



Thorney Sewage Treatment Works, Thorney, Nottinghamshire

Archaeological Watching Brief





**THORNEY SEWAGE TREATMENT WORKS,
THORNEY, NOTTINGHAMSHIRE**

Archaeological Watching Brief

Prepared for:
North Midlands Construction PLC

by
Wessex Archaeology
Unit R6, Riverside Block,
Sheaf Bank Business Park,
Prospect Road,
Sheffield
S2 3EN

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QUALITY ASSURANCE

SITE CODE	73981	ACCESSION CODE	TBC	CLIENT CODE	NA
PLANNING APPLICATION REF.	NA	NGR	485997 373384		

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* I= INTERNAL DRAFT E= EXTERNAL DRAFT F= FINAL

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NOTTINGHAMSHIRE**

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Front cover General working shot during test pitting showing mound
Back cover General working shot during topsoil strip, looking north

Figure 1 Site location plan
Figure 2 Site plan

Table 1 Archive index
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**THORNEY SEWAGE TREATMENT WORKS,
NOTTINGHAMSHIRE****Archaeological Watching Brief****Summary**

Wessex Archaeology was commissioned by North Midlands Construction PLC on behalf of Severn Trent Water to undertake archaeological monitoring during site investigation and groundwork associated with the refurbishment of a Rotating Biological Contactor site at Thorney Sewage Treatment Works (STW), Nottinghamshire, approximately centred on National Grid coordinate 485997 373384. This report presents a brief description of the methodology followed, the results of the monitoring, and an interpretation of the findings.

Archaeological monitoring was undertaken during the excavation of 3 trial pits within the site in April 2010, and during the subsequent groundworks carried out in March 2011. Each trial pit was machine excavated to a depth no greater than 3.5m in order to ascertain ground conditions. The main groundworks comprised the topsoil stripping of a 400m² area to a depth of 0.5-0.8m, and the further excavation of a 44m² area to a depth of 1m for the new sewage treatment tank.

The site is largely comprised deeply ploughed topsoil overlying undisturbed natural sand deposits. Ground levels to the south of the monitored area, at its junction with the road, had been made up with demolition material to a depth of 0.2m likely to improve the ground for passing farm traffic.

Archaeological monitoring during the groundworks did not identify any evidence of human activity prior to the modern period. The entirety of material found is likely attributed to construction activity associated with the creation of the present sewage treatment works, and ground improvement activity adjacent to the road.

**THORNEY SEWAGE TREATMENT WORKS,
NOTTINGHAMSHIRE****Archaeological Watching Brief****Acknowledgements**

This project was commissioned by North Midlands Construction PLC on behalf of Severn Trent Water and Wessex Archaeology would like to thank Denise Bacon in this regard.

The fieldwork and compilation of this report was undertaken by Chris Harrison and James Thomson, with illustrations by Chris Swales. The project was managed for Wessex Archaeology by Richard O'Neill.

**THORNEY SEWAGE TREATMENT WORKS,
NOTTINGHAMSHIRE****Archaeological Watching Brief****1 INTRODUCTION****1.1 Project Background**

- 1.1.1 Wessex Archaeology (WA) was commissioned by North Midlands Construction PLC on behalf of Severn Trent Water (hereafter 'the Client') to undertake an archaeological watching brief during initial site investigation work and subsequent groundwork at Thorney, Nottinghamshire (hereafter 'the Site'). The Site is approximately centred on National Grid coordinate 485997 373384 (**Figure 1**).
- 1.1.2 The proposed development comprised of the demolition of an existing Rotating Biological Contactor (RBC) and its replacement by a new adjacent unit within previously undisturbed ground.
- 1.1.3 Nottinghamshire County Council (NCC) requested a scheme of archaeological monitoring through a watching brief during the excavation of test pits and during the main programme of groundworks in previously undisturbed areas. This is in line with current government planning guidance (DCLG 2010).
- 1.1.4 A Written Scheme of Investigation (WSI) was prepared by Wessex Archaeology (WA 2010b) detailing the scope of the archaeological monitoring and the methods and standards to be employed. This report presents a brief description of the methodology followed, the results of the monitoring, and an interpretation of the findings.

1.2 The Site, Location and Geology

- 1.2.1 Thorney Sewage Treatment Works are located approximately 17km south-east of Retford, Nottinghamshire, and 12km north-west of Lincoln. The site is situated immediately north of the Springwood Farm access road, to the north-east of Thorney.
- 1.2.2 The site was occupied by a modern RBC as well as an access track and fields belonging to Springwood Farm. The British Geological Survey map for the area (1:50,000 Solid and Drift Series, sheet E114) indicates that the underlying geology of the Site is Scunthorpe Mudstone overlain by Holme Pierrepont Sands and Gravels

2 METHODOLOGY**2.1 Aims and Scope**

- 2.1.1 The principal aim of the watching brief was to provide further information concerning the presence/absence, date, nature and extent of any buried archaeological remains that may survive and to investigate and record all archaeological features revealed during test pitting and groundworks.

2.1.2 The specific aims of the project are:

- to accurately record the location and stratigraphy of test pits excavated as part of an initial assessment of the site;
- to accurately record the location and stratigraphy of areas excavated during the main groundworks programme;
- to assess the state of survival of archaeological features and finds within the site;
- to place any archaeology encountered within its local, regional and national significance.

2.2 Watching Brief

2.2.1 In accordance with the WSI (WA 2010b), an archaeological watching brief was maintained by a suitably qualified member of Wessex Archaeology staff during the excavation of test pits and groundworks within the designated monitoring area.

2.2.2 All recording was undertaken using Wessex Archaeology's *pro forma* recording system, supported by a digital photographic record. The contents of the fieldwork archive are tabulated below as **Table 1**.

2.3 Best Practice

2.3.1 All works were conducted in compliance with the Institute for Archaeologists' *Standards and Guidance for an Archaeological Watching Brief* (Revised 2008).

2.4 Copyright

2.4.1 This report 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 we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

3 ARCHAEOLOGICAL BACKGROUND

3.1 Introduction

3.1.1 The following section summarises a scoping report of the historical and archaeological background of the site (WA 2010a).

3.2 Prehistoric

3.2.1 Evidence for prehistoric activity within the vicinity of the Site comprises the discovery of two Neolithic (4000-2400 BC) hand axes within and around Thorney. An undated ditched linear feature that is visible as a cropmark approximately 1.20km to the east of the site may also date to the prehistoric period.

3.3 Early Historic

- 3.3.1 The inclusion of Thorney in the 1086 Domesday survey and the proximity of an Anglo-Saxon Church approximately 0.5km southwest of the Site suggest the area surrounding the Site was settled by the Anglo-Saxon period (AD 410-1066)
- 3.3.2 The present settlement at Thorney largely originated in the medieval period (1066-1500). The regular narrow plots of land either side of the Main Street is typical of medieval settlement patterns and ridge and furrow earthworks corresponding to medieval agricultural practices have been identified to the northwest and southwest of the Site.

3.4 Post-medieval and Modern

- 3.4.1 The present church of St. Helen was constructed in 1850 replacing the medieval church, which had stood in the immediate vicinity. A 12th-century font from the earlier church was incorporated into the fabric of its successor.
- 3.4.2 Thorney sewage treatment works site was depicted on the 1884 Ordnance Survey map as part of a field to the north of the Springwood Farm access track. This plot formed part of a series of small and medium-sized fields with regular boundaries that were typical of the late 18th- and early 19th-century enclosure process. Documentary references suggest that, prior to this period, much of the landscape around Thorney was poorly-drained moorland largely unsuitable for arable farming. Drainage programmes and private enclosure during this period brought several hundred acres of land into agricultural use and it is possible that the site became arable land as a result of this process.
- 3.4.3 Springwood Farm, to the east, is likely to have been one of the five new farms that are known to have been constructed in the late 18th- and early 19th-century. At this time the Site was part of the Springwood Farm field system and the adjacent field boundary and access road were likely created during the Site's enclosure.

4 RESULTS

4.1 Introduction

- 4.1.1 Archaeological monitoring was maintained during the excavation of 3 trial pits, and the subsequent topsoil strip of the Site (**Figure 2**). All the works were machine excavated using a toothless ditching bucket. Each test pit was machine excavated to a depth no greater than 3.5m in order to ascertain ground conditions. The main groundworks comprised the topsoil stripping of a 400m² area to a depth of 0.5-0.8m, and the further excavation of a 44m² area to a depth of 1m for the new sewage treatment tank.
- 4.1.2 The trial pits are numbered 1, 4 and 5 in concordance with the numbering scheme employed by the Client. The following section provides a summary of the information held in the Site archive. Observed features and contexts for each monitored area are tabulated as **Appendix 1**.

4.2 Stratigraphic Sequence

- 4.2.1 The ground surface across the Site largely comprised a 0.5m thick layer of mid brown clayey sand ploughed topsoil. In addition there was a paved concrete raft in the southwest of the Site around the existing RBC.
- 4.2.2 A mound to the north of the existing RBC was investigated, revealing that it was relatively recent, comprising redeposited topsoil and modern plastic mesh (context **200**). The mound was likely created during the removal of remnants of turf growing mesh from the adjacent field.
- 4.2.3 The subsoil across the site was very similar to the topsoil, although of greater compaction and more frequent pebble inclusions (context **404**). Beneath the subsoil, natural geology was encountered at a depth of between 0.50 and 0.80m below ground level. It comprised yellow-brown sand with unsorted pebble inclusions (contexts **102**, and **403**), overlying greyish blue clay with occasional gravel lenses.
- 4.2.4 Made ground comprising of demolition rubble, largely fragments of brick and concrete, was encountered adjacent to the road and around the edge of the RBC compound. The material appears to comprise at least two phases, the earliest represented by the roadside deposit (context **402**) that contained undiagnostic fragments of 19th to early-20th century brick. The deposit beside the compound (context **400**) contained entirely modern material likely imported as hardcore during the construction of the present RBC.

4.3 Archaeological Features

- 4.3.1 No archaeological features were encountered within the monitored areas other than made ground deposits.

4.4 Finds

- 4.4.1 A very small quantity of modern material was recorded during the top soil strip, but was not retained.

5 CONCLUSIONS

- 5.1.1 Archaeological monitoring during the trial pits and groundworks at Thorney STW did not identify any evidence for human activity prior to the modern period. The entirety of material found is likely attributed to construction activity associated with the creation of the present sewage treatment works, and ground improvement activity adjacent to the road.

6 ARCHIVE

6.1 Preparation

- 6.1.1 The project archive, consisting of all primary written documents, plans, sections, photographs, and electronic data, will be prepared by Wessex Archaeology staff in accordance with the requirements of the repository museum and in line with guidelines published by the United Kingdom Institute for Conservation (1990), Museums and Galleries Commission (1992), and English Heritage (1991).

6.2 Deposition

- 6.2.1 It is anticipated that the physical site archive will be deposited with Newark Museum who are currently not accepting archives. Until such time the archive will be stored at Wessex Archaeology's Sheffield office.
- 6.2.2 Copies will be submitted with the site archive, and to the Sites and Monuments Record.
- 6.2.3 An OASIS form will be completed at <http://ads.ahds.ac.uk/project/oasis/> for inclusion in the ADS database. This will include an electronic copy of the report in PDF format.

Table 1: Archive Index

Paper archive			
Folder no.	Folder type	Item(s)	No/Pages
1	A4 ring binder	Wessex Archaeology WSI	6
		Copy of watching brief day book	1
		Test Pit/Trial Trench Record sheets	2
		Photographic Record sheet	1
		Site location drawing	1

7 BIBLIOGRAPHY

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- English Heritage. 1991. *Management of Archaeological Projects*, London; English Heritage.
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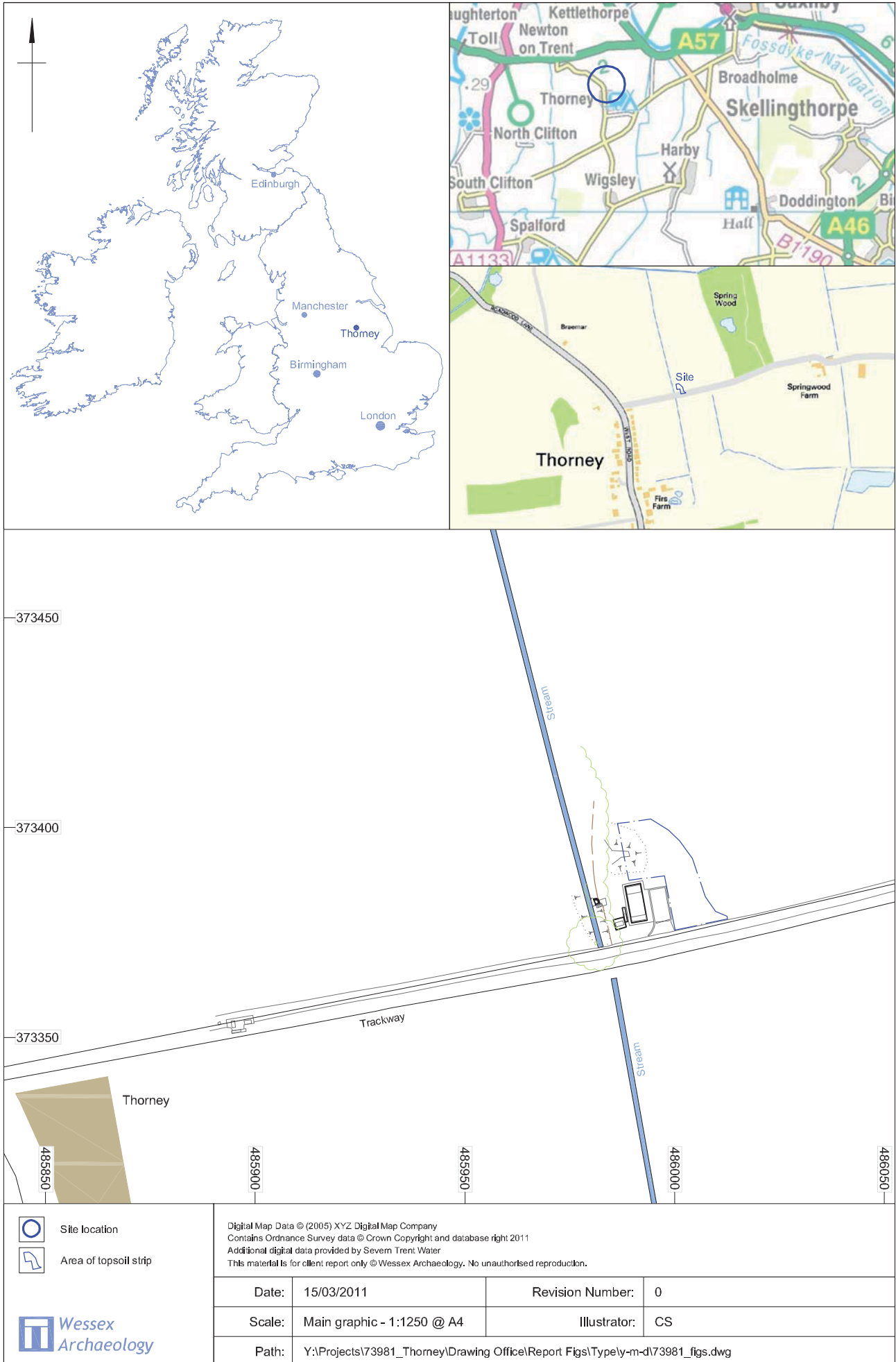
8 APPENDIX 1: SEDIMENT DESCRIPTIONS

Table 2: Sediment descriptions for trial pits 1, 4-5 and topsoil strip

Trial Pit 1			
Context	Interpretive category	Description	Depth bgl
200	Redeposited Topsoil	Dark greyish brown sandy clay with abundant green netting	0.00-1.20m+

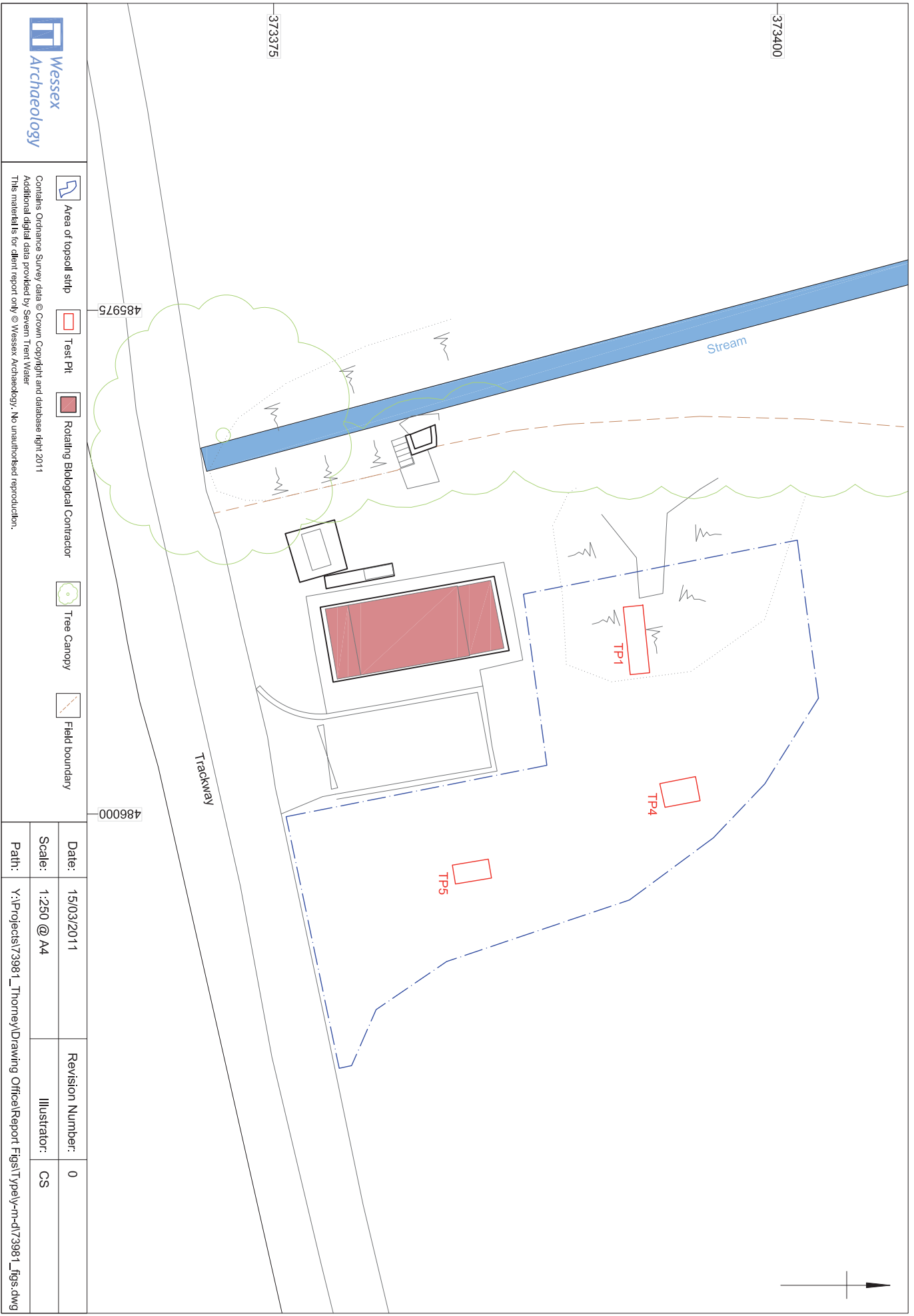
Trial Pit 4-5			
Context	Interpretive category	Description	Depth bgl
100	Topsoil	Dark brown sandy clay with poorly sorted mottled sandy yellow areas. Frequent clumps of straw stubble from the previous harvest.	0.00-0.37m
101	Subsoil	Dark greyish brown sandy clay with abundant pebbles	0.37-0.52m
102	Natural	Yellow-brown sandy gravel	0.52m+

Topsoil Strip			
Context	Interpretive category	Description	Depth bgl
400	Made-ground	Redeposited topsoil with inclusions of modern demolition material	0.00-0.50m+
401	Topsoil	Mid brown clayey sand with moderate unsorted pebbles <10cm	0.00-0.45m
402	Made-ground	Redeposited topsoil with inclusions of 19th century demolition material	0.00-0.20m
403	Natural	Yellow-brown sand with common unsorted pebbles <10cm	0.80-1.20m+
404	Subsoil	Mid brown clayey sand with common unsorted pebbles <10cm	0.45-0.80m



Site location

Figure 1



Site plan

Figure 2



WESSEX ARCHAEOLOGY LIMITED.

Registered Head Office: Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB.

Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk

With regional offices in **Maidstone** and **Sheffield**

For more information visit www.wessexarch.co.uk



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