Castle Acre Anglian Water Pipeline, Castle Acre, Norfolk

Archaeological Watching Brief Report

September 2019

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Castle Acre Anglian Water Pipeline

Archaeological Watching Brief Report

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With illustrations by David Brown BA.

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Summary

Between the 1st and 4th of July 2019, and the 16th and 18th of September 2019, Oxford Archaeology East monitored the excavation of eight drilling pits along the route of an Anglian water pipeline adjacent to the A1065, approximately 2km to the south of Castle Acre, Norfolk. No archaeological remains were revealed. The soil sequences observed in some of the pits excavated on the roadside verges suggest significant movement of soil took place during road-widening works in the 1960s, which may have removed any potential archaeological remains in this area.

Acknowledgements

Oxford Archaeology would like to thank Anglian Water for commissioning this project. Thanks are also extended to Steve Hickling who monitored the work on behalf of Norfolk County Council.

The project was managed for Oxford Archaeology by Nicholas Gilmour. The fieldwork was directed by Thomas Lucking and supported by Frankie Wildmun. Digitizing was carried out by Dave Brown. Thanks are also extended to the teams of OA staff prepared the archive under the management of Katherine Hamilton.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology East (OA) was commissioned by Anglian Water to undertake a watching brief at the site of Castle Acre Anglian Water Pipeline, adjacent to a stretch of the A1065 approximately 2km to the south of Castle Acre.

1.1.2 The work was undertaken in advance of the drilling of an underground water main by Anglian Water. A brief was set by Norfolk County Council Historic Environment Service (Robertson 2016) and a Written Scheme of Investigation (WSI) was produced by OA detailing the Local Authority's requirements for work necessary fulfill this brief (Gilmour 2018). This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

1.2.1 The stretch of works monitored lie approximately 2km south of Castle Acre, and run alongside the A1065 for approximately 500m (Fig. 1).

1.2.2 The area of monitored works consisted of four drilling pits excavated into the grass roadside verge on the eastern side of the road at regular intervals running north-south (Pits 24-27), two pits excavated into the verge on the western side of the road adjacent to an area of woodland (Pits 18/9 and 28), and two drilling pits at the southern end excavated on the margin of an arable field (Pits 29 and 30), following the north-south pipeline route (Fig. 1). The area of woodland adjacent to the west of the site is known as Bartholomew's Hills and the historic significance of this is discussed in more detail below.

1.2.3 The bedrock geology along the route is Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation and Culver Chalk Formation (undifferentiated). This is overlain in places by superficial deposits of the Lowestoft Formation – Sand and gravel or Diamicton (http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html. Accessed 17th September 2019). During excavations, the superficial deposits in this area were revealed to consist predominantly of flint nodules of varying sizes, including some very large, as well as smaller mixed gravels and sands.

1.3 Archaeological and historical background

1.3.1 Below is a brief summary of known archaeological finds and features in the area, drawn from a search of the Norfolk HER, with selected records plotted on Fig. 2.

1.4 Palaeolithic

1.4.1 During the early 20th century, a number of Paleolithic flints were recovered from Bartholomew's Hills pits (NHER 4099). These include 20 handaxes and many flakes, a number of which display signs of secondary working. This is an important assemblage due to the presence of Levallois flakes and cores alongside cruder, stone-struck flakes.

1.5 Bronze Age

1.5.1 A Late Bronze Age socketed axe (NHER 15722) was found on the surface of a field c700m to the north-west of the drill pits to be monitored.

1.6 Saxon and Medieval

1.6.1 There are two major medieval archaeological sites in Castle Acre; a castle and a priory. The castle (NHER 3449) had late Saxon origins, as a large hall held by a thegn called Toki. After the Norman conquest, the building was re-built in stone. During the 12th century the defences were strengthened. The priory (NHER 4096) was founded in AD 1089 and was dissolved in AD1537. The ruins of the priory building survive well and include an important Romanesque Façade of the 12th century church.

1.6.2 In the immediate location where the drill pits were excavated are the remains of a medieval leper hospital (NHER 4124). During widening of the A1065 (in 1967) twelve human skeletons, along with possible a wall foundation were uncovered, which are believed to represent remains of this hospital and associated cemetery (NHER 4128).

2 WATCHING BRIEF AIMS AND METHODOLOGY

2.1 Aims

2.1.1 This archaeological monitoring sought to avoid damage to heritage assets, without any record of these being made.

2.2 Methodology

2.2.1 A total of eight drilling pits were monitored during this project, seven of which were numbered by Anglian Water as Pits 24 to 30, as well as an additional pit, numbered in this report as Pit 18/9, which was excavated after a change in the pipeline route. These were excavated by Anglian Water engineers supervised by a banksman, and measured approximately 2m in length, 2m in width and 2m in total depth after it was confirmed that no archaeological remains were present.

2.2.2 All machine excavation took place under the supervision of a suitably qualified and experienced archaeologist.

2.2.3 Topsoil, subsoil and other modern layers encountered were stripped to the depth required for the construction works. A toothless ditching bucket was used to excavate the drill pits. Overburden was excavated in spits not greater than 0.1m thick.

2.2.4 No archaeology was encountered in any of the pits excavated, but photographic records were made of each pit as well as a record of any modern soil layers encountered including their depths and compositions.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the watching brief are presented below. No archaeological remains were encountered during the excavations, and no residual finds collected. 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 was found to be variable across the pits excavated. The natural geology of sand, gravels and flint nodules was overlain by a mid-greyish brown silty sand subsoil between 0.20m-0.40m thick, with the exception of Pits 26 and 28 where this was absent. This in turn was generally overlain by a mid-brownish grey silty sand topsoil between 0.20-0.55m thick (Plate 1). In pit 24, a layer of redeposited natural sands and gravels (04) and buried twentieth-century topsoil layer (05) were exposed between the subsoil and current topsoil (Plate 2), while in Pit 29 a colluvial layer (06) covered the topsoil (Plate 3). This variation in soils across the trenches was attributed to twentieth-century movement of soils during road-widening works in the 1960s, with the exception of Pit 29 where the colluvial layer was a result of soil movement down the adjacent slope.

3.2.2 Ground conditions throughout the watching brief were generally good, and the site remained dry throughout.

3.3 General distribution of archaeological deposits

3.3.1 No archaeological features were exposed during these works.

3.4 Finds summary

3.4.1 No finds of any period were collected from any of the pits during this investigation.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 No archaeological features were exposed during this investigation, but the clear contrast of the natural geology against the overlying layers suggests that were any features present they would have likely been visible within the excavated pits. For this reason, the results of this watching brief are considered to have a good level of reliability.

4.2 Watching Brief objectives and results

4.2.1 The aim of this watching brief was to avoid damage to heritage assets without any record of these being made. Since no archaeological features were found, this objective may be considered to have been fulfilled.

4.3 Interpretation

4.3.1 The variation in modern soil layers encountered across the pits excavated on the roadside verges is likely to be a result of considerable soil movement from road-widening works during the 1960s. This appears to be particularly true of Pit 24, where the original topsoil (05) of the roadside was subsequently covered by a sand and gravel layer (04) and the current topsoil. Mechanical soil movement may also be attributed to the lack of subsoil encountered in Pits 26 and 28, where a topsoil appeared to have been reinstated over an area that was stripped down to the natural geology, and also in Pit 18/9 where a modern topsoil covered a layer of tarmac and concrete hardcore.

4.3.2 By contrast, the soil sequence of Pit 29 suggests a degree of soil movement into the corner of the field from the adjacent hill, which had covered the topsoil with a colluvial layer (06).

4.4 Significance

4.4.1 The evidence for the considerable movement of soil on the roadside verges suggests the potential for the survival of archaeological features is limited as they may have seen a high degree of truncation during previous works.

APPENDIX A DESCRIPTIONS AND CONTEXT INVENTORY

Pit 24						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil overlying redeposited natural, overlying a buried topsoil, overlying subsoil, overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.20	Topsoil	-	-
2	Layer	-	0.23	Subsoil	-	-
3	Layer	-	-	Natural	-	-
4	Layer	-	0.33	Redeposited Natural	-	Modern
5	Layer	-	0.10	Buried Topsoil	-	Modern

Pit 25						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
2	Layer	-	0.20	Subsoil	-	-
3	Layer	-	-	Natural	-	-

Pit 26						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
3	Layer	-	-	Natural	-	-

Pit 27						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.20	Subsoil	-	-
3	Layer	-	-	Natural	-	-

Pit 28						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.30	Topsoil	-	-
3	Layer	-	-	Natural	-	-

Pit 29						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of colluvium overlying buried topsoil and subsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.35	Topsoil	-	-
2	Layer	-	0.25	Subsoil	-	-
3	Layer	-	-	Natural	-	-
6	Layer	-	0.30	Colluvium	-	-

Pit 30						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil and subsoil overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.55	Topsoil	-	-
2	Layer	-	0.40	Subsoil	-	-
3	Layer	-	-	Natural	-	-

Pit 18/9						
General description					**Orientation**	-
Pit devoid of archaeology. Consists of topsoil overlying a layer of tarmac, overlying concrete hardcore, overlying natural geology of sand and flint nodules.					**Length (m)**	2
					Width (m)	2
					Avg. depth (m)	2
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1	Layer	-	0.55	Topsoil	-	-
3	Layer	-	-	Natural	-	-
7	Layer	-	0.10	Tarmac	-	Modern
8	Layer	-	0.25	Hardcore	-	Modern

APPENDIX B BIBLIOGRAPHY

Gilmour, N, 2018, *Castle Acre Anglian Water Pipeline, Written Scheme of Investigation*, Oxford Archaeology East (unpublished).

Robertson, D, 2016, *Generic brief for the monitoring of works under archaeological supervision and control on a site with surviving archaeological earthworks*, Norfolk County Council Historic Environment Service (unpublished).

Online Sources

British Geological Survey (BGS). 2019. Website: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html. Accessed 17th September 2019.

APPENDIX C SITE SUMMARY DETAILS / OASIS REPORT FORM

Project Details

OASIS Number	Oxfordar3-315091
Project Name	Castle Acre Anglian Water Pipeline

Start of Fieldwork	1 July 2019	End of Fieldwork	16 September 2019
Previous Work	No	Future Work	No

Project Reference Codes

Site Code	ENF143675	Planning App. No.	N/A
HER Number	ENF143675	Related Numbers	

Prompt	NPPF
Development Type	Infrastructure – Water Main
Place in Planning Process	Not known/Not recorded

Techniques used (tick all that apply)

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

Monument	Period	Object	Period
-	Choose an item.	-	Choose an item.

Project Location

County	Norfolk
District	Kings Lynn and West Norfolk
Parish	Castle Acre
HER office	Norfolk
Size of Study Area	N/A
National Grid Ref	TF 81773 13199

Address (including Postcode)

A1065,
Castle Acre,
Kings Lynn,
Norfolk,
PE32 2AD.

Project Originators

Organisation	OA East
Project Brief Originator	Steve Hickling
Project Design Originator	OA East
Project Manager	Nick Gilmour
Project Supervisor	Thomas Lucking

Project Archives

	Location	ID
Physical Archive (Finds)	n/a	n/a
Digital Archive	OA East	XNFCAR18
Paper Archive	-	-

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	☐	☐	☐
Ceramics	☐	☐	☐
Environmental	☐	☐	☐
Glass	☐	☐	☐
Human Remains	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☐	☐	☐
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☐	☐	☐
None	☒	☒	☒
Other	☐	☐	☐

Digital Media		Paper Media	
Database	☒	Aerial Photos	☐
GIS	☐	Context Sheets	☒
Geophysics	☐	Correspondence	☐
Images (Digital photos)	☒	Diary	☐
Illustrations (Figures/Plates)	☒	Drawing	☐
Moving Image	☐	Manuscript	☐
Spreadsheets	☐	Map	☐
Survey	☐	Matrices	☐
Text	☒	Microfiche	☐
Virtual Reality	☐	Miscellaneous	☐
		Research/Notes	☐
		Photos (negatives/prints/slides)	☐
		Plans	☐
		Report	☒
		Sections	☐
		Survey	☐

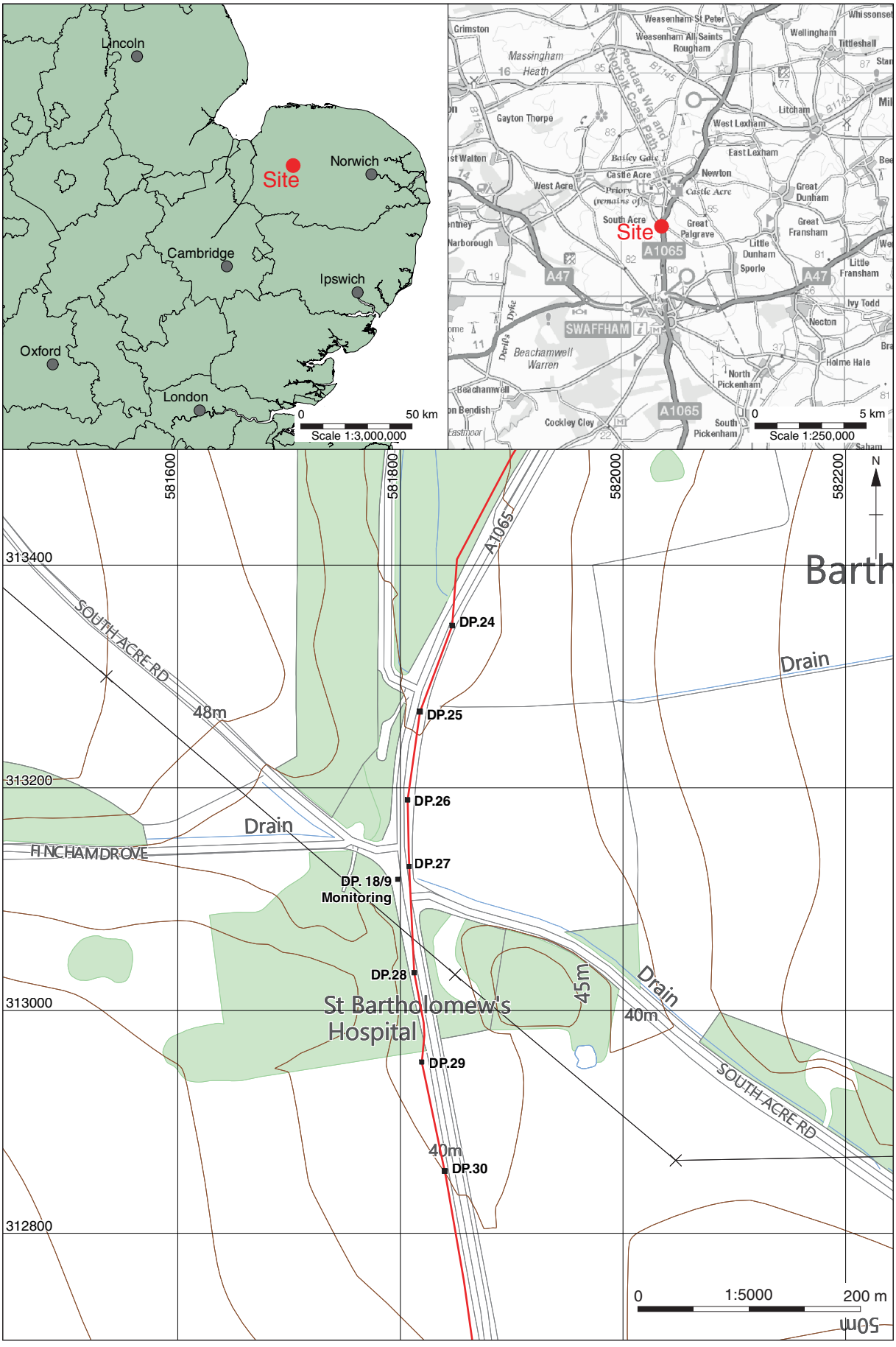

Figure 1: Site location showing monitored drill pits (black) along pipeline route (red)

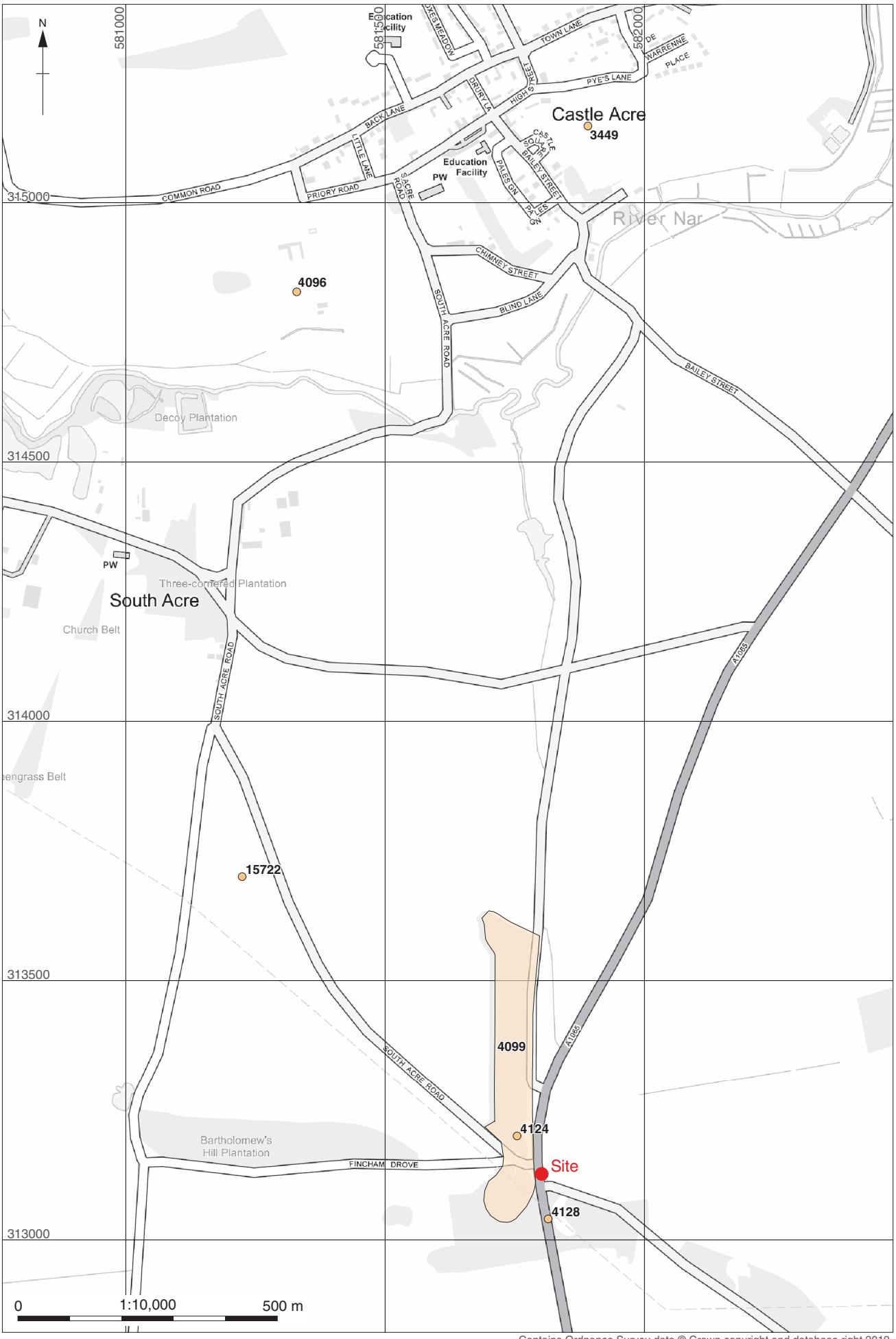

Figure 2: NHER entries mentioned in the text

Plate 1: Pit 30, looking east

Plate 2: Pit 24, looking east, showing buried soil layers

Plate 3: Pit 29, looking east, showing colluvial layer (06)

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