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“Disputing the Roman map”

various authors

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The Society publishes a wide range of books and booklets on historic OS map series and its journal, *Sheetlines*, is recognised internationally for its specialist articles on Ordnance Survey-related topics.

Disputing the Roman map

Perhaps unsurprisingly, Alan Richardson's article in April Sheetlines ¹ *led to some critical responses from CCS members.*

Professor Leif Isaksen ² *writes:*

David Walker's review ³ addresses many of the issues raised by Alan Richardson's article very well. We should always keep an open mind as to the intellectual and practical ingenuity of ancient societies but in this case the evidence seems to be deployed in order to support a hypothesis, rather than to challenge it. It's hard to get away from the feeling that particular examples have been cherry-picked. The article leans quite heavily on claims already made in the author's 2003 BAR report (which I have not read) but if the central theory is that Roman towns and forts were established according to a 15-mile north-oriented grid system, then this could easily be determined by a regression analysis of their locations and the proposed grid. If most Roman sites are shown to sit on such a grid, or even close to it, then the pattern requires explanation and Roman surveying would seem a plausible one. If they are randomly distributed (as seems much more likely) then the rest of the argument is moot.

Without having conducted such an analysis, the contextual evidence speaks strongly against the theory. Tacitus's *Agricola* (Ch. 20) makes clear that as Roman governor he took personal responsibility for the siting of camps across most of northern Britain, a large proportion of which are known to be situated at river crossings or other strategic locations. Roman surveyors did plan some regional landscapes very precisely for the purpose of land distribution – including some in southern Britain – and sometimes mapped them (cf. the Orange Cadastre) but there is no evidence that I am aware of that this took place at a provincial scale, and it is unclear what the benefit of doing so would be. Ptolemy's *Geography*, written almost a century after the sites of most Romano-British cities had been fixed, states explicitly that the spatial relationships and coordinate locations of inland cities were poorly understood in his time. If the surveyors had been capable of conducting such a scheme in Britain, we would expect to see it reflected in the maps that have come down to us. The lack of any such material means that until systematic and comprehensive evidence is presented to the contrary, we must continue to assume that the siting of Roman settlements and fortifications was based on military and/or economic consideration of the local geography, rather than according to a universal scheme.

Helen and Frank Livingston write:

We are responding to the editor's invitation to comment on Alan Richardson's hypothesis that the Romans devised an orthogonal grid referred to degrees of latitude and longitude and that the location of both Roman sites and Roman roads was determined by it.

¹ 'Evidence of a Roman map of Britain', *Sheetlines* 114, 36-47.

² Leif Isaksen is Professor in Digital Humanities, University of Exeter.

³ *Sheetlines* 114, 48.

We have a long-standing interest in Roman roads and Roman surveying techniques (our book *In the footsteps of Caesar: Walking Roman roads in Britain* was published in 1995), and the title of Alan Richardson's article intrigued us. Sadly, though, we have to agree with your reviewer, David Walker. Richardson's argument is unconvincing. We too do not wish to pick holes in the fabric of the article but would like to add the following points:

- Richardson's thesis rests entirely on his interpretation of the meaning of the Roman place-name 'Mediolanum' (modern Whitchurch), since all his calculations spring from the assumption that this place was the origin of the putative grid, although his inexplicable relocation of the origin from a known Roman site to the tumulus at Warren Tump, 3.5 km to the west, might raise a few eyebrows. 'Mediolanum' is not an unusual name, though Whitchurch is the only one known in Britain. It is usually rendered 'middle of the plain' or 'middle of the farmland'. Richardson cites the scholarly work of Rivet and Smith (*The place-names of Roman Britain*, 1979), stating that they suggest 'Mediolanum' means 'the middle of the plain' although it lies close to low hills, and that the -lanum element means 'holy place' similar to the Welsh llan (church, sacred enclosure). Hoping to understand a little better, we turned to our trusty copy of Rivet and Smith and found a worrying discrepancy: Rivet and Smith state that the second element of the name is the British lano -plain, level ground. The Welsh llan is not mentioned at all but, in discussion of the work of others, the Breton lann (sacred place) is considered and rejected. In fact, Rivet and Smith provide a detailed rebuttal of the 'sacred place' interpretation. They conclude that 'the greatly preferable explanation of lano in this name is 'plain, level ground'. For one thing it is very straightforward; for another the word could well have been used to mean 'small extent of levelled ground' which would take account of those continental Mediolanum places situated in hilly country, with Medio- then meaning 'central (to the needs of the community)'. At the very least, then, Richardson has misrepresented the acknowledged authority on Roman place-names in Britain, Rivet and Smith. The other work that Richardson cites to discredit the 'middle of the plain' interpretation and lend support to the concept of 'Mediolanum' as a 'holy centre' is Graham Robb's *The Ancient Paths: Discovering the lost map of Celtic Europe* (2013). This is problematic. We have consulted it. It is not a serious book but a clever piece of pseudo-science claiming that the Druids mapped the whole of Europe on a grid organised by sight lines derived from the solstice position of the sunrise and that their settlements relate to the grid. If you Google the book – published as 'Finding Middle Earth' in America - you will find this exposed in the review by Prof Ian Morris⁴. Richardson seems to have transferred ideas from Robb's book, including the interpretation of 'Mediolanum' as a sacred centre associated with survey lines. This time a 'grid' is credited to the Romans, whom at least we know to have been competent surveyors.

⁴ *New York Times*, 22 November 2013.

- We would like to emphasise the Romans' consummate knowledge of Britain's geography. This is demonstrated time and time again by the skilful way they employed it to such advantage in their road routes: altering their alignments to use a ridge of high land or cross a river at the most convenient site before turning back to the road's survey line. Richardson's orthogonal grid would seem to be an impediment rather than an aid to setting out the Roman road system and no mention of any imposed grid has come down to us in the surviving literature. If the grid existed, one would expect the 'nodes' to have been marked on the ground, by cairns or standing stones, perhaps. Surely some would still survive in open country for archaeologists to record and question their purpose. Moreover, since Britain's topography is so varied, being neither like a prairie nor the 'unbounded plain' beloved of spatial theorists, the actual setting out of 'nodes' fifteen miles apart to create a template for development would be beset with problems. Why would such expert surveyors and engineers as the Romans try to shoe-horn their infrastructure into something so eminently impractical? Finally, although our knowledge of Roman Britain is incomplete, there are many more known Roman sites than those named in the article. We are forced to wonder if the putative grid is testament not to the skill of the Romans but to Alan Richardson's wizardry with computer spreadsheets and carefully selected data.

To conclude, before we even get to consider the geodesy and mathematics or question the accuracy of the groma over long distances, it seems a pity that the author has constructed his entire edifice on a foundation unsupported by scholarly evidence: the Roman place-name 'Mediolanum' seems not refer to a survey point, sacred or otherwise, but to location in the middle of a community (farmland?). Once you discover the foundation is unsafe you look at the building to ask: 'will it stand?' Unfortunately, the answer here is 'probably not'.

Michael Spencer writes:

This is an interesting hypothesis, on a subject about which I know nothing; but some of the statements in it need a little thought. In general, it may indeed be true that the stages in the programme of road building were planning-auguries-construction; but the idea that the roads were laid down on a mathematical system from nowhere to nowhere,⁵ and the settlements later appeared at the nowhere-points as if by magic, is very hard to take. It also denies the fundamental reasons for a road: to provide easy and quick communications between sites of military significance, and to allow the development of trade between existing settlements. The road is an enabler, but it is the settlements that are the drivers. I think it's more likely that the auguries were along the lines of "Should we do it today?" rather than "Should we do it here?"

The construction of the road was a multi-layered job, designed to leave a permanent road surface that could carry more than trivial loads. The builders proceeded by excavating the line of the road, building a firm foundation, refilling and compressing the soil, forming a central embankment by adding more soil

⁵ "not Axminster-to-Lincoln", p.43.

from digging lateral ditches (or fosses) on one or both sides of the road, then surfacing the embankment with graded layers of stone and cobbles. The surface was cambered to allow rainwater to run off; the lateral ditches became the storm drain. It is unrealistic to pretend that this considerable engineering was ever done on a “Build-it-and-they-will-come” principle. It would not be undertaken simply to satisfy the witch-doctors.

As a general criticism, the Romans clearly did not have the OS kilometre grid of Britain available to them, and the various calculations in the article might be more convincing if the actual geographical co-ordinates were used as primary data. This would of course lead to the question of how accurate Roman surveys, and the fixing of the north point, were able to be.

Just to pick a nit, the word Prom. is short for Promontorium which means what it looks like it means. I would argue that Cantium Promontorium (Kent Head) was more likely to have been the North Foreland, which is more promontory-shaped than the rather obtuse outline of the South Foreland and is closer to where Caesar landed his invasion. This might upset the calculations in the article, though, so I won't press it.

The Fosse Way

In his description of the Fosse Way, Alan Richardson states that the “mean course between Axminster and Lincoln is a straight line.” This doesn't say much: the mean course between any two points is necessarily a straight line. It's the detailed deviations that are important, and the Fosse Way has plenty of those. I think what Alan is getting at is that the Fosse Way never deviates as much as ten miles away from the mean line. It is, of course, remarkable that the four main stations along the route — Aquae Sulis (Bath), Corinium (Cirencester), Ratae (Leicester) and Lindum Colonia (Lincoln) — are almost collinear; but this is just the ley-lines argument all over again, and I have addressed that already. The important point here is that these stations are not intervisible; it is not clear how the Roman engineers, grubbing about in the estuary of the Axe on the south coast, knew in which direction to build their new road to reach Lindum Colonia. I think this has to remain an open question. (Of course, I could just say that they let the trigonometry guide them, and turned out lucky, but you know how I feel about that.)

But as to the route and its deviations. First of all, it's not clear what happened in Bath. Working northward from Axminster along the well-established line of the road, we see that it starts off at Grid-35°E, running almost to Chard, then at 50°E to Ilchester, at 30°E to Street-on-the-Fosse (wonder how long it's had that name?) and then runs with slight deviations either into or past Bath — the line is not clear beyond Combe Down. ⁶ If you produce the 30° line past Street-o-t-F as far as you can, it runs slap through the centre of Bath and continues on minor roads almost to Cirencester. Many of these roads are annotated “Fosse Way” on the one-inch map. This route, however, ignores the mapped “Fosse Way” which joins the

⁶ It's all right for me to use the National Grid to give directions: I'm not trying to prove anything, just showing relative bearings.

30° line at Wraxall, having come from the Avon at Bathford, which I find perhaps suggestive.

The 25-inch of 1888 shows “Fosse Way” approaching the Avon on a bearing of 65°E, fording the river just above the Old Bridge in the centre of Bath, and leaving on a bearing of 15°W. It’s by no means clear how these sections fit into the overall plan of the road.

Cirencester may not have been an important military site but was certainly the administrative capital of Britannia Prima, one of the five sub-provinces that formed Britannia. Roman remains at all their capitals are well-known; Roman cathedrals are perhaps something more than a hypothesis at four of them. It has not, as far as I know, been suggested before that Cirencester may have been a cathedral city; but in 1965 a Saxon church was excavated on the site of the abbey, which proved to be the longest Saxon building in England: this may at the very least be taken as circumstantial evidence of the religious importance of the site. It may also be significant in this context that the Abbot of Cirencester in the Middle Ages was entitled to wear the mitre.

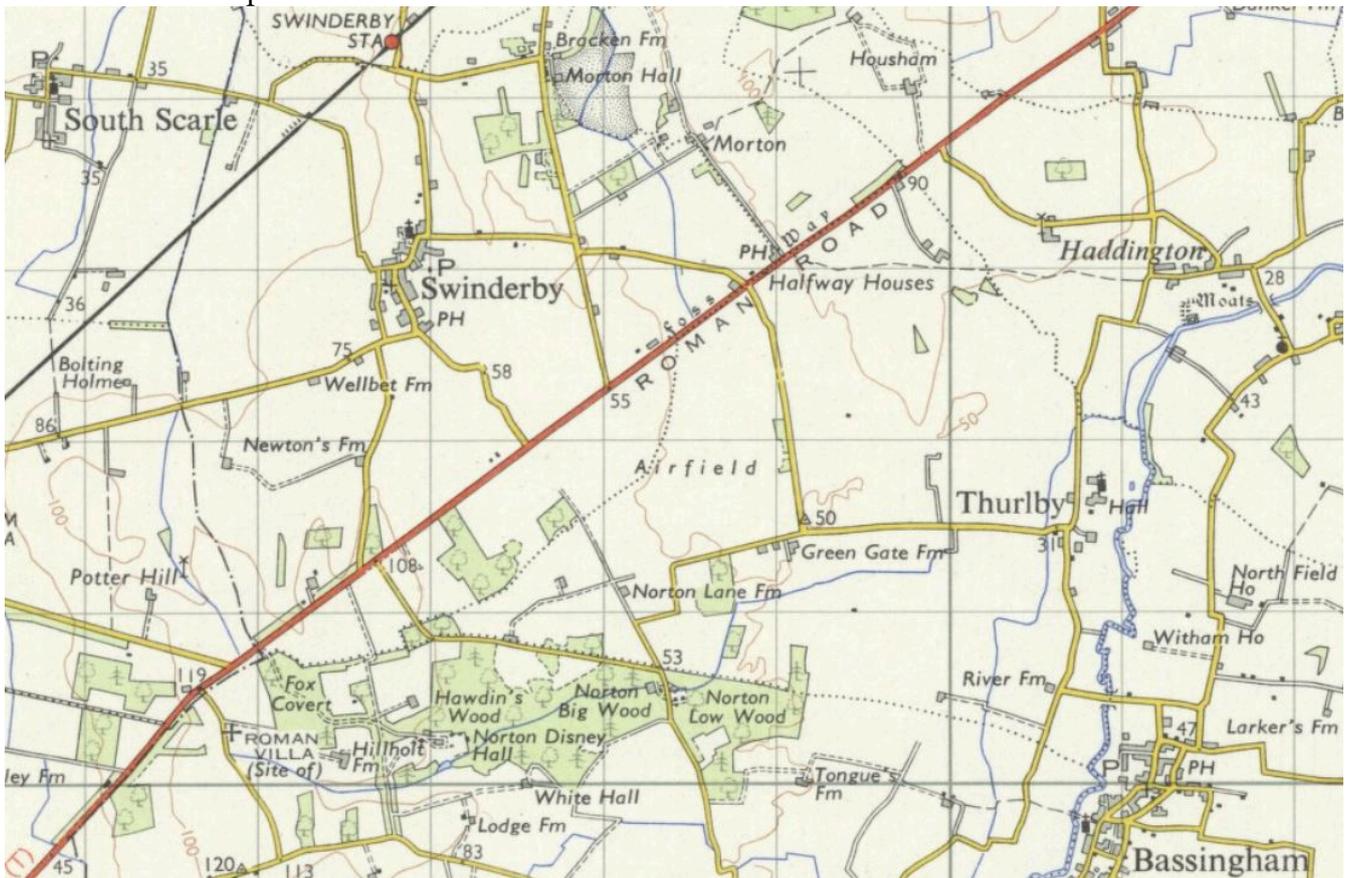
Only a couple of miles before reaching Cirencester, the line of the Fosse Way adopts a 45°E bearing to approach the site of the abbey directly, and shortly thereafter runs due north a few miles before taking a 40°E line, through villages called Foss Cross and Fossebridge, to Stow-in-the-Wold. Through Stow the route adopts a northerly bearing again, and then reasserts the 30°E line all the way to Leicester. This long section, so distinctive on the map, marked now by the A429 and the B4455, astonishingly enough is a projection of the 30° line south-west of Cirencester. (It certainly looks as though the deviation through Cirencester was built only after the place became administratively important; but one wonders why the 30° line was not rejoined much earlier.) The B4455 shows a clear deviation to the intersection with Watling Street, but returns to the line, which runs through the centre of Leicester and leaves the city on what is now the A607. At Syston there is an alteration of course to 10°E, followed today by the A46.

At the top of a marked elevation on the Cropwell Wolds, but for no obvious reason, the Fosse Way and the A46 now return to the 30°E line, but at Newark the line changes to 40°E, and after only a few miles changes again to 50°E, which is followed to Lincoln. On this line, the route leads directly into the gap in the limestone escarpment penetrated by the River Witham, which is navigable for small craft from here to the sea. Two thousand years ago Lindum Colonia, corrupted now into Lincoln, was a seaport. There is no indication that the road was ever built further to the north-east; but my money’s on the line of the B1200, pointing directly to the centre of Lincoln and meeting the sea at Saltfleet Haven. This name is suggestive in itself.

Throughout the length of the Fosse Way, Grid North varies from True North by only about a degree: so these frequent alterations of course can not have been due to the surveyors’ mathematics. On the other hand, it’s quite possible that, at least from the ridge at the Cropwell Wolds, they could actually see their target, and these changes were expressions of relief.

The maritime connections at the Lincoln end lead us naturally to consider the route at the Axminster end. Alan Richardson is right: the road did not end at Axminster, nor even at the place where Axminster grew up. Modern thinking is that it turned through a considerable angle, and ran through Honiton to Exeter; but while a connection to the fortress at Exeter was obviously vital, this dog-leg is not at all in keeping with the very slight deviations from the straight line exhibited along all the rest of the route. Projecting the line as it runs down the valley of the Axe through Axminster leads very naturally to the estuary of that river at Axmouth. Two thousand years of silting has changed the depths of the upper estuary to the point where it is now merely picturesque; but in Roman times it was capable of harbouring the largest contemporary merchant ships. The Roman equivalent of the 300,000-ton ore carrier was a wooden boat about 150 feet long, capable of carrying up to a thousand tons. Such a vessel could certainly be used to carry on trade across the English Channel and even down the western coast of Europe to enter the Mediterranean.

This gives real meaning to the existence of the Fosse Way. It brought in supplies from the Continent which were not available in Britannia, and distributed them quickly to the military and civilian establishments in the west and central districts of the province.



The Fosse (or Foss) Way, Lincolnshire. OS 1-inch sheet 113 Lincoln & Grantham, 1959