

# The Roman Car Dyke Billinghay Skirth Lincolnshire



## Archaeological Evaluation Report



September 2009

**Client: Environment Agency**

OA East Report No: 1125

OASIS No: oxfordar3-64309

NGR: TF 15436 54443

## **The Roman Car Dyke, Billingham Skirth, Lincolnshire**


*Archaeological Evaluation*

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*Report Date: September 2009*

**Report Number:** 1125  
**Site Name:** The Roman Car Dyke, Billinghay Skirth, Lincolnshire  
**HER Event No:** TBC  
**Date of Works:** August 2009  
**Client Name:** Environment Agency  
**Client Ref:** Project No. 10858  
**Planning Ref:** N/A  
**Grid Ref:** TF 15436 54443  
**Site Code:** BISK09  
**Finance Code:** XLI BHS 09  
**Receiving Body:** The Collection, Lincoln  
**Accession No:** LCNCC: 2009.126  
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**Date:** September  
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### **Summary**

*An archaeological evaluation by Oxford Archaeology East took place in August 2009 on the western bank of the Billingham Skirth, a watercourse thought to follow part of the route of the Roman Car Dyke in Lincolnshire. The evaluation comprised a single 13m long trench. Deposits possibly representing a buried soil sealed beneath bank material were found. Since no dating evidence was recovered it has not been possible to positively establish whether the bank deposits relate to the Roman Car Dyke.*

## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 An archaeological evaluation was conducted adjacent to the Billingham Skirth, an extant watercourse, that runs near the village of Billingham in Lincolnshire. A single 13m long trench was excavated through the west bank of the watercourse (TF 15436 54443; Fig. 1).
- 1.1.2 The Environment Agency in consultation with Kesteven and Boston Borough Planning Archaeologists required that a scheme of archaeological work should be carried out to inform any archaeological implications on proposed improvement works to the Billingham Skirth watercourse. The evaluation was undertaken in accordance with a Specification prepared by OA East (Connor 2009).
- 1.1.3 The present waterway is believed to follow the line of a Roman canal known as the Car Dyke, but it is likely to be obscured or obliterated by it along this stretch (Simmons and Cope-Faulkner 2006).
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

### 1.2 Geology and topography

- 1.2.1 Billingham is located at the north-western edge of the silt based fens that stretch from Kings Lynn towards Boston. The fens have largely been eroded and in the north-west fen the underlying clay is exposed at the surface in many areas (Lane 1993, 3). The Soil Survey of England and Wales (1983) puts the evaluation just within an area of Typical Stagnogley soils with Pelo-alluvial gley soils, directly (less than 50m) to the south-west.
- 1.2.2 The Billingham Skirth was once navigable but now acts mainly as a drain leading into the river Witham to the north. The watercourse follows an approximately south to north orientation at the evaluation trench with a water level of 2.6m AOD. The western bank/berm forms a slope of just under twenty degrees over a distance of approximately 8m from the edge of the watercourse steepening to 30 degrees for about 3m before levelling out at a height of 5.65m AOD (Fig. 2) at the top of the bank.

### 1.3 Archaeological and historical background

- 1.3.1 It is thought that the Billingham Skirth is a medieval waterway that follows or obscures the route of the Car Dyke (Simmons and Cope-Faulkner 2006, 21). The Car Dyke is generally believed to be a Roman canal, although the earliest records of the Car Dyke only date to the 12th century, it may be safe to assume it was constructed before AD 1000 (Simmons and Cope-Faulkner 2006, 16). The Lincolnshire Car Dyke is approximately 92km long and stretches from Lincoln in the north to Peterborough in the south. Its function is not fully understood and whilst it may have been used to transport goods it could also have been used as a catch-water drain which allowed water to flow in both directions depending on the state of the tide.
- 1.3.2 The Lincolnshire Car Dyke has received considerable attention and a number of observations and investigations have taken place along its length and are published in the Lincolnshire Archaeology and Heritage Report Series (Simmons and Cope-Faulkner 2006). In the 10km area around Billingham there have been no investigations (*ibid*, fig. 11) and this section is the least known part of this former canal. Unexcavated profiles

were recorded across the Car Dyke “near” (possibly north of) Billingham in 1872 and 1972 although the exact location and direction of view were not recorded (*ibid*, fig. 27a and 66-67). The profiles show the channel to be approximately 10m wide at ground level with a marked right-hand (probably eastern) bank and a more rounded wide left bank. These surveys found, “the right-hand bank is 2.1m high in 1972 and 1.7m high 100 years later, suggesting erosion” (*ibid*, 66).

- 1.3.3 Ordnance Survey observations made in 1964/5 of the stretch of Car Dyke between TF 138567 to TF 145557 note that the ditch was 2m deep with low widespread banks (Simmons and Cope-Faulkner 2006, 136). In 1972 the Car Dyke Research Group recorded recent dredging between TF 138566 and the Billingham Skirth (TF 158550) where the visible banks represented recent up-cast (Simmons and Cope-Faulkner 2006, 136).
- 1.3.4 The section between Billingham southwards to North Kyme (in which the present trench was located) has been subject to considerable changes resulting in a very deep and wide profile. Trollope in 1872 recorded that within this section the repaired banks formed a drain connected with the Billingham Navigation (Simmons and Cope-Faulkner 2006, 136). The Car Dyke Research group in 1972 noted that this section joined the Billingham Skirth and was used as a deep modern drainage channel, water filled and with large banks (Simmons and Cope-Faulkner 2006, 137). In 1996, Archaeological Project Services concluded that “the Billingham Skirth obscures any traces of the Car Dyke” (Simmons and Cope-Faulkner 2006, 137).
- 1.3.5 Excavated sections through the Car Dyke at Billingham, Baston and Helpringham produced similar profiles (Simmons and Cope-Faulkner 2006, fig. 24) with channels of between 12m and 17.2m wide (*Ibid*, table 6).
- 1.3.6 The Helpringham section (excavated in 1999; Simmons and Cope-Faulkner 2006, Fig. 23, 57-58) is probably one of the best preserved sections to have been excavated. Here the distance between the outer edges of the banks was 50m; the channel was 17.2m wide and 5m deep with banks of up to 1.7m high. An old buried soil layer up to 0.5m deep and at least 17m long pre-dated this bank.

## 1.4 Acknowledgements

- 1.4.1 Thanks go to the Environment Agency for funding this project with Stuart Hunter and Stephen Kemp organising the work. The farmer, Mr Russell Page, for allowing access. The evaluation was carried out by Rob Atkins and the project managed on behalf of OA East by Aileen Connor. Thanks are extended to Jenny Young, Kesteven and Boston Borough Planning Archaeologist, for input into this scheme. Paddy and Mick from P and R Plant hire gave helpful advice and the trench was skilfully machined by Mick who also kindly helped to level in the site.

## 2 AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The objective of this evaluation was to seek to establish the character, date, state of preservation and extent of any archaeological remains with particular emphasis on remains relating to the route of the Roman Car Dyke and the Billingham Skirth.

### 2.2 Methodology

- 2.2.1 A single 13m long by 1.5m wide trench was excavated using a wheeled JCB-type excavator fitted with a toothless ditching bucket. The trench was excavated under constant archaeological supervision and was widened to 2.5m where the trench depth required.
- 2.2.2 To ensure no spoil entered the watercourse a c.2.5m buffer was maintained between the water's edge and the trench (Fig.2).
- 2.2.3 All archaeological features and deposits were recorded using OA East's *pro-forma* recording sheets. Trench locations, plans and sections were recorded at a scale of 1:50 and colour and monochrome photographs were taken of all relevant features and deposits.
- 2.2.4 The evaluation took place in sunny, dry conditions.



### 3 RESULTS

#### 3.1 Trench 1 (Fig. 2)

- 3.1.1 The earliest deposit comprised a mid to dark blue grey clay (105) that gently sloped down to the watercourse. This was sealed by a band of yellow brown clay sand with some patches of yellow white chalk (104). This deposit was up to 0.5m thick and may be redeposited natural upcast to form the base of a bank. Above it was a 0.2m thick band of mid grey brown clay silt flecked with charcoal (103). The presence of charcoal suggests that this layer may represent an old land surface (buried soil). Above it was yellow/orange brown chalk with clay silt up to 0.30m thick, probably redeposited natural (102). This was sealed by a mid grey brown clay silt (101). The upper layers may represent another phase of bank material. The entire sequence of bank deposits (101-104) was approximately 1.5m from base to top.
- 3.1.2 Sealing layer 101 was topsoil (100) which was only 0.1m thick near the water's edge deepening to up to 0.80m thick at the top of the slope on the western side. It comprised a dark grey brown loam. No artefacts were found from any of the layers within the trench.

### 4 DISCUSSION AND CONCLUSIONS

#### 4.1 Overview

- 4.1.1 The evaluation has found buried deposits which may represent a bank associated with a watercourse now known as the Billingham Skirth. The section excavated has some similarities to a section excavated across the Car Dyke at Helpringham where a buried soil layer was found sealed beneath bank deposits (see section 1.3.6 above). Whilst at Helpringham the section showed one phase of bank deposition, that at Billingham appeared to show two phases.
- 4.1.2 It has been noted above that it is very likely that the Billingham Skirth and recent dredging have removed most (if not all) of the former Car Dyke channel along this stretch. The section reported on here has provided no evidence that a former channel existed at this point along the watercourse. It has, however, provided evidence for two phases of a possible bank on its west side although there is no evidence for the construction date of either of the phases.

#### 4.2 Significance

- 4.2.1 Medieval and modern drainage is likely to have removed most if not all of the former Car Dyke channel on the west side of the Billingham Skirth in this area. Evidence for two phases of a possible bank has been found that is likely to be associated with the watercourse. The date of the bank phases would need to be established before drawing any conclusions as to whether either of them are evidence for the continuation of the Car Dyke.

#### 4.3 Recommendations

- 4.3.1 Recommendations for any future work based upon this report will be made by the Environment Agency in consultation with the Lincolnshire County Archaeology Office.

## APPENDIX A. HEALTH AND SAFETY STATEMENT

- A.1.1 OA East will ensure that all work is carried out in accordance with relevant Health and Safety Policies, to standards defined in *The Health and Safety at Work, etc. Act, 1974* and *The Management of Health and Safety Regulations, 1992*, and in accordance with the manual *Health and Safety in Fieldwork Archaeology* (SCAUM 1997).
- A.1.2 Risk assessments prepared for the OA East office will be adhered to.
- A.1.3 OA East has Public Liability Insurance. Separate professional insurance is covered by a Public Liability Policy.

Full details of the relevant Health and Safety Policies and the unit's insurance cover can be provided on request.

## APPENDIX B. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description				Orientation		E-W
Trench had buried soil deposits which may represent buried soil layer and later bank material of the Car Dyke/Billinghay Skirth or a former old topsoil layer with modern deposits overlaying it.				Avg. depth (m)		Stepped 1.5m
				Width (m)		1.5
				Length (m)		13.2
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
100	Layer	-	up to 0.8	Topsoil	-	-
101	Layer	-	0.3	Bank material	-	-
102	Layer	-	0.3	Bank material	-	-
103	Layer	-	0.2	Buried soil or old topsoil	-	-
104	Layer	-	0.5	Bank material?	-	-
105	Layer	-	0.2m+	Natural	-	-

## APPENDIX C. BIBLIOGRAPHY

Connor, A., 2009 Specification for Archaeological Evaluation at Billingham Skirth OA East Specification dated 11th August 2009 (unpublished)

Lane, T., 1993 The Fenland Project No.8: Lincolnshire Survey, The Northern Fen-Edge, E. Anglian Archaeol. 66 (Sleaford), 230-33

Simmons, B and Cope-Faulkner, P, 2006, *The Car Dyke*, Heckington: Lincolnshire Heritage Trust

Soil Survey of England and Wales 1983 Soils of England and Wales Sheet 4 Eastern England Scale 1: 250, 000

## APPENDIX D. OASIS REPORT FORM

All fields are required unless they are not applicable.

### Project Details

OASIS Number	oxfordar3-64309		
Project Name	The Roman Car Dyke, Billinghay Skirth, Lincolnshire		
Project Dates (fieldwork) Start	26-08-2009	Finish	27-08-2009
Previous Work (by OA East)	No	Future Work	Unknown

### Project Reference Codes

Site Code	BISK09	Planning App. No.	N/A
HER No.		Related HER/OASIS No.	

### Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - Direction 4
Development Type	Farm Infrastructure

### Please select all techniques used:

<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 Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Canal bank (possible)	Roman 43 to 410	N/A	None
Drainage channel	Medieval 1066 to 1540	N/A	None
Drainage channel	Post Medieval 1540 to 1901	N/A	None

### Project Location

County	Lincolnshire	Site Address (including postcode if possible) Farm field directly to the south of St Michael's Close, Billinghay, Lincolnshire	
District	North Kesteven		
Parish	Billinghay		
HER	Lincolnshire HER		
Study Area	1km	National Grid Reference	TF 15436 54443

## Project Originators

Organisation	OA EAST
Project Brief Originator	N/A
Project Design Originator	Aileen Connor
Project Manager	Aileen Connor
Supervisor	Rob Atkins

## Project Archives

Physical Archive	Digital Archive	Paper Archive
Location ...The Collection, Lincoln	Location ...OA East	Location ...The Collection, Lincoln
Accession ID .	Accession ID ..LCNCC: 2009.126	Accession ID ..LCNCC: 2009.126

## Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
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 Bones	<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 type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Digital Media	Paper Media
<input checked="" type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input checked="" type="checkbox"/> Correspondence
<input checked="" type="checkbox"/> Images	<input type="checkbox"/> Diary
<input type="checkbox"/> Illustrations	<input checked="" type="checkbox"/> Drawing
<input type="checkbox"/> Moving Image	<input type="checkbox"/> Manuscript
<input type="checkbox"/> Spreadsheets	<input type="checkbox"/> Map
<input type="checkbox"/> Survey	<input type="checkbox"/> Matrices
<input checked="" type="checkbox"/> Text	<input type="checkbox"/> Microfilm
<input type="checkbox"/> Virtual Reality	<input type="checkbox"/> Misc.
	<input type="checkbox"/> Research/Notes
	<input checked="" type="checkbox"/> Photos
	<input checked="" type="checkbox"/> Plans
	<input type="checkbox"/> Report
	<input checked="" type="checkbox"/> Sections
	<input type="checkbox"/> Survey

### Notes:

Possible digital and paper records relating to charcoal from a buried soil layer which may be sent for C14 dating.



Figure 1: Location map (A) and trench plan (B)

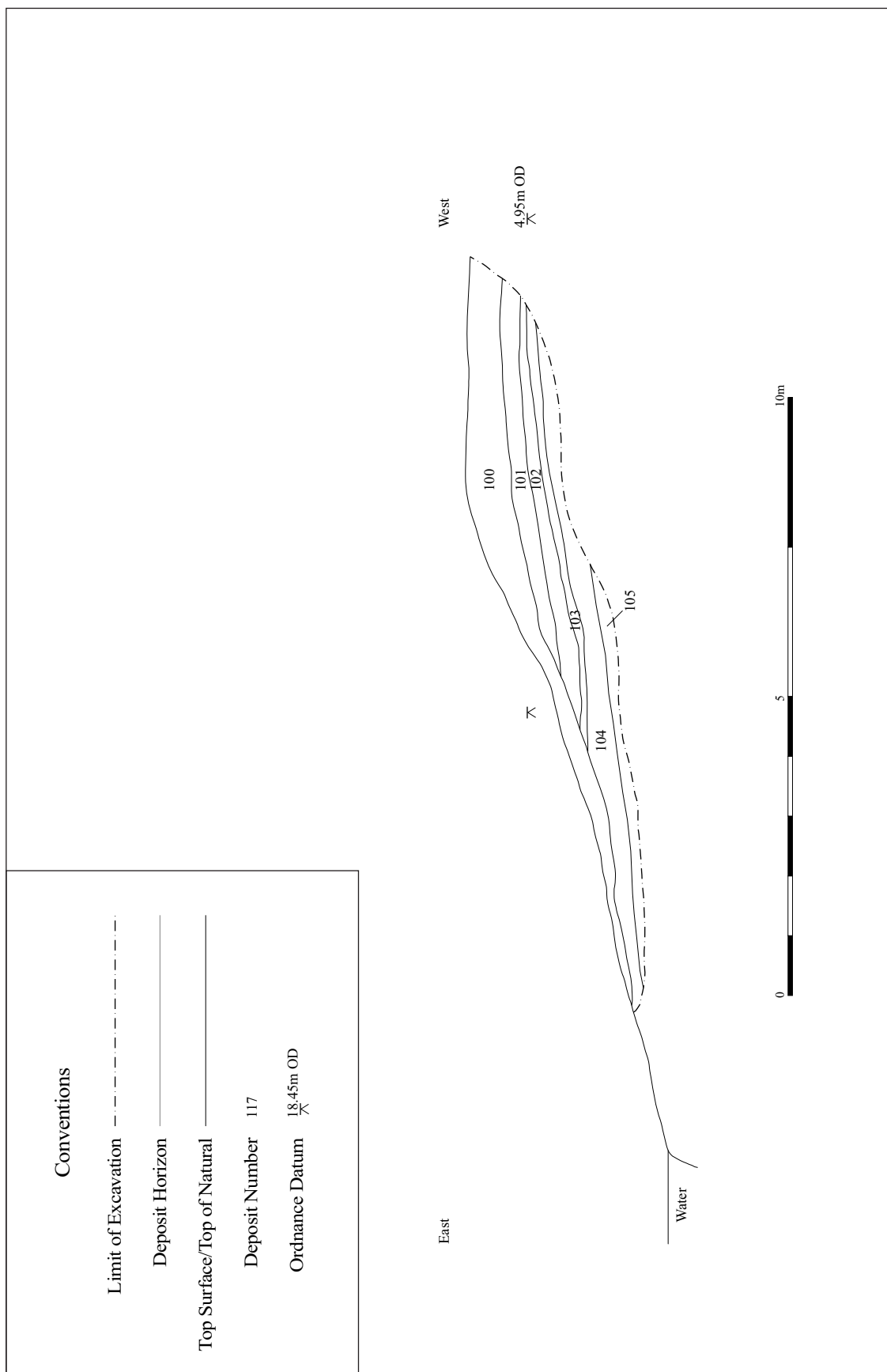


Figure 2: Section 1





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