

HERITAGE NETWORK



CHIPPING WATER TREATMENT WORKS Chipping, Hertfordshire

HN568



Archaeological Monitoring Report

THE HERITAGE NETWORK LTD

Registered with the Institute of Field Archaeologists as an Archaeological Organisation Archaeological Director: David Hillelson, BA MIFA

CHIPPING WATER TREATMENT WORKS Chipping, Herts

HN568

Archaeological Monitoring Report

Prepared on behalf of Veolia Water Partnership

by

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Acknowledgements

The fieldwork for this project was carried out by Geoff Saunders, David Kaye and David Hillelson. The report text and illustrations were prepared by Geoff Saunders and Chris Turner. The report was edited by David Hillelson.

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Site name and address:	Chipping Water Treatment Works, Chipping, Hertfordshire				
County:	Hertfordshire District: I		East Hertfordshire		
Village/town:	Chipping Parish:		Chipping		
Planning reference:	3/05/1263	NGR:	TL 35731 32333		
Client name and address:	Veolia Water Partnership, Blackwell House, Three Valleys Way, Bushey, Hertfordshire.				
Nature of work:	Industrial	Industrial Former land use: Arable / Existin Works			
Site Status:	AA 5	Reason for investigation:	Direction of local planning authority (PPG16)		
Position in planning process:	After determination	Project brief originator:	Local Authority		
Size of affected area:	c.4230m ²	Size of area investigated:	c.4230m ²		
Site Code:	HN568	Other reference:	-		
Organisation:	Heritage Network	Site Director:	David Hillelson		
Project type, methods etc	Watching Brief	Archive Recipient:	Hertford Museum		
Start of work	18/01/2006	Finish of work	19/06/2006		
Related SMR Nos:	n/a	Periods represented:	Romano-British, Late post- medieval		
Oasis UID	Heritage1 - 12959	Significant finds:	Pottery, CBM, Stone		
Monument types:	Boundary ditch, late post-medieval; Boundary ditch, Romano-British.				
Physical archive:	Pottery, CBM, Stone, Slag				
Previous summaries/reports:	n/a				

Summary

Synopsis:

In response to a condition on the planning permission for a development at Chipping Water Treatment Works, Chipping, Herts., the Heritage Network was commissioned by the developer to undertake the archaeological monitoring of the groundworks.

The site lies within a defined archaeological area (AA5) which includes five groups of undated linear cropmarks.

The fieldwork revealed evidence of boundary ditches which were similar in character to the nearby cropmark features. Romano-British pottery was recovered from the investigated ditches. The evidence suggests that AA5 represents a Romano-British field system and that a contemporary occupation site is located in the vicinity of the present site. No features of any period, which might be indicative of occupation, were recorded, however.

1. Introduction

This report has been prepared at the request of *Veolia Water Partnership*, as part of a programme of archaeological work associated with the development works at Chipping Water Treatment Works, Chipping, Herts. The planning permission for the work (ref. 3/05/1263), granted by the East Hertfordshire District Council (EHDC), has been subject to a standard archaeological condition in accordance with the provisions of the Department of the Environment's *Planning Policy Guidance Note 16* (PPG16). The scope of the required work followed the *Design Brief for Archaeological Monitoring and Recording* prepared by the *County Archaeology Office* (CAO) of Hertfordshire County Council (ref. JS 02/09/2005), acting as advisers to EHDC. A full specification for the work undertaken was contained in the Heritage Network's approved *Project Design*, dated January 2006.

The site lies to the north east of the village of Chipping, approximately 200m east of the A10, which follows the line of a Roman road known as Ermine Street. The site is centred on NGR TL 35731 32333 (Figure 1). The new development involved extending the existing treatment works, the construction of a new building on a raft foundation and the creation of a new access road.

The development lies partly within and adjacent to an Alert Area (AA5) designated in the District Local Plan. The eastern and southern limits of the site are adjacent to AA5, while the new access road passes through it. Roman artefacts, tile and pottery, have been recovered from the vicinity and cropmarks within AA5 suggest the presence of field systems and enclosures, possibly Iron Age and Roman in date, within 0.5km of the site. On this basis there was considered to be a high probability that remains of a Roman or earlier date may be affected by the development.

The aim of the present project has been to identify and record any archaeological features and deposits which were uncovered, and to retrieve artefactual and ecofactual elements to allow the date, character, and significance of the site to be assessed in accordance with the current published regional research agenda (Glazebrook 1997, Brown and Glazebrook 2000), and subject to the limitations of reasonable safety and practicality.

The present report is intended to set the site in its archaeological and historical context, and, together with the deposition of the archive for the project with Hertford Museum, to complete the requirements of the planning condition.

2. Fieldwork

TOPOGRAPHY AND GEOLOGY

The existing pumping station lies within arable farmland to the east of Chipping. The present study area covers the existing pumping station, a plot of land immediately to the west, and a narrow corridor of land running north – south to form a new access road (Figure 2).

The underlying natural geology of the area consists of firm, light olive brown (2.5Y 5/6), clay with flint and chalk fragments.

METHODOLOGY

The timetable for the fieldwork followed the client's groundwork schedule. A number of site visits were made to supervise the ground reduction for the site compound, ground reduction within the footprint of the new building, ground reduction for a new concrete apron, and ground reduction for the new access road..

All open area ground reduction was carried out using a 360° mechanical excavator fitted with a toothless ditching bucket, and under direct archaeological supervision.

Spoil from the various stages of the groundworks was inspected for archaeological artefacts.

All fieldwork was carried out in accordance with the approved *Project Design*, current health and safety legislation, and the appropriate IFA and ALGAO guidance documents.

MONITORING AND RECORDING

Site Compound

2.1 A temporary site compound was created to the west of the development area (Figure 3). The ground level within the compound was reduced by a maximum depth of approximately 0.40m. This was sufficient to remove the firm, dark olive brown (2.5Y 3/3), silty clay topsoil from across the majority of the compound. Beneath the topsoil the natural drift geology of olive brown clay with flints was revealed.

A single boundary ditch [101] was revealed running across the compound on a north – south alignment. The ditch, which had a maximum width of 0.40m, was preserved in situ beneath a geotextile membrane which was laid down prior to the level of the compound being built up. Two small fragments of ceramic building material of late post-medieval or 19^{th} century date were recovered from the surface of the firm, dark olive brown, silty clay fill (102).

No further archaeological features or deposits, or artefacts predating the $18^{\text{th}}/19^{\text{th}}$ centuries, were observed during the ground reduction of the site compound.

Concrete apron

Ground reduction for a new concrete apron was undertaken immediately to the west of the existing treatment works (Figure 3). Approximately 0.25m of topsoil was removed revealing the underlying natural drift geology. The stratigraphy was identical to that observed in the temporary site compound.

Boundary ditch [101] was observed continuing on a north-south alignment.

Two sherds of pottery of Romano-British date were recovered unstratified during this stage of the groundworks.

No further archaeological features, deposits, or artefacts were observed during the machining of the concrete apron.

New building

The new building was located within the boundary of the existing water treatment works between a large settling tank which has a soil mound over it to the north and an enclosure surrounding tanks and pumping equipment to the south (Figure 3).

The proximity of the building to the existing settling tank necessitated the removal of the mound along the southern side of the tank. The mound was constructed of redeposited natural clay which contained fragments of modern brick and concrete. The tank extended over a metre below the existing surface and its construction had heavily disturbed the stratigraphy in this area.

The footings for the new building measured 0.8m in width and were excavated to a depth of approximately 1.0m. Immediately to the north of the tank the ground had been heavily disturbed. In this area the trenches were excavated to approximately 1.8m. Unfortunately due to an oversight by the site agent the Heritage Network was not informed when the footings trenches for the new building were excavated and so they were not observed. Two areas adjacent to the new building were monitored.

Immediately to the north of the north-east corner of the new building the ground was reduced by a depth of 0.85m for the foundation of a new plinth. The material removed consisted of mixed olive clay with reddish brown sand and gravel. A further plinth was located to the south-west of the new building, the level being reduced through made ground to expose the clay natural at a depth of approximately 0.50m below the existing surface. The natural showed evidence of previous modern construction activity.

Given the disturbed nature of the ground within the footprint of the new building and that no archaeological features, deposits, or artefacts were observed in the adjacent plinths, it is considered unlikely that significant archaeological remains were disturbed in the unmonitored footings trenches.

No archaeological features or deposits were revealed, and no artefacts were recovered during this stage of work.

Access Road

A new access road was excavated linking the treatment works with the A10 to the north of the village of Chipping (Figure 4). The topsoil was removed along the length of the new road. Following this a layer of geotextile material was laid down and covered with granular material. The road measured approximately 5.0m in width and had a total length of approximately 295m.

Three related ditches were revealed during the machining of the access road: [103], [105], and [107] (Figure 4).

- Ditch [103] was observed running across the access road on a north south alignment. The ditch had a width of approximately 0.60m. The ditch was preserved in situ beneath a layer of geotextile membrane prior to the level of the new road being built up. The fill (104) of firm, olive brown, slightly silty clay yielded abraded pottery sherds of Romano-British date.
- Ditch [105] was observed running across the access road on an east west alignment. The ditch had a width of approximately 0.65m. The ditch was preserved in situ beneath a layer of geotextile membrane prior to the level of the new road being built up. The fill (106) of firm, olive brown, slightly silty clay yielded abraded pottery sherds of Romano-British date. The ditch has a junction with ditch [103] close to the edge of the access road. The fills of the two ditches are identical suggesting that they are contemporary.
- Ditch [107] was observed running across the access road on a north south alignment. The ditch had a width of approximately 0.65m. The ditch was preserved in situ beneath a layer of geotextile membrane prior to the level of the new road being built up. The fill (108) of firm, olive brown, slightly silty clay yielded no archaeological artefacts. The ditch has a junction with ditch [105] close to the edge of the access road. The fills of the ditches are identical suggesting that they are contemporary.

The three ditches appear to be contemporary with each other. The pottery recovered from them is highly abraded and is unlikely to have been in its primary place of deposition. The ditches are most likely to be boundary ditches and may represent part of a field system predating the present one.

A single small and abraded undiagnostic bodysherd of sand tempered greyware pottery, probably of Romano-British date, was recovered unstratified from close to the junction of the access road with the A10.

No further archaeological features, deposits, or artefacts were revealed within the new road corridor.

Soakaways and services

The service trenches for the development were excavated to width of 0.45m and a maximum depth of 0.9m. The majority were excavated through the existing access road in ground which had already been heavily disturbed by previous services. The remaining service trenches, soakaways, and inspection chambers were excavated in areas that had already been inspected during the earlier ground reduction.

No archaeological features or deposits were revealed, and no artefacts were recovered.

Fieldwork data:

Context	Туре	Description	D	imensions ((m)	
		_	Length	Width	Depth	
101	Cut	Linear cut feature on a north – south alignment.	35.00 +	0.40	-	
		Unexcavated, preserved in situ. Boundary ditch.				
102	Fill	Firm, dark olive brown (2.5Y 3/3), silty clay with	35.00 +	0.40	-	
		frequent small flints. Fill of [101].				
103	Cut	Linear cut feature on a north – south alignment.	19.50 +	0.60	-	
		Unexcavated, preserved in situ. Boundary ditch.				
104	Fill	Firm, olive brown $(2.5Y 4/4)$, silty clay with	19.50 +	0.60	-	
		moderate small chalk nodules and small to				
		medium angular flints, and very occasional				
		charcoal flecks. Fill of [103].				
105	Cut	Linear cut feature on a east – west alignment.	5.75 +	0.65	-	
		Unexcavated, preserved in situ. Boundary ditch.				
106	Fill	Firm, olive brown $(2.5Y 4/4)$, silty clay with	5.75 +	0.65	-	
		moderate small chalk nodules and small to				
		medium angular flints, and very occasional				
		charcoal flecks. Fill of [105].				
107	Cut	Linear cut feature on a north $-$ south alignment. $18.50 + 0$.		0.65	-	
		Unexcavated, preserved in situ. Boundary ditch.				
108	Fill	1 Firm, olive brown (2.5Y 4/4), silty clay with $18.50 + 0.65$		0.65	-	
		moderate small chalk nodules and small to				
		medium angular flints, and very occasional				
		charcoal flecks. Fill of [107].				

Concordance of finds

	Pot	tery	CE	BM	Ste	one	SI	ag	Comments
Context	No	Wt	No	Wt	No	Wt	No	Wt	
102			2	10					
104	4	55			2	165			
106	5	15							
U/S Concrete	2	10							
Apron									
U/S Access Road	1	4					1	35	
Total	12	84	2	10	2	165	1	35	

A total of twelve sherds of pottery, weighing 84g, were recovered during the course of the present project. Aside from a single base sherd of sand-tempered pottery, the assemblage consists of small heavily abraded undiagnostic bodysherds of sand-tempered and grog-tempered wares.

A base sherd of sand-tempered ware recovered from fill (104) in boundary ditch [103] represents the only diagnostic pottery recovered. A small sherd of late post-medieval brown glaze ware was recovered from the same fill. This is likely to be intrusive within an earlier feature.

The pottery assemblage is of early Romano-British date. The material is heavily abraded and is unlikely to have been in its primary place of deposition.

Two small undiagnostic fragments of late post-medieval ceramic building material, weighing 10g, were recovered from fill (102) in ditch [101].

A single piece of slag, weighing 35g, was recovered unstratified from the new access road close to its junction with the A10.

Two pieces of stone, weighing 165g, were recovered from fill (104) in ditch [103]. One of these is unworked and can be discarded. The remaining fragment is part of a circular fossil which has mortar attached to it suggesting it has been used in a wall.

No further work is proposed on these artefacts.

3. Discussion and Conclusion

The monitoring of the groundworks associated with the development revealed no features which might be directly associated with settlement activity. However, a late postmedieval boundary ditch [101] was observed during the ground reduction of the temporary compound and concrete apron. Three boundary ditches [103], [105], and [107] that yielded pottery of early Romano-British date were observed in the new access road.

The three ditches [103], [105], and [107], were interconnected and had identical fills suggesting that they are contemporary with one another. The finds assemblage recovered from them suggests that they are located away from any areas of occupation. They may represent part of a Romano-British field system.

Further unstratified pottery of early Romano-British date was recovered during the fieldwork. Taken together with the material recovered from the boundary ditches, this indicates the presence of settlement activity of this period in the general vicinity of the site.

The site is situated in and adjacent to an area of defined archaeological activity consisting of linear cropmarks (AA5). Five clusters of cropmarks have been identified within this area (SMR refs. 1111, 4395, 4486, 7711 and 7712). These features suggest earlier field systems and rectangular enclosures of unknown date. A possible pit within SMR 7711, approximately 500m the north of the site, may indicate a focus for settlement activity.

Three of the cropmark groups (SMR 1111, 4395 and 4486) include linear features forming rectangular enclosures on a similar alignment to the ditches investigated on the present site. Dating evidence from the three ditches investigated suggests that some of the other cropmark features may be Romano-British in date.

An examination of the first edition Ordnance Survey of 1883 suggests that the recorded ditches are not of modern origin.

Conclusion

The fieldwork revealed evidence of a potential Romano-British field system. The small pottery assemblage recovered during the groundworks is indicative of domestic Romano-British activity. However, no features which might be indicative of occupation were encountered on the site.

Confidence Rating

During the course of the fieldwork, the conditions were generally acceptable for the identification of potential features and deposits, and for their investigation.

There are no circumstances which would lead to a confidence rating for the work which was less than High.

Date	Staff	Hours	Comments	
18/01/2006	GIS	6	Monitor ground reduction for site compound	
19/01/2006	GIS	8	Monitor ground reduction for site compound	
24/01/2006	GIS	2	Inspect removal of mound inside new building footprint	
25/01/2006	GIS	2	Inspect removal of mound inside new building footprint	
01/02/2006	GIS	1	Pre-arranged site visit	
01/02/2006	GIS	5	Monitor ground reduction for concrete apron	
22/02/2006	DGK	2	Pre-arranged site visit, site induction	
22/02/2006	DGK	2	Monitor tank excavation	
02/03/2006	GIS	2	Monitor drainage	
29/03/2006	GIS	5	Monitor plinth excavation	
30/03/2006	GIS	5	Monitor access road	
03/04/2006	GIS	1	Pre-arranged site visit	
04/04/2006	GIS	2	Inspect access road	
12/04/2006	DJH	2	Monitor plinth excavation	
24/04/2006	GIS	2	Inspect access road	
19/04/2006	DGK	4	Monitor access road	
10/05/2006	GIS	4	Monitor access road	
11/05/2006	DGK	3	Monitor access road	
12/05/2006	GIS	4	Monitor access road	
16/06/2006	GIS	8	Monitor access road	
19/06/2006	GIS	3	Monitor access road	

4. Schedule of Site Visits

5. Bibliography

Smith, J. 2005, *Design Brief for Archaeological Monitoring and Recording at Land NE of Chipping*. HCC

Turner, C. 2006, *Chipping Water Treatment Works, Chipping, Hertfordshire: Archaeological Project Design.* Heritage Network

6. Illustrations

Figure 1	Site location
Figure 2	Site layout
Figure 3	Site detail
Figure 4	Feature location







