



# HPS

Professional Archaeological Services



Royal Fort House Drains, Clifton, Bristol, BS8 1UH

---

**Author:** David Etheridge, BA, MPhil.

---

**Client:** University of Bristol

---

**Project:** Archaeological Watching Brief Report

---



Applicant Name / Agent: University of Bristol  
Project Site: Royal Fort House Drains, Clifton, Bristol, BS8 1UH  
NGR: NGR ST 5827 7338  
Document Type: Archaeological Watching Brief Report  
Issue ID: v1.0  
Date of Preparation: 19 November 2018  
Local Planning Authority: Bristol City Council  
Application Reference: N/A  
HPS Site Code: HPS-281  
Oasis ID: heritage10-327428  
OS Licence: 100048201

### **Disclaimer**

Whereas Heritage Planning Services Ltd (HPS) have taken all care to produce a comprehensive summary of the known and recorded archaeological and historical evidence, no responsibility can be accepted for any omissions of fact or opinion, however caused.

### **Copyright**

The copyright to the following text, drawings, graphics and photographs is, unless otherwise credited, the property of Heritage Planning Services Ltd. HPS hereby grants a licence to the client and their agent(s), to use this report for the purpose for which it was issued, after receipt of full payment.

### **Reproduction of maps**

Plans and maps based on Ordnance Survey Sheets are reproduced by permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved.

### **Heritage Planning Services Ltd**

53 Marshfield Road, Chippenham, Wiltshire, SN15 1JS

Sam Driscoll (m) 07825 550271 (e) [sam@heritageplan.co.uk](mailto:sam@heritageplan.co.uk)



## Contents

Non-Technical Summary .....	v
1. Introduction .....	1
Background.....	1
The Project Site and Study Area .....	3
2. Planning Policy.....	4
Aims .....	4
3. Methodology.....	4
4. Baseline Survey: The Archaeological Recording .....	5
The Recording .....	5
The Finds.....	11
5. Baseline Survey: Archaeological and Historical .....	12
Introduction.....	12
Statutory Constraints .....	12
Non-Statutory National Constraints .....	12
Non-Statutory Local Constraints .....	12
HER Events .....	12
Monuments.....	13
6. Historic Development of the Project Site .....	13
7. Summary.....	14
8. Conclusion .....	15
9. Bibliography .....	16

## List of Figures

Figure 1. Location of the Study Area (indicated in red).	1
Figure 2. Detail of the Study Area (outlined in red).	2
Figure 3. Location of the trench and principal features in relation to Royal Fort House.	9

## List of Photographs

Photo a. Location of the study area in relation to Royal Fort House (right), looking east.	3
Photo b. Surface of brick roof prior to removal, looking WSW. Scales 1m x 2.	5
Photo c. Vertical ceramic pipe in chamber, looking west.	5
Photo d. View of the chamber after excavation and removal of vertical pipe, looking west.	6
Photo e. Truncated section of walling in the south face of the trench, looking south. Scale 1m.	6
Photo f. Detail of the well access hatch.	6
Photo g. Interior of the well, looking down from the surface.	7
Photo h. North facing section of trench showing ash-filled cut into bedrock overlain by the remains of two culverts.	7



Photo i. Exterior of the well as exposed in the northern section of the trench, looking northeast.	7
Photo j. View of stone lined culvert in north facing section, looking east. Scale 1m.	8
Photo l. The eastern end of the trench, looking southeast, showing the western wall of the underground boiler room.	8
Photo k. Truncated brick-lined culvert in north facing section, looking southwest.	8



## Non-Technical Summary

In June 2018, Heritage Planning Services Ltd was commissioned by the University of Bristol (the client) to undertake archaeological recording otherwise known as a watching brief (WB) on a site adjacent to Royal Fort House Drains, Clifton, Bristol, BS8 1UH (the study area).

This project was generated due to the proximity of proposed drainage replacement to the Grade I listed Royal Fort House and the possibility that archaeological remains relating to the house or the Civil War fort might be present. Royal Fort House dates to c. 1760 and stands in Royal Fort Gardens, a public park owned by the University of Bristol, part of a 1799 landscape designed by Sir Humphrey Repton on the site of the Civil War fort. The gardens are on the register of local historic parks and gardens, while the whole garden lies within the Tyndall's Park Conservation Area.

Due to the depth of the excavated trench, which in places extended to c. 4 metres, recording was largely limited to written and photographic observations made at a safe distance from the side. The watching brief took place in the latter half of July 2018.

During the excavation a number of features were observed and recorded that were either contemporary with or pre-dated the present house. Chief amongst these were a well and a nearby cistern/cess pit. It is unlikely these features are later than the construction of the present house; they may have been extant earlier in the 18<sup>th</sup> century, when it is known a previous house stood nearby.

A limited number of unstratified artefacts were retrieved; these were commensurate with activity in the 19<sup>th</sup> century.

The watching brief was concluded once the entire length of broken drain pipe had been exposed and no further excavation was required.

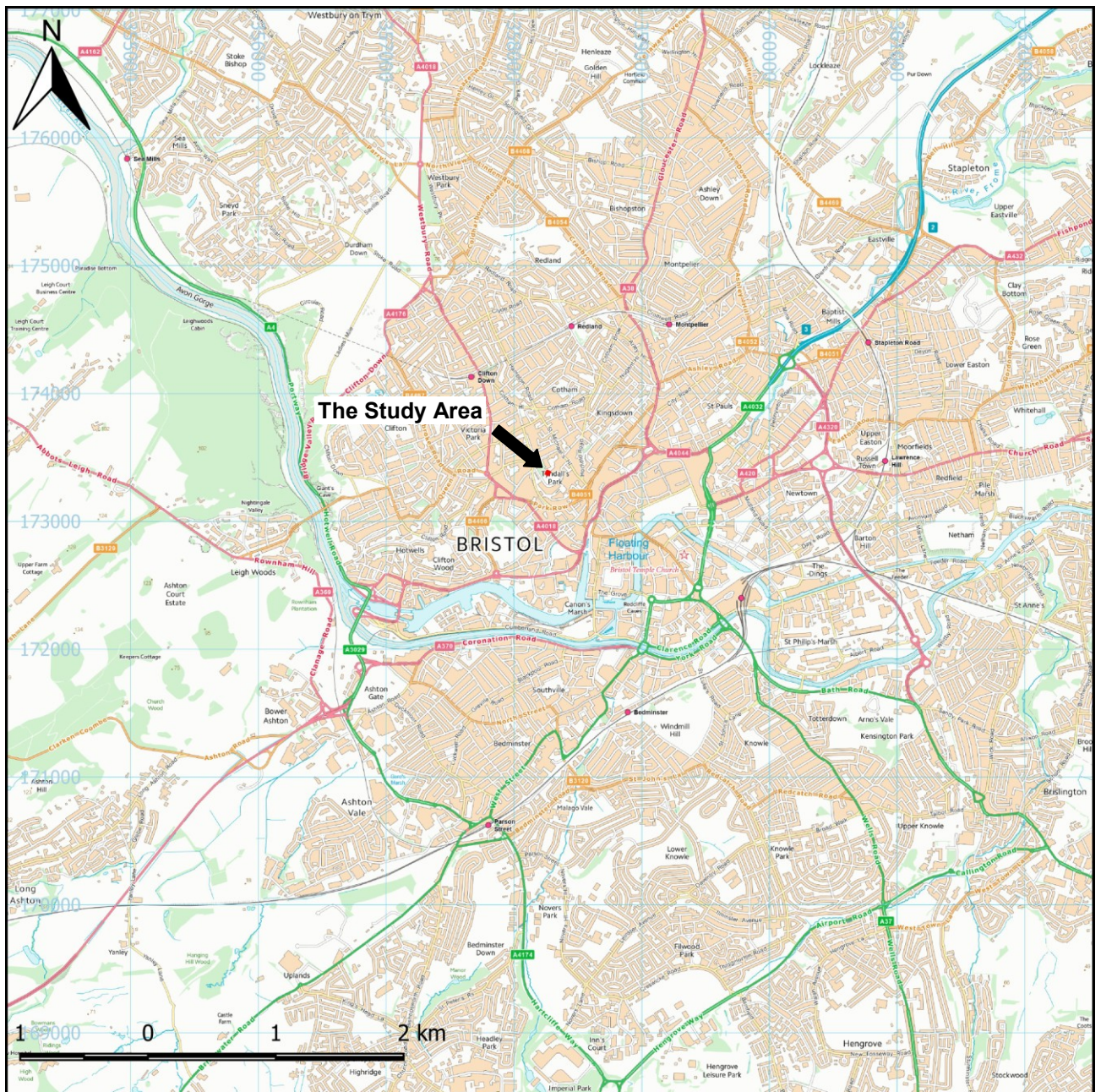


Figure 1. Location of the Study Area (indicated in red).

## 1. Introduction

### Background

- 1.1. In June 2018, Heritage Planning Services Ltd was commissioned by University of Bristol (the client) to undertake an archaeological recording exercise (watching brief) on land adjacent to Royal Fort House Drains, Clifton, Bristol, BS8 1UH, NGR ST 5827 7338 (hereafter referred to as the study area).
- 1.2. A section of foul water ceramic drain had collapsed at depth and required replacement, necessitating the excavation of a trench c. 6.8m long by 2.5m wide and approximately 4m deep, on a roughly ENE-WSW alignment. The width of the trench was constrained by the need to



maintain pedestrian access to other parts of the University whilst other construction work was ongoing. The watching brief was requested to monitor the excavations for buried archaeological deposits and record where necessary.

- 1.3. This work was undertaken following a request from Andy Robinson, University of Bristol, due to the possible historic implications of undertaking excavation close to a Grade I listed building within the grounds of a Civil War fort; there were no historic environment planning constraints upon the proposed works.

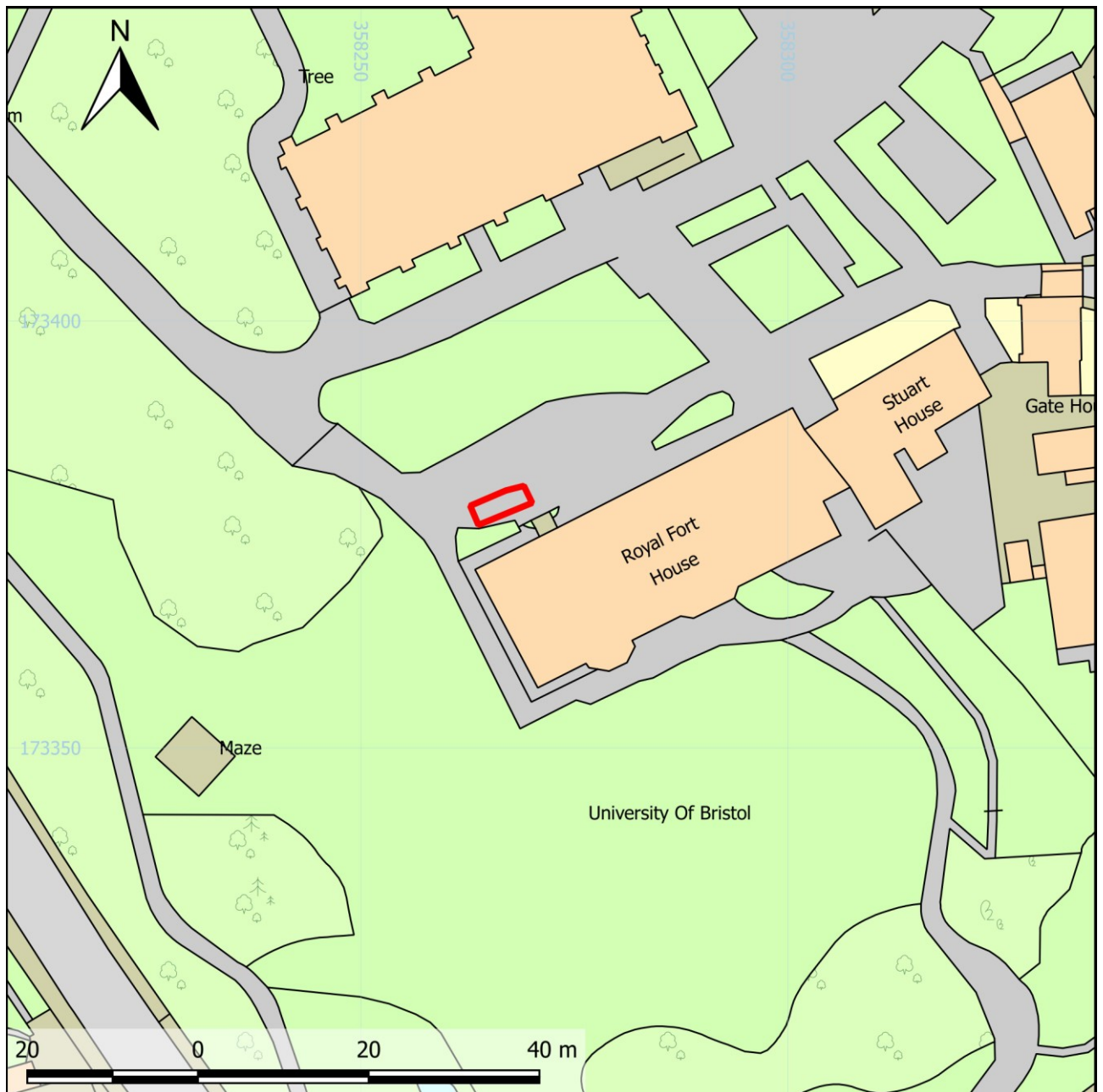


Figure 2. Detail of the Study Area (outlined in red).



- 1.4. This report has been compiled by David Etheridge BA, MPhil. under HPS project reference HPS-281.

### The Project Site and Study Area

- 1.5. The study area lies within the City of Bristol unitary authority, c. 700m northwest of the city centre. It is located on land to the north of Royal Fort House, which stands on a high point (c. 78.0m aOD) within Royal Fort Gardens, at NGR ST 5827 7338.



*Photo a. Location of the study area in relation to Royal Fort House (right), looking east.*

- 1.6. Royal Fort Gardens and Royal Fort House are owned and managed by the University of Bristol; the gardens are open to the general public. They stand within a parcel of land bounded to the west by Woodland Road and University Walk, leading to Tankards Close to the south and southeast, leading to Royal Fort Road and St Michael's Hill on the east, while to the north is Tyndall Avenue.
- 1.7. The study area comprised a single trench 6.80m ENE-WSW by 2.25m wide and up to c. 4.5m deep, encompassing in plan 16.23m<sup>2</sup>.
- 1.8. The underlying geology of the study area is sandstone of the Quartzitic Sandstone Formation, laid down in the Carboniferous period; no superficial deposits (drift) are recorded (BGS 2018).





## 2. Planning Policy

### Aims

2.1. The aim of this study is to:

- Identify and record cultural heritage assets within the affected part of the study area;
- Provide an assessment of the identified heritage assets considering their archaeological, historic, architectural and artistic interests;
- Define the potential for future development impact to the archaeological resource.

## 3. Methodology

3.1. This document has been prepared in accordance with the CIfA Standard and Guidance for archaeological watching briefs (revised Dec 2014), which states that *'An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant regulations of CIfA (CIfA 2014).*

3.2. All work was carried out in line with the following standards and guidance-

- *Standard and Guidance for an Archaeological Watching Brief.* The Chartered Institute for Archaeologists Guidance Document, University of Reading, Reading;
- *The Management of Archaeological Projects-2.* English Heritage, 1991

3.3. The aim was to produce a document that not only recorded the archaeological remains on the Project Site, but to also put these into their historical and archaeological context.

3.4. The primary repositories for information consulted comprised:

- Bristol Historic Environment Record;
- National Heritage List for England (NHLE);
- Geological Maps;
- Ordnance Survey maps of the site and its environs;
- Historical maps and documents held in the Bristol Record Office;



## 4. Baseline Survey: The Archaeological Recording

### The Recording

4.1. The site was attended by the author on the following dates: 9, 10, 11, 12, 16, 17 and 18<sup>th</sup> July 2018; Sam Driscoll of Heritage Plan Ltd attended site on the 13<sup>th</sup> July. The conditions were generally hot and sunny, with limited cloud cover and no precipitation. The study area lies in an area of surfaced path located on the north side of Royal Fort House, a Grade I listed country house, built c. 1760. The surrounding garden is not on the national register of Parks and Gardens, but is on the local list, and lies within the Tyndall's Park Conservation Area. Land north of the study area is reasonably level, but to the west it falls away sharply.



*Photo b. Surface of brick roof prior to removal, looking WSW. Scales 1m x 2.*

4.2. Excavation of the trench was hampered by the presence of a fibre optic cable junction above the line of the broken drain, it was then further complicated by the presence of substantial remains of an archaeological nature. Consequently the process of excavation was slow and undertaken in two phases, with the first section of trench backfilled before the remaining sections of the trench were fully excavated.



*Photo c. Vertical ceramic pipe in chamber, looking west.*

4.3. The original cutting measured approximately 4.54m long, by c. 2.45m wide, and was aligned roughly ENE by WSW. Excavation of this area commenced on 10<sup>th</sup> July and was discontinued on 13<sup>th</sup> July, when it was found the westernmost section of drain was unbroken. The westernmost 2m of the trench were backfilled with a layer of gravel and then concrete. Subsequently the trench was extended a further 2.26m eastward, until contact was made with a subterranean boiler room of reinforced concrete, a modern extension of the cellars beneath Royal Fort House. The broken section of drain was encountered at depth.



4.4. Excavation was undertaken by staff employed with Taylor Plant Ltd, using a tracked slew and a mini digger. Due to the depth of the excavation and the likely presence of raw sewage, it was considered unsafe to enter the trench below 1.2m depth.

4.5. In the western section of the trench, beneath a layer of general demolition rubble, a lime mortared brick surface was encountered at c. 900mm below present ground surface (see Photo b). This was broken through by machine and was found to be the roof of a rectangular stone-built subterranean chamber, c. 2.45m square, rendered internally. No obvious entrance to the chamber was observed; the roof appeared to be intact, except in the northwest corner, where the chamber had been truncated by the construction cut for an inspection chamber associated with the route of the broken drain. Although the interior of the inspection chamber appeared to have been constructed in the last 60 years, the exterior lining of mortared sandstone (see Photo d) indicated the presence of an earlier, probably later 19<sup>th</sup> century, inspection chamber.

4.6. The brick-roofed chamber had been further truncated by the laying of the ceramic drain. Rather than cut vertically through the chamber walls and roof, a hole had been made in the east and west side walls, implying the chamber was a void at the time the drain was laid. The truncation of the northwest corner by the construction of the access hatch had been used as an

opportunity to partially backfill the chamber with soil and rubble before laying the drain, which was then sealed by a further deposit of soil and rubble. A few remnant pennant flags suggested the original flooring of the chamber, but these appear to have been largely removed prior to the construction of the drain.



*Photo d. View of the chamber after excavation and removal of vertical pipe, looking west.*



*Photo e. Truncated section of walling in the south face of the trench, looking south. Scale 1m.*



*Photo f. Detail of the well access hatch.*



4.7. Towards the western end of the chamber, which lay slightly beyond the western edge of the trench, was a vertical ceramic drain pipe (see Photo c), the origins of which could not be determined; it is possible this represents drainage into the chamber. A further hole had been made in the wall near the southwest corner at or near original floor level, while another hole at a similar level had been made in the north wall. The exact purpose of these holes could not be ascertained, but it seems likely they were inserted to facilitate drainage out of an otherwise watertight structure that was no longer required for that purpose.



*Photo g. Interior of the well, looking down from the surface.*

4.8. The chamber predates the horizontal ceramic drain, which was almost certainly laid in the later 19<sup>th</sup> century. Construction techniques, in particular the use of white lime mortared hand-cut bricks in the roof, strongly suggest a date for construction in the 18<sup>th</sup> or early 19<sup>th</sup> century. Towards the outer edges of the roof stone corbels had been used instead of brick; in Bristol, stone corbelling of cellar roofs is a feature of the 17<sup>th</sup> and earlier 18<sup>th</sup> centuries. The internal rendered walls indicate it was intended for the retention of fluid, and it was noted the structure stands close to a known well.



*Photo i. Exterior of the well as exposed in the northern section of the trench, looking northeast.*

4.9. It seems reasonable to suggest the chamber was constructed as a cistern, which may have been manually filled from the well. The vertical ceramic drain pipe could represent a later outer lining for a hand pump shaft. Alternatively the chamber may have functioned as a cess pit/septic tank. It is possible the chamber was converted from the former to the latter, before it became redundant with the introduction of mains drainage. Since the alignment appears to reflect that of Royal Fort House, it seems reasonable to suppose its construction and use was contemporary with the house, which was built c. 1760. However, to the east of the trench stood an earlier house, shown on a map of 1746, but presumably demolished by 1760. It is also possible



*Photo h. North facing section of trench showing ash-filled cut into bedrock overlain by the remains of two culverts.*



this chamber was originally built to serve the earlier house. Unfortunately no stratified artefactual dating was retrieved to confirm the date of construction for the chamber.

4.10. Excavations within the chamber ceased when it was determined the drain had been found and the exposed section was intact. This section of the trench was then backfilled as described above, before excavation to the east was continued.



*Photo j. View of stone lined culvert in north facing section, looking east. Scale 1m.*

4.11. Immediately east of the eastern wall of the chamber, a short section of truncated walling (see Photo e) was exposed in the north facing section of the trench. A length of approximately 1m of walling was exposed, with only the northern face visible in the trench section. The alignment appeared to be similar to that of the cistern, which was slightly more to the southwest of the trench alignment. The wall was constructed of roughly hewn blocks of sandstone, of varying sizes, surviving in up to three irregular courses. No bonding material was observed.



*Photo i. Truncated brick-lined culvert in north facing section, looking southwest.*

4.12. This section of walling did not appear to be connected to any of the other features observed within the trench. Although physically higher than the chamber, the stratigraphic relationship between the two had been truncated by the insertion of a fibre optic cable duct. It is possible the wall was earlier and had been truncated by construction of the chamber. No dating evidence was found in relation to the wall, but the construction techniques employed suggest it is unlikely to be later than the later 19<sup>th</sup> century.



*Photo k. The eastern end of the trench, looking southeast, showing the western wall of the underground boiler room.*

4.13. In the northeast corner of the original length of the trench a well is located. This well is known and has been sealed by a cast iron access hatch (see Photo f). Below the hatch and concrete cover is a stone lined well of significant depth, with water at the base (see Photo g). The southern side of



this well lining was exposed in the trench during the extension of the trench eastward (see Photo i).

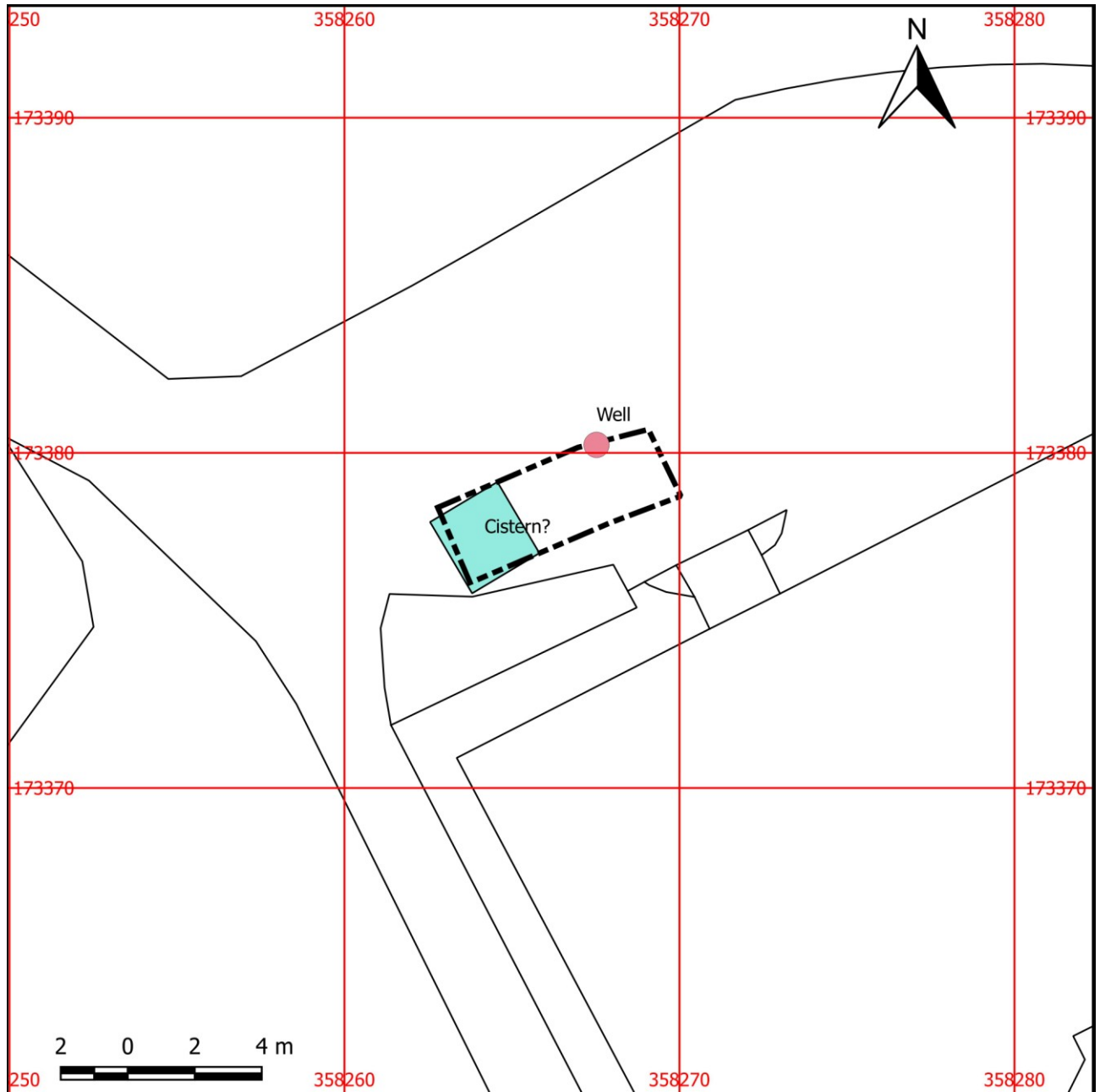


Figure 3. Location of the trench and principal features in relation to Royal Fort House. Survey courtesy of Nick Hannon, UoB Dept. of Anthropology & Archaeology.

4.14. For a short stretch east of the chamber the sandstone bedrock was encountered at c. 3.5m depth. However, this rapidly gave way to a loose grey ashen looking fill, indicating the stone had been quarried away at depth (Photo h). In the southern section of the trench, east of the chamber, the truncated remains of a stone-lined culvert on a roughly E-W alignment sealed the backfilled quarry pit (Photo j). The roof of the culvert was located c. 700mm below present ground surface. This culvert extended eastward for about 750mm, where it was intersected by a lime-mortared brick-built culvert with sandstone roof, on a roughly north-south alignment (Photo k). This was sealed



by a layer of soil and rubble, that was in turn sealed by a rough surface of sandstone slabs c. 350mm below present ground surface.

4.15. The fill of the quarry pit extended as far as the eastern end of the trench, where it was truncated by the construction cut for the concrete underground boiler room (Photo I).



## The Finds

- 4.16. Due to the nature of the excavation, finds were limited to those that could be safely retrieved from the surface of the machine bucket. They are therefore limited in number and unstratified.
- 4.17. The unstratified finds consisted of: two rim sherds of Somerset Red Ware type, possibly from the same vessel; two fragments of clay tobacco pipe, one a section of pipe stem and the other the base of a bowl with stiletto heel rest; one fragment of oyster shell; one ungulate molar. All of these finds are commensurate with a 19<sup>th</sup> century date.





## 5. Baseline Survey: Archaeological and Historical

### Introduction

- 5.1. The information presented here is derived from sources including the Bristol Historic Environment Record, the Historic England National Monuments Record database (PastScape), the National Heritage List for England (NHLE), the Historic England Archive, and surviving cartographic resources, along with other published or documentary sources.
- 5.2. Trawls of the National Heritage List for England, Magic.gov.uk, PastScape, the Historic England Archive and the Bristol HER have revealed the following:

### Statutory Constraints

#### **Listed Buildings and Conservation Areas**

- 5.3. Royal Fort House, adjacent, is a Grade I listed 18<sup>th</sup> century house, built c. 1760 (List Entry 901-1/10/304). The adjacent Stuart House is Grade II listed (List Entry 901-1/10/305). The study area lies within the Tyndall's Park Conservation Area.

#### **Scheduled Ancient Monuments and other Heritage Statutory Constraints**

- 5.4. There are no scheduled ancient monuments within or adjacent to the study area. The nearest Scheduled Ancient Monuments are the Civil War Defences on Brandon Hill (ListEntry 1006989), c. 520m to the SSW.

### Non-Statutory National Constraints

- 5.5. The nearest registered park and garden is Grade II\* listed grounds of Goldney House (ListEntry 10004444), c. 950m southwest of the study area.

### Non-Statutory Local Constraints

- 5.6. Royal Fort Garden is on the local register of parks and gardens.

### HER Events

- 5.7. There has been previous archaeological work in the vicinity of Royal Fort House. In 1985 two lime mortared walls were observed during the excavation of a cable trench leading to the northwest corner of Royal Fort House (BHER 3174), i.e. the approximate location of the present study area.



- 5.8. In 2001 archaeological excavation was undertaken on a site north of Royal Fort House, prior to proposed landscaping of the area; the excavation identified walls that could relate to the earlier house, thought to have been demolished c. 1760 (BHER 3781).
- 5.9. In 2007 archaeological monitoring of resurfacing works outside Royal Fort House was undertaken; no results were reported (BHER 4411).

### **Monuments**

- 5.10. There are three Bristol HER monuments associated with Royal Fort House. The primary monument of note is 1034M, the Grade I listed Royal Fort House, designed by Bridges, Gay and Paty for Thomas Tyndall near the site of an earlier house. Royal Fort House was commissioned in the 1750s and complete by 1760. The garden is believed to have been created for Thomas Tyndall in 1799 by Sir Humphrey Repton (Bristol local register of Parks and Gardens).
- 5.11. To the east of Royal Fort House stands Stuart House, a Grade II listed building (BHER 508M).
- 5.12. Royal Fort House and Gardens are thought to stand on the site of a Civil War fort constructed c. 1643, captured by the Royalists in that year and subsequently strengthened significantly; it was recaptured by Parliament during the siege of Bristol in 1645 and thought to have been largely demolished c. 1655 (BHER 928M).

## **6. Historic Development of the Project Site**

- 6.1. The study area currently lies within the historic bounds of the City of Bristol within the ancient parish of St Michael. The earliest detailed map to show this part of the city is the Rocque plan of 1746, available on Bristol Know Your Place). This shows what appears to be a single house on a NNW-SSE alignment, located approximately in the space between where now stands the present Royal Fort House and the University of Bristol Physics Building. Much of the surrounding lands appear to be formal gardens and orchards/allotments.
- 6.2. Ashmead and Plumley's plan of 1828 shows the present Royal Fort House and structures on the site of Stuart House, but the former house had been removed; the formal gardens and orchards/allotments had been replaced by parkland.
- 6.3. Ashmead's plans of 1874 were used in the field for the construction of the Bristol sewer network in the last quarter of the 19<sup>th</sup> century. The proposed route of sewer pipes connected to Royal Fort House are shown; this appears to include the route of the pipe exposed during this excavation.



6.4. The site had been acquired by the University of Bristol before 1927, by which date the Physics Building had been constructed.

## 7. Summary

- 7.1. Archaeological monitoring and recording in Royal Fort Garden, adjacent to Royal Fort House, Tyndall's Park, Bristol, was undertaken during deep excavation to locate and repair a broken ceramic sewer pipe. This exercise has identified a previously unrecorded subterranean masonry structure, which was most likely constructed as a cistern in the 18<sup>th</sup> century. A short section of walling from an unidentified structure, two culverts, and a paved surface, were also recorded. A record was also made of an adjacent well that could also have been of 18<sup>th</sup> century date.
- 7.2. Nothing recorded could be firmly tied to the records of a Civil War fort at approximately this location, or to the 17<sup>th</sup> century or earlier periods.
- 7.3. Artefacts retrieved from the spoil are commensurate with a 19<sup>th</sup> century date of deposition; they probably relate to the laying of the ceramic sewer pipe in the later 19<sup>th</sup> century.



## **8. Conclusion**

- 8.1. Nothing exposed in this exercise appears to be earlier than the 18<sup>th</sup> century. There is the possibility that the well and cistern date to the earlier 18<sup>th</sup> century, therefore pre-dating the present Royal Fort House dated c. 1760. It is known that an earlier house stood nearby in 1746.
- 8.2. Although nothing that could definitely be dated to the Civil War period was identified, this exercise has demonstrated the potential for substantial archaeological remains to be preserved relatively close to the surface and at significant depth, in the vicinity of Royal Fort House.



## 9. Bibliography

BGS. 2018. "Geology of Britain Viewer." British Geological Survey.  
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.

CIfA. 2014. *Standard and Guidance for an Archaeological Watching Brief*. Reading: Chartered Institute for Archaeologists.



Heritage Planning Services Ltd  
53 Marshfield Road, Chippenham, Wiltshire, SN15 1JS  
T: 07825 550271 E: [info@heritageplan.co.uk](mailto:info@heritageplan.co.uk) [www.heritageplan.co.uk](http://www.heritageplan.co.uk)

Registered in England No: 09583997 VAT Registration No: 216388107