

Hadrian and Britain: the civil zone

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Hadrian and Britain: the civil zone

By Michael Fulford

Abstract

The lack of written sources and the difficulties of establishing close chronologies from archaeological material means that it is difficult to identify initiatives other than the commissioning of Hadrian's Wall that can confidently be attributed either to the emperor's visit to Britain in 122 or to his reign more generally. However, the early second century presents several archaeological proxies which point to a quickening of economic activity integrating the frontiers of Wales and the north of Britain with the civil zone of the south. Developments in the countryside hint at the growth of larger estates, including the emergence of larger, 'complex' farms, villages and better communications, together assuring the province's sustained ability to feed both military and civilian populations. At the same time there is evidence for public building across the towns of the south, especially of forum basilicas, which may be linked to administrative reforms including the establishment of new civitates.

Keywords: BB1, BB2, *civitates*, *classis Britannica*, countryside, forum basilica, Hadrian, lead mining, Lezoux samian, *mansiones*, public building, towns

Introduction

The account of Hadrian's visit to Britain in 122 in the *Vita Hadriani* is brief: beside the mention of his decision to build the Wall, we are simply told that 'he corrected many abuses'.¹ He arrived from Germania Inferior probably in June and left three or four months later, certainly before the onset of winter which he spent in Gaul. Although we are not told as such, he presumably visited York and the northern frontier and, arguably, the frontier zone of Wales as well and the legions based at Caerleon and Chester. Apart from showing political even-handedness by visiting all three of the legions based in Britain, there would have been time enough to make the journeys over the summer months. And, in making those journeys, he would have seen a great deal of the province, a context, perhaps, for identifying the abuses his biographer mentions.²

In trying to assess the impacts and consequences of the Emperor's visit to Britain beyond the decision to build the Wall, we are confronted by a lack of closely datable evidence which would allow us to attribute developments within the province to decisions made by him, or through him by the governors. We have a single Hadrianic inscription from the 'civil zone', that from the Wroxeter forum basilica which records its completion in A. D. 129/30, some eight years after the visit.³ Whether Hadrian initiated the project, we will never know, but we will return below to consider developments in the administration of the province and its urban infrastructure which were made in the early second century. Without inscriptions, the dating of public works rests on coins – when found – but, very largely, on the evidence of pottery, particularly on the presence of the generally more closely datable samian (but see also below, p. 00 and Fig. 1), from the associated construction contexts to give a *terminus post quem*. We should not overlook the potential of dendrochronology which, given the right conditions of preservation, can give us the precise date of felling and a *terminus post quem* for the associated deposit or structure. This is particularly the case with London where we do have three dates attributable to Hadrian's reign (see further below, p. 00). Nevertheless, the evidence otherwise seldom allows us greater precision regarding date than about 25 years and Hadrian's reign only lasted some 21 years. Thus, if a single-year date of c. A.D 120 or 125 is asserted, we probably need to translate that into a range of c. A.D. 110-30 or 115-135 which spans part of the reigns of both Trajan and Hadrian. The same holds for the span of dates towards the end of Hadrian's reign which extend into that of his successor Antoninus Pius.

The decision to make a tour of the western provinces was made, at the latest, in the first months of 121, giving the governor responsible for making the arrangements in Britain about a year's notice.⁴ A priority is likely to have been ensuring that accommodation along the routes reckoned to be taken was in good order. Work might well have been in hand as Hadrian's biographer records his reorganisation of the imperial post,⁵ but there is little well-founded evidence yet for this from Britain. Although Black attributes a large number of *mansiones* to Hadrian,⁶ there are only two from the towns and vici, or 'small towns' of the civil zone where the evidence actually supports a case for work of Hadrianic date: Chelmsford, Essex and, but more tentatively, Godmanchester, Cambridgeshire.⁷ In both cases the work probably involved the re-building or repairing of an existing bath-house as it is now clear that the building of *mansiones* or *praetoria* along the major roads of southern Britain began in the A.D. 50s and 60s.⁸ Hadrian's visit might also be the context for new work to ensure a secure crossing of the Channel by the shortest route: Boulogne – Dover. At each port there is evidence for the building of a new fort at this time for the *classis Britannica*.⁹ Although we do not know which crossing Hadrian chose, it is likely that he would have opted for the shortest route. It is quite possible that he took an interest in the workings of the fleet which, through inscriptions and stamped tile, becomes archaeologically visible in the second century. We shall return to the role of the fleet below.

While improvements to communications and the imperial post were probably an important development, even if we have little clue as to their scale and extent, we should continue by considering the impact of the decisions both to bring more troops to Britain and to build the Wall. The province's legionary complement was once more raised to three with the introduction by Hadrian of the *legio vi victrix* from Xanten in lower Germany. Other legionary detachments, notably from the two legions based in upper Germany and the *legio vii gemina* based in Spain, were also introduced into Britain about this time.¹⁰ Perhaps these deployments provide the context and stimulus for the construction of the 4.5ha Cripplegate fort in London which is dated to the Hadrianic period, though Perring has made a case for the fort being a response to local rebellion in the early part of Hadrian's reign.¹¹

Economic Impacts

Recent studies have drawn attention to the nature and the scale of resources required for the construction of the Wall.¹² There is also the organisation of the food supply to the forts of the Wall and the northern frontier (as well as the frontier in Wales) to consider. While some materials for building the Wall, including its forts, milecastles and turrets, such as stone and mortar, were available very locally, sources of some of the timber required may have been more distant. Resources beyond what the legions could supply may have been needed to provide more specialised items like carts, wagons and animals to haul and transport materials. The involvement of the *classis Britannica* as evidenced by inscriptions from the Wall¹³ implies not only the deployment of manpower in construction, but also a supply role. The stamped tiles of the fleet found on iron-making sites in the Weald and in production by c. A.D. 130¹⁴ provide a specific link with the south of the province and an important resource to meet the need for the quantities of iron required for tools and ironmongery more generally.¹⁵ Although it remains to be proven that Wealden iron was used on the northern frontier, this seems highly likely. The Weald would also have been a good source for the quantities of timber required, not only for the buildings within each fort, milecastle, turret, etc but also for the necessary scaffolding. For this and for the Wall alone, Hill calculated that each legion would have needed about 45,720m of straight poles, reckoning that sourcing them could have proved a major bottleneck in the building programme.¹⁶ When account is also taken of the fuel requirements for making lime, for metalworking, etc, Kendal estimated a total timber requirement,

including that needed for structural purposes for all the buildings, of some 86,000 tonnes.¹⁷ However, we do not know how the building programme was managed and over what timescale, but it seems unlikely that local resources of iron and timber would have been sufficient.

Lead would also have been in demand to meet both military and civil needs. There are lead pigs carrying Hadrian's name associated with four of the six British lead-mining districts: the Mendips, Somerset;¹⁸ Shropshire and Montgomeryshire;¹⁹ Derbyshire²⁰ and Yorkshire²¹. There are none from the Flintshire field or from South Wales where there are no imperial stamped pigs, only a single record of *legio ii Augusta*.²² No other emperor is associated with as many lead-mining districts, a possible indication of the extent and scale of production as well as of the importance of imperial control during Hadrian's reign.²³

Equally difficult to see archaeologically, never mind quantify, and, arguably more important than the supply of timber and iron, are foodstuffs and other perishables like leather and textiles. For the moment we really only have the evidence of durable proxies such as pottery and building materials to give us insight into the movement of all types of goods within the province, though the isotopic analysis of animal bone shows considerable promise.²⁴ In relation to the latter, Booth has recently drawn attention to the high incidence of cattle bone in upper Thames valley faunal assemblages, speculating that the rearing of cattle was an important part of that sub-region's agricultural economy.²⁵ Perhaps there is a link here with the development of the salt-producing centres at Droitwich, Middlewich and Nantwich and the opportunity they gave for the salting of meat before sending it to frontier garrisons and other markets.²⁶ As for leather, whose preservation is so dependent on anaerobic conditions, a massive waterlogged midden with an estimated volume of c. 2156m³ found at Catterick, North Yorkshire gives precious insight into the scale of the leather industry in the first half of the second century. It contained very considerable quantities of leather including the remains of tents, boots and sandals and waste fragments.²⁷

Direct evidence of the involvement of the south of the province in the supply of the Wall comes in the form of the pottery, notably south-east Dorset black-burnished 1 (BB1), made around the shores of Poole Harbour and Wareham.²⁸ This kitchen ware has been found in levels associated with the construction of the Wall.²⁹ Judging by the quantities consumed, it also accounts for a significant proportion of the pottery consumed by military and civilian sites in between, with distributions spreading north across Dorset and Somerset to the Severn Estuary and then stretching up the Severn Valley on the western side of England to Wroxeter, Chester and beyond, but also with supply westwards to forts in Wales and north-east along the Fosse Way to Leicester.³⁰ Given the variations in size and the possibility, therefore, of stacking one vessel inside another, it is likely to have been supplied in its own right, though, given the proximity of the production sites to salterns around the shores of Poole Harbour, it has been speculated that vessels may have carried salt. Severn Valley ware also reached the northern frontier by similar routes in the early Hadrianic period.³¹ There is no evidence that the *classis Britannica* operated around the western coasts of Britain, so, unlike the deployment of the fleet to transport supplies up the east coast of Britain, the distribution of BB1 seems to have been mainly by road, though the coast of south Wales and the legionary fortress at Caerleon could easily have been reached via the short crossing of the Severn Estuary from the Somerset coast. Also from the south is BB2, the black-burnished, kitchen ware 'twin' of BB1, which was manufactured at Colchester and around the Thames Estuary and reached the northern frontier via the east coast, but only becoming archaeologically visible there from the Antonine period, from about A.D. 140, though present in London from c. A.D. 120.³²

At the hub of the strategic road network of the province, London, where the provincial procurator was based, remained at the centre of the economic life of the province and was the starting point

for the redistribution of the bulk of the goods imported into the province of which, at this time, Lezoux sigillata was the most visible archaeologically, but also included more humble items like Allen's Wealden whetstones.³³ Another proxy for the movement of goods outwards from London is the Verulamium pottery industry around Brockley Hill on Watling Street midway between London and Verulamium, which produced domestic wares, the best known of which are the mortaria dating between the A.D. 60s and 140s, whose distribution extended both west across to Wales as well as north to Hadrian's Wall.³⁴ Some of the Verulamium-type pottery may have been exported from London itself where visually indistinguishable pottery was also produced from the beginning of the second century.³⁵

What we cannot estimate at this stage is how quickly production and the volume of pottery (and of whatever goods it was a proxy for) made in Britain and transported northwards and westwards developed over time. The same is true for Lezoux sigillata whose importation into Britain also begins in the Hadrianic period from about A.D. 120. Even more extensive than that of BB1, the distribution of Lezoux samian of Hadrianic date reaches not only military and urban consumers throughout the province, but also a wide range of both high and low status rural settlements in the 'lowland zone' of south-east Britain (Fig. 1). This sense of a quickening economy engaging the great majority of the 'civil zone' from the 120s onwards gains support from John Creighton's analysis of denarii hoards.³⁶ 'From about A.D. 120-50 hoards gradually become more homogenous.....New coin continued to arrive, so the increasing similarity in the hoards suggests coin is moving around the province more rapidly, ironing out differences.'³⁷

Fig. 1 Distribution of the stamps of potters working at Lezoux between the end of the first century and before the mid-second century A.D. This should include all the potters supplying Hadrian's Wall between 120 and 140, but some of their careers continue into the reign of Antoninus Pius; hence the presence of their vessels on the Antonine Wall. (a) simple distribution of findspots; b) relative-scaled to show sites with greater densities of loss.

The Countryside

How is the evidence set out above for the movement of goods around the province reflected – if at all – in changes in the countryside? From the early second century we begin to see significant developments in the organisation and settlement of the countryside which are particularly evident in the Central Belt region of The Rural Settlement of Roman Britain Project.³⁸ These take a variety of forms ranging from major drainage or canal-building projects at the Fen edge to the re-organisation and expansion of existing settlements creating a 'new' category, the complex farm, at the expense of the smaller, enclosed settlements.³⁹ With evidence of a distinct rise in numbers, nucleated settlement or 'village' development is also a feature of the early second century.⁴⁰ Not surprisingly, but more broadly, the second century sees a rise in the number of dated field systems in the region.⁴¹ Settlements were connected by a network of new roads, trackways or droveways, many of which, given the straightness of their layout over several kilometres, are likely to have been laid out by surveyors. These can be seen both in the Fens and further west in the Upper Thames Valley and there is the mention of a vicinal road in the wooden tablet recording the sale of a small wood in Kent and dated to A.D. 118.⁴² Who owned or managed these landscapes, has long been a matter of debate, but, in this context, it is the intensification of investment in the landscape and its subsequent exploitation which is significant. To initiate and organise the digging of tasks of the scale of the Fen Edge dykes or of the laying out of minor routeways across the landscape involving multiple ownerships would have required authority at a higher, perhaps provincial level. Indeed, the manpower required to undertake these works might well have exceeded what the local populations could supply. Even if their date is uncertain – and a Hadrianic date cannot be excluded – an example

of long-distance civilian deployment is provided by building stones from Hadrian's Wall which record the engagement of *corvées* from southern *civitates* in construction work.⁴³ Although a late Iron Age origin for many settlements in the Fen is now acknowledged, the delivery of public works and the expansion of settlement may well have required the introduction of additional manpower from elsewhere in the province. All of these investments may be seen as contributing to a strategic necessity to improve agricultural productivity and ensure food security for the province. It is also surely no coincidence that the Fenland landscapes in which investment in drainage and communications is so evident lie beside the main route between London and the northern frontier and also within easy reach of the east coast. Agricultural supplies could therefore be moved with relative ease either to the northern frontier or, alternatively, across the Channel to Gaul and Germany, should the need arise. Associating a particular emperor or governor with initiatives of this kind is difficult because of the looseness of the dating. However, certain developments are specifically attributed to Hadrianic initiatives, such as the creation of the Car Dyke to assist with drainage and, in part at least, to act as a canal to transport agricultural produce to the northern frontier, and the monumental, but enigmatic complex, the possible estate centre at Stonea in the Fens.⁴⁴ The former has an Antonine *terminus ante quem*,⁴⁵ while Jackson and Potter assign a Hadrianic date to the building at Stonea.⁴⁶ Elsewhere across the region, the dating of rural settlement and infrastructure closer than within 25 or even 50 years is hard to achieve in the second century.

Civitates, the forum basilica and public building in the towns

There are other areas of provincial development where fundamental change took place. That Hadrian's visit stimulated urban development has been a theme which has been refined and developed by historians and archaeologists of Roman Britain since Collingwood made the case in the 1930s, referring in particular to the recently discovered Wroxeter inscription.⁴⁷ Wachter went considerably further in arguing that Hadrian took the initiative to establish several self-governing *civitates* to fill the gap left by the abandonment of forts following the decision to build the Wall. His 'Hadrianic Stimulation' encompassed the development of *civitates* headed by new towns at Caerwent, Carmarthen, Brough-on-Humber and Aldborough.⁴⁸ For Frere 'the physical indication of a self-governing community was the possession of a forum with basilica, which housed the meetings of the council and the administration of local justice'.⁴⁹ It followed, then, that the date of their foundation indicated the date of the grant of local self-government.⁵⁰ From the perspective of the type of building we conventionally interpret as a forum basilica, it is hard to see an alternative interpretation for it, other than that it was the central building which administered the *civitas*.

With regard to the possibility of a Hadrianic date for the establishment of some *civitates*, we now have dating evidence from the forum basilica at Caerwent and at Aldborough. In both places the buildings are integral with and therefore thought to be contemporary with the initial laying out of the respective street grids. An unworn and rare sestertius of Trajan minted in, or soon after A. D. 113, and samian dating no later than from A.D. 110-120 provide a *terminus post quem* for the Caerwent forum basilica, with Guest arguing for a rapid construction, perhaps in as little as three years in the range, A.D. 115-20.⁵¹ At Aldborough pottery gives a *terminus post quem* of c. A.D. 120 for the construction of the building interpreted as the town's forum. A curious parallel with Caerwent is provided by an antiquarian find of a gold *aureus* of Trajan of A.D. 112-14 in the foundations of the building.⁵² Whether or not you place greater weight on the unusual coin finds, the two constructions look to be more or less contemporary and both could have been authorised and started before Hadrian's visit. It is also worth noting a similarity in the sizes and locations of the two towns; both are small and close to legionary fortresses. Aldborough, some 21.6ha (47.5 acres)

within its (later) walls is about 15 miles (24km) north of York, while Caerwent, some 18ha (44 acres) within its (later) walls, is less than 10 miles (16km) from Caerleon. These similarities may, of course, be completely coincidental but, taken with the dating evidence, do suggest that the decisions to establish these two towns and their tribal territories were taken about the same time and by the same person, whether the provincial governor or the emperor, in this case, perhaps, Trajan, rather than Hadrian. The proximity to the legionary fortress invites the speculation that their creation was a response to pressure from within the respective legions for permission to establish new *coloniae*; each of these new towns representing perhaps a kind of 'compromise' *colonia*.

Both towns have earlier occupation which would inevitably have seen some disruption as a result of the laying out of the initial phase of street grid. At Wroxeter in the north-west Midlands a different situation prevailed. Built on the site of the legionary fortress, the town made use of the fortress's streets after the withdrawal of *legio xx* to Chester by c. A.D. 90⁵³ and it may have been more than 30 years before work started on building the forum basilica from which has come the inscription of 130, mentioned above (p. 00), which also confirms the entity of the *civitas Cornoviorum*. The start of building of the forum could well date back to the early 120s, but whether it coincided with the establishment of the *civitas* and of the *ordo* to administer it is not known. An assumption that has underpinned our ideas about the development of urbanism in Roman Britain, including Wachter's model for the development of the *civitates*⁵⁴ is that civic authorities were established immediately following the abandonment of the fort or fortress which preceded it but, until a town produces evidence of the exercise of an over-arching authority through such corporate acts as the laying out of a street grid or the construction of public buildings, particularly the forum basilica, this hypothesis remains open to challenge.⁵⁵ It is possible that the fortress *principia* continued to be used as Hurst has suggested was the case at Gloucester until it was replaced with a forum in masonry in the early second century.⁵⁶ An early-mid second century date is also attributed to the construction of the forum at Lincoln.⁵⁷ This contrasts with the picture from Exeter where the construction of the masonry forum basilica, which is equated with the setting up of the *civitas* of the Dumnonii, appears to follow on quite soon after the departure of the *legio ii* to Caerleon and the ensuing demolition of the fortress baths c. A.D. 80.⁵⁸

While the above examples are of cities which developed on the site of legionary fortresses, the case of Cirencester, where the Leaholme fort appears to have been abandoned in the mid-70s, may not be so different from that of Wroxeter.⁵⁹ Here, we also find evidence of a gap between abandonment of the fort and the construction of public buildings. Much of the evidence is of a proxy nature, indicating the development of the street grid over a protracted period from the late first and continuing 'well into the second century'⁶⁰, while the equally meagre evidence for the date of the construction of the forum basilica points to a period after c. A.D. 85 with it 'unlikely to have been completed before the late first century at the earliest', but see further below (p. 00).⁶¹ To the north-east, along the Fosse Way at Leicester, there seems to have been continuous occupation from the Conquest onwards (with limited indications of a Roman military phase) of the late Iron Age oppidum with evidence of buildings both of timber and of masonry on different alignments to and pre-dating the laying out of streets, which, in the St Nicholas area, were metalled by A.D. 120.⁶² The forum basilica followed a later, c. A.D. 130-40/50.⁶³, and the Jewry Wall public baths a little later still, c. A.D. 145-50.⁶⁴ If we go by the date of the laying out of the streets, the *civitas* of the *Corieltauvi* was not created until the early second century, again some 30 years or more after the likely withdrawal date of the putative garrison.

At Caistor-by-Norwich, at the heart of the former client kingdom of the Iceni where the evidence of a post-Conquest military presence is also slight, Bowden argues for broad contemporaneity between

the initial laying out of streets, 'unlikely to be much earlier than 90-120'⁶⁵ and the construction of the first forum in timber sometime after A.D. 90-95.⁶⁶ Bowden cites the parallel with Silchester where the construction of what we believe to be a timber forum basilica can now be shown to be contemporary with the initial laying out of street grid, c. A.D. 85. The *terminus post quem* for the rebuilding of the forum basilica in masonry is provided by a cast counterfeit *as* of Domitian which Boon dated to c. A.D. 122, but with completion perhaps not until as late as c. A.D. 150.⁶⁷ Finally, London, where Milne has proposed that 'construction work on the new Basilica began at the turn of the 1st century, and that the first phase was completed within a decade of AD 120.'⁶⁸ The forum basilica was almost certainly the location of the 1.25 times life-size bronze statue of Hadrian whose head was found in the Thames in 1834.⁶⁹ Further, Tomlin has put forward a case for London being elevated to the status of *colonia* by Hadrian.⁷⁰ It was certainly the formal capital of the province by A.D. 118, the date of the stilus tablet documenting the sale of the five-acre wood in Kent.⁷¹

Another source of evidence for comparing these monumental public buildings is the architectural stonework associated with them, where it survives. Blagg, following the earlier work of Kähler, has suggested that the Class C Corinthian capitals associated with the Caerwent and Silchester forum basilicas are so similar as to be the work of the same school of stonemasons, suggesting broad contemporaneity.⁷² Very similar, but perhaps stylistically earlier (but how does this translate into number of years earlier?) than Silchester and so possibly consistent with the dating evidence cited above (p. 00), are the two capitals associated with the Cirencester forum basilica.⁷³ The surviving capital possibly to be associated with the Wroxeter forum is of a different style, perhaps to be linked with a military school of stonemasons, and attributed to Class D.⁷⁴

Notwithstanding the patchy quality of the dating evidence, what can we conclude from the above? To what extent can we associate Hadrian and his governors of Britain with the above developments? If we follow Frere⁷⁵ and see a correlation between the establishment of the forum basilica and the *civitas*, we see a very mixed picture with some established very soon after the departure of the military, as at Exeter in the A.D. 80s, or after the demise of client kingdoms in the 80s and 90s (Caistor-by-Norwich and Silchester). In the case of Leicester and Wroxeter and, less certainly, Cirencester, there appears to be a significant interval of about 30 years between the departure of the military, which is thought to be the trigger for the establishment of the *civitas*, and the establishment of the forum basilica. This inevitably raises the question about how the associated territories or emergent *civitates* were administered in the meanwhile. Recalling the timber fora at Caistor and Silchester, was the fort or fortress *principia* used in the interim as the administrative centre? Although there is earlier occupation, albeit with uncertainty about its character, at Aldborough and Caerwent, the two otherwise look like *de novo* urban foundations as *civitas* capitals equipped from the start with a street grid and monumental forum basilica. Wroxeter, with its inscription of A.D. 130, gives a *terminus ante quem* for the establishment of the *civitas Cornoviorum* and we might extrapolate from that to propose that, along with Aldborough and Caerwent, all the lowland *civitas* capitals were established by then. Only Leicester is a little anomalous with a *terminus post quem* of A.D. 130-40/50 for its forum basilica. This relatively late date poses yet another challenge to whether there is a simple linkage between the construction of the forum basilica and the establishment of the *civitas*, which, in this case, is surely unlikely to have been later than that of Aldborough, Caerwent and Wroxeter. For the time being we should set aside Brough-on-Humber and Carmarthen, the other two towns advanced by Wachter as Hadrianic *civitas* capitals, since neither has yet produced evidence of a forum basilica nor supporting epigraphic evidence of their status.⁷⁶

Putting to one side the vexed issue of how to date the establishment of the *civitates*, we can see a distinct phase of monumentalisation of town centres in the early second century. While the construction of some of the fora basilicas discussed above may have begun before Hadrian, as suggested for London, Caerwent and Cirencester, their completion and the start (and possible completion) of others, such as at Aldborough, Leicester and Wroxeter and the re-building at Silchester can be more securely associated with Hadrian. More loosely dated to the early second century are the fora basilicas at the *coloniae* of Gloucester and Lincoln. It is also to Hadrian's reign that the re-building of amphitheatres, from c. A.D. 125 in masonry in London, and in timber at Silchester, and at least the start of work on the public baths and *macellum* at Wroxeter, can be attributed.⁷⁷ Thanks to dendrochronological dating, Perring can be confident of a Hadrianic date for the re-building of at least part of the London waterfront.⁷⁸ By the time of his death in A.D. 137 the town centres of most of the major towns of *Britannia* would have undergone a significant transformation.

Conclusions

The monumental building in the town and city centres of Britain in the early second century, a substantial amount of which we can attribute to Hadrian's reign, was a major achievement. However, it is the economic integration of the province aided by investment in communication and drainage schemes and the expansion of settlements in the countryside, especially in the Central Belt, which had the most significant and long-lasting impact on the development of the province and its strategic ability to ensure food security in order to sustain frontier garrisons in Britain and on the continent.

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¹ *Historia Augusta, Vita Hadriani*, 11.2.

² Birley 2000, 123-41.

³ *RIB* 288.

⁴ Birley 2000, 111.

⁵ *HA* 7.5.

⁶ Black 1995, 32-47.

⁷ Drury 1988 (Chelmsford); for Godmanchester there are only interim reports: Green (2017, 9-21; 97-102), where the *mansio* is Site 1, does not add anything new to Green 1975, 196-201.

⁸ Fulford and Machin 2021.

⁹ Philp 1981; Blamangin and Demon 2020.

¹⁰ Birley 2000, 123-25.

¹¹ Shepherd 2012; Perring 2017, 52-5. Construction of the fort is dated by samian to the 120s, but the absence of Hadrianic fire debris suggested to Perring that it may have been built after the fire dated c. AD 125/30, possibly caused by a local uprising (cf Perring 2017, 50-2).

¹² Eg Kendal 1996; Hill 2004.

¹³ *RIB* 1944; 1945.

¹⁴ Frere and Tomlin 1993, 1-25; Williams 1981, 126-7.

¹⁵ Kendal roughly estimated about 200 tonnes of iron would have been needed (1996, 141).

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- ¹⁶ Hill 2004, 95. However, for much of the length of Wall at a height of 12 feet, it would have been possible to have used trestles rather than scaffolding and this would have significantly reduced the amount of timber required for building the Wall (P. Bidwell, pers. comm.).
- ¹⁷ Kendal 1996, 138-40.
- ¹⁸ *RIB* 2404.14-15.
- ¹⁹ *RIB* 2404.28-30.
- ²⁰ *RIB* 2404.39 and, possible, 2404.66.
- ²¹ *RIB* 2404.64.
- ²² *RIB* 2404.25.
- ²³ Earlier emperors are associated with no more than two lead fields each, while stamped pigs of his successors Antoninus Pius, Marcus Aurelius and Lucius Verus are only linked to the Mendip Hills field. On Hadrian's control of lead fields, see Frere 1999, 280.
- ²⁴ For example, Müldner and Frémondeau's analysis (2021) of cattle bone from Roman Exeter shows supply from outside the local region to the Neronian-early Flavian legionary fortress
- ²⁵ Booth and Simmonds 2018, 784-8.
- ²⁶ Burnham and Wachter 1990, 211-17; 225-8; Arrowsmith and Power 2012.
- ²⁷ Hooley, *et al.*, 2002, especially p. 319.
- ²⁸ See my earlier remarks on this subject in Fulford 2000, 574-6.
- ²⁹ Tyers 1996, 182-6.
- ³⁰ Allen and Fulford 1996, 238-48; 255-60, Figs 1, 8, 10; Timby 2017, 314-22.
- ³¹ Bidwell 2017, 292; Swan *et al.*, 2009, 605.
- ³² Tyers 1996, 119-20; 186-8; Bidwell 2017, 292-8. For its Hadrianic presence in London, see Davies *et al.*, 1994, 107, 205-9.
- ³³ Allen 2015.
- ³⁴ Tyers 1996, 132-4.
- ³⁵ Seeley and Drummond-Murray 2005.
- ³⁶ Creighton 2014.
- ³⁷ *Ibid.*, 135.
- ³⁸ Smith 2016, 141-207. The chapter includes a case study of the Cambridgeshire Fen Edge (pp. 192-207)
- ³⁹ Allen and Smith 2016, 28-33; Smith 2016, 151-7, Figs 5.13-14.
- ⁴⁰ *Ibid.*, 160-4.
- ⁴¹ *Ibid.*, 179-83, Fig. 5.39.
- ⁴² Booth 2011; vicinal road, see Tomlin 1996.
- ⁴³ Fulford 2006.
- ⁴⁴ Malim 2005, 142-52.
- ⁴⁵ *Ibid.*, 146.
- ⁴⁶ Jackson and Potter 1996.
- ⁴⁷ Collingwood and Myres 1936, 195-6; cf Frere 1999, 235; Salway 1981, 185-8
- ⁴⁸ Wachter 1995, 31-2, 378-407; note Salway's scepticism (1981, 186-7)
- ⁴⁹ Frere 1999, 103, 197
- ⁵⁰ *Idem*
- ⁵¹ Guest 2021
- ⁵² Ferraby and Millett 2020, 104, 106-8, 157.
- ⁵³ See Ellis 2000, 11-19 for evidence of the early town A.D. 90-130
- ⁵⁴ Wachter 1995, 17-32
- ⁵⁵ Cf Ferraby and Millett 2020, 106-7
- ⁵⁶ Hurst 2020, 18-20; 47. Note his comments on the Flavian *terminus post quem* for the forum (p. 47).
- ⁵⁷ Steane *et al.*, 2006, 186-88. There are also traces of an earlier monumental building which 'may have gone up at the end of the 1st century' (p. 188).
- ⁵⁸ Bidwell 1979, 86-8
- ⁵⁹ Wachter and McWhirr 1982, 66
- ⁶⁰ Holbrook and Pamment Salvatore 1998, 22
- ⁶¹ Holbrook and Timby 1998, 101-4
- ⁶² Cooper and Buckley 2003, 3-34
- ⁶³ Hebditch and Mellor 1973, 40-1
- ⁶⁴ Kenyon 1948
- ⁶⁵ Bowden 2013, 50

⁶⁶ Ibid., 51-2

⁶⁷ Fulford and Timby 2000, 68, 139

⁶⁸ Davies, with Hall and Milne 1992, 69

⁶⁹ Toynbee 1964, 50-1

⁷⁰ Tomlin 2006

⁷¹ Tomlin 1996, 215

⁷² Blagg 2002, 26. This is a posthumous publication of the author's PhD completed some years before his death in 2000 and therefore not including the revised dating evidence for Silchester's forum basilica published in Fulford and Timby (2000).

⁷³ Ibid., 27

⁷⁴ Ibid., 32-3

⁷⁵ Above, note 38

⁷⁶ Rivet and Smith 1979, 422, 437-8; cf *RIB* 707

⁷⁷ Fulford 1989, 29-36; Bateman *et al.*, 2008, 39-62; Ellis 2000, 19-48

⁷⁸ Perring 2017, 51-2