

## ***Two Studies on Roman London. Part B: population decline and ritual landscapes in Antonine London***

In this paper I turn my attention to the changes that took place in London in the mid to late second century. Until recently the prevailing orthodoxy amongst students of Roman London was that the settlement suffered a major population decline in this period. Recent excavations have shown that not all properties were blighted by abandonment or neglect, and this has encouraged some to suggest that the evidence for decline may have been exaggerated.<sup>1</sup> Here I wish to restate the case for a significant decline in housing density in the period *circa* AD 160, but also draw attention to evidence for this being a period of increased investment in the architecture of religion and ceremony. New discoveries of temple complexes have considerably improved our ability to describe London's evolving ritual landscape. This evidence allows for the speculative reconstruction of the main processional routes through the city. It also shows that the main investment in ceremonial architecture took place at the very time that London's population was entering a period of rapid decline. We are therefore faced with two puzzling developments: why were parts of London emptied of houses in the middle second century, and why was this contraction accompanied by increased spending on religious architecture?

This apparent contradiction merits detailed consideration. The causes of the changes of this period have been much debated, with most emphasis given to the economic and political factors that reduced London's importance in late antiquity. These arguments remain valid, but here I wish to return to the suggestion that the Antonine plague, also known as the plague of Galen, may have been instrumental in setting London on its new trajectory.<sup>2</sup> The possible demographic and economic consequences of this plague have been much debated in the pages of this journal, with a conservative view of its impact generally prevailing. I do not propose to challenge this view, since I draw on different evidence to different ends. The obliteration of London would fail to register on any available proxy measure of economic activity in the Roman Empire, but the changing architectural topography of Antonine London is most coherently understood as a response to plague. To start with, however, we must give our attention to the evidence from which changes to London's second century urban topography can be described.

### **Second century contraction.**

Many excavations in London have found evidence of busy construction and reconstruction down to the middle years of the second century, but less compelling evidence for the continuation of such activity into the late second century and beyond. On other sites, however, construction sequences show that the second and third centuries were no less vital than the earlier periods. This has encouraged an ongoing debate between minimalists who privilege the evidence for contraction and maximalists who suspect that the scale of change has been exaggerated. The issue is complicated by the fact that absence of evidence cannot be relied upon as evidence of absence, and there are several plausible reasons why material traces of second century and later occupation might be under-represented in the archaeological record. Recent

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<sup>1</sup> e.g. Rowsome 2008, 30.

<sup>2</sup> Merrifield 1996, 111-2.

excavations at One Poultry, next to the Walbrook crossing, and on a site at Lloyd's Register, to the east of the forum and Cornhill, have both produced evidence for successive timber and masonry buildings of the second to fourth centuries. These individual archaeological sequences have been used to assert the continued vitality of London in later periods and argue against the existence of a pronounced mid second century AD decline.<sup>3</sup> Whilst it is recognised that these sites might not be typical, it has encouraged the suggestion that *'the absence of post-Hadrianic occupation levels from many sites must be the result of later truncation and soil formation processes which converted late Roman strata into dark earth, and that the evidence for contraction has often been overstated.'*<sup>4</sup>

The case for this rests largely on the evidence of the dark-earth.<sup>5</sup> Dark earth deposits have been studied at many sites and generally consist of finely mixed material - deriving from earth and timber buildings augmented by occupation debris, ash and cess - homogenised *in situ* by the action of roots and earthworms.<sup>6</sup> In some cases two distinct horizons have been noted: a lower horizon representing an initial formation of biologically reworked Roman strata mixed with dumped material, and an upper, more uniform, horizon resulting from soil formation, dumping and reworking.<sup>7</sup> Pollen indicates the presence of plants characteristic of grassland or urban wasteland, but there is no evidence to support the suggestion that dark earth originated through the cultivation of gardens.<sup>8</sup> As Cowan and Seeley have observed in their useful review, these deposits do not necessarily mean abandonment but can be the product of abandonment. Where this took place a zone of biological activity, which rose as soil accreted, disturbed earlier stratified deposits to varying depths depending on local circumstances and topography. This disturbance can result in the loss of evidence of structural phases that preceded dark earth formation.<sup>9</sup>

Where dark-earth deposits are found over the remains of earlier buildings this indicates that those buildings had at some stage given way to open land, where roots and earthworms could act on the archaeological stratigraphy. The problem is that it is not usually clear when this took place. In some cases dark earth can be shown to have been contemporary with second century buildings but it also occurs over fourth century structures.<sup>10</sup> The most common stratigraphic pattern, represented by many dozens of individual excavations and as typified by the sequence excavated at Newgate Street in 1978, involves structural activity up until the period AD140/160 followed by dark-earth formation with little evidence of later Roman periods. From this it has been argued that these sites were abandoned in the middle of the second century, but the presence of dark earth has made it possible to counter with the suggestion that *'soil formation processes may have destroyed evidence of later activity.'*<sup>11</sup> These contradictory readings of the evidence demand closer scrutiny. At Newgate Street parts of the Antonine buildings had indeed been disturbed beyond

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<sup>3</sup> Rowsome 2006.

<sup>4</sup> Howe and Lakin 2004, 51; a view endorsed by Rowsome 2006 and Cowan and Rowsome 2009.

<sup>5</sup> It is also the case that many excavations in London take place beneath modern basements that have removed all but the earliest deposits.

<sup>6</sup> Macphail 2003, 89-104; Perring and Roskams 1991, 64-5; Bluer *et al.* 2006, 6; Sankey 2002, 13-17.

<sup>7</sup> Lyon 2007, 36.

<sup>8</sup> Watson 1998, 105; *contra* Perring 1991a, 79.

<sup>9</sup> Cowan and Seeley 2009; Yule 1990; Watson 1998.

<sup>10</sup> Macphail 2003; Macphail 2005, 88-90.

<sup>11</sup> Lyon 2007, 33.

recognition, but elsewhere the local topography had preserved the remains of these buildings beneath an unusual demolition and levelling horizon that preceded dark earth formation. Previous architectural practice had involved the recovery and, presumably, re-use of upstanding clay walls, but when the Antonine buildings were demolished their broken-up walls were spread over the final floor deposits.<sup>12</sup> This evidence of a demolition horizon came from areas where the floors of the Antonine houses had subsided into the poorly compacted fills of deep quarry pits allowing for their deeper burial and better preservation. Elsewhere on site the destruction deposits and parts of the underlying floor deposits had indeed been subsumed into the dark earth, but a full archaeological sequence was preserved where earlier subsidence had resulted in a much thicker spread of destruction debris. Many architectural practices, such as the construction of deeper foundations for load bearing walls, the burial of foundation deposits, the excavation of drainage channels and sumps, and the occasional use of timber piles, appear to have been discontinued at this time. The absence of such features penetrating into the Antonine buildings from higher levels indicates a radical change in the nature of the architecture. A similar argument can be developed from the absence of tile built hearths and ovens within the dark-earth sequence. Large ovens were a particular feature of the strip buildings at Newgate Street, and were present in all phases of construction. The robust solidity of such features in the late Hadrianic and Antonine buildings had preserved them from the disturbance caused by dark-earth and contributed to the survival of areas of intact stratigraphy, supplementing the evidence obtained from areas of subsidence.<sup>13</sup> No similar ovens and sequences were preserved from later phases, suggesting that no later ovens were built. The unusual destruction horizon and the architectural discontinuities point irresistibly to the conclusion that the site was converted into open land after the demolition of the Antonine buildings. Later Roman periods were instead represented by numerous small stakeholes cut from within the dark earth. These might have supported livestock pens, or posts where goats were tethered.

Many other sites, especially on the higher ground to the west of the Walbrook, present similar stratigraphic sequences. Formerly busy areas of occupation appear to have fallen into disuse a generation or so after the Hadrianic fire of *c.* AD 125, with the latest stratified assemblages containing pottery of the period AD 120-160.<sup>14</sup> The date most commonly given for the final stages of occupation on these sites is *c.* AD 160.<sup>15</sup> As Watson and Heard observe: *'although some argue that the evidence for later Roman buildings at many sites may have been destroyed in antiquity by subsequent soil formation processes, the abrupt disappearance of buildings from so many areas is still generally accepted as providing evidence for a marked decline in settlement'*. This decline in settlement density might also account for the mid second century abandonment of the public baths at Huggin Hill, and a contemporary failure to replace the wells and water-lifting devices that supplied water to the western half of the Roman city.<sup>16</sup> It is notable that despite the apparent abandonment of the organised water supply later Roman London also made use of fewer timber-lined wells.<sup>17</sup>

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<sup>12</sup> Perring and Roskams 1991, 19 and 67 Group VIII.13.

<sup>13</sup> Perring and Roskams 1991, 19 Groups VIII.8-10.

<sup>14</sup> Lyon 2007, 33; Watson and Heard 2006, 56-7; Perring 1991a, 77-9.

<sup>15</sup> e.g. Lyon 2007, 45.

<sup>16</sup> Rowsome 1999; Blair *et al.* 2006.

<sup>17</sup> Wilmott 1982.

Contraction was not restricted to this area west of the Walbrook: in particular waterfront sites in Southwark, to the south of the Thames, present evidence of rapid decline in the period AD 160-170.<sup>18</sup> Detailed work on building density in the eastern town also suggests that population declined in this central area in the mid- to late 2<sup>nd</sup> century, with increased areas of open space.<sup>19</sup> Various other indicators, such as densities of pits and wells and the number of dated archaeological assemblages point firmly towards a decline in the middle second century.<sup>20</sup> Studies of London's Roman pottery illustrate a clear dearth of assemblages for the period AD 160-200: with the cessation of both the Verulamium and Highgate Wood industries *c.* AD 160 reflecting on radical change in pottery production and supply.<sup>21</sup> It has also been suggested that the high proportion of dog bones found in second and third century contexts in western London and Southwark may represent culls of feral animals in waste areas, with the implication that such waste areas were a more common feature of this period than had previously been the case.<sup>22</sup> During the middle second century cattle diminished in importance in comparison to sheep in bone assemblages from sites west of the Walbrook (with a shift also towards older sheep, indicating an emphasis on ante-mortem products), but no similar change has been noted on sites in central and eastern areas. This divergence might be explained if the open spaces now found in the western parts of town were used to pasture animals destined for local consumption.<sup>23</sup>

In sum I see no reason to doubt that there had been a drastic reduction in the population of London in the mid second century, with much of the evidence for this converging on the period AD 160-170. This in no way negates the evidence for continued occupation at many sites.<sup>24</sup> I have previously estimated – based on a small sample of 37 sites - that up to two-thirds of London's houses may have been abandoned. This may exaggerate the scale of contraction because the sample was biased towards sites on the western and southern margins of the town, but we are still looking at a major exercise in depopulation.

Other cities in southern Britain may have witnessed a contemporary decline in the density of occupation, if not on an equivalent scale. There is ample evidence that this was the case in Verulamium, but here the situation may have been exacerbated by the effects of a fire that destroyed much of the city in the Antonine period.<sup>25</sup> Several properties were not redeveloped after the fire, with some areas left open for fifty years. Elsewhere the picture is more mixed. In several Romano-British towns there was a tendency to see the smaller timber buildings of the early Roman period replaced by larger town houses with masonry foundations in the course of the late 2<sup>nd</sup>

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<sup>18</sup> Cowan and Seeley 2009; Douglas 2007, 34; Killock 2005; Taylor-Wilson 2002; Brigham 2001; Perring 1991a, 77.

<sup>19</sup> Swain and Williams 2008, 39 drawing on analysis to appear in Williams forthcoming.

<sup>20</sup> Marsden and West 1992, 138.

<sup>21</sup> Symonds and Tomber 1991; Seeley and Drummond-Murray 2005; Symonds 2006, fig 80.

<sup>22</sup> Rielly *et al.* 2006.

<sup>23</sup> Rielly *et al.* 2006.

<sup>24</sup> As illustrated in the architectural sequence revealed at 71 Fenchurch Street (Bluer *et al.* 2006, 58). Subsequent urban renewal may be indicated by the construction of the masonry town walls at the end of the 2<sup>nd</sup> century, whilst the construction of new quays along the Thames waterfront, associated with continental imports, suggests a busy port in the early third century (Symonds and Tomber 1991).

<sup>25</sup> Niblett 2001, 112-3.

century.<sup>26</sup> This change in the urban architecture appears to reflect a shift towards communities of fewer but larger urban households. Whilst the consolidation of land-holdings into a smaller number of bigger properties would have been facilitated by a period of population decline we have no evidence that this is what actually occurred, and these changes could just as easily be the consequence of the wider economic and social trends of the period.

Several cities elsewhere within the Roman world may also have seen declining housing densities in the mid to late second century. Examples with which this author is directly acquainted include Beirut, where there was a significant decline in building activity in some areas dated from the Antonine period, and Milan, where archaeological sequences indicate a hiatus in building activity that started in or around the middle of the second century.<sup>27</sup> These examples can be used to suggest that London's mid second century contraction might have been part of a wider phenomenon, evident in some other ports and places linked to military supply and commerce. Elsewhere, however, the Antonine period can be described as one of urban prosperity, finding reflection in the construction of new town houses and public buildings. A range of different local factors will have influenced individual urban trajectories. For present purposes it is sufficient to establish that London witnessed contraction in this period. The reasons for this merit further discussion.

I have previously argued that London's contraction was a direct consequence of economic decline, as the site's importance to the imperial administration changed. This argument still stands, but works best as an explanation of longer-term trends. The changes in London appear to have taken place within the course of a single generation, involving extensive abandonment and clearance. In order to account for the timing, speed and scale of change it is worth giving further thought to the possible impact of the plagues that affected the Roman world between AD 165 and 180. Fear of plague might also have contributed to an apparent shift in the focus of architectural patronage at this time: in which secular projects were neglected, but patrons spent lavishly on building new temples and enlarging religious sites.

### **London's ceremonial architecture**

Our understanding of London's ceremonial and religious architecture has been transformed by a series of recent discoveries. Creighton has argued that the commemoration of ancestral kingship created focal points to the urban landscapes of towns such as Colchester and Verulamium, establishing a dialogue between sites of temporal and sacred power.<sup>28</sup> The ritual topography he describes finds some parallels in the layout of later Roman London. As a new urban foundation Roman London lacked a landscape informed by historical tradition, but the natural potency of rivers and boundaries defined a series of liminal locations where the supernatural forces of the gods demanded acknowledgement. During earlier periods most sites of veneration were not marked by monumental architecture, and can only be identified from the

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<sup>26</sup> Perring 2002, 41; as evidenced by the buildings of Roman Colchester (Crummy 1997, 91).

<sup>27</sup> Perring 2003, 211-12; Perring 1991b, 136-140. Perring 1991a, 77 provides some other examples of possible urban contraction in this period.

<sup>28</sup> Creighton 2006, 129.

evidence of votive deposits found in rivers and buried in pits and shafts.<sup>29</sup> These rites were most evident where bridges and gates penetrated defined precincts and where watery places linked the world of the living with the underworld. The arterial roads through London inevitably established and articulated several such locations, and may have encouraged the subsequent development of these roads for use in civic rituals. This in turn may have informed the institutions, and consequently architecture, of organised religious ceremony.

One of the most important areas for ritual activity was found at the southern approaches to London, on the mainland opposite the point where a bridge carried Watling Street over the southern channel of the Thames and onto the islands of Southwark. Offerings found in excavations at Swan Street included human and animal body parts and complete or near complete pots which had been placed in pits, wells, shafts and ditches.<sup>30</sup> These votive deposits, most of which dated to the period between the mid 1<sup>st</sup> and mid 2<sup>nd</sup> century, may have been associated with rituals of departure and arrival. The distinctive nature of the faunal assemblages found at this site also suggests that sheep/goat may have been sacrificed here.<sup>31</sup>

A large temple complex was built on an adjacent site, to the north of Watling Street, in the middle of the second century. Excavations at Tabard Square in 2002 and 2003 uncovered the remains of two stone-built Romano-Celtic temples, each about 11m square with an outer *temenos* 2.3m wide, which had flanked a courtyard with a winged villa-like building at one and a column and sites of two possible altars at the other.<sup>32</sup> Three plinths, presumably for statuary, formed the fourth side of the courtyard. The gravel courtyard of this temple precinct was laid over earth and timber buildings that had been levelled in the middle of the second century. The boundary ditch that enclosed the *temenos* contained several votive deposits, including a bronze foot and ritually sacrificed vessels, and primary finds assemblages dated to the period AD 140-160.

The most important find from this site was a dedication to the god Mars Camulus inscribed onto a marble slab that was buried in a pit at the heart of the complex.<sup>33</sup> Local dedications to Mars tend to refer to the role of the god as the guardian of a place rather than as a god of war, and the temple at Tabard Square was ideally placed for the symbolic protection of London. The road south from London also lead directly to the important religious sanctuary at Springhead, where mid to late second century temples were associated with a spring and pool.<sup>34</sup> The dedication to Mars Camulus was made by Tiberinius Celerianus, a citizen of the Bellovaci and *Moritix* of the Londoners (*Moritix Londiniensi*). The title, deriving from a Celtic root meaning seafarer, suggests that the plaque had been dedicated by someone with a formal role in a guild or association engaged in seaborne trade. The connections with Gallia

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<sup>29</sup> There is widespread evidence for structured deposition in ritual shafts of the type described by Fulford 2001 (also Perring 1991a, 81-2). Merrifield 1995 argues, convincingly, that metalwork from the Walbrook was votive in origin.

<sup>30</sup> Beasley 2006.

<sup>31</sup> See also Douglas 2007, 34.

<sup>32</sup> Durrani 2004; Fitzpatrick 2004, 301. I am grateful to Vicky Ridgeway and Gary Brown of Pre-Construct Archaeology for providing additional information on the dating evidence in advance of publication.

<sup>33</sup> Tomlin and Hassall 2003, 116. Grew 2008.

<sup>34</sup> Andrews 2008.

Belgica, established by both the declared citizenship and the choice of god, add to a body of evidence indicating the significant role played in London by immigrants from this region. The dedication also included a formulaic reference to the Divinities of the Emperors, where the plural nature of the reference (NVM.AVGG) indicates a date after AD 161 when Lucius Verus was adopted as co-Emperor by Marcus Aurelius.<sup>35</sup> The circumstances of burial suggest that this inscription held particular importance to the sanctuary, and it may have been part of the original temple dedication. Taken in association with the finds from the *temenos* ditch, and other strands of evidence that point to a mid-second century reorganisation of cult activities in the area, it can be suggested that the temple complex was built in the period AD 161-169 by a leading figure within London's mercantile community. This represents a significant shift in the source and character of civic patronage from the earlier periods of London's occupation where military and public officials appear to have been the dominant players within the urban community, although it should be recognised that Tiberinius Celerianus came from the same pro-Roman Gallo-Belgic background as some of Roman Britain's leading government officials. Matters of trade and supply continued to concern the procurator's office, and a *Moritix* of the Londoners is likely to have retained a close working relationship with the provincial administration.

This temple precinct may have established a monumental distinction between a secular public forum at the centre of London and an opposing sacred site beyond the urban boundary (fig 1). In this regard London was adopting an approach to public architecture that has been identified in other Romano-British cities, inspired by a common need to recognise and reconcile the competing forces that guided civic affairs.<sup>36</sup> The forum was an important location for ceremonial activities and a small classical temple, a little over 20m long and 10m wide, was probably built here as part of the Flavian forum complex.<sup>37</sup> This rectangular structure, with an angular apse on its north side, was set within a gravelled precinct and is the earliest temple known from Roman London.

The road that linked these different centres of ideological power and civic ceremony are likely to have been used for public processions, drawing on the example of Rome's own sacred way.<sup>38</sup> Such processions were an important feature of the cities of the Hellenistic world, where worshippers carried statues and ritual objects along prescribed routes '*stopping at certain points for specific acts of ritual, heading towards the the god's temple or sacred precinct*'.<sup>39</sup> Ephesos presents one of the better documented examples of a Roman religious way, where a benefaction dated to AD 104 allowed for a fortnightly circular procession from an extra-mural sanctuary through the city to the theatre and back.<sup>40</sup> Esmonde Cleary has recently argued that religious processions are likely to have taken place in the oppida of late Iron Age Britain and also been a feature of Roman-British civic life.<sup>41</sup> Whilst we have no

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<sup>35</sup> The lettering of the inscription is consistent with a dedication during Marcus Aurelius' joint reign with either Julius Verus (AD 161-69) or Commodus (AD 177-80). Other dating evidence from the site, assuming the plaque to have been associated with the initial dedication of the temples here, makes the earlier of these two periods the more likely.

<sup>36</sup> Creighton 2006, 129-45.

<sup>37</sup> Marsden 1987, 32-3.

<sup>38</sup> Coarelli 1983.

<sup>39</sup> Rice 1983, 26, quoted in Rogers 1991, 80.

<sup>40</sup> Rogers 1991.

<sup>41</sup> Esmonde Cleary 2005.

direct evidence that Romano-British towns were configured to provide a setting for such urban rituals, processions formed an integral part of the ceremonial observances involved in the Imperial Cult which was widely adopted in the western provinces.<sup>42</sup> The urban topographies of Colchester and Verulamium, as described by Creighton, lend support to the notion that places of extra-mural sacred power were in ritual dialogue with sites of urban temporal power.

Any procession that may have taken place between London's forum and the temple complex on its southern border is likely to have visited other shrines and religious sites along its route, and there is some archaeological evidence that this might have been the case. A temple or shrine may have been found in the vicinity of Southwark Cathedral, where an important group of cult statuary was found in a well although this material might alternatively have derived from a funerary monument.<sup>43</sup> The main focus of votive activity was probably on London Bridge itself. Clusters of finds from river dredging in the Thames appear to indicate the location of a shrine here, where votive gifts were made to the god that was the river Thames.<sup>44</sup> The evidence of a lead *defixio* addressed to Neptune found on the foreshore of the Thames has been used to suggest that Neptune was also venerated at shrine by the bridge.<sup>45</sup> The coin finds suggest a Flavian date for the commencement of these votive activities on the bridge. This is broadly contemporary with the construction of the first forum building and is a plausible date for the beginning of organised civic festivals and processions along this route. A monumental inscription found at Nicholas Lane may involve a dedication to the divinity of the Emperor by the province of Britain, and was perhaps derived from a temple to the imperial cult located in this area between the forum and river.<sup>46</sup> This would have added an important point of reference in any public festivals taking place along the road from the southern sanctuary to the forum, and reinforced the official and Roman identity of the settlement that had developed on the northern bank of the Thames (for which see the preceding paper in this volume).

The religious precinct found on London's southern border may have been matched by a site of equal importance to the west. There is mounting evidence to suggest that an early sanctuary may have been established on the hill north-west of the Claudio-Neronian settlement, in the area where water-works were established in the aftermath of the Boudican revolt. At least two Romano-Celtic temples were built here in later periods, as described below, but it seems likely that cult activities had an early origin. The presence of wells and springs on high ground overlooking the site of the Claudian fort would have made this an attractive location for ritual offerings. A large pond, formed from a quarry pit, appears to have been the focus of votive dedications from the Neronian period, as implied by the gilt-bronze arm found in excavations at 20-30 Gresham Street.<sup>47</sup> This pond, an unusual and dominant feature in the early Roman city, may have been built to take advantage of a series of natural springs on this low hill. The flowing water found here necessitated the construction of a series of timber lined channels, some of which were investigated in the excavations at One Poultry where they dated AD 47/48. An early rural sanctuary at this location would account

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<sup>42</sup> Price 1984; Fishwick 2002.

<sup>43</sup> Hammerson 1978. See further below.

<sup>44</sup> Rhodes 1991.

<sup>45</sup> Hassall and Tomlin 1987, 360-3.

<sup>46</sup> RIB 5.

<sup>47</sup> Shotter 2004, 4; Blair *et al.* 2006 ; Bayley *et al.* 2009.

for both the early development of the street system in this area and its unusual layout: it is notable that several early streets converge on the site of the pond and it is otherwise hard to account for the unusually early development of this part of London's street system.<sup>48</sup> The presence of a sacred site here may have attracted the temples later built to the north of the pond, and might also have been a factor in the subsequent decision to build the Flavian amphitheatre on a site immediately to their north.

The amphitheatre would itself have been the scene of important public ceremonies, and was a likely destination for organised processions.<sup>49</sup> London, in common with many Romano-British towns, does not seem to have had a separate theatre. This building was rebuilt in stone in the Hadrianic period and saw various phases of alteration and repairs from the 160s onwards.<sup>50</sup> Two temples have recently been identified in the area between the amphitheatre and site of the Gresham Street pond, on the likely line of approach for those arriving from (or departing to) the forum. The first of these was probably built in the late first century, and consisted of a central *cella* surrounded by a colonnade with pier-bases clad in Purbeck marble.<sup>51</sup> In post-Hadrianic rebuilding a Romano-Celtic temple or shrine was also built on a site a short distance to the east, as discovered in excavations at Gresham Street in 2007. This also consisted of a simple rectangular *cella*, 4.5m square surrounded by a 1.4m wide portico, with foundations at one end possibly marking the location of a cult statue.<sup>52</sup> Any processional route from the forum to the amphitheatre would have crossed the Walbrook: another likely site for a shrine from which offerings to the river would have been made. A temple was probably built here in the mid to late 2<sup>nd</sup> century, as suggested by the remains of a precinct wall of this date found in excavations at One Poultry.<sup>53</sup>

The amphitheatre may not have been the final, or only, destination of any religious processions west of the Walbrook. A further temple may also have been located 150m to the west of the Gresham Street pond. Monumental foundations and an altar were found at the site of Goldsmiths' Hall, Foster Lane in 1830.<sup>54</sup> Merrifield has suggested that the hunter-god shown on this altar, likely to date to the second century, can be identified with Apollo (perhaps Apollo Cunomaglus), and has shown that the same deity was present amongst the group of sculptures found beneath Southwark Cathedral on the suggested route of the processional way linking the southern precinct with the forum. He suggests that response to the plague was a stimulus for the development of a London cult of Apollo, appropriately syncretised with a British deity, in the course of the 2<sup>nd</sup> century.<sup>55</sup> In Greek and Roman mythology Apollo, the archer-god, was a god of medicine and healing and bringer of plague, as exemplified by his deeds in Homer's *Iliad*.

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<sup>48</sup> Roads 6, 8 and 10 illustrated in Bateman *et al.* 2008 fig. 114 appear to be aligned on the large Gresham Street pond.

<sup>49</sup> Price 1984, 111; Rogers 1991, 102.

<sup>50</sup> Bateman *et al.* 2008.

<sup>51</sup> At 30 Gresham Street and 26-27 King Street: Bateman *et al.* 2008, 116.

<sup>52</sup> At 54-66 Gresham St: Bateman *et al.* 2008, 118; Booth 2008, 317; Booth 2007, 287.

<sup>53</sup> Burch *et al.* 1997, 135.

<sup>54</sup> Merrifield 1996, 106, 112.

<sup>55</sup> Merrifield 1996, 112.

An Antonine temple precinct may also have been built next to the Thames on the southern slopes of Ludgate Hill. Two successive Roman public building complexes (the 'Period I' and 'Period II' complexes) have been identified west of the redundant public bath-house at Huggin Hill. The later period of construction is better documented, and includes two *podia* for classical temples built using timbers felled in AD 294. Until recently the earlier complex was ill defined and ill dated, but excavations undertaken between 2001 and 2003 located two large masonry apses facing onto the river, linked by a possible ambulatory or portico.<sup>56</sup> Building material found in preparatory levelling dumps gives a *terminus post quem* of AD 140 for the construction here, whilst a timber pile from beneath one of the earliest walls provided a dendrochronological date of AD 165. It is unfortunate that only a single timber was recovered for analysis since many others were present on site. In Roman London most large-scale exercises in using timber piles drew on freshly felled unseasoned wood, and there is therefore a distinct possibility that the temple here was built within a year or so of AD 165. Sculptured blocks from a free-standing arch, which depicted various figures from classical mythology, were found re-used in the late Roman riverside wall nearby and is believed to have formed the entrance to a religious precinct. The style of decoration allowed Blagg to suggest a date not earlier than the late Antonine period.<sup>57</sup> Several subsequent phases of alteration were evident. Two third-century altars were also found re-used in the foundations of the riverside wall. One described the restoration of a temple to Isis by the provincial governor and the other, which included an imperial freedman amongst a trio of patrons, may have accompanied the reconstruction of a temple to Jupiter.<sup>58</sup> The evidence combines to suggest that a temple precinct built here in AD 165, or very soon thereafter, had housed temples to the principal Roman deities and enjoyed the patronage of the provincial governor and other senior officials. Processions to this temple from the forum quarter might have been taken across the southern Walbrook crossing, where there is circumstantial evidence for the location of a shrine in the form of chance finds of sculptures and inscriptions including a dedication to the mother-goddesses and a pair of lead curses likely to have been nailed to shrine walls.<sup>59</sup>

Two other archaeological discoveries from the western part of Roman London might also testify to civic investment in ceremonial architecture in the mid second century. A monumental structure, perhaps the base for a column or part of an arch, was built next to the main west road, a short distance inside the line of the 2<sup>nd</sup> century town wall. Roadside buildings had been demolished here *c.* AD 160 to make way for this monument, the archaeological evidence for which consisted of a concrete foundation 6m square and 1.1m high.<sup>60</sup> Further to the west, outside the town on the banks of the river Fleet, stood an octagonal structure thought by its excavators to be part of a Romano-Celtic temple built *c.* AD 170.<sup>61</sup> These findings have not been published in full and the interpretation of this building as a temple is not universally

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<sup>56</sup> Bradley and Butler 2008, 65-9.

<sup>57</sup> Blagg 1980.

<sup>58</sup> Hassall 1980.

<sup>59</sup> RIB 2, RIB 6, RIB 7. Haynes 2000, 91-2; Merrifield 1995.

<sup>60</sup> In excavations at 3-9 Newgate Street: Pitt 2006, 50-3. This unusual masonry foundation closely resembles an equally puzzling monumental square foundation excavated by this author in Milan, where I tentatively suggested that it might have been part of a commemorative arch (Perring 1991b, 135).

<sup>61</sup> Perring 1991a, 81-82; Merrifield 1996, 110-1.

accepted, although Merrifield has pointed out the possible parallels that can be drawn with the octagonal temple of Apollo Cunomaglus at Nettleton in Wiltshire.

To summarise: two sites for devotional ritual activities may have been established at wet places outside the southern and north-western approaches to London soon after the town came into being. These were open-air sanctuaries at commanding locations, undistinguished by any form of public architecture.<sup>62</sup> A generation later the early Flavian investment in civic institutions and architecture caused a small temple to be built in association with the public forum at the centre of London. A Romano-Celtic temple was also built as part of the north-west sanctuary, now subsumed within the growing city and attached to the Flavian amphitheatre to its north. These three principal devotional sites – the forum, the southern and western sanctuaries – were possibly linked by processional ways that incorporated shrines on the bridges across the Thames and Walbrook. This ceremonial architecture would have united London's three distinct quarters. The architecture of public ceremony implies the involvement of public or guild officials. One of the most important duties charged to a town's magistrate was to establish a calendar of religious festivals and assume responsibility for their public celebration.

The mid second century witnessed widespread new investment in religious and ceremonial architecture. Temples were built at several sites along the line of the putative processional way in the mid to late 2<sup>nd</sup> century. These included a major new temple precinct by the southern sanctuary, the addition of new temple buildings to the south of the amphitheatre (which was itself refurbished) and the construction of a new precinct at the site of the Walbrook shrine.<sup>63</sup> This late Antonine flowering of religious and ceremonial architecture took place at a time when the urban population was in decline and some other public buildings had been abandoned.

## The 'Antonine Plague' and London

The programme of temple building in London took place at about the same time that London witnessed a pronounced decline in building and population density, with most of the published evidence for abandonment and contraction placed in the period AD 160-180. On the basis of the presently available evidence more new temples were built in London in the period *circa* AD 165 than at any other point in the history of the Roman city. The most closely dated of these building projects was the development of the new temple precinct in the south-west quarter of the city, which incorporated a timber felled in AD 165 in its construction, whilst the temple precinct at Tabard Square was probably first dedicated within the period AD 161-69. Several other temples appear to have been built at around this time, including buildings to the south of the Amphitheatre and on the west banks of the rivers Walbrook and Fleet.

One of the recorded responses to the plague that descended on the Roman Empire *c.* AD 165 was to seek divine assistance. According to the *Historia Augusta* one of the actions taken against the plague by the emperor Marcus Aurelius was to diligently

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<sup>62</sup> The replacement of open-air sanctuaries with roofed buildings was a common feature in the evolution of Romano-Celtic religious sites in the late Iron Age and early Roman period, as described by King 1990.

<sup>63</sup> Merrifield 1996

restore the cults of the gods.<sup>64</sup> There are grounds for believing that instructions issued by the oracle of Apollo of Claros in AD 165, or shortly thereafter, elicited the erection of a series of dedications at sites across the Roman Empire as part of the prophylactic measures taken at this time.<sup>65</sup> One of these inscriptions was found on Hadrian's Wall, and although our sources for the Antonine Plague are biased towards the eastern empire evidence from the west is almost equally abundant.<sup>66</sup> The presence of one of the inscriptions that may have been inspired by the oracle of Apollo on Claros at Hadrian's Wall suggests that the Antonine plague was feared in Roman Britain. London, as a busy port city with strong military associations, would have been particularly vulnerable to plague, and historical descriptions suggest that the Roman army was particularly badly affected.<sup>67</sup> Fear of disease, although not necessarily of Antonine date, also provides a context for a metrical phylactery against plague that was written in Greek on a pewter/lead amulet found near London's Roman waterfront.<sup>68</sup> This 30 line inscription called upon various named deities, including Apollo, to protect one Demetrius from plague and other contagious diseases.

The advent of plague offers a convenient explanation for the speed, character and date of the change witnessed in London in the course of the mid to late second century. The evidence is circumstantial, and it is not possible to establish a direct causal link between plague, religious response and urban contraction. This takes us onto the vexed question of whether there is any convincing evidence for the Antonine plague having had such impacts elsewhere within the Roman world. It has been suggested that in some places the disease might have killed as much as one-third of the population whilst populations of affected cities would also have been further reduced by flight.<sup>69</sup> Mortality on such a scale would make it easy to conclude that London suffered as other cities suffered, but the statistical evidence advanced in support of these claims has not withstood critical scrutiny. Bruun has recently summarised the history of scholarly interest in the economic and demographic effects of the plague.<sup>70</sup> He and Greenberg have separately concluded that it is not possible to demonstrate that the plague had the dramatic negative effects ascribed to it.<sup>71</sup> These are, however, arguments about the statistical validity of the inferences that can be drawn from proxy data, such as building inscriptions and shipwrecks, and about the wider and longer-term impacts of plague in a world dogged by other social and economic problems. The problems of relying on monumental inscriptions as a measure of urban vitality are highlighted by the different trajectories of change in London's housing stock and public religious architecture that have been described in this paper. There were many causes of crisis and change in the Roman Empire, and giving plague a particularly decisive role has failed to convince.

What is not in serious dispute, however, is that there was an outbreak of plague in the Antonine period and that many died. Likely variations in the scale of mortality, and

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<sup>64</sup> S.H.A. *Marcus*, 21.

<sup>65</sup> Jones 2005.

<sup>66</sup> RIB 1579

<sup>67</sup> Jerome Helm. 206; Duncan Jones 1996, 120, 135.

<sup>68</sup> Tomlin and Hassall 1999, 375; Tomlin 1999, 106; Hall and Shepherd 2008, 43; Tomlin in prep.

<sup>69</sup> Duncan Jones 1996.

<sup>70</sup> Bruun 2007.

<sup>71</sup> Bruun 2003; Greenberg 2003. See also Scheidel 2002 and 2010 who shows that economic changes in Egypt are consistent with a substantial demographic contraction at this time.

the particular vulnerabilities of port cities, make it possible that a town such as London would have suffered unusually severely. It is also likely that London's early reliance on the imperial administration, as described in the preceding paper, would have left it particularly exposed to population fluctuations. Roman London was a city of soldiers and administrators, supported by merchants, slaves and artisans. This was essentially a transient community, easily uprooted and relocated. London's importance to the Roman administration was, in any case, in decline from the late second century as other provincial cities such as York rose to prominence as supply lines and administrative arrangements were reformed. London's relative decline can be explained without reference to plague, but flight from plague would help account for the relatively rapid abandonment of many urban districts and a contemporary need to spend on the prophylactic measures of religious ceremonies and dedications.

Whatever its immediate inspiration, the architecture and topography of second century London appears to indicate a growing plurality of power with a variety of patrons prepared to invest in supporting the institutions and rituals of civic society. Wealth and real estate may also have been concentrated into fewer hands as a consequence of population decline, encouraging the development of the larger and more lavishly decorated town houses in London in the late second and third centuries.<sup>72</sup> The middle of the second century can therefore be seen as a turning point in the affairs of London. The psychological and demographic impact of the Antonine plague may have contributed to this transformation and reconfiguration of the urban landscape.

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<sup>72</sup> Perring 2002, 40-1.

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## Figures

Fig. 1. Antonine London: ceremonial and other monumental architecture of the late 160s AD. 1. Tabard Square; 2 Southwark Cathedral; 3. Nicholas Lane; 4. Gresham Street; 5 One Poultry; 6. Goldsmiths Hall; 7. Thames Street; 8. 3-9 Newgate St; 9. Old Bailey

