at the same time and possibly were conceived as a pair. The domestic building does not have to be attached to or even close to the chapel.

The cemetery would be common to both phases of the chapel's use and is likely to have been the burial place of both those serving the hospital and monks who died while at the cell. The high incidence of priest burials confirms this.

Recommendations

This summary has been prepared exclusively from secondary sources and primary material held by the Lincolnshire Archives. Further research is necessary to identify the process by which the medieval hospital / cell of Partney was established, and what the full extent of estates was, primarily by a study of the relevant parts of the Bardney Abbey cartulary (British Library Cotton Ms Vespasian XX), and the economic base of the site from the Ministers Accounts and suppression papers (National Archives). No further

work is needed on the pre-Conquest period, the material presented here forming an adequate basis for the publication.

7.4 The Finds

The specialists' reports are reproduced below, appendices to which are presented in Volume 2. Provisional site phasing based on stratigraphy and spot dating was given to specialists prior to assessment of the various finds categories.

7.4.1 Small Finds and Miscellaneous Bulk Material

by Nina Crummy

Summary

A total of 222 items was examined, mostly metal and non-ceramic building materials. None of the objects have been conserved or X-rayed. A catalogue appears in Volume 2, Appendix 6.

Where datable, most items were medieval or later, but the assemblage includes a Roman coin, leaving open the question that some of the more miscellaneous undated items might also be Roman. No single group of material is particularly large apart from the ironwork, which consist chiefly of nails from medieval graves. In general, these nails and a variety of objects associated with the fabric of the building predominate, while only a limited range of functional categories is represented by the remaining items.

Condition

The metalwork is in general in fair to good condition apart from the pewter, a lead alloy that rarely survives well in the ground. The pewter objects have fragmented and in some cases have crumbled to a coarse powder.

The objects are packed to a good standard of storage in either polythene bags or small crystal boxes supported by pads of foam. The bags and boxes are stored in crystal boxes or airtight Stewart boxes with silica gel, apart from the stonework, which is stored in archive-standard cardboard boxes.

Quantification

Several bags contain more than one object; the minimum number is given here. The assemblage is quantified by material in Table 15.

Gold	1
Silver	4
Copper alloy	23
Iron	105
Lead(-alloy)	13
Bone	2
Glass	7
Textile	1

Stone	37
Metal-working debris	2
Wallplaster and mortar	8
Fired clay	11
Fuel	7
Coprolite?	1
Total	**222**

Table 15: PTN4 03 Artefacts by material

It is discussed below in broad groups by both material and function.

Coins and Jeton

One gold, one copper alloy and four silver coins were recovered. One is Roman, a very worn, featureless, *denarius* pierced for suspension to be worn as an amulet, probably as a sun or moon symbol. The assemblage from PTN1 03 (Area J) at Partney contained a pierced lead disc worn as an amulet, and, given that such items are not common as site finds, it may be postulated that a common source, local feature, or local tradition provided the stimulus for the production and use of the two Partney discs. Votive discs can occur in some numbers at Roman temple sites, and pierced coin amulets also occur in late Roman graves. The latter also turn up in some numbers on Migration period sites, when they were used as parts of bead festoons, again probably amuletically. The date of use of this coin in its pierced state may therefore not necessarily be Roman.

Of the other coins, the earliest is a short-cross cut farthing of the late 12th to early 13th century, the latest a noble of Henry V of the early 15th century. A Nuremberg jeton of the late 16th to early 17th century is listed with the coins because although jetons were officially used to reckon accounts they were also sometimes fraudulently passed off as coinage. The gold noble, found in a well, is unusual as a site find. The equivalent of 6s 8d, it would have represented a considerable loss to the owner (or a considerable investment if it were thrown into the well deliberately).

Other Metalwork, Textile, Bone and Stone Artefacts

These items are divided by function and material in Table 16. The functional categories are those defined in Crummy 1983 and 1988. Those represented in Table 16 are: dress accessories (category 1); textile manufacture (3); household equipment (4); writing (7); transport (8); buildings and service (9); tools (10); general fittings (11); agriculture/horticulture (12); military equipment (13); religion (14); metal-working (15); and miscellaneous (18). Items that are associated with more than one function (*i.e.* a lead plug repair can be related to both household equipment and metalworking) are placed in first appropriate category.

Category	1	3	4	7	8	9	10	11	12	13	14	15	18
Copper alloy	10	-	2	1	1	-	-	2	-	1	-	-	5
Lead (alloy)	-	1	1	-	-	3	-	-	-	-	5	2	1
Iron	-	-	-	-	1	-	5	92	1	-	-	-	6
Textile	1?	-	-	-	-	-	-	-	-	-	-	-	-
Bone	-	-	-	2	-	-	-	-	-	-	-	-	-
Stone	-	-	-	-	-	-	4	-	-	-	-	-	-
Totals	**11**	**1**	**3**	**3**	**2**	**3**	**9**	**94**	**1**	**1**	**5**	**2**	**12**

Table 16: PTN4 03 Objects by functional category

As is usual with most assemblages dress accessories, general fittings and miscellaneous items predominate at Site PTN 4 03. Most of the objects are medieval or early post-medieval in date, but some are later post-medieval or modern. A considerable proportion (15%) are from topsoil.

The dress accessories are mainly buckles and strap-ends, and they include at least one shoe buckle. Small fragments of textile associated with a lead chalice in a grave may derive either from a shroud or from fabric wrapped around the vessel when it was buried. Though a spur fragment has here been placed in category 8 (transport), in the 17th century in particular spurs were worn as a fashion items. Similarly, the hilt-guard fragment placed here in category 13 may have been worn as a dress accessory rather than a weapon. Both are unstratified. The one object associated with textile manufacture is a lead spindlewhorl, also unstratified and therefore possibly pre-dating the building on the site.

Of the three household items, one is a copper alloy curtain ring and another may be part of a cast copper alloy vessel or vessel fitting; the third is a lead plug repair from a sheet metal vessel. All are probably of medieval date, though unstratified.

The objects associated with writing (category 7) are of particular interest on an ecclesiastical/hospital site. They consist of a bone stylus (pit **222**) and part of a goose radius pen, pen-holder or quill holder (well **405**), and a copper alloy fitting that may be from a book (until the latter unstratified item is conserved its identification is only tentative). The stylus lacks its iron point, which would have been used for writing on wax tablets. The form is a common one and occurs on both domestic and monastic sites in 13th- to 15th-century contexts; they may also be associated with schools (Egan 1998, 272-3; MacGregor *et al* 1999, 1974-6). They have formerly been described as parchment prickers (Brown 1990, 733-5, 743; Geddes 1985, 149). The goose radius fragment is of similar date, or perhaps slightly later, and is almost certainly also associated with writing, though no example has as yet been found to contain traces of ink (MacGregor *et al* 1999, 1976). Literacy would have been an essential tool for the administration of both a chapel and a hospital, and the presence of these two objects is highly appropriate.

Apart from the spur the only other object associated with transport (category 8) is part of a horseshoe; it may be modern. Two of the lead objects associated with category 9 (buildings) are fragments of lead window cames and the third is an offcut that may be associated with their manufacture. They are discussed further below in the section dealing with the window glass and other building materials.

Of the six iron tools present, two are associated with burial 14, an adze or small mattock (SF 21) and fragments of a probable knife (SF 36). A second knife came from well **405**, and a third, again in fragments, from context pit **432**. The knife from well **405** is of a distinctive form, with a short broad blade on which the edge rises sharply to a point (as Cowgill *et al* 1987, fig 57, 51). It may have been used in butchery, though it is small for a cleaver. In the context of a hospital it is possible it was used for amputations. A possible file came from topsoil and may be modern. The sixth tool, a two-tined hoe has been shown in the table above under category 12, agriculture/horticulture; it may be residual Roman. Three of the four stone tools listed are hones for sharpening iron tools; two are of Norwegian ragstone and one of phyllite, from either Norway or Germany. The trade in these imported hones began in the Late Saxon period and may have continued into the 16th or even 17th century. They are particularly characteristic of sites of the medieval period. The fourth stone implement is a fragment of decorative granite which has the distinctive roughly triangular section and polished base of a handheld rubbing stone. It may have been originally quarried and used as decorative veneer in a Roman building, then recycled as a tool in either the Roman period or later.

Of the 94 general fittings given Table 16 two are copper alloy, a small knob handle and a ferrule (or weight). The latter is almost certainly modern, the former is probably post-medieval or modern. Two of the iron fittings, both from well **405**, are U-shaped staples or joiner's dogs, structural items used to clamp two pieces of wood together; and part of a large key came from topsoil . Of the remainder 84 are iron nails (a minimum number as some bags contain several nails), many of which derive from burials and come from either coffins or timber grave coverings. Many nails have mineral replaced wood surviving on the shank.

The hilt-guard fragment from category 13 may more correctly be seen as a post-medieval dress accessory. The five lead-alloy items listed under category 14, religion, are in fact only four, all fragmentary pewter chalices from the burials of priests.

The two lead objects associated with metal-working are an offcut and a refrozen drip; both may be associated with the cutting of cames for the insertion of the painted glass windows. Two fragments of iron-working debris are discussed below.

There are few miscellaneous items considering the size of the assemblage. Most are small scraps of metal, though at least two large iron objects are so

heavily corroded that their original form is obscure; X-radiography should reveal their true shape.

The general character of this part of the assemblage can therefore be summarised as consisting largely of structural fittings associated with graves, burial deposits, and small personalia, including writing equipment, but with very few household objects present.

Links to the fabric of the building (below) are provided by nails from contexts other than graves, lead cames and offcuts of sheet lead probably related to their manufacture.

Painted Window Glass, Lead Cames, Stonework, Wallplaster and Mortar

Six contexts produced small fragments of painted glass or plain window glass, (quarry pit **111**, quarry pit **171**, well **405** and pit **454**). Where the paint is clearly visible it is all red. None of the pieces are large and reconstructing elements of the design is unlikely to be successful, though some of the pieces may represent whole units. A lead came fragment also came from quarry pit **111**, another was in topsoil, and an offcut that may be from the manufacture of cames came from well **405**. That so little survives of either the glass or lead from the windows could be due to several factors, one of which is the high value of lead in the medieval period.

The right to mine lead was only given by royal grant, and there is much evidence for recycling. At the time of the Dissolution all lead from monastic buildings was considered to be the property of the king, and there is both archaeological and documentary evidence for its removal (Dunning 1952, 200; Rahtz & Hirst 1976, 205; Saunders 1980, 134; Hare 1985, 42; Homer 1991). It can be presumed that the lead from the Partney building was also salvaged for reuse, perhaps to be melted down and recycled, but it is also possible that entire windows were removed for insertion into another building, secular or ecclesiastical.

The stonework consists principally of pieces of worked clunch, a chalk (calcite limestone) with varied inclusions; some of the inclusions on the Partney fragments may be marcasite. Several of the clunch fragments are from the same double-splayed architectural feature, a truncated triangle in section (lacking the base), with chisel marks on the faces. There is at least one cross-fit between two contexts in well **405**, and closer examination may produce more. As a minimum, these fragments occur in contexts four contexts in the well **405**. Some of the smaller clunch chips and more weathered pieces may also be part of this group. The faces bearing chisel marks might be expected to have been internal, the marks partly acting as keying for mortar, but if they were high up in the building, and if it made no pretensions to high quality, then there may have been no perceived necessity for removing them. The double-splayed form suggests that they come from one or more openings, probably windows, though there are no surviving marks from the attachment of a window frame.

A few other clunch fragments are more roughly worked, and there are also some pieces of hard limestone and Spilsby sandstone with architectural detailing. Fragments of rubble from the walls include ironstone and ?mudstone, both locally sourced, and also some clunch, the latter with gritty mortar attached.

As clunch is a soft stone, when used externally it should be protected by a skim of mortar and/or limewash. Two of the contexts from well **405** producing the double-splayed clunch pieces also contained small fragments of mortar coated with a skim of some kind, but analysis will be necessary to determine if this is wallplaster or limewash. Further fragments came from contexts 47 (chapel internal wall), and two contexts in quarry pit **111**. Most of the mortar is fine and well mixed, but two contexts from **111** and **226** produced pieces of the same distinctively gritty mortar found on the clunch rubble mentioned above; one piece was covered with wallplaster/limewash skim.

Three large blocks of Spilsby sandstone from the topsoil were too large to transport and have been catalogued from photographs. One has been identified as a burial marker with rectangular tile *c*.5inch by 6inch pattern (Paul Drury pers. comm.). One is a well-worked probably used at ground-level as the base of a feature, perhaps a pillar, door or archway, or possibly just a wall. The third is less well-made and of unusual form, with a projection from one corner. This may have been used at the base of a wall adjacent to an opening, with the projection serving as an internal bond between the two features. However, it should be stressed that these identifications are tentative without close examination of the surfaces of the blocks.

Metalworking Debris, Fired Clay and Fuel

Two fragments from the bottom of an iron-working hearth or furnace were recovered, one from pit **222**, the other from topsoil (see 7.4.2 below). This is insufficient evidence to argue for iron-working on the site associated with the building, whether for its construction or its use, or for the manufacture of coffin nails, and the pieces may not necessarily even be contemporary with the building.

A number of contexts produced small pieces of fired clay. They vary from oxidised to reduced, and have a variety of tempering, chiefly vegetable matter, but occasionally grit and ?shell. All may derive from a single feature, presumably an oven, as at least two thin oxidised slabs, from two contexts from well **405**, appear to be part of the superstructure.

A very small quantity of charcoal was also found, mainly small twigs or branches. It was not concentrated in any one particular context.

?Coprolite

A fragment of a friable concretion from well **405** may be a coprolite, though this identification is only tentative.

Recommendations

Further analysis of the finds detailed assessed above will:

1. add to the understanding of the nature of the chapel/hospital site, including its function and status;

2. assist in the identification of the character of the buildings;

3. allow comparison with other relevant sites and assemblages.

It is recommended that:

1. all the silver, copper alloy, lead and glass objects should be conserved (forty-seven objects). All the ironwork should be X-radiographed (105 bags);

2. the textile fragments should be reported on by a specialist. Penelope Walton Rogers of Textile Research Associates, is recommended;

3. a report on the stonework should be commissioned from a specialist familiar with other medieval buildings in the area;

4. the geological identifications of the building stone should, if necessary in view of Item 3 above, be verified by a local geologist;

5. the wallplaster/limewash and mortar should be analysed to enable precise identifications to be established. Staff of the Department of Archaeology at the University of Leicester undertake this type of analysis;

6. the ?coprolite should be incorporated into the Partney environmental assemblage for identification *etc* by the relevant specialist;

7. reports on the metalwork (including coins), bone artefacts, glass, and fired clay should be commissioned. Objects confirmed to be modern after conservation and X-radiography should be excluded;

8. a maximum of fifty-nine objects should be drawn. This number will be revised after the ironwork has been X-radiographed and the other metalwork conserved.

7.4.2 Notes on Architectural Stone

by Andrew Brown

Andrew Brown (Masonry Projects Manager, Rattee & Kett) was shown the thirty-four small pieces of the architectural stone fragments from the site. At least four types of stone were used, deliberately enhancing features such as doors and giving a good aesthetic appearance. The Metheringham quarry in

mid Lincolnshire and possibly Clipsham are where two of the stone types may have been quarried. There were mainly chisel marks on the stones but also occasional saw marks. Most of the fragments have the potential to be related to a specific function; there were several window fragments, door fragments and a part of a possible font.

Recommendations

It is recommended that the stone is reported on by relevant specialists in order to define function and provenance.

7.4.3 Metalworking Debris

by Tom Eley

Slag was found unstratified and in posthole **222** (Phase 3). The relevant unstratified material relates to machining the topsoil next to the chapel. This topsoil contained a moderate quantity of tile and stone fragments presumably from the robbing of the hospital. The slag consisted of a piece of smithing slag (0.38kg) and a smithing hearth bottom (0.472kg) measuring 70mm by 90mm by 25mm. The smithing hearth bottom has a plano-convex shape and is an accumulation of hammerscale, slag, lining and ash formed at the base of a smithy hearth.

Context **222** contained 0.23kg of smithing slag dating from the 13th to 15th centuries. The quantity recovered was too small to confirm the presence of a smithy.

Recommendations

No further work is recommended.

7.4.4 Lithics

by Barry Bishop

An assemblage of forty-three pieces of worked flint was found in the excavation at PTN4 03. The flint report was amalgamated with PTN1 and PTN 7 and appears in Section 5.3.3 above.

7.4.5 Pottery

by Carole Fletcher

Methodology

The basic guidance in the *Management of Archaeological Projects* (MAP2) has been adhered to (English Heritage 1991). In addition the following documents act as a standard: (Blake and Davey 1983), Medieval Pottery Research Group (MPRG 1998) and (MPRG 2001).

Spot dating was carried out using the Lincolnshire system and the AFU's in-house system based on that used at the Museum of London. Fabric

classification has been carried out for all previously described types and the Fabric Series is in Volume 2, Appendix 7. New types have been given descriptive identifiers, but full fabric descriptions using binocular microscope and x20 magnification have yet to be carried out for these. Jane Young, a pottery specialist from Lincolnshire, spent a day at the AFU helping to identify the material. All sherds have been counted, classified and weighed. Sherds warranting possible illustration have been flagged, as have possible cross-fits (see Appendix 7).

All the pottery has been spot dated on a context-by-context basis (see Appendix 7); this information was entered directly onto a full quantification database (Access 2000), which allows for the appending of quantification data.

The pottery and archive are curated by the Archaeological Field Unit until formal deposition in Lincolnshire.

Ceramic Phase Dates

Ceramic Phase 3	650-850 AD (Middle Saxon)
Ceramic Phase 4	850/900 to 1150 AD (Late Saxon to Early Medieval)
Ceramic Phase 5	1150/1200 to 1350 AD (Medieval/High Medieval)
Ceramic Phase 6	1350 AD to 1450/1500 AD (Late Medieval)
Ceramic Phase 7	1450/1500 to 1650/1700 AD (Post–Medieval)

Ceramic Phase	No. sherds	Weight (kg)
Prehistoric	3	0.029
Roman	11	0.206
?	5	0.069
2/3	1	0.025
3	1	0.027
4	51	0.367
4/5	103	0.852
5	227	7.200
5/6	421	15.560
6	111	7.005
7	28	0.954
Total	**962**	**32.294**

Table 17: PTN4 03 Pottery by ceramic phase

Quantification

The fieldwork generated 962 sherds of pottery, weighing 32.294kg including unstratified material.

The majority of the assemblage, including unstratified material, is medieval with 30.617kg (862 sherds) deriving from the 1150 to 1450 bracket. In

addition 103 sherds (weighing 0.852 kg) can be thought of as early medieval, ceramic phase 4. There are no other large groups of material outside these ceramic phases.

Within this wide date range two distinct groups can also be identified, 227 sherds (weighing 7.2kg) that fall within ceramic phase 5 which can be considered medieval (1150/1200 to 1350), and 111 sherds (weighing 7.005kg) that can be described as late medieval (1350 to 1450; ceramic phase 6).

There is no definitely intrusive material in the assemblage and there is little residual material. There was a very small number of prehistoric sherds (3 sherds), only 11 Roman sherds, weighing 0.206 kg and a single Middle Saxon sherd (650 to 850).

The relatively tight dating of large parts of the assemblage indicates a concentration of activity on the site over a relatively limited period of time from the middle of the 12th century to the middle of the 15th century, with apparent abandonment by the end of the 15th century. The small amount of earlier material indicates some activity around the site in the prehistoric, Roman and Saxon periods, however the important focus of this site is the medieval activity in an area some little distance from the medieval chapel that forms a large part of the excavated area. It would appear that the major ceramic phase of activity dates to between *c*.1150 and *c*.1350.

The normal range of vessel types is present within the assemblage, these include jars, bowls in Saxo-Norman or early medieval Lincolnshire fabrics. The earlier phase of occupation producing both Lincolnshire Fine Shelled ware (LFS) and Early Medieval Shell tempered ware (EMSH) jars. The medieval assemblage produced a very large number of Toynton ware (TOY) bowls, and jugs, and a large quantity of South Lincolnshire Shell Tempered ware (SLST) jar sherds were also recovered. Medieval local fabrics (MEDLOC), brought forth a series of jugs, jars, bowls and fragments of a fish smoker. The actual fabrics have at this point in time not been identified and a comparative study of the Lincolnshire type series is required as part of the next phase of investigation. Non-local medieval fabrics (MEDX) also make up a large proportion of the assemblage and again these fabrics require further investigation: however, they seem mainly to be represented by jugs in the assemblage with few bowl or jar sherds recognised. Some non-local fabrics have been more firmly identified and the assemblage includes 12 sherds from one or more Scarborough ware (SCAR) jugs and 2 sherds from a Grimston ware (GRIM) jug.

South Lincolnshire Shell Tempered Coarse ware (SLSHCW), an early medieval to medieval fabric, produced one of the most interesting finds consisting of 54 sherds one or more industrial vessels of unknown usage (Jane Young pers. comm.). The character of the assemblage suggests it derives from a domestic context. The assemblage appears to be generally indicative of a rural assemblage and offers potential for further study which will add to current knowledge of medieval Partney.

Provenance and Contamination

Basic statistics relating to source area for the assemblage are given in Table 18. This indicates the bulk of the assemblage is likely to have travelled less than 80km and for much of the assemblage less than 10km.

General provenance	% of assemblage by count	% of assemblage by weight
Lincolnshire	76.55	80.94
Non Local	10.94	10.98
Norfolk	0.21	0.02
Staffordshire	0.11	0.02
Thames Basin	0.42	0.05
Yorkshire	1.26	0.79
Unknown	8.93	6.39
Prehistoric/Roman/Saxon	1.58	0.81

Table 18: PTN4 03 General provenance areas for post-Roman assemblage

The source for the bulk of the assemblage was evidently Lincolnshire. This dominance is due to the relative proximity of the production centres within Lincolnshire and good communications by road to those production centres. For example Toynton All Saints lies only 6.1km to the south-west of Partney and the pottery from the kilns in and around Toynton All Saints (TOY) makes up over 47% of the Partney assemblage by weight. Non-local suppliers of pottery make up only approximately 12% of the assemblage. The relatively well-fired glazed TOT wares provided the site's inhabitants with almost all of their needs for jugs and bowls while their everyday cookpots were mainly coarsewares from various sites around the county, many of which originated in South Lincolnshire.

Contamination of this assemblage is light with only two intrusive sherds in ceramic phase 4 (850 to 1150), weighing 7g. Residuality is also not a serious problem: there are relatively few early sherds found alongside those whose date range extends between 1200 and 1450. The low level of residuality suggests that there was little disturbance of the material indicating that most material from the site were primarily deposited in features.

Sampling Bias

The excavation was carried out by hand and selection made through standard sampling procedures on a feature by feature basis. There are not expected to be any inherent biases. Where bulk samples have been processed for environmental remains, there has also been some recovery of pottery. These are, however, only very small amounts and serious bias is not expected to result.

Condition

This assemblage is of a reasonable size, the average sherd size being moderate to large at 34g per sherd. The size of sherds from ceramic phase 6 is especially large at more than 63g per sherd and seems to imply primary deposition in this phase. No preservation bias has been recognised and no long-term storage problems are likely.

This assemblage has no near complete vessels although it does include partial vessels and sherds worthy of illustration, including the very fragmented SLSHCW industrial vessel and jug sherds in TOY and other fabrics. It is a close grouped assemblage and the large size and date of the assemblage make full quantification and analysis of the main period groups desirable.

Statement of Research Potential

The assemblage has the potential to aid local, regional and national priorities. The relatively large amount of pottery means that they can be used for definition and dating of all settlement phases on the site. The pottery can be used for understanding settlement function, including processing and storage.

Method Statement

Stratified pottery from all phases of excavation described here has been quantified to a basic level. Further work should aim to identify and quantify stratified pottery from excavation areas, recording all fields associated with fabric, form, decoration, technology and use.

Recommendations

It is recommended that analysis should take place in order to characterise and quantify the stratified pottery which will contribute to the local and regional corpus. The work will link to issues of settlement dating, function and patterns of trade/supply.

The following tasks are recommended:

1. a full analysis of this assemblage on various field criteria, based on major stratigraphic units, to support the dating of structures, cut features and other materials recovered from the excavation. The 24 post-Roman pottery sherds found in the evaluation need to be integrated. The prehistoric, Roman and Saxon material identified in the assemblage should be sent to the relative specialists. Any recommendations regarding the assemblage relate to the post-Roman and Late Saxon and medieval material only;

2. a textual report on the results of the above. The report will be up to twenty pages long, with a minimum of five tables and figures;

3. macroscopic inspection (based on x20 magnification) of all major fabric types;

4. tabular statistics of fabric and vessel data;

5. illustrations of new forms and traits, especially relating to local fabric types, which are otherwise, unpublished to date. Seventeen vessels or fragments of vessels have been identified as suitable for illustration and they are listed in Table 15 below. (The SLSHCW industrial vessel sherds have been counted as representing one vessel for this exercise);

Ctxt	Fabric	Vessel Form	Qty (no. shds)	Description	Date Range
68 (**111**)	MEDX	Jug	1	Small vessel	1150-1450
221 (**222**)	MEDLOC	Jar	1	Small vessel thin walled	1150-1450
221 (**222**)	SCAR	Jug	7	(Copper) green glaze internal and external ring & dot decoration around the handle body rilled? Fit with 389 & pos same vessel in 225	1150-1350
(**384**)	TOY	Jar	2	Large sherds oxidised red hard to identify xfit with sherds in context 384	1250 to 1450
(**384**)	TOY	Bowl	1	Internal glaze on lower portion xfit with 384	1150 to 1250
(**384**)	BOUA	Jug	1	Rim and handle stub from jug unglazed upper deep imprints at side of handle and lump of mortar across break of handle xfit with 389	Late 13th early 14th
(**384**)	TOY	Jar	2	Large sherds oxidised red hard to identify x fit with sherds in context 225	1250 to 1450
389 (**388**)	SCAR	Jug	3	(Copper) green glaze internal and external ring & dot decoration xfit with 221 & pos same vessel in 225	1150-1350
404 (**405**)	SLSHCW	Industrial Vessel	13	Body sherds & part of surrounding cordon, wide & thumbed part of industrial vessel apparently common in potter-Hanworth (J. Young pers. comm.) Heated above firing temp (similar sherds pos same vessel in context 455, 538, 535,457	12th to 14th
416 (**422**)	MEDX	Jug	1	Beginnings of pulled lip on rim green glaze (same? Fabric in 99999)	1200 to 1250
431 (**432**)	TOY	Jug	2	Stamped & applied decoration (stamped decoration 15th century but could be stamped earlier (Jane Young pers. comm.)	15th
452 (**454**)	TOYII	Jug	1	Rim with thumbed applied strip at junction of neck & body also the beginning of a handle or at least attachment point parallel in MaCarthy & Brooks 1988 page 260 fig 149 (854) which has thumbing below rim & handle at similar level	1450-1550

455 (**405**)	SLSHCW	Industrial Vessel	26	Body sherds & part of surrounding cordon, wide & thumbed part of industrial vessel apparently common in potter Hanworth (J. Young pers. comm.) Heated above firing temp (similar sherds pos same vessel in context 404, 538, 535,457	12th to 14th
455 (**405**)	SLSHCW	Industrial Vessel	7	Flat almost right-angled base appears to have mortar on the base slab construction part of industrial vessel apparently common in potter Hanworth (J. Young pers. comm.) Heated above firing temp (similar sherds pos same vessel in context 404, 535,457, 538	12th to 14th
455 (**405**)	SLSHCW	Industrial Vessel	15	Body sherds & part of surrounding cordon, wide & thumbed part of industrial vessel apparently common in potter-Hanworth (J. Young pers. Comm.) Heated above firing temp (similar sherds pos same vessel in context 404, 538, 535,457	12th to 14th
455 (**405**)	TOY	Jug	2	Rim with smallest pulled/pinched spout (small sherd does not fit but are the same vessel) rim type postdates cuff type?	1250-1450
457 (**405**)	TOY	Jug	2	Frilled base imitating stoneware some glaze spots on vessels	14th to 15th
457 (**405**)	TOY	Jug/cistern?	1	Large vessel glazed internal base surface uneven and blobby from poorly mixed or badly ground glaze so the lead survives in its metallic state	1250-1450
467 (**468**)	TOY	Dripping dish	1	Slab built various bits stuck to it as a result of contact with other vessels in the kiln fired with decorated vessels? As one piece appears to be iron rich clay	1250-1450
535 (**405**)	SLSHCW	Industrial Vessel	6	Body sherds & part of surrounding cordon, wide & thumbed part of industrial vessel apparently common in potter-Hanworth (J. Young pers. Comm.) Heated above firing temp (similar sherds pos same vessel in context 404, 455, 535,457	12th to 14th
540 (**405**)	TOY	Jug	1	Xfit with handle in 563	1250-1450
563 (**405**)	TOY	Jug	19	Xfit with rim and handle in 540	1250-1450
99999	MEDX	Bowl	1	From area C may be toy?	1150-1450
99999	MEDX	Jug	3	Beginnings handle below rim green glaze (it? Fabric in 416)	1200 to 1250

Table 19: PTN4 03Pottery to be illustrated

6. the medieval non-local fabrics and medieval local fabrics warrant further study in an attempt to determine the source of this material. This requires time to be spent examining the Lincolnshire type series.

Thin sections have been recommended to identify any unknown or questionable source for a fabric type.

7.4.6 *Roof and Wall Tile*

by Rob Atkins and Carole Fletcher

An assemblage of 337 tile fragments weighing 26.998kg was recovered from the site (Table 20). The tile was found in thirty-two different contexts although this represents only nineteen separate features. The vast majority was recovered from three features infilled during the 15th century (**111**, **405** and **454**), as well as that found unstratified. Half the assemblage was recovered from the backfill of well **405.** Features **405** and **454** may have been backfilled with unabraded pottery and rubble soon after the abandonment of the hospital while the small tile pieces recovered from quarry pit **111** may imply that the quarry had been dug and backfilled at a slightly later date.

The tile was all medieval except one Roman and one possible post-medieval piece. The vast majority of the assemblage was oxidised orange/red and were frequently sandy with rare small flint. There were relatively few reduced tiles although two from fill 535 were very overfired. A few tiles had been made with clay probably mixed with chalk to produce a light yellow/green sandy tile. Only one tile had a peg hole whereas fourteen were nibbed. Part of a roof finial survived and may represent a bird. Two fragments of decorated tile were recovered and may be from wall decoration.

Recommendations

It is recommended that the roof tiles are reported on by Jane Young. Such analysis will contribute to the understanding of the character of the buildings at the site. As yet very little has been reported on roof tile from the area although at least one of the fabric types described in this report seems similar to Bourne. The site is comparable to recent excavations on the sister chapel at Skendleby. It is recommended that the three probable fabric types are thin sectioned to confirm the providence of the tiles. The decorated tile and roof finial may warrant illustration.

Context/ feature	Qty	Weight (kg)	Comment
65 (**111**)	51	1.551	Relatively small pieces.
68 (**111**)	15	0.459	1 with mortar adhered to
69 (**111**)	3	0.017	
70 (**111**)	2	0.023	
79 (**80**)	1	0.013	
81 (**82**)	7	0.380	
116 (**117**)	1	0.024	
118 (**119**)	1	0.050	Decorated. Similar to 457..same fabric. Possible wall tile?
157 (**158**)	1	0.188	Roman roof tile
162 (**163**)	1	0.160	
170 (**171**)	2	0.051	

227 (**229**)	2	0.037	
294 (**295**)	2	0.049	
346 (**347**)	1	0.009	
375 (**378**)	1	0.015	
396 (**390**)	1	0.005	
402 (**403**)	2	0.066	Is one post-med?
404 (**405**)	96	10.217	9 nibbed. 3 of which have finger deepening marks below nib.
431 (**432**)	8	0.796	
452 (**454**)	3	0.102	
453 (**454**)	20	2.572	1 nibbed
454 (**454**)	4	0.297	
455 (**405**)	32	2.910	1 hole. Square 11mm width
457 (**405**)	2	0.403	1 Decorated. Stamped. Leaves? Animal? Wall tile? See cont 118
458 (**454**)	1	0.060	
467 (**468**)	1	0.135	
534 (**405**)	1	0.083	
535 (**405**)	25	1.101	
536 (**405**)	2	0.184	
538 (**405**)	1	0.126	1 nibbed. Finger signature
548 (**405**)	6	0.272	
628 (**629**)	1	0.084	
99999	40	4.559	3 nibbed. 1 roof finial ?bird
TOTAL	**337**	**26.998**	

Table 20: PTN4 03 Roof and wall tile

7.4.7 Molluscs

by Rob Atkins and Rachel Fosberry

An assemblage of 820 shells recovered from six different medieval features (Table 21). This comprised 102 oyster (*Ostrea Edulis*) shells, 667 cockles (*Cerastoderma*), fifty mussels (*Mytilus Edulis*) and a whelk. The vast majority (97% of the assemblage; 794 shells) came from the backfill of pits **111** and **454**, each of which contained a small layer full of shells which had been tipped in as a single deposit. The shells would have come from estuaries and lower shore areas, having presumably been transported to Partney in barrels.

Context/cut	No. of Oysters	No. of Cockles	No of Mussels	No. of Whelk	Total
65 (**111**)	-	301	32	-	333
68 (**111**)	89	22	7	-	118
69 (**111**)	-	11	7	-	18
70 (**111**)	1	-	-	-	1
73 (**74**)	-	3	-	-	3
404 (**405**)	1	-	-	-	1
452 (**454**)	4	308	-	-	312
453 (**454**)	-	5	1	1	7
455 (**405**)	2	-	1	-	3
457 (**405**)	1	1	-	-	2
458 (**454**)	1	2	2	-	5
469 (**521**)	1	-	-	-	1
548 (**405**)	1	-	-	-	1

582 (**583**)	1	14	-	-	15
Total	102	667	50	1	820

Table 21: PTN04 03 Molluscs by context and type

Recommendations

No further work is recommended.

7.4.8 Worked Animal Bone

by Jacqui Mulville

Part of a whale bone board was found from quarry pit fill 68 (**111**), fashioned from part of a whale vertebra. There are marks, presumably from knives, which are consistent with use as a chopping board.

Recommendations

No further work is recommended, other than to summarise details of the item for publication.

7.5 Zoological and Environmental Evidence

7.5.1 Human Skeletal Remains

by Sue Anderson

Introduction

Human bones from 32 burials and three disarticulated contexts were submitted for study. One of the disarticulated groups was a redeposited burial, which was given a skeleton number (Sk. 1) and treated as articulated. A further ten burials were excavated, but these produced no retrievable bone. The cemetery is thought to belong to a medieval hospital. A catalogue of metric data *etc.* appears in Volume 2, Appendix 8.

Method

Measurements were taken using the methods described by Brothwell (1981), together with a few from Bass (1971) and Krogman (1978). Sexing and ageing techniques follow Brothwell (1981) and the Workshop of European Anthropologists (WEA 1980), with the exception of adult tooth wear scoring which follows Bouts and Pot (1989). Stature was estimated according to the regression formulae of Trotter and Gleser (Trotter 1970). All systematically scored non-metric traits are listed in Brothwell (1981), and grades of cribra orbitalia and osteoarthritis can also be found there. Pathological conditions were identified with the aid of Ortner and Putschar (1981) and Cotta (1978).

Number of individuals

Very few of the graves had been disturbed by intercutting, so there was little redeposition and mixing of skeletal material. Consequently, the minimum number of individuals is the same as the number of graves which contained bone, *i.e.* 33, along with one further disarticulated individual from three contexts (65, 69 and 70) in quarry pit **111**.

Condition

An assessment of condition of the bone was made for each skeleton, although it is recognised that this is fairly subjective. The assessment of condition took into account the preservation of the bone, not the completeness or otherwise of the skeleton. Two skeletons were considered to be in 'good' condition, four were 'fair', six were 'poor-fair', seven were 'poor' and fourteen were 'very poor'. Generally there was a high degree of surface erosion in this assemblage, many bones consisting of flaky fragments of the outer layers which had been separated from the thicker cortical bone and had often either disappeared or were the only part to survive. All skeletons were fragmented, even those in good condition, although it was possible to reconstruct a few skulls for measurement. In general, skulls were in better condition than other bones.

It is worth noting that Sk. 1 had an unusual and very regular erosive pattern on the front of the skull, which could have been caused by weathering through the fabric of a sack, perhaps suggesting that the bones were bagged before they were redeposited in a pit.

Demographic analysis

A summary list of skeletons with age and sex is included in Table 22. Details of methods used for ageing and sexing individuals are recorded in Volume 2, Appendix 8.

Juveniles

Five individuals were under the age of 18 years at death, giving a proportion of 15.1% of the group. This is a relatively low figure in comparison with other medieval groups. For example at Rivenhall in Essex (O'Connor 1993) and Barton Bendish in Norfolk (Stroud 1987), both rural churchyards, the children made up approximately a third of the populations. The Partney figure is more typical of monastic establishments, and similar proportions of children were present at the Gilbertine Priory in York (Stroud 1993), and the Franciscan Friary in Hartlepool (Anderson forthcoming C).

The youngest child in this group was aged *c.*7-8 years, the next *c.*13-14 years. The other three sub-adults were all around the age of sixteen.

Sk.	Grave	Sex	Age	Condition	Stature (cm)	Cranial index	Pathology
1	3	Male	Adult	Poor			Periostitis.
2	6	Unsexed	c.16	Poor			
3	9	Male	c.16-18	Poor-Fair	171.6	80.5	Stress in spine, congen/devel conditions of spine and skull.
4	12	Male	c.20-23	Poor	173.5		Stress lesion of ankle.
5	15			No bone			
6	18	Male	MA+	Poor-Fair	160.3		Degenerative disease, sinusitis.
7	24	Male?	Y-MA	Fair	165.5	84.6	Stress in spine, sinusitis, trauma.
8	28	Male	Old	Poor-Fair	165.7	93.0	Deficiency disease, degenerative disease, possible TB, periostitis.
9	32	Unsexed	Y-MA?	V. Poor			
10	36	Male?	Y-MA?	Poor-Fair	171.8	75.9	Sinusitis.
11	40	Unsexed	MA	Poor			Degenerative disease?
12	43	Male	Old	Poor-Fair		80.8	Sinusitis and periodontal disease.
13	46	Male?	MA?	V. Poor			Degenerative disease.
14	61	Male?	Y-MA	Poor-Fair		84.1	Degenerative disease, sinusitis.
15	50	Unsexed	c.15-16	Good			Deficiency disease, sinusitis, possible trauma.
16	53	Male	Adult	V. Poor			
17	64	Unsexed	c.13-14	Poor			Deficiency disease.
18	85	Male	c.25-30	Fair	172.8		Degenerative disease?
19	102	Unsexed	c.7-8	Fair			
20	231	Unsexed	Adult	V. Poor			
21	248	Male?	Adult	V. Poor			
22	272			No bone			
23	251			No bone			
24	274	Male?	MA	V. Poor			
25	281			No bone			
26	291	Unsexed	Y-MA	V. Poor			
27	288			No bone			
28	302	Unsexed	Adult?	V. Poor			
29	326	Female?	Mature	Poor			
30	339			No bone			
31	306			No bone			
32	316	Unsexed	MA-Old	V. Poor			Sinusitis, degenerative disease.
33	354	Male?	Mature	V. Poor			
34	351			No bone			
35	374	Male?	Y-MA	Good	172.2	85.4	Stress in spine, degenerative disease.
36	378	Male	MA	Fair	170.5		Degenerative disease, periostitis, osteoma.
37	386	Unsexed	Adult	V. Poor			
38	394	Male?	Young?	V. Poor			
39	401			No bone			
40	409	Unsexed	Adult	V. Poor			
41	412	Unsexed	Y-MA	V. Poor			
42	418			No bone			
43	421	Unsexed	Mature	Poor			

Table 22: PTN4 03 Summary of human burials.

Adults

Twenty-eight individuals were adults over the age of 18 years. Of these, seventeen were male (including seven ?male), one was ?female, and ten were unsexed. A further male can be added from the sub-adult group. There is

clearly a statistically significant difference between the sexes at this site. As a caveat, however, it should be noted that in most cases sexing had to be based on cranial features alone, and this is not as reliable as using the pelvis. All skulls in this group had relatively large brow ridges, mastoid processes and occipital crests, which are male traits. Based simply on their size, Sk. 6 and Sk. 14 could also be female. However, the possibility that all the burials are in fact male cannot be discounted, particularly as this was a monastic establishment and the small number of burials suggests that it was fairly exclusive.

Table 23 shows the distribution of adult age at death. Categories of age rather than actual age ranges are employed because estimation of adult age at death is difficult with currently available techniques. The data should be taken to represent *biological* rather than chronological age at death.

	Male		**Female**		**Unsexed**		**Total**	
Age group	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Young	2	14.3					2	9.5
Young/Middle-aged	5	35.7			3	50.0	8	38.1
Middle-aged	4	28.6	1	100	2	33.3	7	33.3
Middle-aged/Old	1	7.1			1	16.7	2	9.5
Old	2	14.3					2	9.5
Total aged	14		1		6		21	
Unaged adult	3	-			4		7	
Total	**17**		**1**		**10**		**28**	

Table 23: PTN4 03 Distribution of adult age at death

A quarter of these skeletons could not be aged more closely than 'adult'. If the 'middle-aged' category is assumed to include individuals over approximately 40 years of age, then approximately half the group were younger than this at death. The lack of people in old age, however, may be a reflection of the poor overall preservation of the assemblage, as the thinner, more porous bones of the elderly might be expected to disappear more quickly than the stronger bones of younger individuals. The distribution of ages at death in this group follows a 'normal distribution', with more individuals in the middle categories and fewer at the extremes. Similar patterns have been noted at the rural churchyards of Barton Bendish, Norfolk, and The Hirsel, Scottish Borders (Anderson forthcoming a and b), and the urban churchyard of St Mark's, Lincoln (Dawes 1986). Higher proportions of 'old' individuals have been noted in some urban monastic establishments, for example Ipswich Blackfriars (Mays 1991), and Hartlepool Friary, and also at the rural churchyard of Rivenhall.

Metrical and Morphological Analysis

Tables of measurements and non-metric traits are provided in Volume 2, Appendix 8.

Stature

Estimated living stature could be calculated for nine men. The mean was 169.3cm (5' 7") and the range was 160.3cm to 173.5cm (5' 3" to 5' 8"). This is within normal limits for a medieval population.

Cranial Indices

Only seven skulls were measurable for calculation of the cranial index, all male. Other measurements were taken where possible. The average cranial (breadth/length) index was 83.5, and the range was 75.9 to 93.0. All but one of these skulls was brachycranial (broad), and several of those which could not be measured would clearly have fallen into the same category. Broader heads are more commonly found in medieval populations than earlier or later groups, but the mechanism behind this is uncertain — climate may be a factor.

Non-metric Traits

Non-metric traits are small asymptomatic deviations from the 'normal' skeletal anatomy and are scored on a present/absent basis. A number have been shown to be of genetic origin, and this may be the case for others. Tables of scores and percentages for each trait are included in Volume 2, Appendix 8.

Unfortunately the group was too poorly preserved to carry out any detailed statistical analyses of these traits. The maximum number of individuals for which any one cranial trait could be scored was nineteen, and for post-cranial traits, only nine. Metopism was identified in two individuals (Sk. 10 and Sk.17), buried close to each other. Mandibular torus was present in three skeletons (Sk. 11, 14 and 32), also located in a cluster. Palatine torus was present in four skeletons towards the north end of the site (Sk. 3, 6, 7 and 10). These clusters of traits are probably evidence for burials in extended family groups. Less common traits identified in this group included one skeleton with an ossicle at the lambda (Sk. 2), and one with a sagittal wormian bone (Sk. 7).

Dental Analysis

Twenty-four individuals had complete or partial dentitions. Of these, 19 were adults and five sub-adults or children. The group was too small for separation into age and sex categories, and in any case is dominated by males. All sub-adults over the age of 12 were included with the adults, as most of the permanent teeth were fully erupted. This left only Sk. 19, the *c.*7-8 year old, whose dentition consisted of six deciduous and eight erupted permanent teeth; one of the deciduous teeth, the lower left first milk molar, was carious.

If complete dentitions from all 23 adult and sub-adult individuals had been present, there would have been a total of 736 observable positions. However, 263 teeth/positions were missing, leaving 473 observable positions, 69 of which consisted of the tooth only, the alveolar bone having been dissolved. This means that there were 404 positions which could be assessed for

abscesses or ante-mortem tooth loss. Ante-mortem loss was recorded in 23 positions; the ante-mortem tooth loss frequency for this group is therefore 5.7%. Five abscesses were recorded, which gives a frequency of 1.2%. Post-mortem loss from assessable alveoli totalled 56. Eleven teeth in this group were unerupted or partially erupted, seven were congenitally absent and five were uncertain; with one exception (the congenital absence of a second premolar with retention of a deciduous molar in Sk. 3) all of these were third molars. A total of 371 teeth were present. Six carious lesions in the surviving teeth gave a frequency of 1.6% for this dental pathology. This data is summarised in Table 24, along with prevalences from other contemporary groups.

Type	Site	% caries	% abscesses	% A-M loss
Rural	Partney	1.6	1.2	5.7
	The Hirsel, Scottish Borders	2.0	0.2	6.9
	Barton Bendish, Norfolk	10.2	3.9	c.15
Urban	St. Mark's, Lincoln	4.0	0.5	6.3
	Jarrow medieval (Anderson forthcoming a)	4.4	1.1	9.1
	Ipswich Blackfriars	10.4	5.5	17.4
	Hartlepool Friary	10.2	2.0	17.1
	St Mary's Priory, Hertford (Waldron 1996)	3.2	2.4	17.4

Table 24: PTN4 03 Dental disease frequencies at Partney and contemporary sites

This shows that dental disease was relatively low in this population in comparison with other medieval groups. In part this may be a result of poor preservation, as carious teeth might disappear faster than complete ones, and many areas of alveolar bone were lost or in poor condition, so were not assessable for abscesses and ante-mortem tooth loss. However, it is probably more typical of a rural group. With the notable exception of Barton Bendish (which includes a post-medieval component and is a relatively small group), dental disease prevalences are generally higher in the urban groups, but the very high rates of ante-mortem tooth loss in some of these groups are probably related to the higher proportions of older individuals present.

The carious lesions seen in this group all appear to have originated in interstitial cervical positions and often affected adjoining teeth as a result. This is common in medieval populations, and reflects the difficulty of removing decaying food particles from between the teeth.

The poor condition of the teeth generally made recording of calculus and enamel hypoplasia difficult, but both conditions were present. Calculus was slight in four individuals, moderate in one, and considerable in one, but it is likely that a lot of the evidence for this condition had been lost. Hypoplastic lines were noted in two individuals, Sk. 15 who was affected between the ages of c.3-6 years, and Sk. 18 for whom lines had formed at age c.4-5 years. These shallow horizontal lines in the tooth enamel are thought to be related to

stress and illness, and they often occur annually, perhaps as a result of winter malnutrition.

Pathology

In general, the condition of these skeletons, with so much surface erosion and post-mortem breakage, was not conducive to the preservation of pathological changes and few were observed.

Congenital/Developmental Anomalies

The sacrum of Sk. 3 (male, *c.*16-18 years) showed near-complete spina bifida occulta, with a cleft over the first to second and third to fourth segments, and only a small bridge of bone over the upper half of the third segment. This individual had only four sacral segments, the first having been 'lumbarised' to become a sixth lumbar. The arch of this was also bifid. Only six cervical vertebrae were present, and it is possible that there was never a seventh.

The same individual had a slight scaphocephaly (keeling of the skull along the mid-line) due to early fusion of the cranial sutures (craniosynostosis), which had affected the rear three-quarters of the sagittal suture and the upper halves of both sides of the lambdoid. Early closure of the cranial sutures can sometimes cause mental retardation, but in this case the fusion seems to have occurred later in life and may not have affected brain development to any great degree.

Arthropathies and Degenerative Disease

Arthritic changes in this group were difficult to assess due to the lack of preservation of joint surfaces. However, four individuals (Sk. 8, 13, 14 and 18) showed signs of pitting and thickening in the superior part of the acetabulum (hip joint). Two others had marked lipping of the acetabular borders (Sk. 6 and 36). There were signs of arthritis in the right elbow of Sk. 8, who also had osteophytes at the shoulder and hip joints. The right wrist joint of Sk. 6 appeared to have a large osteophyte which may have been part of an osteoarthritic lesion, but the joint surface was lost. The right shoulder and both elbows of Sk. 36 showed signs of osteophyte formation.

The spine is usually the area of the skeleton most affected by degenerative conditions, but very few vertebrae survived in this group. Osteophytes were noted in the spines of five individuals, and three of these also had Grade II osteoarthritis, two in the cervical vertebral bodies and one in the zygapophyseal facets of most thoracic vertebrae.

There is some evidence for diffuse ideopathic skeletal hyperostosis (DISH) in two skeletons (Sk. 6 and 36) and the possibility that it occurred in two others (Sk. 11 and 32). This disease, which consists of a proliferation of new bone at muscle attachments and partial fusions of the spine, is often associated with monastic groups. It is related to obesity and late-onset diabetes and is usually more prevalent in males over 50 years of age. The spines of three of these individuals were not present, so the only evidence was in the form of bone

proliferation, most of it occurring on the linea aspera of the femur and the soleal line of the tibia, and in the case of Sk. 36, on the greater tuberosity of the L. femur, the iliac crest, and the tips of the spinous processes of the few surviving thoracic vertebrae.

Trauma and Stress Indicators

Schmorl's nodes were present in three individuals, although generally vertebrae were not very well preserved on this site and most were not assessable for the condition. The pits formed in the vertebral bodies are a result of stress in the spine, and they are most common in the mid-thoracic to lumbar regions. This group is no exception.

A possible osteochondritic lesion was present in the right ankle (distal tibia) of Sk. 4. These small pits are associated with physical stress on the joint, but are more common on convex than concave joint surfaces, and this example may be better described simply as a 'stress lesion'. A circular lesion with a pitted floor in the inferior part of the distal facet of the right first cuneiform of Sk. 15 was probably similar, although its appearance was reminiscent of 'metatarsal pitting' which occurs in the third metatarsal and cuneiform and is of unknown aetiology (Rogers and Waldron 1995).

Sk. 7 (?male, young/middle-aged) had a well-healed fracture of the left ulna at the midshaft. There was a slight misalignment of the shaft as a result. The surfaces of the bone were lost post-mortem, but callus appeared well-rounded and the fracture was likely to have been quite old at the time of death. The radius was not affected. This kind of fracture, known as a parry fracture, is often caused in an attempt to ward off direct violence. The same individual also had a small exostosis, indicating a torn muscle or ligament attachment, at the right knee (anterior inferior border of the superior facet for the fibula on the tibia).

A slight oval dent (c.23 x 15mm) on the right side of the frontal bone of Sk. 15 (sub-adult, c.15-16 years) was probably a depressed fracture. However, this skull had been badly deformed by soil pressure, affecting the rear of the left parietal and occipital, and it is possible that the slight indentation on the frontal bone was caused in the same way.

Deficiency Disease

Generally skulls were in too poor condition for the presence or absence of cribra orbitalia and porotic hyperostosis to be recorded. Nine individuals could be assessed for one or both orbits, and cribra was present to a mild (porotic) degree in three, two of which were sub-adults (Sk. 8, 15 and 17). This condition is associated with iron deficiency anaemia.

Infections

Sinusitis of the maxillary sinus is a relatively common infection in most early groups and can be related to abscess formation around the roots of the

maxillary teeth, to smoke inhalation in rooms with open hearths, or to viral infection. In this group, four out of seven of those with evidence for the disease had been affected with dental abscesses and/or tooth loss. Sinusitis of the other cranial sinuses is less common, but one example of chronic sphenoidal inflammation with osteitis, which had caused pitted new bone growth and thickening of the sinus walls, was present in Sk. 10. A similar degree of osteitis was seen in the fragmentary remains of the maxillary sinuses of Sk. 6.

Periostitis, an inflammatory response causing graining and new bone formation, was noted in the lower legs of three individuals: Sk. 1 was affected in the right tibia, Sk. 8 in the right fibula, and Sk. 36 in the left fibula. Generally, loss of bone surfaces made the prevalence of this condition difficult to assess, but six individuals were definitely not affected in the lower leg bones.

Sk. 8 (male, old) had a lytic lesion in the superior body of the ?first lumbar vertebra, which was in poor condition. A large cleft had also developed in the inferior surface of the body, and the bone was wedged anteriorly. This may be a tuberculous lesion, although trauma could produce a similar result. The spine would have been bent (kyphotic) as a result.

Miscellaneous Lesions

An osteoma was present on the centre of the left parietal of Sk. 36. It was oval and measured c.13 x 15mm. These benign tumours are relatively common on the cranial vault and would simply have produced a hard lump which could have been felt through the scalp.

Summary and Discussion

Of the 43 burials excavated at Partney, 33 produced human skeletal remains, ranging from a few teeth or scraps of long bone, through fragments representing most of the skeleton, to near-complete individuals. Two-thirds of the skeletons were in poor or very poor condition.

Very few children and sub-adults were present, and the youngest was aged 7-8 years. No infants or young children were present, and there is no indication from the size of the other graves that any were buried here. Of the adults, 18 individuals could be sexed. Sexing was based largely on skulls and robusticity of long bones, and suggested that the majority of individuals were male. Only one, uncertain, female was identified. Most adults had survived to 'middle-age', although a few younger and older individuals were present; this pattern is comparable with other rural medieval groups.

Physically these people were very similar to their contemporaries in terms of stature and head shape, although the mean cranial index in this group is particularly high, and many of the skulls which could not be measured were also noticeably broad. Evidence from non-metric traits suggested that family groups were present. Presently the suggestion is that the hospital was partly

for the lay people who ran the estate and partly for priests. The apparent lack of females may simply be a result of poor preservation of the more reliable sex discriminators.

The results of the dental analysis suggest that dental disease was low in this group, and similar results have been found in other rural populations. Urban groups appear to be more affected, although most of the larger groups which are available for comparison are from monastic sites, and many have a high proportion of older individuals, in whom dental disease can be expected to be advanced.

Poor preservation has limited the pathological study of this group. Most of the common skeletal pathologies are represented, including degenerative disease, inflammatory changes to the lower leg bones, and stress indicators in the spine and elsewhere. However, only one fracture was noted, and if others were present they should have been relatively easily identified despite the condition of the bone. Similarly, evidence for deficiency disease, in the form of iron deficiency anaemia and enamel hypoplasia, was also scarce. Perhaps the most debilitating pathologies noted in this group were the spinal lesions of Sk. 8, which may have been a result of tuberculosis but which in any case would have caused pain and difficulty of movement, and the osteitis of the sphenoidal sinuses of Sk. 10, which was probably a long-term infection and would have caused severe headaches and respiritory problems. This condition too can be caused by a specific infection such as tuberculosis, but no other evidence for the disease was seen in this skeleton. Where possible, bones of the face, hands and feet were checked for leprosy, but there was no evidence for the disease in this group, and even the few examples of periostitis of the shin were unremarkable.

Taking into account all available evidence, it seems that this group came from a relatively healthy and well-nourished population in comparison with some of its contemporaries, with little evidence of the violence and physical stress which can be seen in other, particularly urban, groups.

Recommendations

No further analytical work is required on the human remains and the report included here will be integrated into the publication.

It is proposed that five burials should be radiocarbon dated, with stable isotope measurements taken. The burials for proposed dating include one within chapel, one along wall, two from intercutting burials and one from a stone-lined grave. The dating programme is expected to elucidate the development of the cemetery, while the stable isotope analysis will be targeted towards various research issues (see Sections 12.7.6 and 12.7.8).

7.5.2 *Animal Bone*
by Ian Baxter

Introduction

A total of 164 countable animal bone fragments were hand-collected (Table 25) and a further thirty-one fragments collected from sieved samples (Table 26). The site included a number of human graves and a few bones from these were included with the animal bones.

Human (*Homo sapiens*)	4
Cattle (*Bos* f. domestic)	75
Sheep/Goat (*Ovis/Capra* f. domestic)	26
Sheep (*Ovis* f. domestic)	(7)
Pig (*Sus scrofa*)	23
Equid (*Equus* sp.)	1
Horse (*Equus caballus*)	7[1]
Dog (*Canis familiaris*)	2
Hare (*Lepus* sp.)	2
Rabbit (*Oryctolagus cuniculus*)	2
Domestic Fowl (*Gallus* f. domestic)	11[2]
Goose (*Anser/Branta*)	8
Crow/Rook (*Corvus corone/frugilegus*)	1[3]
Bird (*Aves* sp.)	2
Total	**164**

Table 25: PTN4 03 Animal bone: number of hand-collected identified specimens (NISP).

"Sheep/ Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" .

[1]includes partial skeleton (thirty-one bones) counted as 1.
[2]includes partial skeleton (thirty-three bones) counted as 1
[3]three bones from the wing of a single individual counted as 1

Cattle (*Bos* f. domestic)	1
Sheep/Goat (*Ovis/Capra* f. domestic)	1
Mouse/Vole (*Murid/Microtine*)	5
Mole (*Talpa europaea*)	2
Domestic Fowl (*Gallus* f. domestic)	1
Bird (*Aves* sp.)	+
Anuran (*Rana/Bufo* sp.)	1
Fish (*Pisces* sp.)	20
Eel (*Anguilla anguilla*)	(3)
Ray (*Raja* sp.)	(1)
Total	**31**

Table 26: PTN4 03 Animal bone: number of identified specimens from the sieved assemblage (NISP)

"Fish" includes specimens identified to species or higher taxonomic category. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" (see text).

The Assemblage

Cattle remains account for 60% of the main domestic species. The only cattle horncore recovered came from a sub-adult shorthorn. This was found in pit **556**. While most of the epiphyseal ends of long bones available for study are fused, and therefore derived from skeletally adult beasts, mandibles were recovered from contexts two contexts each from well **405** and pit **454** from calves that had not long been weaned (Grant wear on dP_4 = b) suggestive of milk production and the consumption of veal. No cattle long bones suitable for the calculation of withers heights were sufficiently complete.

Ovicaprids account for 21% by NISP of the main domestic mammals. The only species that could be identified is sheep. No horncores were recovered and the only frontals seen, from pit **454**, were polled. The only mandibles found (n =2) have M_3 in wear and most long bone epiphyses are fused. Three complete bones give withers heights ranging between 59cm and 64cm based on the multiplication factors of Teichert (1975).

Pigs account for 19% by NISP of the major domesticates. This is a relatively high proportion, especially by comparison to sheep. The few canines seen are male. Most of the available epiphyses are fused and the mandibles recovered (n = 5) indicate the slaughter of immature and subadult/young adult animals (based on O'Connor 1988).

Horse remains occur at much lower frequency to those of the domestic food species but include a partial skeleton found in well **521**. This animal was aged around 14 years based on the comparative wear curves of Levine (1982). The presence of canines in the upper jaw suggests that it was a stallion (Sisson and Grossman 1953). Measurements taken on the long bones indicate an animal of around 13½ hands based on the multiplication factors of Kiesewalter (1888). No cut marks or pathologies were observed on any of the bones. A P_3 from (431) came from a horse aged approximately 10 years old.

A maxilla fragment found and several postcranial fragments found in well **521** belonged to a small dog.

The bones of both rabbits (*Oryctolagus cuniculus*) and hares (*Lepus* sp.) were found in contexts 140, 171, 454 and 405 respectively. Whilst the hare is a native wild species, the rabbit at this time was semi-domesticated and kept in specially constructed artificial warrens. Rabbits were expensive in the 13th and 14th centuries costing four or five times as much as chickens (Davis 1987, 194).

The bones of domestic fowl (n = 11) are marginally more frequent than those of geese (n = 8). The partial skeleton of a hen was found in well **405**. This was un-butchered. A chicken sternum found in well **405** has a twisted keel, indicative of faulty perching. Most of the goose bones are similar in size to the wild greylag and are probably domestic. However, a few are comparatively small and the possible presence of the smaller *Anser* species

and/or barnacle geese (*Branta leucopsis*) cannot be excluded. A goose tibiotarsus found in well **405** has cut marks on the medial condyle. Three bones from the wing of a crow (*Corvus corone*) or rook (*Corvus frugilegus*) were found in pit **454**. A thrush size radius was found in well **405** and the premaxillae of similar wild birds in samples from that context and pit **454**.

Fish bones were relatively numerous in the sieved sample residues (Table 26). All are small and include the jaws of eels (*Anguilla anguilla*) and the dermal scutes of rays (*Raja* sp.). While the eels could have been caught locally the rays, doubtless along with other species not represented in the material recovered, must have been imported from the coast.

Incidental pitfall victims and specimens probably deriving from burrowing activities found in the sample residues include mice or voles, mole and anuran amphibians.

Discussion

The medieval hospital site was well supplied with meat from a variety of domestic and wild species. Beef was the main dietary constituent, followed by pork and bacon and then mutton. The comparatively frequent recovery of the mandibles of recently weaned calves indicates the eating of veal and production of milk. There is evidence for the consumption of both fresh and saltwater fish, which would certainly have been a more important element of diet than the few bones recovered from the samples would suggest. Rabbits, hares, chickens, geese and possibly wild birds supplemented the diet.

Recommendations

No further work is recommended on this assemblage. The report included here will be integrated into the publication.

7.5.3 Charred Plant Macrofossils and Other Remains

by Val Fryer

Methods

A group of thirty-three samples was collected from features of medieval date. The samples were bulk floated by CCC AFU, and flots were collected in a 500 micron mesh sieve. The flots were air dried prior to submission for assessment. All flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x16. The plant macrofossils and other remains noted are listed in Tables 23-27 in Volume 2, Appendix 9. Nomenclature within the tables follows Stace (1997). Modern contaminants including fibrous roots, seeds, arthropod remains and fungal sclerotia were present within most of the charred assemblages.

Sample Composition

The samples from site PTN 4 were all taken from features (including graves, pits, hearths, wells and ditches) associated with a medieval hospital, which appeared to have been in use from the 12th to the 15th centuries. Although small quantities of scattered and/or wind-blown refuse were recorded from a number of features (most notably the grave fills), discrete dumps of burnt domestic refuse or hearth waste were noted within hearth **422** (Sample 22), pits **425** and **454** (Samples 23 and 28/29 respectively) and well **405** (Samples 24, 25, 31, 32, 33 and 34). Food residues including wheat (*Triticum* sp.), barley (*Hordeum* sp.), oats (*Avena* sp.) and pulses (Fabaceae) were common, as were weeds seeds, some or all of which were probably derived from either processing waste or fuel residues.

Recommendations

Selected samples will be analysed in order to provide economic and environmental information to supplement other data. The relevant samples include both possible hearth/dietary waste and possible processing waste.

The following are recommended for full quantitative analysis:

Sample 22	Hearth **422**	Possible hearth/ dietary waste	Medieval
Sample 23	Pit **425**	Possible processing waste	Medieval
Samples 28 and 29	Pit **454**	Possible processing waste	Medieval
Samples 24-25, and 31-34	Well **405**	Possible processing waste	Medieval

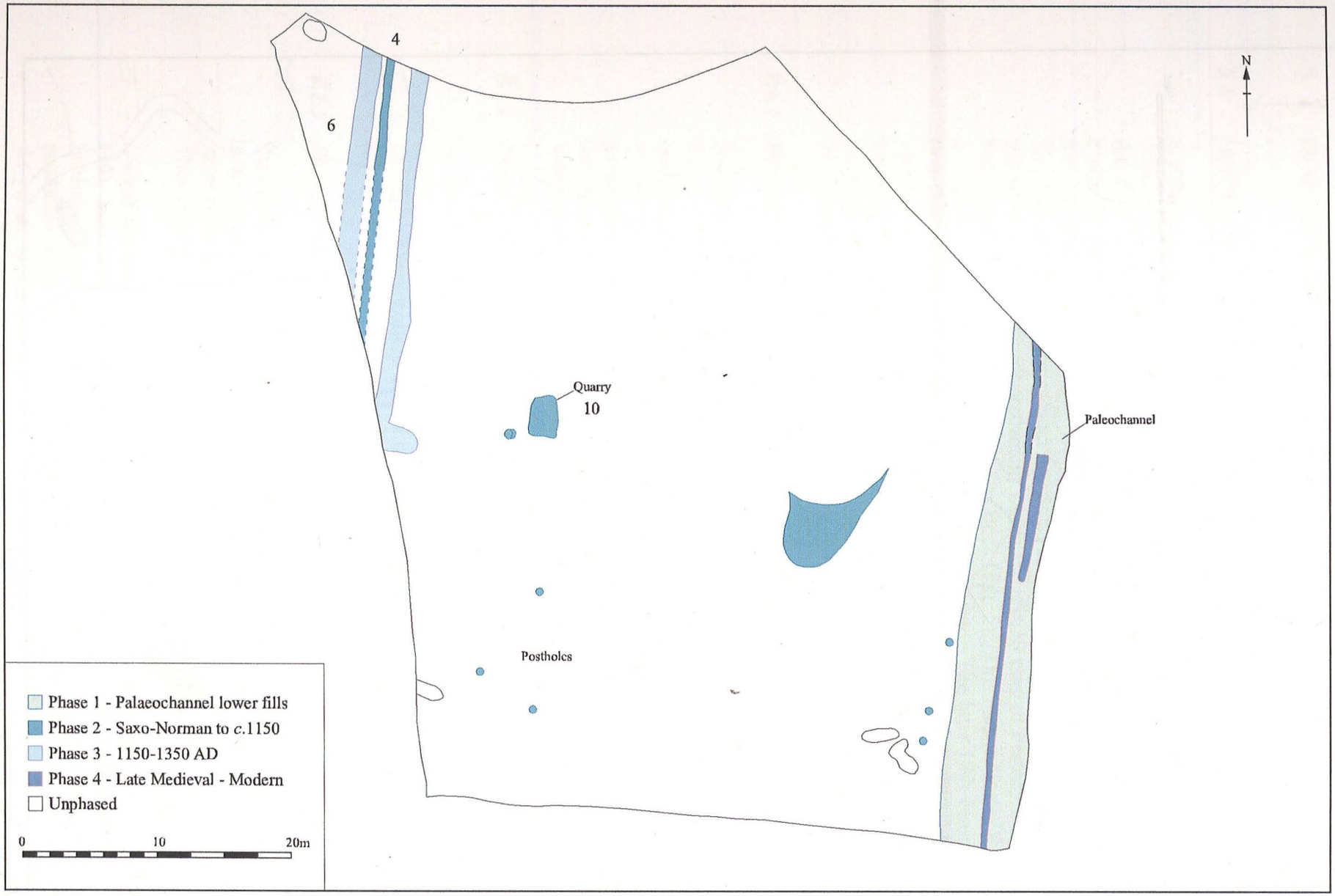


Figure 15 *Phased plan of PTN7 03*

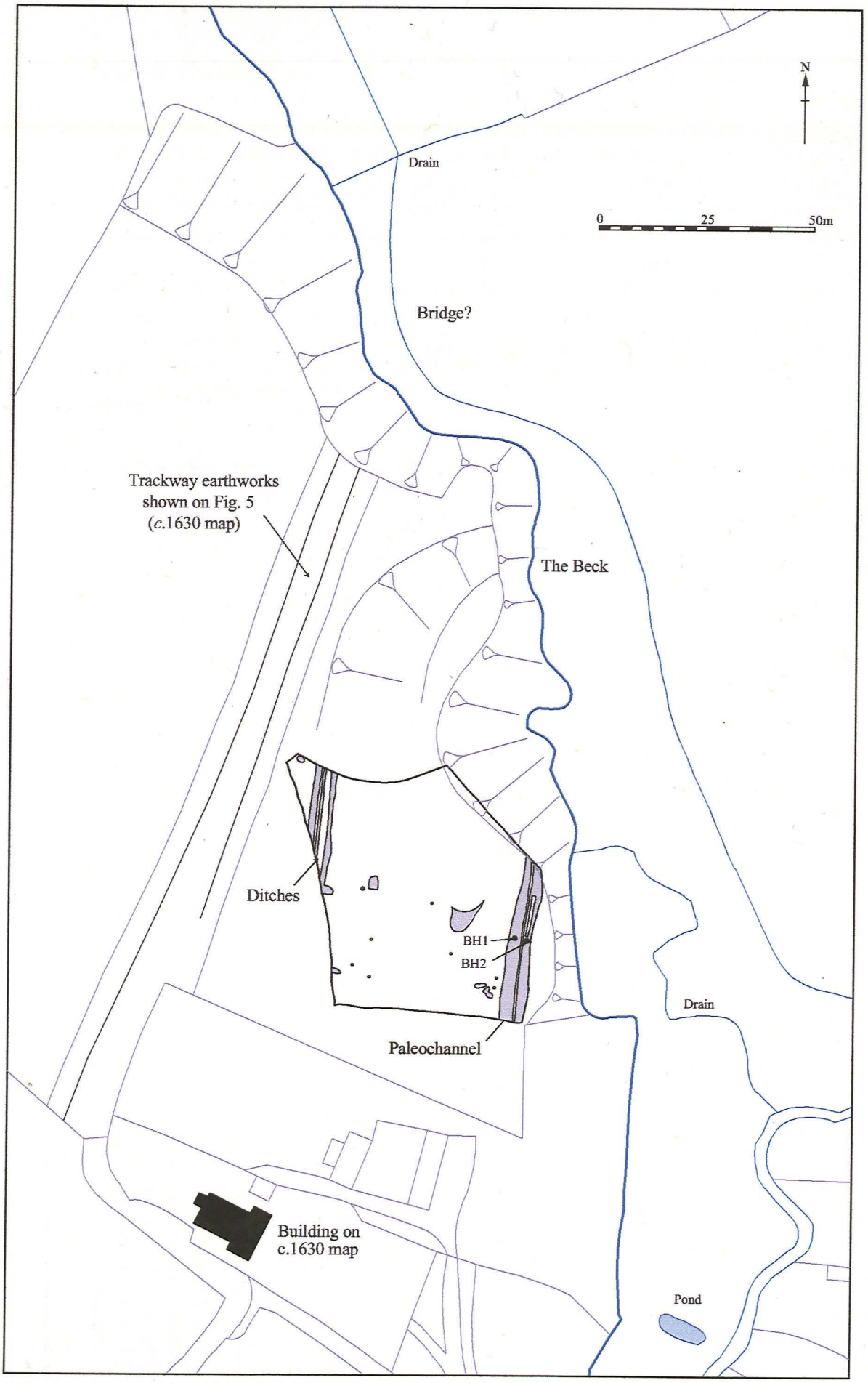


Figure 16 *Earthworks around PTN7 03*

8. SUMMARY RESULTS FOR PTN7 03

8.1 Introduction

A palaeochannel on the eastern part of this site lay directly to the west of the existing Beck. The excavation level was within medieval deposits although the date of the lower fills of the palaeochannel is likely to be prehistoric. Evidence for human activity comprised sparsely scattered features of the Saxo-Norman and early medieval period with features continuing to *c.*1350. The low density of features (and artefacts) show that that the site was on the periphery of the medieval settlement which the *c.*1630 map of Partney shows had existed on the western bank of The Beck (Fig. 5). This map indicates that a medieval road ran adjacent to the west part the site. The later 18th-century map (Fig. 6) shows that the road had gone out of use by this date, although it survived as an earthwork (Fig. 16). Presumably there was a bridge to the north of the site across The Beck and the road would have connected onto the Louth Road. The excavations showed that Partney was in decline by the end of the medieval period, with no post-14th century occupation in this area.

8.1.1 Phase 1: Palaeochannel lower fills

Borehole samples were taken from the palaeochannel. A medieval weight was found in one of the upper fill of the channels within the excavation area. Bulk samples indicate some wet land herb species and wetland plant growing in the vicinity in the medieval period. For the earlier periods, the results of the pollen cores, with radiocarbon dating of a couple of the layers, will provide information about the local environment. These results could be compared with the other data from the palaeochannels taken elsewhere on the By-Pass.

8.1.2 Phase 2: Saxo-Norman (to c.*1150)*

A single feature may date to this period. A north to south ditch (**4**) ran roughly parallel to the medieval roadway less than 10m to the west (Figs. 5 and 16). Three pottery sherds dating to 1000-1150 were recovered from its fill.

*8.1.3 Phase 3: Medieval (*c.*1150-1350)*

Parallel to and on either side of ditch **4** were two further north to south ditches, although only ditch **6** adjacent to the west was dated. The three ditches may have served the same function but been cut in slightly different positions. They may represent a long-standing boundary ditch, recut twice.

Within the central part of excavation area was a sub-rectangular quarry pit (**10**), measuring 3m by 1.85m and 0.70m deep with near vertical edges. Directly to the west and further to the south of the quarry pit were four-postholes which may relate to structures. There were further postholes near to the palaeochannel, which may be remains of a structure(s).

8.1.4 Phase 4: Modern

A north to south ditch cutting the top of the palaeochannel appeared to be a fairly recent boundary ditch.

8.2 ASSESSMENT

8.2.1 Quantification of the Archive

Evaluation and Excavation

3 sheets of context lists
71 context records

1 sheet of plan register
1 plan at 1:50, 2 at 1:100, 1 at 1:250 and 1 at 1:800

2 sheets of section register
11 sections at 1:10 and 5 at 1:20

1 sheet of sample register
2 bulk sample at 30L and 4 at 10L
2 bore hole column sample taken for pollen

1 sheet of site objects registers
5 Small Finds

3 sheets of photographic sheets
3 photographic register sheets
1 black and white print film
1 colour print film
1 digital photograph sheet

8.2.2 Stratigraphy and Phasing

The activity revealed through borehole sampling and excavation can be attributed to four phases:

Phase 1:	Palaeochannel lower fills
Phase 2:	Saxo-Norman (to *c.*1150)
Phase 3:	Medieval (*c.*1150-1350)
Phase 4:	Modern

8.2.3 Range and Variety

Two borehole column samples were taken from the western edge of a palaeochannel. Around 2m of silty and organic alluvial sediments overlay coarse sand. It seems likely that these sediments may represent overbank

sedimentation which began in the Late Bronze Age, or Early Iron Age and continued through the Romano-British and medieval periods to the present day. No radiocarbon dates have yet been taken from borehole material to date this sequence and pollen analysis has not yet commenced.

To the west of the palaeochannel, a few scattered features date from the Saxo-Norman period to about the 14th century and may represent backyard and small quarry features associated with the medieval settlement. The postholes represent structures, although the lack of finds implies that the main domestic buildings were elsewhere. The *c.*1630 plan of Partney (Fig. 5) shows that there was a house some 50m to the south, at the site of the present building. It is therefore possible that the excavations exposed the backplot features to this former building, although this suggestion is highly tentative, particularly as houses shown fronting onto Monks Lane further to the south on the *c.*1630 map have small burgage plots.

The *c.*1630 map and an earthwork survey of the area (Fig. 16) shows a medieval trackway running north to south just to the west of the excavation. Earthworks to the north of the site indicate a slight hollow *c.*60m by *c.*30m leading to The Beck (Fig. 16). This hollow may have been quarrying or a natural phenomenon.

A sub-rectangular pit (**10**) has been described as a quarry pit. This was a very small quarry working as the natural sandstone bedrock layer was less than 0.5m thick in this area. The ditches may be boundary ditches possibly of former burgage plots or enclosure ditches.

8.2.4 Condition

The few features survived in relatively good condition. The field has not been intensively ploughed as the surviving earthworks of the trackway demonstrate. The site is still grassland, with evident damage from badger and rabbit holes.

8.3 The Finds

8.3.1 Metal Finds

by Nina Crummy

Summary

Five metal objects were recovered. In their unconserved state only one modern item can be closely dated, the remainder are likely to be medieval or later.

Condition

All five objects appear to be reasonably well-preserved but retain a coating of soil. The surfaces of two of the lead objects are covered by a distinctive powdery white corrosion.

The objects are packed to a good standard of storage in polythene bags supported by pads of foam. The bags of copper alloy objects are stored in an airtight Stewart box with silica gel. The bags of lead objects are stored in a crystal box.

Assemblage

The assemblage consists of two copper alloy and three lead objects:

Context	Material	Identification	Date	Conserve	Illustrate	Functional category
99999	copper alloy	strap-plate	medieval	y	-	1
99999	copper alloy	?belt-plate, composite	medieval	y	-	1
19	Lead	perforated bun-shaped weight	medieval	y	-	6
99999	Lead	bullet	modern	-	-	-
99999	Lead	thick discoid weight	medieval	y	-	6

Table 32: Metal objects from PTN7 03

The functional categories used above are those defined in Crummy 1983 and 1988. Both copper alloy items are dress accessories (category 1), and two of the lead objects are weights (category 6, weighing). These four objects are broadly of medieval date, perhaps in some cases as early as Late Saxon. The third lead object is a modern bullet, which has not been categorised. All the objects apart from one of the lead weights were unstratified in topsoil.

Recommendations

Given the small quantity of the assemblage and the fact that most objects are unstratified, only limited further work is required. It is recommended that:

1. in order to stabilise them, the four medieval objects should be conserved.

2. only the stratified weight needs be included in the site report, unless it is residual. Otherwise no further action need be taken, though all the objects should be deposited with the site archive.

3. no items merit illustration.

8.3.2 *Pottery*

by Carole Fletcher

Quantity and Date Range

The fieldwork generated a small assemblage of 34 sherds of pottery, weighing 0.545kg, including unstratified material. The main period represented in the assemblage is medieval, the date of most material falls within a mid 12th to mid 13th century bracket. There is no post-medieval material and only a single residual sherd of Roman Samian was recovered. The pottery catalogue is presented in Volume 2, Appendix 10.

The pottery was recovered during area excavation following machine stripping of the road corridor and many sherds show surface abrasion caused by acidic soil conditions.

Provenance and Contamination

Basic statistics relating to source area for the assemblage are given in Table 33. This indicates a local source for the bulk of the assemblage.

General provenance	**% of assemblage by count**	**% of assemblage by weight**
Lincolnshire (including Local medieval)	55.89	56.2
Non local (medieval)	2.94	0.55
Norfolk (Thetford Type ware)	14.71	26.2
Unknown (Unsure of fabric type)	23.52	16.14
Roman	2.94	0.91

Table 33: *General provenance areas for assemblage by weight (kg) and count*

The majority of fabrics are local in origin due in part to site's proximity to the pottery production centre around Toynton. The remaining medieval non-local pottery has not been fully identified at this stage and it is possible that some of this may also be local but surface abrasion of the sherds has made identification problematic.

Contamination of this assemblage is apparently light, with only a single residual sherd. The medieval sherds in the assemblage are not thought to be intrusive.

Sampling Bias

The area was stripped by machine along the road corridor in advance of construction with some further excavation was carried out by hand. Selection was made through standard sampling procedures.

Where bulk samples have been processed for environmental remains no pottery has been recovered.

Condition

The assemblage is comparatively small but with an average sherd weight of approximately 16g. Statistical analysis is not viable on this assemblage due to its small size. Many of the sherds are relatively unabraded, however the Shelly fabrics are all leached and the fabric has been softened by the acidic soil conditions of the post depositional environment making them more susceptible to abrasion.

This assemblage contains no complete vessels. It is significantly fragmented and in a well-understood and published region would be deemed of limited value beyond the basic requirements of the stratigraphic sequence and the need to provide comparative period statistics.

Main Vessel Types

The assemblage consists of large moderately abraded sherds from several large Shelly ware jars, early Shelly ware and a Thetford type ware in–turned bowl. A single sherd from an internally glazed bowl was also recovered; this was the only glazed sherd in the assemblage. A single Samian ware sherd represents the only Roman vessel identified. The assemblage though small appears to be domestic in origin.

Conclusion

The relatively small size of the assemblage makes it difficult to generalise about activity across this part of the road corridor. The lack of table wares suggests the assemblage is concerned more with the domestic day to day activities in the kitchen of a small dwelling using local coarse wares, rather than serving at table in larger household.

Recommendations

No further work is recommended on the above assemblage.

8.3.3 Lithics

by Barry Bishop

Only four worked flints were recovered from PTN 7 03. The flint report was amalgamated with PTN1 and PTN 4 and appears in Section 5.3.3 above.

8.4 Zoological and Environmental Evidence

8.4.1 Animal bone

by Ian Baxter

Only five "countable" bone fragments were recovered from this site representing cattle (n = 3), pig (n = 1) and horse (n = 1). The pig fragment is a male lower canine and the horse P^4 came from an animal aged approximately 6 years.

Recommendations

No further work is recommended on the assemblage.

8.4.2 Sedimentology and Pollen Analysis

by Steve Boreham

Introduction

Two boreholes were located in a valley-fill sequence in The Beck near 'The Grange' (TF 4094 6859; Fig. 16). The boreholes were excavated within the excavation which had removed topsoil and subsoil.

Valley-fill Sequence

Two trial boreholes were put down using a hand auger to assess the stratigraphy at the site (PTN7 03). BH1 was located closest to the valley side, and BH2 was located 6m to the east adjacent to the present river channel. The log descriptions are described below:

BH1 – described top-down - 0-50cm is section cut in trench.

0-50cm	Grey/brown sand-silt with rootlets and occasional flints.
50-60cm	Grey soft organic silt.
60-80cm	Brown soft organic material.
80-90cm	Grey organic sand.
90-100cm	Grey sandy silt with organic material.
100-120cm	Brown organic silt.
120-130cm	Grey/brown organic silt.
130-140cm	Grey silt.
140-180cm	Grey silt with wood fragments.
180-190cm	Grey sandy silt.
190-240cm	Grey sand.

Hole stopped at 240cm on running sand.

Pollen samples – 15, 25, 35, 45, 55, 65, 75, 85, 95, 105, 115, 125, 135, 145, 155, 165, 175, 185cm.

BH2 – described top-down - 0-50cm is section cut in trench.

0-50cm	Grey/brown sand-silt with rootlets and occasional flints.
50-60cm	Grey soft organic silt.
60-90cm	Brown soft organic material.
90-100cm	Grey organic silt with sand.
100-140cm	Brown/black organic silt.
140-160cm	Grey/brown organic silt with wood fragments.
160-180cm	Grey sand with wood fragments.
140-180cm	Grey silt with wood fragments.
180-200cm	Grey coarse sand.

Hole stopped at 200cm on coarse sand.

Both boreholes found *c*.2m of silty and organic alluvial sediments overlying coarse sand. The sequence at BH1 was sampled at 10cm intervals for later analyses. It seems likely that these sediment may represent overbank sedimentation which began in the Late Bronze Age, or Early Iron Age and continued through the Romano-British and medieval periods to the present day. However, without further investigation it is difficult to be sure of their significance.

Recommendations

A full report assessing the pollen and integrating the findings with radiocarbon dates would assess the significance. This could be done with BH1 where the valley-fill sequence was sampled at 10cm intervals and produced 18 pollen samples. It would be useful to have at least one, preferably two, radiocarbon dates to date the borehole sequence.

8.4.3 Charred Plant Macrofossils and Other Remains

by Val Fryer

Methodology

Two samples from fills within a palaeochannel were assessed. Other samples from the site did not produce charred material and were not submitted. The samples were bulk floated by the CCC AFU team, and flots were collected in a 500 micron mesh sieve. The flots were air dried before submission for assessment. All flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x 16. The plant macrofossils and other remains noted are listed in Table 34 (see Volume 2, Appendix 11). Nomenclature within the tables follows Stace (1997).

Sample Composition

Two samples were taken from waterlogged fills within a probable medieval channel. Both assemblages were extremely small (<0.1 litre in volume) but did contain a limited range of wetland and aquatic plant macrofossils and seeds of dry-land herbs.

Recommendations

No further work is recommended on these samples.

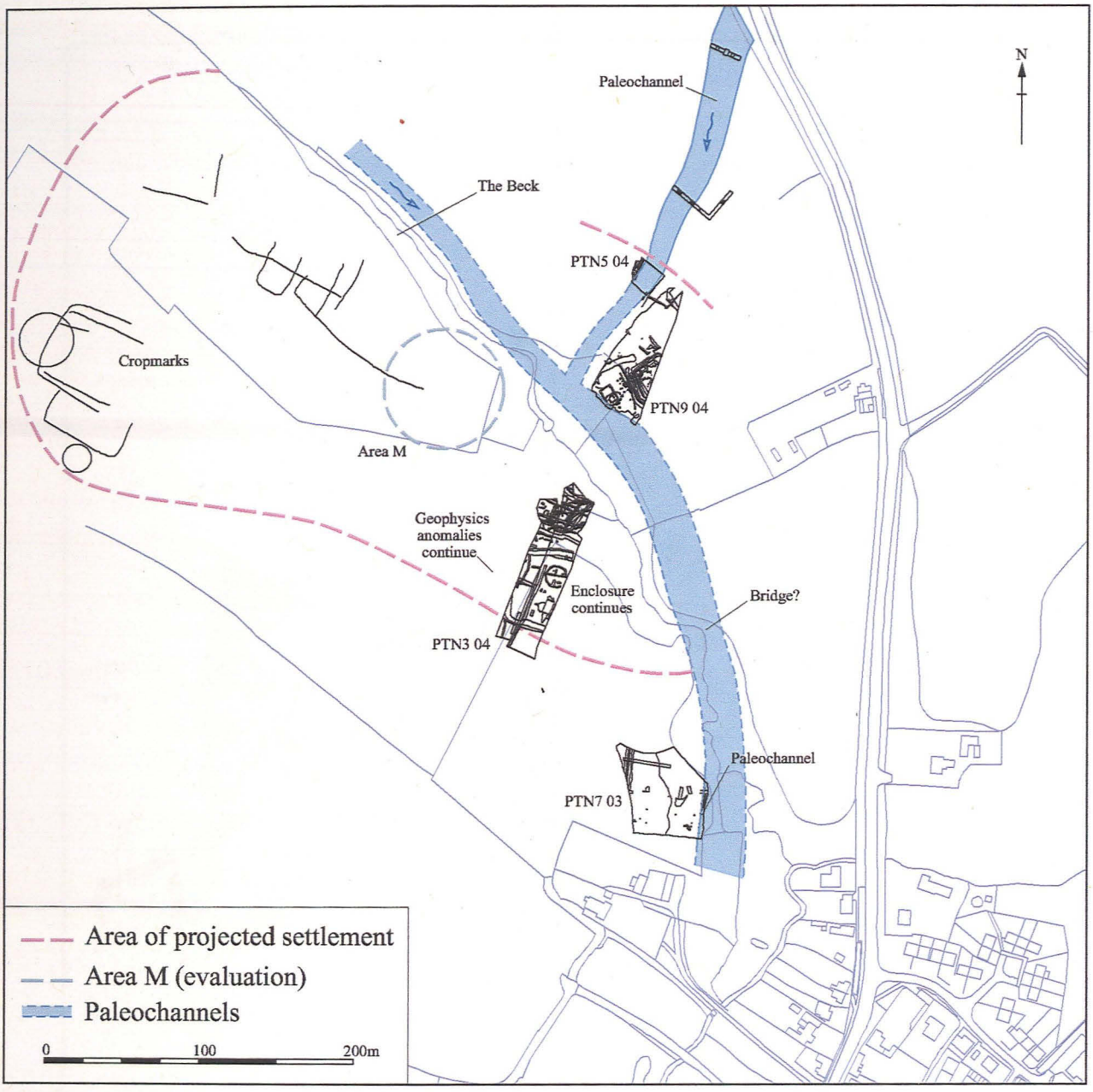


***Figure 17** Area of projected Iron Age / Roman settlement*

Figure 18 *Phased plan of PTN3 04*

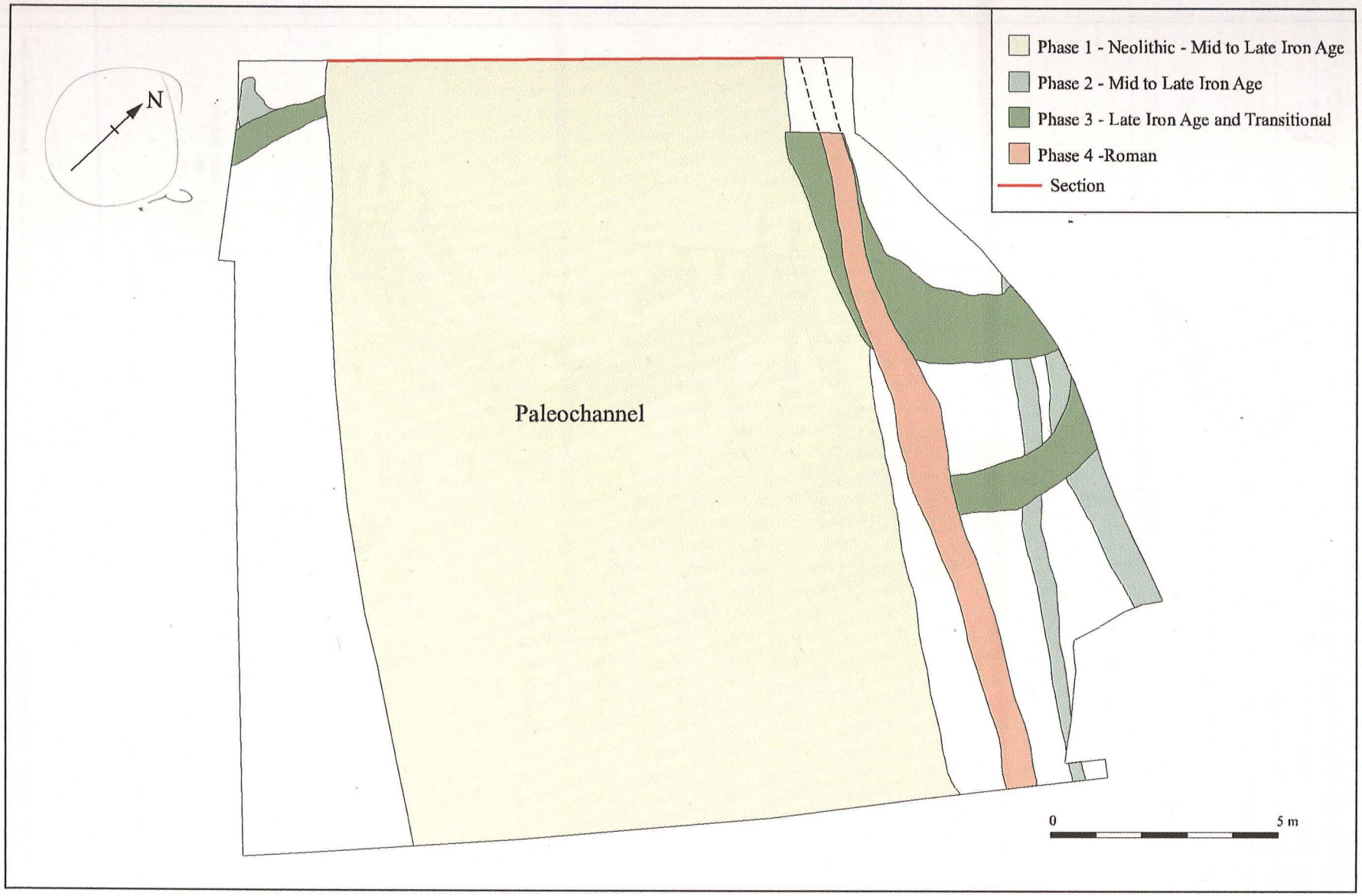


Figure 19 *Phased plan of PTN5 04*

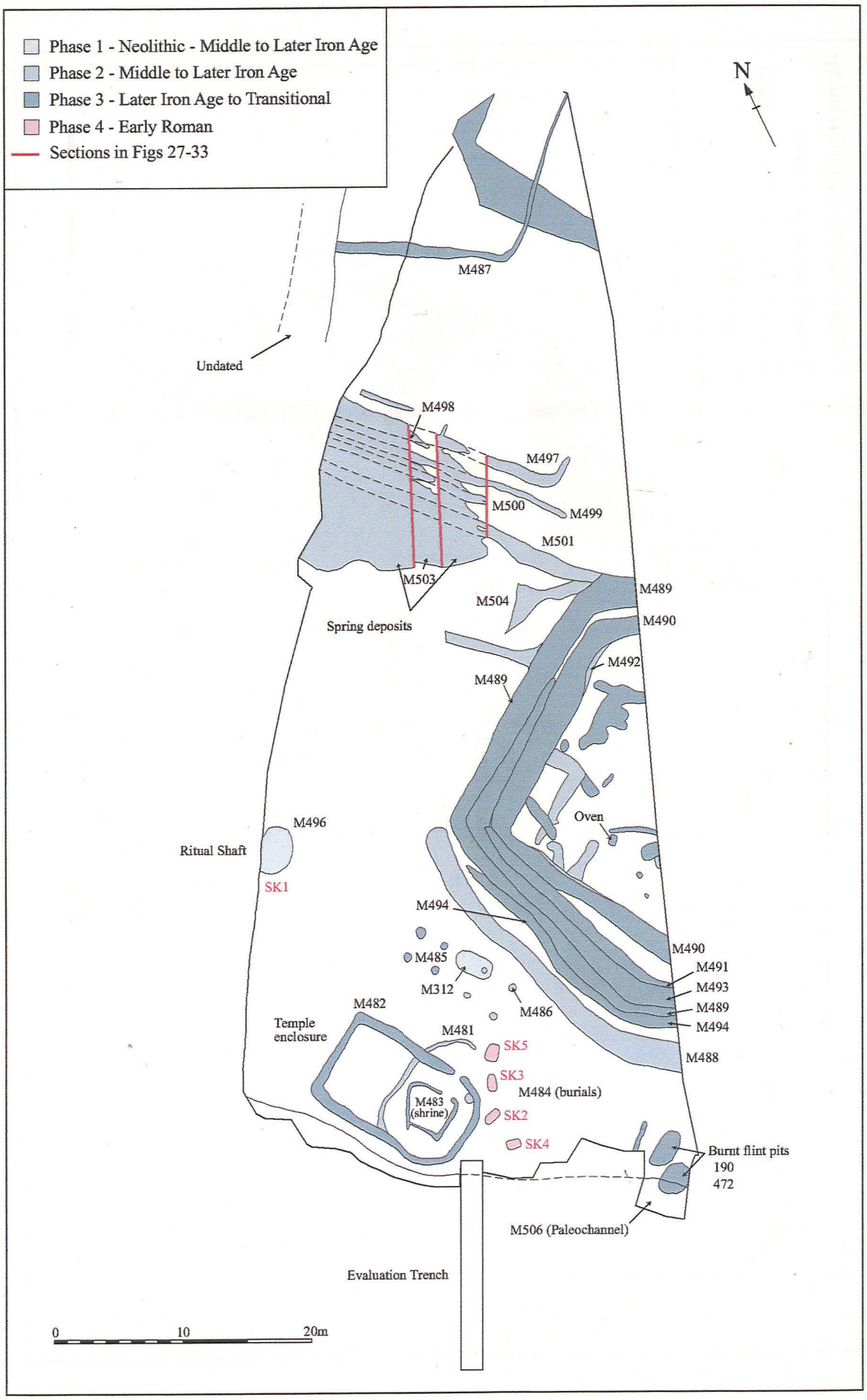


Figure 20 *Phased plan of PTN9 04*

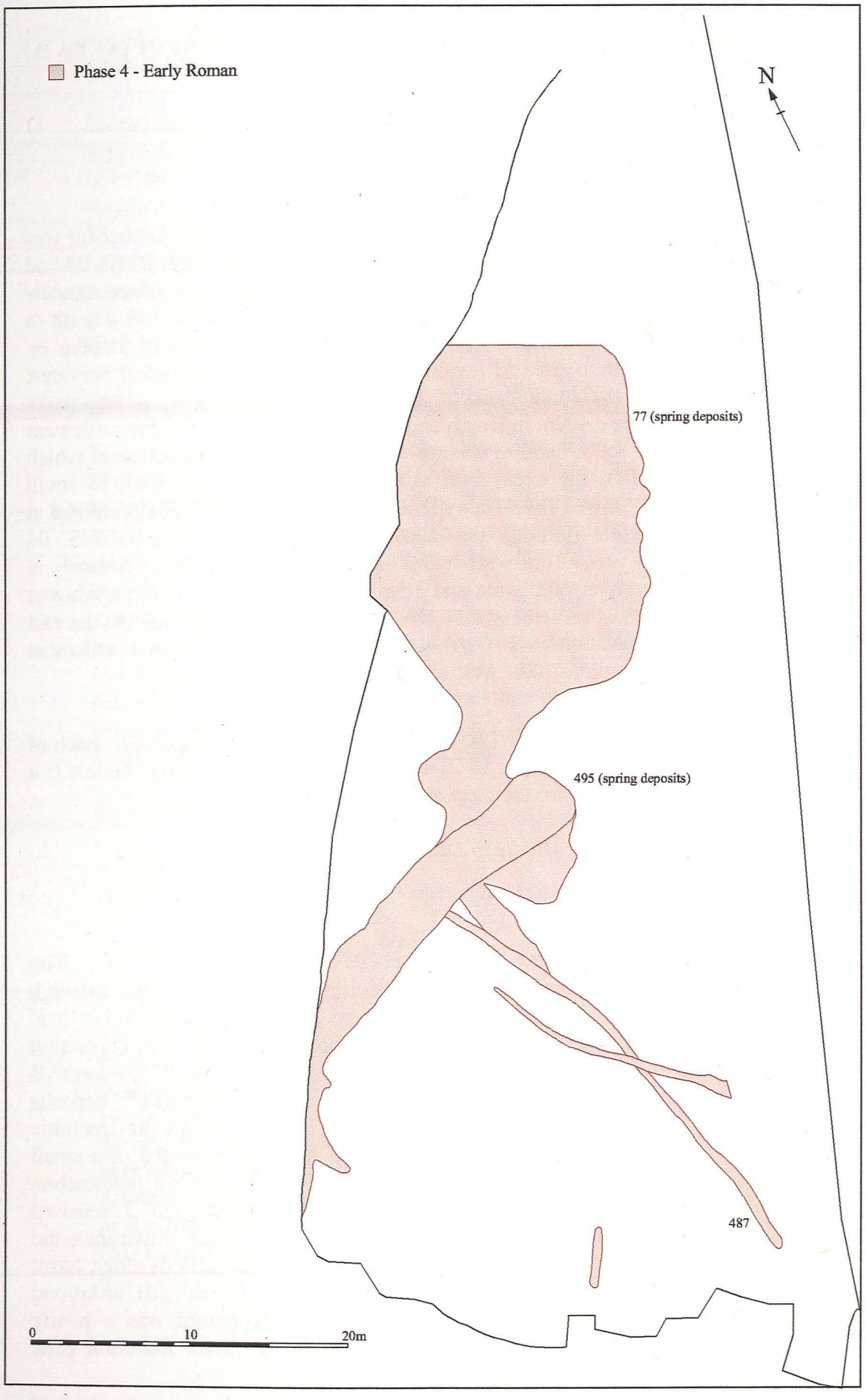


Figure 21 *Phased plan of PTN9 04*

9 SUMMARY OF RESULTS FOR PTN3 04 (AREA B), PTN5 04 (AREA A) AND PTN9 04

9.1 Introduction

Part of a very large and nationally important Iron Age/Roman settlement was evaluated and excavated at Sites PTN3 04 (Area B), PTN5 04, PTN9 04 and Area M (Fig. 17). The settlement was on three banks of two palaeochannels which met at right angles. Preparation for the By-Pass resulted in a north to south strip being excavated through this settlement (an area of *c*.300m by 40m), in addition to Area M (evaluated by Lindsey Archaeological Services; Fig. 17). On the south bank of The Beck, photographs show cropmarks covering an area *c*.400m in length and 250m wide. This part of the settlement was along the south bank of a north-east to south-west palaeochannel which was sectioned in the excavation at PTN9 04. A further north to south palaeochannel flowed from Dalby Hill 1km to the north and was sectioned at PTN5 04 before joining the above palaeochannel. The PTN5 04 palaeochannel was *c*.16m wide and 2.5m deep whilst the palaeochannels at PTN9 04 were over 30m wide and 3.5m deep. Excavation on the north-east bank found part of settlement at PTN9 04 and occupation continued to the east outside the excavation area. On the north-west bank, the edge of a settlement was found to continue to the west of the excavation (PTN5 04).

The phasing for PTN3 04, PTN5 04 and PTN9 04 were very similar. Each of the plans for the site Figures 18-21 indicates the specific phasing. Below is a combined assessment for the three sites.

9.1.1 Phase 1: Neolithic to Middle to Late Iron Age

Palaeochannels

The palaeochannels were sampled at PTN5 04 and PTN9 04. The infilling/silting of both may have started during the Neolithic period although further radiocarbon samples of earlier deposits may give a pre-Neolithic date. At PTN5 04 Steve Boreham has assigned 8 separate 'packages' of deposition (A-H) and radiocarbon dates were obtained for a channel infill 'package' B (3770 to 3380 BC (to 2 standard deviations)) and channel infill C deposits (1920 to 1680 BC (to 2 standard deviations)). The only possible pre-Neolithic deposit from this palaeochannel was package A which consisted of a small basal sand deposit. At PTN9 04, the lower deposits were not radiocarbon dated but a very Late Neolithic date (2870 to 2470BC (to 2 standard deviations)) was obtained from the third phase in the channel. Environmental samples show that during the Bronze Age and Neolithic periods alder, hazel and dryland shrub species were present. A few waterlogged arthropod remains were recovered although the only one recognised was a poorly preserved fragment of the dung beetle, *Geotrupes* sp (Mark Robinson pers.

comm.). When the pollen analysis is completed it will show if crops were being cultivated in the area.

Within the palaeochannels at PTN9 04, were a small number of animal bones deposited in a probable Neolithic layer. This layer was directly below the layer attributed a Late Neolithic radiocarbon date (2870 to 2470 BC (to 2 standard deviations)). There were equal numbers of cattle and equid remains. The cattle remains include a cranium with the part of the frontal with the horncores missing, perhaps intentionally removed. It is possible that such remains were being deliberately deposited into the channel on this known ritual site (on the basis of the location of springs and palaeochannels, a ritual shaft and the later temple at PTN9 04).

Springs at PTN9 04

Two springs at PTN9 04 fed into the palaeochannel at PTN5 04 (Figs. 20 and 21). One of the springs (**M503;** middle deposits) was radiocarbon dated to the Middle Iron Age (400 to 200 BC (to 2 standard deviations)), while an early deposit in the spring (194) produced two Mesolithic narrow flakes and a chunk representing a thermally shattered blade core.

The radiocarbon date from a middle deposit predates the settlement on the site by at least *c*.50 years (pottery dating shows the settlement started at *c*.150 BC) and demonstrates that the springs existed before the settlement. The lower fills of the second spring were not radiocarbon dated (the spring therefore only being shown on the later phase plan; Fig. 21) although the springs may be contemporary with the earlier palaeochannel phases.

Bronze Age feature at PTN3 04

A single small shallow pit (**109**) found at PTN 3 04 to the south of The Beck contained Bronze Age pottery (Volume 2, Appendix 14).

Archaeological features within PTN9 04

A ritual shaft (**M496**) at PTN9 04 (Fig. 20) seems to date to before the Middle Iron Age period as two Bronze Age or Neolithic flint blades were recovered from it. It was sub-circular 3.65m in diameter, with vertical edges and 1.2m deep. It was filled with eleven layers, while a crouched burial of a possible young female had been placed in the top of the shaft. The shaft was sealed by the top layer of spring deposits. A radiocarbon date from the burial would be very useful to determine its date and thereby the date of the disuse of the shaft. Another early large pit (**312**) seems to date to this period and was cut by one of the Middle to Late Iron Age four-post structures (**M486**). Within its fill (311) was a miniature axe-like wedge of later Neolithic or Early Bronze Age date perhaps of a ceremonial/funereal function.

9.1.2 Phase 2: Middle to Late Iron Age (c.150 BC to c.50BC)

A number of features at Sites PTN3 04, PTN5 04 and PTN9 04 have been dated by pottery and stratigraphy from *c.*150BC to *c.*50BC. The features continue outside the three excavations and the full extent of the settlement remains unknown. As settlement was seen on all the three sites it implies that the area of occupation was extensive in this period.

PTN3 04

At PTN3 04 (Fig. 18) this phase consists of part of an unenclosed domestic settlement across the excavation area. Features from this period were a posthole and slot structure (**M158**). A few ephemeral ditches (**M531** and **M547**) and pits were found scattered in low density across the excavation area. The slot and posthole structure's north-west corner survived as an 'L' shaped feature more than 4.5m in length and 3m wide. It is possible than the structure was originally sub-rectangular in plan.

PTN5 04

Two ditches may date to this period, running north to south roughly parallel to the palaeochannel (Fig. 19).

PTN9 04

The ditched enclosure located at this site (Fig. 20) appears to have been established in this period (**M492**). Although some features were found within the enclosure, they did not form a coherent pattern. Ditch **M488** ran north-west to south-east parallel to the south of the ditched enclosure and seems to have been dug to stop the palaeochannel (**M506**) overflowing into the enclosure. One of the four-post structures (**M486**) seems to date to this period. Such structures are either interpreted as platforms for exposing/laying out the dead or as storage granaries.

Early drainage ditches appear to have been present. A series of east to west ditches (**M497, M498, M499, M500, M501**) cut an early spring (**M503**) and headed towards the palaeochannel at PTN5 04. These ditches may have been dug to drain this spring and stop water flooding across the site. A curvilinear ditch (**M481**) in the southern part of the site may have drained into the palaeochannels at PTN9 04 or may have been a temple enclosure pre-dating **M482**.

9.1.3 Phase 3: Late Iron Age to Transitional (c.50BC to c.50AD)

The ditched enclosure found at PTN9 04 continued into this phase and another ditched enclosure appears to have been created at PTN3 04. The temple and a substantial number of features date to this period. Late pre-Roman Iron Age pottery was recorded in the evaluation at Area M, implying that the settlement was extensive during this period.

Palaeochannel

One of the layers in the palaeochannel recorded at PTN9 04 has been radiocarbon dated at 50BC to 140AD (to 2 standard deviations). The remains from the bulk samples from this layer (Sample 35) show that there was some evidence of alder and bramble growing in the area, along with wetland species and herbs. Analysis of the pollen may provide better indications of the environment at this time.

PTN3 04

An enclosed farmstead (**M521** and **M522**) was established at the southern end of PTN3 04 (Fig. 18). The geophysical survey (Fig. 3) shows that the enclosure was sub-square measuring *c.*55m by *c.*60m. A reasonable amount of domestic waste was backfilled into the ditches in the northern area but few objects were deposited in the southern ditches. Geophysical survey records no definite structural features surviving within the enclosure. It is uncertain what is happening at/beyond the eastern side of the enclosure as several ditches run at different directions.

In the excavation one shallow ring gully, (**M523**) *c.*13m in diameter and between 0.09 and 0.35m deep was uncovered with a large entrance way on its eastern side. A few undated features found within the ring gully may have formed part of the structure.

To the north of the enclosure were unenclosed settlement remains including a post-pad structure (**M529**), part of a posthole/slot structure (**M528**) and a possible fragment of another ring gully which survived on its northern side with a diameter of *c.*8m. A kiln with its flue to the north-east survived (**M537**) but with no evidence of a structure around it. It is uncertain, at present, whether this formed a pottery kiln or hearth/oven. Other features included a few drainage or boundary ditches (including **M527**, **M532** and **M545**) as well as a few pits.

PTN5 04

Intercutting ditches located at PTN5 04 included a curvilinear ditch abutting the palaeochannel (Fig. 19).

PTN9 04

The temple recorded at this site (Fig. 20) consisted of an enclosure ditch (**M482**) and internal shrine (**M483**). A four-post structure (**M485**) lay on higher ground 5m to the north. The enclosure ditch was sub-rectangular in plan with external measurements of 12.75m by 8.2m. Within this enclosure the sub-square shrine was 3.5m long. On the north-east side of the shrine was a 0.8m wide entranceway aligned on the entrance to the enclosure. Some of the burials to the east (**M484**) may date to this period, although the grave-goods of one of burials provides a later 1st century AD date (see Section

9.3.2). The four-post structure, measuring *c*.3m square, was possibly a platform for disposal of the dead although the environmental evidence points to the fact that it could have been a granary for the storage of cereal crops.

Several of the adjacent enclosure ditches were recut in this period (**M489** to **M494**) implying that there was difficulty maintaining open ditches. The fact that most of the recutting occurred on the south side of the enclosure, closest to the palaeochannel, may indicate an association with drainage. Only a small part of the enclosure was within the excavation area but the overall plan seems to have been sub-square or sub-rectangular with a length/width of *c*.40m. A moderate collection of finds was recovered from the backfills of the enclosure ditches including evidence for metalworking. Features within the enclosure included an oven and pit groups. Features containing burnt flint on the edge of palaeochannel PTN9 04 seem to date to this period as do several ditches to the north of the enclosure (including **M487**).

9.1.4 Phase 4: Early Roman (c. AD50 to c.early 2nd century AD)

PTN3 04

At this site the major enclosure ditch went out of use in the Early Roman period (Fig. 18). Finds from the top fill include a late 1st century brooch as well as wheel-thrown and hand-made pottery. In the unenclosed part of the excavation area there were largely ephemeral/or truncated boundary/drainage ditches. The exception was a large ditch (**M544** and **M546)** which was part of the same boundary following The Beck. Both ditch sections butt-ended, providing a 2m wide entranceway to the stream channel.

PTN5 04

Stratigraphically a north to south ditch running parallel to the palaeochannel may date to this period (Fig. 19). Beetles recovered from an environmental sample from the ditch imply marshy grassland conditions with domestic animals in the vicinity (Mark Robinson below at Section 9.3.11).

PTN9 04

The temple complex continued in use into the Roman period but seems to have gone out of use by the early 2nd century. At least one of the four burials dates to this period (Fig. 20). The adult female had *c*. late 1st-century AD grave-goods in the form of a brooch, bracelets, a hair ring and beads. The burials were in a crouched position with the head to the north. The other three burials were undated though two were identified as adult, one was a mature to old probable male. The dating of pottery and a brooch indicates that the ditched enclosures went out of use in this period.

9.1.5 *Phase 5: Roman (2nd Century)*

PTN3 04

The Roman phase shows limited early 2nd century activity at PTN3 04 (Fig. 18), consisting of several boundary/drainage ditches in the extreme northern part of the site. The ditches do not conform an overall pattern but may include drainage and enclosure ditches.

PTN9 04

The site at PTN9 04 seems to have been abandoned in this period possibly as a result of flooding. Second-century Roman pottery was recovered from the top layers of features. Flood deposits from the palaeochannel (**M506**) sealed the temple site, as well as the burials.

Sites PTN3 04, PTN5 04 and PTN9 04 provide no evidence of Roman occupation or activity after *c*.200AD. There were no artefacts from the later Roman period. In contrast, the 2002 evaluation at Area M found features and finds dating to the 3rd and 4th centuries (McDaid 2003). Here, finds were thought to be high status, possibly indicating the presence of a villa estate.

9.1.6 *Phase 6: Post-Medieval*

PTN3 04

A post-medieval trackway ran east to west across the centre of the site (not illustrated). This feature contained 18th-century brick pieces. Within the last one hundred years, trees were planted in the northern end of the site and several modern tree throws were seen cutting archaeological features.

9.2 Assessment

9.2.1 *Quantification of the Archive*

Item	PTN 3 04	PTN 5 04	PTN 9 04
Sheets of context lists	13	3	12
Context records	513	103	469
Sheets of plan registers	1	1	1
Plans	22 at 1:50 7 at 1:20	5 at 1:50	20 at 1: 50 5 at 1: 10
Sheets of section registers	2	1	2
Sections	15 at 1:10 61 at 1:20	10 at 1: 20 3 at 1: 50	55 at 1: 10 17 at 1: 20 2 at 1: 50
Sheets of sample registers	3	1	4
Bulk samples	4 at 30L 11 at 20L 12 at 10L	2 at 30L 4 at 20L	4 at 30L 14 at 20L 8 at 10L 2 at 5L
Small samples from burials	-	-	5
Column Samples taken	-	2	4
Spot pollen samples	-	x	x

Sheets of site objects registers	1	-	1
Small Finds Numbers (multiple nails not included)	11	-	5
Sheets of human burial list	-	-	5
Sheets of photographic index	3	3	4
Photographic register sheets	18	3	18
B&W print films	7	1	6
Colour Print films	3	1	4
Colour Slide films	3	-	5
Digital	5	1	3

9.2.2 Stratigraphy and Dating

The activity revealed through excavation can be attributed to 6 Phases:

Phase 1: Neolithic to Middle to Late Iron Age

Phase 2: Middle to Late Iron Age (*c*.150BC to *c*.50BC)

Phase 3: Late Iron Age to transitional (*c*.50BC to *c*. AD50)

Phase 4: Early Roman (*c*. AD50 to *c*.early 2nd century AD)

Phase 5: Roman (2nd century)

Phase 6: Post-Medieval

9.2.3 Range and Variety

Archaeological remains were found across Sites PTN3 04, PTN 5 04 and PTN9 04. In a few places features were comparatively dense with relatively complicated stratigraphy, although for the majority of the areas, the remains comprised moderate concentrations of features with few stratigraphic relationships.

The settlement was located at the junction of two palaeochannels which met at a 'T' junction. Springs from the north-eastern bank of The Beck fed into the north to south palaeochannel. Both palaeochannels were sampled and produced good organic remains. Excavation revealed possible ritual Neolithic or Bronze Age features next to one of the palaeochannels including a crouched burial.

The excavation uncovered parts of large ditched enclosures on both the north-eastern and southern banks of The Beck. Both enclosures were placed on higher ground. The enclosure at PTN3 04 contained sparse internal features including a ring gully, whereas the enclosure in PTN9 04 included an oven. Between The Beck and the enclosures were features on both banks. On the north-east bank was a small sub-rectangular Late Iron Age/Early Roman temple at the junction of the two former streams. Four burials were placed to the east of the ditch surrounding the shrine, one burial of which contained late 1st-century AD grave-goods. Two four-post structures were uncovered on slightly higher ground to the north of the temple. On the southern bank were

the remains of houses, a kiln, pits and ditches next to The Beck. The edge of the settlement on the north-western bank was just within the road corridor.

9.2.4 Condition

There was little plough damage to these sites, especially in the lower lying areas as features were sealed, and therefore protected, by a thick flood deposit, subsoil and ploughsoil layers. Few post-medieval features were apparent though there was an east to west trackway through the southern side of PTN3 04. A few areas of tree disturbances occurred at PTN3 04.

Local soil conditions (silty sand) affected survival. Human and animal bone preservation was very poor in all three sites, with the vast majority of bone not surviving. By contrast, in the river channels, the animal bone survived well. The waterlogged conditions produced evidence for insects. Metalwork had suffered damage in these acidic conditions with several requiring emergency conservation. Seeds survived in variable condition. There was poor recovery from PTN3 04 although that from PTN9 04 was reasonable. Bulk samples from the palaeochannels produced environmental remains in good condition due to the waterlogged conditions.

9.3 The Finds

The specialists' reports for this large settlement have been, on the whole reported on individually by site (PTN 3 04, PTN 5 04 and PTN9 04). During analysis and final report writing, the relevant reports will be integrated further and any outstanding dating issues will be addressed.

9.3.1 Metal Objects from PTN3 04

by Nina Crummy

Summary

A total of eleven objects was recovered, ranging in date from Roman to post-medieval.

Condition

In general the preservation of the metals is good, but some will need to be chemically stabilised to prevent the outbreak of active corrosion. The objects are packed to a good standard of storage in either polythene bags or small crystal boxes supported by pads of foam. The bags and boxes are stored in crystal boxes or airtight Stewart boxes with silica gel. The catalogue of metal finds appears in Volume 2, Appendix 12.

Assemblage

The assemblage is presented in Table 35:

Copper alloy	6
Iron	2
Lead	3
Total	**11**

Table 35: PTN3 04 Metal objects by category

In terms of function, as defined in Crummy 1983 and 1988, the range is very limited. The categories represented are: dress accessories (category 1); weighing (6); literacy (7); transport (8); general fittings (11); and miscellaneous (18).

The only two diagnostically Roman objects are both brooches and are both early types. The only other certain dress accessory is a medieval buckle or strap-loop. A ?gilt pendant may be from horse harness rather than a belt. A lead weight and a book clasp represent weighing and literacy. The general fittings consist of an iron nail and nail shank, and two lead objects, though the latter are both unusual and their identifications may need to be revised after conservation. The only miscellaneous item is a decorative mount.

Recommendations

Analysis of the assemblage is recommended in order to define fully the character and status of the site and to permit comparisons with the other Partney sites. It is recommended that:

1. all the copper alloy and lead objects should be conserved (9 items). The iron objects should be X-rayed (2 items).
2. a report on all the objects should form part of the published site report, which should include a detailed catalogue and discussion, with reference to similar material and assemblages where appropriate.
3. a maximum of eight objects should be drawn. This number may be revised after the ironwork has been X-radiographed and the other metalwork conserved.

9.3.2 Metal Objects from PTN9 04

by Nina Crummy

Summary

Only seven objects were found at this site, most of which date to the Early Roman period. An eighth object, a copper alloy brooch from burial 3, was not

assessed as it was undergoing emergency conservation. The full catalogue is listed in Volume 2, Appendix 13.

Condition

The preservation of the metals varies from poor (brooch SF 4) to very good (brooch SF 1). The mineral and glass objects are in good condition, though some of the small decorative flecks or 'eyes' in one of the beads are decaying. Some 'eyes' may have dropped out where the glass has completely disintegrated.

The objects are packed to a good standard of storage in either polythene bags or small crystal boxes supported by pads of acid-free tissue paper. The bags and boxes are stored in crystal boxes or airtight Stewart boxes with silica gel.

Assemblage

The assemblage consists of three copper alloy objects, one of ?jet, one of frit, and two of glass. Six of the objects are dress accessories, the seventh is a corroded ring fragment with an unidentified attachment or integral protruberance. Conservation should allow a more accurate identification, but, in view of the rest of the assemblage, it is also likely to be some form of dress accessory.

One of the brooches is a hinged Sawfish type, with a crest in the form of a crouching dog (SF 1, context 141). Examples of this specific variant are not numerous and have a wide distribution. Other examples from Lincolnshire come from Dragonby and South Ferriby. The form is certainly present by the Flavian period, and may be even earlier; it may continue into the 2nd century.

The other brooch is in very poor condition (SF 4). It is enamelled and appears to be sub-circular, making it most likely to be a chatelaine brooch. This type is fitted with a set of small toilet instruments and dates to the 2nd century. Like the Sawfish brooch above its distribution is wide, but examples are not very numerous.

Burial 3 produced two beads of 1st or early 2nd century form. One is a frit melon bead, a type introduced at the conquest and the other is a large translucent cobalt blue annular bead with a cable of opaque blue and white. A third bead from the grave is a comparatively rare type. Also in cobalt blue glass and globular, it has flecks of white glass and at least one 'eye' of white within a ring of another colour, now decayed. Conservation may show that the flecks are also set within similar rings.

The burial also produced a fragment of a black mineral ring, too large to be a finger-ring but of the size usually described as a hair-ring.

Recommendations

Analysis of the assemblage is recommended in order to define fully the character and status of the site and to permit comparisons with other sites along the By-Pass and elsewhere. It is recommended that:

1. all the objects should be conserved (7 items).

2. a report on all the objects should form part of the published site report, which should include a detailed catalogue and discussion and should refer to similar material and assemblages where appropriate.

3. all seven objects should be drawn.

9.3.3 Metalworking debris from PTN3 04 and PTN9 04

by Tom Eley

PTN3 04

Very small slag fragments were recovered from PTN3 04 in five contexts from four features (**50**, **176**, **M526** and two contexts from **M530**). They weighed 0.022kg and the material is undiagnostic implying that metalworking was not practised at this location.

PTN9 04

At PTN9 04 there was undiagnostic slag (0.041kg), copper alloy slag (0.140kg) and vitrified hearth lining (0.077kg) was found in five contexts (Table 36). All the slag was recovered as secondary deposits from Late Iron Age ditched sub-rectangular enclosure ditches (**M489** and **M494**) as well as an associated pit (**302**) just to the north of a contemporary temple/shrine. Although only a small amount of metallurgical debris was recovered, its association with an enclosure relating to magico-religious practices is significant (Doonan and Andrews 2003; Budd and Taylor 1995).

Context/ feature	Feature type	Slag Type	Weight (kg)	Magnetic	Description
301 (**302**)	Pit	Non-diagnostic	0.023	No	Rough surface with porous green interior
237 (**238**)	Enclosure ditch	Non Ferrous	0.113	No	Copper alloy
204 (**M489**)	Enclosure ditch	Non Ferrous	0.017	No	Copper alloy
204 (**M489**)	Enclosure ditch	Non-diagnostic	0.018	Yes	
204 (**M489**)	Enclosure ditch	Hearth Lining	0.025	No	Hearth lining and fuel ash slag
391 (**M489**)	Enclosure ditch	Hearth Lining	0.048	No	Hearth lining and slag
440 (**M494**)	Enclosure ditch	Hearth Lining	0.004	No	Hearth lining and fuel ash slag

Table 36: PTN9 04 Slag

Recommendations

XRF is recommended in order to determine whether the slag derives from non-ferrous metallurgical practices.

9.3.4 *Lithics from PTN3 04 (Area B), PTN5 04 (Area A) and PTN9 04*

by Barry John Bishop

Introduction

This report considers the lithic material recovered from three areas of excavation (Sites PTN3 04, PTN5 04 and PTN9 04). These sites produced a total of eighty-eight struck flints and 0.4kg of burnt flint fragments. This report quantifies the material by context according to a basic technological/typological scheme (see Table 37), in order to suggest a chronological framework, and includes some general, preliminary impressions and interpretations of the material. All metrical descriptions follow the methodology of Saville (1980). No statistically based technological, typological or metrical analyses were attempted and a more detailed examination may alter or amend any of the interpretations offered here.

Quantification

Site PTN	Context	Preparation Flake	Trimming Flake	Squat Flake	Flake	Blade	Narrow Flake / blade-like	Flake Fragment	Blade Core	Flake core	Minimal Core	Chunk	Core-Tool	Plano-Convex knife	Scraper	Truncated blade	Burnt (no.)	Burnt (Wt: g)
3	9 (**M526**)														1			
3	33 (**M520**)				2							2						
3	35 (**M521**)																1	12
3	39 (**M522**)							1										
3	49 (**50**)			1														
3	71 (**M527**)			1					1									
3	107 (**M528**)		6															
3	115 (**M532**)																1	295
3	140 (**50**)											1						
3	177 (**157**)									1							1	23
3	188 (**189**)			1														
3	194 (**M520**)						2					2						
3	196 (**M524**)						1											
3	204 (**203**)		1															
3	228 (**M520**)			1								1						
3	230 (**M520**)			1				1				1						
3	237 (**236**)															1		
3	243 (**242**)				1													
3	247 (**M523**)			1														
3	250														1			
3	251							1	1									
3	298 (**M523**)														1			
3	300 (**301**)				1													
3	302 (**304**)							1										
3	311 (**M540**)			1														
3	317 (**M520**)		2									1						
3	321			3				1							1			
3	365 (**362**)							1										
3	370 (**M527**)						1	1										
3	401 (**M525**)					1												
3	414 (**413**)		1									1						
3	439 (**M538**)			1				1										
3	999999	1							1									
5	7				1													
9	7 (**M495**)			1														
9	16 (**M496**)					2												
9	22 (**M485**)					1	1											
9	61 (**M484**)				1													
9	103 (**M484**)							1										
9	177 (**M484**)	3		1		1	1											
9	182 (**M488**)							1										
9	187 (**190**)						1											
9	188 (**190**)										1	1	1					
9	202 (**M491**)																1	4
9	204 (**M489**)				1													
9	229 (**228**)									1								
9	249 (**M490**)						1											
9	253 (**254**)	1																
9	299 (**M497**)						1											
9	311 (**312**)												1					

Site PTN	Context	Preparation Flake	Trimming Flake	Squat Flake	Flake	Blade	Narrow Flake / blade-like	Flake Fragment	Blade Core	Flake core	Minimal Core	Chunk	Core-Tool	Plano-Convex knife	Scraper	Truncated blade	Burnt (no.)	Burnt (Wt: g)
9	332 (**190**)							1										
9	334 (**190**)	1																
9	394 (**395**)						1											
9	407 (**408**)						1											
9	413 (**409**)																1	13
9	99999											1						

Table 37: Quantification of lithic material by context from PTN3 04, PTN5 04 and PTN9 04

Burnt Flint

Five fragments of otherwise unmodified burnt flint weighing 0.347kg were recovered from the excavations. The degree of burning was variable, with some pieces still retaining their original colour and cortex type, but most had been burnt to the extent that they had completely shattered and changed colour, as is consistent with having been in or near a hearth. The burnt flint was recovered in small quantities and was distributed widely, and probably represented residual 'background' waste from hearth use.

Struck Flint

The raw material utilized at the sites varied considerably, ranging in colour from speckled opaque grey, brown, to semi-opaque grey, and translucent black, grey and brown. The cortex types were also very variable, ranging from slightly weathered thick chalky to thin abraded and water rolled smooth types. This would suggest that the flint originated from a variety of sources, including the pre-Ipswichian tills found south of the Humber, the Devensian tills found along the Humberside coast, and the Lincolnshire chalk (Brooks, in Guirr *et al.* 1989). However, it is entirely possible that all were obtained from local alluvial or glacial till deposits (*e.g.* Henson 1985), and there was no evidence that any raw materials obtained directly from the parent chalk were exploited. The raw material was generally of good knapping quality, although somewhat limited by the frequent thermal flawing which was observed across the differing types of flint.

PTN3 04

The assemblage from this site consisted of 57 struck flints, which were recovered either singly or in small numbers from any particular context. The material was dominated by technological traits most characteristic of industries dating to the Middle Bronze Age or later (*eg* Brown 1991; Herne 1991; Edmonds 1995). These include a high proportion of small, thick 'squat'

flakes with wide, obtuse striking platforms (*cf* Martingell 1990), which often retained significant quantities of cortex. Also present were several chunks that probably resulted from the shattering of cores, and many of the small trimming flakes. The squat flakes demonstrate a lack of concern for core preparation and maintenance, the high proportion of remaining cortex testifying to the short length of the reduction sequence, and the chunks, although partially the result of the thermally fractured nature of the raw materials, demonstrate a lack of concern or control over the reduction process. These attributes give the impression that the core was simply 'bashed' until flakes with suitable working edges were produced; a purely utilitarian and functional approach. Also characteristic of this type of approach was the core recovered from pit fill 177 (**157**), which was irregularly reduced, producing small, squat flakes.

Of the four scrapers identified, that from **M526 (**context 9) was made on a flaked thermal fragment, possibly a shattered core, with one side steeply retouched. The example from Phase 2 ditch **M523** (context 298) was also made on a thermal fragment, and had one side steeply and rather crudely flaked, forming a scraper-type edge. Both of these would be typical of 'late' industries dateable to the Middle Bronze Age or after. The other two are both from layers, consisting of a burnt short-end scraper from context 321 and a finely worked semi-denticulated convex short-end scraper from context 250, were less chronologically diagnostic and could have been manufactured from between the Mesolithic and the Iron Age.

Some of the pieces were more characteristic of earlier industries. Phase 1 early deposit within **M520** (194), for example, produced two narrow flakes and a chunk representing a thermally shattered blade core, and the truncated blade from pit or tree throw (**236**) could almost certainly be dated to the Mesolithic. In addition, the three remaining cores from this site consisted of definite or possible blade cores. The example from layer 251 was burnt but clearly a small (micro-blade) core of Clark *et al.* (1960) type A2 weighing only 16.2g, the one from **M527** (context 071) consisted of an exhausted polyhedral blade core, incorporating 'keeled' platforms, whilst the core from unstratified context, although extensively reduced with many small flake scars still visible, retained some evidence that it had earlier produced blades. Both of these latter cores were of (Clark 1960 *et al)* type C and relatively small, weighing 28g each.

PTN5 04

Only a single flake was recovered from this site, consisting of a thin but wide flake manufactured from translucent brown flint and, could only be broadly dated to between the Mesolithic to Bronze Age.

PTN9 04

This site produced 30 pieces of struck flint, mostly recovered in small numbers from individual contexts. The technological appearance of this

assemblage was similar to that from PTN3 04, although the proportion of earlier looking material was higher than at PTN3 04. This possible material included a number of narrow flakes and blades, dateable to the Mesolithic/Early Neolithic periods, and included two rejuvenation flakes, a transverse example from Phase 1 ritual shaft **M496** (context 16) and a longitudinal example with a plunged distal termination from Phase 3 grave fill 177 (**M484**), both struck to alter the striking platform/core-face angle.

Phase 1 pit **312** (context 311) produced a bifacially worked implement reminiscent of a miniature flaked axe. This measured 36mm x 28mm x 17mm and exhibited some invasive retouch. It had carefully finished edges, with one end sharpened and the opposite end battered, suggesting it had either been hafted or used as a wedge. Similar pieces are occasionally found on prehistoric sites (*e.g.* Healey 1973, fig. 128) although as a type are poorly dated. The partially invasive nature of its flaking and its similarity to flaked axes may suggest it was manufactured during the Neolithic or Early Bronze Age.

A number of pieces recovered from this site were also characteristic of industries dateable to the Middle Bronze Age or after. These included the few squat flakes present, the core from burnt flint pit **190** (context 188), which consisted of an angular thermal spall with a few squat flakes removed, and the core-tool from context 188, which comprised a thermally shattered core that appeared to have been reused as a scraping-type tool. One of the flakes, from pit **190** (context 334), had been struck from an earlier, recorticated, core, and also evidenced later flintworking.

Also recovered from this site was a rounded white quartzite pebble weighing 36g from pit **190** (context 187). This was unworked and possibly incidentally incorporated into the deposit, but such stones are occasionally found on prehistoric sites and were sometimes used for ceremonial or decorative purposes.

Discussion

Overall, the lithic material from the three sites demonstrates that this area was occupied episodically from the Mesolithic to at least the Middle Bronze Age, and may be contemporary with the ritual features on site. The small size of the total assemblage would suggest that prehistoric activity was not necessarily continuous or very intensive.

The general quantities of material from all of these sites would be consistent with a series of intermittent, short-stay camps geared towards activities such as raw material collection and probably the exploitation of the undoubtedly abundant natural resources that this riverine area would have afforded.

Perhaps of a ceremonial/funereal function was the miniature axe-like wedge of Later Neolithic or Early Bronze Age recovered from a Phase 1 pit at PTN9 04.

Later flintworking, consisting of a number of squat flakes and crudely reduced cores and core-tools, dateable to the Middle Bronze Age or after, was identified at PTN3 04 and PTN9 04. It has increasingly become accepted that flintworking, to some degree, did continue throughout much of the Iron Age in some parts of Britain (Pollard 1996; Young and Humphrey 1999; Humphrey 2003). Although no sites in Lincolnshire were included in a recent survey of potential Iron Age flintworking, several were identified in neighbouring counties, including Cambridgeshire, Northamptonshire, Leicestershire and Derbyshire (Humphrey 2003, table 1). Where it has been identified, it shares many of the characteristics displayed by the later material here (*ibid.* 20). In light of this, it is entirely plausible that the later material here was associated with the Iron Age settlements revealed at PTN3 04 and PTN9 04. No large quantities of potential Iron Age struck material were recovered, although this may not be surprising as flintworking during this period would probably have been casual and opportunistic, with flint only knapped when needed and used for the specific purpose in mind. Nevertheless, even if some flintworking had occurred, it was not extensive and would have only represented only a minor aspect of material culture.

Recommendations

No statistically based technological, typological or metrical analyses have yet been attempted and a more detailed examination may alter or amend any of the interpretations offered here. It is therefore recommended that such analysis should take place, linked to relevant research objectives (see Sections 12.1.1, 12.2.1 and 12.3.2). This will lead to the production of a full report for publication. Illustrations should be produced for the more unusual and diagnostic pieces.

9.3.5 Prehistoric and Roman Pottery from PTN3 04 (Area B), PTN5 04 (Area A) and PTN9 04

by Sarah Percival and Alice Lyons

A total of four boxes of pottery from the three sites was scanned to assess the quality of the assemblage, range of dates present and potential for analysis. The results are presented by site. The pottery catalogue is listed in Volume 2, Appendices 14, 15 and 16.

PTN3 04

Site PTN3 04 was the largest of the prehistoric assemblages from the Partney excavations. The pottery is mostly in a poor condition often heavily encrusted with mineralised deposits, several sherds having been re-fired or heavily burnt. A variety of fabrics is present. The majority of the assemblage comprises handmade sherds containing sand or shell with a smaller number of wheel-made grog tempered sherds, greywares, white wares and other Romanised fabrics. Handmade vessel forms present include globular burnished jars with short out-turned necks and jars with slack shoulders often sooted or encrusted with cooking residue. Decoration or surface treatment of

any kind is rare. Scoring occurs on a small number of handmade sherds from two contexts of the backfill of kiln **M537** and enclosure ditch **M520**. Scored wares have a long currency in Lincolnshire being in use from perhaps the 4th century BC well into the 1st century AD (Knight 2002, 134).

Cordoned jars similar to examples found at Old Sleaford and characteristic of the Aylesford-Swarling tradition are found in both handmade and wheelmade fabrics. The wheelmade assemblage comprises shell-tempered jars from **M521** and **M546** and Nene Valley greywares from **M539**. A semi-complete white ware flagon was found in **M549**. The flagon has a distinctive cupped rim suggesting an early Romano British date (mid 1st to late 2nd centuries AD). Shell tempered storage jars with distinctive rolled rims are found in at least three contexts from **M546** with one example being very large indeed. Similar jars are found all over East Anglia and were in use from the 3rd century BC to at least the 1st century AD. Overall a date range of between *c.*150BC and AD200 could be suggested for this assemblage.

PTN5 03

Site PTN5 03 produced a small assemblage of six sherds. No diagnostic forms were found. The sherds are in a range of sandy fabrics with added grog, shell or vegetable temper. The fabrics suggest that the assemblage is probably of similar date to the pottery found at PTN3 04 and dates from the Middle Iron Age (150BC onwards).

PTN9 04

Pottery was recovered from fifty-one contexts at PTN9 04. A range of handmade and wheel thrown vessels is represented, though fully Romanised wheel made forms were only found in six contexts. The handmade vessels were made of sand, grog, organic and shell tempered fabrics similar to those identified on sites PTN3 04 and PTN5 03. Many sherds were heavily encrusted with mineralised concretions. The wheelmade component of the assemblage is mainly composed of cordoned jars of the type found at Old Sleaford. Handmade forms include the globular jars seen at PTN03 04. Other forms present include a single example of a jar with an upright rim in grog tempered fabric from possible early temple ditch **M481** (context 35) similar to examples found at Ingoldmells where they were associated with salt production (Elsdon 1993 C7). The assemblage is of similar composition and date to that found at the adjacent site of PTN3 04 and almost certainly represents contemporary occupation, or perhaps an extension of the same settlement.

Potential for Analysis

The pottery is of interest as it is the first assemblage of Iron Age date to have been recovered archaeologically from the Partney area. The assemblage is generally in poor condition but several large diagnostic sherds survive within the material collected from PTN3 04, which could be usefully compared with

the large contemporary assemblages from Old Sleaford (Elsdon 1997) and Dragonby (May 1996). Full analysis of the entire Iron Age and Romano-British assemblage is therefore recommended.

Petrological analysis of the assemblage would be interesting. Steve Willis in the regional frameworks from the East Midlands recommends petrological analysis of Iron Age pottery (Willis 2002, 36).

The pottery from the evaluation at PTN3 04 (Area B) needs to integrated with the above assemblage. This consists of forty-five sherds (0.391kg) of prehistoric pottery, one Roman sherd and sixteen post-Roman sherds. In addition the pottery from Site M, an Iron Age into Roman site found in the evaluation, needs to be included. This comprises 108 pottery sherds (2.597kg) of Iron Age and Roman pottery and 2 post Roman sherds. Area M was *c.*100m to the west of PTN3 04 (Area B) and is part of the same Iron Age/Roman settlement. The Roman pottery from Area M has been recorded as high status (McDaid 2003). The comparisons between all the pottery groups would be very useful.

Recommendations

In order to achieve the research objectives for this assemblage outlined above, it is recommended that:

1. a full catalogue and analysis of the Iron Age and Romano- British pottery to publication standard should be completed by Sarah Percival, with additional comment on the Romano British pottery from Alice Lyons;

2. petrological analysis of Iron Age fabric types should be undertaken.

9.3.6 Post-Medieval Brick and Clay Pipe from PTN3 04 (Area B)

by Rob Atkins

Ten post-medieval brick fragments (1.492kg) were recovered from four contexts (24 (**25**), 194 (**M520**), 209 and 211 from a post-medieval trackway) as well as unstratified. The bricks largely derived from the creation of an east to west trackway across the middle of the site but there were two intrusive bricks found in earlier contexts. All the brick dates to the 18th century, probably the first half.

Two clay pipe stems came from a post-medieval feature (**160;** fill 159). Another was found intrusively in **M535** (context 407).

Recommendations

No further work is recommended.

9.3.7 *Fired Clay from PTN3 04 (Area B), PTN5 04 (Area A) and PTN9 04*

by Rob Atkins and Carole Fletcher

PTN 3 04

Two fragments (4g) of fired clay came from pit **176**.

PTN5 04

Two medium size pieces of fired clay (121g) came from ditch fill 79. One had part of a circular impression around *c*.40mm in diameter and presumably was an imprint of a small wooden stake. There was an additional undiagnostic piece.

PTN9 04

Twenty-four fragments (96g) of fired clay were recovered from ditch **275**. One piece retains a wattle impression, the remainder being undiagnostic.

Discussion

The fired clay pieces do not seem to be from industrial features and one is possibly not structural. The wattle impressions on two pieces imply that they were from domestic structures.

Recommendations

No further work is recommended.

9.3.8 *Stone Object from PTN9 04*

by Steve Critchley

A single fragment of fine grained hard sandstone was recovered from PTN9 04 from ditch **M546** (context 265). It had one worked face and was sub-square in shape measuring 48mm by 44mm. It is probably part of a whetstone though may be from a quern stone.

Recommendations

No further work is recommended.

9.4 Zoological and Environmental Evidence

9.4.1 Human Skeletal Remains from PTN9 04

by Sue Anderson

Introduction

Five prehistoric/Roman burials were excavated at PTN9 04, of which four contained surviving bone. One was isolated *i.e.* the one above the ritual shaft (Sk. 1), and the other four were grouped together in a loose north-south line at the east end of the temple/shrine structure. The catalogue of human bone is given in Volume 2, Appendix 17.

Method

Sexing and ageing techniques follow Brothwell (1981) and the Workshop of European Anthropologists (WEA 1980), with the exception of adult tooth wear scoring, which follows Bouts and Pot (1989). Due to the poor condition of these skeletons, no measurements were taken, stature could not be estimated, and no non-metric traits were recorded. Very little pathology was observed.

Number of Individuals

The fragments of bone represent a minimum of four individuals.

Conditions

All four skeletons were in poor or very poor condition. Skeleton 1 had iron pan concretions, which obscured or replaced some areas of bone, particularly around the arm bone shafts and on some of the cranial vault fragments. Fine, dense light grey ?clay concentrations were present on the bones of Sks. 2 and 4, and there appeared to have been some solution and redeposition of the calcium element of the bone post-mortem in both cases, leaving many fragments unrecognisable. In both cases, the concreted lumps generally contained only a thin layer of bone.

Demographic Analysis

Table 38 shows the suggested ages and sexes of the four surviving skeletons.

Sk.	Context/feature	Age	Sex
1	46 (**M496**)	Young?	Female?
2	61 (**M484**)	MA-Old	Male?
3	103 (**M484**)	Adult	Female
4	178 (**M484**)	Adult	Unsexed

Table 38 PTN9 04 Age and sex of human skeletons

All four individuals were adults of various ages, and both men and women were represented.

Metrical and Morphological Analysis

No measurements could be taken and it was not possible to record non-metric traits owing to the poor condition of the remains.

Dental Analysis

Two teeth of Sk.1 survived, a lower right second molar and a lower left second premolar. Neither showed signs of any disease and tooth wear was not heavy.

Most of the right side of the dentition and some of the left molars of Sk. 3 were present. The lower right first molar had been lost ante-mortem, and its upper counterpart had medium calculus deposits. A fragment of crown was all that remained of the lower left second molar, the other half appearing to have been lost as a result of caries. If so, it is very likely that the pulp cavity of the tooth would have been exposed and that there was an abscess. Unfortunately, the alveolar bone from this area was not present. Tooth wear was moderate to heavy, and there was moderate alveolar resorption. Some of the teeth had been chipped, probably in life, particularly the upper right premolars. This may simply be a result of grit in the food, but could also be related to some occupational or habitual use of the teeth to hold something.

Pathology

Sinusitis was probably present on the right maxillary sinus of Sk. 3, with new bone formation. This may have been a result of the dental disease suffered by the individual, but there was no evidence for an abscess in the surviving fragments of this part of the dentition.

Sk. 2 suffered from a mild degree of degenerative change, with small osteophytes at the anterior edges of all surviving cervical (third to seventh), upper thoracic (first to second) and sacral (first) vertebrae. The cervical vertebrae were fused into a solid mass due to concretions at the vertebral arches. Whilst there is a possibility that this may have occurred in life, it appeared that the bone had been altered post-mortem, as there were thin strands of calcareous or clayey material between the vertebral bodies. The arches themselves had also been altered in appearance, with solution holes and concretions of clayey material. This is unlike any disease process known to the author, with the possible exception of some fungal infections. However, as similar changes were seen affecting other bones in Sk. 4, it seems most likely to have been caused by an unusual post-mortem chemical reaction.

Summary and Discussion

Four skeletons were recovered from five graves at PTN9 04. Two individuals were probably women, one was probably male, and one was unsexed. One individual was in middle or old age at the time of death and one was probably young, but two could only be classified as adult. The skeletons were all poorly preserved and post-mortem changes meant that many of the bone fragments were unidentifiable. However, it was possible to identify some common dental and skeletal pathologies in the group. Most of these affected the older woman, whose skeleton was the best preserved of the four. She probably suffered some pain as a result of dental disease and the normal aches and pains associated with increasing age.

Recommendations

No further analytical work is required on the human skeletal remains. The above report will be integrated into the publication.

9.4.2 *Animal Bone from PTN3 04, PTN5 04, PTN9 04*

by Ian Baxter

The material recorded under these site codes derives from the same Middle/Late Iron Age/Early Romano-British site situated on three banks of two palaeochannels meeting at a 'T' junction adjacent to an Iron Age/Romano-British temple. It is probable that some of the animal bones were deliberately deposited into the channel (fill 467). The material derives from waterlogged deposits and are exceptionally well preserved. This assemblage is tiny but consists of approximately equal numbers of cattle and equid remains. Most of the equid remains can be positively identified as horse but others, largely on account of their size and/or fragmentary nature but also their gnathic morphology, are more problematic. The cattle remains include a cranium found in PTN9 04 (fill 467) with the part of the frontal including the horncores missing, perhaps intentionally removed. The equid remains include two partial crania found in (467) and a small mandible containing small teeth from the same context. This is donkey sized. However, although the lingual sulcus is generally 'V' shaped (particularly in P3 & M3) and there are ptychostylids on P3, M1 & M2, there is penetration between the metaflexid and entoflexid in M1-3. The teeth are quite worn and this specimen may well be a small pony. Several mandible fragments and teeth from horses aged approximately 3½ to 9 years were found in PTN3 04 ditch (**229**) and the palaeochannel fill (467). A tibia with unfused epiphyses found in PTN3 04 pit (**425**) came from a stocky and sturdy individual. The tibia of a slightly built dog, probably a sight hound of some kind, approximately 60cm high at the shoulder (Harcourt 1974) was also found in context 467.

Taxon	PTN3/5 04	PTN9 04	Total
Cattle (*Bos* f. domestic)	8	3	**11**
Equid (*Equus* sp.)	-	3	**3**
Horse (*Equus caballus*)	2	5	**7**
Dog (*Canis familiaris*)	-	1	**1**
Total	**10**	**12**	**22**

Table 39 PTN3 04, PTN5 04 and PTN9 04 Animal Bone - Number of Identified Specimens (NISP)

Discussion

Cattle and to a lesser extent horses dominate the small assemblage recovered from the riverine sites adjacent to the Iron Age/Romano-British temple (PTN3 04, PTN5 04 and PTN9 04), suggesting that these animals may have been sacrificial offerings. The Romano-British temple at Ivy Chimneys, Witham, Essex has produced evidence for the sacrifice of horses and the consumption of horseflesh (Luff 1999). Deities associated with horse sacrifice include the goddess Epona and the god Mars (*op. cit.*; Green 1992). Photographs of the interesting bone from the palaeochannel (PTN9 04) will be included in the published report.

Recommendations

No further work is recommended, other than to summarise this report for publication and to include photographs of the bone from the palaeochannel (PTN9 04).

9.4.3 Insects from PTN5 04 and PTN9 04

by Mark Robinson

Waterlogged arthropods were noted by Val Fryer during assessment of the charred plant remains and six of the best samples were therefore submitted for specialist assessment. Five of the samples came from PTN5 04 and PTN9 04 contexts ranging in date from Bronze Age deposits in the palaeochannel to Early Roman ditches adjacent to the palaeochannel. The flots were scanned under a binocular microscope and the insect remains observed were identified. The range of Coleoptera (beetles) in the samples is listed in Table 40.

Results

Identifiable remains are absent from three of the palaeochannel samples: PTN5 04, 90 (Sample 2) and PTN9 04, 463 (Sample 35). All that was observed in PTN5 04, 88 (Sample 1) from a Late Bronze Age layer in a palaeochannel was a poorly preserved fragment of the dung beetle *Geotrupes* sp.

Preserved insect remains came from two samples from the Phase 3 temple enclosure ditch (**M482**) at PTN9 04 and an Early Roman ditch at PTN5 04.

There is a higher concentration in the Early Roman sample. Species include the beetles *Donacia* or *Plateumaris* sp. and *Notaris acridulus*, which feed on marsh and aquatic plants, the scarabaeoid beetles *Geotrupes* sp. and *Aphodius* sp., which feed on the droppings of domestic animals, and the weevils *Apion* sp. and *Sitona* sp., which feed on grassland plants. The concentration of remains in the temple ditch is very low but they include the terrestrial beetles *Bembidion* sp. and *Xantholinus linearis* or *longiventris*.

	PTN5 04	PTN5 03	PTN9 04
Context	88	69	48 **(M482)**
Sample	1	4	7
Phase	1	4	3
Bembidion sp.	-	-	+
Pterostichus sp.	-	+	-
Helophorus (*brevipalpis* size)	-	+	-
Megasternum obscurum (Marsh.)	-	+	-
Xantholinus linearis (Ol.) or *longiventris* Heer	-	-	+
Geotrupes sp.	+	+	-
Aphodius sp.	-	+	-
Oxyomus sylvestris (Scop.)	-	+	-
Donacia or *Plateumaris* sp.	-	+	-
Chaetocnema sp. (not *concinna*)	-	-	+
Apion sp.	-	+	-
Sitona sp.	-	+	-
Notaris acridulus (F.)	-	+	-
Ceuthorhynchinae indet.	-	+	-

Table 40: Coleoptera from Partney

+ present

Potential

The insect remains from the palaeochannel samples have no potential for further analysis. The insects from Sample PTN5 03, 69 (Sample 4) provide useful environmental information about the site and have the potential for more detailed analysis provided unprocessed waterlogged material is available for analysis. (Insect remains are damaged and become hard to extract when flots are dried.)

Recommendations

Further analysis of Sample 4 will provide additional environmental information for the Early Roman period at the time when the adjacent settlement including temple/shrine was in use. It is therefore recommended that Sample 4 from Site PTN5 04 is fully analysed.

9.4.4 Sedimentology and Pollen Analyses from PTN5 04 (Area A)

by Steve Boreham

Introduction

The palaeochannel feature at TF 4091 6893 (PTN5 04) was discovered on the floor of a small dry tributary valley to the north-east of the main stream. A 14m wide, 3m deep section was cut through the palaeochannel deposits to reveal the stratigraphy.

Palaeochannel section

A *c*.14m long and *c*.3m deep excavation aligned north-west to south-east across a channel-like feature (PTN5 04), revealed a complex of channel and floodplain sediments resting on bedrock sandstone. The lithology of the strata encountered in the north-east face of the section was recorded in the field, three detailed logs (A-C) were described and sampled, and two (A & B) were sampled using monolith tins. The deposits showed a complex stratigraphy, with a various lithologies including sand, silt, and clay. The detailed log descriptions appear below, and a descriptive section of the trench is shown in Fig. 22.

Log A – 4.5m along section - described bottom-up

Below 0cm	Bedrock sandstone.
0-23cm	Grey/yellow/orange medium sand with rootlets.
23-42cm	Grey silt-sand with wood fragments.
42-52cm	Green contorted silty sand with grey organic silt and white/orange sand.
52-120cm	Grey silt with rootlets

Monolith 2 - 30-60cm, Pollen samples - 10, 25, 75, 100cm.

Log B – 8.5m along section - described bottom-up

Lower step	
0-5cm	Orange sand.
5-50cm	Contorted pale medium sand with grey silt and organic material.
50-84cm	Grey organic silty clay.
84-110cm	Interbedded sand and clay; each layer 3-4cm thick.
110-130cm	Grey/orange mottled clay
130cm	Top of step in trench.
Upper step	
130-139cm	Grey organic sandy silt.
139-158cm	Grey silty clay (channel fill).
158-170cm	Black organic clay.
170-225cm	Orange clay.
225-260cm	Grey clay.

Monolith 1 - 20-50cm, Pollen samples - 60, 70, 80, 135, 145, 155, 165, 175cm.

Log C – 10m along section - described bottom-up

0-10cm	Orange/grey sand.
10-14cm	Orange/grey silty sand.
14-23cm	Blue/grey silty sand.
23-29cm	Buff silty clay.
29-41cm	Brown/black organic material.
41-63cm	Grey silt with some organic material.
63-84cm	Grey silt with white marl mottles.
84-120cm	Grey sandy silt with rootlets.

Pollen samples - 5, 12, 20, 27, 35, 45, 58, 75, 95cm.

The incised and nested channels make this sequence superficially difficult to understand. However, Fig. 23 shows a colour-coded lithological section

where sand is shaded yellow, silt is shaded green and clay is shaded blue. Organic beds are shaded violet, marl is shaded grey and other beds with a significant organic component are shown with violet hatching. This technique shows a general transition from sandy sediments at the base of the section to clays at the top. There is a great deal of internal complexity with very different sediments in close juxtaposition. The application of stratigraphic methodology to the sequence allows the depositional history to be determined (see Fig. 24). Eight separate packages of sediment (A-H) each representing a discrete depositional episode can be identified. The lithological units in each sediment package are indicated by Roman numerals in order of deposition. Figure 25 shows the changing depositional environment of these sediments. In general, sand is deposited by swiftly flowing water in high-energy environments, whilst clay and organic material accumulate in low-energy environments. A sequence of likely depositional events leading to the formation of the palaeochannel sediments is shown in Fig. 26.

Package A comprises the oldest basal sands in the section and are presumed to be of Late Glacial age. Package B cuts into A, and comprises sandy channel-fill sediments, which themselves are cut into by silty and sandy channel-fill sediments of package C. These sediments are notable because they exhibit involutions and contortions that have drawn the underlying sediments up into 'flames' of sand. These features may be interpreted as de-watering or loading structures, the product of animal trampling, or more probably periglacial frost heave. The latter interpretation would place package C sediments within the Late Glacial. Package D sediments represent fine grade overbank flood and back-channel deposits, and are cut into and overlain by channel-fill and overbank sediments of package E. Curiously, both D and E contain some evidence of sand 'flames' suggesting post-depositional disturbance. Package F sediments represent a complex of diverse channel-fill and overbank deposits including sand, silt, clay and marl. In contrast, package G sediments represent overbank alluvial floodplain clays which cover the floor of the dry valley. The change in sedimentation to an overbank clay-dominated regime suggests disturbance of soils in the catchment, perhaps by tree clearance. If this is the case, the unit might date from the Late Bronze Age, or perhaps the Early Iron Age. These sediments are incised by the final upper silty clays of package H, which might represent the 'Romano-British Silt'. This model would leave packages D – F representing the early and middle part of the Holocene. However, without radiocarbon dating or pollen evidence it is impossible to confirm these assertions. There are clearly some major differences between this palaeochannel sequence and palaeochannel PTN2 03 described by the current author in Section 6.3.1.

Recommendations

The palaeochannel sequence produced two 30cm monoliths and twenty-one separate pollen samples. It may be possible to assess the sediments in this feature with pollen analysis of sixteen samples. It is also recommended that two further radiocarbon dates are taken from package A and D deposits. This will provide a dating sequence through the palaeochannel which, combined

with the pollen and other environmental details, will create an understanding of the local environment over time.

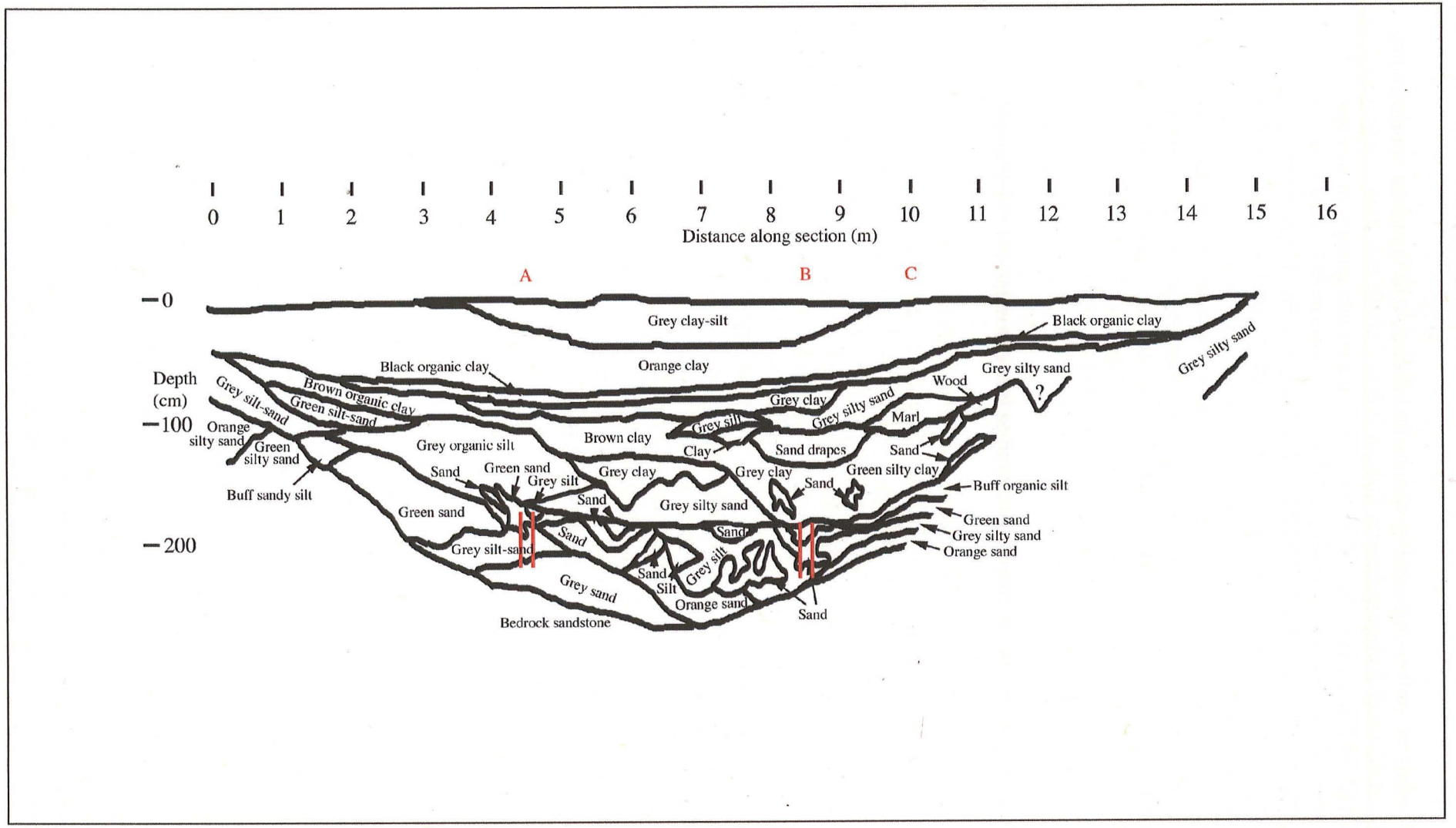


Figure 22 *PTN5 04 trench section showing location of logs A - C*

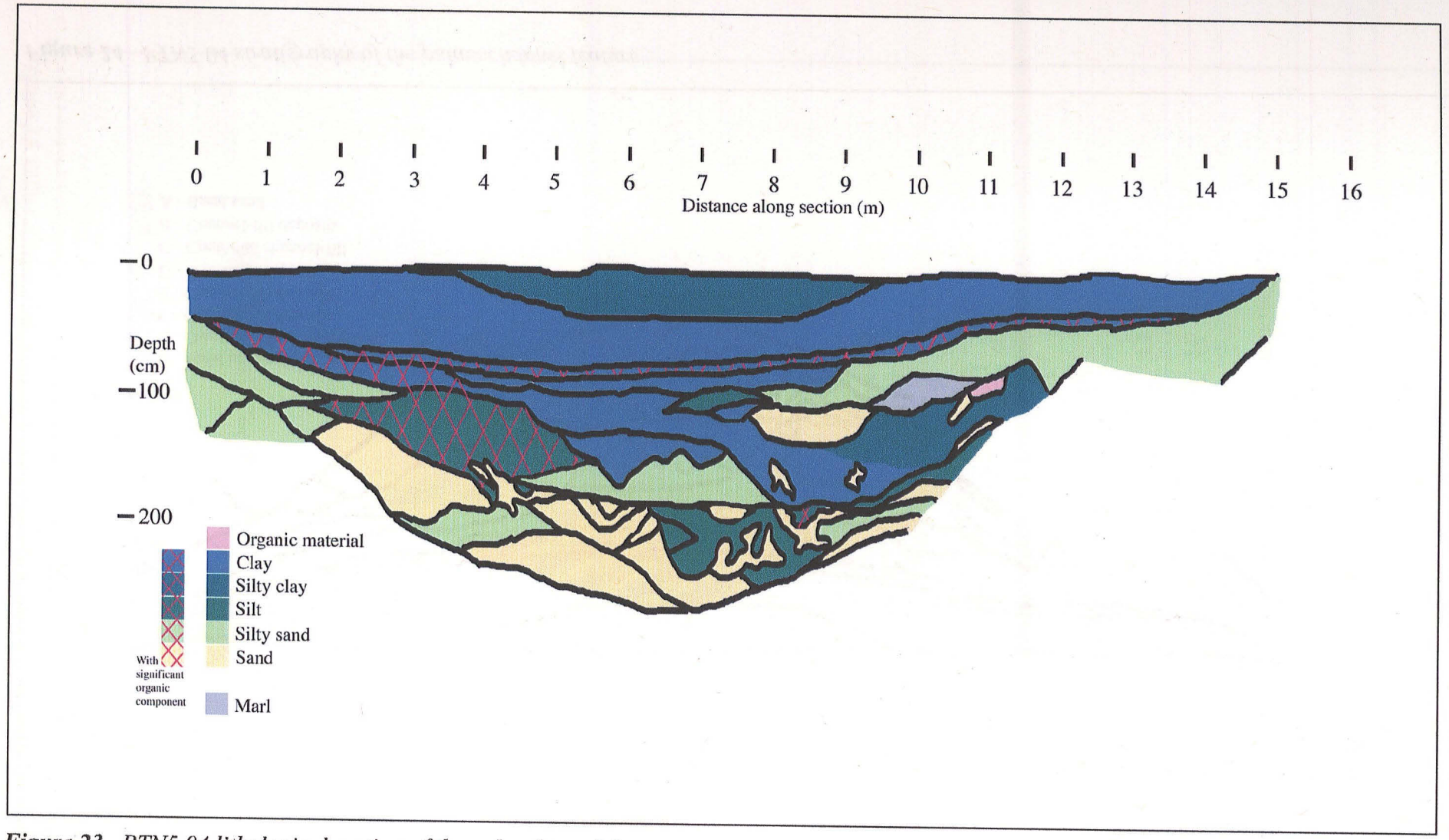


Figure 23 *PTN5 04 lithological section of the paleochannel feature*

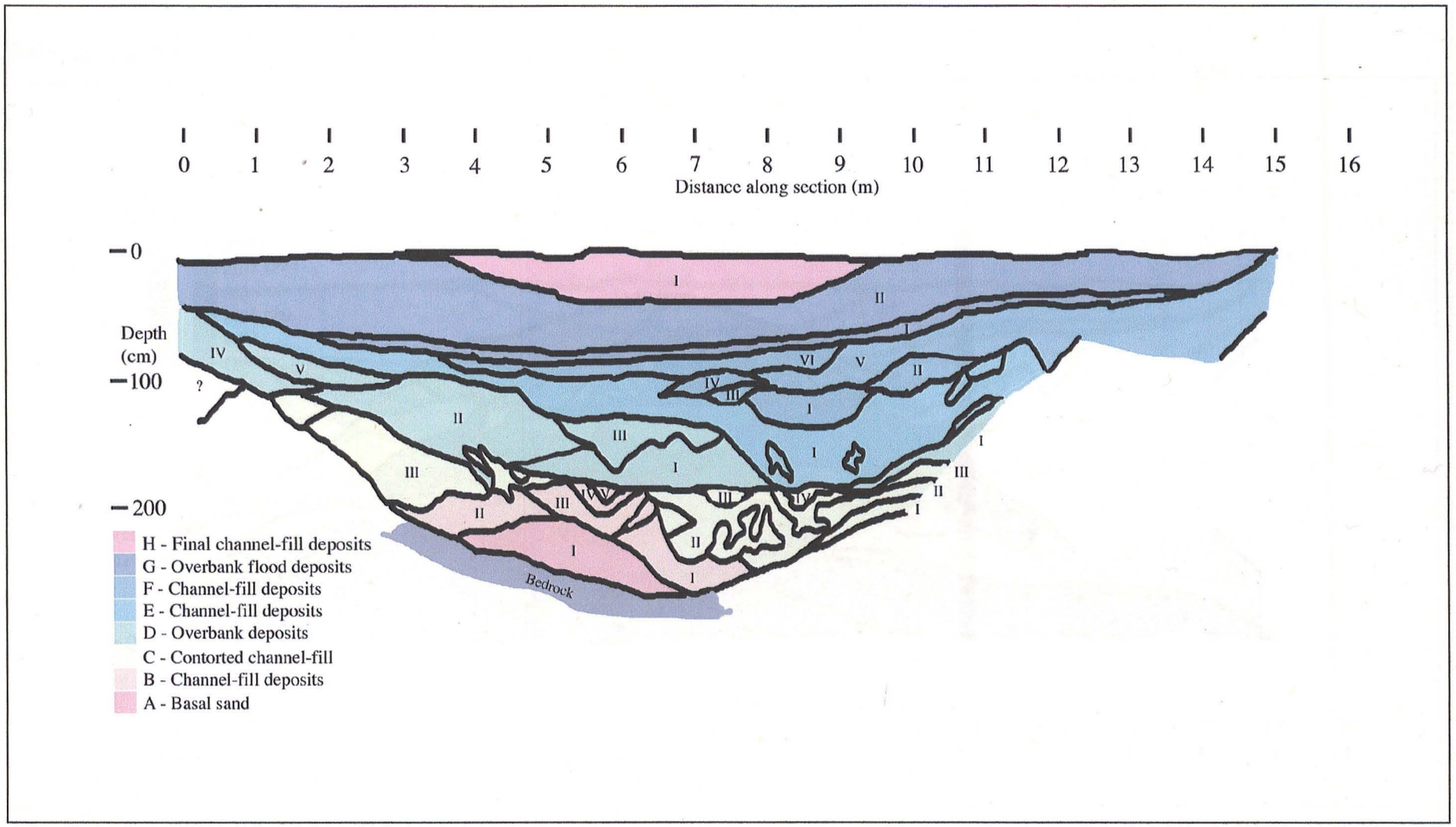
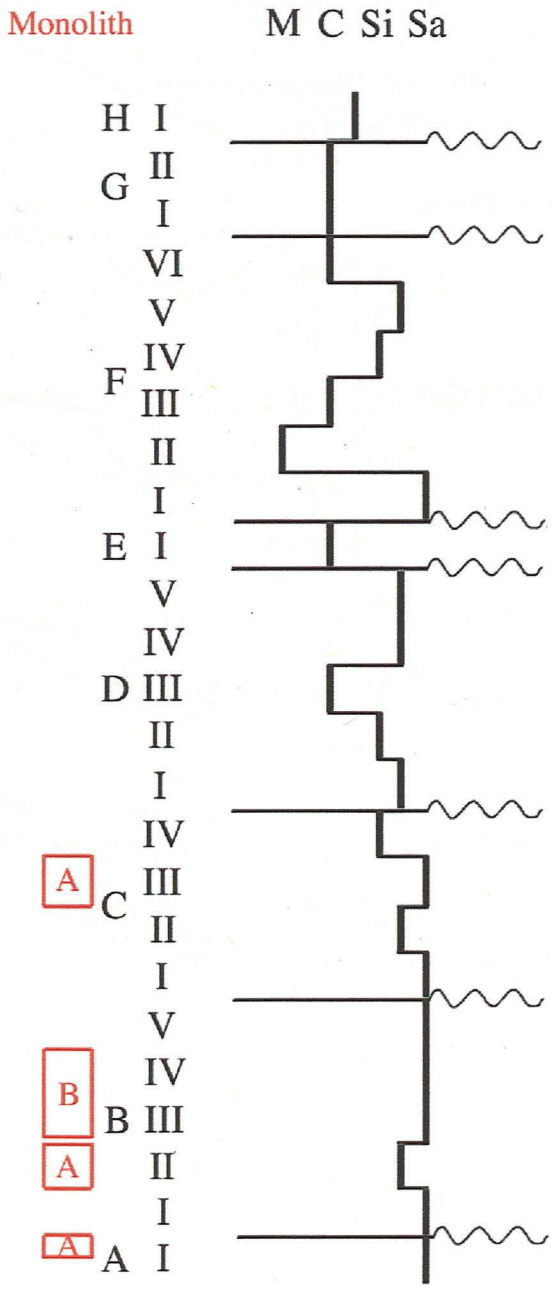


Figure 24 *PTN5 04 stratigraphy of the palaeochannel feature*



Key: M=marl, C=clay, Si=silt,Sa=sand.

Figure 25 *PTN5 04 the changingdepositional environment of sediments from the palaeochannel*

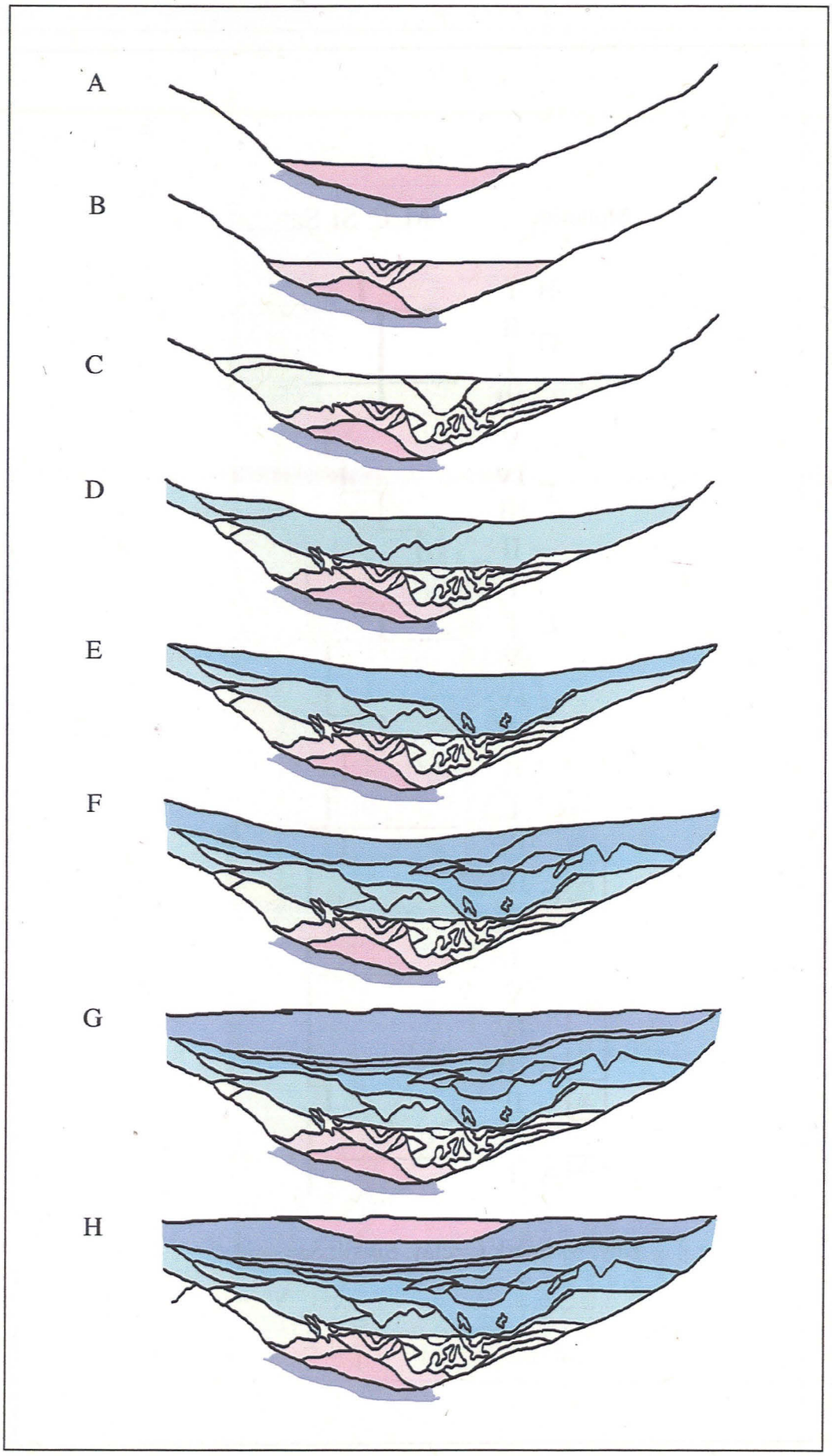


Figure 26 *PTN5 04 sequence of likely depositional events from the palaeochannel*

9.4.5 *Sedimentology and Pollen Analyses of a Springhead Feature and Burnt Flint Site at PTN9 04*

by Steve Boreham

Introduction

This report describes the investigation of a presumed springhead feature and a burnt flint site at PTN9 04 (Figs 20-1, 27-32). The springhead feature was identified in a trench some 30m south of a palaeochannel feature (PTN5 04) previously described by the current author (9.3.12). The feature was located on the eastern edge of the palaeochannel, and was represented by a small 'V' shaped channel-form cut into the sandstone bedrock and filled with sediments clearly different in character to those filling the main palaeochannel. In the immediate vicinity there was at least one further suspected springhead feature and the remains of a presumed Late Iron Age to Roman temple. The burnt flint site was located some 80m to the south at the edge of the main valley. Here, a bed of burnt flint and charcoal was overlain by peat and alluvial sediments.

Springhead Feature

The first evidence from the springhead feature was examined in Face 1 (see Fig. 28). It seemed clear that a narrow 'V' shaped channel-form filled with sediment was preserved at the edge of the main north-south aligned palaeochannel. However, a brief examination of Face II (2m to the north-west) showed no clear sign of the channel-form. This enigmatic feature was investigated by sinking a line of boreholes (BH 4-8) parallel to Face I, 2m to the south-east (see Fig. 27).

The geological section (Section 1) constructed from these boreholes is shown in Figs 28 and 33. The 'V' shaped channel in the bedrock can be clearly seen in the section, and the majority of the infilling sediments are silty sands or sandy silts. One of the most surprising discoveries was a void towards the base of BH5. This was probed and found to be a real feature, rather than a coring artefact. Beneath the void was a bed of loose gravel and sand, indicating the past presence of flowing water. This section is interpreted as showing the upper part of the springhead largely beyond the influence of the nearby palaeochannel, and filled with colluvial (slopewash) material, rather than alluvial sediment. The void, and loose gravel bed is interpreted as evidence of re-activation of the springhead at some point after a substantial accumulation of slopewash sediment.

When Face I was cleaned and logged, and the base excavated, the nature of the sediments preserved became apparent (Figs. 30 and 33). The 'V' shaped channel in the bedrock was clearly filled with fluvial sand overlain by silty sand slopewash. This was overlain by a lens of silty clay, a tongue of clean sand,

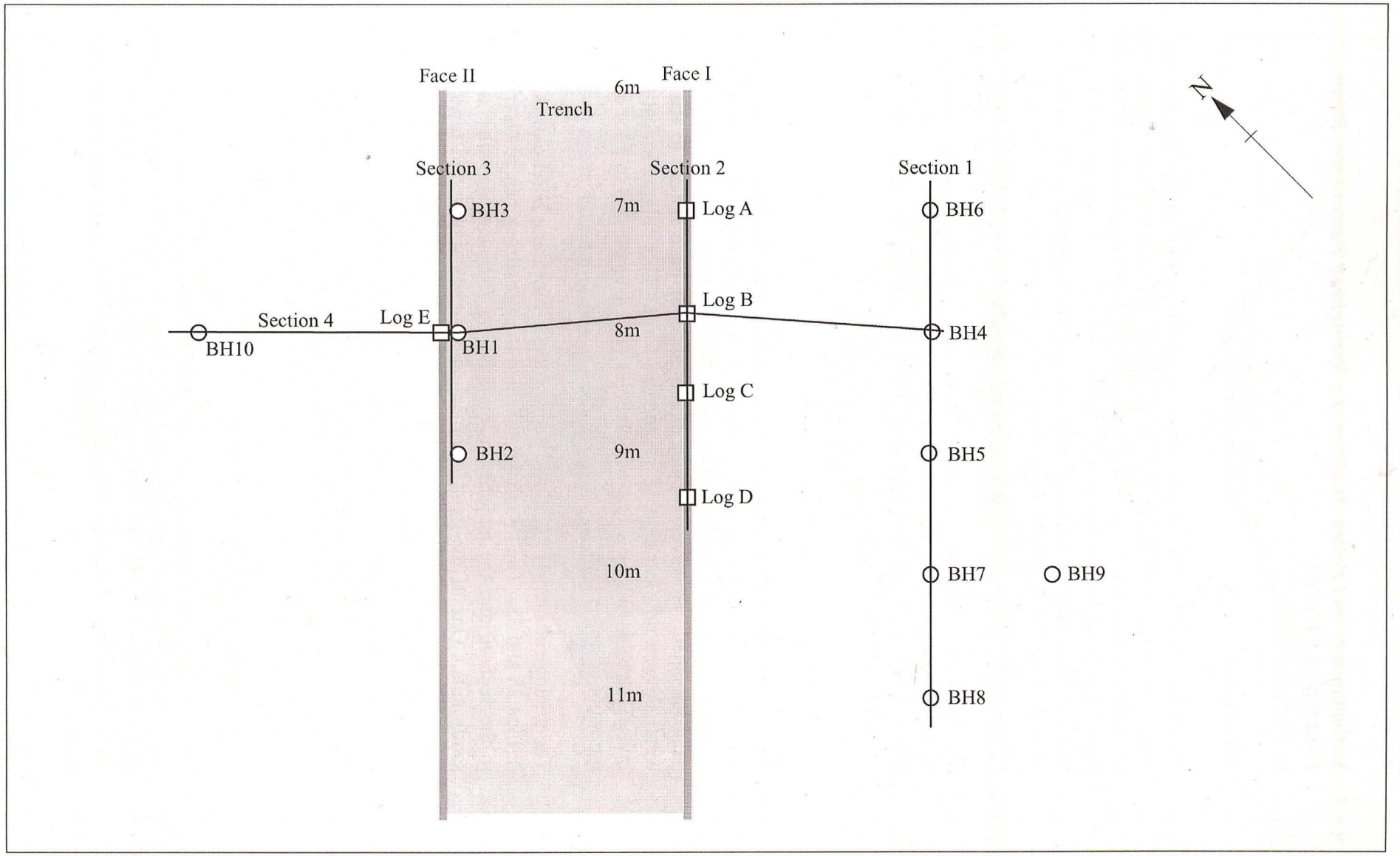


Figure 27 *PTN9 04 springhead feature - location map of logged sections and boreholes*

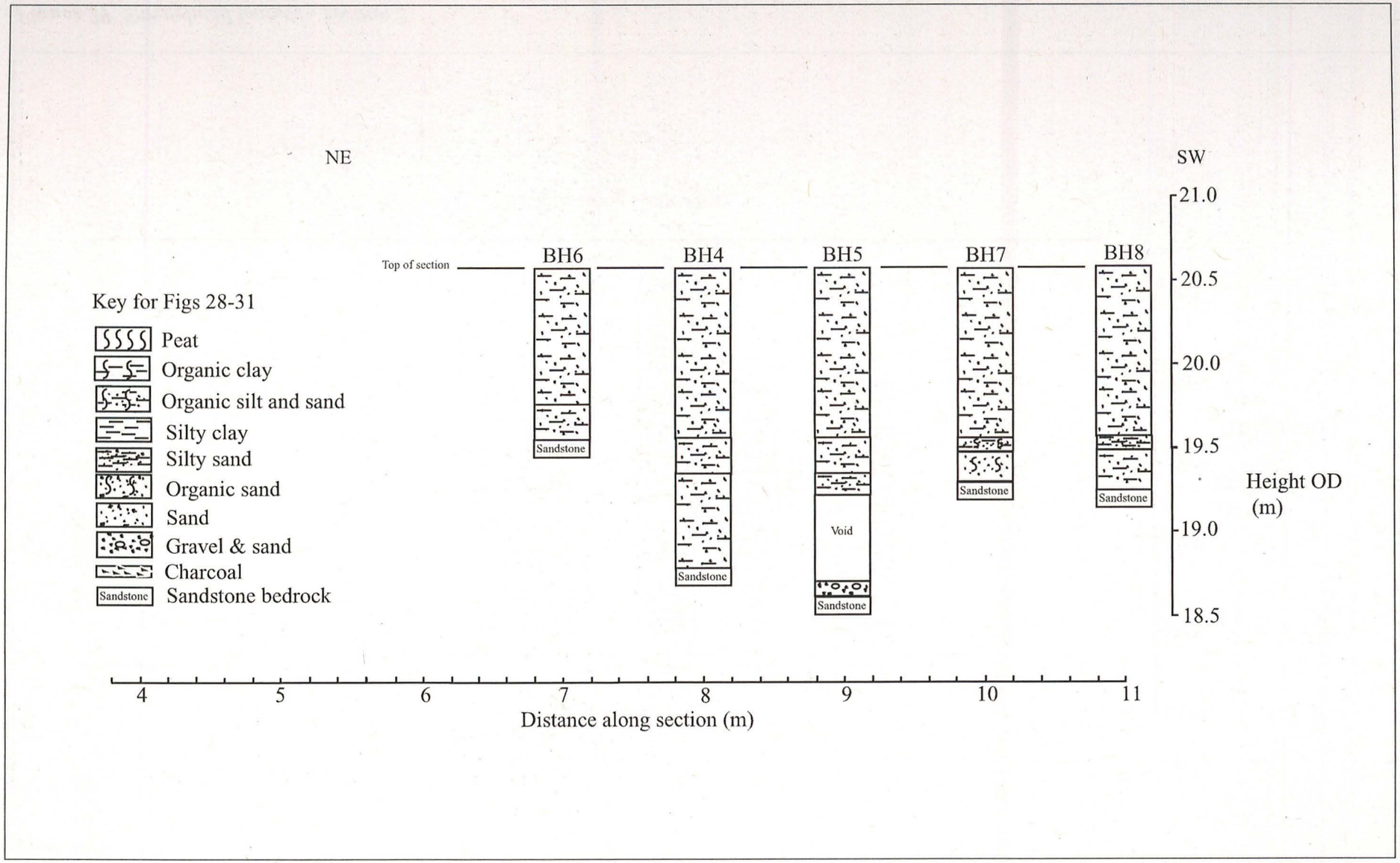


Figure 28 *PTN9 04 springhead feature - section 1*

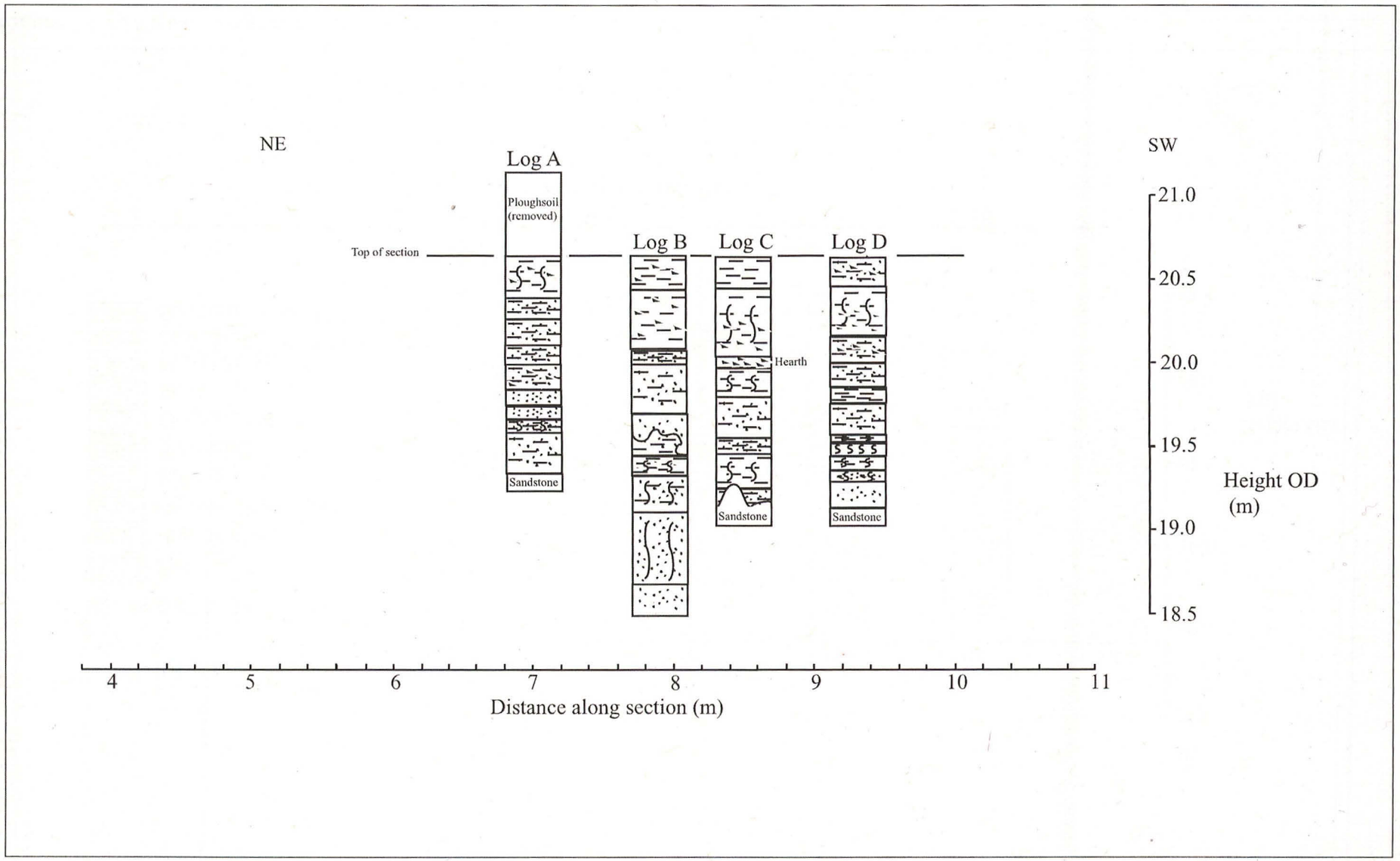


Figure 29 *Springhead feature - section 2*

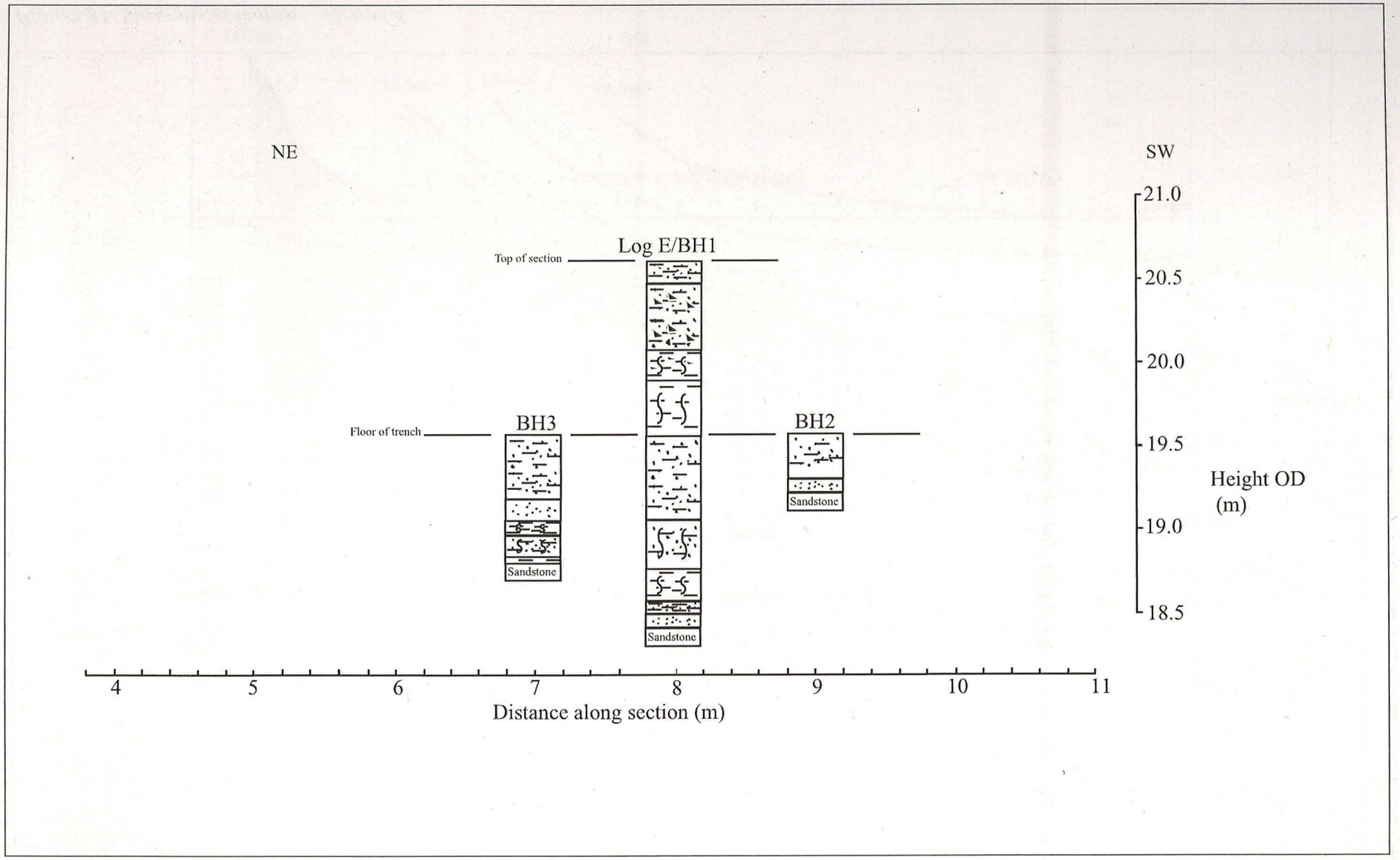


Figure 30 *Springhead feature - section 3*

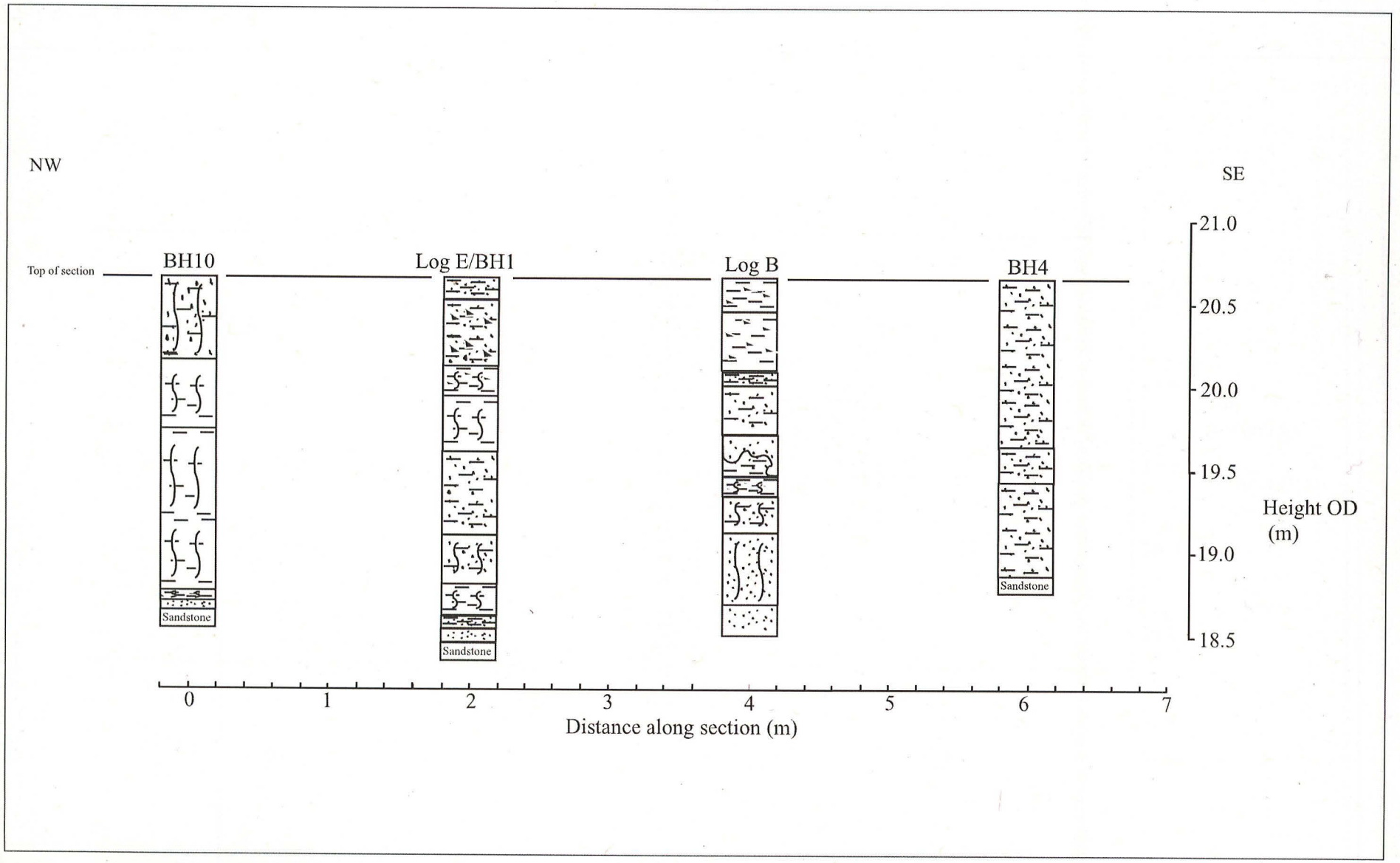


Figure 31 *Springhead feature - section 4*

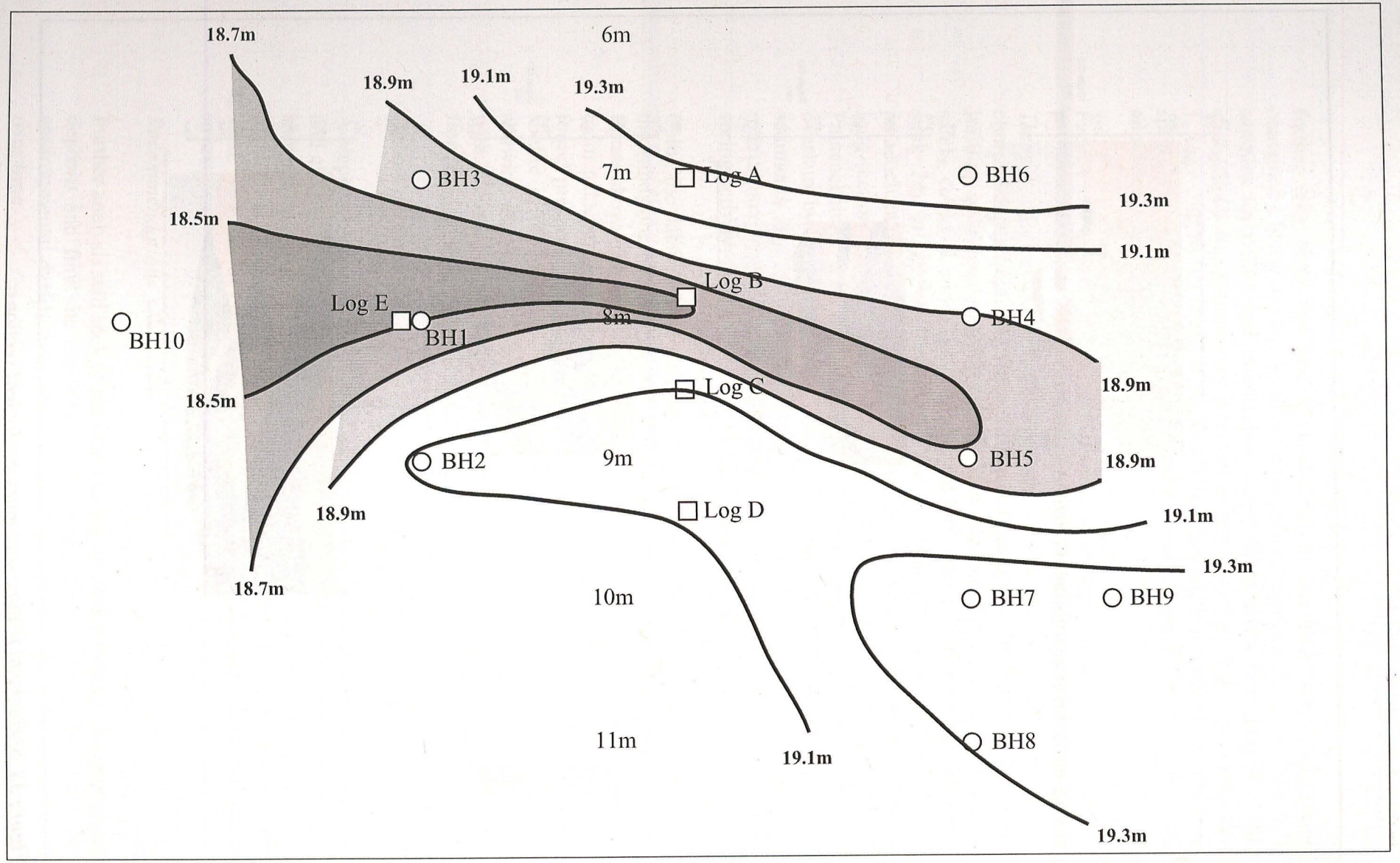


Figure 32 *Springhead feature - contour map - elevation of sandstone bedrock*

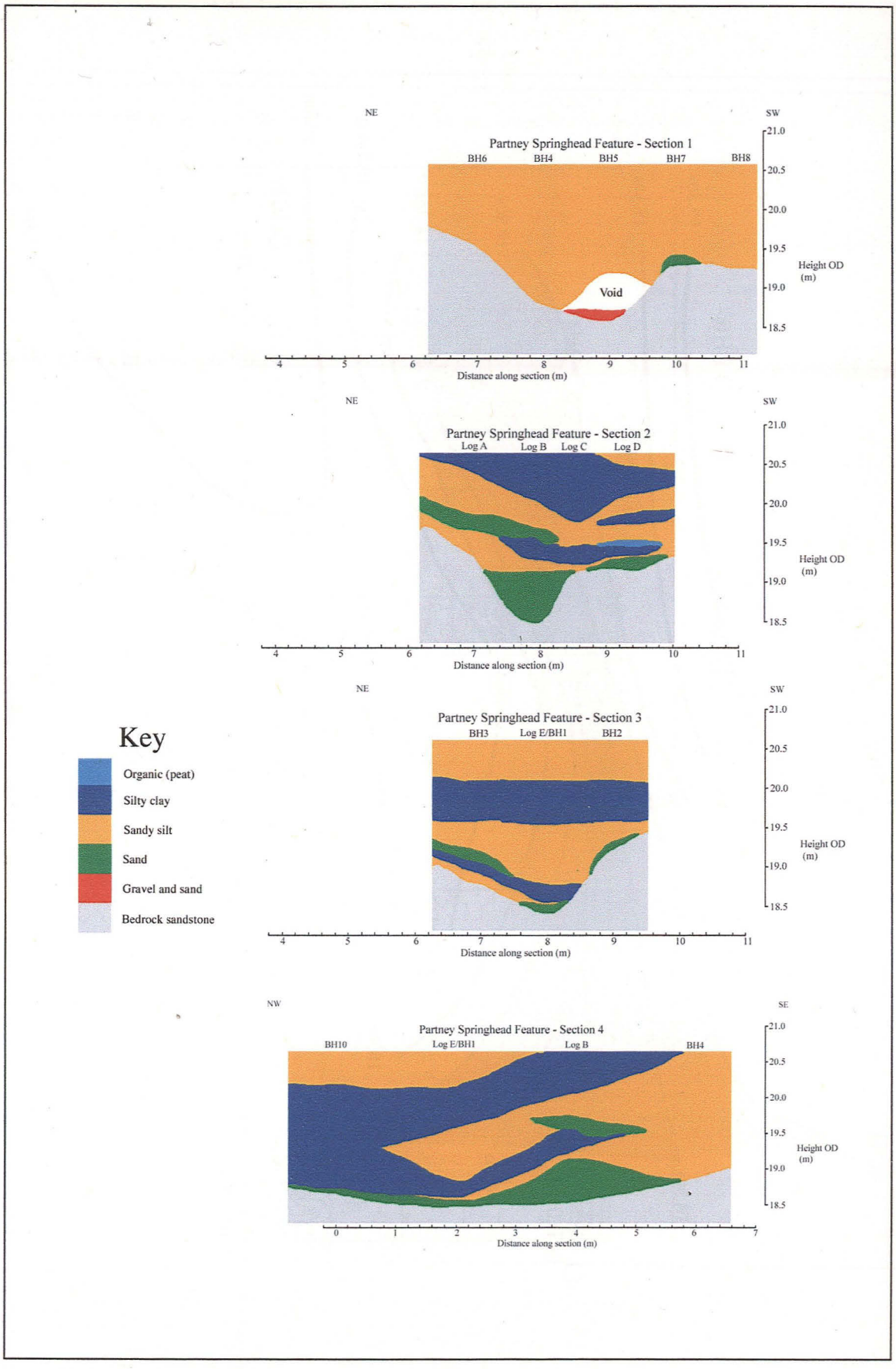


Figure 33 *Springhead feature -summary geological sections*

further silty sand bed and a channel-fill of overbank silty clay, which contained a hearth producing abundant charcoal fragments (Log B). Four bulk samples for pollen and radiocarbon dating were taken from Log B. This stratigraphy was clearly very different to that described from Fig. 33 Section 1, only 2m away. Fig. 33 section 2 is interpreted as showing sands from spring activity, colluvial silty sand and alluvial overbank silty clays from the adjacent palaeochannel.

Face II was cleaned and the rather uniform stratigraphy was described (Log E). A bulk sample for pollen and radiocarbon dating was taken from Log E. Three boreholes were sunk at the base of Face II (BH 1-3, to reveal the continuation of the 'V' shaped channel (Fig. 33). The stratigraphy of the infilling sediments was rather similar those described in Section 2, with fluvial sands, colluvial silty sands and alluvial silty clays. A borehole (BH10) was sunk 2m to the north-west of Face II to investigate the nature of the palaeochannel sediments. Section 4 (Figs. 31 and 33) shows a geological long-section north-west to south-east through the springhead feature. Palaeochannel sediments in BH10 comprise organic alluvial silty clays overlain by a colluvial silty sand. The relationship of the palaeochannel sediments is clearly visible in Fig. 33, where wedges of sandy slopewash interdigitate with alluvial sediments. The sand lenses show the extent of spring activity.

Using the data from the boreholes and logs, a contour map of the elevation of the sandstone bedrock surface (rockhead) has been made (Figure 32). This figure shows the narrow 'V' shaped springhead channel leading towards the main palaeochannel at BH10. It is perhaps not surprising that a hearth was found preserved at Log B, since this 'notch' would have provided a natural shelter in the landscape. The hearth was built on and sealed by alluvium, showing that the springhead had long ceased flowing and had largely filled with sediment at this time, and that the nearby stream (palaeochannel) was flooding into it on a regular basis.

Burnt Flint Site (Fig. 20)

A stepped section at the edge of the main valley revealed a bed of burnt flint and charcoal overlain by peat and alluvial sediments. The lower step (Log F) showed basal sands overlain by organic silts containing burnt flints. The upper step (Log G) showed overlying peat, alluvial clay and colluvial silty sand. A series of nine pollen samples was taken from the section for further investigation.

Recommendations

Further analysis will seek to provide a dating sequence through the springhead deposits and flint site deposits which, combined with the pollen and other environmental details, will create an understanding of the local environment over time.

The springhead logs were sampled to give five bulk samples for pollen and radiocarbon dating: investigation of these remains could be achieved with pollen analysis of all five samples and a radiocarbon date.

The burnt flint site produced nine separate pollen samples. It should be possible to assess the sediments at this site with pollen analysis of eight samples and a radiocarbon date.

9.4.6 *Pollen Analyses from Trial Trench and Borehole Samples from PTN9 04*

by Steve Boreham

Introduction

This report describes the investigation of samples from trial trench comprised a north-east to south-west aligned trench, some 20m long and up to 3m deep, which was excavated on the floor of the main stream valley (Fig. 20). Rob Atkins supervised the description of the organic and alluvial deposits in this section, and took four monolith samples from the exposed sediments (Fig. 34). In addition, Lincs Laboratory sunk a series of boreholes across the valley floor, parallel to, but *c.*10m to the north-west of the original section. The author did not visit the section, but is familiar with the site and has had access to the drawings and samples taken by Rob Atkins and Lincs Laboratory.

Valley Section and Monolith Samples

A simplified stratigraphic section through the deposits is shown in Fig. 36. The basal part of the section had complex lenses of peat and green sand, overlain by sub-horizontal layers of sand and peat. Lenses and layers of silty clay were recorded within the peat, and a thin upper peat, thought to be post-Roman, was overlain by brown sandy clay slopewash and topsoil. Three 0.50m long monoliths (3, 2, 6) were taken from the central part of the section. A single monolith (8) was taken from the edge of the section covering roughly the same stratigraphic interval as monolith 3. The details of these 0.5m long monoliths are shown below.

Monolith 3	0-50cm	(0-25cm sandy peat, 25-50cm woody peat)
Monolith 2	50-100cm	(50-70cm orange grey silt, 70-100cm peat)
Monolith 6	110-160cm	(110-130cm peat, 130-145cm grey silt, 145-160cm peat)
Monolith 8	0-50cm	(0-20 grey silty sand, 20-40cm peat, 40-50cm silt)

Lincs Laboratory Boreholes

The four boreholes can be used to form a second geological section, which runs parallel to the 'Valley Section' (Fig. 36). The borehole section clearly shows evidence for a channel-form *c.*3.5m deep cut into the underlying fluvial sands, filled by a sequence of silty sand, peats and clay, and overlain by sandy clay slopewash. This information was not available from examination of the valley section trench alone. In general, the boreholes show a somewhat

similar sequence to the valley section, with layers of silty clay sandwiched between peat. The sampling of the boreholes is detailed below.

BH1		
0.3m		bulk
0.5-1.5m	core	(0.5-0.9m sandy clay, 0.9-1.2m sand, 1.2-1.5m sand)
1.5-2.3m	core	(1.5-2.3m sand)
2.9m		bulk
BH2		
0.3m		bulk
0.5-1.5m	core	(0.5-0.7m missing, 0.7-1.05m sandy clay, 1.05-1.5m clay)
1.5-2.5m	core	(1.5-2.05m clay, 2.05-2.3m sandy clay, 2.3-2.5m silty sand)
2.8m		bulk
3.1m		bulk
3.5m		bulk
3.8m		bulk
4.3m		bulk
BH3		
0.3m		bulk
0.5-1.5m	core	(0.5-0.6m missing, 0.6-0.65m sandy clay, 0.65-1.5m peat)
1.5-2.5m	core	(1.5-1.7m sandy clay, 1.7-2.2m peat, 2.2-2.5m peaty sand)
2.6m		bulk
2.8m		bulk
3.1m		bulk
3.4m		bulk

Core samples are shown in Fig. 36 by a red line running along the side of the borehole log. It can be seen that BH3 is roughly equivalent to Monoliths 3, 2 and 6 in the central part of the Valley Section, and that BH2 is roughly equivalent to Monolith 8 at the section edge (Figs. 35 and 36).

Recommendations

It is clear that both the valley section and the Lincolnshire Laboratory boreholes cut through a palaeochannel feature exhibiting a range of fluvial lithologies. There is the possibility that these deposits span the Bronze Age to Romano-British interval. The valley section monoliths and the core samples apparently cover roughly the same depth and lithological range, and may therefore be equivalent. It would therefore not be advisable to examine a pollen sample of both the monoliths from the trial trench and the boreholes. It is recommended that a pollen analysis of sixteen samples be undertaken as well as two radiocarbon dates. One radiocarbon date should be taken from an early deposit and the other from a middle dating deposits in the palaeochannel. This will give a dating sequence through the palaeochannel which combined with the pollen and other environmental details will create an understanding of the local environment over time.

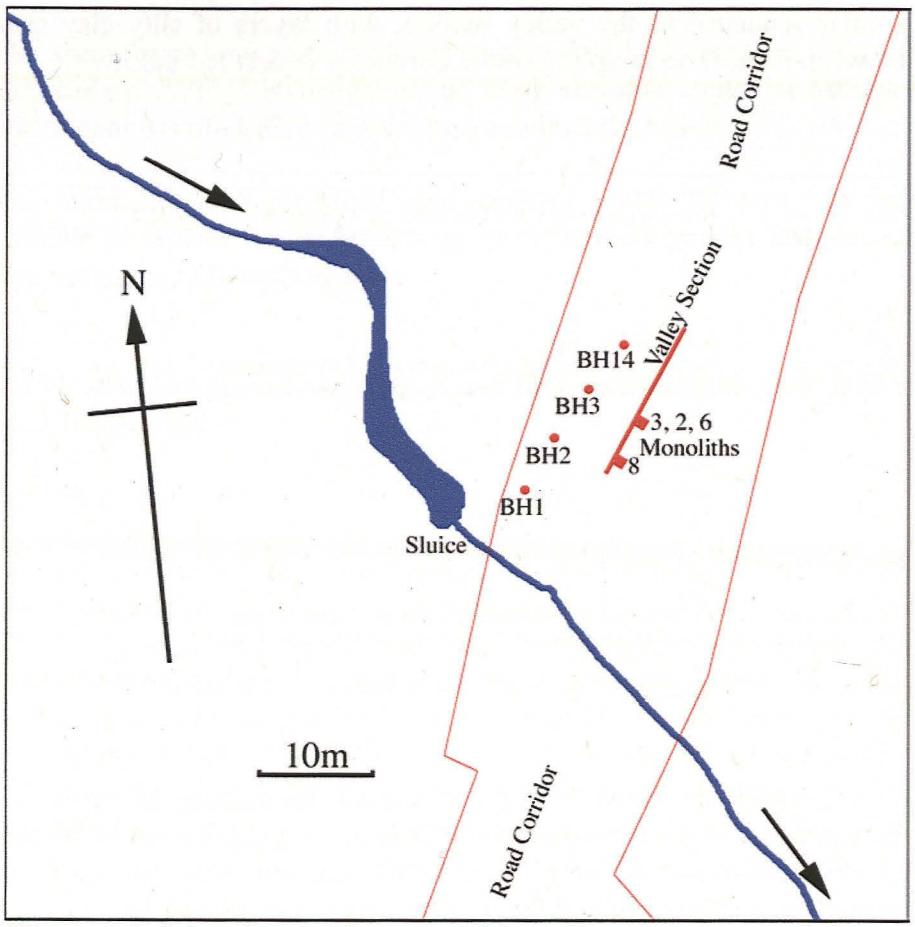


Figure 34: *Map showing location of the valley section, monolith samples and boreholes*

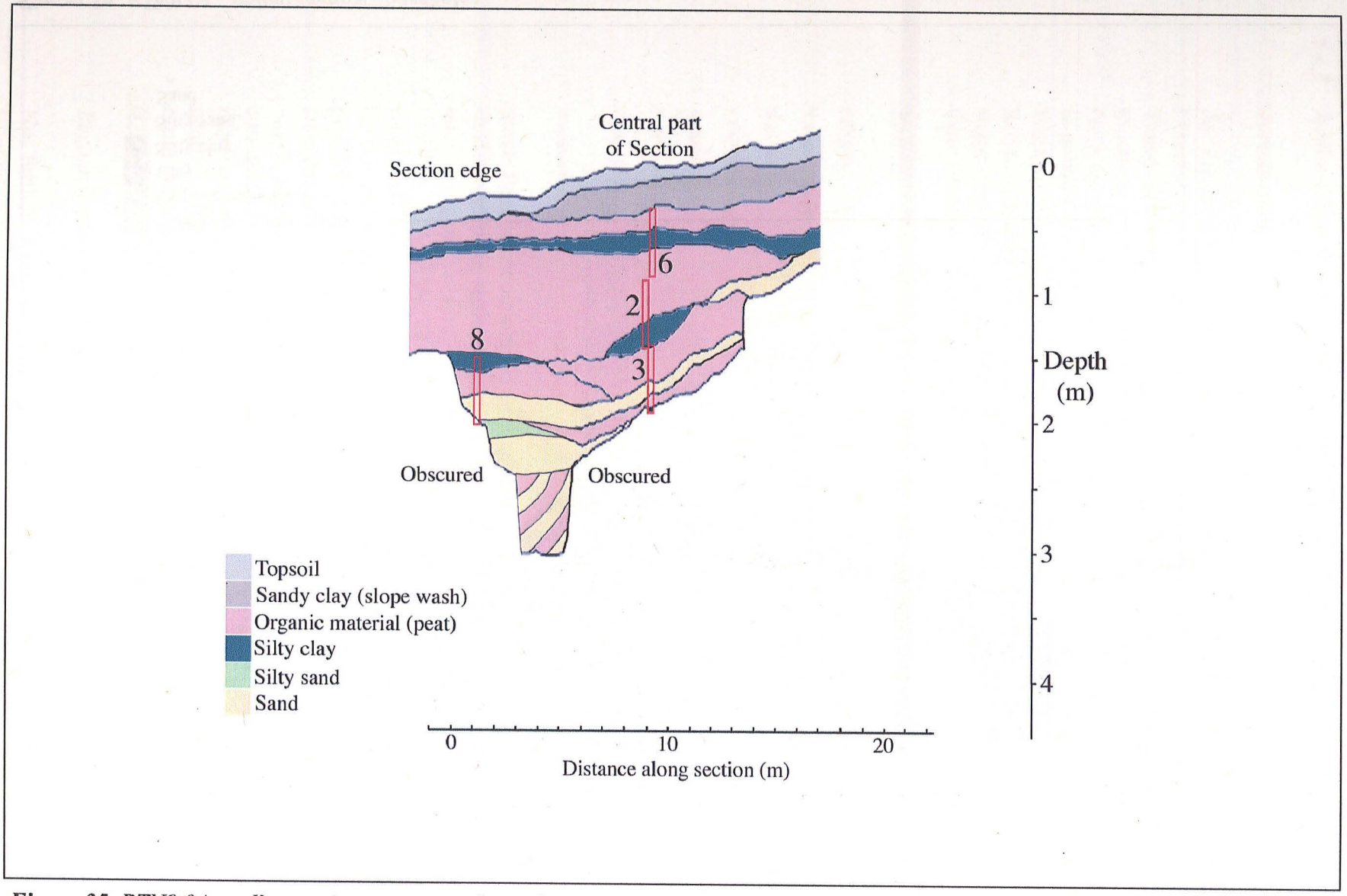


Figure 35 *PTN9 04 - valley section - stratigraphy and sampling*

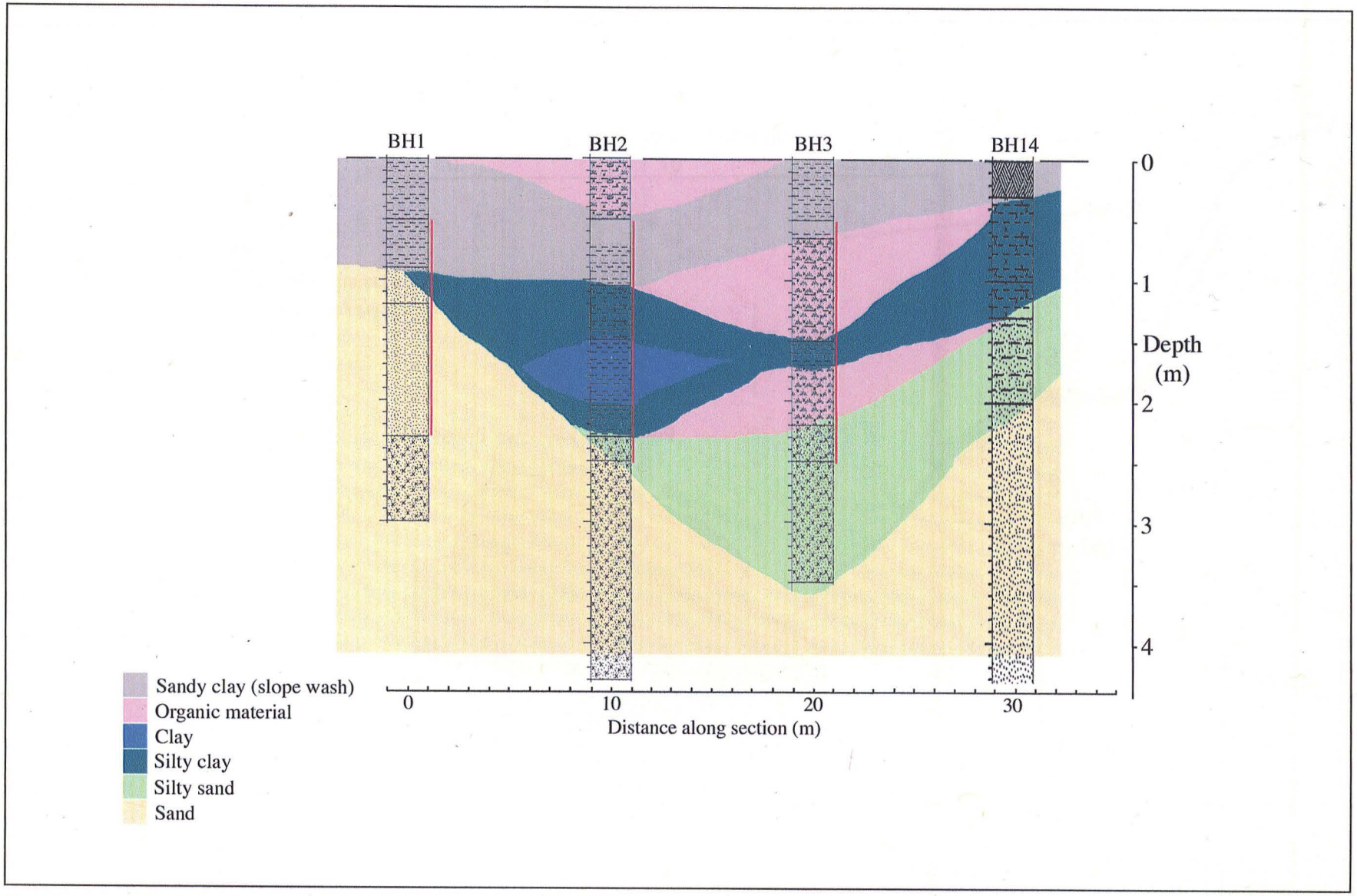


Figure 36 *PTN9 04 - valley section - boreholes*

9.4.7 Radiocarbon Dates from Palaeochannels at PTN5 04 and PTN9 04

Introduction

At the request of Mr Jim Bonnor (Senior Built Environment Officer, Lincolnshire County Council) the dates of the palaeochannels were assessed. These dates were obtained after Dr Steve Boreham's report was written (Sections 9.3.12-9.3.14). Two organic deposits (prepared by Steve Boreham) from the palaeochannel at PTN5 04, one from the springhead at PTN9 04 and two from the palaeochannels at PTN9 04 were sent to the University of Waikato for radiocarbon dates. These five samples span the Neolithic to Roman period. The results show up to three peaks in the calibrated date suggesting up to three possible date ranges. All the peaks are recorded with there likelihood within the 95.4% probability (2 standard deviations).

Results

PTN5 04

Waikato15962	3770 to 3500 BC (91.7%) (to 2 standard deviations)
	3430 to 3380 BC (3.7%) (to 2 standard deviations)
Waikato15963	1920 to 1680 BC (to 2 standard deviations)

PTN9 04 Springhead

Waikato15964	400 to 200 BC (to 2 standard deviations)

PTN9 04 Palaeochannels

Waikato15965	2870 to 2800 BC (15.5%) (to 2 standard deviations)
	2760 to 2720 BC (5.6%) (to 2 standard deviations)
	2710 to 2470 BC (74.4%) (to 2 standard deviations)
Waikato15966	50 BC to AD 140 (to 2 standard deviations)

Steve Boreham commented on the samples taken. The earlier organic silt-sands were from sediment package B (Partney_5_A_4.5m_30-38cm), and the later organic silty sands were from sediment package C (Partney_5_A_8.5m_20-28cm). The organic-poor nature of these sediments restricted choices for dating samples. These dates suggest that the upper parts of the channel-fill (packages D-H) represent Bronze Age, Iron Age and probably Romano-British sediments. The sample from the Partney springhead site (Partney_Spring_8m_80-90cm) was from a unit of brown organic silt with wood fragments. It is therefore clear that the burning activity in the springhead must have taken place in the Late Iron Age period. This is clearly important in the context of the other Iron Age activity (*e.g.* the temple) found nearby. The samples of organic material from the PTN9 04 palaeochannel came from (Partney_9_soil sample 3_10-15cm) and (Partney_9_soil sample 6_12-20cm).

Recommendations

No further work is required on these radiocarbon dates, other than to summarise the results for publication.

9.4.8 *Charred Plant Macrofossils and Other Remains from PTN3 04, PTN5 04 and PTN9 04*

by Val Fryer

Introduction

A total of fourteen samples was submitted from PTN3 04 from features of Bronze Age to Roman date, five samples from PTN5 04 with features of Bronze Age to Iron Age date and thirty-three samples from PTN9 04 with features of Neolithic to medieval date.

Methods

The samples were bulk floated by the CCC AFU team, and flots were collected in a 500 micron mesh sieve. In most instances the flots (including those from waterlogged deposits) were air dried before submission for assessment, although a small number of wet retents from sites PTN5 04 and PTN 9 04 were stored in water. As air drying of the waterlogged assemblages had no apparent adverse effect on the macrofossils, these samples have now also been slowly air dried to facilitate long term storage.

All flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x 16. The plant macrofossils and other remains noted are listed in tables, which form a supplement to this report. Nomenclature within the tables follows Stace (1997). Both waterlogged/de-watered and charred plant remains were recorded and, where appropriate, the status of the material is noted within the Tables 41-50; Volume 2, Appendices 18-20.

Modern contaminants including fibrous roots, seeds, arthropod remains and fungal sclerotia were present within most of the charred assemblages. The degree of contamination within the waterlogged/de-watered assemblages is not known, but is probably quite low due to the nature of the deposits.

Preservation of the Assemblages

Cereals grains/chaff, seeds of common weeds and wetland plants and tree/shrub macrofossils were all recorded at varying densities. Although most were well preserved, some specimens from PTN3 04 were both puffed and distorted (possibly as a result of combustion at extremely high temperatures) and heavily abraded. In addition to this, the macrofossils from a small number of samples from PTN9 04 were coated in fine silt particles, although in most cases this did not prevent identification.

Waterlogged/de-watered macrofossils were noted in the palaeochannels but although roots and twigs were generally abundant, seeds, fruits and other remains were often surprisingly rare. The reason for this is not clear at present, but it is not thought to be a result of the drying of the material before assessment as both the dried assemblages and the wet retents were similarly composed with the recorded material being robust and easy to identify.

Sample Composition

Site PTN3 04 (Tables 40-42; Volume 2, Appendix 18)

Site PTN3 04 recorded part of a large Iron Age/Romano-British settlement located at the junction of two palaeochannels (see also sites PTN5 04 and PTN9 04). Some elements within the settlement were enclosed within a large ditched area, although other features were also recorded beyond the enclosure. Samples were taken from fills within pits, ditches (including the enclosure ditch), post-holes and a possible roundhouse gully. With few exceptions, the assemblages were characterised by the poor condition of the plant macrofossils, most of which were severely puffed and distorted, probably due to repeated combustion at very high temperatures. Although the original composition of the assemblages may have been compromised by these subsequent episodes of burning, the remaining material appeared to indicate that scattered refuse (possibly including charred cereal processing waste and/or domestic detritus) was predominant, with little or no evidence for the systematic disposal of rubbish.

Site PTN5 04 (Table 43; Volume 2, Appendix 19)

Samples were taken from the waterlogged fills within the channel which lay adjacent to settlement PTN9 04 as well as the settlement. Material from within the lower Bronze Age fill (Sample 2) was very similar to the assemblages noted at Site PTN2 03, and again indicated the presence of local open woodland (including alder, hazel and hawthorn (*Crataegus monogyna*)) with a predominance of dry-land herbs. However, by the Iron Age (samples 4 and 6), there was a marked increase of evidence for human activity, with charcoal fragments and charred grains/chaff and weed seeds being moderately common in both assemblages. Although there is little evidence for the systematic deposition of refuse, this charred material is almost certainly derived from the adjacent settlement.

Site PTN9 04 (Tables 44-49; Volume 2, Appendix 20)

The excavations at PTN9 04 (adjacent to sites PTN3 04 and PTN5 04) recovered further evidence of Late Iron Age/Romano-British settlement on the eastern bank of the palaeochannel. Remains of a contemporary temple/shrine with associated burials were situated at the confluence of the channels, and other excavated features included a shaft, a four-post structure, ditches, ovens and pits. Samples were also taken from waterlogged fills within the channel. Many of the assemblages appeared to contain little other than scattered refuse (including chaff, seeds and occasional grains). However, the samples from four-post structure **M486** did contain a slightly higher density of material (most notably barley grains), and the abundance of charcoal/charred wood within the assemblages may indicate that the material was burnt *in situ*, possibly during a catastrophic fire. This would not be unusual for granary/storage area to have burnt down. There is certainly more cereal than would be expected from an exhumation platform. Possible discrete dumps of

charred cereal processing waste were noted within enclosure ditches **M490** (Sample 29) and **M493** (Sample 28).

The ritual area appears to have been kept relatively clean, with only a very low density of probable wind-blown detritus being recorded from the temple/shrine ditches, the burials and the shaft. Seeds were surprisingly rare within the waterlogged channel fills and, with the exception of a single piece of charcoal, cultural evidence is entirely absent. As with the channel fills studied from other of the Partney excavations, open woodland (Alder/Hazel) conditions are indicated, with some evidence of scrub and dry-land herbs.

Recommendations

Analysis of selected samples will provide the following information:

1. data relating to specific activities which may have been of importance to the local economy;

2. data relevant to the study of the local environment – to supplement information from, for example, the pollen analysis;

3. data relating to specific events;

4. information to supplement the existing data set for settlement activity and the rural economy of the North Lincolnshire area from the Bronze Age to the medieval period.

The following samples are recommended for full quantitative analysis:

PTN 5 04

Sample 6	Ditch fills	Local habitat	Iron Age
Sample 4	Ditch fills	Local habitat	Roman

PTN 9 04

Samples 13, 14 and 15	Four-post structure	?Crop storage	Iron Age

10 SUMMARY OF RESULTS FOR PTN8 04 (WATCHING BRIEF)

by Marc Berger and Rob Atkins

10.1 Introduction and Methodology

Jacobs Babtie's specification included a methodology for a watching brief (Babtie Group 2003, 26-8) and these requirements were carried out in stages. The excavation of The New Beck was observed by Marc Berger as well as the large majority of the earthcut workings during road workings. This included work on the re-routing of The Beck, digging geotechnic test pits, watching digging of badger proof fencing, construction of the compound, road tie-ins, and stripping of topsoil along the road corridor, especially in Area L where Early Saxon burials had been found in 1950. The watching brief included excavation of a 30m by 10m area where tree throws had been found in the evaluation at Area I and during excavation of the New Beck.

The main road corridor chainage points were given prefixes CHA for the A16 and CH for the A158 on the east side from the roundabout with the A16 and CHB for the west (Fig. 37):. Fifty metre points were pegged along the centre line of the roads with numbers commencing from zero at the roundabout. These chainage points were maintained by the construction engineers and chainage points were used to number finds picked up or metal detected in the course of the watching brief and as location points on plan drawings.

The watching brief site code PTN8 04 overlapped areas of excavation:

PTN1 03 (Area J)	Iron Age-Roman site at Hardings Lane: CH 790 to CH 960
PTN2 03 (Area H)	Palaeochannel area: CH 340 to CH 435
PTN3 04 (Area B)	Iron Age/ Roman Enclosure: CHA 775 to CHA 870
PTN4 03 (Area C)	Medieval hospital: CHA 320 to CHA 420
PTN5 04 (Area A) 20m by 20m	Palaeochannel and settlement: CHA 990 to CHA 1010
PTN6 03	Evaluation trenches between B/C: CHA 510 to CHA 640
PTN9 04	Palaeochannel /Temple site: CHA 890 to CHA 1000

10.2 The New Beck

The Beck was re-routed to the south of Partney (Figs. 38 and 39). This was *c.*100m to the north of the palaeochannel at area PTN2 03 and reached as far as Area I. In 2002, Lindsey Archaeological Services had excavated two evaluation trenches in Area I (28 and 29). The trenches had uncovered three (or four) large ditches orientated north-west and south-east running over two smaller gullies with Roman pottery dated to the mid to late 2nd century.

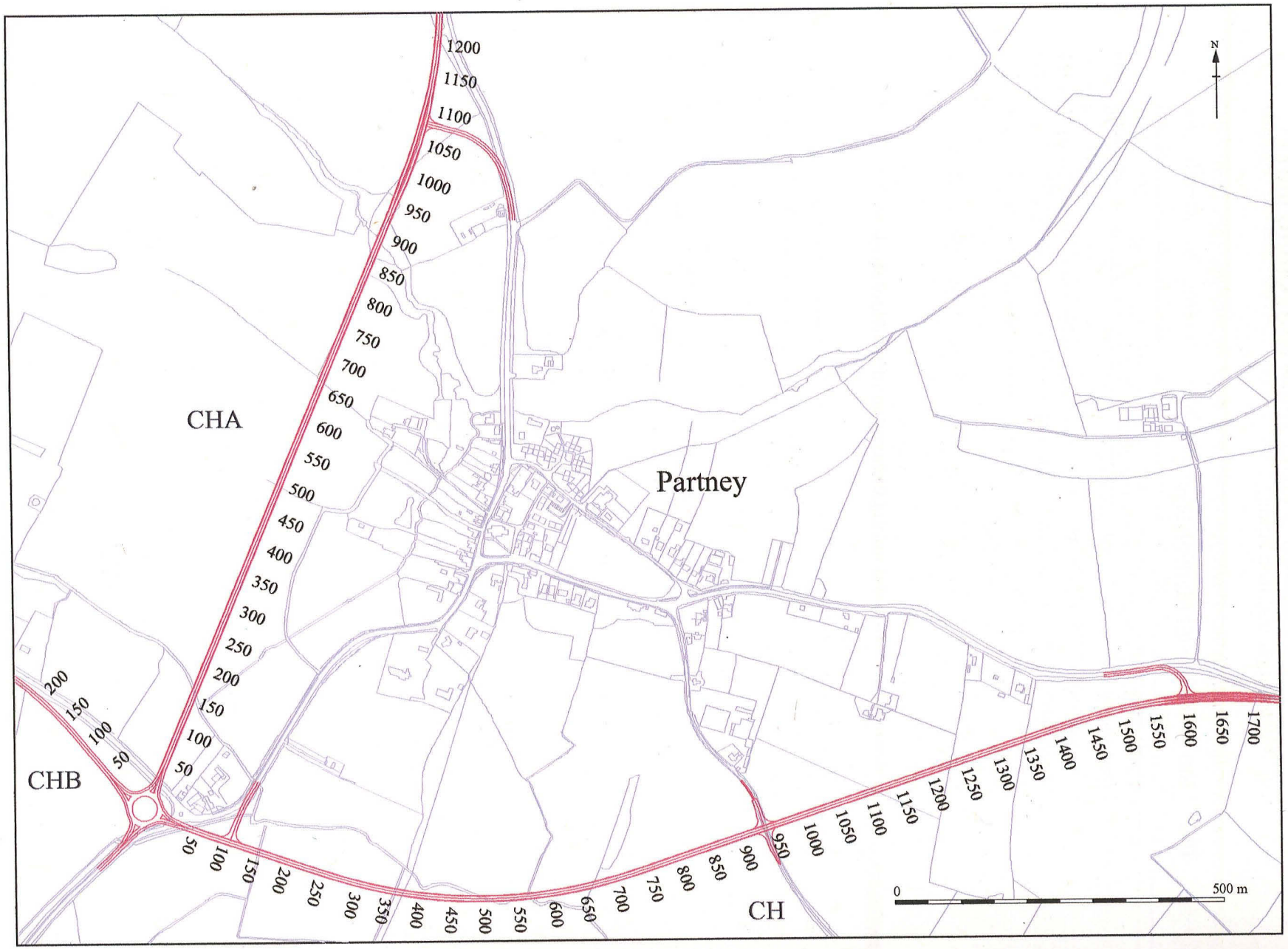


Figure 37 *PTN8 04 road corridor and location of chainage points*

Two tree throws were identified, within which there were flint artefacts including flint cores dated to the Late Neolithic/Early Bronze Age (McDaid 2003).

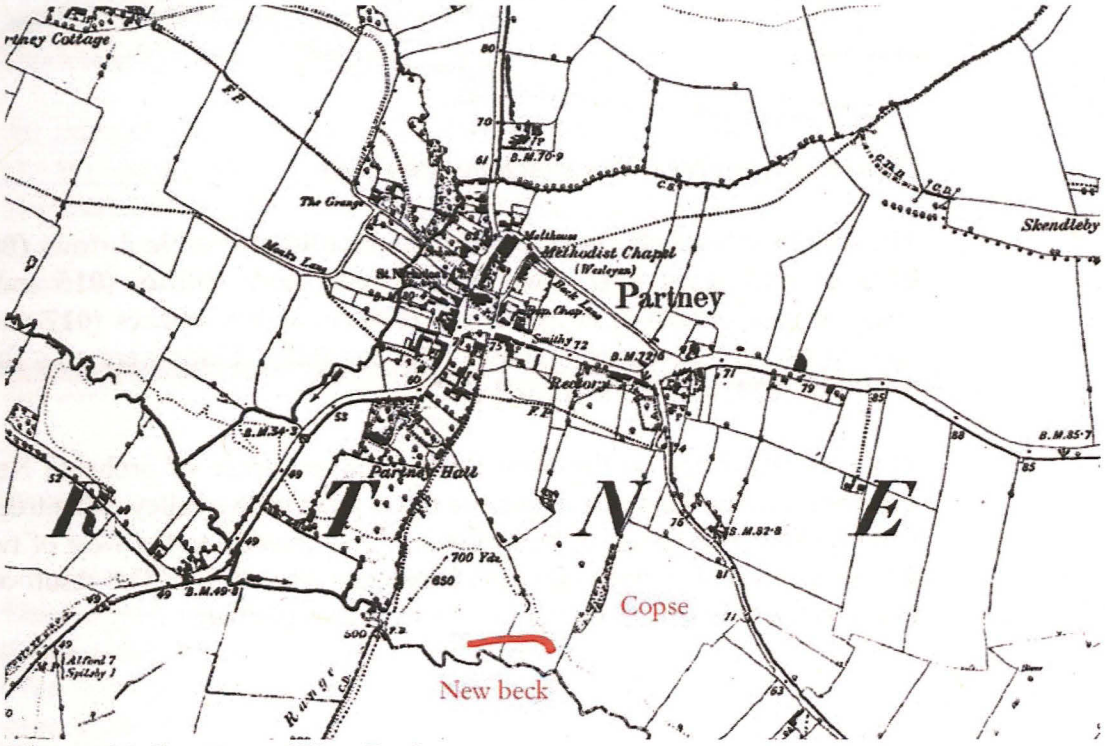


***Figure 38** Position of New Beck*

A 32 ton excavator was employed with a toothed bucket with bespoke V-shaped 'wings' designed to leave 1 in 2 angled sloped banks. Observations were made along a length of approximately 160m of cutting. At the west end of the dyke, on higher ground, the depth of excavation was 3.5m and it was 14m broad. The ground level sunk along the cutting towards the west. The excavated depth was reduced, 'upstream', to 2.5m on the Lymn flood plain in the eastern field.

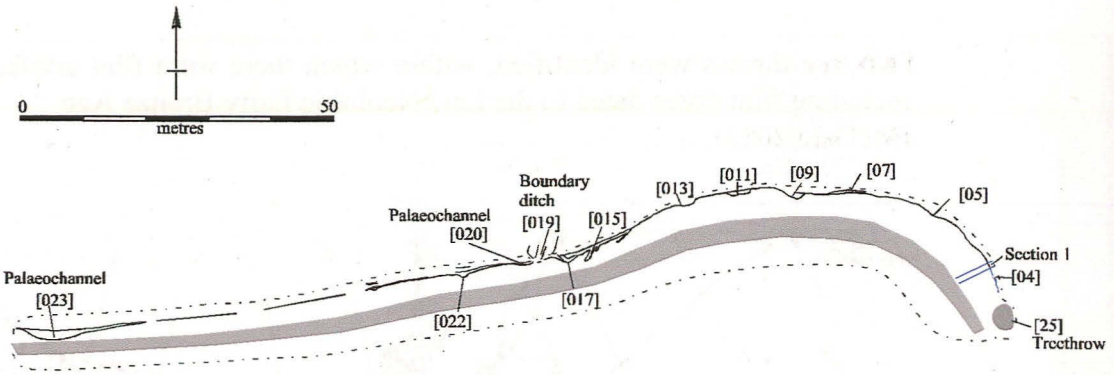


***Figure 39** Features within watching brief area*

The watching brief observed one large ditch (**009**), possible furrows (**005** and **013**), a small ditch (**007**), two possible prehistoric ditches (**015** and **022**), possible posthole (**004**), a tree-throw (**024**) boundary ditches (**017** and **019**) and cut two palaeochannel features (**020** and **023**). Finds were only found in the fill of (**023**) and in the subsoil (002).

The watching brief on the New Beck found evidence of probable Neolithic tree clearance on land just above the flood plain of the valley. The tree throw feature (**024**) was found in the watching brief directly to the west of two tree throws excavated in the evaluation (Trenches 28 and 29). The result of these findings led to excavation of a 30m by 10m area (below).

10.3 Area I

The 30m by 10m area was excavated extending from the tree throw found in the watching brief on the New Beck (Fig. 40). Within the excavation area were two tree throws, ditches and a former medieval road (shown on the *c.*1630 Map; Fig. 5). From the backfill of one of the tree throws (contexts 300 and 308-10) 38 flints were recovered consisting of knapping debris dating to the Mesolithic to Early Neolithic period. This may indicate that tree felling and farming was taking place in this period. This ties in with the results of the palaeochannel at PTN2 03. Small charcoal fragments and a single piece of charred hazel nutshell were obtained from soil samples from the tree throws. The charcoal fragments would be usefully radiocarbon dated to give a date for the tree burning and this could be compared with the palaeochannel at PTN2 03.

Two ditches were undated. They could relate to the Iron Age/Roman settlement (PTN1 03) to the north or to Roman ditches found in evaluation trenches (Trench 28 and Trench 29) in Area I.

10.4 Area L

An irregular triangular area 300m in length and up to 50m wide was stripped under archaeological supervision at the extreme eastern end of the road corridor. Natural geology was exposed in the whole area. Apart from a few ephemeral features possibly ditches there were no archaeological remains or concentrations of artefacts.

An undated cow burial was found at the junction of the old Skegness road (A158) and the new By-Pass to the east of Partney (Baxter, Section 10.10.1). This burial is possibly part of an Early Saxon (*c*.AD600) burial mound found in 1950 when the road was lowered to remove a hump in the road which had been a hazard to traffic (Thompson 1954). The earlier work had located a possible family group consisting of two young children as well as an adult female and male (Thompson 1954). A radiocarbon date is required to date this cow burial.

10.5 Test Pits

Forty test pits were dug to sample the sediments for engineering properties. The test pits were positioned at the side of the 50m chaining points along the centre of the road corridor (Fig. 37). They were excavated using a JCB with a 0.6m wide toothed bucket. Approximately 2m long slots were cut. Fifteen were undertaken on the A16 portion, five on the A158 to Lincoln from the roundabout and 20 on the A158 to Skegness from the roundabout. The test pits were cut to various depths from 0.4m to 4.3m depending on the depth of foundation for the road scheme. In areas where the road did not require a cutting test pits were not undertaken. The test pits were numbered according to the chainage point. Of the forty test pits, three (CH 800, CH 1700 and CHA 965) showed undated ditches. Pit CH 800 was within PTN1 03. Pit CH 1700 was located in Area L could be a field boundary as it appeared to align with the current boundary. No finds were recovered from it and the feature was not seen in the topsoil strip. Test pit 965 was located in what subsequently became PTN9 04. This feature contributed to the decision to dig an evaluation trench in this area which uncovered part of an Iron Age/Roman temple and settlement complex (see above). Three pits (CH1250, 1300 and 1350) cut upstanding ridge and furrow earthworks. In others, finds were recovered from the spoil including a flint plano-convex knife and a hand made Iron Age pottery sherd from CHA 550.

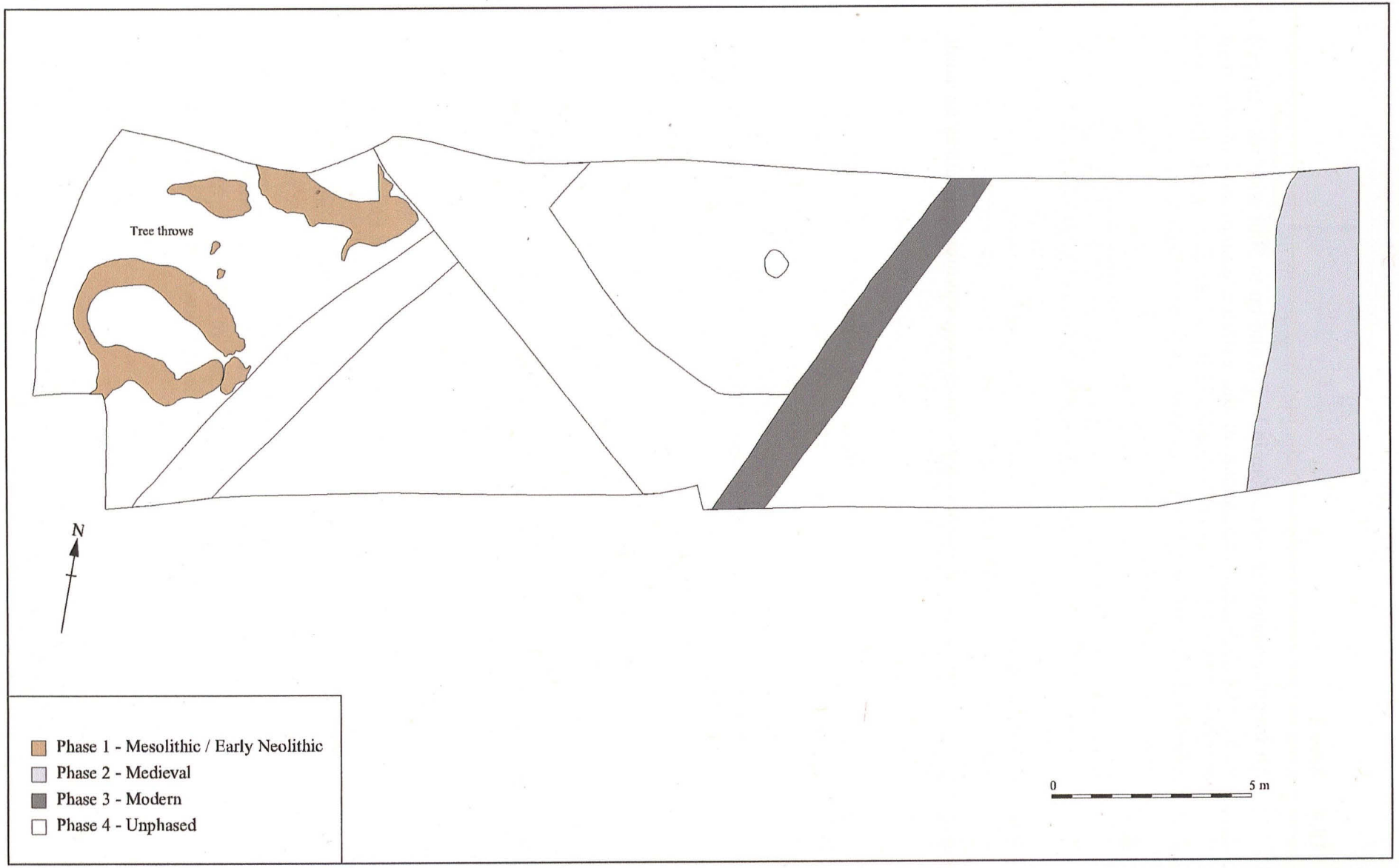


Figure 40 *Phased plan of Area I, PTN8 04*

10.6 Permanent Fencing

Permanent fencing was installed along the edge of the road scheme corridor though areas of the flood plain around PTN2 03 were not watched. Two mini-excavators with 0.4m wide toothed buckets were used to excavate a continuous trench to a minimum depth of 0.3m. A continuous plan at 1:50 was made in areas where features could be observed. Some features were excavated by hand. The method was problematic as in many areas the subsoil was not exposed and disturbed topsoil obscured the base of the trench.

A possible undated borrow pit, was observed just south of the excavation area PTN4 03 (Area C) at chainage point CHA300. Three slots were excavated in this feature, the central to a depth of 1.1m which did not reach the base. At PTN3 04 (Area B), the badger fence was built a few weeks before excavation. As it was part of the watching brief, context numbers 100-113 were assigned and these can be related to features excavated in the subsequent excavation. At PTN1 03 a few features were uncovered between CH 700-850 including ditches and ridge and furrow.

10.7 Road Tie-Ins and Compound

To enable access to the road corridor, tie-ins with existing roads were excavated and concrete footings poured. These tie-ins were monitored before the topsoil strip. Only the Hardings Lane junction showed features which were not modern services and road side drains with a ditch related to PTN1 03. No features were seen when the By-Pass compound was stripped.

10.8 Topsoil Strip

A 300mm deep topsoil strip was undertaken along the length of the road corridor using two 360° machines (48 and 54 tons) with bulking buckets to which shoes had been attached. One 36 ton machine was used in some areas with a toothless ditching bucket and an extra toothless ditching bucket was employed towards the end of the topsoil strip on the 54 ton machine. In some areas, particularly, below power cables and in the Lymn flood plain, bulldozers were employed in combination with the machines to move the soil. The soil was removed to spoil heaps using dump trucks.

In all areas the topsoil strip was archaeologically monitored. The 300mm depth of soil excavated produced a restricted view of potential archaeological horizons in almost all areas that were observed. In many areas natural was not exposed throughout in the strip with subsoil left exposed. The bucket used by the baulking machines left an uneven surface often covered with loose soil. The movement of dump trucks on topsoil, particularly in wet conditions, created deep tyre ruts which obscured potential archaeological features and made observation difficult.

In some areas the archaeological monitoring was hindered by the depth and method of topsoil stripping and wheel rutting. All the contractors involved were sympathetic to the Jacobs Babtie archaeological specification (Babtie Group 2003). Metal detecting was undertaken over the full extent of the spread by Steve Critchley and Marc Berger. Finds were located to the lowest 50m chainage marker. Surface finds were collected and labelled to the lowest 50m chainage point.

Between chainage point CH 1600 – CH 1900, Area L was stripped under archaeological control in search of Anglo-Saxon burials (see Section 10.4 above). Ridge and furrow was observed between CH 700 to CH 1575 though between CH 550 – CH 1000 subsoil was often obscured by wheel rutting. Just to the south of the medieval chapel site (PTN4 03) two undated ditches were seen between CHA170 and CHA310. These were tangential to the larger ditch system found in the excavation. The ground in this area was noticeably wet and a spring line was observed.

A small collection of pottery and metalwork was recovered from the topsoil strip. Of especial interest was a papal bulla found 250m to north of medieval hospital site at CHA 650, (see below) and a Roman brooch and coin from the area of PTN 1 03.

10.9 THE FINDS

10.9.1 Metalwork

by Nina Crummy

Summary

The assemblage consists of fifty objects, three of which are coins. They range in date from Roman to modern, but the majority are medieval or post-medieval/modern. A catalogue of the finds appears in Volume 2, Appendix 21.

Condition

The metalwork is generally in good condition, apart from a Roman coin and a medieval cast item; the former has active bronze disease, the latter is damaged and may be a miscasting. The objects are packed to a good standard of storage in either polythene bags or small crystal boxes supported by pads of foam. The bags and boxes are stored in crystal boxes or airtight Stewart boxes with silica gel.

Assemblage

Some bags contain more than one object; the maximum number is given here. The assemblage breaks down by material thus:

Silver	1
Copper alloy	17
Iron	26
Lead (alloy)	6
Total	***50***

Table 51: PTN8 04 Artefacts by material category

The categories are those defined in Crummy 1983 and 1988: dress accessories (1) textile manufacture (3); household equipment (4); weighing (6); transport (8); general fittings (11); military equipment (13); religion (14); metalworking (15); and miscellaneous (18). If the function of an object is at this stage ambiguous, it is placed in first possible category. In terms of function and date-range it can be divided thus:

Date	**Category**										
	Coins	**1**	**3**	**4**	**5**	**6**	**8**	**11**	**13**	**14**	**15**	**18**
Roman	1	1	-	-	-	-	-	-	-	-	-	-
Medieval/post-medieval	1	3	-	1	1	3	1	-	-	1	-	-
Post-medieval/modern	1	3	1	-	-	-	-	8	1	-	-	4
Undated	-	-	-	-	-	-	-	10	-	-	1	7

Table 52: PTN8 04 Objects by category

The only certain Roman object is a coin, but a fragment of a plate brooch may also belong to the Roman period; conservation should enable its date to be determined accurately.

Eleven objects are of medieval or early post-medieval date, including an unstratified papal *bulla* (the seal attached to a papal document) of 1187, several dress accessories, two lead weights, the frame of a Jew's harp and a late 16th-century silver penny of Elizabeth I. A large casting may be from a cauldron or ewer. Though few in number, these items cover a wide variety of functional categories. The absence of general fittings is unusual, but such items vary little over time, and several of the undated iron objects listed here could belong within this date-range, but cannot be placed there with confidence.

The majority of the remaining datable objects are later post-medieval or modern. They include a machine-made thimble, two buttons and a halfpenny of George III. As noted above, most of the ironwork is not diagnostic of a

specific date, but some pieces are probably modern, in particular a fitting with a well-preserved leather tag attached.

Recommendations

Further analysis will relate to pre-modern items, a number of which (such as the papal *Bulla*) are significant in their own right. The significance of the assemblage will be considered alongside those from other sites along the By-Pass and elsewhere as appropriate.

It is recommended that:

1. most of the silver, copper alloy and lead objects should be conserved (17 objects). The exceptions are of recent date (7 objects). All the ironwork should be X-radiographed (26 objects);

2. a report on all the pre-modern items (approximately 37 objects) should form part of the published site report, which should include a detailed catalogue and discussion and should refer to similar material and assemblages where appropriate;

3. a maximum of nineteen objects should be drawn. This number will be revised after the ironwork has been X-radiographed and the other metalwork conserved.

10.9.2 Metalworking debris

by Tom Eley

Slag was recovered from three watching brief contexts. Undiagnostic slag was found at (CHA 200) 0.087kg and CHA 450 (0.062kg) and a proto smithing hearth bottom (0.082kg) measuring 55mm by 35mm by 25mm at CH 1550. A piece of coal weighing 0.002kg was found in CH 1250. These were unstratified deposits found over the 5km road corridor. This material does not imply metalworking in the vicinity.

Recommendations

No further work is recommended.

10.9.3 Lithics

by Barry Bishop

The Assemblage

The watching brief produced eighty-one struck flints, with concentrations in contexts 300 and 309, provisionally identified as tree-throw hollows (Area I). The material from these two features includes a number of uniformly shaped thin blades and narrow flakes, usually with narrow, complex striking

platforms and parallel sides and dorsal ridges, as well as blade cores. Some of these pieces refit and, combined with their very sharp condition, indicate *in situ* flintworking. Most of these pieces could be considered waste from the reduction process, and even the blades and flakes often have features, such as being broken or retaining cortex or step/hinge dorsal scars, which could have made them undesirable as useable implements. It is likely that the more useful flakes and blades were removed for use elsewhere. Unfortunately, due to a lack of chronologically diagnostic implements, it is only possible to date this assemblage to the Mesolithic or Early Neolithic period. Much of the rest of the assemblage from this site shares similar technological characteristics, and it is likely that activity of a broadly similar date was more widespread than indicated by the tree-throws alone. This includes a number of small and exhausted blade or narrow flake cores, a 'classic' plunged core-rejuvenation flake from CHA200, and an unstratified core tablet. Three convex side-and-end scrapers were also recovered, two from CH1600 and one from CH1800. Although not strictly dateable, their small size and fine, abrupt retouch would make them easily compatible with Mesolithic/Early Neolithic industries.

Other notable pieces from this site comprise the two plano-convex knives, both from unstratified contexts and manufactured from semi-opaque grey flint. The example from CHA550 was very competently worked with fine invasive flaking covering its entire dorsal surface, whilst that from unstratified context was similar, although the flaking only partially covered the dorsal and one end had broken off. Plano-convex knifes, especially elaborate examples such those here, are characteristic of Late Neolithic, Beaker and Early Bronze Age industries and are frequently associated with funerary contexts of these periods.

Also recovered from this site was a fragment of glauconitic, fossiliferous and poorly sorted (?)sandstone weighing 22.6g, from context 164. This has a single smoothed surface and appears to have been used as a quern or rubber.

Site PTN	Context	Preparation	Trimming	Rejuvenatio	Squat Flake	Flake	Blade	Narrow	Flake	Blade Core	Flake core	Minimal	Chunk	Core-Tool	Plano-Convex	Scraper	Truncated	Burnt (no.)	Burnt (Wt: g)
8	021	2					1			1			2					2	66
8	112								1										
8	150					1												1	3
8	219	1																	
8	300 (Area I)	1				3	7	5	5	2			3						
8	304 (Area I)									1									
8	308 (Area I)						1												
8	309 (Area I)	1				1	5	1	2	1									
8	496							1											
8	502					1													
8	u/s					1													
8	CHA200			1															
8	CHA450																		

8	CHA500				1			1	1				2					
8	CHA550 SF12														1			
8	CHA650						1			1		1						
8	CHB00	1																
8	CHB100									1								
8	CH650	1								1								
8	CH700									1								
8	CH1100							1										
8	CH1550					1							1					
8	CH1600	2					1	1	1							2		
8	CH1800															1		

Table 53: PTN8 04 Flint

Discussion

Notable aspects of the overall assemblage include evidence of *in situ* flintworking within tree-throw hollows at PTN8 04 (Fig. 40). This could be dated to the Mesolithic or Early Neolithic, and largely consists of knapping debris with useable flakes, blades and cores removed for use elsewhere. This indicates the exploitation of natural features, such as for exposed raw materials suitable for knapping, or as natural shelters, where activities such as knapping could take place (*cf* Evans *et al.* 1999). Other pieces found within a variety of contexts at this site suggest that, although not intensive, activity may have been more widespread rather than just within the tree-throws. The plano-convex knives from PTN8 04 are indicative of Later Neolithic or Early Bronze Age activity, perhaps of a ceremonial/funereal nature.

Recommendations

The general lithic scatter in the watching-brief provides evidence for Mesolithic to Bronze Age activity in the area with contemporary religious activity at the palaeochannels at PTN9 04, flint working and tree clearance at Area I. The flints from tree throws in Area I provide and relatively rare example of *in situ* flint knapping of probably Mesolithic or Early Neolithic date. The flints recovered from the evaluation will be integrated into the report including flints from the tree throws in evaluation trenches 28 and 29.

It is therefore recommended that this material from PTN8 04 should be examined and integrated with the other flints from the Partney evaluations and excavations with illustrations drawn of the more unusual and diagnostic pieces especially from the well dated stratified deposits such as Area I.

10.9.4 The Iron Age and Roman Pottery

by Sarah Percival

The pottery from PTN8 04 included an earlier to mid Iron Age sherd with fingertip impressed decoration from within the medieval hospital area PTN4 03 (CHA 400), a number of handmade shell tempered sherds (contexts 112, 149, 150, 160) and a small quantity of wheelmade Roman sherds (149, 166). Context 112 is equivalent to PTN 3 04 **M546**. The Roman assemblage

included several sherds from a medium greyware jar (not closely datable) and a single abraded sherd of South Carlton colour coat (late 2nd to 4th century).

Recommendations

In order to provide a complete corpus of Iron Age and Roman pottery for the project, the pottery should be integrated with the full reports from the other Partney excavations and pottery illustrated where appropriate.

10.9.5 Medieval and Post-Medieval Pottery

by Carole Fletcher

Quantification

The fieldwork generated a moderate small assemblage of 183 sherds of pottery, weighing 3.961kg, including unstratified material. A catalogue of the pottery is given in Volume 2, Appendix 22.

The main period represented in the assemblage is medieval. The date of most material falls within the 1200 to 1400 bracket, although there is some post-medieval material within the assemblage (twenty-five such sherds being identified). These comprise three sherds of Cistercian ware, one sherd of English stoneware, fourteen sherds of white earthenware, six sherds of Post-medieval Red ware and a single sherd of Staffordshire Slip ware. In addition to this material there are eleven Roman and twenty-nine prehistoric sherds. The pottery was recovered during machine stripping of the road corridor and almost all sherds show significant surface abrasion caused in part by acidic soil conditions.

Provenance and Contamination

Basic statistics relating to source area for the assemblage are given in Table 54, indicating a local source for the bulk of the assemblage.

General provenance	% of assemblage by count	% of assemblage by weight
Lincolnshire (Local medieval) including Toynton-All-Saints	29	40.3
Non local (medieval)	27.3	35.82
Staffordshire etc (post-med and modern fabrics)	13.66	4.82
Unknown	8.2	5.73
Roman	6	6.13
Prehistoric	15.84	7.2

Table 54: General provenance areas for assemblage by weight (kg) and count

The fact that the majority of fabrics originating from Lincolnshire is due mainly to the site's close proximity to the pottery production centre at Toynton. The remaining medieval non-local pottery has not been fully

identified at this stage, it is possible that some of this pottery may also be local but surface abrasion of the sherds has made identification problematic.

Contamination of this assemblage is apparently light, with few residual sherds. The medieval sherds in the assemblage are not thought to be intrusive.

Sampling Bias

The area was stripped by machine along the road corridor in advance of construction with some further excavation was carried out by hand. Selection was not made through standard sampling procedures and it is likely that there are biases in the assemblage due to soil conditions and the pottery itself as the bright oxidised surfaces of the local medieval pottery are more visible than the Roman grey wares or the often reduced fabrics of prehistoric pottery. The relatively large size and weight of many of the sherds may also indicate bias in collection policy, as a large sherd, even if abraded, is more visible than small fragments.

Where bulk samples have been processed for environmental remains, no pottery has been recovered.

Condition

The assemblage is comparatively small but with a relatively large average sherd weight of approximately 23g. Statistical analysis is not viable on this assemblage due in part to the inherent biases discussed previously and because the finds represent a scatter of material over a very large area, with very few contexts associated with defined archaeological features. Although large, the sherds are almost all moderately abraded to abraded. The sizes of the sherds indicate this abrasion is not the result of medieval manuring, and subsequent disturbance by modern ploughing but is due in part to post-depositional disturbance, and in part to the acidic nature of the burial environment. This has weakened the structure of the pottery, softening the fabrics and making them more susceptible to abrasion.

This assemblage contains no complete vessels. It is significantly fragmented and in a well-understood and published region would be deemed of limited value beyond the basic requirements of the stratigraphic sequence and the need to provide comparative period statistics.

Main Vessel Types

Many of the sherds have lost their surfaces due to soil conditions and subsequent abrasion and it has therefore been difficult to assign form and precise fabric identifications to body sherds with no diagnostic features. This has resulted in a further bias in recording, as it would appear that the vessel types represented in the assemblage are mainly glazed jugs and bowls, with jars being under represented.

The assemblage produced abraded sherds from several highly decorated jugs, and half of the rim and handle of a large decorated glazed jug that could be reconstructed and illustrated. In addition a large sherd from a dripping dish and a single sherd tentatively identified as a fragment from a chafing dish, were also recovered. A single glazed Stamford ware sherd represents the only Saxo-Norman vessel identified in the assemblage. The assemblage though biased appears to be domestic in origin.

Conclusion

The relatively small size of the assemblage and the large area it represents makes it difficult to generalise about activity across this part of the road corridor. The domination of table wares is in part due to the biases already discussed, however the amount of glazed sherds and their relatively large size suggests that medieval domestic activity of some status is occurring within or close to this area of the road corridor. The majority of the pottery is locally produced.

Recommendations

No further work is recommended on this assemblage.

10.9.6 Ceramic Building Material, Fired Clay and Clay Pipes

by Carole Fletcher

Quantity and Date Range of Material

Fieldwork generated a small assemblage of 0.822kg of ceramic building material and fired clay from the machine stripping of the road corridor. The material is a mixture of medieval tile, post-medieval yellow peg tile, fragments of field drain and undiagnostic fragments of fired clay. Ten clay pipe stems were also found, none of which were closely datable.

Condition and Sampling

Condition of the overall assemblage is fair, with the medieval material showing some degree of abrasion. There are no complete tiles and all the tile fragments are apparently from roof tiles, although only the post-medieval yellow tile showed evidence fixing method, in this case peg holes.

The area was stripped by machine along the road corridor in advance of construction with some further excavation was carried out by hand. Selection was not made through standard sampling procedures and it is likely that there are biases in the assemblage. No long-term storage problems are likely.

Functional Assemblage

The fired clay types represented in the assemblage are summarised in Table 55.

Form	Field Drain	Med tile	Post-med inc. Peg Tile	Roman?	Unclassified Fired Clay	Unclassified Brick/Tile Fragments
Weight (kg)	0.035	0.348	0.229	0.017	0.043	0.150
Count	2	7	7	1	4	8

Table 55: Fired clay material types

Conclusions

Stratified fired clay from the road corridor has been quantification to a basic level and the small assemblage provides little information pertaining to settlement location or function.

Recommendations

No further work is recommended on this collection.

10.10 Zoological and Environmental Evidence

10.10.1Animal Burial from Area L

by Ian Baxter

Seventy-two bones from the partial skeleton of a heifer were found in context (170). This animal was female on the basis of pelvic morphology and subadult on the evidence of the eruption and wear of the teeth and fusion state of the long bone epiphyses. Age at death was around two years (Grigson 1982). The left metacarpal epiphysis had recently fused and the estimated withers height was 134cm based on the multiplication factors of Matolcsi (1970). This suggests an animal of a size comparable to recent cattle. Though the bones were poorly preserved and extensively leeched the burial could well be recent.

Recommendations

No further work is recommended on the burial although obtaining a radiocarbon date is suggested in order to establish any relationship with the adjacent burial mound (see Section 12.6).

10.10.2Plant Macrofossils and Other Remains from Area I

by Val Fryer

Two samples were taken from tree throw holes with evidence for *in situ* burning of possible Mesolithic/Neolithic date, and a further sample was from an undated ditch fill (Table 56, Appendix 23). The tree throw assemblages were extremely limited, containing only small charcoal fragments and a single piece of charred hazel nutshell (Sample 3). The undated assemblage did contain wheat and barley grains and a single bread wheat (*T. aestivum/compactum*) type rachis node, but nothing was recovered which might indicate a date for the deposit.

Recommendations

No further work is recommended on these samples.

11 ARCHAEOLOGICAL EVALUATION AT PTN6 03 (Area B/C)

An archaeological evaluation took place at PTN6 03 between the 22nd and 23rd September 2003 in an area previously covered by geophysical survey, to which it was not possible to gain access during the main phase of trial trenching (Fig. 4). Four trenches were excavated consisting of two 20m long trenches and two L-shaped trenches with arms 20m long (Table 57). These were situated to evaluate a series of linear and curvilinear linear features of uncertain origin.

	Topsoil	**Subsoil**	**Any features**
Trench 1	0.20m-0.25m	0.43m-0.50m	Undated east to west ditch 0.8m wide by 0.08m deep.
Trench 2	Up to 0.25m	Up to 0.50m	Undated east to west ditch 1.2m wide and 0.1m deep
Trench 3	0.15m to 0.25m	0.55m to 0.6m	None
Trench 4	Up to 0.25m	0.45m to 0.53m	Undated north to south ditch 0.96m wide and 0.8m+ deep

Table 56: PTN6 03 Trench descriptions

The evaluation was largely negative finding only a very thin scatter of undated possible features across the site. Only one ditch, in Trench 4, was substantial but this could be a former field boundary ditch. No pottery or dating evidence was found implying that there was no previous occupation in this field.

12 RESEARCH AIMS AND UPDATED PROJECT DESIGN

This assessment presents the potential of the By-Pass sites in relation to relevant research aims outlined in the East Midlands Archaeological Research Frameworks for both Lincolnshire and the overall East Midlands region (Clay 2000; Everson 1999; Lewis 2002; Membery 1999; Membery 2000a; Membery 2000b; Monkton 2003; Myers 2001; Taylor 2000; Willis 2002). The relevant areas of these research frameworks are listed in relation to the Partney excavations by the relevant archaeological period.

The post-excavation analysis will produce both an accessible research archive and a publication that will succinctly interpret the main elements of the Partney excavations. This publication will address the aims of the archaeological specification (Babtie Group 2003) and relevant interest areas recorded in the regional strategy document. The specific research aims are described and justified using the criteria specified in Map 2 at A5.3.1 (English Heritage 1991).

As is accepted practice, the Partney findings will be considered appropriately in the light of the local, regional and national research objectives specified in this assessment. A number of areas for possible future research, which lie outside the remit of the project publication, have also been identified (*e.g.* DNA analysis at Site PTN4 03): such analysis would be subject to the separate acquisition of research funding.

In addition to the detailed text for the research themes, a table summarising relevant research themes and how they can be addressed by the data recovered from the excavations is presented below (Table 58). The anticipated outcomes for each of the research aims are discussed in Sections 12.1 to 12.7.

As part of the analytical stage, relevant comparators for each aspect will be sought as appropriate, utilising the examination of sources such as SMR data and published material (including data cited in relevant research agendas), as well as liaison with colleagues in other organisations where appropriate. Where comparators are evident at this stage, they are indicated in Sections 12.1 to 12.7.

Mesolithic	Research Aim(s)	Proposals
12.1.1	1. Establish the extent, chronology and character of evidence for environmental manipulation across the region. 2. Define earlier and later Mesolithic site flint reduction to understand how technology was organised.	1. A radiocarbon date for the tree throws in Area I 2. Further work on the lithic assemblage 3. Full examination and integration of relevant site data (including evidence for tree clearance at Area I) 4. Appropriate publication of data in relation to the stated research objective (contribution to monograph Chapter 2)
12.1.2	Targeting deposits offering potential for the preservation of Mesolithic environmental data	1. Radiocarbon date for palaeochannel PTN5 04 package A deposit 2. Radiocarbon date for earliest possible phase of deposits from palaeochannels PTN7 03 and PTN9 04. 3. If a Mesolithic date is obtained, analyse pollen samples from the above sites 4. Full examination and integration of relevant site data (including the paleochannels at Sites PTN2 03, PTN5 04 and PTN9 04 and relevant environmental data) 5. Appropriate publication, relating to environmental and other data of Mesolithic date (contribution to monograph Chapter 2)
Neolithic		
12.2.1	The introduction, character and development of agricultural practices	1. Radiocarbon date for palaeochannel PTN5 04 package A deposit 2. Radiocarbon date for earliest possible phase of deposits from palaeochannels PTN7 03 and PTN9 04. 3. If a Mesolithic date is obtained, analyse pollen samples from the above sites 4. Full examination and integration of relevant site data. This will include evidence for tree clearances (Area I) and palaeochannels, supplemented by evidence from flint working, faunal and environmental remains 5. Appropriate publication of relevant aspects in relation to the introduction and development of agricultural practices (contribution to monograph Chapter 2)
Bronze Age		
12.3.1	Evidence for land use from the study of a range of remains including pollen	1. Further radiocarbon dates: palaeochannel PTN2 03 upper layer of package G deposit; PTN5 04 package D deposit; 2. Analysis of pollen samples from PTN2 03, PTN5 04, PTN7 03 and PTN9 04 3. Full examination and integration of relevant site data, including a significant number of channel infilling and overbank deposits from the palaeochannels, linked to pollen and

		environmental evidence 4. Appropriate publication of relevant aspects relating to land use during the Bronze Age (contribution to monograph Chapter 2)
12.3.2	The development of ceremonial monuments and their environs	1. Radiocarbon dates to be taken from: burnt flint 'pit' **190;** early deposit in ritual shaft **M486;** the crouched burial above ritual shaft **M486;** an early deposit in spring **M503** 2. Pollen samples to be analysed from spring **M503** and burnt flint feature **190** if the radiocarbon date proves it to be Bronze Age. 3. Further work on the flint assemblage, including illustration of relevant items. 4. Full examination and integration of relevant site data. This will include the evidence for features apparently relating to ritual from Sites PTN5 04 and PTN9 04 5. Appropriate publication of relevant aspects relating to ceremonial monuments and their environs (contribution to monograph Chapter 2). The Partney sites are particularly significant in terms of the considerable landscape area available for consideration (contribution to monograph Chapter 5)
Iron Age to Transitional		
12.4.1	The resource: knowledge and coverage	1. Further work on pottery from PTN1 03 and the ritual site 2. Further work on bulk sample 6 from PTN5 04 3. Further work on pollen samples from PTN2 03 and PTN9 04 4. Full examination and integration of relevant site data, which includes parts of substantial Iron Age to Roman settlements located at Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03 5. Appropriate publication of aspects relating to the Iron Age and transitional settlements (contribution to monograph Chapters 2, 3 and 5)
12.4.2	Chronology	1. Radiocarbon date upper package G deposit PTN2 03 and burnt flint pit **190** 2. Pollen samples from PTN2 03 (if Iron Age) and PTN9 04 palaeochannel, spring and burnt pit **190** (if Iron Age) 3. Further analysis of the Iron Age pottery 4. Full examination and integration of relevant site data, in relation to radiocarbon dating from a range of specified features 5. Appropriate consideration and publication of radiocarbon dates in

		relation to stratigraphic and spatial evidence (contribution to monograph Chapters 2, 3 and 5)
12.4.3	Landscape exploitation	1. Radiocarbon date PTN9 04 ritual shaft deposits and pit **190** 2. Further work on pollen samples from PTN2 03 and PTN9 04 including possible Iron Age burnt 'pit' **190** and Spring **M503** 3. Further work on environmental samples from PTN5 04 (Sample 6) and PTN9 04 (Samples 13, 14 and 15) 4. Full examination and integration of relevant site data(including geology, topography, tree clearances, water sources and local environment) 5. Appropriate publication of aspects relating to landscape exploitation during the Iron Age to transitional periods (contribution to monograph Chapters 2, 3 and 5)
12.4.4	Settlement archaeology: Middle Iron Age *c.*450-100BC	1. Full examination and integration of relevant site data, including both the settlement remains excavated at Partney (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03) and supplementary evidence (aerial photographs and geophysical survey) 2. Appropriate publication of relevant aspects relating to Middle Iron Age settlement (contribution to monograph Chapter 2)
12.4.5	Settlement archaeology: Late Iron Age *c.*100BC-AD50	1. Full examination and integration of relevant site data, comprising the settlement remains located at Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03 and associated finds and environmental evidence 2. Appropriate publication of relevant aspects relating to Late Iron Age settlement (contribution to monograph Chapters 2-3)
12.4.6	The agricultural economy	1. Further work on environmental samples at PTN9 04 (Samples 13, 14 and 15) and PTN5 04 (Sample 6) 2. Work on animal bone from evaluation at PTN1 03 3. Full examination and integration of relevant site data, in particular the faunal and environmental remains, in relation to the excavated evidence for farmsteads (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03) 4. Appropriate publication of aspects relating to Iron Age and transitional agricultural economy (contribution to monograph Chapters 2-3)
12.4.7	Craft, industry and exchange	1. XRF analysis undertaken on the copper

		slag from PTN9 04 2. Further work on the Iron Age pottery from both sites including thin section analysis 3. Full examination and integration of relevant site data, including the pottery kiln from Site PTN3 04 and associated pottery 4. Appropriate publication of relevant aspects of craft industry and exchange during the Iron Age and transitional periods (contribution to monograph Chapters 2-3)
12.4.8	Ritual, structural deposition and religion	1. Full examination and integration of relevant site data from the shrine site at Site PTN9 04 2. Appropriate publication of relevant aspects relating to ritual, structured deposition and religion (contribution to monograph Chapters 2-3)
12.4.9	The Late Iron Age landscape and consequences of Conquest	1. Full examination and integration of relevant site data (including artefacts and environmental remains such as pollen) 2. Appropriate publication of relevant aspects relating to the Late Iron Age landscape and the impact of the Roman conquest (contribution to monograph Chapter 3)
Roman		
12.5.1	Rural settlement, landscape and society	1. Further work on animal bone from evaluation material at PTN1 03 2. Further work on environmental bulk sample at PTN5 04 (Sample 4) 3. Further work on insects from sample at PTN5 04 (Sample 4) 4. Further work on pollen samples from palaeochannels at PTN9 04 and spring **M503** 5. Full examination and integration of relevant site data, including the farmsteads and ritual site (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03) 6. Appropriate publication of relevant aspects relating to Roman rural settlement, landscape and society (contribution to monograph Chapters 4-5)
12.5.2	Artefact production, exchange and consumption	1. Further work on Small Finds from the By-Pass 2. Further work on XRF analysis undertaken on the copper slag from PTN1 03 3. Further work on pottery, including the evaluation material 4. Full examination and integration of relevant site data, including limited evidence for iron and copper working

		at Site PTN1 03 5. Appropriate publication of relevant aspects relating to artefact production, exchange and consumption (contribution to monograph Chapter 4)
12.5.3	Ritual, religion and identity	1. Further analysis of burial items from Sk. 3 2. Full examination and integration of relevant site data, including the burials at Site PTN9 04 3. Appropriate publication of relevant aspects relating to Roman ritual, religion and identity (contribution to monograph Chapter 4)
12.5.4	Chronology	1. Thin sectioning Dales-type pottery from PTN1 03 2. Appropriate publication of new evidence for Roman ceramic chronology (contribution to monograph Chapter 4)
Anglo-Saxon 12.6		1. Radiocarbon dating of the cow burial (Area L) 2. Appropriate publication of relevant aspects relating to the Anglo-Saxon period (depending on results of radiocarbon date, possible monograph contribution to be defined)
Medieval		
12.7.1	Understanding inter-relationships in the landscape	1. Further documentary work on the Partney hospital and chapel site 2. Full examination and integration of relevant site data, including the inter-relationships with Skendleby and St Nicholas' Church 3. Appropriate publication of relevant aspects relating to inter-relationships in the medieval landscape (article contribution)
12.7.2	Exploitation of Building Materials and Other Resources	1. Geological and structural analysis of the Partney stonework 2. Analysis of both the mortar and limewash 3. Thin sectioning and other identification of the roof tile 4. Full examination and integration of relevant site data, including the integration of finds evidence with the structural remains 5. Appropriate publication of relevant aspects relating to the exploitation of building resources and other materials (article contribution)
12.7.3	Understanding monastic estates	1. Further documentary work on the Partney hospital 2. Full examination and integration of relevant site data, in particular the finds and environmental data 3. Appropriate publication of relevant aspects relating to understanding monastic estates (article contribution)

12.7.4	Understanding the parochial framework and religious provision	1. Further documentary research into Partney – its relationship to the mother church (Bardney Abbey) and St Nicholas' parish church 2. Full examination and integration of relevant site data, in particular the evidence for spatial patterning according to role/status within the cemetery 3. Appropriate publication of relevant aspects relating to the parochial framework and religious provision (article contribution)
12.7.5	Understanding the health, sickness and diet of the region by analysing the prosperous and poor in the monastic, rural and urban settings over time	1. No further work is required on the human remains (see Sections 12.7.6 and 12.7.7 for further issues relating to diet and genetics) 2. Full integration of relevant site data, including artefacts and human bone with the documentary evidence and relevant comparators 3. Appropriate publication of relevant aspects relating to the stated research objective (article contribution)
12.7.6	Understanding diet within the region through the use of stable isotope analysis in order to clarify issues of diet and resource use	1. Radiocarbon dating and stable isotope analysis of five selected skeletons 2. Full examination and integration of relevant site data, including spatial patterning within the cemetery, human remains and food waste 3. Appropriate publication of relevant aspects relating to understanding diet through stable isotopes (article contribution)
12.7.7	Human genetic relationships	1. Although there is potential for future study of genetic relationships between the Partney burials, following advice from a specialist it is not thought cost effective to conduct such analysis within the limits of the agreed project design
12.7.8	Understanding human remains and burial practices	1. Selected radiocarbon dated and stable isotope measurements 2. Full examination and integration of relevant site data, including grave morphology and spatial patterning within the cemetery 3. Appropriate publication of relevant aspects relating to understanding human remains and burial practices (article contribution)
12.7.9	Understanding the Economic History of Settlement to Understand Desertion	1. Further work on the artefacts, ecofacts and documentary research 2. Full examination and integration of relevant site data, including archaeological evidence for settlement desertion as well as artefactual and environmental evidence for its

		economic history 3. Appropriate publication of relevant aspects relating to economic history and desertion (article contribution)
12.7.10	Overview of the Hospital	1. Full examination and integration of relevant site data such as evidence of use of area in the estate holdings and landscape evidence through artefact and environmental evidence 2. Appropriate publication, providing an overview of the hospital's significance (article contribution)

Table 57: Table by period of research aims and recommendations for further work

12.1 Mesolithic *c.* 8000 to 4500BC

12.1.1 Establish the extent, chronology and character of evidence for environmental manipulation across the region; define earlier and later Mesolithic site flint reduction sequences to understand how technology was organised

These two regional research agenda objectives (taken from Myers 2001, 23) have been raised as a result of the need to clarify dating and understanding of both environmental manipulation and dating flint reduction sites. Only a small number of sites which have found evidence for environmental manipulation. This limited evidence points to forest burning increasing after *c.*7000BP (5000BC) in order to clear areas for farming (Myers 2001, 9). Myers notes that any further evidence that might contribute towards an understanding of the chronology, nature and extent of this activity is potentially of great value. On the second framework question there is little precise dating for lithic flint knapping and therefore the dating of the changing flint typology being produced is uncertain (Myers 2001, 21).

Evidence for tree felling (tree throws) were found burnt *in situ* at Area I, overlooking palaeochannel PTN2 03. Flint knapping waste recovered from the throws may date to the Mesolithic period. The flint has been dated as Late Mesolithic/Early Neolithic and comprises flint reduction process with blades being produced (Section 10.9.3 above). Area I therefore has great potential to address the two regional framework issues in question.

The other flint recovered from work at the By-Pass has the potential to address the highlighted issues. The recovery of flint artefacts dating to the Mesolithic period from across the Partney excavations enables comparisons with what was being produced in Area I. At PTN9 04, for example, (more than a kilometre away from Area I) several Mesolithic tools were recovered including blades and cores. Overall, the recording of these finds is significant since lithic knowledge is sparse for Lincolnshire with fewer than one hundred Mesolithic sites recorded on the county SMR: the majority of these represent lithic scatters rather than any primary *in situ* material (Membery 2000a, 1).

Recommendations

- A radiocarbon date for the tree throws in Area I
- Further work on the lithic assemblage
- Full examination and integration of relevant site data (including evidence for tree clearance at Area I)
- Appropriate publication of data relating to environmental manipulation and flint reduction strategies in relation to the research objective stated above (contribution to monograph Chapter 2)

12.1.2 Targeting Deposits Offering Potential for the Preservation of Mesolithic Environmental Data

This objective is set in the regional Mesolithic Agenda (Myers 2001, 23). The region has produced a relatively small number of sites that have actually produced environmental evidence relevant to this research objective (Myers 2001, 11). Palaeo-environmental information is essential to the understanding of the character of Mesolithic activity and attention is therefore focussed upon the potential that exists across the region for the preservation and recovery of such evidence (Myers 2001, 12).

Excavations at Partney have elucidated the development of three palaeochannels, all tributaries of the River Lymm. These tributaries would have been formed since the last glaciation. From radiocarbon dates obtained for this assessment report it appears that infilling/silting of all the palaeochannels only occurred during the Early/Middle Neolithic. The question of whether the palaeochannels formed in this period or whether the pre-Neolithic deposits were removed by fast stream action in the Neolithic period (before periods of infilling) remains a key area to be addressed.

The investigations revealed a few deposits which may date to the Mesolithic period. The earliest deposits from the palaeochannel at PTN2 03 are undated and consisted of thin layers of coarse grade terrace deposits (package A; Fig 11). Radiocarbon dates at PTN2 03 have already dated the top layer of package B deposits, providing an Early Neolithic date (4040 to 3790BC). At PTN5 04 the only possible pre-Neolithic deposit from this palaeochannel consists of a small basal sand deposit (package A). At PTN9 04 radiocarbon dates have been obtained from one deposit within the middle of the sequence (2870 to 2470 BC (to 2 significant deviations)): there is potential to obtain further radiocarbon dates from earlier channel phases and from borehole samples in this location at PTN9 04. A radiocarbon date is recommended from the earliest phase to clarify when the channels could have been formed.

If the earliest phase within the palaeochannel at PTN9 04 provides a Mesolithic date, it will confirm the potential to understand the environment around the river corridor through pollen sampling. At present an indication of what was growing in the area during the Neolithic period comes from environmental samples from deposits in the three palaeochannels (PTN2 03,

PTN5 04 and PTN9 04). This indicates the presence of hazel and alder woodland and dry scrubland at this later period but it would be unwise to extrapolate too much information from this for any interpretation of environment in the Mesolithic period.

If a radiocarbon date of from early palaeochannel deposits at PTN9 04 proves to be Neolithic, this would raise the important questions raised about the origins of these three tributaries discussed in paragraph two above. Such a date would therefore help to answer the regional Mesolithic Research Agenda questions as possible negative evidence.

No radiocarbon dates or pollen work has been yet conducted on the column samples taken from the palaeochannel at PTN7 03. It is suggested that the earliest phase from the column samples should be radiocarbon dated in order to ascertain their date. If a Mesolithic date is forthcoming, the pollen samples have good potential to provide environmental information from this area.

Recommendations

- Radiocarbon date for palaeochannel PTN5 04 package A deposit
- Radiocarbon date for earliest possible phase of deposits from palaeochannels PTN7 03 and PTN9 04
- If a Mesolithic date is obtained, pollen samples will be analysed from the above sites
- Full examination and integration of relevant site data (including the paleochannels at Sites PTN2 03, PTN5 04 and PTN9 04 and relevant environmental data)
- Appropriate publication, relating to environmental and other data of Mesolithic date (contribution to monograph Chapter 2)

12.2 Neolithic *c.*4500-2500BC

12.2.1 The Introduction, Character and Development of Agricultural Practices

The regional frameworks for both the Neolithic and Bronze Age periods note the requirement to investigate the introduction, character and development of agricultural practices (Clay 2000, 22). An aspect of this issue is the dating of tree clearances which 'require an emphasis on ensuring palaeo-environmental data is addressed in fieldwork projects and, where appropriate, scientific dating programmes are included' (Clay 2000, 22). Clay also states that 'palaeo-environmental samples should be taken from dated palaeochannels including small streams in addition to major rivers' as these areas possesses enormous potential to increase current understanding (Clay 2000, 18 and 24). Monkton has listed priorities including a requirement to pollen date clearings, cereal cultivation and land-use from well-dated deposits in order to understand the environment and land use (Monckton 2003, 33). Clay asserts that further radiocarbon dating of well-associated lithic material is urgently needed to understand lithic typology (Clay, 2000, 18).

The specific research objective at issue partly formed since what was happening in Neolithic Britain remains obscure and present models of Neolithic settlement in Britain offer alternative interpretations (Clay 2000, 1). The traditional model identified a rapid pioneering phase of agriculture from the 5th millennium BC, with a slow-down later in the 3rd millennium BC (Whittle 1978). More recent interpretations have challenged this (Thomas 1991; Barrett 1994). Thomas questioned whether arable farming and permanent settlement was a significant aspect of Neolithic life (1991, 28) while Barrett (1994) suggested that, during the Earlier Neolithic, non-intensive agricultural practices using long-fallow horticulture and some animal pasturing were added to the activities already undertaken by Mesolithic groups. Clay notes that the picture emerging for the East Midlands region is that the area was being exploited extensively, if not intensively, between the 5th millennium to the 2nd millennium BC.

Few sites of this period in the East Midlands region have provided information on land use. One of the exceptions comes from nearby Skendleby where charred wheat seeds and hazelnuts were recovered from in ditch deposits associated with Giants Hill Long Barrow: these, however, may have been at the end of the period and of later Neolithic date (May 1976, 46 and 49). Only ten regional sites of this period have evidence for pollen samples from palaeochannels (Clay 2000, 6-7), none of which are from Lincolnshire. Theses ten sites have produced a remarkable varied environment history of their respective areas implying that the environment and its human exploitation varied. Some areas had a preponderance of lime tree, others were already cleared with grassland but no evidence to suggest cultivation of cereals.

Membery notes that 'nationally' tree clearance is dated from 5000BP (3000BC) and that it is possible that this Early Neolithic date applies to Lincolnshire (Membery 1999, 1). Tree coverage probably continued in some areas of Lincolnshire throughout the prehistoric periods with the extent gradually declining. Fire-setting of tree stumps has been dated to 3900-3810BC at Sproxton, Leicestershire (quoted in Clay 2000, 7). Other examples are known from Derbyshire, Leicestershire, Northamptonshire and Nottinghamshire (Clay 2000, 7 and 12).

The Partney excavations will greatly add to the understanding of the introduction, character and development of agricultural practices, through analysis of the environmental evidence from the palaeochannels and also possibly through the results of excavations at PTN8 04 Area I, assuming that the proposed radiocarbon date of the burnt tree throws produces a Neolithic date.

Environmental remains demonstrate the presence of alder and hazel with dry shrubland in the areas surrounding all three palaeochannels (PTN2 03, PTN5 04 and PTN9 04) throughout the period. At PTN2 03 the samples also provide evidence of charred cereals (wheat) being grown during clearances in

the Middle Neolithic (recorded in Sample 3; Fryer Section 6.3.3 and Volume 2, Appendix 5). At PTN2 03, two of the three radiocarbon dates from phased deposits are Early and Early to Middle Neolithic (4040 to 3790BC and 3650 to 3380BC respectively (to 2 standard deviations)). These dates came from package B and D deposits respectively, indicating that half of the fills/deposits from this PTN2 03 channel may have been deposited over a 500 year period. This may be significant since palaeochannels tend to become silted at times of change and destabilisation such as woodland clearances (Monkton 2003, 37).

The radiocarbon date from PTN5 04 package B channel deposits provides roughly contemporary date of 3770 to 3380 BC (to 2 standard deviations) to that from the palaeochannel at PTN2 03. This may imply that tree clearances were taking place throughout the area at approximately the same time.

Should the tree throws in Area I prove to be Neolithic in date, this would be significant since both evidence for tree clearance and flintworking in this period is very rare. Area I has further importance as the location directly overlooks palaeochannel PTN2 03; the information from this site and the palaeochannel can be compared to give an enhanced understanding of the area.

A radiocarbon date from a middle fill of the palaeochannel at PTN9 04 gave a radiocarbon date of 2870 to 2470BC (to 2 standard deviations). In the layer below this fill, animal remains were deposited into the stream, perhaps as ritual deposits. Farming may also have taken place nearby.

In order to increase understanding of the introduction, character and development of agricultural practices at Partney further work required includes a programme of additional radiocarbon dates, more work on a sample from PTN2 03 and pollen samples from all relevant sites. As already noted, a radiocarbon date is also recommended for the tree clearance in Area I (see Section 12.1.2 above).

Study of the environmental remains is largely completed. Analysis of the pollen samples has, however, not yet commenced and is expected to provide a wider range of species from a larger catchment area.

The positions of the palaeochannel samples will facilitate examination of a landscape extending for more than *c*.2km. Results can also be compared with existing data in the East Midlands region.

Recommendations

- Further radiocarbon dates of palaeochannels:
  - PTN2 03: package C deposits
  - PTN7 03: middle phase deposit from column sample
  - PTN9 04: layer 467 (animal bone deposit)
- Further work on analysis of PTN2 03 Sample 1
- Pollen samples from PTN2 03, PTN5 04, PTN7 03 and PTN9 04

- Further work on the flint assemblage
- Full examination and integration of relevant site data. This will include evidence for tree clearances (Area I) and palaeochannels, supplemented by evidence from flint working, faunal and environmental remains
- Appropriate publication of relevant aspects in relation to the introduction and development of agricultural practices (contribution to monograph Chapter 2)

12.3 Bronze Age *c.* 2500- 700BC

12.3.1 Providing Evidence for Landuse

Monckton lists contributing to the objective of studying land use through a range of materials, including pollen, as a regional research priority for the Bronze Age (2003, 33). More information is required from dated palaeochannels and waterlogged deposits since they have the potential to reveal evidence of landuse with the ability to reveal the extent and type of woodland, use of land as pasture and the presence of cultivated land, together with the type of crops cultivated (Monckton 2003, 37-8). Such information from pollen and plant macrofossils should be collected as a minimum in order to build a picture of the inhabited landscape and exploitation of the land. At present only a few single widely spaced samples are usually taken from palaeochannels and more complete information could be obtained if more sample sites were used including examples from different parts of the palaeochannel (Monkton 2003, 38). Evidence of the effects of large-scale environmental events or catastrophes are noted in the dendrochronological record around 1159BC and further evidence for this event on other sites may be discovered by detailed analysis of pollen profiles (Monkton 2003, 37).

This research objective follows on from the Mesolithic and Neolithic environmental research agendas (above). Radiocarbon dates already obtained at Partney show that a significant number of channel infilling and overbank deposits, several of which are organic sediments, were present in all three palaeochannels dating to the Bronze Age. This may mean that more extensive tree felling was taking place in this period, especially in the vicinity of the two palaeochannels at PTN5 04 and PTN9 04.

Through pollen analysis, allied with further radiocarbon dates, the whole environment of the different sites along the By-Pass can be examined and compared. Further dates are needed from the channels to date these phases. The palaeochannel at PTN2 03 produced a radiocarbon date of 2300 to 1950BC (lower fill of the package G deposit). It seems this palaeochannel was infilled in the Bronze Age/Iron Age period (this can be investigated by radiocarbon dating an upper layer of the package G deposit). At palaeochannel PTN5 04 a phase C channel was dated at 1920 to 1680BC (to 2 standard deviations). Stratigraphically the package D overbank and package E channel deposits pre-date the Middle Iron Age archaeological settlement

features. The dating of a package D deposit would be useful to date this infilling sequence.

Pollen samples from the spring deposits (**M503**) at PTN9 04 (see Section 12.3.2 below) should further date the sequence in this area. As the spring is a different type of deposit to the palaeochannels at PTN5 04 and PTN9 04, this may lead to the recovery of different environmental information. As already noted, the Partney sites provide opportunities for land use and environmental comparison between palaechannels over an extensive distance.

Recommendations

- Further radiocarbon dates:
  - palaeochannel PTN2 03 upper layer of package G deposit
  - PTN5 04 package D deposit
- Analysis of pollen samples from PTN2 03, PTN5 04, PTN7 03 and PTN9 04
- Full examination and integration of relevant site data, including a significant number of channel infilling and overbank deposits from the palaeochannels, linked to pollen and environmental evidence
- Appropriate publication of relevant aspects relating to land use during the Bronze Age (contribution to monograph Chapter 2)

12.3.2 The development of ceremonial monuments and their environs

One of the significant developments of the Bronze Age is the introduction of ceremonial monuments and their role in the social interaction of Neolithic and Early Bronze Age communities (Clay 2000, 23). Clay notes that it is important to examine river confluences and upland watershed landscapes which warrant attention in view of the evidence for their use as ritual areas.

Partney Sites PTN5 04 and PTN9 04 can greatly add to this aspect of regional research. Aerial photographs show barrows less than 200m from the excavation (Fig. 1). During the Neolithic, ritual animal deposits may have been thrown into the channel (see above) where the two palaeochannels met at a 'T' junction. Within the excavation area at PTN9 04 were two springs feeding into the palaeochannel near PTN5 04. It evident that both of these were part of a ritual landscape in which water and springs were important.

Within the excavation area at PTN9 04 was a ritual shaft (**M496**) with a crouched inhumation at the top; this was found in close proximity of one of the palaeochannels and one of the springs. Two Bronze Age or Neolithic flint blades recovered from the lower fills of the shaft may date the infilling. Another pit (**312**) at PTN9 04 contained a miniature axe-like wedge of later Neolithic or Early Bronze Age date, perhaps of a ceremonial/funereal function. Two burnt flint 'pits' at the edge of palaeochannel PTN9 04 which may have been saunas. There was some unburnt flint recovered from the pits which hints at a Bronze Age date though a sherd of pottery from the top of one

pit was dated as Iron Age. Possible occupation in the area can be seen by an isolated Bronze Age pit on the other side of the palaeochannel at PTN3 04 which contained Bronze Age pottery. The longevity and importance of this ritual site can be seen in the construction of a later Iron Age temple and shrine which were built at the junction of the two palaeochannels.

Radiocarbon dates should be obtained from one burnt flint feature (**190**) to establish if it was Bronze Age in date. Radiocarbon dates will be useful from the crouched burial above the ritual shaft as well as from an earlier deposit within the shaft. This will date two phases of this important feature and will answer questions such as whether the ritual shaft was open and for how long before it was sealed by the burial.

One of the springs (**M503**) has potential for further work. A radiocarbon date from an early deposit will confirm whether the spring was active in this period and contemporary with ritual features such as the crouched burial. A middle phase spring deposit has already been radiocarbon dated and produced a Middle Iron Age date (400 to 200BC (to 2 significant deviations)). It is proposed to date the early spring phase and relate it to analysis of the pollen columns taken from this feature. Such analysis links to the research aim detailed in Section 12.3.1. It is also recommended that pollen samples should be analysed from the burnt flint feature (**190**), should the radiocarbon date prove it to be Bronze Age. This will give some indication of environment surrounding and the possible use of these unusual features.

Further work on the flint assemblage will explain what type of flint is being deposited/lost. Comparisons could be made with other Bronze Age flintwork found in the By-Pass excavations which indicate assemblage differences from various locations. The illustration of rare/interesting flintwork, such as the miniature axe-like wedge from PTN9 04 pit **312**, is required.

Recommendations

- Radiocarbon dates to be taken from:
    - burnt flint 'pit' **190**
    - early deposit in ritual shaft **M486**
    - the crouched burial above ritual shaft **M486**
    - an early deposit in spring **M503**
- Pollen samples to be analysed from spring **M503** and burnt flint feature **190** if the radiocarbon date proves it to be Bronze Age.
- Further work on the flint assemblage, including illustration of relevant items.
- Full examination and integration of relevant site data. This will include the evidence for features apparently relating to ritual from Sites PTN5 04 and PTN9 04 noted above
- Appropriate publication of relevant aspects relating to ceremonial monuments and their environs (contribution to monograph Chapter 2). The Partney sites are particularly significant in terms of the considerable

landscape area available for consideration (contribution to monograph Chapter 5)

12.4 Iron Age to Transitional

12.4.1 The Resource: Knowledge and Coverage

The general state of knowledge for the region during the Iron Age to transitional periods is very incomplete. Relatively few Iron Age sites have been found in the region (Willis 2002, 16 and 58), although the corpus of sites of this date is steadily accruing, particularly as a consequence of PPG 16 interventions. This is particularly true of Lincolnshire, a county with a previously tiny number of sites of this period (*cf.* May 1976). Regionally, there is a key gap in knowledge relating to settlement evidence especially as, apart from Northamptonshire, only a meagre number of sites have appeared in print (Willis 2002, 59). Comparatively little identification and/or investigation of Late Iron Age settlements has taken place in parts of northern, central and eastern Lincolnshire (Willis 2002, 25).

The two Iron Age settlement sites at Partney will therefore make a significant contribution to current understanding of the Iron Age in an area where there have been very few excavations. Parts of a large Middle Iron Age to Roman ritual site were excavated to the west of the village (PTN3 04, PTN5 04, PTN9 04 and evaluation Area M) which may represent a large aggregated site dating from *c.*150 BC. A Late Iron Age to Roman farmstead was found to the east of the village (PTN1 03).

Willis has commented that much of the record of settlement and activity in the region is biased towards river valleys and margins (Willis 2002, 55). Both the Partney sites reflect this bias. The large Partney site was located on the three banks of two minor palaeochannels (tributaries of the River Lymn) which met at a 'T' junction in the base of a valley site. PTN1 03 lay on the south-facing valley side.

Further work on the Iron Age pottery from PTN1 03 and the large ritual site, a key sample from PTN5 04 and pollen samples of the upper layers of PTN2 03 and PTN9 04 (see Section 12.4.2 below) will give a more definitive picture of both the settlements and the local environment in this period. Comparison with other Iron Age archaeological sites locally, regionally and nationally will set the sites into context.

Recommendations

- Further work on pottery from PTN1 03 and the ritual site
- Further work on bulk sample 6 from PTN5 04
- Further work on pollen samples from PTN2 03 and PTN9 04

- Full examination and integration of relevant site data, which includes parts of substantial Iron Age to Roman settlements located at Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03
- Appropriate publication of aspects relating to the Iron Age and transitional settlements (contribution to monograph Chapters 2, 3 and 5)

12.4.2 Chronology

The problem of dating the archaeology of the 1st millennium BC is well characterized (Willis 2002, 55). Improvement of the chronological framework on the basis of the findings at Partney will assist advancement in most areas of potential research. The Roman research agenda stresses that dating the Late Iron Age to Roman transition needs further understanding (Taylor 2000, 20). For the Early Roman period an important area of concern for the northern part of the region is dating Late Iron Age and 1st-century AD coarse wares (Taylor 2000, 6). In particular much work needs to be done on pulling together the grog and shell gritted wares common in south Nottinghamshire and Lincolnshire and their chronological development (Taylor 2000, 6).

Dating Programmes

Willis argues that single entity radiocarbon dating should be routine on all excavations of 1st millennium BC sites (Willis 2002, 56), drawing on samples taken for palaeo-botanical evidence to ensure an adequate selection.

The excavations at Partney will contribute to this dating corpus. The radiocarbon dating at this assessment stage elucidated the date of two Iron Age deposits. Spring **M503** and one of the upper deposits in palaeochannels at PTN9 04 were dated to this period 400 to 200BC and 50BC to 140AD respectively (to 2 standard deviations). Further radiocarbon dating of possible Iron Age contexts in palaeochannel PTN2 03 will be useful. Radiocarbon dating of a possible Bronze Age/Iron Age flint burnt pit **190** has already been discussed (see Section 12.3.2 above). Dr Boreham has recommended more AMS dating of the channels, including the upper layers of package G deposit at PTN2 03 which he suspects dates to the Bronze/Iron Age (see 12.3.1 above). If the above radiocarbon date proves to be Iron Age then pollen samples from PTN2 03, the above channel spring and burnt flint pit at PTN9 04 will establish a chronological sequence for environmental remains over a *c*.2 km distance.

Recommendations

- Radiocarbon date upper package G deposit PTN2 03 and burnt flint pit **190**
- Pollen samples from PTN2 03 (if Iron Age) and PTN9 04 palaeochannel, spring and burnt pit **190** (if Iron Age)
- Full examination and integration of relevant site data, in relation to radiocarbon dating from a range of specified features

- Appropriate consideration and publication of radiocarbon dates in relation to stratigraphic and spatial evidence (contribution to monograph Chapters 2, 3 and 5)

Improving Ceramic Chronologies

Improving ceramic chronologies is a key issue for future research (Willis 2002, 56). The date for scored ware use and the introduction of wheel-made pottery are both in need of clarification. Partney has produced a reasonable amount of Iron Age pottery including wheel-thrown and scored pottery from the large ritual settlement (although very little from PTN1 03). In the east of the region Late Iron Age pottery, including wheel-made vessels, appears perhaps by the start of the 1st century AD and, crucially, is often mixed in groups with Scored Ware from a number of sites (listed in Willis 2002, 31). Scored ware continues in parts of the region until the mid 1st century AD. This also seems to occur at Partney where scored ware has been recovered in contexts containing wheel-thrown pottery.

The Partney excavations may be able to assist with the problem of dating Late Iron Age and 1st-century AD coarse wares. Grog tempered pottery was found in the Transitional and Roman phases and Shell Tempered ware came from the Roman phases. Both wheel-made grog tempered and shell tempered wares were found at the large ritual site.

Further analysis of the pottery from the Partney sites may be able to tie down the date of Iron Age pottery for this part of Lincolnshire and help improve and clarify the ceramic chronology for the region.

Recommendation

- Further analysis of the Iron Age pottery in order to clarify ceramic chronology
- Appropriate publication of ceramic assemblages (contribution to monograph Chapters 2, 3 and 5)

12.4.3 Landscape Exploitation

Willis notes that, apart from Leicestershire and Northamptonshire, few clayland sites in the East Midlands were settled at this time (Willis 2002, 58), leading to identification of any such sites as a research priority. Further environmental data for woodland clearance (or otherwise) on claylands is required (Willis 2002, 58).

The Partney excavations will assist in developing understanding of landscape exploitation. The Partney sites have indicated that the underlying clay does not seem to have been an important influence on the location of settlement. The PTN1 03 settlement site was placed on clay whilst the large ritual site (PTN3 04, PTN 5 04 and PTN 9 04) was sited on silty sand. Positioning of the large ritual site appears to have been connected with the long established

ritual aspect (since at least the Neolithic period) of an important site based around the junction of the two palaeochannels and associated springs.

The date of the tree clearances along the By-Pass is likely to be established from further work on the pollen. For all the research periods from the Mesolithic to the Iron Age there is a proposed programme for pollen analysis at four sites (PTN2 03, PTN5 04, PTN7 03 and PTN9 04 which will develop understanding of the environment. A waterlogged deposit (Sample 35) from the palaeochannel at PTN9 04, which has been radiocarbon dated to 50BC to 140AD (to 2 significant figures), shows that alder woodlands still existed in the vicinity. Samples from the dryland sites (including ritual shaft **M486** and the temple ditch and shrine **M481** and **M483**) indicate that barley and wheat were being grown nearby. Further work on bulk samples of features from Iron Age features and deposits has been recommended at PTN5 04 (Sample 6) and the four-post structure at PTN9 04 (Samples 13, 14 and 15). Further work is recommended on pollen samples of possible Iron Age date including palaeochannel deposits at PTN2 03 and PTN9 04, spring **M503** and pit **190** (see recommendations for further work on these deposits in relation to other research issues above)

Recommendation

- Radiocarbon date PTN9 04 ritual shaft deposits and pit **190**
- Further work on pollen samples from PTN2 03 and PTN9 04 including possible Iron Age burnt 'pit' **190** and Spring **M503**
- Further work on environmental samples from PTN5 04 (Sample 6) and PTN9 04 (Samples 13, 14 and 15)
- Full examination and integration of relevant site data (including geology, topography, tree clearances, water sources and local environment)
- Appropriate publication of aspects relating to landscape exploitation during the Iron Age to transitional periods (contribution to monograph Chapters 2, 3 and 5)

12.4.4 Settlement Archaeology: Middle Iron Age c.*450 BC – 100BC*

Of relevance amongst the regional research topics relating to Middle Iron Age settlement study is examination of the meaning, causation and possible sequences of settlement enclosure, as opposed to open settlements and those placed within field systems (Willis 2002, 60).

The large ritual Iron Age site at Partney will contribute to this regional research objective. This site appears to have been a mixture of enclosed and unenclosed settlement during the Middle-Late Iron Age period, probably a large aggregated settlement founded in *c.*150BC on a previously ritualised Bronze Age site (see above). The site is approximately *c.*500m by 300m in size, built on three banks of two palaeochannels. Its full size remains unknown but appears to have been considerable. The results from aerial photographs, geophysical survey, evaluation and excavation imply the full extent of settlement on the southern bank (Fig. 17). Aerial photographs did

not, however, indicate the presence of the settlement on the north-eastern (PTN9 04) and north-western bank (PTN5 04).

It is possible that Early Iron Age occupation survives on parts of the site not investigated but no Iron Age activity pre-dating *c.*150BC was found in the 2004 excavations. A further *c.*0.5ha of the settlement (Area M) was evaluated 100m to the east of PTN3 04 by Lindsey Archaeological Services in 2002 and found material earlier than the late pre-Roman Iron Age in that part of the settlement.

Rectangular ditched enclosures, covering no more than *c.*0.5ha and containing one or two circular buildings together with ancillary structures, have been defined as the typical site type of the Middle and Late Iron Age in central Britain (Willis 2002, 17). Evidently such settlements represent the farmsteads of small family/kin groups (Willis 2002, 17). It is characteristic for settlement sites of this period (and the Late Iron Age) to include evidence for circular buildings and ancillary structures, particularly four-post and two-post structures (Willis 2002, 20 and 29). The Partney sites seem to be representative of this layout, with at least two separate, probably sub-rectangular enclosures being recorded (one at PTN3 04 and one at PTN9 04). A roundhouse was located within the enclosure at PTN3 04 with geophysical survey showing at least one further ring gully. In addition two four-post structures were discovered at PTN9 04. Both enclosures at Partney therefore appear to represent farmsteads.

Further work on the site data at the next stage has the potential to clarify settlement development at Partney. It is anticipated that publication of this site will greatly add to the understanding of settlement archaeology in the Middle Iron Age for the county and region.

Recommendations

- Full examination and integration of relevant site data, including both the settlement remains excavated at Partney (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03) and supplementary evidence (aerial photographs and geophysical survey)
- Appropriate publication of relevant aspects relating to Middle Iron Age settlement (contribution to monograph Chapter 2)

12.4.5 Settlement Archaeology: The Late Iron Age c.*100BC – AD50*

It is recognized that Middle Iron Age landscapes often show strong continuity and evolution through the Late Iron Age and into the Roman period (Willis 2002, 22). Late Iron Age and Roman settlements are more numerous, perhaps due to increased population in this period.

Relevant research topics include the requirement to characterise the major aggregated settlements. The character of apparent aggregated settlements of the period, and indeed the reasons for their emergence, are not understood

(Willis 2002, 60). Further surveys on aggregated settlements are a priority in terms of understanding these sites and evaluating their significance in settlement dynamics.

Aggregated and major settlements have been found across much of the region, some covering up to 5ha (Willis 2002, 26). In Lincolnshire so-called 'major centres' of the Late Iron Age, occur mainly in historic Lincolnshire, including those at Ludford, Owmby, Ulceby, Sleaford, Dragonby and Kirmington (*cf.* May 1984). The presence of numbers of Iron Age coins and brooches at these Lincolnshire sites has made them appear very different from other sites in the region, yet these finds may have more to do with religious activity and ritual deposition than providing indices of possible high status (Willis 2002, 26).

Clearly these aggregated sites, whether high status or not, were extant by the beginning of the early 1st century AD and appear to have been largely a Late Iron Age phenomenon. Little is known of their specific morphology, however, due to limited excavation (Willis 2002, 17 and 29). The Dragonby site seems to have been established at the same time period as Partney (*i.e.* 1st century BC) and will provide a useful site comparison.

The results from Partney excavation will assist in the understanding of these aggregated sites, ritual and domestic functions having been found. Pottery and other artefacts may provide information of the environmental and trade practices occurring.

A proportion of settlements of the Late Iron Age period are enclosed (as at the ritual site at Partney), but settlements and buildings placed in field systems rather than specific enclosures are increasingly coming to light as open settlements (Willis 2002, 28). The PTN1 03 settlement began about the beginning of the 1st century AD and seems to have been unenclosed, consisting of roundhouses, pits and possible drainage ditches. The size of the settlement remains unknown although it was limited to the southern half the excavation area, continuing to the east and west.

Recommendations

- Full examination and integration of relevant site data, comprising the settlement remains located at Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03 and associated finds and environmental evidence
- Appropriate publication of relevant aspects relating to Late Iron Age settlement (contribution to monograph Chapters 2-3)

12.4.6 The Agricultural Economy

A key regional research area relates to the probable relationship between agricultural developments and processes of settlement and social change (Willis 2002, 62). Environmentally there are large swathes of the region about which little is known due to a lack of sampling, including much of Lincolnshire distant from the south of the county (Willis 2002, 62). Sampling

for palaeo-environmental evidence is important reflecting the need to construct a coherent picture of agriculture, diet and land use. In order to achieve this there has been a call for more pollen samples (Willis 2002, 70). Results from the multi-period Witham Valley Project (which also has a strong palaeo-environmental dimension) will be compared with those from Partney in order to aid the understanding the development of the latter sites.

There is less information on cereal use in Lincolnshire than Leicestershire, Rutland and Northamptonshire (Willis 2002, 31). Environmental evidence shows cereal processing taking place at PTN1 03 and in the ritual site. Further work on crop processing waste from four-post structure at PTN9 04 (Samples 13, 14 and 15) may indicate use of this structure as a granary. Further work on a sample from PTN5 04 (Sample 6) is also proposed.

Evidence from the small assemblage of animal bone from PTN1 03 demonstrates that mixed farming was taking place although there was an unusually large percentage of horses found. It is recommended that the animal bone from this evaluation should be analysed and added to excavation report. Unfortunately at the constituent elements of the large ritual site insufficient animal bone survived the acidic soil conditions to permit any detailed analysis.

Overall, further work on these two Iron Age sites will therefore add knowledge to not only the Iron Age land use around Partney but also to the region where there has been little archaeological work of this nature.

Recommendations

- Further work on environmental samples at PTN9 04 (Samples 13, 14 and 15) and PTN5 04 (Sample 6)
- Work on animal bone from evaluation at PTN1 03
- Full examination and integration of relevant site data, in particular the faunal and environmental remains, in relation to the excavated evidence for farmsteads (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03)
- Appropriate publication of aspects relating to Iron Age and transitional agricultural economy (contribution to monograph Chapters 2-3)

12.4.7 Craft, Industry and Exchange

The regional framework has emphasised the need to understand craft, industry and exchange (Willis 2002, 62-3). Current understanding of Iron Age craft is variable. There are, for example, a few instances of copper alloy working within the region, including evidence at Grimsby (Willis 2002, 35): further investigations of copper alloy working are warranted (Willis 2002, 65). In contrast Late Iron Age evidence for iron-working is widespread, but usually limited and indicative of small scale operations such as repair and fashioning of domestic/everyday tools (Willis 2002, 35). Overall there is growing evidence from the region of organized production and long and middle distance distribution (Willis 2002, 36). Petrological analysis of inclusions within pottery types recovered from East Midland sites is now becoming more

routine and has begun to illuminate likely sources of pottery production (Willis 2002, 36). Petrological studies of pottery have begun to discriminate non-local items travelling into and within the region (Willis 2002, 65).

Some of the Partney sites will aid understanding of craft/industry and exchange. Only the large ritual site (PTN3 04, PTN5 04 and PTN 9 04) provided a little evidence of craft activities, although small quantities of iron and copper alloy slag were found in secondary deposits at PTN9 04. Further work is proposed on the copper alloy slag as relatively little is known about such non-ferrous working. The small amount of iron slag recovered from Partney is of interest but is fairly normal for Late Iron Age sites as these were largely self-sufficient communities.

Of great interest is a possible Late Iron Age ?pottery kiln, found at PTN3 04. The plan of the kiln, flue and chamber partly survived as well as substantial parts of a few vessels deposited in the backfill, including a scored ware vessel. Further work needs to be done to find parallels for this feature. Petrological analysis has been recommended for the Iron Age pottery both from PTN1 03 and from the ritual site to compare the fabrics. Pottery from the possible pottery kiln is particularly important: future work may establish whether any nearby sites were supplied with pottery from this source.

The means of trade is likely to along the river tributaries. Two log boats were excavated by the Witham in 2001; one is probably Iron Age, the other probably Iron Age or Roman (Pitts 2001). The low draught of these types of boats would have meant that rivers and tributaries were assessable making trade and exchange far easier than by trackway.

Recommendations

- XRF analysis undertaken on the copper slag from PTN9 04
- Further work on the Iron Age pottery from both sites including thin section analysis
- Full examination and integration of relevant site data, including the pottery kiln from Site PTN3 04 and associated pottery
- Appropriate publication of relevant aspects of craft industry and exchange during the Iron Age and transitional periods (contribution to monograph Chapters 2-3)

12.4.8 Ritual, Structured Deposition and Religion

There is a need to identify shrines: 'for most of the region there are few identified shrines or formal religious locations, though they may have been comparatively common' (Willis 2002, 69). Associated research includes developing current understanding of the social context of ritual and the requirement to collate characteristics.

The investigations at Partney provide considerable evidence to develop current understanding of such ritual sites. The temple and shrine site was

placed adjacent to the confluence of two palaeochannels and to the nearby springs. Though the deity in question is not known, water was obviously important to the founding and maintenance of the site. An earlier ritual significance is indicated by the presence of a (?Bronze Age) ritual shaft and overlying crouched burial, as well as Neolithic animal remains deposited into the tributary.

The two four-post structures may be part of this temple/shrine complex and were possibly excarnation platforms (alternatively they may have been granaries). If they were used as platforms for the laying out of the dead their presence would account for the absence of burials at Partney. It has long been established that there are few burials of 1st millennium BC date, in absolute and relative terms, in the East Midlands. The prevailing presumption is that excarnation was commonly practised leaving little trace in the archaeological record (Willis 2002, 37).

The regional framework stresses that for the East Midlands it is important that sites of this period are fully published (Willis 2002, 60). The results from Partney sites are highly significant and will contribute greatly to understanding of the Iron Age in the region.

Recommendations

- Full examination and integration of relevant site data from the shrine site at Site PTN9 04
- Appropriate publication of relevant aspects relating to ritual, structured deposition and religion (contribution to monograph Chapters 2-3)

12.4.9 The Late Iron Age Landscape and Consequences of Conquest

It has been stressed that it is critical to examine the early period of conquest and subsequent change and to consider the landscape of Late Iron Age societies into which Romans came (Taylor 2000, 20). Settlement and rural landscape evidence for this Transitional period should be considered together.

This assessment demonstrates that at PTN1 03 activity seems to have continued without change. At PTN3 04 the ditched enclosure continued in use without change into the Early Roman period, while at PTN9 04 the ditched enclosure seems to have fallen from use in the Transitional period and there seems to have been little activity here after the Transitional period.

Understanding the landscape around the sites is crucial. Further study of the artefacts and environmental evidence found during work on the by-pass will add to our understanding of changes in use of the landscape around the Conquest period.

Recommendations

- Full examination and integration of relevant site data at Sites PTN1 03, PTN3 04 and PTN9 04 (including artefacts and environmental remains such as pollen)
- Appropriate publication of relevant aspects relating to the Late Iron Age landscape and the impact of the Roman conquest (contribution to monograph Chapter 3)

12.5 Roman

Introduction

Throughout the region the Roman period is characterized by intensely occupied and extensive rural landscapes related to expanded agricultural production, regional scale craft and industrial production of pottery, salt and iron, the construction and use of an extensive network of roads, along with the foundation and development of many local market and religious centres (Taylor 2000, 2). The two Roman Partney sites (PTN1 03 and the ritual site (PTN3 04, PTN5 04 and PTN9 04) are a part of this developing landscape, though in both cases they originated in the later Iron Age.

12.5.1 Rural Settlement, Landscape and Society

Rural settlements of the Roman period in Britain are not well understood (Taylor 2000, 26) and need further study. There has been 'noticeable under representation of Roman rural settlement evidence (in the region)' (Taylor 2000, 4). Little research into the dynamics of agricultural land use in the Roman period has yet been achieved, although integrated field survey, targeted excavation and environmental sampling should increase current understanding considerably (Taylor 2000, 14-15). There is still little detailed work on palaeobotanical and faunal remains of this period, especially away from the major river valleys and small towns/roadside settlements (Taylor 2000, 14).

The Partney project represents the first major excavation of the period in this part of Lincolnshire, its importance being emphasised by the lack of local parallels. Only a relatively small amount of both Roman settlements was excavated consisting of a *c.*40m wide corridor through both sites, the remains at PTN1 03 having been heavily truncated by ploughing. Despite this, some general plans of the unexcavated areas of the settlement can be augmented by limited aerial photographs and geophysical survey although in both cases the full extent of the settlements remains unknown. For both sites enough has been excavated to elucidate the general layout and character of activity.

The acid nature of the soil means that bone survival was not good at the ritual site and there is limited survival from PTN1 03 where mixed farming took place. The charred remains from environmental samples have, however, generally survived well. The waterlogged samples from the palaeochannel at PTN9 04, which gave an Iron Age to Roman date (50BC to 140AD (to 2 standard deviations)), are likely to contain preserved pollen. The evidence from beetles implies marshy grassland conditions in the surrounding area with domestic animals being kept in the settlement. The top fill of spring **M503** was dated by Roman pottery to the *c.*2nd century. Analysis of the pollen from these deposits will assist understanding of the local landscape.

Deities possibly associated with horse sacrifice have been detailed in relation to finds from PTN9 04 in Section 9.4.2, while a possible votive disc or amulet, of probable Roman date, was found unstratified at PTN1 03 (Crummy, Section 5.3.1).

Recommendations

- Further work on animal bone from evaluation material at PTN1 03
- Further work on environmental bulk sample at PTN5 04 (Sample 4)
- Further work on insects from sample at PTN5 04 (Sample 4)
- Further work on pollen samples from palaeochannels at PTN9 04 and spring **M503**
- Full examination and integration of relevant site data, including the farmsteads and ritual site (Sites PTN3 04, PTN5 04, PTN9 04 and PTN1 03)
- Appropriate publication of relevant aspects relating to Roman rural settlement, landscape and society (contribution to monograph Chapters 4-5)

12.5.2 Artefact Production, Exchange and Consumption

Examination of artefact production, exchange and consumption is a research priority (Taylor 2000, 27-8). The Partney excavations will provide some evidence to contribute to understanding artefact production. Iron and copper working seems to have taken place to a limited extent at PTN1 03. Here, copper off-cuts and small quantities of slag were found in Roman contexts. Further work is recommended on the copper slag.

Understanding of patterns of material exchange and consumption has been enhanced by metal detecting along the By-Pass but in particular from both the Roman settlement sites. The moderate collection of artefacts from both sites provides a general idea of the status and types of objects in use. Site PTN1 03 seems to have been a rural farmstead from the range of artefacts (relatively few coins - all Late Roman, metal finds and high status pottery) though recovery of some roof tile and possible box tile implies that there was a reasonably Romanised building to the west of the excavation area.

Artefactual evidence suggests that the ritual site was abandoned by the end of the 2nd century AD. Excavation shows that this settlement acquired a few high status finds but apparently no imported pottery. There were a few Small Finds recovered including only five brooches recovered, although one of them was probably a high status chaterlaine.

Interestingly, evaluation Area M produced Late Roman high status pottery leading the excavator to suggest the presence of a villa estate in this part of the settlement (McDaid 2002). Further work on these finds from Area M will include comparison with those from Sites PTN3 04 and PTN9 04.

Recommendations

- Further work on Small Finds from the By-Pass
- Further work on XRF analysis undertaken on the copper slag from Site PTN1 03
- Further work on pottery, including the evaluation material
- Full examination and integration of relevant site data, including limited evidence for iron and copper working at Site PTN1 03
- Appropriate publication of relevant aspects relating to artefact production, exchange and consumption (contribution to monograph Chapter 4)

12.5.3 Ritual, Religion and Identity

A primary research goal is to provide a better understanding of Roman religious practice (Taylor 2000, 28). There is also a requirement for better examination of religious foci within both rural and larger nucleated/small town sites (Taylor 2000, 19). Three issues which are relevant to the ritual Partney site are:

1. Definition of any predecessor Iron Age shine?
2. Clarification of the extent to which such sites are the founding reason for the settlements often associated with them.
3. The need to understand the practices and beliefs associated with temples/shrines.

In addition, the regional research agenda has highlighted that in the East Midlands region there is still a surprisingly small number of dead found for the earlier Roman period (Taylor 2000, 28). Recent reviews of this sparse phenomenon (Pearce 1999; Taylor 2000) suggest some significant patterns in burial location and tradition that merit further investigation (Taylor 2000, 19).

In Lincolnshire, temples are known at Nettleton and Kirmington where votive offerings have been recorded (Bennet 1999, 4). Altars and statuary have been found at Lincoln, Whaplode, Deeping St James and Saltsford. In all these sites the evidence has been secondary and the results insubstantial.

At Partney a ritualised site may have existed from at least the Neolithic, probably attracted by the site's location next to the palaeochannels and springs. The temple and shrine excavated at PTN9 04 dates from about the Late Iron Age. Its ground plan is largely complete, consisting of a sub-rectangular ditched enclosure with an internal sub-square shrine, both with northern entranceways.

The two four-post structures to the north of the temple (possibly for the laying out of the dead) and the four burials lying to the east of the temple provide some indication of death and burial practices (crouched, head to the north; one of the burials (Sk. 3) contained grave-goods dating to the *c.*late 1st century

AD). The lack of burials from the temple site is also interesting as it implies that for the most part people were either buried elsewhere in the settlement or in a way that left no trace in the archaeological record. The burial goods from Sk. 3 are of interest as they indicate a deliberate policy of burying the women with treasured items as well as give some indication of type of material were being worn.

Recommendations

- Further analysis of burial items associated with Sk. 3
- Full examination and integration of relevant site data, including the burials at Site PTN9 04
- Appropriate publication of relevant aspects relating to Roman ritual, religion and identity (contribution to monograph Chapter 4)

12.5.4 Chronology

Clarification of dating during the 3rd to 4th centuries requires further work (Taylor 2000, 20). Thin sectioning of ceramics is required to elucidate ceramic sourcing of the Middle and later Roman pottery. Dales ware, for example, is believed to have originated at the end of the 2nd century and continued into the 4th century but it is uncertain what fabric types are, where they are made and the chronology of the different fabric types. Thin sectioning has been recommended on the Dales ware and Dales-type wares to establish whether a new fabric type (grog tempered) from PTN1 03 has been found in the assemblage (Lyons, Section 5.3.4).

Recommendations

- Thin sectioning Dales-type pottery from PTN1 03
- Appropriate publication of new evidence for Roman ceramic chronology (contribution to monograph Chapter 4)

12.6 Anglo-Saxon

The excavations at Partney found very little evidence of Anglo-Saxon activity. A single cow burial at PTN8 04 (Area L) may date to this period and is possibly associated with an Early Saxon (*c*.600AD) burial mound found during road improvements in 1950. If the cow is not Anglo-Saxon, it shows that the original road improvements in 1950 had removed the entire monument. If the cow is Saxon then this will be very interesting as cow burials of this date are not common.

Documentary research by Glyn Coppack (Section 7.3) has suggested that the Middle Saxon Abbey of Partney lay to the west of the excavations in a field called Highe Monks Close (Fig. 6) which has also produced evidence of high status Roman occupation (Area M).

Recommendations

- Radiocarbon dating of the cow burial (Area L)
- Appropriate publication of relevant aspects relating to the Anglo-Saxon period (depending on results of radiocarbon date, possible monograph contribution to be defined)

12.7 Medieval

A number of county and regional research proposals (Everson 1999; Lewis 2002) can be related to the findings from the excavation of the rural hospital chapel of St Mary Magdalene (PTN4 03). Both the results of assessment and further proposed work (analysis of the artefactual assemblage, human remains and documentary research) will provide details of this nationally important site. The work seeks to understand the entire hospital complex, large parts of which were beyond the limits of the recent excavations, surviving in adjacent arable fields next to the Partney Bypass. The primary objective is to understand the landscape history of the area including economic and social interactions between the village and the hospital. The site can then be placed in its regional and national context and the results developed into a coherent publication and dissemination strategy.

12.7.1 Understanding Inter-Relationships in the Landscape

The relevant regional research framework has identified the inter-relationships between monastic estates and rural villages, and between the monasteries and hospital cells as gaps in current knowledge (Everson 1999, 21, 4.2).

This aspect has been investigated in outline in the documentary assessment for the Partney site (see Section 7.3), although further work remains to be done. The chapel was given by its founder, Gilbert de Gant, to Bardney Abbey by 1115 and had become a hospital by 1138. The 32.75 acre block shown to the west of the village on the *c.*1771 plan was probably part of the former Partney hospital estate (Fig. 6). This probably also included a further 104.5 acres on the west side of the parish (Coppack, Section 7.3). There is documentary evidence that the hospital had its own estate with other landholdings outside Partney itself and that the estate was modified over time. The hospital was quite distinct from the parish church of St Nicholas which was owned by Bardney Priory/Abbey from its foundation in *c.*1087 and the revenues of the parish church were used specifically to support the abbot and his establishment. The hospital had ceased to function by the early 14th century and became a cell of Bardney by 1318 (Knowles and Hadcock 1953, 73). Its estate also transferred to the monastery where it was accounted as a direct holding in 1534/5 (Caley and Hunter 1836, 81). The cell itself went out of use by *c.*1450 and was quickly robbed of stone and other building materials.

Recommendations

- Further documentary work on the Partney hospital and chapel site
- Full examination and integration of relevant site data, including the inter-relationships with Skendleby and St Nicholas' Church
- Appropriate publication of relevant aspects relating to inter-relationships in the medieval landscape (article contribution)

12.7.2 Exploitation of Building Materials and Other Resources

The medieval regional framework notes the requirement to understand the exploitation of building materials and other resources at the local landscape and regional level (Everson 1999, 33 [6]). The Lincolnshire stone quarries were a resource of at least regional importance (Everson 1999, 15). The study of distribution and use of such building materials may serve as an indication of the mechanics of the industry in Lincolnshire during the medieval period.

A geological analysis of the Partney stonework is vital to elucidate provenance of the building materials. Apart from local Spilsby sandstone, the finer window and tracery details are from imported limestone and clunch (Crummy, Section 7.4.1). The mortar and limewash survives on the some of the stones and roof tile. Thin sectioning of ceramic roof tile would also be useful to define where the tile was being made. Analysis of both the mortar and limewash is recommended. Evidence from pottery, shells and other finds indicates that produce was largely being traded from various parts of Lincolnshire with few imports from further afield. Comparison with Skendleby will be useful to judge if both chapels were conceived as a pair (Coppack, Section 7.3). Other nearby comparisons include the building accounts for the steeple of St James at Louth (Dudding 1941).

Recommendations

- Geological and structural analysis of the Partney stonework
- Analysis of both the mortar and limewash
- Thin sectioning and other identification of the roof tile
- Full examination and integration of relevant site data, including the integration of finds evidence with the structural remains
- Appropriate publication of relevant aspects relating to the exploitation of building resources and other materials (article contribution)

12.7.3 Understanding Monastic Estates

The requirement to understand the exploitation of the agricultural landscape of monastic estates has been noted (Lewis 2002, 42). Documentary evidence of the estate holdings (see Coppack, Section 7.3) and evidence from bulk samples (especially the hearth material from PTN4 03) show that cereal farming and processing was taking place (Fryer, Section 7.4.10). A hoe was recovered from a pit adjacent to possible field enclosures (Crummy, Section

7.4.1). Minor iron working was also evident (Eley, Section 7.4.2). Overall, the whole estate seems to have been a largely self-sufficient unit.

Further work will look at the chapel site and its own monastic estate. Initial documentary evidence in Section 7.3 has shown that the hospital had various estates within and outside the parish. Further documentary work is needed to establish whether other details of the Partney estate are recorded. Comparisons with other similar monastic sites will be used as an aid to understanding the excavated Partney findings.

Recommendations

- Further documentary work on the Partney hospital and its monastic estate
- Full examination and integration of relevant site data, in particular the finds and environmental data
- Appropriate publication of relevant aspects relating to understanding monastic estates (article contribution)

12.7.4 Understanding the Parochial Framework and Religious Provision

The requirement to increase understanding by reviewing and investigating chapels and churches in the region, particularly those lost, the parochial framework and religious provision has been highlighted (Lewis 2002, 42). Both documentary research and excavated evidence demonstrate the rôle of St Mary in religious provision. The chapel was apparently a re-establishment of a former pre-Danish monastery (Coppack, Section 7.3). It was separate from the parish church of St Nicholas (also owned by Bardney Abbey) less than a kilometre away to the east and there was no inter-relationship between the two (Coppack, Section 7.3). The chapel may have been built to serve the immediate workers of the estate. The number of people running the hospital would be unlikely to exceed ten, including probably no more than two monks, one of whom would normally be a priest (Coppack, 7.3). Excavation has revealed a small cemetery. Half of its population may be lay people, presumably those working on the estate (to the north of the pathway) and probable priests (to the south of the pathway). When it reverted to a dependent cell, the lack of expansion of the chapel shows that it did not attract large numbers of people or particular wealth.

The regional framework supports the idea that 'archaeology's value and importance is enhanced in circumstances where relevant documentary resources are also available and capable of correlation' (Everson 1999, 2-3). Such comparisons will be important in identifying conflict and correlation between the archaeological and documentary records. It is likely that further documentary work will demonstrate St Mary's hospital role in religious provision in the locality, within the parish and Bardney holding and in this part of Lincolnshire. This work may provide information, for example, on any agreement on burial rights between the hospital and St Nicholas' church in the village.

Recommendations

- Further documentary research into Partney – its relationship to the mother church (Bardney Abbey) and St Nicholas parish church
- Full examination and integration of relevant site data, in particular the evidence for spatial patterning according to role/status within the cemetery
- Appropriate publication of relevant aspects relating to the parochial framework and religious provision (article contribution)

12.7.5 Understanding the Health, Sickness of the Region by Analysing the Prosperous and Poor in the Monastic, Rural and Urban Settings Over Time

This research objective (Lewis 2002, 42) can be addressed by the Partney excavations. The remains of forty-four individuals excavated at the hospital site will provide some useful information to contribute towards this regional research priority. The locally acidic soil results in the fact that most of the excavated burials survived in poor condition, limiting comments on health, sickness and diet. Taking into account all available evidence it appears that this group came from a relatively healthy and well-nourished population in comparison with some of its contemporaries (Anderson, Section 7.4.8). The exceptions are one young male aged *c.*16-18 years who had spinal bifida and may also have had mental retardation, an elderly male with a possible tuberculous lesion and another young male who had a well-healed fracture of the left ulna. In general, there was little evidence of the violence and physical stress which can be seen in other, particularly urban, groups (Anderson, Section 7.4.8).

Physically, the Partney individuals were very similar to their contemporaries in terms of stature and head shape, although the mean cranial index in this group is particularly high, and many of the skulls which could not be measured were also noticeably broad (Anderson, Section 7.4.8). Evidence from non-metric traits suggests that family groups were present. Dental disease was relatively low in this population in comparison with other medieval groups in part this may be a result of poor preservation. It is probably more typical of a rural group as dental disease prevalences are generally higher in the urban groups.

This research aim will use comparators bring together artefacts, human bone and comparative data. This will highlight the difference between the burials found at Partney with other rural/urban and hospital sites.

Recommendations

- No further work is required on the human remains (see Sections 12.7.6 and 12.7.7 for further issues relating to diet and genetics)
- Full integration of relevant site data, including artefacts and human bone with the documentary evidence and relevant comparators

- Appropriate publication of relevant aspects relating to the stated research objective (article contribution)

12.7.6 Understanding diet within the region through the use of stable isotope analysis in order to clarify issues of diet and resource use

The environmental research agenda for the East Midlands has highlighted the importance of stable isotopes in relation to human bone (Monckton 2003, 40, 43). It has also been noted that 'there appear to have been no skeletal reports on monastic populations in the county; the potential is in principle high within Lincolnshire for comparative studies of populations of different dates and backgrounds' (Everson 1999, 8).

Partney lies in an interesting landscape bordering the Lincolnshire Wolds, with sea, river and fen resources lying in proximity. The excavated cemetery provides an excellent opportunity to assess the diet of a population who are likely to have held a special status in the region, either as an affluent or marginalised society. The results from analysis of the skeletal material can also be compared against the potential dietary materials recovered during the excavations (freshwater and marine fishbone, animal bone, shellfish, grain *etc.*). It may prove possible to establish whether diet changed during the period in which the burial ground was in use (by obtaining several stable isotopes of burials for comparison), providing a more chronologically refined method of analysing periods of prosperity within the establishment than can be gained through the excavated materials alone.

It has been noted that hospitals which offer the greatest opportunities for study are those (such as Partney) which possessed cemeteries in use for a limited duration, with burial confined mainly to the population of the house (Gilchrist 1995, 104).

Stable isotope analysis of the remains from Partney will assist in developing the regional research agendas targeted at understanding the local population in terms of its health, diet, social relationships and inter-dependencies. In addition it may permit understanding of the complex inter-relationships of monastic estates and villages, patterning and resourcing of settlements and monastic estates. These studies may potentially produce a refined chronology of population and monastic prosperity for the region or more particularly to this establishment.

Recommendation

- Radiocarbon dating and stable isotope analysis of five selected skeletons
- Full examination and integration of relevant site data, including spatial patterning within the cemetery, human remains and food waste
- Appropriate publication of relevant aspects relating to understanding diet through stable isotopes (article contribution)

12.7.7 Human Genetic Relationships

A radiocarbon date taken during the field evaluation (AD1030 to 1280), combined with pottery dates, suggests that the chapel and probably the hospital at Partney were in existence for between 300 and 400 years. The Partney site offers the opportunity to develop understanding of diet and human genetic relationships over this period through DNA analysis. Anderson notes that some family groups may be present on the basis of metrical analysis. These may represent families serving the hospital and it would be useful to conduct further analysis to prove if the cemetery is planned with a 'lay' area and another for monks/priests. There would be value in analysing the genetic signatures from within this cemetery in order to understand social make up and inter-relationships. Daniell has shown that at Hulton Abbey, where samples from the femurs and ribs were taken from eight skeletons, three were related. This type of work needs to be extended, where possible, to larger percentages of the buried population (Daniell 1997, 136).

Recommendations

- Although there is potential for future study of genetic relationships between the Partney burials, following advice from a specialist it is not thought cost effective to conduct such analysis within the limits of the agreed project design

12.7.8 Understanding Human Remains and Burial Practices

Relatively few medieval burial grounds have been published (Lewis 2002, 25). Human remains represent the only direct evidence for many aspects of life in the medieval period and as such analysis of human remains should be a high priority when they are discovered. In particular it is desirable that that populations should be available that would allow comparison for example through monk and peasant (Lewis 2002, 42). The Partney chapel site has been described as 'unique' and probably the 'missing link' between monastic infirmaries and true hospitals (Barney Sloane pers. comm.).

Analysis of the results from Partney can be expected to address some of the above objectives, particularly there appears to have been a separate burial ground for the priests (monks) and lay people.

The cemetery would have been common to both phases of the chapel's use and is likely to have been the burial place of both those serving the hospital and the monks who died at the cell, the latter confirmed by the high incidence of priest burials (Coppack, Section 7.3). The cemetery was divided into two main areas. Those who served the hospital were buried to the north of the pathway and along the south wall of the chapel. Monk/priest burials, grouped to the south of the pathway, were generally anthropomorphic in type and all of the anthropomorphic type burials were adults of at least young to mature age.

This compares with the shallow burials to the north of the pathway and along the south wall of the chapel which consist of people who were of a mixed range of ages from a child to old people. Grave-goods were only included in the anthropomorphic burials and consist of a buckle in one burial and four burials with pewter chalices denoting priests/monks. A further burial contained an adze or small mattock and fragments of a knife: this may represent an abbot burial signifying a builder (Barney Sloane, pers. comm.). It is only comparable with one other burial in Britain, of a burial in Winchester Cathedral Priory (Biddle 1990). It forms one of a very small number of medieval graves accompanied by working tools.

Most of the anthropomorphic type graves were earth-cut although there was one stone-lined burial. These burials have many parallels. They are not uncommon but tend to be earlier rather than later in the medieval period (Chris Thomas, pers. comm.). A number of sites have produced good examples, although few have yet been published (Barney Sloane, pers. comm.). It has been suggested that stone and mortar/head anthropomorphic graves were a Norman introduction, although pre-Conquest examples are known from Norwich (Elizabeth Shepherd Popescu, pers comm.) and Brampton (Blair, unpublished, 34 and fig. 20).

While such anthropomorphic graves are often stone-lined, there are examples of earth-cut graves, such as two from St Mary Spital (Thomas *et al*, 1997) and five or six others from St Neots Priory (Alexander and Shepherd Popescu, forthcoming). A number of examples of burials with wooden covers (*i.e.* not coffined) are known. These 'lids' sometimes cover the whole body but tend, where associated with niches, not to cover the head due to the odd shape (Chris Thomas pers. comm.). At Partney there were twenty-six anthropomorphic type burials (59%) compared with the Cistercian abbey of St Mary Stratford (Barber, Chew and White in prep.) where about 6% of *c.*690 graves were of this form.

There were several shallow burials at Partney, the majority of which lay to the north of the pathway, including a single child burial along the south wall of the church. In Anglo-Saxon Christian cemeteries children might be buried under the eaves of churches, a custom which seems to have died out post-Conquest (Daniell 1997, 128). The presence of a child burial in this position at Partney may suggest that this tradition survived locally.

The burial found within the chapel is also significant. In the Statutes of Chichester 1292, there was an injunction that there should be no indiscriminate burials in the church or chancel except for those of the lords of the village, patrons of the church, and their wives, and the rectors and vicars. This was in order that the church could accrue honour and nobility (Powicke and Cheney 1964, 117). By the 15th century, burial of lay people in the nave and aisles of the church was common (Daniell 1997, 187). A radiocarbon date may confirm whether the Partney example was a late burial. The importance of the burial site is also enhanced because there appear to have been no skeletal reports on monastic populations in Lincolnshire (Everson 1999, 8).

Recommendations

- Five of the burials should be radiocarbon dated and stable isotope measurements taken
- Full examination and integration of relevant site data, including grave morphology and spatial patterning within the cemetery
- Appropriate publication of relevant aspects relating to understanding human remains and burial practices (article contribution)

12.7.9 Understanding the Economic History of Settlement to Understand Desertion

This research objective (Monckton 2003, 39) can be address by the relevant Partney site. The chapel's demise in the middle of the 15th century probably occurred because Partney was not economically viable. It had failed as a chapel, then a hospital and finally as a cell of Bardney. Comparisons with other sites such as Skendleby (which was abandoned at the same time) and other abbeys cells may indicate why Partney did not continue. The documentary history of land holdings will be used in an attempt to gauge its wealth.

The artefacts and ecofacts recovered from the site can inform understanding of site economics. Analysis of these remains will also promote an understanding of both the adornment and status of these people in life and death. The lack of wealth of the site helps to explain why it fell into early decline.

The lack of building expansion at Partney indicates a lack of wealth, the only adaptation evident being its sub-division. The painted glass, however, indicates only one costly new acquisition, evidently made in the 14th century. Relatively few objects demonstrate wealth or trade: the pottery included no definite imports. Only a moderate collection of artefacts was recovered by metal detecting despite examination of the topsoil, subsoil and features. Only six iron tools present, two of which were from a burial. The gold coin – an early 15th-century noble of Henry V (Section 7.4.1) – is an exception and few other coins were found.

Other artefacts indicate relatively small scale activity. The four stone tools are hones and would have been used for sharpening iron tools, while a fourth stone implement is a fragment of polished base of a hand-held rubbing stone. There was some evidence of small scale iron and lead working on the site. Of only three household items, one is a copper alloy curtain ring and another may be part of a cast copper alloy vessel or vessel fitting; the third is a lead plug repair from a sheet metal vessel. The objects associated with writing were also few: they consist of a bone stylus and part of a goose radius pen, pen-holder or quill holder, and a copper alloy fitting that may be from a book.

Recommendations

- Further work on the artefacts, ecofacts and documentary research
- Full examination and integration of relevant site data, including archaeological evidence for settlement desertion as well as artefactual and environmental evidence for its economic history
- Appropriate publication of relevant aspects relating to economic history and desertion (article contribution)

12.7.10 Overview of the Hospital's Importance

This excavation relates to a minor rural hospital cell of an abbey, representing the first of its type to be investigated in Lincolnshire. In the country as a whole, excavation of hospitals has tended to concentrate on the larger hospitals within towns and cities or on rural abbeys themselves.

The Partney chapel site is significantly sited overlooking the A158, a former medieval routeway leading from the coastal marshes and Skegness to Horncastle: from there lay a direct route to the River Witham at Bardney, the site of Bardney Abbey. Also to the south lies the River Steeping which would have provided navigable access to the east coast. Approximately 20km further to the south lies the River Witham, a medieval routeway significant for its association with the important medieval abbeys of the region. Such navigable waterways, also including the River Spedding, were important commercial routes.

To the north lies the Partney Beck and the uplands of the Wolds, an area significant for its medieval sheep farming and the economic base upon which the wealth of the monastic institutions is believed to have been founded. The site also overlooks the village and parish church of Partney to the east.

The excavation suggested that archaeological features continue to the east and west of the site. Resistivity survey was used at the evaluation stage and recorded a few linear anomalies, rather than the density of archaeology discovered by excavation. Within the excavation the two post-built structures and other post-alignments are unlikely to indicate the site of a major hospital building or refectory, but could provide evidence for domestic structures such as guest accommodation or kitchen(s). It seems probable that, if any of major buildings did exist within the hospital's compound, they lay either to the east or west of the recent excavations.

During the excavation, a metal detecting survey was conducted whilst machining the excavation area. The survey was extended on the adjacent fields of stubble. Many medieval metal artefacts were recovered, including coins and buckles, and the greatest density appears to lie to the east of the excavation area possibly indicating medieval occupation in this direction. Medieval pottery was also found in this area. The metal detected finds were consistent with those of the excavation in that no finds from the period 1500-1900+ were found suggesting a single abandonment of the whole site, with

relatively little modern disturbance other than ploughing. There are other indications that further hospital structures lie to the east in that the landowner, Cllr John Hudson, remembers a stone wall being exposed about fifty years ago, some 30m to the east of the AFU excavation area.

Map 2 Appendix 7.2 viii asks that attention should be drawn to areas of future study potential which it has not been possible to explore fully within the limits of the agreed project design (English Heritage 1991). At Partney, English Heritage may fund work such as test pitting and metal detecting on land outside the by-pass to determine the extent of the associated settlement but this would come out of regional funds (Glyn Coppack pers. comm.).

Recommendations

- Full examination and integration of relevant site data such as evidence of use of area in the estate holdings and landscape evidence through artefactual and environmental evidence
- Appropriate publication, providing an overview of the hospital's significance (article contribution)

13 STORAGE AND CURATION

The archive is currently held at the AFU's headquarters at Fulbourn under the site codes PTN1 03, PTN2 03, PTN3 04, PTN4 03, PTN5 04, PTN6 03, PTN7 03, PTN8 04 and PTN9 04. The bulk of the material archive is to be prepared for storage at the Lincoln Museum. The Christian burials are to be reburied at Partney.

14 PUBLICATION

Following completion of analysis, a full archive report and publication(s) will be prepared.

There are clearly two main aspects of interest for publication: the prehistoric to Roman landscape (including the shrine site) and the medieval hospital. While a multi-period site with a *continuous* settlement history would be appropriately considered for dissemination in a single monograph, this is not the situation at Partney where there is discontinuity between the Roman and medieval periods. Discussion between the AFU's project team, the Post-Excavation and Publications Manager (Elizabeth Shepherd Popescu), the Principal Archaeologist (Paul Spoerry) and the County Archaeologist (Adrian Tindall, a member of the EAA editorial committee) confirms Cambridgeshire Archaeology's view that the most appropriate means of publication is two-fold, comprising a monograph and one major supplementary article. In

academic terms, the two key aspects of the project noted above simply do not sit well together as a single volume. It is felt that the national importance of the hospital site would be obscured in a single integrated volume, since the remaining By-Pass excavations primarily recovered evidence of prehistoric and Roman date: audiences for these reports will differ considerably and the selected outlet must deal appropriately with issues of dissemination and accessibility. An additional note could be considered to summarise the shrine site in a national journal (*e.g. Proceedings of the Prehistoric Society*), drawing attention to the contemporary landscape study and more detailed evidence presented in the monograph.

It is therefore strongly recommended that the prehistoric to Roman sites be published as a monograph entitled *Prehistoric to Roman Remains Along the Partney By-Pass, Lincolnshire* by Rob Atkins and other contributors. It is suggested that publication should take place in an appropriate and recognised series, to be agreed by relevant parties. The CCC AFU's Post-Excavation and Publications Manager has made preparatory contact with both the Lincolnshire Archaeology and Heritage Reports Series (NB: this series is currently on hold in the absence of a Publications Officer) and East Anglian Archaeology. In addition to the summary presented below a publication synopsis is in preparation for discussion with the relevant publication outlet.

In light of the above, Cambridgeshire Archaeology suggests that the medieval hospital excavations should be fully published separately in *Medieval Archaeology*, in an article entitled *Excavations at the Hospital of St Mary Magdalene, Partney, Lincolnshire* by Rob Atkins and other contributors.

14.1 Monograph: Prehistoric to Roman

14.1.1 Draft Monograph Contents

Front matter (listings, acknowledgements, list of contributors *etc.*) (*c.* 5 pages)

Chapter 1: Introduction (*c.* 5 text pages, *c.* 5 figures, *c.* 2 plates)

I. Introduction
II. Geology and Topography
III. Archaeological Background
IV. Evaluation Results
V. Excavation Strategy
VI. Layout, date and phasing

Chapter 2: Mesolithic to Mid to Late Iron Age

I. The Archaeological Sequence (c. 12 text pages, *c.* 12 figures, *c. 3* plates)
II. Artefactual and Environmental Evidence (c. 12 pages, c.10 figures, *c.* 8 tables)

Chapter 3: Mid to Late Iron Age to Transitional Period

I. The Archaeological Sequence (c. 12 text pages, *c.* 12 figures, *c. 5* plates)
II. The Finds (c. 8 text pages, *c.* 7 figures, *c.* 8 tables)
III. The Zooarchaeological and Botanical Evidence (*c.* 8 text pages, *c.* 7 tables)

Chapter 4: Romano-British Occupation

I. The Archaeological Sequence (*c.* 12 text pages, *c.* 14 figures, *c.* 5 plates)
II. The Finds (*c.* 10 text pages, *c.* 4 figures, *c.* 3 plates, *c.* 7 tables)
III. The Human Remains, Zooarchaeological and Botanical Evidence *(c.* 7 text pages, *c.* 3 figures, *c.* 7 tables)

Chapter 5: Discussion and Conclusions (*c.* 12 text pages, *c.* 5 figures, *c.* 2 tables)

Back Matter (bibliography, index, *etc.*) (*c.* 8 pages)

14.1.2 Volume Summary

Total pages	111
Total figures	70
Total plates	18
Total tables	39
Volume total	**162 pages**

14.2 Article: Medieval Hospital

14.2.1 Draft Article Contents

Introduction (*c.* 2 text pages, 2 figures, 1 plate)

The Archaeological Sequence (c. 10 text pages, 7 figures, 6 plates)

The documentary evidence (*c.* 6 text pages, 2 figures)

The finds (c. 12 text pages, 3 figures, 4 plates, 5 tables)

The Human Remains, Zooarchaeological and Botanical Evidence *(c.* 12 pages, *c.* 2 figures, *c.* 8 tables)

Discussion and Conclusions *(c.* 5 pages)

Back matter (*c.*2 pages)

14.2.2 Article Summary

Total text pages	49
Total figures	16
Total plates	11
Total tables	13
Article Total	**63 pages**

15 TASK LIST

Key:
CO = Conservator, FC = Finds Co-ordinator, ILL = Illustrator, PEPM = Post Excavation and Publications Manager, PM = Project Manager, PO = Project Officer, SC = Specialist Consultant,

15.1 Stratigraphic Analysis and Publication Draft

Task	Days	Staff
Project Management	2.5	PO/PM/PEPM
Project Administration	4	PM/Admin
Liaison (with client/consultant/specialists/publishers, etc.)	6	PM/PEPM/ PO LCC/Jacobs Babtie
Produce publication synopsis	1	PO/PEPM
Discuss issues raised through assessment with post-excavation team	3	PO/PEPM/PM
Finalise site phasing	15	PO
Dispatch final phasing to specialists for analysis	1	PO
Write group and phase text	40	PO
Compile full report for archaeological sequence	5	PO
Review results of specialist analyses	4	PO
Collate results of specialist analyses	3	PO
Project management and liaison with specialists *etc.*	3	PO/PM
Collate and review results of previous work from the local area	4	PO
Write background text	5	PO
Write discussion and conclusions	10	PO
Collate front matter for publication (lists, captions *etc.*)	4	PO
Collate back matter for publication (bibliography, appendices *etc.*)	4	PO
Internal edit	8	PM/PEPM
Incorporate internal edits	8	PO
Final edit	2	PM/PEPM
Produce SMR summary	1	PO
Submit to EAA for refereeing	2	PO
Post-refereeing revisions	5	PO
Archiving	6	FC

15.2 Illustration

Task	Days	Staff
Compile list of illustrations/liaise with illustrator	3	PO/ILL
Produce plans/sections/location drawings	20	ILL
Pasting-up	5	ILL
Finds illustration	60	ILL
Total person days	**88**	

15.3 Documentary

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team	0.25	SC
Research at British Library and National Archives	4	SC
Write report	5.5	SC
Discuss issues raised / results of collation with post-excavation team	0.25	SC
Total person days	**10**	

15.4 Finds Analysis

15.4.1 Metalwork

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team	0.25	SC
Discuss final grouping and phasing with post-excavation team	0.25	SC
Catalogue and report	11	SC
Total person days	**11.5**	

15.4.2 Metalworking Debris

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team	0.25	SC
Check on copper-alloy slag from PTN1 03 and PTN9 04	1	SC
XRF	1	SC
Total person days	**2.25**	

15.4.3 Conservation

Task	Days	Staff
Cleaning and stabilisation of PTN1 03	12.5	CO
Cleaning and stabilisation of PTN3 04	3.5	CO
Cleaning and stabilisation of PTN4 03	20	CO

Cleaning and stabilisation of PTN7 03	1	CO
Cleaning and stabilisation of PTN8 04	6	CO
Cleaning and stabilisation of PTN9 04	4.5	CO
X-rays of ironwork	2.5	CO
Total person days	**50**	

15.4.4 Geology of worked stones

Task	**Days**	**Staff**
Discuss issues raised through assessment with post-excavation team	0.5	SC
Analysis	3	SC
Write report	2	SC
Thin Section	2.5	SC
Prepare assemblage for archive	0.5	FC
Total person days	**8.5**	

15.4.5 Lithics

Task	**Days**	**Staff**
Discuss issues raised through assessment with post-excavation team	0.5	SC
Discuss final grouping and phasing with post-excavation team	0.5	SC
Analysis	5	SC
Review results of specialist analyses	1	SC
Write lithic report	2	SC
Discuss issues raised / results of collation with post-excavation team	0.5	SC
Prepare assemblage for archive	0.5	FC
Total person days	**10**	

15.4.6 Iron Age/Roman Pottery

Task	**Days**	**Staff**
Discuss issues raised through assessment with post-excavation team	0.5	SC
Discuss final grouping and phasing with post-excavation team	0.5	SC
Catalogue PTN1 03 and ritual settlement (including Area M)	8	SC
Input data	2	SC
Petrological analysis	3	SC
Report	5.5	SC
Select and check illustrations	0.5	SC
Prepare assemblage for archive	0.5	FC
Total person days	**20.5**	

15.4.7 Medieval Pottery from PTN4 03

15.4.7 Medieval Pottery from PTN4 03

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team	0.5	SC
Discuss final grouping and phasing with post-excavation team	0.5	SC
Analysis	2	SC
Macrosocopic inspection of all major fabric types	1.5	
Petrological analysis of samples	2	SC
Tabulate statistics	1	SC
Report	3	SC
Select and check illustrations	0.5	SC
Prepare assemblage for archive	0.5	SC
Total person days	**11.5**	

15.4.8 Medieval Tile from PTN4 03

Task	Days	Staff
Petrological Analysis of samples	1	SC
Report on tiles	2	SC
Total person days	**3**	

15.4.9 Textile Fabric from PTN1 03 and PTN4 03

Task	Days	Staff
Textile From PTN1 03 and PTN4 03	2	SC
Total person days	**2**	

15.4.10Wall plaster/limewash from PTN4 03

Task	Days	Staff
Analysis of wallplaster/limewash from PTN4 03	2	SC
Total person days	**2**	

15.5 Zooarchaeological and Botanical Analysis

15.5.1 Animal bone

Task	Days	Staff
Discuss final grouping and phasing with post-excavation team	0.5	SC
Add evaluation PTN1 03 (area J)	1	SC
Any revisions	1	SC
Prepare assemblage for archive	0.5	FC
Total person days	**3**	

15.5.2 Insect Remains from PTN5 04

Task	Days	Staff
Sieving and sorting sample for insect remains (technician)	2.5	SC
Identification and analysis of and reporting on insect remains (specialist)	2	SC
Total person days	**4.5**	

15.5.3 Charred Plant Remains

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team	0.5	SC
Charcoal: species identification	0.5	SC
Data tabulation and report production	10	SC
Total person days	**11**	

15.5.4 Pollen

Task	Days	Staff
Discuss issues raised through assessment with post-excavation team including more radiocarbon dates	0.5	SC
Discuss radiocarbon dates	0.25	SC
Preparation and counting pollen	70	SC
Report	14	SC
Discuss issues raised from report	0.25	SC
Total person days	**85**	

15.5.5 ?coprolite from PTN4 03

Task	Days	Staff
Analysis of ?coprolite	1	SC
Total person days	**1**	

15.5.6 Further Radiocarbon Dates

Task	Staff
20 further radiocarbon dates comprising:	SC
PTN2 03 one from palaeochannel Phase C deposit on one from upper parts of phase G	SC
PTN3 04 one from pottery kiln	SC
PTN 4 03 Stable Isotopes five from burials (one within chapel, one along wall, two from intercutting burials and one from stone lined burial)	SC
PTN5 04 one from both the palaeochannel Phase A and Phase D deposits	SC
PTN7 03 Two dates from boreholes	SC
PTN8 04 one from cow burial and one from tree throw (Area I)	SC
PTN9 04 One from crouched burial in ritual shaft M486,	SC

one from earlier deposits in this ritual shaft. One from spring M503, one of burnt flint area/mound 190, one from early and middle deposits in palaeochannel

16 PROJECT PERSONNEL

Name	Role	Employer
Sue Anderson	Human Skeletal Remains	CFA Archaeology
Rob Atkins	Project Officer	CCC AFU
Ian Baxter	Animal Bones	Freelance
Barry Bishop	Lithic Analysis	Freelance
Steve Boreham	Pollen	Cambridgeshire University
Glyn Coppack	Documentary Research	Freelance
Nina Crummy	Small Finds	Freelance
Tom Eley	Site Assistant	CCC AFU
Carole Fletcher	Finds Supervisor	CCC AFU
Rachel Fosberry	Environmental Supervisor	CCC AFU
Val Fryer	Environmental Analysis	Freelance
Celia Honeycombe	Conservator	Cambs CC
Graham Lott or Graham Turner	Geology of the Stone	British Geological Survey
Alice Lyons	Roman Pottery	Norfolk Arch. Unit
Graham Morgan	Limewash and mortar	Leicester University
Sarah Percival	Iron Age Pottery	Norfolk Arch. Unit
Elizabeth Shepherd Popescu	Post-Excavation & Publications Manager	CCC AFU
Judith Roberts	Project Manager	CCC AFU
Penelope Rogers	Textile	Freelance
Mark Robinson	Insects	Oxford Museum
Carlos Silva	Illustrator	CCC AFU
Alan Vince	Petrological Analysis	Freelance
Jane Young	Medieval Pottery and Tile	Freelance

ACKNOWLEDGEMENTS

The AFU is grateful to Lincolnshire County Council for funding the excavations. Elaine Turner, in charge of Lincolnshire's road scheme, was very interested throughout and helped on the chapel site. Her assistant, Sean Kent (Scheme Manager) was especially helpful and encouraging in all stages of work throughout the project. Thanks also go to Sean's father-in-law, Gerald Brooks, who assisted on the chapel site. Robert Sutton of Lincolnshire County Council provided helpful information during By-Pass construction work.

Jacobs Babtie organised all stages of the archaeological work and greatly helped in the smooth running of the project (particularly Adrian Scruby, Ruarigh Dale and Dan Johnston). May Gurney, building contractors were extremely accommodating, supplying equipment, technical information *etc.*

Particular thanks are extended to Ted Lamb (Site Manager) and Jaspar Barnham (Scheme Manager). Helpful advice was given by Jim Bonnor, Senior Built Environment Officer, Lincolnshire County Council who monitored the excavation on behalf of Lincolnshire County Council. Glyn Coppack, regional English Heritage Inspector, visited both the chapel site as well as the temple site and gave helpful advice.

West Yorkshire Archaeological Services kindly supplied Fig. 3, the geophysical data from the evaluation. Pre-Construct Geophysics supplied further geophysics material. Lindsey Archaeological Services gave their whole evaluation archive which will be included at full report stage. Lincolnshire Laboratories took column samples at PTN9 04 and Richard Humphreys provided details on these samples.

The local landowners were all extremely interested and helpful during the work: Mr and Mrs A Collard, Mr Grant, Mr Hawkes, Messrs John and Ron Hudson, Mr and Mrs Ian Oliver and Mr John Oliver. In particular, Mr and Mrs I. Oliver kindly volunteered some of their time to help excavation on Area J and gave information on land use. Mr John Hudson helped the smooth running of the excavation through constant assistance such as supplying local knowledge of land use, maps as well as helping to organise both the open day and school visit. The Reverend Richard and Mrs Catherine Benson gave their time freely, providing advice and encouragement as well as helping to excavate one of the chapel burials. Richard Benson has agreed to hold the service when the former chapel cemetery burials are reinterred. Mr Bob Johnston was especially enthusiastic, keeping a useful photographic record. Mr Gavin Motley helped photograph the chapel site using his own crane. Mr Jim Hoff of Skendleby was interested throughout and added to the site by encouragement and opening up Partney's sister chapel at Skendleby to fieldwalking and then excavation.

The excavation was managed initially by Steve Kemp and then Judith Roberts. Rob Atkins directed the fieldwork with Spencer Cooper, Carole Fletcher, Taleyna Fletcher and Andy Rudge supervising on some of the sites and a team consisting of Abby Antrobus, Tony Baker, Celine Beauchamp, Marc Berger, Jon Bolderson, David Brown, David Crawford-White, Tom Eley, Helen Fowler, Michael Fradley, Steven Graham, Alex Howe, Adam Howard, Adam Lodoen, Claire Jacklin, Tom Lyons, Thomas McCarthy, Dennis Payne, Hannah Pethen, Tom Phillips, Steven Wadeson and Sam Whitehead.

Marc Berger monitored the Watching Brief on the road corridor as well as assisting with excavation on most of the sites. Steve Critchley made a significant contribution to the understanding of the site through the recovery of a substantial quantity of metal objects, also providing geology advice.

Thanks go to Carole Fletcher assisted in the assessment of the artefacts. The assessment team included Shannon Cliff and Charles Rowland-Jones. Jane Young commented on the medieval pottery from PTN4 03 and Julie Miller assisted Dr Steve Boreham at PTN9 04. Thanks are also extended to all the

specialists who wrote reports or commented on artefacts/environmental matters: Sue Anderson, Ian Baxter, Barry Bishop, Steve Boreham, Andrew Brown, Glyn Coppack, Steve Critchley, Nina Crummy, Tom Eley, Carole Fletcher, Rachel Fosberry, Val Fryer, Alice Lyons, Jacqui Mulville and Sarah Percival and Mark Robinson.

Elizabeth Shepherd Popescu kindly edited this report. Illustrations were by Crane Begg, Alex Howe, Carlos Silva and Sam Whitehead.

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