



**Report on a Programme of Archaeological Works at
Eastney Sewage Pumping Station, 201-203 Henderson
Road, Southsea, Hampshire**

August 2021

NON-TECHNICAL SUMMARY

This document sets out the results from an archaeological watching brief at Eastney Sewage Pumping Station, Southsea, Hampshire, during the installation of new security fencing. It was carried out on the 14th July and 10th August 2021 by West Sussex Archaeology Ltd on behalf of Portsmouth City Council. The results revealed an iron pipe, probably carrying the existing water supply to the Beam Engine House, and a brick wall, possibly the side of a culvert linked to an early 20th century suction chamber.

BACKGROUND

Topographical Background

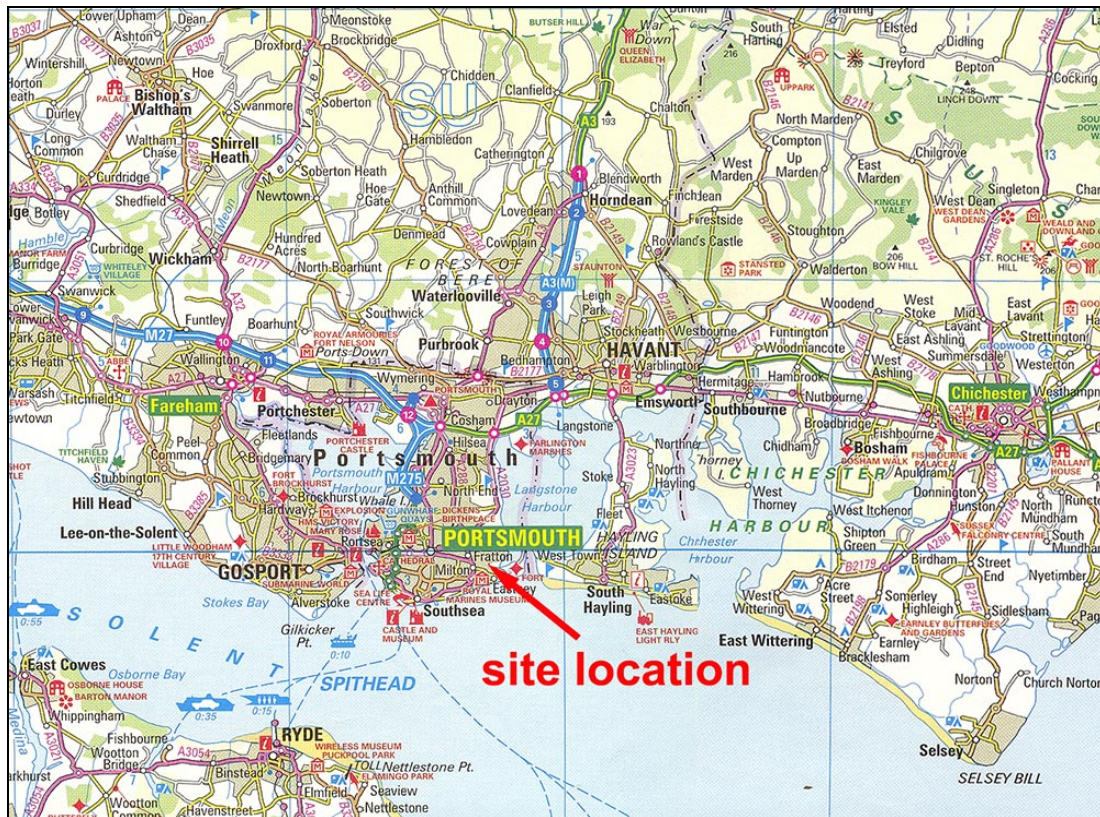


Figure 1 Site location. © Crown copyright. All rights reserved. License number: AL100036068

1. Eastney is the most south-easterly of the suburbs of Portsmouth, lying at the south-eastern tip of Portsea Island. The Sewage Pumping Station is positioned between Henderson Road and Eastney Lake (see Figures 1 & 2). It lies at 4m aOD and is centred at OS grid reference SZ 6735 9924. The underlying geology is the Wittering Formation overlain by River Terrace Deposits.

Project Background

1. Portsmouth City Council (PCC) have been given Scheduled Monument Consent (SMC No.S00240578) from Historic England (HE) for the installation of railings and a security fence around the reservoir/cooling pond and neighbouring pump house. Condition (c) of that consent states that: “No works shall take place until the applicant has confirmed in writing the commissioning of a programme of archaeological work to take place during the development. This shall be carried out in accordance with a written scheme of investigation which will be submitted to, and approved by, the Secretary of State advised by Historic England”.

WEST SUSSEX ARCHÆOLOGY

2. West Sussex Archaeology Ltd (WSA) was appointed by PCC to write and submit such a written scheme of investigation (WSA 2021), which was approved by Alex Bellisario (Historic England).



Figure 2 Site location. © Crown copyright. All rights reserved. License number: AL100036068

3. This report details the results of the ensuing archaeological work, which was carried out on 14th July (PH1-6) and 10th August (PH7-12) 2021 by George Anelay of West Sussex Archaeology Ltd. The project archive, which consists solely of paperwork, will be deposited with Portsmouth Museum.

Historical Background

1. Eastney Sewage Pumping Station (Scheduled Monument No.1001791) was originally constructed in the 1860s as a first attempt at dealing with human waste on the island. Initially it consisted of a reservoir/cooling pond and two buildings to the south, the western being the Old Engine House housing a beam engine, since removed. In the 1880s the system was upgraded with the construction of the new Beam Engine House and Boiler House to the north of the original buildings, and east of the reservoir/cooling pond. A second upgrade was undertaken in 1904 when the Gas Engine House was built to the west of the reservoir/cooling pond. Later additions include a screen house and further pump houses to the west and north of the Gas Engine House. The site became a museum in the 1970's.

WEST SUSSEX ARCHÆOLOGY

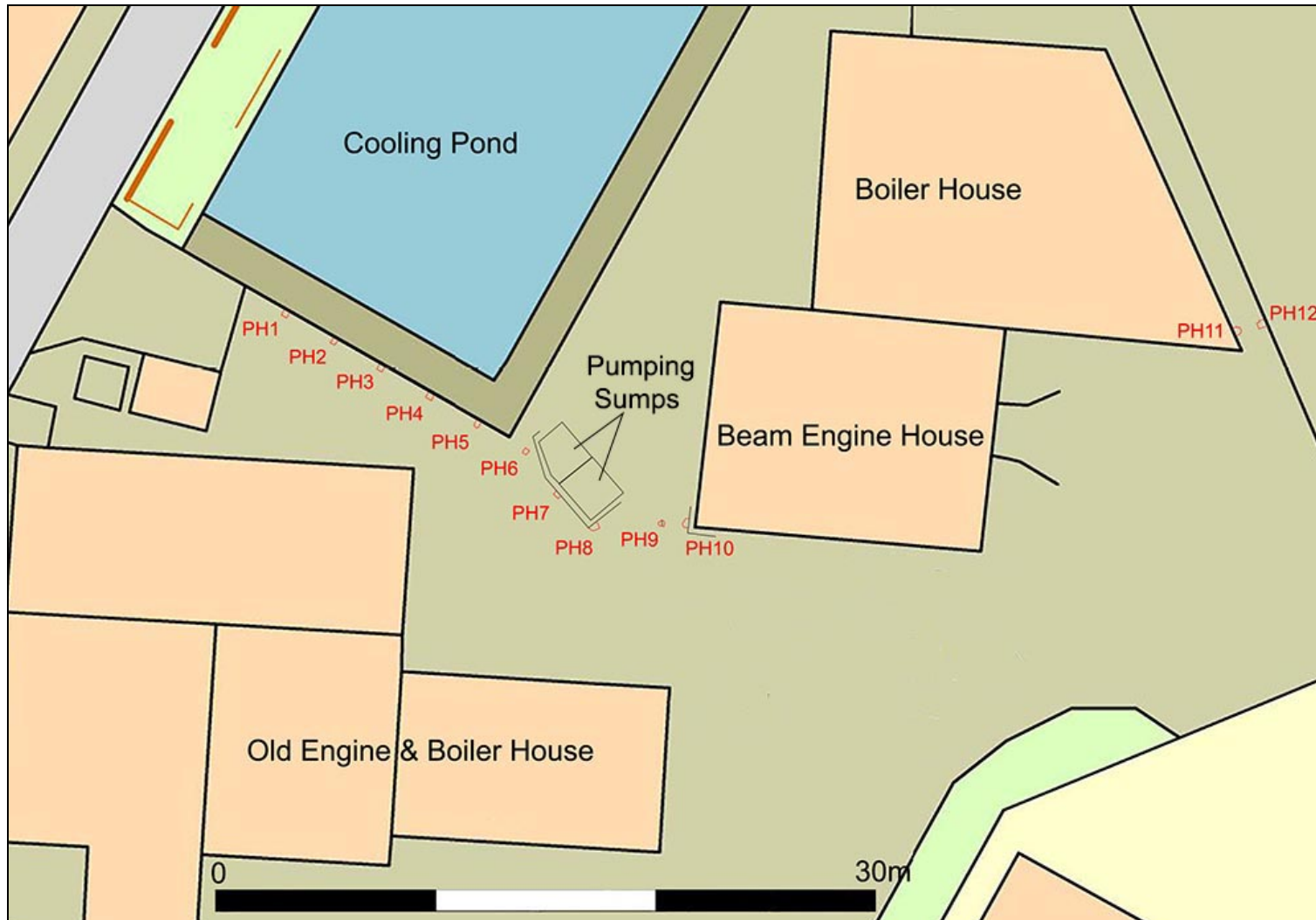


Figure 3 Plan showing the location of the excavated post-holes (PH1-12)

RESULTS

1. A total of ten post-holes were excavated along the line of the new security fencing to the south of the Cooling Pond, with a further two to the east of the Boiler House. The line of new railings to the east of the Cooling Pond, which were also to be monitored according to the terms of the written scheme of investigation, were omitted since no groundworks were associated with their installation.
2. Post-holes 1 – 5 were located against the concrete kerb of the Cooling Pond on its south side. All were c.0.25m x 0.2m in plan and extended to between 0.5-0.6m deep. Below the modern concrete (0.25-0.4m thick) was a layer of mid-brown clay silt containing frequent gravel and occasional CBM fragments, probably representing the fill of a trench containing an iron pipe (?water) with lay at the bottom of each post-hole against its northern edge. Post-hole 6, which lay just to the east of the Cooling Pond kerb, also contained the same iron pipe, although here it had changed direction to run approximately north-south along the western edge of the post-hole, presumably in order to miss the pumping sumps to the east. The lower clay silt layer, present also in Post-hole 6, was here capped by only 0.15m of concrete.



Figure 4 Site shot looking north-west, with the Post-holes 7 – 10 visible in the foreground and the newly erected posts within Post-holes 1 – 6 in the background

3. Post-holes 7 & 8 abutted the south-west and south-eastern sides of the brick built pumping sumps that lie between the Beam Engine House and the Cooling Pond, here capped with steel covers (see Figure 3). The sides of the sumps were of brick, topped by a stone kerb. Post-

WEST SUSSEX ARCHÆOLOGY

hole 7 was c.0.25m square and 0.7m deep, while Post-hole 8 was 0.25m x 0.3m and 0.75m deep. The upper layer in both post-holes was again concrete, 0.15m thick, although in Post-hole 7 a second layer of concrete, 0.35m deep lay immediately under the first. Below this concrete was an orange-brown clay silt with frequent gravel and occasional CBM.

4. Post-hole 9 lay between the pumping sumps and the Beam Engine House, and was 0.25m in diameter and 0.75m deep. Below a 0.15m thick layer of concrete, a brick wall bonded in a concrete mortar was encountered, which lay on the western side of the post-hole and was partially cut into by it. To the east of this, and under the concrete surface, was the same layer of orange-brown clay silt encountered in Post-holes 7 & 8. The brick wall is probably one side of a culvert, possibly that appearing on a map of 1920 in approximately this location and labelled “new 33’ suction”. This would appear to be linked to the formation of a new suction chamber to the north-east of the earlier pumping sumps, possibly constructed at the same time as the Gas Engine House built in 1904.



Figure 5 The brick wall in the west face of Post-hole 9, looking south

5. Post-hole 10 lay against the south-east corner of the Beam Engine House and was c.0.3m in diameter and 0.6m deep. Below the modern concrete, here 0.15m thick, was again the orange-brown clay silt found in the three neighbouring post-holes to the west. The brick foundation to the Beam Engine House formed the eastern side of this post-hole, with a step, half a brick width wide, c.0.1m below the current surface.
6. Post-holes 11 & 12 lay to the east of the Boiler House, either side of the passageway that runs up its north-eastern side. Both post-holes were c.0.25m in diameter, the former being 0.7m deep and the latter 0.8m deep. Post-hole 11, on its western edge, cut into the brick footing for the corner pilaster of the Boiler House, which here extends 0.13m beyond the brickwork above. Away from the building the layers encountered were the same in both post-holes, with the existing stone setts lying upon a bedding layer of sand, over a 0.15m thick layer of concrete, which sat above a grey-brown clay silt containing frequent gravel.



Figure 6 Post-holes 11 & 12 either side of the passageway running north-west alongside the Boiler House

CONCLUSION

1. None of the twelve post-holes excavated penetrated to undisturbed geology, the deepest layer being a clay silt containing fragments of brick and/or tile suggestive of made-ground. Capping this across the site was varying thicknesses of modern concrete. Only Post-holes 1-6 and 9 revealed previously unknown features, with 1-6 containing a probable water pipe, and 9 cutting into a brick wall probably linked to a culvert running from the suction chamber immediately to the west of the Beam Engine House.

WEST SUSSEX ARCHÆOLOGY

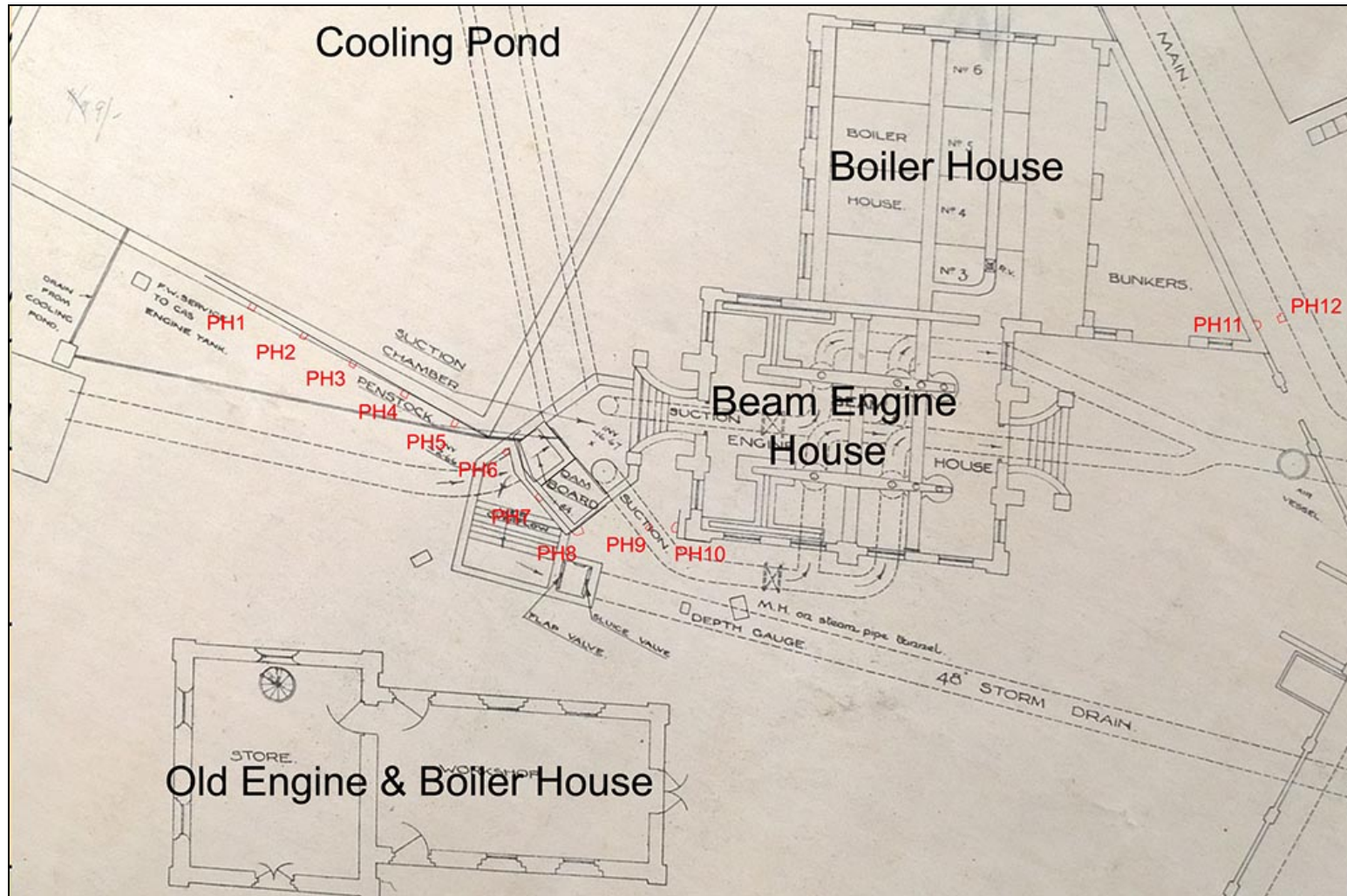


Figure 7 Extract from a plan dated 1928 showing the underground and overground layout of the pumping station, including the suction culvert under PH9 (courtesy of Debbie Scarrow, Portsmouth City Council, originals held in Portsmouth History Centre)

BIBLIOGRAPHY

West Sussex Archaeology Ltd 2021 ***Written Scheme of Investigation for a Programme of Archaeological Works at Eastney Sewage Pumping Station, 201-203 Henderson Road, Southsea, Hampshire***
Unpublished