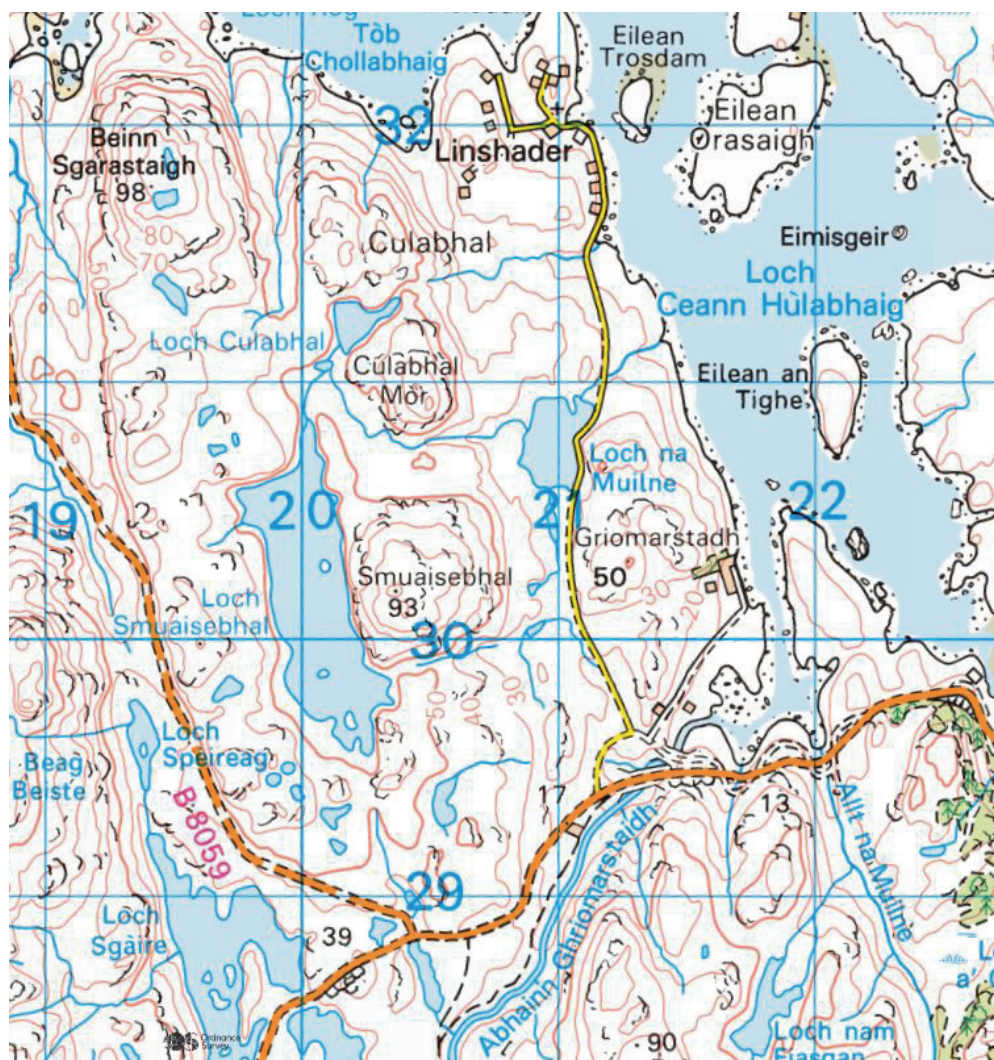


Sheetlines

The Journal of
THE CHARLES CLOSE SOCIETY
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Number 125

December 2022



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Quietest Under The Sun ... looking over the landscape of Popular Series Sheet 70 (see p 49)

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A steady flow of submissions is essential for a successful *Sheetlines*. Alas, of late the flow has dwindled almost to a trickle, and maintaining a journal of the quality, and pagination, to which members have become accustomed is proving to be more troublesome than hitherto (although I hope and believe that this situation – of concern to the Editor – is not evidenced for the reader by the content of this edition or of its immediate predecessors). Submissions of all kinds are warmly welcomed and encouraged; not only longer articles, but also your letters, responses, and comments. Please put pen to paper, or fingers to keyboards, and help to maintain *Sheetlines* as a vibrant, interesting, and informative source of knowledge and entertainment.

This edition of *Sheetlines* is accompanied by a reproduction of the secret map prepared for the General Strike of 1926, the seventh in our 'Maps From The Past' series.

The next AGM will take place, epidemics, wars etc permitting, on Saturday 13 May at the National Library of Wales, Aberystwyth, with formal business commencing at 1200. Fuller details will appear in the next *Sheetlines*. NLW is organising a live Carto-Cymru the previous day, which will have an OS theme, but details are yet to be published.

The five-foot Town Surveys in Lancashire

Rob Wheeler

The recent appearance of the 1:1056 (five-feet-to-the-mile) town scales for England on the NLS website makes it opportune to examine this series. It becomes apparent that its history is more complicated than has hitherto been presented. This paper sets out to describe the changes to the maps that took place in the first few years and to see how this fits in with the high-level policy decisions. It goes on to draw out some implications for the quality of the detail on the contemporary six-inch.

The Sequence of a 1:1056 Survey

1. Operations will have started with a chain survey. This will have been integrated with the six-inch survey of the surrounding area, but for presentation at 1:1056 it will have been necessary to fix far more points, so the party conducting the chain survey must have been made aware of the exact area to be presented at the larger scale.

2. The triangles will have been plotted at 1:1056. Once it had been demonstrated that closure errors were acceptable, another copy will have been made of each sheet showing the buildings, fences, streams, and other such features - an outline plan.

3. A tracing of this plan will have been sent to the Field Examiner. His job was to check it for errors, to add details of land utilisation, and to determine and position names. The resulting *Field Examination Trace* was in effect a draft of that part of the finished map.¹

4. Details from the Field Examination Trace were then added to the existing plan that had been traced: (a) the outline was gone over in ink; (b) colour and ornament were added; (c) the names were written in.

5. A reduction was made to 1:10,560 with appropriate generalisation - for example, the width of streets often needed to be exaggerated at the smaller scale. Likewise the names would be thinned out and simplified. It was possible for the first of these stages to take place as soon as 4(a) was complete.²

6. The sheet was signed off by the Divisional Officer as 'fit for publication'. How this was understood prior to December 1846, when authority for engraving was given, is an interesting point: was it assumed that the sheets would be engraved sooner or later; or was the map being certified as fit to go into a manuscript map library as a 'good' depiction of the town in question? This stage could come before or after (5).

7. When, at last, there was a prospect of the plans being engraved, it often happened that some form of revision took place. The changes were incorporated on the fair copy, and this was signed off again. Such supplementary revision was not normal practice within the Survey but was perhaps allowed for this series because it was so easy for a surveyor to be sent to check on the progress of building work of which he may already have been aware. Evidence of this supplementary revision can be seen in various places where the published

¹ WA Seymour (ed), *A History of the Ordnance Survey*, 1980, 169-171 - which admittedly describes a slightly later period, but is summarised, along with (4) in the key to the progress diagrams at TNA OS/3/412. I am most grateful to Richard Oliver for additional information on these diagrams beyond that contained in *The Ordnance Survey in the nineteenth century* [henceforth *OSC19*], 2014, p187,fn130.

² This is apparent by comparing the 5-foot and the 6-inch progress diagrams.

1:1056 shows a later state of development than the reduction to the six-inch scale. The ‘date of survey’ stated on the maps relates to (7) where this stage took place, otherwise to (6). A date like “1844-46” on Clitheroe Sheet 2 probably indicates that the sheet was first signed off in 1844; part was then revised and the 1846 sign-off date applies to this part.

8. Eventually the sheets for a town were ready to be published. Almost the final stage in engraving the plates will have been the insertion of a publication date.

For any sheet we thus have a ‘survey date’ and a publication date.³ We also know from a set of progress diagrams how advanced the drawing of each sheet was in April 1845. Those diagrams indicate that all sheets of all ⁴ Lancashire towns had reached stage (2) at the very least. The build-up of activity in England following the completion of work in Ireland took place predominantly in the financial year 1841-2 ⁵, so the initial chain survey is likely to have taken place some time between 1842 and 1844. There is, however, a poor correlation between how advanced a town was in 1845 and its ‘survey date’; there is an even poorer correlation with its publication date. The delays between the different stages listed above varied greatly from town to town.

During the early years of the 1:1056 plans, conventions and drawing practices were subject to change. One finds (with one exception addressed later) that practice is fairly uniform across a town. There appears also to be a steady development that can only be regarded as change with time. Effectively this gives us a handle on (4): not a date as such, but at least a position within a sequence.

The evolution of style and content

It is instructive to start with Lancaster, which bears a survey date of 1845, earlier than any other large town. (A case can be made that Haslingden was earlier, but small towns provide less certain evidence.)

The survey extends out as far as the municipal boundary but generally no further. The exceptions are, first, that where a group of houses or some such feature stands just outside the boundary it may be included. Secondly, where the Parliamentary boundary diverges from the municipal boundary, embracing a larger area, sheets which were needed anyway could be surveyed up to the neatline within the Parliamentary area. These exceptions apply to quite a few towns and are to be understood when the expression ‘to the municipal boundary’ is used. That (municipal) boundary lacks mereings - “4ft RH” and suchlike. The Irish maps never had mereings, and the early Lancs six-inch sheets lack them.

The view seems to have been taken that gates, being moveable objects, ought not to be shown. Indeed the Haslingden sheets do just leave a gap between gate piers. At Lancaster, the gaps are annotated ‘Gate’. The other annotation (or should one term it a descriptive name?) is ‘Grate’, applied to every sewer grate (*ie* drain) in the streets. In consequence the sheets are quite densely populated with ‘Grate’ and ‘Gate’ in tiny lettering. This was perhaps more appropriate to a map that was intended to remain in MS than to one that was to be engraved. ‘Lamp’ and ‘Lamp Post’ also appear, the former being for lamps projecting from

³ There might be a case for putting the latter date too in inverted commas. Instances are known where Old Series sheets only appeared on sale the year following the declared publication date.

⁴ Except Bacup - unless this is just a careless omission.

⁵ OSC19, Appendix 1(A).

buildings. *Lamp Posts* are rare: apart from round the stations (of which more later) there seem to be just two in very prominent positions. I suspect that the surveyor was uninterested in lamp posts generally, and the two that are recorded without abbreviation were ornate multi-armed specimens lighting important public spaces. If any historian of the town reads this, I should appreciate their thoughts.

The Lamp Posts (mere *L.P.s*) around Green Ayre station are instructive. When the maps were signed off in 1845, this railway was absent. The presence of a rail link to the Castle station shows that this part of the plan cannot be earlier than 1849. On Sheet 5, it appears that the whole area north and west of Cable Street has been redrawn. *Figure 1* shows the area with red highlighting for descriptive names which appear only on the original part: *Grate*, and *Gate* with just a gap. Highlighted in green are *Gate* with a line or a crossed band; these are not used on the original work. In amber are *L.P.* and *L.*; these are uncommon on the original work but widely employed in the new work.



Figure 1. Lancaster Sheet 5 showing the change of drawing styles across Cable Street.

The other railways also seem to have benefited from later revision, possibly more than once. This is most apparent on the Lancaster & Carlisle line which is described as 'London & North Western Railway'; this company only leased the Lancaster & Carlisle from 1859.

The treatment of railway tracks under roofs is often quoted as an aspect where the town scales show variability. The fact that the depiction of railway property may be of a different date from the rest of the map makes it difficult to analyse this characteristic. That said, the five-foot plans seem fairly consistent in showing tracks in passenger stations, though whether the rails are drawn as solid or broken lines does vary. Tracks in goods sheds or

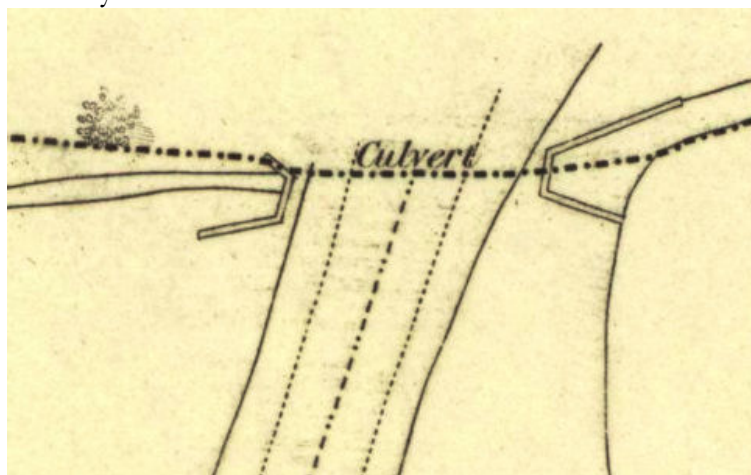
engine sheds may or may not be shown. The cynic might wonder whether it depended primarily on whether the surveyor was in a hurry and whether the shed door was open!

The other characteristic of these plans often remarked on is the depiction of the interior of public buildings. Not only does one see the internal arrangement of rooms, but also fixed furniture, like seating. Nor is the detail restricted to ground level: in churches, the outline of galleries is often shown by a broken line; likewise vaulting or prominent ceiling beams. Indeed one even encounters cases where the plaster rose at the centre of a ceiling is shown. Whether this represents the quirk of particular surveyors, or whether it changes with time, is almost impossible to analyse without an independent description of the buildings in question so that one can see omissions as well as inclusions.

Turning from Lancaster to Manchester (signed off 1848) we find a different style of map. All sheets are filled to the neatline. Coverage corresponds broadly to the municipalities of Manchester and Salford but extremities of these with scarcely any settlement are excluded, whilst a couple of sheets cover areas wholly outside the two boroughs. Administrative boundaries are mered. Gates are shown by a crossed band symbol - something like an elastic band wound round the gate piers and crossed in the middle. The standard features of street furniture are abbreviated to letters, along with F(ire) P(lug) and S(top) C(ock). S(ewer) G(rate)s are only found in yards on the outskirts. There can be little doubt that the principal streets of this great town did have modern arrangements for taking away surface water; the surveyor simply appears to have been uninterested in them.

We can base a simple typology of these maps on the treatment of administrative boundaries:

1. Unmered.
2. Helpful Hints.
3. Lacks only the 'change of mereing' symbol
4. Fully mered.



'Helpful Hints' indicates the practice of explaining what a boundary does when it disappears under an embankment, for example, by annotating the section 'Drain' or 'Culvert', say, or 'Defaced' (*Figure 2, left. Preston Sheet 3. The culvert under the Deepdale Road seems to be marked as such because the municipal boundary follows it - whether centre or side is unclear. Certainly the surveyor normally shows less interest in culverts. The boundary running down the*

road is a ward boundary). In between there will be sections where the mereing is deemed clear enough not to need spelling out. The typology can be broken down further as:

- 1a. Like Lancaster: descriptive names generally given in full..
- 1b. Gate symbol appears: a crossed band, a single line, or both. L and LP appear extensively.
- 2a, 3a, 4a. 'Grate' remains.
- 2b, 3b, 4b. Grate abbreviated, usually to SG but Warrington uses G as do most Yorkshire

towns.

Of twenty-four Lancashire towns, ⁶ five cannot be classified by this method, generally because they do not have any usable administrative boundaries.⁷ Of those that can be classified, those up to 2a stop at a boundary - which in the case of non-corporate towns may simply be an arbitrary line - whilst those from 2b onwards are filled to neatlines. This is quite a striking result: it means one can deduce from the appearance of a sheet at the centre of the town where the mapping will stop on sheets at the periphery.

It is also instructive to look at the fifteen towns which had been completely drawn by April 1845 or which only lacked the writing in of the names. We have to exclude Oldham because NLS lacks the initial 'edition' and two small towns (Fleetwood and Clitheroe) whose style is ambiguous. Of the remaining twelve, eleven were intended to have detail stopping at a boundary (Manchester being the exception). Six were indeed published in that form. The other five ⁸ had originally been intended to stop at a boundary but were extended to neatlines and (as the previous paragraph makes clear) had a later style of drawing. It would appear that, in order to ensure unity of style between the new work and the old, the first lot of fair drawings was scrapped and the towns in question were completely redrawn. Such extravagance must have had a cause, and that leads on to the next section.

High-level policy

By April 1845, more than three hundred sheets at 1:1056 were complete or in course of preparation, as opposed to one hundred and eighteen sheets at six inches to the mile; and the disparity must have been apparent for at least the previous year. Superficially, it might appear that three quarters of the Survey's effort had been devoted to a product which had not received Treasury authorisation. That exaggerates the problem, because there was much more work in a six-inch sheet. Nevertheless, it is worth asking how this came about.

Seymour's account ⁹ gives the impression that sanitary reform was the great driver. It is based on observations in the First Report of the Commission of Enquiry into the State of Large Towns, made in 1844; and on the fact that that the 'survey dates' of the five-foot plans start in 1845 (with just a couple in 1844). But we know now that the work on these plans was under way much earlier.

Military officers - even Engineers - tended to be motivated more strongly by military matters than by sanitation. We need to remember that the horrors of the French Revolution were still to the forefront of people's minds, the risks being emphasized by a further round of popular revolutions in 1830. Closer to home, the attack on Newport (Monmouth) by some ten thousand Chartists in 1839 had been widely regarded as an attempt at insurrection. Defence against such threats benefited from maps, and the six-inch scale was inadequate in towns. Were these fair-copy five-foot plans seen by the Board of Ordnance as the modern equivalent of the Great Map in the Tower that had been a product of the original Kent

⁶ Liverpool has been excluded because of the large amount of railway revision. Oldham and Stockport are excluded because NLS only has later 'editions' of these.

⁷ A small group of towns have circular boundaries: it is a moot point whether these should be mered 'Und' or not.

⁸ Accrington, Burnley, Colne, Rochdale, Todmorden.

⁹ Seymour (ed), p113.

survey? It might be pertinent that the municipal boundary represented the limits of the authority of a town's magistrates, so there was logic in extending mapping thus far and no further. Or it may simply be that Irish practice had been continued without much thought as to whether the rules needed to be changed in the new circumstances. Colby's style of leadership was not such as to encourage his subordinates to question the appropriateness of their orders. Perhaps he had simply taken his eye off the ball, so to speak, until it became all too apparent that the tail was wagging the dog.

The first sign of this being addressed came in April 1843, when the Ordnance asked Colby if he was having Manchester surveyed at an 'enlarged scale'; Colby replied that this was being done with a view to six-inch publication. He further explained in June 1843 that this was because the six-inch was too small a scale in urban areas to allow field examination. These exchanges were taken by Colby as implicit authority for the towns scale. It is remarkably convenient that the question concerned Manchester, where the central area was so very congested that there could be no doubt about the need for surveyors to work at a larger scale. Indeed one wonders if the question had been planted by Colby.

As for sanitary applications, a number of towns started to ask for tracings of their plans, and Colby seems to have been deliberately unhelpful. Perhaps he was hoping that the accumulated demands would bolster his argument that the plans should be engraved. What does not seem to have happened was any change that would make the plans more useful for sanitary engineering.

In this context it may be worth describing the work of the engineer George Giles in designing a sewerage system for Lincoln.¹⁰ Giles used as his base map JS Padley's twenty-inch plan of Lincoln (1:3168) which he enlarged to 1:1584 for his design work, although he presented his proposals at the twenty-inch scale. His plan was contoured at a twenty foot interval and frequent spot heights will have been taken along the streets. The spot heights were essential in determining the depth of sewers: deep enough to drain the adjoining properties but not so deep as to occasion unnecessary expense, while maintaining a steady gradient. The contours provided a general picture of the relief. Had they been drawn in the over-detailed manner prompted by the General Police & Improvement (Scotland) Act of 1862 they would have been much less useful.¹¹ In addition, Giles used larger-scale plans of two selected areas, but for propaganda rather than design, as a way of showing the density of 'nuisances' - privies, dust holes and pig-sties - on ground ill-suited for them. When Lincoln's sewers came to be constructed some decades later, large-scale plans - in due course the OS 1:500 - were found useful as a means of recording the private sewers connected to the Corporation system. Giles described the existing sewerage of the city but had no interest in mapping it: it was all to be superseded and much of it - ditches discharging into stagnant pools in the fields immediately outside the built-up area, for example - was not really amenable to the OS style of mapping.

If one asks what sort of OS map would have met Giles' needs, it is apparent that the early 1:528 plans stand out as tailor-made for such a task. Not only were they well-supplied

¹⁰ DR Mills, *Effluence and Influence*, 2015.

¹¹ The plans of Selkirk on the NLS website show contouring within the built-up area that is completely unreadable.

with spot heights along the streets but for every house the level of the lowest floor is given, so that the sewers could be capable of draining every cellar. These plans also give the functions of outbuildings - stables, cow-houses, piggeries and privies being important from a sanitary perspective.¹² That said, the 1:1056 plans were well-suited to act as a base map, so the move to have them engraved was entirely sound. None of the ‘street-furniture’ features will have been particularly useful to a sanitary engineer. So why do we have such an assembly of ‘Grates’ on early plans like Lancaster’s? It may be that the surveyor found their corners useful as precisely-defined points to which any subsequent survey work could be tied: a 19th-century equivalent of the ‘Revision Point’ of post-WW2 surveying.

Post-publication revision

Before proceeding to a comparison of detail between five-foot and six-inch scales, we need to be sure we are comparing like with like, especially as most of this work has been done using late printings. So we need to understand what changes were made to these sheets after they were first engraved. The most important of these is that up to about 1867 new railways were added to both scales, along with any changes to adjoining detail; and there is normally no indication of this in the marginalia. It might be expected that this revision would be mapped at the 1:1056 scale within areas where this was the scale of survey and that this revision would in due course find its way to the published maps. This does seem to be the case, with a couple of small exceptions which might be explained by the reviser not realising he had moved into a 1:1056 area. To guard against this type of change, the user needs to be aware of the dates of the local railways; comparison against an early state of the six-inch¹³ is another way of checking.

A second cause of revision was presented by the great monuments to civic pride which some towns erected. At Lancaster, sheet 19 was revised to show Ripley’s Hospital, a very grand orphanage opened in 1864. In Yorkshire, the town halls at Halifax (1860) and Leeds (1858) were added, but Manchester Town Hall (1868-77) never appeared; probably the completion date was too late. Revision of this nature sometimes spread well beyond the building that stimulated it. At Halifax, construction of the town hall had involved the creation of two new streets; the revisions encompassed a whole block around the town hall, another block where the markets had been rebuilt, and a third block around the railway station. At Leeds, a couple of new buildings facing the town hall were added.

The third category is represented in Lancashire by the Liverpool revision of 1864. Here all railways seem to have been revised along with adjoining docks and other buildings, the revisers working back from the railway line until they encountered unchanged detail. The docks had extended to the north since the original survey, and this may have motivated the work. Unusually, marginal notes were added, of the form “New Railways & Houses inserted 1864”. The exact wording was tailored to the circumstances of each sheet; thus Sheet 5 (which lacks railways but where revision must have spilled over from an adjoining sheet) has merely “New fences &c inserted 1864”.

Perhaps it is wrong to elevate this solitary example to a category, but there was a general

¹² Most of the later engraved versions are less detailed, omitting in particular spot heights for individual houses. But Alnwick and Berwick-on-Tweed offer engraved versions at the full specification.

¹³ Such as those on <http://mario.lancashire.gov.uk/agsmario/default.aspx>

problem in revising railways in urban areas that the details of trackwork had often changed and these changes - for example the addition of a siding - might extend some distance along the line and overlap with other changes. Thus revision that started on one sheet might extend to several adjoining sheets. This was not a problem at the six-inch scale, where depiction of railway trackwork was more sketchy. One sees something of the sort in Leeds, where five-foot sheets 13 and 14 have railway revision, perhaps associated with adding the interchange station at Holbeck.¹⁴ That revision may have extended to sheets 10 and 17, but in the absence of marginal notes (or a cartobibliography) it is difficult to establish what was changed when.

Finally, one can encounter security deletions: Strangeways Prison in Manchester is an example. There may also be changes to administrative names and boundaries.¹⁵

This sounds a formidable list; but many sheets survived their entire lives without any changes to content. Of the sheets that were revised, almost all the revision concerns railways and adjoining land. As long as the user is wary of this, it is reasonable to use late states from the NLS website for comparison purposes.

The quality of six-inch detail

For most towns, the area shown as surveyed in the 1845 progress diagram corresponds to the area depicted in the published five-foot plans. In some cases the number of actual sheets has increased as a result of what had been envisaged as insets now having their own sheets. At Blackburn a portrait sheet was replaced by two landscape sheets (7 and 11) but without any change in the area mapped, and similarly at Wigan.

One completely new sheet (Clitheroe 3) was added; and, as mentioned earlier, certain towns which had been surveyed to municipal or arbitrary boundaries had their sheets filled to the neatlines. All the indications are that this extension to the mapped area took place after the reduction to 1:10,560. In other words, these extensions offer an independent check on the quality of the six-inch detail. All these sheets show instances like *Figure 3*, from Clitheroe sheet 3.

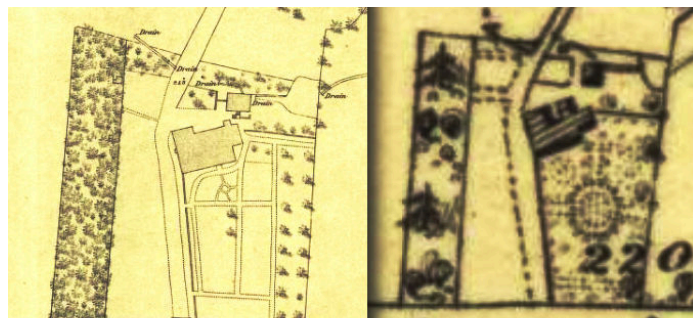


Figure 3. Clitheroe Sheet 3.

This shows a villa on the road leading west from the town, with its depiction on the five-foot to the left and on the six-inch to the right. Note the difference in the line of the

¹⁴ A copy of Sheet 13 with a June 1866 epd is known, which establishes a *terminus ante quem* for the changes.

¹⁵ I have omitted here changes that do not affect content. Rouletted building-fill was added from 1850; "All Rights of Reproduction Reserved" was added from early 1888; and the price was raised from 2s to 2s6d in September 1888 - see dated stamps on several Liverpool sheets. Price was sometimes omitted and the details of survey, etc, were occasionally simplified earlier in the 1880s.

northern boundary of the grounds. Note also the change in proportions of the house's various projections; it would appear that the outline of the house was sketched for the six-inch survey rather than being measured. The change in the house's garden is a consequence of the six-inch quite properly employing garden *ornament*, whereas for the five-foot the garden paths were surveyed. Finally, note the 220ft spot height on the six-inch, but not on the five-foot. It is quite understandable that the five-foot should have heights not on the six-inch, but not the other way round. Where benchmarks appear on both, one often finds a discrepancy in the final digit: perhaps a fresh adjustment of circuits had taken place between the dates of the two maps.

The key points to note are the error in alignment and the irregularity in the treatment of building projections. The other changes are oddities resulting from separate surveys or a difference in dates but are not errors as such.

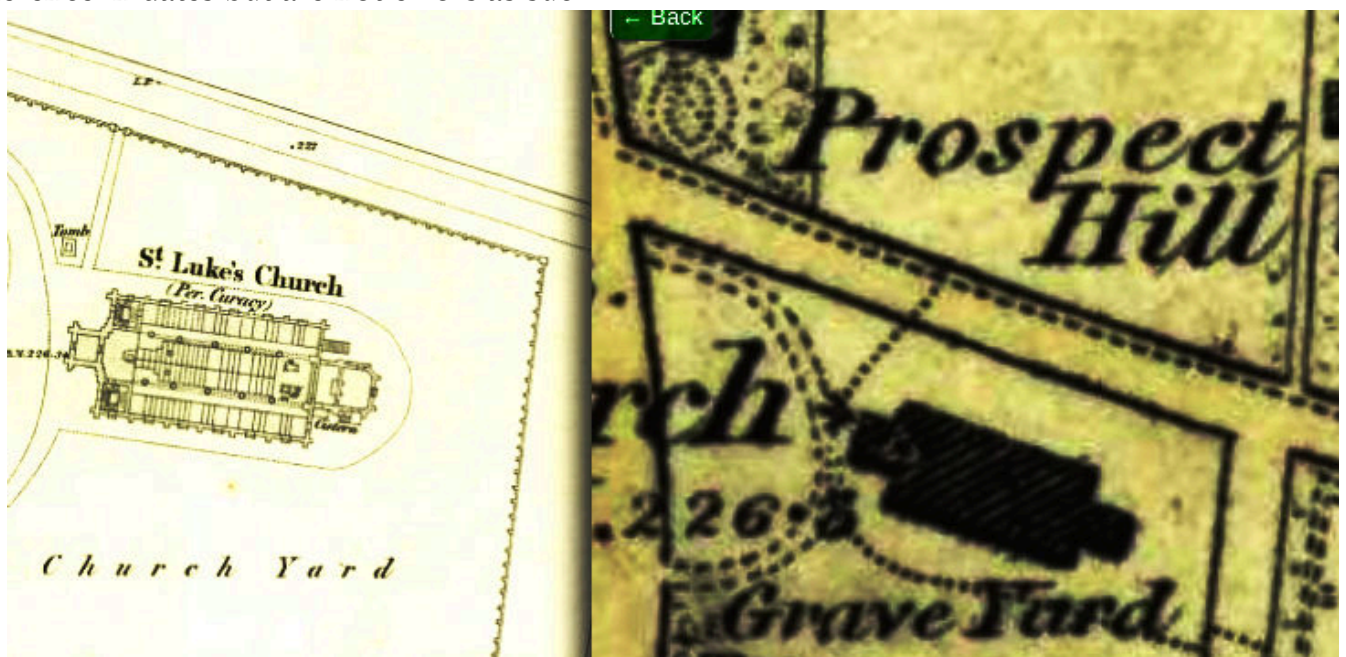


Figure 4. Manchester Sheet 8: rotated church.

Figure 4 shows a similar alignment error affecting a church in Manchester. Here the error seems to have occurred despite the six-inch being derived from the five-foot.

Figure 5 (following page) shows a more drastic error where one of the Colne sheets has been filled to the neat line. A tramway that crosses a river by a bridge - whose parapet is carefully depicted on the five-foot - is shown on the six-inch as tunnelling under the river.

How do these errors arise? For the alignment errors and the irregularities in building projections we must look for a mechanism that affects both ordinary six-inch surveys and reductions from the five-foot. I suggest that the problem arose from the method used to transfer detail from the fair drawing to the copper plate. The detail was traced using lamp-black; the tracing was then placed on the copper plate which had been given a coating of wax and was rubbed with a burnisher to transfer the detail to the wax. This provided guidance to the engraver.¹⁶ That last sentence was almost certainly written by Henry James,

¹⁶Report of the Ordnance Survey Commission, BPP (HC) 1857-8 [2396] XIX, 585. The description appears on p46 of the report and is then largely repeated in Capt H Riall Sankey's article in *Engineering*, 6.1.1888,

who was not prone to understate the Survey's technical achievement; and *guidance* suggests something less than a crisp image. I suggest that on occasion the quality of the image was sufficient to show where a building needed to be engraved but that the engraver needed to consult the fair drawing for the fine detail and even the exact alignment; and this was done 'by eye'. As for the tunnel at Colne, the appearance of 'tunnel' rules out any explanation affecting just the engraver; the field examination trace was perhaps misinterpreted, and someone mistakenly added the word in the hope of offering clarification.



Figure 5. Colne Tunnel.

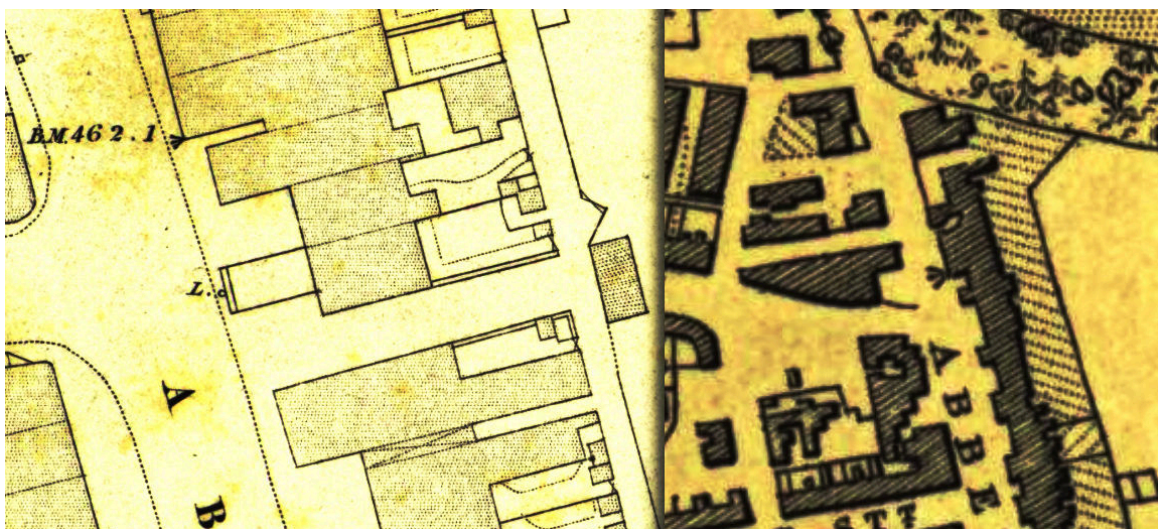


Figure 6. Accrington Sheet 3: Abbey St. The benchmark is useful in relating the two depictions.

Another puzzling discrepancy is found at Accrington (Figure 6) and concerns the terrace

on the east side of Abbey Street. The five-foot plan shows these houses with extensive buildings behind them - presumably lower service buildings accessed via the lane at the rear. The six-inch shows the rear of the terrace uncluttered by these buildings. It is as though the rear of the terrace had been surveyed from the far side of the rear wall or fence, ignoring single-storey rear projections. It certainly could not have been obtained by any process of generalisation of the five-foot. It might be regarded as giving a clearer picture of the structures than a reduction of the five-foot would have, although omission of the rear lane and of the gap in the terrace allowing access to it might seem a little excessive. Although this sheet of the Accrington five-foot was extended to the neat lines after 1845, Abbey Street appears to have been inside the earlier boundary line. Perhaps this indicates a wider problem with small places that were not municipalities: the surveyors doing the six-inch survey may have been uncertain where they should stop and so the fringe of the urban area may have been covered by surveys at both scales. Of course, we should also consider the possibility that the discrepancy might be explained by 'top-up' revision to the five-foot; but the terrace in question gives the impression of being well-established and it seems unlikely that all the owners should have simultaneously embarked on a programme of rear extensions.

Conclusions

The results on quality of detail can scarcely be described as tidy. We have problems with alignments and building projections cropping up occasionally and these might be attributable to the transfer process used. We have a misunderstanding over a 'tunnel' that can only be described as weird. And we have a piece of independent six-inch survey where we expected a reduction from the five-foot, and done in a manner that perhaps tries to be helpful at the expense of Colby's aspirations for scientific rigour.

These examples came from looking at a very few of the five-foot plans extended in scope between 1845 and their date of publication, and corresponding in total to about one-fiftieth of a six-inch sheet. It is highly unlikely that this is the only weird misunderstanding or the only depiction which sacrifices scientific rigour in a bid to be helpful. Users of the early six-inch surveys therefore need to exercise a degree of caution.

As for the historical account, it is clear that the Lancashire five-foot surveys were something of a tail wagging its dog. It was perhaps eighteen months after their commencement before Colby recognised the problem and modified his instructions. The sanitary movement may not have motivated these plans but it provided a welcome justification and in due course led to their being engraved..

Afterword: a reversal of policy?

Strictly, Yorkshire falls outside this account, but it would be misleading to fail to mention what happened at York and Wakefield.

The intention in 1845 was that York should be published in twelve sheets, filled to the neatlines. Indeed, the fair-drawing was complete in 1845, except for the writing of names on the two central sheets. But as published in 1852 (with survey updated to 1849-51) there were twenty-one sheets, completed to the Parliamentary boundary or slightly beyond it. Effectively, the Survey had reverted to something like its original policy.

Wakefield does not appear in the 1845 progress diagram: presumably it had not yet been started. The only evidence we have for the intended layout is the form of the sheet

numbering. Sheets 1 to 8 and 10 to 13, all with a date of survey of 1848, are filled to the neatlines and form a tidy rectangular grid. But there are also Sheets 2A (placed SE of sheet 2) and 5A (placed SE of sheet 5), surveyed 1850. These form a joggled column compared to the earlier pattern, and extend only to the municipal boundary.¹⁷ Thus we seem to have a policy change that can be dated to the bracket 1848 to 1850. There is also a third sheet in this joggled column bearing the number 9 and the survey date 1848.¹⁸ Its positioning accommodates the municipal boundary exactly; but it is filled to the neatlines. This prompts the observation that the southern part of 5A, up to the railway line, likewise extends detail to the eastern neatline. Thus it would seem that in 1848, while survey was still in progress, it was decided that survey to 1:1056 standard should extend right to the municipal boundary and indeed beyond. That would imply a requirement for sheets 2A and 5A. It was deemed possible to change the sheet numbers from 9 onwards so that sheet 9 could have a normal number but it was not possible to alter the earlier sheet numbers. Why not? Did the sheet number become sacrosanct as soon as it was applied to the fair drawing? It is all a bit of a mystery.

More generally, was there a universal policy change, or were particular pressures applied in the case of these two towns? When Hull was surveyed in 1853, sheets were filled to the neatline and there was no requirement to embrace the whole of the municipal or parliamentary area - in other words the policy that had been followed generally since 1845. So perhaps there were particular reasons driving the treatment of York and Wakefield.

All illustrations courtesy NLS

Peter K Clark Awards

As a result of a generous gift by our first Chairman, the Society is offering awards to assist with research expenses for those engaged in original research into Ordnance Survey and associated mapping. They are intended to cover necessary travel and accommodation costs for visits to libraries and archives, and the costs of making copies of material. They may extend to the cost of analyses and equipment where the research concerns some aspect like the physical constitution of papers and inks. It is expected that the results of research will be published in *Sheetlines* or (where more appropriate) some other journal.

Applications for grants should be sent to the Hon Sec. They will be considered by the committee in meetings in February and October. It is recommended that applications should reach the Hon Sec by mid-January or mid-September so that clarification or expansion may be sought. Applications should state the nature of the research to be undertaken and the anticipated results, the nature of the costs for which reimbursement will be sought and their expected amount, and the form of publication planned.

No applications will be considered for the retrospective payment of costs already incurred. The committee will be seeking to maximise the benefits that can be achieved from a finite sum available, so applicants are advised to pay particular attention to cost-effectiveness in their proposals.

¹⁷ Which according to the 1:1056 is also the Parliamentary boundary; but the 6-inch disagrees!

¹⁸ This is based on the sheet on the NLS website which was transferred to zinc in 1882 and given new marginalia, so the survey date is perhaps not as trustworthy as if it were taken from an early printing.

The Isle of Lewis survey reconsidered

John Moore

“Carried on to an extent which I consider perfectly unjustifiable”. Although commenting specifically on contouring, this criticism by Henry James, Superintendent of the Ordnance Survey has a relevance to the whole question of the Lewis survey, a rather exceptional episode in the history of Ordnance mapping in Scotland.¹ John Hall Maxwell, Secretary to the Highland and Agricultural Society of Scotland viewed it as ‘a still greater mistake’ than recommending the survey of Scotland in Wigtownshire, when giving evidence to a parliamentary committee five years earlier.² This particular survey has been considered elsewhere but both studies form only part of a wider discussion.³ Despite an element of letting sleeping dogs lie with this singular undertaking, scrutiny of the available contemporary evidence suggests that a more detailed investigation is justifiable.

On 24 September 1843, James Stewart-Mackenzie died and, the following year, the Seaforth connection with Lewis ended when the island was sold to James Matheson, Member of Parliament and founding partner in Jardine, Matheson and Company, which was to become the largest British firm trading in Asia. Entering into possession of his new property on Whitsunday (26 May) 1844, Matheson was a man with deep pockets and big improvement ideas, including constructing new houses, upgrading harbour facilities, road and maritime communications, and, most importantly, developing Lewis’s agricultural capacity. At that time, only about 10,000 of the island’s over 417,000 acres were arable.

With this in mind, Matheson wrote to fellow Scot, Sir George Murray, Master General of the Ordnance in September 1845, seeking to have Lewis surveyed out of sequence at his expense.⁴ Five years earlier, in April 1840, Sir George Mackenzie had raised the possibility of such a survey for the county of Ross to be funded by subscriptions from the local gentry. In his application, he stated: “The nature of the county, nine-tenths of it being open, will not cause too much labour as counties more extensively cultivated, but with the view to improvements of various kinds, the map will be of the utmost service.”⁵

This attempt failed but Mackenzie re-applied in 1845 on Matheson’s behalf and the latter’s letter to Murray appears to have set the ball rolling on an event which was to prove that Mackenzie’s comment on the effort required was overly optimistic. Treasury agreement was reached with Matheson that he would meet some portion of the additional expense to defray the cost and, although claiming to be ‘staggered’ by the amount required, he offered to contribute £1200 and purchase 100 copies of the engraved map.⁶ A proviso was made

¹ Reply by Lt.-Col. Henry James, 10 April 1856. *Report from the Select Committee on Ordnance Survey of Scotland*. HC Paper 1856 (198) XIV. 361. p.71

² *Report from the Select Committee on Ordnance Survey (Scotland)*. HC Paper 1851 (519) X. 359. p.68

³ Roy C Boud, *The Highland and Agricultural Society of Scotland and the Ordnance Survey of Scotland, 1837-1875* Cartographic Journal, vol. 23, 1986, pp.3-26, particularly pp.13-14; Richard Oliver, *The Ordnance Survey in the Nineteenth Century: maps, money and the growth of government*. London, 2014, pp.197-198

⁴ The National Archives [henceforth TNA]. WO47/2053, pp.13517-21. Letter dated 17 September 1845

⁵ Ordnance Maps. Correspondence respecting the Scale for the Ordnance Survey, and upon Contouring and Hill Delineation. HC Paper 1854 (1831) XLI. 187. pp.1-2

⁶ TNA. T1/5175/15250. Letter dated 19 June 1846. In 1884, William Mackay, Chamberlain of Lewis

whereby ‘the first moiety’ of his subvention would be paid on receipt of the first engraved sheet. Events were to prove that he would have a long wait. The need for agricultural improvement was soon brought into sharp focus by a famine resulting from the first of a series of potato crop failures on the island in 1846, which Matheson met by laying out considerable sums on oatmeal to support his tenants. With this as a backdrop to the survey, an expeditious approach might have been considered essential to Matheson’s needs.



James Matheson MP
(*Dictionary of National Biography*)

Mapping such a remote and isolated part of the British Isles was always going to face problems in terms of communication both within the island and, possibly more importantly, with the Board of Ordnance itself. One of Matheson’s major financial commitments was towards improving the island’s roads and bridges, underlining one of the complications met in negotiating an all-too-underdeveloped terrain. Combined with this, there was, inevitably, a challenge in the more remote areas where Gaelic was the only language spoken. Fortunately, one of the labourers attached to the survey party was John Morrison, a Stornoway man whose name appears as an accepted authority in 62 of the OS Name Books for Lewis. His contribution was particularly valuable in cases where residents were unable to spell. It should also be remembered that the Sabbath was, and still

is, strictly observed in many parts of Lewis. The survey of Rona exemplifies some of the problems faced by the Sappers engaged in the mapping. Originally, it was intended that a party of ten civilian labourers under Corporal Michael Hayes would accompany Sergeant James Steel and his team to the island. Steel was engaged in taking observations to complete the determination of stations for the national trigonometrical survey and the party embarked in late August 1850. Unfortunately, turbulent seas left Hayes and his men stranded on the island with few supplies and little shelter for a week before a returning vessel was able to land.⁷

estimated Matheson’s expenditure in developing the island’s resources at over £259,000. Combined with the initial purchase cost and the amount spent on Lewis Castle, the total was in excess of £574,000, putting his subvention toward the survey into perspective. Report of Her Majesty’s Commissioners of Inquiry into the Condition of the Crofters and Cottars in the Highlands and Islands of Scotland. 1884. C.3980. p.154

⁷ TWJ Connolly, *The History of the Corps of Royal Sappers and Miners*. London, 1855, p.55

Surveying had begun on Lewis in July 1847 and appears to have been completed by August 1852. However, by June 1850, there was already concern about the length of time being taken. Colonel Lewis Hall, Superintendent of the Survey at this date, was asked by the Board of Ordnance for a statement as to its progress and the likely date of completion.⁸ One year earlier, he had reported that only three Lewis sheets were at the engraving stage.⁹ As Oliver has observed, 'Hall had the disadvantage of knowing nothing about the detailed working of the Ordnance Survey. He was as complete an outsider as it was possible to be' and, in truth, he had inherited the decision to proceed with this survey when he took up his post in April 1847.¹⁰ In evidence to the 1856 Select Committee, James, Hall's successor highlighted that the mapping of Lewis was undertaken under extremely difficult circumstances, particularly mentioning that the party sent there had not been previously instructed. This resulted in the whole training cost being added to the overall expenditure of the work itself.

The Royal Engineer officer in charge on Lewis, Richard Burnaby had received his commission in 1839 but served in Canada between 1841 and 1846. His involvement in home survey only began in January 1847. Nonetheless, his senior NCO, Sergeant Robert Barlow, was fresh from working in Kirkcudbrightshire while the average age of the other non-commissioned officers, as recorded in the 1851 census, was just over 30, suggesting a degree of experience in the field. Additionally, Ireland was the recorded birthplace for 46 (46.9%) of the 98 names listed as working for the Ordnance Survey in the Lewis census returns and it is assumed that these men would have brought a level of skill and practical expertise with them.

It is when the Name Books for the island are investigated that a degree of complete impracticality in relation to the task in hand can be discerned. Lewis consists of four parishes - Barvas, Lochs, Stornoway and Uig - while the mainland area of Ross and Cromarty is made up of twenty-seven parishes. These are covered in fifty-one volumes. In contrast, the Lewis Name Books run to an astounding 136, with two volumes weighing in at 475 and 346 pages and a seemingly limitless number of small rocky or heathy hills identified. Putting this in some sort of perspective, the county of Argyllshire is covered in 81 books and Lanarkshire by a mere 59 volumes. The level of detail can be seen on the maps themselves; for example on sheet 17 (*figure 1*), where the naming of coastal features around Camus Bhòstaidh seems to have gone into overdrive. This is replicated in the recording of what appears as an excessive number of bench marks running west of Loch Raonasgail on sheet 29 (*figure 2*) and a string of spot heights, often with less than ten feet between them, on the southern flank of Stacashal on sheet 19 (*figure 3*).

⁸ TNA. WO55/963. Letter dated 10 June 1850

⁹ *Second Report from the Select Committee on Army and Ordnance Expenditure*. HC Paper 1849 (499) IX. 5. p.463

¹⁰ Oliver op. cit. p.154. Hall's replies to the 1849 Committee questions do suggest a lack of command of the details and reliance on the experience of other officers, particularly William Yolland. According to Hall, the expenditure on Lewis until June 1849 had been £6,500



Figure 1: Island of Lewis, Sheet 17 (extract), published 1854 (NLS)

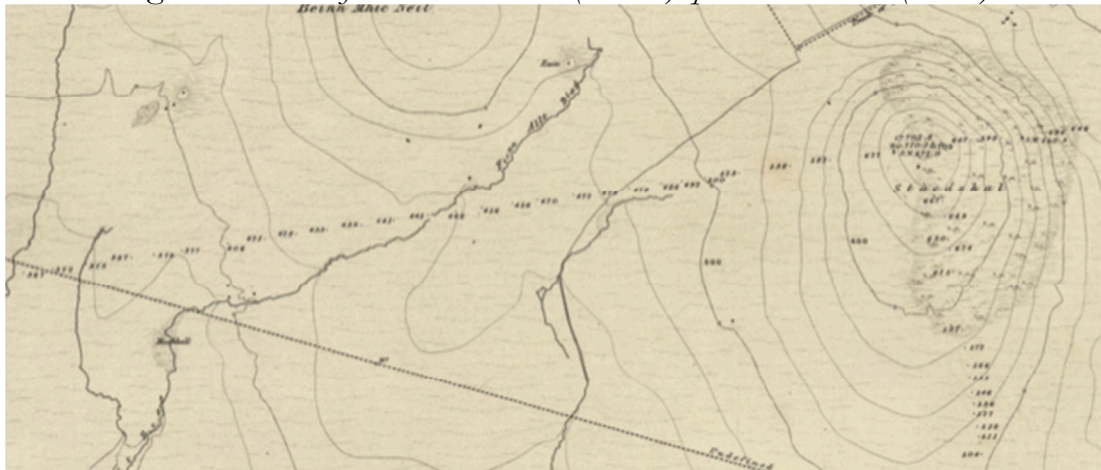


Figure 2 : Island of Lewis, Sheet 29 (NLS)



Figure 3 : Island of Lewis, Sheet 19 (NLS)

With the exception of sheet 20, which covers Lews Castle and Stornoway, Burnaby himself is credited with the contouring on all the engraved Lewis sheets and it was this aspect which warranted James's particular censure. However, while he considered the money incurred there as unjustifiable, James did agree that the introduction of the six-inch scale was the best for the Scottish Highlands. There were weighty opinions to the contrary. On the same day that he gave evidence, he was followed by no less a person than Sir Roderick Impey Murchison, Director-General of the Geological Survey and a Ross-shire man himself, who stated that, 'for all purposes of a military, engineering, or geological nature, a map on a one-inch scale...is fully adequate for the Highlands and Islands of Scotland'. Citing the particular illustration of Lewis, Murchison continued by asserting that maps of 'wild and undivided tracts' on the six-inch scale would be of little use to proprietors who were likely to find them cumbersome and comparatively useless. In his view, he considered that the one-inch map of Lewis exhibited to the Committee served as an example 'where every object which the proprietor could have desired would have been attained' if it alone had been published.¹¹ As it was, the dating of the six-inch sheets shows that only 11 were published between 1851 and 1852 whereas nearly half (24) were not issued until 1854-55. The engraving of the one-inch map only began in February 1852 and the eventual date of completion was given as 1859, at an estimated cost of £1190, which would have come in a little under the subvention originally offered by Matheson.¹²

As James pointed out in 1855, 'fifteen months elapsed between ... April 1853, and ... July 1854, before orders were given to draw the plans upon any scale', the repeated changes, or in effect absence, of orders causing a considerable loss of time and money.¹³ In 1850, Matheson's improvement scheme was suspended and, soon after, was given up completely.¹⁴ Although Matheson spent eight or nine months each year on Lewis, nowhere in the literature does there appear to be any mention of him or his Chamberlain, John Munro Mackenzie showing concern about the time being taken or, indeed, the suitability of the six-inch scale for the improvement scheme. Mackenzie's diary for 1851 includes several references to his visits to the Survey office to examine plans, as well as meetings with Burnaby, but his one concern seems to have been more about the length of time Burnaby would be resident before his cottage could be released to Rev William MacRae, a local minister.¹⁵

¹¹ *Report from the Select Committee on Ordnance Survey of Scotland* op. cit. p.76-77. It should be noted that Murchison, like others, was to experience a change of mind subsequently

¹² The seven sheets of the first edition one-inch map covering Lewis are all dated as published in July 1858. However, the sheets complete with hill shading did not appear until December 1860 to August 1864, with sheet 98 only coming out in May 1886

¹³ Memorandum by Lt-Col. Henry James, 22 March 1855. Ordnance Survey. Treasury Minute dated May 18, 1855, and previous papers, relating to the Ordnance Survey. HC Paper 1854-5 (1933) XXXII. 719. p.13

¹⁴ Alexander Mackenzie, *History of the Mathesons*, Celtic Magazine, vol.7, 1882, p.497

¹⁵ John Munro Mackenzie, *Diary 1851*. Stornoway, 1991, pp.19, 23, 99



*Richard Burnaby (extreme rt, in uniform)
with fellow-Freemasons in the Stornoway Lodge.*

an OS draughtsman, and a map of North Rona prepared to accompany Burnaby's description in support of Matheson's offer of the island to the government as a potential penal colony in 1852.¹⁶ Certainly, Burnaby's later career does not seem to have been adversely affected by what happened on Lewis. He was later stationed at Manchester, Portsmouth and Aldershot, retiring in 1881 with the rank of Major-General. Two questions remain: did Matheson ever get his 100 copies of the 49 Lewis six-inch sheets (or even the seven one-inch maps) and where are they now?

Acknowledgment

The author wishes to thank Richard Oliver for his comments on an earlier draft of this article.

¹⁶ At least another six of the survey party were enrolled as members of the Stornoway masonic lodge between 1848 and 1849 and three more are identified in the subsequent painting. See George Clavey, *A History of Lodge Fortrose No.108 Stornoway*. Stornoway, 1992, p.69

¹⁷ Inverness Courier and General Advertiser for the Counties of Inverness, Ross, Moray, Nairn, Cromarty, Sutherland and Caithness, no.1788, 19 February 1852, p.3, col.4

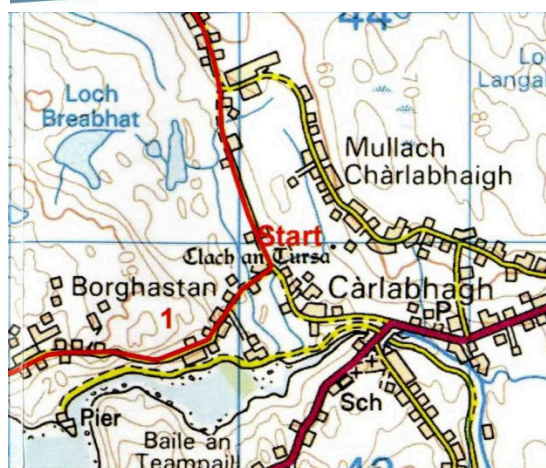
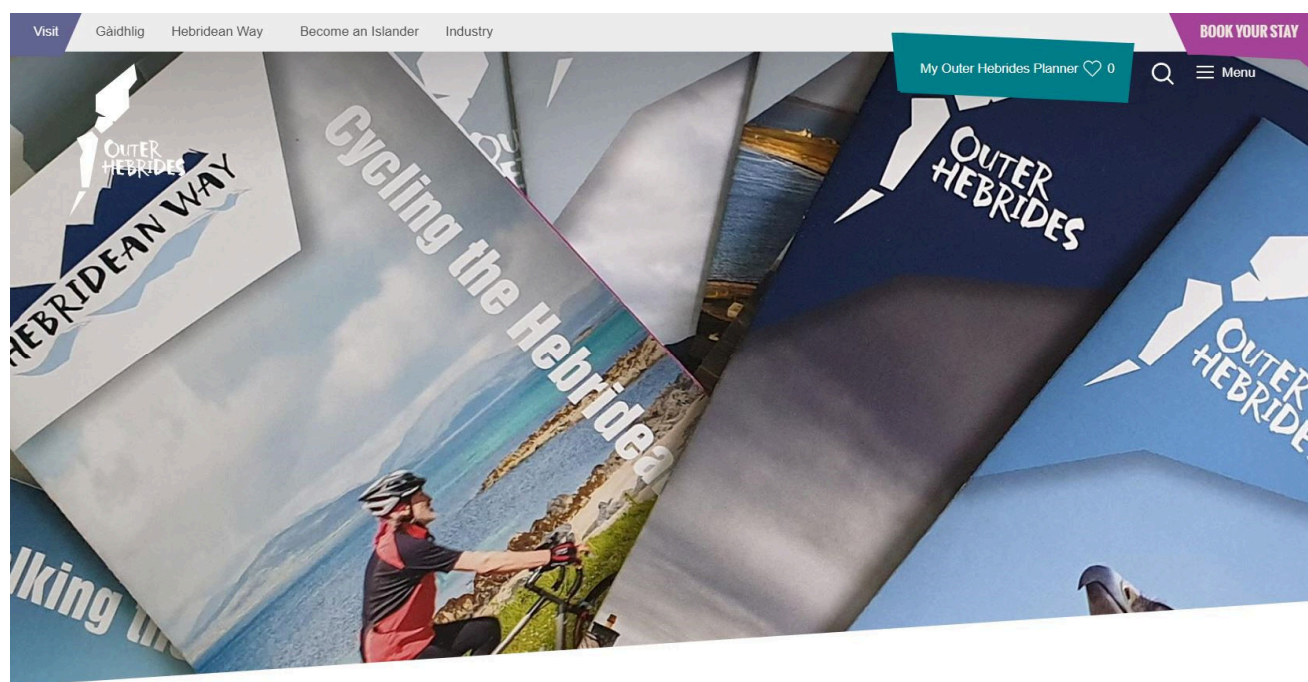
¹⁸ National Records of Scotland. RHP24963; Stornoway Public Library. Plan of the Lews or Lewis Demesne; Royal Geographical Society. mr Scotland S/S.25

Gaelic on OS mapping

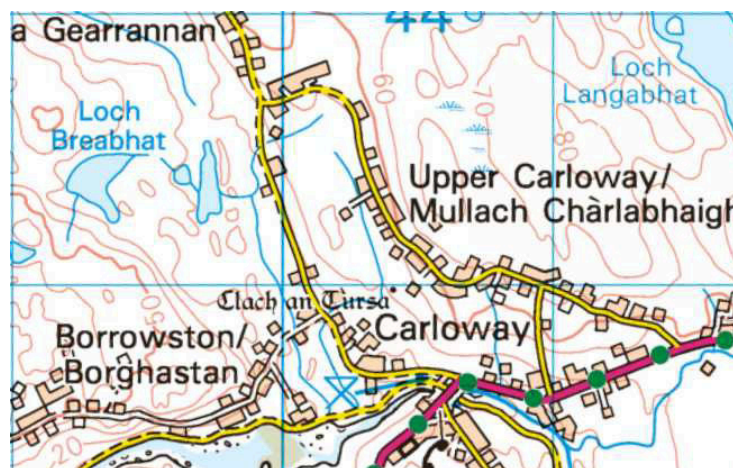
By coincidence, issues surrounding Gaelic place-names on OS mapping – and in particular, on mapping of the Outer Hebrides – were examined in a series of exchanges in the online community *ordnancemaps@groups.io* in September. The correspondence was initiated by John Davies, following a visit to the islands. He wrote:

A series of excellent leaflets showing recommended walking and cycling routes has been produced by the Outer Hebrides tourist organisation. These include excerpts of OS *Landranger* maps, overprinted with route information. But the odd thing is that, in many cases, the excerpt is of a map which has Gaelic placenames, without the Anglicised version, unlike the current edition, which has both.

In the attached example, for instance, the names Borrowston, Carloway and Upper Carloway are on latest *Landranger*, but do not appear on the leaflet. My question is: was there a series of alternative maps or has OS practice changed recently?



Leaflet



Landranger

Alan Bowring: The latest paper edition of the sheet that I have is 1997 B edition which has only the Gaelic names, as per the leaflet - I guess the English was (re-)added sometime during the last 25 years. The building further north (above the junction) is smaller on my map than that portrayed on either attached example.

John Davies: Surveyor's changes (eg the building size and shape - and also the Post Office, Phone box, Cycle route etc) would be expected between editions. But the decision about the language of toponyms would be a policy (or political) choice.

Edition A of sheet 8 (1975) has only the English names. As Alan says, these changed to Gaelic at some point and now both are shown. So clearly discussions are held and decisions are made. It's interesting to speculate who is consulted and how the decision is reached.

(From a visitor's point of view, the Gaelic-only version is unhelpful, as local guides (eg the bus timetable) show only the English names).

Richard Oliver: I don't have any *Landranger* mapping of this area later than 2000-01, which has the Gaelic names: I suspect one reason for the bilingual policy was that the Gaelic names were very difficult for Anglophone speakers (including visitors from 'abroad') and that having only them created considerable practical problems on the ground. The position seems to be rather different from Wales, where a lot of Welsh names have no English equivalents (or else (eg Swansea/Abertawe) the Welsh equivalent is far less familiar outside Wales), and so there is no alternative version to show.

Nevis Hulme: Since Comhairle nan Eilean Siar (the official name of the council of the Western Isles; abbreviated as CnES) was established in 1974, "it has consistently championed the Gaelic cause on many fronts and has one of its key tasks a commitment to 'promote the Gaelic language and culture'."

The Gaelic Policy of CnES, developed to meet the requirements of the Gaelic Language (Scotland) Act 2005, states 'Placenames in the Western Isles should appear in Gaelic only. It may be necessary to have some exceptions to this policy, in cases where Gaelic and English vary significantly eg an t-Ob and Leverburgh'. [The Gaelic name should be An t-Òb; the omission of graves, indicating a lengthening of the vowel, on capital letters was omitted until recently but should have been included here!].

Many village name signs on the islands are in Gaelic only. Some show signs of having been from many years ago, looking at their weathering. I would guess some go back to the 1980s, based on the weathering of similar road signs in Wester Ross, with comparable weather, that I know were placed around then.

Other village signs, more recent ones, have eg 'Fàilte gu Tunga', with the English 'Welcome to Tong' below in smaller type. (This is combined with the speed limit and the usual 'Please drive carefully' in English only.)

The entrance to Steòrnabhagh (the main town; Stornoway in English) is similarly signposted but instead of the speed limit and request to be careful, it is its twinning that we are informed of (Pendleton, South Carolina). Steòrnabhagh is printed without the grave in Gaelic.

I understand that the OS followed CnES's policy and began printing the Gaelic names on their maps as these were the versions of the names encouraged by CnES.

There are English names for many settlements because this is how the names were recorded in rental records of estates of English-speaking lairds. The OS collected names

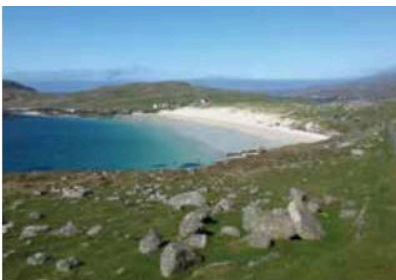
from these people first then went to the lowly crofters for the names the landowners didn't know. The English names for the settlements became established in this way. Most 'hill' names have no English equivalent other, though some are used in English translation by those who fish, for example.

The use of Gaelic in the Outer Hebrides is declining. While there is Gaelic education available, the reality is that the language is gradually dying as a community language. Older members of the community use it as part of their everyday life but this is not the case for most younger inhabitants. I know many youngsters who went through Gaelic Medium Education but, in later life, neither use it nor are even able to speak it.

I think the islands are a number of years behind the mainland but I expect it to follow the pattern found on the mainland. For example, in the two crofting townships near Gairloch, where I live, in the early 1980s there were circa 20 Gaelic speakers out of a permanent population of circa 35. There were and are a large number of second and holiday homes. Today, there is only one native Gaelic speaker with the population having risen to circa 60. Unlike here, I doubt if the population of the Western Isles will increase in the coming years unless there is a dramatic change in circumstances.

What happens to the use of Gaelic place-names will be interesting to follow.

With regards to Richard's comment that 'Gaelic names were very difficult for Anglophone speakers', this is no different to going to a foreign country where the 'practical problems' are the same! Gaelic is a different language, like Czech or Mandarin are, and uses different conventions. Gaelic, however, is far more consistent in its spelling and once one knows the structure and spelling of it, it is straightforward. Like with any language, this takes a while to master.

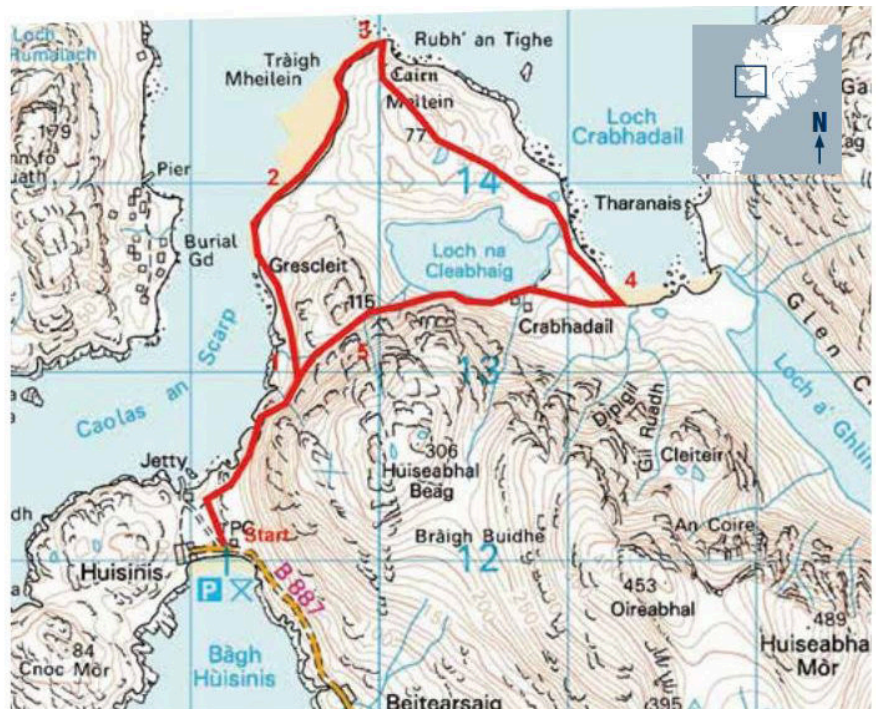


The Rocket Post

2 Descend the track, admiring the impressive stone revetments as it crosses a small burn. Take care for the next 200m – the path is steep and badly eroded and some of the steps can be awkward. There are lots of small paths branching off this section – always choose the lower option and you won't go far wrong. When the path becomes fainter, continue diagonally downhill aiming for the two old stone gate posts visible in the distance. Pass these and continue down

onto Tràigh Mheilein. At first sight, this appears to be a modest sandy beach but as you walk round the corner it reveals itself to be a magnificent golden strand – ranking with Sutherland's famous Sandwood Bay as one of the finest beaches in Scotland that is not accessible by car.

The beach was the site of the famous Rocket Post experiment in 1934, when German inventor Gerhard Zucker attempted unsuccessfully to launch letters across the Sound to Scarp, with explosive results.



OS 1:25,000 in an Outer Hebrides walking guide

‘It’s all about me’? Reminiscences of writing

Richard Oliver

I have recently completed and sent for ‘pre-press’ my part in the Charles Close Society’s next publication, on Ordnance Survey ‘small scale’ maps. These are defined as the half-inch and smaller scales. The book has been produced in collaboration with Roger Hellyer, who, as usual, has been responsible for the cartobibliographical matters, whilst I have concentrated on the history: the former consumes much more time and energy than the latter. And, once again, Chris Higley is responsible for the ‘pre-press’ work, including the preparation of index diagrams. This marks what we suspect will be our final substantial joint contribution to the Society’s publications, and I ask myself the question: how did I get here?

‘The Ordnance Survey in Great Britain, 1835 to 1870’

I joined the Charles Close Society as soon its formation was announced, in June 1981, and attended my first meeting that December. I didn’t then anticipate writing so much about the subject as I have done. I had just completed a BA in history at the University of Sussex, as a mature student, and, having had an academically mediocre grammar school career, had been pleasantly surprised to find that my degree was good enough to qualify for post-graduate research. At Sussex my specialism, so far as the system allowed, had been towards nineteenth century British history, and I conceived a project for a study of the Ordnance Survey between 1840 and 1895, covering the period between the authorisation of the six-inch in Britain and the demise of national maintenance of the ‘town scales’. The logical place and supervisor for this would have been the University of Exeter and Dr J Brian Harley, but the vagaries of funding meant that I finished up back at Sussex, with Valerie Cromwell as my supervisor: she had previously been the tutor on my history special subject course, which produced a dissertation on the government’s handling of the cattle plague of 1865-7, with particular reference to Lincolnshire.¹ Valerie was a government and administration specialist, and later went on to direct the History of Parliament Trust.² Sussex – more particularly Brighton – was not Exeter, but I had connections there, the OS was certainly ‘government’, and Valerie had a loose-touch approach that suited the development of a thesis that was probably rather stronger on narrative and causation than it was on analysis or theory. Had I been registered at Exeter, there would have been the logistical inconvenience that practically all the sources were in London. Brighton was much handier, and for about fifteen or eighteen months I travelled three or four times a week up to ‘London’ – mainly to Kew Bridge, the nearest convenient station for what was then

¹ In fact the original scheme for the dissertation was to have covered later nineteenth century local government more broadly, but a discovery of the Market Rasen Cattle Plague Committee minute book in the Lincolnshire Archives Office (LAO) set me off in a different direction. The dissertation has never been published, though there is a copy somewhere in LAO: to my mind the balance of ‘national’ and ‘local’ would be very awkward for publication in either a national or a local journal, though the dissertation was entered in a competition organised by the journal *History*, and had it done a little better would have been published there.

² Valerie Cromwell, 1935-2018: wife of Sir John Kingman, mathematician and sometime Vice-Chancellor of the University of Bristol: their son John was briefly acting head of the Treasury in 2016. Observe the financial *motif*.

known as the Public Record Office: this was 'doable' with a student railcard and rail fares lower in real terms than they are today.

The original scope of the thesis, 1840 to 1895, was modified after a few months to 1835 to 1870: this covered the preliminaries to the British six-inch, to the transfer of the survey from the oversight of the War Office to that of the Office of Works. This was partly due to Brian Harley, who was anxious to remain in touch with me, whatever money might decree. At this time his numerous projects included *The Old Series Ordnance Survey*, being published in what was projected to be ten volumes by Harry Margary of Lympe Castle, Kent. With the agreement of Valerie Cromwell, I extracted for Brian relevant material from the Ordnance minutes, PRO class WO 47, for 1834 into the early 1850s, when the minutes cease to be indexed and descend into a mass of trivia. I also extracted material relating to the 'town scales' for another project of Brian's that was never completely realised. He had built up a considerable collection of photocopies and transcripts of Ordnance Survey material, from the PRO and elsewhere, and I was able to borrow a lot of this, saving me considerable time visiting Kew and elsewhere. Some of it was of immediate use for the thesis: more has proved valuable since, not least for the *Concise Guide*, which is described later.

Brian was also the external examiner of my thesis. Having got used to total anonymity and impersonality in external school and undergraduate exams, and found that thesis examining was a much more open affair, I thought he would be much too close to me. I suggested to Valerie that John Andrews, who had been valuable as a contact when I had visited the Ordnance Survey in Ireland, but whom I'd only actually met once, might be more satisfactory, but Valerie thought that, if Brian was available, he would do perfectly well. He was available. The internal examiner was John Lowerson, a nineteenth century social and leisure historian, with whom I had had dealings as an undergraduate. All in all, it seems a bit of an insider job. On the day of the viva the examiners were lunched by Valerie, and the subsequent proceedings tended to be jolly: my work was declared 'a very good thesis'. I think that the Senior Common Room must have provided an unusually good lunch that day. The examiners' main comment was on the numerous typos and spelling mistakes: three pairs of eyes came up with three different lots of these. The thesis created something of a sensation amongst the History Subject Group at Sussex, as it was completed within three years: quite a number of the non-faculty attendees at the weekly work-in-progress seminars were registered for 'extension', and completion in six to eight years was by no means unknown.³

Much of the text of the thesis was published in 2014 by CCS in *The Ordnance Survey in the nineteenth century*: the slow publication progress is discussed later.⁴

³ The grant, from what was then the Social Science Research Council (renamed Economic & Social Research Council (ESRC) in 1984), began on 1 October 1982; three copies were sent for 'temporary' binding on 11 September 1985, and were submitted for examination purposes on 1 October 1985.

⁴ Richard Oliver, *The Ordnance Survey in Great Britain, 1835-1870*, University of Sussex D.Phil. thesis, 1985, is available online at <https://thos/bl.uk> (accessed 26 September 2022), but it should be noted that, quite apart from being produced from photocopied amateur typescript, it contains a numbers of factual errors that were corrected in Richard Oliver, *The Ordnance Survey in the nineteenth century: maps, money and the growth of government*, London: Charles Close society, 2014.

Collaboration and co-authorship: the one-inch Old Series

Roger Hellyer and I have collaborated on seven projects: this seems to have grown out of consulting me whilst working on his *Ordnance Survey Indexes 1801-1998*, published by David Archer in 1999. The most intricate in development was the fifth collaboration, *The first Ordnance Survey map*, published in 2015, describing the one-inch Old Series of England and Wales; its earlier development will be described first. It followed on from *One-inch engraved maps of the Ordnance Survey from 1847*, published by CCS in 2009: the later volume includes sheets that started as ‘Old Series’ but became, with little apparent effort – but to the great confusion of later students – ‘New Series’.

In 1967 Brian Harley was approached by David & Charles of Newton Abbot, who had quickly built a reputation for publishing transport and industrial archaeology books. Presumably this was on the recommendation of having produced the *Historian’s guide*, of which more later. ‘David’ was David St John Thomas (1929-2014), who was particularly railway minded, and had the idea of reissuing the early Ordnance Survey one-inch maps – known variously as the Old Series or ‘first edition’ – and for which Brian would act as editor.⁵ Mr Thomas wanted the versions that ‘showed railways’, and the result was a mixture of map states, ticking the railway box except for those few sheets free of these ‘rash assaults’ (Wordsworth). They varied from fairly early in the far north of England to the very last known printings, made in 1909 for ‘record map stock purposes’ in some places further south. The original intention was to use ‘record maps’ as far as possible: these were mainly superseded stock, and availability depended on what remained unsold.⁶ The gaps in OS stock were filled from a number of other sources, including a set originally acquired in 1867 or 1868 by the Royal Military Academy, a slightly earlier set at the Royal Geographical Society, and one or two private collectors. There were sometimes hiatuses in railway information at sheet edges: the inclusion of railways might have been more defensible had the latest states been used, showing the network as it was around 1890, shortly before the mapping was superseded. Mr St John Thomas insisted on calling the confection *Reprint of the first edition of the one-inch Ordnance Survey of England and Wales*. For many of the sheets this was distinctly questionable: for those such as 56 (Old Series 40), 72 (Old Series 1), and 95 (Old Series 33), where the David & Charles issues were produced from versions that had been wholly revised and re-engraved, and were at the very least ‘second editions’, the ‘first edition’ claim was plain wrong. Brian Harley fought ‘tooth and nail’ against ‘first edition’, to no avail, but insisted on using ‘Old Series’ throughout his editorial matter: thus there is an intentional discrepancy between the map covers and what is inside. The maps included

⁵ Much of what follows is based on recollections of conversations with Brian Harley in the 1980s.

⁶ The Ordnance Survey side of the correspondence is in The National Archives (TNA), OS 1/1436: an index at 13A indicates that in September 1967 sheets 1 NW, NE; 2, 4, 5, 12, 14, 15, 17-21, 23-34, 38, 39, 41-3, 45; 46 NE, SW, SE; 48-50; 51 NE, SW, SE; 52, 53; 54SE; 56, 57; 59 SW, SE; 60, 61; 63 SE; 66, 68-71; 72 SE; 73 SW, SE; 74 NW, SW, SE; 75 SW, SE, 76, 77; 78 NW, NE, SW; 79 NW, SW, SE; 80 NW, NE; 81 NE, SW; 82 NE, SW, SE; 83-5; 89 NE, SW; 90 NE, SE; 94 NW, NE, SE; 98 SW of the standard version, and 1 NW, NE, SE; 2, 4, 6, 10, 12, 13, 15, 17, 18, 23-7, 30-35, 38, 40, 41; 42 NW, NE; 43, 44; 46 SW, SE; 47-52; 53 NE, SW, SE; 54-9; 60 NW, SW, SE; 61; 62 NW, NE, SE; 63-76, 78; 79 NW, NE, SW; 80-86, 88 SW, SE of the ‘Index to Tithe Survey’, were available. Further exploration of ‘record maps’ is for another time.

historical and cartobibliographical notes, the latter frankly owned not to be exhaustive; they were, it seems, largely ‘dictated to a secretary in the British Museum’. Given that Brian was based in Liverpool when the project began, a summary, mass-production job was inevitable.

There was certainly some excitement when the maps emerged, in batches in 1969-71, but there was also disappointment. Reproduction quality was variable – later railways had been deep-engraved onto worn detail – and there were occasional irritants, such as on sheet 23 (Old Series 86), made up from a sectioned RGS copy, with some losses at joins. It was a lot better than nothing, but it fell distinctly short of what it could have been. The OS having contributed some of the originals, they received a royalty, which was actually twice that paid to Brian Harley. As the royalties were still significant in the 1980s, at least there was a continuing financial recompense for the intellectual compromise. It seems that sales were slow at first: the sheets were about twice the price of the contemporary one-inch Seventh Series, and prices were not increased in line with inflation.⁷ They seem to have sold better once the original Bender-fold issues were replaced by flat sheets less conveniently folded and placed in envelopes, around 1980.

At the same time as David & Charles were developing their ‘first edition’ scheme, Harry Margary was producing facsimiles of county maps, and an issue of the Ordnance Survey one-inch Old Series in early state was a logical counterpart to this, particularly as a few early Old Series sheets were being included in his county collections. How far *The Old Series Ordnance Survey* (‘OSOS’) was Harry Margary’s idea, and how far Brian Harley’s, is unclear; the Margary county facsimiles were accompanied by historical notes by various writers, including William Ravenhill, who was head of the Geography Department when Brian took up a post at Exeter in 1970, and a personal connection is possible, though I’ve never heard of Bill Ravenhill claiming any credit for OSOS. At any rate, OSOS began officially in 1972. It would differ from the David & Charles enterprise in one very obvious way, in that it would be published in volume rather than sheet form, with each original full sheet spread across four openings. Again, it is unclear how the ‘volume’ concept emerged: perhaps it was thought handier for library and domestic use, and having had to handle some of the earlier ‘original-size’ Margary sheet facsimiles both professionally and domestically, I certainly understand this. The original concept was that each volume would contain, as a preliminary to the map reproductions, a historical ‘introductory essay’, cartobibliographies of the pre-railway states of the sheets included in the volume, and redrawn conventional signs and examples of detail, as a substitute for no comprehensive legend ever having been produced for the Old Series. These last were drawn by Rodney Fry, the chief draftsman and cartographer in the Exeter geography department. For the cartobibliographies and other assistance Brian recruited Yolande Hodson (then O’Donoghue), who was on the staff of the British Library, and had far better access to originals of the maps than was possible from Exeter.⁸ She had an interest in military cartography and relief depiction that fitted neatly with the dominant element of the Old Series: the hachures. Hachures, indeed, would

⁷ The maps were originally offered at 15s (£0.75) per sheet, which was raised to £0.95 by 1977, and £1.95 by 1981; in 1969 the one-inch Seventh Series was 6s.6d (£0.33) per sheet, soon raised to 8s, and by 1978 the 1:50,000 successor was £1.40.

⁸ Having seen the University of Exeter’s holdings, that is being *very kind* about it.

appear in 'Margary' far more prominently than they did in 'D & C'. The intention was to publish two volumes a year, and complete in five years: 1977-8, I suppose.

Confining the 'bibliographical notes' to pre-railway states did not survive beyond Volume II; Volume III included 'railway states', and more of them than had been recorded in the D & C notes. I do not know why the scope was extended, but it is easy to imagine that there were complaints that, with everything else generally so superior to the D & C issues, stinting on the cartobibliographies was spoiling the ship for a ha'porth of tar – and, anyway, once one got north of Birmingham an increasing number of sheets postdated the first railways. Actually, it was a lot more than that: more states meant more library visits, and more work. This led to John and Barbara Manterfield taking over the work for Volumes IV and V, and making a start on Volume VII: John had been a doctoral student of Brian's at Exeter. They extended the library searches further to include university libraries, local record offices and local history libraries, which on the one hand produced new material, and on the other increased preparation and travel time; the advent of the Charles Close Society in 1980 meant that more private collectors offered access to their holdings. More libraries resulted in more complete, or at any rate, extensive, sets, and whilst providing additional material for the later volumes implicitly raised questions about the completeness of the earlier ones. All that leaves out the complications of post-1847 states produced from electrotypes, which did not display any neat pattern of progressive addition or omission. In 1986 I took over for what was now Volume VIII, and in due course handled the remaining volumes as well. The cartobibliographies were compiled from scratch, without reference to the David & Charles work, and occasionally the D & C notes mention a state that was not in 'Margary': I departed from empirical purism by noting these, hoping to minimise correspondence with readers in the future. Though the D & C notes gave a rough outline of what to expect, as far as I know no-one had constructed a cartobibliography quite like this before, and word-processing to minimise the work of typing and retyping only became available in the mid 1980s. Fortunately for me, home computing became available just in time to rationalise my first notes for Volume VIII, and devise a new method that minimised retyping; that procedure is now a curiosity of technological transition, and was soon rendered obsolete by the advent of laptop computers, enabling 'continuous revision'.⁹ I also had the advantage, in 1986-9, of not being tied down to fixed office hours. I claim no other advantages.

It was intended that the ten volumes would effectively provide a serialised history of the Old Series and its context, from the conception of the Hounslow Heath baseline in 1783-4 up to the obsolescence of the Old Series as the replacement New Series progressed after 1872. The essay for volume I duly covered the early base lines, and the making of maps of Kent and Essex: chronology was on its side. As the series progressed, however, so the chronological approach was departed from in favour of a regional approach, and this in turn contributed to a departure from the original ten-volume scheme. This was presumably devised with a view to printing the map sections single-sided, to avoid any show-through problems, though in practice the paper used was good enough for this not to be necessary. The volume numbering was odd: the highest number was 9, Wales being divided between

⁹ Richard Oliver, 'Cartobibliography and the one-inch Old Series', *Sheetlines* 26 (1989), 9-14.

‘6a’ and ‘6b’: why? (The volumes were numbered in Roman on the outer dustwrappers and in the letterpress, but in Arabic on the indexes.) The introductory essays depended largely on the amount of material available in the Ordnance records at the PRO, and this was somewhat unevenly distributed regionally and chronologically: it was a good deal easier to write about Wales with a source-induced bias towards the south, and very difficult to write about the eastern half of northern England, as there is very little source material other than the actual maps – and that is something of a matter of windmills and level crossing cottages. Proceedings moved forward agreeably with visits to and lunches at Lymyne Castle.



Figure 1. Harry Margary, Brian Harley and Richard Oliver at Lymyne Castle, 4 July 1989.

OSOS was finally completed in the summer of 1992, with the publication of Volume VI, Wales. When I joined the project in 1986 I successfully argued for a reduction from ten volumes to eight, on the basis that, with the back-to-back printing being adopted for Volumes IV and V – probably initially just to economise on paper – it would be possible to fit Wales and northern England into a single volume each. This was duly done. Volume VI ought to be the most ‘complete’ of the series, both in terms of chronological scope, covering much of the development of the Old Series, and of cartobibliographic breadth. In one sense it is imperfect, and that is that Brian Harley died suddenly in December 1991, before he could work on my draft for the ‘introductory essay’. Brian’s increasing

commitments meant that he was happy for me to provide preliminary drafts of the essays for the last three volumes: he then reworked them so that there should be overall stylistic consistency.

Collaboration: Roger, Richard, tables, and the Engraved Maps

Apart from the Old Series, Roger Hellyer and I have collaborated on seven projects: three of these have been straightforward, in that they have broken new ground, one was a revision and extension of work by Guy Messenger, one was a development of the Margary project, and is described separately below, one (*One-inch engraved maps*) used some Margary material as a starting-point but was really a fulfilment of something I had begun and then laid aside, and one (*Ordnance Survey small scale maps*) has taken over work from three other CCS members.

The Ordnance Survey 1:25,000 First Series, which was published in 2003, is one of those projects which developed somewhat mysteriously. Back in 1986 there appeared what was treated as the Charles Close Society's first publication: a listing, with a brief historical introduction, of the one-inch Seventh Series. It grew out of correspondence between Guy Messenger and myself, and it was a co-authored offering. It was typed on an elderly office typewriter with terrific 'hammer' which would have been ideal in pre-photocopier days, when secretary-typists would routinely produce half a dozen carbon 'flimsies' in order to supply needed copies for information. Stock was produced by photocopying in small batches, each with its own print-code. I then published a 'What next?' article in *Sheetlines*, suggesting, amongst other projects, a listing of the 1:25,000 First Series, which was expected to be completely superseded by 1990.¹⁰ I gave an estimate of time, based on a sample of the British Library's legal deposit set, and with a view to it being a collaborative venture. In 1993 I published an article describing the development of the 1:25,000 family, but otherwise matters rested for about ten years, until Roger Hellyer took up the idea.¹¹ I contributed an 'introductory essay', of some 30,000 words: closer to 'Margary' than later 'Hellyer-&-Oliver' proportions.¹²

The stimulus for our next project was Tim Nicholson's study of the one-inch Revised New Series in colour, which appeared, after prolonged preparation, in 2002. Tim did not want to go beyond this, which was in many ways an advance on Guy Messenger's work on the one-inch Third Edition maps in colour: his study of the Large Sheet Series appeared in 1988, and was the first CCS monograph. Guy's work was out of print, and did not include Ireland. So we set about rectifying this, including the Irish Third Editions, and such documentary background for the mapping as we could find. There was the satisfaction of finding several states of the maps that had eluded Guy.¹³

¹⁰ Richard Oliver, 'What next? Some personal reflections on CCS publications', *Sheetlines* 17 (1986), 2-5. Most of the projects and schemes described there have now been realised, with the notable exception of the 1:50,000 series, and a comprehensive OS bibliography.

¹¹ Richard Oliver, 'Episodes in the history of the Ordnance Survey 1:25,000 map family', *Sheetlines* 36 (1993), 1-27: this contains some errors and misjudgements.

¹² Roger Hellyer, *A guide to the Ordnance Survey 1:25,000 First Series* (with an introductory essay by Richard Oliver), London: Charles Close Society, 2003.

¹³ Roger Hellyer and Richard Oliver, *A guide to the Ordnance Survey one-inch Third Edition maps, in colour*, London: Charles Close Society, 2004.

We then proceeded to the military versions of the one-inch map produced between the early 1920s and mid 1970s.¹⁴ This was a logical development of Roger's work on the small-scale indexes project: whilst the extent of most of the military versions was clear, things were fuzzy for the inter-war period. Whilst the Third Edition work was substantially checking, tidying and augmenting, the military maps had to be produced from scratch. Maps from the early 1940s onwards were unproblematic: there was the Ministry of Defence's collection, which, most conveniently, had recently been deposited in the British Library, and large numbers were in private hands. Earlier mapping was more difficult: there was a policy of only replacing maps issued to troops once they were worn out, and whilst this ensured 'sweating the assets' for the taxpayers, it means that, proportionate to what must have been printed, far fewer pre-1940 one-inch military maps survive than for later on. Lack of copies in unofficial hands would not matter so much were the MoD collection as comprehensive as it is for post-war mapping, but it isn't: I rather suspect that storage space was at a premium, and 'weeding' was rather hit and miss. As it is, the inter-war military printing history of many sheets is incomplete, and for some is pretty non-existent: one gap was filled just before going to press (*Figure. 2*), a few more have been filled from the second-hand market since the book was published in 2004, and some sheets thus 'apprehended' have been sent to Cambridge University Library. Locating these military printings is important if the history of the parent civil series is to be fully understood, at any



Figure 2. Richard Oliver and Roger Hellyer in October 2004 with the elusive GSGS 3907 sheet 33, printed in 1933, and appearing just in time to be included in the recently published Military Maps.

rate before the advent of the Seventh Series. Gaps in *Military maps* are a continuing challenge to posterity. The presentation formula used for the 1:25,000, Third Edition and Military volumes, and in the recently-published *Intermediate scales* book completing 'the 1:25,000 story', was one used in the Seventh Series booklet, and was being used elsewhere in what there was of OS cartobibliographies at the time: a tabular arrangement, based on one horizontal line per edition, with dates and other identifying data in columns. (*Figure. 3*) This is well suited to lithographically-printed maps, where dates and other marginalia are usually sufficient to establish the identity and developmental place of an individual copy, and changes to specification and content can be compressed into letter-codes, but it is completely unworkable for maps printed directly from copper (*Figure 4*).

¹⁴ Roger Hellyer and Richard Oliver, *Military maps: the one-inch series of Great Britain and Ireland*, London: Charles Close Society, 2004.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
TF 39 (53/39) Covenham*					10 by 10	Revision	a 1905	c 1946-51	f 1972; j 1972	reservoir			
1	A	CPr	OPr	nd:po	-	-	6.48	4BEoo3	RB		11/48	12/48	
2	B	CPt	OPv	1953pc	-	ac	6.53	4BooX3			8/53	6/57	
3	B/	CPv,z		1953pc	1958mc	ac	6.53	4BooX3					
3	B/*	CPz	OPz	1953 ^c ms	nd:rv	acjf	6.53	4BooX3			5/73	9/73	1
1. Covenham Reservoir.													
TF 40 (53/40) Wisbech (South)					10 by 10	Revision	a 1900-25	c 1938-50; j 1980	selected				
1	A	CPr	OPr	nd:po	-	-	6.49	4BEoo3	R		10/49	11/49	1
3	B	CPu	OPs	1955pc	-	ac	6.55	4oooX3			11/55	10/55	
3	B/	CP?w,z		1955mc	1960mc	ac	6.55	4oooX3					
3	B/*	CFz	OFz	1981 ^c ms	nd:r	acj	6.55	4oooX3			3/81	3/81	
AA 1.6.49/NT 6.7.49 on A(A), 3/-, OSPR 11/49. M on A. 1. The Wisbech & Outwell tramway is shown as a black line down the centre of the road.													

Figure 3. A tabular cartobibliographic arrangement: from A guide to the Ordnance Survey 1:25,000 First Series (2003).

Sheet 101 East Retford

Surveyed 1875-91; revised 1897, 1906

[NOTTINGHAMSHIRE]

Railways: (Brantcliffe) to (Kirk Sandall), 7.10.1908g, 1.12.1910p

NEW SERIES ■ outline (incomplete) *July 1890*, (complete) *PI October 1895*

OUTLINE

A. Published incomplete, covering Derbyshire, Nottinghamshire and Lincolnshire, not Yorkshire

Engraved at the ORDNANCE SURVEY OFFICE, Southampton under the direction of Major C.R. Conder, R.E. / The Outline by W. Cross, the Writing by J. Mackenzie, the Ornament by A. McFadden. // Published by Colonel Sir C.W. Wilson, K.C.B., F.R.S., R.E., &c. Director General. July 1890.

State 1.

1. OSE, name, number ■ JTMrt legend, 1", SB, A1, ARRR, Price 1/-, 6" (not Yorkshire), ROW, ASN(es)
2. Printed from an Electrotype taken in 1890.
3., CN+D, CP, STA., road mileages, Ch
4. Railways: Great Northern Railway; Manchester Sheffield & Lincolnshire Railway, with (Lincoln & Retford Branch); M.R. (Mansfield to Worksop); G.N.& G.E. (Joint Railway) (two sections)
5. Waterways: Chesterfield Canal, with branch to Lady Lee; Foss Dyke Navigation#, from River Trent
Copies BL; BOD, TCD, LC, EHG, all epd 7.90; BL Maps 1175 (312), NLS, CUL, RGS, all epd 9.90; BNF, KBK, both epd 10.90; RML-p; ATH
Publications issued...July 1890 – listed as *One-inch map, New Series (Derbyshire, Lincolnshire, and Nottinghamshire portions only)*

Figure 4. A narrative cartobibliographic arrangement: from One-inch engraved maps (2009).

The nature of lithographic printing was such that it favoured printing in relative bulk, to provide several years' stock if possible. With engraving on copper the position was completely different: the plate had to be inked and wiped for each individual impression,

and output was perhaps ten to twenty copies an hour. Once the requisite number of copies was printed off the plate went back into store until more copies were needed. This tended to favour small ‘runs’ and frequent ‘printings’. It was also possible to incorporate changes on the plate at frequent intervals, and so a particular ‘state’ of the plate may have yielded comparatively few copies. Up to the early 1860s, no date was offered subsequent to the original publication date: then an electrotype date was added, where relevant (mainly on one-inch series of Britain), but it was still possible to make amendments to the electrotype. Railway ‘insertion’ dates were added from 1881 onwards (again, mainly on British one-inch), but these sometimes bear a loose relationship with actual changes to the plates. A columnar arrangement is impractical: there is nothing for it but a condensed narrative description.

In 1982, stimulated by an editorial comment in *Sheetlines* no.1, I produced an article providing an outline guide to the one-inch New Series and the corresponding maps of Scotland.¹⁵ This, together with the work I was starting on my doctoral thesis, suggested a cartobibliography of these maps complementary to those in the Margary OSOS volumes. Given the division of these maps into ‘editions’, and the slackening rate of railway development from the 1880s, this was anticipated to be a much simpler task than for the Old Series, but a practical complication was the publication of the mapping in alternative outline and ‘hills’ forms, and although I generated a lot of notes based on British Library holdings, first in 1982-3 and then again around 1989-90, not a great deal of progress was made, though I did manage to work out most of the design and content development of these maps up to the relative standardisation of these in conjunction with the comprehensive revision in the 1890s.

Thus things stood in 2003-4, with the Third Edition and Military Maps projects approaching completion. We then decided on reviving my work: in practice most of the subsequent ‘slog’ around the map libraries, and editing together of materials was Roger’s. (The work I did on the last three Margary volumes enables me to judge the relative amount of work consumed by history and cartobibliographies.) The scope of the work was extended to Ireland, which hitherto had not had its fair share of smaller-scale cartobibliographic attention. The scope of the cartobibliographic work was extended way beyond anything that had been envisaged for ‘Margary’, and took on a worldwide scope: for the *One-inch Engraved Maps* and Old Series projects Roger examined the collections in the major libraries in six European capitals, Toronto, Vancouver, five Ivy League universities, the New York Public Library and, especially rewarding, the Library of Congress.

By this time, as I explain later, I was turning again to putting my thesis into publishable form, and the preparation of the necessary ‘introductory essay’ made it desirable to fuse work on the two as far as possible. Progress was slowed by family and work considerations, but would have been a lot slower but for a change of policy by what was now The National Archives (former PRO): readers could now bring in their own digital cameras, and take photos for their own research purposes to an almost unlimited extent. From earlier forays I knew that there was a considerable amount of relevant material in the Treasury papers, and it was now possible simply to photo away, and work on the reading and ‘note-taking’ at home. What proved rather more hard work was disentangling the sequence of events

¹⁵ Richard Oliver, ‘What’s what with the New Series’, *Sheetlines* 5 (1982), 3-8.

between about 1851 and 1856 and determining the relationship, if any, between the design of the Irish and Scottish one-inches.

One-inch engraved maps was completed and printed in time for the Edinburgh three-day cartographic event in September 2009. At 720 pages it is the longest of the CCS monographs: even so, it has something of a ‘crammed’ look. We thought of publishing it in two volumes, but that would have entailed two lots of binding and a disproportionate increase in cost, both in printing and to hoped-for readers. An important feature was a long chapter on map content, illustrated with enlargements of details, which owed something to the map content chapter in my *Concise guide*.¹⁶

Unfinished business: the First Ordnance Survey map

Whilst all those concerned with OSOS were glad to see the project completed after twenty years, there was a sense of unfinished business. Back in 1988 or 1989 Guy Messenger had decided to extend the cartobibliographies for volumes I and II to include the later states, and this work was published by the Charles Close Society in two booklets in 1991, as part of the celebrations for the official bicentenary of the OS. These booklets were better than nothing, but were not wholly satisfactory, as they left out of account certain collections that Guy found not so easy to access, notably some at the British Library. Had CCS not needed some bicentenary publications, they might not have appeared as they stood. The cartobibliography for sheet 7 (Middlesex) in OSOS Volume IV was also knowingly incomplete, with later states being confined to noting new electrotypes rather than details of railway changes.

Another piece of unfinished business was that, by the late 1980s, Brian Harley was thinking of gathering together the essays and reworking them in a single volume, provisionally titled *The first national survey*, which would include Rodney Fry’s conventional sign drawings. Nothing would be done until OSOS was complete, and by then Brian was dead, and the priority for his literary executor, Paul Laxton, was getting published the collection of essays delivered to John Hopkins Press by Brian three weeks before he died, which emerged in 2001 as *The new nature of maps*. Given the way Volumes VI, VII and VIII had developed, it is likely that I would have had a substantial hand in *The first national survey*, though it was a title that was immediately objected to as leaving out the claims of Christopher Saxton, to look no further. Well, it was a working title, and it had to remain that: by 1992 I was engaged at the University of Exeter on tithe maps, and the most that I had time for was articles for *Sheetlines*. Anyone seeking the history of the Ordnance Survey’s first published series had to read eight disconnected essays, supplemented by a few journal articles elsewhere, and a series of cartobibliographies of varying degrees of completeness.

This remained the position for about fifteen years or so until, as the *One-inch Engraved Maps* project drew close to publication, Roger Hellyer, now retired, turned his attention to the Old Series. By this time laptop computers were well established, and Roger had gained considerable experience with a wide range of Ordnance Survey mapping, not least the nineteenth century ten-mile map and the post-Old Series engraved one-inch maps. Actually, the early northern England component of these was simply the redesignated Old Series

¹⁶ Roger Hellyer and Richard Oliver, *One-inch engraved maps of the Ordnance Survey from 1847*, London: Charles Close Society, 2009.

sheets in OSOS Volume VIII that became the first New Series sheets, and Roger was able to improve on my work without having to start from scratch. The object now was to produce as complete a cartobibliography as practicable, and to incorporate all the ‘complete sets’ that had emerged during work for the later OSOS volumes. Laptop computing had become available a little too late for these final volumes, but by the mid 2000s there was another tool: online library catalogues, and this yielded yet more sets of the Old Series. Those in Europe were accessible; scans were negotiated of some further afield, notably in Australia.

All this amounted to a revival of the *First national map* project, and I was now in a position to take on the ‘introductory essay’, as I continued to call it, though in *One-inch engraved maps* this had run to over 100,000 words, and in what we decided to call *The first Ordnance Survey map* – a nod to Brian Harley’s concept – that ‘essay’ was not much less. (But what should my contributions be called? ‘Historical accounts’?) Rather than attempt to fit together the seven essays taking the story up to the early 1840s, my section was completely written from scratch, to preserve chronological order as far as possible. Some regionalism is present in places, simply because of the location of important developments, for example archaeology in Wiltshire in the 1810s, increased attention to geometrical fidelity in Lincolnshire around 1820, and the development of place name recording in Wales over a longer period. Partly as a souvenir of preparation for OSOS volume VI, and partly in anticipation of the *First national map*, I had in my hands a lot of Brian Harley’s notes and photocopies, and the writing was a relatively straightforward job. The story was completed by reference to the David & Charles and Margary enterprises, with a photograph of Harry Margary, Brian Harley and myself on the terrace at Lympe Castle in 1989 (*figure 1 above*). It would have been nice to have a group photo of all those involved in OSOS – but they were never all together in the same place at the same time.

The first Ordnance Survey map was ready in time for the Charles Close Society’s annual general meeting in Lincoln in May 2015: given the strong Lincolnshire element in the story this was an appropriate venue. It brought to a close a project that could be said to have stretched over nearly half a century.¹⁷

The Concise Guide: collaboration in disguise?

Having enlisted me as a collaborator, Brian Harley discussed various projects: one was a replacement for *The historian’s guide to Ordnance Survey maps*, which collected and augmented articles published in *The local historian* in 1962-3, mostly by Brian but including one on the Survey’s ‘period maps’ by CW Phillips, who was then Archaeology Officer. It is difficult to overstate the effect of this 52-page booklet when it appeared: it was a window into a new world.¹⁸

¹⁷ Roger Hellyer & Richard Oliver, *The first Ordnance Survey map: the one-inch Old Series of England and Wales*, London: Charles Close Society, 2015.

¹⁸ [JB Harley & CW Phillips], *The historian’s guide to Ordnance Survey maps*, London: National Council of Social Service, 1964. Of course, once the window was open one had to find how to travel into the landscape! There were at least four printings, readily identifiable by price changes: five shillings (title page), six shillings, 50p, 85p (all on back cover); I am indebted to David Archer and George Jasieniecki for help with this.

Note that this was *my* reaction in 1965; it was certainly not that of Brian Harley by the early 1980s, when he would have disowned the thing if he could. By that time he was equally well-known for *Ordnance Survey maps: a descriptive manual*, published by the Survey in 1975. Unfortunately there seems to be no file in The National Archives devoted to this, but it is apparent from a reference in the 'David & Charles' file that Brian was originally enlisted in July 1970 to prepare a successor to the *Description* pamphlets covering large-scale, medium-scale and small-scale maps and plans, last issued in 1954-7.¹⁹ How the project then developed is uncertain, but the result was far more elaborate than were the old *Descriptions*, and included extensive material on map content and conventions, such as had not been published before. This came from OS internal manuals, which were supplied to Brian, but which he was not allowed to cite in notes: this concern with confidentiality was rendered completely unnecessary by the early 1980s, when copies of these manuals were sent to the British Library and other collections – including earlier versions which Brian pretty certainly did not see.²⁰ In 1979 he produced a pamphlet on the OS's recording of land-use on the 1:2500, which made good use of the 'Southampton Circulars', and set a new standard in thoroughness.²¹

The *Historian's guide* was good on the basics of series development and on approximate dating of county coverage, but it said little on map content, and not all that was accurate.²² In this respect it fell obviously short of the standard of the *Descriptive manual*, never mind the land-use study. Further, by the early 1980s Brian was developing the ideas that would be gathered together in *The new nature of maps*, and *The historian's guide* seemed beyond inadequate both in content and in conceptual underpinning. As far as he was concerned there could be no question of reissuing it, even in a modestly expanded and updated version: there would have to be a completely fresh start. I was certainly not the first to be enlisted as a collaborator on a *New historian's guide*: I know of at least two others who were approached. For the present our priority was 'Margary', and the nearest we seem to have got to specifics was a suggestion by Brian that the book should be angled towards 'nuances' rather than the broad picture. I don't know how that might have worked. A further complication was that in 1986 Brian moved from Exeter to a chair at the University of Wisconsin-Milwaukee.

In 1988, stimulated by some comments in a lecture by Barbara Bond at the Edinburgh three-day cartographic event in November, I started to investigate the pattern of OS large-scale cover, more particularly in the National Grid era. Out of this grew a series of lists, one of survey dates for towns covered by the 1:1056, 1:528 and 1:500 surveys of 1842-1908, which largely derived from long-published information, and another of initial survey dates for the 1:1250 cover of urban areas, practically all of which could be obtained by careful handling of data in the Survey's published annual reports. I also had some other data,

¹⁹ Drewitt to Harley and reply, 28 and 31 July 1970, 159A and 160A in TNA OS 1/1436. It is possible that more could be learned from Brian Harley's papers, but these are not at present accessible to researchers.

²⁰ The 'Red Book 1952' – instructions for detail survey – is a case in point.

²¹ JB Harley, *The Ordnance Survey and Land-Use mapping, 1855-1918*, (Historical Geography Research Series, no.2), Norwich: Geo Books, 1979. The 'Southampton Circulars', of which there is a photocopy in the Charles Close Society archive at Cambridge, consist of circulars sent (mainly) from OS HQ to field divisions, giving instructions on how to survey and record detail: they survive for 1880 to 1921.

²² *Historian's guide*, 25, where the references to turnpike trusts and field names are at best misleading.

notably lists of abbreviations, many no longer used. In March 1991, one day during lunch at the PRO, I conceived the idea of drawing all this data together into a modest booklet, which by the winter of 1991-2 was being referred to in CCS committee minutes as 'Large scale guide'. It was intentionally a makeshift, to cover basic factual information, so as not to interfere seriously with the *New historian's guide*, however that might turn out. There was a perception in some quarters that 'historic OS maps' still had a smaller-scale rather than larger-scale bias, and something might be done towards correcting this.

Brian Harley's sudden death in December 1991 meant that any tentative plans for a *New historian's guide* were rendered completely irrelevant, and I was free to trench on at least some of its territory. *Ordnance Survey maps: a concise guide for historians* was still intended to be of comparatively modest dimensions: 160 pages, A5 softback, to sell for £8.95, with summary histories of map series, tabulated dates and scales for mapping of towns and counties, a list of abbreviations and a bibliography. What only emerged quite late on was what in the first edition was Chapter 3, 'Notes on the depiction of detail', which was based mainly on Brian Harley's copies of the 'Southampton Circulars' and formerly confidential internal manuals which he had retained following publication of the *Descriptive manual*. This may have provided some of the 'nuances': it certainly proved well worthwhile, as it seems to be this section of the book, duly expanded in the two later editions (2005 and 2013), that has been most useful to readers.²³ I was a little annoyed when one reviewer referred to the book as a revised version of the *Historian's guide*: apart from anything else, scales smaller than six-inch were relegated to distinctly secondary treatment.

In supplying raw material, Brian Harley was a sort of 'ghostly collaborator'. A rather more material one was David Archer, who was CCS secretary at this time, and undertook a great deal of comment and checking on the earlier drafts of the *Concise guide*. It is due to him that the book that emerged in late May 1993 was of 192 pages and B5 size, selling for £11.95; another case where the author's original concept proved misguided, as it gave the book greater 'substance', there were plenty of takers at the higher price, and the Society's funds benefitted agreeably. (It also proved a useful 'visiting card' at some county record offices for the latest 'Exeter' project, on enclosure and other 'parish' maps.) Incidentally, producing drafts at that time was not straightforward: at Exeter the standard word-processing software was Nota Bene, which was capable of generating Times Roman and other 'proportional' fonts, but displayed them in a non-proportional font on-screen, and printing relied on a 'postscript' cartridge that had to be plugged into the printer in the drawing office, which could only be accessed easily 'out of hours'. Even then, difficulties were not over: it took about three minutes to print an A4-size sheet, which does not compare very well with the output from copper. A complete reprint of 160 to 192 pages, even two-up, was therefore a formidable operation, and this had to be gone through several times before David and I were satisfied.

The title *Concise guide* may have been appropriate for the original 160-page concept: the Third Edition is 320 pages, and a fourth edition is in contemplation, which will probably

²³ Richard Oliver, *Ordnance Survey maps: a concise guide for historians*, London, Charles Close Society, 1993, reprinted with corrections, 1994 (both 192 pp); second edition, 2005 (256 pp); third edition, 2013 (320 pp).

run to 352 pages. The claim to ‘concision’ is, I think, still justified, partly because of keeping an eye on the bibliography, to eliminate more marginal and superseded material, and partly because what is now Chapter 5 is a great deal more compact than even one of the *Blue books* or *Red books* that provide much of its basis.



Figure 5. *A pier-reviewed article: early-career academics beware...*

The Ordnance Survey in the nineteenth century – or is it the twenty-first?

We left the story of my doctoral thesis with it completed and examined in the winter of 1985-6. There arose the question of publishing it. I was advised that it would be better first to get a few articles in print in academic journals, before approaching a publisher: quite a lot of doctoral theses don't seem to get beyond the 'two or three articles' stage, if that. The thesis was not so structured that it would be possible to extract and rework one or two chapters as articles: I have only ever published two 'peer-reviewed' articles, one of those a joint effort arising out of my employment at Exeter, and neither includes any of my doctoral work.²⁴ (Figure. 5) I was told by an academic at Sussex, in the bar after one of the weekly history-work-in-progress seminars, that academic publishers wouldn't look at a monograph of over 60,000 words. (I don't think he was on his first drink of the evening.) Now my thesis was officially about 78,500 words; the limit at Sussex was 80,000, though I

²⁴ Richard Oliver and Roger JP Kain, 'Maps and the assessment of parish rates in nineteenth-century England and Wales', *Imago Mundi* 50 (1998), 156-73; Richard Oliver, 'Mapping for cycle touring in Britain: past, present and a possible future', *Cartographic Journal* 38 (2001), 48-60. (A cousin who hadn't seen me for some years who said to me at a family 'do', 'You're some sort of academic, aren't you?' probably had it about right.)

remember one post-graduate (who completed in somewhat over three years) saying that he certainly couldn't fit his work into much less than 120,000 words.²⁵ (I don't know if he got away with it.)

My thesis said a good deal about administration and politics, but practically nothing about the maps, though there were quite a number of monochrome illustrations, and a few hand-coloured ones, that are enduring monuments to the state of photocopying in the mid 1980s. Further, I had got round the word-limit by putting the various arguments for and against the various scales and methods of relief depiction in the Battle of the Scales of the 1850s into an 'appendix', which saved at least 5,000 words. This was thought to be a bit cheeky, but I got away with it. A chapter on the effects on maps would have added substantially to the 85,000-odd words of the main text, counting in that questionable appendix.

Anyway, what it came down to was that there seemed no immediate prospect of publishing the thesis, which in the book form that was implicit would have been of around the length of John Andrew's *A paper landscape*.²⁶ (And I think that, whatever assistance was given along the way, the thesis has more 'Andrews' than 'Harley' influence.) That said, my thesis did achieve a rather wider circulation than sometimes happens: I advertised photocopies in *Sheetlines* and in *Cartographitti*, the newsletter of the Map Curators Group of the British Cartographic Societies, for an unspecified price that varied from customer to customer (OS at Southampton got off lightest): at least twenty 'authorised' copies must have been made.

In 1989 I was appointed to a proper salaried post at the University of Exeter, working for Professor Roger Kain on various map projects which paid the bills, but did not seem to bring publication of my thesis any closer. Although the early intention had been that the Charles Close Society would, a modest *Sheetlines* apart, be a facilitator of dissemination rather than a publisher in its own right, by the 1990s things had developed differently, and in October 2001 CCS Committee minutes mention 'the 1835-70 monograph'. Work progressed slowly: in 2004-5 I typed a large section of the text, which could be reused practically as it stood, but then things seemed to stick again whilst I worked on the *One-inch engraved maps* project, which itself involved investigating tangential matters, notably the OS's use of the Delamere meridian, and the two-inch mapping of Scotland, and investigating a good deal of post-1870 material at TNA that I had examined cursorily in the 1980s. Research at TNA for those based outside London was now greatly facilitated by the possibilities of digital photography, and this gave me the idea of extending 'the thesis' at both ends, to cover the whole of the earlier development of the Ordnance Survey, up to – when? The mid 1890s seemed too early, as hares set to run by the Dorington proceedings in 1892-4 had yet to reach their destination, and 1900 seemed arbitrary: what about 1914? The

²⁵ The thesis was typed on a WH Smith portable typewriter: there was no question of automatically-generated word-counts. The method I used to determine the length was to count a specimen page of text, and measure it vertically with a ruler: this yielded a formula of X words per foot. All that was then necessary was to measure up the pages and keep a running total. Maximum length for theses vary between universities: I have heard of limits varying between 75,000 and 100,000 words.

²⁶ JH Andrews, *A paper landscape: the Ordnance Survey in nineteenth century Ireland*, Oxford: Clarendon Press, 1975.

'long nineteenth century' of 1783 to 1914 is a recognised historical period, its start coincides with the suggestion of the Greenwich-Paris connection, and 1914 is the date of the completion of the 1:2500 remapping of Ireland. So I adopted 1914 as my terminal date, and it gave the excuse to include one of Sir Charles Close's experimental one-inch coloured maps as a plate. In 2009 I took early retirement, and completed the first draft of *The Ordnance Survey in the nineteenth-century: maps, money and the growth of government* in January 2011. It was then sent to several 'readers', of varying backgrounds, for comment, and the opening chapter, in particular, had a good deal of reworking. I wanted if possible to have the book printed and ready for distribution as a sixtieth birthday present to myself, and I achieved this with about four days to spare.

'OSC19', as I abbreviate it, is in places derivative, in earlier sections from the writings of Brian Harley and others, and a lot of the Irish material is taken from John Andrew's *Paper landscape*. Mindful of Brian Harley's views on plagiarists, I hope all this is properly acknowledged: John received a complimentary copy. He also reviewed it for *Imago Mundi*: 'To read this book is an enjoyable experience as well as a gruelling one.'²⁷ (The main text is about 225,000 words: so much for 60,000 words...) This highlights a problem with reviewing CCS work: the pool of suitable reviewers is a small one. As usual, Chris Higley undertook the pre-press work; some of the illustrations repeat those in the thesis, but the availability of colour-printing enabled a much more satisfactory result, and to my mind OSC19 approaches about as perfect a realisation of a concept as an author has a right to expect, even though a couple of irritating glitches remain. Once OSC19 was printed I discarded the camera-ready copy for the thesis, and all the preliminary drafts: it's the final text that matters.

Ordnance Survey intermediate scale maps

Roger Hellyer had a long-standing interest in the military component of the 1:25,000 family – the true 2.5-inch (1:25,344), GSGS 3036, the 1:20,000, GSGS 2748, the 1:25,000, GSGS 3906 – and on 31 March 2015, with *The first Ordnance Survey map* at the printers, we met at Cambridge University Library to inspect a collection of GSGS 3036 – actually, a group of the original sheets, printed in late summer 1914 before the GSGS number was issued. Roger wanted another project, and over tea we decided on a volume to cover all the 1:25,000 family except for the First Series. For once I would bestir myself cartobibliographically, and take on the Second Series family. We used the term 'intermediate scales' as these maps have characteristics both of smaller scales, in relative breadth of cover on a given sheet, and of larger ones, in relative resolution of detail – particularly as quite a lot of them turn out to be based on direct photo-reduction of six-inch linework. The term 'medium scale' was used by the OS for a couple of decades after 1945 to cover both the 1:25,000 and the six-inch, and would clearly be misleading here – or else we would have produced a very bulky volume indeed. As it is, in order to accommodate postage bands, the main text is printed on 90 gsm rather than 115 gsm paper; it seems to work well.

We expected the job to take about two years; in the event it took over seven, with the first copies collected from the printer on 2 August 2022. The delay was partly down to me:

²⁷ Concluding words of review in *Imago Mundi* 67(2) (2015), 251-2.

at the same time as I undertook to handle the ‘historical essay’ and the Second Series, I became involved with some ‘church records’, and found *Things That Had Not Been Done But Ought To Have Been Done*: sorting those out consumed considerable time in 2015-16. (Some rail strikes, impeding access to TNA, didn’t help, either.) Publication was also delayed latterly by the onset of the pandemic. Writing was straightforward, although the narrative deviated in places to explore some context, notably the development of National Grid mapping after 1939, and of public rights of way recording. The original ‘intermediate scale’, GSGS 3036, was evidently produced for counter-invasion purposes, and portraits in the letterpress include some of personalities not usually associated with Ordnance Survey history, though I drew the line at including Kaiser Wilhelm II.

As with the earlier 1:25,000 First Series book, a tabular arrangement is adopted, and with word processing it is easy to insert new lines for new states. This was particularly useful for the bulk of GSGS 3906, produced in ‘provisional’ form from 1940 onwards, as the printing history proved rather more complicated than we had expected: whereas earlier series had been printed centrally, mainly by OS, a lot of GSGS 3906 was printed by Engineer survey units and others, sometimes in quite limited quantities. Roger’s examination of the sets in the legal deposit libraries yielded five new states not in the BL Ministry of Defence deposit, whereas 125 new states were found in the Library of Congress. (Washington has also produced some interesting things at smaller scales.) The earlier mapping proved rather easier, as the record largely depends on the MoD and other collections in the British Library, but even then there are gaps of the sort that we had encountered with the one-inch military editions and that have had to be filled from other collections, and the earlier versions of the artillery training map, GSGS 2748, are often still to seek. Experience with the one-inch military maps has shown that further copies will emerge, but the numbers will be modest. We hope that the book will hold its value for a long time.²⁸

Ordnance Survey smaller scale maps

When we embarked on the intermediate scales, we did not anticipate that we would also be taking on yet another project, which we have dubbed ‘small scale’: mainly the half-inch and quarter-inch, but including aspects of the ten-mile and 1:1,000,000 maps.²⁹

It is possible to trace the origins of the ‘small scales’ book far back into the 1940s, when Peter Clark, CCS’s founder-chairman, was taking an interest in the half-inch map, and started collecting them. At the meeting to found the Society, in November 1980, Peter gave a paper on the half-inch, and there is no doubt that he was intending to produce a monograph in the fullness of time. Whilst he was the most knowledgeable of men about maps, he was not a natural author, and as the years and decades passed, so there was no sign of the monograph. Relief-depiction is an important element of the OS half-inch story, and in due course Yo Hodson joined Peter to write it up, and the prospect of a publication seemed further advanced when Roger Hellyer undertook to prepare a cartobibliography. The cartobibliography was issued in ‘provisional’ form in 2010, in the hope of eliciting

²⁸ Roger Hellyer & Richard Oliver, *Ordnance Survey intermediate scale maps*, London: Charles Close Society, 2022.

²⁹ Roger Hellyer & Richard Oliver, *Ordnance Survey small scale maps*, scheduled for publication in 2023.

further states. The accompanying historical essay made no progress, not least because of what in many ways was another ‘relief map project’, Yo’s work on the Royal Collection at Windsor, with its wealth of eighteenth century manuscript mapping, by William Roy and others, and now available online. Just as the Windsor work was drawing to a close, Yo was enlisted for a military map-history job for which she was well qualified, and it was arranged that I would take over the half-inch historical account.

Meanwhile, and again long antedating the formation of the Charles Close Society, Chris Board had developed an interest in the quarter-inch map. He published several articles and reviews in *Sheetlines*, and was expecting to produce a monograph, but as time went on he felt less able to tackle it. Once again Roger moved things along by undertaking the cartobibliography, and in the autumn of 2015, just after taking on the intermediate scales project, I agreed to write the historical account of the quarter-inch. The ability to photo in bulk at TNA facilitated this, but further progress was delayed by work on the intermediate scales and various non-cartographic distractions. Meanwhile, Roger got to work on refining the half-inch cartobibliography, and developing that of the quarter-inch. The ordinary civil issues were relatively straightforward, a few ambiguous inter-war ‘reprints’ apart, but the military and aeronautical versions proved much more intricate. As with the military one-inch, complete and straightforward official collections from the 1940s contrast with fragmentary survival earlier.

Roger had published a monograph on the OS ten-mile family in 1992, and much of it has stood the test of three decades, but further details of the original ‘index’ map came to light that were worked into *The first Ordnance Survey map*, and on the twelve-sheet ‘1904’ map. The ten-mile was also used as a base for aviation mapping, until replaced after 1937 by the 1:500,000, and there was logic in including ten-mile material under the ‘small scales’ umbrella. Mention of the 1:500,000 and 1:1,000,000 was rather modest, as they really form parts of wider international series and concepts; the same applies for the 1:250,000 ‘JOG’ – Joint Operations Graphic – that superseded ‘the military quarter-inch’.

By early 2020 I was in a position to set about writing the history of the ‘small scales’. At this point the Covid pandemic struck, and travel became impossible. Fortunately I had completed the necessary photography of TNA material, and was able to work at home without distraction: for once, Covid actually helped things along. I varied my usual writing procedure, which is to work chapter by chapter: make notes, and then notes on notes to summarise things and develop ideas, and then to produce a rough draft, largely written out of my head. This draft is then typed up, with source notes and corrections to my memory supplied as necessary: the draft is printed out, and further corrections made, and then I go on to the next chapter. For *Ordnance Survey small scale maps* I varied the procedure: instead of typing up as I went along, I started the next longhand draft immediately. This was partly so as not to lose momentum, and partly because of problems with procuring supplies of printing-toner. The only other published book I’ve written in this way was the first draft of my thesis, which depended on manual typing: in fact the final copy was prepared from the first typed draft, which I regard as indecently hasty these days. An alternative to hard copy printing, which works well for proofing but not always if one decides on making extensive alterations or for cross-checking, is to change the font and size temporarily: I usually type main text in Garamond, 12-point, single-space, but a completely different view is given by

Arial 14-point, at one-and-a-half spacing.

Dr Todd Gray commissioned for the Devon & Cornwall Record Society Facebook page a number of short contributions from local authors on how they were managing to work during the pandemic: I supplied one on the writing of the small scales book, accompanied by a photo.



Figure 6. An armchair cartographic historian? Richard Oliver on 10 June 2020, and near the end of what was then Chapter 5, but is now Chapter 6, of Ordnance Survey Small Scale Maps, telling the half-inch story from 1902 to 1930.

I completed the handwritten draft of my section of *Ordnance Survey small scale maps* in October 2020, and the first typed draft in mid-January 2021; a copy was sent to Peter Clark in time for his 95th birthday. Other drafts were sent out for comment, and I only started the preparation of a ‘final’ text early in 2022.

Illustration is an important part of cartographic history publication, and the advent of scanning has greatly eased this, particularly when one is using originals in one’s own collection. One big drawback to using many otherwise excellent national collections is cost: both in commissioning photography, and in paying reproduction fees. For this reason, all CCS publications have relied as far as possible on private collections. Sometimes this is

impracticable, as with unique surviving copies of high importance: there are several examples of these in both the *Intermediate scales* and *Small scales* books. Scale and arrangement are important: a map is produced to be printed at a specific scale, and whilst it is sometimes useful to enlarge detail to make a point, reduction gives a false impression: in fact, it often makes it very hard to judge the quality of the cartography. Nonetheless, book designers cheerfully enlarge or shrink, with authors apparently powerless to protest, no doubt thinking that panning and zooming are normal in on-screen viewing. Ah, but it is *paper* maps that are being discussed here: viewing is different. It is also important to ensure that map extracts covering the same area of different dates or styles can be read alongside each other, and this can occasionally result in breaking strict chronological sequence.

How does one select an area to illustrate one's points? If the extract is from a stylistically unique map – for example, the *Greater London* half-inch of 1935 – then choice may be conditioned by a sufficient degree of variety, or legibility. There can be scope here for personal references.³⁰ Extracts from *Greater London* have a family slant: one manages both my own family and some in-laws, and another is perhaps something of a joke in that it shows the site of RAF Henlow, to which my father was attached during his time in the RAFVR in the 1940s – though for reasons of security the airfield is omitted from the extract used. An apparent fondness for showing aviation mapping with a significant proportion of sea can be explained by showing a variety of signs, and the complexity of warnings of live-firing areas. One illustration is a reconstruction, as we only have monochrome photocopies of the half-inch gridded mapping of Aldershot of 1922. The grid was overprinted on the standard map of 1915, and was redrawn on a colour photocopy. The result is not especially elegant, but then a purple kilometre grid at half-inch is not the most legible of things, and one wonders if it was set up to fail.

Marking one's own homework?

I observed above that the pool of available reviewers of the books published by the Charles Close Society is small, and some inside comments on the writing process may compensate to an extent for an objective outside view. I will conclude with a quotation from PG Wodehouse:

‘His letter on its way, he was wondering, like all authors who have sent their stuff off, if it could not have been polished a bit and given those last little touches which make all the difference. However, again like all authors, he knew that what he had written, even without a final brush-up, was simply terrific...’³¹

³⁰ Personal references in mapmaking were something that interested Brian Harley in his work for *The new nature of maps*, and he was interested when I ‘decoded’ a couple of literary parallels in my thesis.

³¹ PG Wodehouse, *Pigs have wings* (1952), Harmondsworth: Penguin, 1957, 161.

Reflections on defacements

Ron Blake

Thanks to partial lock-down, I read *Sheetlines* 122 practically in its entirety on the day it arrived. I particularly enjoyed David Archer's 'Musings' which touched upon two loosely connected aspects of the OS popular map, namely its wider cultural applications and its defacement by owners and users.

In the first regard, I did not realise that Britain's top mapping agency still aimed its best-selling product primarily at leisure walkers, cyclists and motorists. (Is there a 'mission statement' clarifying this?). As a sixth-former I bought my first sheet (173 *East Kent*) largely to ensure a good grade in A-level Geography, and on Youth Club hikes my greatest joy was confirming that the pubs and churches stood exactly where the 'paper landscape' indicated. At university the folded One-inch was a 'must-have' and I still possess sheets signed by chums no longer with us. As a trainee land-use planner in Suffolk I relied on a personal One-inch set for reaching sites off the beaten track.

Given my mid-career research focus I was naturally intrigued by David's recollection of a batch of Sevens "in red laminated covers" onto which the previous keeper had deftly highlighted aerodrome runways. The sheets in question sound like B and C revisions, a hallmark of which is intact and vestigial airfield footprints. As to the mysterious map-modifier's objective, I can only surmise that an aero club, private flyer or plane-spotter had required a field guide to fruitful places. In half a century of 'airfield watching' I've yet to see or hear of anything quite like that.

A very different application of One-inch mapping was the ubiquitous County Map required by 1947 planning legislation. Every plan in this genre was based on a monochrome composite, map overprinted with safeguarding zones such as nature reserves, mineral workings and military camps. In most council drawing offices the coloured One-inch sheet was pivotal to measuring connectivity between settlements and defining catchment areas for local services provision. Transparent overlays were a common way of correlating relief, drainage, geology, agricultural productivity and scenic quality in what was a professional application of the classic 'geographical account' that now seems to have disappeared from the curriculum.

Succinctly explained on sheet margins since WW2, the 1km national grid has allowed map-readers to swiftly find or describe any parcel of land to the nearest 100 metres using just six digits. Yet for reasons unclear this framework has become noticeably under-employed in environmental discourse. Although the OS will now sell you a bespoke *Landranger* centred on your pad, the majority of citizens have no idea of the grid reference of their house, workplace or any other venue. Due to GPS and Sat Nav the art of navigating by visual engagement with the townscape and countryside, or pre-planning an unfamiliar journey by perusing a paper map, are in terminal decline. I have actually heard several young people bragging that they have 'no sense of distance or direction.' How very contextual!

Air-historians investigating the after-life of redundant aerodromes love OS grid references for the topographic precision they offer, yet official and commercial 'flight guides' have traditionally supplied only coordinates of latitude and longitude in their

listings. Since the mid-1970s OS grid referencing has progressively been introduced into regional and national aerodrome development histories and gazettes are captioned with a grid reference. However, what I have incidentally noticed is how few photographs of landscape features are captioned with a six-digit reference for the benefit of readers who might wish to visit a viewpoint to ascertain any change. I base this observation on a scan of numerous geographical text books and journal articles, particularly those on land use, landscape analysis and transport infrastructure themes. Apologies to any geologists, archaeologists or railway buffs who are diligent gridders.

Two montages are provided to illustrate my activity in this domain. The first (A-G) is a selection of typical aerodrome shapes copied from various archives and coloured quite inconsistently. A signal benefit of this map-based procedure has been to clear up some misunderstandings about identity and siting in published accounts. This particularly applies where two geographically distinct aerodrome sites have borne an identical title in different periods, eg Kelstern (E). Alternatively, there are single installations that have simply been renamed, giving the impression to non-expert readers that there were two historically different sites.

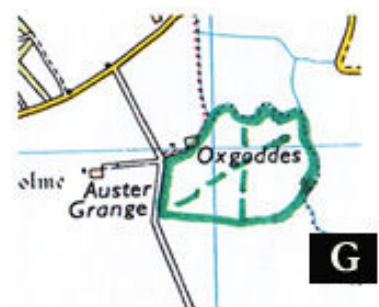
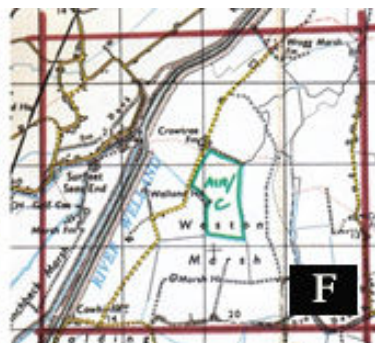
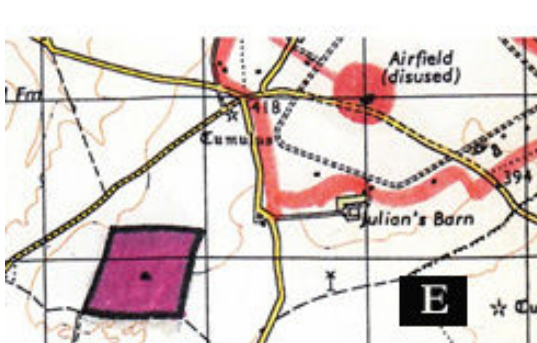
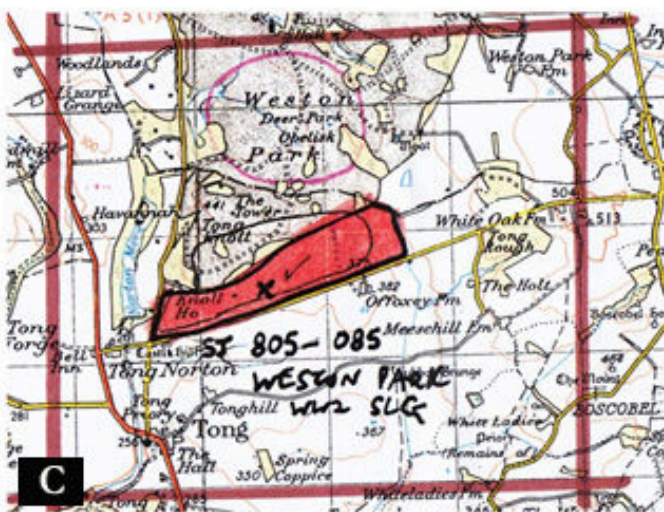
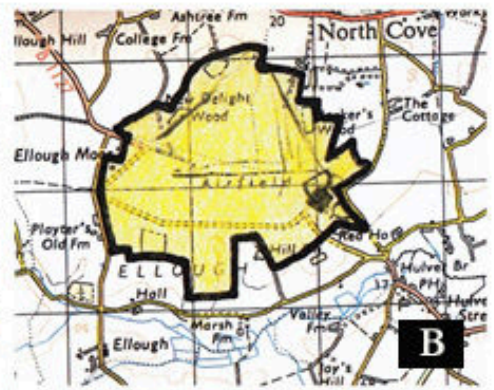
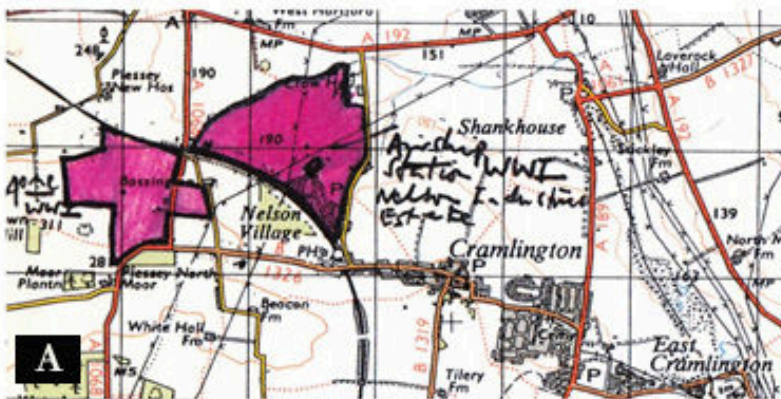
The second montage (1-3) commemorates my earliest professional use of a popular OS map almost 60 years ago. Extract 1 is the T2 hangar at Beccles which I sketched during a routine land use check. Extract 2 is from the map's rear cover on which I noted down that wartime huts were now serving as a civilian housing and a TV warehouse (an example of the 'memo pad' application). Extract 3 includes the guitar chords to *Dirty Old Town* supplied by a fashionable folk-singer in Cambridge (of all places).

Twenty years ago, I felt it was time to formally celebrate the OS's popular treatment of aerodromes. Preparing an illustrated article quickly proved problematic due to the heavy defacement of my Sevenths. What I now needed were pristine copies of the most prolific sheets, so my visits to charity shops and libraries with reprographic facilities markedly increased. I effectively ended up with two sets of Sevenths: one themed, the other practically mint. Bursting with curiosity, I recently asked my local Oxfam book shop manager how he reacted to defacements and he told me that they never open a donated map if the cover looks reasonably clean.

In summary, my hunch is that there aren't many defaced maps donated anyway these days. The prevailing 'shiny-cover' varieties are inherently doodle-resistant, and the ball-point pen has been largely ousted by the mobile phone. Sheets older than the New Popular normally go onto the 'Antiquities' shelf and are priced higher accordingly. I do however fear that many buff covered Sevenths containing historically poignant inscriptions may be biting the dust when well-meaning relatives clear out the old folks' attics.

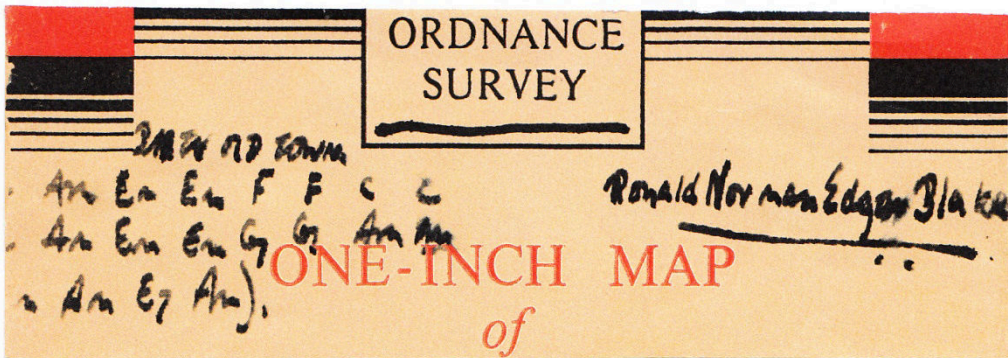
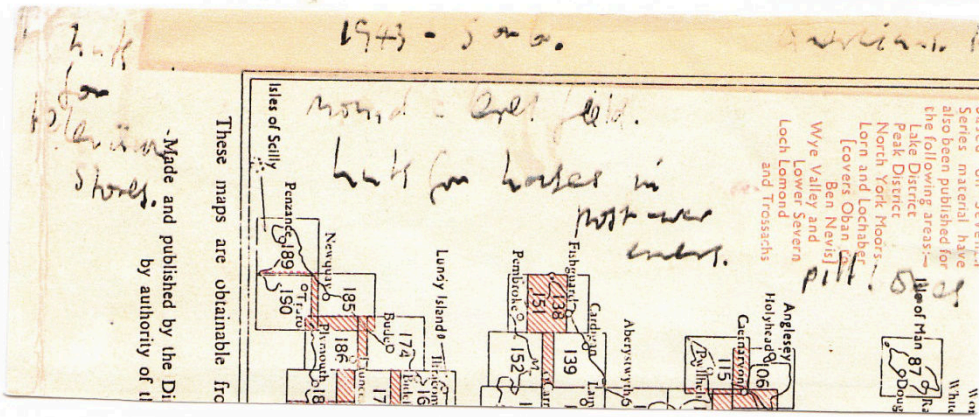
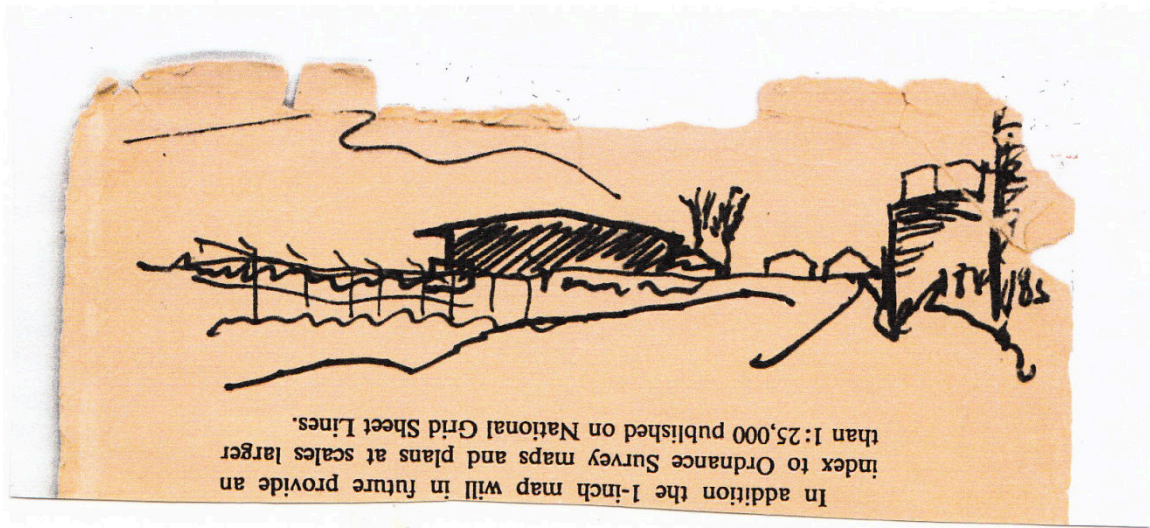
Finally, emulating David's "box of errors on maps and map covers" I've now opened a 'file of defacement' which already contains examples of villages with 'good cafes, friends' rural residences, accessible old railway tracks, and eyesores that students ought to appraise. I do hope that colleagues will supply examples. Concurrently, I'm drafting a working typology that embraces cover doodles, marginal comment and map-face additions as well as deeper agendas and degrees of fabric damage. My parting hypothesis is that the 'golden age' of defacement was the early-to-mid Seventh Series – but I'm expecting this to be hotly challenged! To quote the psychiatrist in *Fawlty Towers* (BBC TV 1978):

“There’s enough material here for an entire conference!”



Defacements of topographic map-faces with non-OS data .

- A. Cramlington, Northumb, WW1 Aerodrome and Airship Station, 78/240775, C/* 1965
- B. Beccles, Suffolk, WW2 Aerodrome, 137/455880 A// 1962
- C. Weston Park, Salop, WW2 Landing Ground, 119/805085, A/, 1953
- D. Brandy, Pembroke, WW2 / Cold War Aerodrome, 138/151/853250, C/, 1965
- E. Kelstern, Lincs, WW1 Landing Ground (245960), WW2 Aerodrome (926920), 105 B 1962
- F. Spalding, Lincs, Holland Civil Airport (via County Map 1953), 123/292287, B 1962
- G. Paull, East Yorks, Civil Airstrip, 113/202250 (1:500,000 Sheet) A 1974



Random defacements of map covers, winter 1963/64

1. *Sketch of a Beccles aerodrome*
2. *Jottings about Beccles aerodrome gathered in the field*
3. *Chords of a fashionable folk song obtained in Cambridge*

Footways Central London walks map

There was a time when Transport for London (TfL) enthusiastically promoted walking and cycling by publishing and distributing free maps showing recommended routes for active travel around the capital. Alas, those days are long gone. From around 2010, several series of such maps appeared, as both John King and I have previously described in *Sheetlines*.¹ By 2016 all these, as well as the 14-sheet local cycling guides and the popular 4-sheet bus map, had ceased publication, presumably as ‘it’s all online these days’. In fact, the meagre information on the TfL website was (and is) a poor substitute.

So the appearance of the *Footways Central London* map,² available to pick up free at mainline stations (or price £5 from Stanfords), is particularly welcome. The map opens out to A1 size, covering the area from Paddington to Whitechapel, and Camden Town to Vauxhall, at a scale of 1:10,000 with a grid of 400 metre squares (a grid square being labelled as a 5-minute walk). Recommended walking routes, such as paths or traffic-free roads, predominantly step-free, are highlighted in orange on an overall pale blue-grey background. A helpful feature, not normally seen on maps, is that raised paths, such as the Barbican high-level walkways, are identified. Prominent buildings and tourist attractions are shown in yellow, pedestrian precincts in pink and mainline stations in orange. Underground, Overground and Elizabeth Line stations are differentiated.

The reverse side has descriptions of nine selected routes, showing that walking times are similar to travel by bus or taxi, albeit slower than by tube. Each route has a QR code enabling the user to download the details to smartphone and follow the map in real-time on the ground. There’s also a sort of Venn diagram with 15-minute walking times from each of 12 mainline stations, showing that almost every attraction in the area is within one of these overlapping circles.

This is overall a pleasing publication, useful to visitor and resident alike. The design is credited to Applied Information Group, with cartographic content derived from OpenStreetMap. The map is sponsored by City of London Corporation, Network Rail, LNER and four local area development partnerships. TfL is listed as a Supporter and there is a link to the map on the Walking page of the TfL website.

John Davies



¹ *Sheetlines* 95,16 and *Sheetlines* 97,31 both available at www.charlesclosesociety.org/81on

² ISBN 9781739656003, © Footways 2022, published by www.footways.london

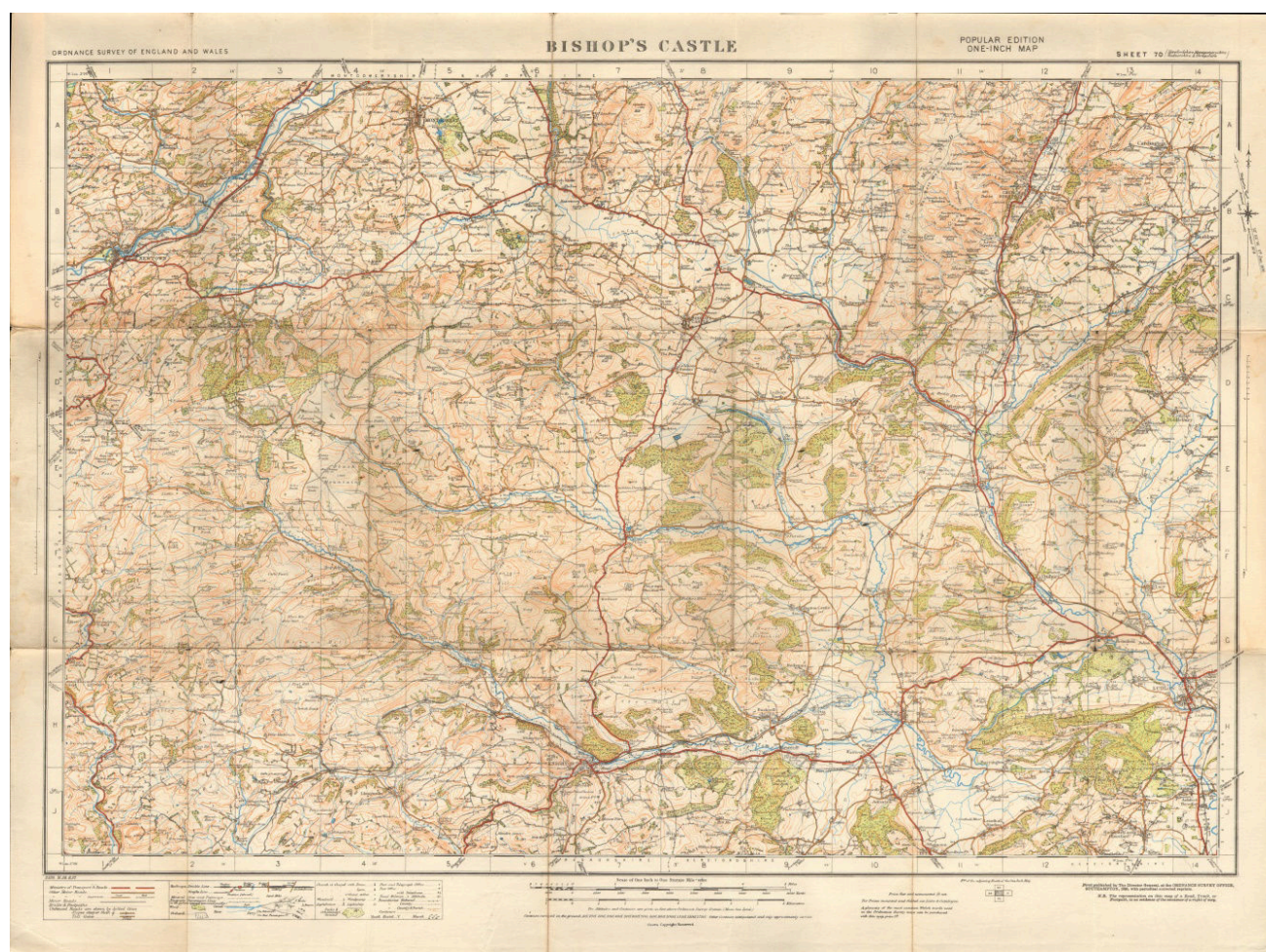
Thank-you, OS ***Andrew Darling***

By chance, some eclectic summer reading led me to the discovery of two obscure, but heartfelt, vintage paeans to the Ordnance Survey: one to its products and the other to both its products and its Director General.

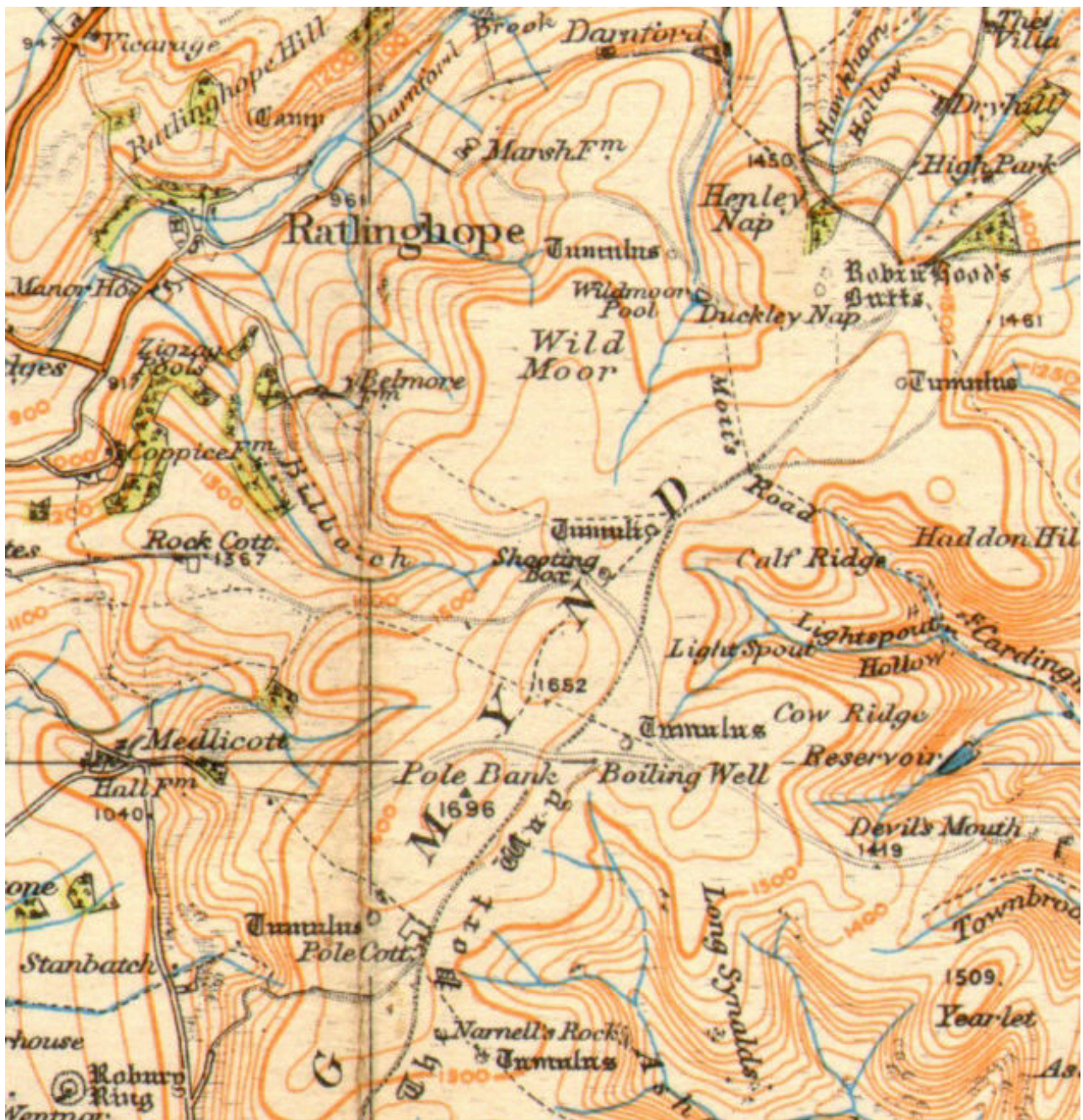
The title of *Quietest Under The Sun*, by John Wood, alludes to some lines in Housman's *A Shropshire Lad*, and the book itself is subtitled *Footways on Severnside Hills*. It was published by Museum Press in 1944, and consists of accounts the author's rambles around Shropshire, Montgomeryshire, Radnorshire, and Worcestershire – always accompanied by the appropriate one-inch map.

“If there is one section of a Government Department which has earned not mere thanks but deep gratitude and admiration it is that Ordnance Survey which, by the authority of the Ministry of Agriculture, produces a series of maps superior to those of the cartographers of any other country,” he wrote. “Especially are we as ramblers grateful for its one-inch-to-the-mile maps, which so seldom fail to meet all reasonable requirements of the seeker of tracks and pathways.”

In particular, he singled out “Sheet 70 – named ‘Bishop’s Castle’, but to me the ‘Clun’ map” for special mention. Within the bounds of the map was “a district compact of such beauty as forms for me the spirit of Shropshire”.



“Does not any Ordnance Survey map thrill you like the best kind of history book?” asked Mr Wood. “There is more history and pre-history packed into almost any of the one-inch series than in many ponderous tomes. Those words in Gothic characters which indicate pre-historic works are particularly common on Sheet 70, where one may quickly pick out a profusion of camps, rings, dikes, ditches, earthworks and tumuli, with many a Welsh *caer* in the western half. On the Long Mynd, near the north-east corner of the map, is a notably rich selection, calling up in the mind ghostly thoughts of those dim, dark Brythonic tribes who roamed over the hill, laboured incredibly in the construction of mounds to bury their dead ... and vanished, leaving but the faintest scratchings on the scroll of time.”



Popular Edition Sheet 70 (detail). Here Be Brythons.

The scroll of time was also examined, in rather less flowery terms, in February, 1917, when the eminent Oxford University historian GB Grundy read a paper to fellow members of the Royal Archaeological Institute. ‘The Evidence of Saxon Land Charters on the Ancient Road-System of Britain’¹ ran to 126 pages, and was the culmination of many months of fieldwork and desk-based research. The project was so fraught with difficulties, the challenge of solving the topography of many of the charters “so heart-breakingly difficult, that it was often laid aside in despair.”

Dr Grundy was assisted in his work by a “very kind request” of Sir Charles Close to the mandarins of the Treasury, whom the Director-General persuaded to make freely available to the scholar every sheet of the six-inch survey of Hampshire and Berkshire, upon which Grundy wanted to record thousands of field-names collected in the diocesan registries of Oxford and Winchester. The maps, had he been obliged to pay for them himself, would have cost him more than £40 – in excess of £3,500 at today’s equivalent values.² The only proviso stipulated by Sir Charles was that the OS should be given, in return, the information gathered by Grundy during his labours.

Grundy summarised the benefits of his researches as providing information on the old topography of the regions concerned (“it would be possible to draw up maps of parts of Hampshire and Berkshire which would contain more local sites and names of the Saxon period than there are modern names in the one-inch ordnance map of the same regions”); the meanings of place-names; the meanings of certain Saxon terms which have been a matter of doubt, or have been mistakenly interpreted in Anglo-Saxon lexicons; the methods of Anglo-Saxon surveyors; the nature of land-tenure and land-law in Saxon times; the life in England of the Saxon period; the archaeology and antiquities of the pre-Roman, Roman, and Saxon periods; and the beginnings of the road-system of Britain. One can see why Sir Charles Close considered the £40 to be money well-spent.

Analysis of the diocesan charters established that the Anglo Saxons identified three major kinds of road, to which they gave distinct names. The Saxons were very precise in their distinctions between objects which came within their limited experience, and they did not use synonyms; hence the different terms applied in the charters to roads and tracks imply different characteristics. The original generic term appears to have been *weg*, way or track, which occurs in the charters many hundreds of times. But there are signs that its meaning was becoming specific, implying what would today be classed as a byway, or a side-road. In only a few cases was it applied to great highways, and then usually with an attribute, such as the proper terms *Ichenilde weg* (Icknield Way), *Lunden weg* (London way), or the common terms *Hi-weg* (hay-way) and *Hyreg-weg* (ridgeway). Dr Grundy’s three classes of through-road are:

- *Hrycgweg* or ridgeway, that is a road which follows the comb of a ridge. Perhaps its most essential characteristic is that it follows a watershed.
- *Straet*, a made road. In the charters the name has already come to be applied to the streets of towns, for example those of Winchester and Romsey.

¹ https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1132-1/dissemination/pdf/075/075_069_194.pdf

² Bank of England Inflation Calculator

- *Herepath*, literally army or military way. But it has the meaning of through-road, and may be applied to any kind of through-road, though is generally applied to through-tracks of Saxon origin.

In general, wrote Dr Grundy, the three forms of roads belonged to three different periods of history; the *hyrgweg* to Pre-Roman times, the *straet* to Roman, and the *herepath* to the Saxon era. The name 'ridgeway' survives on many maps, but is nowadays usually only applied to prominent examples such as the ridgeway which follows the comb of the downs in west Berkshire.

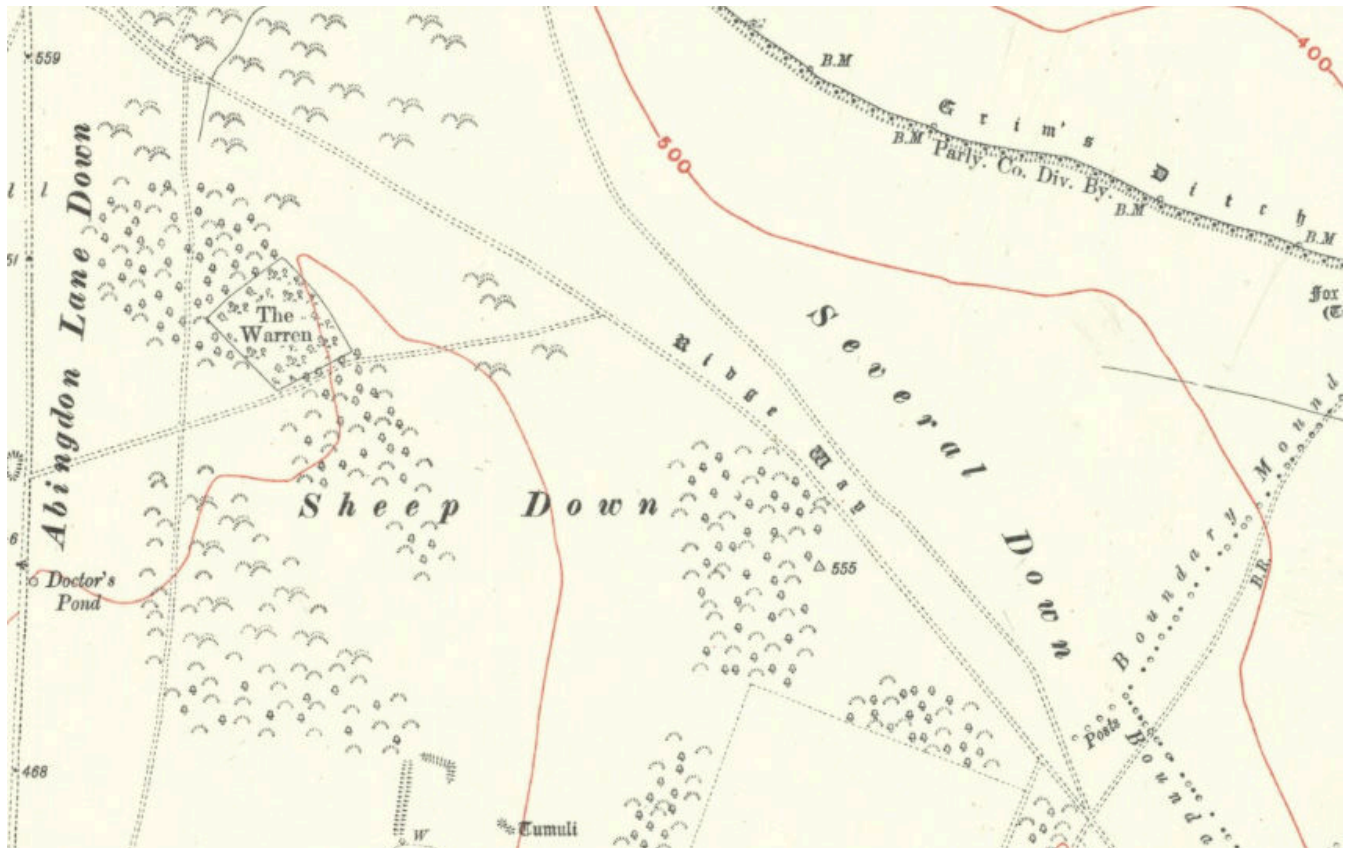
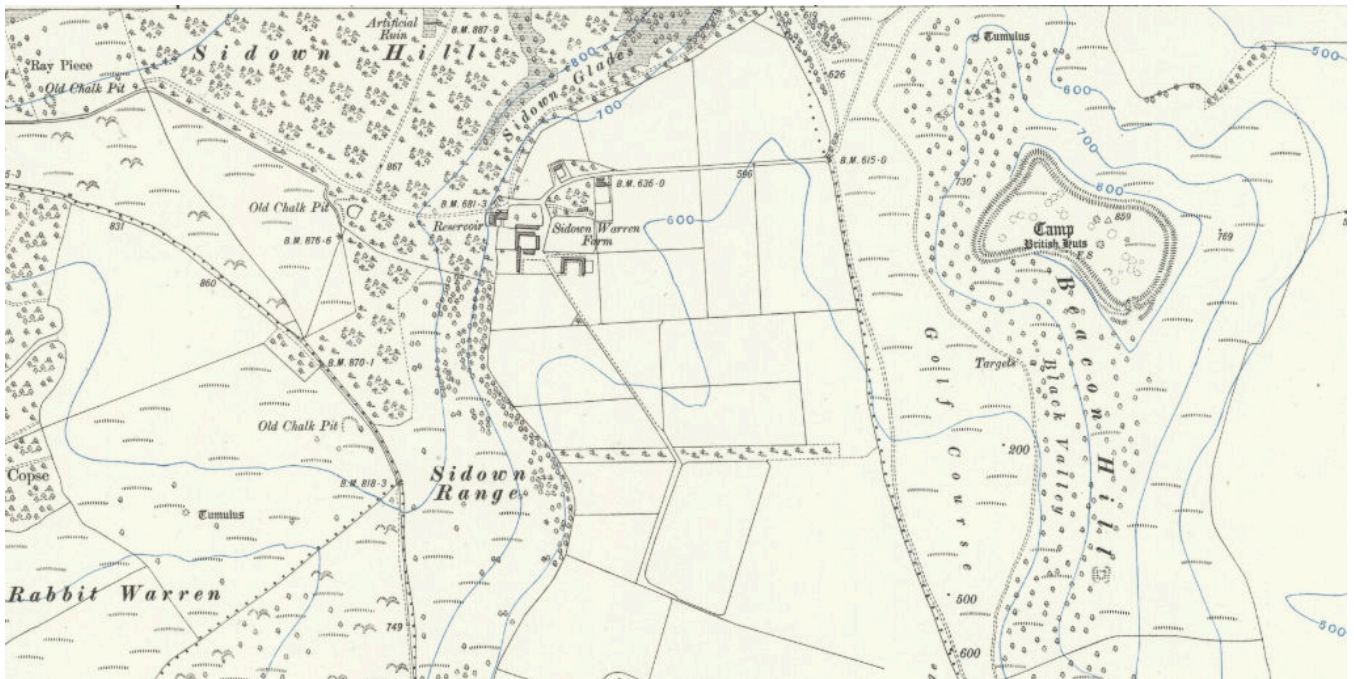


Figure 1 Berkshire six-inch sheet XXI.SW (includes: East Ilsley; West Ilsley)
Revised 1910, published: 1913; the Ridgeway crosses diagonally SE to NW (NLS)

Studying the maps provided to him through his contact with Sir Charles Close, Grundy noted other examples of the use of the term. In Hampshire, he located three: the first near Lymington, where the reference is to the south end of the great ridgeway which follows the east watershed of the river Avon and can still be traced northward as far as Chute in Wiltshire, where it meets another ridgeway running east and west along the comb of the north downs and also the Roman road from Winchester to Cirencester; another on the north edge of Shirley near Southampton, where it refers to a ridgeway which followed the western watershed of the Itchen and curved around to cross the Test at Romsey; and thirdly, north of Whitchurch, where Ridgeway Farm is so-named from a branch which leaves the great ridgeway of the north downs near Kingsclere and runs south west towards Whitchurch.

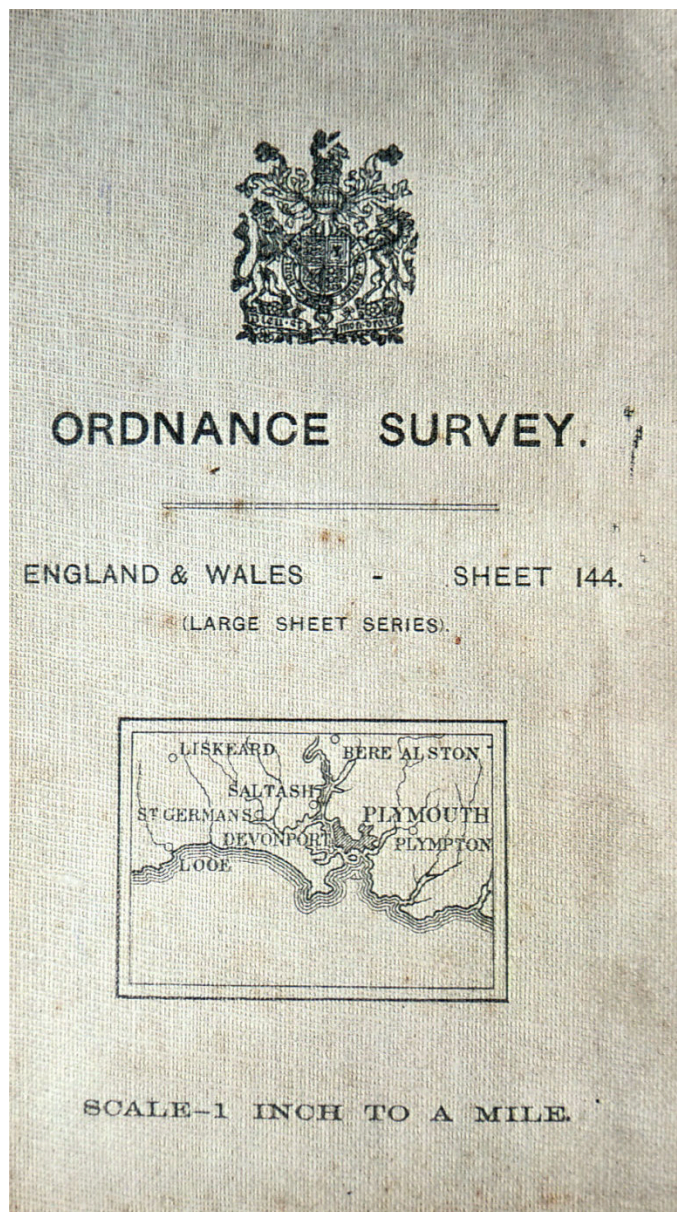
On a six-inch map of the area around Farnham in Surrey, he found a reference to the beginning of what was “evidently an important ridgeway” running through Long Sutton, near Alton in Hampshire. The way divided near the hamlet of Well in the parish of Long Sutton, continuing as a true ridgeway along the watershed between the basins of the the Wey and the Loddon, then between the Loddon and the Itchen, and then between the Itchen and the Test. For the greater part of this distance, it is represented by modern roads. The branch of this road he traced to Seven Barrows, where it, too, forked. One branch went NNW up Beacon Hill to pass just west of the camp which in the charters is named ‘the burh aet West Cleran’ (now Burghclere). At this point on its route, it is named as the ‘Wic herepath’ (highway of the outlying farm). It continues over Sidown Hill to the Three-Legged cross on the Newbury to Andover road. The second branch took a slightly different course over Sidown Hill.



Beacon Hill and Sidown Hill, shown on six-inch sheet Hampshire & Isle of Wight VIII.SE (includes: Ashmansworth; Highclere; Litchfield and Woodcott) Surveyed 1909, published 1912 (NLS)

Dr Grundy’s paper is fascinating; and read in tandem with a study of the relevant sheets so obligingly provided by the NLS, it was a diverting and instructive way of avoiding the hottest days of August by sitting indoors, in front of computer and fan, studying the interface between maps and scholarship.

Letters



I was intrigued as always to read David Archer's Musings in *Sheetlines* 123, particularly his reference to the 1914 Plymouth one-inch map numbered 144, the same number as the corresponding sheet in the Popular Series. Why? Because twenty-some years ago I picked up, for the princely sum of £2.50, a copy of the same map in rather better condition than the one he illustrates.

I enclose a photo of the direct printed cover, from which at first sight I took it to be Third Edition, apparently confirmed by the 'Large Sheet Series' wording. The location map seemed unusual, though, and of course, when I opened it, I immediately recognised the map itself as something different. It clearly anticipates the post-WW1 Popular style, albeit with significant variations in the hachuring and dotgtd black contourse – which, curiously perhaps, don't feature in the key at the foot of the map. However, it does predict the red main, and broken orange 'indifferent' roads of the Populars, together with the railway symbols, including solid black rectangles for principal stations and uncoloured circles for other, as with some of the earliest

Popular issues. Except that the key actually shows principal stations as *open* rectangles: further confirmation, maybe, of the interim, experimental nature.

In fact, comparing the 1914 map with a 1919 Popular 144 (buff cover with red sheet name), the similarities are more marked than the dissimilarities. The colouring of the water, particularly the tidal stretches, and the woodlands is not quite the same, being in the 1914 version a pleasant sort of eau-de-nil and grass/leaf green respectively. And the two-inch grid criss-crossing the later map is only present in the margins of the earlier one in Third Edition style. But the sheet lines coincide, and surprisingly even the tiny diagram showing the layout of the adjoining sheets matches exactly on both maps, even down to their numbering: all four bear their Popular sheet numbers, which differ from the Third Edition ones, as do the sheet lines. Even the heading wording is similar, except that 'POPULAR EDITION ONE-INCH MAP' (upright capitals) on the later map replaces 'FOR OFFICIAL USE ONLY' (italicised) on the 1914 one.

So is the 1914 map as rare as David implies? Not having access myself to the CCS website, I look forward to other responses in *Sheetlines*.

Geoff Kent

‘Missing’ Ellis Martin Covers on Third Edition (LSS)

Messenger (*The Ordnance Survey One-inch Map of England and Wales Third Edition (Large Sheet Series)*. Charles Close Society 1988) and Hellyer and Oliver (*A Guide to the Ordnance Survey one-inch Third Edition maps, in colour*. Charles Close Society 2004) have provided detailed studies of the Large Sheet Series. These maps have been seen in a variety of covers, but the final covers to be attached to these maps from 1919 onwards were designed by Ellis Martin and carry a design generally known as ‘Royal Arms with Mantling’. The covers were originally printed in black with red sheet names, but were rapidly replaced by covers of the same design printed in dark red and brown. Using the numbering system introduced by Roger Hellyer in John Paddy Browne, *Map Cover Art*, Ordnance Survey 1991, these designs are referenced as H.10.1 and H.10.2 respectively.

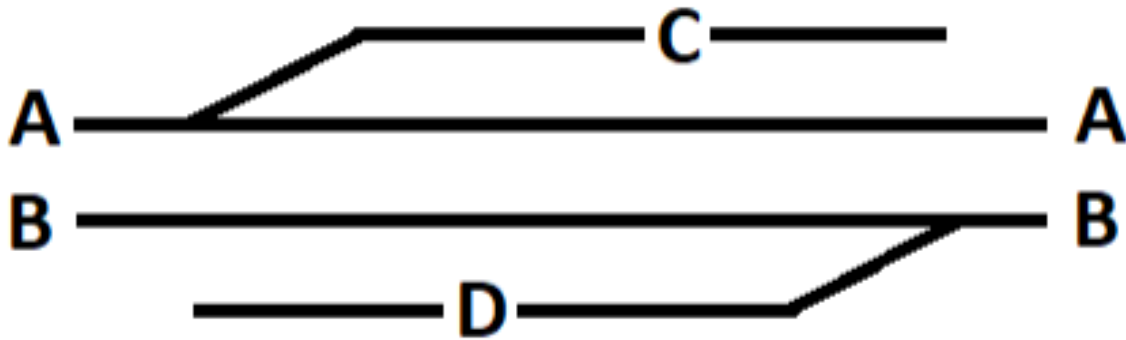
Messenger reports that Ellis Martin covers (either one or both of the H.10 covers) had been seen on all 152 sheets in the Large Sheet Series of England and Wales apart from Sheets 112 (Bath), 146 (Truro) and 150 (Kingsbridge). Hellyer and Oliver (footnote 173, p.81) only report Sheets 112 and 146 as unrecorded in Ellis Martin covers.

After examination of a customised boxed set of these maps and after communication with a major collector, I can now confirm that all ‘missing’ sheets in Ellis Martin covers have now been seen. Sheet 112 carries a sheet title “Bristol and Bath”, a cover title “Bristol and District”, and is known with H.10.1 covers. Sheet 146 is unnamed, has a cover title “Newquay, Truro and District” and is in H.10.2 covers. Sheet 150 has a sheet title “Kingsbridge”, a cover title “Kingsbridge and District” and is in H.10.2 covers.

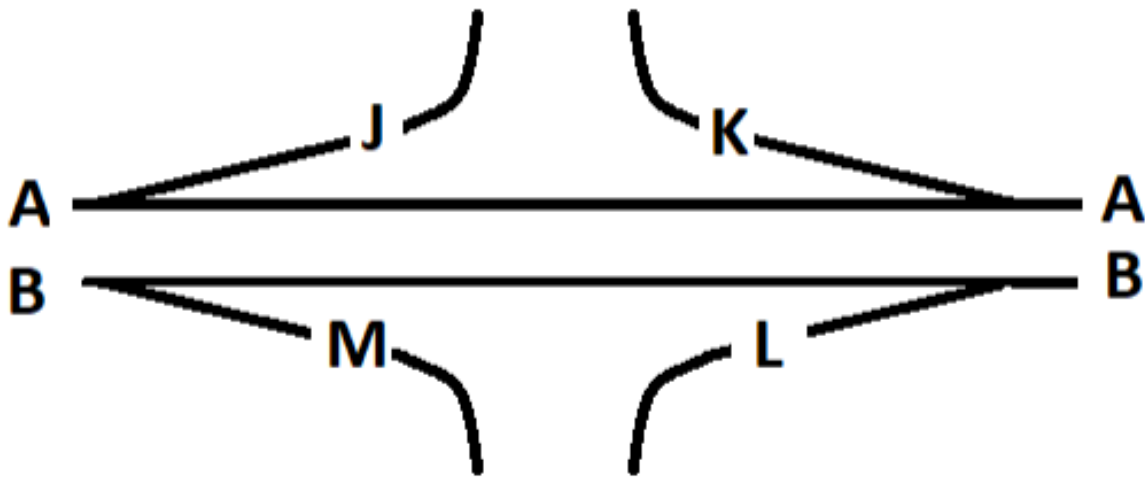
Derek Deadman

The sign illustrated in Figure 7 of Richard Oliver’s *Milestones and other distance markers* (*Sheetlines* 124) is described by Highways England (now National Highways) in the *Design Manual for Roads and Bridges* as a Driver Location Sign. As far as I am aware they are not used in the other countries of the United Kingdom. They supplement the Distance Marker Posts and the manual points out that they use the same referencing system as the latter and says that they should be placed within 20m of the associated distance marker post. While a spacing of 500m is generally required, the manual allows the spacing to be reduced to 400m or 300m where there are site constraints.

Whilst A and B refer to the two carriageways, readers might like to see the following modifications where there are additional separated carrigeways and junctions:



Identifiers on secondary carriageways



Identifiers on connector roads

I haven't carried out a systematic survey, but my observations seem to show that the highway authority tries to avoid positioning at round values of km preferring to use for example a sequence such as 28.2, 28.7, 29.2 ... and avoiding 28.0, 28.5, 29.0... The manual does not make any comment in this regard, but I assume it may be based on some research on minimising errors in reading, recording and reporting locations of incidents. I believe the sign in Richard's article is rather unusual in that it shows a round number of 77.0km.

Peter Wynn

Kerry Musings

David Archer

I start writing this piece having just been looking for a summer book to read. Something light and refreshing in the middle of this hot and sunny 2022 weather, along the lines of *Tortilla flat*, or any PG Wodehouse and Blandings novels always come up trumps, a phrase I use in its older, traditional sense, pleasing. For the summer, I do not want anything gloomy or with a sad ending; indeed, at any time, if a novel appears to be heading towards a sad ending, I skip to the back and put it for the charity shop if all is not smiles. Winter books are those that can only be read on short grey days and long rainy evenings, Conrad's stormy sea stories for example.

Which leads me to wonder whether maps are seasonal in a similar way? Does the weather have any effect on how you feel when you look at a map? Are some better at complementing the seasons than others? Do some maps give the feel of a season? And no, I am not thinking of maps on waterproof paper for the winter. Groan. Please pay attention, this might be a serious piece for once.

Obviously, there are all year maps, which of necessity have to be used regardless of what is going on outside. Route planning and motoring maps are needed to get about at any time. In the same way, the 1:25,000 maps, when used for walking, provide answers to the current weather conditions, summer or winter. How so? If one is planning a walk after a long spell of rain, careful reading of the 1:25,000 map helps to minimise excessively muddy paths, avoid going where stepping stones might be six inches under, or having to battle an exposure to strong winds and driving rain. The 1:25,000 helps keep winter walks on good firm tracks, sheltered from the winds, and free from rain dripping from trees. In summer sunshine, the same maps can guide us to cliff top walks to catch a fresh on-shore breeze, or suggest cool green and leafy meanderings in woods with picnic tables.

So much for the obvious. But this is not really what I am getting at. What I want to consider is whether we feel different when we look at a map in the summer to when we look at it any other time. Do we get more enjoyment under different weather conditions? Do we see the map differently? Well I do, and before I get going, I should state that in this piece it is assumed that we are cheered by summer sunshine and feel low in winter when it rains. That sort of thing.

I wilt in strong sunshine, and if I look at a WW1 trench map on a sunny day in July, I fail to see the rain, water and mud everywhere, as the battlefield is typically portrayed. Rather, I see the summer conditions in the trenches, with the mud now packed hard, dust and flies everywhere, and little shade. I instantly sympathise with those poor souls stationed in that landscape. I see only tufts of grass, bright red poppies and barbed wire in no-mans-land, with the heat being unbearable in thick khaki uniforms. But when I look at the same map in winter, I see the standard picture of mud, more mud, squelch and horror.

Certainly a lot of the early pictorial covers fall into the summer camp, with Arthur Palmer probably contributing more than Ellis Martin in this respect. In fine weather, seeing the two people striding out on the Chilterns cover makes you want to get out there and walk, whilst the ladies on the Isle of Wight cover suggest the best thing on a day like this is to visit an ancient pile and have a cream tea afterwards. Or better still, just the tea, outside in the shade of course. Look at these in winter, and they are just pretty pictures. The Middle

Thames with a crowded Boulter's Lock, Bolton Abbey on the Ilkley District cover and maybe the Wye Valley, are all aimed at enticing the sofa-bound out and about. Arthur Palmer illustrations in particular are very strong on high summer come-out-and-join-us scenes, with strong contrast between sunlight and shade to show how warm and sunny it is. See the Isle of Wight, Brighton, Cheltenham, Chichester and Oxford covers, which were issued with the illustrations promising some nice outings for a summer's day. But look at them in the winter, and this aim falls flat : no way will they entice you out into the cold.

In more recent times, the Ordnance Survey marketing people have occasionally used seasonal-feeling map covers to advantage. The bright yellow bird covers on Outdoor Leisure maps most certainly have a summer come-out-and-join-us feel, whilst the brown bird covers have an equally bright autumnal feel. The blue and white 1965 Cambridge cover is perhaps the freshest and most spring-like of any post-war cover; unlike the 1970s black bordered covers, which really do lack any seasonal feeling. Totally neutral, with not even winter suggested.

Some maps positively bloom in sunlight. I believe the pink buildings on 1:2500 First Edition maps were coloured to be seen in July, especially if the pink covers a large area, as with the Hereford sheet.¹ And if you disturb one by taking it out in February, I promise the sun will come out to see it. Ditto the very stylistically similar 1920s six-inch town maps, lots of sunny pink, with the addition of light green and blue. Even my very worn copy of Southampton radiates freshness and light.

If you find the weather too hot even to think about maps, try opening a refreshing *Pathfinder* or two. I like these maps, and find the paper appears particularly white and bright, giving a cool feel to whatever is shown on the map, whether town or country. OK, most maps have a white background, but as in a paint shop, there are dozens of whites, warm, cold, and so on.

Pathfinders are printed on a beautifully cool white paper, with spider-web thin contours and only three very light colours, orange, green and blue, which leave the snowy white background to dominate and refresh those looking at the map. Indeed, might I suggest that most modern maps have a summer feel about them, probably because the paper is much whiter than of old. A lot of bright white needs to show through if a map is to appeal in summer, with most pre-1945 maps failing miserably. Hachures on one-inch Thirds give a dusty/grubby feel to sheets showing them, much like fog, with the too conspicuous roads looming out of the gloom, as when buses suddenly towered three feet away in London fogs of the early 1960s.

For an example of maps with links to autumn, I would choose what I call school maps. Those with a box embedded in the top border saying 'This map is only to be used in Kerry primary school'. At *any* time of the year, show me one of these and I immediately think of autumn. My first week at secondary school found the days getting shorter and darker, and the first geography lesson offered an introduction to contours, repeating something from primary school. It is not the contours or maps connection, but the box and text mentioning a school and scholar that sets me off on the autumn tack. Very strange.

1 <https://maps.nls.uk/view/120896617>

Another set of autumn maps are the various Aldershot and Salisbury Plain military maps, especially those on a larger scale than normally found, two-inches or one-and-a-half inches to a mile; activity maps for a fresh October afternoon, dominated by autumnal browns, yellows and reds. Lots of keeping warm things going on and safer done out of doors; manoeuvres, firing ranges, troop movements. The two-inch map of *War Department Land on Salisbury Plain*, 1898 is covered with beautiful strong brown contours, with a thin red property border and dark orange roads. The whole thing, brown, red and orange, when seen in fading light reminds me of early autumn and vast open spaces when the grass has turned and is about to die back. Spring? Never. For later in the same season, the 1878 one and a half inch map of the *District round Aldershot* is again dominated by wonderful fine brown contours over the black plate, a combination which allows the medium white paper to show through, resulting in a bird's eye view of the area under the first light winter snow. Although the summer maps and covers only have a magic effect when seen in sunshine, I find autumn maps work at any time. Whilst writing this, in bright July sunshine, I have just opened Salisbury Plain and then glanced at the trees outside, expecting them to be glorious browns and yellows.

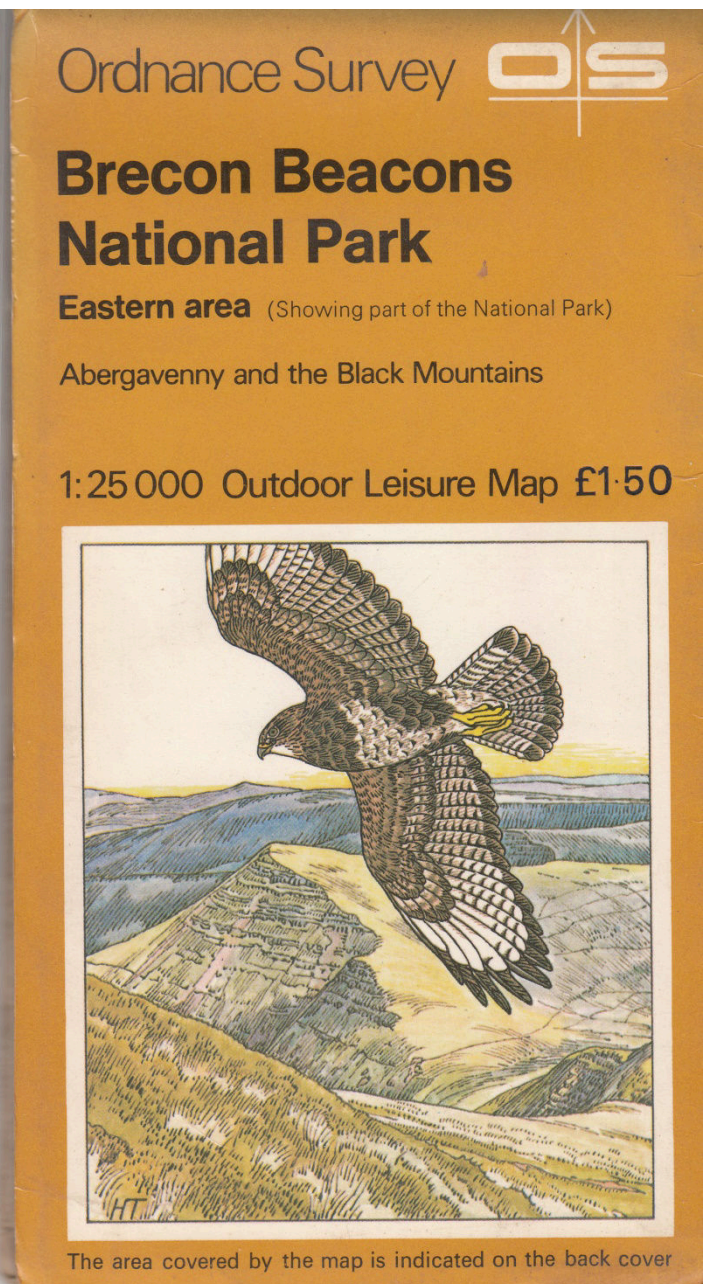
Winter can be depressing for some, and the most depressing map I can think of is the one-inch *Ordnance map of the country about Aldershot : army manoeuvres 1875*, with very fine blue-grey contours and a black plate, it is certainly the densest, darkest and coldest map I can bring to mind. Impossible to read without a glass, it must be what the inside of a glacier is like : dark, blue and cold. Beyond winter. And the only cover illustration to suggest winter is miserable Burns' Country, where miserable is too good a word for it. I ask you, would you go out on a night like that, even if you could go home to a roaring fire and large hot toddy? Look again at the Eclipse map, the Brighton bathers and the Thames at night covers, despite being very dark, all have a summer feel to them.

Perhaps the most depressing map *series* is GSGS 3906, which is like a bleak winter's day, without even the joyful prospect of imminent snowfall. Reduced from the six-inch scale to 1:25,000, all is unclear; the smaller lettering is unreadable or blurred, black is everywhere, and so upsetting, and with the lifeless dull brown contours, it drives me to the edge. The one good thing about these maps is, is, is, is? Is that I seldom need to look at any; unlike two stalwarts of our society who have included them in their latest tome, *and* have included a couple of extracts that are almost clear, unlike Plate 13A, which shows what I am on about.² Similarly dark maps are the impossible-to-read northern Old Series, but these are far more attractive, with fine engraving on a good solid paper and lovely blind stamps. No real comparison, except that both give a strong feeling of winter.

Are there any maps with a spring association, other than the Cambridge cover? For me, yes. We live in rural mid-Wales, and in recent years, when the trees start to show new leaves, I dig out the local 1:2500 sheets and say that this year I will get down to my

2 Roger Hellyer and Richard Oliver, *Ordnance Survey intermediate scale maps*, London: Charles Close Society, 2022.

proposed tree research and write it up for *Sheetlines*. Look at a Second Edition 1:2500 sheet of this area and most fields contain one or two tree symbols. One spring, a few years ago I checked a few of these symbols against the fields and found that they did indeed appear to be accurate. I was pleasantly surprised and previously must have subconsciously assumed single tree symbols to be merely ornamentation. Not sure why. But I now see that they are important records of countryside history, showing where trees have stood for the last 100 years. So yes, each spring I always dig out our local maps with good intentions. But somehow nothing very much gets done.



Season's Greetings