ARCHAEOLOGICAL EVALUATION AT ROYAL WORCESTER PORCELAIN WORKS, WORCESTER







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Archaeological Evaluation at Royal Worcester Porcelain Works, Worcester

Richard Bradley

With contributions by Dennis Williams

Summary

An archaeological evaluation was undertaken on the site of a car park at the former Royal Worcester Porcelain Works, located off King Street in the Sidbury part of Worcester city and centred on National Grid Reference SO85215434. It was commissioned by Cathy Patrick of CgMs Consulting Ltd acting on behalf of Berkeley Homes (the Client) who intend to develop this part of the Royal Worcester Porcelain site for residential use, for which planning application is in preparation.

The proposed development site is positioned just outside the projected limits of the Roman town and within the historic core of the medieval city, defined by the city wall. As such, the site was considered to contain heritage assets and potential heritage assets, the significance of which may be affected by the application. Previous work across the site had identified Roman remains dated to the 1st and 2nd centuries, a cobbled surface, a Saxon re-cut of a Roman ditch, a medieval building, the medieval city wall, brick structures of 18th to 20th century date, human remains from the churchyard of St Peter the Great and part of the church structure itself. The church was known to have medieval origins and to have been rebuilt in 1838.

Four trenches of varying size were excavated across the car park. In addition to a general intention of establishing the existence of archaeological remains across the site, the trenches were specifically positioned in order to assess the extent and survival of previously identified archaeological features, such as the city wall and St Peter's church.

Archaeological remains, although variable in their level of significance, were revealed across most of the site and the trenching demonstrated that complex structural deposits of medieval and later date are present. The most extensive of these were two phases of building remains from St Peter's church the upper parts of which survived at a depth of 0.27m below the car park surface. Based on observations of the walls seen in the evaluation trenches, it is possible to suggest that the foundations and ground plan of an earlier medieval church will survive within the footprint of the Victorian structure. Numerous inhumations in a surviving cemetery layer were also encountered in close proximity to the church building. Part of the medieval city wall was exposed in the northern area of the site at a depth of 0.78m below the current car park surface. This was abutted by a later 18th century cellar with associated structural features including a brick surface which lay immediately beneath the car park.

The evaluation has demonstrated that well preserved stratified archaeological remains survive from a shallow depth beneath the current car park surface.

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1 Background

1.1 Reasons for the project

An archaeological evaluation was undertaken on the site of a car park at the former Royal Worcester Porcelain Works, located off King Street in the Sidbury part of Worcester city (Plate 1). The area evaluated in this work covered approximately 0.178 hectares of the site, centred on National Grid Reference SO85215434 (see Figure 1 for area of development). It was commissioned by Cathy Patrick of CgMs Consulting Ltd acting on behalf of Berkeley Homes (the Client) who intend to develop this part of the Royal Worcester Porcelain site for residential use, for which planning application is in preparation.

The proposed development site is positioned just outside the projected limits of the Roman town and within the historic core of the medieval city, being part of the Historic City Conservation Area first designated in 1969. As such, the site was considered to contain heritage assets and potential heritage assets, the significance of which may be affected by the application. This archaeological potential of the site has been demonstrated through earlier archaeological work encompassing desk-based assessment (Sherlock and Feryok 2004), geophysical survey (ArchaeoPhysica 2004), two stages of evaluation with borehole monitoring (Archenfield Archaeology 2006a; 2006b) and a series of archaeological watching-briefs (Millbank and Mundin 2007; Millbank 2009) covering the wider development area. Archaeological deposits identified throughout these projects have included Roman features dated to the 1st and 2nd centuries, a cobbled surface, a Saxon re-cut of a Roman ditch, a medieval building, the medieval city wall, brick structures of 18th to 20th century date, human remains from the churchyard of St Peter the Great and part of the church structure itself.

The project conforms to a verbal brief provided by CgMs Consulting and agreed with James Dinn, Archaeological Officer Worcester City Council (the Curator), for which a project proposal (including detailed specification) was produced (WA 2013).

The project also conforms to the *Standard and guidance for archaeological field evaluation* (IfA 2009) and the *Statement of standards and practices appropriate for archaeological fieldwork in Worcester* (Worcester City Council 1999).

The event reference for this project, given by the Worcester City HER is WCM101991.

2 Aims

The overall aims of this evaluation are:

- to describe and assess the significance of heritage assets with archaeological interest;
- to establish the nature, importance and extent of the archaeological site;
- to assess the impact of the application on the archaeological site:
- to provide a record that will assist with the formulation of a strategy to mitigate any threat to the archaeological site.

More specifically, the project offered the potential opportunity to contribute to, and improve understanding of, a number of research priorities identified in *An outline resource assessment and research framework for the archaeology of Worcester* (Worcester City Council 2007). These include the following:

- The character and development of the Frog Brook valley and stream (RP1.2)
- Documenting the extents of Roman Worcester (RP3.30)

- Distribution of 1st-century AD settlement (RP3.1)
- Roman road network (RP3.7)
- The southern Roman cemetery (RP3.10)
- Roman activity in the Frog Brook valley (RP3.12)
- Anglo-Saxon urban churches (RP4.14)
- Possible late Anglo-Saxon annexe defences at Sidbury and elsewhere, and their interiors (RP4.22)
- Medieval churchyards (RP5.3)
- The medieval parish churches (RP5.15)
- The eastern medieval rampart and wall (RP5.26)
- Post-medieval burial grounds (RP6.17)

3 Methods

3.1 Personnel

The project was undertaken by Richard Bradley (BA (hons.); MA; AlfA), who joined Worcestershire Archaeology in 2008 and has been practicing archaeology since 2005. Fieldwork assistance was provided by Peter Lovett (BSc (hons.)). The project manager responsible for the quality of the project was Tom Rogers (BA; MSc). Illustrations were prepared by Carolyn Hunt. Dennis Williams contributed the finds analysis, with comments from Shona Robson-Glyde.

3.2 Documentary research

An archaeological desk-based assessment (DBA) was undertaken by Archenfield Archaeology on behalf of Berkeley Homes in advance of the first phase of archaeological investigation on the development site (Sherlock and Feryok 2004). This provides the detailed background research information for this project and therefore only a brief summary of the results are presented below. Additional information on the archaeology of the site can be found in the reports on the earlier stages of evaluation (Archenfield Archaeology 2006a; 2006b) and watching-briefs conducted across the area (Millbank and Mundin 2007; Millbank 2009). Recent archaeological work in advance of development in the immediate surrounds of the site also provides further comprehensive background information on this locality (e.g. Miller and Jones 2001; Webster 2012; Daffern et al. 2012).

The DBA consulted the Worcester City Historic Environment Record, the Worcestershire Record Office and representatives of Royal Worcester Porcelain to study primary and secondary source material relating to the area, to gather a record of relevant archaeological interventions and analyse all known cartographic resources. This highlighted that the Royal Worcester Porcelain Works is located in close proximity to a series of major defensive features from numerous phases of Worcester's development; potential earlier Roman and Saxon town defences were replaced by the castle ditch in this area, now defined by Severn Street around 100m to the west of the car park investigated here. The line of the 13th century city wall and ditch are also shown on maps to run through from the north-east corner of the site before turning to the west, where a corner tower is marked. These defences were strengthened and partially expanded, with a probable bastion in this area, during the Civil Wars of 1642-51. Immediately to the north of the site, the Roman road from Gloucester ran into Worcester through Sidbury and the site is close to a possible Roman cemetery on the southern side of Worcester. Charter evidence indicates that the church and associated cemetery of St Peter the Great, known to have at least medieval origins and to be positioned in the car park, may have originated in the Anglo-Saxon period. The church was demolished 1837 and

rebuilt by 1838, before falling into disuse and being levelled in 1976. Frog Brook, which once ran around the edge of the city wall just to the south of the site, was subsumed by post-medieval development and the construction of the Birmingham and Worcester Canal in1815.

3.3 Fieldwork strategy

Fieldwork was undertaken between 19th June and 26th June 2013 following a detailed specification prepared by Worcestershire Archaeology (WA 2013). The site code is WCM101991.

Four trenches of varying size, amounting to just over 81.60 m² in area, were excavated across the car park using a JCB. The location of the trenches is indicated in Figure 2. In addition to a general intention of establishing the existence of archaeological remains across the site, the trenches were specifically positioned in order to assess the extent and survival of the medieval city wall alongside the medieval and 19th century rebuild of St Peter's church with associated graveyard. It was intended that these trenches should complement the earlier archaeological work completed across the site in order to facilitate in the refinement of the foundation plans for the planned development. All trenches were excavated in their designed position, although a small spur coming off from Trench 3 was not completed due to health and safety considerations resultant from the presence of two electricity cables in close proximity to this location.

Deposits considered not to be significant were removed using the machine, employing a toothless bucket and under constant archaeological supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material, as well as to determine their nature and resolve stratigraphic relationships. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012) and the trenches were located using a differential GPS with an accuracy limit set at 0.04m. On completion of excavation, trenches were reinstated by replacing the excavated material. The car park surface was left to have the tarmac reinstatement completed by external contractors at a later date.

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural and artefactual evidence, allied to the information derived from other sources.

3.5 Artefact methodology, by Dennis Williams

3.5.1 Recovery policy

The artefact recovery policy conformed to standard Service practice (WA 2012; appendix 2).

3.5.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date range was produced for each stratified context. These date ranges were used for determining the broad date of phases defined for the site. All information was recorded on *pro forma* sheets.

The pottery and ceramic building material was examined under x20 magnification and referenced as appropriate by fabric type and form according to the fabric reference series maintained by the Service (Hurst and Rees 1992 and www.worcestershireceramics.org).

3.5.3 Discard policy

The following categories/types of material will be discarded after a period of 6 months following the submission of this report, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository):

- · where unstratified
- post-medieval pottery, and;

 generally where material has been assessed as having no obvious grounds for retention.

3.6 Environmental archaeology methodology

3.6.1 Sampling policy

Due to the nature of the site, no deposits were excavated that were suitable for the recovery of environmental evidence.

3.7 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved. It is considered that the levels, nature and complexity of the archaeology on this site has been characterised as far as is reasonably possible.

4 The application site

4.1 Topography, geology and current land-use

The site is currently in use as mixed public and residents' only car park adjacent to the former Royal Worcester Porcelain Factory, servicing both the city centre and the new apartments and businesses that form part of the ongoing Berkeley Homes development. It is positioned immediately south of the main A38/A44 road and west of the Worcester and Birmingham Canal, which runs alongside Bath Road. The southern boundary of the site is defined by newly constructed apartments and the western boundary is formed by St Peter's Street and the entrance to the development site.

The site is broadly level and low-lying at around 19.20m AOD, being situated in the valley of the former Frog Brook which one ran south-west down to the River Severn. Geologically, it is mapped as having underlying deposits of the Sidmouth mudstone formation, part of the Mercia Mudstone group dated to the Triassic period. These are overlain by Pleistocene 2nd terrace river gravels and later alluvial deposits (BGS 1993).

4.2 Archaeological context of the site

As discussed in the desk-based assessment (Sherlock and Feryok 2004; see also the summary above), and the reports from earlier work (Archenfield Archaeology 2006a; 2006b; Millbank and Mundin 2007; Millbank 2009), the site is situated in an area that is known to contain extensive archaeological remains. However, given the proximity of the river and the position of the site close to a possible ford location in Diglis, where a number of prehistoric finds were recovered (see Carver 1980a, 17-20), evidence for prehistoric activity on the site is limited. A possible Iron Age horse burial found beneath the floor of the vault of St Peter's church remains an isolated example (Sherlock and Feryok 2004, 10; WCM 100806).

Roman remains on the Royal Worcester Porcelain site are more prominent, with deposits and features dating from the 1st to 3rd centuries AD having been identified during a number of projects. A large north-south orientated ditch containing early 2nd century waste and a single inhumation was uncovered during a watching brief nearby (WCM 100185) and investigations to the west and southwest of the site suggest that a substantial Roman cemetery was in existence in this area just outside of the main settlement (Sherlock and Feryok 2004, 10-11; WCM 100380; WCM 100041; WCM 100185). The earlier evaluation trenches excavated on this part of the site identified Roman features, including ditches and a posthole of 1st and 2nd century date (Archenfield Archaeology 2006a; 2006b; WCM 101323; WCM 101382), and the Roman road from Gloucester ran to the immediate north of the site through Sidbury (Carver 1980b, 175; Sherlock and Feryok 2004, 10; WCM 96401).

Because of its proximity to the road, a possible Roman origin for St Peter's church has been suggested (Baker 1980a, 37), and charter evidence, although debated, would indicate that a church close to this site was probably in existence from at least 969AD (Beardsmore 1977, 18-19; Baker 1980b, 119; Baker and Holt 2004, 211-213). St Peter the Great is clearly referred to in a document giving patronage of the church to Pershore Abbey, sometime between 1204 and 1234, and it is known to have been rededicated, and possibly rebuilt, in 1420 (Beardsmore 1977, 19). The medieval church was positioned just inside the corner of the city wall which, as shown on cartographic evidence, ran south from Sidbury gate and turned west past St Peter's church towards the site of the castle and Frog Gate (Sherlock and Feryok 2004, 17; WCM 96132). A tower is marked on a number of maps in this corner location (WCM 96131) and the city walls, in this form, are likely to date from the early 13th century (Beardsmore 1980, 59). Part of the Sidbury gate (WCM 96101) survives to the north of the site within a cellar of a building built during the early 20th century, and it is recognised that the mapping from different periods is in relative agreement over the line of the city walls (see Dinn 2012, 56-62).

The medieval St Peter's church (WCM 96037) was demolished and rebuilt at a larger scale from 1837 onwards, with consecration occurring on 23rd October 1838, and an associated vicarage was built north-east of the church (Beardsmore 1977, 17-19). The church was closed in 1972 after falling into disuse and demolished in 1976 (Beardsmore 1977, 17). Two phases of evaluation trenches across this area located both the vicarage, which was partly built across the medieval city wall (Trench 5, Archenfield Archaeology 2006a, 58), and the west end of the Victorian rebuild of the church (Trench 12, Archenfield Archaeology 2006b, 28-32). This identified the entrance to the church and to the crypt which tied in with a plan of the 1838 rebuild presented in the DBA (see Sherlock and Feryok 2004, 26), as well as uncovering earlier human burials truncated by the Victorian church walls. The broad outline of the church has also been mapped by a Ground Penetrating Radar Survey (ArchaeoPhysica 2004).

It is recorded that the eastern boundary of the church cemetery was defined by the city wall and cartographic evidence indicates that the line of the city wall eventually became a continuous property boundary (Archenfield Archaeology 2006b, 11). Map regression shows how tenements and yards in the northern and western part of this site built up from the 16th century onwards, both against and latterly across the city wall, before demolition in the mid 20th century (see Hughes 1990, 230-254 and Sherlock and Feryok 2004, 22-43). Structural remains in the form of sandstone and brick walls built on deposits dated to the 17th century were recorded at right angles to St Peter's Street in Trench 4 of the earlier site evaluation which probably represent this development, as do others found in later watching-brief work in this area (Archenfield Archaeology 2006a, 52; Millbank and Mundin 2007). Records suggest that the church graveyard was extended to the south and west in 1817 to alleviate a space problem, but was eventually closed in 1858 (Sherlock and Feryok 2004, 26). Human burials associated with the church were uncovered to the south in two adjacent areas monitored during watching-brief work and possibly represent remains from this later period of use, although dating was not definitive (Millbank and Mundin 2007; Millbank 2009).

5 Structural analysis

The trenches and features recorded are shown in Figures 2-7. A stratigraphic narrative of each trench follows below and the results of the structural analysis are presented in Appendix 1.

5.1.1 Trench 1:

Trench 1, 7.30m in length and orientated roughly north-west to south-east, was located at the northern edge of the car park, close to the pavement of the main A38 road (Figure 3; Plate 2). It was targeted across the projected line of the medieval city wall which had been identified, along with the Victorian church vicarage, approximately 6m to the south in Trench 5 of the earlier archaeological evaluation in this area (Archenfield Archaeology 2006a, 58).

The removal of modern deposits by machine exposed a reasonably complex set of structural remains; as a result of this, hand excavation was limited to a few sondages in order to preserve the integrity of the buildings encountered.

Immediately beneath the tarmac and hardcore car park at the eastern end of the trench was a brick surface (113) lying over a bedding layer (114), the highest element of the structural remains in this trench to have survived levelling in the mid 20th century. Two deposits of rubble – (103) and (109) – which were almost certainly contemporary in date, represented this demolition and marked the uppermost fill of the internal space defined by the walls and buttresses of two adjacent cellar structures encountered at 18.68m AOD. Below this rubble, inside one cellar, was a build up of coal residue (104) which included a glass bottle dated to the later 19th century. This overlay an earlier sandy deposit (105) that had probably resulted from general accumulation of debris in the base of the cellar on floor surface (106). Fill (105) also contained a bottle that was 19th century in origin.

The cellars had been constructed from a series of tied-in walls formed of whitewashed red bricks, seventeen courses of which were visible in places, in no regular bond form (walls 107, 108, 110, 111, 120, 122). The position of the trench ensured that around half of one cellar could be observed and it was recorded to be aligned east to west, 3.45m in length, more than 2.00m in width and at least 1.36m in surviving depth. It is likely that wall (107) marked the southern side, wall (111) the east and (122) formed its western side, with a brick sample taken from wall (107) suggesting a construction date of 1700-1750 for the cellar (Plate 3). A tentative interpretation of a feature as a small hearth-type structure, defined by slate plinth (118) and fire-brick rubble (115), was observed to be built into eastern cellar wall (111), and it is plausible that the coal residue (104) may have originated here and been periodically cleared out into the cellar below. Wall (108), just inside wall (122), was probably an internal divide and created what appeared to be an entrance to the cellar where it was joined with wall (120), positioned on a differing NW-SE alignment. This probably formed a junction for steps leading down into the cellar from a yard surface identified at 18.46m AOD in the west end of the trench. The surface consisted of regular square guarry tiles (123) embedded on layer (126) and with a brick edging (125). It is probable that brick wall (124), which was abutted by surface (123) in the north-west corner of the trench, was a continuation of wall (120) and formed part of the steps into the cellar, but this relationship was not definitive.

At the eastern end of the trench it was apparent that the cellar walls themselves were built abutting and overlying a stone and brick repair (118) of a large semi-dressed sandstone block structure (117), undoubtedly part of the former city wall that circuited the medieval city (Plate 4). The lower portion of the wall observed here appeared to be un-dressed and more akin to foundation blocks. The structure was orientated north to south at this point and although the full width and depth was not revealed, at least 0.50m in thickness and 1.10m of the height of the wall was seen to survive. The highest part of the city wall in the trench was visible at 18.45m AOD, 0.78m below the current car park surface.

Two small sondages were excavated in this trench; the first excavated through fills (104) and (105) to reveal the red brick floor of the cellar, (106), which had been built against the sandstone of the city wall (117) and existed at an OD height of 17.35m, 1.88m below the car park surface. The second excavated a small part of bedding layer (126) under surface (123) in the hope of finding undisturbed deposits pre-dating the cellar, but unfortunately only encountered some rubble packing material.

5.1.2 Trench 2:

Trench 2 was the largest of the trenches excavated, being 14.30m in length, and was positioned in order to uncover both the city wall and part of St Peter's church (Figure 4). It was located close to the centre of the car park, around 24m south of Trench 1.

After removal of the tarmac and hardcore surface with machine, a rubble demolition deposit (203) was encountered at the western end of the trench. This contained modern finds such as plastic wrappers and tin cans (not retained) and was clearly derived from the 1970's demolition on the

site. It covered an internal concrete floor, (204), and abutted a substantial wall 0.98m wide (205), built of at least five courses of red and green sandstone with a brick layer on top (Plate 5). This represented the foundation structure of the Victorian phase of St Peter's church. It was reached at 0.30m below the car park surface and was at least 0.90m in surviving height. The main visible part of the structure in the trench ran W-E for 4.5m before turning N-S, with a large sandstone buttress situated on the corner (Plate 6). The buttress position matched up with known plans showing the form of the building and marked the north-east corner of the church. One of the blocks making up this buttress had been carved with the inscription 'IH 1823', something suggestive of re-use of sandstone from an earlier structure as the Victorian church was rebuilt from 1837. It is probable that the stone had come from the medieval church that pre-dated this building (see Plate 7).

Abutting against the outside of the wall, in the centre of the trench, deposit (216) was observed. This was a heavily disturbed soil layer 0.60m in depth, abundant in disarticulated human remains, rubble and charcoal, as well as a pottery fragment dated to the 18th century. This probably represents a construction backfill from the redevelopment of the church in the late 1830's and was comprised of re-deposited former churchyard soil. It was defined in section by scarping event [219], which is likely to mark the 1837/8 construction horizon (see Plate 6). This was identified at a level of 18.25m AOD, 0.83m below the car park surface. Layer (216) covered a drainage pipe (218) which was attached to brick culvert (208), used to channel water from the church wall and probably contemporary in date and built within construction scarping cut [219]. Deposit (216) also abutted two walls of ten courses in height that were found at the east end of the trench. These walls - (213) and (214) - exhibited some later repair in the form of cement mortaring and realignment and may represent the former cemetery boundary. In turn, the walls abutted a rough brick surface (215) seen in the corner of the trench, found only 0.20m below the car park surface at 18.88m AOD. It is possible that the surface was built on top of the remains of the city wall, which should have run through this part of the trench in alignment with the part of it seen in Trench 1, but was not observed.

The walls and floor of the Victorian church, as well as the associated drainage remains, appear to have been cut into a surviving cemetery layer (217) which relates to the earlier church on the site. This had been scalped away by the construction cut [219], but included two clearly articulated E-W aligned human skeletons, (206) and (207), and two identifiable grave cuts, [210] and [212]. Intercutting burials were visible and a number of individual skeletal elements were observed in this cemetery horizon that may have been part of further articulated remains. Other than initial cleaning, these were not explored, but were seen to be in a good state of preservation. The number of burials in this relatively small space would correlate with a high-density use of the churchyard.

5.1.3 Trench 3:

Excavation of Trench 3 revealed a substantial amount of disturbed ground of 19th century and modern origin and probably relating to canal construction and reinforcement. This was unfortunate given that the trench was 9m long and targeted on the possible site of the tower marking the corner of the city wall. A large part of the trench was taken up by a concrete slab (303), 7m in length and 1.2m wide, encountered 0.58m below the car park surface (Plate 8). A modern water pipe (307) also truncated the southern part of the trench, which was seen to contain at least three modern dumping and levelling layers down to a depth of 17.66m AOD, 1.4m from the tarmac surface. The lowest deposit exposed, (306), contained pottery fragments of early 19th century date. It was not clear if more significant archaeological deposits had survived at any greater depth, as it was not practicable or safe to be machining to deeper levels in the small area of the trench accessible around the water pipe at the southern end.

5.1.4 Trench 4:

Trench 4 was positioned around 10m south of Trench 2 and was targeted on the other side of the church, as well as the city wall and the church cemetery area (Figure 5).

After removal of the tarmac and hardcore, a demolition deposit (402) was encountered that filled the inside of extensive and substantial structural remains in the northern half of the trench. undoubtedly the south-east corner of the Victorian church building. The rubble of (402) included a number of timbers, limestone decorative blocks and broken stone slabs from grave markers, as well as general late 20th century rubbish (not retained) similar to that seen in the church demolition deposit (203) in Trench 2. Below the rubble was a floor surface built onto bedding layer (426) and constructed of three distinct components; mixed blue engineering and red bricks (405), a brick edging layer (404), and stone slabs (403) (see Plate 9). The slabs appeared to be re-used grave markers of the same type as those found in backfill (402). The floor level was seen at 18.23m AOD and had been built against eastern (409) and southern (407) brick walls, both of which were constructed in English bond and had been whitewashed. They were reached 0.27m below the car park surface. These walls, combined with internal wall (408) which was joined to an external sandstone buttress (424), formed the main part of the Victorian church observed in this trench. The buttress was the same size and form of that seen in Trench 2 on the other side of the church and included a stone block marked with an 'X', a small mason's mark. The southern wall of the church, (407), had clearly been infilled with a later blocking element, (406), which was eight courses high and could mark a small original access entrance into this part of the church (Plate 10).

It was apparent that part of the Victorian church in this trench had been built upon and incorporated some earlier structural elements. Wall (409) and bedding layer (426) for the floor partially covered a sandstone wall (429), seen in plan to be orientated E-W at a level of 18.00m AOD (Plate 12). Wall (408) and floor surface (405) also overlay and abutted another sandstone wall (425) orientated N-S. This wall had an external buttress that showed evidence of repair (430), which had been built within a construction cut into a natural deposit (Plate 13). It is highly probable that these remains are evidence of the survival of at least part, if not all, of the earlier medieval church on this site.

At the southern end of the trench, external to the church walls, layer (413) abutted the building. This was the same as deposit (216) found in Trench 2, being a heavily disturbed construction backfill 0.60m in depth and abundant in disarticulated human remains. A clay pipe bowl from this deposit was dated to 19th century. Again, this layer covered a drainage culvert and ceramic pipe, (410) and (411), that were attached to and contemporary with the Victorian church, being of the same construction form as (208) and (218) seen in Trench 2 (Plate 11). A scarping event for the construction of all this, [428], was also observed in this trench at a level of 18.12m AOD. This truncated a surviving cemetery layer, (414), that contained evidence for at least three E-W orientated graves with partially articulated human remains visible within them. These had been heavily disturbed and damaged by the drainage of the church however, so the survival and preservation of these was not clear.

5.2 Artefact analysis, by Dennis Williams

The artefactual assemblage came from eight stratified contexts, dating mainly from the post-medieval period (see Table 1). Using pottery as an index of artefact condition, this was generally good, with the majority of sherds displaying low levels of abrasion. The mean sherd weight was above average.

period	material class	material subtype	object specific type	count	weight (g)
post-medieval	ceramic	ı	brick	1	3412
post-medieval	ceramic	-	clay pipe	1	8
post-medieval	ceramic	-	pot	4	194

post-medieval	ceramic	-	roof tile	4	1454
post-medieval	glass	-	vessel	2	1210
modern	plastic	-	button	1	1
undated	metal	lead	unident	1	70
			totals:	14	6349

Table 1: Quantification of the assemblage

Pottery

As summarised in Table 2, the pottery assemblage consisted of a small range of post-medieval fabrics with nothing earlier than the 18th century (layer 216).

period	fabric code	fabric common name	count	weight (g)
post-medieval	85	Modern china	1	8
post-medieval	91	Post-medieval buff wares	1	108
post-medieval	100	Miscellaneous post-medieval wares	2	78
		totals:	4	194

Table 2: Quantification of the pottery

Other artefacts

Other artefacts were also post-medieval. Bricks of a cellar wall (107) were probably datable to the 18th century. This cellar was infilled during the late 19th century, judging by the glass bottles from the fill (104). One notable item was a clay tobacco pipe bowl (layer 413), which incorporated an unusual 'tankard in hand' design, and had been manufactured at Broseley in the 19th century (Pipe Chat 2013).

Two stone blocks from the backfill (402) of the demolished Victorian church were retained from site (not quantified). These were saw-cut limestone and exhibited shallow grooves and metal fittings associated with early Gothic revival ecclesiastical stonework (pers. comm. S Robson-Glyde).

Significance

The finds from this evaluation were of limited significance, representing a range of domestic and building items expected for this part of Worcester. Nevertheless, these finds did indicate that this area was in use during the 19th century, possibly in buildings dating from the 18th century. *Terminus post quem* date ranges for the contexts are shown in Table 3 below.

context	material class	object specific type	fabric code	count	weight(g)	start date	end date	tpq date range
104	glass	vessel	-	1	1024	1850	1900	1850- 1900
105	glass	vessel	-	1	186	1850	1900	1850- 1900
107	ceramic	brick	-	1	3412	1700	1750	1700- 1750
109	ceramic	pot	85	1	8	1800	1900	1800-
109	ceramic	roof tile	-	4	1454	1600	1850	1900
216	ceramic	pot	91	1	108	1700	1800	1700- 1800
306	ceramic	pot	100	2	78	1800	1850	1800- 1850
413	ceramic	clay pipe	-	1	8	1800	1900	1800- 1900
426	metal	unident	-	1	70	-	-	1900-
420	plastic	button	-	1	1	1900	2000	2000

Table 3: Summary of context dating based on artefacts

6 Synthesis

The identified significance of this site, highlighted by the original desk-based assessment and built upon by the earlier archaeological field work in this area, has been confirmed and refined by the evaluation trenches excavated in this project. Although the trenches only sampled a small area of the site, and it is therefore not definitive as to whether every type of feature or period of activity that may exist here has been observed, it is considered that a general characterisation of the level and nature of the archaeology here has been defined.

Due to the nature of the archaeology revealed, the potential for the evaluation to contribute to some of the research priorities identified in the aims of the project was limited. Research priorities not addressed at this stage of work include: the character and development of the Frog Brook valley and stream (RP1.2); documenting the extents of Roman Worcester (RP3.30); distribution of 1st-century AD settlement (RP3.1); Roman road network (RP3.7); the southern Roman cemetery (RP3.10); Roman activity in the Frog Brook valley (RP3.12); Anglo-Saxon urban churches (RP4.14); possible late Anglo-Saxon annexe defences at Sidbury and elsewhere, and their interiors (RP4.22).

There were no deposits encountered that could be attributed to pre-medieval periods and there were no artefacts that demonstrated a medieval date for any of the features on site. This is likely to be a result of disturbance from the post-medieval and Victorian activity in this area, as well as the depth at which complex structural remains were encountered preventing deeper investigation. Primarily as a result of combination of stratigraphic relationships and historical information, medieval features can still be defined on this site however.

6.1 Medieval

With an 18th century cellar structure built against it, the coursed semi-dressed red sandstone blocks forming found at the eastern end of Trench 1 are almost certainly the remains of the medieval city wall. They correlate with the projected route of the wall from Sidbury gate to the north and with the wall identified to the south in Trench 5 of the earlier archaeological evaluation on this site (Archenfield Archaeology 2006a, 58). The appearance and size of the sandstone blocks are also similar to those found previously. The city wall in this form is thought to date from the 13th century and whilst it does not necessarily follow that the sandstone blocks found here are original, with a number of alterations and additions having occurred throughout the Civil War period (see Dinn 2012, 68), it is highly probable that they are of medieval date. The repair to the internal face of the wall identified in this trench is interpreted as later in origin however, as the presence of brickwork within it is suggestive of supporting material being infilled for the building of the cellar against the city wall (Plate 4).

The height of the surviving element of the wall is significant, as is the conformation of the alignment and route of the wall, indicating that substantial remains could be expected to be present further along its mapped course. The three courses of dressed stone seen in the upper part of the wall here are likely to have been part of the visible internal face of the wall, while the foundation stones were seen continuing to a much greater depth. This may offer an opportunity to address Research Priority 5.26, focused on improving understanding of the eastern medieval rampart and wall.

The sandstone walls identified as pre-dating the Victorian church construction in Trench 4 are suggested to be part of the eastern end of the earlier church building on the site, possibly the potential rebuild of the medieval church dated to its rededication in 1420 (Beardsmore 1977, 19). It is feasible that they may be part of the 13th century structure given to the patronage of Pershore Abbey, though there was no archaeological indication for this in the small area observed. However, drawings of the south-east view show the windows of the earlier St Peter's church to be in the geometric style of the late 13th or early 14th century (Beardsmore 1977, 18), which may identify the date of this part of building more closely. The position of the walls suggests that the ground plan of this church was similar to that of the later Victorian building, but on a slightly smaller scale, and this correlates with documentary evidence (Baker 1980b, 119). Given that records indicate that the Victorian crypt floor was at the same level as the medieval church floor (Beardsmore 1977, 18), it is possible that many of the original foundations, and perhaps the earlier crypt, will survive inside the footprint of the later building. This highlights the possibility of addressing Research Priority 5.15, centred on excavation of the medieval parish churches of Worcester and may offer the potential to explore a medieval churchyard in line with Research Priority 5.3.

Aside from these apparent structural remains seen in Trench 4, it may be the case that parts of the sandstone and brick Victorian church wall seen in Trench 2 have elements within it that were reused from the medieval church. Certainly the inscription seen on the buttress on the north-east corner - 'IH 1823' - records a date pre-construction of the 1838 church, which indicates a least one stone block has come from an earlier structure (Plate 7). This reuse of sandstone was also observed in Trench 12 of the previous archaeological evaluation on this site (Archenfield Archaeology 2006b, 28) which located the western end of the later church.

6.2 Post-medieval

Part of the medieval wall seen in Trench 4 had an external buttress which showed evidence for brick repair (Plate 13). This is likely to have been completed in the post-medieval period when the church is recorded as needing other maintenance work (see Beardsmore 1977, 18) and the brick sizes conform to a late 18th century/early 19th century date (pers. comm. S. Robson Glyde). Also of unknown date were the articulated human remains and identifiable grave cuts seen in the cemetery layers observed in both Trench 2 and Trench 4, partially truncated by the construction cut for the Victorian church and its associated drainage. It is not improbable that these may represent medieval burials, but it is suggested that the soil identified as the cemetery horizon and the burials within it are more likely to relate to the 1420-1837 (late medieval and post-medieval)

use of the churchyard surrounding the earlier church. As these graves were not explored further than initial cleaning, no age at death or sex estimation was attempted on site, so it is not possible to indicate a demographic for the burials. However, the number of burials in such close proximity, as well as the amount of disarticulated human bone found in the disturbed construction backfill above this cemetery layer, would suggest a high-density use of the cemetery. This is not uncommon in Christian churchyards in use over a substantial period of time and would correlate with the known requirement for expansion of this churchyard in the early 19th century (Sherlock and Feryok 2004, 26). A cemetery of this size may provide a site to address Research Priority 6.17, focused on research into the population of post-medieval Worcester.

The brick sample from the cellar walls found in Trench 1 suggests that the construction of this building occurred in the first half of the 18th century (Plate 3). Records indicate that the area south of Sidbury gate was built up with tenements and yards from the 16th century onwards (see Hughes 1990, 230-254), though cartographic evidence does not clearly show buildings to the north of St Peter's church until the later 18th century (see Sherlock and Feryok 2004, 29-44). This is likely to be a gap caused by destruction during the Civil War period rather than the idiosyncrasies or quality of early map makers. It may also indicate that the brick was reused from an earlier structure in this instance, but this is purely speculative. However it is interpreted, it is probable that the cellar here was constructed in the 18th century and the build up of material within the cellar certainly suggests that it was in existence and in use from at least 1800 onwards, as evidenced by the glass bottles within it. The associated remains found in Trench 1, incorporating a series of walls, a possible hearth and a tiled yard surface, probably also date from the period of cellar construction and the use of the building above it. The 1884 Ordnance Survey plan shows a yard space in this area, accessed from St Peter's Street and with a series of structures surrounding it, that backs onto the vicarage building of St Peter's church. It is this part of the conurbation that is represented in Trench 1 and may indicate that the structures here are outbuildings belonging to houses fronting onto St Peter's Street.

6.3 19th century

It is clear that the main structural remains uncovered in Trench 2 and Trench 4 are the foundations of the Victorian rebuild of the medieval church, consecrated on 23rd October 1838 and demolished in 1976 (Beardsmore 1977, 17-19; Plates 5, 9, 10). The form of the walls with the attached buttresses matches a ground plan made of the church and a number of photographs from the late 19th and 20th century (see Sherlock and Feryok 2004, 26-7). It is described as being built of brown Broseley bricks with stucco buttresses as 'a large rectangular building with a pinnacled tower at the north west corner and a small projection for sacrarium at the east end' (Beardsmore 1977, 17). This space at the east end should be located in the area between Trench 2 and Trench 4. The stonework recovered from the demolition of the church support the description of the church being built cheaply and at an early stage of Gothic revival architecture (Beardsmore 1977, 17). Drainage systems revealed in both the trenches are also clearly associated with the later church, one of them being still attached to the southern wall of the church by salt-glazed pipe work (Plate 11).

The brick floor surface of the church found in Trench 4 is likely to be part of the Victorian crypt, being similar in type (containing blue Staffordshire engineering bricks) to a surface seen at the west end of the church in previous work (Trench 12, Archenfield Archaeology 2006b, 29). It was built right at the base of the wall foundations and in a space defined by an internal wall that created a small area of limited practical use (see Plate 9). It is suggested that this area contained stacked coffins and that it was cleared out when the church was demolished in 1976 (see Beardsmore 1977, 17; Sherlock and Feryok 2004, 26). It may be the case that the brick infill observed in the southern wall of the church marks an initial access point into this area, perhaps being blocked up when the crypt space was full and the main body of the church was ready to be built on top (Plate 10). A small plastic button of 20th century date was recovered from the northern end of the bedding layer for part of the crypt floor. This could indicate that the entire floor is in actuality a later addition, which is less likely, or that repair work was undertaken to this floor space in the earlier 20th century,

or perhaps is representative of general loss from the clearance and demolition work in the church and is intrusive.

The construction backfill containing abundant disarticulated human remains was observed on both sides of the church. It is not clear how far this scalping event for the building of the 1838 church extends, but it appears to have truncated a substantial part of the earlier cemetery. The walls revealed at the east of Trench 2, which may mark the cemetery boundary wall, seem to have been repaired at some point, probably in this period of construction. Interestingly, given that the Victorian church structure is described as being built of Broseley bricks (from the Ironbridge gorge), the recovery of a 19th century clay pipe bowl from this construction backfill that was also manufactured at Broseley corresponds particularly well.

The earliest deposit of disturbed ground revealed in Trench 3 also appears to be of 19th century date, with a pottery fragment recovered that is identified as early 19th century in origin. This would conform with the disturbance relating to the construction of the Birmingham and Worcester Canal, built in1815.

6.4 Modern

Modern deposits were encountered in all of the trenches excavated. Apart from the concrete slab, modern water pipe and disturbance found in Trench 3 (Plate 8), these all related to demolition and infill of the site when it was turned into a car park. With regard to the infill of the Victorian church building, these demolition deposits can be dated very accurately to the month of November 1976 (see Beardsmore 1977, 17).

7 Significance

7.1 Nature of the archaeological interest in the site

The evaluation trenches have demonstrated that complex structural deposits of medieval and later date are present on this site. This supports the findings of the DBA and the earlier archaeological work. A correlation of buildings and deposits between trenches has been identified and the levels at which the varied archaeology occurs has been recorded.

The most extensive structural features identified on the site are the two phases of building remains from St Peter's church. Given that this was a Christian church, and a high-density of human remains was encountered in the immediate vicinity of this structure, any disturbance of this will require sensitive handling. Based on observations of the walls seen in the evaluation trenches, it is possible to suggest that the foundations and ground plan of the medieval church will survive within the footprint of the Victorian structure.

Potentially of similar significance was the exposure of part of the medieval city wall beneath a later 18th century cellar. This may indicate that substantial parts of the wall will survive outside of that exposed in the evaluation, either as foundation remains or re-used as supporting elements of later structures.

The presence of later structures in close proximity to the car park surface, such as the cellar and yard revealed here, suggests that more of this post-medieval urban environment will be present across the wider area of the site.

7.2 Relative importance of the archaeological interest in the site

The evaluation trenches have shown that features and deposits of variable importance survive on this site. The indication that at least part of the medieval city wall and the medieval church of St Peter's have survived is significant. There is high potential for improving archaeological understanding of this area of Worcester in the medieval period as a result of this, and a series of Research Priorities could be addressed here (RP5.15; RP5.26). The identification of numerous inhumations in a surviving cemetery layer may produce some sensitive issues with regard to the

site, but it could also provide much information on population demographics and health/disease in the medieval and post-medieval periods (RP5.3; RP6.17).

The Victorian rebuild of the church was mapped at the time, photographs exist of this building, people who visited or worshipped in it are probably still alive in Worcester and detailed descriptions of the structure are available (see Beardsmore 1977). In isolation, the archaeological significance of this building is therefore of lesser importance. However, the evaluation has shown that surviving elements of this building incorporate and re-use parts of the medieval church which ensures that the church retains a higher level of archaeological importance than it would normally warrant.

The 18th and 19th century structural remains identified in the evaluation are of more limited and localised significance. They do, however, have considerable potential to contribute to understanding aspects of the medieval and post-medieval development of the suburb of Sidbury and by extension of Worcester itself.

7.3 Physical extent of the archaeological interest in the site

Archaeological remains, although variable in their level of significance, were revealed across most of the site. Trench 3 demonstrated that the eastern edge of the area may have been disturbed by canal construction and strengthening, but how much ground is affected by this is not clear. The identification of parts of the Victorian church and the existence of maps of this structure allows a good estimation of the space this will occupy on this site. It was not possible to determine how far burials associated with the church extended however, nor was it identified how much of the earlier cemetery area had been truncated by the construction scarping for the Victorian church. The route of the city wall was confirmed and it could be expected that this will continue where it is mapped around the corner of the medieval city and the church. Given the survival of post-medieval buildings in the northern part of site, it should also be considered likely that there will be 18th and 19th century urban development occupying a substantial part of the area where cartographic evidence indicates it exists.

Many of the structures revealed during the evaluation were encountered in close proximity or immediately below the car park surface and were present to a substantial depth. Previous work on the site has shown that earlier deposits, some of Roman date, have survived in areas affected by later building remains. Survival of pre-medieval deposits was not demonstrated in this work, but it does not exclude this being the case across areas of the site not yet investigated.

8 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

An archaeological evaluation was undertaken on the site of a car park at the former Royal Worcester Porcelain Works, located off King Street in the Sidbury part of Worcester city and centred on National Grid Reference SO85215434.

The site is positioned just outside the projected limits of the Roman town and within the historic core of the medieval city, defined by the city wall. As such, the site was considered to contain heritage assets and potential heritage assets.

Four trenches of varying size were excavated across the car park. In addition to a general intention of establishing the existence of archaeological remains across the site, the trenches were specifically positioned in order to assess the extent and survival of previously identified archaeological features. These included the medieval the city wall and St Peter's church, known to have medieval origins and to have been rebuilt in 1838.

Archaeological remains, although variable in their level of significance, were revealed across most of the site and the trenching demonstrated that complex structural deposits of medieval and later date are present. The most extensive of these were two phases of building remains from St Peter's church the upper parts of which survived at a depth of 0.27m below the car park surface. Numerous inhumations in a surviving cemetery layer were also encountered in close proximity to the church building. Part of the medieval city wall was exposed in the northern area of the site at a depth of 0.78m below the current car park surface. This was abutted by a later 18th century cellar with associated structural features including a brick surface which lay immediately beneath the car park.

The evaluation has demonstrated that well preserved stratified archaeological remains survive from a shallow depth beneath the current car park surface.

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10 Bibliography

ArchaeoPhysica 2004 Royal Worcester Porcelain Geophysical Survey, Unpublished report WRP 20041

Archenfield Archaeology 2006b The archaeological evaluation of Royal Worcester Porcelain, Severn Street, Worcester, Stage 2, Archenfield Archaeology Report

Baker, N, 1980a 'Churches, Parishes and Early Medieval Topography', in Carver, M (ed.) *Medieval Worcester: An Archaeological Framework*, Transactions of the Worcestershire Archaeological Society Third Series, Vol.7

Baker, N, 1980b 'The Urban Churches of Worcester – a survey', in Carver, M (ed.) *Medieval Worcester: An Archaeological Framework,* Transactions of the Worcestershire Archaeological Society Third Series, Vol.7

Baker, N, and Holt, R, 2004 Urban Growth and the Medieval Church, Farnham, Ashgate

Beardsmore, C, 1977 'St Peter the Great, Worcester', Worcestershire Archaeology and Local History Newsletter No. 19, 1976-77

Beardsmore, C, 1980 'Documentary Evidence for the History of Worcester City Defences', in Carver, M (ed.) *Medieval Worcester: An Archaeological Framework,* Transactions of the Worcestershire Archaeological Society Third Series, Vol.7

BGS (British Geological Survey) 1993 Geological Survey of Great Britain (England and Wales) Solid and Drift sheet, **199**, 1:50,000

Carver, M, 1980a 'The Site and Settlements at Worcester', in Carver, M (ed.) *Medieval Worcester: An Archaeological Framework,* Transactions of the Worcestershire Archaeological Society Third Series, Vol.7

Carver, M, 1980b 'The Excavation of Three Medieval Craftsmen's Tenements in Sidbury, Worcester, 1976', in Carver, M (ed.) *Medieval Worcester: An Archaeological Framework,* Transactions of the Worcestershire Archaeological Society Third Series, Vol.7

Daffern, N, Keith-Lucas, F, and Vaughan, T, 2012, Archaeological Evaluation and Borehole Investigation at Zone 4, King's School Space 42, Severn Street, Worcester, Worcestershire Archaeology, Worcestershire County Council, report **1937**

DCLG 2012 National Planning Policy Framework, Department for Communities and Local Government

DCLG/DCMS/EH 2010 PPS5 Planning for the historic environment: historic environment planning practice guide, Department for Communities and Local Government/Department for Culture, Media and Sport/English Heritage

Dinn, J, 2012 'The Archaeology of Worcester's City Defences: A Review', *Transactions of the Worcestershire Archaeological Society Third Series, Vol.23*

English Heritage 2011 The setting of heritage assets, English Heritage

IfA 2009 Standard and guidance for archaeological field evaluation, Institute for Archaeologists

Hughes, P, 1990 Buildings and the Building Trade in Worcester 1540-1650, Unpublished PhD Thesis

Hurst, J D, and Rees, H, 1992 'Pottery fabrics; a multi-period series for the County of Hereford and Worcester', in Woodiwiss, S G (ed), *Iron Age and Roman salt production and the medieval town of Droitwich*, CBA Res Rep, **81**, 200-9

Millbank, D, and Mundin, A, 2007 Royal Worcester Porcelain, Severn Street and King Street, Worcester: An Archaeological Watching Brief, Thames Valley Archaeological Services Report

Millbank, D, 2009 Royal Worcester Porcelain, Severn Street and King Street, Worcester: An Archaeological Watching Brief, Thames Valley Archaeological Services Report

Miller, D, and Jones, L, 2001 *Archaeological Watching Brief at the King's Head, Sidbury, Worcester*, Worcestershire Archaeology, Worcestershire County Council, report **902**

Pipe Chat, 2013 *Online pipe and tobacco forum* [online]. Available from: http://www.pipechat.info [Accessed 21 June 2013]

Ragg, J M, Beard, G R, George, H, Heaven, F W, Hollis, J M, Jones, R J A, Palmer, R C, Reeve, M J, Robson, J D, and Whitfield, W A D, 1984 Soils and their use in midland and western England, Soil Survey of England and Wales, **12**

Sherlock, H, and Feryok, M, 2004 Royal Worcester Porcelain Factory and St Peter's Church Desk-based Assessment, Archenfield Archaeology

WA 2012 Manual of service practice, recording manual, Worcestershire Archaeology, Worcestershire County Council, report **1842**

WA 2013 Proposal for an archaeological evaluation at Worcester Porcelain Works, Worcester, Worcestershire Archaeology, Worcestershire County Council, unpublished document dated 10th June 2013, P4139

Worcestershire Archive and Archaeology Service, 2012 *Worcestershire online ceramic database* [online]. Available from: http://www.worcestershireceramics.org [Accessed 21 June 2013]

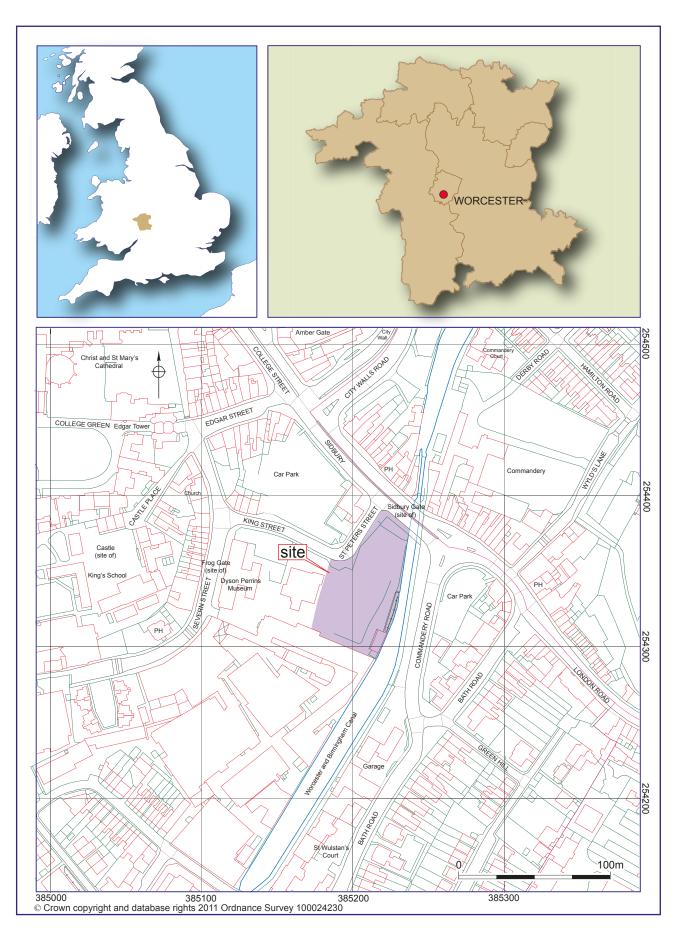
Webster, J, 2012 Archaeological Investigations at the Michael Baker Boathouse, the King's School, Severn Street, Worcester, Worcestershire Archaeology, Worcestershire County Council, report **1841**

Worcester City Council 1999 Statement of standards and practices appropriate for archaeological fieldwork in Worcester, Appendix 3 in Supplementary Planning Guidance Number 8: Archaeology and Development, Worcester City Council, document revised June 1999

Worcester City Council 2007 Worcester Urban Archaeological Strategy – An outline resource assessment and research framework for the archaeology of Worcester, Worcester City Museum

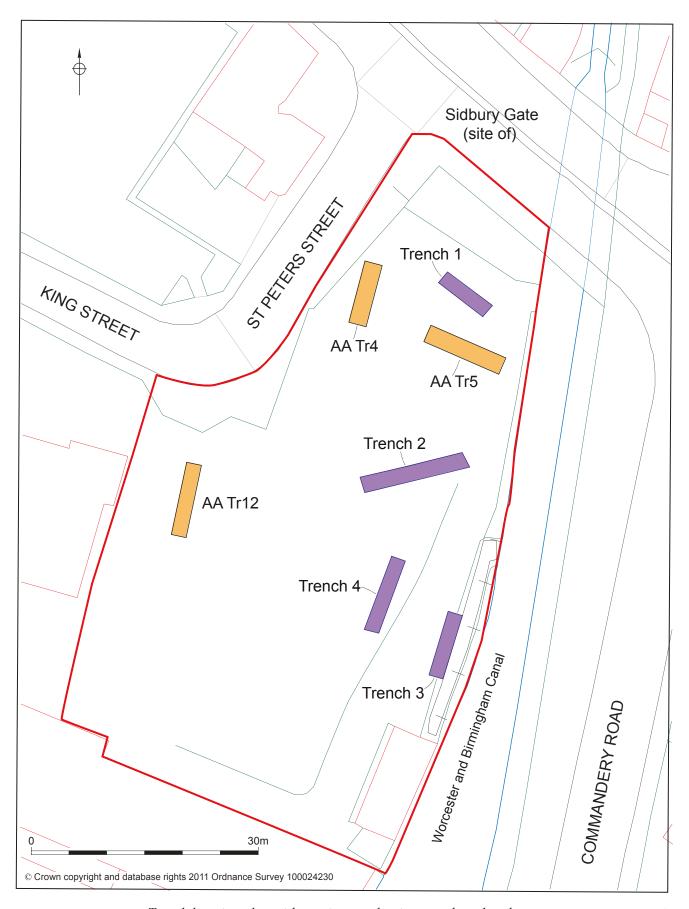
Figures			

Royal Worcester Porcelain Works, Worcester



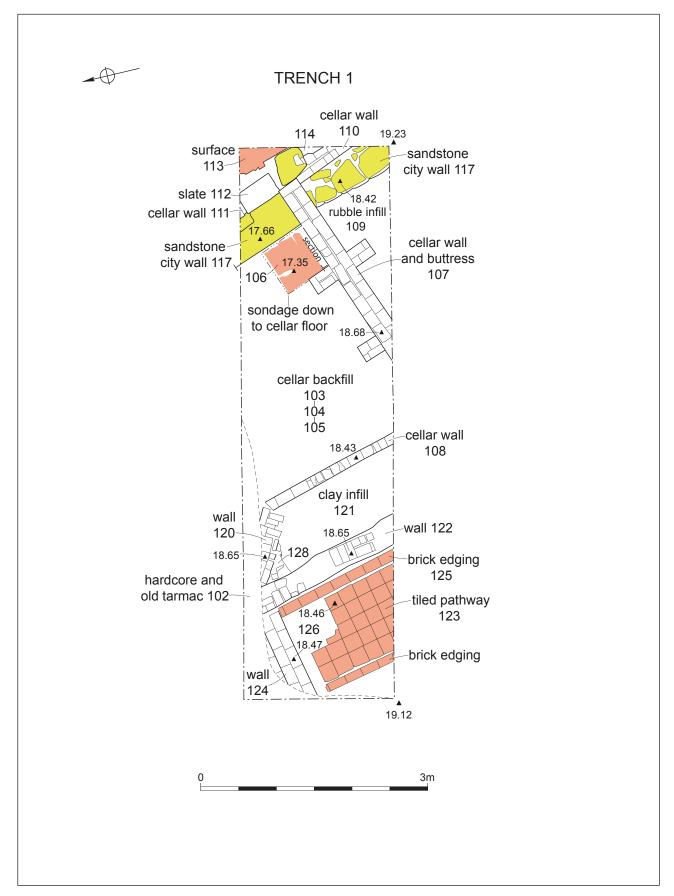
Location of the site

Figure 1

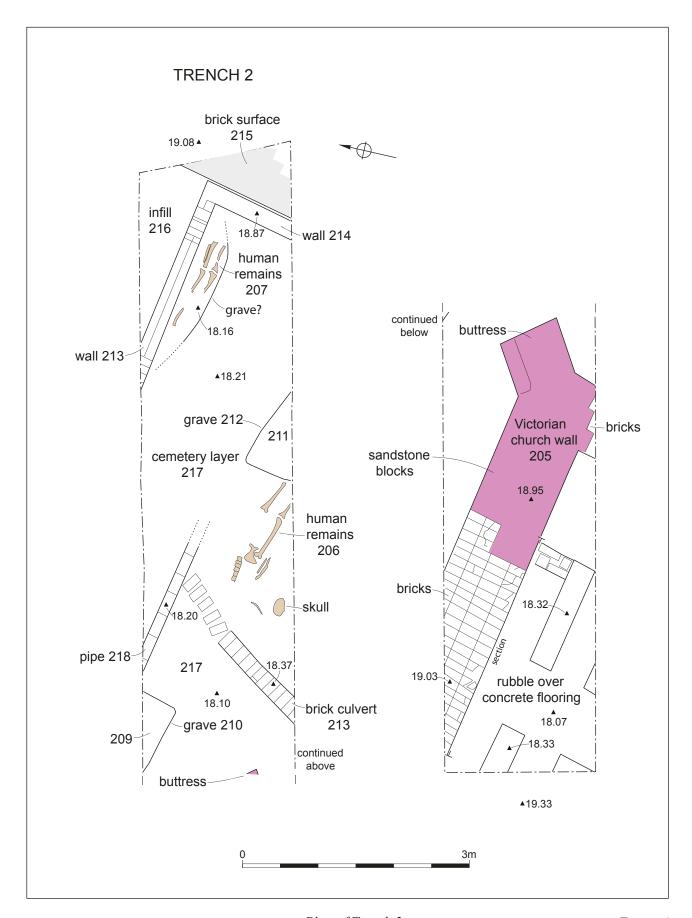


Trench location plan with previous evaluation trenches also shown

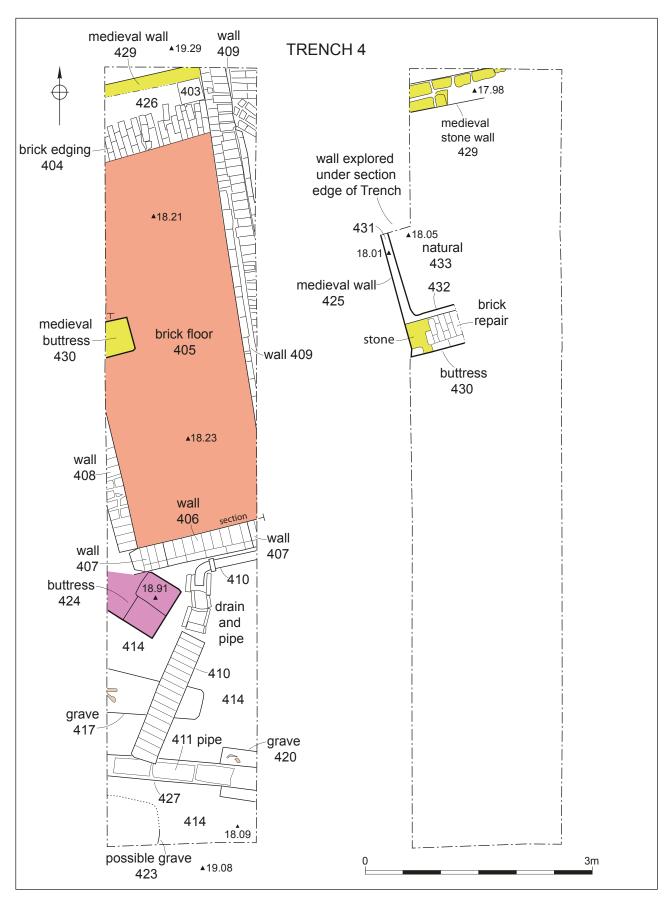
Figure 2



Plan of Trench 1



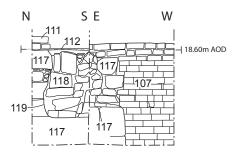
Plan of Trench 2



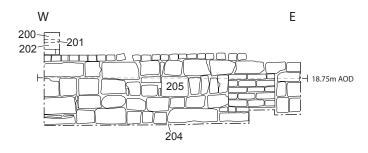
Plan of Trench 4: Victorian Phase (left), Medieval Phase (right)

Figure 5

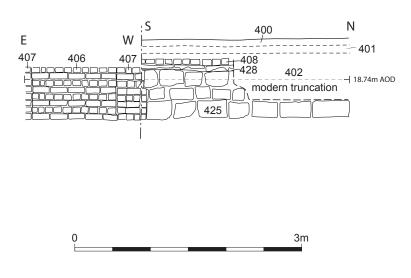
TRENCH 1: INTERNAL ELEVATION OF CITY WALL AND CELLAR

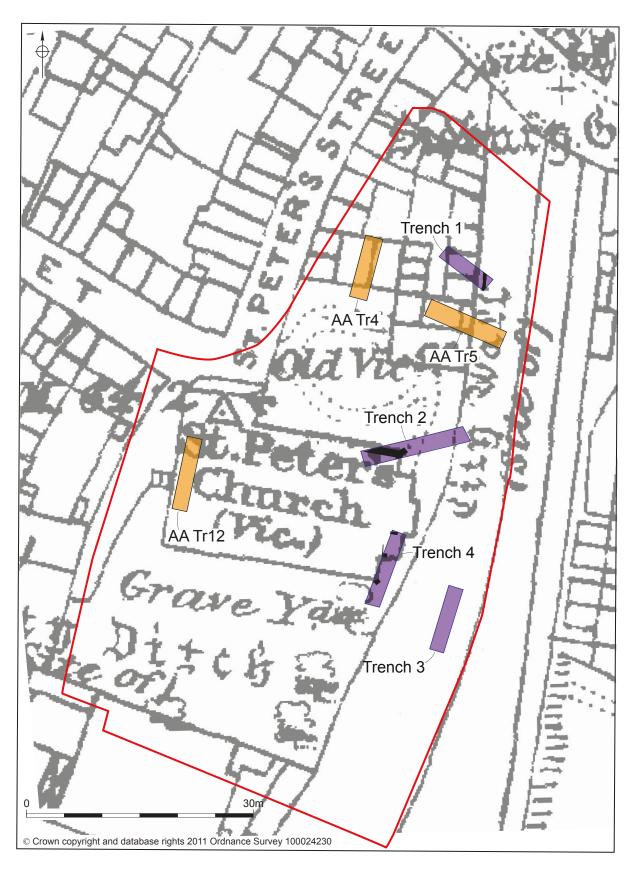


TRENCH 2: INTERNAL ELEVATION OF CHURCH WALL



TRENCH 4: INTERNAL ELEVATION OF CHURCH WALLS





Extract from 1st edition Ordnance Survey with trenches overlain

Figure 7

Plates



Plate 1: The car park before trench excavation, facing south



Plate 2: Trench 1 structural remains facing south-east, surface 123 is in the foreground



Plate 3: Cellar wall 107 in Trench 1, facing south



Plate 4: Repair 118 in city wall 117, Trench 1



Plate 5: Oblique shot of church wall 205 and concrete floor 204, Trench 2



Plate 6: Buttress on church wall and construction backfill 216 in section, Trench 2



Plate 7: Inscription on church wall buttress, Trench 2



Plate 8: Concrete slab and water pipe in Trench 3



Plate 9: Trench 4 facing south, showing brick surface 405



Plate 10: Trench 4 facing south, brick infill 406



Plate 11: Trench 4 facing north, showing drain 410 and buttress 424



Plate 12: Earlier sandstone wall 429 below Victorian church structural elements



Plate 13: Sandstone wall 425 and buttress 430 below Victorian church structural elements

Appendix 1 Trench descriptions

Trench 1

Maximum dimensions: Length: 7.3m Width: 2m Depth: 1.6m

Orientation: SE-NW

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Layer	Modern tarmac surface	0.00 - 0.10m
101	Layer	Sub-angular grey stone hardcore bedding for 100	0.10m - 0.18m
102	Layer	Old tarmac surface	0.17m – 0.26m
103	Fill	Loose, light yellow grey, silty sand and brick rubble. Backfilling of demolition material.	0.26m – 1.50m
104	Fill	Soft, black, coal fragments and dust, with occasional brick fragments. Accumulated coal waste on Cellar 1 floor.	1.50m – 1.85m
105	Fill	Soft, light yellow grey, silty sand. Primary deposit over cellar floor, probably occupational deposition.	1.85m – 1.88m
106	Structure	Red brick floor of Cellar 1. Brick size 240mm x 105mm. Friable light brownish yellow sandy mortar bond.	1.88m b.g.s
107	Structure	Red brick wall, dividing Cellars 1 and 2. Buttressed. Tied in with wall 108. Runs NE-SW. Brick size 235mm x 115mm x 55mm. Firm light brownish yellow sandy mortar bond.	0.55m b.g.s
108	Structure	Red brick wall of Cellar 1. Tied in with walls 107 and 120. Runs NW-SE. Brick size and mortar same as 107.	0.69m b.g.s
109	Fill	Loose, mid greyish brown, silty sand and brick. Demolition backfill of Cellar 2. Partially excavated.	0.55m b.g.s
110	Structure	Red brick wall of Cellar 2, probably once tied in to 107 but evidence now lost. Runs NW-SE. Brick size and mortar same as 107.	0.57m b.g.s
111	Structure	Red brick wall of Cellar 1. Runs NW-SE. Brick size and mortar same as 107, but with a couple of bricks measuring 110mm W x 90mm T, which may be repairs.	0.26m b.g.s

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
112	Structure	Single piece of slate sat on hard light whiteish grey sandy mortar. Sits in between walls 110 and 111. May be part of a hearth associated with 115	0.63m b.g.s
113	Structure	Red brick surface, possibly an external yard. Lies beyond the cellars in the NE corner of the trench. Brick size 105mm x 100mm x 75mm (half bricks). Firm light greyish yellow sandy mortar.	0.08m b.g.s
114	Layer	Firm, mid reddish brown, silty sand, with freq sub-rounded pebbles, charcoal flecks, brick frags and mortar frags. Levelling layer for brick surface 113.	0.27m – 0.51m
115	Structure	Brick structure associated with 112. Badly damaged and not fully revealed but could be a fireplace. Brick size 120mm W x 65mm T. Soft mid whiteish yellow sandy mortar.	0.53m – 0.97m
116	Structure	Piece of sandstone wall. Part of medieval city wall 117	0.51m b.g.s
117	Structure	Sandstone wall, running NW-SE. Avg size of squared stone 0.3m x 0.35m x 0.15m. Medieval city wall. Bonded with soft mid yellowy orange sand. Built to courses. Later used as footing for cellar walls 107, 110 and 111.	0.84m b.g.s
118	Structure	Sandstone repair of truncation through city wall 117. Constructed of squared blocks avg size 0.3m x 0.2m x 0.15m. Dry stone. Probably built in preparation of cellar construction.	0.65m — 1.55m
119	Cut	Vertical cut through city wall 117. Uncertain function. Filled by blockwork 118.	0.65m – 1.55m
120	Structure	Red brick wall of Cellar 1, running E-W off NW end of wall 108. Brick size 240mm x 105mm x 60mm. Soft whiteish yellow sandy mortar. Probably joins onto wall 124 in west.	0.7m b.g.s
121	Fill	Soft, mid greyish brow, clay sand with moderate sub-angular pebbles, charcoal flecks and brick fragments. Part of construction backfill for walls 120 and 108.	0.7m b.g.s
122	Structure	Red brick wall, possibly the back wall of building above Cellar 1. Brick size 220mm x 115mm x 55mm. Firm mid whiteish yellow sandy mortar.	0.47m b.g.s
123	Structure	Red quarry tile floor. Probably external	0.66m b.g.s

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
		passageway leading to entrance to Cellar 1. Tile size 200mm x 200mm x 36mm. Firm whiteish yellow sandy mortar.	
124	Structure	Red brick wall, being a return of wall 120. On very edge of trench, but probably forms a staircase down into Cellar 1. Brick size 125mm W x 55mm T half bricks. Firm whiteish yellow sandy mortar.	0.65m b.g.s
125	Structure	Red brick wall, probably external yard wall. Also probably tied into wall 124. Brick size 245mm x 115mm x 55mm. Firm mid whiteish yellow sandy mortar.	0.66m b.g.s
126	Fill	Soft mid greyish brown silty sand, with frequent brick rubble and charcoal flecks. Bedding material for surface 123.	0.66m b.g.s
127	Fill	Loose mid greyish brown silty sand with frequent rubble. Backfill of construction cuts for walls 122, 124 and 125.	0.66m b.g.s
128	Fill	Loose mid greyish brown silty sand and brick. Rubble backfill behind and under walls 120 and 122.	0.82m b.g.s

Trench 2

Maximum dimensions: Length: 14.3m Width: 2m Depth: 1.3m

Orientation: NE-SW

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
200	Layer	Modern tarmac surface	0.00m – 0.10m
201	Layer	Sub-angular grey stone hardcore bedding for 200.	0.10m – 0.17m
202	Layer	Pinkish stone levelling.	0.17m – 0.23m
203	Fill	Loose mid brownish yellow silty sand and brick. Demolition backfill from 1976.	0.23m – 1.49m
204	Structure	Concrete surface and blockwork designed to support a floor in the Victorian church.	1.01m – 1.49m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
205	Structure	Red and green sandstone, limestone and red brick wall. Avg stone size 300mm x 200mm x 200mm. Brick size 235mm x 115mm x 70mm. Stones were squared and built to courses. Foundation of Victorian church, possibly reusing some of the medieval church stone. Brick course on top of stonework. One part of buttress was marked by graffiti "IH 1823". Runs E-W before returning N-S on edge of trench. A buttress supports the corner.	0.30m b.g.s
206	Skeleton	Unexcavated skeleton in early cemetery layer 217	0.98m b.g.s
207	Skeleton	Unexcavated skeleton in early cemetery layer 217	1.04m b.g.s
208	Structure	Red brick culvert leading into pipe 218. Similar example seen in Trench 4. Would have been fed from pipes up side of church. Brick size 235mm x 110mm x 70mm. Friable light brownish yellow sandy mortar	0.96m b.g.s
209	Fill	Firm mid reddish brown sandy clay with occasional sub-rounded pebbles. Unexcavated grave fill.	1.15m b.g.s
210	Cut	Grave cut filled by 209	1.15m b.g.s
211	Fill	Firm mid reddish brown sandy clay with occasional sub-rounded to sub-angular pebbles. Unexcavated grave fill	1.00m b.g.s
212	Cut	Grave cut filled by 211	1.00m b.g.s
213	Structure	Red brick wall tied into boundary wall 214. Probably built around the time of the Victorian church. Might sit on earlier medieval stone foundation. Brick size 220mm x 110mm x 75mm. Concrete light whiteish grey cement	0.20m b.g.s
214	Structure	Red brick wall tied into wall 213. May be cemetery boundary wall. Brick size and bond same as 213. Possibly built as a skin over the top of the city wall.	0.21m b.g.s
215	Structure	Red brick surface, possibly sat atop the old city wall. Butted by cemetery boundary walls 213 and 214. Brick size 225mm x 110mm x 65mm. Friable light brownish yellow sandy mortar.	0.20m b.g.s
216	Layer	Firm mid reddish brown sandy clay with frequent brick rubble, charcoal flecks, mortar flecks,	0.27m - 0.87m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
		pebbles and human bone. Post construction levelling after completion of Victorian church, hence the human bone present. Seals intact burial horizon.	
217	Layer	Firm dark reddish brown sandy clay with frequent charcoal flecks and CBM fragments. Cemetery grave horizon. In situ layer through which pre-1838 burials are cut.	0.87m b.g.s
218	Structure	Red ceramic pipe, fed from brick culvert 208. Built as part of Victorian construction.	1.00m b.g.s
219	Cut	Victorian scarping cut for demolition of medieval church and for a construction level to work from. Truncates the whole length of the trench but not always visible.	1.00m b.g.s

Trench 3

Maximum dimensions: Length: 9m Width: 2m Depth: 1.2m

Orientation: NNE-SSW

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
300	Layer	Modern tarmac and brick surface	0.00m – 0.10m
301	Layer	Dark greyish green stone hardcore as bedding layer for 300.	0.10m – 0.40m
302	Layer	Loose reddish grey silty sand with frequent brick rubble. Modern levelling deposit.	0.30m – 1.15m
303	Structure	Concrete pad lying along most of the length and over half the width of the trench.	0.58m – 0.78m
304	Layer	Reddish brown clay dumped layer. Modern.	0.70m – 1.00m
305	Layer	Fine cinder grey layer of dumped 20 th C material.	1.00m – 1.07m
306	Layer	Loose mid reddish grey silty sand with frequent brick rubble. 19 th – 20 th C disturbed ground, possibly from construction work of canal wall reinforcement.	1.00m b.g.s

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
307	Structure	Mains water pipe	0.90m b.g.s

Trench 4

Maximum dimensions: Length: 10.2m Width: 2m Depth: 1.3m

Orientation: NNE-SSW

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
400	Layer	Modern tarmac surface	0.00m – 0.10m
401	Layer	Grey stone hardcore for 400	0.10m – 0.20m
402	Fill	Brick rubble from 1976 demolition of church. Included broken timbers and grave slabs.	0.20m – 1.08m
403	Structure	Remnant of grave slab flooring. One piece remains. Reused from medieval church, probably blue lias. Forms continuous surface with 404 and 405.	1.07m b.g.s
404	Structure	Red brick floor, being stretchers on edge, marking a change between on bed brick floor 405 and grave slab floor 403. Brick size 230mm x 110mm x 80mm with a hard pinkish grey sandy mortar.	1.09m bgs
405	Structure	Red brick and blue engineering brick floor of Victorian crypt. Red brick size 230mm x 110mm x 80mm, blue brick size 225mm x 110mm. Friable pinkish grey sandy mortar.	1.06m bgs
406	Structure	Red brick wall in-fill in southern end of Victorian church. Fills gap in wall 407. Brick size 230mm x 110mm x 80mm, in an English bond. Friable mid greyish brown sandy mortar.	0.30m – 1.00m
407	Structure	Red brick south wall of Victorian church. In-filled with wall 406. Brick size 230mm x 110mm x 75mm. 10 courses high with firm mid grey brown sandy mortar.	0.30m – 1.16m
408	Structure	Brick and blue lias gravestone slab wall of Victorian church. One course of bricks on top of slabs, and built on top of medieval church wall	0.25m – 0.39m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
		425. Brick size 235mm x 110mm x 75mm.	
409	Structure	Brick wall at eastern end of Victorian church. 12 courses high in English bond with friable light orange brown sandy mortar. Brick size 230mm x 110mm x 80mm. Built on top of medieval church wall 429.	0.30m – 1.36m
410	Structure	Culverted brick drain with U-shaped tiles and salt-glazed piping. Built against wall in-fill 406. Joins up to ceramic pipe 411.	0.50m – 0.90m
411	Structure	Red ceramic pipe running E-W. Formed part of drainage from church.	1.00m b.g.s
412	Layer	Firm dark greyish brown silty sand layer with frequent brick and sandstone fragments. Build up of material in churchyard post-construction of the Victorian church.	0.20m – 0.43m
413	Layer	Firm mid reddish brown silty sand with frequent brick and sandstone fragments, disarticulated human bone and moderate charcoal flecks. Post construction levelling after completion of Victorian church, hence the human bone present. Seals intact burial horizon 414.	0.43m — 1.03m
414	Layer	Firm mid reddish brown silty sand with moderate charcoal flecks and CBM fragments. Cemetery grave horizon. In situ layer through which pre-1838 burials are cut.	1.03m b.g.s
415	Skeleton	Unexcavated skeleton in grave 417. Damaged and truncated by drain 410.	1.03m b.g.s
416	Fill	Firm mid reddish brown silty sand backfill of grave 417. Unexcavated.	1.03m b.g.s
417	Cut	E-W grave cut.	1.03m b.g.s
418	Skeleton	Unexcavated skeleton in grave 420. Damaged and truncated by drain pipe 411.	1.03m b.g.s
419	Fill	Firm mid reddish grey silty sand backfill of grave 420. Unexcavated.	1.03m b.g.s
420	Cut	E-W grave cut.	1.03m b.g.s
421	Skeleton	Unexcavated skeleton in grave 423.	1.03m b.g.s
422	Fill	Firm mid greyish brown silty sand backfill of grave 423. Unexcavated.	1.03m b.g.s

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
423	Cut	Possible E-W grave cut, not clearly defined.	1.03m b.g.s
424	Structure	Sandstone buttress on south side of church. 4 courses visible, blocks 0.35m x 0.30m x 0.50m in size. Built against original medieval church wall 425.	0.30m – 1.04m
425	Structure	Original medieval church sandstone wall running N-S. 4 visible courses of squared blocks, 0.30m x 0.20m x unknown size. Buttress repair 430 built halfway along.	0.39m – 0.99m
426	Layer	Compact mid yellow brown silty sand with frequent brick and mortar rubble. Bedding layer for floors 403 and 404. Covers medieval wall 429.	1.12m – 1.26m
427	Cut	Cut for drainage pipe 411. Cuts layer 414 and the burials in it. Unexcavated.	1.03m b.g.s
428	Cut	Victorian scarping event for demolition of medieval church and for a construction level to work from.	1.03m b.g.s
429	Structure	E-W medieval church sandstone wall. Squared blocks, 0.30m x 0.20m x unknown size. Only seen in plan but likely to be built to courses, probably return to join wall 425 outside trench limits.	1.04m b.g.s
430	Structure	Buttress attached to medieval wall 425. Initially part of the original construction, it was later strengthened with bricks. Partly covered and abutted by floor 405.	1.05m b.g.s
431	Fill	Loose mid reddish brown sandy clay with frequent pebbles and moderate mortar flecks. Backfill of construction cut 432 for medieval wall 425.	1.24m b.g.s
432	Cut	Construction cut for wall 425.	1.24m b.g.s
433	Layer	Natural deposit. Firm mid reddish brown sandy clay though which wall 425 is cut.	1.24m b.g.s

Appendix 2 Technical information

The archive (site code:WCM101991)

The archive consists of:

- 74 Context records AS1
 - 3 Field progress reports AS2
 - 3 Photographic records AS3
- 175 Digital photographs
 - 1 Drawing number catalogues AS4
 - 7 Scale drawings
 - 2 Context number catalogues AS5
 - 5 Skeleton records AS6
 - 1 Levels records AS19
 - 4 Trench record sheets AS41
 - 1 Box of finds
 - 1 CD-Rom/DVDs
- 1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcester City Museum and Art Gallery

Museums Worcestershire

Foregate Street

Worcester

WR1 2PW

Tel. Worcester (01905) 25371