



**CAM ARC Report Number 918**

## **Roman Occupation South of Car Dyke, Manor Drive, Paston, Peterborough**

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**Evaluation**

Taleyna Fletcher

April 2007

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## **Evaluation**

Taleyna Fletcher, BA

With contributions by Tom Eley BSc, MSc, Chris Faine MA, MSc, BABAO, Rachel Fosberry HNC, AEA, Stephen Macaulay BA, MPhil, MIFA and Chris Rolfe BSc.

Site Code: PET MWP 06  
CHER Event Number: N/A  
Date of works: November 2006  
Grid Ref: TF 1964 0288

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## CAM ARC OASIS Report Form

OASIS Number: cambridg1 - 26488

| PROJECT DETAILS   |   |                               |   |                               |
|---|---|-------------------------------|---|-------------------------------|
| Project name  | Evaluation at Manor Drive, Paston Reserve, Paston, Peterborough   |                               |   |                               |
| Short description   | <p>CAM ARC (formally Archaeological Field Unit (AFU)) of Cambridgeshire County Council conducted an archaeological evaluation on land at Manor Drive to the immediate south of the Car Dyke at Paston Parkway, Peterborough, Cambridgeshire. The investigations took place in early November 2006 and consisted of seven trenches, totalling 480m in length, within the area of proposed development which includes the construction of houses, businesses, leisure and school sites across an area exceeding 48 hectares.</p> <p>Although trenches 1-3 (to the north of Manor Drive) contained no discrete cut archaeological features, they did reveal soils sequences believed to be evidence of an up-cast bank from the Car Dyke, and a large water-management feature, also potentially linked to the Roman Car Dyke Canal. Trenches 4-7 (to the south of Manor Drive) were mostly empty, however trench 7 contained 3 ditches, Roman in date, which can be associated with the enclosure system of the same date excavated to the east by BUFAU in 1997.</p> |                               |   |                               |
| Project dates   | Start   | 26 <sup>th</sup> October 2006 | End   | 9 <sup>th</sup> November 2006 |
| Previous work   |   |                               | Future work   | unknown                       |
| Associated project reference codes  | PET MWP 06  |                               |   |                               |
| Type of project   | Evaluation  |                               |   |                               |
| Site status   | none  |                               |   |                               |
| Current land use (list all that apply)  | Other - wasteland   |                               |   |                               |
| Planned development   | Semi-rural, large-scale residential   |                               |   |                               |
| Monument types / period (list all that apply and use <a href="#">thesaurus of monument types</a> )            | Roman agricultural enclosures.  |                               |   |                               |
| Significant finds: Artefact type / period (list all that apply and use <a href="#">MDA object thesaurus</a> ) |   |                               |   |                               |
| PROJECT LOCATION  |   |                               |   |                               |
| County  | Cambridgeshire  | Parish                        | Peterborough  |                               |
| HER for region  | Peterborough  |                               |   |                               |
| Site address (including postcode)   | Manor Drive, Paston, Peterborough   |                               |   |                               |
| Study area (sq.m or ha)   | 1100m <sup>2</sup>  |                               |   |                               |
| National grid reference   | Easting (6 figure)  | TF196                         | Northing (6 figure)   | 028                           |
| Height OD   | Max OD  | 3.40m                         | Min OD  | 2.57m                         |
| PROJECT ORIGINATORS   |   |                               |   |                               |
| Organisation  | Cambridgeshire County Council, CAM ARC  |                               |   |                               |
| Project brief originator  | Ben Robinson, Peterborough City Council Archaeology Service, Peterborough Museum  |                               |   |                               |
| Project design originator   | Stephen Macaulay  |                               |   |                               |
| Director/supervisor   | Taleyna Fletcher  |                               |   |                               |
| Project manager   | Stephen Macaulay  |                               |   |                               |
| Sponsor or funding body   | Stamford Homes  |                               |   |                               |
| ARCHIVES  | Location and accession number   |                               | Content (e.g. pottery, animal bone, database, context sheets etc) |                               |
| Physical  | Cambridgeshire County Store   |                               | Pottery, animal bone, slag, environmental flots                   |                               |
| Paper   | Cambridgeshire County Store   |                               | Plans, sections, context sheets                                   |                               |
| Digital   | CAM ARC   |                               | CAD drawings, digital photographs                                 |                               |
| BIBLIOGRAPHY  |   |                               |   |                               |
| Full title  | Roman occupation south of Car Dyke, Manor Drive, Paston, Peterborough   |                               |   |                               |
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## Summary

CAM ARC, (formally The Archaeological Field Unit (AFU) of Cambridgeshire County Council) conducted an archaeological evaluation on land at Manor Drive to the immediate south of the Car Dyke at Paston Parkway, Peterborough, Cambridgeshire. The investigations took place in early November 2006 and consisted of seven trenches, totalling 480m in length, within the area of proposed development which includes the construction of houses, businesses, leisure and school sites across an area exceeding 48 hectares.

The site has already been subjected to detailed archaeological investigations which includes: - a desk-based study, aerial photographic appraisal, geophysical survey, evaluation and excavation.

Although trenches 1-3 (to the north of Manor Drive) contained no discrete cut archaeological features, they did reveal soils sequences believed to be evidence of an up-cast bank from the Car Dyke, and a large water-management feature, also potentially linked to the Roman Car Dyke Canal.

Trenches 4-7 (to the south of Manor Drive) were mostly empty, however trench 7 contained 3 ditches, Roman in date, which can be associated with the enclosure system of the same date excavated to the east by BUFAU in 1997.

One of the key aims identified by the brief was to determine the extent of the continuation of the enclosure system identified by the 1997 excavations to the west. This investigation has confirmed that evidence of outlying field systems/related contemporary activity survives in this location. Only further work will determine its full extent and character.

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## 1 Introduction

This archaeological evaluation was undertaken in accordance with a Brief issued by Ben Robinson of Peterborough City Council Archaeology Service (Planning Application Numbers 91/00001/OUT, 91/00002/OUT, 94/00005/OUT), supplemented by a Specification prepared by CAM ARC.

The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *Planning and Policy Guidance 16 - Archaeology and Planning* (Department of the Environment 1990). The results will enable decisions to be made by Peterborough City Council Archaeology Service, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.

The site archive is currently held by CAM ARC and will be deposited with the appropriate county stores in due course.

## 2 Geology and Topography

The sites most recent land use has been for arable cultivation. The geology of most of the site is Oxford Clay (British Geographical Survey 1974) although 2nd terrace river Gravels lie to the south.

## 3 Archaeological and Historical Background

### 3.1 Previous Archaeological Investigations

The study area lies within an area of extensive previous archaeological, geophysical and aerial survey investigation, summarised chronologically below:

#### ***Northamptonshire Archaeology Evaluation, 2006 (Foard-Colby, 2006)***

Seven trenches were opened within the proposed development area. Trenches 6 and 7 south of Manor Drive contained single ditches. One sherd of Roman Nene Valley Colour-Coated ware, together with a small amount of animal bone, was recovered from one ditch, while residual probable Roman tile fragment came from the other. Two fragments of 16th/17th century stone moulding were recovered from a

posthole and may be associated with a former manor house nearby. Trenches close to the Car Dyke revealed a possible buried soil which may have been sealed by an up-cast bank from the dyke. Wood charcoal from the buried soil has been radio-carbon dated to the early Iron Age, but this is thought to derive from previous bank activity, with the bank therefore of Roman or later date.

***BUFAU Evaluation and Excavation, 1996/7 (Ellis, Coates, Cuttler, and Mould, 2001)***

Trenching and Geophysical survey identified a site of Romano-British activity which was then subject to an open area excavation. Two phases of Romano-British enclosure ditches, one dated to the 2nd/3rd century and the second to the 3rd/4th century, were excavated. Considerable quantities of pottery and building material indicated domestic occupation. No structural evidence was found although some of the pits may have been used as clay quarries for daub. It was not certain whether the putative house sites occurred within or alongside the enclosures, which may, if not house enclosures, have been used for sorting stock. The enclosure ditches had been re-cut on a number of occasions, the layout becoming a simpler one in the second phase. The Roman Car Dyke nearby, seen as a distinctive boundary to different area of land use, did not appear to have an influence on the site occupation, although the site did not come into existence until after the dykes construction. The occupation could be paralleled by the 2nd century expansion of activity onto the Fens and may have been associated with it. The absence of coins and small finds commonly found on urban sites suggested a low level of subsistence and an economy that was perhaps, largely self-sufficient. The pottery profile was consistent with a basic rural farmstead but revealed some contact with neighbouring markets. Plant remains indicated evidence for both cultivation and grassland, and also for wetland nearby. The animal bones gave some evidence for an overall improvement of stock suggesting that the farmstead was not entirely cut off from the Roman agrarian changes. The settlement came to an end in the 4th century, around the same time as the Car Dyke (*Macaulay pers com.*).

***Archaeological Project Services Evaluation, 2002 (Hall, 2002)***

An evaluation was carried out along the Eye-Crowland section of the proposed realignment of the A1073 from Spalding, Lincolnshire to Eye green, Peterborough. The evaluation comprised 24 trenches, located mainly on the gravel "upland" of the Car Dyke at the fen edge with a single trench north of the Car Dyke to investigate a geophysical anomaly. Of all the trenches, only those directly north and south of the Car Dyke identified archaeological remains, although all undated.



### ***Aerial Photographic Survey, 2000 (Palmer, 2000)***

An aerial photographic survey examined a corridor 500m each side of the 17km of Car Dyke between Deeping Gate and River Nene at Peterborough. Parts of rectilinear enclosures, possibly field enclosures were identified within the reserve development area as well as traces of Medieval ridge and furrow which may have masked other features.

## **3.2 Historic Environment Record Entries**

Ben Robinson kindly carried out a search for HER entries of the area surrounding the investigations (Figure 2). Entries found are as follows:

### **3.2.1 Roman**

Immediately to the north of the investigation area is Car Dyke, a scheduled Ancient Monument (Monument No. 35725) The Car Dyke is a linear monument that may have been a watercourse connecting the River Witham, near Lincoln, to the River Nene at Peterborough, a length in the region of some 92km, believed to date to the 1st/2nd century. The Cambridgeshire Car Dyke, around Waterbeach, was once thought to be part of this same system, although recent survey has not located a link between the two monuments. The Cambridgeshire Car Dyke is also of a different character to that recorded between Lincoln and Peterborough (Macaulay and Reynolds 1994, Macaulay 1997). At present, there is no clear single hypothesis that explains the variations in scale and apparent function for the whole of the monument, and a synthetic answer may not be forthcoming. The Cambridgeshire and Lincolnshire sections are physically and perhaps functionally unconnected, although they may have been contemporary, and it is possible that various sections were constructed for different reasons to serve a range of purposes (Babtie 2003).

An excavation carried out by Birmingham University Field Archaeology Unit (BUFAU) in 1997 (HER 50526) identified a number of small rectangular enclosures. The pottery dated settlement activity to 2nd to 4th century. (see historical background above). Although building material was recovered from the excavation, no evidence of structures survived.

An evaluation was carried out in 1997 by the Cotswold Archaeological Trust (HER 50529) and ditches were recorded. Fragments of building material were found and pottery dated the activity to the 3rd to 4th century. A trench situated near the Car Dyke may have exposed part of the cut for the south bank. It is uncertain whether this could be part of the original Dyke or belongs to later phase of re-cutting.

A field walking survey carried out in 1975 recorded sherds of Roman pottery within a large area of dark soil containing occupation debris (HER 08017)

### **3.2.2 Medieval**

The site of a deserted Medieval village, possibly Cathwaite (HER 50138), has been identified and supported by several HER entries. Cathwaite is mentioned with Paston from the early 13th century, its exact site is unknown. Interpretations based on an arrangement of tracks recorded on a map of 1791 bound with the survey of the parish dated 1826 suggest its location is in the vicinity of the investigations, south of Manor Drive.

Earth moving during the construction of Paston Parkway (HER 2222) revealed quantities of pottery, mainly dating to 11th to 13th century although some sherds were dated to 15th century and later. Large numbers of domestic animal bones were also noted. It is possible that it is the site of the hamlet of Cathwaite

A field walking survey (HER 2225) recovered a large quantity of 13th century pottery and an architectural stone fragment. These are possibly associated with the hamlet mentioned previously.

Evidence from a reconstructed plan which shows a north – south aligned track (HER 50131) with a sinuously running branch may be associated with the DMV.

Cropmarks, identified through aerial photographs have been recorded on both sides of the Car Dyke. HER 50135 has been associated with activity dating to the Medieval/Post-Medieval period and 50136 is undated.

Geophysical survey, archive research and aerial photographs were used to compile a desk-based assessment of the proposed development area (HER 50527). Evidence of settlement, possibly Roman and remains of ridge and furrow, possibly medieval were both identified.

An archaeological evaluation took place in 1990 in advance of development of the current Baker Perkins site to the immediate south of Manor Drive (HER 50528). Eight trenches revealed evidence of ridge and furrow, but no other archaeological features remained. A source claimed that soil was removed from the site following World War 2, possibly accounting for the slight depth of soil noted on the site.

## 4 Methodology

The objective of this evaluation was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

The Brief required that 1700 square metres of trenching was opened in specific locations defined on an accompanying plan. An additional 300 metres was reserved as a contingency to be used as results dictated.

The specific themes to be addressed were as follows;

- the extent and character of the Romano-British settlement site and its enclosure system
- the relationship of the Romano-British enclosure system with Car Dyke
- the characterisation of Car Dyke's close environs -is there evidence for a southern bank or other associated features?
- the character of periphery of the putative manorial site, now partially occupied by the travellers site

Machine excavation was carried out under constant archaeological supervision with a tracked 360 excavator using a toothless ditching bucket.

Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

All archaeological features and deposits were recorded using CAM ARCs *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits. Supplementary digital photographs were also taken using an Olympus digital camera.

Trench locations were surveyed using a Leica GPS which locates the trenches on the Ordnance Survey grid. The individual trench plans showing the feature locations were then incorporated with the survey data. Levels were also taken on sections using the GPS.

Environmental soil samples were taken from every deposit and monolith tins were also taken at specific locations at the request of the monitoring officer.

Site conditions were reasonable with bright strong sunshine and very little rain, however ploughing of the field north of Manor Drive during the work made access to the trenches difficult on foot and prevented a

contour survey from being carried out which may have assisted with interpretation.

## **5 Results**

### **Trenches 1-3**

Trenches 1-3 were located to the north of Manor Drive, immediately south of the Car Dyke (Figure 1). The purpose of these trenches, as outlined in the brief (Robinson, 2006), was to establish the characterisation of Car Dykes close environs and to look for evidence of a southern bank or associated features.

#### **5.1 Trench 1**

Trench 1 was 50m in length, orientated north-east to south-west and located approximately 15m from the edge of the Car Dyke (Figure 1). The trench was machined to a depth of 1.25m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). No archaeological features were recorded within this trench, however, an interesting sequence of soils identified at the Car Dyke end of the trench may represent evidence of an up-cast bank (Figure 5, section 1),

A light orange-brown layer (07) was recorded beneath the sub-soil, which may represent a plough soil. This layer slightly overlapped an earlier layer (46). Layer 46 was present in the north-eastern end of Trench 1 measuring 10.50m in length and continuing beyond the trench end towards Car Dyke.

A single sherd of Nene Valley Grey ware pottery from a storage beaker was recovered during machining. This could not be attributed to a deposit.

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.40m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.30m.

Layer 07 was a mid orangey, greyish brown silty clay with occasional chalk inclusions. Very compacted with a maximum depth of 0.16m.

Layer 46 was a light grey chalky highly compacted layer with a maximum depth of 0.75m.

## 5.2 Trench 2

Trench 2 was 50.50m in length, orientated north-west to south-east located close to the “bend” of the Car Dyke (Figure 1). The trench was machined to a depth of 2.14m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). Beneath the subsoil, a layer was recorded (11), which sealed the only feature in the trench and did not extend beyond its eastern extent. One large feature was recorded within this trench (29) (plate 1, 2) (Figure 3 and 6) which may represent a pond, canal basin or channel and could possibly explain the turn and alignment of the Car Dyke. Although this feature was not fully revealed in plan, there was visible topographical evidence in the landscape that this was a very substantial feature up to 50m wide and located right up to the edge of the Car Dyke.

One sherd of Oxidised Course ware was recovered during machining. This could not be attributed to a deposit.

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.24m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.18m.

Layer 11 was a mid brownish orange silty clay with occasional small stone inclusions and flecks of charcoal and a maximum depth of 0.30m. This deposit contained several lumps of slag.

Pond(?) 29 was not fully revealed in plan and continued beyond the northern limit of Trench 2, had gradual sloping edges and a maximum depth of 1.40m recorded within this trench. Pond (?)29 was filled by:

Fill 12 was a very compacted mid grey brown silty clay with occasional charcoal flecks and contained a number of butchered horse remains. Maximum recorded depth was 0.66m

Fill 26 was a very compacted rich brown clay with rare chalk flecks and a maximum thickness of 0.28m

Fill 27 was a very compacted flecky grey clay layer with a small silt component and occasional chalk flecks and frequent plant roots. Maximum thickness, 0.42m. This deposit contained fragments of butchered horse bone.

Fill 28 was a very compacted, sticky blue-grey clay with no obvious inclusions. Primary fill with maximum thickness of 0.20m.

## 5.3 Trench 3

Trench 3 was 70.94m in length, orientated east to west, located approximately 12m south of the Car Dyke and running parallel to it (Figure 1). The trench was machined to a depth of 0.40m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). No archaeological features were recorded, however, a layer which appears to be re-deposited natural was identified throughout the

trench (Figure 5 section 8) and may be further evidence of an up-cast bank as seen in Trench 1, or evidence of its maintenance.

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.24m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.14m.

Layer 25 was a mixed mottled grey brown and light beige, chalky, silty clay with occasional chalk lumps, occasional small stones and moderate dark organic flecking. This layer was very compact and had a maximum thickness of 0.68m.

### Trenches 4-7

Trenches 4-7 were located to the south of Manor Drive (Figure 1). The purpose of these trenches, as outlined in the brief (Robinson, 2006), was to establish the extent and character of the Romano-British settlement site and its enclosure system and to establish the character and periphery of the putative manorial site. Trenches 4-6 were excavated initially, followed by trenches 6 and 7 as part of the contingency to address the issue of the establishment of the extent of the settlement recorded in the nearby excavation (BUFAU 1997, Figure 7).

#### 5.4 Trench 4

Trench 4 was 70m in length, orientated approximately north-west to south-east (Figure 1). The trench was machined to a depth of 0.55m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). An undated ditch (**15**) (plate 3) and posthole (**04**) were identified within this trench (Figure 4).

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.35m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.20m.

Posthole **04** was not fully revealed in plan and was located against the southern edge of the trench. It had vertical sloping edges and a flat base. This posthole appeared to have been cut from the level of the subsoil. Posthole **04** was filled by: Fill 03 was a compacted light grey brown clay with no obvious inclusions.

Ditch **15** was linear in plan, 0.50m wide x 0.17m deep and orientated approximately north-east to south-west. It had moderately steep sloping edges and a flat base (Figure 5 section 3). Ditch **15** was filled by:

Fill 14 was a very firm pale yellow brown, slightly silty clay with rare chalk and gravel inclusions and a maximum thickness of 0.17m.

## 5.5 Trench 5

Trench 5 was 97m in length, orientated approximately north-east to south-west (Figure 1). The trench was machined to a depth of 0.45m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). An undated ditch (**10**) and modern stakehole (**10**) were identified within this trench (Figure 4).

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.30m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.15m.

Ditch **10** was linear in plan, 0.50m wide x 0.20m deep, orientated approximately east to west and terminating to the east within the trench. It had gradual sloping edges and a flatish base. Ditch **10** was filled by:

Fill 09 was a very firm pale yellow brown, slightly silty clay with rare chalk and gravel inclusions and a maximum thickness of 0.20m.

Stakehole **06** circular in plan measuring 0.08m in diameter with moderate sloping edges and a rounded base. Stakehole **06** was filled by:

Fill 05 was a compacted light grey clay with inclusions of modern cardboard and plastic.

## 5.6 Trench 6

Trench 5 was 96.89m in length, orientated north to south (Figure 1). The trench was machined to a depth of 0.65m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). Four ditches were identified within this trench, located at its southern end (Figure 4), including two parallel ditches (plate 4).

One sherd of Shelly Ware pottery from a storage jar and one sherd of Nene Valley Colour Coated ware were recovered during machining. They could not be attributed to a deposit.

Layer 01 was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.50m

Layer 02 was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.13m.

Ditch **24** was linear in plan, 0.65m wide x 0.35m deep, orientated approximately east-north-east to west-south-west. This ditch had steep sloping edges and a narrow rounded base (Figure 5, section 7). Ditch **24** was filled by:

Fill 23 was a compact dark orangey grey silty clay with frequent charcoal inclusions and a maximum thickness of 0.35m.

Ditch **17** was slightly curvi-linear in plan, 0.40m wide x 0.07m deep, orientated approximately east-north-east to west-south-west. This ditch had moderate sloping edges and a flat base (Figure 5, section 4). Ditch **17** was filled by:

Fill 16 was a firm mid grey brown silty clay with rare gravel inclusions and a maximum thickness of 0.07m.

Ditch **20** was linear in plan, 0.90m wide x 0.50m deep, orientated approximately east to west. This ditch had moderately steep sloping edges and a narrow rounded base (Figure 5, section 5). Ditch **20** contained two fills:

Fill 19 (primary fill) was a very firm pale grey brown, silty clay with no obvious inclusions and a maximum thickness of 0.05m.

Fill 18 (upper fill) was a very firm pale grey brown, slightly silty clay with rare gravel inclusions and a maximum thickness of 0.45m.

Ditch **22** was linear in plan, 2.21m wide x 0.66m deep, orientated approximately east to west. This ditch had steep sloping edges and a concave base (Figure 5, section 6). Ditch **22** was filled by:

Fill 21 was a highly compacted dark orangey grey silty clay with occasional flint and small sub-angular stone inclusions and a maximum thickness of 0.66m. Several sherds of Nene Valley Colour Coated pottery from more than one jar were recovered from this deposit.

## 5.7 Trench 7

Trench 7 was 30.86m in length, orientated north, north-west to south, south-east (Figure 1). The trench was machined to a depth of 0.90m where the natural undisturbed geology was encountered. A layer of mid brown clayey topsoil (01) was recorded over a light yellowish brown subsoil (02). Three ditches were identified within this trench (Figure 4), on east to west and north to south orientations. One ditch (**43**) had evidence of two re-cuts (Plate 5).

Layer 44 (equivalent to 01) was a mid brown clayey topsoil layer with occasional small stones and frequent root disturbance. Maximum depth of 0.35m

Layer 45 (equivalent to 02) was a light yellowish brown silty clay subsoil layer, no obvious inclusions with a maximum depth of 0.20m.

Ditch **43** was linear in plan, 1.6m wide x 0.55m deep, orientated approximately east to west. This ditch had moderate sloping edges and a rounded base (Figure 5, section 13). Ditch **43** was filled by:

Fill 42 (primary fill) was a highly compacted pale orange brown slightly silty clay with occasional flint and angular stone inclusions and a maximum thickness of 0.25m.

Fill 41 (upper fill) was a firm mid grey brown silty clay with occasional charcoal flecks and a maximum thickness of 0.30m. Two small sherds of Shelly ware were recovered from this deposit as well as a single cattle tooth.

Ditch **43** was re-cut/truncated by ditch **40**.

Ditch **40** was linear in plan, 0.9m wide x 0.2m deep, orientated approximately east to west. This ditch had moderate sloping edges and a concave base (Figure 5, section 13). Ditch **40** was filled by:

Fill 39 was a firm dark brown grey silty clay with frequent charcoal and burnt stone inclusions and a maximum thickness of 0.20m.

Ditch **40** was truncated by ditch **38**.



Ditch **38** was linear in plan, 0.45m wide x 0.2m deep, orientated approximately east to west. This ditch had moderate sloping edges and a rounded base (5, section 13).

Ditch **38** was filled by:

Fill 37 was a firm dark brown grey silty clay with frequent charcoal and burnt stone inclusions and a maximum thickness of 0.20m. Large amounts of burnt clay were recovered from this deposit as well as cattle and sheep/goat molars

Ditch **34** was linear in plan, 0.9m wide x 0.10m deep, orientated approximately east to west. This ditch had gradual sloping edges and a flat base (Figure 5, section 12).

Ditch **34** was filled by:

Fill 33 was a compact mid grey brown silty clay with occasional flint inclusions and a maximum thickness of 0.10m.

Parallel and 0.15m apart from ditch **34** was ditch **36**.

Ditch **36** was linear in plan, 0.7m wide x 0.08m deep, orientated approximately east to west. This ditch had gradual sloping edges and a flat base (Figure 5, section 12).

Ditch **36** was filled by:

Fill 35 was a compact mid orangey grey brown sandy clay with occasional charcoal fleck inclusions and a maximum thickness of 0.08 m.

Ditch **32** was linear in plan, 1.2m wide x 0.50m deep, orientated approximately north to south. This ditch had steep sloping edges and a flat base (Figure 5, section 11).

Ditch **32** was filled by:

Fill 31 (primary fill) was a compact dark greyish orangey brown sandy clay with occasional flint and charcoal fleck inclusions and a maximum thickness of 0.16m.

Fill 30 (upper fill) was a compact dark orangey grey brown sandy clay with occasional charcoal fleck inclusions and a maximum thickness of 0.35m. Sherds of Nene Valley Grey-Ware, Nene Valley Colour-Coated Ware and 1 sherd of Sandy-Ware were all recovered from this deposit as well as a butchered horse radius along with small portion of antler but this could not be identified to species.

## 6 Discussion

### 6.1 Trenches 1-3, North of Manor Drive

The three trenches north of Manor Drive (Figure 6) provided evidence of remains of archaeological significance.

The possible up-cast bank identified in Trench 1 (layer 46) and Trench 3 (layer 25) demonstrates that remains of the Car Dykes construction survive within the development area. This investigation has also shown that although not visible at ground level, that the bank can survive up to 25m from the Dyke itself.

Investigation carried out by Northamptonshire Archaeology (Foard-Colby) also identified clayey soil deposits in the northern end of their Trenches 1 and 3 (Figure 6) which have been interpreted as remains of a bank or evidence of its re-excavation. They also identified what is believed to be a buried soil, however no evidence of this was picked up in this phase of evaluation. The Northamptonshire evaluation did not pick up any evidence of the bank in their Trench 2, further suggesting

that the bank material does not survive or was ever present more than 30m from the dyke itself.

The pollen analysis of sediments from Trench 3 (Appendix 4) casts some doubts on the interpretation of the existence of a surviving up-cast bank. Study of the pollen assemblage has suggested that it is more likely that this sample represents the Late Glacial or early Holocene. However, as a result of the “main sum being low, caution needs to be exercised when interpreting a possible date”. Further excavation and analysis of a bigger sample may help to obtain a clearer understanding of date and function.

There was no definitive evidence to suggest why the Car Dyke turns so abruptly. It may have been cut this way to follow the natural topography or a geological feature, such as a natural watercourse.

It should also be considered, that the Car Dyke is not totally straight, and bends and deviates in other locations (Plate 6).

The large feature recorded in Trench 2 (**29**) may also be associated with the Car Dyke and influenced its deviation. Although it was not fully revealed in plan, there was visible topographical evidence in the landscape to suggest that this was a substantial feature continuing north to the Car Dyke bend and up to 25m in diameter. Although it is located on the “turn” of the Dyke, its relationship to it could not be established without intrusive investigation, however some suggestions of its function are a natural depression, pond feature or more directly associated with the Dyke, a “docking bay” or turning place. Another suggestion is that feature **29** provides evidence of an original cut of the Car Dyke and following drainage, a post-Roman re-cut has deviated its route.

No datable evidence was recovered from any deposits within this feature. The upper deposit (12), however contained moderate quantities bone from a butchered horse. The slag found in context (11) could suggest waterside ironworking/processing, however the amount recovered at this stage was considered to be undiagnostic (Appendix 6).

Pollen analysis of sediments from Trench 2 was also undertaken to gain more of an understanding of the function and date of this feature (Appendix 4). A monolith tin was used to take a sample of contexts 26 and 27. Analysis shows that there was a high proportion of hazel, grass and ferns. The presence of sedge and willow suggested that this was a “waters edge” location. It was also suggested that if the feature represents a pond, it was probably rather shallow, or freshly made.

Other identified remains indicated pastures and meadows, arable fields and the presence of cereal pollen indicates arable activity close by.

There is also some evidence for hazel scrub and heathland. The presence of willow and alder suggest damp woodland nearby, but the presence of yellow water-lily and water milfoil show that the pool or pond had water up to two metres depth.

This analysis supports the theory that feature [29] was a large water holding feature. It was established on site that the gradient of the edges of the feature suggested that it was relatively shallow, this was supported by the pollen analysis. The study of the pollen also suggests that this feature was post-clearance in date, probably Iron Age-Roman. This would fit in with the suggestion that this feature was perhaps associated with the Car Dyke. However the pollen data could potentially be earlier.

The analysis from the pollen samples suggests that the immediate landscape may have been heath, scrub or meadowland. There was no evidence from any of the environmental analysis that there was any industrial activity close-by. In light of this, it is likely that the slag material found in the upper layers of [29] was deposited when the feature had gone long out of use, and may have been a discrete isolated waste dump.

## **6.2 Trenches 4-7, South of Manor Drive**

Trenches 4, 5 and 6 to the south of Manor Drive (Figure 7) revealed very few archaeological features, however additional trench 7 has identified a possible continuation of the activity previously investigated within an area thought to be void of archaeology. This adds to our understanding of the limits of the settlement identified by previous excavation (BUFAU 1997). The orientation of the ditches revealed in trench 7 match the north-south and east-west aligned layout of the enclosure system recorded in the excavation. The pottery recovered from the ditches is also of contemporary date to that found in the excavation (2nd-4th century), providing further evidence to suggest that this is possibly an out-lying field or holding area associated and with the excavated system.

## **7 Conclusions**

The evaluation at Manor Drive has revealed two very different areas of significant remains. The objectives outlined in the brief have all been addressed.

- The extent of the Romano British system has been established by the absence of archaeological features relating to it in trenches to the north and west. However, Trench 7 which contained several ditches on the same lay-out has identified another “zone” of activity the extent of which would benefit from being investigated further.

- The relationship of the Romano-British enclosure system with Car Dyke is difficult to establish. The Car Dyke nearby is seen as a distinctive boundary to different areas of land use. The settlement site did not come into existence until after the dykes' construction and appears to have been in use until the 4th century when the Dyke is thought to have ceased to exist as a canal. This therefore suggests that the Dyke did influence settlement, existing contemporarily with each other.
- The characterisation of Car Dyke's close environs has been addressed in Trenches 1-3. There was clear evidence of a south bank in trenches 1 and 3, whilst Trench 2 identified what may have been a large cut feature for canal-side activity. The presence of butchered horse remains supports this suggestion. However, a contour survey would greatly assist with interpretations and suggestions of how features in trenches 1-3 relate to the Car Dyke and immediate landscape
- No evidence was found in the evaluation of a manorial site, nor was there any evidence of the deserted medieval settlement of Cathwaite.

Recommendations for any future work based upon this report will be made by the County Archaeology Office.

## Acknowledgements

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The brief for archaeological works was written by Ben Robinson, who visited the site and monitored the evaluation. Thanks also to Ben for his advice and guidance during the work.

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## Appendix 1: Context Summary

| Context | Cut       | Trench No | Category | Feature Type | Function   | L (m)  | W (m) | D (m) | Colour                     | Fine component | Coarse component                        | Compaction     | Shape in Plan | Side             | Break of Slope | Orientation | Base     |
|---------|-----------|-----------|----------|--------------|------------|--------|-------|-------|----------------------------|----------------|---|----------------|---------------|------------------|----------------|-------------|----------|
| 1       |           | all       | layer    | topsoil      |            |        |       |       |                            |                |   |                |               |                  |                |             |          |
| 2       |           | all       | layer    | subsoil      |            |        |       |       |                            |                |   |                |               |                  |                |             |          |
| 3       | 4         | 4         | fill     | posthole     | disuse     |        |       |       | Light grey-brown           | Silty clay     | none                                    | moderate       |               |                  |                |             |          |
| 4       |           | 4         | cut      | posthole     | structural | 0.2+   | 0.28  | 0.25  |                            |                |   |                | circular      | Vertical         | Abrupt         | N/a         | flat     |
| 5       | 6         | 5         | fill     | posthole     | disuse     |        |       |       | mid grey brown             | Silty clay     | none                                    | firm           |               | Steep sloping    |                |             |          |
| 6       |           | 5         | cut      | posthole     | structural | 0.2    | 0.16  | 0.08  |                            |                |   |                | circular      |                  | moderate       | N/a         | rounded  |
| 7       |           | 1         | Layer    | Bank?        | Use        | c.40 m | 2.2+  | 0.16  | mid orangey, greyish brown | Silty clay     | none                                    | firm           |               |                  |                |             |          |
| 8       | cancelled |           |          |              |            |        |       |       |                            |                |   |                |               |                  |                |             |          |
| 9       | 10        | 5         | Fill     | Ditch        | Disuse     |        |       |       |                            | Silty clay     | Occ chalk and charcoal flecks           | Very firm      |               |                  |                |             |          |
| 10      |           | 5         | cut      | ditch        | Enclosure? | 1.0+   | 0.50  | 0.30  | Light grey brown           |                |   |                | linear        | Moderate sloping | moderate       | E-W         | rounded  |
| 11      |           | 2         | Layer    | Plough soil? | Use        | 50+    | 2.2+  |       | Mid brownish orange        | Silty clay     | Occ small stones and flecks of charcoal | Very compact   |               |                  |                |             |          |
| 12      | 29        | 2         | Fill     | Pond?        | Disuse     |        |       | 1.4   | mid grey brown             | silty clay     | occ charcoal flecks, occ animal bone    | Very compacted |               |                  |                |             |          |
| 13      | cancelled |           |          |              |            |        |       |       |                            |                |   |                |               |                  |                |             |          |
| 14      | 15        | 4         | Fill     | Ditch        | Disuse     |        |       |       | Light yellow brown         | Silty clay     | Rare chalk and gravel                   | Very firm      |               |                  |                |             |          |
| 15      |           | 4         | cut      | ditch        | Enclosure? | 1.0    | 0.50  | 0.17  |                            |                |   |                | linear        | Moderate slope   | sharp          | NE-SW       | flattish |

| Context | Cut | Trench No | Category | Feature Type | Function   | L (m) | W (m) | D (m) | Colour                                   | Fine component      | Coarse component  | Compaction     | Shape in Plan | Side     | Break of Slope | Orientation | Base           |
|---------|-----|-----------|----------|--------------|------------|-------|-------|-------|--|---------------------|---|----------------|---------------|----------|----------------|-------------|----------------|
| 16      | 17  | 6         | Fill     | Ditch        | Disuse     |       |       | 0.07  | mid grey brown                           | Silty clay          | Rare gravel inclusions  | firm           |               |          |                |             |                |
| 17      |     | 6         | cut      | ditch        | Enclosure? | 1+    | 0.4   | 0.07  |  | Slightly silty clay | Rare gravel inclusions  | Very firm      | curvilinear   | moderate | moderate       | ENE-WSW     | flat           |
| 18      | 20  | 6         | Fill     | Ditch        | Disuse     |       |       | 0.45  | Pale yellow brown                        |                     |   |                |               |          |                |             |                |
| 19      | 20  | 6         | Fill     | Ditch        | Disuse     |       |       | 0.05  | Pale yellow brown                        | Silty clay          | None obvious  | Very firm      |               |          |                |             |                |
| 20      |     | 6         | Cut      | Ditch        | Enclosure  | 1+    | 0.9   | 0.5   |  |                     |   |                | Linear        | Moderate | Moderate       | E_W         | rounded        |
| 21      | 22  | 6         | Fill     | Ditch        | Disuse     |       |       | 0.66  | Dark orangey grey                        | Silty clay          | occ flint and small sub-angular stones                          | Very compacted |               |          |                |             |                |
| 22      |     | 6         | cut      | ditch        | enclosure  | 1+    | 2.21  | 0.66  |  |                     |   |                | linear        | moderate | abrupt         | E_W         | Concave        |
| 23      | 24  | 6         | Fill     | Ditch        | Disuse     |       |       |       | Dark orangey grey                        | Silty clay          | Frequent charcoal flecks  | compact        |               |          |                |             |                |
| 24      |     | 6         | cut      | ditch        | enclosure  | 1+    | 0.65  | 0.35  |  |                     |   |                | linear        | Steep    | sharp          | ENE-WSW     | Narrow rounded |
| 25      |     | 3         | Layer    | Bank?        | Use        | 70+   | 2.2+  | 0.68  | Mixed mottled grey brown and light beige | Chalky, silty clay  | occ chalk lumps, occ small stones and mod dark organic flecking | Very compact   |               |          |                |             |                |
| 26      | 29  | 2         | Fill     | Pond?        | Disuse     |       |       | 0.28  | Rich brown                               | clay                | Occ chalk flecks  | Very compact   |               |          |                |             |                |
| 27      | 29  | 2         | fill     | Pond?        | disuse     |       |       | 0.42  | Flecky grey                              | Slightly silty clay | Occ chalk flecks, freq plant roots                              | Very compact   |               |          |                |             |                |
| 28      | 29  | 2         | fill     | Pond?        | disuse     |       |       | 0.20  | Blue grey                                | clay                | None obvious  | Very compact   |               |          |                |             |                |
| 29      |     | 2         | cut      | Pond?        | Use        | 25+   | 2.2+  | 1.48  |  |                     |   |                | Sub-circular  | moderate | gradual        | n/a         | Unknown        |
| 30      | 32  | 7         | fill     | ditch        | disuse     |       |       | 0.35  | Dark orange grey                         | Sandy clay          | Occ charcoal  | compact        |               |          |                |             |                |
| 31      | 32  | 7         | fill     | ditch        | disuse     |       |       | 0.16  | Dark greyish orange                      | Sandy clay          | Occ flint and charcoal  | Very compact   |               |          |                |             |                |
| 32      |     | 7         | cut      | ditch        | enclosure  | 1+    | 1.2   | 0.5   |  |                     |   |                | linear        | steep    | sharp          | N-S         | Flat           |



| Context | Cut       | Trench No | Category | Feature Type | Function  | L (m)  | W (m) | D (m) | Colour            | Fine component | Coarse component                       | Compaction       | Shape in Plan | Side     | Break of Slope | Orientation | Base    |
|---------|-----------|-----------|----------|--------------|-----------|--------|-------|-------|-------------------|----------------|--|------------------|---------------|----------|----------------|-------------|---------|
| 33      | 34        | 7         | Fill     | Ditch        | Disuse    |        |       | 0.10  | Mid grey brown    | Silty clay     | Occ flint stones                       | compact          |               |          |                |             |         |
| 34      |           | 7         | cut      | ditch        | enclosure | 1+     | 0.90  | 0.10  |                   |                |  |                  | linear        | gradual  | gradual        | E-W         | flat    |
| 35      | 36        | 7         | fill     | Ditch        | Disuse    |        |       | 0.08  | Mid orangey grey  | Sandy clay     | Occ charcoal flecks                    | compact          |               |          |                |             |         |
| 36      |           | 7         | cut      | ditch        | enclosure | 1+     | 0.70  | 0.08  |                   |                |  |                  | linear        | gradual  | gradual        | E-W         | Flat    |
| 37      | 38        | 7         | Fill     | Ditch        | Disuse    |        |       | 0.20  | Dark brown grey   | Silty clay     | Freq charcoal flecks, freq burnt stone | firm             |               |          |                |             |         |
| 38      |           | 7         | cut      | ditch        | enclosure | 1+     | 0.45  | 0.20  |                   |                |  |                  | linear        | steep    | abrupt         | E-W         | rounded |
| 39      | 40        | 7         | Fill     | ditch        | Disuse    |        |       | 0.20  | Dark brown grey   | Silty clay     | Freq charcoal flecks, freq burnt stone | firm             |               |          |                |             |         |
| 40      |           | 7         | cut      | ditch        | enclosure | 1+     | 0.9   | 0.20  |                   |                |  |                  | linear        | moderate | moderate       | E-W         | concave |
| 41      | 43        | 7         | Fill     | Ditch        | Disuse    |        |       | 0.3   | Mid grey brown    | Silty clay     | Occ charcoal flecks                    | firm             |               |          |                |             |         |
| 42      | 43        | 7         | Fill     | Ditch        | Disuse    |        |       | 0.25  | Pale orange brown | Silty clay     | Occ flint and angular stones           | Highly compacted |               |          |                |             |         |
| 43      |           | 7         | cut      | ditch        | enclosure | 1+     | 1.6   | 0.55  |                   |                |  |                  | linear        | moderate | moderate       | E-W         | Rounded |
| 44      | Cancelled |           |          |              |           |        |       |       |                   |                |  |                  |               |          |                |             |         |
| 45      | Cancelled |           |          |              |           |        |       |       |                   |                |  |                  |               |          |                |             |         |
| 46      |           | 1         | layer    | Bank?        | use       | 10.50+ | 2.2+  | 0.75  | Light grey        | Chalk / clay   | n/a                                    | Highly compacted |               |          |                |             |         |

## Appendix 2: Finds Summary

| Context | Material | Object Name               | Weight in kg | Comments      |
|---------|----------|---------------------------|--------------|---------------|
| 1       |          |                           | 0.00         |               |
| 11      | Slag     |                           | 0.97         |               |
| 11      |          |                           | 0.01         | Coal          |
| 12      | Bone     | Bone                      | 0.52         |               |
| 18      | Shell    |                           | 0.03         |               |
| 18      | Shell    |                           | 0.00         | Less than 1g. |
| 21      | Ceramic  | Vessel                    | 0.11         |               |
| 21      | Bone     | Bone                      | 0.07         |               |
| 21      | Bone     | Bone                      | 0.19         |               |
| 21      | Flint    |                           | 0.01         |               |
| 21      | Ceramic  | Ceramic Building Material | 0.13         |               |
| 21      | Stone    | Mill stone                | 0.70         | SF 1.         |
| 27      | Bone     | Bone                      | 0.14         |               |
| 30      | Ceramic  | Fired clay                | 0.00         |               |
| 30      | Bone     | Bone                      | 0.23         |               |
| 30      | Antler   | Bone                      | 0.02         |               |
| 30      | Ceramic  | Vessel                    | 0.15         |               |
| 30      | Stone    | Mill stone                | 0.58         | SF 2.         |
| 35      | Bone     | Bone                      | 0.05         |               |
| 37      | Ceramic  | Vessel                    | 0.10         |               |
| 37      | Bone     | Bone                      | 0.08         |               |
| 37      | Ceramic  | Fired clay                | 0.00         |               |
| 37      | Ceramic  | Fired clay                | 0.42         |               |
| 41      | Ceramic  | Vessel                    | 0.00         |               |
| 41      | Bone     | Bone                      | 0.03         |               |
| 41      | Ceramic  | Fired clay                | 0.17         |               |
| 42      | Bone     | Bone                      | 0.01         |               |
| 99999   | Ceramic  | Vessel                    | 0.01         | Trench 1      |
| 99999   | Ceramic  | Vessel                    | 0.01         | Trench 2      |
| 99999   | Ceramic  | Vessel                    | 0.03         | Trench 6      |

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## **Appendix 3: Environmental Appraisal: Interim statement**

by Rachel Fosberry

### **1 Introduction and Methods**

Eighteen bulk samples were taken from features within the evaluated areas of the site in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations.

The majority of the samples were comprised of heavy boulder clay that presented difficulty in processing. Each sample was soaked in a solution of Decon-90, which is a deflocculant that is extremely effective in breaking down clay soils. This process can take several weeks and, as early feedback was required, it was decided that those samples that had a lesser clay content would be processed as a priority.

Ten litres of samples 3,6,14,15,16,17 and 18 were processed by tank flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.5mm nylon mesh and the residue was washed through a 1mm sieve. Both flot and residue were allowed to air dry. Any artefacts present were noted and reintegrated with the hand-excavated finds. The residues of Samples 14 and 15 retained substantial amounts of charcoal showing that flotation was not successful. Once these residues have dried, a second flotation will be performed in order to assess these charred remains. The flot was examined under a binocular microscope at x16 magnification.

### **2 Results**

Preservation of charred plant remains was very poor, with no survival except for small (<5mm) fragments of wood charcoal. These occurred in Samples 14 and 15, the remaining five samples being completely devoid of charred plant matter.

*All of the flots contained substantial amounts of intrusive root material accompanied by a small number of apparently modern seeds.*

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### **3 Conclusions and Recommendations**

Further work will hopefully produce additional results but the general lack of plant remains from these initial samples suggests that conditions at the site do not favour preservation.

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## **Appendix 4: Pollen Analysis of Sediments from Carr Dyke, Manor Drive, Paston, Peterborough (PETMWP06), Cambridgeshire**

By Chris Rolfe BSc.

### **1. Introduction**

This report presents the results of pollen analyses from four samples of sediment taken from two archaeological trenches (Section 8 Trench 3 and Section 9 Trench 2) at Carr Dyke, Paston, Peterborough (PETMWP06), Cambridgeshire. Section 8 Trench 3 demonstrates a possible up-cast bank and evidence of the Carr Dyke's construction. It appears there is no evidence of this bank in Trench 2. The large feature recorded in Section 9 Trench 2 has been suggested to be a natural depression, pond feature, or docking bay.

Section 8 Trench 3 was sampled using a 30cm long monolith tin, which recovered the potential bank material (context 25). This sample comprised a grey brown silty clay with occasional gravel. Due to the low potential for pollen preservation within this context, a single sample was taken at 15cm.

Section 9 Trench 2 was sampled using a 50cm long monolith, which recovered the fill material (contexts 26 and 27). Context 27 was recovered from 0cm to 30cm., with 30cm to 50cm recovering context 26. Context 27 comprised a mottled grey silty clay with occasional chalk flecks and organic fragments. Context 26 comprised a dark brown clay. From the monolith for Section 9 Trench 2, two pollen samples were taken from context 27 at 5cm and 25cm. For context 26 a single sample was taken at 45cm.

The four samples were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereomicroscope. The percentage pollen data from these 4 samples is presented in Appendix 1.

### **2. Pollen Analyses**

Pollen concentrations varied widely between 13,001 and 52,713 grains per ml. Assessment counts of pollen from a single slide were made at x400 with a high power stereomicroscope. For most pollen samples, the preservation of the fossil pollen grains (palynomorphs) was variable and rather poor. For the sample taken from the middle (15cm) of the monolith at Section 8 Trench 3 a pollen count of 47 was obtained. For the three samples from the monolith for Section 9 Trench 2 pollen concentration and preservation decreased upwards through the section, from 232 grains at 5cm from the base of the monolith, 121 grains in the middle of the monolith (25cm from base of monolith tin),

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and 84 grains at 45cm from the base of the monolith. It should be noted that for statistically reliable data, pollen sums of at least 300 are generally recommended. Therefore care should be taken in the interpretation of these pollen assessment results.

#### *Section 8 Trench 3*

The sample from 15cm produced a rather poor pollen signal with a main sum of only 47 pollen grains counted for the slide, giving a concentration of 14,762 pollen grains per ml. Arboreal taxa are represented by birch (*Betula*), pine (*Pinus*) and spruce (*Picea*). The sample from 15cm was dominated by spores of clubmoss (*Lycopodium*) (25.5%), with ferns (31.9%) and polypody ferns (*Polypodium*) (12.8%). Also present were the pollen of grass (Poaceae) (4.3%), and herbs including thistle (*Cirsium*) (8.5%) and strapwort plantain (*Plantago lanceolata*) (4.3%).

#### *Section 9 Trench 2*

The basal sample from 5cm was dominated with hazel (*Corylus*) (24.1%), ferns (21.6%), grass (16.4%) and thistles (11.6%). Arboreal taxa included pine, oak (*Quercus*), alder (*Alnus*) (2.2%), ash (*Fraxinus*), spruce, willow (*Salix*), privet (*Ligustrum*), ivy (*Hedera*) and juniper (*Juniperus*). No cereal pollen was present. Herb pollen included strapwort plantain (3.4%) and members of the goosefoot family (Chenopodiaceae) (3.4%). Pollen of ling heather (*Calluna*) was observed, and aquatic plants are represented by bur-reed (*Sparganium*).

The sample from 25cm was dominated by thistles (38.0%), grass (15.7%) with other herbs including the goosefoot family (11.6%), strapwort plantain (8.3%) and meadowsweet (*Filipendula*). Arboreal taxa included pine, oak, lime (*Tilia*), alder, spruce, willow and hazel (*Corylus*). This sample contained Cereal pollen at 3.3%.

The top sample from 45cm was dominated by herbs such as thistles (20.2%), goosefoot (26.2%) and grass (14.3%). Arboreal taxa included hazel (6.0%), alder, pine, birch, lime, spruce and willow. Grass steadily declined gradually towards the top of the sequence. Pollen of members of the heather family (Ericaceae) was also counted. The obligate aquatics present were water milfoil (*Myriophyllum*) (1.2%) and yellow water-lily (*Nymphaea*) (2.4%).

### **3. Discussion & Conclusions**

The pollen assemblages from these two sequences are superficially rather similar with grass, thistle and fern dominated spectra, and arboreal taxa such as pine and spruce. However, differences exist between the two sections, which indicate very different palaeoenvironments and ages. The elevated proportions of fern spores and resistant Asteraceae pollen should be noted and may suggest that the sediment particularly in Section 8 Trench 3 and the base of Section 9 Trench 2 has been partly oxidised by soil processes.

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It appears that Context 25 Section 8 Trench 3 indicates an acid, damp environment, possibly from the beginning of the Holocene. The presence of boreal woodland with birch, spruce and pine implies an early Mesolithic or late Upper Palaeolithic date. However, such an assemblage would be possible today in a plantation, for example beneath Sitka Spruce in Thetford Forest, Norfolk. From the pollen assemblage it is more likely that this sample represents the Late Glacial or early Holocene. This interpretation is clearly at odds with the original idea that Section 8 Trench 3 represented possible up-cast bank and evidence of the Carr Dyke's construction. However, as a result of the main sum being low, caution needs to be exercised when interpreting a possible date, and especially as only one level from the section has been analysed.

The samples from Section 9 Trench 2 have a potential problem with post depositional modification of the pollen signal.

At the base of the sequence, Section 9 Trench 2 has a high proportion of hazel, grass and ferns, and soil disturbance indicated by strapwort plantain. When interpreted alone, this sample could be interpreted as either pre-clearance (Mesolithic) or post clearance. Considered with the rest of the sequence, the most likely interpretation is of heathland, scrubland and hedgerows with hazel coppice, privet, ivy and juniper. There are apparently no cereals. Meadowland with sedge and willow growing on the water's edge are also indicated. Since the only obligate aquatic taxon present is the emergent plant bur-reed, if the feature represents a pond, it was probably rather shallow, or freshly made.

In the middle of the section, post-depositional modification (oxidation) has occurred, indicated by the strong presence of the resistant pollen of the Aster family with a strong signal of 38% of the main sum of pollen. Members of the goosefoot family are also abundant, and this plant is typical of pastures and meadows disturbed by cattle, and as a weed of arable fields. The presence of cereal pollen indicates arable activity close by. The reduction in ferns suggests that the land is drying out slightly, compared to the base of the sequence.

At the top of Section 9, post-depositional modification is still evident with the large proportion of Asteraceae. Meadow and arable land is suggested by the presence of cereals, weed species and disturbance indicators. There is also some evidence for hazel scrub and heathland. Willow and alder suggest damp woodland nearby, but the presence of yellow water-lily and water milfoil show that the pool or pond had water up to two metres depth.

From the base to the middle of the sequence the environment appears to change from damp pastoral meadowland with hazel scrub, to a drier, more open arable landscape. At the top of the sequence, there is continued arable activity, accompanied by an increase in scrub and damp woodland, and a local raising of water levels.

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From the limited number of samples analysed and the low pollen counts obtained it is very difficult to give exact dates for the sections studied. From the evidence obtained from Section 9 Trench 2 it is suggested that the sequence is post-clearance, and probably Iron Age – Roman, although the pollen data could easily fit anywhere within the late Bronze Age, Iron Age or Roman periods.



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## Appendix 5: Faunal Remains

by Chris Faine

The extremely small assemblage consisted of 44 fragments, with 14 elements identifiable to species (32% of the sample). All unidentifiable elements were classed as medium/large mammals. Context **12** contained a number of butchered horse remains, including a calcaneus, metapodial and fibula, in addition to an intact 1<sup>st</sup> phalange. Context **27** also contained fragments of butchered horse metapodial. Context **37** primarily consisted of unidentifiable burnt fragments, however, portions of cattle and sheep/goat molars could be identified. A single cattle tooth was also identified in context **41**.

Context **30** contained a butchered horse radius along with small portion of antler but this could not be identified to species. Context **21** contained a single horse and cattle molar along with a butchered cattle metacarpal and 2<sup>nd</sup> phalange.

Due to the extremely small sample size no further information can be drawn from this assemblage, apart from the fact that it appears to represent butchery waste of some description.

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

## **Appendix 6: Slag Assessment from PET MWP06**

by Tom Eley


The archaeological evaluation at PETMWP06 recovered 979g of undiagnostic slag from context (11). It was dark grey and had a partially molten, porous, viscous morphology containing small fragments of stone, hearth lining and charcoal remnants. Iron working slag comes from two main processes: iron smelting, which can have a ropey or flowed texture and iron smithing, which has a blocky shape and rusty exterior. This assemblage has intermediary characteristics and is not diagnostic of either process.

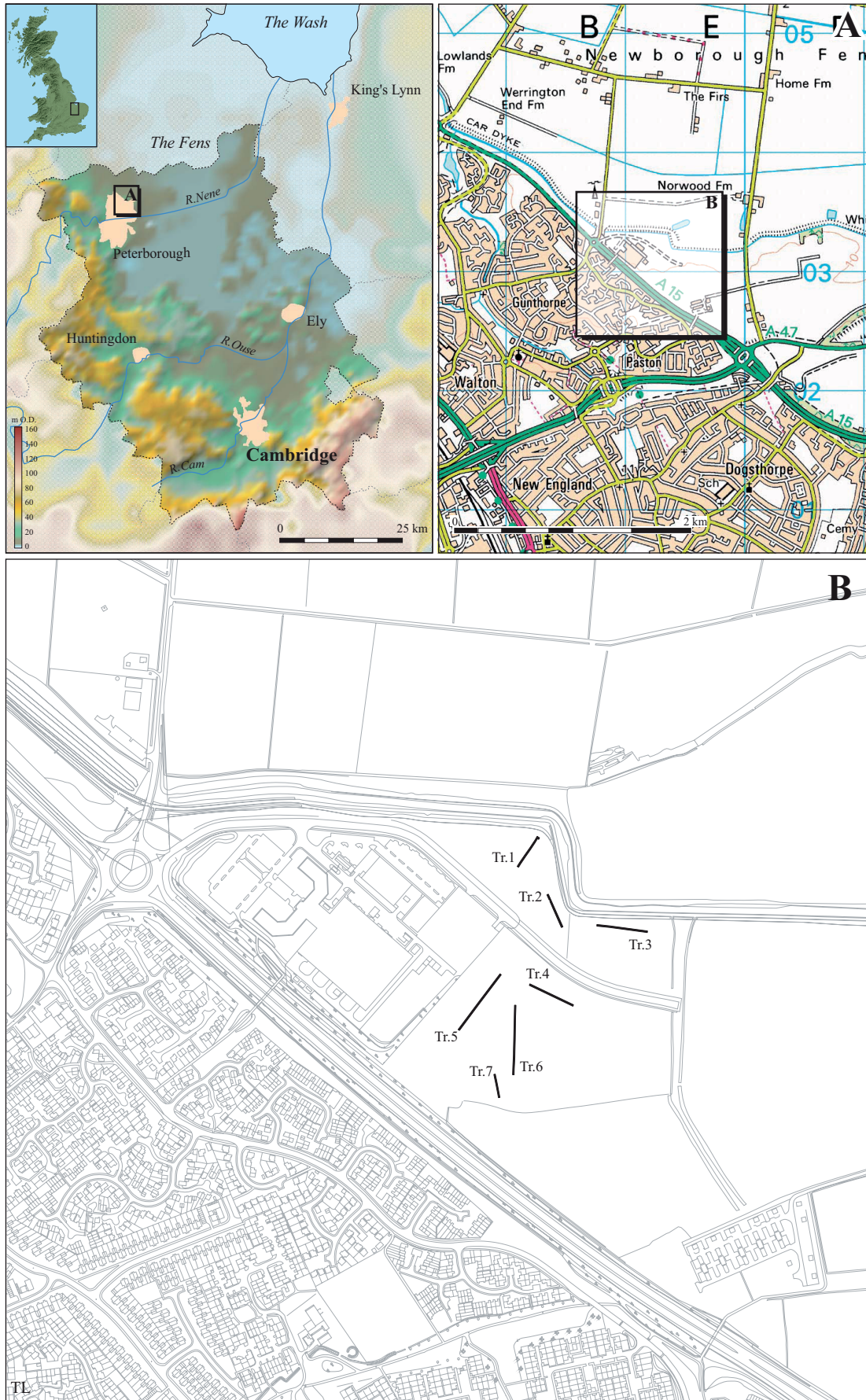
## Drawing Conventions

### Plans

|                        |   |
|------------------------|---|
| Limit of Excavation    | _____   |
| Deposit - Conjectured  | -----   |
| Natural Features       | _____   |
| Sondages/Machine Strip | -----   |
| Intrusion/Truncation   | -----   |
| Illustrated Section    | <u>S.14</u>   |
| Archaeological Deposit |  |
| Excavated Slot         |  |
| Natural Feature        |  |
| Cut Number             | <b>118</b>  |

### Sections

|   |   |
|---|---|
| Limit of Excavation                           | -----   |
| Cut   | _____   |
| Cut-Conjectured                               | -----   |
| Deposit Horizon                               | _____   |
| Deposit Horizon - Conjectured                 | -----   |
| Intrusion/Truncation                          | -----   |
| Top Surface/Top of Natural                    | _____   |
| Break in Section/<br>Limit of Section Drawing | -----   |
| Cut Number                                    | <b>118</b>  |
| Deposit Number                                | 117   |
| Ordnance Datum                                | 18.45m OD<br>X  |
| Inclusions                                    |  |



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Figure 1 Location of the trenches

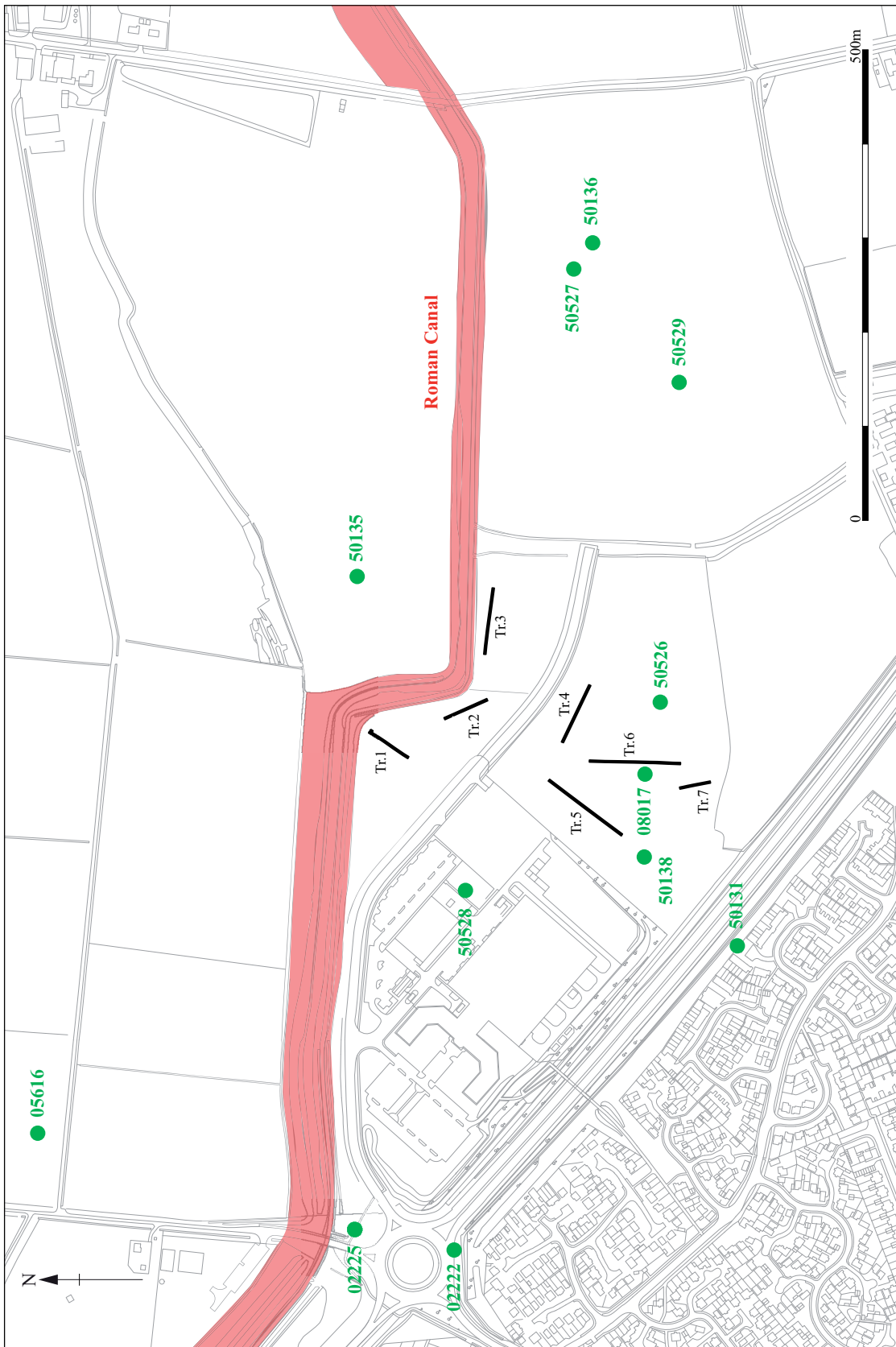


Figure 2: Plan showing HER entry locations

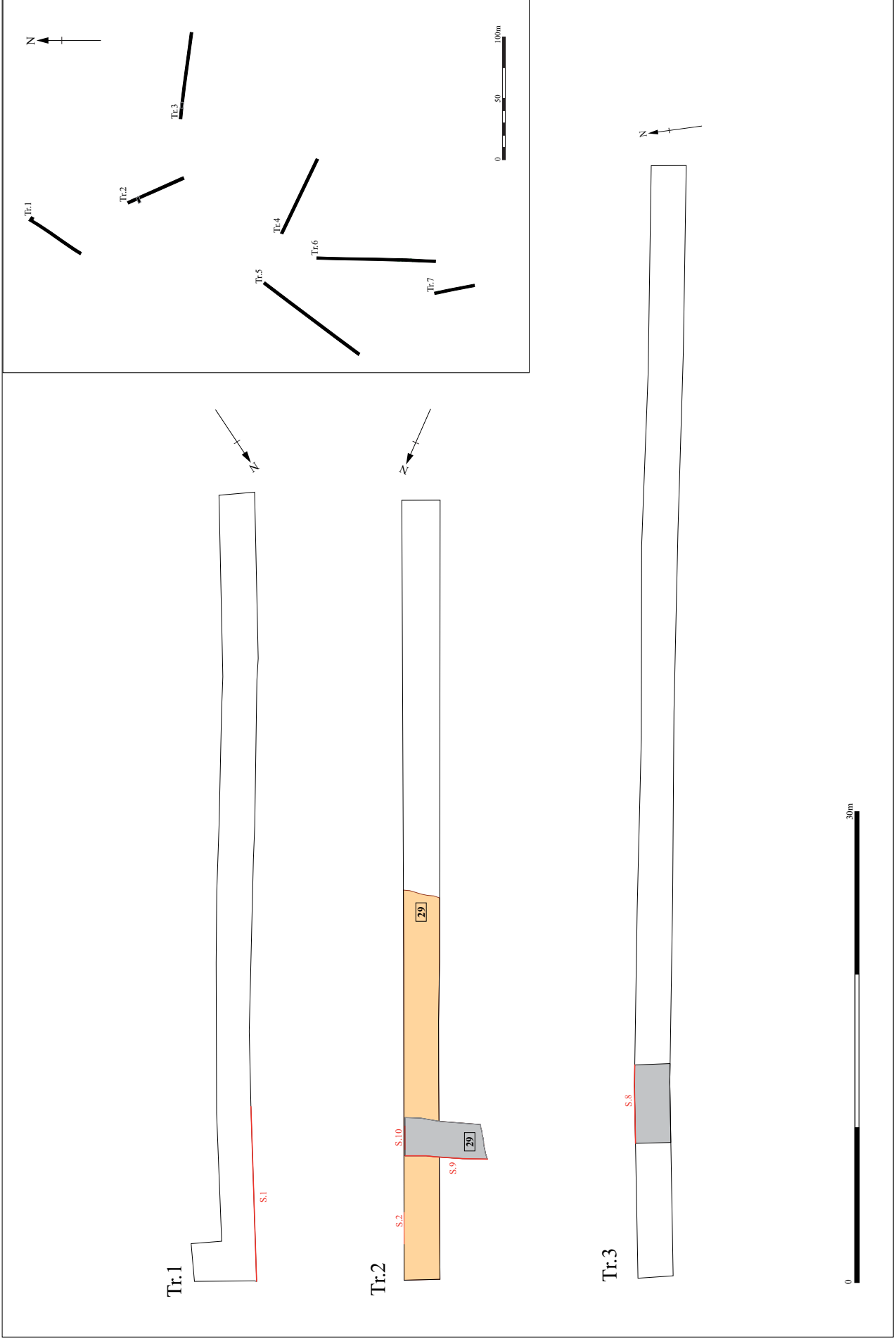


Figure 3: Trench plans (trenches 1-3)

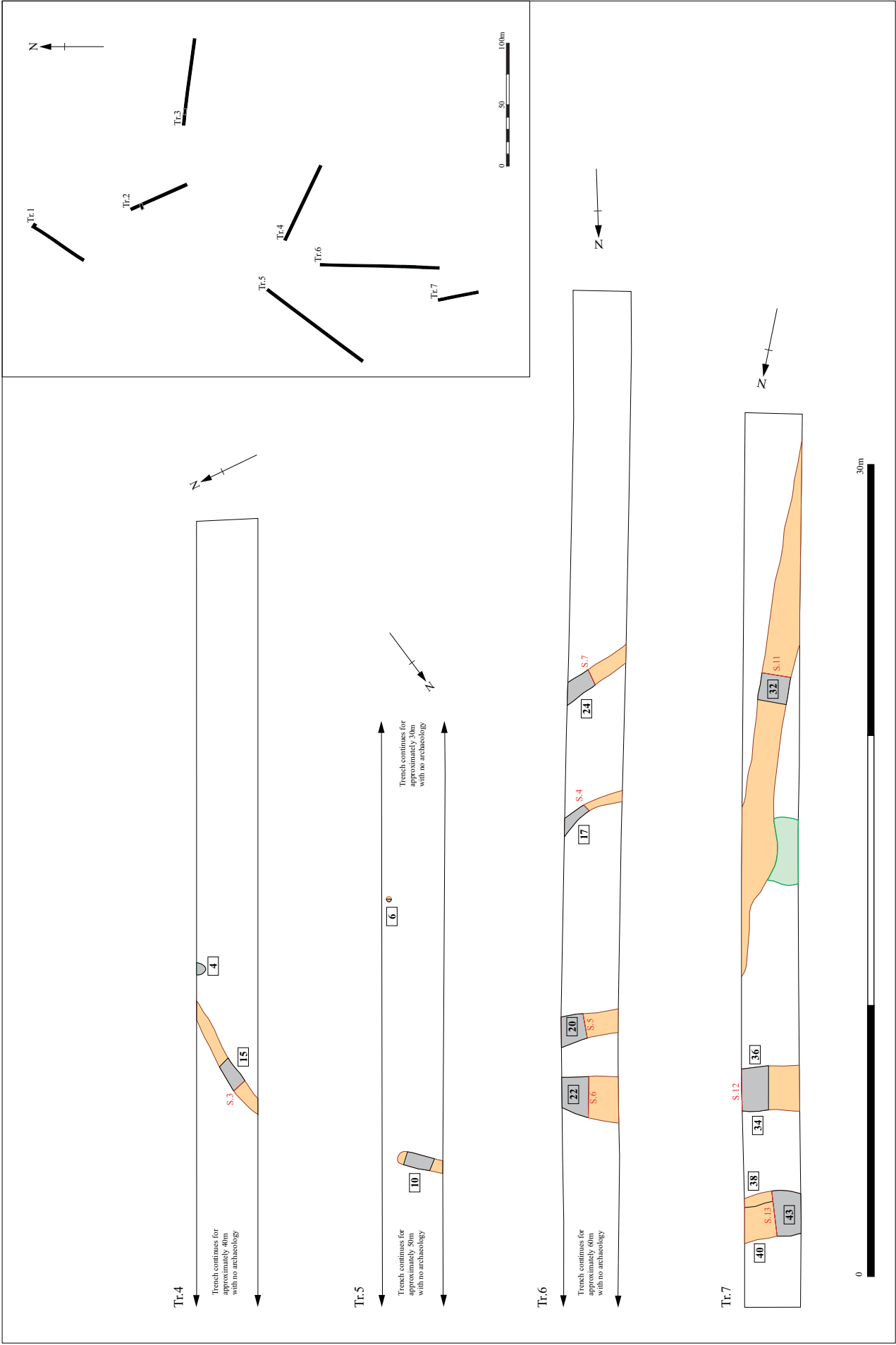


Figure 4: Trench plans (4-7)

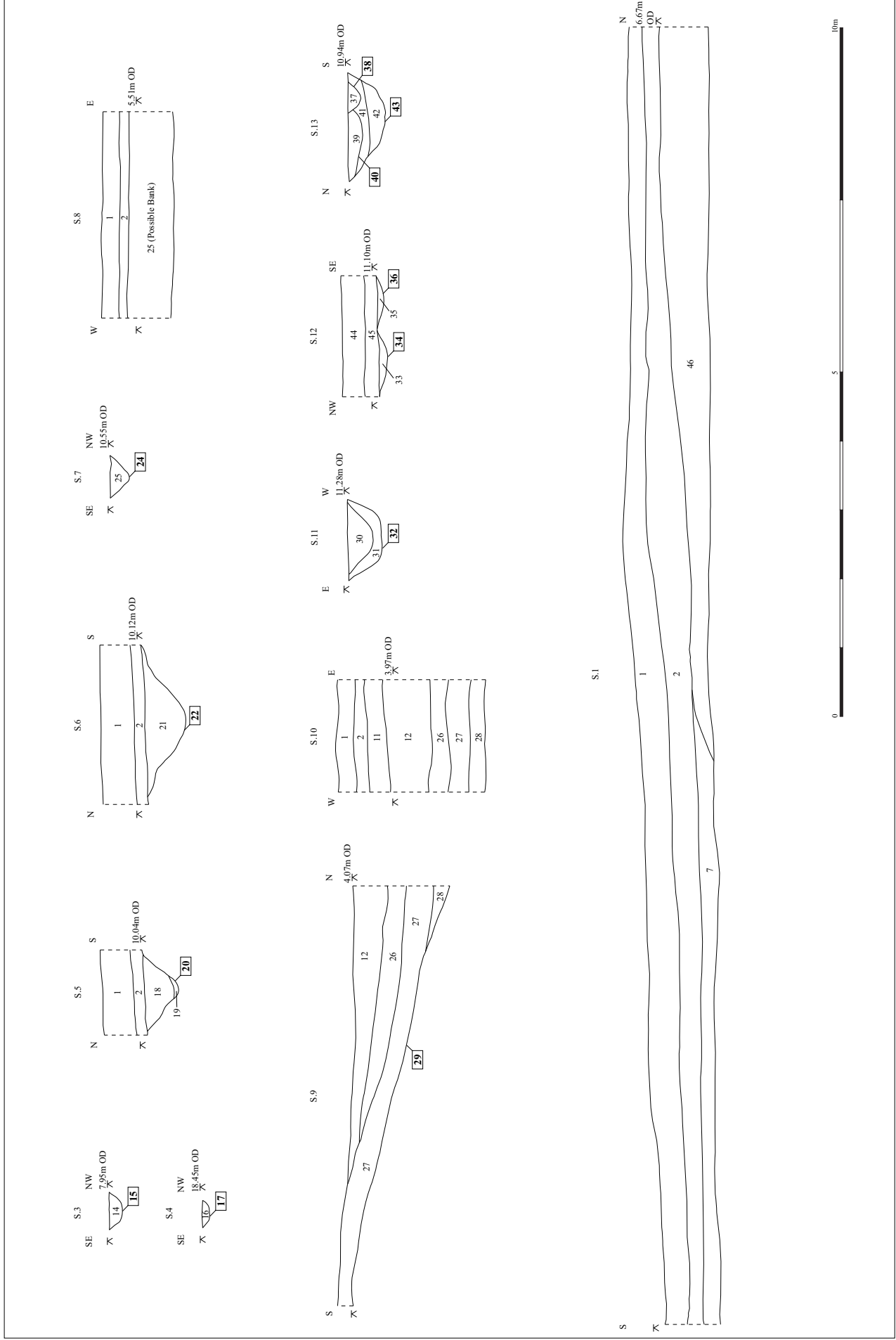


Figure 5: Sections



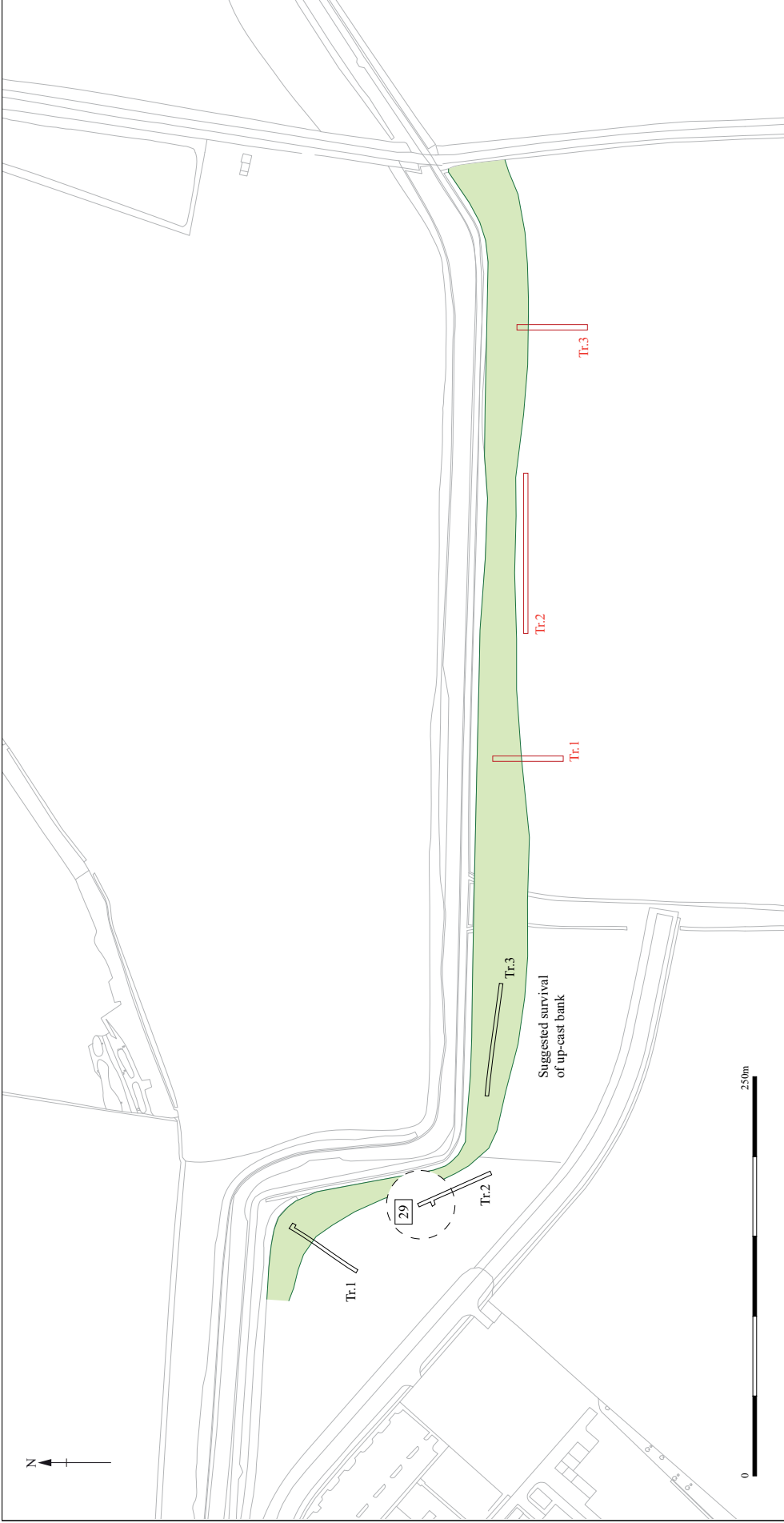


Figure 6: Trenches 1-3 north of Manor Drive, showing Northamptonshire Archaeology trenches (red) and the suggested location of up-cast bank (green) and feature 29

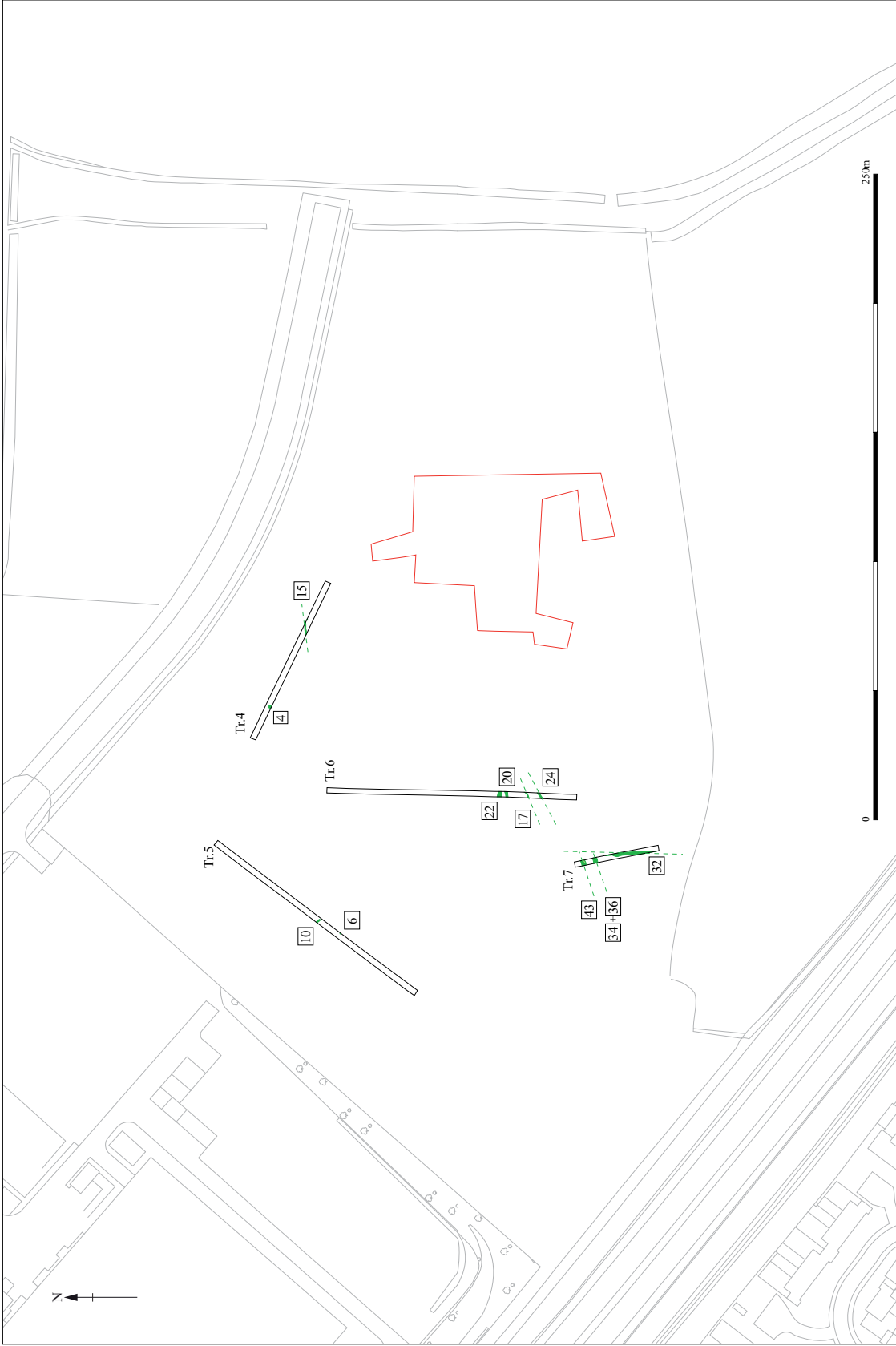


Figure 7: Trenches 4-7 south of Manor Drive, showing BUFAU excavation area (red)



Plate 1; Pond [29]. Trench 2, north-west facing



Plate 2; Pond [29]. Trench 2, south-west facing



Plate 3; Ditch [15]. Trench 4, east facing



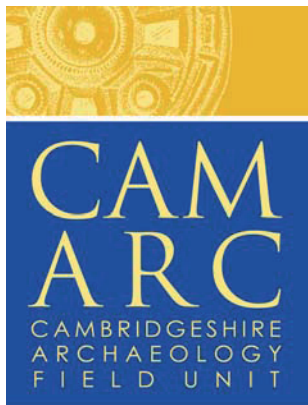
Plate 4, Ditches [20] and [22]. Trench 6, west facing



Plate 5; Ditches [38], [40] and [43]. Trench 7, west facing



Plate 6. Car Dyke (NMR 17910/3) (photograph from English Heritage)



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