

Archaeological Monitoring at Elsham Water Treatment Works, Lincolnshire



Archaeological Monitoring Report



April 2012

Client: Anglian Water

OA East Report No: 1346

OASIS No: oxfordar3-121242

NGR: TA 0380 1340

Archaeological Monitoring at Elsham Water Treatment Works

Watching Brief

Site Code: ELAT

Date of Works: December 2011

Report No: 1346

Excavator: Vickie Jamieson

Client: Mott MacDonald for Anglian Water

Report Date: April 2012

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Summary

Anglian Water are currently redeveloping the water treatment works at Elsham, North Lincolnshire (TA 0380 1340). Oxford Archaeology East (OA East) was commissioned by Mott MacDonald Ltd on behalf of Anglian Water Services Ltd to undertake a series of archaeological watching briefs which has resulted in the production of this watching brief report.

Two separate watching briefs undertaken in November and December 2011 focused on two areas of construction, phase 1 for the construction of a hard standing road and phase 2 for the construction of a rapid gravity filter. These were monitored in order to evaluate the presence and condition of any surviving archaeological features.

Both watching briefs observed the removal of levelling deposits from the construction of the current water treatment works. No features or deposits of archaeological interest were encountered during these site visits.

1 GEOLOGY AND TOPOGRAPHY

- 1.2.1 The site is located approximately 12 km east of Scunthorpe, and 1 km north of the village of Elsham, North Lincolnshire (Figure 1). The site is centred upon National Grid Reference TA 0380 1340.
- 1.2.2 The development of new works are sited within an existing water treatment works which is built on a spur of land running down from 86m AOD in the north-west down to 82m AOD in the south-east.
- 1.2.3 The underlying geology of the area is clay over Lincolnshire Wolds chalk and sandstone.

2 ARCHAEOLOGICAL BACKGROUND

The following section is a brief summary of the archaeological background of the development area. A search was conducted of the local (North Lincolnshire Heritage Environment Record, HER, as held by North Lincolnshire District Council) and national (National Monuments Record as held by English Heritage) databases based on a 1.5km radius circle of the development site. Sites identified in these databases have been identified in the text below using the following abbreviations:

- ◆ MLS (followed by its number): North Lincolnshire HER Archaeological Monument;
- ◆ ELS (followed by its number): North Lincolnshire HER Archaeological Event;
- ◆ NMR (followed by its number): National Monuments Record.

2.1 **Prehistoric Period:** the Lincolnshire Heritage Environment Record suggests that Middlegate Lane (MLS2002) which runs along the south-western boundary of the existing water treatment works may be of prehistoric (probably Iron Age) origin. Finds from within the wider study area include; skull fragments of an Auroch, an extinct breed of wild cattle (NMR 78914) were recovered from Elsham Quarry some 30 metres to the south east of the site in the late 1970s. A trackway, ditches and a possible long barrow have been identified from cropmarks (MLS9892) recorded 580 metres to the north east of the site. A series of fieldwalking projects by local volunteer groups have been carried out to the south-east, south-west and north-west of the site. These produced scatters of Mesolithic and Bronze Age flints along with sherds of Iron Age pottery.

2.2 **Roman Period:** a Roman carinated vessel (MLS2302) was found in the quarry,

approximately 200 metres south west of the site in the 1950s. Fragments of Roman pottery were found during fieldwalking to the south and south west of the site.

- 2.3 **Saxon Period:** an Anglo-Saxon cemetery (MLS2305), located 1.3 km to the south east of the site, was excavated in the 1970s. Over 600 urned cremations and some inhumations were excavated. The cemetery is located on the east side of Middlegate Lane (MLS2002) and may be enclosed by a rectilinear ditch (MLS20945) that has been plotted from an aerial photograph.
- 2.4 **Medieval Period:** approximately 1 km to the south and south west of the site, scatters of early medieval and medieval pottery (ELS 0044 and 2721) were found during further fieldwalking projects.
- 2.5 **Modern Period:** Elsham Wold Airfield (MLS11651) occupied an area approximately 130 hectares that included the whole of the site. This airfield was in use through both World Wars and was closed in 1947. The A15 was built across the site in the 1970s as well as the Elsham Wold Industrial Estate. One of the aircraft hangers was reported as extant in 2002.

3 METHODOLOGY

- 3.1.1 The objective of this watching brief was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.
- 3.1.2 The WSI required that the work was consistent with the current standards and procedures of the Institute for Archaeologists (2008), and generally accepted best practice.
- 3.1.3 The areas of investigation were located in various location on the site (see Fig 3).
- 3.1.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales digital photographs were taken of all relevant features and deposits.
- 3.1.5 Site conditions were generally good.
- 3.1.6 The site was excavated by a 22 ton 360° mechanical excavator fitted with a 2m wide, toothless ditching bucket under the constant supervision of an archaeologist. The topsoil of the site had been removed prior to the archaeologists arrival on site. The area under investigation was excavated in spits through levelling material to a depth of 0.5m, and the material taken away from site by a front-loading dumper.
- 3.1.7 A full and professional archive has been compiled in accordance with the WSI and current IFA (2008) and English Heritage guidelines (1991). The original record archive will be deposited with the appropriate museum in North Lincolnshire, while a copy of the report will be submitted to the North Lincolnshire HER. An OASIS (Online Access to the Index of Archaeological Investigations) form will also be submitted.

4 RESULTS

As the site was monitored during separate construction phases it has been divided into two sections. Phase 1 and 2 (Fig 3). Each one will be discussed individually.

- 4.1 **Phase 1:** was carried out over a period of two days and involved the preparing of the site for the construction of the hard standing road (Fig 3). The material removed in this phase was from a previous levelling layer and was made up of chalk rubble, with brick, tarmac, metal and concrete. It was excavated to a depth of 0.09m – 0.28m (Plate 1). No archaeology was present within this phase of the watching brief.
- 4.2 **Phase 2:** lies to the south-west of the area of development. The watching brief took place over a period of three days, and involved the monitoring of ground works in preparation for the construction of rapid gravity filters (Fig 3). This area measured 17m by 21m in size. It was excavated to a levelling depth of 0.5m across the majority of the site (Plate2), except the north-west end which had a depth of 1m due to the rise in the current ground surface.

The site was made up of three distinct levelling deposits, all from the construction of the current water treatment works. The topsoil had been removed prior to the commencement of the watching brief. Context 001, directly below the topsoil was a firm, mid brown silty clay containing large deposits of crushed brick, chalk, flint and metal. This deposit was 0.15m thick. Directly below this was layer 002, which was made up of creamy loose chalk rubble containing patches of mixed rubble. This deposit had a thickness of 0.30m. The final deposit 003, was also a levelling deposit, made of firm chalk rubble with large inclusions of sand, clay, mixed rubble and crushed brick and off cuts of iron bars. This deposit had a minimum thickness of 0.05m.

3.2.4 Within this phase of the watching brief, an old concrete base was uncovered during excavation, underneath deposit 001, probably relating to the construction of the present water treatment works. When this was removed it was evident that deposit 003 extended in depth for a further 1m. This shows that the made ground layers extend in depth further than expected. No features or deposits of archaeological interest were identified in this phase.

5 DISCUSSION AND CONCLUSIONS

- 5.1 The composition of the site indicates an area that has been heavily disturbed, with large deposits of levelling material. This may well be associated with the current water treatment works. The construction of this facility has had a severe impact on the overburden and subsoils within the site, and appears to have removed archaeological deposits within their footprints. At the end of the watching brief of phase 2, areas were marked out within the location of the rapid gravity filter for chambers to be excavated (Plate 3). It was decided that these chambers were not

to be monitored as the depth would be within the levelling deposits, or of a size that would be impractical to observe any archaeological deposits.

- 5.2 Apart from the concrete block associated with the current water treatment works, no features or deposits of archaeological interest were encountered during the watching brief.

6 ACKNOWLEDGEMENTS

- 6.1.1 Oxford Archaeology East would like to thank Anglian Water Services Ltd who commissioned and funded the archaeological work. The fieldwork was undertaken by Vickie Jamieson and Maurice Hopper. The report was written by Vickie Jamieson. The project was managed by James Drummond-Murray.
- 6.1.2 The brief for archaeological works was written by Alison Williams of North Lincolnshire Council

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APPENDIX A. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	<input type="text"/>		
Project Name	<input type="text"/>		
Project Dates (fieldwork) Start	<input type="text"/>	Finish	<input type="text"/>
Previous Work (by OA East)	<input type="text"/>	Future Work	<input type="text"/>

Project Reference Codes

Site Code	<input type="text"/>	Planning App. No.	<input type="text"/>
HER No.	<input type="text"/>	Related HER/OASIS No.	<input type="text"/>

Type of Project/Techniques Used

Prompt

Please select all techniques used:

<input type="checkbox"/> Field Observation (periodic visits)	<input type="checkbox"/> Part Excavation	<input type="checkbox"/> Salvage Record
<input type="checkbox"/> Full Excavation (100%)	<input type="checkbox"/> Part Survey	<input type="checkbox"/> Systematic Field Walking
<input type="checkbox"/> Full Survey	<input type="checkbox"/> Recorded Observation	<input type="checkbox"/> Systematic Metal Detector Survey
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Remote Operated Vehicle Survey	<input type="checkbox"/> Test Pit Survey
<input type="checkbox"/> Open-Area Excavation	<input type="checkbox"/> Salvage Excavation	<input type="checkbox"/> Watching Brief

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
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Project Location

County	<input type="text"/>	Site Address (including postcode if possible)
District	<input type="text"/>	<input type="text"/>
Parish	<input type="text"/>	
HER	<input type="text"/>	
Study Area	<input type="text"/>	National Grid Reference <input type="text"/>

Project Originators

Organisation	<input type="text"/>
Project Brief Originator	<input type="text"/>
Project Design Originator	<input type="text"/>
Project Manager	<input type="text"/>
Supervisor	<input type="text"/>

Project Archives

Physical Archive	Digital Archive	Paper Archive
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<input type="text"/>	<input type="text"/>	<input type="text"/>

Archive Contents/Media

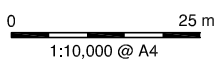
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Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>
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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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Notes:



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Figure 1: Site location

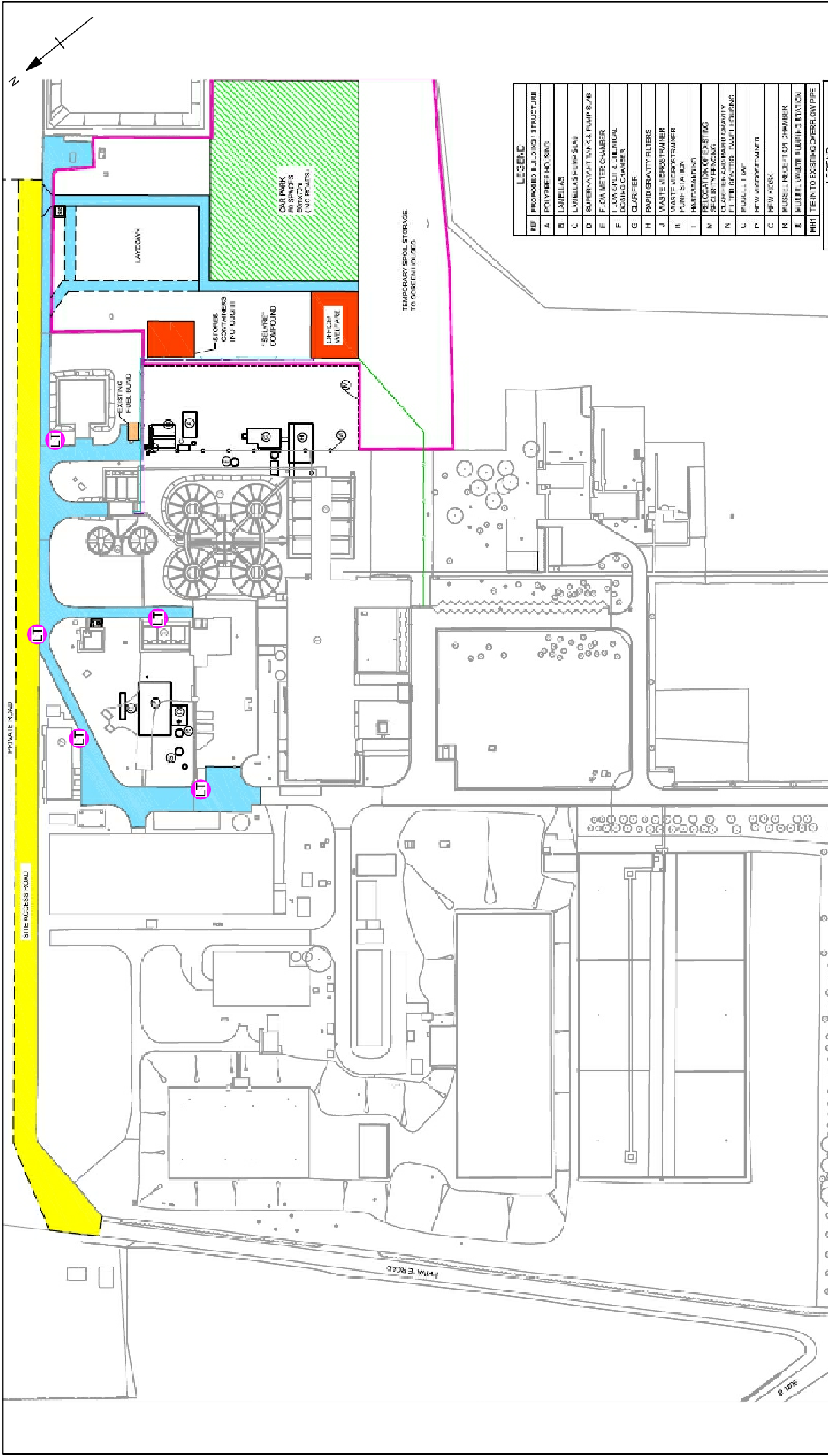


Figure 2: Site layout and proposed area of development



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