



Bury Growth Scheme, Bury St Edmunds, Suffolk

Archaeological Evaluation Report

March 2019

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Bury Growth Scheme, Bury St Edmunds, Suffolk

Archaeological Evaluation Report

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Summary

Between 27th February and 4th March 2019, Oxford Archaeology East (OAE) undertook an archaeological evaluation of 15 trenches on land east of Rushbrooke water treatment works (TL 874 624 to TL 882 633) in advance of a new Anglian Water pipeline running between the treatment works and the A14. The evaluation revealed no archaeological features and no artefacts or ecofacts were recovered.

Acknowledgements

OA East would like to thank Anglian Water for commissioning this project. Thanks also go to Rachel Abraham and James Rolfe who monitored the work on behalf of Suffolk County Council Archaeological Service

The project was managed for OA East by Nicholas Gilmour. The fieldwork was directed by the author, supported by Anna Rogers. Survey and digitizing was carried out by Sarita Louzolo. Thanks also go to the illustrator and editor for their contributions.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 OA East was commissioned by Anglian Water to undertake a trial trench evaluation in advance of a new pipeline running east from Rushbrooke water treatment works and then north to the A14 (TL 874 624 to TL 882 633; Fig. 1). The route was 1.5km long and OA East opened 15 trenches, each measuring 20m in length.
- 1.1.2 A brief was set by Rachel Abraham, of Suffolk County Council Archaeological Service, outlining the Local Authority's requirements for work necessary to inform the planning process. A written scheme of investigation was produced by OA East (Gilmour 2019, see App. C) detailing the methods by which OA East proposed to meet the requirements of the brief.

1.2 Location, topography and geology

- 1.2.1 The pipeline route passes through fields that are currently under arable cultivation. The water treatment works at the western end of the pipeline route is located close to the River Lark, at an elevation of c. 35m OD. The route to be evaluated rises gradually to the east reaching a height of c. 42m OD. The ground then rises to the north to a maximum elevation of c. 55m OD adjacent to the A14.
- 1.2.2 The bedrock geology in the area to be evaluated is Lewes Nodular Chalk Formation. In places this is overlain by superficial deposits of alluvium, head deposits (silt, clay sand and gravel), or sand and gravel (BGS 2019).

1.3 Archaeological and historical background

Introduction

- 1.3.1 The following summary included entries from the Suffolk Historic Environment Record (SHER), those in **bold** are referenced in Figure 2.

Prehistoric

- 1.3.2 Three ring-ditches, which are likely to be the remains of Neolithic or Early Bronze Age funerary monuments, have been identified in the field c. 150m to the north of the water treatment works (**BSE 453**). A substantial assemblage of struck flint was also recovered from this field (**BSE 453**). A number of flint scatters and single finds of struck flints have been recorded in the area around the pipeline route (e.g. single finds **RGH 089**, **RGH 053**). Just to the south of the A14 the pipeline route passes through a field from which 128 struck flints, largely of Middle (or possible Late) Bronze Age date were recovered from the surface (**RGH 048**). A further group of 250 flints of similar date were recovered from an adjacent field to the west (**RGH 043**).

Anglo-Saxon and Medieval

- 1.3.3 Anglo-Saxon archaeology, including sunken-featured-buildings and posthole structures, has been identified during previous evaluation work immediately to the west of the water treatment works (**NWN 018**). This activity appeared to be situated

along the natural slope overlooking the River Lark. Further evidence of Anglo-Saxon activity was also found to the north of the treatment works (**BSE 453**).

- 1.3.4 Medieval activity seems to be centred around the village of Rushbrooke, to the south-east of the pipeline route. Various scatters of medieval pottery have been recovered (RBK 023, RBK 038, RBK 012) and a deserted medieval village is located close to the church (RBK 004).

Post-Medieval and 20th Century

- 1.3.5 In the 18th century, Rushbrooke Park was extended to include fields directly south of the pipeline route (**RBK 017**). These were added to provide vistas for Rushbrooke Hall (RBK 016). Just to the north of the A14, Rougham Airfield was built between 1941 and 1942 and was closed in 1948 (RGH 046).

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The project aims and objectives were as follows:

- i. To determine or confirm the general nature of any remains present.
- ii. To determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence.

2.2 Methodology

2.2.1 A total of 15 20x1.8m trenches were machine excavated using a 14 tonne 360° mechanical excavator under constant archaeological supervision. The exact position of some trenches was slightly altered from those proposed in the written scheme of investigation, due to obstructions being present on site.

2.2.2 All archaeological features were recorded using OA East's pro-forma sheets. Plans and sections were recorded at appropriate scales and digital photographs were taken of all trenches, relevant features and deposits.

2.2.3 Site survey was carried out by RTK GPS with SmartNET.

2.2.4 Spoil and features were scanned with a metal detector to aid recovery of artefacts, but none were found.

2.2.5 No bulk environmental samples were taken during the works as no archaeological features were found.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below by field. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A.

3.2 General soils and ground conditions

3.2.1 The soil sequence between all trenches was fairly uniform. The natural geology of chalk and gravel was overlain by a subsoil which consisted of a mid-reddish brown sandy silt and had an average depth of 0.45m. This in turn was overlain by topsoil consisting of a dark brownish grey sandy silt. Ground conditions throughout the evaluation were generally good, and the trenches remained dry throughout.

3.3 Trenches in Field A

3.3.1 Field A contained Trenches 1-3 and consisted of a ploughed arable field (Fig. 3). The trenches ran along the north edge of the field, adjacent to the access road for the water treatment works. All trenches were devoid of archaeology.

3.3.2 The geology was varied, with Trenches 1 and 2 revealing chalk marl (Plate 1) whereas Trench 3 uncovered silty clay with flint inclusions. The topsoil and subsoil were fairly uniform, on average subsoil measured 0.35m deep and topsoil measured 0.4m deep, although Trench 1 contained a layer of modern gravel, underneath the topsoil. This was only present at the westernmost end of the trench, closest to the water treatment works and was probably associated with the building of the works or the access road.

3.4 Trenches in Field B

3.4.1 Field B contained Trenches 4-10 and consisted of a planted arable field. The trenches ran along the north edge of the field, adjacent to a boundary ditch. All trenches were devoid of archaeology.

3.4.2 The trenches in this field were considerably deeper than those in Fields A and C. The western section of the boundary ditch had the addition of a bank on the southern side. Trenches 4-6 were located at the base of this bank and were therefore the deepest. The topsoil and subsoil were fairly uniform across the field, on average subsoil measured 0.5m deep and topsoil measured 0.4m deep but trenches 4-6 had a thicker layer of subsoil 0.6m thick.

3.4.3 The geology in these trenches consisted of river terrace gravels with inclusions of natural flint, mixed with some chalk and silty clay patches. In Trench 7, a linear natural feature (5) was investigated and was found to be an area of silting over a natural seam of chalk which was forcing its way through the gravel. This feature appeared linear in plan but had very diffuse edges and an irregular base. It measured 0.38m wide and 0.13m deep. It contained one fill consisting of mid yellowish-brown clayey silt which overlaid a seam of natural chalk.

3.5 Trenches in Field C

- 3.5.1 Field C contained Trenches 11-15 and consisted of a planted arable field, with most of the trenches following the western boundary of the field. All trenches were devoid of archaeology.
- 3.5.2 The topsoil and subsoil were fairly uniform across the field, on average subsoil measured 0.25m deep and topsoil measured 0.35m deep. The geology consisted of chalk with flint gravels but the northernmost trench (Trench 15) was predominantly chalk (Plate 4). In Trench 15 a silty natural feature (3) was investigated and found to be a probable glacial scar (Plate 3). This feature was irregular in plan and measured 2.27m wide and was excavated to a depth of 0.45m. It was filled with a mid-reddish brown sandy silt which continued to dive down underneath the natural chalk.

3.6 Finds and environmental summary

- 3.6.1 During the evaluation no artefacts or ecofacts were recovered and no environmental samples were taken due to the lack of archaeological features.

4 DISCUSSION

- 4.1.1 All of the trenches in this evaluation were devoid of archaeology. The northernmost end of the route (Field C) had possibly the most potential for archaeology. Prehistoric activity seems to have been present in this area and potentially in Field C itself where worked flints have previously been found (RGH 048). As the trenches were at the very western edge of the field, it is very likely that any archaeology has not fallen within the study area.
- 4.1.2 Field A also had some potential for archaeology. The adjacent field, west of the water treatment works, contained Anglo-Saxon archaeology including sunken-featured-buildings and posthole structures (NWN 018). The field to the north of the water treatment works also revealed Anglo-Saxon features as well as a group of Neolithic/Bronze Age ring ditches (BSE 453). The archaeological activity seems to be centred around the River Lark, on the natural slopes of the river valley. Although the Trenches in Field A were a similar distance from the river, and both topographically and geologically comparable. However, similar archaeology to that found to the north and west clearly was not present within the three excavated trenches, although this does not preclude archaeological remains being present elsewhere within Field A.

APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk marl.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.75
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.3	Topsoil	-	-
2	Layer	-	0.45	Subsoil	-	-
	Layer	-	0.2	Gravel	-	-

Trench 2						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk marl.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.55
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.2	Subsoil	-	-

Trench 3						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand and gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.85
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.5	Topsoil	-	-
2	Layer	-	0.35	Subsoil	-	-

Trench 4						
General description					Orientation	W-E
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	1.2
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.6	Topsoil	-	-
2	Layer	-	0.6	Subsoil	-	-

Trench 5						
General description					Orientation	W-E
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	1.2
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.55	Topsoil	-	-
2	Layer	-	0.65	Subsoil	-	-

Trench 6						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	1
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.55	Topsoil	-	-
2	Layer	-	0.45	Subsoil	-	-

Trench 7						
General description					Orientation	SW-NE
Trench devoid of archaeology. One natural feature investigated. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.8
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.5	Topsoil	-	-
2	Layer	-	0.3	Subsoil	-	-
5	Cut	0.76	0.13	Natural feature	-	-
6	Fill		0.13	Natural feature	-	-

Trench 8						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of flint gravel and clay.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.9
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.5	Topsoil	-	-
2	Layer	-	0.4	Subsoil	-	-

Trench 9						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of flint gravel and clay.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.9
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.55	Topsoil	-	-
2	Layer	-	0.35	Subsoil	-	-

Trench 10						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of flint gravel and clay.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.95
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.6	Subsoil	-	-

Trench 11						
General description					Orientation	NNW-SSE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.6
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.25	Subsoil	-	-

Trench 12						
General description					Orientation	NNW-SSE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.55
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.2	Subsoil	-	-

Trench 13						
General description					Orientation	SW-NE
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.6
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.25	Subsoil	-	-

Trench 14						
General description					Orientation	N-S
Trench devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of chalk and flint gravel.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.6
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.25	Subsoil	-	-

Trench 15						
General description					Orientation	N-S
Trench devoid of archaeology. One natural feature tested. Consists of topsoil and subsoil overlying natural geology of chalk marl.					Length (m)	20
					Width (m)	1.8
					Avg. depth (m)	0.55
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.2	Subsoil	-	-
3	Cut	2.27	0.46	Natural feature	-	-
4	Fill		0.46	Natural feature	-	-

Context	Cut	Trench	Category	Type	Function	Length (m)	Width (m)	Depth (m)	Shape in Plan	Side	Break of Slope	Base	Colour	Fine component	Coarse component	Compaction
1			Layer	Topsoil												
2			Layer	Subsoil												
3	3	15	cut	natural			2.27	0.46	irregular	irregular	gradual	irregular				
4	3	15	fill	natural			2.27	0.46					mid reddish brown	sandy silt mixed with clay towards base	occasional small to medium sub-angular flints and stones	firm
5	5	7	cut	natural			0.76	0.13	linear	gentle	gradual	irregular				
6	5	7	fill	natural			0.76	0.13					mid yellowish brown	clayey silt	frequent small to medium chalk pieces and small to medium sub-rounded flints	firm

Table 1: Context inventory

APPENDIX B BIBLIOGRAPHY

British Geological Survey 2014, British Geological Survey online map viewer
<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html> [accessed Jan 2019].

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<https://heritage.suffolk.gov.uk/home> [accessed 11/03/2019]

APPENDIX C

WRITTEN SCHEME OF INVESTIGATION



Bury Growth Scheme – WAT 06985 Written Scheme of Investigation

Client: Anglian Water Services

Prepared by	Nick Gilmour
Date prepared	Feb 2019
Version	2
Planning application no.	n/a
Site code	RGH 101
Project number	23064
Project type	trench evaluation
NGR	TL 874 624 to TL 882 633
Event number	RGH 101
OASIS no.	oxfordar3-341698



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1 GENERAL BACKGROUND

- 1.1.1 This WSI conforms to the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment (MoRPHE)*, specifically the *MoRPHE Project Manager's Guide* (2015) and *Project Planning Note 3: Archaeological Excavation*.
- 1.1.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists *Code of Conduct and Standard and Guidance for Archaeological Excavation* (2014). In addition, all work will follow the *Requirements for a Trenched Archaeological Evaluation* (Suffolk County Council Archaeological service 2017).
- 1.1.3 This WSI also incorporates the requirements of the EAA Standards for Field Archaeology in the East of England (Gurney 2003).

1.2 Circumstances of the project

- 1.2.1 Anglian Water are constructing a water pipeline. This will be constructed using a mixture of open cut trenching and directional drilling. Archaeological evaluation is being carried out on the section of the pipeline route south of the A14, where an open cut construction method is to be used.
- 1.2.2 The pipeline route is located on light soils overlooking the river Lark. This is an area that was favourable for activity in the past and so archaeological features are likely to be present.
- 1.2.3 The open cut pipe trench and associated easement will result in damage to any archaeological deposits present and so an archaeological evaluation will be carried out to determine the nature of any deposits present.
- 1.2.4 This Written Scheme of Investigation (WSI) has been prepared on behalf of the Client in response to an Archaeological Brief for Investigation issued by the Suffolk County Council Archaeological Service.

1.3 The proposed archaeological strategy

- 1.3.1 Oxford Archaeology East is proposing the excavation of 15 trenches, each measuring 20m by 1.8m. This will provide a c. 5% sample of the impact area. A plan of the proposed location of these trenches is attached to this document. These trenches have been set out along approximately evenly along the pipeline route, taking into account obstructions (e.g. Hedges, field boundaries and overhead cables).

1.4 Changes to this method statement

- 1.4.1 If changes need to be made to the methods outlined below – either before or during works on site – the County Archaeologist will be informed and asked to consider changes before they are made. Changes will be agreed in before work on site commences, or else at the earliest available opportunity.

2 THE GEOLOGY, TOPOGRAPHY AND OTHER FEATURES OF THE SITE

- 2.1.1 The bedrock geology in the area to be evaluated is Chalk. In places this is overlain by superficial deposits of alluvium, head deposits (silt, clay sand and gravel), or sand and gravel (British Geological Survey 2014, (British Geological Survey online map viewer <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>). (Jan 2019)
- 2.1.2 The pipeline route passes through fields that are currently under arable cultivation. The water treatment works at the western end of the pipeline route is located close to the River Lark, at an elevation of c.35AOD. The route to be evaluated rises gradually to the East to a height of c.42m AOD. The ground then rises to the north to a maximum elevation of c.55m AOD adjacent to the A14.

3 ARCHAEOLOGICAL BACKGROUND

- 3.1.1 A brief summary of known archaeology in the area around the section of the pipeline route to be evaluated is given below. Where relevant the Suffolk County Council assigned parish code is given in brackets.

3.2 Prehistoric

- 3.2.1 Three ring-ditches, which are likely to be the remains of Neolithic or Early Bronze Age funerary monuments, have been identified in the field c.150m to the north of the water treatment works (BSE 453). A substantial assemblage of struck flint was also recovered from this field (BSE 453).
- 3.2.2 A number of flint scatters and single finds of struck flints have been recorded in the area around the pipeline route (e.g. single finds RGH 089, RGH053). Just to the south of the A14 a group of 250 flints, largely of Middle (or possible Late) Bronze Age date was recovered (RGH 043). A further 128 struck flints of similar date were recovered from the surface of a second field directly adjacent to that discussed above (RGH 048).

3.3 Anglo-Saxon and Early Medieval

- 3.3.1 Saxon archaeology, including sunken-featured-buildings and post hole structures, has been identified during previous evaluation work immediately to the west of the water treatment works (NWN 018). This activity appeared to be situated along the natural slope overlooking the River Lark. Further evidence of Anglo-Saxon activity was also found to the north of the treatment works (BSE 453).

4 AIMS AND OBJECTIVES

4.1 Aims of the evaluation

- 4.1.1 This evaluation will seek to establish the character, date and state of preservation of archaeological remains within the proposed development area. The scheme of works detailed below aims to:
- establish the presence or absence of archaeological remains on the site, characterise where they are found (location, depth and extent), and establish the quality of preservation of any archaeology and environmental remains
 - provide sufficient coverage to establish the character, condition, date and purpose of any archaeological deposits
 - provide sufficient coverage to evaluate the likely impact of past land uses, and the possible presence of masking deposits
 - provide – in the event that archaeological remains are found – sufficient information to construct an archaeological mitigation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables, and orders of cost.

4.2 Research frameworks

- 4.2.1 This evaluation takes place within, and will contribute to the goals of Regional Research Frameworks relevant to this area:
- Glazebrook J. (1997). *Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment*. East Anglian Archaeology Occasional Papers 3.
 - Brown, N. & Glazebrook, J. (2000). *Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy*. East Anglian Archaeology Occasional Papers 8.
 - Medlycott, M. (2011). *Research and Archaeology Revisited: A Revised Framework for the East of England*. East Anglian Archaeology Occasional Papers 24.

5 METHODS

5.1 Background research

- 5.1.1 A suitable level of background research will be undertaken before work on site commences. This research will draw on information in the County Historic Environment Record and County Records Office, and will include historical sources, maps, previous archaeological finds, and past archaeological investigations in the vicinity. The results will not be presented separately, but will be incorporated into the final evaluation report.

5.2 Event number and site code

- 5.2.1 A parish event number (RGH 101) has been obtained from the County HER, and a unique site code assigned to the project.

5.3 Trial Trenching

Excavation standards

- 5.3.1 The proposed archaeological evaluation and analysis will be conducted in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines.
- 5.3.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists' *Code of Conduct and Standard and Guidance for Archaeological Field Evaluations*. In addition, all work will follow the *Requirements for a Trenched Archaeological Evaluation* (Suffolk County Council Archaeological service 2017).
- 5.3.3 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming). Further guidance is provided to all excavators in the form of the *OA Fieldwork Crib Sheets – a companion guide to the Fieldwork Manual*. These have been issued ahead of formal publication of the revised Fieldwork Manual.

Pre-commencement

- 5.3.4 Before work on site commences, service plans will be checked to ensure that access and groundworks can be conducted safely.
- 5.3.5 In order to minimise damage to the site and disruption to site users, Oxford Archaeology will agree the following with the client/landowner before work on site commences:
- the location of entrance ways
 - sites for welfare units
 - soil storage areas
 - refuelling points for plant (if necessary), and the extent of any bunding required around fuel dumps
 - access routes for plant and vehicles across the site

- 5.3.6 Access routes to, from and between trenches will be agreed on site at the start of works. Where possible, access routes will use tramlines in the crop, in order to reduce crop damage.

Excavation methods

- 5.3.7 A total of fifteen trenches measuring 20m by 1.80m will be excavated. This is equivalent to c.5% of the development area. A plan of the proposed trench layout is attached to this WSI. During machine stripping, the location of trenches may be altered if there are site obstructions, services, or modern disturbance. If so, the location of affected trenches will be re-surveyed.
- 5.3.8 Service plans will be checked before work commences on site. Before trenching, the footprint of each trench will be scanned by a qualified and experienced operator using a CAT and Genny with a valid calibration certificate.
- 5.3.9 All machine excavation will take place under the supervision of a suitably qualified and experienced archaeologist.
- 5.3.10 Trial trenches will be excavated by a mechanical excavator to the depth of geological horizons, or to the upper interface of archaeological features or deposits, whichever is encountered first. A toothless ditching bucket with a minimum bucket width of 1.8m will be used to excavate the trenches. Overburden will be excavated in spits not greater than 0.1m thick.
- 5.3.11 Spoil will be stored alongside trenches, unless otherwise specified by the client. Topsoil, subsoil, and archaeological deposits will be kept separate during excavation, to allow for sequential backfilling of excavations. Trenches will not be backfilled without the approval the Suffolk County Council Archaeological Service.
- 5.3.12 Where the archaeological levels are particularly deep, safe excavation procedures will be followed to ensure that trenches are safe to enter. This may include shoring or stepping the sides of trenches, as appropriate to the soil and site conditions. If trenches become flooded, pumps may be used to remove excess water, and they will be assessed for stability and safety before staff enter them.
- 5.3.13 The depth and nature of any colluvial or other masking deposits will be established across the site. Buried soils will be tested pitted.
- 5.3.14 The top of the first archaeological deposit will be cleared by machine, then cleaned off by hand. Exposed surfaces will be cleaned by trowel and hoe as necessary, in order to clarify located features and deposits.
- 5.3.15 A representative sample of all archaeological features encountered will be investigated and recorded to adequately characterise the remains on site and allow decisions to be made with regard to future mitigation, whilst at the same time minimising disturbance to archaeological structures, features, and deposits. All relationships between features or deposits will be investigated and recorded. Any natural subsoil surface revealed will be hand cleaned and examined for archaeological deposits and artefacts. Excavation will characterise the full archaeological sequence down to undisturbed

natural deposits. Apparently natural features (such as tree throws) will be sampled sufficiently to establish their character.

- 5.3.16 All excavation of archaeological deposits will be done by hand, unless agreed with the Suffolk County Council Archaeological Service that there will be no loss of evidence using a machine. The method of excavation will be decided by the senior project archaeologist.
- 5.3.17 There will be sufficient excavation to give clear evidence for the period, depth, and nature of any archaeological deposit. Investigation slots through all linear features will be a least 1m in width. Discrete features will be half-sectioned or excavated in quadrants where they are large or deep.
- 5.3.18 Deep features will be evaluated with hand auger or boreholes, to assess their depth and structure.

5.4 Recording of archaeological deposits and features

- 5.4.1 Records will comprise survey, drawn, written, and photographic data.

Survey

- 5.4.2 Surveying will be done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.
- 5.4.3 The site grid will be accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area. Elevations will be levelled to the Ordnance Datum.

Written records

- 5.4.4 A register of all trenches, features, photographs, survey levels, small finds, and human remains will be kept.
- 5.4.5 All features, layers and deposits will be issued with unique context numbers. Each feature will be individually documented on context sheets, and hand-drawn in section and plan. Written descriptions will be recorded on pro-forma sheets comprising factual data and interpretative elements.
- 5.4.6 Where stratified deposits are encountered, a Harris Matrix will be compiled during the course of the excavation.

Plans and sections

- 5.4.7 Site plans will normally be drawn at 1:50, but on deeply-stratified sites a scale of 1:20 will be used. Detailed plans of individual features or groups will be at an appropriate scale (1:10 or 1:20).
- 5.4.8 Long sections showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20. All section levels will be tied in to Ordnance Datum.
- 5.4.9 All site drawings will include the following information: site name, site code, scale, plan or section number, relevant context or feature numbers,

orientation, date and the name or initials of the archaeologist who prepared the drawing.

Photogrammetric recording

- 5.4.10 Plans and sections may be supplemented with photogrammetric recording of the excavation areas. Photogrammetric models will be based on high-resolution digital photographs with a minimum file size of 5 MB. Photogrammetric processing will be conducted using the Agisoft Photosoft (Professional Edition) software, and will incorporate reference points taken by GPS-based survey equipment.

Photographs

- 5.4.11 The photographic record will comprise high resolution digital photographs.
- 5.4.12 Photographs will include both general site shots and photographs of specific features. Every feature will be photographed at least once. Photographs will include a scale, north arrow, site code, and feature number (where relevant), unless they are to be used in publications. The photograph register will record these details, and photograph numbers will be listed on corresponding context sheets.

5.5 Exceptional remains, including human remains

Significant archaeological features

- 5.5.1 If exceptional or unexpected features are uncovered, the Suffolk County Council Archaeological Service will be informed, and their advice sought on further excavation or preservation.
- 5.5.2 Significant archaeological features (e.g. solid or bonded structural remains, building slots or post-holes) will be preserved intact, even if fills are sampled. The following features will normally be cleaned, recorded and preserved for future excavation, unless directed to by the Suffolk County Council Archaeological Service:
- layers relating to domestic, craft or industrial activity (e.g. floor, middens)
 - discrete features relating to domestic or industrial activity (e.g. kilns, ovens, hearths)
 - artefact scatters (e.g. flint, metal-working debris).
- 5.5.3 If preservation *in situ* is required by the Suffolk County Council Archaeological Service, all exposed surfaces will be cleaned and prepared for reburial beneath construction materials. If appropriate, the areas will be protected with geotextile or other buffering materials.

Human remains

- 5.5.4 If human remains are encountered, the Client, Suffolk County Coroner, and the Suffolk County Council Archaeological Service will be informed immediately.

- 5.5.5 Unless directed otherwise by the Suffolk County Council Archaeological Service, human remains will be left in situ (covered and protected), until a full programme of excavation is agreed by the Suffolk County Council Archaeological Service and Client. No further excavation will then take place in the vicinity of the remains until removal becomes necessary. If the remains are under imminent threat, or if the Suffolk County Council Archaeological Service requires information on date and preservation, we will excavate and remove them.
- 5.5.6 Human remains will be excavated in accordance with all appropriate legislation and Environmental Health regulations. Excavation will only take place after Oxford Archaeology has obtained a Ministry of Justice exhumation licence.

5.6 Metal detecting and the Treasure Act

- 5.6.1 Metal detector searches will take place at all stages of the excavation by an experienced metal detector user. Excavated areas will be detected immediately before and after mechanical stripping. Both excavated areas and spoil heaps will be checked. To prevent losses from night-hawking, features will be metal detected immediately after stripping.
- 5.6.2 Metal detectors will not be set to discriminate against iron.
- 5.6.3 Artefacts will be removed and given a small find number. Labels will be placed on the location of each 'small find' and surveyed in with a GPS.
- 5.6.4 If finds are made that might constitute 'Treasure' under the definition of the Treasure Act (1996), they will, if possible, be excavated and removed to a safe place. Should it not be possible to remove the finds on the day they are found, suitable security will be arranged. Finds that are 'Treasure' will be reported to the landowner and County Coroner within 14 days, in accordance with the Act. The County Finds Liaison Officer from the Portable Antiquities Scheme will also be informed.

5.7 Post-excavation processing

- 5.7.1 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. The Project Manager and fieldwork project officer will be given feedback to enable them to develop excavation strategies during fieldwork.
- 5.7.2 Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.
- 5.7.3 Finds will be marked with context numbers, site code or accession number, as detailed in the requirements of the Suffolk County Store.

5.8 Finds recovery and processing

Standards for finds handling

- 5.8.1 Finds will be exposed, lifted, cleaned, conserved, marked, bagged, and boxed in line with the standards in:

- United Kingdom Institute for Conservators (2012) *Conservation Guidelines No. 2*
- Watkinson & Neal (1988) *First Aid for Finds*
- Chartered Institute for Archaeologists (2014) *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds*.

5.8.2 Where finds require conservation, this will be done in accordance with the guidelines of the Institute for Conservation (ICON),

Procedures for finds handling

5.8.3 At the start of work, a finds supervisor will be appointed to oversee the collection, processing, cataloguing, and specialist advice on all artefacts collected.

5.8.4 Artefacts will be collected by hand, sieving, and metal detector. Excavation areas and spoil will be scanned visually and with a metal detector to aid recovery of artefacts. All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis. 'Special/small finds' may be located more accurately by GPS if appropriate.

5.8.5 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. (See the Appendix for a list of specialists.)

5.8.6 All artefacts recovered from excavated features will be retained for post-excavation processing and assessment, except:

- those which are obviously modern in date
- where very large volumes are recovered (typically ceramic building material)
- where directed to discard on site by the Suffolk County Council Archaeological Service.

5.8.7 Where artefacts are not removed from site, a strategy will be employed to ensure a sufficient sample is retained, in order to characterise the date and function of the features they were excavated from. A record will be kept of the quantity and nature of artefacts which are not removed from site.

5.9 Sampling for environmental remains and small artefact retrieval

Standard methodology – summary

5.9.1 Sampling methods will follow guidelines produced by Historic England and Oxford Archaeology. The project team will consult Historic England's Scientific Advisor on environmental sampling and dating where necessary. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies which will be reviewed periodically during the length of the excavation. Specialists will be consulted where non-standard sampling is

required (e.g. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.

Standards for environmental sampling and processing

Paleoenvironmental remains will be sampled and processed in accordance to the OA Sampling Policy (2005) with reference to the relevant guidelines produced by Historic England:

- Oxford Archaeology 2005. *Environmental Sampling Guidelines*, 2nd ed.
- Historic England 2011. *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation*, (2nd ed)
- Historic England 2008. *Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains*.
- Historic England 2010. *Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood*.
- Historic England 2012. *Waterlogged organic artefacts. Guidelines on their recovery, analysis and conservation*.
- Historic England 2008. *Investigative conservation. Guidance on how detailed examination of artefacts from archaeological sites can shed light on their manufacture and use*.
- Historic England 2014. *Animal Bones and Archaeology. Guidelines for Best Practice*.
- Historic England 2004. *Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates*.
- Historic England 2006. *Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates*.
- Historic England 2008. *Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology*.
- Historic England 2015. *Archaeometallurgy. Guidelines for Best Practice*.
- Historic England 2015. *Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record*.

Procedures for sampling and processing

- 5.9.2 Environmental samples (up to 40 litres or 100% of context if less is available) will be taken from a range of potentially datable features and well-stratified deposits to target the recovery of plant remains, fish, bird, small mammal and amphibian bone and small artefacts. Samples will be labelled with the site code, context number, and sample number and a register will be kept.
- 5.9.3 Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) of 20 litres will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments.

- 5.9.4 Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) in consultation with the appropriate specialists. Where features containing very small artefacts such as micro-debitage and hammerscale are identified, 1L grid sampling may be employed.
- 5.9.5 Early feedback on selected samples taken during the excavation will result in a dynamic sampling strategy according to the results of rapid assessment of typically 10L sub-samples.
- 5.9.6 Typically, 20 litres of each bulk sample will be processed standard water flotation using a modified Siraf-style machine and meshes of 0.3mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). The remaining soil from a sample will be subsequently processed if appropriate based on the results of an initial assessment. Normally, early prehistoric samples will be fully processed and samples containing human remains will always be fully processed. Heavy residues will be wet sieved, air dried and selectively sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples will have a sub-sample (approximately 10L) processed as above and the flot will be assessed whilst wet and again once dried. Snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.5mm; these flots and residues will be sorted by the specialist.
- 5.9.7 Where practical, waterlogged wood specimens will be recorded in detail on site, in situ. When removed, they will be cleaned and photographed, and stored in wet cool conditions for assessment by a suitably qualified specialist (see the Appendix).

6 REPORTING

6.1 Evaluation Report

- 6.1.1 Post-excavation analysis and reporting will follow guidance in Historic England's *Management of Research Projects in the Historic Environment* (2006, reissued 2015).

6.2 Contents of the evaluation report

- 6.2.1 The report will include:
- a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address
 - full list of contents
 - a non-technical summary of the findings
 - the aims of the evaluation
 - a description of the geology and topography of the area
 - a description of the methodologies used
 - a description of the findings
 - tables summarising features and artefacts
 - site and trench location plans, and plans of each area excavated showing the archaeological features found
 - sections of excavated features
 - interpretation of the archaeological features found
 - specialist reports on artefacts and environmental finds
 - relevant colour photographs of features and the site
 - a predictive model of surviving archaeological remains, where affected by development proposals, and assessment of their importance.
 - a discussion of the relationship between findings on the site and other archaeological information held in the Suffolk Historic Environment Record
 - a bibliography of all reference material
 - the OASIS reference and summary form.

6.3 Draft and final reports

- 6.3.1 A draft copy of the report will be supplied to the Suffolk County Council Archaeological Service for comment.
- 6.3.2 Following approval of the report, one printed copy and one digital copy (PDF) will be presented to the Suffolk Historic Environment Record.
- 6.3.3 If the Suffolk County Council Archaeological Service requires no further excavation on the site, a summary report will be prepared for the *Proceedings of the Suffolk Institute of Archaeology & History*.
- 6.3.4 .

6.4 OASIS

- 6.4.1 A digital copy of the approved report will be uploaded to the OASIS database.
- 6.4.2 A copy of the OASIS Data Collection Form will be included in the report.

7 ARCHIVING

Archive standards

- 7.1.1 The site archive will conform to the requirements Appendix 1 of the Historic England's (2015) *Management of Research Projects in the Historic Environment* (MoRPHE), and the requirements of the Suffolk County Council Stores (2017).
- 7.1.2 The preparation of the archive will follow the guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (United Kingdom Institute for Conservation, 1990), *Standards in the Museum care of Archaeological Collections* (Museums and Galleries Commission 1992), and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2007).

Archive contents

- 7.1.3 The archive will be quantified, ordered, and indexed. It will include:
- artefacts
 - ecofacts
 - project documentation – including plans, section drawings, context sheets, registers, and specialist reports
 - photographs (digital photographs will be stored on CD-ROM, and colour printouts made of key features)
 - an archive-standard CD-ROM with electronic documentation (such as GIS and CAD files)
 - a printed copy of the Written Brief
 - a printed copy of the WSI
 - a printed copy of the final report
 - a printed copy of the OASIS form.
- 7.1.4 It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.

Transfer of ownership

- 7.1.5 The archaeological material and paper archive produced from this investigation will be held in storage by OA East who will seek to transfer the complete project archive to the Suffolk County Council Stores, in order to facilitate future study and ensure long-term public access to the archive.
- 7.1.6 Where the landowner wishes to retain items recovered during excavation, all selected artefacts will be fully drawn and photographed, identified, analysed, documented and conserved in order to create a comprehensive catalogue of items to be kept by the landowner before the remainder of the archive can be deposited in the Suffolk County Council Stores.
- 7.1.7 A written transfer of ownership document will be forwarded to the Suffolk County Council Archaeological Service before the archive is deposited.
- 7.1.8 In the unlikely event that artefacts of significant monetary value are discovered, and if they are not subject to Treasure Act legislation, separate

ownership arrangements may be negotiated following the creation of a comprehensive illustrated catalogue, as described above.

8 TIMETABLE

- 8.1.1 Trial trenching is expected to take four working days to complete, based on a five-day week, working Monday to Friday. This does not allow for delays caused by bad weather, but it does include time for site set-up and final backfilling of trenches.
- 8.1.2 Post-excavation processing and assessment tasks will commence shortly after excavation commences, to inform the excavation strategy, and minimise time required to prepare the final report after excavation is completed.
- 8.1.3 Post-excavation tasks and report writing will take a maximum of four weeks following the end of fieldwork, unless there are exceptional discoveries requiring lengthier analysis.

9 STAFFING AND SUPPORT

9.1 Fieldwork

- 9.1.1 The fieldwork team will be made up of the following staff:
- 1 x Project Manager (supervisory only, not based on site)
 - 1 x Project Officer/Supervisor (full-time)
 - 1 x Site Assistants (as required)
 - 1 x Archaeological Surveyor (part-time, as required)
 - 1 x Finds Assistant (part-time, as required)
 - 1 x Environmental Assistant (part-time, as required)
- 9.1.2 The Project Manager will be Nick Gilmour, and the Project Officer responsible for work on site will be one of OAE's Project Officers or Supervisors.
- 9.1.3 All Site Assistants will be drawn from a pool of qualified and experienced staff. Oxford Archaeology East will not employ volunteer, amateur, or student staff, whether paid or unpaid, except as an addition to the team stated above.

9.2 Post-excavation processing

- 9.2.1 We anticipate that the site may produce later prehistoric to medieval remains. Environmental remains will also be sampled.
- 9.2.2 Pottery will be assessed by Matt Brudenell (prehistoric), Alice Lyons (Roman) and Carole Fletcher (Anglo-Saxon and medieval).
- 9.2.3 Environmental analysis will be carried out by OA East staff, in consultation with the OA Environmental Department in Oxford. The results will be reported to Historic England's Regional Scientific Advisor. Environmental analysis will be undertaken by Rachel Fosberry (charred plant macrofossils, plant macrofossils), Liz Stafford (land molluscs), and Denise Druce and Mairead Rutherford (pollen analysis).
- 9.2.4 Faunal remains will be examined by Hayley Foster.
- 9.2.5 Conservation will be undertaken by Ipswich and Colchester Museums / Karen Barker (Antiquities Conservator), and will be undertaken in accordance with guidelines issued by the Institute for Conservation (ICON).
- 9.2.6 In the event that OA's in-house specialists are unable to undertake the work within the time constraints of the project, or if other remains are found, specialists from the list in the Appendix will be approached to carry out analysis.

10 OTHER MATTERS

10.1 Monitoring

- 10.1.1 The Suffolk County Council Archaeological Service will be informed appropriately of dates and arrangements to allow for adequate monitoring of the works.
- 10.1.2 During the excavation, representatives of the client, Oxford Archaeology East and the Suffolk County Council Archaeological Service will meet on site to monitor the excavations, discuss progress and findings to date, and excavation strategies to be followed.

10.2 Insurance

- 10.2.1 OA East is covered by Public and Employer's Liability Insurance. The underwriting company is Lloyds Underwriters, policy number CC004337. Details of the policy can be supplied on request to the Oxford Archaeology East office.

10.3 Chartered Institute for Archaeologists

- 10.3.1 Oxford Archaeology is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), and is bound by CIfA By-Laws, Standards, and Policy.

10.4 Services, Public Rights of Way, Tree Preservation Orders etc.

- 10.4.1 The client will inform the project manager of any live or disused cables, gas pipes, water pipes or other services that may be affected by the proposed excavations before the commencement of fieldwork. Hidden cables/services should be clearly identified and marked where necessary. If there are overhead cables on the site or in the approachways, a survey must be completed by the relevant authority before plant is taken onto site.
- 10.4.2 The client will likewise inform the project manager of any public rights of way or permissive paths on or near the land which might affect or be affected by the work.
- 10.4.3 The client will inform the Project Manager if the site is a Scheduled Ancient Monument, Site of Special Scientific Interest (SSSI), or any other type of designated site. The client will also inform the project manager of any trees subject to Tree Preservation Orders, protected hedgerows, protected wildlife, nesting birds, or areas of ecological significance within the site or on its boundaries.

10.5 Site Security

- 10.5.1 Unless previously agreed with the Project Manager in writing, this specification and any associated statement of costs is based on the assumption that the site will be sufficiently secure for archaeological work to

commence. All security requirements, including fencing, padlocks for gates etc. are the responsibility of the client.

10.6 Access

- 10.6.1 The client will secure access to the site for archaeological personnel and plant, and obtain the necessary permissions from owners and tenants to place a mobile office and portable toilet on or near to the site. Any costs incurred to secure access, or incurred as a result of withholding of access will not be Oxford Archaeology's responsibility. The costs of any delays as a result of withheld access will be passed on to the client in addition to the project costs already specified.

10.7 Site Preparation

- 10.7.1 The client is responsible for clearing the site and preparing it so as to allow archaeological work to take place without further preparatory works, and any cost statement accompanying or associated with this specification is offered on this basis. Unless previously agreed in writing, the costs of any preparatory work required, including tree felling and removal, scrub or undergrowth clearance, removal of concrete or hard standing, demolition of buildings or sheds, or removal of excessive overburden, refuse or dumped material, will be charged to the client, in addition to any costs for archaeological evaluation already agreed.

10.8 Site offices and welfare

- 10.8.1 All site facilities – including welfare facilities, tool stores, mess huts, and site offices – will be positioned to minimise disruption to other site users, and to minimise impact on the environment (including buried archaeology).

10.9 Backfilling/Reinstatement

- 10.9.1 Backfilling – but not specialist reinstatement – of trenches is included in the cost unless otherwise agreed with the client. Backfilling will only take place with the approval of the Suffolk County Council Archaeological Service.

10.10 Health and Safety, Risk Assessments

- 10.10.1 A risk assessment and method statement (RAMS) covering all activities to be carried out during the lifetime of the project will be prepared before work commences.
- 10.10.2 The risk assessment will conform to the requirements of health and safety legislation and regulations, and will draw on OA East's activity-specific risk assessment literature.
- 10.10.3 All aspects of the project, both in the field and in the office will be conducted according to OA East's Health and Safety Policy, Oxford Archaeology Ltd's Health and Safety Policy, and Health and Safety in Field

Archaeology (J.L. Allen and A. St John-Holt, 1997). A copy of OA East's Health and Safety Policy can be supplied on request.

11 APPENDIX: CONSULTANT SPECIALISTS

NAME	SPECIALISM	ORGANISATION
Allen, Leigh	Worked bone, CBM, medieval metalwork	Oxford Archaeology
Allen, Martin	Medieval coins	Fitzwilliam Museum
Allen, Martyn	Zooarchaeology	Oxford Archaeology
Anderson, Katie	Roman pottery	Freelance
Anderson, Sue	Medieval & post-medieval pottery (specifically from Norfolk & Suffolk), CBM and human remains	Freelance
Bamforth, Mike	Woodworking	York University
Barker, Karen	Small find conservation & X-Ray	Freelance
Bayliss, Alex	C14 advice	Historic England
Biddulph, Edward	Roman pottery	Oxford Archaeology
Billington, Lawrence	Lithics	Oxford Archaeology
Bishop, Barry	Lithics	Freelance
Blinkhorn, Paul	Iron Age, Anglo-Saxon and medieval pottery	Freelance
Booth, Paul	Roman pottery and coins	Oxford Archaeology
Boreham, Steve	Pollen and soils/ geology	Cambridge University
Broderick, Lee	Zooarchaeology	Oxford Archaeology
Brown, Lisa	Prehistoric pottery	Oxford Archaeology
Brudenell, Matt	Prehistoric pottery	Oxford Archaeology
Cane, Jon	Display & reconstruction artist	Freelance
Champness, Carl	Molluscs, geoarchaeology	Oxford Archaeology
Cotter, John	Medieval/post-medieval finds, pottery, CBM	Oxford Archaeology
Crummy, Nina	Small finds	Freelance
Cowgill, Jane	Slag/metalworking residues	Freelance
Dickson, Anthony	Worked Flint	Oxford Archaeology
Dodwell, Natasha	Osteology, including cremations	Oxford Archaeologist
Donnelly, Mike	Lithics	Oxford Archaeology
Doonan, Roger	Slags, metallurgy	Freelance
Druce, Denise	Pollen, charred plants, charcoal/wood identification, sediment coring and interpretation	Oxford Archaeology
Drury, Paul	CBM (specialised)	Freelance
Fletcher, Carole	Medieval & post-medieval pottery, glass, shell & small finds	Oxford Archaeology
Fosberry, Rachel	Charred waterlogged and mineralised plant remains	Oxford Archaeology
Foster, Hayley	Zooarchaeologist	Oxford Archaeology
Fryer, Val	Molluscs/environmental	Freelance
Mark Gibson	Osteology	Oxford Archaeology

NAME	SPECIALISM	ORGANISATION
Gleed-Owen, Chris	Herpetologist (amphibians & reptiles)	CGO Ecology Ltd
Goffin, Richenda	Post-Roman pottery, building materials, painted wall plaster	Suffolk CC
Howard-Davis, Chris	Small finds, Mesolithic flint, leather, wooden objects and wood technology	Freelance
Locker, Alison	Fish bone	Freelance
Loe, Louise	Osteology	Oxford Archaeology
Lyons, Alice	Late Iron Age/Roman pottery	Oxford Archaeology
Martin, Toby	Anglo-Saxon metalwork and artefacts	Oxford University
Masters, Pete	Geophysics	Cranfield University
McIntyre, Lauren	Osteology	Oxford Archaeology
Middleton, Paul	Phosphates/garden history	Peterborough Regional College
Mould, Quita	Ironwork, leather	freelance
Nicholson, Rebecca	Fish and small mammal and bird bones, shell	Oxford Archaeology
Palmer, Rog	Aerial photographs	Air Photo Services
Percival, Sarah	Prehistoric pottery, quern stones	Freelance
Poole, Cynthia	Multi-period finds, CBM, fired clay	Oxford Archaeology
Popescu, Adrian	Roman and later coins	Fitzwilliam Museum
Quinn, Patrick	Pottery thin section, ceramic petrology	UCL
Riddler, Ian	Worked bone objects & related artefact types	Freelance
Robinson, Mark	Insects	Oxford University
Rowland, Steve	Zooarchaeology & osteology	Oxford Archaeology
Rutherford, Mairead	Pollen, diatoms, <i>etc</i>	Oxford Archaeology
Samuels, Mark	Architectural stonework	Freelance
Scott, Ian	Roman, medieval, post-medieval finds, metalwork, glass	Oxford Archaeology
Shaffrey, Ruth	Worked stone and Roman CBM	Oxford Archaeology
Smith, David	Insects	University of Birmingham
Smith, Ian	Zooarchaeology	Oxford Archaeology
Spoerry, Paul	Medieval pottery	Oxford Archaeology
Stafford, Liz	Molluscs and geoarchaeology	Oxford Archaeology
Timberlake, Simon	Archaeometallurgy & geoarchaeology	Freelance
Tyers, Ian	Dendrochronology	Sheffield University
Ui Choileain, Zoe	Osteology & zooarchaeology	Oxford Archaeology
Vickers, Kim	Insects	Sheffield University
Wadeson, Stephen	Samian pottery, Roman glass	Oxford Archaeology
Walker, Helen	Medieval pottery (Essex)	Essex CC
Way, Twigs	Medieval landscape and garden history	Freelance

NAME	SPECIALISM	ORGANISATION
Webb, Helen	Osteology	Oxford Archaeology
Young, Jane	Medieval Pottery (Lincolnshire)	Freelance
Zant, John	Roman coins	Oxford Archaeology

Radiocarbon dating is normally undertaken for Oxford Archaeology East by SUERC and by the Oxford University Accelerator Laboratory.

Geophysical prospection is normally undertaken by Magnitude Surveys Ltd.

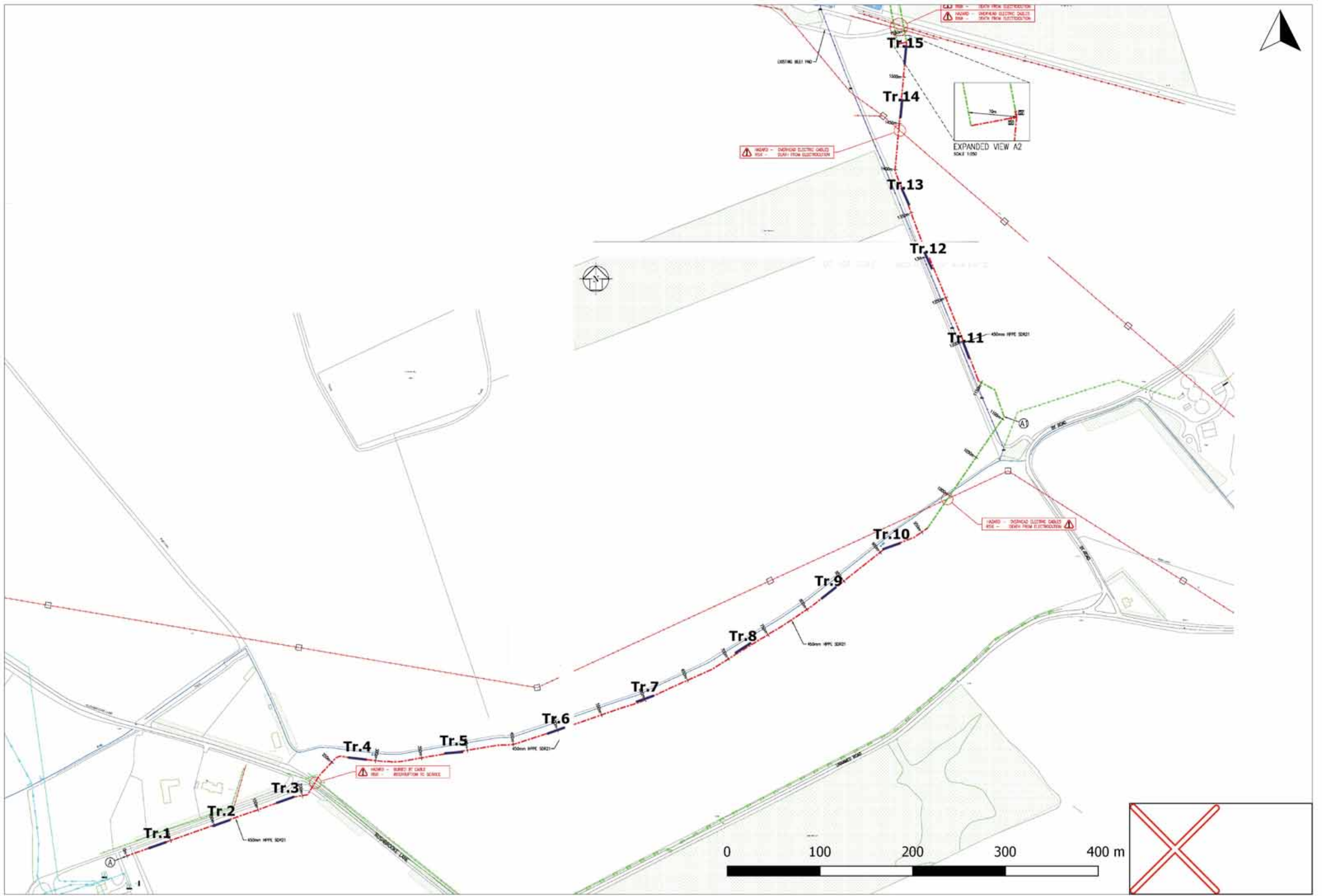


Figure 1. Bury St Edmunds Growth Scheme. Trench Plan



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Director: Gill Hey, BA PhD FSA MCIfA
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APPENDIX D OASIS REPORT FORM

Project Details

OASIS Number	Oxfordar3-341698		
Project Name	Bury Growth Scheme		
Start of Fieldwork	27-02-2019	End of Fieldwork	04-03-2019
Previous Work	No	Future Work	Unknown

Project Reference Codes

Site Code	RGH 101	Planning App. No.	
HER Number	RGH 101	Related Numbers	

Prompt	Water Act 1989 and subsequent Code of Practice
Development Type	Water pipeline
Place in Planning Process	After full determination (eg. As a condition)

Techniques used (tick all that apply)

- | | | |
|--|---|---|
| <input type="checkbox"/> Aerial Photography – interpretation | <input type="checkbox"/> Grab-sampling | <input type="checkbox"/> Remote Operated Vehicle Survey |
| <input type="checkbox"/> Aerial Photography - new | <input type="checkbox"/> Gravity-core | <input type="checkbox"/> Sample Trenches |
| <input type="checkbox"/> Annotated Sketch | <input type="checkbox"/> Laser Scanning | <input type="checkbox"/> Survey/Recording of Fabric/Structure |
| <input type="checkbox"/> Augering | <input type="checkbox"/> Measured Survey | <input checked="" type="checkbox"/> Targeted Trenches |
| <input type="checkbox"/> Dendrochronological Survey | <input type="checkbox"/> Metal Detectors | <input type="checkbox"/> Test Pits |
| <input type="checkbox"/> Documentary Search | <input type="checkbox"/> Phosphate Survey | <input type="checkbox"/> Topographic Survey |
| <input type="checkbox"/> Environmental Sampling | <input type="checkbox"/> Photogrammetric Survey | <input type="checkbox"/> Vibro-core |
| <input type="checkbox"/> Fieldwalking | <input type="checkbox"/> Photographic Survey | <input type="checkbox"/> Visual Inspection (Initial Site Visit) |
| <input type="checkbox"/> Geophysical Survey | <input type="checkbox"/> Rectified Photography | |

Monument	Period	Object	Period
None	Choose an item.	None	Choose an item.

Insert more lines as appropriate.

Project Location

County	Suffolk	Address (including Postcode) Rushbrooke Lane Rushbrooke Bury St Edmunds Suffolk IP30 0EU
District	St Edmundsbury	
Parish	Rushbrooke with Rougham	
HER office	Suffolk	
Size of Study Area	1.5km	
National Grid Ref	TL 874 624 to TL 882 633	

Project Originators

Organisation	Oxford Archaeology East
Project Brief Originator	Rachael Abraham (Suffolk CC)
Project Design Originator	Nicholas Gilmour (OA East)
Project Manager	Nicholas Gilmour (OA East)
Project Supervisor	Emily Abrehart (OA East)

Project Archives

	Location	ID
Physical Archive (Finds)	N/A	N/A
Digital Archive	Suffolk county council stores	RGH 101
Paper Archive	Suffolk county council stores	RGH 101

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Remains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

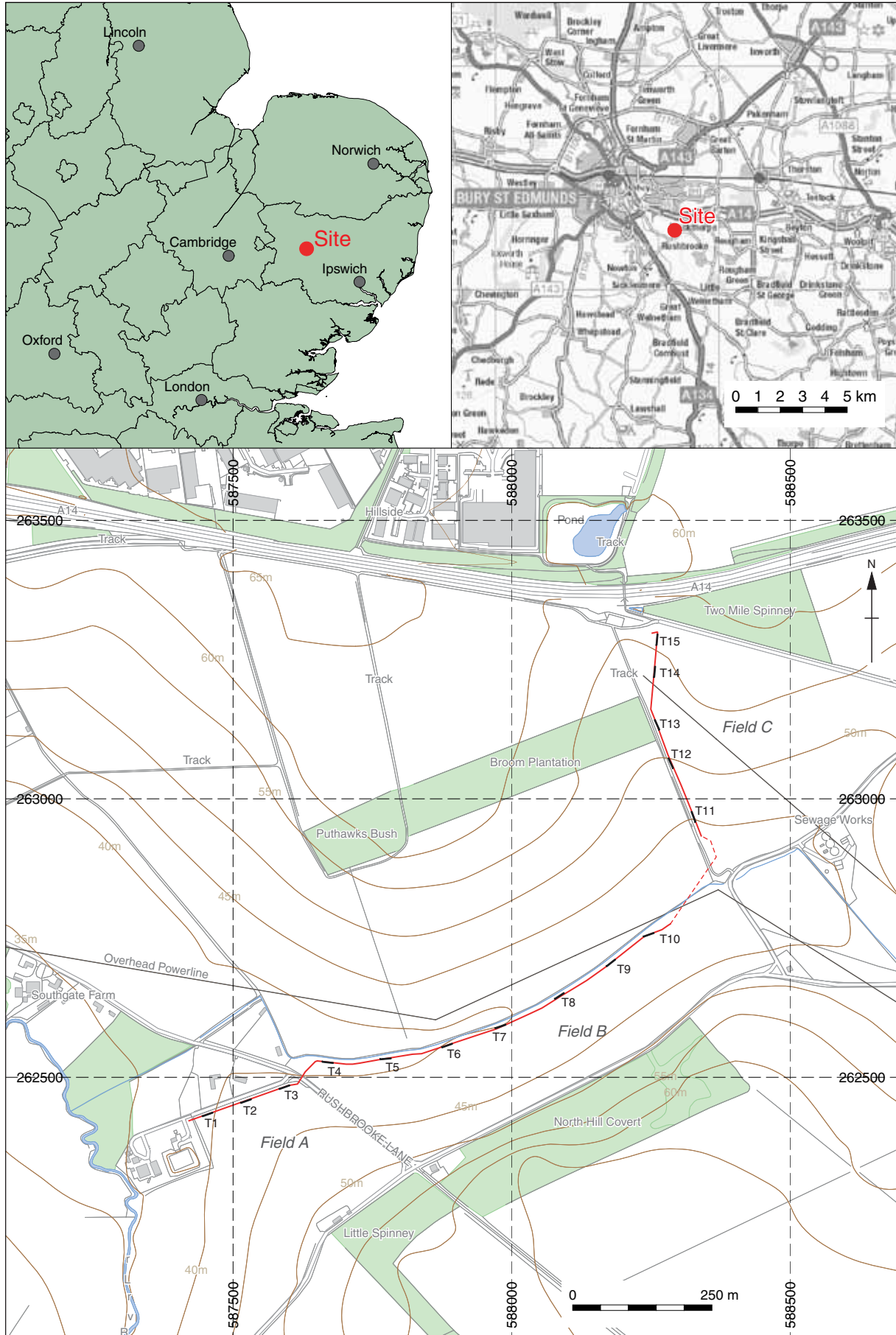
Digital Media

Database	<input checked="" type="checkbox"/>
GIS	<input type="checkbox"/>
Geophysics	<input type="checkbox"/>
Images (Digital photos)	<input checked="" type="checkbox"/>
Illustrations (Figures/Plates)	<input checked="" type="checkbox"/>
Moving Image	<input type="checkbox"/>
Spreadsheets	<input checked="" type="checkbox"/>
Survey	<input checked="" type="checkbox"/>
Text	<input checked="" type="checkbox"/>
Virtual Reality	<input type="checkbox"/>

Paper Media

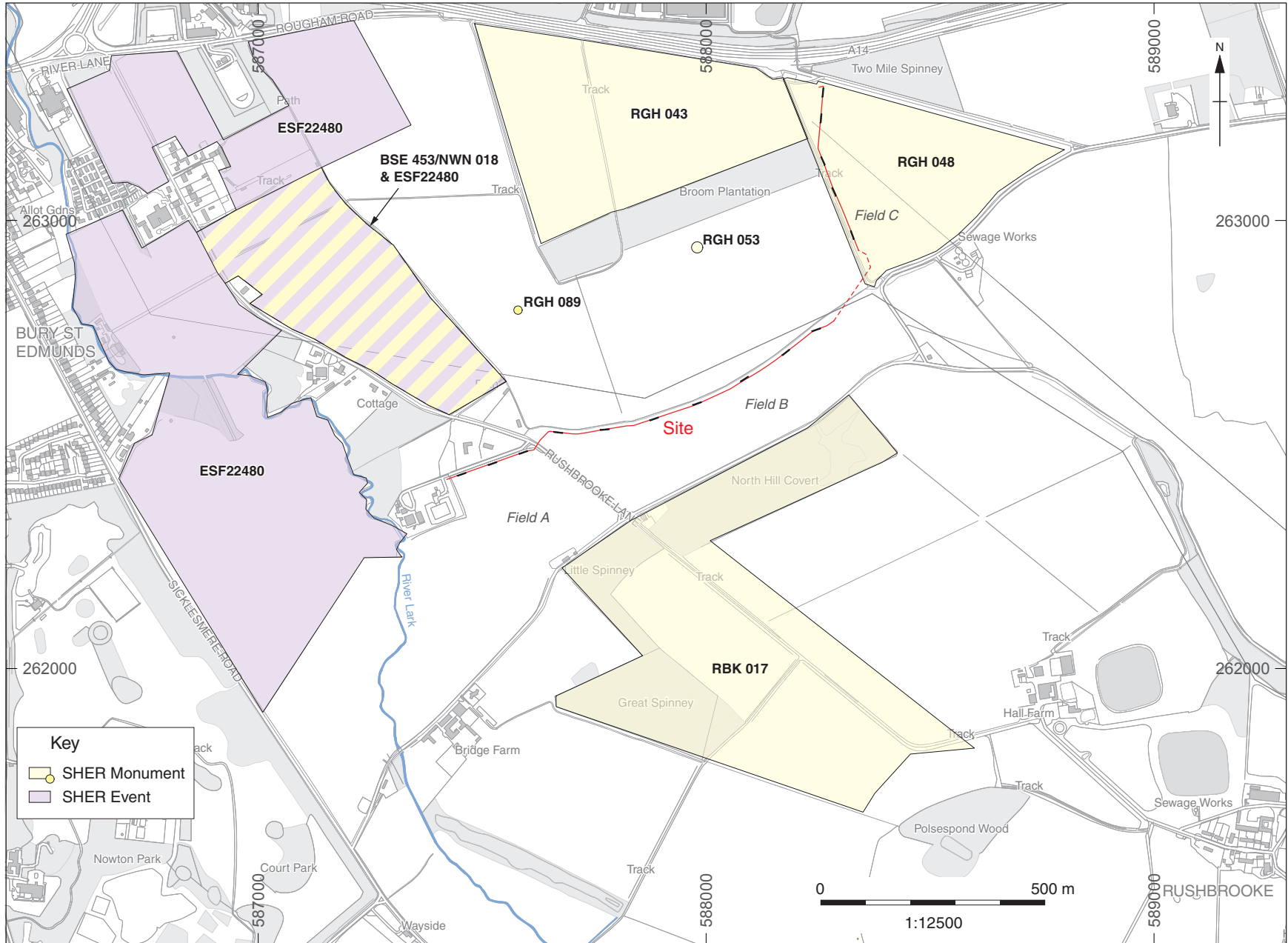
Aerial Photos	<input type="checkbox"/>
Context Sheets	<input checked="" type="checkbox"/>
Correspondence	<input type="checkbox"/>
Diary	<input type="checkbox"/>
Drawing	<input type="checkbox"/>
Manuscript	<input type="checkbox"/>
Map	<input type="checkbox"/>
Matrices	<input type="checkbox"/>
Microfiche	<input type="checkbox"/>
Miscellaneous	<input type="checkbox"/>
Research/Notes	<input type="checkbox"/>
Photos (negatives/prints/slides)	<input type="checkbox"/>
Plans	<input checked="" type="checkbox"/>
Report	<input checked="" type="checkbox"/>
Sections	<input checked="" type="checkbox"/>
Survey	<input type="checkbox"/>

Further Comments



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Figure 1: Site location showing archaeological trenches (black) and pipeline route (red). Scale 1:10000



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Figure 2: Suffolk Historic Environment Record (SHER) entries mentioned in the text

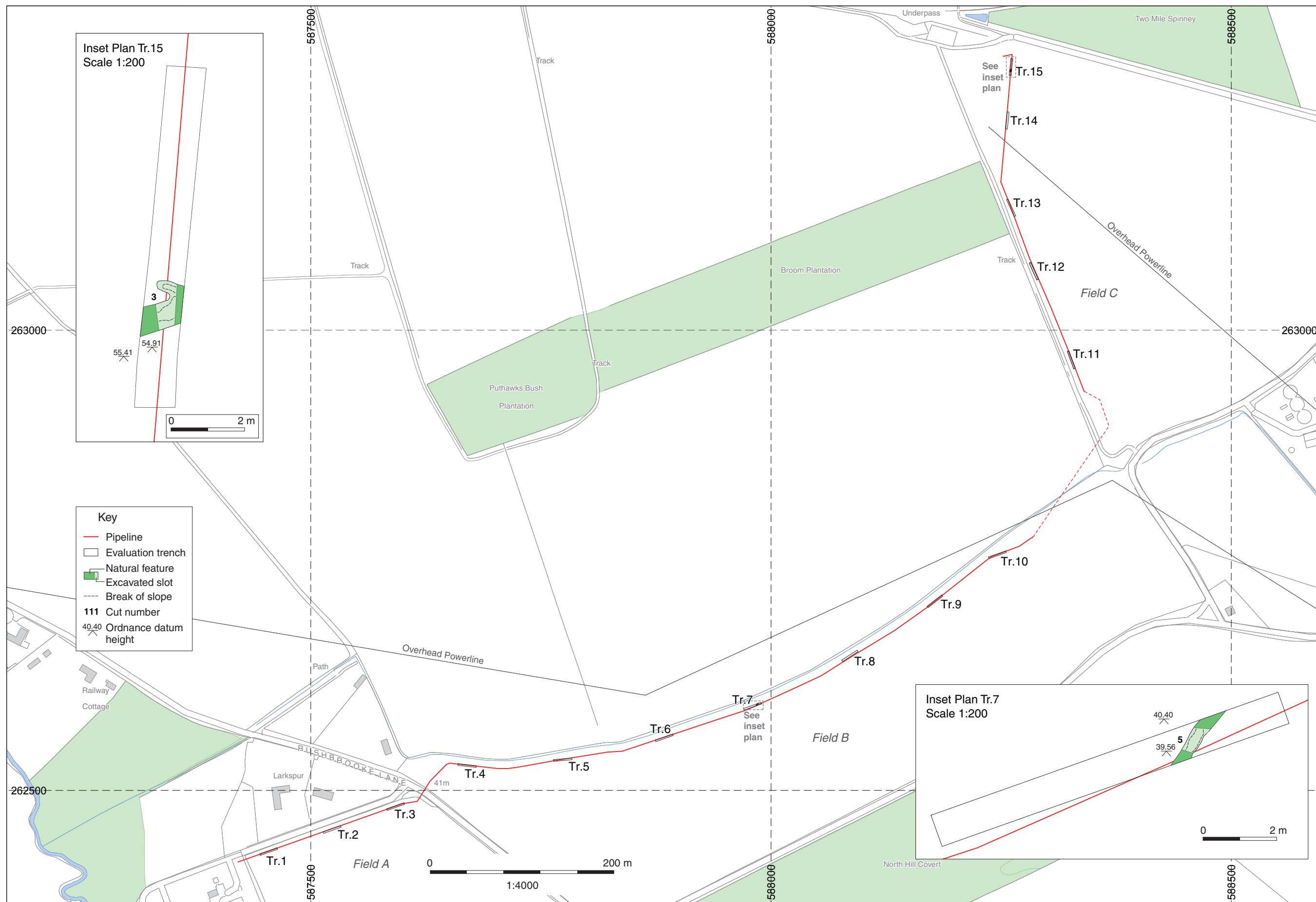


Figure 3: Trench plan

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Plate 1: Trench 1, looking south-west



Plate 2: Trench 9, looking south-west



Plate 3: Trench 15, natural feature 3, looking east



Plate 4: Trench 15, looking north



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