

**Area A, Severn Street,
Royal Worcester Porcelain, Worcester**

An Archaeological Watching Brief (Borehole survey and test pits)

For Berkeley Homes (Oxford and Chiltern) Limited

by Danielle Milbank and Andy Taylor

Thames Valley Archaeological Services Ltd

Site Code RWP 04/65

April 2007

Summary

Site name: Area A, Severn Street, Royal Worcester Porcelain, Worcester

Grid reference: SO 8515 5422

Site activity: Watching Brief -Borehole survey and test pitting

Date and duration of project: 11th December 2006 to 4th January 2007

Project manager: Steve Ford

Site supervisor: Danielle Milbank

Site code: RWP 04/65

Summary of results: Three of the sample points observed revealed late post-medieval brickwork representing floors and foundations. None of the deeper observations (boreholes, window sample) observed rich deposits (peat) of palaeoenvironmental potential. A small number of late post-medieval ceramic finds were noted

Location and reference of archive: The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited at Worcester City Museum in due course.

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Report 04/65c

Introduction

This report documents the results of an archaeological watching brief carried out at Royal Worcester Porcelain, Severn Street, Diglis, Worcester (SO 8515 5422) (Fig. 1). The work was commissioned by Mr Cliff Buddery of Berkeley Homes (Oxford and Chiltern) Ltd, Berkeley House, Abingdon Science Park, Barton Lane, Abingdon, Oxfordshire, OX14 4NB.

Planning permission (App no P05D0432) has been gained from Worcester City Council to redevelop the site of the Royal Worcester Porcelain works for a hotel complex and new residential apartments, with the refurbishment and reuse of other historical buildings. This permission applies to both the northern and southern parts of the Porcelain Works complex, and the planning consent is subject to three archaeological conditions (54, 55 and 56). Conservation Area consent has also been gained (App no L05D0073) with a further condition (2) for a record of the factory buildings and manufacturing process prior to demolition. This is not a part of the works discussed here and has been carried out by others. A summary of the relevant consents is presented in a brief for the project (WCM2006).

This report documents the results of an archaeological watching brief carried out as part of a programme of boreholes, window samples and test pitting at the Severn Street site, prior to demolition and redevelopment of existing buildings.

This is in accordance with the Department of the Environment's Planning Policy Guidance, *Archaeology and Planning* (PPG16 1990), and Worcester City Council's policies on archaeology. The field investigation was carried out to a specification approved by Mr James Dinn, Archaeological Officer for Worcester City Council. The fieldwork was undertaken between the 11th December 2006 and the 4th of January 2007 by Danielle Milbank and Andrew Weale, and the site code is RWP 04/65c. The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited at Worcester City Museum in due course.

Location, topography and geology

The site is located in the Diglis area of Worcester, which is situated in the Severn Valley, to the north of the Severn's confluence with the River Teme (Fig. 1). The site itself lies to the south of the city centre, in the valley

of a former tributary to the Severn, the Frog Brook, whose extant part now comprises part of the Birmingham to Worcester Canal. The Severn Street site lies immediately west of the canal and has been occupied since c. 1840 by buildings associated with the pottery works.

According to the British Geological Survey, the underlying geology consists of alluvial drift deposit overlying the Eldersfield mudstone formation (BGS 1993). A preliminary borehole investigation (STATS 2004) showed that, generally, made ground overlay alluvial deposits to a depth of 0.4-1.3m below current ground level for the Severn Street Area A. The results of the evaluation trenches excavated in the basement area for the Portland Street site to the south indicated deeper made ground, in excess of 4m (Wallis and Colls 2006). The site is reasonably flat and lies at a height of c.15m above Ordnance Datum.

Archaeological background

The archaeological background and potential of the site has been summarized in a brief for the project (WCM 2006) issued by Mr James Dinn, Archaeological Officer at Worcester City Museum, drawing on information presented in a desk-based assessment, small scale evaluation and watching brief during geotechnical investigation (AA 2005a; 2005b; 2005c; Morriss and Sherlock 2005). The Portland Walk part of the development has also been the subject of an evaluation and archaeological watching brief, although the thickness of the 19th- and 20th-century deposits prevented archaeological levels being affected by groundworks (Wallis and Colls 2006; Milbank 2007).

In summary, the site lies close to the confluence of the Frog Brook and the River Severn, within an Archaeologically Sensitive Area and a Conservation area. Such a riparian location, especially if a terrace edge can be identified, is often one preferred for earlier prehistoric settlement and the Worcester City Historic Environment Record notes the presence of prehistoric metalwork finds recovered from the river nearby. A horse burial of probable Iron Age date was found beneath the floor of the vault of St Peter the Great, a nearby church of possible Anglo-Saxon origin. However, no other prehistoric remains are known to have been found in the immediate vicinity of the Severn Street site.

Roman Worcester appears to have been a continuously occupied settlement, with evidence of a thriving iron-smelting industry and an important role in trade as a river port. A road linked a legionary fortress at Kingsholm (near Gloucester) and Wroxeter (near Shrewsbury) and this is believed to have run along the east bank of the River Severn. Several Roman features and deposits, including substantial remains suggestive of a cemetery, are recorded both to the south of the site and at the western edge of the Severn Street site in the area of

St Alban's School (AA 2005b; 2005c). The considerable evidence for use of this land in the Roman period would indicate a high potential for extant Roman remains, possibly including burials, at the west end of the Porcelain Works development.

Saxo-Norman occupation and industry are recorded just to the south. Civil War defences are recorded as (approximately) crossing the site. Remains of the porcelain works itself (late 18th century onwards) could also be expected.

Objectives and methodology

The purpose of the watching brief was to record, and if necessary excavate, any archaeological features or deposits encountered during a programme of trial pitting and borehole survey on the site. Based on the results of earlier evaluation on the site, specific sample locations were targeted for the watching brief for specific research questions, as outlined in Mr Dinn's brief.

The siet investigation programme to be monitored was designed to test the deposits and geology underlying Area A for hazardous chemicals and contamination prior to demolition and development, and was carried out by Vertase FLI Ltd. Percussion testing was also carried out to determine the composition and stability of the deposits and geology in Area A.

The boreholes and window samples were initially dug by hand to a depth of 1.2m below current ground level, breaking through concrete by pneumatic drill where necessary. The holes were typically 0.5m across but irregular in plan. For locations within the buildings, appropriate lighting and ventilation was provided.

The window sample holes were c.0.15m in diameter and were drilled to 5m below ground level, and the boreholes were dug to 20m, with the bore measuring 0.15m to 0.20m in diameter.

The boreholes and window sample locations were distributed fairly evenly throughout Area A, most of them being located outside the existing Porcelain Works buildings. Those that were dug were positioned as close as possible to their intended positions

The trial pits were excavated by a small 360° Kubota-type machine under constant archaeological supervision and spoilheaps were monitored for finds.

Results

Eight boreholes, eight window samples and five test pits were eventually dug across the site and archaeologically monitored. Their locations are shown on Figure 2 and with detailed descriptions in Appendix 1. The locations sampled in general produced no archaeological remains, except as follows.

Boreholes

The eight boreholes were typically drilled 10m to 20m deep, going well below any archaeologically relevant levels. The majority of the boreholes comprised minor variations of concrete overlying made ground overlying a reddish brown sandy silt overlying the natural geology (Mercian Mudstone - red sandy clay with occasional pebbles at the top). In borehole BH103, a course of four bricks was visible in the section side to a depth of 1.03m and in borehole BH105 a water pipe was encountered. A single handle or leg fragment of light brown glazed late post-medieval earthenware was recovered from the made ground in this borehole and a (cup?) rim sherd of white/blue glazed earthenware from the made ground in borehole 109.

None of the boreholes revealed any deposits of obvious palaeoenvironmental potential, such as peat or humic deposits.

Window Samples

Just one of the window sample holes revealed structural deposits other than made ground.

WS 105

This test pit was dug within an existing structure. The watching brief here was required in case remains were encountered of the civil war defences or of the porcelain works, including, specifically, kiln bases. The stratigraphy consisted of concrete overlying made ground (rubble, ash, coal) partially overlying a brick wall or foundation observed on the northern face of the pit. Four courses of brickwork were observed, bonded in the English style with bricks of late post-medieval dimensions (0.23m x 0.11m x 0.075m). This in turn overlay a dark green grey silty clay.

This wall or foundation probably belonged to the Finished Goods Warehouse (G in Sherlock and Feryok 2004), which had several phases, probably beginning in the third quarter of the 19th century. From the limited observations possible it is not clear to which phase(s) this element might belong.

Test Pits

The test pits were 0.7-1.5m wide and 2.5-3.5m long at the top. They were between 0.9m and 3.2m deep. Two of the test pits revealed brick structures (see below). TP104 contained a fragment of ceramic electrical insulator from made ground, presumably of 20th century date.

TP 102

The watching brief here was required in case remains were encountered of the Frog Brook or of the porcelain works. The stratigraphy comprised concrete overlying a green grey hardcore/rubble. The width of the machine bucket almost exactly fitted the space between a brick wall on the SW side of the pit and solid concrete on the NE. The brickwork was of late post-medieval dimensions in English bond, as in WS105. The natural geology was not encountered [**Plate 1**].

The wall here seems likely to be part of the Binns Building (complex K in Sherlock and Feryok 2004) dating no after 1840 and but in place by 1884.

TP 105

The watching brief here was required in case remains were encountered of the civil war defences or of the porcelain works. This consisted of concrete overlying made ground overlying a mid red brown silty sandy clay. This overlay a dark green grey silty clay. Four courses of late post-medieval brickwork were observed in the northern face of the pit founded on the green/grey silty clay natural geology. The bricks were of modern dimensions and were laid end-on and are presumably a foundation. Further brickwork was evident at the southern end of the trench though observation of its form and orientation was hindered by the presence of a service pipe. A single line of bricks above a hard reddish sand with pebbles may be a part of a brick floor. Beneath this was ashy rubble above two(?) courses of brickwork with the hint of an arch formation [**Plate 2**]. A single handle sherd of brown glazed 19th-century earthenware pottery was recovered from the made ground.

These fragmentary remains are difficult to place within the historic development of the site but may relate to the 'northern canal-side warehouse' (F in Sherlock and Feryok 2004) dating after 1902.

Finds

Three sherds of pottery and a fragment of electrical insulator were retrieved during the course of the watching brief. All items were of late post-medieval (19th or 20th century) date, and the three pottery pieces were all made from earthenware. They comprised a lightweight handle sherd of dark brown glazed pottery with a fine red fabric recovered from TP105; a rim sherd from a cup(?) of white/blue glazed pottery with glazed yellow relief

decoration (a leaf) with a fine white fabric from borehole 109, and a possible handle or leg sherd with a light brown glaze with a coarse yellow fabric, from borehole BH103. This latter piece has a similar fabric to mould fragments found elsewhere on the site and may be part of a mould or some other item of kiln furniture. The fragment of electrical insulator came from test pit TP104.

Conclusion

A small number of deposits representing late post-medieval structural remains were observed in the various locations inspected as well as made ground of relatively recent date. The structural remains comprised brick walls and floors but little information could be determined due to the necessarily limited extent of the interventions. From what observations were possible, and by correlation with the cartographic evidence, all appear to belong to buildings of the factory dating to the late 19th and early 20th centuries. A small number of late post-medieval ceramic finds were recovered, whereas other modern material such as coal, brick/tile and concrete was observed in the made ground but not retained. No deposits of earlier archaeological or rich palaeoenvironmental deposits were noted. No deposits or finds predating the 19th century were observed.

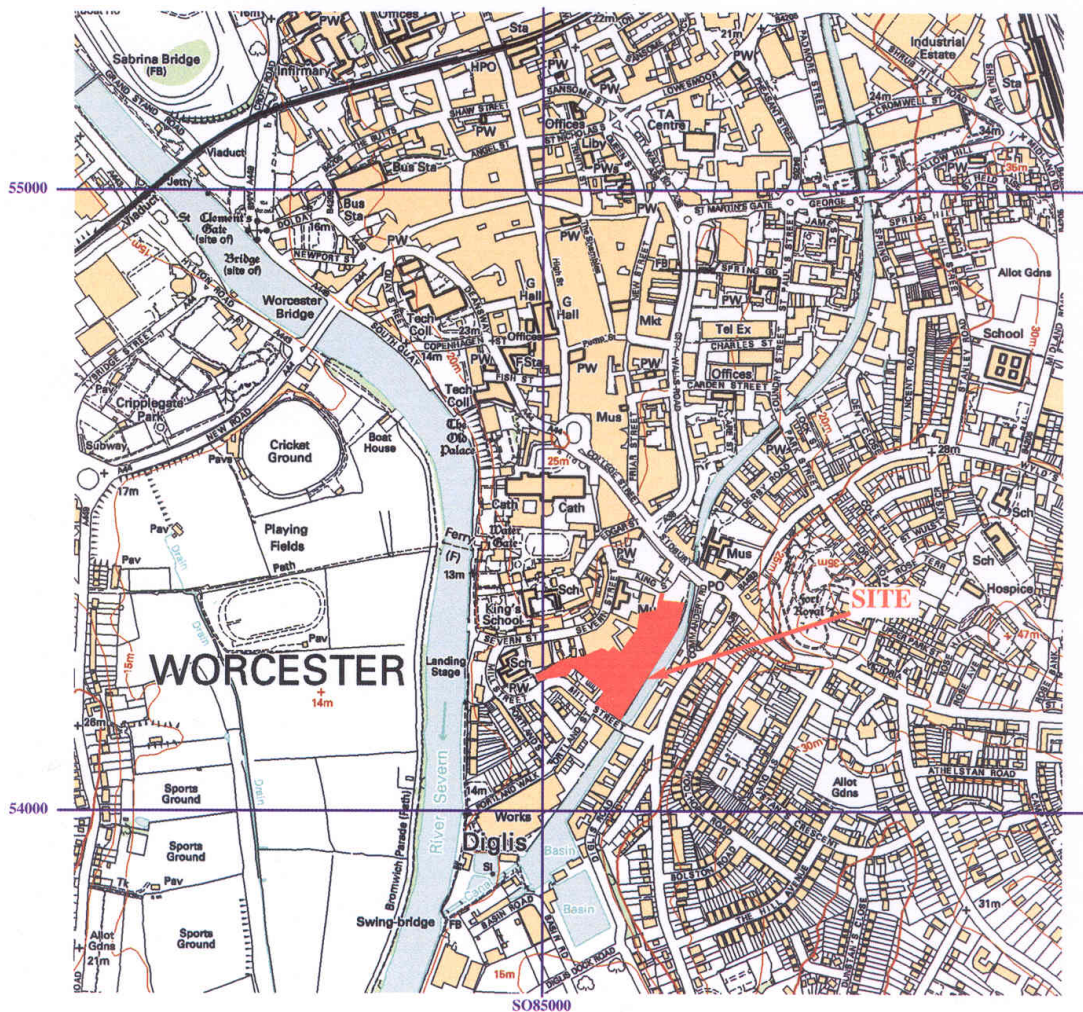
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Appendix 1: Details of stratigraphy recorded

BH=Borehole; WS=Window sample; TP=Testpit

Trench No.	Length (m)	Breadth (m)	Depth (m)	Comment
BH 101	-	-	10.50	0.00m-0.10m Tarmac; 0.10m-0.19m hardcore; 0.19m-1.15m made ground; 1.15m-1.60m grey sandy silt; 1.60m+ natural geology (Mercian mudstone).
BH 103	-	-	20.00	0.00m-0.17m concrete; 0.17m-0.21m hardcore; metal plate and four courses of brick visible in section 0.21m-1.18m made ground; 1.18m-1.60m reddish brown silty clay with occasional brick fragments; 1.60m-2.00m red silty sandy clay; 2.00m+ natural geology (Mercian mudstone).
BH 104	-	-	20.00	0.00m-0.15m concrete; 0.15m-1.05m made ground; 1.05m-1.56m mid reddish brown sandy clay; 1.56m+ natural geology (Mercian mudstone).
BH 105	-	-		0.00m-0.16m concrete; 0.16m-0.24m hardcore; 0.24m-1.00m made ground; 1.00m-1.60m mid reddish brown silty clay; 1.60m+ natural geology (Mercian mudstone).
BH 106	-	-	20.00	0.00m-1.20m garden soil; 1.20m-1.60m mottled garden soil; 1.60m-2.00m reddish clayey silty sand; 2.00m+ natural geology (Mercian mudstone).
BH 107	-	-	10.00	0.00m-0.25m concrete; 0.25m-0.75m made ground; 0.75m-2.00m mottled dark red brown sandy clay; 2.00m+ natural geology (Mercian mudstone).
BH 108	-	-	10.00	0.00m-0.25m concrete; 0.25m-0.40m mortar and rubble mix; 0.40m-0.95m mid brown sandy clay; 0.95m-1.20m reddish brown silty sandy clay; 1.20m-3.00m dark red brown silty clay; 3.00m-3.80m dark grey silty clay; 3.80m-4.00m mid grey silty clay; 4.00m-5.00m mottled reddish grey green friable clay; 5.00m+ natural geology (Mercian mudstone).
BH 109	-	-	10.00	0.00m-0.25m concrete; 0.25m-0.45m brick rubble; 0.45m-1.20m dark red black silty clay; 1.20m-2.50m dark grey brown silty clay; 2.50m+ natural geology (Mercian mudstone).
WS 101	-	-	1.15	0.00m-0.18m concrete; 0.18m-0.30m hardcore; 0.30m-0.95m made ground; 0.95m+ mid brown friable silty clay with decayed roots. natural geology not observed.
WS 102	-	-	5.00	0.00m-0.20m concrete; 0.20m-1.15m made ground; 1.15m-1.50m dark brown grey silty sand with some charcoal; 1.50m-1.80m reddish grey silty sand slightly humic; 1.80m+ natural geology (Mercian mudstone).
WS 103	-	-	2.30	0.00m-0.13m concrete; 0.13m-0.30m hard standing; 0.30m-1.15m made ground; 1.15m-1.72m dark brown grey silty sand with ash, charcoal and tile fragments; 1.72m-1.90m dark reddish brown silty sand with charcoal flecks; 1.90m-2.30m mid-dark reddish brown silty sand. 2.30m+ natural geology (Mercian mudstone).
WS 104	-	-	5.00	0.00m-0.17m concrete; 0.17m-0.95m made ground; 0.95m-1.15m dark reddish brown silty sandy clay with charcoal and brick fragments; 1.15m+-2.00m dark grey silty sand; 2.00m+ natural geology (Mercian mudstone)..
WS 105	-	-	0.70	0.00m-0.20m concrete; 0.20m-0.70m brick rubble; 0.70m+ brick surface. natural geology not observed.
WS 106	-	-	1.20	0.00m-0.20m concrete; 0.20m-0.50m brick courses; 0.50m-0.78m brick rubble; 0.78m-1.20m dark reddish brown sandy clay with decayed roots. natural geology not observed.
WS 107	-	-	0.55	0.00m-0.20m concrete; 0.20m-0.55m rubble and brown sandy silt; 0.55m+ fine brown and silt. natural geology not observed.
WS 108	-	-	1.18	0.00m-0.18m concrete; 0.18m-0.56m made ground; 0.56m-1.18m mid brown sandy silt (buried topsoil?). natural geology not observed.
TP 101	2.50	0.70	3.50	0.00m-0.02m topsoil; 0.02m-0.60m made ground; 0.60m-1.05m mid brown sandy silt; 1.05m-1.60m red sandy silt; 1.60m+ natural geology (Mercian mudstone).
TP 102	2.50	0.70	1.50	0.00m-0.20m concrete; 0.20m-1.50m grey/green rubble- made ground. Brick wall in SW section and mass concrete in NE section, Natural geology not observed [Plate 1]
TP 103	3.50	0.70	0.90	0.00m-0.15m concrete; 0.15m-0.90m made ground. Natural geology not observed Brick wall in NW section; water pipe
TP 104		0.70	3.20	0.00m-0.15m concrete; 0.15m-0.25m hardcore; 0.25m-1.35m made ground; 1.35m-2.00m reddish brown sandy silty clay; 2.00m+ natural geology (Mercian mudstone).
TP 105	2.50	1.50	3.20	0.00m-0.16m concrete; 0.16m-0.46m made ground; 0.46m-1.20m mid red brown silty sandy clay; 1.20m+ natural geology (Mercian mudstone). Brick foundations and floor [Plate 2]



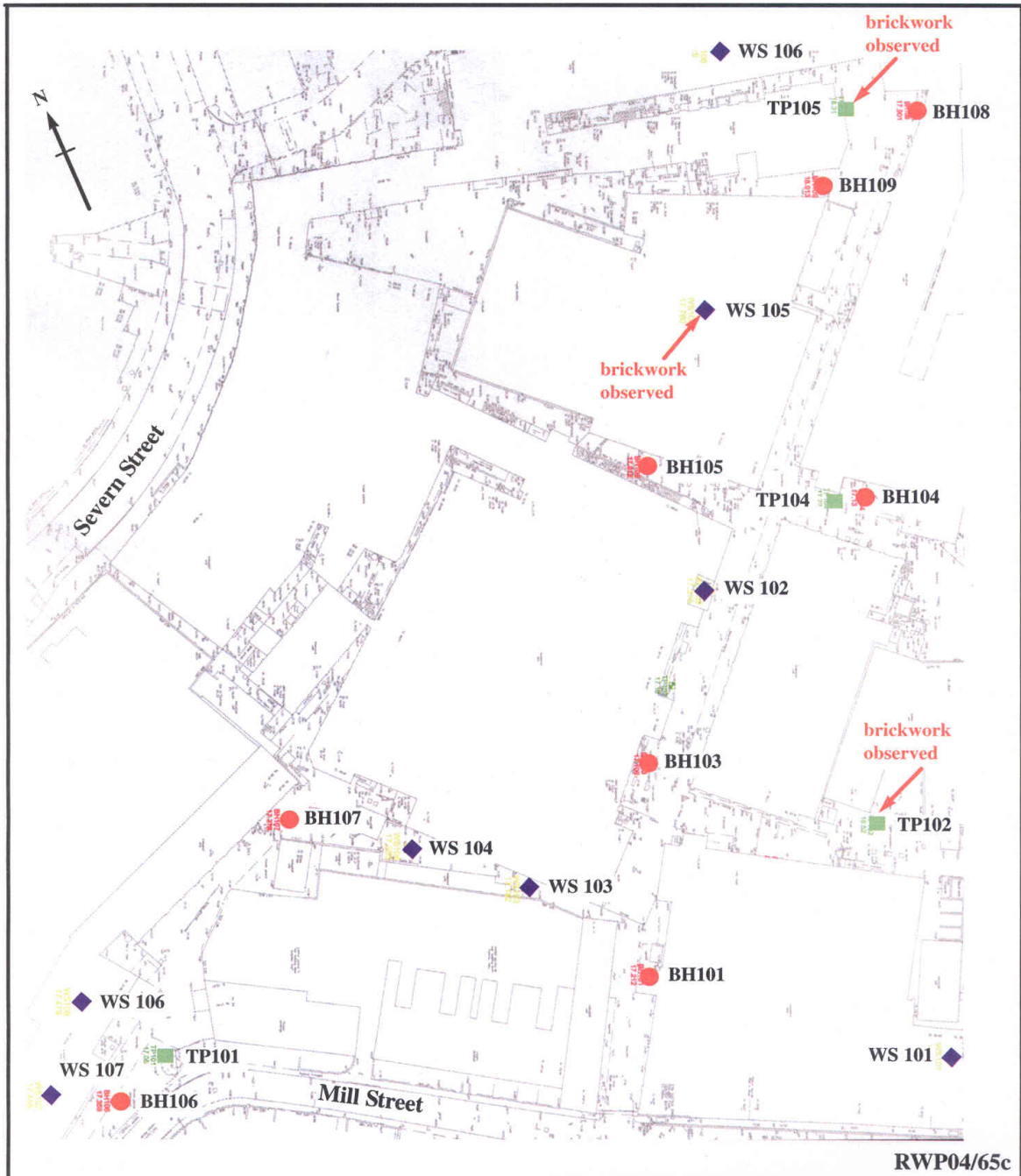
RWP04/65c

**Royal Worcester Porcelain, Severn Street Area A
boreholes and trial pits, Worcester 2007
An Archaeological Watching brief**

Figure 1. Location of site within Worcester.

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Figure 2. Detailed location of sample points.

Not to Scale

T H A M E S V A L L E Y
 A R C H A E O L O G I C A L
 S E R V I C E S



Plate 1. Testpit 102 looking NNW, scale 0.5m.



Plate 2. Testpit 105 looking NNW, scale 0.5m.