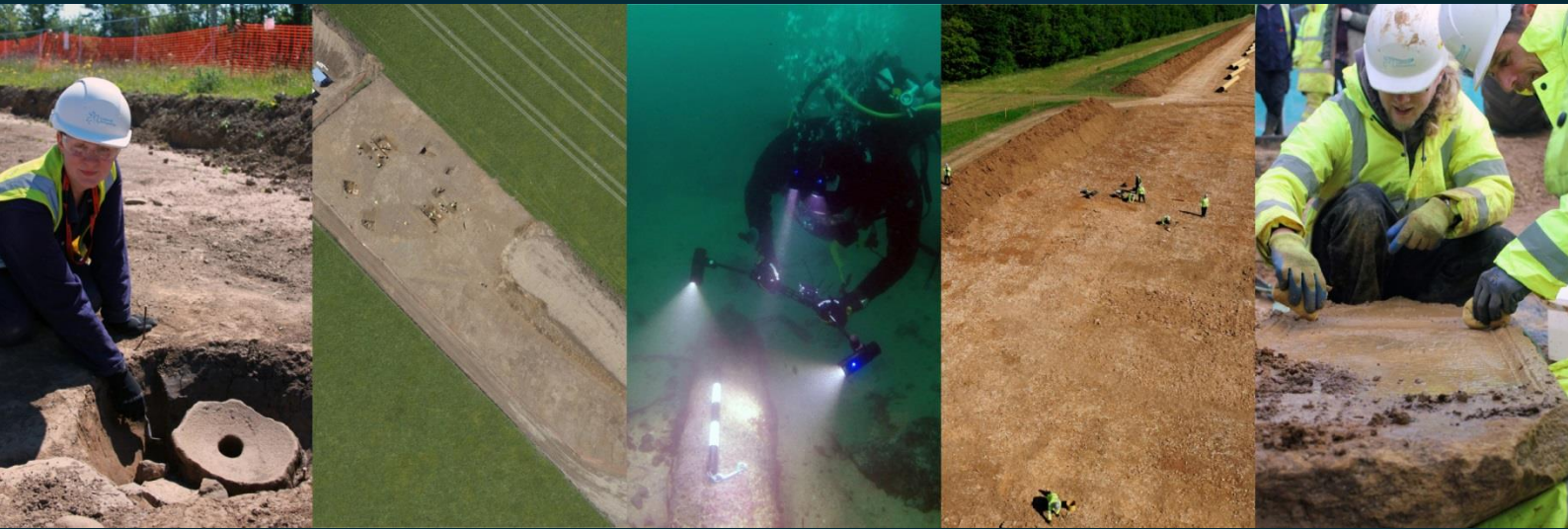


Redcliffe Wharf Redcliffe Way Bristol

Archaeological Watching Brief



for
Complex Development Projects Ltd and
Generator (Redcliffe Wharf) Ltd

CA Project: 6624
CA Report: 18289
OASIS ID: 318311

May 2018



Redcliffe Wharf
Redcliffe Way
Bristol

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SUMMARY

Project Name:	Redcliffe Wharf
Location:	Redcliffe Way, Bristol
NGR:	358980 172370
Type:	Watching Brief
Date:	14–25 May 2018
Location of Archive:	To be deposited with Bristol's Museums Galleries and Archives
Site Code:	REW 18

An archaeological watching brief was undertaken by Cotswold Archaeology during Site Investigation works at Redcliffe Wharf, Redcliffe Way, Bristol.

The watching brief identified several walls and surfaces associated with 17th and 18th-century glass and pottery production at the site, as noted during previous phases of archaeological evaluation of the site.



1. INTRODUCTION

- 1.1 In May 2018 Cotswold Archaeology (CA) carried out an archaeological watching brief for Complex Development Projects Ltd and Generator (Redcliffe Wharf) Ltd at Redcliffe Wharf, Redcliffe Way, Bristol (centred at NGR: 358980 172370; Fig. 1). The watching brief was undertaken on Site Investigation works associated with a planning application, submitted to Bristol City Council (BCC planning ref. 17/02049/F) in 2017, for a mixed use development comprising a new office headquarters for Arup, 36 apartments, ground floor restaurant/bar premises and workshop space with concealed limited car parking as well as extensive public realm space and new berths for six boats and a ferry landing.
- 1.2 The scope and methodology for the watching brief were established following consultation with Peter Insole, the Principal Historic Environment Officer and archaeological advisor to BCC. The fieldwork also followed *Standard and guidance: Archaeological watching brief* (CIfA 2014).

The site

- 1.3 The proposed development area is approximately 0.67ha and lies on the southern side of the Floating Harbour adjacent to the bascule bridge, which spans the harbour from Redcliffe Way to The Grove. The site is defined on the south by Redcliffe Caves and the high ground of Triassic sandstone upon which sit the buildings of Redcliffe Way and St Mary Redcliffe church. Redcliff Hill runs past the site to the east. Redcliffe Way and the approach to the bascule bridge lies to the north. The site extends to a small inlet (formerly the southern end of Grove Ferry located at the point where the cliff face turns south).
- 1.4 The underlying bedrock geology of the area is mapped as Redcliffe Sandstone Member, sandstone of the Triassic Period, with overlying superficial Tidal Flat Deposits, clay and silt (BGS 2018).

2. ARCHAEOLOGICAL BACKGROUND

- 2.1 Several archaeological desk-based assessments have been carried out, the first considered the site as part of an overall assessment of the Redcliffe Way corridor (Leech, 2001). A further assessment was then carried out concerning the proposed

development area itself (CA 2005a) and subsequently, a programme of archaeological evaluation was undertaken (CA 2005b) following on from earlier investigations by Bristol Museum (Ponsford et al 1989). A supplementary desk-based assessment was then carried out to specifically examine additional graphic and photographic evidence (Leech 2006). The site has since been the subject of further phases of archaeological evaluation (CA 2007 and CA 2017). The following is a summary of the site's archaeological potential taken from these and additional sources.

- 2.2 The potential for early medieval occupation of the site has yet to be established. The 2005 evaluation indicated that there are deep deposits (up to 5m) of 17th and 18th-century dumped materials, incorporating important industrial waste. The evidence for the Triassic sandstone cliff, in the form of reworked sandstone within the alluvial sequence, and the absence of defined humic horizons, might suggest that there was not the succession of reclaimed waterfronts that has been recognised to the north on other sites. The relationship with Pile Street, which ran to the site from the east and appears to have been an important medieval route, has yet to be clarified.
- 2.3 By AD 1190 the hospital of St John the Baptist had been founded on the eastern edge of the site. Dr Leech in his study of the Redcliffe Way corridor considered whether the hospital lay to the south-east or north-east of Redcliffe Wharf, and favoured the latter location, defined by 'Jones Lane' (St John's Lane). This route survived until the 1930s when it was removed with the construction of Redcliffe Way. At the southern end of the site, cut into the cliff, is the site of a 14th-century hermitage. It is protected as a Scheduled Monument (SM No. 103).
- 2.4 Following the Dissolution of religious houses in the 1530s the hospital and its lands were granted to a Dr Owen. Not included in this grant was a garden known in the early 17th century as Redrock Garden. In 1666 it was conveyed to the Society of Friends for use as a burial ground. At this time at least part of the wharf itself seems to have been used as a carpenter's yard.
- 2.5 Millerd's plan of c.1710 shows a small glasshouse toward the south-west corner of the site. It is likely that an early glasshouse had been established here shortly after 1673, possibly Bristol's first glasshouse. It is also possible that it was, in part at least, a timber building given the lack of brick and stone-built 'glass-cone' structure, unlike the other six glasshouses shown on Millerd's map (Weeden 1983, 243).

Possible owners have been cited as John Lowden (after c. 1673) and Thomas Ewens (c. 1700 onwards; Leech 2006). By the time of Rocque's plan of 1742 a new circular glass cone appears to have been constructed in the centre of the site. From 1767, the premises were leased to Longman and Vigor, and then in 1776 to Vigor and Stevens, glassmakers, who also became proprietors of the contemporary late 18th-century Portwall Lane glassworks. These premises were formerly of Richard and Thomas Franks, potters, and were sub-leased by Vigor and Stevens in 1784 to an earthenware dealer, John Curtis. Robert Vigor died in 1782, although in 1794 the Redcliffe Wharf (then known as Redcliff Back) glassworks of Vigor, Stevens and Hill was listed in Matthew's Directory as producing 'flint or white glass.....every Tuesday, Wednesday and Thursday', suggesting it produced bottles (Jackson 2010, 16). Vigor and Stevens were among the leaders in trade of glass to America at the time, and were the glass producers favoured by Frederick Rhinelander, a New York merchant who specialised in the importation of glass and ceramics (Witt et al 1984). He compared the quality of the Bristol glass favourably to that from Liverpool (*ibid*). Records of Rhinelander's orders and invoices, held in the archives of the New York Historical Society, show that by the 1770s and 1780s the Redcliffe Wharf glassmakers were sending shipments of wine and spirits glasses and decanters to New York. Rhinelander's detailed orders even contain hand-drawn sketches and descriptions of the particular shapes he wanted for some of the glasses and decanters (*ibid*, 85, plates 43 & 44).

- 2.6 By the very late 18th-century the company that owned the Redcliff Back and Portwall Lane glassworks was in financial difficulties, possibly brought on by the trade disruptions resulting from England's war with France, coupled with the perhaps unwise investment in a new glass-cone at Portwall Lane in 1785 (*idem.*). The Redcliff Back glassworks finally closed in 1802, after their amalgamation with Ricketts and Co. (Leech 2006).
- 2.7 Following the closure of the glassworks and pottery, the site seems to have been used for warehousing, presumably associated with its continuing use as an area for loading, unloading and storage with ships moored at the adjacent quay. Most recently it was used as a depot for the City Engineer's department.
- 2.8 The 2005 evaluation interpreted remains of a conical structure in the centre of the site as the base of the glass-cone depicted on Rocque's map of 1742, which

appeared to survive largely intact, along with several contemporary flagstone floors, walls and drains.

- 2.9 The 2007 evaluation identified evidence for land reclamation from at least the 18th century onward, and several wharf walls pre-dating the existing waterfront. Further evidence of the 18th-century glassworks was uncovered in the northern and eastern areas of the site including brick floors and flues supplementing evidence from the previous evaluation. The plan form, and some floor surfaces, of a 19th-century warehouse and Counting House, and part of a residential dwelling were recorded, with good correspondence to maps and plans from 1828 and the rest of the 19th century. These structures had been extensively robbed in the 20th century.
- 2.10 The 2016 evaluation recorded structures and surfaces associated with both the late 17th century and 18th-century glassworks. A slipway identified at the south-west corner of the site may have also been associated with the later glassworks. Deposits of mixed clay and glass waste at the west of the site were interpreted as evidence of post-medieval land reclamation along the bank of the River Avon.
- 2.11 Re-exposure of the north-western arc of the glasscone base, first seen in the 2005 CA evaluation, during the later 2016 investigation suggested a diameter of only 9m for the cone, which seemed at odds with both the expected size of such structures (c. 16-18m) and contemporary maps and illustrations which appear to depict a more substantial structure. Just prior to the current works a visit was made by Simon Cox, CA, to Bristol Museum to inspect the archive of an unpublished 1989 investigation by the field archaeology section of Bristol Museum, which purports to have found part of the glasscone (the SE part of the arc). Although no accurate location plan of the single 16m by 2m trench dug was evident, it was possible to locate the excavation with reasonable confidence using the photographic record, sketch plan and description by the excavator, Bruce Williams, which suggested a slight overlap with the NE corner of CA's 2005 evaluation Trench 17 (both trenches appear to have recorded the same curving stone-built drain). Re-projection of the cone diameter based on this information gives a more realistic diameter of 16m for the cone.



3. AIMS AND OBJECTIVES

3.1 The objectives of the archaeological works were:

- to monitor groundworks, and to identify, investigate and record all significant buried archaeological deposits revealed on the site during the course of the development groundworks;
- at the conclusion of the project, to produce an integrated archive for the project work and a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data.

4. METHODOLOGY

4.1 An archaeologist was present during intrusive groundworks comprising the excavation of 10 borehole inspection chambers (BH 1-10), nine geotechnical test pits (TP 1-9) and eight hand dug test pits (HDTP 1-7 and 10). Two hand dug test pits (HDTPs 8 and 9) were not excavated due to the instability of nearby structures (Fig. 2). BHs 1 and 2 measured 0.3m by 0.3m and BHs 3-10 measured 1.6m by 1.6m; all were excavated to a depth of 1.2m below present ground level (bpgl) to ensure no services were present, with an archaeologist present to identify areas where the boreholes could be located that would not adversely affect archaeological structures or surfaces. TPs 1, 2, 4 and 5 were 3m long and 0.6m wide, while TPs 3 and 6–9 were 3m long and 1.6m wide; all were excavated to a depth of 4m bpgl. Hand dug test pits measured 0.5m by 0.5m and were excavated to the depth of the foundations of adjacent standing structures.

4.2 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*.

4.3 The archive and artefacts from the evaluation are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Bristol's Museums Galleries and Archives, along with the site archive. A summary of information from this project, set out within Appendix C, will be entered onto the OASIS online database of archaeological projects in Britain.

5. RESULTS (FIGS 2–9)

- 5.1 The natural geological substrate, consisting of red sandstone, was only revealed in BHs 5 and 6 and in TP 3 and 9. In all other interventions the earliest deposits encountered were alluvial clay silts or post-medieval made ground deposits. At the west of the site, nearest to the River Avon, several of these made ground layers, notably 41005, 45004 and 46005, contained large amounts of pottery and glass waste and may represent dumped deposits of waste material associated with land reclamation along the banks of the Avon. Deposit 46005 contained material of late 17th to 18th-century date, including vitrified material almost certainly from glass or pottery kilns, whilst 41005 and 45004 contained slightly later 18th to 19th-century material.
- 5.2 At the south of the site wall 37002 was recorded on a north-east/south-west alignment (Figs 2 & 4). No walls on a similar alignment have been recorded at this part of the site, so the dating of the wall remains unclear, although given its location it is possible that it may relate to the late 17th-century glassworks shown on Millerd's 1710 map. Small areas of mortar bedding for potential surfaces were identified to the immediate north-west and south-east of the wall, but did not extend far in either direction.
- 5.3 North-east/south-west aligned stone-built walls 30002 (BH 10; Fig. 6), 34004 (BH 4; Fig. 3) and 47002 (TP 7; Fig. 8) were identified at the northern part of the site and were associated with the 18th-century glassworks buildings seen in previous phases of archaeological evaluation (Fig. 2).
- 5.4 Wall 47002 was previously recorded in Trench 1 as wall 1080, where it was interpreted as possibly part of the glassworks, although it was also suggested that it may have been a boundary wall. Wall 30002 was previously recorded in Trench 19 (Wall 19024) and was thought to form part of a small irregularly shaped building footprint, although its function was unclear.
- 5.5 Cobbled surface 48004 (Fig. 9) in TP 8 was probably a continuation of a similar surface exposed in evaluation Trench 19 (19046) and thought to be associated with the glassworks cone.

- 5.6 North-west/south-east aligned wall 39008 (BH 9; Fig. 5) was identified in BH 9, with associated cobbled surface 39005 to its south-west. There was no surface to the north-east of the wall, although this area was heavily truncated by a modern electrical service trench. Two north-east/south-west aligned beam slots (39004 and 39007), 0.2m apart and each 0.4m wide, were cut into the surface, extending south-west from wall 39008. The wall was not recorded in Trench 17 to the north-west.
- 5.7 The surface of a slipway, previously recorded in Trench 18, was identified in BH 1 and BH 6 and in TP 1. A sondage through the slipway surface in TP 1 revealed it to be 0.15m thick and was constructed from compressed glass waste. The slipway was interpreted as being associated with the later glassworks buildings.
- 5.9 Large waste pit 45003 in TP5 was cut through the land reclamation deposits in this part of the site. The pit contained two fills, both of which contained large amounts of 18th to 19th-century pottery and tobacco pipe stems, but a notable lack of glass waste, which may indicate that it post-dated the glassworks.

6. THE FINDS

Artefactual material

- 6.1 Artefactual material relating to the post-medieval/early modern periods period was recorded from 14 deposits (Appendix B). The majority of material relates to pottery and glass manufacture previously evidenced at this location. The waster material and kiln furniture (below) almost certainly relates to the operation of the 'pot house' established on Redcliff Back by James Margerum by 1705 and under the ownership of the Franks family by 1707 (Jackson 2005b). Production of tin-glazed earthenwares, and later, of stonewares is known have continued at the site until 1776 (Jackson and Price 1982). Codes used for the recording of the post-medieval and later pottery from the site, and in parenthesis below in the report text, match those of the Bristol pottery type series (summarised in Jarrett 2013).

Pottery

- 6.2 A total of 110 sherds (1423g), all dating to the post-medieval and early modern periods was recorded from nine deposits (Appendix B). The large majority (81

sherds) consists of waster sherds ('biscuit-fired') of tin-glazed earthenware (BPT 99), almost certainly representative of the 18th-century pottery production attested at the site (CA 2005b and CA 2017). A smaller quantity (eight sherds) of non-waster sherds in this type, retaining their white-coloured glaze, were also recorded. All among this group was well-fragmented and a proportion heavily concreted with kiln debris. The few rim or other featured sherds (mainly from deposit 46005), are identifiable as coming from shallow bowls, drug pots and plates, consistent with dating across the late 17th and earlier or mid-18th centuries.

- 6.4 The remainder of the post-medieval/modern pottery comprises small quantities of glazed or unglazed earthenwares, stoneware and 'refined' whitewares. A small group of stonewares (BPT 200) from deposit 45004 might feasibly represent products from the mid/late 18th-century pottery at the site, although none are wasters. Quantities of unglazed earthenwares and a whiteware 'shell-edged' plate from deposits 41005-6, 45008 and 49002 date no earlier than the late 18th century.

Kiln Furniture

- 6.5 Kiln furniture and other material thought to be associated with pottery manufacture (see above) was recorded from eight deposits (Appendix B). In addition fragments of brick and stone from deposit 34002 and 46005, which have clearly been exposed to intense heat, and a quantity of vitreous material derives either from kiln or glass furnace structures.
- 6.6 Kiln furniture, most made in a heavily-sanded yellowish or buff-firing fabric, amounts to 31 fragments (1832g), with most coming from deposits 34003 and 46005. The majority (19 fragments) are derived from saggars - larger containers in which the kiln product was placed. These include thick-walled cylindrical or narrowing/splayed-base forms and vessels with crudely, triangular or U-shaped 'cut-outs'. The latter type is also characterised by a thick, clear or greenish lead glaze. Both forms compare to examples described from previous excavations at the site (CA 2017), and from the 18th-century tin-glazed earthenware production site at Norfolk House, Lambeth (Bloice 1971, Fig.52).
- 6.7 Other kiln furniture classes represented include tile-like 'shelf' fragments, recorded from deposit 46005, and discs from deposit 34003. The shelf fragments measure c. 15mm in thickness (none preserve other dimensions) and occur in the same yellow-fired fabric described for the saggars. The discoid pieces occur in a very heavily

sanded and hard fabric. They appear to be of a type not previously recognised from the site, though which compare to a class seen at the Norfolk House, Lambeth kilns (ibid. 138, fig. 60).

Ceramic Building Material (CBM)

- 6.8 A small number of pan tile fragments (5 fragments, weighing 611g) were recorded, which are representative a class of roofing in use across the late 17th to 19th centuries. The brick, previously described as likely coming from an 'industrial' structure, measures 2½" Th. x 4¼" W., the dimensions suggesting it dates in the 18th or 19th centuries range.

Other finds

- 6.9 A total of 22 fragments (116g) of clay tobacco pipe was recovered, including two bowls sufficiently complete for classification using Oswald's (1976) simplified typology. Both bowls (from deposits 45004 and 45008) are large, plain forms without spur or foot and closest to Oswald's Types 27-28. Dating within the mid/late 18th century is suggested based on Oswald's typology.
- 6.15 Quantities of glass (four fragments, weighing 83g) comprise mainly wine/spirits bottles fragments expected to date across the late 17th to 19th centuries. The single 'featured' fragment is the neck and rim portion from a bottle, which was recorded from deposit 46002. The 'string' rim and short neck in this instance suggests a date in the late 17th or early 18th century. In addition to the vessel glass, there are small quantities of glass waste (214g) which relate to the known manufacturing from the area.



7. DISCUSSION

- 7.1 The watching brief identified a number of structures and surfaces associated with the known glassworks buildings at Redcliffe Wharf, a number of which had been recorded during previous investigations.
- 7.2 TP 8 was located along the projected alignment of the later glass cone, assuming a c.16m diameter for the cone. There was no evidence of the cone wall within the test pit, although the exposed cobbled surface was similar to that found surrounding the exterior of the cone in Trench 19. This could indicate that the cone measured less than 16m in diameter, although the projected location of the southern part of the cone from the 1989 trench is only approximate (see *Archaeological Background* above).
- 7.3 The excavation of deep geotechnical pits allowed investigation of deposits below those associated with the glassworks. These revealed a large volume of dumped material deposited as part of land reclamation activity, containing waste from nearby glass and pottery manufacture.

8. CA PROJECT TEAM

Fieldwork was undertaken by Christopher Leonard. The report was written by Christopher Leonard. The finds reports were written by Ed McSloy. The illustrations were prepared by Charlotte Patman. The archive has been compiled and prepared for deposition by Hazel O'Neill. The project was managed for CA by Simon Cox.

9. REFERENCES

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APPENDIX A: CONTEXT DESCRIPTIONS

Trench	Context	Fill of	Interpretation	Description	L (m)	W (m)	D (m)	Spot date
BH 1	31000		Surface	Extant ground surface	0.3	0.3	0.15	
BH 1	31001		Made ground	Dark brown grey sandy silt. Frequent modern stone and CBM rubble, mortar and ash. Metal, glass and plastic objects.	0.3	0.3	0.95	
BH 1	31002		Made ground	Red sandstone	0.3	0.3	>0.1	
BH 2	32000		Surface	Same as 31000	0.3	0.3	0.15	
BH 2	32001		Made ground	Same as 31001	0.3	0.3	>1.1	
BH 3	33000		Surface	Same as 31000	1.6	1.6	0.15	
BH 3	33001		Made ground	Same as 31001	1.6	1.6	0.45	
BH 3	33002		Made ground	Mixed interleaved mortar, ash, charcoal and sand	1.6	1.6	0.86	
BH 4	34000		Surface	Same as 31000	1.6	1.6	0.13	
BH 4	34001		Made ground	Same as 31001	1.6	1.6	0.56	
BH 4	34002		Deposit	Brick and mortar rubble	1.6	1.6	0.5	
BH 4	34003		Made ground	Mid pink orange clay sand	1.6	1.6	0.12	
BH 4	34004		Wall	NE/SW aligned stone wall	>1.6	>0.15	>0.1	
BH 5	35000		Surface	Concrete slab	0.6	0.6	0.1	
BH 5	35001		Made ground	Same as 31001	0.6	0.6	0.7	
BH 5	35002		Natural	Red sandstone	0.6	0.6		
BH 6	36000		Surface	Same as 31000	1.6	0.8	0.13	
BH 6	36001		Made ground	Same as 31001	1.6	0.8	0.51	
BH 6	36002		Slipway surface	Compacted glass waste	1.6	0.8	0.15	
BH 6	36003		Natural	Red sandstone	1.6	0.8		
BH 7	37000		Surface	Same as 31000	1.6	1.6	0.15	
BH 7	37001		Made ground	Same as 31001	1.6	1.6	0.46	
BH 7	37002		Wall	NE/SW aligned stone wall	>1.65	0.63	0.05	
BH 7	37003		Construction cut	Cut for wall 37002. Unexcavated	>1.65	0.88		
BH 7	37004	37003	Backfill	Mid yellow brown sandy silt. Frequent small stones	>1.65	0.88		
BH 7	37005		Floor bedding	Yellow mortar surface bedding	0.7	0.35		
BH 7	37006		Floor bedding	Grey mortar surface bedding	0.8	0.3		
BH 8	38000		Surface	Same as 31000	1.6	1.6	0.2	
BH 8	38001		Made ground	Same as 31001	1.6	1.6	0.18	
BH 8	38002		Made ground	Loose mortar and rubble	1.6	1.6	0.9	
BH 9	38003		Made ground	Firm mid yellow brown sandy silt with mortar lenses. Frequent charcoal, pot and glass waste	1.6	1.6	>0.1	
BH 9	39000		Surface	Same as 31000	3.2	3.2	0.1	
BH 9	39001		Made ground	Same as 31001	3.2	3.2	0.35	
BH 9	39002		Surface	Crushed and compacted CBM rubble	1.6	1.6	0.15	
BH 9	39003	39004	Backfill	Dark brown grey sandy silt. Frequent CBM and stone rubble	>1.3	0.4	0.1	
BH 9	39004		Beam slot	NE/SW aligned. Steep sides and flat base	>1.3	0.4	0.1	
BH 9	39005		Surface	Cobbled surface	>1.3	>1.6		
BH 9	39006	39007	Backfill	Dark brown grey sandy silt. Frequent CBM and stone rubble	>1.3	0.4	0.1	
BH 9	39007		Beam slot	NE/SW aligned. Steep sides and flat base	>1.3	0.4	0.1	
BH 9	39008		Wall	NW/SE aligned stone rubble wall footings	>1.6	0.55		

Trench	Context	Fill of	Interpretation	Description	L (m)	W (m)	D (m)	Spot date
BH 10	30000		Surface	Same as 31000	2.7	1.6	0.18	
BH 10	30001		Made ground	Same as 31001	2.7	1.6	0.8	
BH 10	30002		Wall	NE/SW aligned stone wall	>1.6	0.55	0.15	
BH 10	30003		Made ground	Mixed charcoal, ash and mortar	1.6	1.6	0.15	
TP 1	41000		Surface	Same as 31000	3	0.6	0.16	
TP 1	41001		Made ground	Same as 31001	3	0.6	0.93	
TP 1	41002		Made ground	Mortar and rubble	3	0.6	0.07	
TP 1	41003		Made ground	Red sandstone	3	0.6	0.6	
TP 1	41004		Slipway surface	Same as 36002	3	0.6	0.14	
TP 1	41005		Made ground	Black clay silt and gravel. Very high humic content. Frequent pottery	3	0.6	1.4	
TP 1	41006		Alluvium	Dark blue grey clay silt. Occasional stone and CBM	3	0.6	>0.6	
TP 2	42000		Surface	Same as 31000	3	0.6	0.1	
TP 2	42001		Made ground	Same as 31001	3	0.6	0.25	
TP 2	42002		Made ground	Yellow sand	3	0.6	0.4	
TP 2	42003		Made ground	Mixed rubble, ash and mortar	3	0.6	0.35	
TP 2	42004		Made ground	Mid yellow grey sandy silt. Frequent rubble and mortar	3	0.6	0.4	
TP 2	42005		Alluvium	Yellow brown silty sand	3	0.6	1.5	
TP 2	42006		Alluvium	Dark blue grey clay silt and gravel	3	0.6	1.5	
TP 3	43000		Surface	Same as 31000	3	1.6	0.15	
TP 3	43001		Made ground	Same as 31001	3	1.6	1.1	
TP 3	43002		Made ground	Mixed charcoal, ash and rubble	3	1.6	0.37	
TP 3	43003		Made ground	Loose stones	3	1.6	0.25	
TP 3	43004		Alluvium	Dark blue grey clay silt and gravel	3	1.6	1.2	
TP 3	43005		Natural	Red sandstone	3	1.6		
TP 4	44000		Surface	Same as 31000	3	0.6	0.15	
TP 4	44001		Made ground	Same as 31001	3	0.6	2.2	
TP 4	44002		Alluvium	Dark blue grey clay silt and gravel	3	0.6	1.65	
TP 5	45000		Surface	Same as 31000	3	0.6	0.15	
TP 5	45001		Made ground	Same as 31001	3	0.6	0.46	
TP 5	45002		Made ground	Mixed ash and mortar	3	0.6	0.28	
TP 5	45003		Waste pit	Steep sides, rounded base	>1.45	>0.6	1	
TP 5	45004	45003	Pit fill	Upper fill. Dark yellow grey sandy silt	>1.45	>0.6	0.85	
TP 5	45005		Made ground	Mid yellow brown clay silt	3	0.6	1.1	
TP 5	45006	45003	Pit fill	Lower fill. Mid yellow brown clay silt	>1.45	>0.6	0.15	
TP 5	45007		Alluvium	Dark blue grey clay silt and gravel. Preserved organic material	3	0.6	0.3	
TP 5	45008		Alluvium	Dark blue grey silt and gravel	3	0.6	>1.7	
TP 6	46000		Surface	Same as 31000	3	1.6	0.1	
TP 6	46001		Made ground	Same as 31001	3	1.6	0.85	
TP 6	46002		Made ground	Black ash, mortar and clinker	3	1.6	0.1	
TP 6	46003		Made ground	Crushed CBM	3	1.6	0.6	
TP 6	46004		Made ground	Yellow clay	3	1.6	0.2	
TP 6	46005		Made ground	Mid yellow brown sandy silt. Frequent dumped pottery sherds	3	1.6	0.5	
TP 6	46006		Made ground	Mid grey brown silt, sand and gravel. Inclusions of clinker, pottery, slag and CBM	3	1.6	1.2	
TP 6	46007		Alluvium	Dark yellow blue clay silt	3	1.6	>0.5	
TP 7	47000		Surface	Same as 31000	3	1.6	0.15	
TP 7	47001		Made ground	Same as 31001	3	1.6	1.5	

Trench	Context	Fill of	Interpretation	Description	L (m)	W (m)	D (m)	Spot date
TP 7	47002		Wall	NE/SW aligned stone wall	>2	>0.3	1.1	
TP 7	47003		Made ground	Yellow crushed mortar and ash	3	1.6	0.45	
TP 7	47004		Made ground	Mid yellow brown clay silt	3	1.6	0.6	
TP 7	47005		Alluvium	Dark blue grey clay silt	3	1.6	0.7	
TP 7	47006		Alluvium	Dark blue grey clay silt and gravel	3	1.6	>0.6	
TP 8	48000		Surface	Same as 31000	3	1.6	0.12	
TP 8	48001		Made ground	Same as 31001	3	1.6	0.13	
TP 8	48002		Surface	Tarmac	3	1.6	0.05	
TP 8	48003		Service trench	Modern service. Unexcavated	3	1.2		
TP 8	48004		Surface	Cobbled surface	3	1.6	0.05	
TP 8	48005		Deposit	Crushed rubble bedding for 48004	3	1.6	0.2	
TP 9	49000		Surface	Same as 31000	3	1.6	0.18	
TP 9	49001		Made ground	Same as 31001	3	1.6	0.95	
TP 9	49002		Alluvium	Dark brown grey clay silt. Preserved organic material	3	1.6	0.4	
TP 9	49003		Alluvium	Mid yellow brown clay silt. Common ash, coal, chalk and shell	3	1.6	0.6	
TP 9	49004		Natural	Red sandstone	3	1.6		
HDTP 1	51000		Surface	Same as 31000	0.5	0.5	0.1	
	51001		Made ground	Same as 31001	0.5	0.5	0.3	
	51002		Step	Concrete step. Unexcavated	0.5	0.5		
HDTP 2	52000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 2	52001		Made ground	Same as 31001	0.5	0.5	0.35	
HDTP 3	53000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 3	53001		Made ground	Same as 31001	0.5	0.5	0.35	
HDTP 4	54000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 4	54001		Made ground	Same as 31001	0.5	0.5	0.5	
HDTP 5	55000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 5	55001		Made ground	Same as 31001	0.5	0.5	0.1	
HDTP 5	55002		Pad	Concrete pad. Unexcavated	0.5	0.5		
HDTP 6	56000		Surface	Same as 31000	0.5	0.5	0.1	
HDTP 6	56001		Made ground	Same as 31001	0.5	0.5	0.3	
HDTP 7	57000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 7	57001		Made ground	Same as 31001	0.5	0.5	0.15	
HDTP 10	50000		Surface	Same as 31000	0.5	0.5	0.15	
HDTP 10	50001		Made ground	Same as 31001	0.5	0.5	0.75	

APPENDIX B: THE FINDS

Table 1: finds concordance

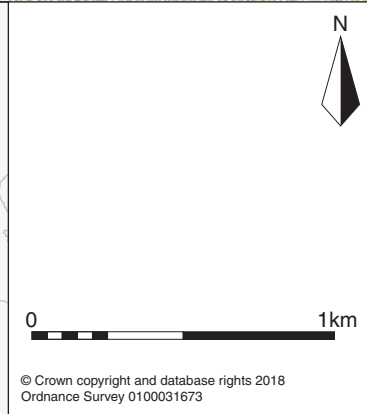
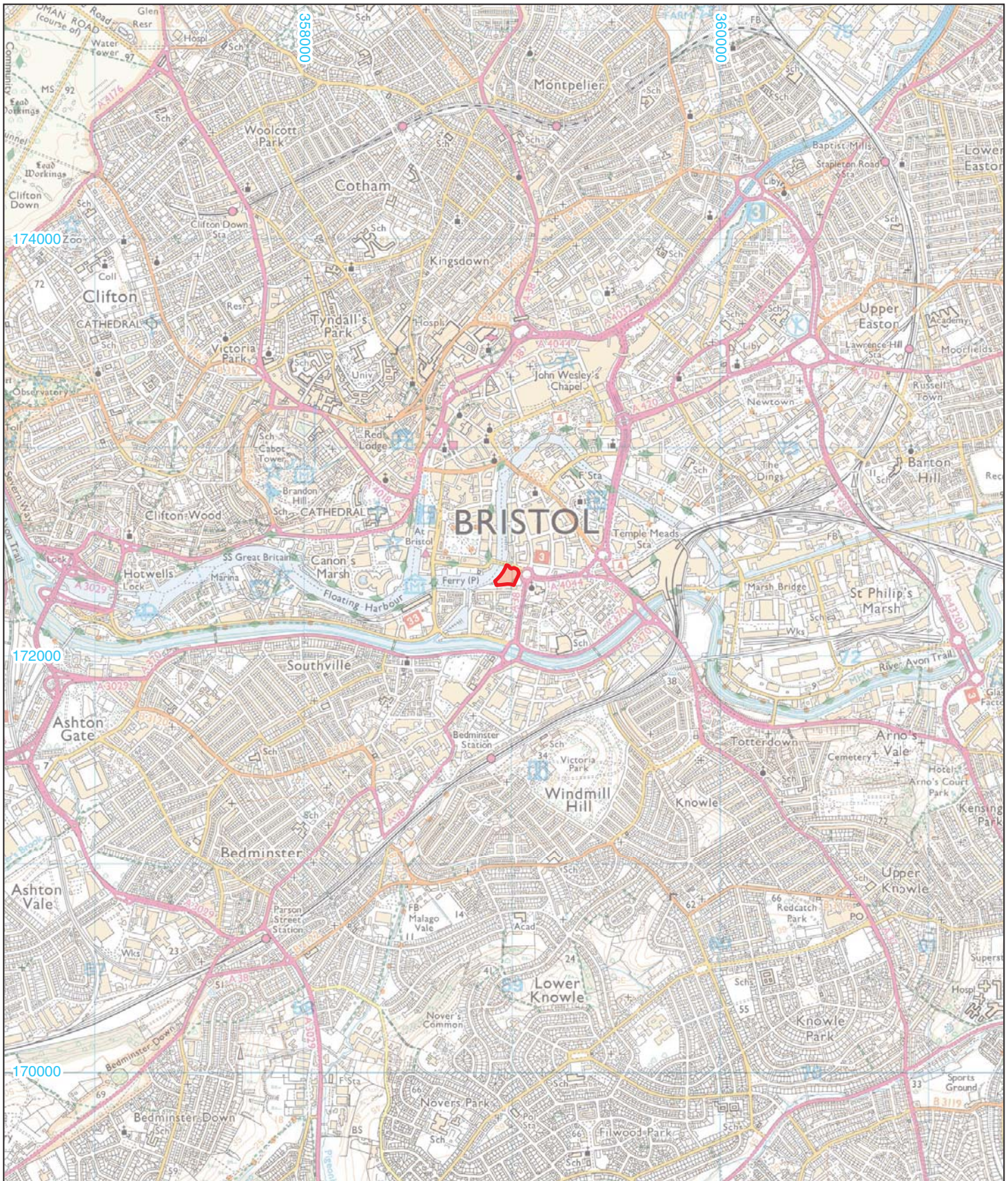
Context	Category	Description	Ct.	Wt.(g)	Spot-date
30003	pmed pottery	TGE biscuit-fired (BPT 99b)	13	84	C18
	pmed pottery	TGE (BPT99)	2	16	
	pmed pottery	English stoneware (BPT 200)	1	5	
	pmed glass	green frags	2	27	
33002	glass waste	pulls/runs	2	7	pmed
	CTP	stems, foot	4	34	
34002	CBM	brick (vitrif.) 2.5 Th x 4.25 W	1	1216	C18+
	kiln structure	stone - glass-covered	1	1580	
34003	pmed pottery	TGE biscuit-fired (BPT 99b)	1	59	LC17-C18
	kiln furnit.	saggars ('glazed' with cut-outs)	4	409	
	kiln furnit.	cubeoid 'glazed'	1	147	
	kiln furnit.	discoid/hoop-like, v. sandy/high-fired	7	195	
	glass waste	runs, pulls	3	18	
	stone	Sandstone: roofing or natural?	1	355	
38003	glass waste	lumps, runs/pull	3	170	pmed
41004	kiln structure	lining/floor	2	1907	
41005	pmed pottery	unglazed earthenware (BPT201)	5	285	C18-C19
41006	pmed pottery	unglazed earthenware (BPT201)	2	52	C18-C19
	pmed pottery	yellow/ black slipware (BPT 100)	1	9	
	CTP	bowl frag	1	3	
	kiln furnit.	saggar	1	123	
	CBM	pan tile, brick	2	192	
	glass waste	frothy blueish	1	8	
45004	pmed pottery	English stoneware (BPT 200)	5	151	C18-C19
	kiln furnit.		1	9	
	CTP	bowl - large, plain, footless	2	20	
	CTP	stems	8	21	
45008	pmed pottery	English stoneware (BPT 200)	3	102	LC18-EC19
	pmed pottery	TGE biscuit-fired (BPT 99b)	1	3	
	pmed pottery	unglazed earthenware (BPT201)	2	31	
		refined whiteware: blue, shell-edged (BPT202)	1	26	
	CTP	bowl - large, plain, footless	2	27	
	kiln furnit.	discoid, ?saggar	2	58	
	CBM	pan tile	1	280	
46002	pmed glass	bottle neck (short neck, string rim)	1	9	MC17-C18
	pmed pottery	TGE biscuit-fired (BPT 99b)	8	62	LC17-C18
	CTP	stems (burnt)	2	11	
46005	pmed pottery	TGE biscuit-fired (BPT 99b)	57	497	LC17-C18
	pmed pottery	TGE (BPT99)	6	31	
	kiln furnit.	saggar	12	524	
	kiln furnit.	flat tiles	3	367	
	kiln structure?	brick (vitrified)	3	860	
	CTP	stems	3	17	
	pmed glass	bottle base (green)	1	47	
	glass waste	opaque blue/pink	1	11	
		pan tile	2	139	
		CBM			
46006	pmed pottery	TGE biscuit-fired (BPT 99b)	1	3	LC17-C18
	indust. Waste	slaggy concretion	1	129	
49002	pmed pottery	unglazed earthenware (BPT201)	1	7	pmed

Table 2: Pottery: summary quantification by type.

Period	Code	Description	Ct.	Wt.
post-medieval	99	tin-glazed earthenware	8	47
	99	tin-glazed earthenware (biscuit-fired)	81	708
	100	Yellow/black slipware	1	9
	201	Unglazed earthenware	10	375
	200A	English (Bristol?). Stoneware	9	258
modern	202	refined whiteware	1	26

APPENDIX C: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Redcliffe Wharf, Redcliffe Way, Bristol	
Short description	An archaeological watching brief was undertaken by Cotswold Archaeology during Site Investigation works at Redcliffe Wharf, Redcliffe Way, Bristol. The watching brief identified several walls and surfaces associated with 17th and 18th-century glass and pottery production at the site, as noted during previous phases of archaeological evaluation of the site.	
Project dates	14–25 May 2018	
Project type	Watching brief	
Previous work	Desk based assessments (Leech 2001, CA 2005, Leech 2006) Field evaluations (Bristol Museum 1989, CA 2005, CA 2007, CA 2016)	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Redcliffe Way, Bristol	
Study area	0.67 ha	
Site co-ordinates	ST 5898 7237 358980 172370	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator		
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Simon Cox	
Project Supervisor	Christopher Leonard	
MONUMENT TYPE		
Glassworks		
SIGNIFICANT FINDS		
None		
PROJECT ARCHIVES		
	Intended final location of archive (museum/Accession no.)	Content
Physical	Bristol's Museums Galleries and Archives	Ceramics, glass waste etc
Paper	Bristol's Museums Galleries and Archives	Trench sheets etc
Digital	Bristol's Museums Galleries and Archives	Survey, digital photos etc
BIBLIOGRAPHY		
CA (Cotswold Archaeology) 2018 <i>Redcliffe Wharf, Redcliffe Way, Bristol: Archaeological Watching Brief</i> . CA typescript report 18289		



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PROJECT TITLE
 Redcliffe Wharf, Redcliffe Way, Bristol

FIGURE TITLE
 Site location plan

DRAWN BY CP	PROJECT NO. 6624	FIGURE NO.
CHECKED BY DJB	DATE 02/06/2018	1
APPROVED BY SC	SCALE @A4 1:25,000	



- site boundary
- area of observed groundworks
- archaeological feature
- structural feature
- deposit
- surface
- 1989 Bristol Museum evaluation trench and archaeological features (approx.)
- 2005 evaluation trench and archaeological features
- 2007 evaluation trench and archaeological features
- 2016 evaluation trench and archaeological features
- projected circumference of the glass cone



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PROJECT TITLE
Redcliffe Wharf, Redcliffe Way, Bristol

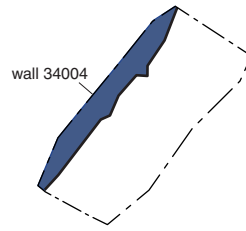
FIGURE TITLE
The site, showing location of groundworks and results of previous archaeological works

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

PA6624 Redcliffe Wharf, Bristol, AIMS\Illustration\Drafts\6624 Redcliffe Wharf Fig 02.dwg



Borehole 4



Wall 34004, looking south-west (scale 1m)

-  area of observed groundworks
-  structural feature



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PROJECT TITLE

Redcliffe Wharf, Redcliffe Way, Bristol

FIGURE TITLE

Borehole 4: plan and photograph

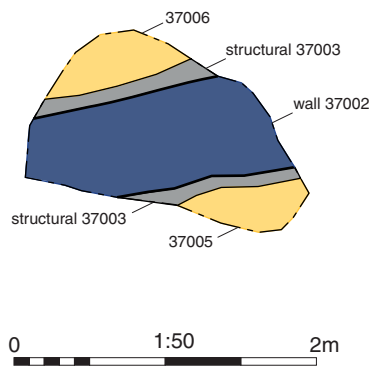
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APPROVED BY SC SCALE@A4 1:50

FIGURE NO.





3



Borehole 7



Wall 37002, looking north-west (scale 0.5m)

-  area of observed groundworks
-  archaeological feature
-  structural feature
-  deposit



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PROJECT TITLE

Redcliffe Wharf, Redcliffe Way, Bristol

FIGURE TITLE

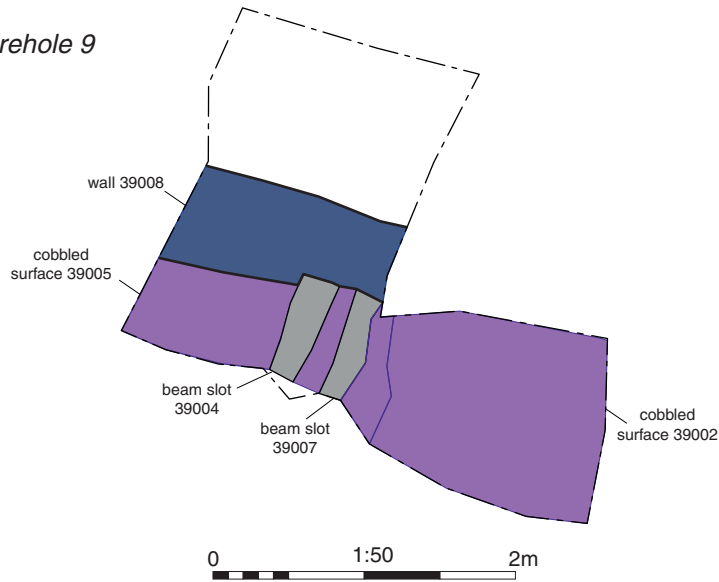
Borehole 7: plan and photograph

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FIGURE NO.

4

Borehole 9



Wall 39008, cobbled surface 39005 and beam slots 39004 and 39007, looking north-west (scales 0.2m and 0.5m)

-  area of observed groundworks
-  archaeological feature
-  structural feature
-  surface



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PROJECT TITLE

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FIGURE TITLE

Borehole 9: plan and photograph

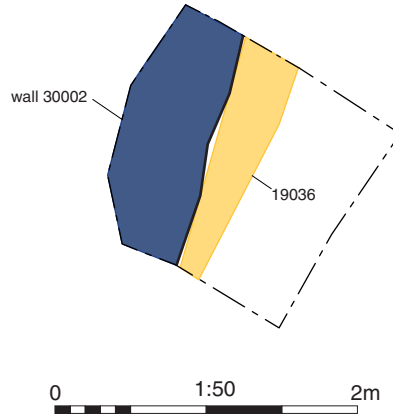
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FIGURE NO.




5



Borehole 10



Wall 30002, looking north-east (scale 1m)

-  area of observed groundworks
-  structural feature
-  deposit



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FIGURE TITLE

Borehole 10: plan and photograph

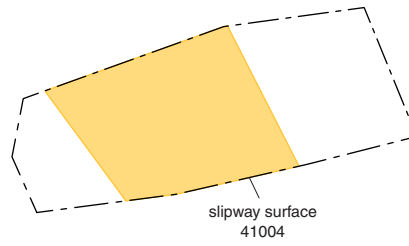
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FIGURE NO.

6





Test Pit 1



0 1:50 2m



Slipway surface 41004, looking north (scale 1m)

-  area of observed groundworks
-  deposit



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FIGURE TITLE

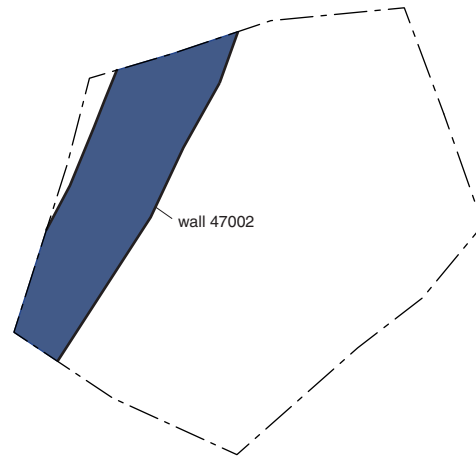
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FIGURE NO.

7

Test Pit 7



Wall 47002, looking north-west (scale 1m)

-  area of observed groundworks
-  structural feature



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FIGURE TITLE

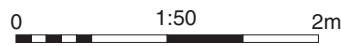
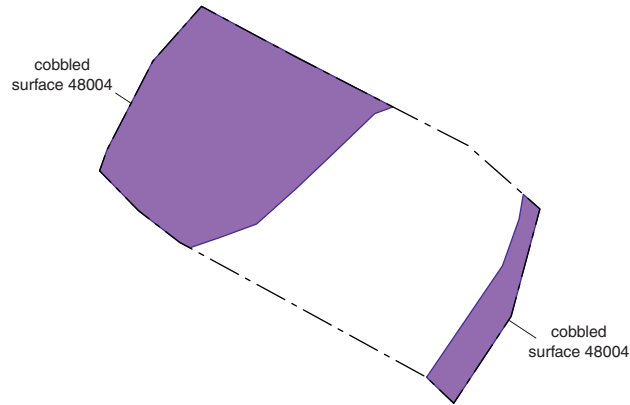
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

FIGURE NO.

8

Test Pit 8



Cobbled surface 48004, looking north-east (scale 1m)

-  area of observed groundworks
-  surface



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PROJECT TITLE

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FIGURE TITLE

Test pit 8: plan and photograph

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FIGURE NO.

9

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