

D9348: Bristol Sewage Treatment Works, Kings Weston Lane, Avonmouth, Bristol

An Archaeological Watching Brief



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for

Wessex Water plc

by



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Non-technical Summary

Context One Archaeological Services Ltd (COAS) carried out an archaeological watching brief during groundworks associated with the construction of a new motor control centre kiosk to monitor and operate the new additional coarse screen equipment at the Bristol Sewage Works, Kings Weston Lane, Avonmouth, Bristol (centred on NGR ST 53530 79027; Planning Application no. 12/03106/F). The work was carried out over 16 days from October 2012 to January 2013 and was commissioned and funded by Wessex Water plc.

The request for the investigation was made by the Local Planning Authority (LPA) on the advice of Mr Peter Insole (Archaeological Officer, Bristol City Council). The Site is adjacent to a surviving medieval drainage and sea defence ditch and bank which is a Scheduled Ancient Monument.

The archaeological work has shown that the area affected by the development has been subject to levelling and the installation of services in the twentieth century. This has resulted in truncation of the underlying natural tidal flat deposits, most probably destroying any archaeological features or deposits, should they have existed. No finds were observed or recovered.

1. Introduction

1.1 Context One Archaeological Services Ltd (COAS) carried out an archaeological watching brief during groundworks associated with the construction of a new motor control centre kiosk to monitor and operate the new additional coarse screen equipment at the Bristol Sewage Works, Kings Weston Lane, Avonmouth, Bristol (Planning Application no. 12/03106/F). The works took place adjacent to Kings Weston Lane (centred on NGR ST 53530 79027; hereafter referred to as the Site) and was carried out over 16 days from 29th October 2012 to 22nd January 2013. It was commissioned and funded by Wessex Water plc under of Term of Agreement contract with COAS.

1.2 The request for the investigation was made by the Local Planning Authority on the advice of Mr Peter Insole (Archaeological Officer, Bristol City Council (BCC)). In a consultation response Mr Insole stated that:

“The treatment Works are located within a very rich archaeological landscape which is essentially of medieval (or possibly Roman) origin. Past archaeological works, especially in the Cabot Park development area and along the route of the M49 motorway, as well as along the route of a previous Wessex Water pipeline, have managed to extend our knowledge of this area considerably.”

1.3 The request for the archaeological work follows advice given by Central Government as set out in the *National Planning Policy Framework* (DCLG 2012) and the *Local Development Framework Core Strategy* (BCC 1997, 2011).

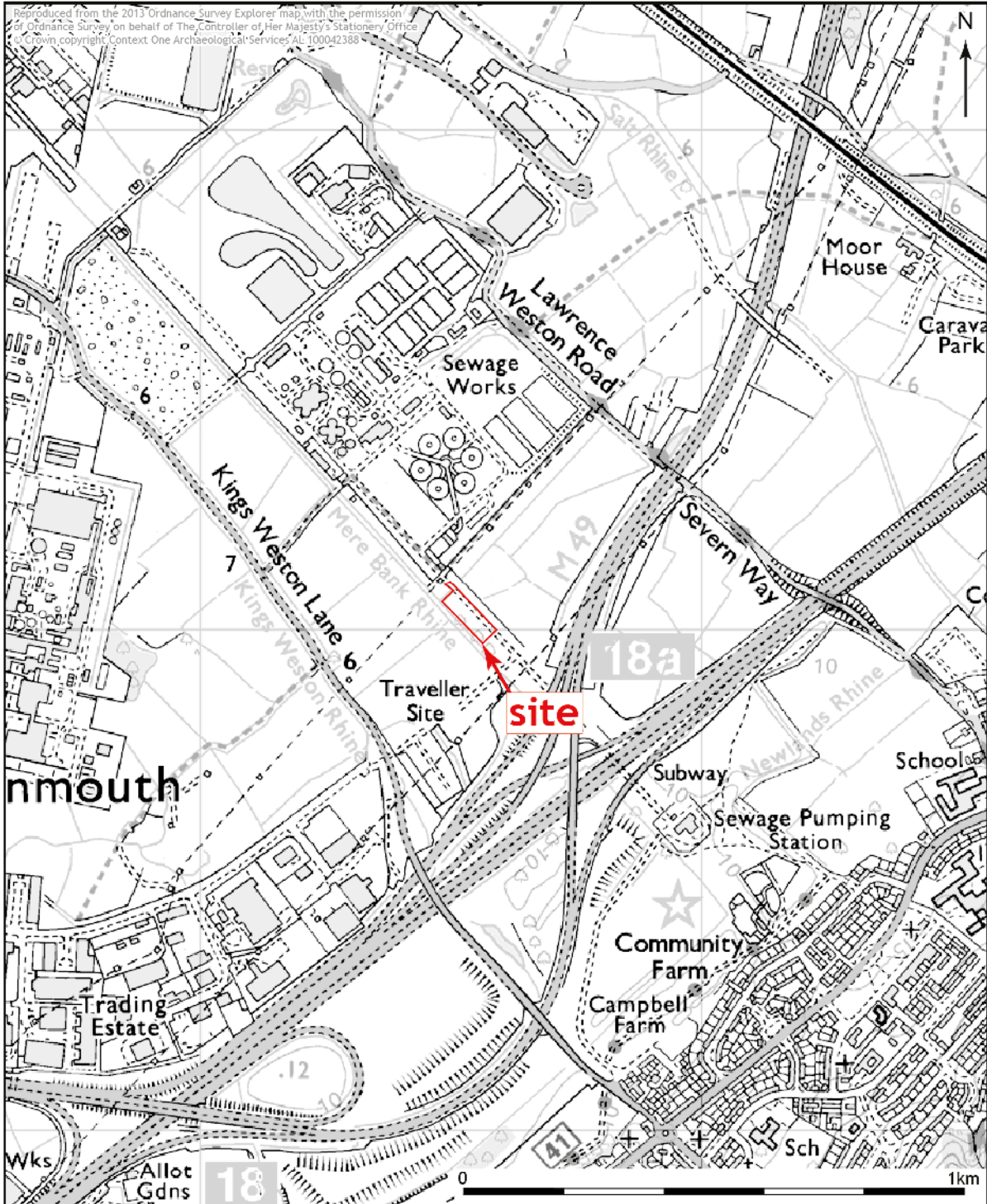
1.4 Given the recorded archaeological and historical data for the environs, it was considered that archaeological features or deposits could be present on the Site, and that these could be damaged or destroyed by development. However, as the nature or presence of such features or deposits was unproven on the basis of currently available information, it was determined that a reasonable archaeological response would be to carry out a watching brief during all ground disturbance associated with the development.

1.5 At the request of Mr Insole, COAS issued a *Written Scheme of Investigation* (Milby 2012), which provided a strategy for the archaeological works. This was submitted to and approved by Mr Insole prior to the commencement of the watching brief. Mr Insole was kept fully informed of progress on site as the investigation proceeded. In this instance, it was not deemed necessary to carry out a site monitoring visit.

2. Site Location, Topography and Geology

2.1 The Bristol Sewage Treatment Works is situated c. 7.5km north west of the centre of Bristol, c. 3km east north east from where the River Avon issues into the Bristol channel and ca. 820m north north west of the M5's junction 18A (**Figure 1**). It is set within an industrial complex west of fields at c. 7m above Ordnance Datum (aOD). The Site occupied a c. 20m by 60m, roughly rectangular, area of former scrubland between the Frome Valley Pumping Station to the south and existing inlet works and screens to the north. It is bounded by the Mere Bank rhine and an access road on the west and east sides respectively.

2.2 The geology comprises Tidal Flat Deposits of Quaternary superficial clay and silt overlying Mercia Mudstone Group Triassic Sedimentary Mudstone and Halite-stone (BGS 2013). Where they survive, the soils are lime-rich, loamy, clays with naturally high groundwater, characteristic of coastal flats, of moderate fertility (NSRI 2013).



	PROJECT TITLE D9348: Bristol Sewage Treatment Works, Kings Weston Lane, Avonmouth, Bristol		
	FIGURE TITLE Site setting		
	SCALE as shown	PROJECT CODE C1/WBF/12/KAB	FIGURE NO. 1

Archaeological background

- 2.3 Previous work had identified environmental evidence that occupation over the estuarine deposits around Avonmouth may have become feasible during the 12th century AD. The adjacent Mere Bank Rhine (SAM 27988; **Figure 2**) is a medieval drainage feature with possibly Roman origins. Sparse finds and possibly contemporary ditches from the following two centuries provide some support for the possibility that a medieval farmstead existed in the area (WA 1998, 21).

3. Methodology

Wessex Water Methodology

- 3.1 The groundworks required local use, on the east side, of a 360 degree tracked machine fitted with a toothed hydraulic breaker and, elsewhere, a machine fitted with a 1.5m wide toothless bucket to strip the surface and to dig 21 pile bases to support a new building.

Archaeological Methodology

- 3.2 The programme of archaeological work was carried out in accordance with the codes, standards and guidelines set out by the Institute for Archaeologists (IfA 1985, rev. 2012; 1990, rev. 2008; 1994, rev. 2008) and Bristol City Council (BCC 2011) at all times during the course of the investigation. Current Health and Safety legislation and guidelines were followed on site.
- 3.3 The machine removal of the topsoil and excavation of pile base pits was carried under the supervision of the supervision of COAS field staff.
- 3.4 In the absence of archaeological features or deposits, representative profile sections of the deposit sequence across the Site were recorded using standard COAS *pro forma* profile sheets. These include a graduated graphical representation of a profile section showing the stratigraphical sequence which was annotated to define the depths of each observed deposit. The sheets also include summary context forms in order that the character of each layer is summarised. There are also entry fields for the profile location, photographic reference and core details of any artefacts. The frequency with which profile sections were recorded was based entirely on any variation of the deposit sequence.
- 3.5 A photographic record of the fieldwork comprised digital images in .jpg format. As a minimum, the record included shots of each profile section, the site setting and development works.
- 3.6 The location, extent and altitude of the archaeological work 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.

4. Results

- 4.1 The prevailing ground conditions were already very moist, with high ground water, and this was exacerbated during the investigation by episodes of heavy rain and snow. No archaeologically significant deposits or features were encountered during fieldwork. In the text layer numbers appear in standard brackets, e.g. (102). The pile base numbers prefix the last two digits, the latter designating the particular layer.

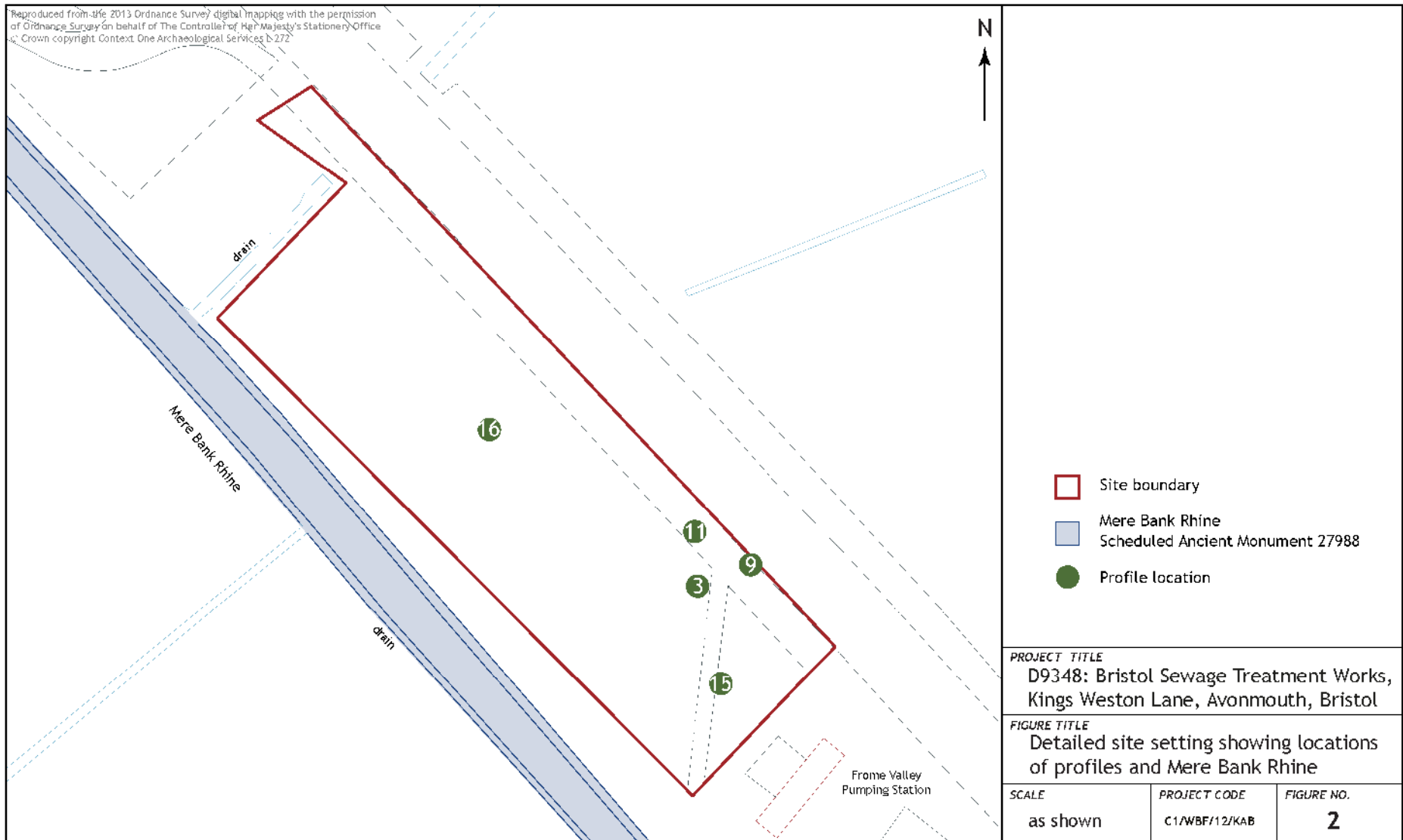




Plate 1. TP15 (from SW; 1m scale)



Plate 2. TP 3 (from NE; 1m scale)



Plate 3. TP16 (from SE; 1m scale)



Plate 4. TP9 (from NE; 1m scale)



Plate 5. TP11 (from SW; 1m scale)

Soil Sequence and Geology

- 4.2 The Site may be divided conveniently into three soil sequence zones. At the south end and middle a thin, c. 0.05m turf (1500), (100) etc. had formed over a 0.15m to 0.25m deep grey soil, (1501), (101) etc. This included moderate to abundant modern building material, apparently forming levelling over slightly yellowish grey, tidal flat deposits of silty clay, (1502), (102) etc. (Plates 1 and 2), of undetermined depth. At the north end the turf (1600) etc. lay directly over the tidal flats (Plate 3). To the east the groundworks encroached on the access road. The tarmac, (900) etc., of c. 0.08m depth was bedded over c. 0.45m of limestone hardcore and scalplings, (901) etc., which had been laid over truncated tidal flat deposits (902) etc. (Plate 4).
- 4.3 The only features encountered were modern ceramic field drains and their trench cuts which were recorded by photograph only (Plate 5). No finds were collected or observed.

5. Discussion

- 5.1 The archaeological work has shown that the area affected by the development has been subject to levelling and the installation of services in the twentieth century, resulting in truncation of the underlying tidal flat deposits, most probably destroying any archaeological features or deposits, should they have existed.
- 5.2 No finds were observed or recovered.

6. Archive

- 6.1 The site archive is currently held at the offices of Context One Archaeological Services Ltd and consists of the written paper record of one context sheet, three COAS *pro forma* profile log sheets and related registers and 155 digital images in .jpg format. The archive will be prepared to comply with the appropriate current national guidelines (UKIC 1984, 1990; MGC 1992; EH 1991). Arrangements will be made to deposit the archive with Bristol City Museum and Art Gallery within 12 months following the submission of this report.
- 6.2 Copies of the Watching Brief report will be deposited with:

Wessex Water plc
Claverton Down Road
Claverton Down
Bath
BA2 7WW

Bristol City Museum and Art Gallery
Queen's Road
Bristol
BS8 1RL

7. COAS Acknowledgements

- 7.1 Context One Archaeological Services Ltd would like to thank Ms Lizzie Willis (Environmental Scientist, Wessex Water plc), for her kind assistance throughout the course of the investigation and Mr Peter Insole, Archaeological Officer, Bristol City Council), for curatorial advice.

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