Black Cat Island

Roxton, Bedfordshire
An Archaeological Evaluation

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Black Cat Island, Roxton, Bedfordshire:

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A team from Cambridge Archaeological Unit undertook evaluation by trial trenching between January and February 2007 on 31 hectares of land located northeast of the village of Roxton. The site sits east of the junction between the A421 and the A1, the Black Cat Roundabout, centred at TL 164 552. The evaluation followed initial investigations by geophysical survey and was designed to determine the presence or absence, extent, date, state of preservation and significance of any subsoil archaeological features. The evaluation was commissioned by Lafarge Aggregates Ltd and the Written Scheme of Investigation was drafted by Archaeologica Ltd. Evidence for prehistoric, Late Iron Age and Romano-British occupation was identified across the landscape in the form of negative features and artefacts.

INTRODUCTION

The Proposed Development Area (PDA) is at the junction to the east of the Black Cat Roundabout, with the A1 and the A421. It is centred at TL 164 552 and covers c.31 ha of land (Figure 1). The application site is situated in the river Great Ouse corridor characterised by shallow, gently sloping valley sides with 1st and 2nd terrace gravel over the western part of the site with alluvium along the eastern side in the Ouse floodplain. The site is bounded by the A1 to the east and the Great Ouse to the west, with Rockham Ditch forming the southern boundary and a field hedge to the north, beyond which is Riverside Farm. The site is currently under agricultural regime.

Archaeological background

The known archaeology within the PDA has been outlined in the Archaeological Desk-Based Assessment (Lisboa & Ivens 2005) and the Written Scheme of Investigation (Lisboa 2006), and is therefore only briefly summarised in this report.

Archaeological activity recorded within the study area has been provided by Bedfordshire County Archaeology Service and is evident from aerial photographs and geophysical survey. Neolithic and Bronze Age activity is quite extensive in the Ouse valley and has been found south of the village of Roxton, c.2km from the PDA. A complex of five ring ditches, barrows and associated burials were excavated north of the River Ouse. These were on a slight gravel ridge that was later ploughed out in the Iron Age and Roman period to be a new focus of settlement activity (Taylor & Woodward 1985; Malim 2000). An extensive complex of dispersed prehistoric monuments and settlement evidence has been identified along the Ouse, and ring ditches especially have been excavated at Great Barford, Eynesbury, Eaton Socon, St Neots, Little Paxton, Bedford and Willington, situated to the north and south of the PDA (Field 1974; Beadsmoore 2005).

Evidence for Iron Age and Roman activity is plentiful on the landscape within and around the PDA and is apparent from cropmarks, including HER 2664 situated on site, which is likely to be Iron Age of Romano-British in date. To the west of the application site, excavations at Great Barford and Bedford, c.5km and 12km from the PDA and Broom, c.14km to the south, excavated evidence for dispersed settlements in the form of enclosures and field systems (Cooper 2004; Cooper 2005; Steadman 1999; Lisboa & Ivens 2005). The distribution of known Iron Age hillforts and occupation sites closest to Roxton are c. 6km south at Sandy. In comparison to the Roman period, occupation is more dispersed along the Ouse with previously unoccupied sites, such as Roxton seeing occupation (Dawson 2000). Late Iron Age field systems, trackways and agricultural infrastructure along the Ouse valley are also seen to continue and become more extensive into the Roman period (Lisboa & Ivens 2005; Oakey 1995).

Indications for later activity within the PDA is very limited. Saxon archaeology has been identified as continuations from Roman occupation, such as at Bedford River Valley Park, c.1.5km east of the village of Willington, where occupation evidence was exposed in the grounds of a Roman villa (Meckseper 2007). Medieval activity within the PDA has focused on agriculture continuing into the post medieval. Similar

post medieval field systems have been excavated at Great Barford, c.5km southwest of the PDA (Meckseper 2006). Additional evidence for post medieval activity within the PDA is in the form of small quarry pit used for gravel extraction. This is visible on the OS Map County Series 1:10560, 1st Edition 1849-1899, but is missing from later editions (Lisboa & Ivens 2005).

In summary, archaeological records and cropmarks revealed that the archaeological potential of the PDA focuses on the later prehistoric and Roman periods with activity distributed widely across the site.

METHODOLOGY

Trial trenching

The location of the evaluation trenches was decided in the Written Scheme of Investigation, drafted by Archaeologica Ltd (Lisboa 2006). The trench plan was aimed at evaluating the whole PDA, whilst also targeting specific areas of interest identified by the geophysical and crop mark survey (Figure 2). A programme of 2150 metres of 2m wide trenches were opened with a contingency of up to 1% (3100 metres) to be held in reserve for extra trenching.

Test pitting

Four trenches in the eastern most field next to the Great Ouse (Trenches 41, 42, 45 and 46) were investigated by test pitting at either end of the trench. This was due to the constant flooding of that area of site and the deep deposits of alluvium.

Topsoil and deposits overlying the archaeology were machined under archaeological supervision and scanned by eye. All of the archaeological features in the machined areas were planned immediately and subsequently sampled. A minimum of 50% of each discrete feature was excavated, whilst ditches were sampled in 1m sections.

The excavation of all archaeological features was carried out by hand and all finds were retained. The recording followed a CAU modified MoLAS system (Spence 1990); assigning context numbers (e.g. [fill], [cut]) to stratigraphic units and feature numbers, F., to interrelated stratigraphic units (e.g. different sections of the same ditch). Sections were drawn at 1:10, base plans at 1:50. The photographic archive comprises colour slides as well as digital images. A representative range of features were bulk sampled.

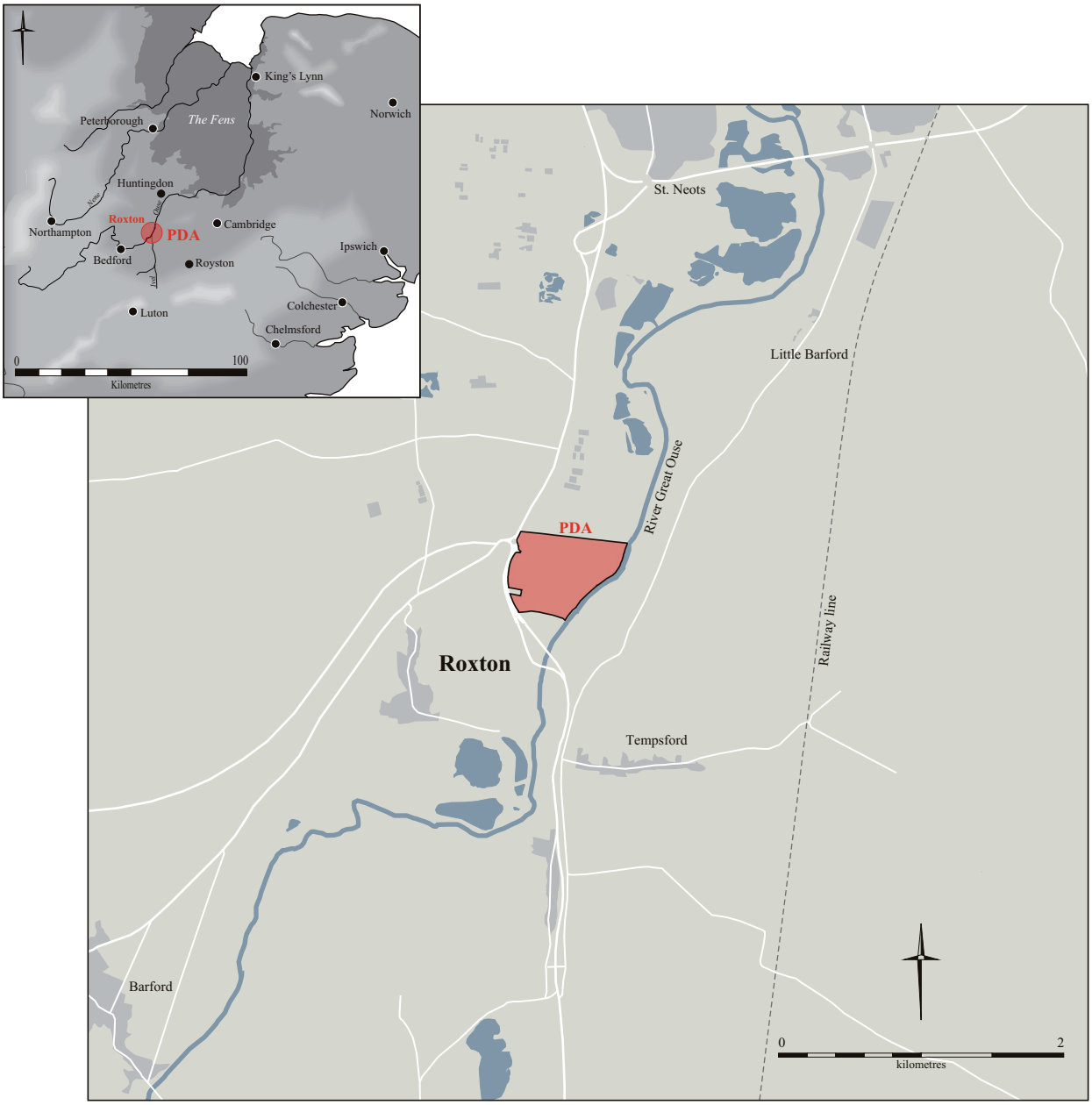

Figure 1. PDA location

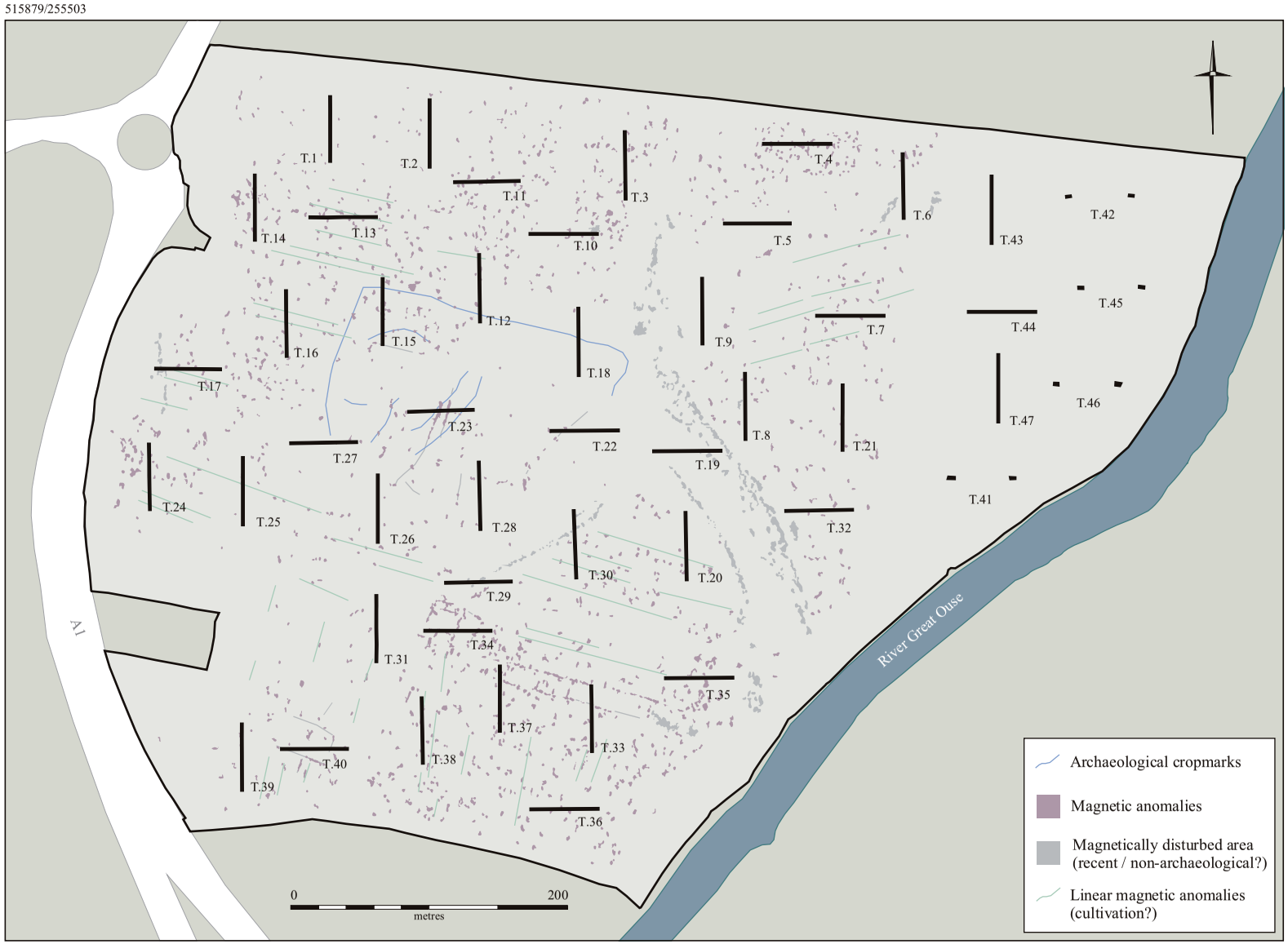

Figure 2. Trench plan with cropmarks and geophysical anomilies

RESULTS

Trial trenching

Forty three 50m trenches were machined, of which 23 trenches revealed archaeological features. The concentration of activity within the application site is to the south and west. Trenches 17, 23, 24, 27, 31, 33, 34, 37, 39 and 40 were the most abundant with archaeology, including substantial enclosure and boundary ditches, possible structures, pits, droveways, watering holes and a human cremation. Evidence of field systems and further boundary ditches are evident across the site in Trenches 1, 5, 6, 8, 9, 11, 13, 15, 16, 21, 29, 32 and 38.

Prehistoric

Prehistoric activity is very limited within the PDA and is evident mainly from background flint work recovered in later features and as surface finds. Two features have been identified to contain prehistoric pottery but cannot be specifically dated due to the poor condition of the pottery.

Boundary ditch – Trench 11

The geophysical survey suggested a north south linear in the northwest corner of the PDA, through which Trench 11 intercepts. A single ditch, F. 29 was exposed and excavated. The primary fill of red brown sand suggests initial slumping after the ditch was opened, although there is no evidence of a bank, with gradual silting up as the feature changed use or was no longer required. It was with this silting up process that animal bone, small fragments of prehistoric pottery and a residual prehistoric flint blade were deposited.

> **F. 29 N-S** ditch. Width 1.55m; depth 0.63m. Cut [62] moderately steep sides to a flat base. Fill [59] orange brown sandy silt. No finds. Fill [60] mid brown grey sandy silt. Contains animal bone, pottery and worked flint. Fill [61] dark red brown sand. No finds.

Pits – Trench 24

A small pit was exposed in the side of Trench 24. F. 21 was 0.81m wide and 0.2m deep. The single fill of orange brown silty sand yielded degraded prehistoric pottery and was also cut by a later much larger pit F. 22 to the north. F. 22 has a similar fill to F. 21 but yielded no cultural material. It is however likely to be of a similar date.

> **F. 21** Oval pit. Length 0.7m; width 0.83m; depth 0.2m. Cut [43] moderately sloping sides to a rounded base. Fill [42] mid orangey brown very silty sand with moderate stone inclusions. Contains pottery.

> **F. 22** Oval pit. Length 0.6m; width 1.15m; depth 0.65m. Cut [46] moderately steep sides to a rounded base. Fill [44] mid orangey brown very silty sand with moderate stone inclusions. No finds. Fill [45] pale brownish orange/yellow silty sand with occasional stone inclusions. No finds.

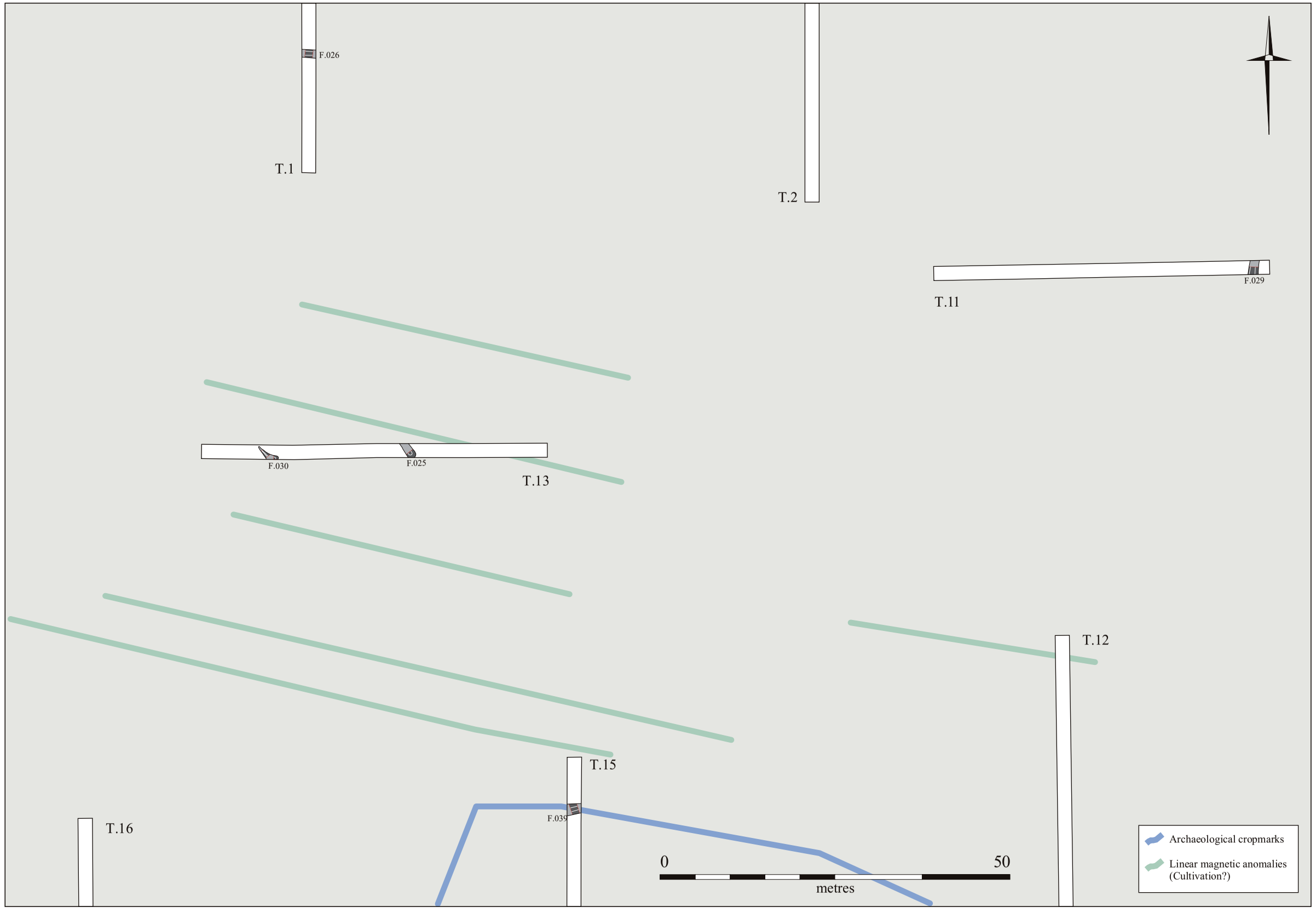

Figure 3. Trenches 1, 11, 13 and 17

Late Iron Age/Early Roman

One complex of ditches date to the Late Iron Age and Early Roman suggesting that the PDA is peripheral to a focus of activity to the west.

Enclosure ditches – Trench 17

Trench 17 was sited to locate a curving linear identified by the geophysical survey and revealed three consecutive intercutting ditches c.2m from the western end of the trench. The earliest ditch, F.38 was also the smallest at 2.1m wide and 1.15m deep. This was cut by F.37, positioned immediately to the west of F.38, measuring 2.9m wide and 1.15m deep. This ditch was in use for a longer period of time, evident by a recut before F.36, a terminus was dug, again to the west and cutting F.37. It also measured 2.9m wide and 1.1m deep with possibly a recut. The upcast from all three ditches was directed to the west, the slumping and erosion of the brighter sandier gravels indicating the presence of a bank internal to the enclosure, compared to darker more silty deposits to the east. The bank would also have had to have been cleared prior to the excavation of the next feature, suggesting a lot of labour unless the gravels were being utilized elsewhere. The finds were very scarce, the terminus yielding a likely residual later Neolithic or Early Bronze Age scraper and very Early Roman pottery (Mid to Late 1st century AD) from the upper fill suggesting the enclosure fell into disuse in the Early Roman.

> **F. 36 N-S** ditch terminus. Width 2.9m; depth 1.1m. Cut [79] moderate to steep sides with a rounded base. Fill [75] mid orangey brown very sandy silt with moderate stone inclusions and occasional charcoal flecking. Contains pottery, animal bone and flint. Fill [76] mid orange brown very silty sand with frequent stone inclusions. No finds. Fill [77] mid faintly greyish brown sandy silt with moderate stone inclusions. No finds. Fill [78] very orange/yellow brown slightly silty sand with moderate stone inclusions. No finds.
>
> **F. 37 N-S** ditch. Width 2.9m; depth 1.15m. Recut [85] steep sides to a rounded base. Fill [80] mid orange brown very sandy silt with moderate stone inclusions. No finds. Fill [81] mid faintly greyish brown very sandy silt with occasional stone inclusions. Fill [82] mid grey brown very silty sand with moderate stone inclusions. No finds. Fill [83] mid orangey brown silty sand with frequent stone inclusions. No finds. Fill [84] mid grey brown silty sand with frequent stone inclusions. No finds.
> Cut [88] stepped side to a slightly rounded base. Fill [86] pale mid yellow brown slightly silty sand with frequent stone inclusions. No finds. Fill [87] orange/red brown slightly silty sand with moderate stone inclusions. No finds.
>
> **F. 38 N-S** ditch. Width 2.1m; depth 1.15m. Cut [95] steep sides to a rounded base. Fill [89] mid orangey brown very sandy wilt with moderate stone inclusions. No finds. Fill [90] pale-mid yellow brown slightly silty sand with frequent stone inclusions. No finds. Fill [91] mid greyish brown very sandy silt with moderate stone inclusions. No finds. Fill [92] mid yellowish brown very silty sand with moderate stone inclusions. No finds. Fill [93] mid grey brown sandy silt with occasional stone inclusions. No finds. Fill [94] mid reddish brown slightly silty sand with moderate stone inclusions. No finds.

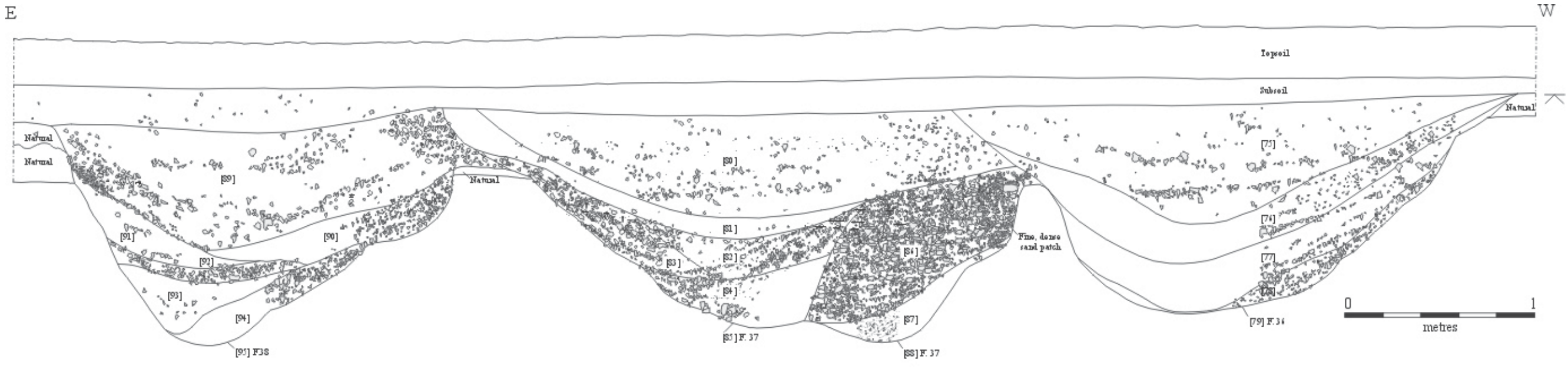

Figure 4. Section of F. 36, 37, 38, Trench 17

Figure 5. F. 36, F. 37, F. 38, Trench 17

Romano-British

The majority of the archaeology within the PDA can be dated as Romano-British, with evidence of occupation activity and farming.

Boundary ditches – Trenches 5, 6, 9, 23, 31 and 40

A large boundary ditch identified on the geophysical survey beginning from Rockham Ditch, the southern boundary of the site, through Trenches 40 and 31 and curving westwards was excavated in Trench 40. The ditch was 3.75m wide while only 0.6m deep and yielding a single undiagnostic fragment of a large square iron nail. The lack of material culture suggests the use as a boundary marker in the landscape perhaps between the lower wetter land to the east and the higher ground to the north and west.

> **F. 10 NNE-SSW** ditch. Width 3.75m, depth 0.6m. Cut [21] shallow straight sides to a flat base. Fill [20] mid brown sandy silt with occasional gravel inclusions. Contains fragment of Fe square nail.

Two southeast-northwest ditches were apparent on the geophysical survey and were excavated in Trenches 6 and 9. Both were similar in dimensions and fills and maybe be the same ditch or possible contemporary parallel ditches. Ditch F. 73 (Trench 6) was slightly deeper at 0.72m – perhaps due to its position a little down slope and nearer to the floodplain. The clays in the lower fills suggest stagnant pooling of water, perhaps as the ditches were silting up. Both sections yielded degraded animal bone, while F. 70 produced a likely residual flint flake.

> **F. 70 WSW-ENE** ditch. Width 1.7m; depth 0.65m. Cut [175] moderately sloping sides to a flattish base. Fill [171] pale brown sand/silt with occasional stone inclusions. No finds. Fill [172] mid-pale orangey grey brown clayey and sandy silt with occasional stone. Contains animal bone and worked flint. Fill [173] mid slightly brownish grey sandy clay. No finds. Fill [174] very dark grey brown faintly sandy clay silt with rare stone inclusions. No finds.
>
> **F. 73 NE-SW** ditch. Width 1.85m; depth 0.72m. Cut [183] moderately sloping sides to a rounded base. Fill [180] blue brown sandy silt. Contains animal bone. Fill [181] orange brown silty clay with patches of light blue/grey clay. No finds. Fill [182] blue black clay with occasional gravel inclusions. No finds.

A small ditch terminus F. 60, was exposed in Trench 5, just 0.65m wide and 0.18m deep. It had a dark silty single fill but no finds were recovered.

> **F. 60 NW-SE** ditch. Width 0.65m; depth 0.18m. Cut [148] steep sides to a flattish base. Fill [147] dark brown silt. No finds.

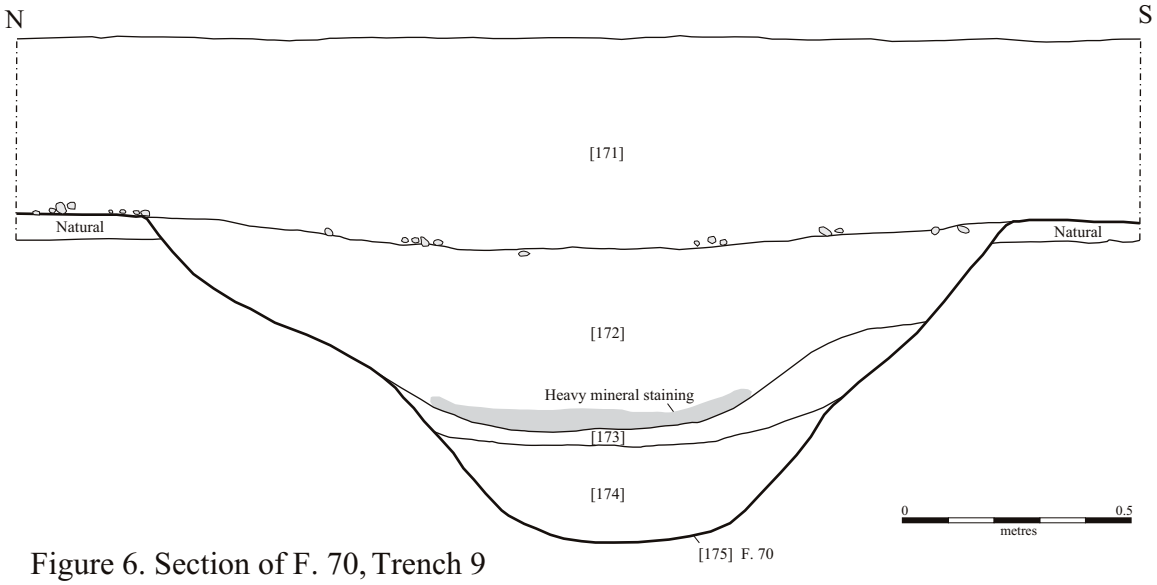

Figure 6. Section of F. 70, Trench 9

Figure 7. Photo F. 70, Trench 9

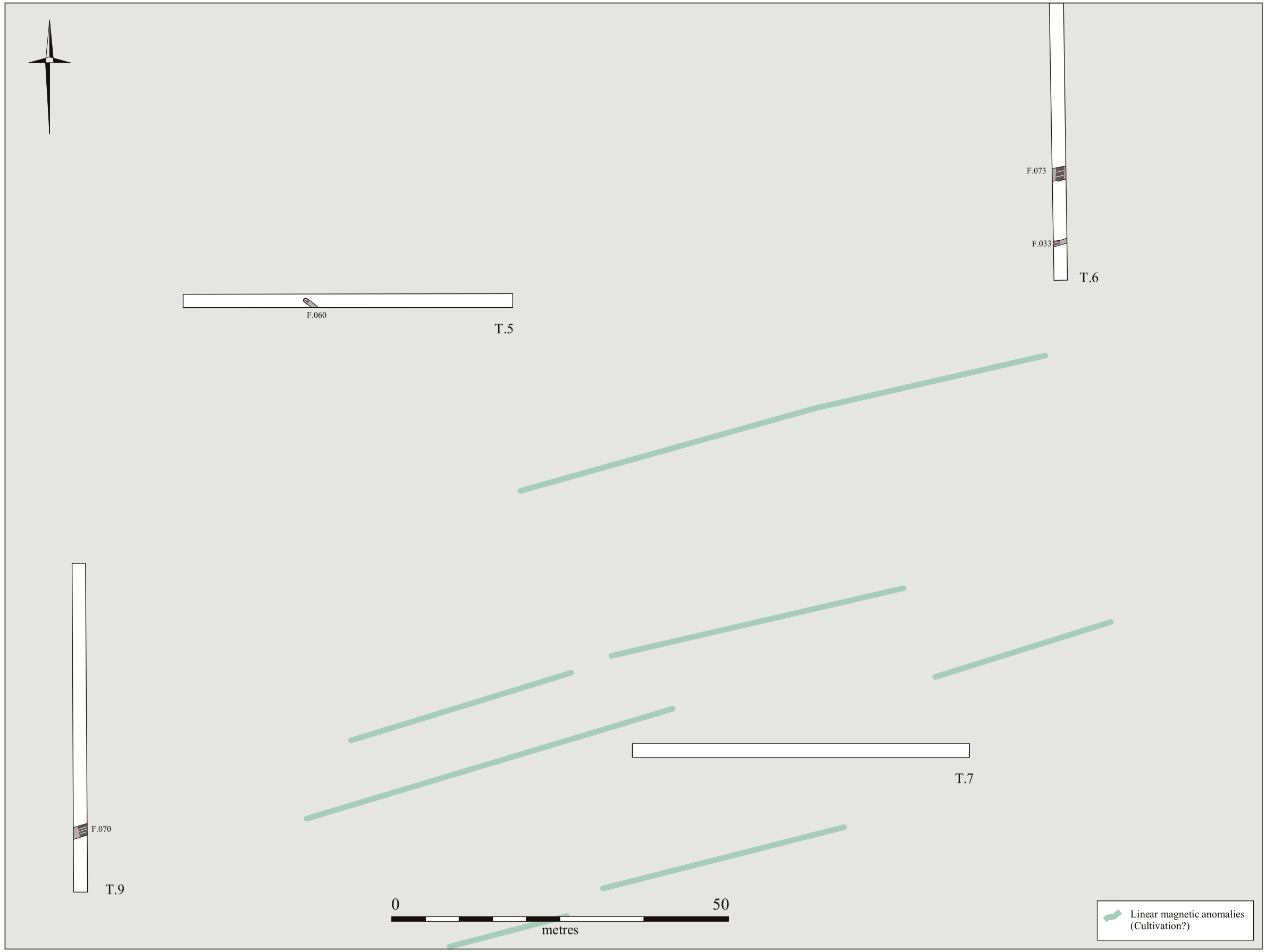

Figure 8. Trenches 5, 6, and 9

Two parallel boundary ditches was exposed mid way in Trench 27. Features 49 and 54 are orientated northeast-southwest through the trench. Both features are comparable in dimensions, although F. 54 is slightly shallower at 0.15m deep, both had a mid brown sandy silt clean fill. F. 54 also yielded a chunk of burnt flint. These ditches seem to divide the wetter ground to the east with the arable landscape to the north and west.

F. 49 NE-SW ditch. Width 0.55m; depth 0.2m. Cut [122] steep sides to a rounded base. Fill [121] mid brown sandy silt with occasional gravel inclusions. No finds.

F. 54 NE-SW ditch. Width 0.6m; depth 0.15m. Cut [132] moderately sloping sides to a flat base. Fill [131] mid brown sandy silt with occasional gravel inclusions. Contains burnt flint.

Two possible Mid and Mid to Late Roman boundary ditches was excavated in Trench 23. F. 62 is the earlier of the two features. It was 1.46m wide and 0.45m deep with a dark rich organic silty clay fill yielding 2nd – 3rd century pottery, animal bone and evidence for food preparation in the form of pounding waste. This likely boundary ditch cuts through the inner core of the occupation area, extending to the south, as does F. 69. This is likely a later addition, to do with possible changes to the structure as it appears in-between the beam slot F. 67 and F. 62. The ditch was 1.1m wide and 0.55m deep and contains a rich dark clayey silt fill, similar to F. 62 with animal bone, burnt clay and 2nd – 4th century pottery.

F. 62 NE-SW ditch. Width 1.46m; depth 0.45m. Cut [153] moderately sloping sides to a flat base. Fill [152] soft sticky dark black silty clay with moderate gravel inclusions and occasional charcoal flecking. Contains pottery and animal bone.

F. 69 NE-SW ditch. Width 1.1m; depth 0.55m. Cut [170] straight steep sides to a pointed base. Fill [169] very dark grey clayey silt with occasional gravel inclusions. Contains pottery, animal bone and burnt clay.

Droveway – Trenches 31, 33 and 37.

Two parallel ditches were identified in the southern most field of the PDA from the geophysical survey and Trenches 31, 33 and 37 were located to intersect. The southern of the two ditches were exposed and excavated in the three trenches. F. 6 varied in width from 0.71m to 1.18m in Trench 31 with a maximum depth of 0.35m. The section in Trench 33 yielded Roman pottery dating to the 1st – 3rd century . A residual waste flint flake and a fragment of an bent iron nail were also recovered in Trench 33. The droveway runs northwest-southeast away from the river Ouse to a ridge of higher ground and the central focus of activity on the site.

F. 6 NW-NS ditch. Width 0.71m; depth 0.2m. Cut [13] moderately sloping sides to a rounded base. Fill [12] compact mid brown orange sandy silt with occasional gravel and pea grit inclusions. No finds.

F. 6 NW-SE ditch. Width 0.86m, depth 0.17m. Cut [27] moderately sloping sides to a rounded base. Fill [26] mid brown sandy silt with moderate gravels and occasional charcoal inclusions. Contains pottery, flint and a Fe nail fragment.

F. 6 NW-SE ditch. Width 1.18m; depth 0.35m. Cut [134] steep sides, not fully excavated due to water table. Fill [133] mid brown slightly clayey silt with frequent gravel and occasional stone inclusions. No finds.

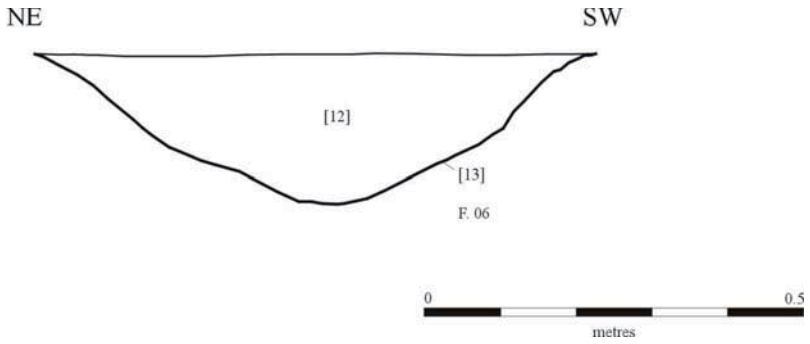

Figure 9. Section of F. 06, Trench 37

Occupation activity – Trench 23

Evidence for a structure was excavated in the form of a beam slot, midway in Trench 23, F. 67. It was 0.57m wide and 0.25m deep and yielded animal bone and 2nd – 3rd century Roman pottery. Although it is only party visible in the trench, the slot is possibly the end of a building and may continue southeast, as seen on the geophysical survey, as a line of substantial pits. There is no evidence of burning so likely the structure fell into disuse or was taken down. Two parallel ditches F. 63 and F. 68 were evident either side of the beam slot, perhaps acting as a boundary contemporary with the structure. F. 63 yielded domestic occupation evidence in the form of 2nd – 3rd century Roman pottery, animal bone and Roman iron hobnails. Although F. 68 yielded no finds, its orientation and proximity suggests a contemporary feature. F. 63 and F. 68 were also identified as part of the cropmark complex HER 2664 (Figure 14).

F. 63 NE-SW ditch. Width 0.65m; depth 0.45m. Cut [155] steep straight sides to a flat base. Fill [154] mid brown sandy silt with rare gravel inclusions. Contains pottery, animal bone and Fe hobnails.

F. 67 NW-SE beam slot. Width 0.57m; depth 0.25m. Cut [166] steep sides to a flat base. Fill [165] dark grey silt sand with occasional gravel inclusions. Contains pottery and animal bone.

F. 68 NE-SW ditch. Width 0.7m; depth 0.38m. Cut [168] straight steep sides to a rounded base. Fill [167] soft mid yellowish brown clay silt with moderate gravel inclusions and occasional charcoal flecking. No finds.

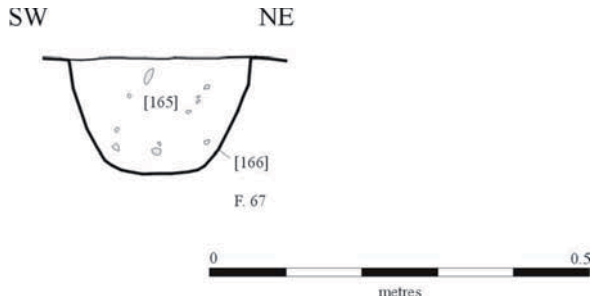

Figure 10. Section of F. 67, Trench 23

Watering holes – Trenches 23 and 27.

Two sites for substantial pits were identified on the geophysical survey and exposed as possible watering holes during machining. A partially exposed pit F. 58, in the western end of the Trench 23 and a large pit F. 57, c.14.5m from the eastern end of Trench 27.

F. 57 exhibited considerable erosion irregularities to the upper sides with clean natural infilling suggesting the pit was open and exposed for a substantial period of time and subject to water erosion. Degraded fragments of animal bone were recovered. The south eastern extent of the feature was very irregular and may indicate trampled edges or perhaps a ramped access point. The feature is likely contemporary with two field boundary ditches F. 54 and F. 66, that surround F. 57 to the northeast and west. The fills of which are both clean brown sandy silts with F. 54 yielding burnt flint and F. 66 animal bone. These likely formed a small paddock or enclosure with the watering hole in the north-west corner.

Trampled edges were also observed in Trench 23, F. 59 around the edges of F. 58, the partially exposed pit. These contained the same black silty clay as F. 58 suggesting a deliberate spread across the area to level the ground after the watering hole fell into disuse. Both features in Trench 23 contained Mid to Late Roman pottery, suggesting continual use after the structure had fell into disuse.

F. 54 NE-SW ditch. Width 0.6m; depth 0.15m. Cut [132] moderately sloping sides to a flat base. Fill [131] mid brown sandy silt with occasional gravel inclusions. Contains burnt flint.

F. 57 Oval pit/watering hole. Length 2.3m; width 2m; depth 0.6m. Cut [142] gentle to moderately sloping sides with a flat base. Fill [138] dark brown sandy silt with rare gravel inclusions. No finds. Fill [139] mid-pale grey fine sandy silt with moderate stone inclusions and occasional charcoal flecking. No finds. Fill [140] dark grey brown silty sand with moderate stone inclusions and occasional charcoal flecking. Contains animal bone. Fill [141] very dark grey brown silty sand with frequent stone inclusions and occasional charcoal flecking. Contains animal bone.

F. 58 Circular pit/watering hole. Width 0.75m; depth 0.28m. Cut [144] moderately sloping sides, base could not be reached in the confines of the trench. Fill [143] soft sticky dark brownish black silty clay with moderate gravel inclusions and occasional charcoal flecking. Contains pottery.

F. 59 Irregular depressions – footprints? Width 0.8m; depth 0.1m. Cut [146] steep sides to an uneven base. Fill [145] soft sticky dark brownish black silty clay with moderate gravel inclusions and occasional charcoal flecking. Contains pottery.

F. 66 WNW-ESE ditch. Width 0.55m; depth 0.15m. Cut [164] steep sides to a flattish base. Fill [163] mid-dark grey brown very sandy silt with occasional stone inclusions and rare charcoal flecking. Contains animal bone.

Figure 11. Photo of F. 58 and F. 59, Trench 23

Figure 12. Photo of F. 57, Trench 27

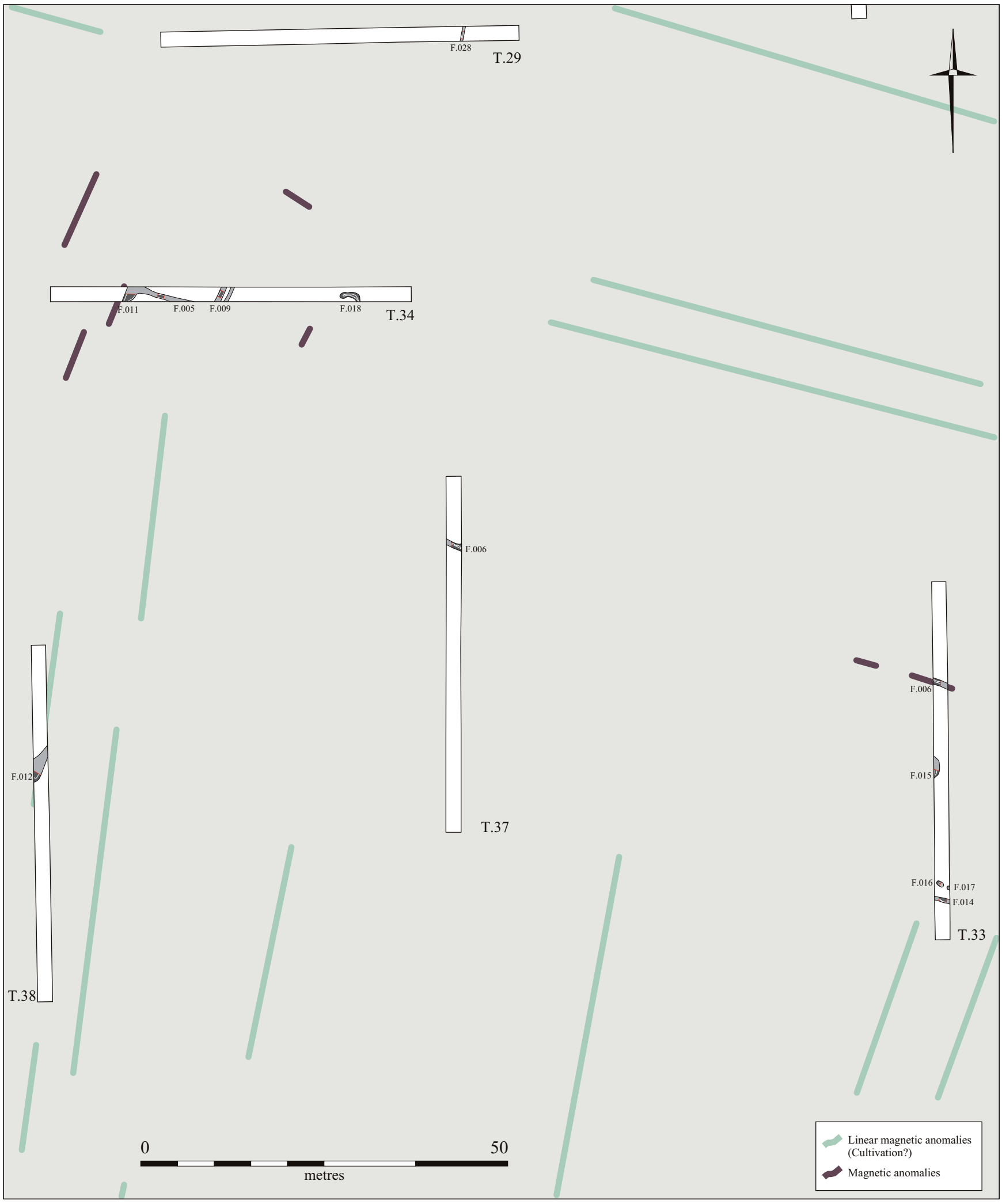

Figure 13. Trenches 29, 33 34, 37 and 38

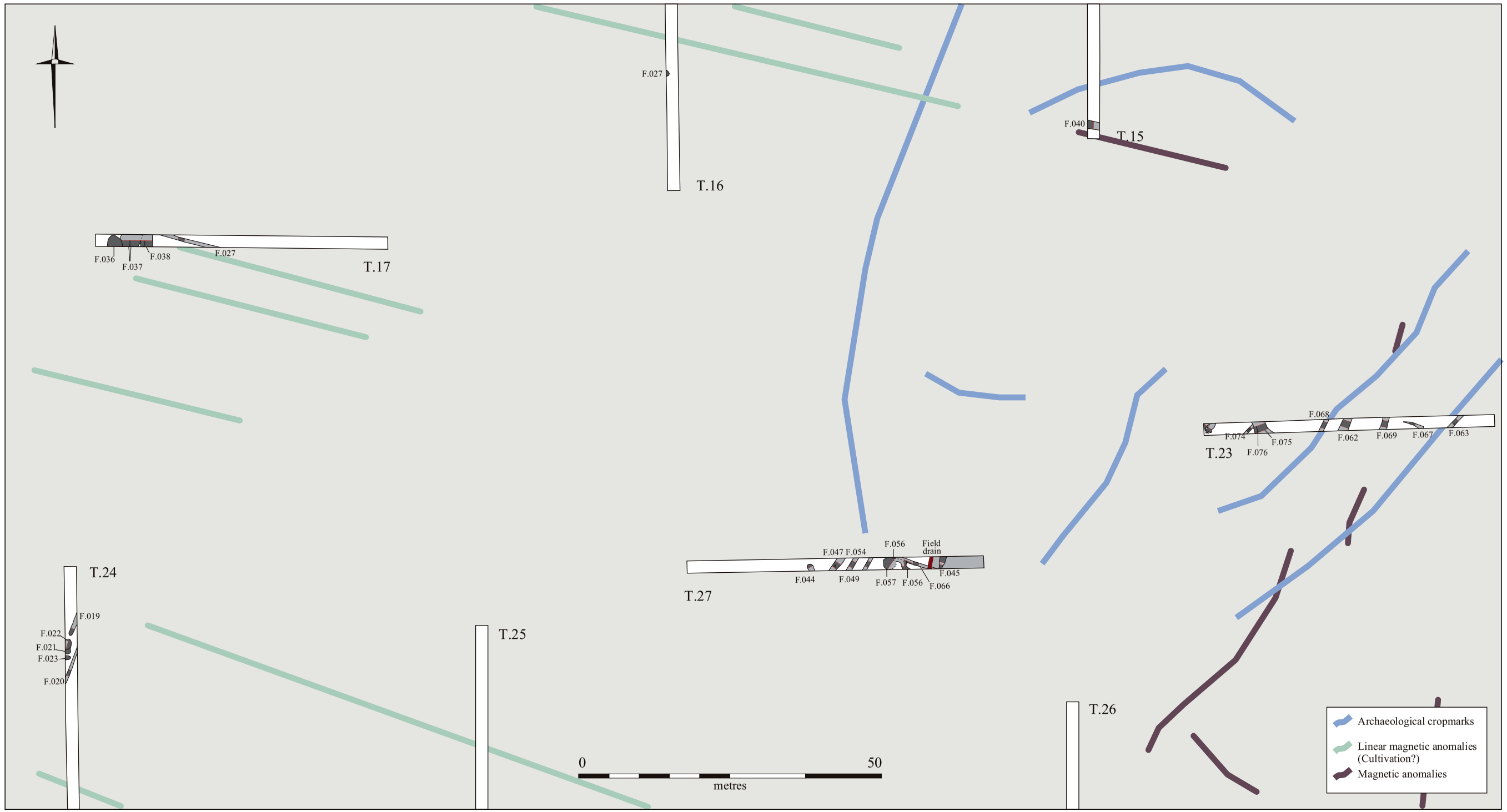

Figure 14. Trenches 15, 16, 17, 23, 24 and 27

Paddocks – Trenches 34 and 40.

Small square enclosures were identified on the geophysical survey and exposed in Trenches 34 and 40. These ditches were probably part of small paddocks for animals due to their location next to the droveway. Features 5 and 11 in Trench 34 and Features 7 and 1 in Trench 40 were all excavated. Features 1 and 5 are both smaller ditches that seem to orientate away from the larger ditches of Features 7 and 11. These were 0.4m and 0.73m wide and 0.06 and 0.27m in depth respectively. These were also the earliest phase of construction dating from the Early to Late Roman with the larger ditches, Features 7 and 11 dating from the Mid to Late Roman. These varied in width from 1.1m and 2.21m but had similar depths at 0.26m and 0.3m.

> **F. 1 NE-SW** ditch. Width 0.4m; depth 0.06m. Cut [2] gently sloping sides to a rounded base. Fill [1] firm mid orangey grey/brown sandy silt with occasional small gravel inclusions. No finds.
>
> **F. 5 E-W** ditch. Width 0.73m; depth 0.27m. Cut [11] steep sides, not fully excavated due to water table. Fill [10] dark black brown sandy silt with occasional pea grit and small stone inclusions. Contains pottery and animal bone.
>
> **F. 7 NSE-SNW** ditch. Width 1.10m, depth 0.26m. Cut [15] steep sides, not fully excavated due to water table. Fill [14] firm dark orangey brown sandy silt with occasional small stones and gravel inclusions. Contains pottery and burnt clay.
>
> **F. 11 N-S** ditch. Width 2.21m; depth 0.3m. Cut [23] steep sides, not fully excavated due to water table. Fill [22] mid red brown sandy silt with occasional small gravel inclusions. Contains pottery and animal bone.

Field boundaries – Trenches 39 and 40

The presence of two ditches F. 4 and F. 9 in Trenches 40 and 39 were excavated as later Roman field systems off the droveway in the south of the site. Both sections were excavated northeast-southwest, F. 4 was 0.55m wide and 0.15m deep while F. 9 was 0.73m wide and 0.27m deep. The fills in both features contained a similar clean dark brown sandy silt and yielding Mid to Late Roman pottery.

> **F. 4 NE-SW** ditch. Width 0.55m; depth 0.15m. Cut [9] moderately sloping sides to a rounded base. Fill [8] compact dark brown sandy silt with rare small stone inclusions. Contained pottery.
>
> **F. 9 NE-SW** ditch. Width 0.73m; depth 0.27m. Cut [19] steep sides, not fully excavated due to water table. Fill [10] dark black brown sandy silt with occasional pea grit and small stone inclusions. Contains pottery and animal bone.

Drainage ditches – Trench 23 and 27.

Three possible drainage ditches were exposed and excavated in Trenches 23 and 27. Two features in Trench 27 were cut from and into existing field boundaries. One ditch, F. 56 was very irregular in shape and had a maximum width of 0.75m with a depth of 0.25m. The ditch was prone to slumping due to water erosions and the sand

natural. It also cuts through the watering hole F. 57 after it had silted up to join the ditch F. 66 as an extended drainage system. The feature yielded a sherd of Mid to Late Roman pot. The ditch, F. 45 to the east of F. 56 is also irregular in shape with a 'bulge' widening from 0.45m to 0.75m but with a constant depth of 0.25m. The 'bulge' suggests a later recut to form a wider ditch, but the pottery evidence implies a wider ditch terminus that had begin to silt up in the Mid to Late Roman that was then extended south into a narrower ditch. This had completely silted up in the Late Roman and was again likely utilised for drainage purposes. F. 45 also contained a fragment of window glass but is likely to be a modern intrusion rather than Romano-British. F. 62 in Trench 23 was 1.46m wide and 0.45m deep and was orientated parallel with F. 68. It contained a dark black silty clay with Mid to Late Roman pottery.

F. 45 N-S ditch. Two slots excavated through feature. First slot: width 1.25m; depth 0.35m. Cut [112] moderately steep sides to a rounded base. Fill [108] mid reddish brown silty sand with occasional stone inclusions. No finds. Fill [109] dark greyish brown very sandy silt with occasional stone inclusions and moderate charcoal flecking. Contains pottery. Fill [110] very dark brownish grey soft ashy silt/sand with occasional stone inclusions and moderate charcoal flecking. Contains pottery, animal bone, quern stone and glass. Fill [111] mid-pale grey and occasional yellow brown mottled silty sand with moderate stone inclusions. No finds.
Second slot: width 0.55m; depth 0.32m. Cut [116] steep sides to a flattish base. Fill [114] mid grey brown very sandy silt with occasional stone inclusions and occasional charcoal flecking. Contains pottery. Fill [115] mid brownish grey silty sand with moderate stone inclusions. No finds.

F. 56 N-S curving ditch. Two slots excavated through this feature. First slot: width 0.45m; depth 0.24m. Cut [137] moderately sloping sides to an uneven rounded base. Fill [136] dark greyish brown very sandy silt with occasional stone inclusions. No finds.
Second slot: width 0.75m; depth 0.25m. Cut [162] moderately sloping sides to a rounded base. Fill [160] pale yellow grey and orange sands with occasional stone. No finds. Fill [161] mid-dark greyish brown sandy silt with occasional stone inclusions. Contains pottery.

F. 62 NE-SW ditch. Width 1.46m; depth 0.45m. Cut [153] moderately sloping sides to a flat base. Fill [152] soft sticky dark black silty clay with moderate gravel inclusions and occasional charcoal flecking. Contains pottery and animal bone.

Figure 15. Photo of F. 45, Trench 27

Figure 16. Photo of F. 45, Trench 27

A further probable drainage ditch was also identified on the geophysical survey and excavated in the western end of Trench 23. F. 75 was 1m wide and 0.54m deep. The lower fills of the clayey silts were, in all probability, gradually deposited by water and allowed to silt up in the Mid to Late Roman period. This feature also cuts through earlier, although un-datable, field boundary ditches F. 74 and F. 76 and may originate from the droveway in the south.

> **F. 75 NW-SE** ditch. Width 1m; depth 0.54m. Cut [189] steep sides to a flat base. Fill [186] fine soft mid brown slightly clayey silt with rare gravel inclusions. No finds. Fill [187] fine soft mid grey clayey silt with occasional gravel inclusions and charcoal flecking. Contains pottery, animal bone, burnt clay and worked stone. Fill [188] fine soft dark grey clayey silt with occasional gravel inclusions and rare charcoal flecking. No finds.

Cremation Pit – Trench 40.

One small circular pit containing cremated bone was excavated in Trench 40. F. 8 was 0.3m wide and 0.21m deep. This feature was largely excavated by the time it was recognised as human so was fully excavated in this instance. The single fill suggests deposition into the pit rather than burning in situ and contained possibly two individuals, both probable subadults. The deposit also contained burnt clay, fuel ash slag and cinder from the pyre, and can be classed as an unurned burial or a deposit of pyre material. It is likely Romano-British in date.

> **F. 8** Circular pit. Width 0.3m; depth 0.21m. Cut [17] straight steep sides to a rounded base. Fill [16] soft dark blackish brown sandy silty clay with moderate gravel and occasional charcoal inclusions. Contains cremated bone, burnt clay, fuel ash slag and cinder.

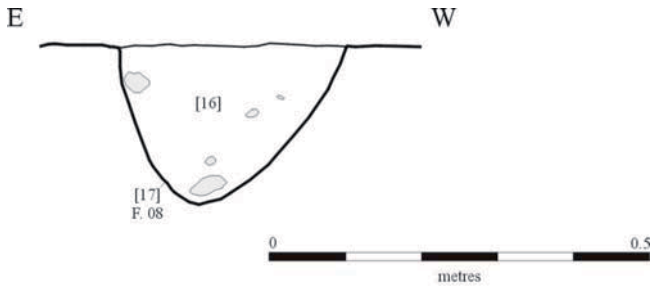

Figure 17. Section of F. 08, Trench 40

Field systems – Trenches 6, 13, 17, 21, 23, 24, 27, 31, 32, 33, 34 and 38

Twenty four ditches were exposed and excavated in Trenches 6, 13, 17, 21, 23, 24, 27, 31, 32, 33, 34 and 38. Features 2, 12, 14, 18, 19, 23, 27, 30, 32, 33, 34, 35, 41, 43, 44, 49, 53, 61, 64, 65, 71, 72, 74 and 76 are aligned northeast-southwest, southeast-northwest, north-south and east-west. Some of these features were identifiable on the geophysical survey, however there is no datable evidence from the majority of the sections, waste flint was recovered in three sections but this is likely to be residual and due to their proximity to Romano-British field systems, boundary ditches, droveways and occupation activity, it is probable that these features date to the Romano-British.

F. 2 N-S ditch terminus. Width 0.8m, depth 0.3m.Cut [5] steep sides to a rounded base. Fill [3] firm dark grey brown sandy silt with black patches and rare small stone inclusions. No finds. Fill [4] compact mid grey sandy silt with rare small stone inclusions and iron staining. No finds.

F. 12 NE-SW ditch. Width 1.3m; depth 0.28m. Cut [25] moderately sloping sides to an uneven base. Fill [24] soft mid brownish orange sandy silt with occasional gravel inclusions. No finds.

F. 14 E-W ditch. Width 0.7m; depth 0.3m. Cut [29] steep sides to a rounded base. Fill [28] dark brown sandy silt with occasional gravel inclusions. No finds.

F. 18 SE-NW ditch terminus. Width 0.8m; depth 0.24m. Cut [37] steep sides, not fully excavated due to water table. Fill [36] dark grey brown sandy silt with occasional gravel inclusions and charcoal flecking. No finds.

F. 19 NE-SW ditch terminus. Width 0.8m; depth 0.1m. Cut [39] straight shallow sides to a flat base. Fill [38] soft dark brown silty sand with frequent gravel inclusions. No finds.

F. 23 E-W ditch terminus. Width 0.6m; depth 0.3m. Cut [48] moderate to steep sides with a rounded base. Fill [47] mid orangey brown very silty sand with moderate stone inclusions. No finds.

F. 27 WNW-ESE ditch. Width 0.5m; depth 0.2m. Cut [56] steep sides to a rounded base. Fill [55] orangey brown sandy silt with occasional gravel inclusions. No finds.

F. 30 NW-SE ditch. Width 0.85m; depth 0.45m. Cut [64] moderately sloping sides to a flat base. Fill [63] soft mid greyish brown sandy silt with occasional gravel inclusions and charcoal flecking. Contains worked flint.

F. 32 E-W ditch. Width 1.4m; depth 0.55m. Cut [68] gradual sloping sides, not fully excavated due to water table. Fill [67] mid brown sandy silt with occasional gravel inclusions. Contains worked flint

F. 33 E-W ditch. Width 0.69m; depth 0.12m. Cut [70] moderately sloping sides to a flat base. Fill [69] yellow brown sand with occasional gravel inclusions. No finds.

F. 34 NW-SE ditch. Width 1m; depth 0.43m. Cut [72] straight steep sides to a flat base. Fill [71] soft dark brown silty sand with moderate gravel inclusions and charcoal flecking. Contains worked flint.

F. 35 NW-SE gully. Width 0.4m; depth 0.06m. Cut [74] straight shallow sides to a rounded base. Fill [73] soft mid orange brown sandy silt with frequent gravel inclusions. No finds.

F. 41 NE-SW ditch. Width 0.6m; depth 0.25m. Cut [101] steep sides to a rounded base. Fill [100] mid brown silty sand with occasional gravel inclusions. No finds.

F. 43 NE-SW ditch. Width 0.7m; depth 0.25m. Cut [105] straight moderately sloping sides to a rounded base. Fill [104] mid brown silty sand with occasional gravel inclusions. No finds

F. 44 SE-NW ditch. Width 0.95m; depth 0.31m. Cut [107] steep sides to a flat base. Fill [106] dark grey silty clay with rare charcoal flecking and occasional gravel inclusions. No finds.

F. 49 NE-SW ditch. Width 0.55m; depth 0.2m. Cut [122] steep sides to a rounded base. Fill [121] mid brown sandy silt with occasional gravel inclusions. No finds.

F. 53 E-W ditch. Width 0.85m; depth 0.24m. Cut [130] steep sides to a rounded base. Fill [129] mid brown slightly clayey silt with occasional stone and gravel inclusions. No finds.

F. 61 NE-SW ditch. Width 0.64m; depth 0.19m. Cut [150] steep sides to a rounded base. Fill [149] dark brownish grey silty clay with moderate gravel inclusions. No finds.

F. 64 NE-SW ditch. Width 0.64m; depth 0.11m. Cut [157] moderately sloping sides to a rounded base. Fill [156] pale to mid brown silty clay with occasional small stones and gravel inclusions. No finds.

F. 65 NE-SW ditch. Width 0.48m; depth 0.14m. Cut [159] steep sides to a rounded base. Fill [158] mid greyish brown silty clay with occasional small stones and gravel inclusions, rare charcoal flecking. No finds.

F. 71 NE-SW ditch. Width 0.6m; depth 0.2m. Cut [177] steep sides to a rounded base. Fill [176] mid brownish grey clayey silt with occasional gravel inclusions. No finds.

F. 72 NW-SE ditch. Width 1.05m; depth 0.17m. Cut [179] gently sloping sides to a flat base. Fill [178] mid brownish grey clayey silt with occasional gravel inclusions. No finds.

F. 74 NE-SW ditch. Width 0.43m; depth 0.23m. Cut [185] steep sides to a flattish base. Fill [184] mid brownish grey very sandy silt with occasional stone inclusions. No finds

F. 76 N-S ditch. Width 0.5m; depth 0.22m. Cut [191] straight steep sides to a rounded base. Fill [190] soft pale grey clayey silt with rare gravel inclusions. Contains burnt stone.

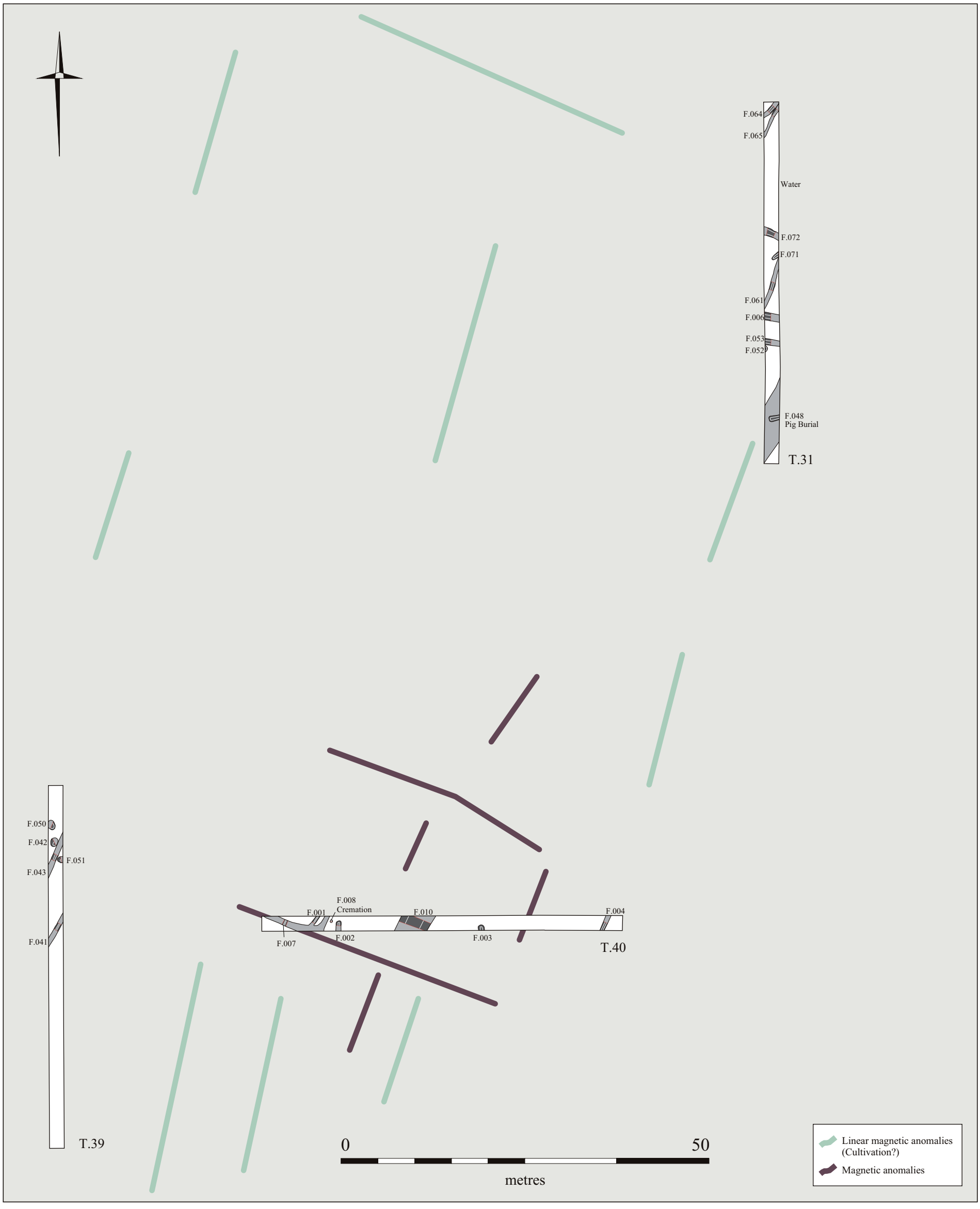

Figure 18. Trenches 31, 39 and 40

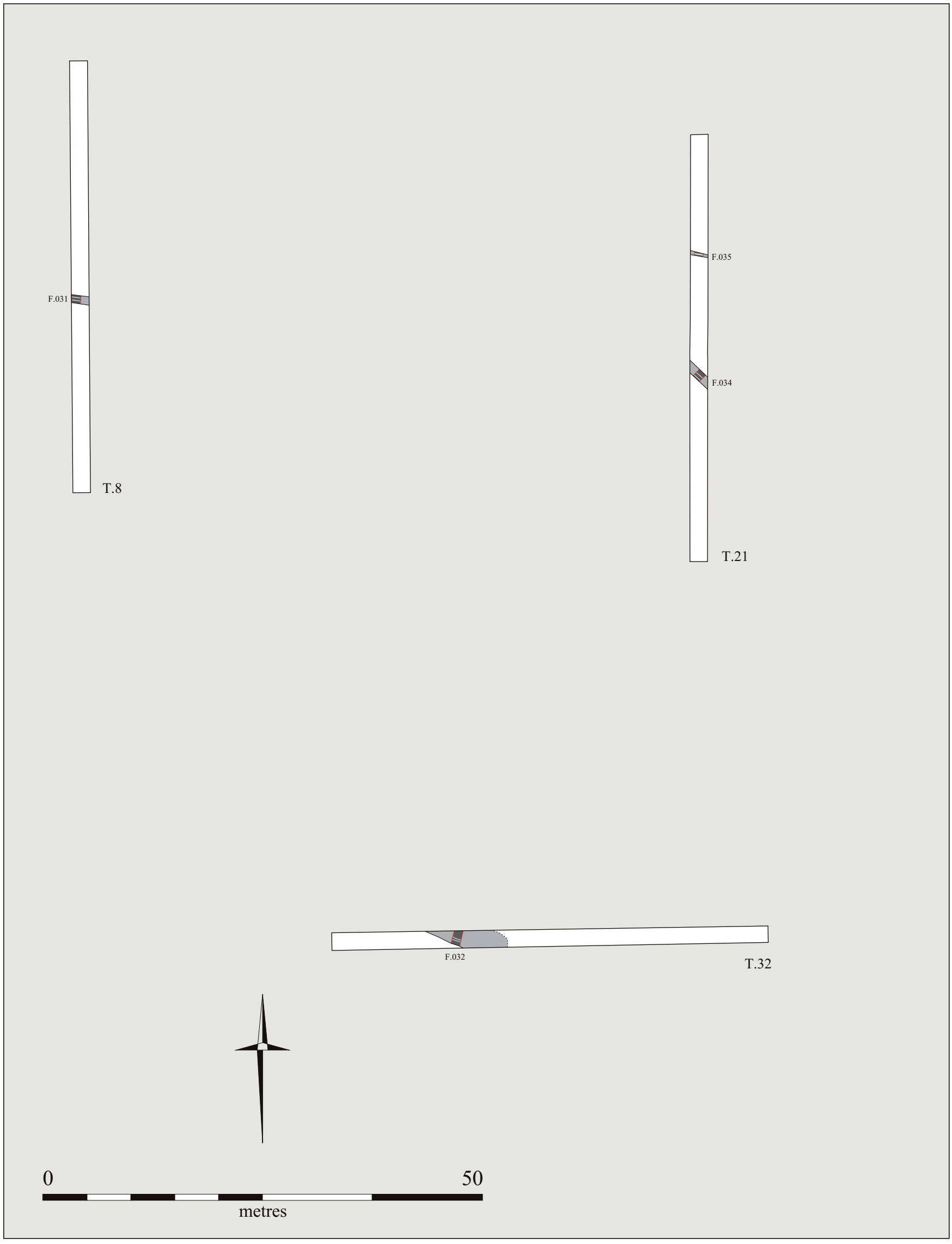

Figure 19. Trenches 8, 21 and 32

Pits – Trenches 31, 33, 39

Seven pits were excavated in Trenches 31, 33 and 39. Four pits were oval, two were circular and one was sub-circular in shape. The widths varying from 0.35 to 1.05m and in depth from 0.15m to 0.35m. The fills were all a similar clean brownish sandy silt and no finds were recovered from any of the features. Due to their location in the south of the site and position in proximity to Roman features, these pits are all likely to be Romano-British in date.

F. 3 Circular pit. Width 1.05m, depth 0.21m. Cut [7] gently sloping sides to a rounded base. Fill [6] compact mid orangey brown sandy silt with rare small stone inclusions. No finds.

F. 16 Oval pit. Length 0.5m; width 0.6m; depth 0.17m. Cut [33] moderately sloping sides to a rounded base. Fill [32] soft dark brown sandy silt with moderate gravel inclusions. No finds.

F. 17 Oval pit. Length 0.4m; width 0.45m; depth 0.17m. Cut [35] moderately sloping sides to a rounded base. Fill [34] soft dark brown sandy silt with occasional gravel inclusions. No finds.

F. 42 Sub circular pit. Width 0.85m; depth 0.35m. Cut [103] moderately sloping sides to an uneven rounded base. Fill [102] dark brown sandy silt with occasional gravel inclusions. No finds.

F. 50 Oval pit. Length 0.95m; width 0.8m; depth 0.15m. Cut [124] shallow sides to a rounded base. Fill [123] soft dark blackish brown sandy silt with frequent gravel inclusions. No finds.

F. 51 Circular pit. Width 0.7m; depth 0.16m. Cut [126] shallow sides to a rounded base. Fill [125] soft dark blackish brown sandy silt with frequent gravel inclusions. No finds.

F. 52 Oval pit. Length 0.8m; width 0.35m; depth 0.27m. Cut [128] moderately sloping sides to a flat base. Fill [127] mid slightly greyish brown silty clay with occasional stone and gravel inclusions. No finds.

Undated

A series of ditches and pits were excavated across the PDA that contained no material culture so at this stage are unable to be dated.

Ditches – Trenches 1, 8, 13, 15 and 29

Five ditches on a co-axial alignment running northeast-southwest, northwest-southeast and east-west were excavated in Trenches 1, 8, 13, 15 and 29. The ditches, Features 25, 26, 28, 31 and 40 were distributed widely throughout the site as part of a large field system and identified on the geophysical survey. The ditches are likely to be phases of the constant agricultural regime present on site, although varying slightly in dimensions, all contained similar mid brown silty sand fills and all yielded few or no finds.

F. 25 NW-SE ditch. Width 1.2m; depth 0.4m. Cut [52] moderately steep sides to a rounded base. Fill [51] soft mid orangey brown very silty sand with occasional gravel inclusions. No finds.

F. 26 E-W ditch. Width 1.1m; depth 0.2m. Cut [54] gradual sloping sides to a flat base. Fill [53] mid brown silty sand with occasional gravel inclusions and charcoal flecking. No finds.

F. 28 NE-SW ditch. Width 0.25m; depth 0.04m. Cut [58] moderately steep sides to a rounded base. Fill [57] soft dark brown sandy silt with occasional gravel inclusions and charcoal flecking. No finds.

F. 31 E-W ditch. Width 0.9m; depth 0.35m. Cut [66] steep sides to a flat base. Fill [65] soft mid reddish brown slightly silty sand with occasional gravel inclusions. No finds.

F. 40 E-W ditch. Width 1.33m; depth 0.39m. Cut [99] moderate to steep sides with a flat base. Fill [98] mid brown sandy silt with occasional gravel inclusions. Contains animal bone.

Pits – Trench 16.

One pit was excavated in the side of Trench 16. It was circular in shape measuring 0.52m wide and 0.11m deep with a clean mid greyish brown clayey silt fill. Due to its isolation of site, a definite date cannot be assigned to the feature.

F. 24 Circular pit. Width 0.52m; depth 0.11mm. Cut [50] moderately steep sides to a flat base. Fill [49] soft mid greyish brown slightly clayey silt with rare gravel inclusions. No finds

Post medieval

The post medieval archaeology of the PDA is focused in Trenches 15 and 27. The ditches excavated are probably part of the agricultural regime on site at that time. This is the area were the OS survey 1880 shows evidence for small scale gravel extraction.

The cropmark enclosure identified prior to excavation (HER 2664) was only uncovered in Trench 15. A ditch, F. 39 was excavated 1.6m wide and 0.44 deep to contain a single backfill of dark brown silty sand. The feature yielded a piece of flowerpot and a fragment of c.19th century clay pipe stem The irregularity of the cut suggests this ditch either cuts or is cut by the post medieval quarrying that is present throughout the length of Trench 15. A shallow north-south linear, F. 47 was excavated in Trench 27 and had a clean single brown sandy silt fill, that also yielded a sherd of early 19th century creamware pot and is probably a furrow.

F. 39 NE-SW ditch. Width 1.6m; depth 0.44m. Cut [97] straight moderately sloping sides to a rounded base. Fill [96] soft dark brown silty sand with occasional gravel inclusions and charcoal flecking. Contains pottery and clay pipe.

F. 47 N-S ditch. Width 1m; depth 0.3m. Cut [118] moderately steep sides to a flat base. Fill [117] dark brown sandy silt with rare gravel inclusions. Contains pottery.

Modern

One modern feature was identified and excavated in Trench 31.

An east-west aligned rectangular animal burial was exposed cutting through the middle of the boundary ditch, F. 10 in the southern end of Trench 31. The cut contained a modern articulated pig burial with a fragment of dark green bottle glass and a shard of black basalt ware were deposited in the backfill.

> **F. 48 E-W** Rectangular cut. Length 1.5m; width 0.65m; depth 0.25m. Cut [120] straight steep sides to a flat base. Fill [119] soft mid brown sandy clay silt with frequent gravel inclusions and occasional charcoal flecking. Contains an articulated pig skeleton, pottery and glass.

Test pitting and alluvial

Eight c.2m^2 test pits were machined at either end of Trenches 41, 42, 45 and 46 in the Ouse floodplain. No archaeology was found but evidence for a possible palaeochannel was identified in five of the test pits (Figures 20-25). The characteristics of the landscape here along the Ouse suggests a gravel terrace through Trenches 42 and 43. Archaeology is often apparent on these gravel terraces so there is potential for preservation of features in this area. On the gravel terrace, the alluvium was encountered at 0.26m and continued to a depth of 1.3m, at which natural gravels were observed.

A palaeochannel was identified at both ends of Trenches 45 and 46 as well as the eastern end of Trench 41. The alluvium extended to depths of 1.1m to 1.3m in Trenches 45 and 46 and at 1.4m in the east of Trench 41. The characteristic bright turquoise blue clays of the paleochannel gradually increased in depth as it progressed further south, from 0.4m in depth in the north, to a maximum of 0.95m in depth in Trench 46, at which it became slightly shallower to 0.8m. The deepest test pit was in Trench 46 to the east where natural gravels were reached at 2.25m.

Trenches 43, 44 and 47 were fully machined. A layer of peat running the length of Trench 47 was exposed that was also seen to continue into the eastern end of Trench 44. The alluvium in these trenches reached a depth of 0.85m in the north to 1.3m, then 1.75m in the south onto natural gravels. There is an increase in depth of the alluvium onto the natural gravels towards the south and east of the floodplain suggesting a marshy ground that was often waterlogged. There is also the potential to find waterlogged material in this part of site.

A further palaeochannel or pond was identified at the eastern end of Trench 44. The alluvium continued down to a depth of 0.95m with the channel down to a depth of 1.3m. This channel may have run north-south in between Trenches 42 and 43 to join the other channel north of Trench 46, or it may have been a body of standing water.

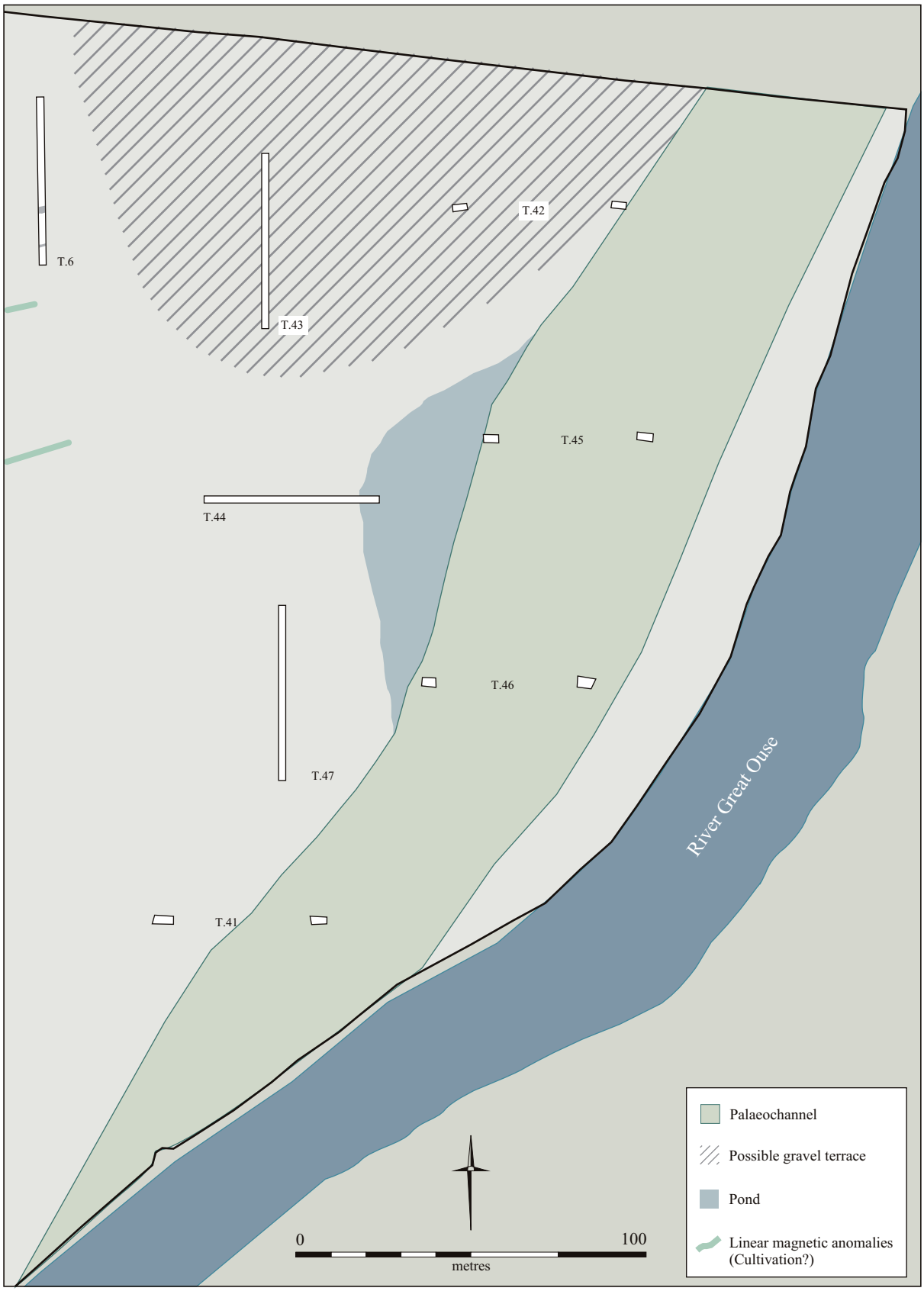

Figure 20. Location of palaeochannel and possible gravel terrace

Figure 21. Photo of Trench 41, West

Figure 22. Photo of Trench 45, East

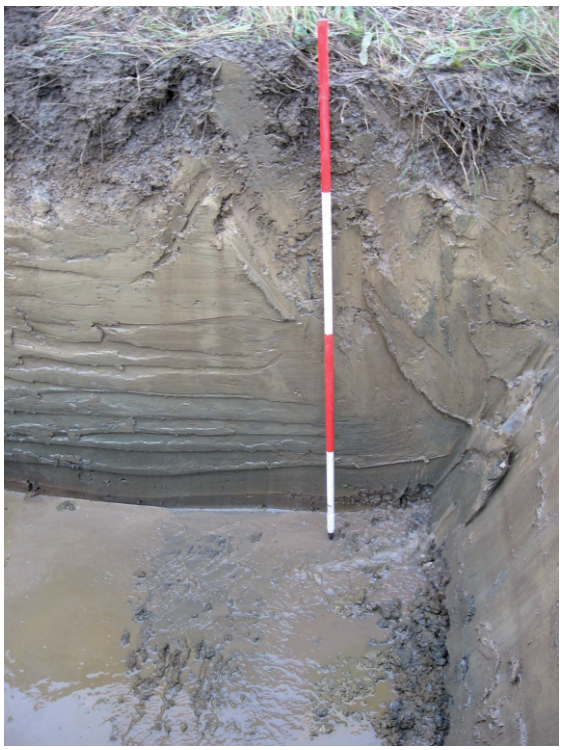

Figure 23. Photo of Trench 45, West

Figure 24. Photo of Trench 46, East

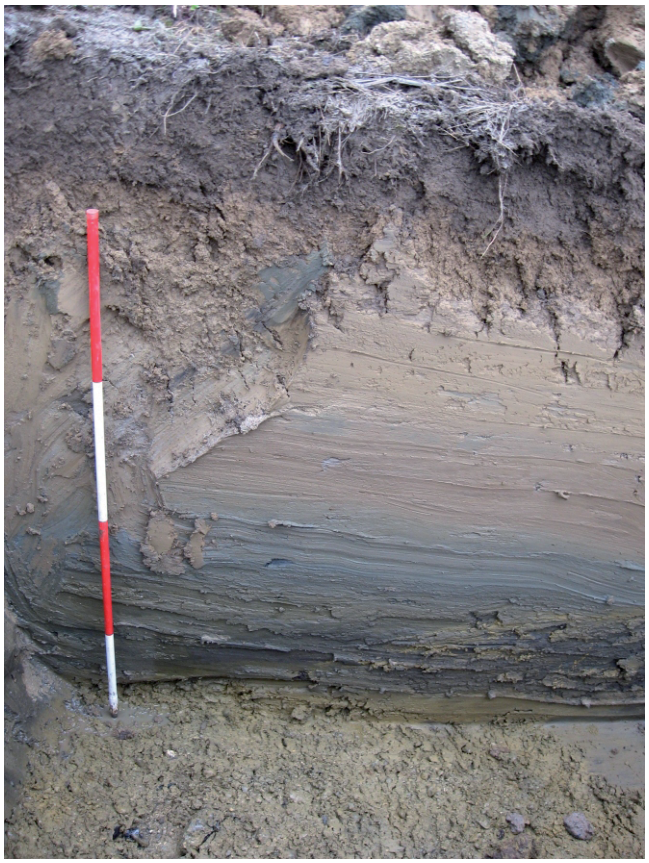

Figure 25. Photo of Trench 46, West

DISCUSSION

Landscape

The topography of the site is characterised by gently sloping valley sides where two distinct gravel ridges can be identified. One is along the western edge of the site with the other orientated north south in the south eastern corner of site. The land levels out either side of these ridges and down into the Ouse floodplain. The archaeology seems to correspond to the terrain, the prehistoric and Late Iron Age/Early Roman enclosures were focused on the highest ground to the north and west before a shift in activity further south and east towards the Ouse in the Romano-British. The majority of the archaeology also exists on the flat level ground avoiding the second ridge in the south-eastern corner of site. The area of the floodplain remains sparse of activity with scattered field systems and boundary ditches occupying the lower levels of land while still avoiding the eastern most part of the site that was likely prone to unpredictable flooding.

Chronologies

Prehistoric

Evidence for background prehistoric activity was identified, albeit diminutive, in the form of flint working – waste flakes, blades and a later Neolithic/Early Bronze Age scraper. The majority of these were found in features that were already dated to the Later Iron Age or Romano-British periods, suggesting these were residual and incorporated into these features as they silted up. Two features contained prehistoric pottery that was too abraded for an exact identification but are likely to be part of settlement or ceremonial features associated with dispersed prehistoric activity along the Ouse valley (Malim 2000).

Late Iron Age

Three features were potentially Late Iron Age in date that also saw continuity into the Early Roman period. These were part of a curving enclosure ditch on the most westerly point of the site in Trench 17, on the high ground away from the Ouse, and was likely to be defensive as a bank was identified internal to the feature. Triple ditched boundaries have been excavated in the Ouse Valley and are utilised to subdivide larger areas of the landscape, and to contain numerous settlements. The triple ditch feature in Trench 17 may be of this type, as seen at Elstow Brook, southeast of Willington (Dawson 2000), or more likely originates as a boundary, part of a long established enclosure for a settlement where the individual ditches were repeatedly dug and recut.

These small, dispersed Iron Age settlements are dominant along the Ouse valley replacing the ritual landscapes of the Neolithic and Bronze Age. These are often affected by regional environments, leading to seasonal occupation and movement around the landscape. This is especially true along the Ouse with changes in water levels that have been identified at Bedford River Valley Park, c.1.5km east of the

village of Willington (Meckseper 2007). The Late Iron Age archaeology identified here suggests a sedentary lifestyle due to the location high on the gravel ridge away from the floodplain.

Romano-British

The majority of the archaeology excavated dates to the Romano-British. The earliest features are continuations from the Late Iron Age enclosure ditches that appear to fall into disuse after the conquest. The growth of new occupation sites along the Ouse in the Romano-British arose with the extension of existing field systems with possibly a reclaim of drier land due to a recede of the water table. At Barford Road, situated between Eynesbury and the Ouse, the Romano-British field systems and trackways excavated there were cut into the alluvium (Oakey 1995). However activity, such as at Willington, south-east of Roxton, is known to have shifted onto a higher gravel terrace in the Early Roman period due to a rise in the water table (Meckseper 2007). This does not seem to be the case here, with Early Roman activity on the lowest levels in the south of the PDA. The area of the floodplain however, seems continually clear of archaeology.

There is a steady rise in occupational activity into the 2nd century, centred on the level ground around Trenches 23 and 27. This likely farmstead appears contrary to the apparent trend of development along the Ouse valley which generally sees many small farm sites decline in the Early and Mid Roman with a migration to the developing towns, such as Bedford, St Neots and Godmanchester, or are replaced with the rise of the villa (Dawson 2000). Although the occupied area appears to stay small, the presence and absence of sub soil over the site suggested both agricultural and pastoral farming. This was especially evident in Trench 27 with a clear double ditch boundary separating the deeper cultivation to the west and the higher, potentially wetter ground to the east with the focus of occupation. Assessing the landscape, a presence of long standing arable cultivation appeared to be present in the north and west of the site. This was the highest ground and therefore less susceptible to the unpredictable flooding of the Ouse. The presence of the droveway and paddocks in the south and east of the site and due to the potential that the ground was constantly saturated being in the Ouse floodplain, this part of site was most likely used for animal husbandry, mainly for keeping cattle and sheep.

The decline of activity in the PDA in the Late Roman may, in part be due to the rise in the water table causing the land to become uninhabitable. This has been seen in other parts of the Ouse Valley, such as at Biggleswade, c.12km south of Roxton (Dawson 2000) as the drainage ditches fell out of use. Here however, boundary ditches, paddocks and even the watering holes appear to still be in use in the Late Roman, indicating continuous activity, but the PDA was perhaps on the peripheral of a new focus of occupation.

Undated

Thirty ditches and eight pits were undated within the PDA. The features along the ridge in the north and west are potentially prehistoric, Late Iron Age or Roman in

date, part of dispersed field systems and boundaries. The features further south and east are more likely to be Romano-British in date, again part of an extensive field system and reflecting the shift in the focus of activity onto the slightly flatter ground closer to the Ouse.

Post medieval

Post medieval features were exposed and excavated in Trenches 15 and 27, on the higher ground to the west. These represented a small scale gravel pit as well as field systems.

Modern

One modern feature was excavated in Trench 31, an articulated pig burial that was cut into the boundary ditch extending through Trenches 31 and 40.

CONCLUSIONS

The cropmarks and the geophysical survey had revealed the archaeological potential of the proposed development area. The evaluation has confirmed and refined the archaeology identified in the non-intrusive surveys; eliminating natural anomalies or possible features whilst confirming others.

The known cropmark feature (HER 2664) was confirmed by the evaluation but was also established to be post medieval in date, potentially related to the quarrying that was also confirmed within the trench. The prehistoric and Late Iron Age to Early Roman enclosure ditches in Trenches 17 and 11 were also confirmed from the geophysical survey, along with the droveway and paddocks through Trenches 31, 33, 34, 37 and 40. The boundary ditches around the structure were identified on the geophysical survey as were the substantial pits recognized as watering holes in Trenches 23 and 27. Further numerous boundary ditches in Trenches 40, 31, 9, 6 and 23 were also identified. Although the geophysical survey suggested the presence of a possible paleaochannel, no evidence for a channel was uncovered; the exception being the eastern most field in the floodplain (see below). None of the remainder of the anomalies identified on the geophysical survey were negative features.

Additionally, previously unknown archaeological activity within the PDA was identified in the form of a structure and associated paddocks in Trenches 23 and 27, prehistoric pits and Romano British field systems and pits in Trenches 6, 13, 17, 21, 23, 24, 27, 31, 32, 33, 34, 38 and 39, drainage ditches in Trenches 27 and 23, and a human cremation in Trench 40. Various undatable pits and ditches were also excavated in Trenches 1, 8, 13, 15, 16 and 29. These added substantial detail to the information already available and established significant character, date and structure to the history of the occupation of the site.

The evaluation also established depths of the alluvium in the floodplain throughout Trenches 41 to 47, although no dating evidence for these periodic alluviations in this part of the Ouse was identified. The potential for a gravel terrace was also found in the north of the floodplain in the PDA, as well as identifying a palaeochannel orientated north south, parallel to the current Ouse.

The scale of the archaeology found in the evaluation suggests background prehistoric activity and only limited activity in the Late Iron Age and Early Roman period. The occupation was likely peripheral to a settlement and remained open fields until the Early to Mid 2nd century when there is a slight rise in activity. This is mainly focused in the south of the PDA in the form of the droveway, a few boundary ditches and field systems. The peak of activity on site is in the Mid 2nd to Mid 3rd century with a focus of domestic occupation with land likely for both arable and pastoral cultivation. The concentration of activity was not that large and was possibly a poor site without a good trade network based on the lack of many British wares and Roman imports. Also, due to the presence of cattle genetic abnormalities, there may have been limited access to cattle for breeding, again possibly due to the fact that the site was poor. Activity is certainly in decline in the Late Roman, the focus of settlement has shifted again and remaining activity is evident in the form of boundary ditches and field systems.

This evaluation has enhanced our understanding of the multi-period archaeological activity in the Ouse valley. The discovery of sedentary Late Iron Age occupation high on the gravel terrace, with a possible reclaim of the floodplain for a small Romano-British farm appears contradictory to the trend for settlement patterns in this part of the Ouse valley.

ACKNOWLEDGEMENTS

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BIBLIOGRAPHY

Armour, N., Appleby, G. & Timberlake, S. 2007 The ARES Site, Babraham Research Campus, Cambridgeshire – An archaeological excavation. *CAU Report No.752.*

Beadsmoore, E. 2005. Dairy Farm South, Willington, Bedfordshire: An Archaeological Evaluation. *CAU Report No. 702*.

Boardman, S. & Jones, G. 1990. Experiments on the effects of charring on cereal plant components. *Journal of Archaeological Science* 17: 1 – 11

Boessneck, J. 1969. Osteological differences between sheep (*Ovis aries* Linne) and goat (*Capra hircus* Linne) in Brothwell, D. and Higgs, E. S. (eds.) *Science in Archaeology* (2nd ed.) Thames and Hudson.

British Geological Survey. 1974. Solid & drift geological map of Biggleswade Sheet 204. Keyworth Notts.

Cooper, A. 2004. Investigation of the Archaeological Landscape at Broom Quarry, Bedfordshire, Phase 8. *CAU Report No. 614.*

Cooper, A. 2005. Broom Quarry, Bedfordshire. An Archaeological Evaluation. Phase 10. *CAU Report No. 614.*

Davis, S .J. M. 1992. *A rapid method for recording information about mammal bones from archaeological sites* HBMC AM Lab. Report 19/92

Dawson, M. 2000. The Ouse Valley in the Iron Age and Roman periods: a landscape in transition. In Dawson, M (ed) *Prehistoric, Roman and Post-Roman Landscapes of the Great Ouse Valley.* CBA Research Report 119. Council for British Archaeology.

Dobney, K. M; Jaques, S. D. and Irving, B. G. 1996. *Of butchers and breeds: report on the vertebrate remains from various sites in the city of Lincoln*. Lincoln Archaeological Studies, No 5.

Field, K. 1974. Ring-Ditches of the Upper and Middle Great Ouse Valley. *Archaeological Journal No. 131.*

Greig, J. R. 1991. The British Isles. In Van Zest, W., Wasylikowa, K. and K-E. Behre (eds.) *Progress in Old World Palaeoethnobotany*. Brookfield and Rotterdam: A.A. Balkema

Jones, G. E. M. 1984. Interpretation of archaeological plant remains: Ethnographic models from Greece. In: W.Van Zeist and W.A.Casparie (eds.). *Plants and Ancient Man. Studies in palaeoethnobotany.* Boston and Rotterdam: A.A. Balkema

Jones, M. K. 1978. The Plant Remains. In Parrington, M. (ed.), *The excavation of an Iron Age settlement, Bronze Age ring-ditches and Roman features at Ashville Trading*

Estate, Abingdon (Oxfordshire) 1974-76. Oxfordshire Archaeological Unit: CBA Research Report 28

Halstead, P. 1985. A study of mandibular teeth from Romano-British contexts at Maxey in Pryor, F. and French, C. (eds) *Archaeology and environment in the lower Wetland valley Vol. 1.* East Anglia Archaeology Report 27: 219-224

Halstead, P. Collins, P and Issakidou, V. 2002. Sorting the sheep from the goats: morphological distinctions between the mandibles and mandibular teeth of adult *Ovis* and *Capra. Journal of Archaeological Science* 29. 545-553

Hambleton, E. 1999. *Animal Husbandry Regimes in Iron Age Britain: a comparative study of faunal assemblages from British Iron Ages sites*. BAR British Series 282

Hayward, G. 2001. Worked Stone. In Lucas, G. & Whittaker, P. (ed) Vicar's Farm, Cambridge: Post Excavation Assessment Report Vol.1. *CAU Report No.425*.

Hillman, G. 1984. Interpretation of archaeological plant remains: The application of ethnographic models from Turkey. In: W.Van Zeist and W.A.Casparie (eds.). *Plants and Ancient Man. Studies in palaeoethnobotany.* Boston and Rotterdam: A.A. Balkema

Lisboa, I. M. G. 2006. *Written scheme of works for an intrusive archaeological evaluation, proposed sand and gravel quarry*, *Black Cat Island, Roxton, Bedfordshire.* Archaeologica.

Lisboa, I. M. G. & Ivens, R. J. 2005. *Archaeological desk-based assessment for proposed sand and gravel quarry, Black Cat Island, Roxton, Bedfordshire.* Archaeologica.

Lucas, G. & Whittaker, P. 2001. Vicar's Farm, Cambridge: Post Excavation Assessment Report Vol.1. *CAU Report No.425*.

McKinley, J. 2004. Compiling a skeletal inventory: cremated human bone. In Brickley, M. and McKinley, J. (eds) *Guidelines to the Standards for Recording Human Remains.* IFA Paper No.7

Malim, T. 2000. The ritual landscape of the Neolithic and Bronze Age along the middle and lower Ouse Valley. In Dawson, M. (ed) *Prehistoric, Roman and Post-Roman Landscapes of the Great Ouse Valley.* CBA Research Report 119. Council for British Archaeology

Maltby, M. 1979. *Faunal studies on urban sites: the animal bones from Exeter 1979-1975.* Exeter Archaeological Reports 2. Sheffield.

Manning, W. H. 1985. *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in The British Museum*. London: British Museum

Meckseper, C. 2006. Great Barford flood attenuation scheme, Bedfordshire. Archaeological field evaluation. *Albion Archaeology Report GBF1104*

Meckseper, C. 2007. Bedford River Valley Park, Bedfordshire. Archaeological desk-based assessment. *Albion Archaeology Report RV1127*

Oakey, N. 1995. An Archaeological Assessment at Barford Road, Eynesbury. *Cambridgeshire County Council Report No. A67.*

O'Connor, T. P. 1988. Bones from the General Accident site, Tanner Row. *The Archaeology of York* 15 (2) 61-136 London. Council for British Archaeology.

Partridge, C. 1981. *Skeleton Green. A Late Iron Age and Romano-British Site*. Britannia Monograph Series No.2. London: Society for the Promotion of Roman Studies

Payne, S. 1973. Kill-off patterns in sheep and goats: the mandibles from Asvan Kale, *Anatolian Studies* 23.

Peacock, D. P. S. 1998. *The Archaeology of Stone*. English Heritage.

Scaife, R. 2000. The prehistoric vegetation and environment of the River Ouse valley. In: Dawson, M. (ed.). *Prehistoric, Roman and post-Roman landscapes of the Great Ouse Valley*. Council for British Archaeology: CBA Research Report 119

Spence, C. 1990. *Archaeological Site Manual.* Department of Urban Archaeology. Museum of London.

Spoerry, P. 2000. Estate, Village, Town? Roman, Saxon and medieval settlement in the St Neots area. In Dawson, M. (Ed) *Prehistoric, Roman and Post-Roman Landscapes of the Great Ouse Valley.* CBA Research Report 119. Council for British Archaeology

Stace, C. 1997. *New Flora of the British Isles*. Cambridge: Cambridge University Press

Steadman, S. 1999. A later Neolithic and Bronze Age mortuary complex and Iron Age settlement at the Bunyan Centre, Bedford. *Bedfordshire Archaeology No. 29.*

Taylor, A. F. & Woodward, P. J. 1985. A Bronze Age barrow cemetery and associated settlement at Roxton, Bedfordshire. *Archaeological Journal No. 142.*

APPENDICES

Flint – Emma Beadsmoore

A total of 16 (<217g) flints were recovered from the site, 15 (<193g) were worked, whilst 1 (24g) was unworked but burnt. Features yielded nine (<102g) of the flints, whilst the remaining 7 (115g) were recovered as stray finds. The material is listed by feature and type in Table 1.

	Type										
Feature	chip/chunk	secondary flake	tertiary flake	secondary blade	tertiary blade	core rejuvenation flake	multiple platform core	flake knife	sub-circular scraper	end scraper	**Totals**
6			1								1
20		1									1
29					1					1	2
30		1									1
32								1			1
36			1								1
54	1										1
70		1									1
stray		1	1	1	1	1	1		1		7
	1	4	3	1	2	1	1	1	1	1	16

Table 1 – Types and quantities of flint

The flint recovered from the features comprises flint working waste/flake blanks and two tools. Amongst the material is a Late Mesolithic/earlier Neolithic blade, a couple of systematically manufactured, potentially later Neolithic flakes, a potentially early prehistoric flake and a Late Neolithic/Early Bronze Age flake knife. However, the flints were residual in later features; already in the landscape, the flints were inadvertently incorporated into the features when they were established. The remaining flints are chronologically non-diagnostic.

The presence of residual material in the later features provides evidence, albeit limited, for earlier, prehistoric activity at the site. Evidence that is supported by the recovery of Neolithic flint working waste and flake and blade blanks, as well as a later Neolithic/Early Bronze Age scraper as stray finds.

Roman Pottery – Katie Anderson

The evaluation yielded a total of 209 sherds of Roman pottery, weighing 3454g and representing 5.10 EVEs. All of the material was examined and details of fabric, form, decoration, EVE and date (where possible) were recorded. For the purposes of this

report, the material will initially be assessed by trench, with a discussion of the assemblage as a whole to follow.

Contextual Analysis

Trench 17

19 sherds of pottery, weighing 172g were recovered from Feature 36, Trench 17. This included 12 sherds from a medium sized, fine sandy greyware jar, and one fine sandy oxidised ware sherd. All of the pottery from this feature dates mid 1st-2nd century AD, with one further grog-tempered sherd dating Late Iron Age/Early Roman. Since most sherds were non-diagnostic, more specific dating is problematic, however, the fabrics suggest a Mid-Late 1st century AD date is appropriate. The pottery therefore highlights this feature as one of the earliest on the site.

Trench 23

A total of 94 sherds of pottery weighing 1722g, from five different features. Feature 58 contained just two sherds from the base of a black-slipped vessel, dating 2nd-3rd century AD. Feature 63 contained 11 sherds (138g), which included four sherds from an imitation black-burnished ware jar, with a long neck and a beaded rim, dating 2nd-3rd century AD. There were also four shell-tempered sherds and one Horningsea greyware sherd, both of which also date 2nd-3rd century AD. Feature 69 contained two sherds dating 2nd-4th century AD, comprising one shell-tempered sherd and one sandy greyware.

32 sherds of Roman pottery, weighing 741g were recovered from Feature 62. This included seven sherds from shell-tempered jars, including two from a large storage jar. There was also a decorated body sherd from a Nene Valley colour-coated beaker, with rouletting, dating Mid 2nd-4th century AD. 11 sherds were from a local imitation black-burnished ware, although no vessel form could be identified. The pottery from this feature broadly dates 2nd-4th century AD, however, the vessel forms suggest a Mid 2nd-late 3rd century AD date is appropriate.

Feature 75 contained 28 sherds, weighing 383g, which included one Nene Valley colour-coated sherd, one late Colchester colour-coated ware from a beaded rim beaker and three shell-tempered sherds. Two oxidised sandy jar rims were also collected, along with a fine sandy greyware jar rim. The pottery recovered from this feature suggests a Mid 2nd-late 3rd century AD date. One Late Iron Age/Early Roman grog-tempered sherd was recovered from the surface of this feature.

11 sherds were recovered from a beam slot, Feature 67, weighing 212g. This included two Nene Valley colour-coated sherds dating mid 2nd-4th century AD and four sandy greyware sherds from the base of a medium sized jar, also dating 2nd-4th century AD.

Finally, seven sherds (144g) were recovered from a cleaning layer covering Features 58 and 59. The pottery from this context dates 2nd-4th century AD, and included one

shell-tempered jar, two sherds from a Colchester black-burnished deep, beaded bowl, as well as a sherd from another imitation black-burnished ware vessel, with burnished lattice decoration.

Trench 27

Features within Trench 27 yielded 59 sherds of Roman pottery, weighing 1040g, from three different features. The vast majority of sherds were from Feature 45, which contained 56 sherds from three fills. [109] contained 23 sherds (410g), with six sherds coming from a Nene Valley imitation of a Samian Dragendorff 31, dating to the 4th century AD. There were also four sherds from a late Colchester colour-coated beaker, dating to the 3rd century AD and three shell-tempered jars represented. Several of the sherds had heavy interior sooting and a small number of sherds were burnt. Context [110], situated below [109], contained seven sherds (128g), which included six sherds from a black-slipped jar dating 2nd-3rd century AD and one shell-tempered sherd. The pottery from this context therefore, appears to be slightly earlier in date than [109]. Context [114] was from the same feature, but a second slot and contained 26 sherds, weighing 468g.

Interestingly, context [114] contained sherds from vessels in both [109], and [110]. 19 sherds from the black-slipped jar identified in [110], were collected from [114], as well as three Nene Valley colour-coated sherds from the imitation Dr31 recovered from [109]. This raises interesting questions about the feature, since the slot containing [109] and [110] was wider than that with [114], which initially implies that this was a later re-cut resulting in a 'bulge' in the ditch. However, the pottery evidence does not necessarily support this view, since the material collected from the wider slot does appear to have stratigraphic differences with the lower fill containing earlier pottery than the upper fill. If the fills in this slot were indeed the result of a later re-cut and thus redeposition, the chronological difference would have to be an extreme coincidence. The pottery evidence therefore suggests that the wider slot was earlier, and then there was some form of re-cut or extension of the feature, ensuring disturbance to fills [109] and [110], and ultimately resulting in material from both of these contexts being redeposited into a single, later fill [114].

The remaining two features in Trench 27 contained only small quantities of pottery, with Feature 56 containing one sandy greyware jar sherd, dating 2nd-3rd century AD and Feature 57 containing one small sandy ware sherd which could only be dated Romano-British.

Trench 33

Three sherds from the base of a sandy greyware jar were recovered from Feature 6, weighing 131g and dating 2nd-4th century AD.

Trench 34

15 sherds of Roman pottery, weighing 415g were collected from Trench 34, from three different features. Feature 5 contained seven sherds (34g), including four grog

and shell-tempered body sherds, dating 2nd-4th century AD, and one whiteware sherd dating Mid 1st-3rd century AD. Four sherds (32g) were recovered from Feature 9, also dating 2nd-4th century AD and including 2 shell-tempered sherds. Finally four sherds weighing 33g were recovered from Feature 11, comprising of two sandy greywares and two shell-tempered sherds, two of which had sooting on the interior.

Trench 40

A total of 14 sherds, weighing 94g were collected from two features within trench 40. Feature 4 contained 12 shell-tempered sherds, from a single medium sized jar, dating 2nd-4th century AD. Feature 7, contained a single sandy greyware sherd, which dates mid 1st-3rd century AD. Feature 8 contained one sandy greyware, beaded rim jar dating 2nd-4th century AD.

Discussion

A variety of different vessel forms and fabrics were present in the assemblage (see Tables 2 and 3), although coarsewares dominated, representing approximately 95% of the assemblage. Most of these appear to have been locally produced, although the exact sources are as yet unknown. The mean weight of the pottery was 16.5g, which is relatively high, however, the level of abrasion was also high, which implies that many of these sherds may have been redeposited, or were on the surface for a period of time before being deposited in features.

The range of vessel forms was limited (see Table 2), with jars dominating and all other forms poorly represented. The lack of mortaria is somewhat surprising, since they tend to feature more heavily in domestic assemblages. The small number of beakers and the lack of any other fineware forms such as flagons suggest, that this was a relatively impoverished site, although it should be remembered that the evaluation may not have been located on the heart of the settlement, thus the pottery recovered does not tell the full story.

Form	No.	Wt(g)
Beaker	6	59
Bowl	12	397
Dish	2	25
Jar	93	1958
Mortaria	1	17
Unknown	95	998
TOTAL	**209**	**3454**

Table 2: All pottery by vessel form

The vessel forms overall, do maintain the view that this is a domestic assemblage, which is further supported by the usewear evidence seen on a number of sherds, specifically interior burnt residues and exterior sooting, consistent with vessels being used for cooking. Interestingly sherds from Features 45 and 75 contained large proportions of sherds with burnt residues, although in the case of Feature 45, this only reflected three different vessels. These two features are located in adjacent trenches

to one another, suggesting, that this area of the site was the focus for domestic occupation.

Shell-tempered wares featured highly, being the most commonly occurring fabric type. This is in part, due to the sites relatively close proximity to the Harrold kilns, which produced shell-tempered vessels in large numbers between the 2nd and 4th centuries AD. There was however, some variation noted between some of the shell-tempered wares, including those which had a combination of grog and shell, which are not necessarily from the same source. This is not unusual however, since shell-tempered wares appear to have commonly been produced on a very local scale throughout the later Roman period in the East of England (Anderson forthcoming), therefore even a site located near to a big producer like Harrold, may have still got its shell-tempered wares from other sources.

Fabric	No.	Wt(g)
Black-slipped	28	471
Colour-coat	1	8
Colchester BB	2	67
Coarse sandy greyware	50	829
East Anglian reduced	1	17
Fine sandy oxidised	1	6
Fine sandy greyware	16	157
Grog and shell-tempered	7	10
Grog-tempered	3	27
Horningsea greyware	1	47
Imitation black-burnished	16	179
Late Colchester colour-coat	5	53
Nene Valley colour-coat	14	357
Coarse oxidised sandy	9	53
Shell-tempered	51	1118
Whiteware	4	55
TOTAL	**209**	**3454**

Table 3: All pottery by fabric

Coarse sandy wares are also common within the assemblage, although the East Anglian reduced ware sherd and the Horningsea greyware were the only two which could be sourced. There are several examples of imitation Black-burnished ware in the assemblage, including two sherds of Colchester black-burnished ware. The other types could not be sourced, although the fabrics are certainly attempting to copy the Dorset BB1, with highly burnished surfaces and burnished lattice decoration.

In contrast, relatively few fineware vessels were recorded (representing 5% of the assemblage). These comprised 14 Nene Valley colour-coated sherds, five late Colchester colour-coated sherds and one unsourced colour-coat. The presence of Nene Valley wares and Colchester wares is not surprising since these were two large industries and their wares were widely distributed.

There are no imports in the assemblage, which is unusual for a site which appears to have been occupied in some form, from the early Roman period to the late Roman period. There are several possible explanations for the lack of imported wares in this assemblage. The first is that the evaluation simply did not uncover any imports and

that further work on the site would. However, many features were sampled and if imports had been a significant part of the assemblage, they would have been found. Perhaps a better explanation is that the site did not have access to imported wares, which in turn may be a result of poverty and or lack of good trade networks, which may be supported by the relative lack of established British wares, which may be expected. The final explanation, which is probably the most likely, is that the lack of imported wares is due to the date at which the site appears to have peaked. Samian is one of the most commonly imported ware in this area of Britain, beginning before the conquest and peaking in the Mid 1st-2nd century AD, before declining in the 3rd century AD. Since the site appears to peak in the Mid 2nd-3rd century AD, the lack of Samian may be explained by this alone.

Although there is pottery on the site dating from the Early Roman period to the Late, it seems to be the 2nd-3rd century AD when in terms of pottery, the site 'peaks'. The Early Roman wares (mid 1st-2nd century AD), are largely limited to those in Feature 36, Trench 17, suggesting activity during this period was very limited, perhaps restricted to a small number of boundary ditches on the outskirts of a settlement. The period between the early-mid 2nd sees a slight increase in the quantity of pottery, but the Mid 2nd-Mid 3rd century AD, is when activity seems to be at it s highest. This however, may be because the settlement has moved and that the evaluation has hit an area with more occupation. Late Roman pottery is restricted to the Nene Valley colour-coated, imitation Dr31, recovered from Feature 45. This vessel alone dates to the 4th century AD. The lack of other late Roman wares, such as Oxfordshire and Hadham also support the view that the site had started to decline by the Late 3rd/4th century AD.

The site fits broadly into the pattern seen in the immediate area, since the St. Neots area appears to lack any large Roman settlements/towns in the area between Sandy and Godmanchester (Spoerry 2000).

Overall the pottery from this site shows that there was occupation from the early Roman period to the late, however, there is fluctuation, with the mid Roman period, seemingly being the most prolific in terms of activity. The pottery recovered suggests a relatively small site, with probably only a small number of occupants at any one time. Although an alternative explanation is that this evaluation was focused on the periphery of a larger settlement, thus the pottery recovered is only a fraction of what was used at the site. Further work on the site would be necessary in order to understand the site in more detail and to confirm whether this was a small-scale, relatively impoverished site, or simply the extremities of a larger, more complex site.

Tile and Burnt Clay – Katie Anderson

One piece of Roman tile was recovered from Feature 4, Trench 40, weighing 257g. This tile is from a tegula, but can only be dated Romano-British. The lack of tile from anywhere else on the site implies that either there was no building in the vicinity and this tile had been redeposited from elsewhere, or that the evaluations did not uncover a potential building on the site.

23 pieces of burnt clay were also collected from three features. Feature 69 contained 15 pieces (76g), Feature 75 contained 7 fragments (64g), while Feature 8 contained a single fragment weighing <1g. All of the pieces were small and fragmented, thus no forms were identifiable. Three fabric groups were identified, comprising one with coarse sandy inclusions, one moderate sandy and one with sand and vegetable temper. Dating of the fragments is problematic, however, their association with other finds implies those from features 8 and 75 are Roman, while the pieces from Feature 69 are likely to be later in date.

Worked and Burnt Stone – Simon Timberlake

A burnt fragment of coarse quartzitic grit, weighing 278g, from a ditch F. 45, Trench 27, almost certainly derived from a coarse gritstone facies of the Millstone Grit (Upper Carboniferous), an exotic geology to the site, collected either from the glacial boulder clay or gravels, but more likely brought here for use as a quern stone, perhaps quarried from a Pennine source. The fairly standard thickness of the fragment (30 mm), along with the presence of at least one (perhaps two) ground surfaces, suggests this may have been a fragment of an (upper?) stone of a rotary quern. The pitting marks resulting from the primary dressing (shaping) of the quern stone surface are still visible.

Finds of such querns are moderately common within Romano-British rural settlements in Cambridgeshire, examples being Vicar's Farm (Hayward in Lucas & Whittaker 2001) and Babraham (Armour 2007). These quern stones are typically found in contexts dating from the 2nd century AD onwards. It appears that the trade in querns from north to south was channelled along some of the main road routes, the original sources being within the Southern Pennines, such as the Peak District of Derbyshire, possibly from Roman-Medieval quarrying sites such as at Hathersage and Wharncliffe Edge (Peacock 1998).

Six fragments of sandstone (weighing 245g), were most likely inadvertently included within the fill of the ditch F. 75 Trench 23. These are all fragments of the same rock type; a pale green-grey fissile calcareous band of micaceous sandstone/ siltstone, most probably a thinly-bedded shelly facies. These could represent some very weathered fragments of Collyweston Slate (Jurassic) of Lincolnshire origin, perhaps deposited by the local glacial drift, or else some rocks from the local Lower Greensand outcrop which outcrops to the south (around Old Warden, Shefford and Biggleswade) and to the east (towards Warely and Potton) of Roxton. The calcareous bed is quite distinctive; along the bedding partings lie small flattened fossil bivalve shells. The matrix of the fine grained sandstone contains small but distinctive inclusions of authigenic mica.

Slag – Simon Timberlake

Four small fragments of an unidentified fused material (not a metallurgical slag) weighing 2g were recovered from F. 8 in Trench 40. Pale yellow-buff coloured and extremely lightweight, soft and crumbly, with a frothy texture and in places evidence for slight vitrification (glassiness), such as on the inside surface of the gas bubbles. However, now devitrified and with a fairly chalky surface. Amongst the inclusions present are several 1-2 mm diameter fragments of a light brown fine sandy soil or else calcined siltstone/sandstone containing small flecks of mica (an original component). These inclusions may be similar to the stone fragments from F.75 [187], perhaps derived from certain of the Lower Greensand beds of which there are very large outcrops towards Potton. Other possible lithic fragments noted within this fused material were examples of a darker grey, slightly coarser grained sandstone. All of these were very broken up, and it is conceivable that these may have been derived from fused ceramic.

In the absence of petrological thin-section (microscope) and chemical analysis it is difficult to be certain of the identity of this material. However, it seems likely that it may either have been some intentional or inadvertent inclusion within the cremation pyre with which this 'slag' was associated; perhaps a fragment of ceramic, glass (beads) or other mineral substance which had reached a temperature in excess of 800°C and then fused and melted, dripping down through the pyre, perhaps fusing and mixing with the bone ash at the same time.

Metalwork – Grahame Appleby

A total of 31 iron artefacts were recovered from during hand-excavation of features, 28 of which are a collection of hobnails recovered from one feature. One object was recovered as an unstratified surface find.

Trench 15
1. <075> Fragment of corroded square-sectioned nail with possible surviving flat triangular head with shoulders. Length 40mm, weight 9g. Recovered as an unstratified surface find from a 18th – 19th century pit. The form and shape of the nail is similar to Manning's Type 2 nail (Manning 1985), common on Roman sites. However, the form of these nails is similar to medieval and post-medieval handmade nails. Undiagnostic.

Trench 23
2. <072> Collection of 28 heavily corroded hobnails. Total weight 25g. The hobnails are of a similar shape and size and probably from a single item. Recovered from ditch F.63, dated by associated pottery sherds to the 2nd – 3rd centuries AD. Hob-nails of this size and form are typically Roman and were fitted to both male and female footwear.

Trench 33
3. <074> Fragment of corroded square-sectioned nail; head missing and bent through 90º. Length 45mm, weight 8g. Recovered from Roman droveway, F.6, and dated by pottery association to the 1st – 3rd centuries AD. Undiagnostic.

Trench 40
4. <072> Corroded and concreted rectangular to square cross-sectioned tapering iron bar, with a rounded wider end. Length 72mm, maximum width 17mm, minimum width 8mm, weight 41g. Recovered from and undated boundary ditch, F.10. Possible tine, chisel or punch. Undated.

The assemblage from this evaluation is unremarkable and largely undiagnostic. The exceptions are the hobnails found associated with pottery sherds dating to the 2nd – 3rd centuries AD. The number of hobnails suggests these came from a single item of footwear. Hobnails were used for both military and civilian footwear during the Roman period, and these may represent traces of a disturbed cremation or inhumation burial located nearby. Examples of such burials are known from Roman cemeteries in Britain, such as those excavated at Skeleton Green, Herts, (Partridge 1981: 261).

Glass – Megan Cuccia

Two shards of glass (6g) were recovered, one each from Trenches 27 and 31. The shard from F. 45, Trench 27 is flat, transparent and of a light blue tint. It could be a fragment of window pane. While found with Roman pottery, this small shard seems to lack the diagnostic features of Roman window glass. The shard from F. 48, Trench 31 belongs to a post medieval dark green glass bottle.

Faunal Remains – Chris Swaysland

An assemblage numbering 834 fragments and weighing 4614 grams was recovered from a series of evaluation trenches. The vast majority of the assemblage, by fragment count and by weight (486 fragments / 3426 grams) was made up of one articulated specimen. The condition of the assemblage was variable though much was in a poor condition.

Methodology

The animal bones were identified using the reference collection of the Cambridge Archaeological Unit. The assemblage was quantified using a modified version of the methodology of Davis (1992). In brief, all mandibular and maxillary teeth and a predetermined restricted suite of elements, predominantly the distal articulations, are counted (countable elements). Results are presented by NISP (Number of Identified Specimens). It can be difficult to distinguish between the bones of sheep and goat; certain elements however can be identified (Boessneck 1969, Halstead et al 2002). All caprine bones that could be confidently identified were sheep, therefore it will be assumed that all caprine bones are from sheep. Information on gnawing, butchery and pathology was recorded where present. Butchery was recorded by type (i.e. chop, knife cut, sawn), location and orientation. Pathological conditions were categorised where possible. The age at death of the major domestic animals was analysed using Halstead (1985) for cattle, Payne (1973) for sheep and Hambleton (1999) for pigs. The assemblage was analysed by phase as defined by the excavator:

Results

Romano-British

The vast majority of the assemblage was dated to the Romano-British period. Most of the material was dated more precisely but in order to increase the sample size all Romano-British material has been considered together (Table 4).

Species	NISP
Cattle	6
Sheep	6
Pig	3
Horse	1

Table 4: Romano-British animal bone

The Romano-British assemblage of identifiable countable fragments is very small. It is dominated by two species: cattle and sheep. Cattle remains were composed entirely of tooth and mandible fragments, these are the most robust elements and indicates a poor level of preservation. One cattle mandible exhibited a congenital abnormality; the hypoconulid (posterior cusp of the third molar) was absent. This condition is often observed in Romano-British assemblages (Maltby 1979, Dobney et al 1999) and may be a result of breeding within a restricted gene pool (O'Connor 1988).
Sheep remains are also restricted to tooth and mandible fragments. The data is limited but a range of ages are present in the assemblage with animals from 1-2 years to 6-8 years represented. Pig is represented by three specimens and horse by one specimen.

Post medieval/modern

A complete pig skeleton was recovered from F.48. The pig was sub-adult, analysis of the tooth eruption and wear indicates that the animal was aged between 14 and 21 months (Hambleton 1999). The specimen was sub-adult and yet very large indicating that it was a post medieval/modern specimen.

Undated

Undated specimens were recorded but have not been included in this analysis.

Discussion/Conclusion

Clearly this is very small assemblage; beyond saying those animals that are present in the assemblage were present on site no further conclusions are possible.

Human Remains – Natasha Dodwell

Cremated human bone was recovered from a small, shallow circular pit, F.8. The fill, [016] was 100% bulk sampled, the material wet sieved and the burnt bone > 2mm was then analysed according to the methods outlined by Mckinley (2004). A total of 61g of bone was collected. The bone fragments were generally small; the largest fragment was 34mm long, 39% of the fragments were >10mm and 43% of the fragments were recovered in the 5-10mm sieve fraction. All parts of the body were represented including part of the auricular surface of the pelvis and a permanent molar root. The skull and limb fragments were generally small and gracile and probably derive from a subadult (12-17yrs). It is possible that some of the thinner skull fragments and smaller ribs and limb shafts could derive from a 2nd more immature individual. All of the bone was buff white in colour, indicative of complete oxidation. The fill of the pit was homogenous charcoal stained sandy silt with moderate gravel and occasional fragments of charcoal and burnt clay. The burnt bone was scattered throughout the fill. A single undated square headed nail was also recovered. The deposit could be classified as an unurned burial or a deposit of pyre material.

Assessment of Bulk Environmental Samples – Anne de Vareilles

Methodology

Ten samples were processed using an Ankara-type flotation machine at the Cambridge Archaeological Unit. The flots were collected in a 300µm mesh and the remaining heavy residues washed over a 1mm mesh. The flots were dried indoors and scanned for the presence of charred plant macro remains.

Sorting and identification of macro remains were carried out under a low power binocular microscope. Identifications were made using the reference collection of the George Pitt-Rivers Laboratory, McDonald Institute, University of Cambridge. Floral nomenclature follows Stace (1997). All environmental remains are listed in tables 5 and 6.

Preservation

All except for F.70 [174] contained plant remains preserved through carbonisation. Preservation by waterlogging was present in F.70, although the feature had evidently began to dry out in recent times. Intrusive rootlets and seeds are indicative of bioturbation through which macro remains may have been lost and/or displaced.

Results

Undated Pit F.8 [16] and Boundary Ditch F.10 [20]

Neither feature had any cereal remains. Two grass seeds and one blinks (*Montia Fontana ssp. minor*) were retrieved from the pit, whilst only a few modern goosefoots (*Chenopodium* sp.) were found in the ditch. Both features had low levels of charcoal.

Late Iron Age Enclosure Ditch F.38 [94]

Nothing but a couple of tiny, residual pieces of charcoal were found.

Possibly Romano-British Boundary Ditches

F.60 [147]
The only charred remains from F.60 were one grass seed and a tiny piece of charcoal.

F.70 [174]
This context had no charred remains but waterlogged seeds from nine species. The most common is crowfoot (*Ranunculus* Subgen, *BATRACHIUM*), followed by a small seeded dock variety (*Rumex conglomeratus/ sanguineus/ obtusifolius*) and then a woundwort variety (*Stachys* sp.). It was not noted during flotation that the sample was waterlogged, and the lack of further plant taxa indicates that the context was only seasonally waterlogged or has dried out in the recent past. The sedge (*Carex* sp.) and crowfoot seeds point to waterlogged soils, whilst the other species may represent open grassland. The boundary ditch reached into the floodplain and was probably seasonally flooded. However, the partial nature of this assemblage does not allow for further details.

Romano-British Watering-hole

F.57 [141]
Context [141] of the watering-hole was not waterlogged. It contained one wheat glume base (*Triticum* sp.), and four wild plant seeds which could have been crop weeds.

2nd – 3rd century AD features

Drainage Ditch F.75 [188]
This 7.5 litre sample revealed 169 cereal grains and 16 indeterminate cereal grain fragments. Of the whole grains, only one was barley (*Hordeum vulgare sensu lato*) and 107 were spelt or emmer wheat (*T. spelta / dicoccum*). No barley chaff was found, but of the 132 wheat glume bases 45 could be identified to spelt (*T. spelta*). The wild plant seed assemblage comprises of a minimum of 38 grass seeds and two medics or clovers (*Medicago / Trifolium*).

Boundary Ditch outside a possible structure (see below) F.62 [152]

This feature was by far the richest in both cereal remains and wild plant seeds. The 9 litre sample revealed over 218 cereal grains – one of which is certainly barley, whilst 109 are spelt or emmer and 23 are oat grains – and 2727 wheat glume bases, 528 of which could be identified to spelt and two to emmer (*T. dicoccum*). Two barley rachis internodes were also found. Although chaff, especially the finer elements, does not survive charring as well as grains (Boardman and Jones 1990), the sample was rich in fragments of spelt glumes, glume wheat internodes, wheat and/or barley awns and oat awns. More wild plant seeds were counted than cereal grains, the majority of which

are grass seeds. The next most common seeds are from a small seeded dock variety, followed by 13 stinking chamomile (*Anthemis cotula*), three clovers or medics and another three seeds representing three species.

Possible Structure Beam Slot F.67 [165]

A maximum of 17 cereal grains were found, five of which are spelt or emmer and two oat grains. 89 wheat glume bases, 16 of which are spelt, and a straw culm node make up the chaff. A maximum of 20 grass seeds represent the majority of the wild plant seeds. Goosefoots, a small seeded dock variety and stinking chamomile are also present but only by one or two seeds.

Late Roman Drainage Ditch F.45 [109]

Of the 51 whole cereal grains, 24 are spelt or emmer. No oat or barley was noted and the chaff component is composed of only five wheat glume bases. The 15 litre sample contained more wild plant seeds than cereal grains. The most common are grass and red bartsia seeds (*Odontites vernus*), followed by a dock variety (*Rumex* sp.) and medics or clovers. Another eight species are represented by only one or two seeds, and at least five of these specimens grew in damp soils.

Conclusions

The numerous quantities of cereal processing waste discovered in Trenches 23 and 27 point to areas of food preparation within the Romano-British site. The boundary ditch F.62 contained a well preserved assemblage of pounding waste. The cereals represented are spelt, which was commonly used in the Romano-British period (*cf.* Greig 1991), a little emmer and very little barley. The barley and emmer are too few to represent individual crops; it is more likely that the assemblage stems from a single maslin crop dominated by spelt. Although the Romano-British did cultivate oats (*ibid.*), the lack of identifiable oat chaff and the relatively poor representation of caryopses suggest that on the PDA they may simply have been a wild crop contaminant.

The cereal remains from F.62 are all from the cereal ears. The absence of straw indicates that the initial threshing to separate the straw from the ears and to break the ears into individual spikelets took place elsewhere. Glume wheats such as spelt and emmer preserve better if stored as spikelets rather than clean grain. G. Hillman's (1984) and G. Jones' (1984) ethnographical studies on Anatolia and Amorgos (Greece) respectively found that glume wheats were stored as spikelets and that further processing was done on a day-to-day basis, according to domestic needs. The spikelets were parched to release the grains from the glumes and glume bases and then winnowed, sieved and hand-sorted until all the chaff, small weed seeds and grain-sized seeds (such as the large grasses) had been removed. The sample from F.62 shows exactly that: a mixture of large grasses, very small and light crop weed seeds and almost 13 times more wheat glume bases than grain, which probably charred during parching.

Stinking chamomile, the second most common crop weed in F.62, grows on damp heavy clay soils and has been used to suggest a Romano-British expansion onto soils that are harder to cultivate (*cf*. Jones 1978).

Table 5: Charred Cereal Grains and Chaff from the Bulk Soil Samples

Sample number		**<8>**	**<14>**	**<17>**	**<5>**	**<7>**
Context		[152]	[165]	[188]	[109]	[141]
Feature / Trench		**62** / 23	**67** / 23	**75** / 23	**45** / 27	**57** / 27
Feature type		Bound. ditch	Beam slot	Drain ditch	Drain ditch	Water-hole
Phase/Date		2nd- 3rd Century A.D			Late R.B	R.B.
Sample volume – Litres		9	7	7. 5	15	6. 5
Flot fraction examined		1/4	1/1	1/1	1/1	1/1
Grains						
Hordeum vulgare sensu lato	Hulled Barley grain	1		1		
T. spelta / dicoccum	Spelt / Emmer wheat	109	5	107	24	
Triticum sp.	Unspecific wheat grain	23	3	22	8	
Triticum / *Hordeum*	Wheat or Barley grain	62	5	39	19	
Avena sp.	Oat grain	23	2			
Undeveloped embryos (detached from grain)		3	2			
Germinated embryos (detached from grain)		19				
Indeterminate cereal grain fragments		87	2	16	16	
Total cereal grain (excluding fragments and embryos)		**218**	**15**	**169**	**51**	**0**
Chaff						
Hordeum vulgare sl. rachis internode – Hulled Barley		2				
Tritcum spelta glume base – Spelt wheat		528	16	45		
Triticum dicoccum glume base – Emmer wheat		2				
T. spelta / dicoccum glume base – Spelt or Emmer		179	8	10		
Triticum spelta glume frags – Spelt wheat		+++				
Triticum sp. glume base – indeterminate wheat		2018	65	77	5	1
Triticum sp. rachis internode – indeterminate wheat		+++				
Triticum / Hordeum awn fragments	Wheat or Barley awns	+++				
Avena sp. awn fragments	Oat awns	+++				
Culm node	Grass stem node		1			
Total wheat glume bases		**2727**	**89**	**132**	**5**	**1**

Note:
F.52 [152] contained an estimated 200 wheat rachis internodes fewer awns and even fewer spelt glume fragments.
The spelt / emmer grain category contains three germinated grains.
The wheat or barley awns occurred in greater quantities than the oat awns.
The Poaceae fragments category below may contain pieces of cereal and oat grains.
The large grass category below contains seeds as long as, though thinner than the wheat and barley grains. Some poorly preserved oats may have fallen into this category.

Table 6. Other Plant Macro Remains (all charred except where indicated)

Sample number		**<16>**	**<8>**	**<14>**	**<17>**	**<5>**	**<7>**	**<10>**	**<11>**	**<2>**	**<1>**
Context		[94]	[152]	[165]	[188]	[109]	[141]	[147]	[174]	[16]	[20]
Feature / Trench		**38** / 17	**62** / 23	**67** / 23	**75** / 23	**45** / 27	**57** / 27	**60** / 5	**70** / 9	**8** / 40	**10** / 40
Feature type		Encl. ditch	Bound. ditch	Beam slot	Drainage ditches		Water hole	Boundary ditches		Pit	Bound. ditch
Phase/Date		L.I.A.	2nd- 3rd Century A.D.			Late R.B.	R.B.	Possibly Romano-British		?	?
Sample volume – Litres		7	9	7	7. 5	15	6. 5	13	11	4. 5	12.5
Flot fraction examined		1/1	1/4	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Wild Plant Seeds											
Ranunculus sp.	Buttercup					1			+ WL		
Ranunculus Subgen, *BATRACHIUM*	Crowfoot								+++ WL		
Chenopodium sp.	Goosefoots	- M		1	- M	+ M		+ M	+ WL		+ M
Atriplex patula/hastate	Oraches		+++ M	++ M	+ M	+ M	2				
Indeterminate *CARYOPHYLLACEAE*	Pink family					1					
Montia Fontana ssp. minor	Blinks									1	
Stellaria sp.	Stitchworts								- WL		
Persicaria hydropiper	Water-pepper					1					
Polygonum sp.	Knotgrasses					2					
Polygonum aviculare	knotgrass						1				
Fallopia convolvulus	Black-bindweed									- M	
Rumex sp.	Docks					4					
Rumex conglomeratus/ sanguineus/ obtusifolius	Small seeded Dock		48	2		1			+++ WL		
Vicia / Lathyrus	Vetches / Wild Pea		0. 5								
Trifolium / Medicago	Clovers / Medics		3		2	4					
Epilobium sp.	Willowherbs					1					
Stachys sp.	Woundworts								++ WL		
Odontites vernus	Red Bartsia		1			9					
Galium sp.	Bedstraws					2					
Indet. ASTERACEAE	Daisy family		1								
Carduus / Cirsium	Thistles								++ WL		
Sonchus sp.	Sow-Thistles								- WL		
Anthemis cotula	Stinking Chamomile		13	1			1				
Eleocharis sp.	Spike-rushes					1					
Carex sp.	Sedge (flat)								+ WL		
Poaceae fragments	Grass seed frags		+++	2	3	5				1	
Large Poaceae (wild)	Large grass seed		164	15	33	4					
Medium Poaceae (wild)	Medium grass seed		35	3	4	1		1			
Small Poaceae (wild)	Small grass seed		5							1	
Indeterminate wild plant seed			1	1		10					
Charcoal											
>4mm						++	++			-	
2 - 4mm			+	+	++	+++	++			+	-
<2mm		-	++	++	+++	+++	+++	-		++	+
Vitrified											-
Small dicot leaf fragment			1								
Parenchyma – undifferentiated plant storage tissue			+++	+	++	++				-	+
Modern rootlets		+++	+++	+++	++	+++	++	+++	+++	+++	+++

Key: '-' 1 or 2, '+' <10, '++' 10-50, '+++' >50 items; M = modern; WL = waterlogged.

As the daily processing of cereals seems to have occurred near to F.62, perhaps even between the structure and the boundary ditch, it is not surprising to find some residual cereal processing waste in the beam slot F.67. The latter showed the same types of cereal remains and wild plant seeds as were found in F.67 (though in very different quantities), which suggests both assemblages were created not only from the same activity but more precisely from the same stored crop.

F.75 contained the same composition of cereal remains and wild plant seeds as F.62, though in fewer numbers. Being a drainage ditch however, the provenance and completeness of its assemblage is difficult to ascertain.

The late Romano-British drainage ditch F.45 did not reveal any new cereal types but did contain many more wheat grains than glume bases. It also contained a wide range of wild plant seeds which tend to point to a wet environment. The spike-rush seed (*Eleocharis sp*.) would not have grown on cultivated ground but may have been found on the edges of damp fields. There are at least seven varieties that are not present in the 2nd-3rd century assemblages, suggesting that the crop represented in F.45 was grown on another field or that soil conditions had changed.

Discussion and Recommendations

There is clear evidence for the processing of glume wheat spikelets which probably occurred on a regular basis according to domestic needs. Whilst the beam slot and watering-hole contain residual waste from such activities, the main deposits seem to have been intentionally discarded into other features. The evidence strongly suggests that domestic dwellings are distributed around Trenches 27 and 23. If further structures are discovered bulk soil samples should be taken from each one to ascertain the spatial distribution and possible communal effort put into cereal processing. Detailed sampling within structures may reveal spatial distribution of cereal related activities. Storage pits or granaries are likely to be found.

As the majority of the crop weeds suggest that damp soils were cultivated, field systems should be sought for in the old floodplain and on nearby lowland clay geology.

The potential for recovering waterlogged plant remains is high east of Trench 9 in the floodplain. Further sampling would improve our understanding of the site's natural environment and use of its floodplain.

Oasis Data Collection Record:

Project Details.

Oasis ID:	Cambridg6-24160
Project Name:	Black Cat Roundabout, Roxton, Bedfordshire
Project Description:	Archaeological Evaluation on open fields along the River Great Ouse, in advance of permission for quarrying. 47 trenches were machined totalling 2150m. Background prehistoric activity was identified, whereas the majority of the archaeology excavated dates to the Romano-British, revealing a small domestic occupation site. Small scale post medieval quarrying and furrows were also identified along with a modern pig burial.
Project Dates:	Start 08-01-2007. End 05-02-2007.
Previous/Future Work:	Yes/Yes
Associated project Reference codes:	2664 – Related HER No.
Type of Project:	Field Evaluation
Site Status:	None
Monument Type:	DITCH Bronze Age
Monument Type:	PITS Bronze Age
Monument Type:	DITCH Late Iron Age
Monument Type:	DITCHES Roman
Monument Type:	PITS Roman
Monument Type:	WATERING HOLES Roman
Monument Type:	CREMATION Uncertain
Monument Type:	DITCHES Uncertain
Monument Type:	PITS Uncertain
Monument Type:	DITCHES Post medieval
Monument Type:	QUARRY PIT Post medieval
Monument Type:	PIT Modern
Significant Finds:	FLINT Neolithic
Significant Finds:	FLINT Bronze Age
Significant Finds:	POTTERY Bronze Age
Significant Finds:	POTTERY Late Iron Age
Significant Finds:	POTTERY Roman
Significant Finds:	TILE Roman
Significant Finds:	IRON HOBNAILS Roman
Significant Finds:	IRON NAILS Uncertain
Significant Finds:	WORKED STONE Uncertain
Significant Finds:	GLASS Post medieval
Significant Finds:	CLAY PIPE Post medieval
Significant Finds:	POTTERY Post medieval
Methods:	Evaluation Trenches
Development Type:	Mineral extraction.
Prompt:	Direction from Local Planning Authority

Project Location:

Country:	England
Site Location:	Bedfordshire, Bedford: Roxton.
Study Area:	31 Hectares
Site Coordinates:	NGR- TL 1625 5515 LL- 52.1819199709 - 0.2995144946 (Decimal) LL- 52 10 54N 000 1758W (Point)
Height OD	Min: 15.51m Max 20.50m

Project Creators:

Name of Organisation:	Cambridge Archaeological Unit
Project Brief Originator:	Local Authority Archaeologist
Project Design Originator:	Isabel Lisboa
Project Director/ Manager:	Emma Beadsmoore
Project Supervisor:	Catherine Ranson

Project Archives

Physical Archive Recipient:	Bedford Museum
Physical Archive ID:	BEDFM 2007: 45
Physical Contents:	Animal bones, Ceramics, Environmental, Glass, Human Bones, Metal, Worked stone, Lithics
Digital Archive Recipient:	Bedford Museum
Digital Archive ID:	BEDFM 2007: 45
Digital Contents:	Animal bones, Ceramics, Environmental, Glass, Human Bones, Metal, Worked stone, Lithics, Stratigraphic, Survey
Digital Media Available:	Digital Photography, Survey
Paper Archive Recipient:	Bedford Museum
Paper Archive ID:	BEDFM 2007: 45
Paper Contents:	Stratigraphy, Survey
Paper Media Available:	Context Sheets, Drawing, Map, Photograph, Plan, Report, Sections
Notes:	Site Code - ROX 07