

Report № 1497a

An Archaeological Fieldwalking, Evaluation and Test-pitting of the proposed route of the Isleham to Mildenhall Anglian Water Pipeline

Assessment and Updated Project Design

CHER: ECB2549 and ECB2598 SSMR: FRK 092, MNL 585 and MNL 586

Prepared for anglian









Stephen Morgan December 2008

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District:	East Cambridgeshire; Forest Heath
Grid Ref.:	TL 640 729 to TL 697 754
HER No.:	CHER: ECB2549, ECB2598 SSMR: FRK 092, MNL 585 and MNL 586
Client:	Anglian Water
Dates of Fieldwork:	March–June 2007 and December–February 2008

Summary

An archaeological evaluation by fieldwalking survey, test-pitting, trial-trenching and watching brief was carried out along the proposed route of an Anglian Water pipeline route from Isleham, Cambridgeshire, to Mildenhall, Suffolk. On the basis of the results from this evaluation two excavations were conducted near Mildenhall.

This report summarises the evidence recovered during the evaluation and excavations, and presents the results from the assessment of these data. This assessment is followed an Updated Project Design that lists any further work required and details how the project's results will be published.

Fieldwalking finds consisted of pottery, ceramic building material, flint, metalwork and coins. These were found throughout the route and there was a concentration of Roman finds at the eastern end of the fieldwalking corridor.

Test-pitting only took place in the Cambridgeshire part of the pipeline. The test pits revealed wide variations in the depth of the topsoil and subsoil. However, very few finds were recovered during the excavation of these test pits.

The evaluation trenches uncovered a possible flint surface to the north of the River Lark. Remains of parts of Roman co-axial field-system were also found in the vicinity of the northern bank of the river and at the eastern end of the pipeline.

One of the excavations investigated the possible flint surface. This excavation revealed that the surface was probably a layer of colluvial material. A human mandible, radiocarbon dated to the Bronze Age, was found to be embedded into the top of this layer. This excavation also uncovered the remains of the Romano-British co-axial field-system. The other excavated area contained several Romano-British features, one of which was probably structural, and associated artefacts.

The Roman pottery and human bone have the potential for further study. The environmental data gathered may also be of great interest in reconstructing the archaeological landscape in the vicinity of the River Lark.

It is proposed that the results from this project relating to the prehistoric evidence from the vicinity of the River Lark are published in the Proceedings of the Prehistoric Society and those relating to Romano-British findings are published in a synthesised form in Proceedings of the Suffolk Institute of Archaeology and History.

1.0 Introduction

This report has been prepared in accordance with the guidelines set out in the document *Management of Archaeological Projects* (English Heritage 1991). The assessment has been compiled from reports produced primarily by NAU Archaeology staff, but also by external specialists. The various categories of material are assessed and summary results and methodologies presented within the specific parts of the Assessment Report and Updated Project Design.

1.1 Project Background

An archaeological evaluation by fieldwalking survey (CHER ECB2549 and SSMR FRK 092), test-pitting (CHER ECB2598) and trial-trenching (CHER ECB2598 and SSMR FRK 092) was carried out long the route of a proposed Anglian Water pipeline route from the Anglian Water pumping station at Isleham, Cambridgeshire, to West Row Road, Mildenhall, Suffolk (Fig. 1.1).

This evaluation comprised the systematic fieldwalking and trial-trenching of the 15.00m wide easement along the c.6.25km proposed pipeline route. In addition to this a number of palaeo-environmental window samples were taken in the flood plains of the River Lark and Lee Brook and the c.2.25km length of the route in Cambridgeshire was subject to a programme of test-pitting.

Based on the results of these works two excavations took place. The first of these (SSMR MNL 585) was situated *c*.1.5km to the west of the centre of Mildenhall. The second excavated area (SSMR MNL 586) was situated *c*.1km to the southeast of West Row, in the vicinity of the northern bank of the River Lark. An archaeological watching brief was carried out on the topsoil stripping of the rest of the route in Suffolk (SSMR FRK 092).

This project was commissioned and funded by Anglian Water.

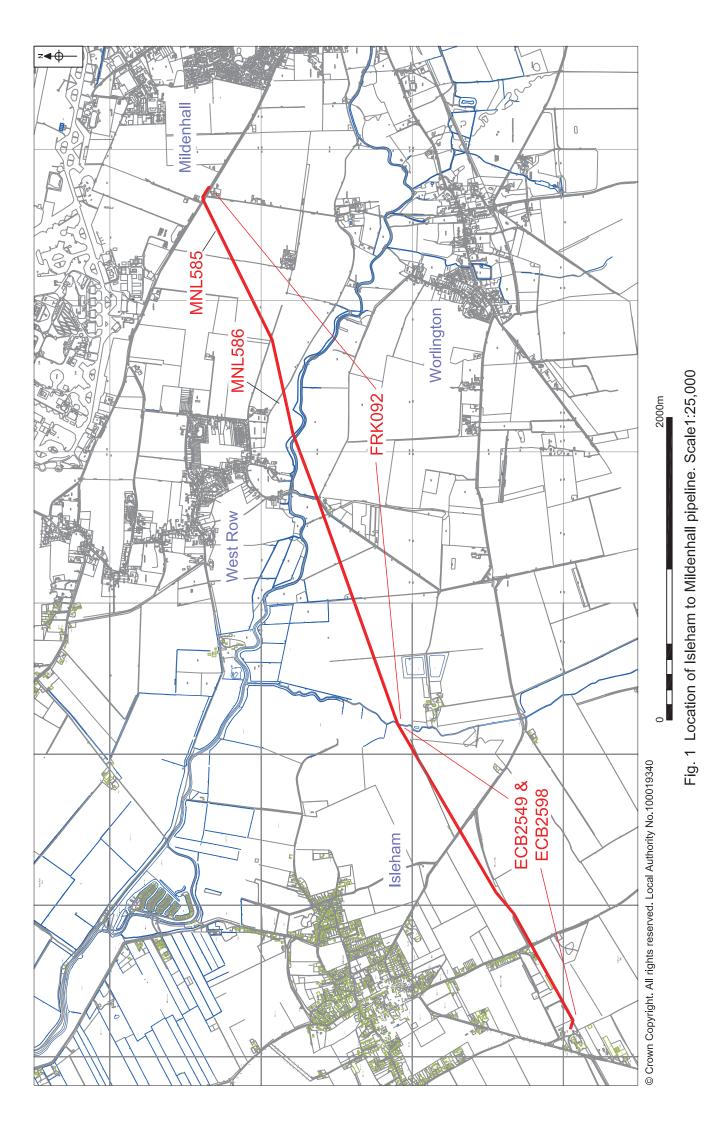
This archaeological programme was undertaken to fulfil planning conditions set by Cambridgeshire County Council and Suffolk County Council and briefs issued by Cambridgeshire Archaeology Planning and Countryside Advice (Ref.: Kasia Gdaniec, 29 January 2007) and Suffolk County Council Archaeological Service Conservation Team (Ref.: Jess Tipper, 29 January 2007 and Will Fletcher, 29 January 2007). The work was conducted in accordance with a Project Design and Method Statement prepared by NAU Archaeology (Ref: BAU1497).

The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area. The results will enable decisions to be made by the Local Planning Authorities with regard to the treatment of any archaeological remains found.

The site archive is currently held by NAU Archaeology and on completion of the project will be deposited with Cambridgeshire County Council and Suffolk County Council, following the relevant policy on archiving standards.

1.2 Site Location

The western extent of the route was located c.1.00km to the south of the centre of Isleham and the eastern extent was located c.1.00km to the west of the centre of Mildenhall (see Fig. 1.1).



1.3 Geology and Topography

The geology and depositional sequence of the proposed pipeline route consists of chalk bedrock overlain by layers of deposits of sand and gravel drift which have been laid down since the Anglian Glaciation, *c*.250,000 years ago (Wymer 1999, 16). More recent deposits, dating from the Devensian Glaciation (*c*.15,000 years ago) exist in river valleys in the area (Sheail 2000).

The peats and silts that overly the post-glacial sands in this part of the fen edge have a complex depositional history, characterised by interleaving periods of marine incursion, flooding (silt deposition), freshwater expansion and land formation (peat deposition). Peat first formed in the Mesolithic period (6th–5th millennia BC), with the main period of basal peat formation taking place between the 4th–3rd millennia BC. In the western fens, long periods of flooding prior to the start of the Neolithic period in the early 2nd millennium BC laid down the 'fen clay' silts around a series of tidal creeks and roddons (silt islands) (Sheail 2000). Freshwater peats continued to form up to the Early Bronze Age, and the seaward extension of freshwater conditions may have led to the abandonment of some 'coastal' sites (Sheail 2000). Certain areas (north of the proposed pipeline) were subsequently flooded with silty clays during the later Bronze Age and Iron Age (Sheail 2000).

At the Cambridgeshire end of the proposed route the topsoil consisted of brown clayey silt or brown clayey loam and was generally 0.06m to 0.45m deep. This topsoil was found to overlie a subsoil which consisted of brown silty loam and this was generally 0.05m and 0.52m deep. The natural soil at the Cambridgeshire end of the route consisted of chalk. In the Suffolk part of the route the topsoil consisted of brown clayey silt or brown sandy silt and was generally 0.28m to 0.45m deep. In some places this topsoil was found to overlie a brown silty sand subsoil which was generally 0.03m to 0.30m deep. The natural soil in the Suffolk part of the pipeline route consisted of chalk.

The western part of the route is fairly flat and is generally at a height of c.5.00m OD with the ground rising to the north and the south. Towards the east the proposed route passes through the valley of the River Lark, at c.4.00m OD, and then rises slightly at its eastern extent to c.8.00m OD.

1.4 Archaeological and Historical Background

The following section is broadly based on the findings of an archaeological deskbased assessment of the proposed route carried out by Davies (2007).

1.4.1 Prehistoric Activity (500,000 BC to AD 43)

The route lies in an area of light soils, rivers and wetland which would have offered a wide range of resources to prehistoric peoples. This would appear to account for the large number of sites known from this period, outlined below.

Palaeolithic (500,000–10,000 BC). The majority of finds dating from this time come from between the Anglian glaciation, which ended *c*.440,000 years ago, and the Devensian stage, which began *c*.18,000 years ago. Finds from this area include flint tools, such as hand-axes, scrapers and blades (Reynolds 2000). In particular, a large number of hand-axes have been recovered from Warren Hill, Mildenhall (Wymer 1999). In addition to this, a hand-axe fragment has been recovered form

Mildenhall Fields (SSMR MSF 9230), a Lower Palaeolithic plano-convex hand-axe has been found within 500m of the proposed development (SSMR MSF 9233) and two Upper Palaeolithic long blades have been found in the parish of Freckenham (SSMR FRK 032), c.1.00km south of the pipeline route.

1.4.1.1 Mesolithic (10,000–4,000 BC)

Three surface scatter sites were identified by the Fenland Survey on the raised area on which Isleham is located (Hall 1996). Further scatters have been located on the nearby banks of the River Lark (SSMR MNL 063 and MLN 013). These scatters may be related to the undated, but prehistoric, remains of butchered aurochs found on the southern bank of the River Lark (SSMR MNL 501).

1.4.1.2 Neolithic (4,000–3,000 BC)

An early Neolithic settlement site is known to have existed at Hurst Fen, Mildenhall (Gibson 2004). Neolithic pits and a buried soil have also been excavated at Mildenhall Airfield (SSMR MNL 464 and MNL 469). Six later Neolithic surface scatters were identified by the Fenland Survey on the raised area on which Isleham is located (Brown 1996). Neolithic flint scatters have been found within 1.00km of the proposed route (SSMR FRK 031, MNL 149 and MNL 063) along with a possible flint-knapping site (SSMR MNL 304), four polished flint axes (SSMR FRK 025, WGN 006, MNL 020 and MNL 310) and two barbed-and-tanged arrowheads (SSMR MSF 11618).

Neolithic and Bronze Age flints were found at Chalk Farm, to the south-west of Isleham and pits dating to these periods were found at Prickwillow Road, to the north of Isleham (Gdaniec *et al.* 2007).

1.4.1.3 Bronze Age (3,000–700 BC)

Cropmarks on aerial photographs of the western extent of the proposed development have been identified as Bronze Age round barrows (CHER MCB 16798 and MCB 16204). Also at the western end of the route, approximately 1.00km to the west of the proposed development, the 'Isleham Hoard' was found, consisting of riveted swords, spear-heads, arrows, axes, palstaves, daggers, armour, decorative equipment and many fragments of sheet bronze (Hall 1996).

Just over 1.00km to the north of the route a group of Bronze Age settlement sites have been located at West Row Fen, Mildenhall (Martin 1999). Within 1.00km of the proposed route several Bronze Age items have been found including bronze awls (SSMR FRK 033, MSF 19712, WGN 026, WGN 004), bronze blade fragments (FRK 031), a stone adze-head (SSMR MNL 031), a flint arrowhead (SSMR FRK 027), a flint axe (FRK 026), flint scatters (SSMR 026 and FRK 013), a bronze axe-head (SSMR FRK 017), a bronze chisel (SSMR FRK 018), a bronze dirk (SSMR FRK 014), a bronze dagger (SSMR WGN 016), a pot (SSMR WGN 010) and a bronze spearhead (SSMR MSF 20324). Animal remains dating from this period have been found to the south of the River Lark (SSMR FRK 014, WGN 016, WGN 010, MSF 20324 and FRK 020). Portable antiquities have also been found near the pipeline in the form of two moustache-shaped bronze objects (SF9183 and SF520513), a rapier fragment (SFID7484) and a sword fragment (SF14F276).

A pond in-filled during the Bronze Age was found during excavations at Hall Farm, west of Isleham (Gdaniec *et al.* 2007).

1.4.1.4 Iron Age (700 BC–AD 43)

Twelve Iron Age findspots are located within 1.00km of the proposed route. Finds from these take the form of bronze coins (SSMR FRK 033, FRK 064, FRK 030, WGN 025), silver coins (SSMR FRK 032, FRK 067, MNL 141), bronze fittings (SSMR FRK 032), a bronze brooch (SSMR WGN 024), gold coinage (SSMR FRK 065 and FRK 013), a surface scatter of metalwork, including a harness fitting and bronze and silver coinage (SSMR FRK 031), and two possible sherds of Iron Age pottery (SSMR MNL 428). There are also eleven findspots of portable antiquities dating from this period from within 1.00km of the route.

Excavations immediately to the west of Isleham, at Chalk Hill Farm, uncovered an Iron Age storage pit (Gdaniec *et al.* 2007).

1.4.2 Romano-British Activity (AD 43–410)

The 'Mildenhall Treasure', which dates from this period, was found near to the village of Mildenhall, c.1.00km away from the eastern end of the proposed pipeline. This hoard consists of 34 Roman silver artefacts including a dish, 605mm in diameter, depicting the face of the sea god Oceanus.

At Field Farm, approximately 1.00km to the west of Isleham, the Fenland Survey excavated a site which yielded Roman finds, including ceramics, hypocaust tiles, painted wall plaster and *tesserae*. These finds also included much red tile and flint building material, strongly suggesting the presence of at least one substantial Roman building (Hall 1996). This potential villa site may hint at the origins of the village of Isleham. Further investigations in the vicinity of this finds scatter by Gdaniec *et al.* (2007) uncovered two Roman ditches.

Forty-three Roman findspots are located within 1.00km of the proposed route. These comprise a hoard of 595 bronze coins (SSMR FRK 003), other coin hoards (SSMR FRK 022, WGN 022), surface scatters of metal artefacts (SSMR FRK 031, FRK 032, FRK 033, FRK 066, FRK 070, MNL 141, MNL 450, MNL 504, WGN 023, MSF 17978), a possible cemetery (SSMR FRK 032), pottery sherds (CHER MCB16206, SSMR FRK 001, MNL 221, MNL 091, WGN 008, MNL 361, WGN 001, MNL 362, MNL 020, MNL 421, MNL 428, MNL 167, MSF11612), coins (SSMR MNL 135, MSF18982, MSF19959), reports of a 'Roman floor' (SSMR MNL 487), a report of a mosaic (SSMR FRK 061), surface scatters of potterv and metalwork combined (SSMR 013, FRK 010, MNL 232, MNL 333), a metalwork hoard (SSMR WGN 004), possible inhumation burials (SSMR FRK 012) and a large surface scatter relating to a villa (SSMR WGN 005). There is a suggestion of a possible Roman river crossing to the south of Mildenhall where pottery sherds have been dredged from the River Lark (SSMR 091). There also 49 findspots relating to the Portable Antiquities Database within 1.00km of the proposed route including coins and brooches. Other coins and metalwork have been found within the vicinity of the route which have not yet been entered in to the Suffolk SMR database.

1.4.3 Early Saxon Activity (410–650)

A sunken-featured building (SFB) dating from this period was found to the southwest of West Row (SSMR FRK 011). This site, which was excavated in the 1930s, contained finds of pottery sherds, bone pins and chalk whorls. There are a number of findspots from this period within 1.00km of the proposed route. These comprise a bronze sleeve clasp (SSMR FRK 032), the Holywell Row cemetery (SSMR MNL 084), cruciform brooches (SSMR FRK 066, MNL 450, MNL 504), a lead brooch (SSMR FRK 080), small-long brooches (SSMR MNL 450, WGN 023) and reference to the finding of an Anglo-Saxon sword (SSMR FRK 001). A recent metal-detecting rally, which took place to south-west of West Row, found a scatter of Early Saxon metalwork which has not yet been entered in to the Suffolk SMR. As this material is tightly clustered it may well indicate the site of a cemetery.

1.4.4 Middle Saxon and Late Saxon Activity (650–1066)

There have been a number of finds made dating to this period within 1.00km of the proposed route. These comprise a silver gilt pendant and coin (SSMR MNL 211), a hooked tag (SSMR FRK 031), copper-alloy pins (SSMR WGN 022, WGN 025), a coin hoard of Edmund (SSMR WGN 023), other coin finds (CHER 07612, SSMR FRK 031), buckles (SSMR FRK 031, FRK 066) and sherds of Thetford Ware pottery (SSMR MNL 421).

1.4.5 Medieval Activity (1066–1540)

The centre of Isleham takes the form of a nucleated medieval village. The Norman priory of St Margret was located here and survives in the form of a Romanesque church, earthworks and the remnants of a fishpond (Hall 1996).

Previous finds dating from the Medieval period which lie within 1.00km of the proposed route comprise metal artefact scatters (SSMR FRK 031, FRK 032, FRK 065, FRK 066, WGN 023, WGN 025, FRK 070), coin finds (SSMR FRK 013, FRK 062, MNL 141, MNL 449, MSF 18983, MSF19960), seal matrices (SSMR WGN 024, MSF10121, MSF11972, MSF20301), a buckle (SSMR MSF9643), a bronze object (SSMR MSF10174), pottery (SSMR MNL 421), ten excavated pits (SSMR WGN 018). There are also several buildings dating to this period within 1.00km of the proposed route and these comprise All Saints' Church, Worlington (SSMR WGN 007), the site of a manor house to the south-west of Mildenhall (SSMR MNL 329), a market cross to the south of Mildenhall (SSMR MNL 133) and, also of the south of Mildenhall, the remains of a dovecot (SSMR MNL 181).

1.4.6 Post-medieval and Modern Activity (1540–Present)

A number of Grade II-listed buildings lie within 1.00km of the proposed route including the remains of Wamil Hall. Other post-medieval structures recorded within 1.00km of the proposed route comprise the church of St Peter, West Row (SSMR MNL 219), two lime kilns to the south of Mildenhall (SSMR MNL 328 and MNL 449), the remains of a weir to the south of West Row (SSMR FRK 027), an earthwork mound associated with Bargate House (SSMR MNL 247), a chalk quarry to the west of West Row (SSMR MNL 467/468) and a disused railway (CHER 07633).

A number of post-medieval finds have been made within 1.00km of the proposed route and these comprise metal artefact scatters (SSMR FRK 013, FRK 032, FRK 062, FRK 066, MNL 450, WGN 023, WGN 025), silver coins (SSMR MCB16206), the remains of a flash-lock (SSMR MNL 459) and debris from the manufacture of gun flints (SSMR MNL 188). There have also been a number of portable antiquities found within 1.00km of the route including coins, tokens and gunflints.

Three pillboxes on the World War II Eastern Command Line were observed within 1.00km of the proposed route during this project's fieldwalking survey.

1.4.7 Cartographic Evidence

Both Isleham and Mildenhall are depicted on Saxton's 1575 map of Suffolk, with the latter being represented as a relatively large town when compared to others in the country. The Lark and the Lee Brook are also shown on this map as fairly large waterways suggesting that they are important routes of navigation at this time.

Hodskinson's 1783 map of Suffolk attributes the land through which the route passes between West Row and Mildenhall to the ownership of a Sir Charles Bunbury. To the west of West Row this map is shows the route as being part of Mildenhall Common Fen. This map also depicts a number of east–west roads immediately to the west of Mildenhall.

The enclosure map of Isleham of *c*.1800 shows the fields to the south of the village, through which the proposed route passes, as being open and arable. The area adjacent to the Lee Brook is depicted as being meadows. This map also depicts the roads to the south of Isleham as being in roughly the same position as they are now. The enclosure map also depicts a no longer existing road, cutting across the proposed route, which was a continuation of Sheldrick's Road to the south-east of Isleham. As this road is not shown on the 1890 Ordnance Survey (OS) map it must have fallen out of use at some time during the 19th century.

Tithe maps of 1851 (Mildenhall and west) and 1858 (Mildenhall and east) are not particularly clear and show similar detail to that depicted on the First Edition OS map discussed below.

The First Edition OS map depicts to area to south of Isleham with hachures indicating raised silt islands. This may represent the remains an outfield associated with the village of Isleham which has its origins in the medieval period. The field to the south of this is labelled "Barrow Field" and this may relate to features seen as cropmarks in this area (CHER MCB1678 and MCB16204). Other features depicted on this map are a circular mound in the garden on the west side of Bargate House (SSMR MNL 247), a chalk quarry to the west of West Row (SSMR MNL 467/468) and two lime kilns to the south of Mildenhall (SSMR MNL 328 and MNL 449). More recent OS maps depict the now dismantled Barnwell Junction to Mildenhall railway (CHER 07633), the location of an 'Anglo-Saxon sword and Romano-British pottery' (SSMR FRK 001) and the location of a bronze dagger (SSMR WGN 016). The 1890 OS map depicts the proposed route as open fields, with the exception of a small area of flood meadow adjacent to the Lee Brook.

1.5 Project Objectives

The initial Programme of Archaeological Work stipulated by Suffolk County Council Archaeological Service Conservation Team and Cambridgeshire Archaeology Planning and Countryside Advice was required to inform the development of a mitigation strategy for the impact of the scheme on the historic environment by using fieldwalking and associated metal-detector survey, test pitting and evaluation by trial trenching. Period resource assessments set out in the document *Research and Archaeology: A Framework for the Eastern Counties* (Glazebrook 1997; Brown and Glazebrook 2000) pose specific research questions for periods ranging from the Palaeolithic to the modern period. Existing information indicated that the proposed development may have had an impact on a number of known and unknown sites that have the potential to contain archaeological features and other forms of evidence for all periods. As such, there was the potential for substantive archaeological evidence to be revealed that may help answer a range of research questions. The aims of the archaeological evaluation may therefore be summarised as follows:

- To establish the presence or absence of archaeological remains within the proposed area.
- To determine the extent, condition, nature, quality and date of any archaeological remains occurring within the area.
- To ensure that any archaeological features discovered during the evaluation are identified, sampled and recorded.
- To establish, as far as possible, the extent, character, stratigraphic sequence and date of archaeological features and deposits, and the nature of the activities which occurred in the area during the various periods or phases of its occupation
- To characterise the sequence and patterns of accumulation of palaeoenvironmental/ geoarchaeological deposit, including the depth and lateral extent of major stratigraphic units, and the character of any potential land surfaces/buried soils within or pre-dating these sediments.
- In consultation with a palaeo-environmental specialist establish the palaeoenvironmental potential of subsurface deposits by ensuring that any deposits with the potential to yield palaeo-environmental data are sampled and submitted for assessment to the appropriate specialists.
- In consultation with the relevant specialists assess the potential of any artefactual and economic evidence recovered, with especial reference to faunal remains and the recovery of small mammal and fish bones.
- To place any archaeological remains within their regional context and to highlight any regional or national research issues that the archaeological evidence may address.
- To provide a predictive model of the location and relative importance of any archaeological remains and an assessment of the impact of the proposed development upon them.
- To disseminate the archaeological data recovered by the evaluation in the form of a formal report which will provide the basis for decisions regarding further archaeological intervention and mitigation.

Following the results from the evaluation phase the following objectives were formulated.

• To further investigate the possible flint surface and other archaeological features to the north of the River Lark.

• To further investigate the vicinity of those areas in which Roman features were found.

1.6 Methodology

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

1.6.1 Requirements

The briefs required that the following evaluation work be carried out on the proposed pipeline:

- A fieldwalking and metal-detector survey of the entire length of the proposed route along at least three transects located 5.00m apart. The resulting finds were bagged and their positions were logged using a Global Positional System (see Figs 2–16).
- Existing aerial photographs to be replotted.
- A palaeo-environmental survey involving the taking of twenty window samples across the flood plain of the River Lark, centred on the proposed pipeline and a further four window samples to be taken either side of the Lee Brook, see Fig. 17 (Hill 2007).
- Forty-five test pits measuring 1.00m by 1.00m to be hand-excavated at 50m intervals across the Cambridgeshire section of the proposed route, see Fig. 18–21.
- Sixty-four trenches measuring 30m by 1.8m to be excavated to allow an approximate 5% sample (3,726m²) of the easement to be evaluated (Figs 23 to 36). After consultation with the Development Control Officer for Cambridgeshire the lengths of five of these trenches were extended based on the finds from the fieldwalking phase of this project. The lengths of three of these trenches were extended to 50m with two further trenches being extended to 35m and 37m.

1.6.2 Approaches

The locations of the trenches were based on the findings of a fieldwalking and metal-detecting survey and the results of the replotting of aerial photographic evidence. Field 4 of SSMR FRK 092 did not have any trenches placed in it as it was under crop. Instead, this field was directionally drilled.

The Cambridge University Collection of Air Photographs (CUCAP) and the National Monuments record (NMR) were searched for aerial photographic coverage of the pipeline route. These images were, where necessary, rectified and plotted onto a digital map base. The results from the replotting of the aerial photographs are presented in Appendix 8 (Malone 2007).

Four palaeo-environmental window sample boreholes were taken from the floodplain of the Lee Brook and twenty were drilled in the vicinity of the River Lark. The results from this work are presented in Appendix 9 (Hill 2007).

Forty-five test pits measuring 1.00m by 1.00m were hand excavated at 50m intervals along the Cambridgeshire section of the proposed route. In total forty-three of these pits were excavated as two of the proposed pits would have been positioned in the scrub adjacent to the Lee Brook, an area which is a known habitat of otters and newts.

Based on the results of this evaluation work two areas were designated for a full archaeological excavation (see Fig. 37). The excavated area to the west of Mildenhall measured *c*.8.00m north-west to south-east and *c*.41.50m north-east to south-west (SSMR MNL 585). To the south-east of West Row there were two excavated areas, one measuring *c*.8.00m north-west to south-east and 166.70m north-east to south-west, the other measuring *c*.8.00m north-west to south-east and 31.30m north-east to south-west (SSMR MNL 586). Two palaeo-environmental monolith samples were taken from the western part larger of the two excavated areas to the south-east of West Row.

Machine excavation of the evaluation trenches was carried out with a hydraulic 360° excavator using a toothless ditching bucket, operated under constant archaeological supervision.

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

All archaeological features and deposits were recorded using NAU Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

A level was transferred from an Ordnance Survey benchmark of 15.78m on the former railway bridge south of Isleham. Several non-permanent pegs were used as temporary benchmarks throughout the pipeline route.

1.7 Site Conditions

Site conditions the fieldwalking and test pitting phases of the project were carried out under good conditions of weather and visibility. The weather conditions during the evaluation were, at times, wetter.

During the excavation the weather for the most part was fair although heavy rain was experienced, particularly during machine striping.

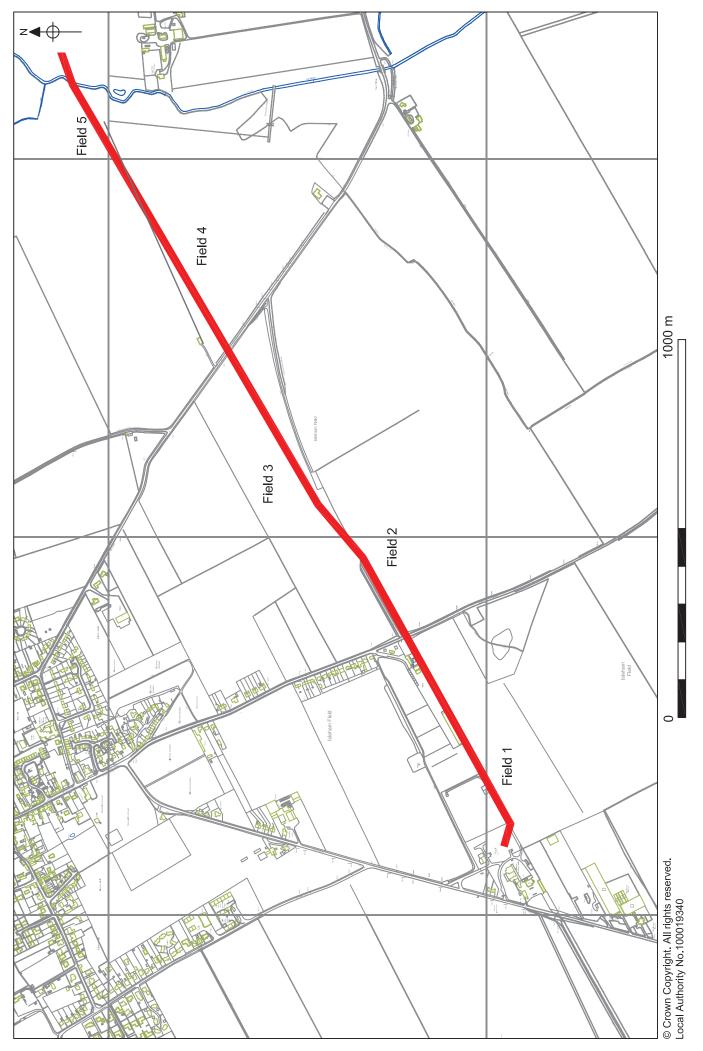
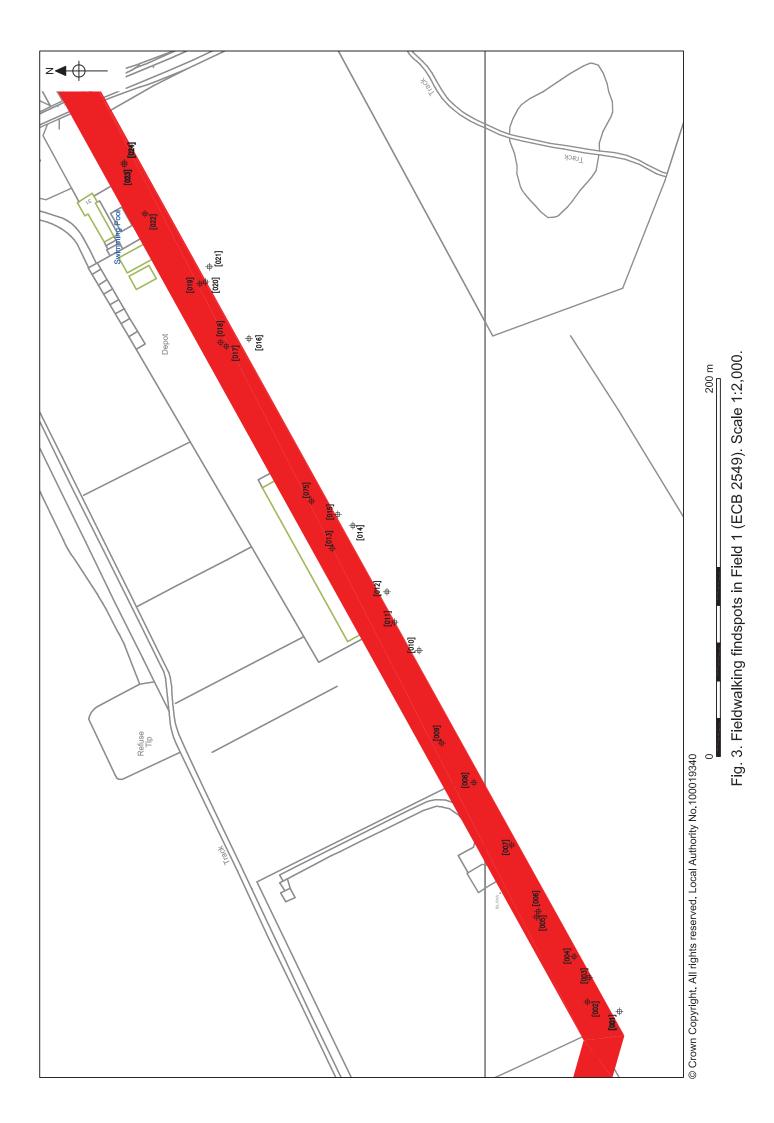
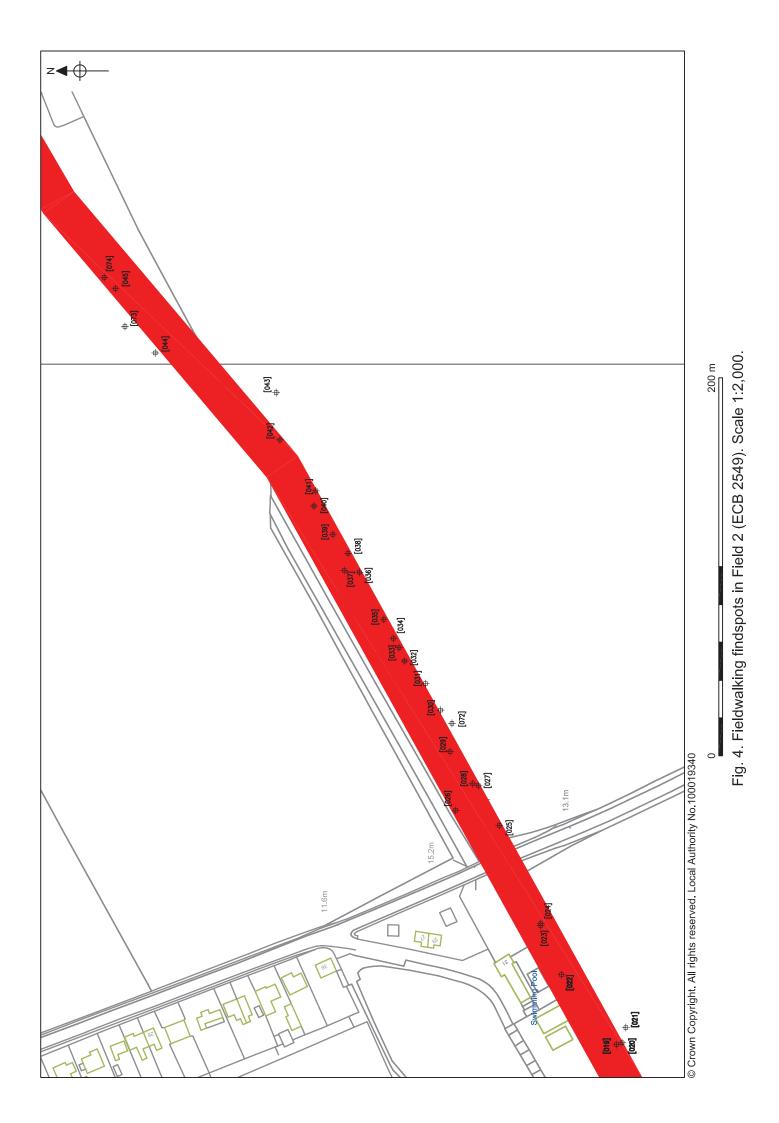


Fig. 2. CHER ECB 2549 Fieldwalking, test-pitting and evaluation fields. Scale 1:10,000.





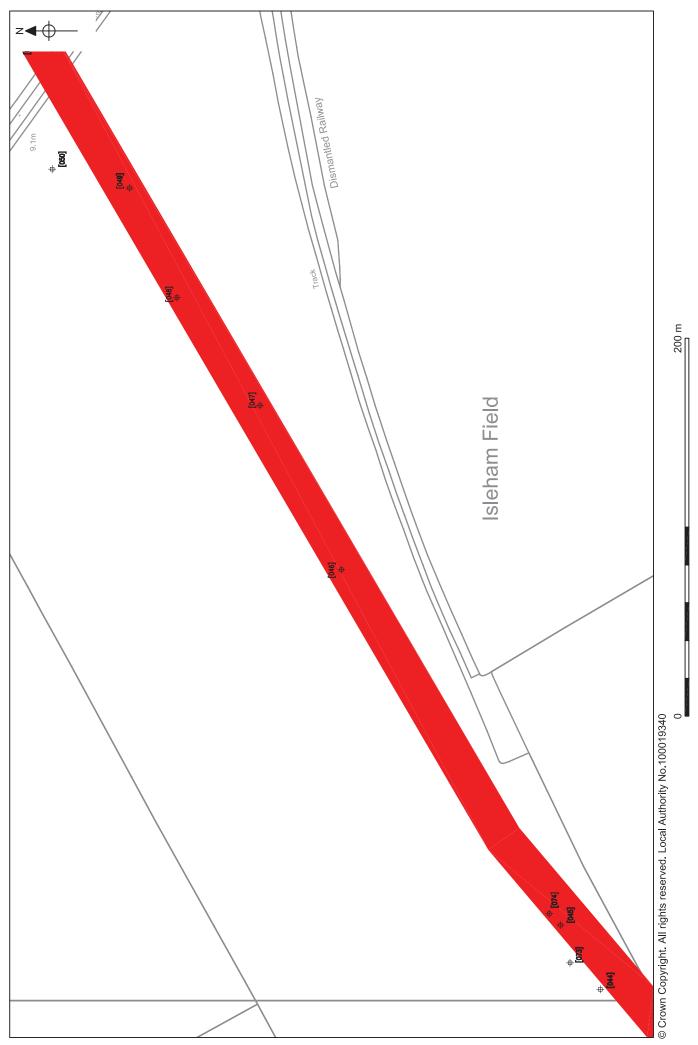
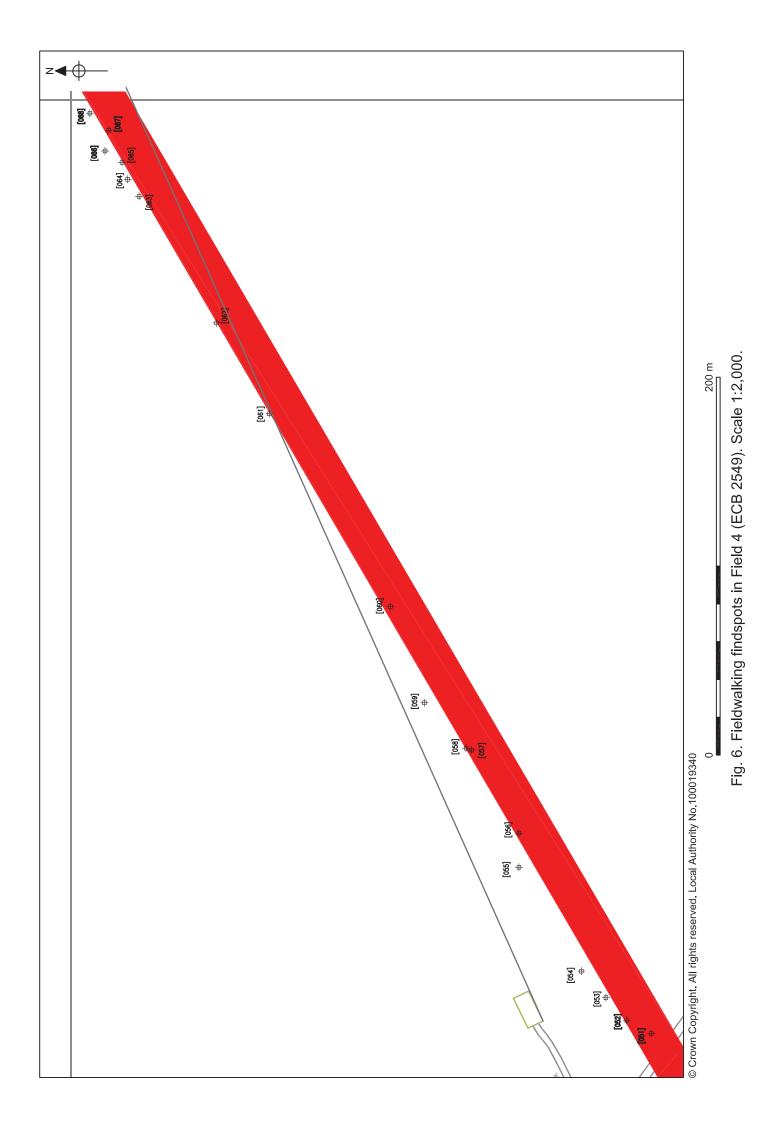
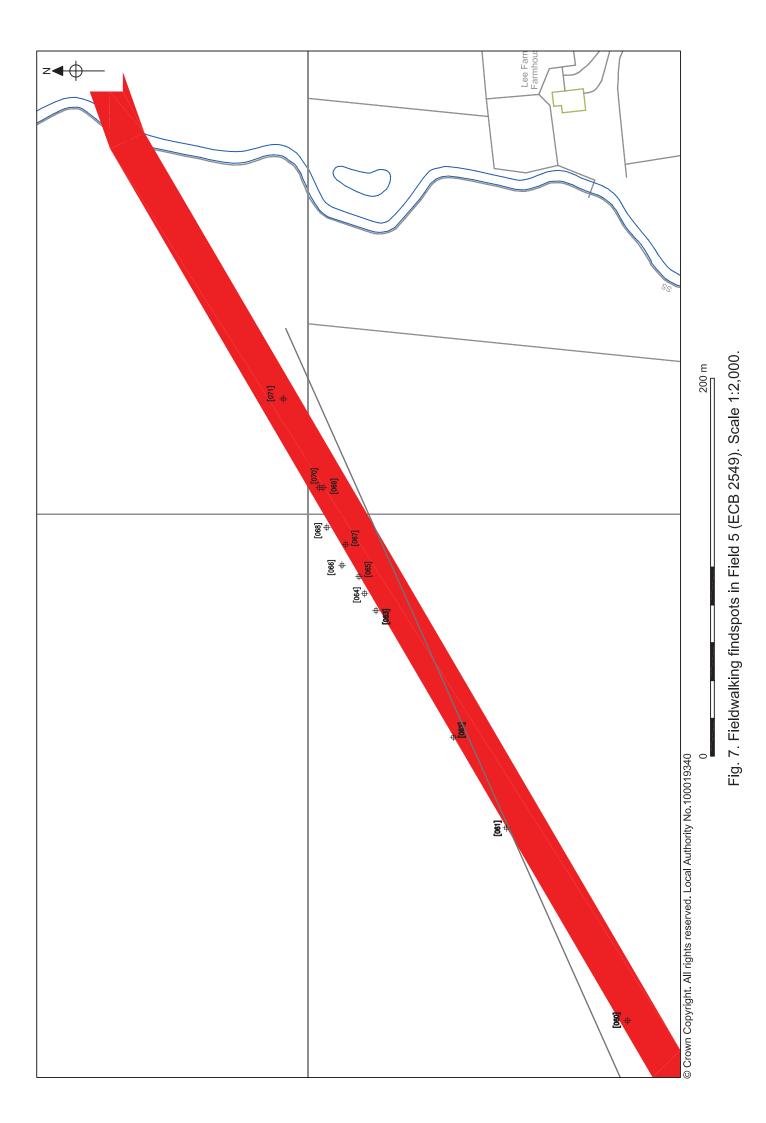
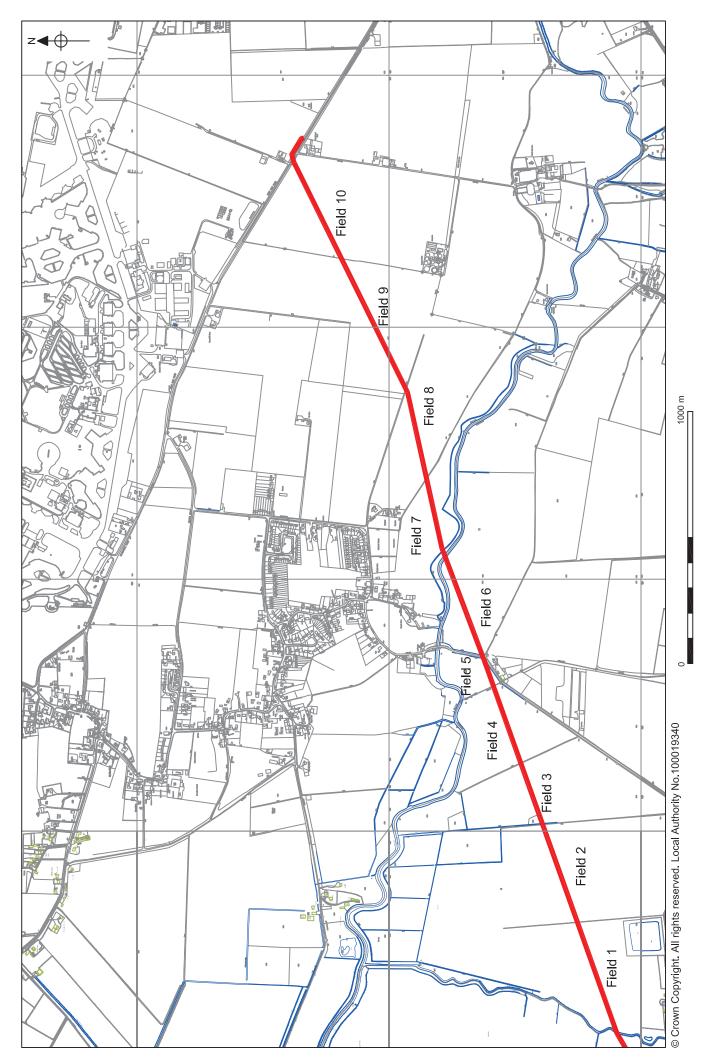


Fig. 5 Fieldwalking findspots in Field 3 (ECB 2549). Scale 1:2,000.









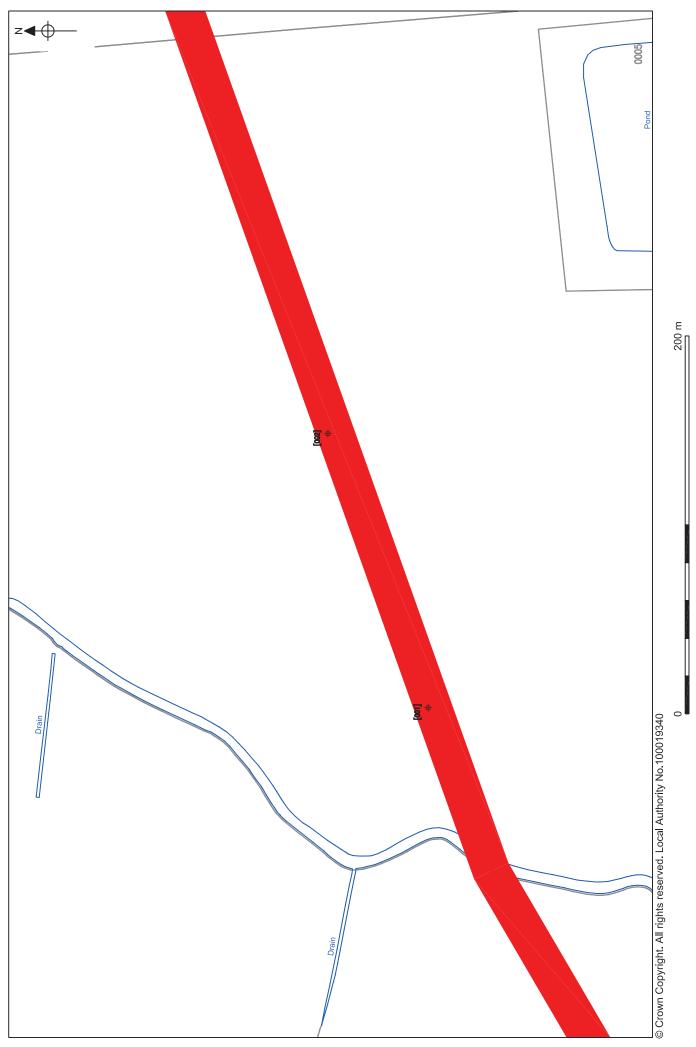
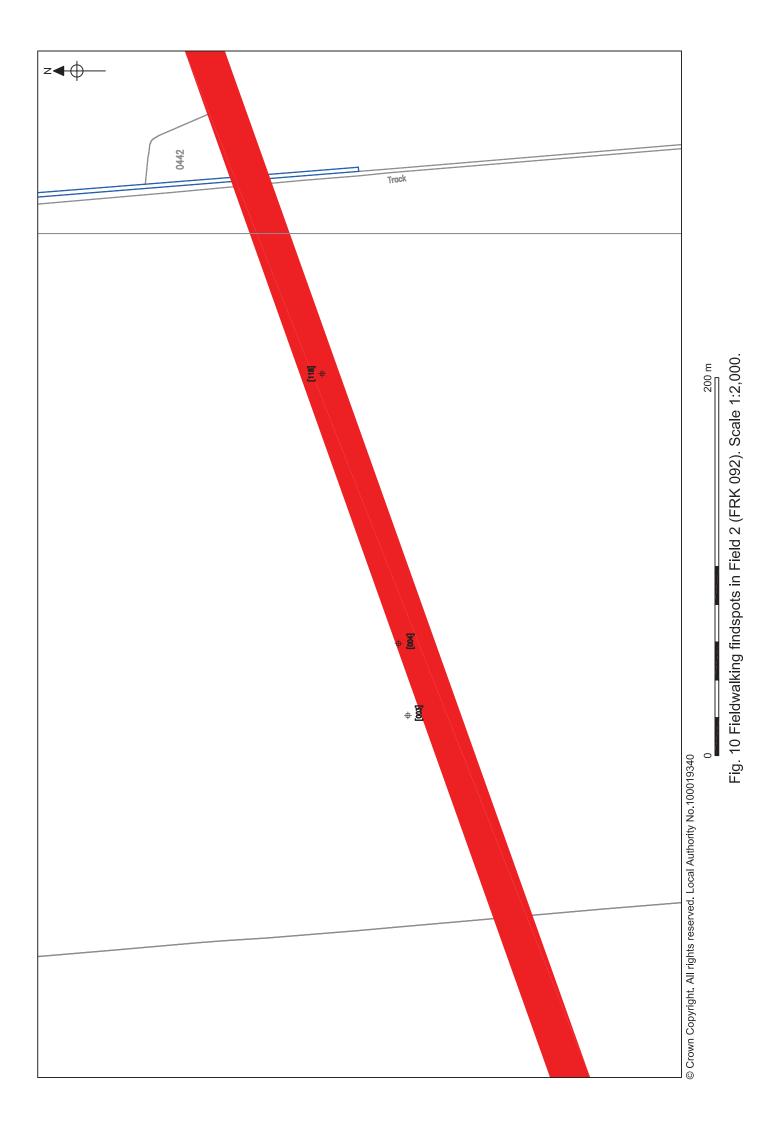
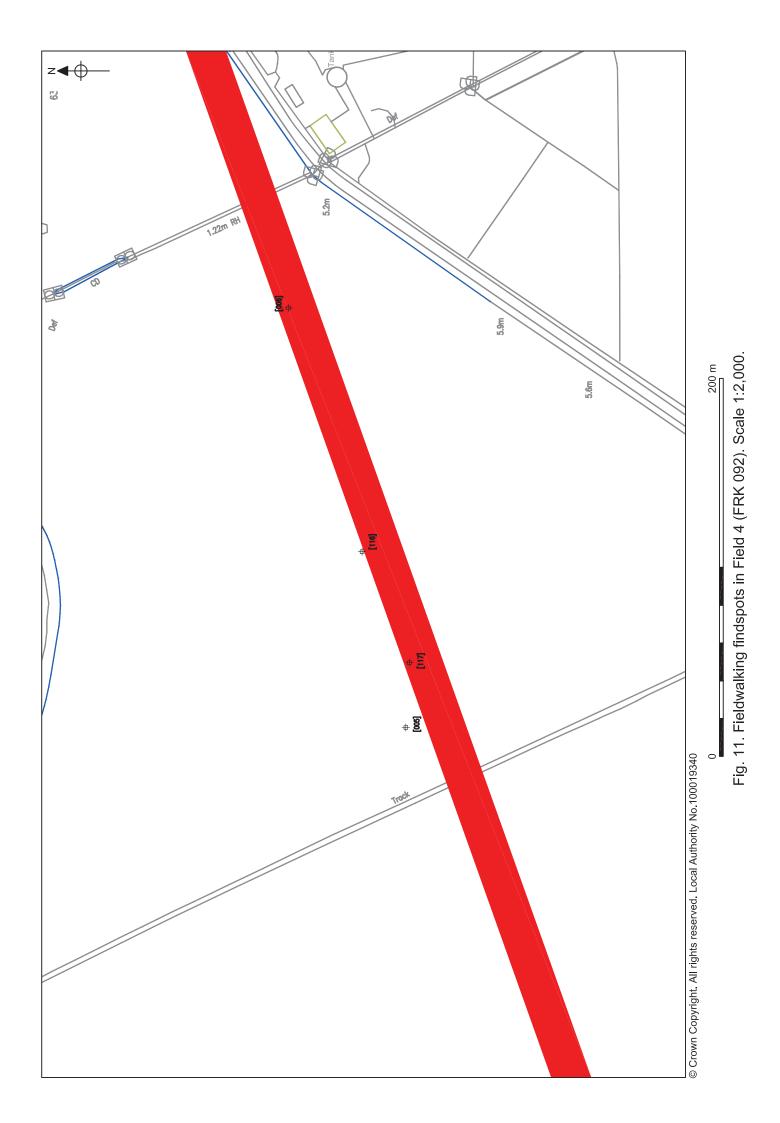
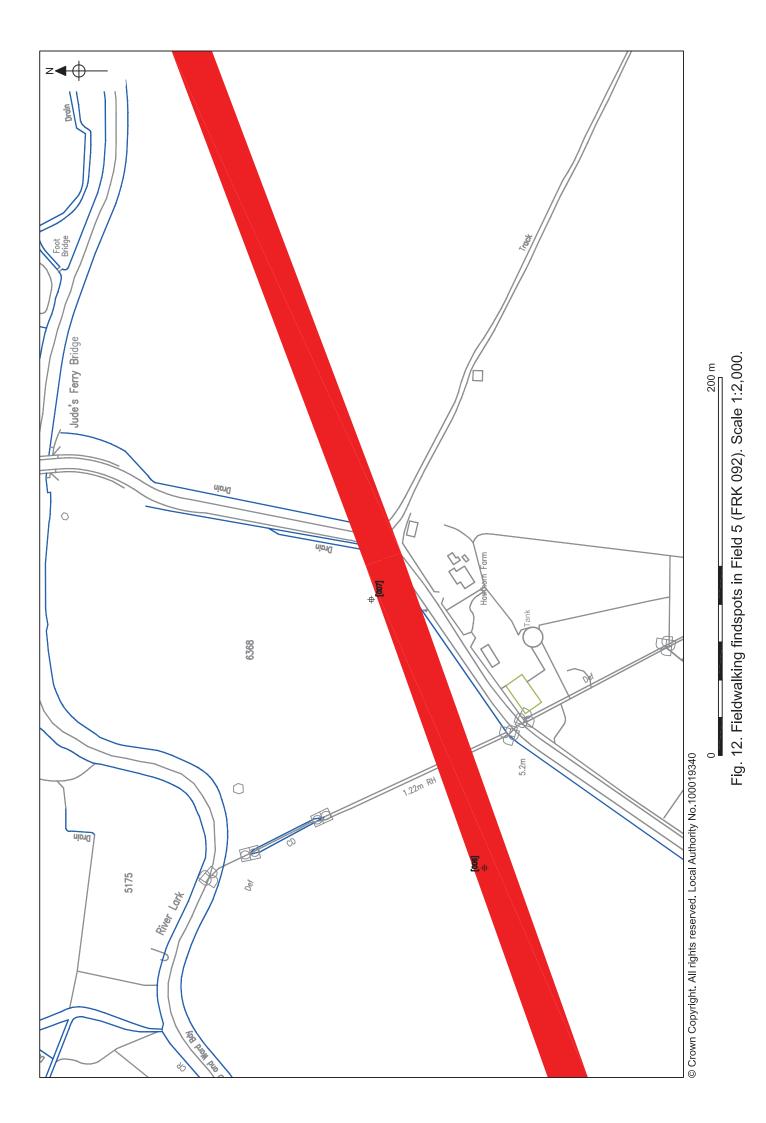
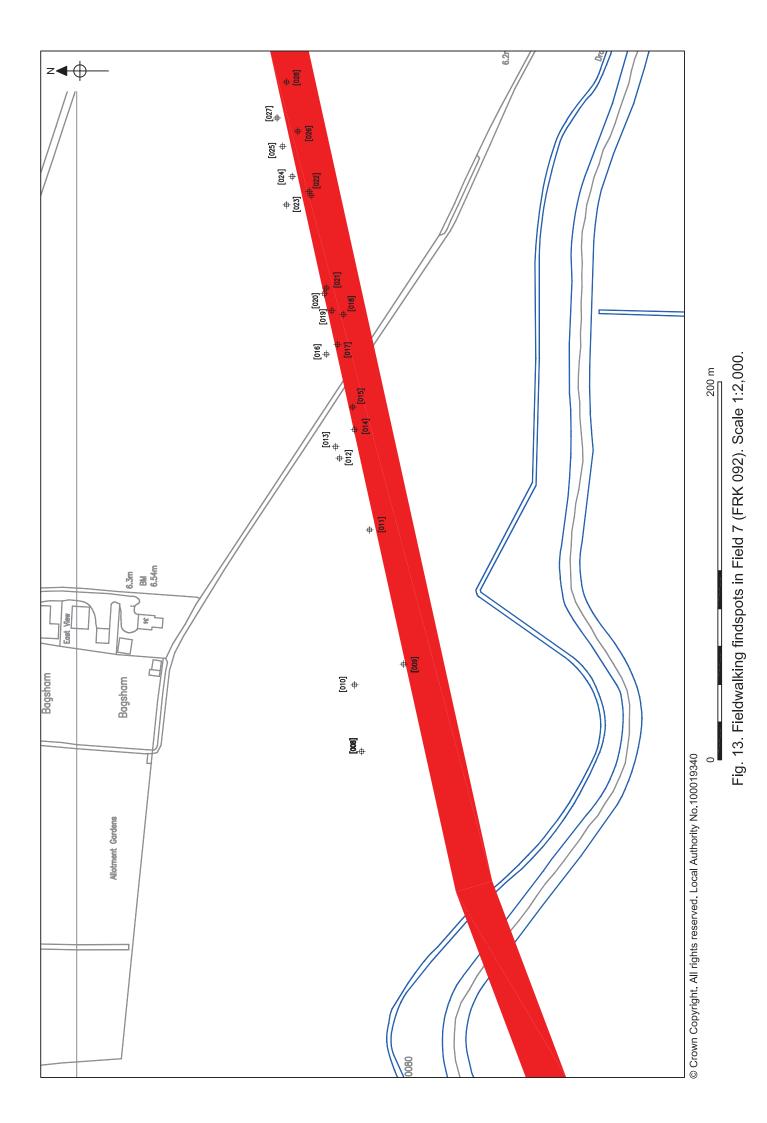


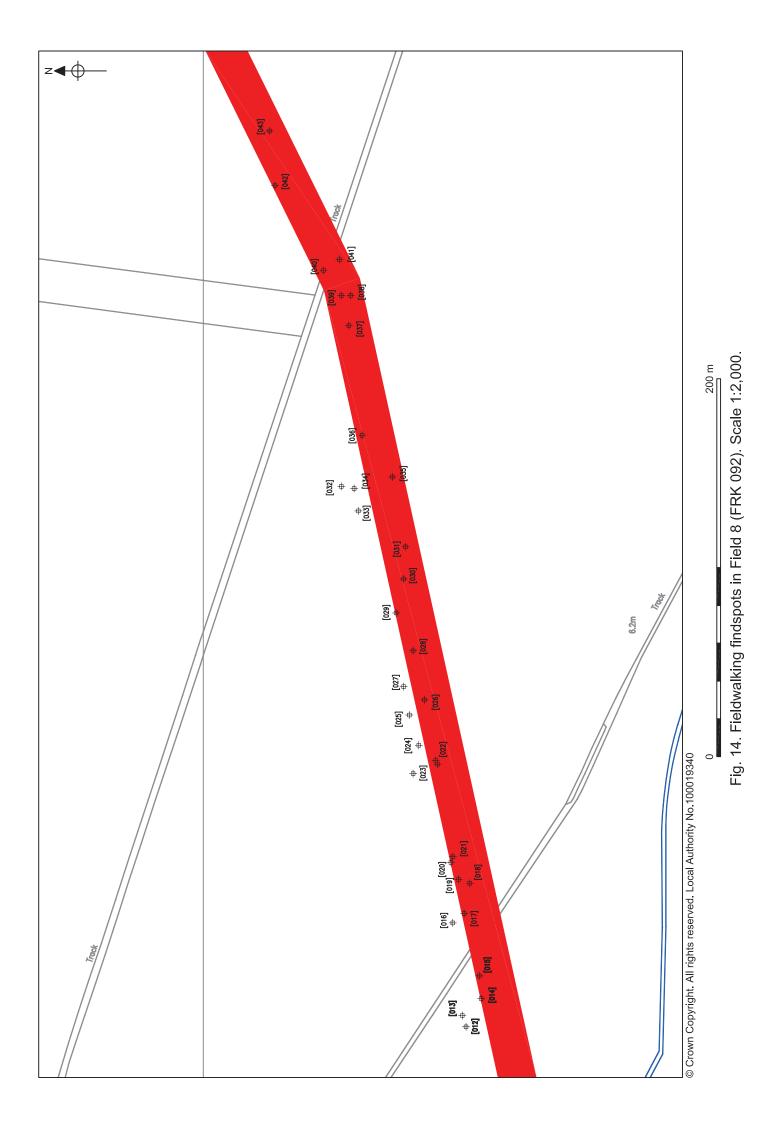
Fig. 9. Fieldwalking findspots in Field 1 (FRK 092). Scale 1:2,000.

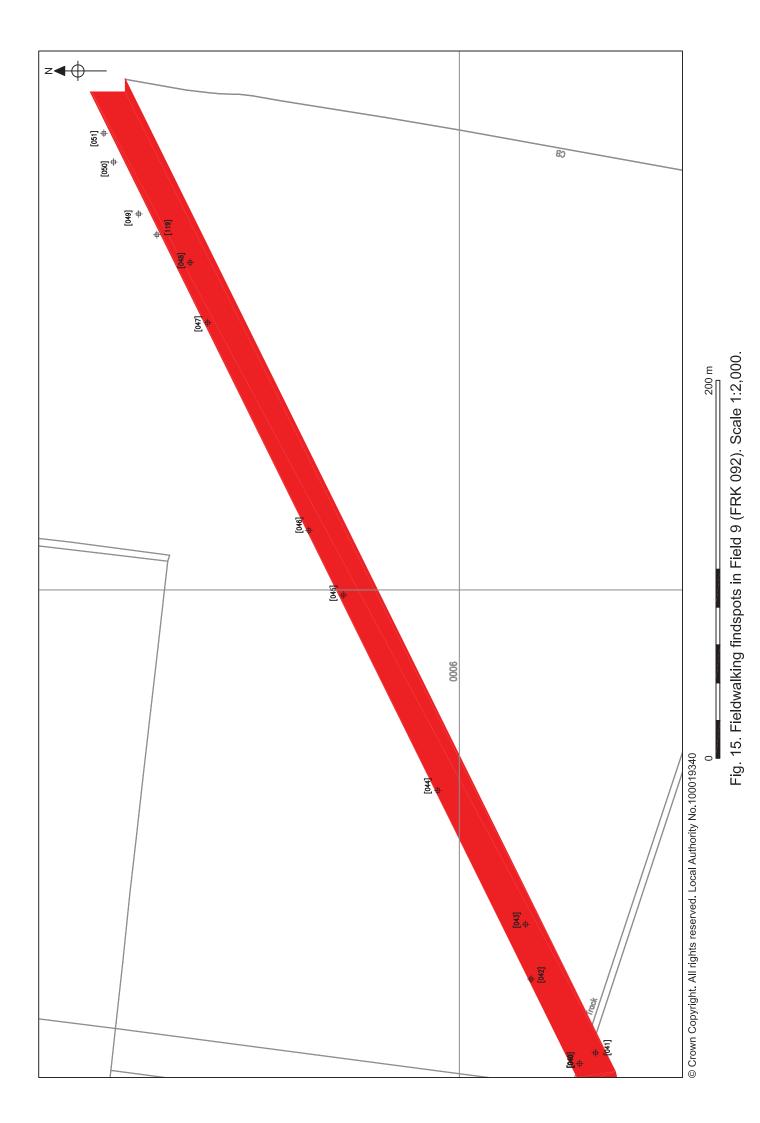


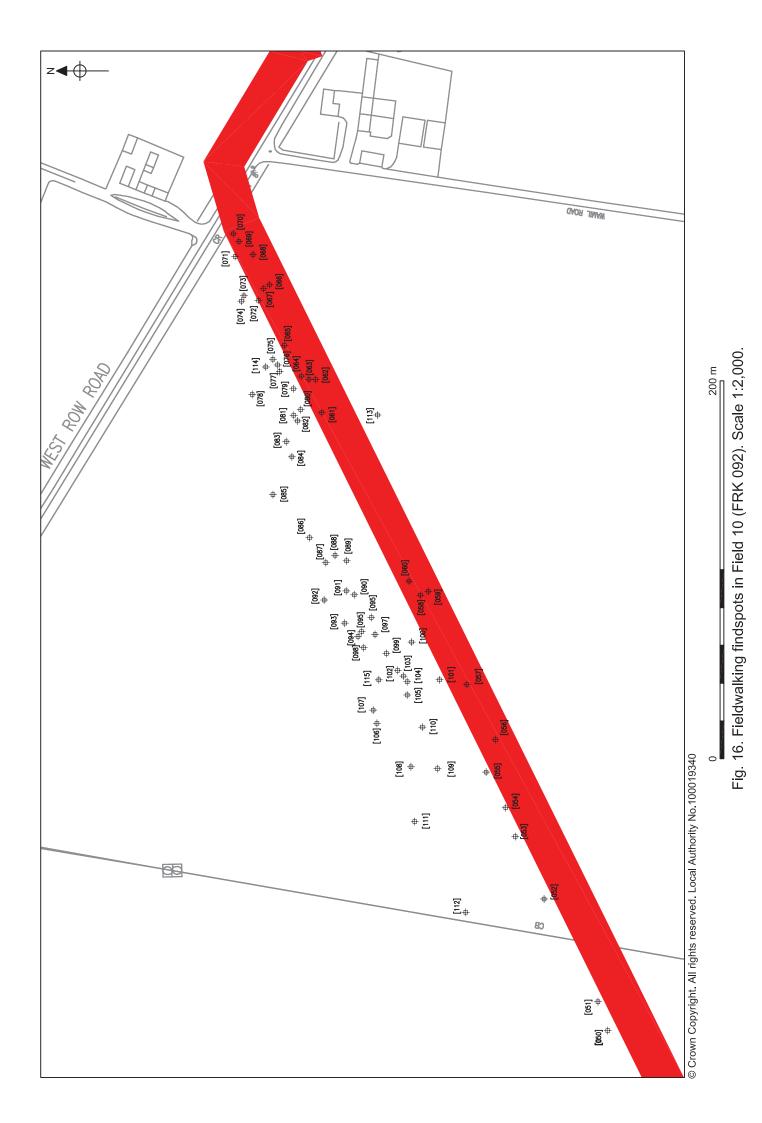


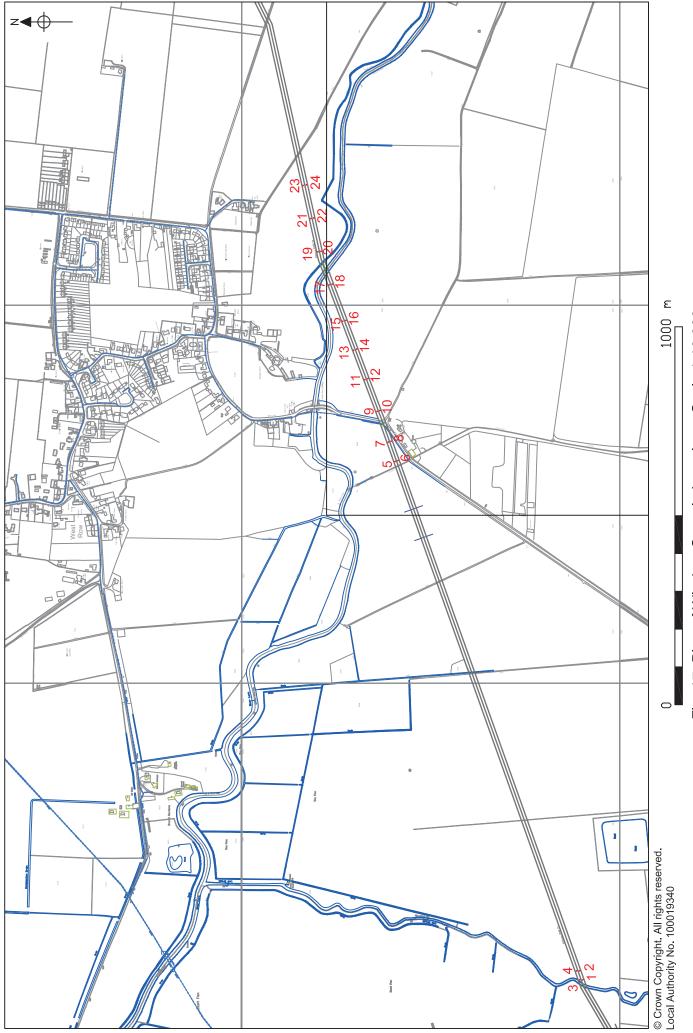




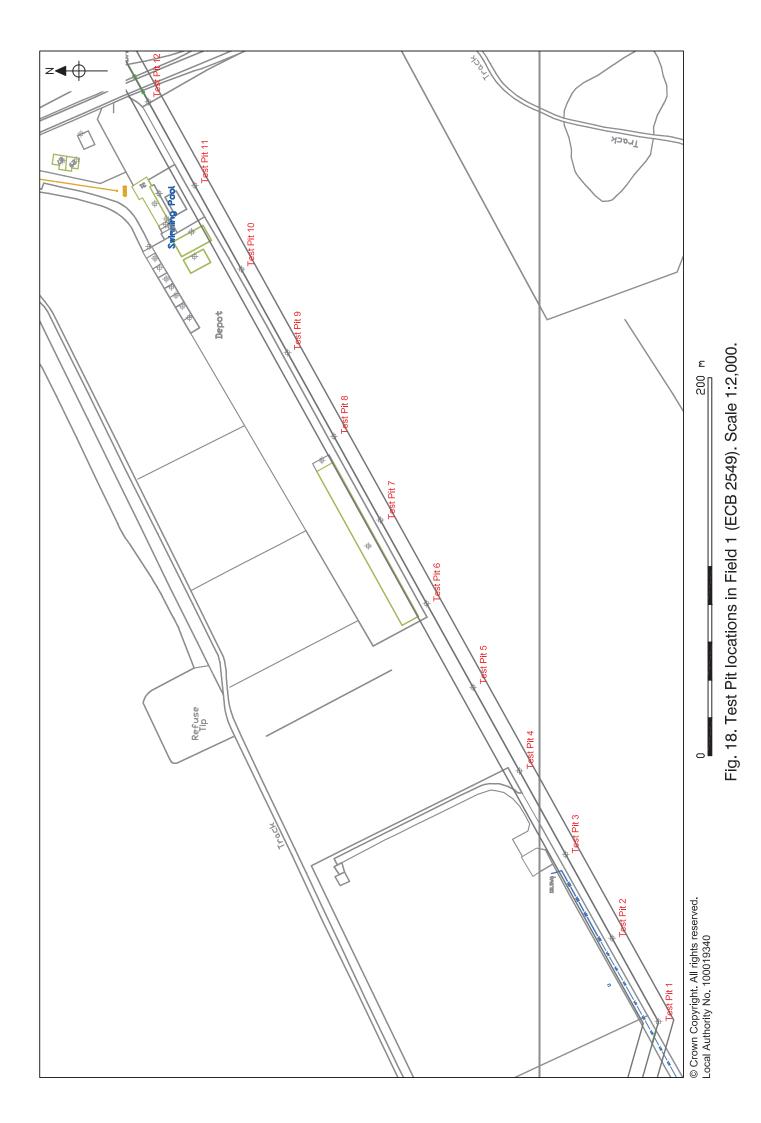












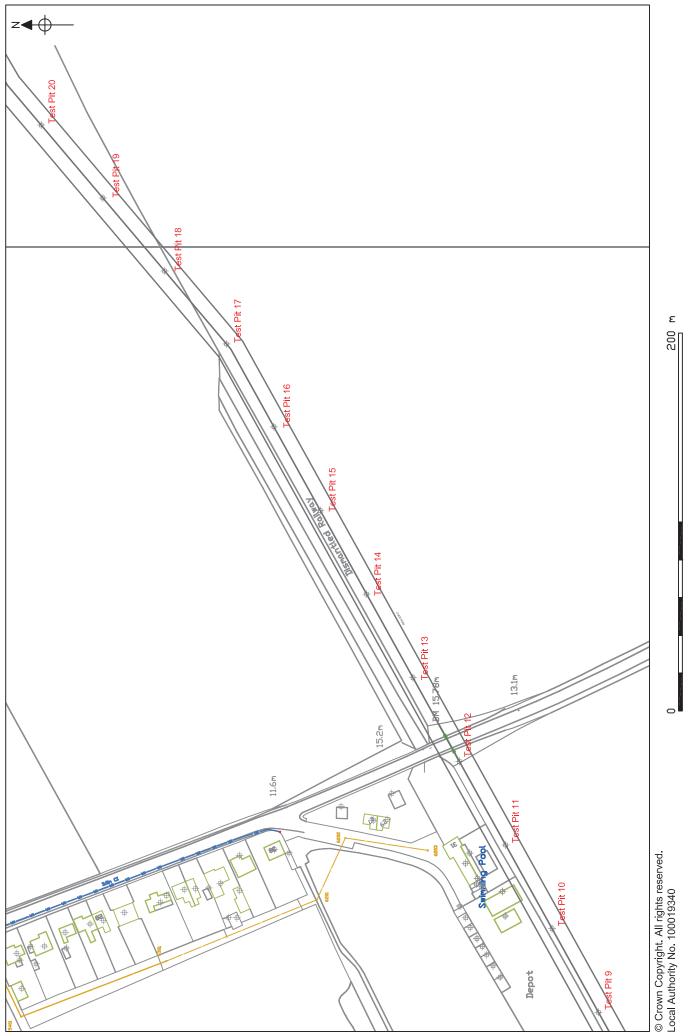
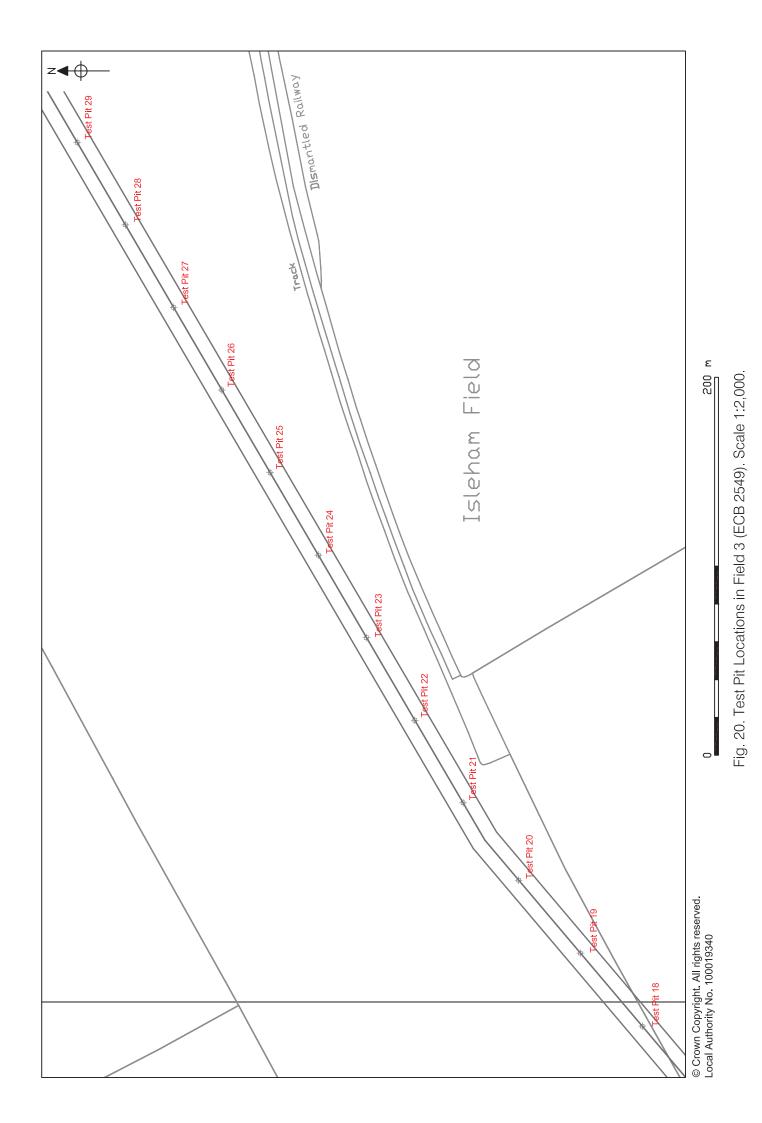
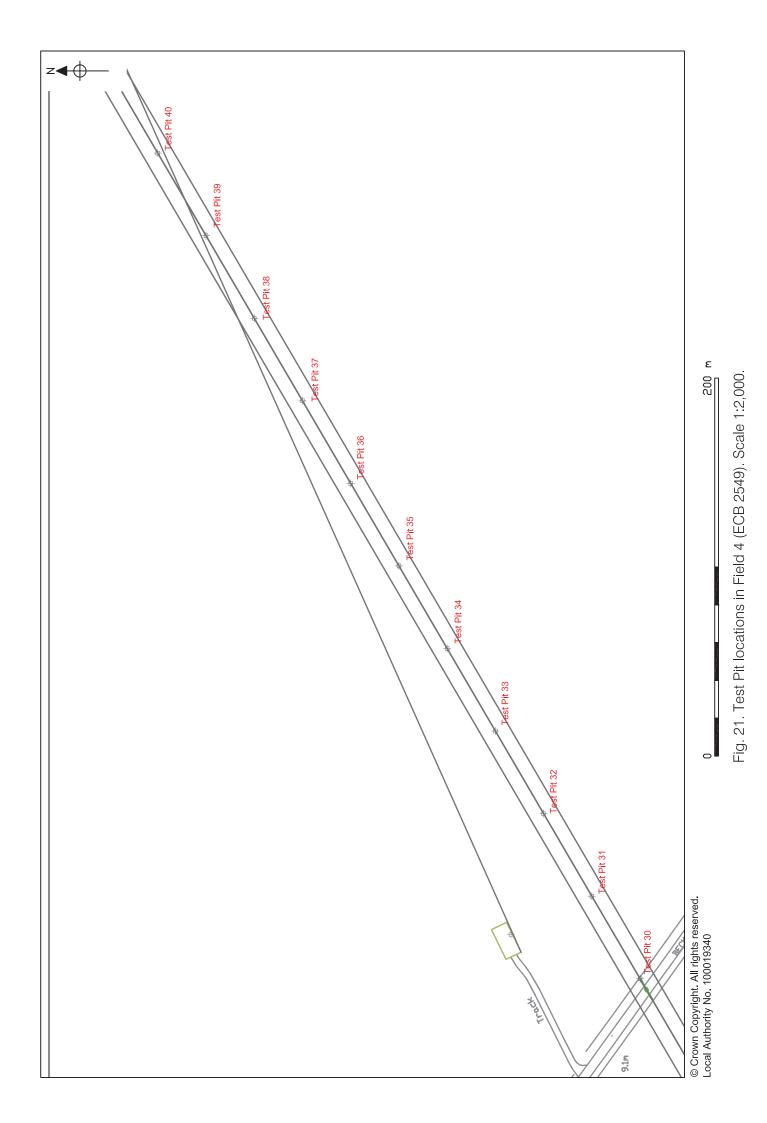


Fig.19. Test Pit locations in Field 2 (ECB 2549). Scale 1:2,000.





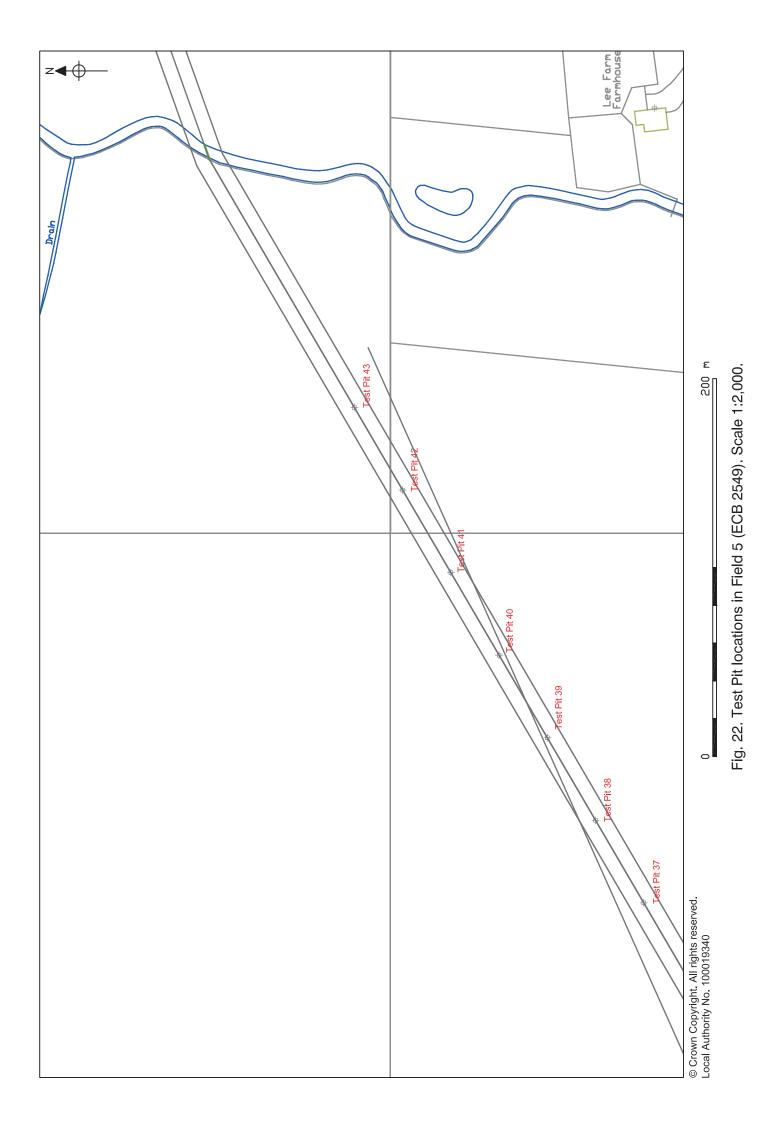




Fig. 23. Evaluation Trench Locations in Field 1 (ECB 2598). Scale 1:2,000.

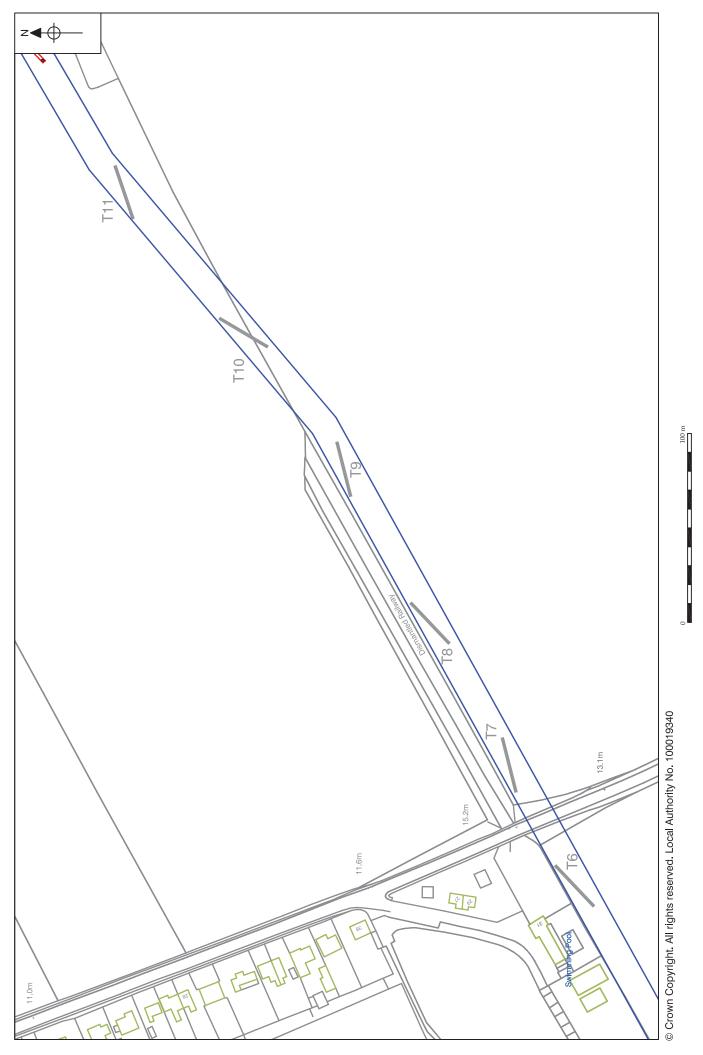


Fig. 24. Evaluation Trench Locations in Field 2 (ECB2598). Scale 1:2,000.

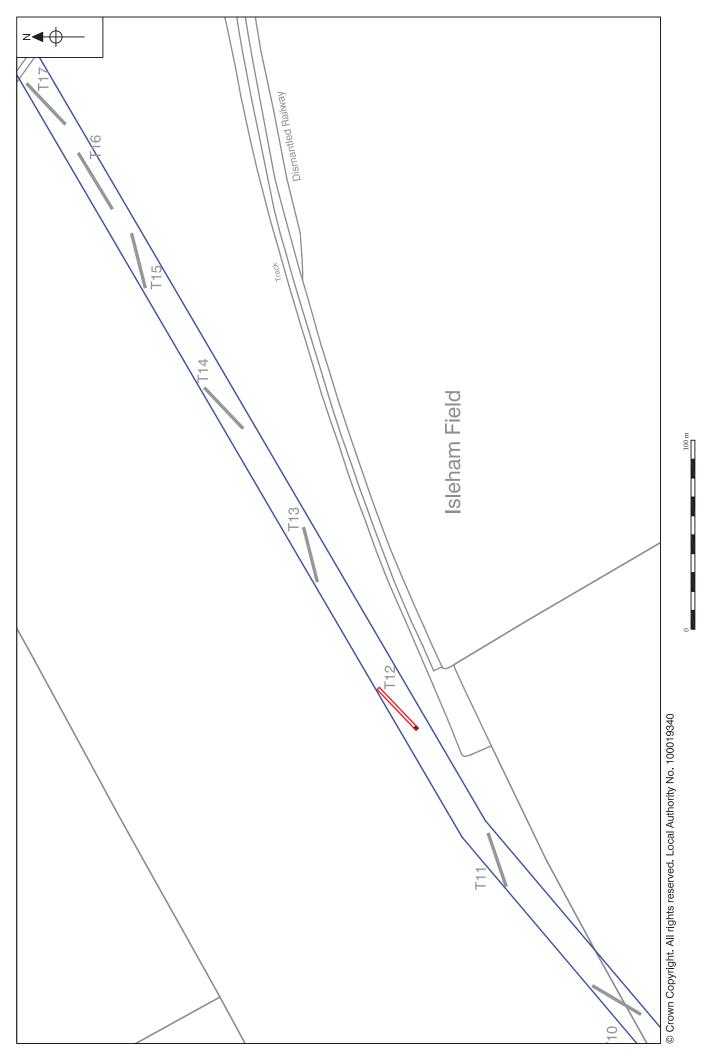


Fig. 25. Evaluation Trench Locations in Field 3 (ECB 2598). Scale 1:2,000.

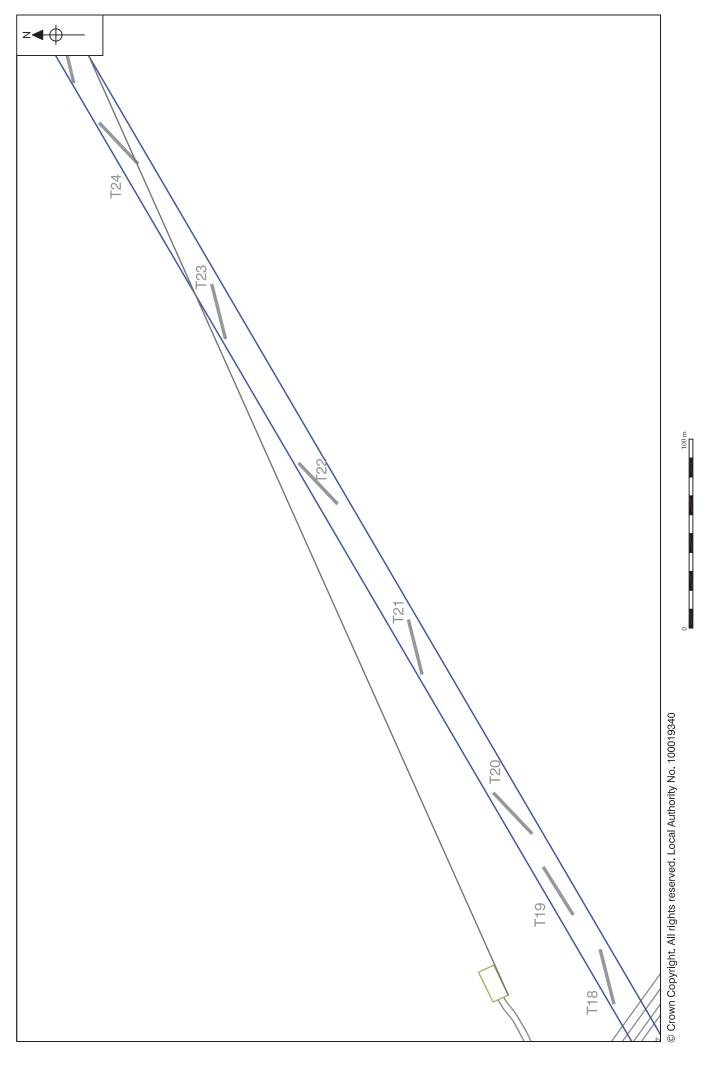


Fig. 26. Evaluation Trench Locations in Field 4 (ECB2598). Scale 1:2,000.

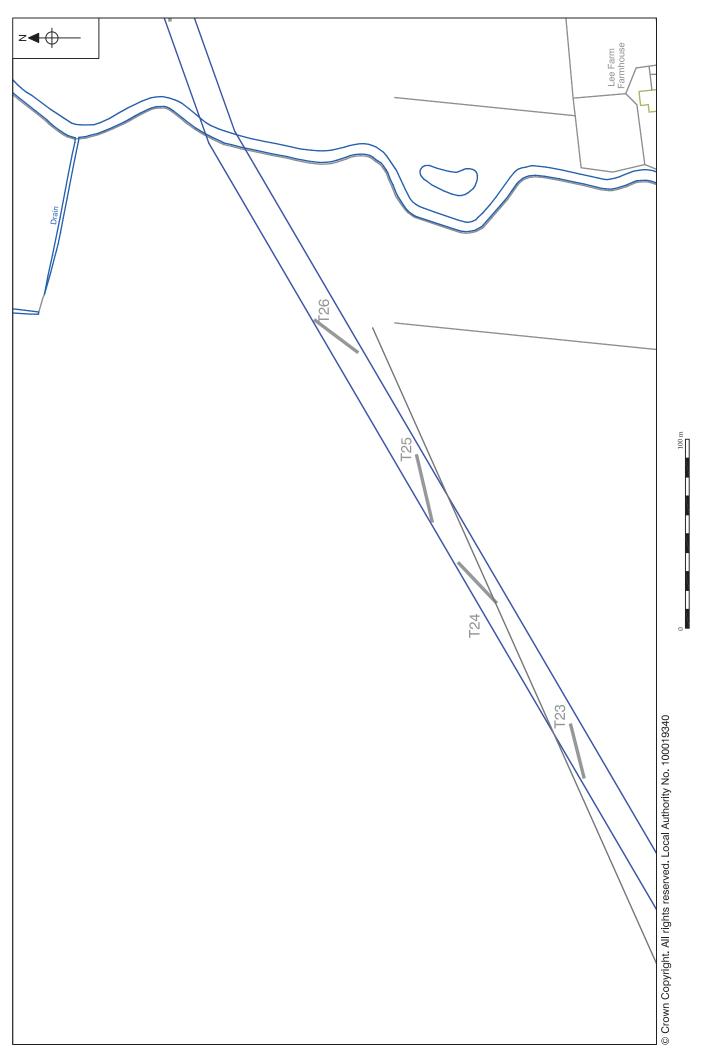


Fig. 27. Evaluation Trench Locations in Field 5 (ECB 2598). Scale 1:2,000.

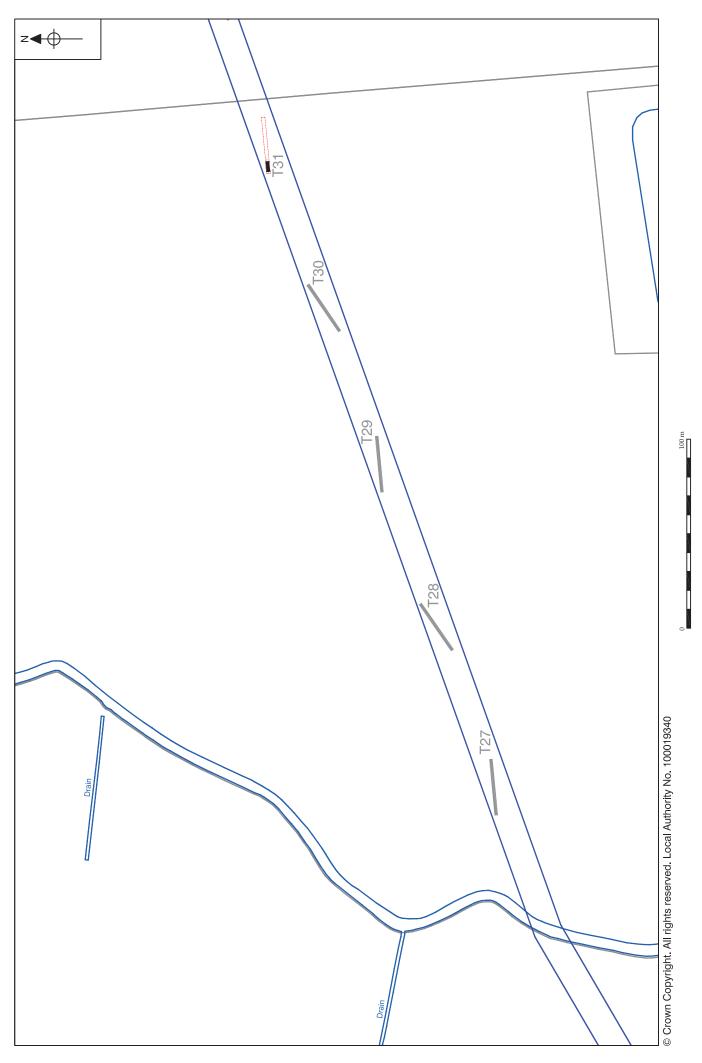


Fig. 28. Evaluation Trench Locations in Field 1 (FRK 092). Scale 1:2,000.

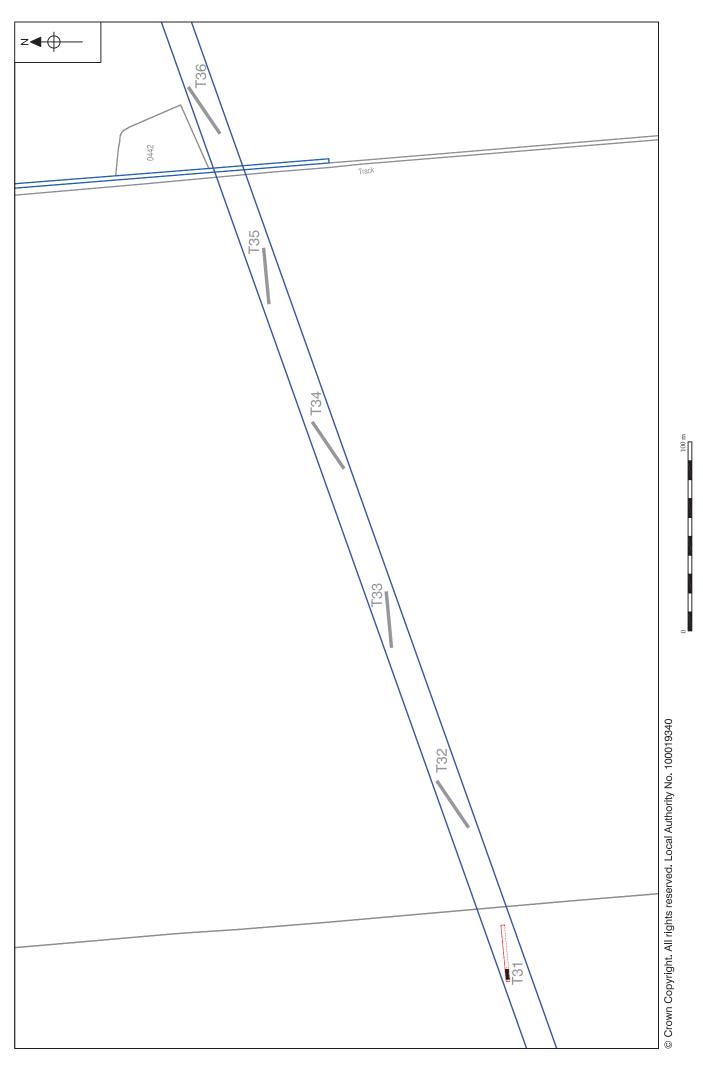


Fig. 29. Evaluation Trench Locations in Field 2 (FRK 092). Scale 1:2,000.

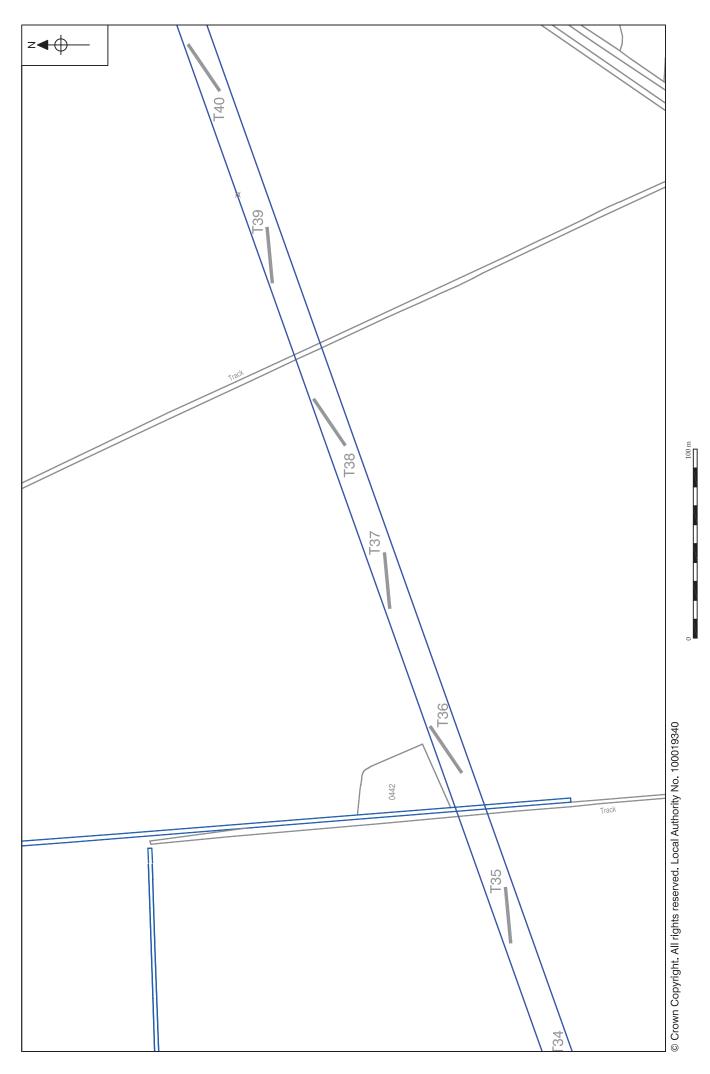
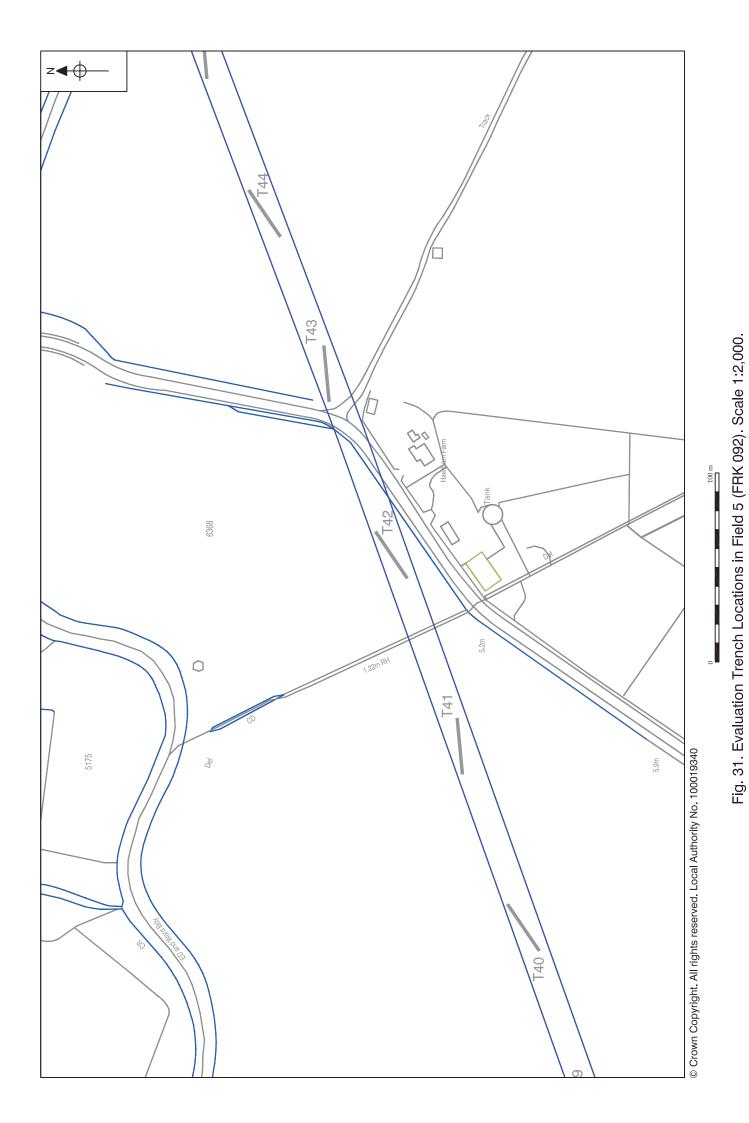


Fig. 30. Evaluation Trench Locations in Field 3 (FRK 092). Scale 1:2,000.



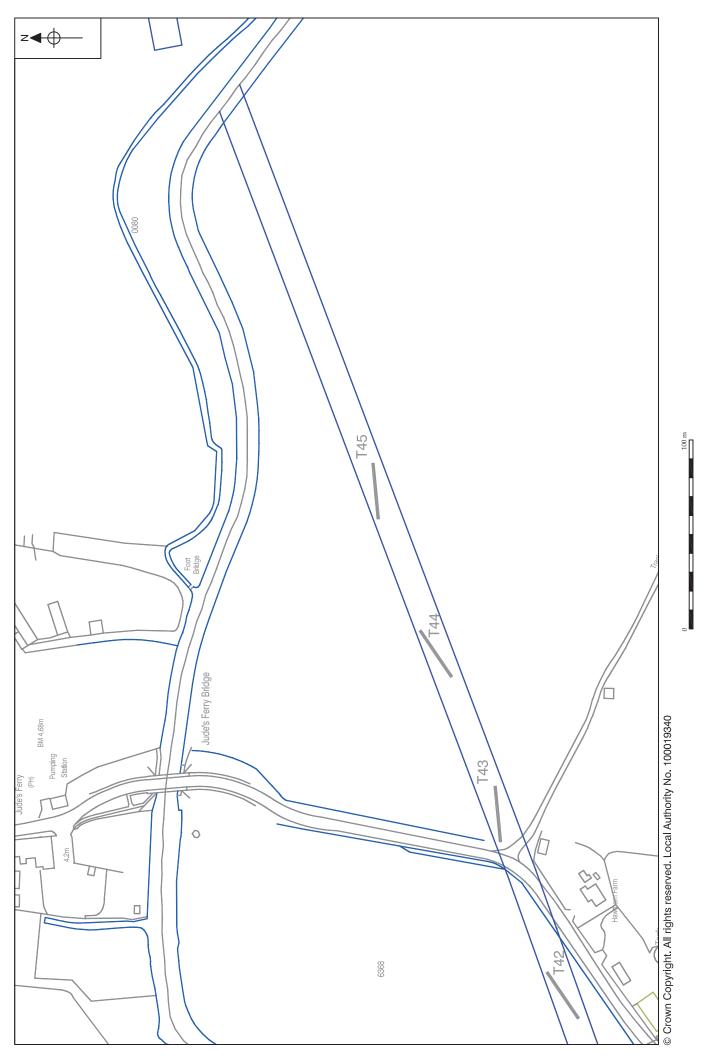


Fig. 32 Evaluation Trench Locations in Field 6 (FRK 092). Scale 1:2,000.

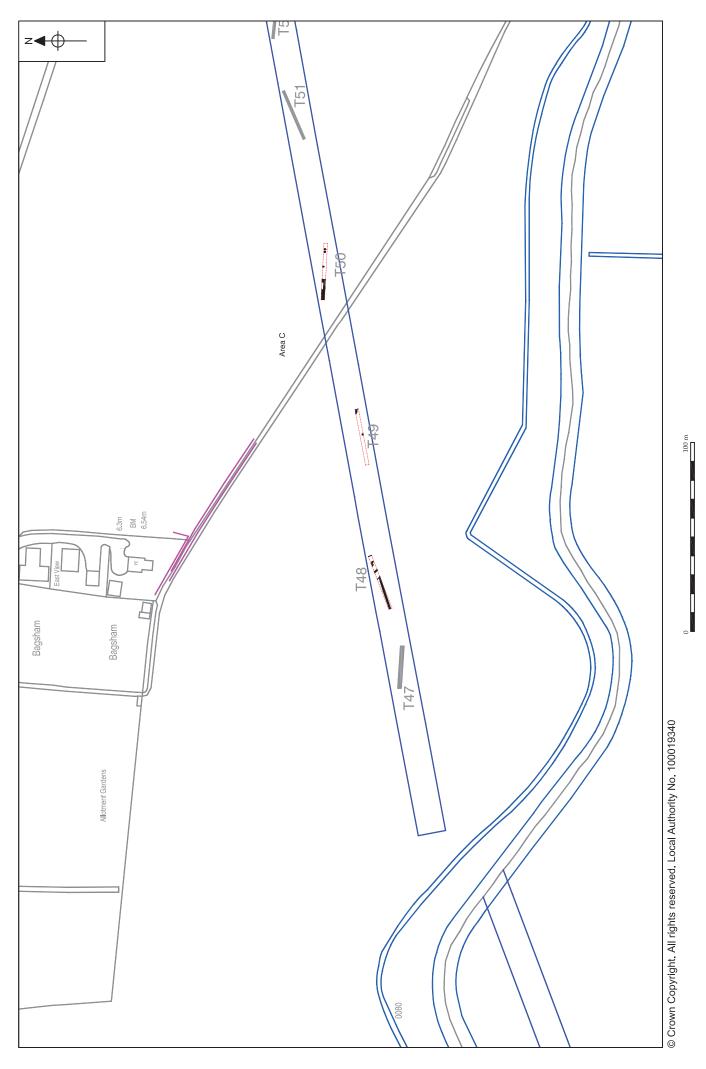


Fig. 33. Evaluation Trench Locations in Field 7 (FRK 092). Scale 1:2,000.

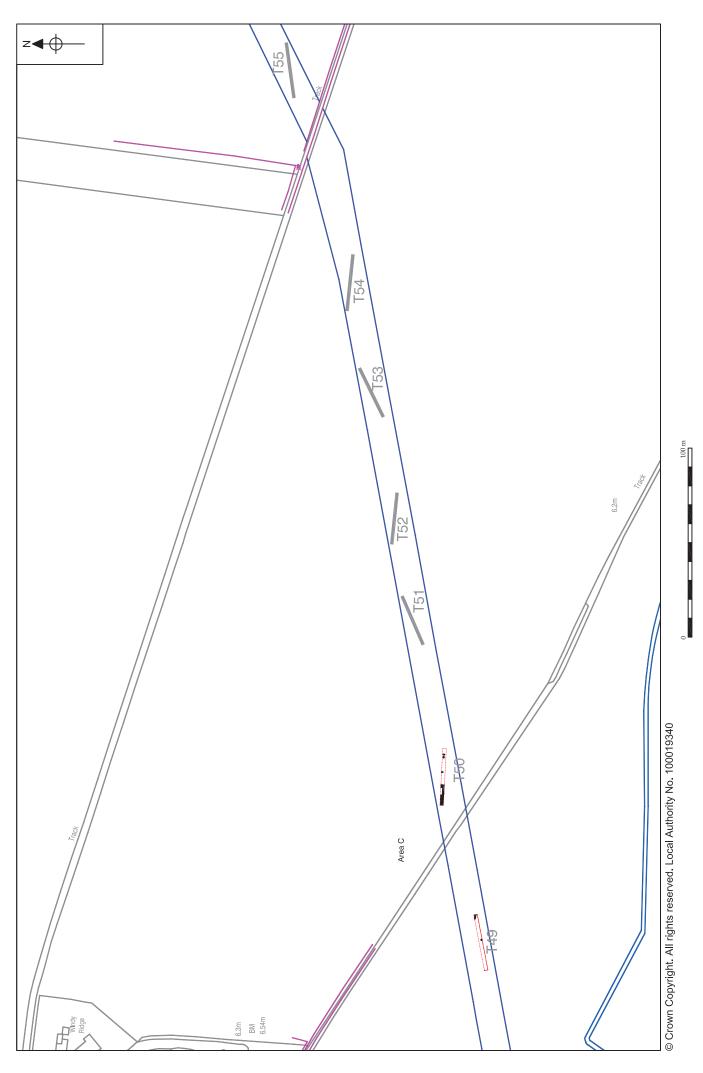


Fig. 34. Evaluation Trench Locations in Field 8 (FRK 092). Scale 1:2,000.

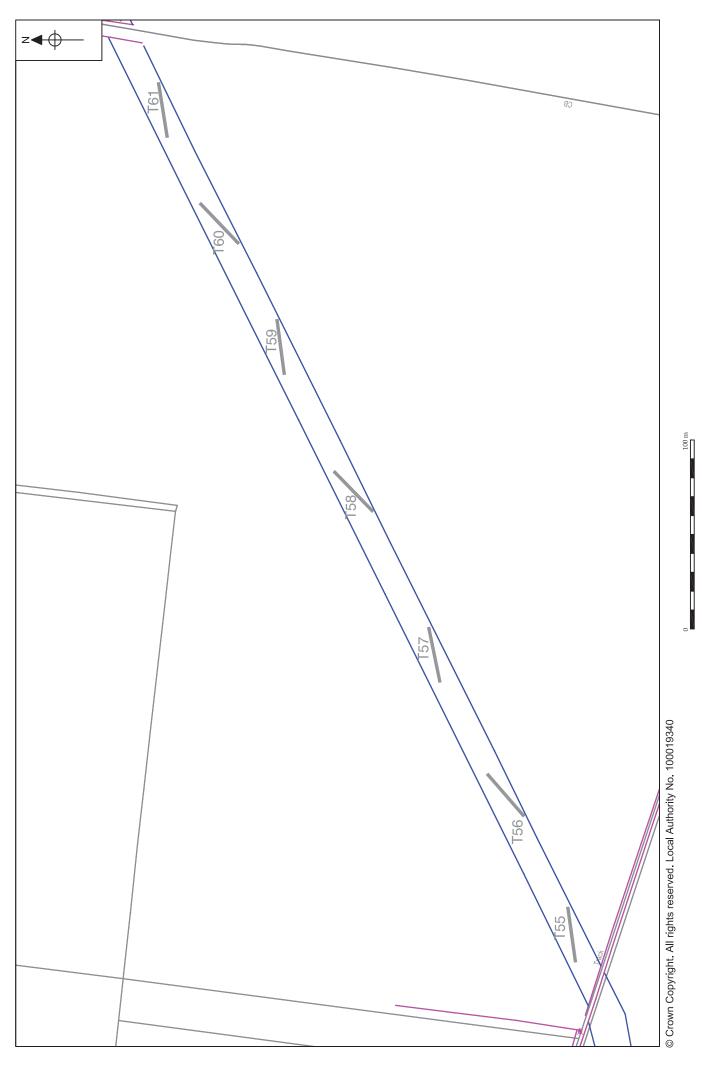


Fig. 35. Evalution Trench Locations in Field 9 (FRK 092). Scale 1:2,000.

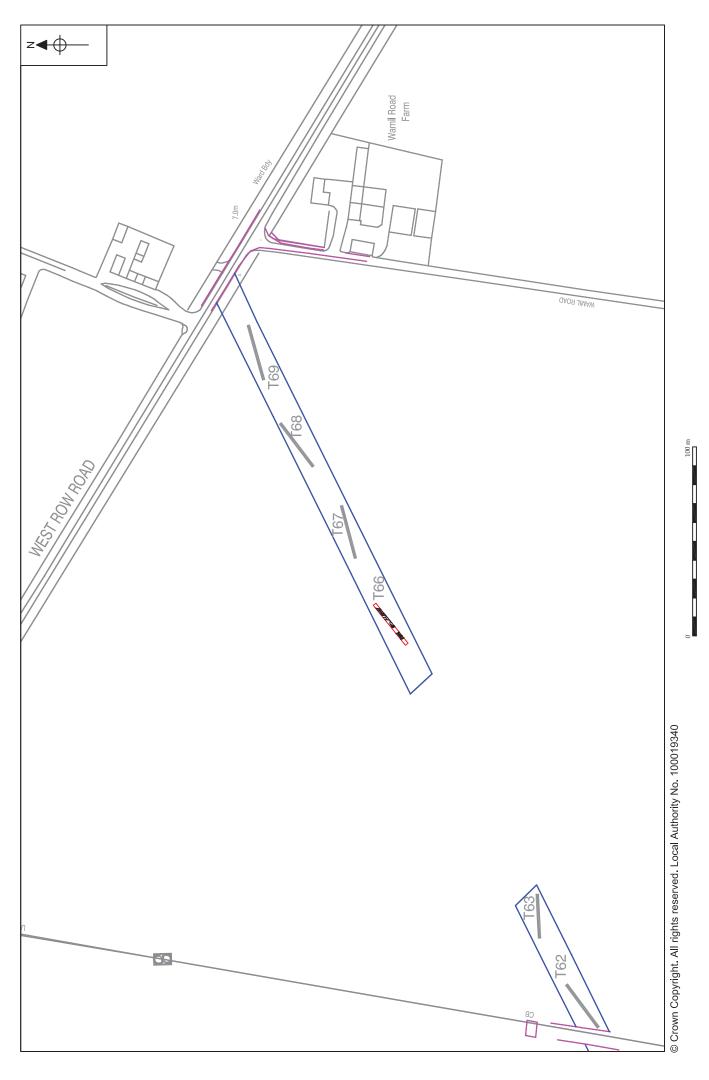


Fig. 36. Evaluation Trench Locations in Field 10 (FRK 092). Scale 1:2,000.

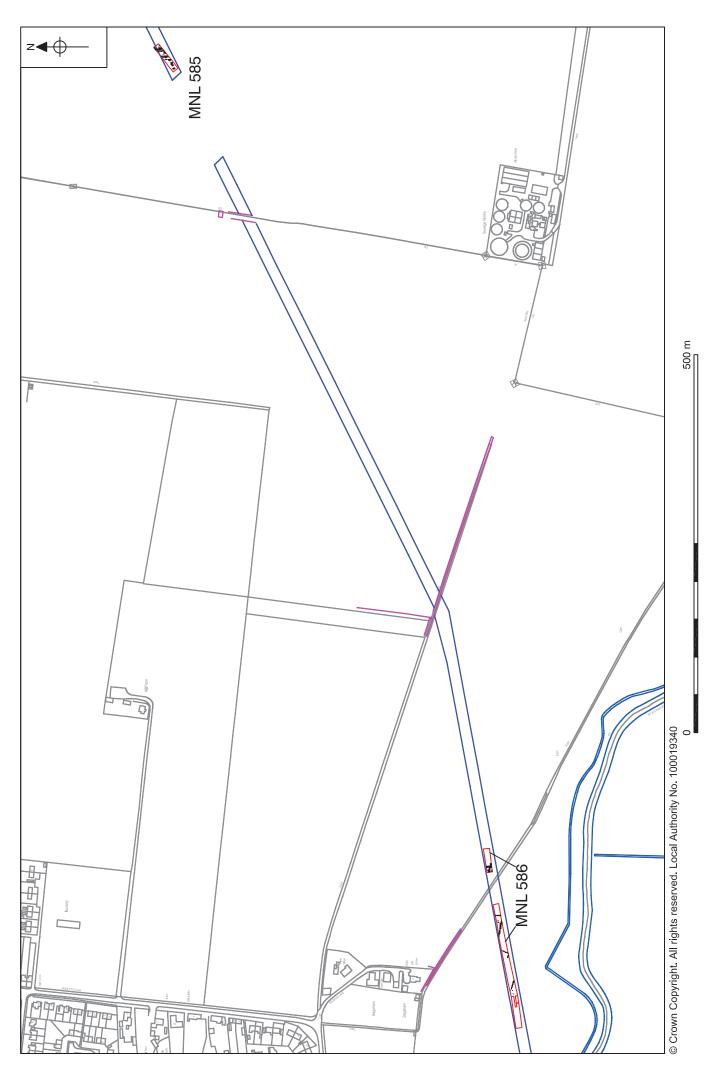


Fig. 37. SSMR MNL 585 and MNL 586: Excavation Locations. Scale 1:5,000.

2.0 Results

2.1 Prehistoric

2.1.1 Fieldwalking

A number of prehistoric flints were found throughout the proposed route during the fieldwalking phase of this project. These were found in the topsoil and could not be associated with any features. The positions of the findspots of these flints are unlikely to be significant.

2.1.2 Excavation

The excavated area SSMR MNL 586, in the vicinity of the northern bank of the River Lark, investigated a deposit which was probably colluvial, in which a human mandible was found. This mandible has been radiocarbon dated to 1500–1330 cal BC. This is also likely to be an approximate date for the deposition of the top of the colluvial layer, into which the mandible was embedded, and the base of the peat layer which overlay it.

2.2 Romano-British

Many of the finds and features found in the pipeline route during the fieldwalking, evaluation and excavation phases of this project date from this period.

2.2.1 Fieldwalking

A significant amount of the Romano-British finds from this phase of the project were found at the eastern end of the pipeline route. These finds consisted of pottery, metalwork and coins (see Fig. 38).

2.2.2 Evaluation

Ditches, which were probably field boundaries, containing Romano-British pottery were found in SSMR FRK 092 Trench 50, *c*.150m north of the River Lark (see Fig. 39). Another boundary was found in SSMR FRK 092 Trench 66, at the eastern end of the pipeline route (see Fig. 40).

2.2.3 Excavation

The excavated area SSMR MNL 586 *c*.150m to the north of the River Lark, and at excavated area SSMR MNL 585 the eastern end of the pipeline route further revealed the ditches found during the evaluation phase. These areas also uncovered pits and, in the case of that at the eastern end of the pipeline route, possible beam-slots dating from the Romano-British period (see Figs 41–2).

2.3 Early and Middle Saxon

2.3.1 Fieldwalking

A possible part of an Early Saxon cruciform brooch was found at the western end of the proposed pipeline route during fieldwalking.

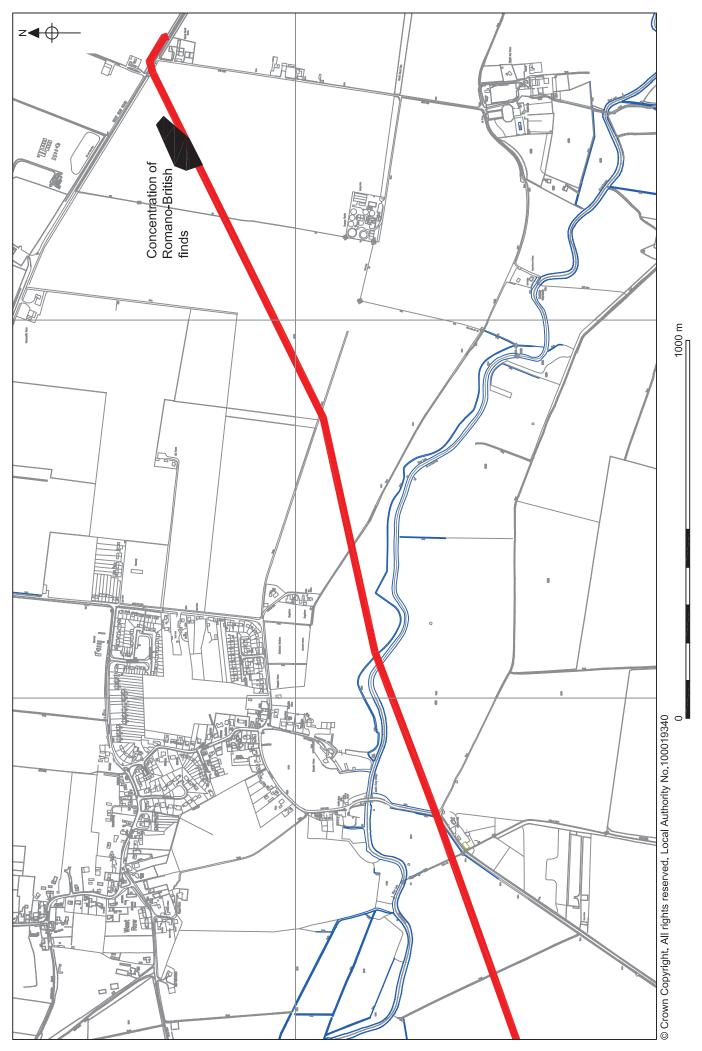
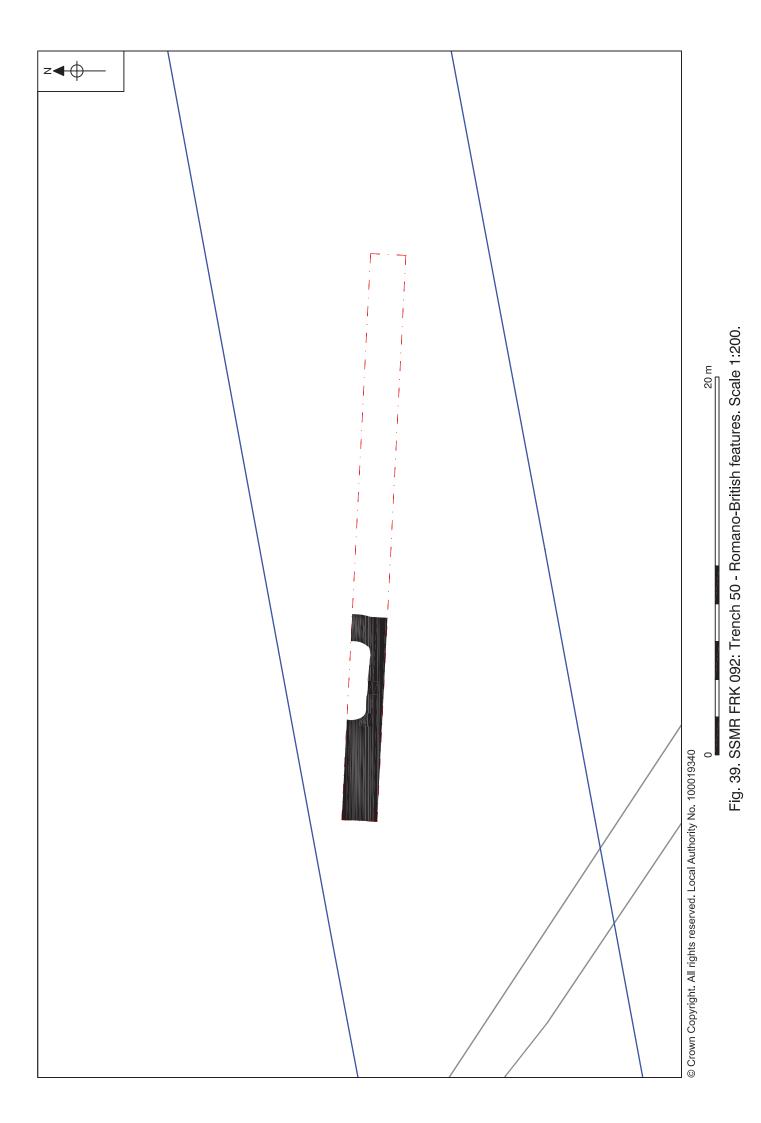
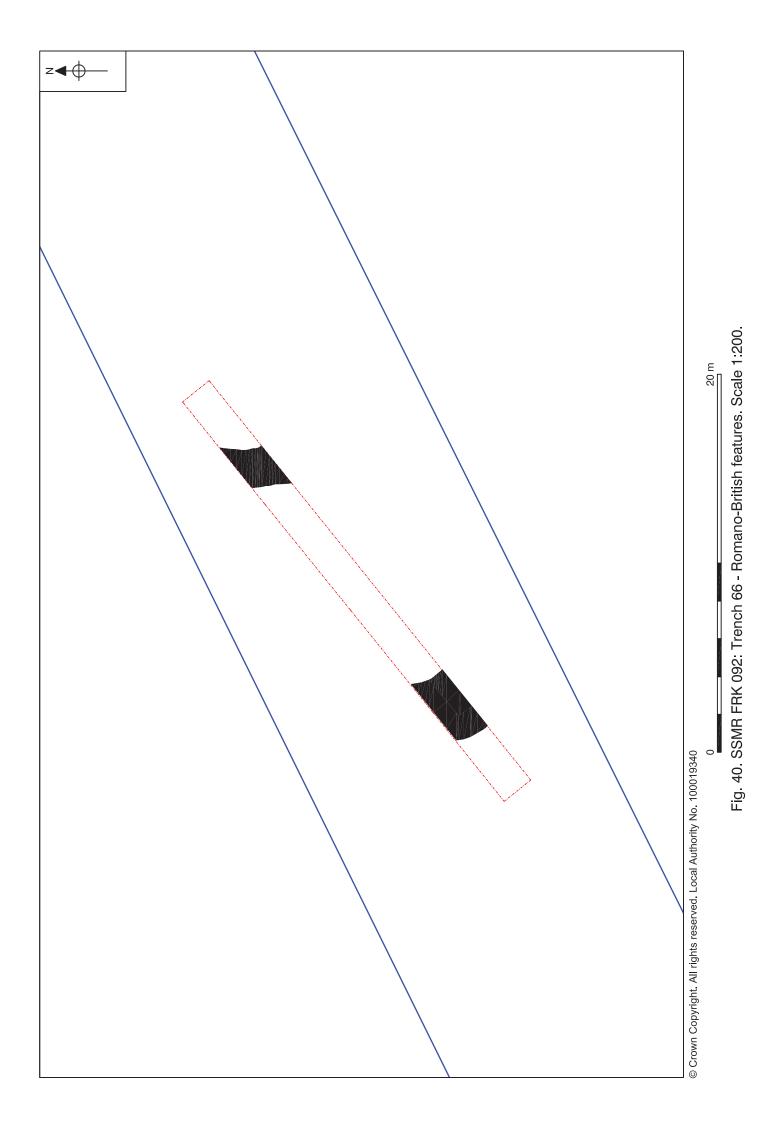
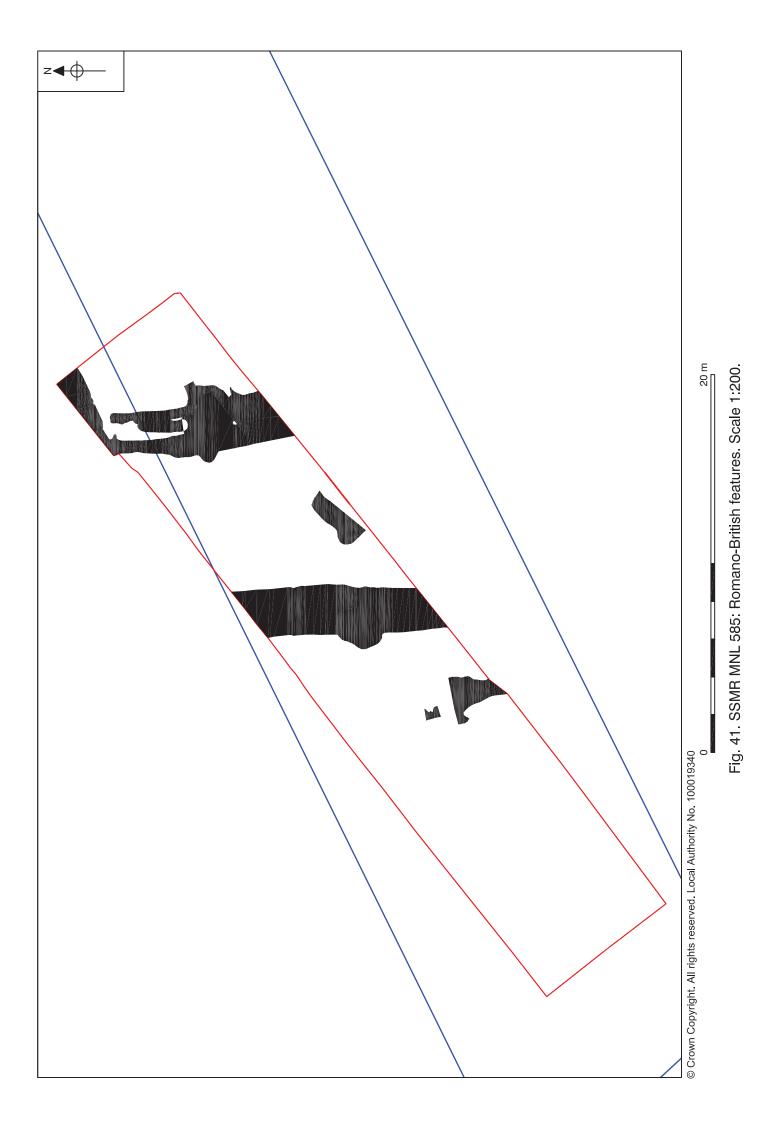
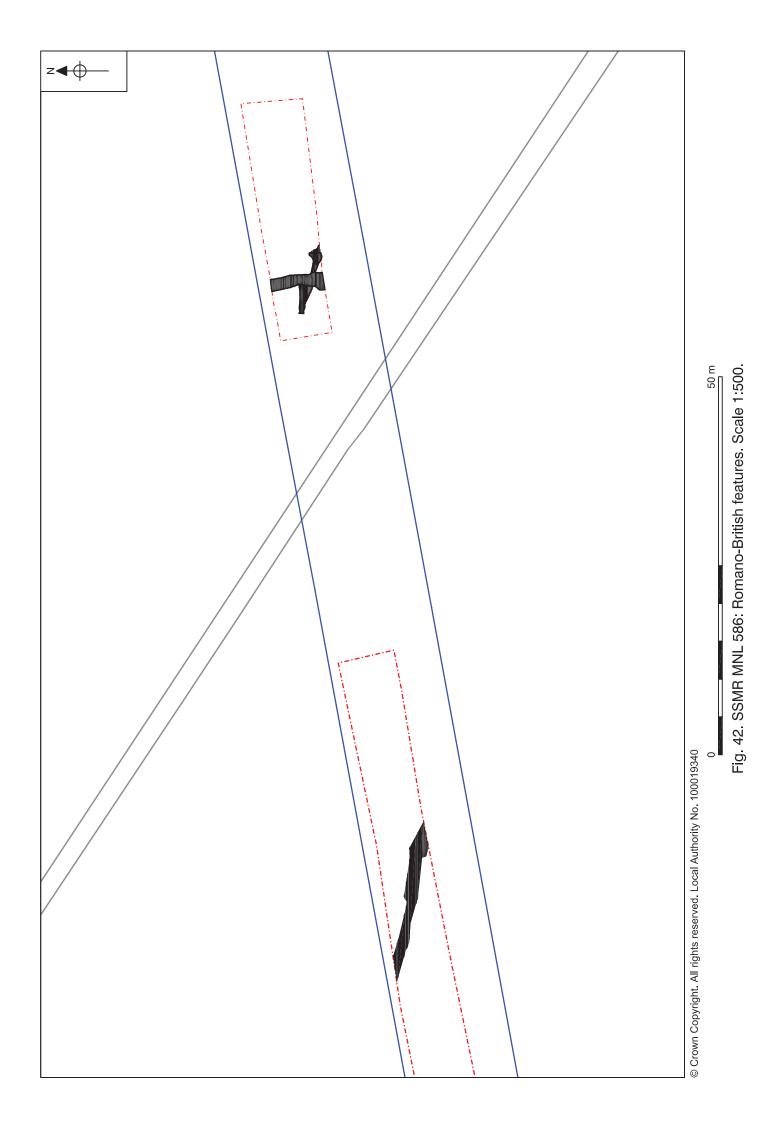


Fig. 38. SSMR FRK 092: Concentration of Romano-British fieldwalking finds. Scale 1:10,000.









2.4 Late Saxon

2.4.1 Fieldwalking

Two sherds of Late Saxon Thetford Ware were found in the western part of the pipeline route. Sherds of this type of pottery were also found in the eastern part of the pipeline route.

2.5 Medieval

2.5.1 Fieldwalking

Medieval pottery and ceramic building material were found in the western part and at the eastern end of the pipeline route. A medieval silver coin was also found in the western part of the pipeline route.

2.6 Post-medieval

2.6.1 Fieldwalking

Post-medieval objects were found along the length of the proposed pipeline route.

2.6.2 Evaluation

A post-medieval ditch was found in SSMR FRK 092 Trench 48, in the vicinity of the north bank of the River Lark (see Fig. 43).

2.6.3 Excavation

The post-medieval ditch found in SSMR FRK 092 Trench 48 was examined further in excavation SSMR MNL 586, in the vicinity of the north bank of the River Lark (see Fig. 44).

2.6.4 Watching Brief

A post-medieval ditch was found in the vicinity of the south bank of the River Lark during the watching brief phase of SSMR FRK 092.

2.7 Undated

2.7.1 Fieldwalking

An undated jetton and silver coin was found in the western part of the pipeline route. Undated copper alloy coins were found in the eastern end of the route.

2.7.2 Evaluation

A possible ditch was found in CHER ECB 2598 Trench 12 (Fig. 45), in the western part of the pipeline route. Three parallel ditches, which were probably re-cuts of the same field boundary, were found in SSMR FRK 092 Trench 31 (Fig. 46), in the central part of the route, to the east of the Lee Brook. Two pits, a narrow linear feature and a possible surface were uncovered in SSMR FRK 092 Trench 48, in the vicinity of the northern bank of the River Lark (Fig. 47). A ditch and a pit were found in SSMR FRK 092 Trench 49 (Fig. 48). Linear features were also found in Trench 66 (Fig. 49), in the eastern part of the route, which could not be dated at the evaluation stage.

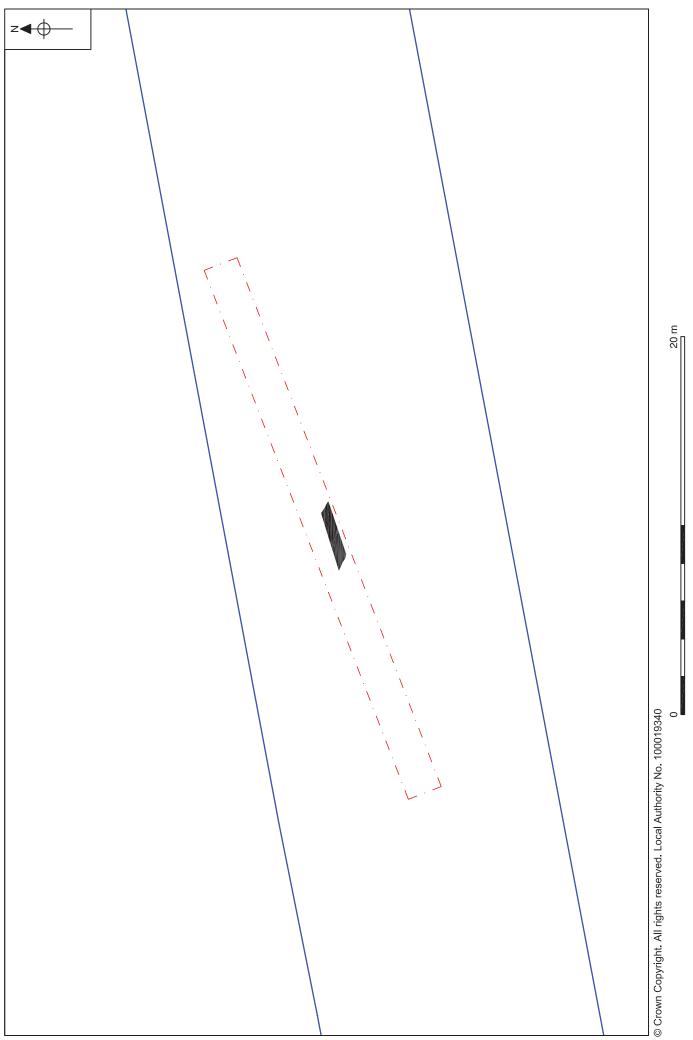
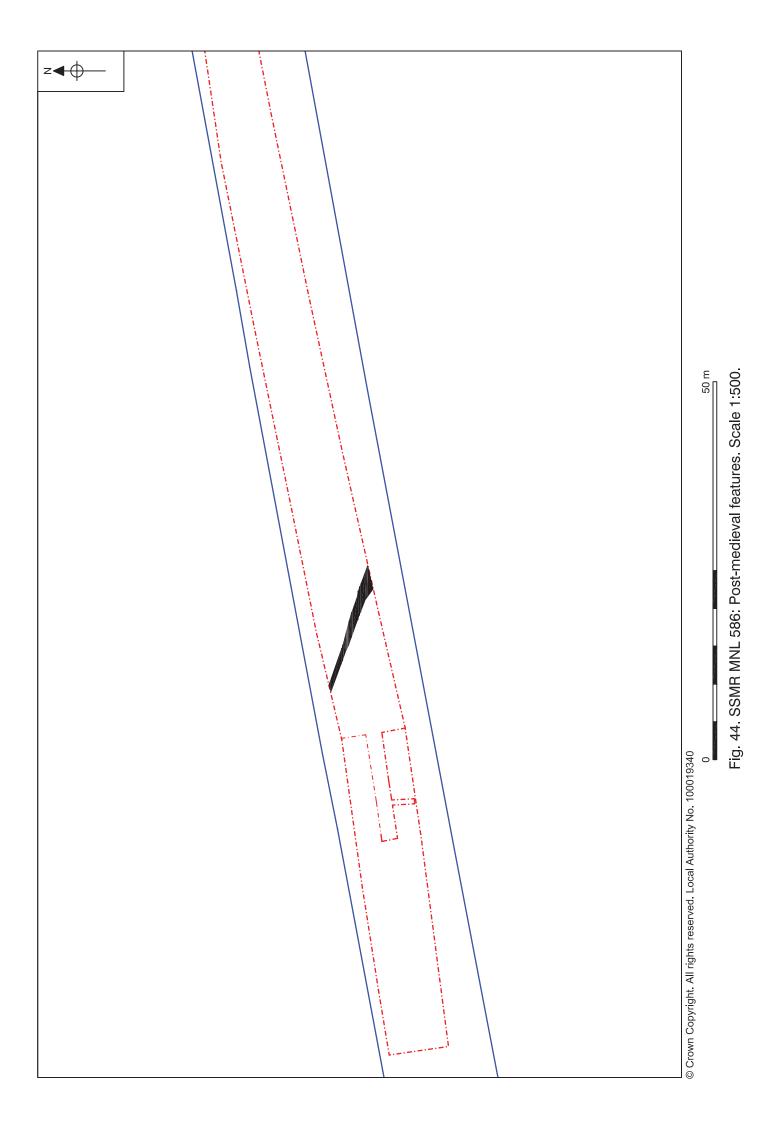
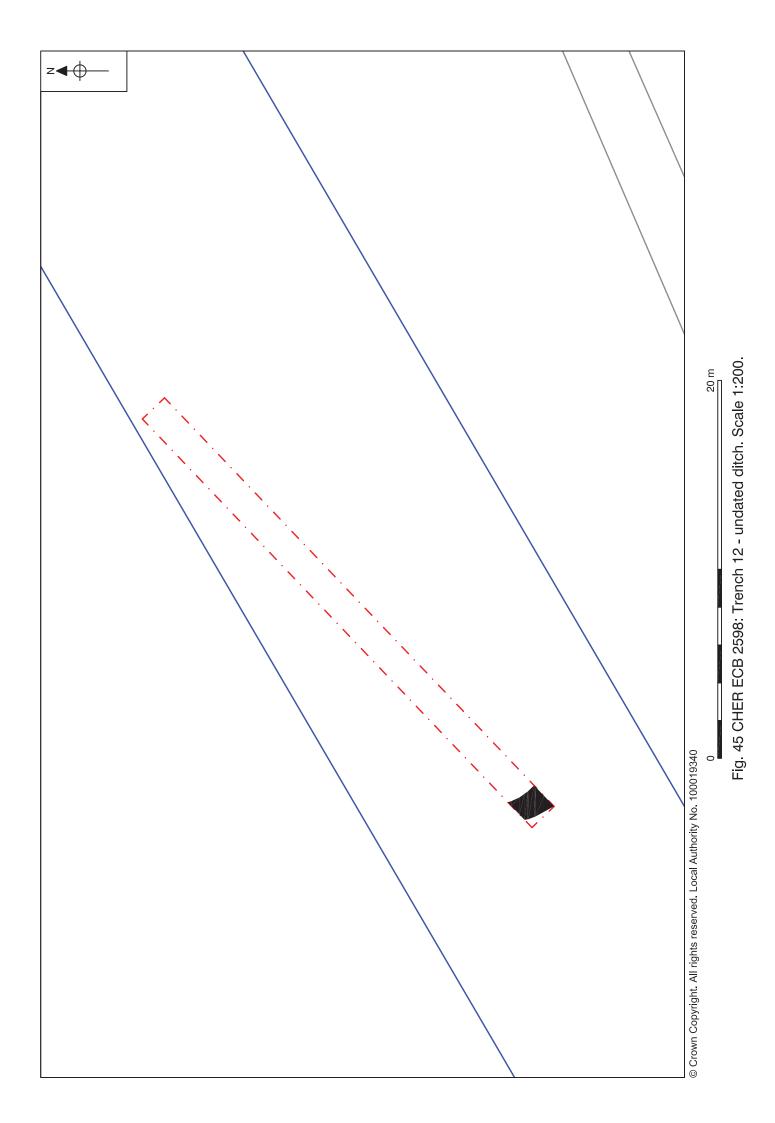
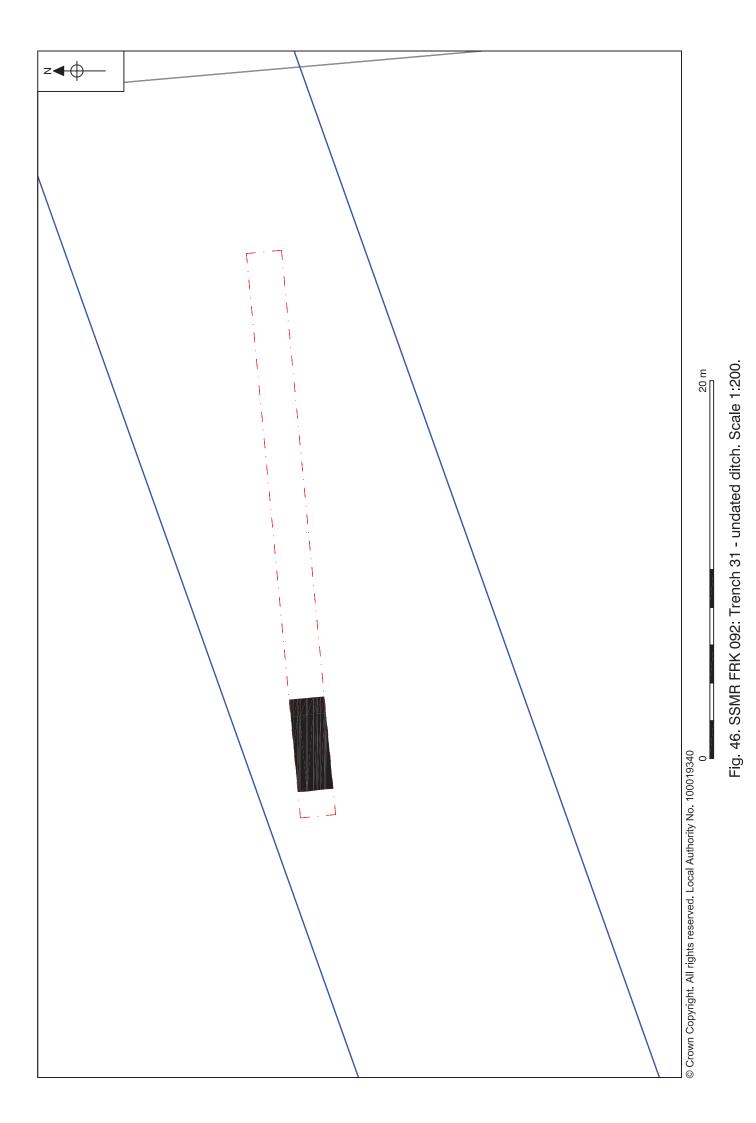
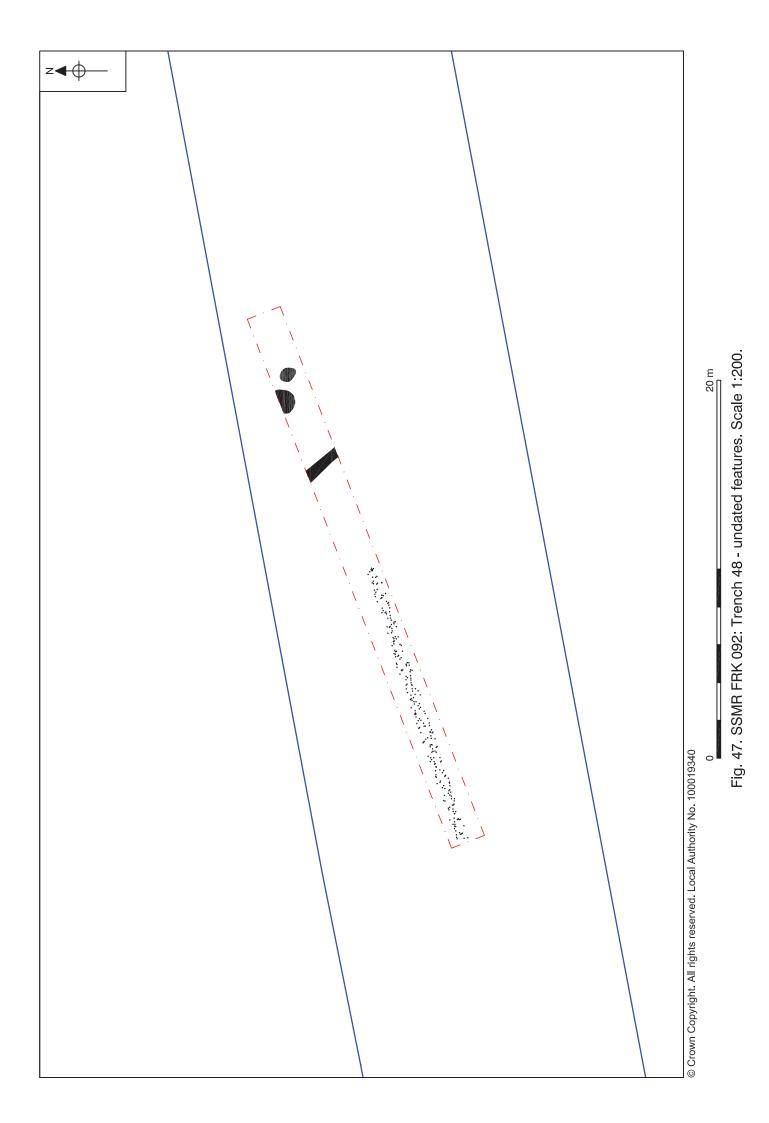


Fig. 43. SSMR FRK 092: Trench 48 - post-medieval features. Scale 1:200.









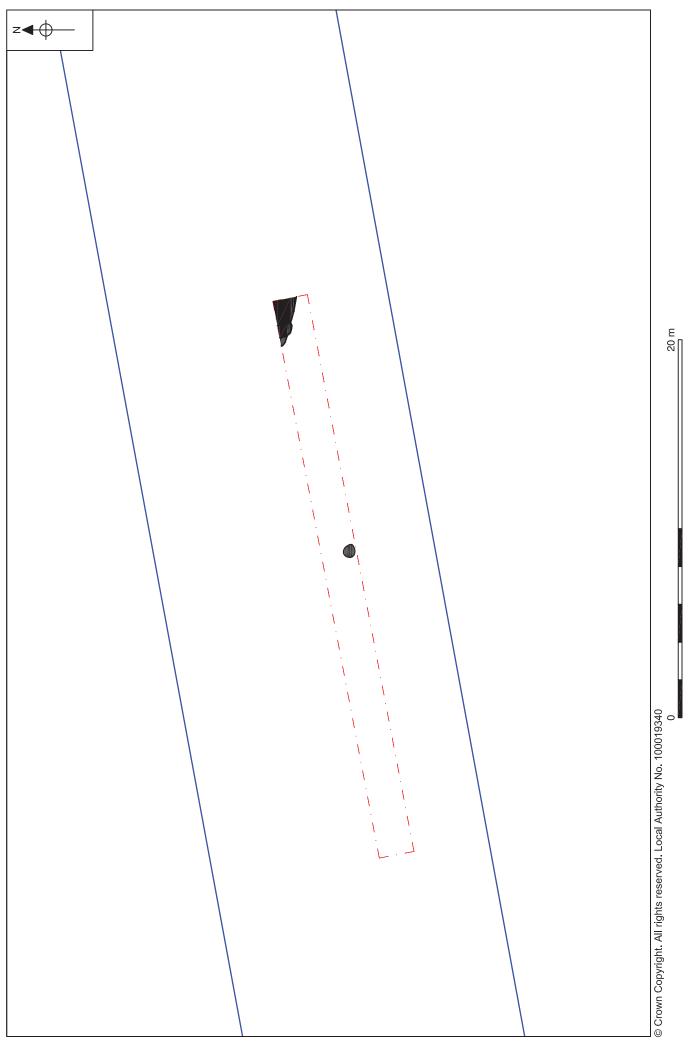
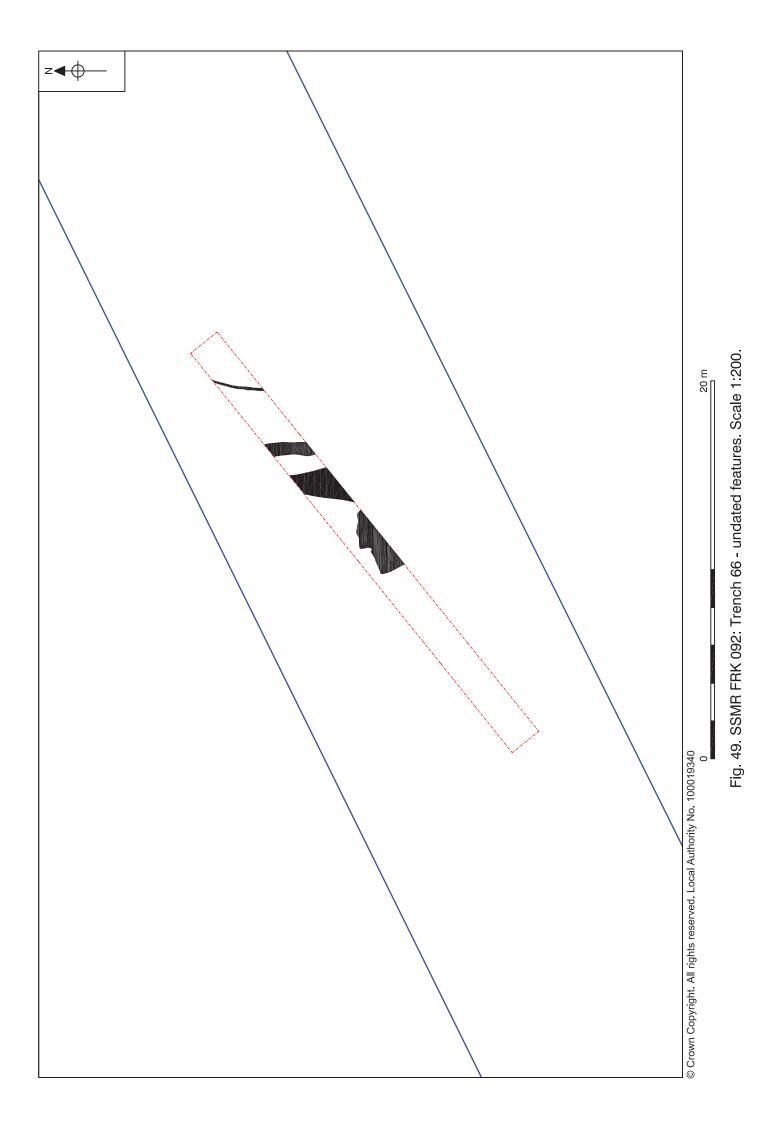
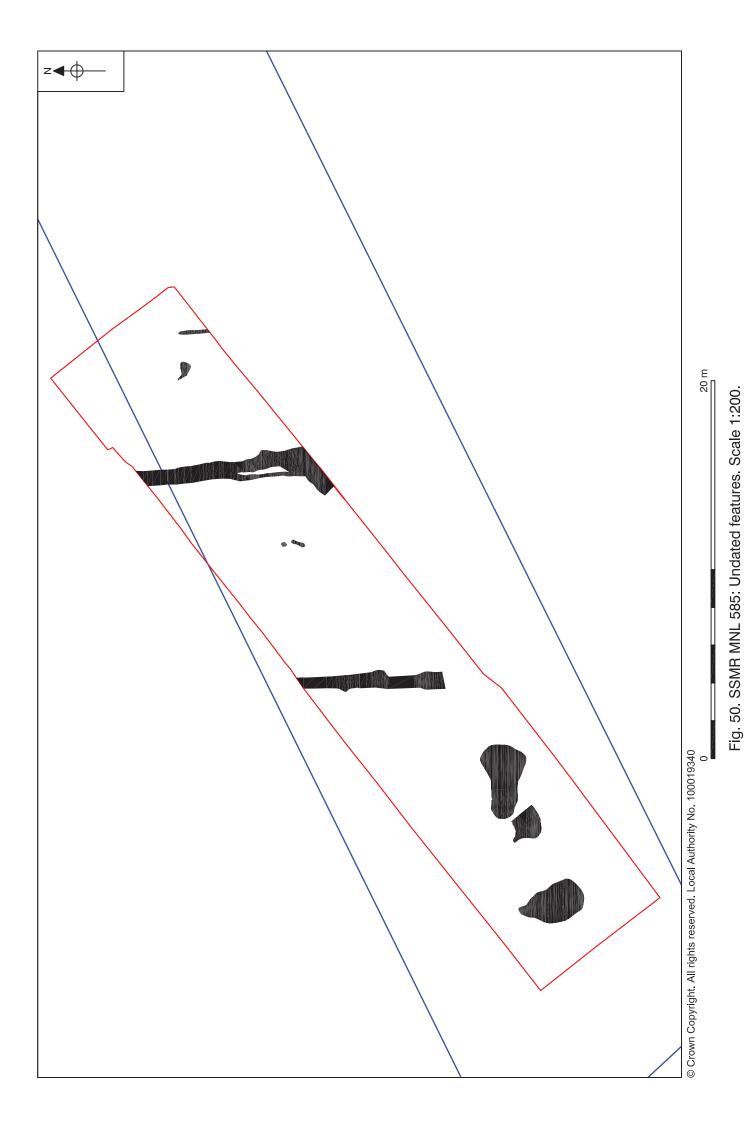


Fig. 48. SSMR FRK 092: Trench 49 - undated features. Scale 1:200.





2.7.3 Excavation

Six undated ditches and four undated post-holes were found in excavated area SSMR MNL 585 (Fig. 50), at the eastern end of the pipeline route. It is likely, given the dates of features found in their immediate vicinity, that at least some of these ditches and post-holes are Roman. Excavated area SSMR MNL 586, in the vicinity of the north bank of the River Lark, uncovered five ditches, four post-holes and three pits, all of which were of unknown date (Fig. 51).

2.7.4 Watching Brief

An undated ditch was found in the vicinity of the south bank of the River Lark during the watching brief phase of SSMR FRK 092 (Fig. 52).

2.8 Natural Features

2.8.1 Evaluation

Animal burrows and other natural features were found in CHER ECB 2598 Trenches 1, 2, 4 and 7, at the western part of the pipeline route.

2.8.2 Excavation

Several features were found in excavation SSMR MNL 585, at the eastern end of the pipeline route which may be animal burrows but could possibly be post-holes or ditches.

2.9 Unstratified Finds

2.9.1 Evaluation

A fragment of Roman tile was found in the topsoil of SSMR FRK 092 Trench 49, in the vicinity of the northern bank of the River Lark. Medieval copper-alloy objects and a medieval silver coin were found in the eastern part of the pipeline route.

2.9.2 Excavation

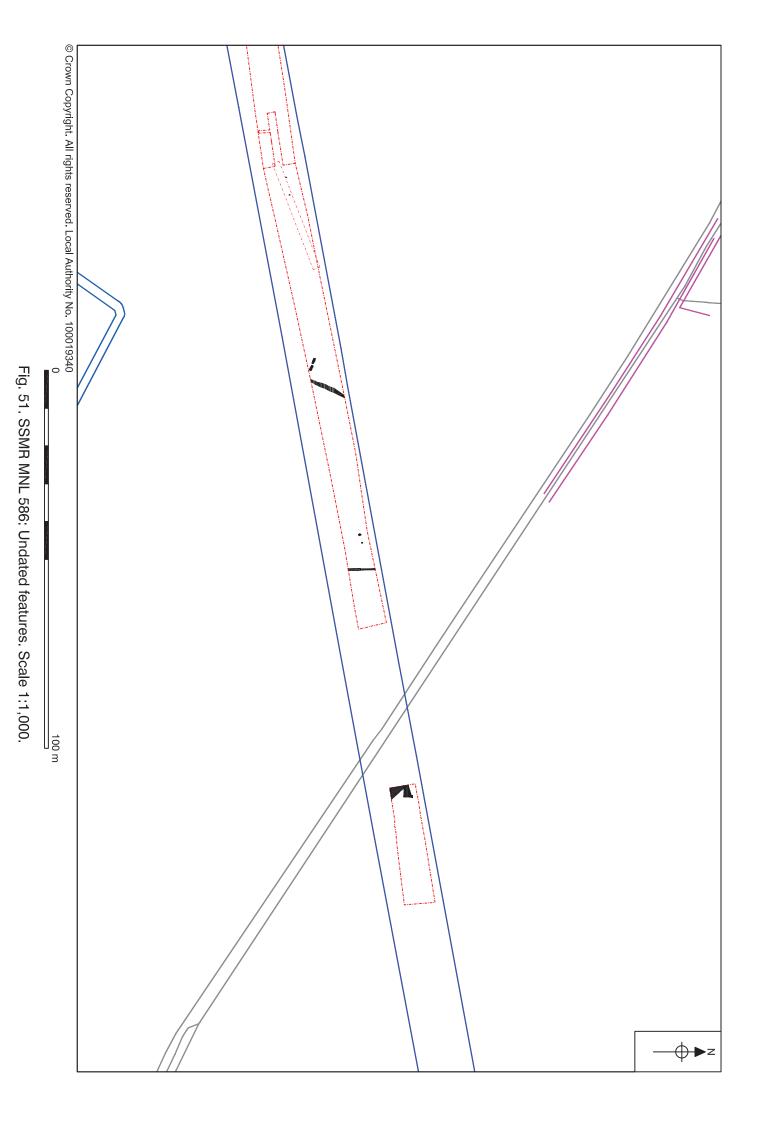
Roman pottery and ceramic building material were found while machining in the excavated area SSMR MNL 586, in the vicinity of the north bank of the River Lark.

2.10 Archive Quantification

Table 1 quantifies the various archive components that were generated during the various phases of this project.

Archive Component	Evaluation ECB 2549	Evaluation ECB 2598	Evaluation FRK 092	Excavation MNL 585	Excavation MNL 586
Context records	110	19	286	75	88
Drawn sections	0	6	40	18	28
Drawn plans	0	4	10	12	20
Colour slides	35	9	67	65	28
B&W negative and print sets				1	1

Table 1. Archive Quantification.



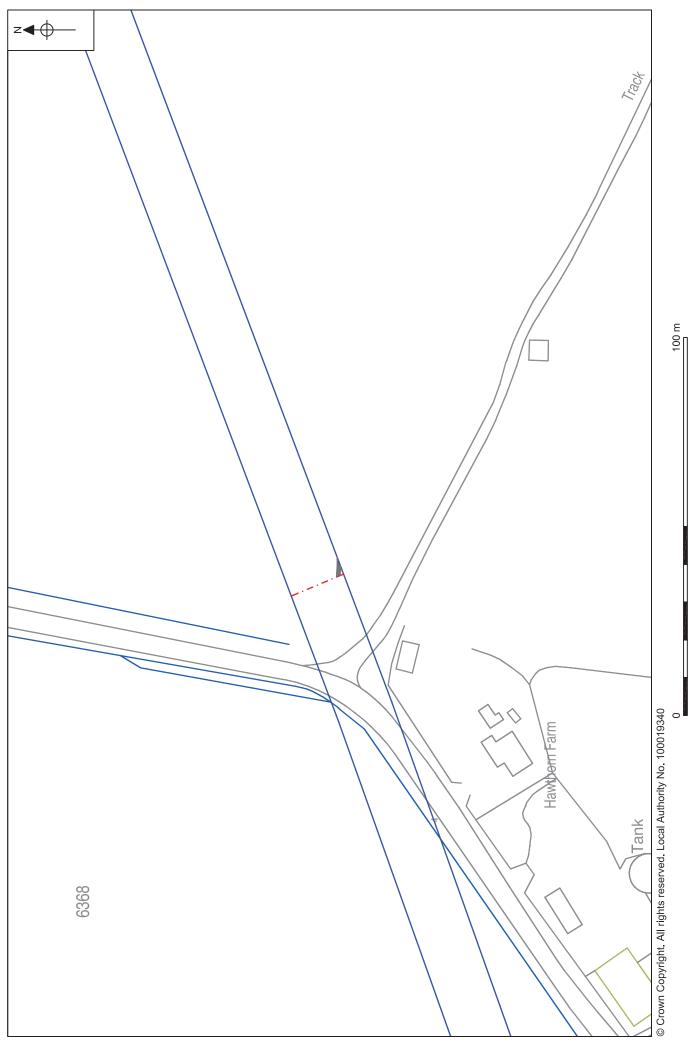


Fig. 52 SSMR FRK 092: Watching brief, Field 6 - Undated ditch. Scale 1:1,000.

3.0 Assessment

3.1 Introduction

The following section presents a detailed assessment of the stratigraphic, artefactual and environmental data recovered during this project. This assessment considers the significance of each dataset in relation to its potential to address the project's objectives and research aims. It also identifies aspects of the project that were of a wider significance or that can potentially address new research questions. *Research and Archaeology: A Framework for the Eastern Counties* (Glazebrook 1997; Brown and Glazebrook 2000) was consulted as part of this report in order to assess the significance of the results from each period.

3.2 Assessment of Stratigraphic data

3.2.1 Evaluation

The vast majority of the archaeological features found during the evaluation phase were investigated during the excavation phase and are, therefore, assessed below. The only exception to this was the field boundary found in SSMR FRK 092 Trench 31, to the east of the Lee Brook. As this feature was undated and found in isolation it does not warrant any further investigation.

3.2.2 Excavation

The sequence of deposits found to the north of the River Lark suggests a depositional history involving episodes of colluvial build-up and flooding. Further study of these deposits could help the sequence to be understood and possibly date it in such a way that it could be integrated with known regional environmental changes. Such sequences are seen as important potential research areas by Brown and Murphy (2000).

The recovery of a human mandible dating from the Bronze Age in the vicinity of the northern bank River Lark (SSMR MNL 586) possibly provides a date for the colluvial layer in to which it was embedded. This colluvial layer stratigraphically underlies some of the features found during the excavation and therefore provides a *terminus post quem* for these features. The features found in this excavated area were mostly field boundaries and further study of these may go some way to reconstructing the Romano-British and post-medieval layout of the area.

The excavated area at the eastern end of the pipeline route (SSMR MNL 585) uncovered the remains of Romano-British field boundaries and a part of a possible structure. The study of Romano-British rural settlement has been highlighted as an area of interest by Going (1997) and fen-edge locations, such as Mildenhall, may have been seen as a particularly important agricultural environment at this time.

The post-medieval ditch found in site SSMR MNL 586, in the vicinity of the northern bank of the River Lark, may also be of interest. This may be the remains of field boundaries or roadside ditch which may relate to earlier land divisions. Such division of land may be of interest in so far that it may shed light on how plots of the fen edge were 'doled' out (Williamson 2006).

3.3 Assessment of Artefactual, Faunal and Environmental Material

Each artefactual assemblage was examined by an appropriate specialist who assessed the significance of the material, both in relation to the site itself and in terms of its wider importance. The results of these assessments are summarised below and supported by Appendices 1 to 7.

3.3.1 Site CHER ECB 2549 (Appendix 1)

3.3.1.1 Worked and Burnt Flint

Four struck flints were recovered from this phase of the project. These have no potential for further analysis.

3.3.1.2 Romano-British Pottery

One sherd was found dating from this period during fieldwalking. This has no potential for further analysis.

3.3.1.3 Anglo-Saxon Pottery

Two sherds of Thetford Ware were found dating to this period during fieldwalking. These have no potential for further analysis.

3.3.1.4 Medieval Pottery

Nine sherds were found dating to this period during fieldwalking. These have no potential for further analysis.

3.3.1.5 Post-medieval Pottery

Fifteen sherds were found dating to this period during fieldwalking. These have no potential for further analysis.

3.3.1.6 Ceramic Building Material

Twenty fragments of ceramic building material dating to the medieval and postmedieval periods were found during fieldwalking. These have no potential for further analysis.

3.3.1.7 Small Finds

Twenty-five non-numismatic small finds were recovered on site from twenty-five contexts (Appendix 1.4). One cast object fragment was found and this is possibly part of an Early Saxon Cruciform-type brooch (SF6). This object appeared to be burnt and further identification may confirm whether or not it was from a cremation (K. Penn, pers. comm.).

The remaining objects, where it has been possible to ascertain, date from the medieval and post-medieval periods. Two date from the medieval period: a vessel foot fragment and part of a buckle. Post-medieval finds include part of a double-looped buckle, a thimble, two later machine-made thimbles and a lead bale.

Non-diagnostic metalwork includes two pieces of lead weighing 70g, parts of two cast fittings and the head of a stud or similar. Modern items comprise an iron nail.

3.3.1.8 Numismatic Evidence

Fourteen coins, four jettons and two tokens were recovered. Three are of silver, one is of lead and the remainder are copper alloy. Seven of these coins, one of which is silver, two jettons and the two tokens are post-medieval. There are two

medieval silver coins and two medieval jettons, although full identification is needed to be sure. The final two coins are Roman.

These coins and jettons should be fully identified and a report written in conjunction with and in reference to, contextual evidence and spatial disposition as recorded by GPS points.

3.3.2 Site CHER ECB 2598 (Appendix 2)

3.3.2.1 Worked and Burnt Flint

One struck flint was recovered from this phase of the project. This has no potential for further analysis.

3.3.2.2 Medieval Pottery

Two sherds were found dating to this period during test pitting. These have no potential for further analysis.

3.3.2.3 Post-medieval Pottery

Two sherds were found dating to this period during test pitting. These have no potential for further analysis.

3.3.2.4 Ceramic Building Material

Six fragments of ceramic building material dating to the medieval and postmedieval periods were found during test pitting. These have no potential for further analysis.

3.3.3 Site SSMR FRK 092 (Appendices 3–5)

3.3.3.1 Worked and Burnt Flint

Six struck flints and two burnt flints were recovered from the fieldwalking phase of the project. Nine burnt flints were found during the watching brief part of this project. These have no potential for further analysis.

3.3.3.2 Romano-British Pottery

Twelve sherds were found dating to this period during fieldwalking and twentyeight sherds during the evaluation phase. These have no potential for further analysis beyond that which has already been done.

3.3.3.3 Anglo-Saxon Pottery

Four sherds of pottery were found dating to this period during fieldwalking. These have no potential for further analysis.

3.3.3.4 Medieval Pottery

Twenty-two sherds were found dating to this period during fieldwalking. These have no potential for further analysis.

3.3.3.5 Post-medieval Pottery

Fourteen sherds were found dating to this period during fieldwalking and one sherd during the evaluation phase. These have no potential for further analysis.

3.3.3.6 Ceramic Building Material

Twenty-three fragments of ceramic building material dating to the Roman, medieval and post-medieval periods were found during fieldwalking and one

fragment dating to the Roman period during evaluation trenching. These have no potential for further analysis.

3.3.3.7 Small Finds

Thirty metal finds were recovered from eighteen collection units during the fieldwalking phase of this project. Of these, eighteen have been small found and include copper-alloy and lead artefacts; the remaining twelve objects are late post-medieval or modern (Appendix 3.5). Dated finds include two Roman brooches and a possible pot mend. Medieval material consists of two belt/strap mounts, a vessel fragment and part of a lead Ampulla. The post-medieval and modern material includes a mount, a looped fitting, part of a cast pellet bell and a finger ring.

Six artefacts are either too badly corroded or fragmentary to be positively identified; one part of a possible mount (SF44) would need to be cleaned for positive identification.

Thirty metal finds were recovered from the evaluation, 23 artefacts have been small found, 13 of which are coins or jettons (see below) with the remaining seven late post-medieval or undiagnostic items (Appendix 4.4). The objects are from Trenches 49, 61, 63, 67 and 68. All of the material is dated from the medieval to the post-medieval period.

Apart from a late post-medieval child's thimble and a lead weight (undated), all of the finds recovered are dress fittings and include four buckles or parts of buckles, three of which are medieval and one 18th century. A strap-end, a strap loop and a twisted wire fastener have medieval parallels elsewhere. Finally, an openwork hooked tag is early post-medieval. All of the finds recovered are fully catalogued and no further analysis is recommended.

3.3.3.8 Numismatic Evidence

This area produced the majority of the assemblage with forty coins and jettons. Of these, 19 were Roman and four were medieval. The remainder comprised of seven post-medieval coins, five post-medieval jettons and five modern coins. All of the above are copper-alloy, except for four medieval coins and two modern coins.

These coins should be fully identified and a report written with reference to contextual evidence and spatial disposition.

3.3.3.9 Faunal Remains

This assemblage appears to be derived from the primary and secondary butchering waste of a range of mammals. The butchered canid bones are of interest, which at least represent skinning, and possibly use for food. The canid (and other) bones should be measured and identified to species and the butchering of these bones compared to other sites.

3.3.3.10 Plant Macrofossils and Other Charred Remains

One sample was taken from a pit found in this project. This will be wet sieved in order that plant macrofossils may be recovered.

3.3.4 Site SSMR MNL 585 (Appendix 6)

3.3.4.1 Worked and Burnt Flint

One struck flint was recovered from this phase of the project. This had no potential for further analysis.

3.3.4.2 Romano-British Pottery

A total of 118 Romano-British pottery sherds was recovered from this excavation.

This is a moderately sized, but well recorded group of Late Romano-British pottery that has the potential to add to understanding of economy and trade in the Mildenhall to Isleham fen-basin area at the end of the Romano-British period.

The assemblage would benefit from a detailed catalogue, integration with the site contextual data and analysis of its distribution within the context of the site and local area. The pottery from pit fill (10) is of particular interest and worthy of publication in a local journal.

Several of the vessels are worthy of illustration, particularly those from pit fill (10), and this work should be budgeted for.

3.3.4.3 Ceramic Building Material

Seven fragments of ceramic building material dating to the Roman, medieval and post-medieval periods were found during this phase of the project. These have no potential for further analysis.

3.3.4.4 Fired Clay

Three pieces of fired clay were recovered from this site. These have no potential for further analysis.

3.3.4.5 Small Finds

Seven metal finds were small found. Roman material comprises a penannular brooch (SF110), part of an armlet (SF116) and a perforated catch plate from a brooch (SF111). Apart from the penannular brooch, all of the finds are unstratified. A mount is post-medieval. Part of a silver chain (SF112) is undated. The remaining items are too fragmentary to be further identified.

The finds are disappointingly few with all bar one unstratified. However, the presence of these finds is indicative of nearby Roman activity; the site is c.1km away from Mildenhall, famous for its Late Roman activity and with a further 43 findspots of Roman material located within 1km of the proposed route.

3.3.4.6 Numismatic Evidence

Eight late Roman coins and a fragment of a silver, possibly Roman, coin were recovered from the site. They all appear to be 4th century, including the silver fragment, although final identification is required.

These coins should be fully identified and a report written in conjunction with and reference to, contextual evidence and spatial disposition.

3.3.4.7 Faunal Remains

This is a very small assemblage that is similar to other sites of a Romano-British date and little more information can be obtained from full analysis. It is

recommended that the bone is identified fully, the catalogue updated and comparisons made with other similar sites.

3.3.4.8 Plant Macrofossils and Other Charred Remains

Five samples were taken from the fills of features and deposits found in this project. These will be wet sieved in order that plant macrofossils may be recovered.

3.3.5 Site SSMR MNL 586 (Appendix 7)

3.3.5.1 Worked and Burnt Flint

Thirty-one struck flints was recovered from this phase of the project. These had no potential for further analysis.

3.3.5.2 Romano-British Pottery

A total of 26 Romano-British pottery sherds was recovered from this excavation.

This is a moderately sized, but well recorded group of Late Romano-British pottery that has the potential to add to understanding of economy and trade in the Mildenhall to Isleham fen-basin area at the end of the Romano-British period.

The assemblage would benefit from a detailed catalogue, integration with the site contextual data and analysis of its distribution within the context of the site and local area. Several of the vessels are worthy of illustration and this work should be budgeted for.

3.3.5.3 Post-medieval Pottery

One sherd of late medieval and transitional pottery was found in a pit on this site. The sherd is thick-walled and glazed internally only, with a reduced core and external surface. The fabric contains soft ferrous fragments and some chalk; it may be a Cambridgeshire or Essex version of LMT.

3.3.5.4 Ceramic Building Material

Four fragments of ceramic building material dating to the Roman and postmedieval periods were found during this phase of the project. These have no potential for further analysis.

3.3.5.5 Small Finds

Four metal artefacts were found. Of these there is one iron item, the remainder being copper-alloy. Eleven other items were recovered, which are late post-medieval, modern or are undiagnostic (lead-working).

Only one object is Roman, part of a bow brooch (SF100). Part of a domed fourpetalled ?boss (SF108), a badly corroded iron object fragment (SF105) and a piece of copper-alloy metalworking debris complete the assemblage here, all undated.

3.3.5.6 Numismatic Evidence

The assemblage from this site is similar to that found at SSMR MNL585; only coins from the Roman period were found. Of the five coins recovered, three are 4th century, one is possibly 3rd–4th century and one is possibly 1st–2nd century. All are copper alloy.

These coins should be fully identified and a report written in conjunction with and reference to, contextual evidence and spatial disposition.

3.3.5.7 Faunal Remains

This assemblage is important, as there are relatively few bone assemblages associated with Bronze Age finds and the preservation is good for the period. The assemblage appears to be derived from primary butchering and food waste. The presence of a butchered deer demonstrates that at least some hunting took place.

It is recommended that the assemblage is more fully identified, measured, catalogued and measured, compared with other assemblages and the report updated.

3.3.5.8 Human Skeletal Remains

The remains comprised an incomplete mandible, consisting of the body only and lacking both rami, and three fragments of loose teeth. The mandible was in good condition, but was stained dark brown, comparable with a number of prehistoric human and animal bones which have been recovered from the Suffolk fen edge in recent years. The mandible has been radiocarbon dated to the Cal. BP 3450–3330 and Cal BP 3280.

This fragment may be another example of the increasing corpus of 'bog bodies' to be recovered from the Norfolk and Suffolk fenland, and the possibility that it was a ritual deposit should be considered. It may be of value to place this find in context by comparison with the anatomical evidence from other contemporary finds.

3.3.5.9 Insect Remains

It is proposed that six beetle assessments take place on the two monolith cores taken from this project. Beetle remains are a key indicator of environment.

3.3.5.10 Plant Macrofossils and Other Charred Remains

Six samples were taken from the fills of features and deposits found in this project. These will be wet sieved in order that plant macrofossils may be recovered.

3.3.5.11 Pollen

It is proposed that 43 pollen samples from the two pollen cores taken during this project are processed. These will aid with the reconstruction of the environment of the area.

3.4 Assessment of the Potential for Scientific Analysis

3.4.1 Radiocarbon dating.

Radiocarbon dating will take place on the top and bottom of the two pollen cores under assessment taken from site SSMR MNL 586. Therefore, a total of four radiocarbon dates is required. It is possible a further two samples may be need to be dated, one from the middle of each core, if excessive contamination makes dating from any of the original four samples too difficult. Difficulty has been experienced in the past in dating samples from this region, possibly due to hardwater contamination.

3.5 Assessment of the Overall Site Potential

The following section discusses, by period, the overall potential of evidence recovered during the various phases of this project.

3.5.1 Prehistoric

Excavated evidence of prehistoric activity is limited to the Bronze Age mandible and possibly associated animal bones and flints found near to the northern bank of the River Lark (SSMR MNL 586). Interesting parallels may be drawn with similar finds adjacent to a palaeochannel of the River Snail (Gdaniec *et al.* 2007). Further examination of environmental data, such as soil and pollen samples, may also yield valuable information, including that relating to any environmental impact caused by human activity during this period.

3.5.2 Romano-British

It is undoubtedly to this period to which the most interesting features and finds from this project belong. Finds of Romano-British artefacts were made during fieldwalking and subsequent excavations of the areas to the north of the River Lark (SSMR FRK 092 and MNL586) and at the eastern end of the pipeline (SSMR FRK 092 and MNL 585). The remains of structures, pits and field boundaries dating from this period were uncovered. Further examination of the artefacts themselves, particularly the coins and the pottery, may add to the existing corpus of knowledge about Romano-British activity in the Mildenhall and West Row area.

Examination of the Roman field boundaries in conjunction with existing knowledge of Romano-British field layouts in the area may also be of interest. This will help to integrate the site into the context of its landscape. It will also be informative to examine whether or not the field boundaries found on these sites can be integrated with the various aerial photographs of the area.

Further examination of the Romano-British pits and structural features may yield information on settlement during this period. Analysed in conjunction with data gained from associated artefactual evidence, such as the pottery, an idea may be gained as to whether or not these features represent the remains of substantial and long-lasting settlement. Analysis of soil samples associated with these features may yield important information as to farming practices and the local environment at this time.

The data gathered during this project have the potential to be integrated with, and significantly add to, the rich Romano-British history of this area of the fen edge.

3.5.3 Medieval and Post-medieval

The post-medieval ditch, which is probably a field boundary, found on site SSMR MNL 586 may be informative as to the medieval and post-medieval fieldscape. Further examination of the cartographic evidence and a site visit in order to study the local topography and the ages of existing field boundaries will facilitate this.

4.0 Updated Project Design

4.1 Introduction

This Updated Project Design is based on the results of the assessment and details the general aims of the post-excavation programme and its Revised Research Objectives. It also presents a publication proposal that details how and where the project's results should be published. This is followed by a detailed breakdown of the individual tasks that must be undertaken to bring this project to completion.

4.2 General Aims

The aims of the post-excavation programme can be summarised as follows:

- To undertake further analysis of specific data sets where required to meet either the initial aims of the project or the revised research objectives that have arisen as a result of the assessment.
- To produce an interpretative synthesis drawing together all available data sets. This synthesis will then be disseminated via appropriate publications.
- To create an ordered and indexed research archive for deposition with an appropriate curatorial institution.

4.3 Revised Research Objectives

Following the assessment of the evidence recovered during this project it is now possible to set out a series of more specific, detailed research objectives. These focus on areas where further analysis is required in order to meet the established potential of the evidence, and are as follows:

- To refine the depositional sequence of the soils in the vicinity of the River Lark and integrate this with the archaeological and environmental evidence.
- To reconstruct environment of the vicinity of the River Lark using pollen and beetle analysis.
- To place the human mandible and other human skeletal remains found near to the River Lark within their wider archaeological context.
- To place the Romano-British ditches within the wider context of known contemporary field systems.
- To place the evidence for Romano-British settlement within the wider context of known contemporary settlement
- To further study the Romano-British pottery and numismatic assemblages.

4.4 Publication Proposal

It is proposed that the results relating to the prehistoric evidence from the area in the vicinity of the River Lark are published as a short note in the *Proceedings of the Prehistoric Society*.

It is proposed that the Romano-British findings from the part of the pipeline route in Suffolk are published in a synthesised form in the *Proceedings of the Suffolk Institute of Archaeology and History*.

4.5 Contextual and Stratigraphic Analysis

The discussion of the archaeological features found during this project will be split into those that relate to prehistoric activity and those that relate to Romano-British activity. Those results relating to the former are associated with the excavation to the immediate north of the River Lark (SSMR MNL 586). The latter are from the northern part of SSMR MNL 586 and the excavated area at the eastern end of the pipeline (SSMR MNL 585). Features and deposits will be discussed using the context numbers assigned to them.

4.6 Artefactual Analysis

4.6.1 Worked and Burnt Flint

No further analysis of this assemblage is required. Brief mention of these flints will be made in the published report. A catalogue of the material will be prepared for inclusion within the archive.

4.6.2 Romano-British Pottery

The assemblages from sites SSMR MNL 585 and MNL 586 would benefit from a detailed catalogue, integration with the site contextual data and analysis of its distribution within the context of the site and local area. The pottery found in a quarry pit on site SSMR MNL 585 is of particular interest and worthy of publication in a local journal. Several of the vessels are worthy of illustration and this work should be budgeted for.

4.6.3 Post-Roman Pottery

No further analysis of this assemblage is required. Brief mention of these sherds will be made in the published report. A catalogue of the material will be prepared for inclusion within the archive.

4.6.4 Ceramic Building Material

No further analysis of this assemblage is required. Brief mention of these fragments will be made in the published report. A catalogue of the material will be prepared for inclusion within the archive.

4.6.5 Fired Clay

No further analysis of this assemblage is required. Brief mention of these fragments will be made in the published report. A catalogue of the material will be prepared for inclusion within the archive.

4.6.6 Small Finds

No further work is necessary on the rather disparate, largely post-medieval assemblage from CHER ECB 2549. The two Roman brooches, the lead ampulla and an unidentified ?mount (SF 44) from fieldwalking SSMR FRK 092 should be fully catalogued by the relevant external specialists, the remaining finds from this phase of this site and the evaluation phase have no potential for further analysis.

The silver chain from SSMR MNL 585 (SF112) and part of a catch plate from a brooch (SF111) should be seen by a specialist for positive identification. Once all the material from this site has been fully identified, catalogue entries for the Roman material should be finalised and a short summary included in the relevant section of the report.

Given the paucity of finds from SSMR MNL 586, together with the fact that they are all from unstratified contexts, they have no potential for further analysis.

4.6.7 Numismatic Evidence

Half of the assemblage is Roman, with 4th century coins dominating. The postmedieval group is mainly 17th century and the medieval coins are 13th–14th century. The modern coins are mostly from the first half of the 20th century.

These coins should be fully identified and a report written in conjunction with and reference to, contextual evidence and spatial disposition as recorded by GPS points. Special attention should be given to the Roman assemblage and any evidence for similar groupings or spreads in the vicinity should be taken into account. The modern group requires minimal work. The medieval and post-medieval coins and jettons may well be casual losses, but comparison with any surrounding groups or spreads may be of value.

A digital scan of the lead token (SF37) should be included in the grey literature for future reference.

4.7 Zoological and Botanical Analysis

This section presents in detail the nature of further work or analysis required in relation to the zoological and botanical material. Also included are proposals on how this evidence will be presented in the final publication.

4.7.1 Faunal Remains

Faunal remains will be measured and compared to those found on other sites in the area. The catalogue will be updated and will be included in the final report. Beetle analysis will be performed on samples from the monoliths.

4.7.2 Human Skeletal Remains

The mandible has been fully recorded, and this report would suffice for inclusion in any publication. However, as noted above, further comparison would be possible with other similar finds. This additional work would take no more than half a day to complete.

4.7.3 Plant Macrofossils

The soil samples taken from the sites will be wet sieved and the resulting flots will be analysed in order that plant macrofossils be recovered. A report on the results from this will be included in the final report.

4.7.4 Pollen

Pollen samples will be examined in order that the environment of the area of the River Lark will be reconstructed. The results from this work will be included in the final report.

4.8 Scientific Analysis

4.8.1 Radiocarbon dating

Radiocarbon analysis will take place on the monoliths taken for pollen and beetle analysis in order to date these monoliths.

4.9 Resource and Programming

4.9.1 Staff

The project team will consist of NAU Archaeology staff and External Specialists.

Staff	Abbrev.	Role
Stephen Morgan	SM	Assistant Project Officer, NAU Archaeology
Andy Hutcheson	AH	Archaeology Manager, NAU Archaeology
Andy Barnett	AB	Numismatic Specialist, NAU Archaeology
Sarah Bates	SB	Finds Specialist, NAU Archaeology
Julia Huddle	JH	Finds Specialist, NAU Archaeology
Francesca Boghi	FB	Human Remain Specialist, NAU Archaeology
Sarah Percival	SP	Finds Specialist, NAU Archaeology
Julie Curl	JC	Faunal Remains Specialist, NAU Archaeology
Fran Green	FG	Environmental Specialist, NAU Archaeology
David Dobson	DD	Illustrator, NAU Archaeology
Richard Hoggett	RH	Editor, NAU Archaeology
External bodies and	ES	External Specialist
individuals	EE	External editor

All Costs are based on tasks being completed in financial year 2008–2009.

4.9.2 Scientific Dating and Botanical and Insect Analysis Task List

Task	Task Description	Duration (days)	Cost (£)	Staff
1	Carbon 14 dating, pollen and beetle sample analysis and report		9719 (excl. VAT)	ES
2	Analysis of soil samples for the retrieval of plant macrofossils		274.5	ES

4.9.3 Stratigraphic Analysis Timetable

Task	Task Description	Duration (days)	Cost (£)	Staff
3	Analysis of site data	1	164	SM
4	Update of site database	0.5	82	SM

4.9.4 Artefactual Analysis Task List

Task	Task Description	Duration (days)	Cost (£)	Staff
5	Further analysis of Romano-British pottery assemblage	2 + illustration		ES
6	Further analysis of the numismatic evidence	3.5	424	AB
7	Further analysis and cataloguing of small finds	4		ES/JH

Task	Task Description	Duration (days)	Cost (£)	Staff
8	Cataloguing of faunal remains	2.5	434	JC
9	Comparison of human skeletal remains with similar finds from other sites	0.5		ES

4.9.5 Zoological and Human Skeletal Remains Analysis Task List

4.9.6 Client Report Task List

Task	Task Description	Duration (days)	Cost (£)	Staff	
10	Desk-based Assessment	1	164	JA/ SM	
11	Write introduction and background sections	3	491	SM	
12	Descriptive text	4	655	SM	
13	Edit specialist reports and tables	3	491	SM	
14	General research	3	491	SM	
15	Write discussion	3	491	SM	
16	Check and amend text	2	327	SM	
17	Production of figures	5		DD/SM	
18	Final edit	1		RH	
19	Amend text	2	327	SM	

4.9.7 Publication Report Task List: Prehistoric Material

Task	Task Description	Duration (days)	Cost (£)	Staff
20	Main Text	1	164	SM
21	Check and amend text	0.5	82	SM
22	Production of figures	1	164	DD
23	In-house check/edit	1	164	RH
24	Edit	1		External
25	Amend text following reader comments	1	164	SM
26	Final edit	1	164	SM

4.9.8 Publication Report Task List: Romano-British Material

Task	Task Description	Duration (days)	Cost (£)	Staff
27	Main Text	4	655	SM
28	Check and amend text	0.5	82	SM
29	Production of figures	2	327	DD
30	In-house check/edit	1	164	RH
31	Writing up of pottery assemblage	1	180	EE
32	Edit	1		EE
33	Amend text following reader comments	1	164	SM
34	Final edit	1	164	SM

4.9.9 Archiving Task List

Task	Task Description	Duration (days)	Cost (£)	Staff
35	Compilation of catalogues and draft reports for inclusion within archive	2	327	SM
36	Cross-checking and final preparation of archive	1	164	SM

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The Air Photographic Assessment was carried out by S.J. Malone of Archaeological Project Services.

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The report was edited by Richard Hoggett.

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Appendix 1.0: Finds from CHER ECB 2549

Appendix 1.1: Worked and Burnt Flint

By Sarah Bates

Four struck flints were recovered from the site.

There is a small fragment which may have been tested as a core and which has slight retouch to a scraper-like edge from findspot (07). There are also two other irregular scraper type tools; one, from findspot (16), is a very thick irregular flake with retouch of one steep edge. The other, from findspot (45), has been formed by the retouch of the sloping distal edge of a larger hard hammer struck flake. Another small utilised flake, from findspot (68), has slight retouch which forms a small protruding point or spur.

The pieces represent activity in the vicinity of the site during the prehistoric period. They are not closely datable but their irregular nature suggests that they are more likely to be of later Neolithic, or later, date.

Context	Cat.	Туре	Quantity
7	core	Core/tool	1
16	scpf	Scraper	1
45	scpf	Scraper	1
68	pecr	Spurred piece	1

Table 2. Summary of flint from CHER ECB 2549.

Appendix 1.2: Pottery

By Sue Anderson

A total of 27 sherds weighing 307g was collected during fieldwalking near Isleham. Table 3 provides a quantification by fabric.

Description	Fabric	Code	No	Wt/g	eve
Roman redware	RBRW	1.40	1	3	0.08
Thetford-type ware	THET	2.50	2	3	
Medieval coarsewares	MCW	3.20	2	9	
Mildenhall-type coarseware	MILW	3.62	1	5	
Late medieval and transitional	LMT	5.10	6	104	
Glazed red earthenware	GRE	6.12	10	131	0.11
West Norfolk bichrome	WNBC	6.14	1	7	0.12
Cologne/Frechen stoneware	GSW4	7.14	2	29	0.06
Westerwald stoneware	GSW5	7.15	1	5	
English stoneware	ESW	8.20	1	11	
Total			27	307	0.37

Table 3. Pottery from CHER ECB 2549 quantification by fabric.

The assemblage includes sherds of probable Roman, Late Saxon, medieval, late medieval and post-medieval date. The sherds were generally very abraded and some were difficult to identify with any certainty as a result. Identifiable vessels included a Roman redware jar, a medieval coarseware bowl with an Essex-style rim (L.13th–14th c.), a West Norfolk bichrome jug, a GRE pancheon, a Frechen stoneware mug and an English white-dipped stoneware tankard.

Context	Fabric	Form	Rim	No	Wt/kg	Spotdate
03	LMT	jar	THEV	1	0.015	16th c.?
03	LMT			1	0.031	15th–L.16th c.
04	GSW4	mug		1	0.002	16th–17th c.
08	GSW5			1	0.005	E.17th–19th c.

Context	Fabric	Form	Rim	No	Wt/kg	Spotdate
10	GRE	pancheon	THEV	1	0.050	16th–18th c.
13	MCW			1	0.002	L.12th–14th c.
14	GRE			1	0.009	16th–18th c.
17	THET			1	0.001	10th–11th c.
19	GRE	bowl?	bead	1	0.009	16th–18th c.
21	ESW	tankard		1	0.011	17th–19th c.
27	WNBC	jug	bead	1	0.007	17th c.
30	MILW			1	0.005	12th–14th c.
31	LMT			1	0.009	15th–L.16th c.
36	RBRW	jar?	rolled	1	0.003	Rom
37	GSW4			1	0.027	16th–17th c.
37	LMT			1	0.010	15th–L.16th c.
43	MCW	bowl	flat-topped everted	1	0.007	L.13th-14th c.
44	GRE			1	0.003	16th–18th c.
47	GRE			1	0.015	16th–18th c.
49	GRE			1	0.013	16th–18th c.
50	THET			1	0.002	10th–11th c.
50	GRE			1	0.014	16th–18th c.
56	GRE			1	0.001	16th–18th c.
57	LMT			1	0.014	15th–L.16th c.
59	GRE			1	0.011	16th–18th c.
75	GRE			1	0.006	16th–18th c.
75	LMT			1	0.025	15th–L.16th c.

Table 4. Spotdate list of pottery from CHER ECB 2549.

Appendix 1.3: Ceramic Building Material By Sue Anderson

Twenty fragments of CBM (311g) were recovered. Table 5 shows the quantities by fabric and form.

Fabric	Description	RT	RT?	PAN	EB?	LB
est	Estuarine clay				1	
fs	Fine sandy with few other inclusions			1		
fsc	Fine sandy, dense matrix with moderate to common calcareous inclusions	9	1			
ms	Medium sandy with few other inclusions	2				
msc	Medium sandy with moderate calcareous inclusions	3				
wfe	White-firing clay with coarse ferrous ?slag inclusions					1
wsg?	White-firing clay with red grog inclusions	2				

Table 5. CBM fabric and form quantities (fragment count) from CHER ECB2549. Forms: RT = roof tile; PAN = pantile; EB = early brick; LB = late brick.

Like the pottery, much of this material consisted of small abraded sherds which were of uncertain identification. Most fragments were calcareous-tempered roof tiles. The reduced cores of some pointed to a medieval date, but other fragments could be late or post-medieval. The two fragments of 'wsg' fabric are similar to estuarine types, but in this area similar fabrics were used in the post-medieval period and it seems likely that these are of later date.

Context	Fabric	Form	No	Wt/g	Abr	Comments	Date
10	msc	RT	1	5	+		Med
11	ms	RT	1	10			Med
14	wsg?	RT	1	15			Post-med?
20	fsc	RT	1	17	+	coarse calc material leached out	Late med?
22	fsc	RT	1	5	+	finer calc	Late med?
38	fsc	RT	1	22		finer calc	Late med?

Context	Fabric	Form	No	Wt/g	Abr	Comments	Date
40	fsc	RT	1	4		v dense	Med?
50	fsc	RT	1	23			Late med?
51	fsc	RT	1	11	+		Late med?
54	wsg?	RT	1	4			Post-med?
55	fsc	RT?	1	2	++		Late med?
55	fs	PAN	1	13	+	could be Rom, but v dense	Post-med
57	fsc	RT	1	15			Med/late med
60	est	EB?	1	3			Med
60	wfe	LB	1	108		66mm thick	18/19
62	fsc	RT	1	11			Med
63	ms	RT	1	4	++		Med
65	fsc	RT	1	3			Med
72	msc	RT	1	19			Med
75	msc	RT	1	17			Med

Table 6. Catalogue of CBM from CHER ECB 2549.

Appendix 1.4: Small Finds By Julia Huddle

SF	Ctxt	Material	Object	Description	Object date
1	1	Copper alloy	Artefact	Part of a cast ?vessel foot from tripod or similar	Medieval +
2	2	Copper alloy	Mount	with domed sexfoil head; central hole for missing rivet.	Late medieval or early post- medieval
5	6	Copper alloy	Artefact	Fragment from cast, originally spherical, object. Perhaps part of a rumbler bell.	?Post-medieval
6	7	Copper alloy	Artefact	Possibly part of an Early Saxon brooch (cruciform type); appears to be burnt which might suggest from cremation. Pers. Com Ken Penn	
7	8	Copper alloy	Buckle	One half of a cast double-looped buckle frame with rosette on outer edge of frame and lobes at junctions of bar and frame; pin.	Early post- medieval
8	9	Copper alloy	Thimble	Machine-punched diamond-shaped dots on sides and top; plain, turned-over rim.	Post-medieval
9	12	Copper alloy	Thimble	Top missing, with evenly-punched tiny circular dots around top half; ornate border. Similar to group illustrated in Norwich Households thought o be made at Nuremberg during the 16th century (Margeson 1993, 187)	16th century
10	15	Lead	Bale seal	Stamped disc, one face slightly larger circumference, smaller face stamped with crowned initials.	Late post- medieval
12	18	Copper alloy	Artefact	Cut sheet fragment, folded. Part of a fitting.	Undated
13	19	Copper alloy	Fitting	Hinged oval ?dress fitting with sprung arm on reverse and missing front plate. Part of a cufflink or similar. Gilded	Late post- medieval
15	22	glass	Vessel	Moulded cut glass vessel fragment, lilac-tinted, comprising oval base ?part of a dressing table set	Late post- medieval
17	24	Copper alloy	Girdle buckle	Square double-looped frame with moulded ends; iron corrosion around central bar from missing pin (Read 1995, 141).	c.1628–1700
23	35	Copper alloy	Thimble	With evenly-punched circular dots around top and sides, lower half stamped with four plain bands. Distorted	Post-medieval
24	39	Copper alloy	Rumbler bell	Cast, incomplete rumbler bell	Post-medieval
27	43	Copper alloy	Mount	Asymmetrical cast decorative lozenge-shaped mount; front decorated with circular dots. Tip of shank missing.	Post-medieval
30	54	Copper alloy	Ferrule	Made from folded conical sheet, open at both ends and with two small attachment holes at top of broken edge.	Post-medieval

SF	Ctxt	Material	Object	Description	Object date
34	69	Copper alloy	Pendant	Gilded lozenge-shaped pendant with stamped (worn) decorative floral design on front and suspension hole at top corner.	Post-medieval
36	70	Copper alloy	Buckle	Incomplete, subcircular frame (13 x 16mm); pin notch with integral bevelled plate; pin missing. (Cf. those in Dress Accessories (Egan 1991, 106–9, figs 68, 70 and 71)).	Medieval
38	34	Copper alloy	Ferrule or large lace tag	Edges folded inwards to grip	Undated

Table 7. Catalogue of small finds (non-numismatic) from CHER ECB 2549.

Ctxt	Material	Object	Wt (g)	Description	Object date
35	Lead	Waste	21		Undiagnostic
28	Lead	Formless fragment	49	?waste	Undiagnostic
17	Iron	Nail		corroded and bent shank	Undiagnostic
53	Copper alloy	Coin		Victorian penny	19th century
53	Copper alloy	Fitting		incomplete with iron wire through attachment hole at top	Late post- medieval
64	Copper alloy	Rivet		/stud head	Undiagnostic
73	Copper alloy	Coin		Elizabeth II penny	1959
45	Copper alloy	Cast fitting		incomplete shank with iron and copper alloy rivets and is broken at expanded end. ?mechanical fitting.	Modern

Table 8. Catalogue of non-small found metalwork from CHER ECB 2549.

Appendix 1.5: Numismatic Evidence By Andy Barnett

Table 9 is a catalogue of numismatic finds from CHER ECB 2549.

SF	Ctxt	Denomination	Metal	State
3	4	Halfpenny	Cu Alloy	Modern
4	5	Jetton/Token?	Cu Alloy	Post Medieval
11	17	Halfpenny?	Cu Alloy	Post Medieval
14	20	Penny	Cu Alloy	Modern
16	23	Farthing	Cu Alloy	Post Medieval
18	25	Rose Farthing	Cu Alloy	Post Medieval
19	26	Traders Token	Cu Alloy	Post Medieval
20	29	Button	Cu Alloy	Post Medieval
21	32	?Halfpenny	Cu Alloy	Post Medieval
22	33	Jetton Rose/Orb	Cu Alloy	Post Medieval
25	41	Royal Farthing	Cu Alloy	Post Medieval
26	42	Penny Voided Long Cross	Silver	Medieval
28	48	Jetton	Cu Alloy	Medieval?
29	52	AE3	Cu Alloy	Rome?
31	58	Halfpenny	Silver	Medieval
32	61	Jetton	Cu Alloy	Medieval
33	66	AE2 Radiate	Cu Alloy	Rome
35	70	Sixpence?	Silver	Post Medieval
37	74	Token	Lead	Post Medieval
No SF	53	Halfpenny	Cu Alloy	Post Medieval
No SF	73	Penny	Cu Alloy	Modern

Table 9. Catalogue of numismatic finds from CHER ECB 2549.

Appendix 2.0: Finds from CHER ECB 2598

Appendix 2.1: Worked and Burnt Flint

By Sarah Bates

A single piece of struck flint was recovered from the site. It is the proximal part of a flake, probably quite small. Its surviving right edge is retouched and the broken edge has a small notch and some possible slight retouch – although this edge damage might be accidental.

It is evidence of activity in the vicinity of the site during the prehistoric period and probably dates to the later Neolithic period or Bronze Age.

Context	Cat.	Туре	Quantity
9	retf	Retouched flake	1

Table 10. Summary of flint from CHER ECB2598.

Appendix 2.2: Pottery

By Sue Anderson

Four sherds of pottery weighing 20g were collected from four contexts. Table 11 shows the quantification by context.

Ctxt	Fabric	No.	Wt/g	Description	Spotdate
01/T5	MCW	1	4	oxidised	13th–14th c
01/T8	LMT?	1	10	base, fairly coarse, burnt, int clear glaze	15th/16th c
01/T18	GRE	1	1	v abraded, int clear glaze, ext combing?	16th c?
01/T30	GRE	1	5	base, v abraded	16th–18th c.

Table 11. Pottery catalogue from CHER ECB 2598. Key: MCW – medieval coarseware; LMT – late medieval and transitional; GRE – glazed red earthenware.

Four sherds in fine to medium sandy oxidised fabrics were collected. All were abraded, and the three glazed sherds had lost most of their glazing. The medieval coarseware sherd is very similar to the local fenland wares, although it contains fewer calcareous inclusions and does not have the distinctive black core commonly seen in Mildenhall-type ware. It is possible that it had an external glaze. The sherd of possible LMT consisted of a fragment of saggy base showing signs of external wear and internal clear glaze. It is probably a local late medieval type, rather than the typical LMT produced in north-east Suffolk. The two sherds of GRE were typical of this fabric group, but heavily abraded and undiagnostic.

Appendix 2.3: Ceramic Building Material

By Sue Anderson

Six fragments of CBM (49g) were collected from five test pits. Table 12 provides a catalogue of the material.

Ctxt	Fabric	Form	No.	Wt/g	Description	Spotdate
01/T5	est	В	1	7	poss a p-med type in estuarine clay	Late med/post-med
01/T8	msg	В	1	8	abraded, white & red clays, poorly mixed	Post-med?
01/T14	ms	RT?	1	3	abraded	Post-med
01/T18	CS	RT	1	8	v fine dense matrix	Med?
	ms	RT	1	8	abraded	Post-med
01/T22	fsfe	PAN?	1	15	abraded	Post-med

Table 12. CBM catalogue from CHER ECB 2598.

The assemblage consisted of two fragments of brick (B), three pieces of plain roof tile (RT) and one fragment of a possible pantile (PAN) in red-firing fabrics with grog (msg), ferrous fragments (fsfe) or few inclusions other than medium or coarse sand (ms, cs). One fragment appeared to be in an estuarine clay (est) fabric, which would normally indicate a medieval date, but this fabric appears to

have continued in use into the post-medieval period in the Fens. One fragment of a coarse sandy roof tile is similar to medieval roof tiles found in Norwich, but all other fragments in this group are likely to be post-medieval.

Appendix 3.0: Finds from SSMR FRK 092 (Fieldwalking)

Appendix 3.1: Worked and Burnt Flint

By Sarah Bates

Six pieces of struck flint were recovered from this part of the pipeline. Three fragments of burnt flint were also found and have been recorded and then discarded. The flint is listed by context in Table 13.

The flint includes an irregular fragment with abraded cortex with signs that a few flakes have been struck from one edge from findspot (64). Although the piece is quite battered it has two or three flakes from one side and may have been tested for its suitability as a core. There is also part of a thick blade-like flake, from findspot (43), and two small flakes, from findspots (64) and (119), the former heavily patinated.

There are two retouched pieces. One is a small flake with one side retouched to a slight spur from findspot (46). The other is somewhat larger and has some blade-like scars on its dorsal face. There is a short length of probable retouch on its right side.

The flint was all recovered during fieldwalking. It represents activity in the vicinity of the pipeline during the prehistoric period and is most likely to date to the Neolithic period or Bronze Age.

Context	Туре	Quantity
10	burnt fragment	1
35	burnt fragment	1
43	blade-like flake	1
46	spurred piece	1
64	tested piece	1
64	flake	1
92	retouched flake	1
109	burnt fragment	1
119	flake	1

Table 13. Summary of flint from SSMR FRK 092 (fieldwalking).

Appendix 3.2: Romano-British Pottery

By Sue Anderson

A total of 22 sherds of pottery weighing 267g were collected from 18 contexts. Table 14 shows the quantification by fabric; a summary catalogue by context is included as Table 14.

Description	Fabric	Code	No	Wt/g	eve
Roman greyware	RBGW	1.10	5	36	
Roman grey micaceous	RBGM	1.20	9	57	0.22
Roman black surfaced ware	RBSW	1.22	1	2	
Horningsea greyware	HOG	1.31	2	111	0.05
Roman oxidised wares	RBRW	1.40	1	12	
Roman whitewares	RBWW	1.80	2	29	
Roman colour coat	RBCC	1.81	2	20	0.10
Total Roman			22	267	0.37

Table 14. Roman Pottery quantification by fabric from SSMR FRK 092 (fieldwalking).

Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). Recording uses a system of letters for fabric codes together with number codes for ease of sorting in database format. The results were input directly onto an Access 2003 database.

The assemblage consisted of greywares, redwares, whitewares and colour-coated wares. Identifiable vessels included three jars, two bowls, two mortaria and a large Horningsea greyware storage vessel.

Context	Fabric	Form	Rim	No	Wt/kg
002	RBGM			1	0.001
016	RBWW			1	0.015
019	RBCC			1	0.001
022	RBGW			1	0.003
026	RBGM	bowl	upright plain	1	0.014
029	RBGM	jar	cavetto	1	0.008
037	RBGM			1	0.004
058	RBGM			1	0.008
085	RBGM			1	0.005
085	RBGW			1	0.003
087	RBGM	jar	everted	1	0.014
091	RBSW			1	0.002
091	RBGW			1	0.018
092	HOG			1	0.015
093	RBCC	jar	cavetto	1	0.019
094	RBGM			1	0.001
096	RBRW	mortarium	flanged	1	0.012
096	RBWW	mortarium	flanged	1	0.014
098	RBGW			1	0.002
098	HOG	large storage jar	everted	1	0.096
104	RBGM			1	0.002
105	RBGW	bowl	bead	1	0.010

Table 15. Catalogue of Romano-British Pottery from SSMR FRK 092 (fieldwalking).

Appendix 3.3: Post-Romano-British Pottery

By Sue Anderson

A total of 42 sherds of pottery weighing 308g were collected from 39 contexts. Table 16 shows the quantification by fabric; a summary catalogue by context is included as Table 17.

Description	Fabric	Code	No	Wt/g	eve
?Early Saxon medium sandy	ESMS	2.22	1	4	
Total ?Early Saxon			1	4	
Thetford-type ware	THET	2.50	3	27	
Early medieval ware gritty	EMWG	3.11	3	7	
Medieval coarsewares	MCW	3.20	8	54	0.06
Mildenhall-type coarseware	MILW	3.62	5	32	0.10
Grimston-type ware	GRIM	4.10	1	20	
Mildenhall glazed ware	MILG	4.35	2	7	
Total Late Saxon to medieval			22	147	0.16
Late Medieval and Transitional	LMT	5.10	3	42	
Glazed Red Earthenware	GRE	6.12	8	63	
Speckle-glazed ware	SPEC	6.15	1	3	
Post-medieval slipwares	PMSW	6.40	1	13	
Late post-medieval earthenwares	LPME	8.01	3	13	0.04
English stoneware Nottingham-type	ESWN	8.22	1	6	
Post-medieval to modern			17	140	0.04
Unidentified	UNID	0.001	2	17	
Total			42	308	0.20

Table 16. Pottery quantification by fabric from SSMR FRK 092 (fieldwalking).

Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). A full quantification by fabric, context and feature is available in the archive. All fabric codes were assigned from the Suffolk post-Roman fabric series, which includes Norfolk, Essex, Cambridgeshire and Midlands fabrics, as well as imported wares. Imports were identified from Jennings (1981). Form terminology follows MPRG (1998). Recording uses a system of letters for fabric codes together with number codes for ease of sorting in database format. The results were input directly onto an Access 2003 database.

Early Saxon

One everted rimsherd was identified as possibly Early Saxon, although it was in a medium sandy fabric with few other inclusions and could also be Iron Age.

Late Saxon

Three sherds of Thetford-type ware were recovered, consisting of one body sherd and two flat bases.

Early medieval

All three early medieval ware sherds were in the fairly coarse sandy fabric typical of Essex and parts of Suffolk.

Medieval

Sixteen sherds were of high medieval date. They included unprovenanced coarsewares (some of which were similar to those normally recovered in the east of the county and to the north of Bury St Edmunds), Mildenhall-type coarse and glazed wares (similar to Ely-type ware and probably a Fenland tradition), and a Grimston-type jug handle. Identifiable coarseware vessels included one jug and one jar.

Post-medieval and modern

Three sherds of late medieval and transitional ware consisted of a body, a base and a tripod base fragment.

The majority of post-medieval wares consisted of abraded body and base sherds of glazed red earthenware, and there was one sherd of speckle-glazed ware. One heavily abraded sherd of a post-medieval slipware of uncertain provenance was also identified.

Modern pottery included three sherds of plant pot and a fragment of Nottingham-type stoneware.

Unidentified

Two sherds were unidentified. One was a greyware sherd which appeared to be glazed but which may simply be vitrified due to over firing or burning. The other was a bowl rim which is probably post-medieval but could be Roman.

Discussion

In the pre-modern groups, all wares were sourced from local or regional production sites in Norfolk, Suffolk and Cambridgeshire. Nothing unusual was identified, but the assemblage is too small and too widely dispersed in both time and space to contribute further information.

Context	Fabric	Form	Rim	No	Wt/kg	Spot date
015	ESMS	jar	everted	1	0.004	(IA)/E.Sax
020	THET			1	0.014	10th–11th c.
076	THET			1	0.007	10th–11th c.
114	THET			1	0.006	10th–11th c.
072	EMWG			1	0.002	11th–12th c.
108	EMWG			1	0.002	11th–12th c.
110	EMWG			1	0.003	11th–12th c.
027	MILW			2	0.008	12th–14th c.
034	MILW	jug	flat-topped bead	1	0.010	12th–14th c.
055	MILW			1	0.003	12th–14th c.

Context	Fabric	Form	Rim	No	Wt/kg	Spot date
070	MILW			1	0.011	12th–14th c.
036	MILG			1	0.002	13th–14th c.
109	MILG			1	0.005	13th–14th c.
047	LMT			1	0.017	15th–L.16th c.
078	LMT			1	0.023	15th–L.16th c.
002	MCW			2	0.007	L.12th-14th c.
011	GRE			1	0.004	16th–18th c.
012	ESWN			1	0.006	L.17th–L.18th c.
018	GRE			1	0.010	16th–18th c.
018	GRE			1	0.004	16th–18th c.
018	PMSW			1	0.013	17th–19th c.
020	UNID	bowl	bead	1	0.013	Rom/Post-med
021	GRE			2	0.012	16th–18th c.
024	MCW			1	0.003	L.12th-14th c.
028	GRE			1	0.007	16th–18th c.
030	SPEC			1	0.003	L.17th–18th c.
031	GRE			1	0.013	16th–18th c.
031	GRE			1	0.013	16th–18th c.
032	LPME	plant pot?		1	0.004	18th–20th c.
043	GRIM			1	0.020	L.12th-14th c.
056	MCW			1	0.009	L.12th-14th c.
061	MCW			1	0.010	L.12th-14th c.
068	LPME	plant pot		1	0.001	18th–20th c.
075	MCW	jar	bead	1	0.019	L.12th–14th c.
100	MCW			1	0.001	L.12th–14th c.
102	LMT			1	0.002	15th–L.16th c.
107	MCW			1	0.005	L.12th–14th c.
111	UNID			1	0.004	Med?
112	LPME	plant pot?		1	0.008	18th–20th c.

Table 17. Catalogue of Post-Romano-British Pottery from SSMR FRK 092 (fieldwalking).

Appendix 3.4: Ceramic Building Material

By Sue Anderson

A total of 23 fragments of CBM weighing 940g were collected from 21 contexts.

The assemblage was quantified (count and weight) by fabric and form. Fabrics were identified on the basis of macroscopic appearance and main inclusions. The dimensions of Roman tiles and bricks were measured, but roof tile thicknesses were only measured when another dimension was available.

Table 18 shows the quantification by fabric and form.

Fabric	Code	RBT	IMB	EB	RT	PAN	FD?	UN	FC
coarse sandy, ferrous inclusions	csfe	2	1						
medium sandy, poorly mixed clays	msx	1							
estuarine fabrics	est			1	3				
coarse sandy, calcareous inclusions	CSC				2				
medium sandy, calcareous inclusions	msc				1		1		
fine sandy, calcareous inclusions	fsc							1	
fine sandy, no obvious inclusions	fs					2			
fine sandy, very micaceous	fsm					2			

Fabric	Code	RBT	IMB	EB	RT	PAN	FD?	UN	FC
fine sandy with clay pellets	fscp							1	
medium sandy, no obvious inclusions	ms							1	
medium sandy, ferrous inclusions	msfe				3				
fine sandy with organic inclusions	fso								1

Table 18. CBM by fabric and form from SSMR FRK 092 (fieldwalking). Forms: RBT – Roman tile; IMB – imbrex; EB – early brick; RT – plain roof tile; PAN – pantile; FD – field drain; UN – unidentified; FC – fired clay (daub).

Much of this assemblage was heavily abraded and identifications were uncertain. However, Roman tile was definitely present, and there was probably one early brick and some medieval roof tile. The remaining fragments of roof tile, pantile and field drain were all post-medieval. Unidentified pieces were flakes in fabrics which could belong to any period. One organic-tempered small fragment was probably fired clay, either daub or oven dome.

The assemblage was collected from widely dispersed areas of the site with no apparent clusters. Whilst the presence of Roman tile may indicate a Roman building in the vicinity, the small quantity suggests it was probably not located within the fieldwalked area. Medieval and post-medieval tile often reached arable fields with midden material during manuring activity and again is not necessarily suggestive of buildings of these periods on the site.

Ctxt	Fabric	Form	No	Wt/g	W	Т	Abr	Comments	Date
001	csfe	IMB	1	76		13	+	occ calc, flint	Rom
005	msc	FD?	1	36		16		appears wheelmade, broken tip tapers from inside to outside, may have been a hole?	Post-med?
006	fs	PAN	1	95			+		Post-med
007	fsm	PAN	1	53			+		Post-med
009	CSC	RT?	1	48		11			med?
013	csfe	RBT	1	95		32	+	knife-trimmed edge	Rom
021	fso	FC	1	3			+		
021	msfe	RT	1	12			+		Post-med
025	CSC	RT?	1	5			+		med?
031	fsc	UN	1	2				flake with one flat surface, coarse calc	
034	est	RT	1	37				mortar on breaks	med
038	fs	PAN?	1	4				flake	Post-med
041	fsm	PAN	1	29					Post-med
045	msx	RBT?	1	4				flake, may be fired clay	Rom?
051	csfe	RBT?	1	10		10			Rom?
057	est	RT	1	21			+		med
065	msfe	RT	1	8			+		Post-med
066	ms	UN	1	2			+	undiagnostic frag in pale pink fabric	
071	msfe	RT	1	20			+		Post-med
101	msc	RT?	1	16					med?
102	est	RT	1	4					med
102	fscp	UN	1	3			++		
103	est	EB	1	357	88	47		reused?	med

Table 19. CBM by context from SSMR FRK 092 (fieldwalking). Key: w – width; t – thickness.

Appendix 3.5: Small finds (non-numismatic) By Julia Huddle

Collection SF unit		Material	Object	Description	Object Date	
17	2	Copper alloy	Enamelled brooch	Oval plate brooch with raised border around oval recessed area with vestiges of blue enamel; the central recessed field would once have held a paste setting. Remains of catch plate and lug on reverse. Small circular hole in enamelled zone. Ken Penn has kindly looked at this object and has said that it is similar to one from the Anglo-Saxon cemetery at Spong Hill (Mackreth 1984, 36, fig. 83, Pl. XIII), where these enamelled series of these brooches are usually placed in the second century. H: 30; W: 26; T: 1.2mm	Roman	
34	5	Copper alloy	Vessel fragment.	Plain rim fragment, sooted exterior.	?Medieval	
39	7	Copper alloy	Rumbler bell	Cast fragment with moulded decoration on sides.	Post- medieval	
53	11	Copper alloy	Object fragment	C-shaped object fragment; ?buckle fragment. L (incomplete): 21; W: 7; T: 6mm	Unidentified	
62	16	Lead	Perforated pyramidal weight	L: 22; W: 12 X 12mm at base.	Undiagnostic	
69	18	Copper alloy	Folded pierced sheet	with rivet, broken at fold. L 32; W: 10;	Undiagnostic	
79	21	Copper alloy	Strip	fragment with rivet; L: 15; W: 11; T: 1mm	Undiagnostic	
81	23	Lead	Pot mend	Oval shaped pot mend with characteristic U-shaped profile around edge. Remains of pottery in one side.	?Roman	
83	25	Lead	Ampulla	Part of a lead ampulla, handles and top missing. L: 30; W: 28; T: 8mm	Medieval	
90	30	Copper alloy	Brooch	Piriform brooch with three small lugs, the side ones are bifurcated and a bifurcated foot. The disc element has two shallow concentric grooves around a central hole. Broken catch plate on reverse and double lug for missing pin broken at holes. This brooch is similar to three examples illustrated in Hattatt (1987, 159, fig. 52, nos. 1008 (from East Anglia), 1009 & 1010); where the possibility of these type of brooches being a native British production of the mid 1st century is discussed.	Roman	
91	32	Copper alloy	Curved rod	C-shaped cast object of circular section with pinched flattened ends. L: 60; D: 7mm	Undated	
92	33	Copper alloy	Bar mount	Plain rectangular bar mount, slightly curved profile and with one of originally two rivets in situ. L: 16; W: 5; T: 2.5mm	Medieval	
97	35	Copper alloy	Object fragment	Unidentified fragment.	Undated	
99	36	Copper alloy	Mount	Pressed sheet-metal rectangular mount with raised embossed 'W' (or 'M'), on ribbed background; two small tabs at ends for securing into corresponding plate. L: 28; W: 14; T: 1mm	Post- medieval	
100	37	Copper alloy	Bar mount	Cast bar mount with separate rivet at each end; embossed central lobe. Identical to one in Read (1995, 69, no 375 & dated to 1175-1425).	Medieval	
116	42	Copper alloy	Decorative looped fitting	Cast fitting with moulded looped terminal and pierced at base beyond small moulded collar. ?Handle.	Post- medieval	
117	43	Copper alloy	Finger ring	cast in one piece with heart-shaped bezel and mouldings around sides.	Post- medieval	
49	44	Copper alloy	Artefact	fragment, ?cast, possible mount. Surfaces covered in corrosive products. Would need to be cleaned for positive identification.	Undated	

Table 20. Catalogue of small finds (non-numismatic) from SSMR FRK 092 (fieldwalking).

Collection unit	Material	Object	Quantity	Object date
03	Iron	Nail fragment	1	Undiagnostic
04	Copper alloy	Waste	1	Undiagnostic
14	Lead	Pierced disc	1	Undiagnostic
15	Iron	Sheet fragment	1	Undiagnostic
48	Copper alloy	Button	1	Late Post-medieval
49	Copper alloy	Sheet	1	Undiagnostic
50	Copper alloy	Vessel wall fragment.	1	Undiagnostic
61	Copper alloy	Strip fragment	1	Undiagnostic
67	Copper alloy	Belt fitting, eyelet	1	Late Post-medieval
72	Copper alloy	Sheet/object fragment	1	Undiagnostic
77	Lead	Cylindrical object	1	Undiagnostic
80	Copper alloy	Waste	1	Undiagnostic

Table 21. Catalogue of non-small found metalwork from SSMR FRK 092 (fieldwalking).

Appendix 3.6: Numismatic Evidence

By Andy Barnett

Table 22 is a catalogue of numismatic finds from the fieldwalking phase of SSMR FRK 092.

SF	Ctxt	Denomination	Metal	State
1	8	Rose Farthing	Cu Alloy	Post Medieval
3	20	AE3/4	Cu Alloy	Rome
4	23	AE4	Cu Alloy	Rome
6	36	Rose Farthing	Cu Alloy	Post Medieval
8	40	Farthing	Cu Alloy	Post Medieval
9	42	Jetton	Cu Alloy	Post-Medieval Germany
10	44	Jetton	Cu Alloy	Post Medieval
12	59	AE3/4	Cu Alloy	Rome
13	59	AE4	Cu Alloy	Rome
14	60	AE3/4	Cu Alloy	Rome
15	61	Shilling	Silver	Modern
17	63	Halfpenny	Cu Alloy	Post-Medieval
19	73	Penny	Silver	Medieval
20	74	AE3/4?	Cu Alloy	Rome?
22	80	Shilling	?Silver	Modern
24	82	Farthing	Cu Alloy	Modern
26	84	AE3/4	Cu Alloy	Rome
27	86	AE3/4	Cu Alloy	Rome
28	88	AE3/4	Cu Alloy	Rome
29	89	Sestertius	Cu Alloy	Rome
31	91	AE2	Cu Alloy	Rome
34	95	AE2/3	Cu Alloy	Rome
38	106	Penny	Silver	Medieval
39	113	Cut Half Penny	Silver	Medieval?
40	114	Jetton	Cu Alloy	Post-Medieval Germany
41	115	AE3	Cu Alloy	Rome

Table 22. Catalogue of numismatic finds from the fieldwalking phase of SSMR FRK 092.

Appendix 4.0: Finds from SSMR FRK 092 (Evaluation)

Appendix 4.1: Romano-British Pottery

By Alice Lyons

A total of twenty-eight Romano-British pottery sherds, weighing 0.564kg, was recovered ten deposits during fieldwalking and evaluation of this site (Table 23). This material was generally abraded, although the average sherd size was quite large (*c*.20g) and one jar retained sooty residues indicative of use as a cooking pot.

The pottery dates from between the 2nd to the 4th centuries, with the majority belonging to the later part of the Romano-British period (3rd and 4th centuries).

Ctxt	Fabric	Form	Qty	Wt(g)	Comment	Date
202	South Midland shell tempered ware (Brown 1994, 51; Tomber and Dore 1998, 115).	Medium mouthed jar rim	1	19	Good condition	Late 3rd–4th century AD
208	Shell tempered ware	Jar body and base sherds	3	25	Abraded	2nd–4th century
	Sandy grey ware (Andrews 1985, 92; Anderson 2006, 140, Q101).	Medium mouthed jar	1	73	Sooted	2nd–4th century
	Sandy grey ware	Jar body and base sherds	2	96	Cheese wire marks on vessel base	2nd–4th century
	Sandy grey ware	Straight-sided dish rim	1	58	Abraded with two grooves under rim	3rd–4th century AD
	Sandy grey ware with micaceous inclusions (Tomber and Dore 1998, 184; Gurney 1995, 102; Anderson 2006, 140, Q104).	Wide mouthed bowl or cup rim	1	12	Cordoned	?2nd century
216	Sandy grey ware	Jar body sherd	1	3	Abraded	Late 1st-4th century
	Nene Valley colour coat (Tomber and Dore 1998, 118)	Beaker body sherd	1	4	Rouletted and worn	3rd century
220	Nene Valley shell tempered ware (Perrin 1996, 119)	Storage jar body sherd	1	41	Abraded	1st–4th century
	Sandy grey ware	Jar rim and body sherds	2	21	Abraded	Late 1st-4th centuries
221	Sandy grey ware	Jar body sherd	1	5	Abraded	Late 1st–4th century
	Sandy oxidised ware (Andrews 1985, 90 (OW1)).	Jar or flagon body sherd	1	2	Abraded	Mid-1st–3rd century
227	Oxfordshire red ware with a white slip (Young 1977, 123; Tomber and Dore 1998, 176).	Mortarium rim sherd	1	75	Abraded	4th century
	South Midland shell tempered ware	Jar body sherd	1	11	Abraded, with fine rose quartz trituration grits	Late 3rd–4th century
	Nar Valley white ware (Gurney 1995, 101 and Tomber and Dore 1998, 171).	Mortarium base sherd	1	51	Abraded, with large slag trituration grits	3rd-4th century
	Sandy grey ware	Straight-sided dish rim	1	15	Abraded with a single groove under the rim	3rd–4th century
228	Sandy grey ware with micaceous inclusions	Jar body sherd	1	4	Abraded	Late 1st-4th century
240	Samian, Central Gaulish (Webster 1983, 7; Tomber and Dore 1998 25-41)	Bowl	1	4	Worn	2nd century
	Sandy grey ware	Jar body sherds	5	21	Abraded, several combed	2nd–4th century
242	Sandy grey ware	Jar base sherd	1	26	Abraded	Mid-1st-4th century

Table 23. The Romano-British pottery fabrics and forms, quantified and listed in context order from
SSMR FRK 092 (evaluation).

The assemblage was analysed in accordance with the guidelines for analysis and publication laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). The sherds were examined using a hands lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types present. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

Although only twenty-nine sherds were recovered, a relatively large number (nine) of individual fabrics were identified. The majority of these were locally produced (but unsourced) sandy grey ware utilitarian coarse wares jars and bowls, one of which retained a sooty residue suggesting it had been used as a cooking pot. Several of the Sandy grey ware sherds, also contained abundant silver mica, which is probably a natural contaminant of the clay; vessels of this type are known to have been produced in North Suffolk. Sandy oxidised ware flagon or jar sherds were also retrieved, which also originate from local unsourced kilns.

A single sherd of Central Gaulish Samian from a 2nd-century bowl was the only international import recovered. The other traded wares all originated from regional domestic pottery production centres that flourished in the later Roman period. These include a white ware mortarium fragment produced in West Norfolk within the Nar Valley and a red ware mortarium manufactured in Oxfordshire. Two fabrics were identified as originating from the large industrial centre located in the Lower Nene Valley (near modern Peterborough) including a shell tempered coarse ware and a colour coated fine ware beaker fragment. A South Midland shell tempered ware jar, possibly produced in the Harrold Kilns in Bedfordshire, was also identified.

Although a small assemblage, it appears typical of a Romano-British settlement in this area in the later Roman period. The pottery was discarded by a population that had adopted the Romano-British way of life (including food preparation techniques) and had access to local and traded ceramic goods.

Appendix 4.2: Post-Romano-British Pottery

By Sue Anderson

A sherd of ?post-medieval redware was recovered from ditch fill (256). The sherd is abraded and in poor condition. Slip and/or glaze is present on the internal surface but this is decayed and stained. Identification is uncertain.

Appendix 4.3: Ceramic Building Material

By Sue Anderson

One abraded fragment of Roman tile was recovered from spoil (219) in Trench 49. It was in a soft red-firing fabric with moderate sand and sparse flint tempering. It measured at least 23mm thick, but due to abrasion it was uncertain whether both surfaces were present.

Ctxt	Fabric	Form	No	Wt/g	W	Т	Abr	Date
219	msf	RBT	1	44		23	+	Rom

Table 24. Catalogue of CBM from SSMR FRK 092 (evaluation).

Appendix 4.4: Small Finds (non-numismatic)

By Julia Huddle

Ctxt	Metal detected	Trench	SF	Material	Object	Description	Date
229	У	68	127	Copper alloy	Strap loop	Sub-rectangular frame with hole for missing separate internal rivet. Cf (Egan 1991, fig. 147, nos 1248–9) both from contexts dated to the second half of the 14th century.	Medieval
228	У	67	128	Copper alloy	Buckle	Plate fragment with notch for pin and three holes for missing rivets. Traces of red flushing on upper surface (surface coated with another unidentified metal).	Medieval

Ctxt	Metal detected	Trench	SF	Material	Object	Description	Date
222	у	61	129	Copper alloy	Buckle	Oval buckle frame with integral rectangular loop for strap; copper alloy pin, small notch for pin rest. Cf example from London from context dated to the first half of the 15th century (Egan 1991, 102, fig. 65, no. 472).	Medieval
224	У	61	132	Copper alloy	Fastener	Twisted wire fastener	Medieval
226	У	63	133	Copper alloy	Buckle	Incomplete buckle-plate with two of three rivets in situ.	Medieval
305		Field 8	135	Copper alloy	Hooked tag	Openwork hooked tag with rectangular loop and decorated with openwork trefoil.	Early post- medieval
305		Field 8	138	Copper alloy	Thimble	Very small child's thimble, machine made, thickened rim and stamped with circular pits around sides and square pits on top.	Late post- medieval
305		Field 8	143	Copper alloy	Strap- end	sheet folded widthways with corners at folded (outside edge) turned over; large, centrally placed, hole roughly punched through at folded end; two rivets (with roves?) at attachment end. This is a rather crude example of this type of strap-end made from sheet metal folded widthways examples of which are illustrated from medieval deposits in London in Dress Accessories (Egan, 1991, 127, figs 83–4).	Medieval
305		Field 8	144	Lead	Weight	Discoidal with slightly raised border on both faces. 105g.	Undated
306		Filed 9	145	Copper alloy	Buckle	Cast sub-rectangular buckle with double-spiked tongue and anchor chape. Cf Read (1995, 178, no. 1198).	c.1720– 90

Table 25. Catalogue of small finds (non-numismatic) from SSMR FRK 092 (evaluation).

Ctxt	Trench	Metal detected	Material	Object	Description	Wt(g)	Date
218	48	У	Copper alloy	Wall bracket	Cast decorative wall bracket with attachment hole on one complete surviving arm		Late post- medieval
225	61	У	Copper alloy	Metal working debris		9	Undiagnostic
220	50	У	Copper alloy	Sheet	Oval sheet fragment, possible spoon bowl fragment		Undiagnostic
275	Not given		Copper alloy	handle	From ?teaspoon		Late post- medieval
244	50		lead	sheet	fragment	1	Undiagnostic
252	Not given		Copper alloy	button	Discoidal button with loop soldered on reverse		Late post- medieval
221	51	У	Copper alloy	stud			Late post- medieval

Table 26. catalogue of non-small found metalwork from SSMR FRK 092 (evaluation).

Appendix 4.5: Numismatic Evidence

By Andy Barnett

Table 27 is a catalogue of numismatic finds from the evaluation phase of SSMR FRK 092.

Small Find	Context	Denomination	Metal	State
125	275	Royal farthing	Cu Alloy	Post-medieval
126	230	Penny	Silver	Medieval
130	215	Irregular Issue	Cu Alloy	Rome
131	219	Gloria Exercitus (One Standard)?	Cu Alloy	Rome

Small Find	Context	Denomination	Metal	State
134	227	AE4	Cu Alloy	Rome
136	305	Jetton/Token?	Cu Alloy	Post-medieval?
137	305	Jetton Rose/Orb	Cu Alloy	Post-medieval
139	305	Farthing	Cu Alloy	Post-medieval
140	305	Dupondius?	Cu Alloy	Rome
141	305	AE4	Cu Alloy	Rome
142	305	?	Cu Alloy	Rome
146	306	?	Cu Alloy	Post-medieval?
147	306	Halfpenny 1965	Cu Alloy	Modern
Not Small found	118	Halfpenny	Cu Alloy	Modern

Table 27. Catalogue of numismatic finds from the evaluation phase of SSMR FRK 092.

Appendix 4.6: Faunal Remains

By Julie Curl

All of the bone was examined primarily to determine range of species and elements present and the amount of material that could produce measurable, ageable bone. The assemblage was scanned to determine if bone-, horn- or antler-working was present. Butchering and any indications of skinning, hornworking and other modifications were recorded. When possible a record was made of ages and any other relevant information, such as pathologies. Counts and weights were noted for each context and each species identified. All information was input directly into Excel for analysis. The assessment was carried out following a modified version of guidelines by English Heritage (Davis 1992). A catalogue of the assemblage is included as a table with this report.

A total of 1.286kg of faunal remains, consisting of ninety-eight elements, was recovered from excavations at this site. Faunal remains were produced from eight contexts with a provisional dating to the Romano-British period. The bone is in reasonable condition with some variation between contexts. Some elements showed a dark mahogany colour that is typical of bone that has been buried in an organic and waterlogged environment. Remains in ditch fills (203) and (209) exhibited eroded surfaces and insect damage. Bone in ditch fill (232) showed some canid gnawing that may suggest scavenging activity or food for dogs.

Five species were identified; cattle, sheep, dog/wolf, equid and pig, in order of frequency. Most bones were of adult animals, with exception of a juvenile pig; pigs are usually culled before maturity as they have little use in adult life.

The cattle remains included a large and robust proximal phalange in ditch fill (217) and a further robust phalange was noted in pit fill (234); both suggestive of bulls.

A proximal phalange from a small equid (small pony or mule size) was found in ditch fill (232), showing canid gnawing. Small, slender sheep bones were seen that are similar to the Soay type breed that was kept in the Romano-British period.

Two humeri from dog/wolf were identified in pit fill (234), from a large canid; both bones show knife cuts at the distal ends of the shaft.

The assemblage appears to be derived from the primary and secondary butchering waste of a range of mammals. The butchered canid bones are of interest, which at least represent skinning, but possibly use for food. The canid (and other) bones should be measured and identified to species and the butchering of these bones compared to other sites. The further work and updating of the catalogue and report should take half a day.

Ctxt	Qty	Wt(kg)	Species	Spp.Qty	Age	Butchering	Comments
202	6	0.024	Mammal	6		butchered	large rib in fragments, poor condition, insect damage
208	8	0.055	Sheep/goat	1		butchered	small tibia , delicate - Soay type
208			Mammal	7			poor condition, eroded and insect damage
216	10	0.282	Cattle	10	adult	butchered	mandible and fragments, large robust proximal phalange
232	42	0.356	Cattle	6	adult	?	proximal, intermediate and distal phalanges

Ctxt	Qty	Wt(kg)	Species	Spp.Qty	Age	Butchering	Comments
232			Equid	1	adult	butchered	small proximal phalange, pony/mule, canid gnawing
232			Mammal	35			
234		0.232	Cattle	1	adult	butchered	humerus
234			Sheep/goat	1	adult	butchered	proximal metatarsal, large and robust
234			Dog/wolf	2	adult	knife cuts	2 large humeri, knife cuts at distal ends
234			Mammal	19			fragmentary
240	25	0.109	Sheep/goat	2	adult		molar, metatarsal
240			Mammal	23			fragmentary
242	4	0.164	Cattle	1		butchered	tibia
242			Sheep/goat	1		butchered	tibia shaft
242			Mammal	2			
252	3	0.064	Pig	1	juv	butchered	tibia, mahogany colour
252			Mammal	2			

Table 28. Catalogue of the faunal remains recovered from SSMR FRK092 (evaluation).

Appendix 5.0: Finds from FRK 092 (Watching Brief)

Appendix 5.1: Worked and Burnt Flint

By Sarah Bates

Nine piece of burnt flint weighing a total of 181g were recovered during the work. They are not closely datable but might have been deliberately heated for use in heating water during the prehistoric period.

Context	Cat.	Туре	Quantity
301	burn	burnt fragment	9

Appendix 5.2: Small Finds

Ctxt	Field	SF	Material	Object	Description	Date
305	Field 8	135	Copper alloy	Hooked tag	Openwork hooked tag with rectangular loop and decorated with openwork trefoil.	Early post- medieval
305	Field 8	138	Copper alloy	Thimble	Very small child's thimble, machine made, thickened rim and stamped with circular pits around sides and square pits on top.	Late post- medieval
305	Field 8	143	Copper alloy	Strap- end	sheet folded widthways with corners at folded (outside edge) turned over; large, centrally placed, hole roughly punched through at folded end; two rivets (with roves?) at attachment end. This is a rather crude example of this type of strap-end made from sheet metal folded widthways examples of which are illustrated from medieval deposits in London in Dress Accessories (Egan, 1991, 127, figs 83–4).	Medieval
305	Field 8	144	Lead	Weight	Discoidal with slightly raised border on both faces. 105g	Undated
306	Filed 9	145	Copper alloy	Buckle	Cast sub-rectangular buckle with double-spiked tongue and anchor chape. Cf Read (1995, 178, no. 1198).	c. 1720–90

Table 30. Catalogue of small finds from SSMR FRK 092 (watching brief).

Appendix 6.0: Finds from SSMR MNL 585

Appendix 6.1: Worked and Burnt Flint

By Sarah Bates

A single struck flint was recovered from this site. It is squarish in shape and is patinated white in colour. One edge is battered along both sides and the piece may be from the edge of a core or, possibly, a tool.

Context	Cat.	Туре	Quantity
56	retf	retouched flake	1

Table 31. Summary of flint from	n SSMR MNL 585.
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Appendix 6.2: Romano-British Pottery

By Alice Lyons

A total of 118 Romano-British pottery sherds, weighing 4.273kg, was recovered from this excavation (Tables 32 and 33).

The majority of the pottery dates from the later part of the Romano-British period (3rd and 4th centuries) with some evidence of continuity into the early 5th century. Mildenhall is famous for its Late Roman activity, particularly for the discovery of an exceptionally rich hoard of precious metal objects, known as the 'Mildenhall Treasure'.

The condition of the pottery is good, as much of the assemblage was only moderately abraded. The average sherd size was large (c.33g) as one complete vessel and several almost complete pots were retrieved. Several of the sherds retained sooty residues indicative of use as cooking pots.

The assemblage was analysed in accordance with the guidelines for analysis and publication laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). The sherds were examined using a hands lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types present. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

The pottery recovered from the this excavated area was similar in character to that recovered from site SSMR MNL 585 and is summarised in Table ? below.

The most common type of pottery found were locally produced (but unsourced) sandy grey ware utilitarian coarse wares jars, bowls and flanged dishes, several of which retained a sooty residue suggesting they had been used as cooking pots. The majority of these wares were of types (wide mouthed jars and flanged dishes) common in the later part of the Roman period. One sherd (recovered from unstratified finds (20)) was of a coarse fabric and manufacture suggesting that it may have been produced at the very end of the Romano-British era (early 5th century). Another grey ware fragment (also from unstratified finds (20)) had had its edges chipped away, re-worked into a tool – a phenomena not unknown in Late Roman or Early Saxon assemblages (Lyons forthcoming; Tester 2000).

A small amount of unsourced oxidised material was also found, this is also of local manufacture – probably made at the same kiln sites as the Sandy grey wares.

The other main coarse ware identified were shell tempered wares from several different sources. The large storage jar fragments may originate from the Lower Nene valley (Perrin 1996, 119), while much of the remainder of the pottery is consistent with manufacture at the Harrold kilns in Bedfordshire (Brown 1994, 51) or other unsourced East Cambridgeshire, North Suffolk production sites copying their wares.

Only one sherd of Central Gaulish Samian was recovered in this assemblage, the rarity of the fabric, commonly imported between the mid 1st and 3rd centuries (Webster 1976), within this assemblage is probably a chronological indicator of the Late Roman nature of the majority of the pottery.

The most frequently found fine ware are the Hadham red ware (Tomber and Dore 1998, 151) jars and bowls, however, an almost complete vessel was found in this fabric which does account for its dominance. The vessel is a narrow mouthed pedestal urn with an external surface burnished in narrow horizontal bands. The vessel has also been deliberately damaged ('ritually killed'; Gurney 1998, 2) which may indicate it has been used for burial but has been disturbed from its primary position. This pottery was produced in Hertfordshire in the Late Roman period. A small amount of Oxfordshire red wares were also found (Young 1977), in particular a white slipped mortarium (see below).

The second most common fine ware was the Late Roman beaker, jar and dish sherds manufactured in the large industry of the Lower Nene Valley.

A single colour coated beaker fragment from Colchester was identified as was an unsourced colour coat that may have originated from the continent (Tomber and Dore 1998, 59).

Specialist wares were rare within this assemblage. No amphora were found, although this is not unusual in Norfolk assemblages away from the coastal ports, also amphora became less well supplied towards the end of the Roman period (Darling 1993, 205–7). Flagon fragments were identified and one Oxfordshire red ware mortarium with a white slip was found.

Fabric	Sherd count	Sherd weight (g)	Sherd weight (%)
Sandy grey ware	52	1949	45.62
Hadham redware	13	895	20.94
Nene Valley colour coat	16	444	10.40
South Midland shell tempered ware	11	415	9.72
Unsourced shell tempered ware	8	302	7.07
Oxfordshire red ware	2	86	2.01
Nene Valley shell tempered ware	2	66	1.54
Sandy oxidised ware	5	48	1.12
Sandy coarse ware	2	36	0.84
Unsourced red fine ware	4	18	0.42
Colchester colour coat	1	7	0.16
Central Gaulish Samian	1	6	0.14
Unsourced colour coat	1	1	0.02
	118	4273	100.00

Table 32. Site SSMR MNL 585, the pottery fabrics listed in descending order of weight (%).

Ctxt	Fabric	Form	Qty	Wt(g)	Comment	Date
2	Sandy oxidised ware	Undiagnostic body sherd	1	3	Severely abraded	1st to 4th century
10	Hadham redware	This is a narrow mouthed pedestal urn, with a single cordon on the neck, of late Roman type.	1	741	Although almost complete, half the rim is missing. It has been repeatedly struck with a knife of the vessel shoulder. ?Ritually killed. This vessel is of a type that could be associated with a burial.	4th century
10	Sandy grey ware with dark burnished surfaces	A wide mouthed jar with a rolled rim, a cordon on neck globular body and flat base	8	1035	Almost complete. The interior of the vessel has a similar concretion to the Nene Valley beaker/jar. The exterior of this vessel is burnished with a panel of wavy line burnished decoration on its lower half. It shows evidence of use.	4th century
10	Nene Valley colour coat (Tomber and Dore 1998, 118)	The base from a globular beaker or jar.	3	264	Although relatively fresh on the inside the exterior of this vessel is heavily accreted with a hard pale brown substance. This is odd as none of the other vessels in this context have the same finish. Is this a phenomenon of use?	Mid 2nd to 3rd century AD

Ctxt	Fabric	Form	Qty	Wt(g)	Comment	Date
10	Nene Valley colour coat (Tomber and Dore 1998, 118)	The pedestal base from a small beaker and unassociated beaker/jar sherds	5	29	Fairly fresh	Mid 2nd to 3rd century
10	Nene Valley shell tempered ware (Perrin 1996, 119)	A body and base sherd from a storage jar	2	66	Fairly abraded	1st to 4th century AD
10	Sandy oxidised ware			8	Slightly abraded with a fumed exterior	1st to 4th century
10	Red fine ware	Burnished body sherds from a jar/bowl	4	18	Burnished. Three sherds are similar to Hadham red fine ware, with another to Oxfordshire red colour coat. If so they should date to the 4th century.	2nd to 4th century
10	South Midland shell tempered ware (Brown 1994, 51; Tomber and Dore 1998, 115).	A medium mouthed jar with and undecorated body sherds	4	87		Mid 2nd to 4th century
10	Sandy grey ware	A medium mouthed jar with body sherds	3	70	These sherds a blue/grey and are is decorated with a burnished wavy line.	Mid 2nd to 3rd century
11	Shell tempered ware	Storage jar body sherd	1	23	Severely abraded	1st to 4th century
11	Sandy grey ware	Undiagnostic body sherd	1	4		Mid 1st to 4th century
17	Shell tempered An undiagnostic body ware sherd		1	17	Moderately abraded	1st to 4th century
20	South Midland shell tempered ware (Brown 1994, 51; Tomber and Dore 1998, 115).	Jar rims and undiagnostic body sherds	7	328	Moderately abraded	3rd to 4th century
20	Central Gaulish Samian	Bowl rim	1	6	Fresh, but worn (?Dr44 – 2nd half 2nd century).	2nd century
20	Hadham red ware	Jar and undiagnostic body sherds	5	87	Moderately abraded	4th century
20	Nene Valley colour coat	Dish base	1	29	Fresh	3rd to 4th century
20	Sandy grey ware	Flanged dish rims and undiagnostic body sherds	12	143	Moderately abraded, one showing signs of re-working (an Early Saxon trait)	3rd to 4th century
20	Sandy oxidised ware	Flagon base and undiagnostic body sherd	2	27	Moderately abraded	1st to 4th century
20	Sandy coarse ware	Undiagnostic body sherd	1	23	Moderately abraded, Romano-Saxon?	4th to early 5th century
22	Shell tempered ware	A storage jar rim	1	150	Moderately abraded	1st to 4th century
30	Sandy grey ware Undiagnostic body sherds		4	13	Moderately abraded	Mid 1st to 4th century
30	Colour coat	Beaker rim	1	1	Fresh, possibly imported from Germany	3rd century
33	Sandy grey ware	Jar rims and undiagnostic body sherds	14	248	Slightly abraded	2nd to 4th century
33	Shell tempered ware	A storage jar body sherd	1	75	Severely abraded	1st to 4th century
33	Hadham redware	Beaker body and base sherds	2	4	Fresh	4th century

Ctxt	Fabric	Form	Qty	Wt(g)	Comment	Date
33	Nene Valley colour coat	Beaker body sherds a dish base	4	26	Fresh, but well worn	3rd to 4th century
39	Colchester colour coat			7	Moderately abraded roughcast beaker	Mid 2nd to 3rd century
39	Sandy coarse ware	An undiagnostic body sherd	1	13	Moderately abraded, of Horningsea type	2nd to 3rd century
39	Sandy grey ware	An undiagnostic body sherd	1	2		Mid 2nd to 4th century
46	Nene Valley colour coat	A jar base	1	68	Fresh	3rd to 4th century
46	Oxfordshire red colour coat	An undiagnostic body sherd	1	20	Fresh	Mid 3rd to early 5th century
46	Hadham redware	A bowl rim	1	22	Moderately abraded	4th century
56	Sandy oxidised ware	A flagon base	1	10	Moderately abraded	2nd to 4th century
56	Shell tempered ware	Undiagnostic body sherds	3	21	Severely abraded	2nd to 4th century
56	Hadham redware	Undiagnostic body sherds	3	27	Moderately abraded	4th century
56	Nene Valley colour coat	A dish and jar sherd	2	28	Moderately abraded	3rd to 4th century
56	Sandy grey ware	A wide mouthed jar and undiagnostic body sherds	9	434	Moderately abraded	3rd to 4th century
62	Oxfordshire white colour coated red ware	A bead and flange mortarium rim	1	66	Moderately abraded	4th to early 5th century
62	Hadham redware	A jar rim	1	14	Moderately abraded	4th century
62	Shell tempered ware	A jar rim	1	16	Moderately abraded	Mid 3rd to early 5th century

Table 33. Site SSMR MNL 585 catalogue of Romano-British pottery.

Appendix 6.3: Ceramic Building Material

By Sue Anderson

Seven fragments of CBM were collected from five contexts. Three fragments were of recent date and consisted of a small fragment of post-medieval roof tile in a medium sandy ferrous fabric from ditch fill (22), a piece of chimney pot, from unstratified finds (20), and a small mosaic floor tile from ditch fill (56).

The remaining four fragments were Roman. Pit fill (10) contained a corner fragment of an imbrex in a coarse buff fabric with a similar appearance to amphora. Beam-slot fill (11) produced a flange fragment from a red-firing flanged tegula. Two pieces of box flue tile in hard fine fabrics were found in ditch fill (56); one was combed and both were sooted on the rough inner surface. Together, these suggest a relatively high status building or farmstead in the vicinity, with evidence for at least two phases of tiled roof and a hypocaust system.

Ctxt	Fabric	Form	No	Wt/g	W	Т	Abr	Comments	Date
10	msc	IMB	1	226		21		corner frag, buff with grey core	Rom
11	ms	FLT	1	186		17		flange height 35mm, width 20mm	Rom

Ctxt	Fabric	Form	No	Wt/g	W	Т	Abr	Comments	Date
20	mod	CP	1	44		10		coarse pink fabric, small white and red inclusions, surfaces burnished red, sooted internally	19–20
22	msfe	RT	1	14		13	+		Post- med
56	fs	BOX?	1	50		15		hard, reduced core, sooted on rough side	Rom
56	fs	BOX	1	60		17		combed, sooted int	Rom
56	mod	FT	1	22	25	12		small square tile in dense black ceramic	Mod

Table 34. Catalogue of CBM from SSMR MNL 585.

Appendix 6.4: Small Finds By Julia Huddle

Ctxt	SF	Material	Object	Description	Date
10	110	Copper alloy	Brooch	Penannular brooch, ?silver coated. The flat sectioned ring has terminals of a single coil. Both faces are decorated with two circumferential grooves and the central band on the upper face is nicked giving a beaded appearance. The pin which has a slightly pointed/domed profile is wrapped around the ring one and a half turns. D: 40; W: 3; T: 2; internal D:33mm	Roman
20	111	Iron	Brooch	Part of a brooch catch plate with flanged edge and perforation on plate. I am grateful to Andrew Rogerson for his comments on this object. Further analysis recommended for this item	Possibly Roman
20	112	Silver	Chain	Fragment. Interlinked oval rings soldered at ends. Each ring is slightly twisted at top and bottom (overlap) so that each ring sits in the same plane as previous one. L: 40; D max: 5; D min: 4mm. Further analysis recommended for this item. Reference for (Roman) chains used in jewellery Higgins R. 1976, Jewellery in Roman Crafts edited by D. Strong & D. Brown.	Undated
20	116	Copper alloy	Armlet	Curved rod of circular section, cross section of slightly uneven sub- circular cross-section. L: 48; W: 5; T: 5mm. Probable fragment of a plain copper alloy armlet as illustrated from Colchester (Crummy 1983, 40, fig. 42, nos. 1640-1650).	Roman
20	117	Copper alloy	Artefact	Small sub-rectangular plate fragment. L: 21; W: 10; T: 2mm	Undiagnostic
20	122	Copper alloy	Mount	Lombardic-style letters 'R' & 'F', joined at right angles to opposite letter by elongated serifs. No visible means of attachment. L:12; W: 19; T: 2mm	Post- medieval
20	123	Copper alloy	Artefact	Small unidentified object fragment	Undiagnostic

Table 35. Catalogue of non-numismatic small finds from SSMR MNL 585.

Ctxt	Material	Object	Description	Object date
20	Copper alloy	Sheet	Fragments x 3	Undiagnostic
20	Iron	Bar	Bent, slightly Lead-shaped fragment	Undiagnostic
20	Lead	Artefact	Cast ?rectangular plate fragment with lead rivet in one extant corner	Undiagnostic
20	Copper alloy	Disc	Cast dished disc with raised slotted central knop for attachment. ?Lid	Undiagnostic
20	Copper alloy	Sheet	Fragment, folded with stamped ?border along one edge and small rivet hole at broken top.	Undiagnostic

Table 36. Catalogue of non-small found metalwork from SSMR MNL 585.

Appendix 6.5: Numismatic Evidence

By Andy Barnett

Small Find	Context	Denomination	Metal	State
109	17	AE3/4	Cu Alloy	Rome
113	20	AE3	Cu Alloy	Rome
114	20	AE3	Cu Alloy	Rome
115	20	AE3	Cu Alloy	Rome
118	20	AE4	Cu Alloy	Rome
119	20	AE3	Cu Alloy	Rome
120	20	Follis?	Cu Alloy	Rome
121	20	VRBS ROMA	Cu Alloy	Rome
124	20	Siliqua fragment?	Silver	Rome?

Table 37 is a catalogue of numismatic finds from this site.

Table 37. Catalogue of numismatic finds from SSMR MNL 585.

Appendix 6.6: Faunal Remains

By Julie Curl

All of the bone was examined primarily to determine range of species and elements present and the amount of material that could produce measurable, ageable bone. The assemblage was scanned to determine if bone, horn or antler working was present in the assemblage. Butchering and any indications of skinning, hornworking and other modifications were recorded. When possible a record was made of ages and any other relevant information, such as pathologies. Counts and weights were noted for each context and each species identified. All information was input directly into an Excel database for analysis. The assessment was carried out following a modified version of guidelines by English Heritage (Davis 1992). A catalogue of the assemblage is included as a table with this report.

A total of 3.922kg of bone, consisting of seventy-seven elements was recovered from excavations at this site. Faunal material was produced from ten contexts, provisionally dated to the Romano-British period. The assemblage is in reasonable condition with several measurable and ageable elements, although much is quite fragmentary due to butchering and wear. Some contexts, notably unstratified finds (20) and ditch fill (22), produced bone with eroding surfaces that would suggest burial in acid conditions. Some remains showed surface insect damage, no gnawing was visible during the scan. Some remains are of a dark mahogany brown colour that is typical of bone that has lain in organic waterlogged deposits.

The assemblage is dominated by the main domestic food mammals. The butchering waste from cattle is the most frequent and includes chopped cattle horncores were from ditch fill (56) that may suggest hornworking. Sheep/goat was the second most recorded with a range of sheep/goat ages in pit fill (10) including well worn Dp4s, that could be indicative of an autumn cull. Pig was recorded. A neonatal pig tibia was produced from (56) which suggests on site breeding of this species.

A pony sized equid was noted, with a metacarpal from unstratified finds (20) showed knife cuts at the proximal end from skinning. One ovicervid (sheep/goat/deer) was noted in ditch fill (30) which may be roe deer. One bird bone was seen in pit fill (10), the radius is from a larger species (goose or larger).

The assemblage appears to be derived from domestic butchering and food use. There is a higher number of primary waste bones and some skinning waste that may indicate more processing waste in this part of site.

This is a very small assemblage that is similar to other sites of the same date and little more information can be obtained from full analysis. It is recommended that bone is identified fully, the catalogue updated and comparisons made with other similar sites. It is estimated that this work would take half a day.

Ctxt	Qty	Wt(kg)	Species	Spp.Qty	Age	Butchering	Comments
10	26	0.196	Sheep/goat	9	range	chopped/cut	humerus, radius, mandibles, teeth, inc worn Dp4s
10			Bird	1		butchered	radius
10			Mammal	16		butchered	inc 1 fragment dark stained
11	4	0.111	Cattle	1	adult	butchered	mandible/teeth
11			Sheep/goat	1		butchered	metatarsal shaft, small and slender
20		0.358	Cattle	2	adult	butchered	metatarsal, scapula
20			Equid	1	adult	knife cuts	metacarpal, pony size, cut at proximal end
20			Mammal	8			poor condition, eroded surfaces
22	2	0.183	Equid	2	adult	?	talus, radius; poor condition, insect damage
30	30	0.505	Cattle	6	juv	chopped/cut	humerus, small metatarsal, teeth
30			Ovicervid	1		butchered	tibia shaft
30			Mammal	23		butchered	
33	1	0.003	Mammal	1			slightly burnt
39	1	0.447	Cattle	1	adult	?butchered	large tibia, fuse line visible, young adult
46	7	0.299	Cattle	1	adult	?cut	metatarsal, complete
46			Equid	2	adult		worn upper molars
46			Pig	1		butchered	fibula
46			Mammal	3			
56		1.355	Cattle	12	range	butchered	metapodials, tibia, scapula, ribs, femur, chopped horncores
56			Sheep/goat	3		butchered	metapodials, tibia
56			Equid	1	adult	butchered	radius
56			Pig	1	neo		tibia
56			Mammal	3		butchered	
62	6	0.465	Cattle	3	adult	butchered	radii
62			Equid	1	adult		upper molar
62			Mammal	2			

Table 38. Catalogue of the faunal remains recovered from SSMR MNL585.

Appendix 7.0: Finds from SSMR MNL 586

Appendix 7.1: Worked and Burnt Flint

By Sarah Bates

Thirty-five struck flints were recovered from site SSMR MNL 586. The flint is mostly mid to pale grey; quite often mottled. The pale colour is probably due largely to patination. Three single platform flake cores are present, one of them is quite chunky, from deposit (64), and two pieces from deposit (88), one of them a very thick flake, have been used as small irregular cores. The assemblage is summarised in Table 39.

Context	Туре	Quantity
2	barbed and tanged arrowhead	1
13	plano convex knife	1
14	flake	1
15	flake	1
16	retouched flake	1
47	flake	1
63	flake	5
64	leaf-shaped	1
64	single platform flake core	1
64	flake	4
64	non-struck fragment	0
76	blade-like flake	1
87	blade	1
87	flake	2
87	knife	1
87	retouched blade	1
87	utilised blade	1
87	utilised flake	1
88	burnt fragment	4
88	single platform flake core	2
88	blade-like flake	1
88	flake	2
88	utilised flake	1

Table 39. Summary of flint from SSMR MNL 586.

Eighteen flakes, two of them blade-like in form, were recovered. The flakes are mostly quite irregular but two or three thinner smoother-looking flakes are present, one with a facetted platform from deposit (88).

One blade is present from (87). It has a facetted platform and a mottled pale grey/white patina.

Two arrowheads came from the site. One of them is a very small example of a leaf-shaped arrowhead (Green 1984, Type 4A). It is on a thin flake and is minimally retouched around its edges. It is of earlier Neolithic date. A barbed and tanged arrowhead of early Bronze Age date was also found. It is a quite small bifacially flaked piece and has its tang and, probably, one barb, broken off; they both have straight edges. The other barb is small and pointed. It is comparable with Green's Sutton type (Green 1984). The tip of the point is also broken; this may have occurred during use.

Two pieces have been classified as knives. One is a neat plano-convex knife, from findspot (13), with flaking of most of its right edge, and the distal end of its left edge on its dorsal face. The left edge is also flaked on the ventral face and the left edge is worn smooth and has some damage. The proximal end is retouched around both faces to a rounded blunt end. Such knives are most likely to be of early Bronze Age date; they are often associated with Food Vessels or Beaker pottery (Butler 2005, 172). A thin, almost leaf-shaped, flake with shallow invasive flaking along most of its right edge has also been classified as a knife and this was found in deposit (87).

A retouched flake, a retouched blade, an utilised flake and an utilised blade are present. The latter piece, which was found in deposit (87), may have deliberate serration on part of its edge. Serrated pieces are most likely to be of an earlier Neolithic date.

This small assemblage probably represents activity during more than one period. There is a mixture of flake types with one or two pieces having been struck from prepared cores and likely to date to the earlier Neolithic, the small leaf-shaped arrowhead is of earlier Neolithic date and so might be the possible serrated piece. Other flakes and the irregular cores may well date to the later Neolithic period or Bronze Age and the barbed and tanged arrowhead and plano-convex knife are of earlier Bronze Age date.

The patinated nature of the flint may reflect the raw material type or the soil and post-depositional conditions at the site itself.

Appendix 7.2: Romano-British Pottery

By Alice Lyons

A total of 26 Romano-British pottery sherds, weighing 0.457kg, was recovered from this excavation.

The majority of the pottery dates from the later part of the Romano-British period (3rd and 4th centuries) with some evidence of continuity into the early 5th century. Mildenhall is famous for its Late Roman activity, particularly for the discovery of an exceptionally rich hoard of precious metal objects, known as the 'Mildenhall Treasure'.

The condition of the pottery is good, as much of the assemblage was only moderately abraded.

The assemblage was analysed in accordance with the guidelines for analysis and publication laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). The sherds were examined using a hands lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types present. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

The pottery recovered from the site was similar in character to that recovered from SSMR MNL 585 and is summarised in Table 40.

The most common type of pottery found was unsourced shell tempered ware. One sherd (from unstratified finds (88)) was of a coarse fabric and manufacture suggesting they may have been produced at the very end of the Romano-British era (early 5th century).

A small amount of unsourced oxidised material was also found, this is also of local manufacture – probably made at the same kiln sites as the Sandy grey wares.

The main coarse ware identified were shell tempered wares from several different sources. The large storage jar fragments may originate from the Lower Nene valley (Perrin 1996, 119), while much of the remainder of the pottery is consistent with manufacture at the Harrold kilns in Bedfordshire (Brown 1994, 51) or other unsourced East Cambridgeshire, North Suffolk production sites copying their wares.

The most frequently found fine ware are the Hadham red ware (Tomber and Dore 1998, 151). This pottery was produced in Hertfordshire in the Late Roman period. A small amount of Oxfordshire red wares were also found (Young 1977), in particular a white slipped mortarium (see below).

Fabric	Sherd count	Sherd weight (g)	Sherd weight (%)
Unsourced shell tempered ware	4	161	35.23
Sandy grey ware	12	142	31.07
Nene Valley colour coat	4	88	19.26
Sandy oxidised ware	2	25	5.47
Hadham redware	2	21	4.60
Grey ware with grog inclusions	2	20	4.37
Total	26	457	100

Table 40. Site SSMR MNL 586, the pottery fabrics listed in descending order of weight (%).

Ctxt	Fabric	Form	Qty	Wt(g)	Comment	Date
20	Shell-tempered ware	A very thick sherd possibly from a storage jar but it may also be CBM.	1	86	Thick abraded sherd	1st to 4th century
20	Nene Valley colour coat	A jar body sherd	1	20	A thick fresh sherd with a grey external slip and orange internal one	3rd to 4th century
20	Hadham red ware	An undiagnostic body sherd	1	2	A small abraded sherd	4th century
66	Sandy grey ware	A decorated jar body sherd	1	9	A small abraded sherd with combed decoration	2nd to 3rd century
74	Grey ware with grog inclusions	Undiagnostic body sherds	2	20	Moderately abraded	Mid 1st to mid 2nd century
74	Shell-tempered ware	Undiagnostic body sherds	2	15	Moderately abraded	1st to 4th century
74	Sandy oxidised ware	Undiagnostic body sherd	1	5	Moderately abraded	1st to 4th century
74	Sandy grey ware	Jar/bowl rim and undiagnostic body sherds	4	37	Severely abraded	Mid 1st to 2nd century
76	Sandy grey ware	Decorated jar body sherd	1	10	Finger nail incised on shoulder, possibly very late Roman	2nd to 4th century
82	Sandy oxidised ware (coarse)	Storage jar body sherd	1	20		1st to 4th century
82	Sandy grey ware	Jar rims and undiagnostic body sherds	4	67	Severely abraded, possibly later Roman	2nd to 4th century
88	Shell-tempered ware	A very thick storage jar body sherd	1	60	A thick abraded sherd	1st to 4th century
88	Sandy grey ware	Undiagnostic body sherds	2	19	Very coarse, suggests late RB, almost Romano-Saxon	4th to early 5th century
88	Hadham red ware	A flagon handle	1	19	An abraded handle fragment	4th century
88	Nene Valley colour coat	A flanged dish rim	1	23	Severely abraded, most of the colour coat is missing	4th to early 5th century
88	Nene Valley colour coat	A lid with a square flat rim	1	37	Severely abraded,	4th century
88	Nene Valley colour coat	A medium mouthed jar rim with a double rim	1	8	Severely abraded and sooted during use	3rd to 4th century

Table 41. Site SSMR MNL 586 catalogue of Romano-British pottery.

Appendix 7.3: Post-Romano-British Pottery

By Sue Anderson

One sherd of late medieval and transitional pottery was found in pit fill (66). The sherd is thickwalled and glazed internally only, with a reduced core and external surface. The fabric contains soft ferrous fragments and some chalk; it may be a Cambridgeshire or Essex version of LMT.

Appendix 7.4: Ceramic Building Material

By Sue Anderson

Six fragments, representing four bricks/tiles, were collected from three contexts. Two white/pinkfiring bricks were found in ditch fill (42) and pit fill (66), the latter in association with a white-firing peg tile. These fragments were all post-medieval, despite the similarity of the bricks to earlier estuarine types. White-firing bricks are typical of this part of the Fens in Suffolk and Cambridgeshire.

A fragment of Roman flanged tegula came from spoil (88). The fragment was in a soft medium sandy orange fabric. The flange had been broken off and the base was sooted and burnt. This is typical of tiles which have been re-used in Saxon hearths and it seems likely that there was occupation of this date somewhere in the vicinity.

Ctxt	Fabric	Form	No	Wt/g	W	Т	Abr	Comments	Date
42	wsg	LB	1	88		50		pink with white surfaces, handmade, straw impressions on upper surface	Post-med
66	wms	LB	3	98				=1 brick, poorly mixed white & red clays, laminated	Post-med
66	wms	RT	1	48		12		streaky red clay in white matrix	Post-med
88	msf	FLT	1	42		21		flange lost, burnt on base	Rom

Table 42. Catalogue of CBM from SSMR MNL 586.

Appendix 7.5: Small Finds

By Julia Huddle

Ctxt	SF	Material	Object	Description	Date
88	100	Copper alloy	Brooch	Incomplete bow brooch	Roman
88	101	Copper alloy	Metalworking debris	17g	Undiagnostic
88	105	Iron	Artefact	Badly corroded object fragment	Undiagnostic
88	108	Copper alloy	Artefact	Domed ?boss with three of originally four petals.	Unidentified

Table 43. Catalogue of small finds (non-numismatic) from SSMR MNL 586.

Ctxt	Material	Object	Description	Qty	Wt(kg)
88	Lead	Bullet	Small pistol bullet	1	
88	Lead	Shot	D: 6mm	1	
88	Copper alloy	Mount	Openwork symmetrical mount with two integral lugs on reverse	1	
88	Lead	Spillage		8	0.127

Table 44. Catalogue of non-small found metalwork from SSMR MNL 586.

Appendix 7.6: Numismatic Evidence

By Andy Barnett

Table 45 is a catalogue of numismatic finds from this site.

SF	Ctxt	Denomination	Metal	State
102	88	Irregular Issue	Cu Alloy	Rome
103	88	AE4	Cu Alloy	Rome
104	88	AE3	Cu Alloy	Rome
106	88	AE3	Cu Alloy	Rome
107	88	As?	Cu Alloy	Rome

Table 45. Catalogue of numismatic finds from SSMR MNL 586

Appendix 7.7: Human Skeletal Remains

By Sue Anderson

One tooth fragment was a root tip and was too small for identification, and another small fragment was loose in the right third molar socket. The most complete was a very worn anterior tooth, lacking the anterior part of the root. It appeared to be the lower left canine, although it is possible that it was the left first premolar. Apart from this, and the roots of the right second incisor and the left second molar which were still in situ, all teeth had been lost either ante- or post-mortem. Ante-mortem loss had affected both first molars, that on the left showing evidence of an abscess prior to the loss. The second molar root showed considerable attrition which had removed the enamel and resulted in exposure of the pulp cavity, probably resulting in another abscess, although this is not visible. The ?canine was also very worn, but unevenly, resulting in a sloping surface which also exposed the pulp cavity, and left a small amount of enamel on the lingual side. Despite attempts to clean the sockets, the presence of a very fine white ?chalk/clay deposit made assessment of the presence of disease difficult. Porosity was visible at the base of the socket for the right second

molar, and it is possible that all four premolars were also affected, suggesting the presence of small abscesses.

The sex of the individual was difficult to determine as very few sexual indicators were present. Overall, the mandible is relatively small, and the distance between the foramen mentale (42mm) is within the female range in comparison with other East Anglian populations. However, these are of later date and may have been larger than their prehistoric ancestors. The chin is pointed and slightly robust, but the overall appearance of the jaw is quite child-like. It is suggested that the individual was female. Based on tooth wear she was probably an older, but attrition was probably a more rapid process during this period, so 'old' is merely a relative term and she may not have been much over 40 years of age at death.

Teeth are recorded in the form illustrated below.

Maxilla R. 8765432112345X7UL.								
Mandible	O 7 6 5 4 / / 3 4 5 6 7 8							
	A							
<u>Code</u>	Meaning							
1 2 3 etc.	Tooth present in jaw.							
Х	Tooth lost ante-mortem.							
1	Tooth lost post-mortem.							
А	Abscess present (above/below tooth number).							

Attrition patterns are coded according to the scores suggested by Bouts and Pot (1989, modified version of Brothwell's original tooth wear chart).

Catalogue

Sk. 3	?Fe	?Female, older adult														
Description:	Boo	Body of mandible only.														
Condition:	Go	Good, well preserved, stained dark brown.														
Determination of age:	Тос	ooth wear.														
Determination of sex: Mental protuberance is relatively pointed, lower mandible is thick, but overall appearance relatively child-like, and the mandible is small.							nce is									
Teeth:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	1	Х	1	1	1	1	1	1	1	3?	1	1	Х	7	1
		A?							-					Α		-
Tooth wear:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	6+	-	-	-	7	-
Dental pathology:	Slic	aht peri	odonta	al dise	ase ar	ound b	oth fir	st mol	ars.							_

Measurements

Mandible		
Bicondylar width	W1	-
Bigonial breadth	GoGo	-
Foramen mentale breadth	ZZ	42mm
Symphyseal height	H1	30mm
Mandibular length	ML	-
Bicoronoid breadth	CrCr	-
Min ramus breadth R.	RB'	-
Coronoid height R.	CrH	-
Condylar length R.	CyL	-
Gnathion-gonion length R.	GnGo	-

Appendix 7.8: Faunal Remains

By Julie Curl

All of the bone was examined primarily to determine range of species and elements present and the amount of material that could produce measurable, ageable bone. The assemblage was scanned to determine if bone, horn or antler working was present in the assemblage. Butchering and any indications of skinning, hornworking and other modifications were recorded. When possible a record was made of ages and any other relevant information, such as pathologies. Counts and weights were noted for each context and each species identified. All information was input directly into an Excel database for analysis. The assessment was carried out following a modified version of guidelines by English Heritage (Davis 1992). A catalogue of the assemblage is included as Table 46.

A total of 1.765kg of faunal remains, consisting of thirty-six elements, was recovered from excavations at this site. Bone was produced from eighteen contexts, with the assemblage provisionally dated to the Bronze-Age to Romano-British period, one group of animal bone was found with a human mandible dated to the Bronze-Age. The bones are in good condition, although some are in a fragmentary state from butchering. Many bones are stained a dark mahogany brown colour, which is typical of bones that have lain in an organic and waterlogged deposit. The presence of several lower limb and foot bones in deposit (47) would suggest these limbs were disposed of complete.

Three species were identified, the most common being cattle and then sheep; one element from a deer was also found.

The cattle remains in deposit (47) were of interest as they comprised of a complete metatarsal and a complete metacarpal, both juvenile. Both metapodials were recovered with all of the proximal phalanges, 3 out of 4 of the intermediate phalanges and a distal phalange; one carpal bone was also noted. Little butchering was observed on these bones, but there may be cuts from skinning; it would appear that these lower limbs were discarded whole.

The size and dimensions of the sheep bones in this assemblage suggest animals of a small and delicate stature, typical of the small Soay type sheep kept in the Roman period.

A large tibia from a Red Deer was recorded from find spot (04), the size of the bones suggests a mature stag. The deer had been butchered, with knife cuts visible on the bone from skinning; the bone is stained a dark mahogany brown which suggests the bone had lain in organic, waterlogged conditions for a time.

This assemblage is important as there are relatively few bone assemblages of this date and the preservation is good for the period. The assemblage appears to be derived from primary butchering and food waste. The presence of the butchered deer demonstrates that at least some hunting took place. It is recommended that the assemblage is more fully identified, catalogued and measured, compared with other assemblages and the report updated. It is estimated that the analysis would take 1.5 days.

Ctxt	Qty	Wt(kg)	Species	Spp.Qty	Age	Butchering	Comments
4	1	0.321	Deer - Red	1	adult	butchered	large tibia, stag, many cuts, mahogany colour
5	1	0.063	Mammal	1		butchered	
6	1	0.024	Mammal	1			
7	1	0.045	Mammal	1			
8	1	0.148	Cattle	1	adult	butchered	radius
9	1	0.013	Sheep	1		butchered	tibia, small and slender
10	1	0.024	Cattle	1	adult		molar
11	1	0.006	Sheep	1		butchered	metacarpal, small and of delicate stature
12	1	0.153	Cattle	1	adult	butchered	radius
17	2	0.107	Cattle	1		butchered	tibia
17			Mammal	1			
18	1	0.085	Cattle	1	adult	butchered	humerus
20	1	0.008	Sheep	1	adult		molar
47	16	0.453	Cattle	13	juv	cut	metatarsal and metacarpal, complete with nearly all phalanges

Ctxt	Qty	Wt(kg)	Species	Spp.Qty	Age	Butchering	Comments
47			Mammal	3			
62	3	0.281	Cattle	3	adult	butchered	metatarsal, metapodial fragments
63	1	0.007	Cattle	1			premolar
64	1	0.018	Cattle	1	juv	butchered	vertebrae
74	1	0.001	Mammal	1			
87	1	0.008	Cattle	1	adult		carpal

Table 46. Catalogue of the faunal remains recovered from SSMR MNL586