# FINNINGLEY AND ROSSINGTON REGENERATION ROUTE SCHEME (FARRS) DONCASTER, SOUTH YORKSHIRE

Archaeological Evaluation Report



Ref: 84450.05 April 2012



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# **Archaeological Evaluation Report**

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Report reference: 84450.05

April 2012

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SITE CODE	84450	ACCESSION CODE	CLIENT CODE
PLANNING APPLICATION REF.		NGR	NGR SK 5894 9931 TO SK 6295 9942

VERSION	STATUS*	PREPARED BY	APPROVED BY	APPROVER'S SIGNATURE	DATE	FILE
1	E	СН	APN	LH	20/04/12	S:\PROJECTS\84450 (FARRRS TRIAL TRENCHING)\REPORTS
2	F				26/04/12	S:\PROJECTS\84450 (FARRRS TRIAL TRENCHING)\REPORTS

I= INTERNAL DRAFT E= EXTERNAL DRAFT F= FINAL



# **Archaeological Evaluation Report**

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# **Archaeological Evaluation Report**

# Summary

Wessex Archaeology was commissioned by Doncaster Metropolitan Borough Council (DMBC; hereafter referred to as the 'Client'), to undertake archaeological trial trenching on the Finningley and Rossington Regeneration Route Scheme (FARRRS) ('The Site', NGR SK 5894 9931 to SK 6295 9942). The scheme comprises a transport link between Junction 3 of the M18 and the junction of the A638 and B6463 to the south of Bessacarr, with links extending into Rossington. The area of works comprised a 33ha area. Wessex Archaeology (2011) previously undertook a scheme of geophysical survey and fieldwalking along the route which indicated extensive enclosures or field systems of uncertain date, although a single flint flake recovered from the fieldwalking hinted at a prehistoric date for the features in the west. The ditches at the easternmost extent of the survey area were thought to be associated with the nearby Rossington Roman fort, although no Roman finds were recovered from the fieldwalking survey.

The evaluation results demonstrated that the geophysical survey was largely accurate in identifying possible archaeological anomalies. Through comparison of the geophysics and trenched results we can determine the likely extent of the features revealed within the evaluation, and date of the anomalies revealed by the geophysical survey. The results may also allow us to further define a network of cropmarks bordering the Site. The archaeological features revealed during the evaluation were largely undated, but the presence of a redeposited sherd of Romano-British pottery in a probable post-medieval ditch hints at a similar date for some of the ditches, although a prehistoric (or later) date cannot be ruled out.

The ditches within the west of the route are likely to be Romano-British in origin, and excavated as boundary ditches or short lived animal enclosures. The lack of any finds strongly suggests that any settlement lay away from the Site. The ditches would have silted up relatively quickly and may have only been short lived, and there was little evidence for recutting. The sandy natural may have meant that any nutrients in the soil would have been exhausted relatively quickly and agricultural fields would not be long lived. Although deep it is unlikely that the ditches would have prevented animals straying, and the revealed postholes may have formed part of associated fences; hedge lines may also have been cultivated.

Although isolated features in the centre and east of the Site may also have been Roman in date, several ditches were aligned with modern field boundaries, and it is likely that most of the ditches in these areas were post-medieval in date. Despite Rossington Roman fort lying to the east of Area 4, no Roman (or post-medieval) features were identified in this area. It is likely that the area immediately to the west of the fort was pasture or scrubland. The central part of the Site had been subject to landscaping, possibly as a result of the construction of the motorway or railways, and any archaeological features would have been removed at this time. Peat deposits were also revealed in the central part of the Site, which was radiocarbon dated to the Early Bronze Age. The project archive is held at the offices of Wessex Archaeology in Sheffield and will be deposited in due course with Doncaster Museum under an accession number to be confirmed.



# **Archaeological Evaluation Report**

# **Acknowledgements**

Wessex Archaeology would like to thank Phillippa Adams of Mott MacDonald Ltd for her help and assistance throughout the project. The work was monitored by Andy Lines of South Yorkshire Archaeology Service (SYAS), with environmental advice provided by Andy Hammon of English Heritage.

The fieldwork was directed by Chris Swales who was assisted by Charlotte Burton, Ralph Collard, Sam Fairhead, Martin Huggon, Matt Weightman and Dane Wright. The project was managed by Andrew Norton. The report was compiled by Chris Harrison and the illustrations produced by Chris Swales.

This finds were analysed by Lorraine Mepham and the environmental samples were processed by Nicki Mulhall. The bulk and waterlogged samples were assessed by Dr Chris J. Stevens. Soils and sediments (including requirement and sampling for microfossils) were assessed by Nicki Mulhall and David Norcott. Wood identification was carried out by Dr Catherine Barnett. Radiocarbon sampling and liaison was provided by Dr Chris J Stevens, and radiocarbon dating by the Scottish Universities Environmental Research Centre Radiocarbon Laboratory, University of Glasgow.



# **Archaeological Evaluation Report**

### 1 INTRODUCTION

### 1.1 **Project Background**

- Wessex Archaeology was commissioned by Doncaster Metropolitan 1.1.1 Borough Council (DMBC; hereafter referred to as the 'Client'), to carry out an archaeological evaluation on the Finningley and Rossington Regeneration Route Scheme (FARRRS; hereafter the 'Site', NGR SK 5894 9931 to SK 6295 9942, Figure 1).
- 1.1.2 The scheme comprises a transport link between Junction 3 of the M18 and the junction of the A638 and B6463 to the south of Bessacarr, with links extending into Rossington. The area of works comprised a 33ha area.
- 1.1.3 Wessex Archaeology (2011) previously undertook a scheme of geophysical survey and fieldwalking along the route which indicated extensive enclosures or field systems of uncertain date, although a single flint flake recovered from the fieldwalking may hint at a prehistoric date for the features in the west. The ditches revealed at the easternmost extent of the geophysical survey area were thought to be associated with the nearby Rossington Roman fort, although the evaluation has subsequently disproved this theory.
- 1.1.4 Towards the centre of the survey corridor, a probable former structure was identified, along with an extended anomaly possibly relating to industrial activity such as coal, aggregate or mineral extraction. A number of former field boundaries were also identified, several of which appear to have been continuations of extant boundaries outside the survey area.
- As potentially significant archaeological remains were identified in the 1.1.5 geophysical survey, and following discussions with Andy Lines (SYAS), Mott MacDonald (2012) prepared a specification for 2,570m of linear trenching (88 trenches x 1.8m wide) in order to determine the need for further mitigation prior to development.
- 1.1.6 Wessex Archaeology produced a Written Scheme of Investigation (WSI) detailing how the archaeological requirements of the work would be met (Wessex Archaeology 2012), which was approved by Mott MacDonald and SYAS prior to starting work.
- 1.1.7 The WSI originally detailed the excavation of 83 trenches measuring 25m by 1.8m, 2 trenches measuring 20m by 1.8m and 3 trenches measuring 10m by 1.8m. However, only 70 trenches could be excavated due to access constraints (Figure 2). The trenches were targeted over geophysical anomalies as well as areas devoid of geophysical anomalies, in order to assess the accuracy of the geophysical survey.



This report details the findings of the trial trenching in conjunction with an 1.1.8 assessment of the geophysical data.

### 1.2 **Site Location and Topography**

- 1.2.1 The proposed route extends east from Junction 3 of the M18 and runs to the south of the M18, to the junction of the A638 and B6463 to the south of Bessacarr. Part of the route extends to the south to serve New Rossington (**Figure 1**). The proposed route is c. 4.5km in length.
- 1.2.2 The route runs through existing agricultural land, and the geology of the route comprises alluvium, clay, silt, sand and gravel to the west, and bands of peat, river terrace sands and gravels and Head deposits to the east (http://maps.bgs.ac.uk). The route lies between 2m and 5m AOD in the west and between 7m and 9m AOD in the east.

### 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

### 2.1 General

2.1.1 The following summary is based on a review of known sites along the route of the proposed road.

### 2.2 **Prehistoric**

2.2.1 Evidence for prehistoric activity within the vicinity of the Site is represented by nearby find spots. Mesolithic lithic artefacts were discovered on the banks of the River Torne (SYAS 04926), and a Neolithic axe head north of Rossington (SYAS 01812/01). Furthermore, palaeochannels of the former lake Humber (which began to fill in prior to 9050BC), were identified at Potteric Carr to the north of the M18 (SYAS 04922). The area was likely to have been wetland and fen-carr during the prehistoric period.

### 2.3 Iron Age/Romano-British

- 2.3.1 There is also evidence within the area for Iron Age and Romano-British activity. Significantly, the Site lies close to the north-east corner of Rossington Roman Fort, a Scheduled Ancient Monument (SAM no. 1004823). The site of the fort was identified from earthworks comprising a pair of parallel square ditches, surrounding an area of approximately 23 acres.
- 2.3.2 Situated approximately 500m to the north-east of the Site is the Roman Potteries site at Cantley Rossington Bridge (SAM no. 1004787); an Iron Age and Roman settlement site and pottery production centre. Activity in the area is also represented by Romano-British field systems, identified from aerial photographs to the south and north-west of the Site (SYAS 02469/01, 02896/01, 00965/01-02, and 00067/01; **Figure 2**), the discovery of artefacts within the close vicinity of the Site (SYAS 01876/01), and the location of an alternative route of the former Roman road (Ermine Street) which passes north-south approximately 500m to the east of the Site (Bishop 2010).



### 2.4 Medieval/Post-Medieval

- 2.4.1 By the medieval period the area was still largely agricultural with the majority of the Site lying within former wetland common (Lines et al 2008). The present large fields were probably created in the 17th century during Cornelius Vermuyden's drainage improvement programme (*ibid.*). Medieval settlement in the area includes Draw Dykes moated site to the north of Rossington (SYAS 00231).
- 2.4.2 There was increasing urban development and intensification in industrial and agricultural practices during the post-medieval period. There is a history of coal extraction in the area, and Rossington Colliery (SYAS 04346/01), situated to the south of the Site, opened in the early 1900s.

### 3 **OBJECTIVES AND METHODOLOGY**

### 3.1 Aims and Objectives

3.1.1 The general objectives outlined in the WSI (Wessex Archaeology 2012) are detailed below:

# General

- 3.1.2 The general aims of the work were:
  - To identify and record any archaeological features exposed during trenching;
  - To recover any artefact evidence during trenching;
  - To make available the results of the investigation;

# Specific

- 3.1.3 The specific objectives of the work were to:
  - Confirm the accuracy of the results of the previous geophysical survey;
  - Confirm or disprove the presence of Iron Age-Romano-British 'brickwork' field system across the Site;
  - Identify evidence for Roman activity associated with Rossington Roman Fort:
  - Define the nature and date of the possible structure identified through the geophysics (Area 3) feature 4019;
  - Investigate the features identified through geophysical survey in close proximity to the Castle Hills mound;
  - Investigate surviving peat deposits:
  - Identify any previously unknown archaeological remains and define their location, extent, date, function and form;
  - Provide sufficient information to devise a suitable mitigation strategy if required.



### 3.2 Methodology

# General

3.2.1 The methodology employed to excavate and record trial trenches, to process finds and environmental samples, as well as archive Site records and material followed standard Wessex Archaeology guidelines and procedures as outlined in the Site Written Scheme of Investigation (Wessex Archaeology 2012). All Wessex Archaeology procedures conform to industry best practice as outlined in guidelines issued by the Institute for Archaeologists (IFA 2008a and 2008b), English Heritage (2005 and 2011), the Museum and Galleries Commission (1992) and the United Kingdom Institute of Conservation (2001).

# Machine Excavation

The archaeological work comprised the mechanical excavation of 70 3.2.2 trenches to the first archaeological horizon or natural geology (whichever was encountered first). All mechanical excavation was undertaken by a JCB 3CX excavator fitted with a toothless ditching bucket, whilst under direction from an appropriately qualified archaeologist. Once archaeological deposits or natural had been encountered, excavation proceeded by hand unless previously agreed with the Client and SYAS.

# Hand Excavation

3.2.3 All excavation and recording was undertaken by qualified archaeologists employed by Wessex Archaeology. Any archaeological remains encountered were recorded, and where necessary excavated to a safe working depth or their base, whichever was reached first. Features of whatever origin requiring clarification were cleaned by hand and recorded in plan at an appropriate scale.

# Recording

- 3.2.4 All archaeological features and deposits encountered were recorded using Wessex Archaeology pro forma recording sheets, and a continuous unique numbering system. All archaeological features were drawn to an appropriate scale and photographed using 35mm monochrome prints and colour transparencies as well as digitally.
- 3.2.5 The spot height and levels of all principal features and drawings were taken in metres relative to Ordnance Datum.

### 3.3 Finds

- 3.3.1 Finds were treated in accordance with the relevant guidance (UKIC 2001; MGC 1992; English Heritage 2005, 2006; IfA 2008b).
- 3.3.2 All artefacts from excavated contexts were retained, except those from features or deposits of obviously modern date. All retained artefacts were washed, weighed, counted and identified.

### 3.4 **Environmental Samples**

Bulk soil samples for plant macro-fossils, small animal and fish bones and 3.4.1 other small artefacts were taken from appropriate dated/datable archaeological deposits. The collection and processing of environmental



- samples was undertaken in accordance with English Heritage guidelines (English Heritage 2011).
- 3.4.2 Monoliths and bulk samples were taken through peat deposits to assess the nature of the material and retrieve suitable samples for radiocarbon dating.

### 4 ARCHAEOLOGICAL RESULTS

### 4.1 Introduction

4.1.1 The Site can be divided into four interpretative areas based on the concentration of features within the Site. Area 1 is defined by Trenches 1-24, Area 2 by Trenches 25--53, Area 3 by Trenches 71-83 and Area 4 by Trenches 85-88 (Figure 2). Archaeological features were observed in Areas 1-3 areas, however, the densest area of archaeological activity was located within Area 1. Archaeological descriptions are described by context, full details of all contexts can be found in **Appendix 1.** Sections of key or typical features are reproduced as figures (see below for detail), but contexts may be described in the text that are not illustrated. Trenches 54-70 and 84 were not excavated due to access issues.

### 4.2 **Natural**

4.2.1 In general the natural across Site could be characterised as a light yellow or at times white sand or sandy silt.

### 4.3 Site Sequence

- 4.3.1 In general the natural geology was revealed between 0.2m and 0.6m below ground level. Where archaeology was encountered it was invariably cut into the natural layers. Peat layers were observed in Trenches 30, 31, 33 and 35, which may have represented the filling up of natural hollows.
- 4.3.2 The majority of the trenches displayed some form of postdepositional alteration. High levels of bioturbation were noted across the entire Site, whilst the soils formed especially in the west of the route had podsolised.
- 4.3.3 Between Trenches 46 and 53 a reddish brown clay made ground layer, containing rubble and stone, overlay the natural. The deposit represents a build up of material that was probably associated with a temporary works.
- 4.3.4 Where they had not been removed by modern ploughing, thin layers of relic ploughsoils overlay the natural and archaeological deposits. The modern ploughsoil or topsoil completed the stratigraphic sequence.
- 4.3.5 The features encountered were mainly confined to Areas 1 and 3, and could be split into three categories: wide ditches, narrow ditches or gullies, and post or stake holes. The three types of features were present in all three areas and did not follow any sequential rigidity (narrow and wide ditches could be contemporaneous or belong to different eras). The majority of linear features displayed evidence for an initial gradual silting, followed by a rapid backfill, suggesting similar uses for features.



Where the bases of wide linear features were reached through hand 4.3.6 excavation (less than 1m in depth from the ground surface) the majority were cut as gentle 'U'-shapes. The majority of the narrow ditches were very shallow in comparison and were straight sided with a flattish base.

### 4.4 Area 1 (Trenches 1-24)

# Introduction

4.4.1 Within Area 1, Trenches 1-3, 5, 13-15 and 21 contained no archaeological features, whilst a series of ditches and gullies forming field boundaries and drainage channels were revealed in Trenches 4, 6-12 and 16-20. These ditches and gullies have been separated into two types: those that are wide (2.5-3m, possible enclosure) and those that are narrow (0.5-1m, possible drainage). The majority of the ditches, no matter what width, had gradually sloping sides (see Figures 3-6).

# Trenches with archaeology

- 4.4.2 Trench 4, located over an area without any geophysical anomalies, contained a cut feature (403) running north-east to south-west that was filled gradually with lenses of silt before being rapidly backfilled (**Plate 1**). The cut feature (403) was 2.6m wide, falling into the 'wide' category of ditches. A field drain cut through the fill of 403.
- 4.4.3 Trench 6 ran from east to west and was located over three intercutting geophysical linear anomalies. Two features were identified in Trench 6, 602 (Plate 2) - a north-west to south-east aligned narrow ditch, and 604 (Plate 3) - a north-south aligned wide ditch with a hedge line running along its east edge. Ditch 604 was rapidly filled with ploughsoil that contained modern pot and animal bone. Ditch 602 was filled with organic material, which had subsequently podsolised.
- 4.4.4 Trench 7, running east-west, and Trench 8 running north-west to south-east, were located over the same irregular linear geophysical anomaly. Where both of these trenches intersected the geophysical anomaly, a large 3m wide ditch was encountered (704 running north-west to south-east and 803 (Plate 6) running north-east to south-west; see Figure 4 for sections and Plate 4). The ditch was gradually filled with lenses of silt (706 and 805/6 respectively) before being rapidly filled by a deposit that contained modern pottery in Trench 8 (705 and 804). Trench 8 also contained a 1m wide ditch to the west of 803 (ditch 810). This narrow ditch was very shallow and contained a single silting deposit, possibly suggesting these features were used for drainage. North-east to south-west aligned shallow gullies were identified at the both ends of Trench 8 (809 and 812; Plate 7), although their purpose was unclear (possibly drainage as well). Trench 7 also contained an 'L' shaped cut feature, which turned out to be the base of a shrub (702; Plate 5).
- 4.4.5 Trenches 9, running north-east to south-west, and 11, running north-west to south-east, were placed over the same right-angled geophysical anomaly. Trench 9 revealed a 2m wide ditch running north-west to south-east (905), with a small gully cut into the southern side (903) (similar to 604 in Trench 6: see Figure 4 for sections and Plate 8). The base fill of 905 formed as gradually weathered lenses of silt (908) and contained a single sherd of Roman pottery. Deposit 908 was overlain by a rapidly backfilled mixed



- material (906 and 907), similar to that filling 604. The primary fill of gully 903 was a silting deposit (904) below backfill 906, which also filled 905 suggesting that 904 and 908 were also deposited at the same time.
- 4.4.6 Despite the presence of the Romano-British pottery it is likely that ditch 905 was post-medieval in date; the fills were identical to those in ditch 604, which contained a dumped ploughsoil with post-medieval finds.
- 4.4.7 A shallow narrow ditch was excavated in Trench 11 and was similar in nature to 1801/4 (Plate 9) and 2005 (Plate 10) excavated in Trenches 18 and 20 respectively (see below). Gully 1103 (Plate 11), had steep sides and a flat base and was filled with silt before being recut, suggesting this may have been a drainage ditch.
- 4.4.8 Trenches 10 and 12 contained similar archaeological features. Trench 10 was excavated running over a north-south aligned linear geophysical anomaly, whilst Trench 12 was excavated running from north-east to southwest and was located over a north-west to south-east linear geophysical anomaly. The linear feature in Trench 10 was seen to be a 2m wide ditch with an irregular base (1003; Plate 12), whilst the linear feature in Trench 12 was seen to be a 3m wide ditch (1203; Plate 14). Both ditches were cut as 'U'-shapes and filled with a thick mixed layer (1005 and 1205), suggesting a rapid backfilling episode. A lack of a silting layer at their bases suggests that 1003 and 1203 were cleaned after opening. A silting layer (1004 and 1204) within a shallow scoop in 1005 and 1205 was also recorded. A field drain cut the fills of both ditches.
- 4.4.9 Trench 16 ran from north-west to south-east and was located over a northeast to south-west linear geophysical anomaly. In addition to identifying the geophysical anomaly as a ditch (1603), an additional ditch was identified to the north (1609; Plate 15). Both ditches displayed a similar fill sequence of lenses of silt overlain by a rapidly deposited backfill (see 1604-1607). The base of ditch 1603 was not reached due to health and safety concerns (see section, Figure 6).
- A posthole was also recorded (1614) cut into the base of the north side of 4.4.10 ditch 1609. The posthole was 0.45m deep, irregular in plan, and filled with dark grey sand (1613).
- Trenches 18, 19 and 20 were located over a sequence of linear features that 4.4.11 form a sequence of rectangular enclosures and correspond with cropmark data. Trench 16 (feature 1603) may form a rectangular enclosure with the linear feature uncovered in Trench 18. Trench 18 contained a singular narrow ditch, which had steep sides and a flat base (1801/4; Figure 6, section), identical to cut features in Trench 11 (1103) and Trench 20 (2005). Ditch 1804 was cut as a shallow 'U'-shaped ditch that was filled with an initial layer of silt (1805) below a slump of sandy silt (1806). A second 'U'shaped narrow ditch (1801) was then cut into the fills of 1804 and filled in the same way 1804 (1802 and 1803). Within Trench 20 a north-south aligned drainage ditch was also revealed (2003; Plate 16).
- Trench 19 was located over a east-north-east to west-south-west aligned 4.4.12 geophysical anomaly. The geophysical anomaly was revealed to be a 3.3m wide ditch (1905; Plate 17) filled with primary silts below a backfilled deposit



(1906 and 1907; see section on Figure 6), in a similar manner to ditch 704 in Trench 7. A second north-east to south-west aligned linear feature was also recorded (1903; Plate 18), which was a very narrow shallow possible infilled water channel.

- Trench 22 was north-south aligned over a cluster of circular geophysical 4.4.13 anomalies. Within Trench 22 was an area of bioturbation (Plate 19), interpreted as a tree throw (2205/6) and cut by a later 'U'-shaped east-west aligned ditch (2203, fill 2204; see Figure 6). The ditch 2203 was narrow and shallow and filled with a dark silty deposit. It is possible that this feature represents a drainage ditch and the circular anomalies may represent an area of trees.
- Trench 24 ran from east to west and was located to investigate three linear geophysical anomalies. Excavation of the trench revealed two land drains and a ditch (2404; Plate 20) to the east (see section on Figure 6). Ditch 2404 was 2.5m wide, 0.8m deep and filled with a primary silt deposit (2405 and 2406) below a rapidly deposited topsoil derived material (2407).

### 4.5 Area 2 (Trenches 25-53)

# Introduction

- 4.5.1 Area 2 contained few areas of archaeological features. However, Trenches 27 and 44 both targeted geophysical anomalies and revealed cut features, whilst linear features not identified by the geophysical survey were recorded in Trenches 25, 35, 34 and 37. These ditches and gullies can be separated into two types: those that are wide (2.5-3m, possible enclosure) and those that are narrow (0.5-1m, possible drainage). As in Area 1 the majority of the ditches, had shallow sides.
- 4.5.2 Trenches 30, 31, 33 and 35 encountered peat filled channels or layers within or above the natural, which may have represented the filling up of natural hollows. Trench 33 also contained a naturally filled possible water course (Figure 7).
- 4.5.3 Within Trench 30 peat was revealed 0.3m below ground level (31). A trial pit was dug into the peat to reveal a 0.9m deep sequence. No archaeological features were encountered.
- 4.5.4 Between Trenches 46 and 53 a reddish brown clay made ground layer, containing occasional fragments of ceramic building material, stone and pebbles, was encountered below the topsoil. The deposit was over 1m deep and indicated that this area of Site was subject to previous landscaping (see Figures 7 and 8).

# Trenches with archaeology

A north-south aligned drainage ditch (2503) was revealed in Trench 25. The 4.5.5 ditch was 0.9m wide and 0.25m deep and filled with a silty sand (2504). Trench 27 was located over a north-south aligned geophysical anomaly. The anomaly was seen to be a 2.8m wide ditch (2703; Plate 21) that was filled with a gradual accumulation of humic material (2705), before episodes of rapid deposition (2706/7). The deposits were overlain by a further episode of gradual humic accumulation (2708) below a backfilled deposit (2709; see



section on Figure 7). To the east of ditch 2703 root disturbance was noted, suggesting that a hedge may have originally existed to the east of the ditch.

- 4.5.6 Trench 31 was located over a geophysical anomaly and the south-eastern two-thirds of the trench was seen to comprise peat. Trial pit 1 was excavated into the peat and revealed a sequence 1.5m deep. Within this peat (11) the top of a sawn stake was uncovered. The stake was likely to have been driven into the peat and the lower part of the stake had rotted away. The stake was saw-cut and can be no earlier than Romano-British in date. A clearly modern stake, driven into the sandy natural 3106, was uncovered within the north-west part of Trench 31 (Figure 7) and it is likely that the stake within the peat was similarly dated.
- 4.5.7 Trench 34 ran across an area absent of geophysical anomalies. Upon excavation a narrow linear feature was revealed (3403; Plate 22), which was meandering and irregular in plan. Feature **3403** is most likely to be a natural water channel and it was filled by a silty clay (3404).
- 4.5.8 Trench 35 did not target any geophysical anomalies and contained a 0.9m deep channel filled with peat (Trial pit 2; 3503 and 21). This channel existed within the eastern third of the trench.
- 4.5.9 Trench 37 targeted an area of geophysical anomalies. Two shallow, narrow cut linear features were uncovered, running north-west to south-east (3703/5). These features were both filled with silty material (3704 and 3706) suggesting they functioned as drainage ditches. Cut 3703 was probably a recut of cut 3705 (Plate 23).
- 4.5.10 Although not targeted on any geophysical anomalies, a shallow feature was observed in Trench 39. The feature was c. 0.1m deep and possibly a posthole. However, the depth and location of the feature makes a root hole a more likely interpretation (Figure 7).
- 4.5.11 Trench 43 was also in an area devoid of geophysical anomalies but two narrow (c. 1m wide) ditches (4303 aligned north-west to south-east and 4307 north-east to south-west) were revealed (Plates 24 and 25). The ditches may have formed a right angle of the same feature and were filled with primary silts (4304) below an eroded/slumped fill (4305 and 4306). Trench 44 contained a linear feature that was first identified as a geophysical anomaly. The feature (4406; Plate 26) was 2m wide, parallel to a modern field boundary, and similarly filled to 4303 (4407-4409). All three features appear to be modern field boundaries (see sections on Figure 8).

## 4.6 **Area 3 Archaeological features (Trenches 71-83)**

# Introduction

4.6.1 Within Area 3, Trenches 71, 73-78, and 82-3 contained no archaeological features other than field drains and areas of bioturbation, whilst Trenches 72, 75 and 79-81 revealed a series of ditches and gullies forming field boundaries and a hollow way. The majority of the ditches, no matter what width, had relatively gently sloping sides. All the archaeological features can be argued as modern in origin (see Figures 9 and 10).



# Trenches with Archaeology

- 4.6.2 Trench 72 was located to target a north-west to south-east aligned linear geophysical anomaly. Excavation of Trench 72 revealed a shallow 6m wide hollow way (7203; Plate 27) with an undulating base caused by erosion. A clay trample layer overlay the base of the hollow way (7205), which was in turn overlain by an eroded sandy clay layer and dumped deposit (7204 and 7206; see section, Figure 10).
- 4.6.3 Trench 75 was located to target a north-west to south-east linear feature and revealed a 3m wide and 0.8m deep field boundary (**7503**). The ditch was filled with a dump of mixed topsoil and natural sand (**7504**), similar in nature to ditches **604** and **905**, and a modern date is likely.
- 4.6.4 Trench 77 was located to target a north-west to south-east complex of geophysical anomalies. Excavation of the trench revealed a north-west to south-east aligned narrow gully (7703) parallel to a land drain. Gully 7703 was filed by a dark silty material which had stained the adjacent natural (yellow sand) grey, suggesting that gully 7703 had carried water that had overflowed as the gully had filled. It is uncertain if the gully was water-cut or man-made as little survives. It is worth noting that 7703 follows the same line as adjacent plough scars, and it may have been a plough scar that was widened and infilled.
- 4.6.5 Trench 79 was located to investigate a north-west to south-east linear geophysical anomaly and the route of a road shown on the 1<sup>st</sup> edition OS map. Initially no archaeological remains were revealed so following discussions with Mott MacDonald and SYAS the trench was extended to the south-west. Following the trench extension a steep-sided narrow ditch (7907; Plate 28) was revealed, and filled at its base with modern brick and pebbles (7906) to act as a soak-away. No evidence of the road was revealed.
- 4.6.6 Trench 80 was excavated to investigate a meandering geophysical anomaly and revealed a 6.3m wide ditch (8003). Ditch 8003 was not bottomed as it exceeded safe working depths. The ditch was filled by silts (8008), below a humic fill (8007) and a leached light grey sandy podsol deposit (8006). The ditch was also filled by the erosion of a probable bank to the north (8009) and backfilled deposits (8004, 8005 and 8010; see section on Figure 10).
- 4.6.7 Ditch **8003** had two land drains placed within its fills, one stone and brick built and running east-west in the same direction as the ditch, and the other a ceramic sectional pipe running north-west to south-east feeding into the stone and brick drain. The bank slump and land drains were overlain by backfill layer **8005**, which lay beneath a subsoil layer **8004** a horizon between the backfill and topsoil **8001**.
- 4.6.8 Trench 81 was located to investigate an east-west aligned geophysical anomaly and revealed an east-west aligned linear feature (8103; Plate 29). This feature corresponds with a field boundary on early OS maps (up to 1930). Field boundary 8103 was filled with silts and dumps of silty clays (8104-8107) and had a land drain cut into its fills.



### 4.7 **Area 4 Archaeological Features (Trenches 85-88)**

4.7.1 No Archaeology was found within Trenches 85-88.

### 4.8 **Finds**

By Lorraine Mepham

4.8.1 Very few finds were recovered from the Site, all of them ceramic and comprising eight sherds of pottery and two incomplete bricks (Table 1).

Table 1: Finds by context (number / weight in grammes)

Context	Brick	Pottery
0804		1/7
8080		1/8
0908		1/35
7906	2/2936	
8304		1/6
8700		4/77
TOTAL	2/2936	8/133

- 4.8.2 Apart from one sherd of Romano-British coarse greyware pottery (context 908), all of the finds are of post-medieval date. The post-medieval pottery includes coarse redware, stoneware, and refined whitewares, dating from the 18<sup>th</sup> century onwards. The bricks are both unfrogged types, and are of probable 18<sup>th</sup> or early 19<sup>th</sup> century date.
- 4.8.3 No further analysis or reporting is necessary. Given the small quantity of finds recovered and their date range, retention for long-term curation is not recommended, and the finds will be discarded prior to archive deposition.

### 4.9 **Environmental Remains**

- 4.9.1 Four bulk samples were taken from the trenches during the evaluation and were processed for the recovery and assessment of waterlogged remains, charred plant remains and charcoal. Of these four samples, two came from non-waterlogged ditches thought to be of Romano-British date; ditch 905 (908) from Area 1 and ditch 8103 (8106) from Area 3, however, through further study of the deposits, ditch 905 is likely to be post-medieval in origin and the pottery redeposited.
- 4.9.2 The remaining two samples were taken from peat deposits within Trench 31. context 11 from 0.5m to 2m bgl, and Trench 35 Test Pit 2 (21) at 0.6m bgl. These are both in Area 2 and only some 200 to 300 metres apart.
- 4.9.3 There is little evidence for any material that is directly indicative of settlement activity within the ditches. The low levels of material within ditch 905 would at least hint at some potential settlement activity within the general area, although given the quantities (and later reinterpretation) this likely to be intrusive or reworked. Full details can be found in **Appendix 2**.



4.9.4 Two individual stones of sloe (Prunus spinosa) were extracted from a bulk sample 9 taken from the peat deposit **21** in Trench 35 in Area 2. The sample was taken to identify the date at which this probable terrestic detrial fen peat formation occurred. The radiocarbon determinations were calibrated using OxCal 4.1.7 (Bronk Ramsey 2001; 2009) and the IntCal09 calibration curve (Reimer *et al.* 2009) and are quoted in the form recommended by Mook (1986) with the end points rounded outward to 10 years. The sloe had an Early Bronze Age date of 1900-1650 cal. BC (3485±35 BP, SUERC-39313). Full details can be found in **Appendix 3**.

# 5 DISCUSSION

# 5.1 Reliability

5.1.1 The evaluation results demonstrated that the geophysical survey was largely accurate in identifying possible archaeological anomalies. Through comparison of the crop mark data, and geophysics and trenched results, we can determine the likely extent of the features revealed within the evaluation (see **Figure 2** and detailed trench plans), and date of the anomalies revealed by the geophysical survey. The geophysical anomalies have been shaded according to their likely origin on **Figure 2**. However, it is worth noting that a likely structure identified during the geophysical survey (**4019**; Wessex Archaeology 2012) was not revealed and the anomaly may have resulted from variations in the geology. No evidence of possible industrial activity was revealed, but the geophysical anomaly may have related to the levelling up of the ground within Area 2.

# 5.2 Interpretation

- 5.2.1 The archaeological features revealed during the evaluation were largely undated, but the presence of a redeposited sherd of Romano-British pottery in a probable post-medieval ditch hints at a Roman date for the adjacent features, although a prehistoric (or later) date cannot be ruled out.
- 5.2.2 The ditches within Area 1 are likely to be Romano-British in origin, and excavated as boundary ditches or short lived animal enclosures. The ditches appear to be in a brick-work arrangement, and nearby excavations have targeted similarly arranged ditches that did contian Iron Age and Romano-British dating evidence (Andy Lines pers. comm.). At FARRS The lack of any finds strongly suggests that any settlement lay away from the Site. The ditches would have silted up relatively quickly and may have only been short lived as their was little evidence for recutting. The sandy natural may have meant that any nutrients would have been in the soil would have been exhausted relatively quickly and agricultural fields would not be long lived. Although deep it is unlikely that the ditches would have prevented animals straying, and the revealed postholes may have formed part of associated fences and hedge lines may also have been cultivated. The ditches within Trenches 16, 18, 19 and 20 appear to form part of the same Romano-British enclosure identified by the cropmark data and geophysics results. The revealed features in the west of the site are also likely to form part of probable Romano-British brickwork enclosures/field boundaries.



- Although isolated features in Areas 2 and 3 may also have been Roman in 5.2.3 date, several ditches were aligned with modern field boundaries and/or filled with dumps of redeposited topsoil and natural, and it is likely that most of the ditches in these areas were post-medieval in origin. The eastern part of Area 2 had been subject to landscaping and much disturbance, possibly as a result of the construction of the motorway or railways, any archaeological features would have been removed.
- 5.2.4 Isolated peat deposits were only revealed in Area 2 and no associated archaeological remains were recovered. The peat was radiocarbon dated to the Early Bronze Age, and is broadly comparable to nearby deposits; peats have been sampled by borehole about 5 miles to the south of the Trench at Bawtry, associated with the River Idle (Dinnin and Weir 1997). These are located at around -3 to -4m OD and while some are thought to have formed in the Late Mesolithic the majority are thought to be no older than later Neolithic/Early Bronze Age in date (Gaunt 1994). These similar, terrestic woody (Alnus sp.) detrital fen peats are of similar thickness to those seen here being around 1 to 1.5 m thick, with extensive telmatic reedswamp peat coming to dominate in the late prehistoric/early historic period within this valley (Dinnin and Weir 1997).
- 5.2.5 Despite Rossington Roman fort lying to the east of Area 4, no Roman features were identified in this area. It is likely that the area immediately to the west of the fort was pasture or scrubland.

### 5.3 Conclusions

5.3.1 In conclusion probable Roman agricultural or pastoral field boundaries were revealed within the western part of the Site with little archaeological evidence revealed in the centre of the Scheme (although much of Area 3 was not evaluated). The ditches are likely to form part of the Romano-British brickwork field systems seen throughout the Doncaster area. The archaeological features in the east of the Site may be Roman in origin, but their fills and alignment make a post-medieval date more likely.

### 6 ARCHIVE AND COPYRIGHT

### 6.1 Archive

The project archive has been compiled into a stable, fully cross-referenced 6.1.1 and indexed archive in accordance with Appendix 6 of Management of Archaeological Projects (2<sup>nd</sup> Edition, English Heritage 1991), and Archaeological archives – a guide to best practice in creation, compilation, transfer and curation (Brown 2007). The archive is currently held at the offices of Wessex Archaeology in Sheffield, under the project code 84450. The archive will be deposited with Doncaster Museum under an accession number to be confirmed in due course. An OASIS form will be submitted at the time of deposition.

### 6.2 Copyright

6.2.1 This report, and the archive generally, may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which



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# **APPENDIX 1: CONTEXT INVENTORY**

Trench No	Context No	Туре	Interpretation	Depth of	Width (m)
1	101	Layer	Ploughsoil	deposits (m) 0.3	
-	102	Layer	Natural	0.5	
2	201	Layer	Ploughsoil	0.37	
_	202	Layer	Natural	0.57	
3	301	Layer	Ploughsoil	0.42	
3	302	Layer	Natural	02	
4	401	Layer	Ploughsoil	0.38	
·	402	Layer	Natural	0.50	
	403	Cut	Wide boundary ditch	0.6	2.75
	404	Fill	Base fill of 403 - lenses of dark		
			and light grey silt		
	405	Fill	2nd fill of 403 - weathered in bank		
	406	Fill	3rd fill of 404 - silt		
	407	Fill	Final back fill of 403		
5	500	Layer	Ploughsoil	0.3	
	501	Layer	Natural		
6	600	Layer	Ploughsoil	0.42	
	601	Layer	Natural		
	602	Cut	Narrow and shallow drainage	0.6	1.5
			gully		
	603	Fill	Final back fill of 602		
	604	Cut	Field boundary	0.8	2
	605	Fill	Secondary fill of 604		
	606	Cut	Ditch terminus	0.8	1.85
	607	Fill	Single fill of ditch terminus		
	608	Fill	Base fill of 602, podsolised/		
	C00	C	leached part of 603		
	609	Cut	Bioturbation		
7	610 700	Fill	Sole fill of 609 Ploughsoil	0.4	
,	700	Layer	Natural	0.4	
	701	Layer Cut	L shaped gully/hedge	0.09	1
	702	Fill	Secondary fill of 702	0.09	1
	703	Cut	Ditch	1+	3
	704	Fill	Secondary fill of 704	0.3	3
	705	Fill	Silting deposit within 704	0.5	
	707	Fill	Primary silt within 704	0.5	
8	801	Layer	Ploughsoil	0.5	
0	802	Layer	Natural	0.9	
	803	Cut	Wide boundary ditch	1+	2.53
	804	Fill	Main backfill of 803	0.58	2.55
	004		Main buckini oi 005	0.50	



Trench No	Context	Туре	Interpretation	Depth of deposits (m)	Width (m)
	805	Fill	Redeposited natural slump in 803	0.4	
	806	Fill	Redeposited natural slump in 803	0.36	
	807	Cut	Modern feature/land drain		
	808	Fill	Backfill of 807		
	809	Cut	Gully/hedge line	0.3	0.5
	810	Cut	Shallow ditch	0.5	1.5
	811	Cut	Gully terminus/Pit	0.5	0.6
	812	Cut	Gully	0.1	0.45
9	901	Layer	Ploughsoil	0.45	
	902	Layer	Natural		
	903	Cut	Gully	0.16	0.8
	904	Fill	Fill of 903		
	905	Cut	Ditch	0.5	2.5
	906	Fill	Fill of 905		
	907	Fill	Backfill of 905		
	908	Fill	Fill of 905		
10	1001	Layer	Ploughsoil	0.45	
	1002	Layer	Natural		
	1003	Cut	Ditch	0.7	2
	1004	Fill	Secondary fill of ditch		
	1005	Fill	Slumped fill of 1004		
11	1101	Layer	Ploughsoil	0.37	
	1102	Layer	Natural		
	1103	Cut	Ditch	0.3	1.3
	1104	Fill	Secondary dumped fill within 1103		
	1105	Fill	Primary silting in 1103		
12	1201	Layer	Ploughsoil	0.4	
	1202	Layer	Natural		
	1203	Cut	Ditch	1.23	3
	1204	Fill	Tertiary dumped fill of ditch 1203		
	1205	Fill	Secondary silting fill of 1203		
	1206	Fill	Primary silting of 1203		
13	1301	Layer	Ploughsoil	0.62	
	1302	Layer	Natural		
	1303	Cut	Animal burrow	0.13	0.3
	1304	Fill	Silty fill of 1303		
14	1401	Layer	Ploughsoil	0.32	
	1402	Layer	Natural		
15	1501	Layer	Ploughsoil	0.45	
	1502	Layer	Natural		



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
16	1601	Layer	Ploughsoil	0.35	
	1602	Layer	Natural		
	1603	Cut	Ditch	0.5	2
	1604	Fill	Slumped fill of 1603		
	1605	Fill	Backfill within 1603		
	1606	Fill	Slump within 1603		
	1607	Fill	Dumped fill in 1603		
	1608	Layer	Relic ploughsoil		
	1609	Cut	Ditch	0.8+	2
	1610	Fill	Fill of 1609		
	1611	Fill	Fill of 1609		
	1612	Fill	Fill of 1609		
	1613	Fill	Backfill of posthole 1614		
	1614	Cut	Posthole	0.2	0.4
	1615	Cut	Ditch		1.8
	1616	Fill	Fill of ditch 1615		
	1617	Fill	postpipe fill in 1615		
17	1701	Layer	Ploughsoil	0.3	
	1702	Layer	Relic ploughsoil	0.3	
	1703	Layer	Natural		
18	1800	Layer	Ploughsoil	0	
	1801	Cut	U shaped narrow drainage	0.3	0.6
			ditch, cuts through 1806		
	1802	Fill	Base fill of 1801 - silting		
	1803	Fill	Last fill of 1801 - Rapid fill -		
			leached podsolisation in		
	1804	Cut	process U shaped narrow drainage	0.4	0.8
	1004	Cut	ditch	0.4	0.0
	1805	Fill	Base fill of 1804 - silting		
	1806	Fill	Last fill of 1804 - Rapid backfill		
			cut through by 1801		
	1807	Layer	Natural	0.33	
19	1901	Layer	Ploughsoil		
	1902	Layer	Natural	0.4	
	1903	Cut	Ditch	0.4	1.2
	1904	Fill	Secondary ditch fill		
	1905	Cut	Ditch	0.7	3.5
	1906	Fill	Backfill of 1905		
	1907	Fill	Primary silting of 1906		
20	2001	Layer	Ploughsoil	0.4	
	2002	Layer	Natural		
	2003	Cut	Possible plough scar	0.2	0.6
	2004	Fill	Silt		



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	2005	Cut	Narrow and shallow drainage		1.6
	•••		gully		
	2006	Fill	Silt, contains Land drain		
21	2100	Layer	fragments. Ploughsoil	0.37	
	2101	Cut	Land drain	0.57	
	2102	Fill	Back fill in 2101		
	2103	Cut	Land drain		
	2104	Fill	Back fill in 2103		
	2105	Fill	Back fill in 2106		
	2106	Cut	Area of rooting		
	2107	Layer	Natural		
22	2201	, Layer	Ploughsoil	0.34	
	2202	Layer	Natural		
	2203	Cut	Water cut channel in 2206	0.3	1.8
	2204	Fill	Silt in 2203		
	2205	Cut	Tree throw	0.31	2.6
	2206	Fill	Fill of 2205	0.31	
23	2300	Layer	Ploughsoil	0.35	
	2301	Cut	Land drain	0.3	
	2302	Fill	Fill of 2302		
	2303	Layer	Natural		
24	2401	Layer	Ploughsoil	0.32	
	2402	Layer	Sub Soil	0.03	
	2403	Layer	Natural		
	2404	Cut	Boundary ditch	0.35-1	2.8
	2405	Fill	Base fill of 2404 - Laminated sequence of silt	0.35-0.81	
	2406	Fill	2nd fill of 2404 - weathered in bank	0.35-0.85	
	2407	Fill	Final fill of 2404 - Rapid backfill	0.35-1	
25	2501	Layer	Ploughsoil	0.3	
	2502	Layer	Natural		
	2503	Cut	Ditch	0.3-0.55	0.9
	2504	Fill	Ditch fill	0.3-0.55	
26	2600	Layer	Ploughsoil	0.2	
	2601	Layer	Natural		
27	2701	Layer	Ploughsoil	0.3	
	2702	Layer	Natural		
	2703	Cut	Boundary ditch	0.7	2.5
	2704	Fill	Base fill of 2703 - Humic laminations	0.6-0.7	
	2705	Fill	2nd fill of 2703 - Humic accumulation of foliage and twigs	0.5-0.7	



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	2706	Fill	3rd fill of 2703 - root	0.3-0.5	
			disturbance, intrusive		
	2707	Fill	3rd fill of 2703 - root	0.3-0.5	
	2700	eill	disturbance, intrusive	0.405	
	2708	Fill	4th fill of 2703 - Humic	0.4-0.5	
			accumulation of foliage and twigs		
	2709	Fill	5th fill of 2703 - rapid backfill	0.3-0.4	
	2710	Cut	Part of tree throw with 2712	0.0 0	
	2711	Fill	Part of tree throw with 2713		
	2712	Cut	Part of tree throw with 2710		
	2713	Fill	Part of tree throw with 2711		
28	2801	Layer	Ploughsoil	0.34	
20	2802	Layer	Natural	0.5 .	
	2803	Layer	Natural		
29	2901	Layer	Ploughsoil	0.45	
23	2902	Layer	Natural	0.43	
30	31	Layer	Sampled peat deposit (TP 3)		
30	32	Layer	Sampled natural (TP 3)		
	3001	Layer	Ploughsoil	0.3	
	3001	Layer	Natural	0.5	
31	11	Layer	Sampled peat deposit (TP 1)		
31	12	Layer	Sampled natural (TP 1)		
	3101	Layer	Ploughsoil	0.23	
	3102	Layer	Peat	0.23-0.5	
	3103	Layer	Sand band in peat	0.5-0.55	
	3104	Layer	Peat	0.55-0.7	
	3105	Layer	Natural	0.55 0.7	
	3106	Cut	Stakehole		
	3107	Fill	Fill of stakehole 3106		
32	3201	Layer	Ploughsoil	0.6	
J <u>-</u>	3200	Layer	Natural	0.0	
33	3301	Layer	Ploughsoil	0.25	
33	3302	Layer	Natural	0.23	
	3303	Layer	Sub Soil	0.4+	
	3304	Natural	Water cut channel	0.4+	
34	3401	Layer	Ploughsoil	0.4	
3.	3402	Layer	Natural	0	
	3403	Cut	Water cut channel	0.3	
	3404	Fill	Silt in 3403	0.5	
35	21	Layer	Sampled peat deposit (TP 2)		
33	22	Layer	Sampled natural (TP 2)		
	3501	Layer	Ploughsoil	0.45	
	3501	Layer	Natural	0.43	
	3302	Layer	Hatulul		



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	3503	Layer	Peat	0.45	
37	3701	Layer	Ploughsoil	0.45	
	3702	Layer	Natural		
	3703	Cut	Narrow and shallow drainage	0.15	1
	3704	Layer	gully Fill of 3703		
	3705	Cut	Narrow and shallow drainage	0.15	0.5
	2706		gully		
	3706	Layer	Fill of 3705	0.45	
	3707	Layer	Tree throw	0.15	
38	3801	Layer	Ploughsoil	0.18	
	3802	Layer	Natural		
39	3901	Layer	Ploughsoil	0.35	
	3902	Layer	Natural		
	3903	Cut	Possible posthole/root hole	0.07	0.15
	3904	Fill	Fill of 3903	0.07	
40	4001	Layer	Ploughsoil	0.34	
	4002	Layer	Natural		
41	4101	Layer	Ploughsoil	0.34	
	4102	Layer	Natural		
42	4201	Layer	Ploughsoil	0.25	
	4202	Layer	Natural		
43	4301	Layer	Ploughsoil	0.26	
	4302	Layer	Natural		
	4303	Cut	Modern Field boundary	0.32	1
	4304	Fill	Backfill of 4303, subjected to		
			post depositional change		
	4305	Fill	Backfill of 4303, subjected to		
			post depositional change		
	4306	Fill	Initial silting in ditch 4303		
	4307	Cut	Modern Field boundary	0.15	0.8
	4308	Fill	Backfill of 4307, subjected to		
			post depositional change		
44	4401	Layer	Ploughsoil	0.29	
	4402	Layer	Natural		
	4403	Cut	Hedge line	0.32	
	4404	Fill	Hedge line upper fill		
	4405	Fill	Hedge line lower fill		
	4406	Cut	Modern Field boundary	0.57	2
	4407	Fill	Initial silting in ditch 4406		
	4408	Fill	Backfill of 4406, subjected to		
			post depositional change		
	4409	Fill	Backfill of 4406, subjected to		
45	4501	Layer	post depositional change Ploughsoil	0.3	
7.5	7301	Layer		0.5	



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	4502	Layer	Peat lens	0.2	
	4503	Layer	Clay spread of natural	0.3	
	4504	Layer	Natural		
	4505	Cut	Service trench	0.2	
46	4601	Layer	Topsoil	0.2	
	4602	Layer	Relic ploughsoil	0.2	
	4603	Layer	Natural		
47	4701	Layer	Topsoil	0.2	
	4702	Layer	Made ground over 1m deep		
48	4801	Layer	Topsoil	0.2	
	4802	Layer	Made ground over 1m deep		
	4803	Layer	Natural		
49	4901	Layer	Topsoil	0.2	
	4902	Layer	Made ground over 1m deep		
50	5001	Layer	Topsoil	0.3	
	5002	Layer	Made ground over 1m deep		
51	5101	Layer	Topsoil	0.2	
	5102	Layer	Made ground over 1m deep		
	5103	Layer	Made ground over 1m deep		
	5104	Layer	Made ground over 1m deep		
52	5201	Layer	Topsoil	0.2	
	5202	Layer	Made ground over 1m deep		
	5203	Layer	Natural		
53	5301	Layer	Topsoil	0.2	
	5302	Layer	Made ground	0.2	
	5303	Layer	Made ground over 1m deep		
71	7100	Layer	Topsoil	0.28	
	7101	Layer	Relic ploughsoil	0.07	
	7102	Layer	Natural		
	7103	Cut	Tree hole	0.15	2
	7104	Fill	Fill of tree hole	0.15	
72	7201	Layer	Topsoil	0.34	
	7202	Layer	Natural		
	7203	Cut	Hollow way	0.34	6
	7204	Fill	Silting up of hollow way 7203		
	7205	Fill	Primary fill of hollow way		
	7206	Fill	Slump of bank into hollow way		
73	7301	Layer	Topsoil	0.2	
	7302	Layer	Relic ploughsoil	0.15	
	7303	Layer	Natural		
	7304	Cut	Hedge line	0.2	0.3
	7305	Cut	Land drain		
74	7400	Layer	Topsoil	0.34	



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	7401	Layer	Relic ploughsoil	0.26	
	7402	Layer	Natural	- <del>-</del>	
	7403	, Fill	Animal burrow fill	0.38	
	7404	Cut	Animal burrow	0.38	
75	7501	Layer	Topsoil	0.4	
	7502	, Layer	Natural		
	7503	Cut	Ditch	0.8	3
	7504	Fill	Sole fill of ditch	0.8	_
76	7601	Layer	Ploughsoil	0.3	
	7602	Layer	Natural		
	7603	Layer	Area of modern burning	0.3	
	7604	Layer	Root disturbance	0.3	
77	7700	Layer	Topsoil	0.34	
	7701	Layer	Relic ploughsoil	0.19	
	7702	Layer	Natural		
	7703	Cut	Gully	0.51	0.5
	7704	Fill	Silting up of gully 7703	0.01	0.0
	7705	Cut	Land drain	0.51	
	7706	Cut	Land drain	0.53	
	7707	Cut	Land drain	0.51	
78	7801	Layer	Ploughsoil	0.4	
	7802	Layer	Natural		
	7803	Cut	Land drain	0.4	
	7804	Cut	Land drain	0.4	
	7805	Cut	Land drain	0.4	
	7806	Layer	Bioturbation		
79	7901	Layer	Ploughsoil	0.5	
_	7902	Layer	Natural		
	7903	Cut	Land drain	0.5	
	7904	Cut	Land drain	0.5	
	7905	Fill	Backfill of modern drainage ditch	0.5	
	7906	Fill	Rubbly primary 'drainage' fill of		
	7907	Cut	ditch Drainage ditch	0.7	1
80	8001	Layer	Ploughsoil	0.4	1
80	8001	Layer	Natural	0.4	
	8002	Cut	Boundary ditch	0.8+	6
	8003	Fill	Upper backfill of ditch 8003	0.0+	U
	8004	Fill	Possible bank slump of ditch		
			8003		
	8006	Fill	Backfill of 8003		
	8007	Fill	Humic layer at base of ditch 8003		



Trench No	Context No	Туре	Interpretation	Depth of deposits (m)	Width (m)
	8008	Fill	Bank slump in ditch 8003		
	8009	Fill	Bank slump in ditch 8003		
81	8101	Layer	Topsoil	0.4	
	8102	Layer	Natural		
	8103	Cut	Drainage ditch	0.6	2.4
	8104	Fill	Trample at base of ditch 8103		
	8105	Fill	Slumped/eroded silts in ditch 8103		
	8106	Fill	Silting fill of ditch 8103		
	8107	Fill	Backfill of 8103		
82	8201	Layer	Ploughsoil	0.35	
	8202	Layer	Natural		
	8203	Layer	Burnt layer	0.35	
	8204	Cut	Geotech pit		
	8205	Fill	Fill of geotech pit		
83	8301	Layer	Topsoil	0.4	
	8302	Layer	Natural		
	8303	Cut	Geotech pit		
	8304	Fill	Fill of geotech pit		
85	8501	Layer	Ploughsoil	0.4	
	8502	Layer	Natural		
86	8600	Layer	Topsoil	0.53	
	8601	Layer	Natural		
87	8700	Layer	Ploughsoil	0.31	
	8701	Layer	Natural		
88	8800	Layer	Topsoil	0.21	
	8801	Layer	Natural		



# APPENDIX 2: PALAEOENVIRONMENTAL EVIDENCE

# Introduction

Four bulk samples were taken from the trenches during the evaluation and were processed for the recovery and assessment of waterlogged remains, charred plant remains and charcoals. Of these four samples, two came from non-waterlogged ditches thought to be of Romano-British date; ditch 905 (908) from Area 1 and ditch 8103 (8106) from the Golf Course Site, however, through further study of the deposits ditch 905 is likely to be post-medieval in origin and the pottery redeposited.

The remaining two samples were taken from peat deposits within Trench 31, context 11 from 0.5m to 2m bgl and Trench 35 Test Pit 2 (21) at 0.6m bgl. These are both in Area 2 and only some 200 to 300 metres apart.

While some difficulties were encountered in taking monolith samples (predominately the deposits contained too much water); a single monolith (10) was obtained through peat deposits 21 and 22 from 0.45 to 1.65m bgl and the underlying sands (21) from Trench 35.

A series of sub-samples were also taken through context 11 (sample series 11) within Trench 31. These comprised 13 sub-samples of around 0.3 litres at 100 mm intervals, between 0m to 1.3m depth through the peat.

# **Charred plant remains**

The two bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 5.6 mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. Flots were scanned under a x10-x40 stereo-binocular microscope and the preservation and nature of the charred plant and wood charcoal remains recorded in Table 2. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997).

The sample from ditch 8103 (8106) had high amounts of roots and modern material, and while it did contain some charred rootlets these may be also modern. The ditch from Area 1 had less modern roots but high numbers of iron impregnated roots and wood fragments. It also had a small amount of charred material including a glume base of hulled wheat (Triticum spelta/dicoccum) and charred seeds of vetch/wild pea (Vicia Lathyrus sp.) and fat-hen (Chenopodium album). This sample also had fragments of charred rootlets.

There is little evidence for any material that is directly indicative of settlement activity within the ditches. The low levels of material within ditch 905 would at least hint at some potential settlement activity within the general area, although given the quantities (and later reinterpretation) this likely to be intrusive or reworked.

# Wood charcoal

Wood charcoal was noted from the flots of the bulk samples and is recorded in Table 2. Generally there was very little wood charcoal in any of the samples.



# Waterlogged remains and worked wood

Deposits of peat were noted in several of the test pits in the central area of Area 2 and samples were taken from Trenches 31 and 35 for the examination of waterlogged material. Sub-samples of 2 litres were taken from these bulk samples for the recovery of waterlogged remains. In addition a sub-sample was processed from the lower peat context (22) within monolith 10 from Trench 35. Laboratory flotation was undertaken with flots retained on a 0.25mm mesh and residues on a 0.5mm mesh. Residues and flots were stored in sealed containers with Industrial Methylated Spirits (IMS).

The larger fraction (>5.6mm) was sorted, weighed and discarded. The flots were visually inspected under a x10 to x40 stereo-binocular microscope to determine if waterlogged material occurred. Where waterlogged material was present, preliminary identifications of dominant taxa, were conducted and are presented below.

The remainder of these bulk samples were processed though a 2mm sieve to check for artefacts, worked wood and larger waterlogged remains that might be under-represented or missing from the sub-sample e.g. stones of hawthorn and sloe, alder cones, acorns and hazelnuts.

# Area 2: Trench 35 Contexts 21 and 22

The sample from context 21 in Trench 35 contained two stones of sloe (Prunus spinosa), which were sent for radiocarbon dating and produced an Early Bronze Age date (see Appendix 3). Other material included a female catkin or "cone" of alder (Alnus glutinosa) and several seeds of buttercup (Ranunculus sp.) together with occasional seeds of common nettle (Urtica dioica) and stitchwort (Stellaria sp.). Further fragments of probable sloe were seen and although some may be of hazelnut (Corylus avellana), no clearly identifiable nut fragments were seen. The sample also contained a number of twigs, fragments of wood and occasional bud and remains of alder cones were relatively frequent within the 2mm artefact sieved sample.

The small sub-sample from context 22 was broadly similar to that seen within context 21, containing several fruits and a whole male catkin of alder, as well as occasional seeds of buttercup (Ranunculus sp.).

In terms of the general environment it is notable that aquatics are completely absent and this implies that the peat is unlikely to be related to channel activity in the immediate vicinity of the Site or within an area which contained large bodies of standing water. More probably such material formed within small shallow pools that occasionally were subject to drying. The samples generally imply alder woodland with some scrub, with small patches of wet grassland in the general vicinity of the Site.

For much of Britain the situation of often quite dense alder woodland within many wetland areas in the Late Mesolithic and Neolithic sees one in which alder declines on the floodplain in the Bronze Age to Iron Age with generally few reduced stands surviving into the Romano-British period onwards. However, while this supports a Bronze Age date for the deposit, given that such stands do survive, albeit in lesser frequency, in some areas means a Romano-British date to post-medieval date cannot be eliminated. Similarly situations do exist in the Mesolithic and Neolithic in which alder woodland may have become cleared through human or natural processes.



# Area 2: Trench 31 Context 11

The sample from 12 (11) in Trench 31 came from 1.5m of deposit between 0.5 and 1m blg. The samples had outstanding preservation in places. Many twigs and fragments of round wood were preserved, possibly of alder, but it also had some very large root fragments within it which had clearly penetrated into the deposit from above. The sample contained several fruits and occasional male catkin fragments of alder, as well as a larger female catkin/cone. The sample also had occasional seeds of yellow water lily (Nuphar lutea), possible hemlock water-dropwort (Oenanthe crocata) and sedge (Carex sp.). More unusual were seeds, pods and buds of probable dyer's broom (Genista tinctoria).

The seeds of dyers boom (Genista tintoria) were unusual in two respects. Firstly their size 4mm to 6mm is slightly larger than expected and might indicate that they are in fact of an ornamental or cultivated species of Genista and not G. tintoria. The second is that most seeds of leguminous species do not generally survive in waterlogged conditions. Given that only the coats of these specimens survived, and the apparent unusual conditions of preservation it is possible that they are of some antiquity, however, the presence of a possible sawn timber, see below, raises the possibility that at least some of this deposit is of a relatively recent date.

This same context produced a larger fragment of probably sawn timber, around 0.60m by 0.17m by 0-0.13m, which has been identified as alder (Alnus glutinosa) wood. While some of the facets may have been broken more recently, potentially by machining, the examination of at least one surface showed it to have probably been sawn and as such it is likely of more recent date and certainly no earlier than Romano-British. In addition a clearly modern post was found close to the peat deposit within the natural sand.

The sampled deposit of peat in this Trench is over 1.5m and as such, to an even greater extent than above, there is no guarantee that this material is of a single date and it may be that the evidence for alder woodland and dyers broom which is more indicative of heathland, or fields/meadows are not contemporary. The presence of some factors suggest that at least parts of this organic deposit are probably of more recent date, although if the timber came from a post some of the elements might be introduced and the peat itself might be of more similar date to the peat described above.

A complete examination of samples series 11 might help elucidate this fact, and if well preserved remains of dyers broom are either absent or present only within the upper deposits then it would suggest that this material is of more recent date.

# **Summary**

Peats have been sampled by borehole about 5 miles to the south of the Trench at Bawtry, associated with the River Idle (Dinnin and Weir 1997). These are located at around -3 to -4m OD and while some are thought to have formed in the Late Mesolithic the majority are thought to be no older than later Neolithic/Early Bronze Age in date (Gaunt 1994). These similar, terrestic woody (Alnus sp.) detrital fen peats are of similar thickness to those seen here being around 1 to 1.5 m thick, with extensive telmatic reedswamp peat coming to dominate in the late prehistoric/early historic period within this valley (Dinnin and Weir 1997).



How comparable the peats sampled here from the River Torne Valley are with the Idle valley peats to the south is a matter of conjecture. But the general interpretation of detrital woody peat as opposed to reedswamp would suggest a Neolithic to Bronze Age date.

### **Insect remains**

Occasional elytra and other remains of insects were noted within the sample from context 21 and while such remains were not abundant, the sample provides a reasonable quality and quantity of survival of such remains. Context 21 also yielded some remains of insect including occasional fragments of elytra and occasional heads.

## Land and fresh/brackish water molluscs

All of the samples were checked for the recovery or preservation of mollusc shells. However, none were seen and it is probable that the conditions were too acidic for such remains to survive within the conditions on Site.

### **Sediments**

A single monolith was taken from Trench 35, incorporating contexts 21 and 22. The monolith was cleaned prior to recording and standard descriptions used, (following Hodgson 1997) including Munsell colour, texture, structure and nature of boundaries, as given below in Table 3.

The upper deposit comprised of a highly organic peat (21) probably represents an alder carr type environment. The deposit was notably woodier than the underlying context 22.

The lower, fine peat (22) appeared to be quite humified, although the colour-change on exposure to air indicates reducing conditions. The deposit is interpreted as a terrestrial detrital peat, formed within a similar environment to the upper peat, but probably drying periodically due to fluctuating water levels.

# Small animal and fish bones

No small animal bones or fish bones were noted in the deposits and it is probable that, as with the molluscs, conditions across the Site and general area are too acidic for such survival to occur.



Table 2: Assessment of the charred plant remains and charcoal

Samples				Flot								
Feature	Context	Sam	Vol.	Flot	ot % Charred Plant Remains Ch			Charcoal	Other	Anal		
reature	Context	ple	Ltrs	(ml)	(ml) roots		Chaff	Other	Comments	>4/2mm	Other	ysis
Area 1 F	Romano-	British	1									
Ditch 905	908	4	8	500	6	-	С	С	Many iron impregnated roots, wood and organics. Charred rootlets, glume base, Vicia, Chenopodium sp.	1/3ml	-	-
Golf Co	urse											
Ditch 8103	8106	8	20	120	90	-	-	-	A large number of modern contaminates. Some charred rootlets and stems.	0/3ml	-	-
Other S	amples											
Trench	31											
peat	11	12	15	alder	). Also	root fra	gments	. Male	et-sieved – round wo and female catkins a ar lutea), water-drople	and fruits o	f alder (	
peat	11	11	13x0.3ltr	13x 300ml unprocessed sub-samples taken in a column between 0 to 1.3m								
Trench	35 (Test	Pit 2)						_				
TP2 Tr 35	TP2 21 9 13 2 litres of waterlogged deposit wet-sieved – twigs and buds, sloe ( <i>Prunus spinosa</i> ), alder ( <i>Alnus glutinosa</i> ) male and female catkins and fruits, common											

Key: A\*\*\* = exceptional, A\*\* = 100+, A\* = 30-99, A = >10, B = 9-5, C = <5;



Table 3: Area 2, Trench 35, Monolith 1>, Contexts 21 and 22

Location:		Mono:	10	Comments:		
Level (top):	2.40m AOD	Drg:	See trench sheet			
Depth Mbg & <i>OD</i>	Sediment	descripti	on		Interpretation	
0.10-0.58 (gap above 0.10) 2.3-1.82m AOD	predomina and wood with mode	antly horiz ly fragmer erate sma file, with	ontally lamin nts throughoull quartzy s	peat. Highly organic with nated plant remains. Roots out. Very soft and crumbly sand inclusions increasing ation at 0.48-0.52. Sharp		Woody peat, alder carr
0.58-0.59 1.82-1.81m AOD	Pale quart Sharp smo	•		Sandy inwash.		
0.59-0.81 1.81-1.59m AOD	brown fine with a hi exposure	e peat. Ver igh moist to air. Ver quartzy	own oxidisin y soft and s ure content tical roots a sand inclus	?quite humified, probably detrital	Formed within probable alder carr environment with occasional drying out	
0.81-0.98 1.59-1.42m AOD	10YR 7/2 especially Abrupt bo	large roo		Sand, prest deposited, Pleistocene reworked in		
0.98-1.16 1.42-1.24m AOD	3/6 dark y	ellowish l woody fra	orown mottle gments, slig	ndy silt alluvium with 10YR es on the surface. Vertical htly less than above. 0.2%	rooting.	umably could I depo
1.16-1.20 1.24-1.2m AOD				sand. Mixed with a small out predominantly sand.	Ditto	alluvially be intact bsits or



## **APPENDIX 3: RADIOCARBON REPORT**

### Introduction

Two individual stones of sloe (Prunus spinosa) were extracted from a bulk sample 9 taken from the peat deposit 21 in Trench 35 in Area 2. The sample was taken to identify the date at which this probable terrestic detrial fen peat formation occurred.

The samples were submitted to the Scottish Universities Environmental Research Centre, East Kilbride (SUERC) for radiocarbon dating.

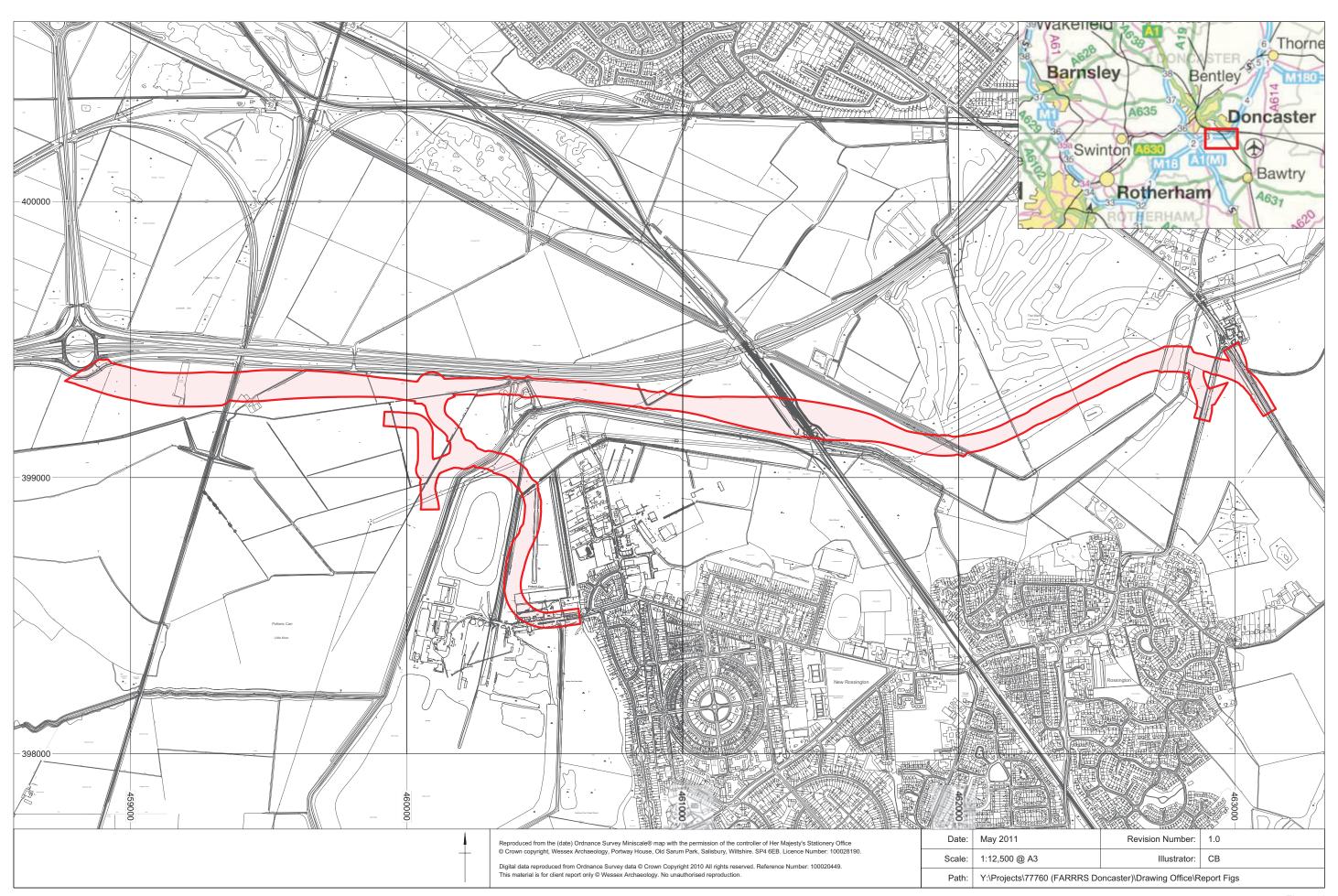
### Results

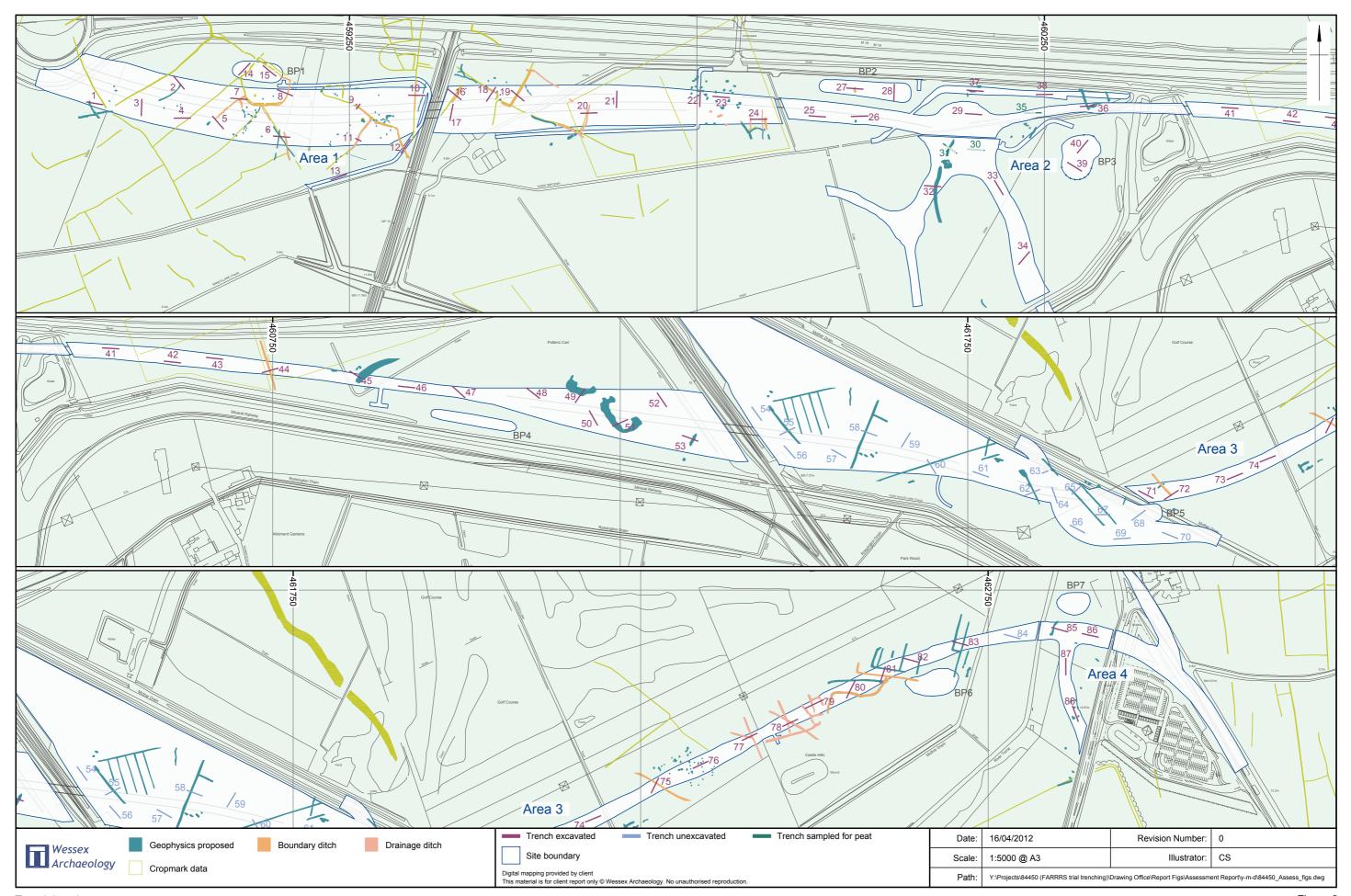
The radiocarbon determinations were calibrated using OxCal 4.1.7 (Bronk Ramsey 2001; 2009) and the IntCal09 calibration curve (Reimer *et al.* 2009) and are quoted in the form recommended by Mook (1986) with the end points rounded outward to 10 years (Table 4).

The returned Early Bronze Age date of 1900-1650 cal. BC (3485±35 BP, SUERC-39313) corresponds very well to the expected date of the deposit. Peat in the adjacent Idle Valley to the south is generally thought to have begun to form in the Late Neolithic/Early Bronze Age (Gaunt 1984). The date also corresponds to the opening up of alder woodland on the floodplain seen in the Early to Middle Iron Age, probably through a combination of increased natural flooding and clearance.

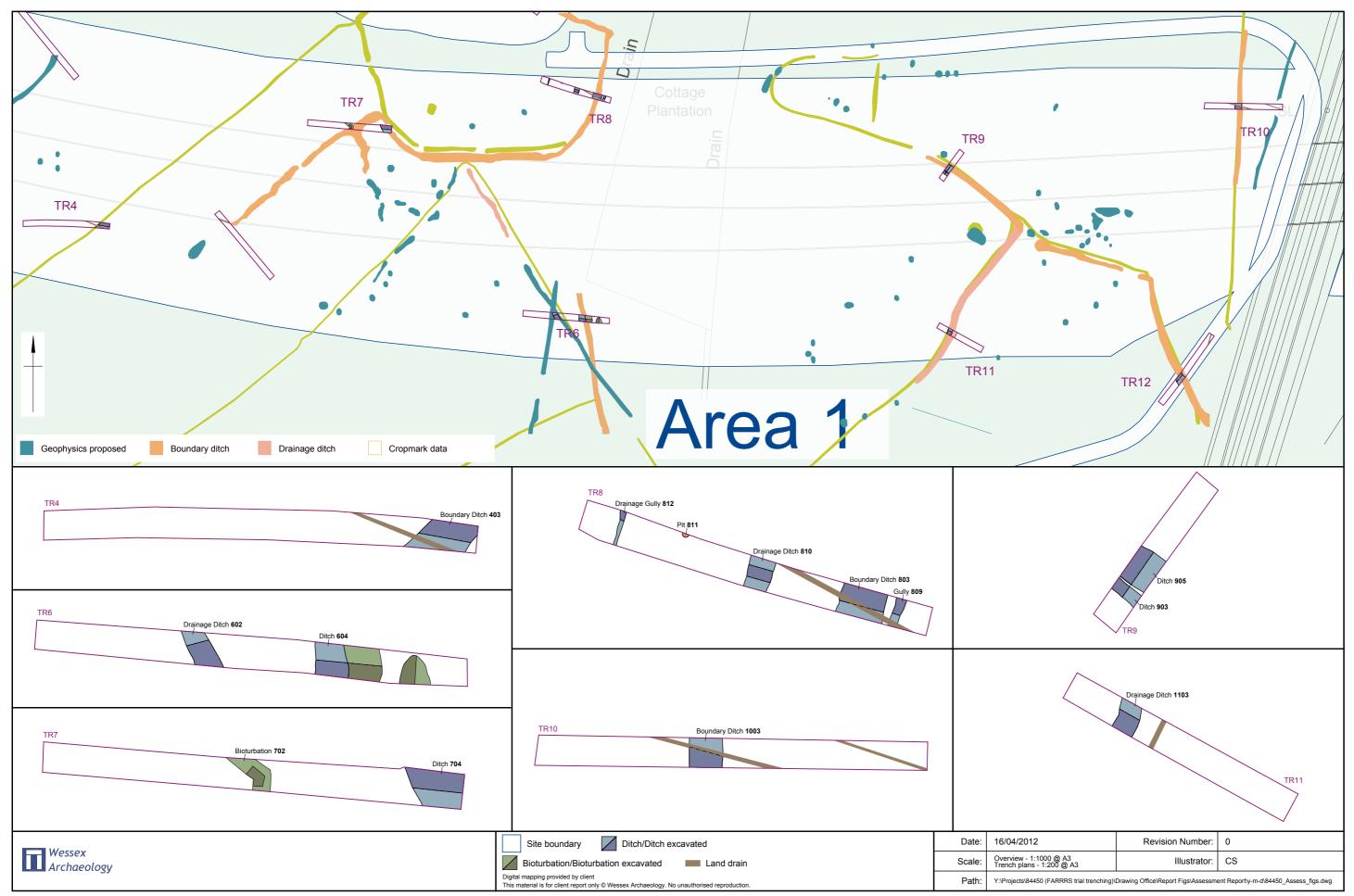
Table 4 Radiocarbon determination for Peat 21 in Trench 35 Area 2.

Feature and context	Identification	Laboratory Code	δ <sup>13</sup> C	Date BP	calibration BC (2 sig. 95.4%)
Trench 35 Peat (21)	Waterlogged sloe ( <i>Prunus spinosa</i> )	SUERC-39313	-27.6‰	3485±35	1900-1650 cal. BC

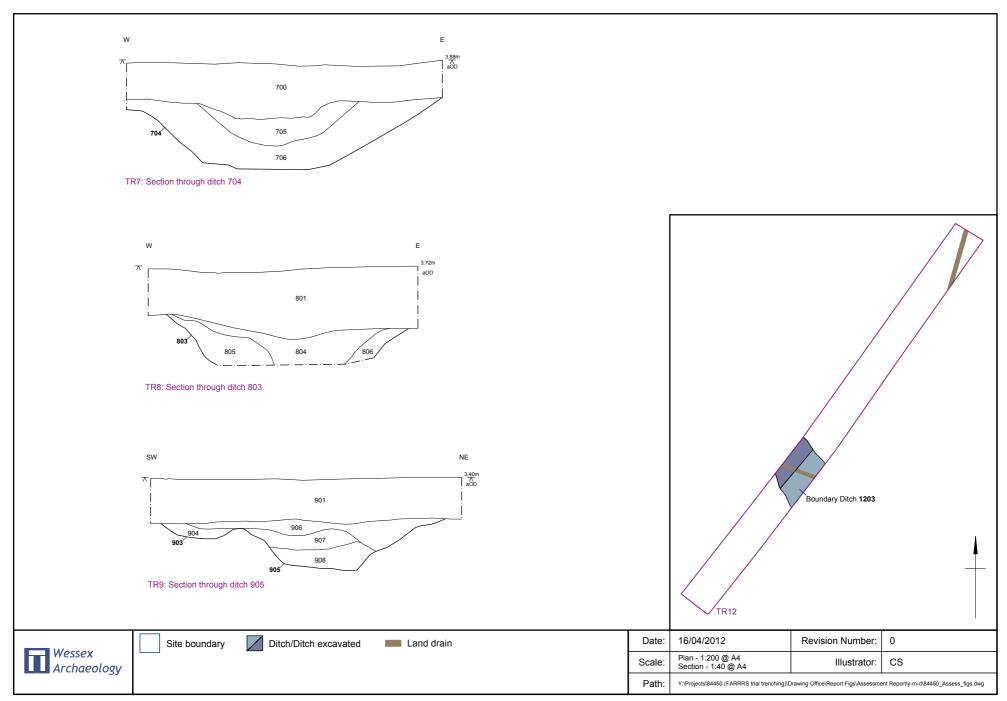




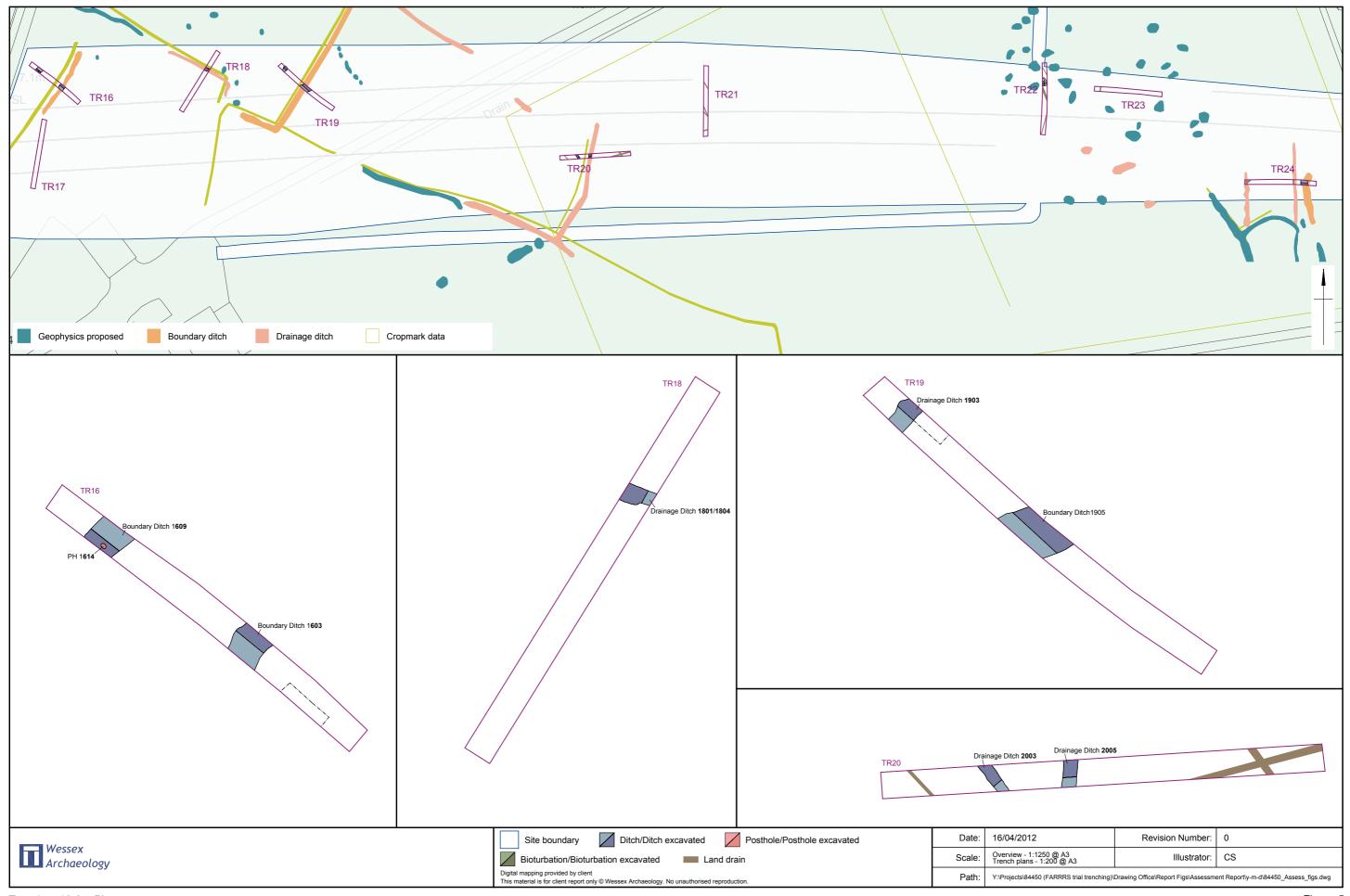
Trench locations Figure 2



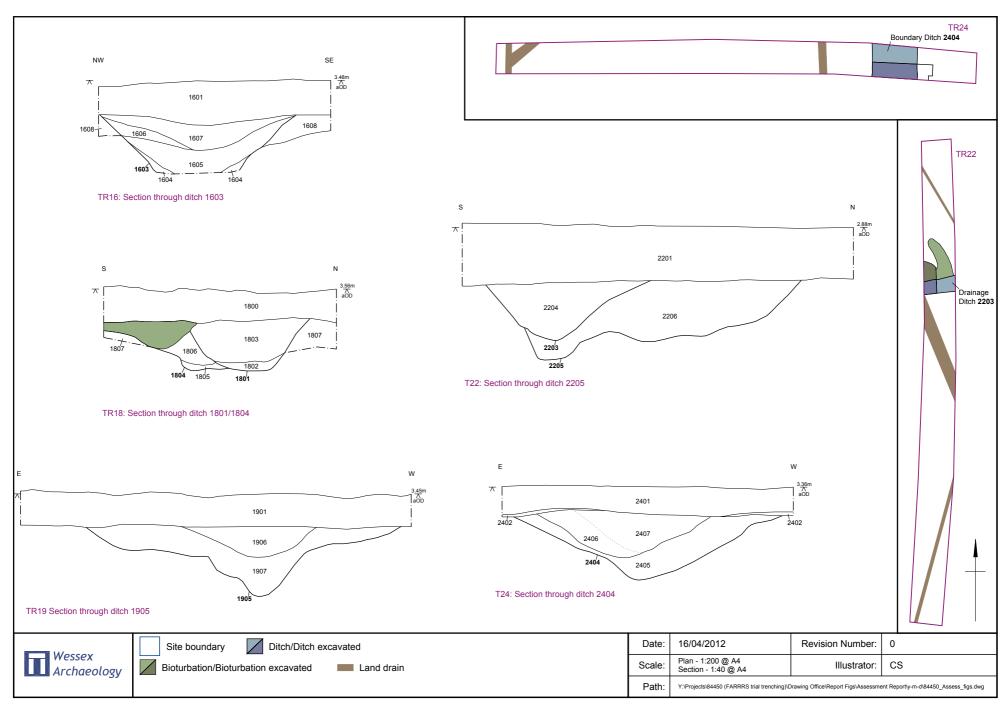
Trenches 1-15: Plans



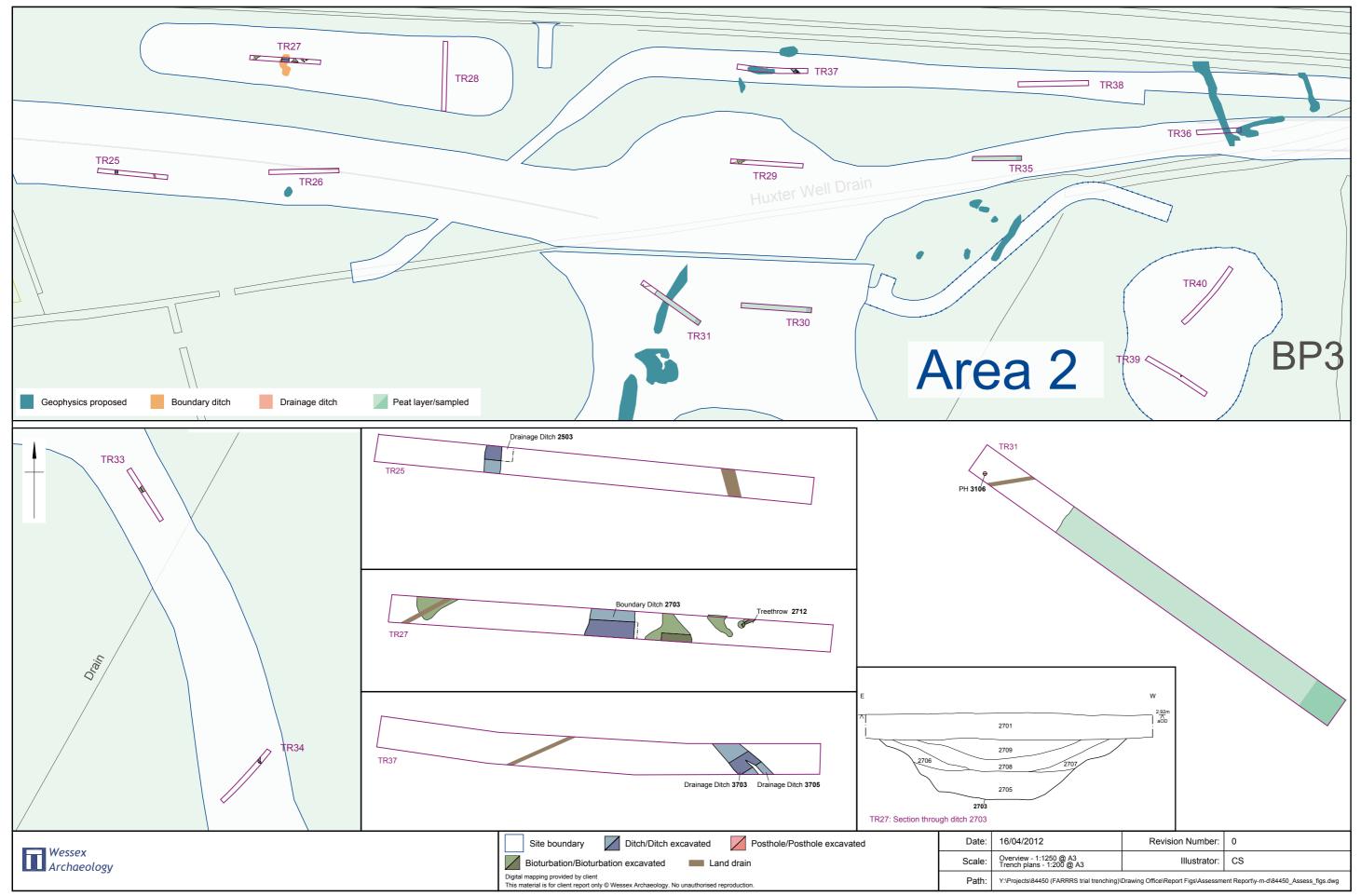
Trenches 1-15: Plans and sections



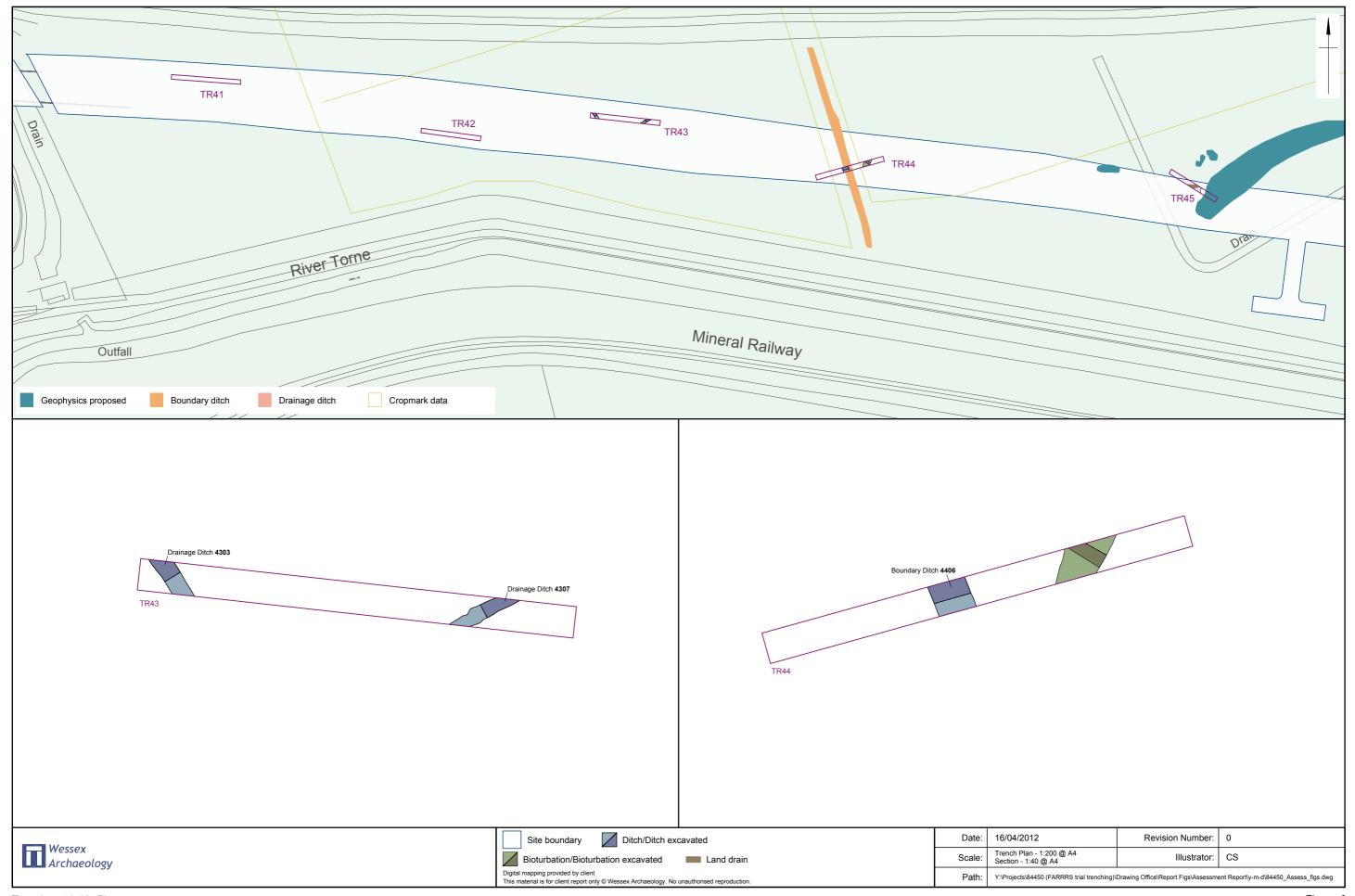
Trenches 16-24: Plans



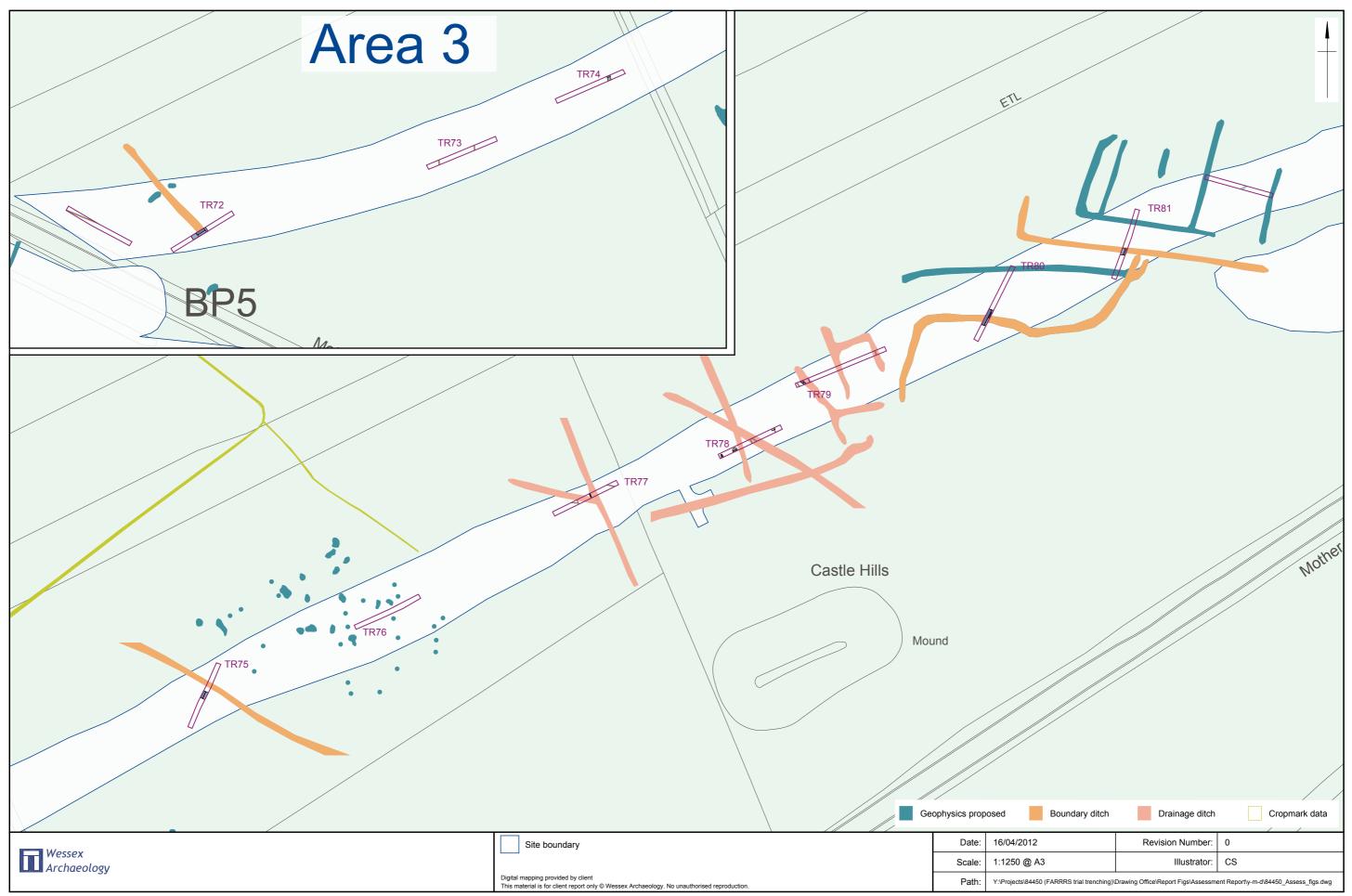
Trenches 16-24: Plans and sections



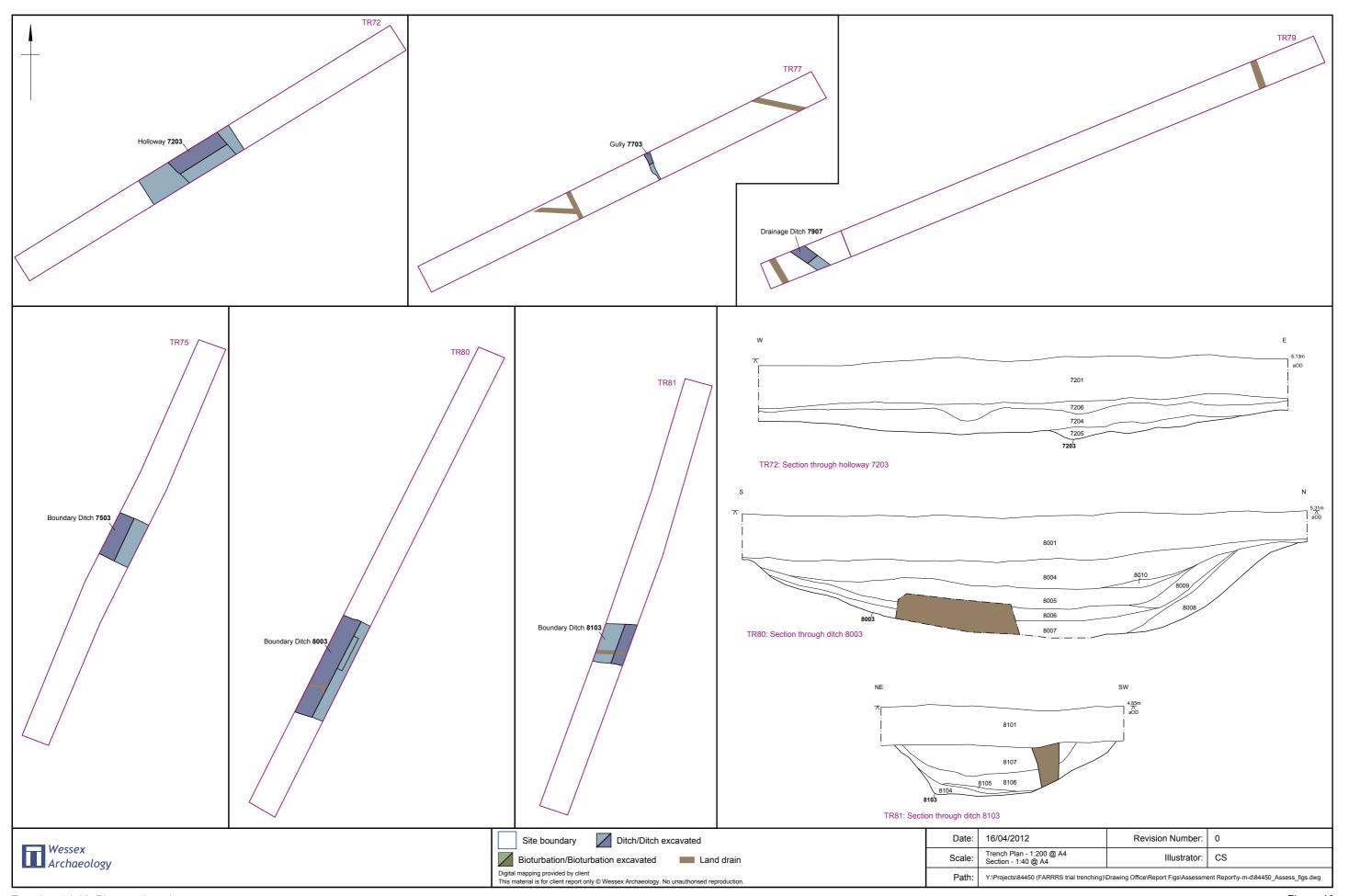
Trenches 25-40: Plans and section



Trenches 41-53: Plans



Trenches 71-88: Plan



Trenches 71-88: Plans and sections



Plate 1: Trench 4, view of boundary ditch **403**, from the south.



Plate 2: Trench 6, view of drainage gully **602**, from the north.

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Wessex	Scale:	N/A	Illustrator:	CS	
Wessex Archaeology	Path:	Y:\Projects\84450 (FARRRS trial trenching)\Drawing Office\Report Figs\Assessment Report\y-m-d\plates.cdr			



Plate 3: Trench 6, view of modern boundary ditch **604**, from the north.



Plate 4: Trench 7, view of boundary ditch **704**, from the south.

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Wessex Archaeology	Path:	Y:\Projects\84450 (FARRRS trial trenching)\Drawing Office\Report Figs\Assessment Report\y-m-d\plates.cdr				



Plate 5: Trench 7, view of shrub disturbance **702**, from the south-west.



Plate 6: Trench 8, view of boundary ditch 803, from the south.

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Wessex Archaeology	Path:	Y:\Projects\84450 (FARRRS trial trenching)\Drawing Office\Report Figs\Assessment Report\y-m-d\plates.cdr				



Plate 7: Trench 8, view of drainage gully **812**, from the south.



Plate 8: Trench 9, view of boundary ditch 903 and 905, from the south-west.

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Plate 9: Trench 18, view of drainage gully **1801** and **1804**, from the east.



Plate 10: Trench 20, view of drainage gully 2005, from the south.

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Wessex	Scale:	N/A	Illustrator:	cs		
Wessex Archaeology	Path:	Y:\Projects\84450 (FARRRS trial trenching)\Drawing Office\Report Figs\Assessment Report\y-m-d\plates.cdr				



Plate 11: Trench 11, view of drainage gully **1103**, from the south.



Plate 12: Trench 10, view of boundary ditch 1003, from the south.

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Plate 13: Trench 12, view of boundary ditch 1203, from the south-east.



Plate 14: Trench 16, view of boundary ditch 1603, from the south-west.

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Plate 15: Trench 15, view of boundary ditch **1609**, from the north-east.



Plate 16: Trench 20, view of plough scar/gully 2003, from the north-west.

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Plate 17: Trench 19, view of boundary ditch 1905, from the north.



Plate 18: Trench 19, view of plough scars 1903, from the south.

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Plate 19: Trench 22, view of water cut channel 2205, from the east.



Plate 20: Trench 24, view of boundary ditch **2404**, from the north.

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Plate 21: Trench 27, view of boundary ditch 2703, from the north.



Plate 22: Trench 34, view of water cut channel 3403, from the east.

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Plate 23: Trench 37, view of drainage gully **3703** and **3705**, from the south-east.



Plate 24: Trench 43, view of modern field boundary 4303, from the south.

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Plate 25: Trench 43, view of modern field boundary **4307**, from the north.



Plate 26: Trench 44, view of drainage gully **4406**, from the south.

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Plate 27: Trench 72, view of hollow way **7203**, from the south-east.

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Plate 28: Trench 79, view of soakaway **7907**, from the south.



Plate 29: Trench 81, view of modern field boundary 8103, from the north.

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