

**Land adjacent to No. 46 Wade Street  
St. Paul's, Bristol.**

**Archaeological Monitoring**

Bristol HER 24772

BRSMG 2009/23

NGR ST 5985 7347



**for:**

**Connolly and Callaghan Limited**

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ACKNOWLEDGEMENTS

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## ABSTRACT

Avon Archaeological Unit Limited was commissioned by Connolly and Callaghan Limited to undertake the archaeological monitoring of groundworks associated with the development for residential housing of c. 500 m<sup>2</sup> land adjacent to No. 46 Wade Street, St. Paul's, Bristol (NGR ST 5985 7347).

This project was generated in response to a Brief for Archaeological Monitoring issued by Mr R. H. Jones, City Archaeologist of Bristol City Council. The work was carried out according to a Written Scheme of Investigation prepared by Avon Archaeological Unit Limited and agreed with Mr R. H. Jones.

Following a desk-based assessment and an archaeological evaluation of the study area, both undertaken in AD 2000, a brief for archaeological monitoring was requested, as the site was developed c. 1707 for artisan tenements that were demolished after 1936. Wade Street and the adjoining streets were known to be a centre for the manufacture of clay tobacco pipes in the 19<sup>th</sup> century. The discovery of two Roman lead ingots from the Mendips where the street crosses the Frome suggests that Wade Street follows the course of a Roman road between Bitton and Sea Mills.

Piling of the site was monitored for the presence of physical obstructions that could represent the presence of buried archaeological remains. During this exercise several sandstone walls relating to the former tenements were encountered. These were exposed and excavated by machine before backfilling and re-piling. Occasional finds were retrieved from the spoil generated by the piling. In several instances a layer of sandstone gravel containing the occasional fragment of chert was contacted just above the level of the sandstone bedrock at c. 4.5 m below ground surface. This layer is interpreted as the Greensand, a Pleistocene deposit associated elsewhere in Bristol with finds from the Palaeolithic era. In total the excavation of 37 piles was monitored, with the position and findings from each one logged by the monitoring archaeologist.

Subsequent digging of machine-excavated trenches was monitored for the presence of finds, deposits or the remains of former structures of archaeological significance. These trenches were excavated in an L-shaped grid pattern between the piles to a depth of about one metre below ground surface. Several sandstone walls, remnant cellar roofs and associated finds were revealed that related to the former 18<sup>th</sup> century tenements. There were also 20<sup>th</sup> century structural remains and finds that indicated the site had subsequently been reused as a motor engineering works. In several places soil layers were exposed associated with finds of abraded medieval pottery that indicated medieval agricultural activity across the site prior to its development in the early 18<sup>th</sup> century.

No finds of features were observed that indicated Roman period settlement or activity in the area, despite the finding in the 19<sup>th</sup> century of two Roman lead ingots at the Wade Street crossing of the Frome.

The results of this watching brief are consistent with the evidence gathered during the previous evaluation. A low level scatter of medieval and early post-medieval pottery probably indicating agricultural use represents the earliest human activity. This was followed by an intense phase of construction during the late 17<sup>th</sup> or early 18<sup>th</sup> centuries, coupled with a period of domestic occupation. The material culture of the later 18<sup>th</sup> century and the 19<sup>th</sup> century are barely represented, which could indicate a move away from domestic occupation. Demolition of the tenements took place during the first half of the 20<sup>th</sup> century, with a subsequent partial re-use for light engineering in the second half of the century.

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## ABBREVIATIONS

aOD	Above Ordnance Datum
BP	Before Present (1950)
BRO	Bristol Record Office
BHER	Bristol Historic Environment Record
NGR	National Grid Reference
OS	Ordnance Survey

## 1. INTRODUCTION (see Figures 1, 2 and 3)

The Study Area is a plot of land c. 500 m<sup>2</sup> located in the St. Jude's area of St. Paul's district, Bristol (NGR ST 5985 7347).

Avon Archaeological Unit Limited was commissioned to undertake an archaeological monitoring exercise of the Study Area during groundworks related to the construction of residential accommodation, for Connolly and Callaghan Limited.

This project was generated in response to a condition (no. 6) for archaeological monitoring (SC81) issued by the City Archaeologist Mr R. H. Jones, attached to planning application no. 05/04973/F.

## 2. GEOLOGY, TOPOGRAPHY AND CURRENT LAND USE (see Figures 1, 2 and 3)

Wade Street is a roughly northwest to southeast aligned street situated in the St. Jude's area of the St. Paul's district in the City of Bristol, just to the east of the city centre. Wade Street is located between Pennywell Road and Newfoundland Road, its route crossing the River Frome, where it continues as Houlton Street. West of Wade Street the route of the Frome is covered to the point where it enters the River Avon. The site is located at the junction with Little Ann Street, on the east side of Wade Street and on the south side of Little Ann Street, in the angle between the two. The land at Wade Street slopes gently down from 14.0 m aOD at Pennywell Road towards the Frome crossing below 11.6 m aOD.

The underlying geology of the Study Area comprises sandstone of the Redcliff Sandstone formation belonging to the Mercia Mudstone Group of the Triassic era (British Geological Survey 2004). The Bedminster Great Coal Seam runs beneath the site (*ibid.*) with the former Pennywell Colliery located some 600 m to the north (OS 1903). A layer of red loam with occasional pebbles or greensand chert was observed nearby in a section on the north side of Pennywell Road (BHER 3172). The presence of greensand chert suggests the origins of this deposit lie in the Pleistocene era (Bates 2005, paras. 3.6 and 4.13).

At the commencement of the monitoring phase the site was vacant, having been cleared at some point previously of vegetation, spoil and fly tipping. It lay adjacent to a property, No. 46 Wade Street, adjoining the southern boundary of the site. No. 46 Wade Street, last used as a chip shop, but with a residential flat above, appeared to be vacant. The frontage of No. 46 was constructed of lime mortared pennant sandstone blocks and slabs, with more modern extensions to the rear. To the east of the site was an area of vacant land formerly used for car parking.

### 3. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

#### 3.1. Historical Evidence

The study area formerly lay outside the traditional bounds of the city defined by royal charter in 1373, in the medieval parish of St. Philip and St. Jacob, in the royal manor of Barton Regis, first recorded in Domesday. The location of the study area was omitted from most of the early maps of the city, with the exception of the c. 1610 map of Kingswood forest (BRO/04480), where it is shown as vacant open land between *Gloster lane* (modern Stapleton Road) and the River Frome.

The earliest cartographic evidence to show the study area is the 1742 map of the city by Jean Rocque (BRO/07770/1). By this date Wade Street, Little Ann Street, and the Frome crossing had been laid out, with the study area shown as developed land. The Frome crossing had been erected in 1711 by local landowners and prospective developers Nathaniel Wade and Abraham Hook (Erskine and Smith 2000, 4). An abstract of title in the Bristol Record Office for No. 40 Wade Street indicated the property had been erected by July 1707, when it was conveyed to a Mr. C. Slade by Nathaniel Wade. No. 40 Wade Street lay within the study area.

Little is known of the tenements erected on Wade Street in the early part of the 18<sup>th</sup> century. They were generally three storey structures with or without cellars, intended as artisan housing, shops and public houses (Erskine and Smith 2000, 8). The desk-based assessment cited above found little evidence for the occupiers and activities during the 18<sup>th</sup> century, though records pick up during the 19<sup>th</sup> century with the advent of the street index in Matthew's (later Kelly's) Directories.

No. 38 Wade Street, within the study area, on the corner of Wade Street and Little Ann Street, was a public house on the OS 1:500 scale map of 1881 (see **Figure 7**). Records show it was a licensed premises from 1873 until 1910, and was known as the *Berkeley Arms* (Erskine and Smith 2000, 6). Between 1921 and 1931 the premises was a hairdressers (ibid.) and was a dwelling house with shop in 1935 (Erskine and Smith 2000, 5). Land on Little Ann Street, to the rear of No. 38 Wade Street, was recorded as a garage in 1935 (Erskine and Smith 2000, 6).

No. 40 Wade Street was shown as a smithy on the above OS map. Records show there had been a smithy there in 1850, and it was variously occupied by smiths/farriers until 1921 (Erskine and Smith 2000, 6). In 1931 the occupier was a greengrocer (ibid.) but was listed as a dwelling house in 1935 (Erskine and Smith 2000, 5).

There appear to have been no records for No. 42 Wade Street, other than as a dwelling house in 1935 (Erskine and Smith 2000, 5). No. 44 was occupied by a boot maker in 1880 and a lithographic printer in 1889 (Erskine and Smith 2000, 6). It too was a dwelling house in 1935 (Erskine and Smith 2000, 5).

It is known that clay tobacco pipe manufacture in Bristol during the 19<sup>th</sup> century became concentrated in the area around Wade Street (Baker, Beckey and Jackson 1989, 55), however no historical evidence was found to indicate this industry was ever carried on within the bounds of the study area.

By 1930 the majority of the tenements on Wade Street were let out as furnished rooms, and the area had a bad reputation (Erskine and Smith 2000, 5). In 1935 the city drew up plans to compulsorily purchase many of the tenements on Wade Street and Little Ann Street, with a view to slum clearance (ibid.). Compulsory purchase of the tenements within the study area appears to have taken place in December 1936 (ibid.). It is not clear when final eviction and demolition occurred, but an RAF vertical aerial photograph taken in October 1941 and now in the National Monuments Record, Swindon, shows gable ended properties occupying the study area (RAF/13C/BR/143, frame 5055 V), suggesting the slum clearance was delayed. A similar photograph taken in April 1947 (RAF/CPE/UK/2026, frame 5322 V) shows the study area cleared of all standing buildings, as does a photograph taken in October 1980 (OS/80156, frame 297 V).

### 3.2. Archaeological Evidence

The most significant archaeological find in the area was the discovery in 1865 of two Imperial Roman lead ingots from the Mendip hills, dated AD 139-161 (Higgins 2000, 17-18). They were discovered in the old bank of the River Frome, during work to confine the river within a narrower course (*ibid.*). It has been plausibly suggested their discovery represents the site of a Roman bridge over an earlier (deep) channel of the Frome, which in turn indicates the course of a Roman road known to have existed between Bath and Sea Mills, Bristol (Higgins 2000, 19-21). Trawls of the Bristol Historic Environment Record indicate no other Roman finds or features in the vicinity.

In April 2000 an archaeological desk-based assessment of the present study area was undertaken, which concluded that as an early 18<sup>th</sup> century planned expansion of the city suburbs, the study area had “considerable social, historical and archaeological potential” (Erskine and Smith 2000, 9).

Following on from this study the City Archaeological Officer requested an intrusive archaeological evaluation of the present study area. Two archaeological trenches were excavated. Cellars and walls associated with the 18<sup>th</sup> century tenements were uncovered, as were stratified deposits dated by the presence of early 18<sup>th</sup> century artefacts (Young 2000, 16-17). A single deposit pre-dating the construction of the tenements indicated probable agricultural use (*ibid.*).

As noted above, a layer of red loam with occasional pebbles or greensand chert was in 1939 observed c. 300 m to the northeast, in a section on the north side of Pennywell Road (BHER 3172). The presence of greensand chert suggests the origins of this deposit lie in the Pleistocene era (Bates 2005, paras. 3.6 and 4.13). A similar deposit was recently observed during a watching brief undertaken on Pennywell Road in 2009 (Etheridge 2009, 8, 13). Although in other parts of Bristol Palaeolithic artefacts have been associated with this deposit, to date none are known from the Frome valley (Bates 2005, paras. 3.6 and 4.13).

## 4. METHODOLOGY

The Watching Brief was carried out in March 2009. The Study Area was first attended on the 5<sup>th</sup> March 2009 and subsequently on the week of the 9<sup>th</sup> to the 13<sup>th</sup> March 2009, during which monitoring of operations relating to piling of the site was undertaken. On the 16<sup>th</sup> March the Study Area was attended for the final piling operations. Further monitoring was undertaken on the 20<sup>th</sup> March during excavation between the piles for the ground beams. Monitoring of these operations continued on the 23<sup>rd</sup> to the 27<sup>th</sup> March, with detailed section recording on the Wade Street frontage undertaken on the 23<sup>rd</sup> and 24<sup>th</sup> of March. A final visit to the Study Area was undertaken on the 31<sup>st</sup> March 2009 after a poorly capped well was revealed during spoil clearance operations.

During this monitoring exercise scale plans, an extensive context record, digital still photographs and hand written notes were made. These will be deposited together with the rest of the project archive at the Bristol Museum and Art Gallery under the accession number BRSMG 2009/23.

The project was carried out in accordance with a brief (Condition 6, Planning Application Reference 05/04973/F) specified by Mr R. H. Jones, the City Archaeological Officer, to a Scheme of Works dated March 2009, drawn up by Avon Archaeological Unit Limited and agreed with Mr R. H. Jones.

All excavation works on site were monitored by an experienced and qualified archaeologist under the direct supervision of Mr Andrew Young, principal archaeologist of Avon Archaeological Unit Limited. Monitoring was ceased after it was determined that further excavation works would be of a minor nature and would only disturb recently made ground.



## 5. ARCHAEOLOGICAL RECORD

### 5.1. The Piling (see Figures 4 and 5, Plates b, c, d and e)

Archaeological monitoring of the piling exercise commenced on the 9<sup>th</sup> of March 2009. Access to the site was gained via a single vehicle entrance at the eastern end of Little Ann Street. Piling was undertaken by specialist contractors from Scisco Construction Limited using a 300 mm bore machine with the bore elements at one metre lengths, allowing for depth estimations to be made to the nearest half metre. The standard procedure was to excavate several boreholes to at least one half metre (0.5 m) below the surface of the bedrock, place a prefabricated reinforcement of steel rods and ties in each borehole, then backfill each with concrete.

However, in practice on several occasions substantial obstructions that could not be overcome by the boring machine were encountered. On these occasions boring was temporarily abandoned and transferred to another location, while a slew-tracked machine excavated the site of the obstruction. Where the obstruction was found to be a wall this necessitated excavating a substantial pit, on some occasions over 2.0 m deep. Once the obstruction had been removed the pit was backfilled and piling at that location recommenced. Archaeological monitoring was undertaken of the entire piling operation.

For recording purposes the monitoring archaeologist numbered each borehole consecutively in the order in which they were commenced, and logged the location of each on a scale plan of the site at 1:50. Hand written notes were made of any observations, and where substantial features were exposed these were drawn to scale and appropriately recorded.

In general it was observed that bedrock was contacted at between 4.5 and 5 m depth. In all cases the spoil from the boring indicated this was rock of the Redcliff Sandstone formation. The operators noted that in places the upper surface of the rock was soft and degraded, necessitating them to bore deeper at those locations.

On eight occasions (boreholes 1, 3, 7, 25, 35, 36, 37, 38), at about 4.5 m depth, and just prior to contact with the bedrock, a possible Greensand deposit with occasional chert gravels was observed in the spoil. On subsequent examination none of these gravels showed evidence for human modification or use. The location of these boreholes is indicated in **Figure 4**.

Above the Greensand and/or bedrock was a deposit of brown clay interpreted as naturally occurring subsoil, sealed by a brown soil yielding occasional sherds of pottery, in turn sealed by at least one metre of made ground.

Where obstructions comprising walls etc. were noted, for ease of interpretation these have been combined with the later findings from the foundation trenches to compose **Figure 5**, but are described here.

No obstructions were encountered until the excavation of **Borehole 10**, where brick and sandstone rubble were exposed in the spoil, possibly representing a buried wall close to the surface. **Borehole 12** also glanced of a buried obstruction, chips of pennant sandstone indicating this was a wall.

**Borehole 13** met an obstruction requiring machine excavation. At c. 1 m deep below a mixed layer of clay and rubble a concrete rail (**1043**) was exposed, measuring c. 300 mm wide and exposed for a length of c. 600 mm. A central slot or groove was observed, with metal runners on either side, suggesting this was part of a track system for a mobile crane or hoist. This feature is 20<sup>th</sup> century in date and probably represents an industrial use of the site after it was abandoned for residential use.

**Borehole 14** also encountered an obstruction requiring machine excavation. This revealed in the west facing section an East-West aligned wall (**1044**) 0.2 m wide, surviving to a height of 1.6 m, constructed of pennant sandstone slabs with the occasional brick, bonded with a grey lime mortar. The base of the wall was located c. 2.1 m below the tarmac surface of the pavement adjoining Little Ann Street (c. 13.27 m aOD). The remnant of an adjoining pennant flagstone floor (**1045**) overlying natural clay was briefly observed in the base of this excavation pit. These remains indicate the former presence of a cellar at this location. The remainder of the excavated material comprised pennant and brick rubble indicating post demolition backfill of the cellar.

At **Borehole 17** machine excavation revealed the shallow remains of an east-west aligned wall (**1046**) constructed of pennant sandstone blocks bonded with brown clay flecked with lime and charcoal. The wall survived to a height of three courses (0.4 m), with the base located at a depth of 0.5 m below ground level. Only the south face of the wall was exposed, for a length of 850 mm. The south face was removed by machine before the borehole was backfilled.

**Borehole 20** contacted a possible wall at c. 1.0 m depth, but no machine excavation was necessary. Likewise **Borehole 21** appeared to encounter bricks at about a depth of c. 1.0 m, but no machine excavation was necessary.

**Borehole 22** encountered a major obstruction requiring machine excavation, which revealed an east-west aligned wall (**1047**) of pennant sandstone slabs bonded with brown lime mortar, adjoined on the south face by a brown lime mortared cellar roof (**1048**) constructed of pennant sandstone corbels. About one metre length of the wall was exposed, which was excavated by machine until the base of the wall was located at c. 2.0 m depth below ground level. The resulting pit was then backfilled before boring continued.

**Borehole 23** (see **Plate b**) almost immediately encountered a vaulted brick roof (**1049**) mortared with very hard Portland type cement mixed with lime. Machine excavation revealed the north side of the vault sprang from an east-west aligned brick wall (**1050**) a single brick thick butted against the south face of an east-west aligned lime-mortared pennant sandstone wall (**1051**). The eastern edge of brick roof **1049** and brick wall **1050** both butted the west face of wall **1052**, a north-south aligned lime-mortared pennant sandstone wall. Walls **1050**, **1051** and **1052** were exposed for a length of c. 1.0 m, to a depth of c. 1.5 m below ground level.

**Borehole 24** met with no obstructions, while **Borehole 25** met with a temporary and unidentified obstruction c. 1.5 m below ground level. Continued boring met with a further obstruction at c. 2 m depth, pennant sandstone fragments in the spoil indicating this may have been a flagstone floor.

**Borehole 26** appears to have been a duplicate in the records, possibly a re-boring of **Borehole 12**.

**Borehole 27** encountered an obstruction at c. 1.5 m deep. Boring was temporarily discontinued. It was then recommenced in an area slightly further to the north of the original site, where a further obstruction at c. 2.5 m depth was encountered. This obstruction may have been a cellar floor but no evidence was observed to support this.

**Borehole 28** immediately encountered obstructions that appeared on machine excavation to be large pieces of rubble to a depth of c. 500 mm. After backfilling boring was recommenced in the same location without further obstruction. **Borehole 29** encountered no obstructions.

**Borehole 30** encountered several large but loose blocks of pennant sandstone that were excavated by machine to a depth of c. 500 mm before boring was recommenced without further obstruction.

**Boreholes 31 and 32** (see **Plate c**), located in the northwest corner of the study area, both encountered obstructions near the surface. Machine excavation of these boreholes was combined to form a single large rectangular pit measuring c. 3.5 m east-west by c. 3 m by c. 2.5 m deep. Two adjoining walls were identified, one aligned north-south fronting Wade Street (wall **1035**) and the other aligned east-west fronting Little Ann Street (wall **1053**). Both walls were constructed of pennant sandstone blocks and slabs bonded with a brown lime mortar mix. Both internal faces (south and west) were lined with lime plaster. There was no evidence for roofing at this location but these walls undoubtedly represent a former cellar. These walls were excavated by machine until natural clay was contacted beneath them at c. 2.5 m deep.

**Borehole 33** located towards the mid point of the Wade Street frontage located an obstruction near the surface that on machine excavation was found to be a north-south aligned wall (**1054**) of pennant sandstone blocks and slabs bonded with a pinkish lime mortar. The wall was c. 500 mm thick and was exposed for a length of 2.4 m and to a depth of c. 2.0 m. The west face of the wall was against the Wade Street frontage.

Butted against the east face of wall **1054** was part of a vaulted roof (**1055**) constructed of pennant sandstone corbels bonded with a brown clay lime mortar mix. As exposed the roof was rising towards the north at a minimum depth of less than 100 mm below the ground surface to the top of the roof. Although no direct evidence was seen it is likely this roof sprang from an east-west aligned wall located just to the south of the machine-excavated pit (possibly a continuation of wall **1047**). Both the remains of wall **1054** and roof **1055** were completely removed by machine at this location and the pit backfilled before boring recommenced without further obstruction. Beneath the roof was a partial void and loose sandstone building rubble in sand and lime mortar fragments. These masonry features represent the remains of a cellar at this location, which had probably been backfilled when the former tenement properties on site were demolished.

**Borehole 34** was originally located against the southern end of the Wade Street frontage, but was moved 1.4 m to the east after probing indicated the presence of a near surface obstacle, possibly another wall. Clearance by machine at the new location revealed part of another *in situ* corbelled stone roof (**1056**) of pennant sandstone slabs bonded with a brown clay lime mortar mix.

**Borehole 35**, located between **Boreholes 22 and 33**, located an obstruction at c. 300 mm depth, which on machine excavation transpired to be a continuation of sandstone wall **1047** found in **Borehole 22**. Up to 2 m length of wall **1047** was machine excavated to a depth of 2.2 m below ground level before natural clay was encountered, giving a surviving height of 1.9 m for wall **1047**. Only the south face of the wall was visible. Butting this face was a vaulted, lime-mortared stone corbelled roof, similar to those seen previously and interpreted as a continuation of roof **1048**. Behind the wall, in the south facing section of the excavation pit, could be seen the outline of a backfilled cut feature, interpreted as part of Trench 2 from an archaeological evaluation undertaken in AD 2000 (Young 2000, see figures 3 and 5). This had been cut into a brown soil layer (**1057**) overlying what appeared to be the natural red brown clay.

**Borehole 36** (see **Plate d**) was machine excavated to a depth of 2.30 m and the resulting pit measured 2.6 m north-south by 2.0 m. A north south aligned sand cement wall (**1058**) of machine cut bricks was exposed for a length of 2.7 m in the west facing section. The top of the wall was located c. 100 mm below the level of the nearby tarmac surfaced pavement and the base was located c. 2.3 m below, giving a wall height of c. 2.2 m. This wall butted a north facing pennant sandstone wall (**1059**) exposed for a length of c. 1.3 m in the north facing section. This wall was butted by a further two north-south aligned brown lime-mortared pennant sandstone walls. One wall (**1060**) was located in the east facing section of the pit and measured c. 500 mm wide by 2.0 m exposed length, by c. 2.3 m high. Towards the base of the pit what appeared to be the truncated remnant of a second pennant wall (**1061**) became visible, butted by wall (**1058**). There were some remnants of plaster on the west face of wall **1061**, indicating this represented part of a cellar. In the angle between walls **1059** and **1061** there was a projecting rectangular pier in pennant that appeared to be part of wall **1061** and reached to almost the same height.

There was no trace of intact roofing during the excavation of this pit. Wall **1058** corresponds in location and style with wall **216** recorded during the archaeological evaluation undertaken in AD 2000 (Young 2000, 12, figure 5 and photograph f).

**Borehole 37** (see **Plate e**) encountered obstructions near the surface necessitating machine excavation that resulted in a roughly rectangular pit c. 2.5 m north-south by 2 m, by 1.9 m deep. As this pit was located on the Wade Street frontage, immediately to the south of the excavated pit around **Borehole 33**, it exposed the southern end of wall **1054** in the south facing section, giving a total exposed length for that wall of 2.60 m. Adjoining the southern edge of wall **1054**, but recessed back behind the edge of the pavement were masonry steps **1005** (described in more detail below under Section 1). In the south facing section of this pit was part of an east-west aligned pennant sandstone wall (**1062**) butting wall **1054**, which was exposed for 400 mm wide by 1.3 m long to a depth of 1.9 m. Part of stone corbelled roof **1048** appeared to butt the south face of wall **1062**. It was noted that roof 1048 appeared broken in this location and it is postulated this occurred at the time of demolition of the former sandstone tenements, allowing the cellar beneath to be filled with demolition rubble. Adjoining the southern edge of steps **1005**, was the northern edge of wall **1063**, which appeared to continue the line of wall **1054**.

**Borehole 38** encountered obstructions near the surface. A roughly rectangular machine-excavated pit was dug measuring c. 2.2 m north-south by 2.2 m by c. 2.5 m deep. In the south facing section this revealed the south face of an east-west aligned wall (**1064**) of pennant sandstone slabs bonded with lime mortar. This wall was exposed for a length of 2.2 m and extended down from near the surface to c. 2.4 m deep. Initially no north-south wall along the Wade Street frontage could be observed, except in the north facing section of the pit, where the finished north face of a lime-mortared pennant sandstone wall (**1067**) was observed. On further excavation it was found the lower courses only of this wall extended northwards and butted against wall **1064**. The exact depth and purpose of this step down in the level of wall **1067** could not be ascertained due to the nature of the excavation. *In situ* pennant sandstone corbels seen in the north facing section only indicated the surviving extent of roof **1056**.

## 5.2. Monitoring of the Foundation Trenches (see Figure 5; cover right, frontispiece and Plate f)

Following the completion of the piling exercise the principal contractors excavated a grid like pattern of foundation trenches by machine. Each trench was approximately one metre wide and excavated to a depth (c. 12.27 m aOD) of approximately one metre below the ground surface. In some places the width was as great as 1.20 m where loose material in the trench sections required remedial battering. Although the floor of the trenches was uniformly level throughout, the depth varied slightly from the uneven ground surface.

It is worth noting that much of the material excavated from these foundation trenches comprised loose brick and sandstone demolition rubble, probably indicating backfilled cellars, with only variations from this norm

Most of the walls along the Wade Street frontage previously recorded were machine excavated to just below c. 12.27 m aOD, where they had not already been completely removed by machine. One further wall remnant was observed on this frontage, in the far southwest corner of the study area. A brick built buttress of machine cut 20<sup>th</sup> century bricks supported the far western end of the north face of No. 46 Wade Street (adjoining). Excavation revealed this was founded, at ground level, on a lime mortared pennant sandstone wall (**1068**) c. 450 mm wide, 1.25 m high, exposed for a length of c. 1.5 m northwards from the southern edge of site.

The remains of roofs **1056** and **1049** could be seen butting the north face of the footings for No. 46 Wade Street, however, despite the clean join between the two, no supporting wall could be observed at that location.

On the line of wall **1052**, and to the south of it, was lime-mortared pennant sandstone wall **1069**, which extended northwards from beneath the eastern brick built buttress of No. 46 for c. 2.1 m. Both the south face of wall **1052** and the north face of wall **1069** were finished, indicating the c. 1.2 m gap between them may have been a doorway or passageway. However this gap was filled with demolition rubble and was not subject to further investigation.

In the area between and to the north of walls **1051** and **1064** a further stone corbelled roof (**1070**) overlying rubble fill was exposed. It is suggested that vaulted stone roofs **1048** and **1070** both represent the same original feature, but nothing was found to confirm this as there appeared to have been an irregular break between the two, possibly a deliberate result of the demolition process by which rubble was backfilled into the cellar.

To the north of wall **1051** a corner of a pennant sandstone wall (**1071**) was exposed, with a short length (c. 1.25 m) of north-south aligned pennant sandstone walling (**1072**) located some 1.16 m to the north. As the southern end of wall **1072** was finished, it is concluded the gap between the two walls represents another doorway or passageway. The northern end of wall **1072** was also finished, suggesting a further gap or passageway, but no further elements of walling on this alignment could be traced until near the northern edge of site, where c. 1.95 m of lime-mortared pennant sandstone walling (**1073**), c. 300 mm wide and c. 300 mm high was exposed at just below ground level.

East of the line between walls **1073** and **1069**, the demolition rubble was noticeably shallower, in places less than 1 m deep, indicating the extent of the cellars fronting Wade Street had been reached. In one particular area of site a layer of brown silty clay was identified c. 850 mm below the ground surface that was particularly rich in Staffordshire slip ware sherds and other artefacts. However as this area was machine excavated together with the overlying rubble it was not possible to separate out the finds, so they were assigned the context number **1025**. A distinct area of rubble to the north of this was assigned the context number **1036**. Beneath this layer was found a concrete and steel rail similar in appearance to rail **1043**, and on the same parallel alignment some 2.26 m apart, suggesting they were both part of the same mechanism.

Located a short distance to the east a small underground passageway or cellar was partly exposed, of which only the north wall and part of the lime-mortared vaulted brick roof were clearly visible. As exposed the north wall was constructed of lime-mortared pennant sandstone with the occasional brick. The exposed portion of the cellar measured c. 2.4 m long east-west by c. 510 mm wide.

Almost immediately to the east of this cellar were the remains of a north-south aligned wall (**1076**) built of machine cut bricks, in a sand cement mortar. As exposed wall **1076** measured 4.54 m long, was eight courses high and 440 mm wide, with an eastward return on the northern end exposed for about 480 mm length. Wall **1076** was associated with a small group of masonry features. Adjoining the base of the east face of the wall was a rectangular

concrete pad or surface (**1078**) measuring 1.14 m east-west and exposed for 990 mm north-south. Against the southeast corner of surface **1078** part of a wall (**1077**) of similar construction and alignment to **1076** was exposed for a length of 500 mm. Adjoining the north face of wall **1077** and the east face of pad **1078** was a further concrete and steel rail, similar in construction to rails **1043** and **1074**, but exposed for a length of c. 5.69 m. No parallel rail was observed during the excavations.

Encapsulated beneath part of wall **1076** were the truncated remains of an east-west aligned wall (**1080**) constructed of pennant sandstone slabs, exposed for a height of four courses. No trace of bonding material could be detected on wall **1080**.

Two soil layers of note were exposed in the eastern arm of the foundation trench grid. In the north-eastern corner located some 100 mm below the working surface was exposed a layer (**1038**) of 800 mm thick grey brown sandy silt with bands and lumps of lime mortar mix and bands of ash, interpreted as a possible construction deposit relating to the construction of the tenements or associated buildings.

In the south eastern corner of this arm was exposed c. 100 mm below the surface an extensive layer (**1037**), some 650 mm thick, of grey brown sandy silt banded with reddish brown silty clay and charcoal flecks, with flecks and lumps of white lime.

During machine operations to remove a spoil heap the brick cap of an otherwise uncapped well (**1041**) was disturbed. Well **1041** was located outside the area of boreholes and foundation trenches, in the southeast angle between the two arms of the trench grid, c. 1.8 m east of wall **1051**. As exposed the well was a circular structure with a diameter of 1.16 m at present ground surface. Construction material throughout appeared to be coursed pennant sandstone blocks and slabs. A laser distance measurer gave a reading of 5.15 m from the ground surface to the top of the water. Approximately the last 200 mm of the well above the water level appeared to have been cut into the bedrock, with no sandstone lining. The top of the well had been capped with two short sections of steel railway rails supporting a skin of mortared bricks.

In the far northeastern corner of the foundation trenches a 700 mm length of north-south aligned wall (**1042**) was exposed. The wall measured 600 mm wide and was constructed of pennant sandstone blocks and slabs bonded with a brown sandy clay lime mortar. The truncated top of the wall was located just below the level of the Little Ann Street pavement, and the wall was exposed to a height of c. 500 mm.

### 5.3. Recording of the East Facing Section along the Wade Street Frontage (see Figure 6 and cover left)

During the excavation of the foundation trenches, a continuous east facing section was exposed along the Wade Street frontage of the site. During the monitoring process a large proportion of this section was drawn and recorded by the monitoring archaeologists to provide a permanent record. The various north-south aligned walls (described above) along the Wade Street frontage had been either truncated or removed to the level of the excavation trench floor (c. 12.27 m aOD). The excavation floor level was then covered with c. 50 mm on concrete, thus obscuring any related features exposed in plan.

Recording of the southernmost extent of this section was limited, due to the presence of a live electricity cable, in an area that already appeared to have been heavily disturbed by modern service trenches. Section recording was therefore commenced four metres north of the southernmost extent of the Wade Street frontage (see **Figures 4** and **5** for exact location of the section), giving a total drawn section length of 14.82 m.

The entire length of the section was sealed by the tarmac surface (**1001**) of the street pavement on the east side of Wade Street. The pavement level rose from 13.27 m aOD at the junction with Little Ann Street to 13.60 m aOD at the southern end of the section. The pavement surface varied between 30 and 50 mm thick.

Towards the northern end of the section beneath the pavement were a couple of adjoining shallow scoops (**1083**) filled with brown soil (**1082**), cut into layer **1002**, a black silty sand layer that ran through the southern half of the section, physically beneath the tarmac. Layer **1002** also filled two cut features, cut **1003**, also containing a lead pipe and interpreted as a service trench, and cut **1010**, a broader cut also associated with a lead pipe. Layer **1002** also sealed masonry feature **1022**, constructed entirely of brick, interpreted as the remains of a step or part of a chute into one of the cellars from street level. Masonry **1022** forms the upper fill of stepped cut **1024** with shelving sides, 1.25 m wide at the top, 640 mm deep and 1.00 m wide at the generally flat base. The lower fill of cut **1024** consists of 390 mm thick deposit of black sandy silt heavily mottled and flecked with charcoal. Cut **1024** is interpreted as the construction cut for masonry **1022**, which appears stratigraphically to have been a later addition to the tenements rather than an original feature. Cut **1024** truncated the southern end of fill **1026** and the northern end of fill **1081**.

In the northern half of the section, where layer **1002** was not present, tarmac **1001** overlay various layers and fills, of which the latest was brown soil **1069**, uppermost fill of cut **1031**. Beneath **1069** was a further brick structure **1029** (see **Figure 6 d**), also interpreted as a chute. Cut **1031** is therefore also interpreted as the construction cut for a chute that was probably another late addition to the tenements rather than an original feature.

Cut **1031** truncated the southern end of dark soil layer **1032**, located at the northern end of the section, and also truncated the northern end of pit fill **1026**. Layer **1032** sealed masonry feature **1033**, up to two courses of pennant sandstone blocks and slabs bonded with a reddish brown lime mortar mix, laid in shallow cut **1034**. A clear interpretation of these features was not possible, but they could represent a former paved surface or a short flight of steps associated with the tenement on the corner of Wade Street and Little Ann Street.

Layer **1026** extended to fill cuts **1027** and **1028**. Cut **1027**, of unknown purpose, was 1.90 m wide and 500 mm deep, with a flat base, while cut **1028**, 1.66 m wide and 140 mm deep, also of unknown purpose, had a more irregular base.

Banded clay and silt layer **1081** filled shallow cut **1066** made into layer **1020**, as did cuts **1027**, **1028** and **1034**. Layer **1020** was a uniform brown silty clay up to 305 mm thick with the occasional fragment of brick, pennant sandstone and white lime, suggesting it was deposited after or during the construction of the tenements, possibly with spoil from the excavation of the cellars. This interpretation is further reinforced by the presence of a small pile or layer of loose pennant sandstone fragments (deposit **1021**) interpreted as a remnant construction deposit, sealed between layer **1020** and the underlying buried soil layer **1018**.

The southern half of the section was dominated by a broad (1.72 m) masonry feature (**1005**) flanked on either side by lime-mortared pennant sandstone masonry uprights **1004** and **1006**. Masonry **1005** (see also **Figure 5**) was constructed of limestone slabs bonded in a grey lime mortar mix, and is interpreted as the remnant of a flight of steps from Wade Street down into the adjacent cellar. In all approximately nine courses of sandstone slab were revealed, to a height of c. 800 mm, representing two steps, and a possible third below. The lowest courses of masonry sealed two soil fills, the latest, **1007** a black silty sand with some pennant sandstone fragments over an earlier reddish brown silty clay (**1008**) with some fragments of both pennant sandstone and brick. All three contexts, masonry **1005**, and soil fills **1007** and **1008** lay within cut **1009**, interpreted as a construction cut for the steps. In total this cut measuring 2.10 m wide at the top, with rounded sides was exposed for a depth of 1.06 m, although the base was not revealed. The stratigraphic location of the cut (into layer **1018**) suggests it represents part of the initial construction for the tenements on Wade Street, and can therefore be dated to c. AD 1707. The external cellar entrance this represents is likely to have been blocked at the time of demolition c. AD 1936 or later.

Located some 700 mm to the south of probable wall **1006** was another upright masonry feature, **1011**. This was constructed of up to five courses of pennant sandstone slabs bonded with an orange sandy lime mortar and measured 470 mm wide by 310 mm high. It is presumed to represent a low wall of unknown length, possibly originally intended to define a small front garden. Both masonry structures overlay compact brown sandy fill **1012**, 210 mm thick, which in turn overlay fill **1013**, a looser brown sandy clay 240 mm thick, the primary fill of a straight sided cut (**1014**) with rounded base, interpreted as a possible construction cut for the two masonry features **1006** and **1011**.

Construction cut **1014** truncated a short sequence of soil layers, **1015** to **1017**, all of which contained varying quantities of white lime mortar flecks, charcoal flecks and pennant sandstone fragments, suggesting association with the construction phase of the early 18<sup>th</sup> century tenements.

Layer **1017** sealed part of layer **1018**, a uniform brown silty clay that ran the length of the section and at its thickest measured c. 580 mm. This is interpreted as a buried soil dating to before the construction of the tenements and probably represents an accumulation of agricultural activity known to have been undertaken in the general area in the 17<sup>th</sup> century and probably dating back to the Middle Ages. Soil layer **1018** overlay a layer of reddish clay mixed with sand and silt (**1019**), only partially exposed in the southern half of the section, interpreted as a natural deposit.

## 6. THE FINDS

### 6.1. THE POTTERY (by Andrew Young)

#### INTRODUCTION

An assemblage of 277 sherds (5842g) of medieval and later pottery (Table 1) was recovered during the archaeological monitoring. The pottery was sorted into fabrics with the aid of a binocular microscope (x10), counted and weighed. The overwhelming majority of the pottery is of post-medieval date and only a handful of medieval sherds have been identified (11 sherds; 126g). Nine sherds (433g) of modern ceramic building material were also found.

#### MEDIEVAL POTTERY

##### Fabrics

A limited number of fabrics are present, including the following:

**Site Fabric 12 - Ham Green coarsewares (HGRCW).** Bristol. Mid 12th–13th centuries (Vince 1988, 258). Black throughout, usually with red surfaces. Very similar to Proto Ham Green but with finer temper, including abundant sub-angular quartz <0.2mm; sparse calcareous grains <0.5mm. Hand-made coarsewares.

**Site Fabric 13.** Bristol? c.12th century.

Dark grey core, brown to red surfaces. Well sorted inclusions of quartz, limestone, calcite and sandstone representing a hand-made coarseware. Similarities with Bristol Pottery Types (BPT) 2, 3, 10 and 309 (Vince 1988; Ponsford 1998, 137).

**Site Fabric 14 - Bristol (/Redcliffe) ware** (BPT 67). Bristol. Mid 13th–15th centuries (Vince 1988, 260; Ponsford 1998; Burchill 2004). Usually pale yellow or pink throughout, sometimes with a light grey core. Inclusions of quartz <1.2mm, clay pellets <1mm, occasional sandstone up to 7mm, iron ore 0.2mm across, rounded limestone <0.3mm. Wheel-thrown jugs. Green glaze on exterior, one sherd with applied clay strip.

The range of medieval earthenware fabrics represented is very limited, and where identifiable consistent with local wares frequently found in the city. Most of the sherds are significantly abraded indicating likely residuality and were recovered from contexts **1013** and **1018**, the former were mixed with a single sherd of later date. Other sherds are from unstratified contexts.



## POST-MEDIEVAL AND MODERN FABRICS (c1550 onwards)

A total of 266 fragments (5716g) of post-medieval ceramics were recovered representing a range of different recognized fabrics:

**Site Fabric 1 - Bristol/Staffordshire slipwares** (BPT 100). 23.1% by weight and 40.8% by count. Late 17th–18th centuries. Buff throughout. Moderate iron oxide, <0.25mm, is present. Trained dark brown slip over white slip under amber glaze on earthenware body. Most of the sherds decorated with combing or spots and including sherds from a standard range of 'pie-crust' plates, tankards and small jars.

**Site Fabric 2 – Transfer Printed ware** (BPT 278). 7.3% by weight and 3.6% by count. Industrial transfer printed white wares first produced around 1780.

**Site Fabric 3 - Somerset glazed wares** (BPT 124, 285). 22.3% by weight and 14.8% by count. 16thC–18th centuries (Coleman-Smith and Pearson 1988; Gutiérrez 2007). Generally orange throughout, but occasionally with grey core or surfaces. No visible inclusions. Wheel-made. Included in this group are plain lead glazed wares, all-over white slipwares and sgraffito wares.

**Site Fabric 4 - English delftware** (BPT 99). 6.6% by weight and 12.3% by count. Several sources including London and Brislington Bristol possible. 17th century. Fine buff earthenware fabric with no visible inclusions. Glazed all-over with hand painted decoration in blue.

**Site Fabrics 5, 7, 8 and 17 - Refined wares.** 4.8% by weight and 9% by count. Later post medieval White china, Porcelain, Creamware (BPT 326) and Pearlware (BPT 202).

**Site Fabric 6 - North Devon wares:** gravel-tempered (BPT 112). 20.9% by weight and 8.7% by count. Late 17th–18th century (Allan 1984). Grey or orange core, grey interior margin and surface, orange exterior margin and surface. Abundant quartz <6mm; abundant milky quartz up to 3mm; sparse limestone up to 2mm; moderate slate <5mm; moderate chert <6mm. Green glaze on interior surface.

**Site Fabric 9 – Rhenish (?Westerwald) Stoneware.** 0.3% by weight and 1.1% by count. Stoneware flagons and jars produced in the Rhine valley region often highly decorated and from a number of different industrial production centres.

**Site Fabric 10 – Modern CBM.** 7.4% by weight and 3.2% by count. 19<sup>th</sup> century and modern ceramic tile and building materials.

**Site Fabric 11 – 19<sup>th</sup> century/modern decorated tile.** As Site Fabric 2 above. 0.3% by weight and 0.4% by count. 19<sup>th</sup> century and modern ceramic decorative tile.

**Site fabric 15 and 16 - Moderns stonewares.** 3.65% by weight and 1.5% by count. Included here are lead-glazed wares (Bristol-type) and Brown Stoneware plus unidentified glazed stoneware of the 19th century.

**Site Fabric 18 – Plain White dipped stoneware.** 0.1% by weight and 1% by count. Light grey fabric with white salt dipped glazed. 18th century

The range of post medieval ceramic wares represented in the assemblage is very standard and typical of those used in the city during the post-medieval and modern periods although the sherds are generally fairly large and unabraded indicating limited transportation from their source.

In site specific terms the overall proportion of the assemblage made up by Yellow Slipware (FT1), Bristol Delftwares (FT4) and North Devon Gravel Tempered wares (FT6), which combined total 51% by weight and 62% by count of the total assemblage, appears significant and points to a phase of greatest domestic activity on the site in the period 1650-1800 AD with a peak probably between 1700 and 1750.

## CONCLUSIONS

The assemblage of pottery recovered from the Wade street site is consistent with the ceramic material recovered during the preceding evaluation stage (reference) and overall it includes a very standard range of medieval and post-medieval ceramics that are commonly found on sites in the city.

Firstly, in view of the position of the site, close to a suggested Roman crossing of the river Frome, the complete absence of Romano-British material may be significant. However, it should be noted that in general Roman roads outside urban areas are notoriously lacking in finds of any kind.

The presence of a small number of medieval sherds is to be expected and points to no more than transient activity in the area during the middle ages, possibly relating to agriculture and manuring. Post medieval activity is indicated from the later 17<sup>th</sup> century onwards with a phase of more intense domestic activity indicated during the earlier part of the 18<sup>th</sup> century. Thereafter the quantities and range of domestic ceramic waste diminishes.

It is concluded that whilst the assemblage is of interest in site-specific terms the collection does not justify any further detailed analysis or reporting. None of the sherds are illustrated.

*Table 1*  
*Quantification of ceramic assemblage*

Fabric	Fabric date	Site Fabric	Sherds	Weight (g)
Bristol/Staffordshire yellow slipwares	late 17th–18thC	1	113	1350
Transfer printed wares	1790s–1840s	2	10	425
Post-medieval glazed redwares	17th–18thC	3	41	1302
Delftware	1650-1770	4	34	385
Refined Wares – White China	19 <sup>th</sup> century +	5	17	205
North Devon Gravel temper ware	1600-1780	6	24	1220
Plain porcelain	from 1770s	7	1	8
Factory-made slip-decorated pearlware	1790s–1840s	8	4	26
Rhenish Stoneware	17th-18 <sup>th</sup> C	9	3	18
Modern CBM	19 <sup>th</sup> century +	10	9	433
Transfer printed tile	19 <sup>th</sup> century +	11	1	16
Ham Green medieval coarseware	1100-1250	12	1	2
Medieval coarseware	c.1150-1250	13	4	14
Bristol Redcliffe ware	13 <sup>th</sup> -15 <sup>th</sup> C	14	6	32
Modern English brown stoneware	19thC	15	1	185
Bristol-type brown stoneware	18th-19thC	16	3	27
Creamware	1740-1800s	17	3	44
Plain dipped stoneware	18thC	18	1	3

**Table 2**

*Suggested Context Dates based on Ceramic Assemblage alone*

<b>1037</b>	18thC+
<b>1025</b>	19th C
<b>1036</b>	18th C
<b>1018</b>	late medieval if one small sherd of later (1600+) is considered intrusive
<b>1026</b>	18th C+
<b>1038</b>	17th - 18th C
<b>1039</b>	late medieval +
<b>1013</b>	medieval +
<b>1040</b>	19th C

## 6.2. THE CLAY TOBACCO PIPE (by Sarah Newns)

### INTRODUCTION AND METHODOLOGY

A small assemblage of clay tobacco pipe fragments, consisting of 27 stems and 11 bowls and weighing a total of 228g, was recovered in the course of the recording exercise.

Material from the assemblage was washed, bagged and numbered with the context number and site code, before being weighed, counted and catalogued. The pipe bore stem diameters were measured and the pipe bowls were compared with typologies established by Oswald (Journal of the British Archaeological Association, 1960) and Peacey (Committee for Rescue Archaeology in Avon, Gloucestershire and Somerset no.4, n.d.). Makers' marks were compared with the lists of Bristol pipemakers given in Jackson and Price, 1974 and Walker, 1971 (see bibliography).

The number of stem fragments was considered too small to provide a useful diagnostic sample and is not discussed further.

### The Bowl Fragments

Of the bowl fragments, only two were from a stratified context, Context **1026**, the fill of Cuts **1027** and **1028**, in the east-facing section recorded adjacent to Wade Street. One near-complete bowl with an abraded spur heel was similar in form to Oswald type 19, dated 1690-1710, Peacey type 11, 1690-1720. The second near-complete bowl, with the heel missing and a perforation in the side of the bowl, was similar to Oswald type 26, dated c.1740-1800, Peacey type 14, 1730-1800.

The remaining marked pipe bowls, all unstratified, were also of probable local manufacture and dated from 1689 to 1881. The earliest bowl, bearing the name, "TAYLOR", within a cartouche, is the probable product of William Taylor, working in Bristol from 1689 until at least 1712, when he took one George Ebbery as an apprentice (Walker 1971, fig 13 and p.20; Jackson and Price 1974, 75). Ebbery was later to work in partnership with George Berry (see below) in the mid to late eighteenth century. This pipe was recovered from the machining layer in the centre of the site, which also yielded a bowl of eighteenth century date with a blank cartouche. It has been suggested that a blank cartouche is the result of a pipemaker inheriting another maker's moulds and deliberately excising his initials. Two bowls of similar date, with similar blank cartouches, were recovered during excavations on Upper Maudlin Street (Jackson 2000a, 95).

Two bowls of mid to late eighteenth century date were recovered from the eastern portion of the site (Contexts **1036** and **1040**). One bowl bears the initials, "WN", incuse, on the top of the bowl and may be the product of one of two Bristol makers, both of St James' parish, either William Naylor (fl.1722-35) or William Nicholas (fl.1730-75) (Jackson and Price 1974, 60). The second bowl bears the initials, "IW", within a cartouche and may be dated typologically to c.1730-1800 (Peacey type 14, Oswald type 26). Jackson and Price list at least ten makers with these initials working in Bristol within these dates.

The remaining marked bowl bears the indistinct initials, "GB", within a possible shield surrounded by a circle of raised dots. The bowl may be dated typologically to 1740-1820 (Oswald type 26, Peacey type 15). The only Bristol maker with these initials known to have been working at this period is George Berry, who was apprenticed to George Ebbery in 1740 (see above). Berry is recorded as working in St Michael's parish from 1754-74. It is probable that he went into partnership with Ebbery, as the firm of "Ebbery and Berry" was a noted exporter of clay pipes from 1774-77 (Jackson and Price 1974, 29).

A further unstratified bowl fragment bears fluted decoration and a floral design and is similar in decoration to pipes manufactured by Jonathan Moul, who was working in New Street (between Great Ann Street and Great George Street) from c.1836 to c.1847 (Beckey and Jackson 1986, 45, 46 and fig 4).

Two remaining unmarked bowls, both unstratified, were dated typologically to c.1690-1720 (Oswald type 19, Peacey types 9 or 11), and a third bowl, also unstratified, to the period 1830-70 (Peacey type 17).

### **Discussion**

The assemblage is notable primarily for its relatively small size and the lack of significant numbers of pipes of nineteenth century date, in an area known to be the centre of the nineteenth century pipemaking industry in Bristol (Baker, Beckey and Jackson 1989, 55). The industry, which, in the seventeenth and eighteenth centuries, had been based largely in the Lewins Mead area of the city, gradually re-located to a more suburban environment over the course of the following several decades (Beckey and Jackson 1986, 45). It is probable that this was a sporadic and adhoc move, prompted by a search for less cramped and more fire-resistant (i.e. not timber-framed) premises, rather than an organised re-location.

Assemblages of kiln waste have been recorded at Newton Street, dating to 1820-70 (Baker, Beckey and Jackson 1989 pp.55-58); New Street, dating to 1837-51 (Beckey and Jackson 1986, pp.45, 46) and Wellington Road, Great Ann Street and Great George Street, dating to the 1850s (Beckey 1999, pp.89-93). A known pipe kiln site, George Bye's pipe factory, in operation from the 1850s onwards, has been identified between Great George Street and Great Ann Street (Beckey 1999, fig 4, pp.92,93). Documentary sources also record numerous nineteenth century pipemakers working or residing at addresses in the Great George Street and Great and Little Ann Street area (including a J.Wilkey at 26, Wade Street, 1864-70; Jackson and Price 1974, 79 and *passim*).

It is thus surprising that almost all of the dateable pipe fragments from this assemblage are of late seventeenth to late eighteenth century date, with only one fragment that can be confidently dated to the nineteenth century. This is a slightly wider date range than the pipe recovered during the evaluation (none of which was dated later than c.1720; Young 2000 pp.14, 15) and suggests the pipe recovered during the watching brief dates to the earlier period of occupation of the 1707 tenements, before the pipe making industry had become established in the vicinity.

### **6.3. THE GLASS (by Sarah Newns)**

A relatively small assemblage of eight complete bottles, one bottle base shard and one glass marble, weighing a total of 3,205g, was recovered in the course of the watching brief.

Most of the glass was recovered from Context **1036**, an unstratified machining layer in the eastern portion of the site. The earliest bottle recovered was of probable nineteenth century date or earlier, a small, thick-walled phial in pale green glass with frequent small air bubbles. The phial is cylindrical in form, with pronounced mould seams and a very thick base and probably served as a container for medicine or other chemicals.

The remaining bottles from this layer were all machine-made, of probable twentieth century date. These comprised four clear glass milk bottles, embossed "Mendips Bristol Sterilised Milk", with a triangular "Safety First" design on the rear of the bottle; one clear glass embossed early Pepsi Cola bottle with remnants of the paper label; one clear glass unmarked probable medicine bottle and one bottle base shard in green glass, bearing an embossed eagle's head. The milk bottles must be of 1920s date or later, as milk was sold only from churns before this date (Hedges 1975, 30). The context also contained a coloured glass marble (19<sup>th</sup>/20<sup>th</sup> century).

The remaining complete bottle was recovered from **Borehole 20** in the south-eastern corner of the site and consisted of a small ink bottle in pale green glass, with pronounced mould seams and an unevenly applied lip, of probable nineteenth century date (Hedges 1975, 27).

#### 6.4. OTHER ARTEFACTS (by David Etheridge and Andrew Smith)

Machining layer **1040** yielded a small collection of engraved metal nameplates, of which two were retrieved for further examination. All were of the same size and shape, bearing the same logo. The plates measured 105 mm by 44 mm by 1 mm with four holes for fastening, one in each corner. The plates were in a white metal, probably aluminium, that shows little sign of corrosion, each on average weighed 32.5 g. One face was engraved (probably acid etched) with the logo:

MANUFACTURED BY  
BRECKNELL MUNRO & ROGERS  
(1928) LTD  
ENGINEERS FOUNDERS  
BRISTOL PAT. NO. [blank] ENGLAND

The firm of Brecknell Munro and Rogers Ltd. were based on Pennywell Road. They were mechanical and electrical engineers who made automatic vending machines and pantographs for electric trams and trolleybuses. Records in the Bristol Record Office indicate they were in existence from 1876 to at least 1947. The firm was bought out by their chief designer Harry Dolman, and became Brecknell Dolman and Rogers ([http://en.wikipedia.org/wiki/Harry\\_Dolman](http://en.wikipedia.org/wiki/Harry_Dolman); no date given).

The finding of these plates suggest they, or one of their suppliers, operated from the present study area during the later half of the 20<sup>th</sup> century. This ties in with the evidence for late 20<sup>th</sup> century engineering structures reported above.

From context **1025** came a bent teaspoon with a purple patina, weight 15 g. Cleaning in the hallmark area revealed the word 'ORUBA' and what appeared to be a small pennant with the letters W H within. A trawl of the internet revealed the SS Oruba was a steamship built for the Pacific Steam Navigation Company and serving with the Orient line ([www.simplonpc.co.uk](http://www.simplonpc.co.uk)). She was berthed in Sydney on the 27<sup>th</sup> April 1891 (<http://mariners.records.nsw.gov.au>). Records indicate she plied routes to Australia and the Americas carrying passengers and mail ([www.simplonpc.co.uk](http://www.simplonpc.co.uk), <http://query.nytimes.com>). During the Boer War she operated as a troop ship, returned to service with the Royal Mail, then commandeered during the Great War as a dummy battleship before being scuttled in the Aegean ([www.simplonpc.co.uk](http://www.simplonpc.co.uk)). Similar examples of this spoon are believed to be silver plated, by William Hutton and Sons, Sheffield. This spoon probably represents a souvenir from the vessel, taken by a former passenger or crewmember.

A large, smoothed and rounded pennant sandstone fragment weighing 1.645 kg, from context **1036** is interpreted as a broken street cobble.

Several pieces of chert gravel were retrieved during this exercise. On cleaning none of these pieces were found to be worked.

Other artefacts observed on site were identifiably mid to late 20<sup>th</sup> century in date and were therefore not collected.

## 7. SUMMARY AND CONCLUSIONS

A programme of archaeological monitoring has been undertaken during construction groundworks on land adjacent to No. 46 Wade Street, St. Paul's, Bristol (NGR ST 5985 7347).

This project was commissioned by Connolly and Callaghan Limited to satisfy a planning condition for an archaeological watching brief applied by the Bristol City Council Planning Department. The project was undertaken by Avon Archaeological Unit Limited to a Written Scheme of Investigation prepared by Avon Archaeological Unit Limited and agreed with the Archaeology Officer of Bristol City Council. The Archaeological monitoring had been requested, as there were known sites and find spots of Romano-British, Medieval and early post-medieval date in the vicinity.

Archaeological monitoring took place between the 5<sup>th</sup> and 31<sup>st</sup> March 2009. The machine boring of 37 piles to a depth of c. 5 m below ground surface was monitored. During the boring a geological deposit known as the Greensand, probably dating to the later Middle Pleistocene (c. 380,000 to 125,000 Before Present) was observed in the spoil from eight of the piles, originating approximately 4.5 m below present street level. Although the Greensand deposit has been associated with the discovery of Lower Palaeolithic stone tools in the St. Anne's district, no artefacts of that date were retrieved by this exercise.

Subsequently an archaeologist monitored the machine excavation of one-metre deep foundation trenches across the study area.

Overall it was found that a large proportion of the study area had been heavily disturbed during the 20<sup>th</sup> century, with up to 2.5 m depth of made ground containing a large amount of demolition rubble. This material probably represents the demolition of former early 18<sup>th</sup> century tenement buildings known to have occupied the site and the backfilling of the cellars with the rubble. Subsequently the site had been used as a motor engineering workshop, with walls, deposits and demolition rubble relating to that period also. However, in a few places, particularly along the Wade Street frontage, sandstone walls and the remnant of vaulted cellar roofs in both brick and sandstone were observed, which relate to the early 18<sup>th</sup> century tenements. A single well, also probably dating to this period of activity, was exposed during spoil moving operations. In several places soil layers were exposed that indicate low intensity medieval and earlier post-medieval agricultural activity across the study area.

In general then, the watching brief indicates low level agricultural activity across the site during the medieval and early post-medieval periods, with a pronounced period of building activity in the late 17<sup>th</sup> or early 18<sup>th</sup> centuries, followed by an intense period of domestic occupation in the earlier 18<sup>th</sup> century. The later 18<sup>th</sup> century and the 19<sup>th</sup> century are less well attested, suggesting that while the tenements remained standing, domestic occupation was much less pronounced. The tenements were demolished during the first half of the 20<sup>th</sup> century, with evidence for partial reuse of the site as an engineering works in the later half of the 20<sup>th</sup> century.

No structures, finds or deposits relating to the Roman period were observed during this monitoring exercise, despite the recorded find in the 19<sup>th</sup> century of two Roman lead ingots at the nearby crossing of the river Frome.

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## APPENDIX 1

### The Clay Tobacco Pipe Catalogue

Context	Quantity	Weight (g)	Description	Approx date range
1000	20	104	<p>1 stem fragment 109mm long, with mouthpiece.            1 stem fragment with very abraded spur heel.            1 stem fragment with slightly abraded spur heel.            1 stem fragment (oval in cross-section) with fractured spur heel.            12 undiagnostic stem fragments.            4 fragments are of 4/64" bore diameter.            11 fragments are of 5/64" bore diameter.            1 fragment is of 6/64" bore diameter.</p> <p>1 near-complete, forward-leaning plain bowl with a slightly abraded spur heel. Oswald type 19 (c.1690-1710), Peacey type 9 or 11 (1690-1720).            1 near-complete bowl with signs of external burning, forward-leaning, with very abraded, chunky spur heel. Oswald type 19 (c.1690-1710), Peacey type 11 (1690-1720).            1 partial bowl with long, abraded spur, forward-leaning, undecorated, possibly Peacey type 17 (1830-70).            1 bowl fragment with abraded spur heel and maker's mark, "GB", within a shield device surrounded by a circle of raised dots, possibly Oswald type 26 (1740-1800), Peacey type 15 (1780-1820). Possibly George Berry, apprenticed to George Ebbery (see below), 1740. Freed 1747. Working in St Michael's parish, 1754-74. The firm, "Ebbery and Berry", were a noted exporter of pipes c. 1774-77 and it is assumed that Berry was in partnership with his former master. Berry was still alive in 1812, when his daughter married (Jackson and Price 1974, 29).</p>	<p>Dating from typologies: 1690-1870.            Dating from identified makers: 1747-c.1777.</p>
1025	7	40	<p>5 undiagnostic stem fragments.            1 fragment is of 5/64" bore diameter.            2 fragments are of 6/64" bore diameter.            2 fragments are of 7/64" bore diameter.</p> <p>1 forward-pointing, straight-sided bowl with cartouche bearing maker's name, "TAYLOR". Peacey type 11 (1690-1720). Probably mark of William Taylor, a Bristol maker, fl.1689-1706, dead by 1721 (Walker 1971 fig.13, p.20. He took George Ebbery (above) as his apprentice in 1712 (Jackson and Price 1974 75, 112).            1 narrow, upright bowl with sooting around rim, large pedestal heel. Possible cartouche with maker's name removed (Jackson 2000 95). Lip of bowl parallel to stem, no milling. Oswald type 25 (c.1700-70).</p>	<p>Dating from typologies: 1690-1770.            Dating from identified makers: 1689-c.1712.</p>
1026	3	24	<p>1 stem fragment of bore diameter 5/64".</p> <p>1 near-complete bowl with an abraded spur heel, probably Oswald type 19 (1690-1710), Peacey type 11 (1690-1720).            1 near-complete bowl with heel missing and perforation in side of bowl. Oswald type 26 (c.1740-1800), Peacey type 14 (1730-1800).</p>	<p>Dating from typologies: 1690-1800.</p>

Context	Quantity	Weight (g)	Description	Approx date range
1036	2	20	1 stem fragment with fractured heel and signs of external burning Bore diameter 5/64".  1 complete bowl with slightly abraded very long spur heel. Cartouche bears the initials, "IW". Oswald type 26 (c.1740-1800), Peacey type 14 (1730-1800). May be 1 of 10 Bristol makers of these initials working between these dates (Jackson and Price 1974, 78).	Dating from typologies: 1730-1800.
1038	1	2	1 stem fragment of bore diameter 4/64".	Post medieval.
1040	4	36	1 stem fragment with an applied spur heel, of bore diameter 6/64". 1 stem fragment with a fractured spur heel, of bore diameter 4/64".  1 partial bowl with an abraded spur heel and the maker's initials, "WN", incuse, on the top of the bowl. 1 of 2 possible Bristol makers, William Naylor (fl.1722-1735), working in St James' parish, or William Nicholas (fl.1730-1775), recorded at St James' parish 1739-74. He was working or residing at 29, Lewins Mead and had a warehouse there in 1775 (Jackson and Price 1974, 60). 1 bowl fragment with fluting and floral decoration, sooted externally. Similar to pipes made by Jonathan Moul (fl.1835-47, dead by 1851), working in the Great Ann Street/New Street/George Street area (Beckey and Jackson 1986, figs 3,4; p.46).	Dating from possible makers: 1722-1847.
Borehole 14	1	<2	1 stem fragment of bore diameter 4/64".	Post medieval.