

Land at 21 Kingsholm Square, Gloucester

Report on an Archaeological Watching Brief

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Avon Archaeology Limited

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Cover

Extract from OS town plan at 1:500 original scale, Gloucestershire Sheet 25.15.2, surveyed 1883, published 1884. 21 Kingsholm Sq indicated. Note late 19th century findspot of Roman coins marked close by to the west of the site. Sources: KnowYourPlace and National Library of Scotland.

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- aOD Above Ordnance Datum
MYA Million years ago



Abstract

Avon Archaeology Limited were commissioned by Mr David Mackey to undertake an archaeological watching brief during groundworks related to the construction of a small, single-storey extension on the rear of an existing dwelling house in Kingsholm Square, Gloucester. The project was rather unusual in that the brief consisted of monitoring a series of augured boreholes for piles, rather than conventional trench-dug foundations, so the work was necessarily limited to checking the deposits coming up with the auguring. The depths of the various deposits could also, again by definition, be measured with only rough accuracy, as they had to be estimated as closely as conditions allowed from the number of drill bits, of known length, that were in the ground at any one time. Despite these constraints, the deposits identified across all the excavated boreholes were consistent, ceramic of Romano-British date was identified in the uppermost of the deposits identified from the various boreholes, and as significantly, an unexpected development was the presence of what was clearly riverine alluvium as the lower of the deposits recorded.



Notes

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1 Introduction

Avon Archaeology Limited were commissioned by Mr David Mackey to undertake an archaeological monitoring project (watching brief) at an existing dwelling house on the western side of Kingsholm Square in Gloucester (**Figures 1 and 2**). The site itself is part of a yard/garden area immediately to the rear (ie to the west of) the current house, and the project is related to a planning application (City of Gloucester 18/00348/FUL) for the demolition of a small outbuilding, followed by the construction of a single-storey extension joined onto the western side of the existing house. The means of construction was by piled foundations joined by concrete beams, and the monitoring project involved checking the deposits which were brought up by the augur drill which was used to bore the pile holes.

The watching brief project was required as a condition of the planning consent, and was outlined in Condition 3 of the local authority's formal Decision Letter, issued on 7th June, 2018. The project had earlier been requested by the City Archaeologist, Andrew Armstrong, in internal advice issued to the application Case Officer on 23rd April, 2018. In that advice, the Archaeological Officer explained to the CA that the rationale for his advice was that:

[The] site is located within a very large Roman cemetery. In 1989 works for a small house extension at 23 Kingsholm Square (12 metres to the south) exposed at least five human burials. Numerous burials have also been found in Kingsholm Square itself. I'm therefore concerned that groundworks associated with the proposed development could damage or destroy archaeological remains, including human remains. In view of that background I recommend that a programme of archaeological mitigation should be undertaken so as record any archaeological remains and finds which may be adversely affected by the proposed development.

The fieldwork for the project was undertaken on 1st June, 2021. The work was conducted in accordance with the relevant guidelines for archaeological fieldwork projects issued by the Chartered Institute for Archaeology. Specifically, the overarching controlling document in this respect was the *Standard and Guidance*



for an *Archaeological Watching Brief*, first issued by the CIfA in Dec. 2014, and most recently substantively revised and updated in June 2020. The project also followed both the guidelines for archaeological projects set out in MoRPHE (Management of Research Projects in the Historic Environment, 2015), and was underpinned by the guidelines set out at national level in the NPPF (National Planning Policy Framework, as revised Feb. 2019). Issues of Health and Safety took priority over all archaeological matters, and the fieldwork was undertaken in accordance with the Health and Safety Policy of Avon Archaeology Limited (produced in collaboration with AAL's health and safety advisors Acorn Health and Safety). The CIfA does not itself produce Health and Safety standards and guidance explicitly for the archaeological sector, although some general guidance is provided by FAME (the Federation of Archaeological Managers and Employers). An accession number has been applied for from City of Gloucester Museum, and an OASIS record has been opened under the reference 412662. There is no Historic Environment Record Number, as the City of Gloucester local authority does not allocate these until after receipt of the final project report. The monitoring was undertaken according to the methodologies outlined in an earlier WSI, also produced by AAL, and submitted to and approved by the local authority prior to the commencement of the fieldwork.

2 Topography and Geology

The site is centred on NGR SO 83366 19435, covering an area of just under 280msq, and lies within a row of semi-detached properties flanking the western side of Kingsholm Square. To its north and south it is abutted by the houses and gardens of numbers 20 and 22 Kingsholm Square respectively, whilst to its west lies the house and garden of 6 Edwy Parade. To its eastern side, as stated above, is Kingsholm Square road and a set of tennis courts. The planned extension is located within the rear yard and garden of the property, lying at around 9m aOD.

Geologically, the site occupies an area dominated by Blue Lias Formation and Charmouth Mudstone Formation (undifferentiated). This is sedimentary Bedrock formed approximately 183 to 210 million years ago in the Jurassic and Triassic Periods in a local environment previously dominated by shallow lime-mud seas. Their characteristics are described by the BGS as

Blue Lias Formation: Thinly interbedded limestone (laminated, nodular, or massive and persistent) and calcareous mudstone or siltstone (locally laminated). Individual limestones are typically 0.10-0.30m thick. In some areas, intervening mudstone units with relatively few limestone beds.

Charmouth Mudstone Formation: Dark grey laminated shales, and dark, pale and bluish grey mudstones; locally concretionary and tabular limestone beds; abundant argillaceous limestone, phosphatic or ironstone (sideritic mudstone) nodules in some areas; organic-rich paper shales at some levels; finely sandy beds in lower part in some areas

Prior to the present project, no superficial (drift) deposits or borehole surveys were recorded in the area of the site. In effect, therefore, the opportunity to sink pile holes on this site, even if only relatively shallow in geological terms, and obviously not recorded to strict geotechnical standards, nonetheless represented an important intervention in its own right, in both geological and archaeological terms; having proven the occurrence, at relatively shallow depth, of drift deposits of both gravel and (probably) riverine alluvium.

3 Archaeological and Historical Background

The sheer quantity of information relating to the history of the city of Gloucester, much of it underpinned by the results of archaeological work, is such that what is presented here can, almost by definition, represent only the most summary account of the most salient points, and especially insofar as they relate to, and may have direct implications for, the watching brief project at the present site.

The early history of Gloucester is defined by its origins as a Roman town, itself originating as a legionary fortress. The strategic importance of a river crossing,

and the need for a command point in the general area which could control access to it, was recognised early on during the Roman conquest and pacification of lowland Britain; this, at least, seems clearly to be the imperative behind the establishment of a legionary fortress at Kingsholm, slightly to the north of Gloucester, perhaps as early as the late 40s or early 50s AD (Wacher 1995, 150).

There is a suggestion, indeed, that the choice of this specific site for this early fortress may owe something to the presence of a pre-existing late Iron Age settlement, but the indications are extremely vague, and if such a settlement did exist at Kingsholm, its nature and extent are entirely problematic (Hurst 2005, 299). It seems also to have been the case that the western defences of the Kingsholm fort were sited very close to the eastern bank of the former course of the Severn (McWhirr 1981, 11-12).

By the mid-60s AD, a legionary fortress had been established on the site which was later to become the colonia of Glevum, and it is likely that the Kingsholm site was abandoned by this time (McWhirr 1981, 14), although Hurst has suggested recently that there may have been a military presence on the Gloucester site before the Kingsholm fort ceased to operate (Hurst 2005, 299, fn7). The new fort at Gloucester enclosed an area of just over 17ha, and was provided with defences consisting entirely of earthen ramparts and ditches. Surprisingly little is known about the internal nature of the fortress, although in terms of general layout and the provision and design of barrack blocks, gates, principia and ancillary buildings, it seems in essence to have conformed to the 'standard' Roman model, so far as this can be defined (McWhirr 1981, 14-19; de la Bedoyere 2001, 40-85).

The life of the fortress as a military installation was, however, relatively short, for it seems to have lost that function by, at the latest, the late 70s, and thereafter supported civilian occupation at a fairly low level, until its formal elevation to the status of colonia, or colony for retired army veterans, probably during the short rule of the Emperor Nerva (96-98AD).



In the late first or early second century AD, a narrow stone wall, probably intended to act as little more than a revetment, was cut into the front of the old fortress rampart along its entire circuit, and this marked the first phase in 'monumentalising' the defences of the civilian town. Barrack blocks were eventually replaced with dwellings and other buildings, although to date the plan of only a single large town house, of mid second century AD date, is known with any certainty, on a site at Berkeley Street (Wacher 1995, 156-157). It is nonetheless clear that the second century was a time of extensive rebuilding and expansion, and that some of this was achieved by the amalgamation of a number of previously separate, smaller plots. The archaeology of the city centre, most notably the forum area, from earliest times to the post-medieval period, has now been the subject of a recently-published and seminal review and collation of the results of excavations undertaken in the late 1960s and 1970s (Hurst 2020).

The area of the site appears on several early maps of Gloucester (consulted on the Know Your Place website), and well into the 19th century, it was under agricultural fields. However, by the time of the First Edition OS map (early 1880s), Kingsholm was already being rapidly developed as a northern suburb, and indeed, Kingsholm Square itself had already been laid out by this time, and was completely lined with houses on its western side, with a few also on its eastern side. The present house on the site had been built by the early 1940s and from at least that time, the Square had pretty much its present appearance.

As we have already noted, the proposed development site lies to the north of what is considered to be the most sensitive historic core area of the city. There are, however, a number of considerations which have implications for the present site. While it is true that the detailed positions of the defences of the original Kingsholm fortress are imperfectly known, it is probable that the site falls within the area of the fort. It is also the case that immediately to the west, the open area of Kingsholm Square itself has protected Scheduled Ancient Monument status, arising from a belief that it was the site of the royal hall which is known to have been located in Kingsholm by the Anglo-Saxon period. This building is, very



regrettably, described as a 'palace' in the published Kingsholm Conservation Area Appraisal (GCC 2007), which is a loaded term and deeply inappropriate in this context. And whatever building it was which is described in that same document as having been 'pulled down' in 1591, it was almost certainly not the structure in which William the Conqueror ordered the making of Domesday Book at Christmas 1085/86, which will, instead, have been a large timber hall.

Nonetheless, we should note that the site does lie firmly within the Kingsholm Conservation Area. Know Your Place also indicates that the line of the nearby A430 road, about 130m to the east of the site, is here following one of two Roman roads shown as exiting from the north gate of the Gloucester colonia, 1km to the south of the present site. Part of this road, eventually bound for Tewkesbury, was later turnpiked in the second half of the 18th century. Part of the street alignment within the original Kingsholm fort is also shown, being inferred from the results of a wide variety of interventions over many years, and two of these internal streets are mapped as running roughly parallel with the western and northern boundaries of the site. To the north of the site, the road lies at about 30m distance, whereas to the south it is thought to lie at less than 20m distance. There have also been significant discoveries close to the site. HER 40250 refers to the discovery of what has been interpreted as the floor of one of Kingsholm's forts, at a depth of around 620mm below ground level, in the garden of 23 Kingsholm Square, which is only a few metres to the south of the present site. HER 42745 records the observations made during the excavation of an extension trench at the rear of 24 Kingsholm Square, which included part of a military rampart and floor surface, a sunken oven and four inhumations, all of Roman date. Crucially however, HER 38476 establishes the presence of what may have been, originally, a very extensive cemetery of Roman date, with numerous important finds, made over a long period of time and reported on from at least the early 18th century onwards, coming from the area not far to the east and north-east of the present site. The burials seem to have included both inhumations and cremations. At least one altar and several lead coffins are known to date. The HER entry is unfortunately not specific about the suggested date of the cemetery and its period of use, but the distinct

impression is given that it was not directly related to the actual occupation of the fort, but was established, and was in use for a very long period of time after the fort had been abandoned, by the inhabitants of the *colonia* – lying as it did well outside the city boundary.

The upshot of this very brief survey is that it is clear that the site lies in an area of well-known and well established high archaeological sensitivity and importance.

4 The Monitoring

As already noted, the monitoring work was carried out on 1st June, 2021. The brief was *only* for the checking of deposits thrown up by the screw augur which was being used to drill the pile holes, and in the first instance there were intended to be four of these, each of 8m depth. The drill sections were in 1m lengths, and were 0.30m in diameter. The ground surface had already been prepared by slight reduction, and the stone pile mat had been laid, when the monitoring work began (**Plates 1-5**). The recovered deposits were pretty consistent across the entire area of the work, although the initial four pile bores that the site effectively encompassed were very close together. They formed a rectangle framed by a hole at each corner, with its long axis oriented roughly north-south, and measuring 5.50m in length, and 1.85m in width. The piles were intended to carry the bulk of the load of that part of the new extension against the western elevation of the existing building, as shown on **Figure 2**. The ground surface from which drilling was commenced (ie the site formation level) was at 9.34m aOD.

The work, however, hit a problem after only the first bore hole was dug to full depth. Ground water, probably the top of a permanent water table, was encountered at only 2.10m depth. The work then had to be stopped, because the sub-surface deposits were collapsing into the pile bore due to waterlogging. It was eventually decided that this issue was to be resolved by adding an additional two

bores (making six in all), and taking them and all the remaining bores down only to 2-3 metres depth with the augur, with the remaining extent of the bores (down to 8m, so at about 1.34m aOD) being drilled with a percussion hammer system; the latter did not, of course, lend itself to meaningful archaeological monitoring. The additional two bores were placed centrally along the short axes of the piling rectangle, as shown on **Figure 2**. All of the remaining augured, upper parts of the pile bores were monitored.

We would stress again that depths and thicknesses of recorded deposits could only be estimated in pretty crude terms by noting changes in the nature of the deposits in relation to the changing number of bits actually on the drill. We think, however, that in fact the measurements are by no means wildly inaccurate, and are probably acceptable to within $\pm 0.50\text{m}$. The results were as follows:

(100) From ground level down to *about* 1.5m depth. Dark to mid greyish brown, soft, gritty, very plastic silty clay, with flecks of charcoal and some animal bone. Possibly a heavily worked-over cultivation/garden deposit of some kind. This layer produced Romano-British pottery. **Plate 3**

(101) From 1.5m to *about* 2.5m depth. Mid kahki-brown, stony, sandy, very loose, wet (ie waterlogged) gravel, with occasional pockets of pure clay. Unstable in the borehole. Possibly river terrace gravel? **Plate 4**

(102) From 2.5m down to full depth of the bore in the only hole that was augured to full depth (ie 8m). Mid grey-blue, soft to moderate, sticky, stiff, pure clay. Riverine alluvium? **Plate 5**

5 Conclusions

We cannot say for certain that the deposit we have assigned here as (100) was an in situ layer of Romano-British date. All that could be done was to check as much as possible of the material as it came out of the respective bores, and while a small group of Romano-British ceramic did come from this layer, with the best will in the world, it would have been all too easy to miss material of other (ie much later) dates. Although that said, we certainly we did not see any of the more 'obvious' light coloured ceramics in this material which act as instantly recognisable markers of late disturbance/deposition – white or cream wares, the various kinds of regional Staffordshire ware (in Gloucester probably from Bristol), and any kind of blue and white ware, whether hand painted or transfer printed. Although the *apparent* absence of this kind material from such a small and 'difficult' sample, may not in fact be taken to prove anything in terms of its date.

The identification of drift deposits on this site in the form of possible Quaternary river terrace gravels and, underneath them, ?riverine alluvium, has, though, been a useful and unexpected result (*pers comm* Andrew Armstrong), although its implications are not as yet entirely clear. The geology map shows that at the present state of knowledge, riverine drift deposits in the channel of the River Severn lie only about 200m to the west of the site. As presently recorded, we would have expected the deepest of the Kingsholm Square boreholes, at 8m depth, to have hit a solid rock geology consisting of mudstones and limestones of various kinds, straddling the Triassic and Jurassic periods; but it did not. The BGS online resource gives a generalised description of alluvium, as:

.....a general term for clay, silt, sand and gravel. It is the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope. Synonym: alluvial deposits. Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present (BGS).



This would seem exactly to describe contexts (101) and (102) above, and it looks as though therefore, the mapped alluvial coverage from the Severn channel in this area, which in these upper reaches is considerably braided, needs to be redrawn to bring it much further eastwards to encompass, at the very least, the present site, and perhaps further east still. This is relevant because these deposits can both contain, and can seal, archaeological material.



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Location of the Site

Figure 1

The Site 

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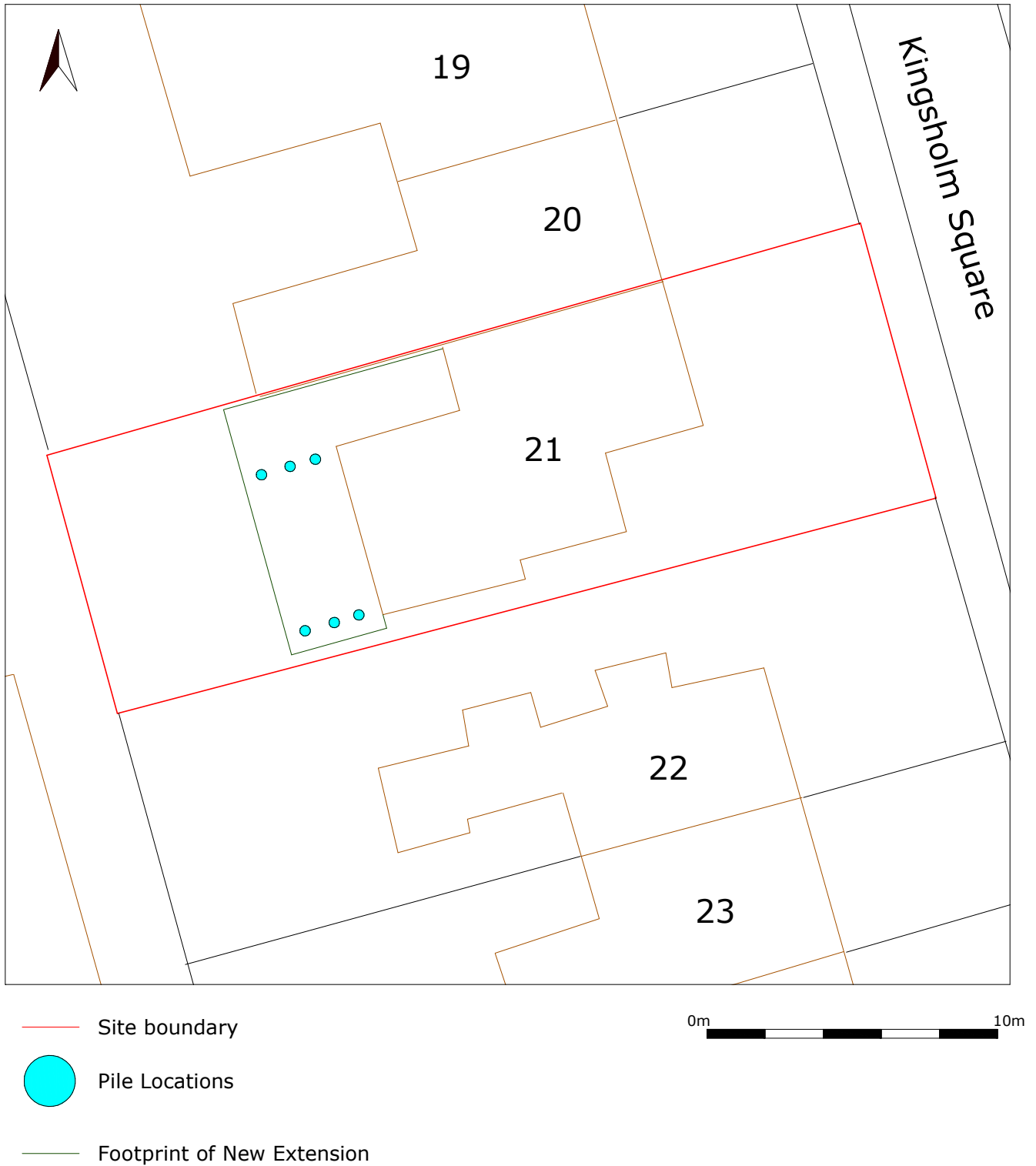


Grid lines at 1km intervals

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Based on OS Explorer 1:25,000 scale, Sheet 179 - Gloucester,
Cheltenham and Stroud

Figure 2

Site Plan Showing Red Line Boundary and Monitored Groundworks



PLATES



1. Preparing the rig for operation. The yellow cross at bottom right marks the first, and deepest of the pile holes to be drilled, and is the north-westernmost of the group as marked on **Figure 3**. View to south-west from the north-eastern side of the site.



2. The drill in operation, bringing up ?riverine alluvium, context (102)



3. Context (100)



4. Context (101)



5. Context (102)