

Land to the south of Broads
Green Farm, Broads Green,
Heddington, Calne, Wiltshire

Archaeological Monitoring and
Recording report

January 2017

Information matrix

SITE DETAILS	
Site address	Land to the south of Broads Green Farm, Broads Green, Heddington, Calne, Wiltshire.
Site postcode	SN11 0NX
Site NGR	Centred on ST 98035 67202
Site area	N/A
Site aOD height (min/max.)	Site falls from c. 120m aOD at the western end to c. 97m aOD at the eastern end
Topography	Descending from the west to c. 103m aOD half way along pipeline with a more gentle fall to the eastern end
Ground conditions	Grass, low vegetation
Site geology (solid)	Lower Greensand Group - Sandstone
Site geology (drift)	None recorded
PROJECT DETAILS	
Client	Wessex Water plc
Client project reference	BJ283
Development proposal	Replace an 832m long section of pipeline
Local Planning Authority	N/A
Planning reference	N/A
INVESTIGATION	
C1 site code	C1/AMR/16/BHC
Investigation type	Archaeological monitoring and recording
Fieldwork dates	14/10/16 & 1-3/11/16
Fieldwork team	Peter Fairclough
Post-excavation team	Richard McConnell, Tara Fairclough, Cheryl Green
ARCHAEOLOGICAL DETAILS	
Previous events for Site	N/A
Written Scheme of Investigation (WSI)	Approved by Melanie Pomeroy-Kellinger (County Archaeologist) on 18/10/16
Scheduled Monument Consent ref.	N/A
Historic Environment Record reference	N/A
Collecting Museum	N/A
OASIS reference	contexto1-264445
REPORT	
Draft report date	25 January 2017
Final report date	26 January 2017
Prepared by	Richard McConnell
Illustrations by	Tara Fairclough
Internal review by	Cheryl Green
Checked and approved by	Cheryl Green
ARCHIVING	
Site records	6 x test pit/compound recording sheets, 1 x 1 x feature intervention record, 2 x permatrace feature drawings
Site images	81 images in .jpg format.
Artefacts	N/A
C1 STAFF	
Projects Director, Historic Buildings Archaeologist	Richard McConnell BA (Hons), PCIfA
Fieldwork Manager, Osteoarchaeologist	Stuart Milby BSc (Hons), MSc, PCIfA
Post-excavation Manager, Historic Buildings Archaeologist, Stone Specialist	Cheryl Green FSA, BA Hons, PhD
Illustrator, Project co-ordination, Historic Buildings Archaeologist	Tara Fairclough BA (Hons), PCIfA



Archaeological Officer, Animal Bone
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Summary

Context One Archaeological Services Ltd (COAS) carried out a programme of archaeological monitoring and recording during groundworks relating to the insertion of a new water pipe into an existing pipe on land to the south of Broads Green Farm, near Calne, Wiltshire during October and November 2016. The project was commissioned and funded by Wessex Water plc under a Term Agreement with COAS.

The Site was very close to the Roman town of Verlucio and the groundworks were in proximity of a conjectured Roman road.

Monitoring of five access pits and a compound area revealed a single feature and this comprised a metaled surface encountered in access pit 2. This included four compacted layers of alternating gravel and stone and it is conjectured that this might represent a vestige of the Roman road. However, no dating was recovered to substantiate this and the confined nature of the investigation prevents a precise interpretation. It has also been suggested that a geophysical survey in the adjacent field appears to indicate that, at this location, the road was here instead.

This report is produced solely for the benefit of an individual client and for the proposed uses stated in the report, and should not be relied upon for other purposes or by other parties unless specifically agreed by us in writing. The different elements of the report are designed to be integral to each other and therefore do not necessarily stand alone. Opinions and information provided in this report are on the basis of C1 using reasonable skill and care, however no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or less than fully representative information. This report is limited to the scope and limits agreed with the client under our appointment. Any investigative work undertaken as part of the commission will have been subject to limitations imposed by such factors as timescales, budgets, seasonal variations and weather conditions.

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1. Introduction

1.1 Context One Archaeological Services Ltd (COAS) carried out a programme of archaeological monitoring and recording during groundworks relating to the insertion of an 832m long section of pipeline into an existing water main on land to the south of Broads Green Farm, near Calne, Wiltshire (the 'Site'), during October and November 2016. This comprised the monitoring of a soil strip on the compound location along with access pit excavations for the pipe insertion. The project was commissioned and funded by Wessex Water plc under a Term Agreement with COAS.

1.2 The monitoring and recording was advised by Ms Melanie Pomeroy-Kellinger (County Archaeologist) Wiltshire County Archaeology Service (WCAS)), following a consultation request from Mr Liam Ridley (Graduate Environmental Scientist, Wessex Water plc) on the potential archaeological impact of the scheme. In an email to Wessex Water (19 July 2016) Ms Pomeroy-Kellinger stated:

"This is a highly sensitive area archaeologically and it looks like it passes through areas of the Roman town. I'd like to get further details of the method. Any open cut trenching will require archaeological monitoring. The pipe burst may have an impact too depending on its depth."

1.3 This resulted in further consultation between Ms Clare King (Assistant County Archaeologist, Wiltshire County Archaeology Service (WCAS)) and Mr Sergio Perez (Environmental Scientist, Wessex Water plc) on the preferred methodology and confirmed scope of the works. In an email to Wessex Water (8 August 2016), Ms King stated:

"Thanks for the update and our conversation on Friday. I said that, in Melanie's absence, I would give some advice on the two options. I have copied her in on this email as she may have something to add."

As you are aware, we did have considerable concerns about the original proposals (Option A) as it included a large stretch of open cut within an extremely sensitive archaeological area. Option B is less intrusive. The area of open cut is in a less sensitive area and the proposal within the Roman settlement is for up to 6 pits (one every c. 100m) that should stay within the areas that have been previously disturbed by the existing pipeline, allowing a new pipe to be passed inside the old one. As we discussed, this is also potentially less intrusive than the 'pipe bursting' originally considered, as it has the same number of intrusive pits, but less of a risk that joints or patches on the existing pipe will be pulled or fractured, resulting in the need for emergency excavation. We also discussed the need for the works to be undertaken in periods of fine weather, preferably in the summer, so that an easement is not required. We would be happy to discuss this further as the proposals develop, given the very high sensitive of the archaeological remains, which we consider to be nationally important."

1.4 Ms Pomeroy-Kellinger further clarified the archaeological requirements in an email to Wessex Water (15 August 2016):

"...option 4 seems much better for us in terms of the archaeology. I won't require an archaeological monitoring if the trenching is in the carriageway at Broad Green. It will if the trenching veers off into verges or fields. There are no known archaeological features in the proposed compound area, but it will need a watching brief."

1.5 The programme of archaeological works comprised four elements: the production of a Written Scheme of Investigation (WSI) which set out the project strategy; archaeological monitoring and recording; post-excavation and report production (this document); and archive production and deposition.

1.6 The request for the archaeological work follows advice given by Central Government as set out in the *National Planning Policy Framework* (DCLG 2012).

2. Objectives

2.1 The principal objectives of the archaeological work were:

- to assess the known archaeological and historical potential of the Site;
- to understand the significance of the archaeological resource;
- to determine the character of the archaeological remains, where present;

- to recover environmental information, which may provide further information relating to the local historic environment of the area;
- and to provide sufficient information to enable further mitigation strategies to be determined, where appropriate

3. Methodology

Wessex Water methodology

- 3.1 Given the archaeological sensitivity of the pipeline route, and to minimise the impact of associated groundworks, it was decided to replace the present water main by inserting a new pipe inside the existing pipe along the entire length of the works. This involved the machine excavation of five access pits at strategic locations over the existing pipe so that the new pipe could be inserted in sections along the route. The pits were planned to measure up to c. 3.50m square and up to 1.50m deep and were excavated with a Takeuchia TB228 3 tonne mechanical excavator fitted with a toothless bucket. In addition, a temporary compound for Site welfare and materials storage was set up to the north of Broads Green Farm. The compound area measured c. 15m x 15m and was excavated by JCB to a maximum depth of 0.20m. The excavation here was simply to provide a firm surface for the laying of a breathable membrane and aggregate for an operational area. The compound location and the positions of the access pits are shown on **Figure 1**.

Archaeological methodology

- 3.2 All archaeological work was carried out in accordance with the *Standard and guidance for an archaeological watching brief* issued by the Chartered Institute for Archaeologists (CIfA) (December 2014) and *Standards for Archaeological Assessment and Field Evaluation in Wiltshire* (CAS 1995). COAS adhered to the Code of Conduct of the CIfA (December 2014) and the Regulations for Professional Conduct (December 2014, rev. 2015). The fieldwork methodology is summarised below.
- 3.3 COAS gave notification of the commencement of the works to the WCAS. Ms Pomery-Kellinger visited the Site on 10 November 2016 accompanied by Mr Jon Last and Mr David Roberts from Historic England.
- 3.4 An archaeologist was on Site to monitor all specified groundworks, to identify and record any archaeological remains, features and deposits present. Provision was made to allow extra time for the excavation and recording of features revealed as a result of groundworks.
- 3.5 By default, all the access pits and the compound were recorded using COAS *pro-forma* test pit/profile forms in digital format using iPad mini tablets. This included logging the deposit sequence encountered and a digital photograph of a representative section.
- 3.6 Any archaeological features/deposits were recorded using standard COAS *pro-forma* feature intervention recording forms in digital format using iPad mini tablets. Stratigraphic relationships were recorded using a "Harris-Winchester matrix" diagram. Soil colours were logged using a Munsell soil colour chart. Any features were drawn on dimensionally stable media at scales of 1:20 (plans) and 1:10 (sections).
- 3.7 The location, extent and altitude of archaeological features and deposits were mapped relative to the National Grid and Ordnance Datum using a TopCon GRS-1 Global Positioning System receiving real-time calibrations to produce accuracies of 1-2cm.
- 3.8 A digital photographic record of any features/deposits was carried out to illustrate the detail and general context of any remains. The record also included working shots to demonstrate the nature of the archaeological investigation.
- 3.9 Excavation of any features/deposits was also carried out with a view to taking samples for scientific study where this was merited.

4. Results

- 4.1 In the following paragraphs, 'TP' followed by the number of the pit is given as a shorthand for the access pits; this accords with COAS recording sheets. Where a deposit (context) is discussed, it is presented within parentheses with the leading number relating to a specific member of the field team. A context in square brackets relates to a cut. Where a feature is described, it is given shorthand of 'F' followed by a unique feature number.

The compound

- 4.2 The compound area was first soil-stripped ahead of the water main replacement works. It has been noted that this may have been over the site of a former compound area used by British Gas the preceding year. The compound strip was shallow and did not exceed 0.20m deep. The deposit sequence comprised a very dark greyish brown (10YR 3/2) silty clay (7-100) measuring 0.20m thick mixed with modern rubble and limestone and brash fragments. This exposed a yellowish brown (10YR 5/4) clay with silt subsoil (7-101). No features or finds were encountered.

TP 1, 3, 4 and 5

- 4.3 TP1 measured 3m x 2m and was excavated to a maximum depth of 1.20m. TP3 measured 3m x 2m and was excavated to a maximum depth of 0.50m. TP4 measured 2m x 0.45m and was excavated to a maximum depth of 0.50m. TP5 measured 3m x 1.5m and was excavated to a maximum depth of 1m.
- 4.4 Perhaps not surprisingly, the deposit sequence across all four access pits was similar and depending on the depth of the pits comprised two or three horizontal deposits which all showed disturbance from the insertion of the original water pipe to varying degrees. The topsoil was a very dark grey (10YR 3/1) or strong brown (7.5YR) silty clay (7-100), (7-300), (7-400) and (7-500), measuring between 0.20m and 0.25m thick with frequent angular gravel fragments and occasional sandstone pieces. In access pits 1, 3 and 5, the topsoil covered a deposit of made ground comprising mixed silty clay (7-101), (7-301) and (7-501) measuring between 0.50m and 1.00m deep with frequent angular gravel fragments, bricks, ceramic pipe fragments, concrete lumps and gypsum. The deposit ranged in colour from dark grey (10YR 4/1) to dark yellowish brown (10YR 4/4). In access pit 4, a more recognisable subsoil was present and this was composed of a yellowish brown (10YR 5/8) sandy silt (7-401) measuring 0.25m thick with a moderate frequency of small sandstone fragments. The natural clay was dark grey (10YR 4/1) or dark yellowish brown (10YR 4/4) where it was exposed and included occasional river-type gravel. The deposit was excavated to a maximum depth of 0.25m and only deep enough to expose the existing pipe.

TP 2

- 4.5 TP2 measured 2.40m x 1.60m and was excavated to a maximum depth of 0.50m. The general deposit sequence here comprised two horizontal deposits which also showed disturbance from the insertion of the existing water pipe. This included a very dark grey (10YR 3/1) silty clay topsoil (7-200) measuring 0.20m thick with frequent angular gravel fragments, and a dark yellowish brown (10YR 4/4) mixed subsoil (7-202) up to 0.20m deep with frequent angular gravel fragments, bricks, ceramic pipe fragments and concrete lumps.
- 4.6 A metallised surface (F1) was encountered in plan, where it was not disturbed by the excavations for the existing pipe, and in section (**Plates 1 and 2**). The metallising was encountered below the subsoil (7-200). This feature comprised four distinct horizontal deposits: a brownish yellow (10YR 6/8) coarse sand (7-203) measuring 0.35m thick with occasional angular sandstone fragments; a 0.07m thick mixed layer of small sandstone blocks and plates (7-204); a 0.30m thick dark greyish brown (10YR 7/8) deposit of coarse sand and gravel (7-205); and a 0.20m thick, dark greyish brown (10YR 4/2) lens of frequent, flat angular limestone slabs (7-206) each measuring up to 0.30m long.

5. The finds

- 5.1 Apart from modern brick and ceramic pipe fragments observed in the access pits, no further material was identified.

6. Discussion

- 6.1 Given that the access pits and the compound were positioned over previously disturbed ground, it is not surprising that this was reflected in the recorded deposit sequence. However, the existing pipe in TP2 had clearly been dug through a former metalled surface and this was exposed once more during the current water main replacement works. Where it had not been removed, the surface was present throughout the access pit and so was at least 4m wide and 2.40m long. Comprising of four distinct layers with alternate bands of gravel and stone, it was clearly well constructed. Given its location along the conjectured line of the road to the known Roman settlement of Verlucio a short distance to the west, it is tempting to speculate that this is part of the original Roman road. However, a geophysical survey carried out in the adjacent field to the south indicates the actual line of the road in this location may have been there instead (Pomeroy-Kellinger, 2016 *pers. comm.*, 11 November). On this basis, it is therefore possible that the metalling represents a later surface, perhaps associated with firming the ground near a modern field gate which is shown to be close by. However, the general quality of the construction might negate this idea and lead back to the notion that this may indeed be a vestige of the Roman road. The lack of dating and the confined nature of the investigation prevents a more precise appraisal although the monitoring here has provided useful data that may assist future investigations in the environs of the Roman settlement.

7. Archive

- 7.1 The National Planning Policy Framework (NPPF) (2012) requires that an archaeological archive arising from development works is made publicly accessible (para. 141). The archive comprises two parts: the paper/digital archive including site records and images; and the artefact/ecofact assemblage. In this instance, there is no artefact/ecofact assemblage.
- 7.2 The digital archive (consisting of born-digital data and digital copies of drawings produced during fieldwork) will be transferred into the care of a Trusted Digital Repository. The only suitable repository for digital archaeological archive is the Archaeology Data Service (ADS). The digital archive will be compiled in accordance with the standards and requirements of the ADS, as set out on their website. A digital copy of the report will also be deposited with the Archaeology Data Service, via OASIS (On-line Access to the Index of Archaeological Investigations – <http://oasis.ac.uk/england/>).
- 7.3 Copies of this report will be deposited with the client/agent and included as part of the Wiltshire Historic Environment Record.
- 7.4 Archive deposition will ordinarily be carried out within three months of completion of reporting.

8. Acknowledgements

- 8.1 COAS would like to thank the following for their contribution to the successful completion of this project:

Sergio Perez (Environmental Scientist, Wessex Engineering and Construction Services)
 Wayne Johnson (Site Manager, Wessex Engineering and Construction Services)
 Melanie Pomeroy-Kellinger (County Archaeologist, Wiltshire Council)
 Jon Last and David Roberts (Historic England)

9. Bibliography

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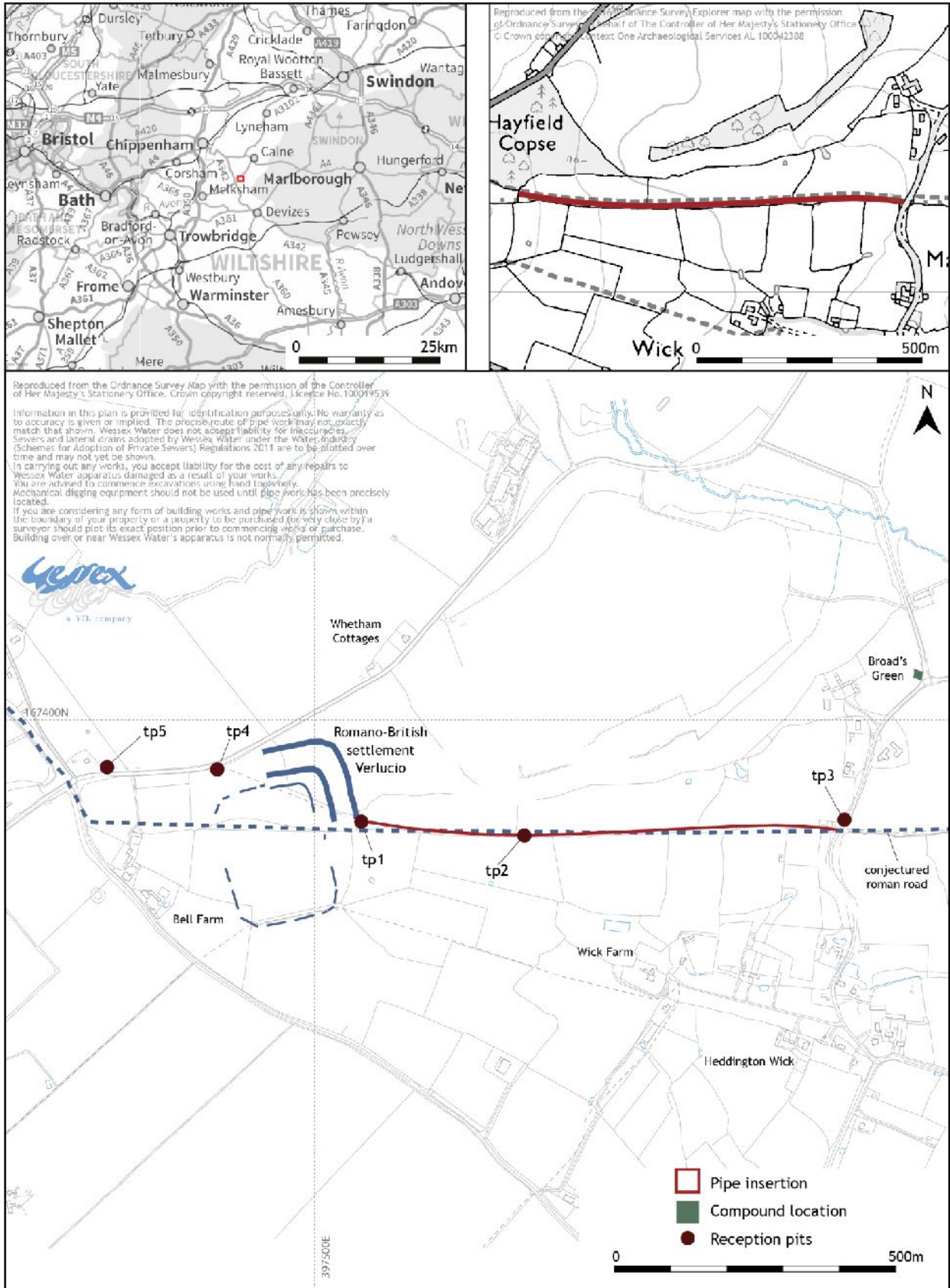


Figure 1. Site setting and area of works with relation to the Romano-British settlement (Verlucio)



Plate 1. Access pit 2 and metallised surface from N (1m scale)



Plate 2. Metallised surface from N (1m scale)

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