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Sheetlines 32

January 1992

CHARLES CLOSE SOCIETY ANNOUNCEMENTS

It will be seen that Sheetlines has yet another cover design. It has been produced by Chris Higley, and it is intended to adopt it as standard for future issues.

FUTURE MEETINGS

8 February 1992, (Saturday): Study meeting on the Ten-mile map at Roger Hellyer's house, 60 Albany Road, Stratford on Avon, Warwickshire, CV37 6PQ. Starts 10.30 a.m.: numbers are limited, so please contact Roger if you are interested in attending. (Telephone 0789-295752.)

27 February 1992, (Thursday), 5 p.m., at the Warburg Institute, Woburn Square, London, WC1: Richard Oliver on 'Base and Superstructure: the nineteenth century Ordnance Survey and the recording of the landscape.' Admission is free, and the meeting, part of the 'Maps and Society' series is open to anyone interested.

16 May 1992: notice is hereby given that the Charles Close Society Annual General Meeting will be held at Birkbeck College, London, WC1, at 10.30 for 11 a.m. Further details will be announced in Sheetlines 33.

June 4-6: there is a possibility of something being arranged around these dates: await Sheetlines 33!!

'Maps and Society' series of lectures at the Warburg Institute: in addition to that on 27 February, which is presumably of interest to CCS members, attention is drawn to the others, (all start at 5 p.m.): 30 Jan, William Ravenhill, 'Early town mapping and the Exeter experience'; 12 March, Denis Cosgrove, 'Mapping new worlds: culture and cartography in sixteenth century Venice'; 30 April, Betty Ingram, 'Maps as "reader's aids": Genevan bibles in the sixteenth century'; 14 May, John Andrews, "More suitable to the English tongue": the cartography of Celtic placenames'.

NEW PUBLICATIONS

Attention is drawn to the following which have recently been published by the Society:

Guy Messenger, Sheet Histories of Ordnance Survey One-inch Old Series maps, complementing the Harry Margary facsimiles:
Devon and Cornwall [corresponding to Margary vol II] - 48 pp, £ 4.20.

Special offer: the two for £8.00.

(N.B. - A 'subscription list' for these was opened at the AGM, but unfortunately went astray afterwards. Will all those who ordered copies of these Sheet Histories but have not yet received them please contact the Society's Publications Manager, (address on back cover).

Karen S. Cook and Robert P. McIntosh, A Preliminary List of Ordnance Survey "One-Inch" District and Tourist Maps and selected precursors in The British Library, 68 pp, £ 3.00. The most lavishly got-up CCS publication to date.

(Continued inside back cover.)
SHEETLINES 32

January 1992

JOHN BRIAN HARLEY

24 July 1932 - 20 December 1991

We are extremely sorry to have to record that Professor Brian Harley, formerly of the University of Exeter and latterly of the University of Wisconsin-Milwaukee, suffered a fatal heart attack just before Christmas. He is best known in Britain as the author of several standard works on the Ordnance Survey, and was unquestionably the leading writer on the subject. It is proposed to publish a proper tribute to him in Sheetlines 33, but some idea of the extent of his influence is to be found in the various mentions of his name in this present issue, which was planned before receiving this sad news.

Anyone willing to contribute to the tribute, whether as short articles or as anecdotes is invited to write to the Editor of Sheetlines.

Letter from the Editor

This issue of Sheetlines appears in slightly more modest form than did its predecessor, but is intended to be the first of a new standard style. Apologies are due to readers for the very small type-size used in parts of Sheetlines 31; this was due to a miscalculation by the Editor. It is hoped that the present issue will prove generally acceptable in that respect.

Some readers have asked for an explanation of the apparently random order of the contents of those issues of Sheetlines which have appeared under the present editorship. The answer is twofold: first, a desire not to have contributions from the same source following on from each other; and second, the Editor has never much cared for the verbal shanty towns which often grow at the ends of periodicals. So they sometimes appear in the middle! The publishing of a separate ’supplement’ to Sheetlines 28 and 31 has also been questioned, it being suggested that it could easily be lost. Good! Out of date membership lists are surely no more interesting to the vast majority of us that old telephone directories, and the same surely applies to AGM minutes and to discussion documents or provisional lists: their day is soon done.

The question of the status of Sheetlines has now been resolved: the Society’s Committee has now decided that it will have no subtitle, and that it will be described as a ’journal’ or ’newsletter’ only when absolutely necessary, and according to the audience being addressed.

It would be extremely useful were readers to write to me with comments on Sheetlines, and also to me or David Archer, the Society’s Secretary, (addresses are on the back cover), saying what their interests are, and what they would like to see either written up in Sheetlines or else the subject of the Society’s meetings. For example, a few members have expressed interest in a meeting on home repairs to maps, and one newly joined member has asked for something in Sheetlines on the 1:25,000. Other suggestions will be most welcome.

A happy new year to all readers.

Richard Oliver
Notes, queries, answers, news and editor's jottings.

The relationship of the 'Surrey Hills' Six-inch to the 1:2500

Richard Dean has written to ask whether there is any connexion between the 'Surrey Hills' Six-inch first printed in 1861-8 (Sheetlines 31, p.50) and the 1:2500/Six-inch of Surrey surveyed in 1861-71. There would appear to be none: the earliest sheets of the 'hills' map were surveyed in 1858-9, around Reigate, a district which was not surveyed for the 1:2500 until c.1867-8, and there is a similar gap between the two maps elsewhere. Indeed, the 'hills' map only seems to have been placed on sale circa 1872, by which time the Six-inch reductions of the 1:2500 were being published, so the 'hills' map can hardly have had much justification even as a stopgap, except in Berkshire and Oxfordshire. Richard Dean reports a copy of 'Sheet 2 West of Dorking' printed in 1863, which has the imprint 'Compiled from the One Inch Maps of the Ordnance Survey and the Tithe', covered by a printed sticker 'Compiled from Tithe Maps for Military Purposes only, and not strictly accurate.' The One-inch contribution is puzzling, unless it refers to gaps in the tithe survey coverage (which is fairly comprehensive over most of the area of these 'hills' maps) supplied from the two-inch and three-inch Ordnance Surveyors' Drawings. The 'hills' themselves were apparently sketched afresh, if the notes in the top margins of the maps can be relied on.

Signposts with grid references

Following the remarks in Sheetlines 32, several letters have been received by your Editor. S.W. Simpson writes that in the mid 1950s 'gridded' signposts were to be found at almost every road junction in the West Riding of Yorkshire, though he adds that at the time he wasn't aware of the significance of the numbers! He says that most of these signposts have now disappeared. Tim Bleasdale reports 'a decreasing number between Leeds and Harrogate'; Peter Haigh says that they were apparently not to be found in county boroughs and cities administratively outside the West Riding, and that 'there are still a good few to be found about the place.' Martin Loach reports that in Radnorshire, 'at Maes-Treyow, a cross roads some three miles west of Presteigne, is such a post, but alas no longer has any fingers. I would give the grid reference as [SO] 267652, although the reference on the post is 266652!... This corner is interesting to photograph as there is still a Red K6 telephone kiosk, and a small rural telephone exchange which will probably become disused soon.' Rob Wheeler suggests that the idea was disseminated by H.S.L. Winterbotham in A Key to Maps:

Suppose, in the future, that some lonely traveller has lost his way, map notwithstanding, on a lonely road, and eventually reaches a signpost. Suppose that on that signpost are its co-ordinates or reference figures. Then whatever map he carries (if it has this system on it), he will be immediately placed and can go on his way rejoicing.

Your editor cannot help reflecting that Ordnance Survey would do well to ponder the revival of this idea! Though perhaps they would not need go as far as A.R. Hinks suggested in 1923, that 'Every lamp-post might... be labelled with its grid co-ordinates', they might ponder lobbying some department (the European Community perhaps, it being 1992), for Hinks' other suggestion to be made a standard: '...the map reference... added to the printed address.'

Map reading booklets, etc.

Following David Archer's piece in Sheetlines 31 (pp.4-5) Richard Dean reports that Lt Col H.M.E. Brunner, Notes on Maps and Map-Reading, (London, William Clowes, 1905), has a complete OS map supplied with it, One-inch New Series Third Edition Sheet 285, of excellent quality, but apparently not printed by the OS as it bears the usual reproduction copyright.

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acknowledgement.

Not quite on target: The Horncastle Target for 18 December 1991 reports on its front page Councillor Michael Beard, of East Lindsey District Council, observing *apropos* rural house building: 'I would like to see the 1906 Ordnance Survey used as a precedent. If a dwelling was marked then one should be allowed today.' An admirable idea, both cartographically and edificationally! Unfortunately, the Ordnance Survey has never distinguished dwellings from other buildings; some tithe maps of the 1830s and 1840s did so, though such information for Lindsey is patchy.

Leisured interests: Peter Haigh says that a thought occured to him when writing about OS Outdoor Leisure Maps. 'What would an indoor leisure map be? An armchair confection for CCS members?'

AHH!!

On Sunday 5th January 1992 ITV telecast a dramatisation of Agagtha Christie's tale of the A.B.C. murders, set in 1936, and quite remarkable for the lack of authenticity of the railway travelling. But a light shone in the darkness! There was a glimpse of an OS 1:2500, purportedly of Donaster racecourse, and whilst your Editor was not certain whether it actually was Yorkshire Sheet 285.2, at least it looked like an inter-war 1:2500, with the right typeface. (Dr Brian Harley once told your Editor that, having observed Sherlock Holmes use an OS 1:25,000 map, he duly complained, but apparently had no reply!)

The 'pride of ownership', popularised

Those who heard Dr Sarah Bendall's lecture in the 'Maps and Society' series on 5 December with its descriptions and demonstrations of elaborately prepared estate maps of 1600-1840 will doubtless be interested in the following, relating to the 1920s, and, presumably, to the OS One-inch Popular Edition: 'You must start with a map. We kept ours in the drawing-room on the bookshelf by the window. You must start with a map because Cotchford Farm is on the map and this was something we were all very proud of. Look. Here! And what is more it is underlined. I used to think that it was the printer who had underlined it, but I realize now it was more likely to have been my mother or my father. And over the years, as countless proud fingers pointed it out to countless admiring visitors, so a sort of grey haze descended upon it, making it even easier to find.' (The preliminary to describing the environs of Cotchford Farm, Hartfield, Sussex, in Christopher Milne, The Enchanted Places, London, Eyre Methuen, 1974, p.68.)

Charles Close Society visit to the Bodleian Library, Map Library, Oxford, 14 September 1991

About a dozen members attended, and were looked after admirably by Betty Fathers and her assistants. Unlike the usual *table d'hote* of CCS meetings, this was *à la carte*, in that after an introduction to the library by Miss Fathers, the visitors ordered whatever took their fancy. In addition, a number of maps had been produced in advance, of which the following are particularly notable:

The 'indiarubber' map of Aldershot (C17(26d)[2]). This is in a fragile condition, and is not normally produced, so CCS enjoyed an unusual privilege. It measures about 18 ins W-E by 12 ins S-N within the neatlines, and derives from the One-inch Old Series. Though celebrated and advertised as 'the indiarubber map', in fact a note on the plastic case which now encloses this curiosity describes it as 'textile surfaced on one side with a rubber compound'. The rubber compound is now crumbling; anyone expecting something looking like an old inner tube will be disappointed, as the surface was originally 'white', and is now a dirty cream.

1:10,000 sheet SP 08 NE, 'E 294 - 1:10,000 Derived Mapping'. This covers the centre of Birmingham and has been obtained by reduction from the digitised 1:1250 and 1:2500 plans; it is part of the intensive experiments to reduce the cost of producing the 1:10,000 by obtaining it by direct reduction from the larger scales. Although this was being tried back in the late 1960s, in the 'Bideford Experiment', no entirely satisfactory result has hitherto been obtained. This
experimental sheet has the names in the same computerised lettering as recent editions of the 1:625,000; everything else within the neatline appears 'grey', being composed of fine dots: some lines have a coarse 'jerk' effect. (No contours are shown, presumably because there is no generalising problem there.) Stipple is used for both building and water infill, and the contrast between the two is not very good. Close study produces a 'buzzing' effect. Altogether, it is a 'utility' map, but it would be much improved were it to be printed in the 'Superplan' colours.

1:1250 'Superplan', parts of quarters of sheet SP 5106. This was prepared for the OS bicentenary exhibition held at the Bodleian Library early this year, and is a specimen of what is now on offer as standard in London and an increasing number of other places. On this particular copy the contrast between the various vegetation colours in the legend was less than ideal, with 'Rough Grass, Heath' and 'Scrub, Coppice, osiers and scattered trees' appearing more similar on paper than might be expected in reality.

Second-hand booksellers
Following Paul Swindell's enquiry in Sheetlines 31, S.W. Simpson suggests the following as worth investigating, as are book and antique fairs:
Cole's Register of British Antiquarian and Secondhand Bookdealers, published annually by The Clique Limited 1990, 7 Pulleyen Drive, York, YO2 2DY
Provincial Booksellers Fairs Association, PO Box 66, Cambridge, CB1 3PD.

A round solution Following Richard Dean's drawing attention to curious field boundaries near Harrogate, ('A round puzzle', Sheetlines 31, p.46), Tim Bleasdale has obtained some information from Mr Malcolm Neesam, a Harrogate historian. The circular parcel 115, together with the adjoining hable, was awarded at enclosure in 1778 to the Crown, it being common practice for the Crown to retain control of vantage points such as Harlow Hill, which was indeed used as a lookout during the wars of 1793-1815. The land, which forms a circle described from the summit of the hill, was by the Crown sold in the late 19th century.

How up to date are the Ordnance Survey road atlases and the 'Routemaster' maps?
Guy Messenger has been investigating this matter, and wrote to the Editor on 26 November remarking: "Among the 1992 Road Atlases so far published the most up to date in respect of new roads is Bartholomew's quarter-inch, which even shows the A6 Market Harborough bypass as open which it won't be for several months yet. As usual OS Atlases trail along well in the rear." He supplies the following information on road construction in the south-east Midlands:
A6 Kettering by-pass: this was opened on 8 November.
A14 junction with A1 at Brampton: by 26 November this had been pegged out and some new fences erected.
A47: the bypasses round Caistor and Ailsworth to the west and that round Eye to the east of Peterborough have recently been opened. (The last is annotated 'Due to open Summer 1992' on 1:50,000 Second Series Sheet 142, edition B.)
A604 and A14: the former A604 from Kettering to Huntingdon has now been renumbered A14, (the latter is effectively extended, having for 69 years run only from Royston to Huntingdon). Work on converting to dual carriageway the section between the Catworth and Easton turnings has started.
Guy also points out that the A46 now consists of three quite distinct sections separated from one another by gaps of 15-20 miles while the two remaining sections of the A34 are nearly 40 miles apart.

Why, whither, why Woldingham?

The Editor was surprised to receive from one of our dealer members a dissected map titled 'Woldingham - one inch grid' on the cover. Inside is the southern part of Sheet 115 and the northern part of Sheet 125 of GSGS 3907, Second War Revision, with a sticker 'A.West & Partners Ltd. Official Contractors to H.M.Govt. 4 Abbey Orchard St., Westminster'. The dealer asks: 1, Why Woldingham? 2, Whither Woldingham? 3, Why the expense of crushed morocco for such a map? After some 26 years of intermittent residence in Woldingham, and over 30 years of interest in OS maps, the best explanation that your Editor can come up with is that it was prepared for a local resident at some time during World War II. The local resident was presumably patriotic enough or stingy enough not to insist on using parts of Sheets 114 and 124 so as to have Woldingham in the centre of the map, instead of well up in the north-west. Between 1940 and 1945 almost all civil OS map issues were paper flat, but amateur folding is sometimes met with, and also professional dissecting; several Sifton Praed examples have been seen. (Presumably map mounters were a form of labour which wasn't directed into something else!) However, the Editor would be interested to hear of any instances apparently comparable with this 'Woldingham' example. He would also be interested to learn of any cases comparable with his copy of GSGS Second War Revision Sheet 132, which has been dissected and stuck on top of a copy of Popular Edition sheet 115, edition 8.21! The job has been very neatly executed.

Jinxed?

Following the remark about the duplication of the name 'Linkslade' on one state of 1:50,000 Second Series Sheet 164, edition B, in Sheetlines 31, Chris Higley writes to draw attention to the writing of the name 'Bucknell Lodge' in the same square, SP 5523, on One-inch Seventh Series Sheet 145, in editions A to A/// inclusive, where it appears as:

Bucknell Lo
Lo

'This co-incidence makes me wonder if this bit of country is jinxed', Mr Higley adds. It is certainly curious that the same fundamental and, to say the least, highly unusual error should occur twice in so small a tract of country? Does anyone know any other examples?

Congratulations are tendered to our member, Major Brian Frost, R.E., on being awarded the M.B.E. in the New Year's Honours List.

Cartographic discoveries

Quarter-inch county indexes using boundaries from the 'Index to Tithe Survey'

Bill Batchelor draws our attention to another of these, this time a combined one of Hertfordshire and Middlesex, published in 1886, and retaining tithe-derived boundaries in Hertfordshire. One wonders if it is a redated reissue of earlier material, as by 1886 the 1:2500 survey of Hertfordshire, and consequently of its boundaries, was long since complete.

A Quarter-inch Fourth Edition cover

A copy of Quarter-inch Fourth Edition (with National Grid), printing 20,045/Ch, has recently come to hand. The cover is the usual basic H.96.2.a, but differs from the normal pattern in three respects: (1) top right is '11' (rather than 'England & Wales sheet 11'); (2) the index-map uses the pre-1940 style of lettering, rather than the usual Times Roman, for placenames, (3) the revision and publication dates on the cover are '1938' and '1939' respectively, (rather than 1930 and 1945, which also appear on the map inside). The card used for the cover is of rather poor quality, and so presumably this is a first issue of August/September 1945. It is possible that sheet 12 of this Edition appeared in a similar cover, as it was published simultaneously; were there any others?
The Half-inch Second Series

It is well known that the only sheets published of this family were 28, 36, 39, 43 (as 'Greater London') and 51, (as a 'Provisional Edition'), together with fragments of Sheets 29 and 34 as part of the Snowdonia Tourist Map of 1966. The 'job files' for this series have recently been transferred to the Charles Close Society, and enable the mortal remains of this ill-fated project to be assessed. As well as a set of proofs of the Sheffield/Rotherham experiment of 1946-7 (already known from PRO OS 1/351), there is a complete colour-proof of Sheet 37 of July 1960, and a proof of July 1948 of part of Sheet 50, covering an area within 495-535 km E and 100-120 km N, with outline in black and building fill in grey only, in the style (with handwritten names) used for the Sheffield experiment and the published Sheet 51. There is no evidence from these 'job files', which give the instructions for the various stages of producing these maps, that any other Half-inch Second Series sheets were printed. (Incidentally, they show that apparently the difference between the A and A/ editions of Sheet 36 is that the latter adds a golf course symbol at SO 841754!) Although there is no proof copy of Sheet 43 in its numbered form in the 'job' file, one such has been reported in a private collection; and as 'Greater London' this sheet was actually reprinted circa 1970, apparently in conjunction with research into a metric replacement for the One-inch Seventh Series, with most of the footnotes removed.

The 'King Alfred map' found It will be recalled that in discussing the 'Killarney' and other experimental maps of 1913-14 Brig. H.S.L. Winterbotham once wrote: 'There are, at the Ordnance Survey office in Southampton, some perfectly beautiful examples of that time in colour printing. There is one of Somerset, for example, which would have been of the greatest value to King Alfred in his western battles with the Danes, for the features stand out so that no man can misunderstand.' Your Editor was not doubt not alone in assuming that these unpublished specimens were all destroyed by enemy action on 30 November and 1 December 1940, along with the Colby papers, O.G.S. Crawford's private library, one of the Ramsden theodolites, and other victims of dental parades and the like. In fact, what, in default of a further discovery, is evidently the 'King Alfred' map, has now turned up in a private collection, having been purchased at the auction of a library. So far as the content is concerned, it is the same as Popular Edition Sheet 120, and indeed it bears this number top right. The publication imprint is the same as the Popular, except that the printing date is '1916'. It is printed in nine colours: outline, black; water outline, blue; water tint, light blue; contours, grey; woods, green; main road infill, red; other road infill, orangish; hachures, off-black; ground tint, brownish yellow. Your Editor's interpretation is that it was produced in 1916 as a cheaper alternative to the 11- or 12-colour style exemplified by the two Aldershot sheets and 'Sheet 145' of 1914, in preparation for printing the maps which eventually emerged as the Popular Edition from 1918 onwards, but it is also of interest in anticipating the Fifth (Relief) Edition in the combination of hachures with a ground tint, (a scheme modified in the later map by turning the ground tint into over-subtle hypsometric tints). Certainly, 'the features stand out so that no man can misunderstand.' There is, however, a small remaining mystery: this 1916 version has a flat tint for the sea, whereas the earlier printings (1918 onwards) of the published Sheets 119 and 120 have hypsometric tinting of the sea, which seems somewhat illogical in view of its denial on land, where it would surely have been rather more useful for the great majority of map users. One other feature of this 'Sheet 120' which is common to 'Sheet 145', but not to the two Aldershot sheets is the retention of parish names (but not boundaries) where they were not duplicated by a settlement name: a good idea which might with advantage be revived, particularly in Wales where many of the ancient parish names do not correspond to any placename.

(Sheetlines is indebted to David Archer, Bill Batchelor, Roger Hellyer and Mr Mole for this information.)

New maps

*Ordnance Survey:* new publications between 1 August and 30 November 1991 included:

*Conventional paper maps:*
1:25,000 'Pathfinder', revised sheets: 84 (NC 42/52); 471 (NT 02/12); 672 (SE 24/34); 1054 (TM 23/33) (all edition B).

*World Maps, 1:50,000: St Lucia (6th edition)*

*Street atlases:*
North Hampshire Street Atlas: ISBN 0 319 00241 1
South Hampshire Street Atlas: ISBN 0 319 00242 X

Both are at 1:18,103 (3.5 inches to 1 mile) scale and cost £10:99 each.

*The Godfrey Edition:*
Between 1 September and 15 December 1991 coverage was extended to the following: Amphill; Barrow in Furness; Bishop's Stortford; Chorleywood (Herts); Greenford (Middx); Hoddesdon; Hoylake & West Kirby; Ironbridge; Richmond (Surrey); Salisbury; and additions have been made to the London, Liverpool and Portland groups, *inter alia.* Two Irish 1-inch 2nd editions have been issued: 44 and 46, bringing the total thus reissued to five (32, 44-6, 57). Sheet 44 is notable for bilingual notes, by Séamus MacAinndaidh; *Jesmond & Heaton 1859* is the official Godfrey Edition tenth anniversary issue.

(Catalogue: 57-8 Spoor St, Dunston, Gateshead, NE11 9BD)

**Ordnance Survey of Ireland: archives**

Recently three groups of archives have been transferred from the Ordnance Survey Office at Phoenix Park to the National Archives, Four Courts, Dublin 7. The first group are the administrative archives which were the main source for J.H. Andrews' *A Paper Landscape.* They are now available for consultation, and the series are as follows:

<table>
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<th>Series</th>
<th>Description</th>
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<tbody>
<tr>
<td>OS 1</td>
<td>Progress reports and monthly returns</td>
</tr>
<tr>
<td>OS 2</td>
<td>Correspondence registers and indexes to registers, 1824-1952</td>
</tr>
<tr>
<td>OS 3</td>
<td>Registered correspondence, 1824-46</td>
</tr>
<tr>
<td>OS 4</td>
<td>Registered boundary correspondence, 1824-46</td>
</tr>
<tr>
<td>OS 5</td>
<td>Registered correspondence, 1847-90</td>
</tr>
<tr>
<td>OS 6</td>
<td>Registered correspondence, 1891-1935</td>
</tr>
<tr>
<td>OS 9</td>
<td>Correspondence with Board of Works, 1874-92</td>
</tr>
<tr>
<td>OS 10</td>
<td>Confidential correspondence, 1909-48</td>
</tr>
<tr>
<td>OS 11</td>
<td>Military correspondence, 1886-92</td>
</tr>
<tr>
<td>OS 12</td>
<td>Office circulars and memoranda, 1876-94</td>
</tr>
<tr>
<td>OS 31</td>
<td>Reports on boundaries, 1820s-30s</td>
</tr>
<tr>
<td>OS 32</td>
<td>Letters of Information (Notices), 1820s-30s</td>
</tr>
<tr>
<td>OS 33</td>
<td>Meresmen's certificates, bonds and requisitions, 1820s-30s</td>
</tr>
<tr>
<td>OS 95/1</td>
<td>Templemore memoir project: source material</td>
</tr>
<tr>
<td>OS 95/2</td>
<td>Templemore memoir project: graphic material</td>
</tr>
<tr>
<td>OS 95/3</td>
<td>Templemore memoir project: manuscript drafts</td>
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<td>OS 95/4</td>
<td>Templemore memoir project: printer's proofs</td>
</tr>
<tr>
<td>OS 96/1</td>
<td>Memoir project (other than Templemore): source material</td>
</tr>
<tr>
<td>OS 96/2</td>
<td>Memoir project (other than Templemore): graphic material</td>
</tr>
</tbody>
</table>

(A detailed list is available in the National Archives reading room.)

Also transferred, but not yet numbered, are: boundary alteration report books; boundary letters; and original and duplicate computations. The second group comprises all the copper plates and remaining litho stones, which areouthouse at Upper Dominick Street, and have been sorted by edition and sheet number. The third group comprises working documents of the 6-inch Townland survey: content registers, levelling registers and trig. books. These will be arranged and listed by OSI staff working at the National Archives. When that work is completed, further work on the remaining 6-inch materials is intended.

(Sheetlines is indebted to Frances McGee of the Irish National Archives, via Roger Hellyer, for this information.)

Additions and corrections

To Sheetlines 31: on page 48 Major-General Brian Irwin was demoted to Brigadier, by oversight; our apologies.

To Richard Oliver’s Guide to the New Popular Edition, etc:
page 26, Lake District, edition 3631: a version with ‘Price 3/-’ only has been reported, i.e. presumably printed in or after 1956.

To Richard Oliver’s Seventh Series Guide:
page 26, sheet 72, edition A/1: price/colour in column 8 should read ’10E’.
page 47, Peak District, edition A//1: a 10tg printing has been reported.

(Thanks are due to Philip de Paris and Roger Hellyer for drawing attention to these.)

Puzzle Corner

Brian Adams supplies us with the following: Which One-inch Popular Edition sheet of England and Wales is not filled to the neatline?

The answers to the two puzzles in Sheetlines 31 (page 53), is as follows.

The definition of an island devised by James Kenward\(^2\) circa 1920 was ‘a piece of land from which the water could be seen all round. If it was flat it ought not to be larger than a fair-sized farm, but if there was a hill in the middle it might be up to a dozen times as large.’ By the late 1950s (and not part of the original puzzle!), ‘I do not insist upon this definition nowadays, as it rules out a number of indubitable islands such as Lundy and the Isle of Wight, but I approve of it in principle because it matches the legal idea that justice must not merely be done — it must be clearly seen to be done. Any piece of land clearly differentiated from its surroundings is an island, one’s own garden, for example, or the grounds of one’s preparatory school.’

The reason why in December 1989 the 1:25,000 ‘Pathfinder’ series was announced as complete yet in July 1991 Pathfinder Sheet 109 was announced as a first publication is that Sheet 109 is a combination of two formerly independent 10 x 10 km sheets, NG78 and NG79. As Bill Batchelor remarked, old Pathfinder indexes can suddenly come in useful!

Research in Somerset using the Ordnance Survey

by John Bentley

Starting in 1980 Mr Brian Murless and I, on behalf of Somerset Industrial Archaeological Society, set out to find all surviving turnpike and other local roadside relics. This was initially spurred on by the revision of Listed Structure lists; Avon was excluded for practical reasons, but the following comments do stray beyond the county boundary. A good selection of Ordnance Survey sheets, from One-inch (1:63,360) to 1:2500, was available locally and gave a good idea where to look; milestones set up to guide travellers are now anything but obvious, and can only be hunted in winter when undergrowth is low! Our suspicion that it was not all that easy was confirmed on finding a 1:2500 sheet with a note 'Reconstituted from former County Series plans and revised, December 1970'. The milestone shown in the middle of the A.361 carriageway suggested that the OS was not unduly concerned about such trifles, a view courteously confirmed by Southampton! Some removed during the 1940 invasion scare were still being transferred off 1904 1:2500 Second Edition sheets (some postdate the First Edition) but elsewhere those surviving had been deleted. Some County sheets had been revised by 1939, but probably only for major changes. Some objects are now on the opposite side of the road, and most will have shifted slightly due to carriageway widening, but not enough to affect National Grid references; the relation between the grid and the topography differs slightly on different scales at different times, but not by enough to cause trouble.

The scope of research soon widened. Which roads were turnpiked? Where were they to start with? Old maps were needed, including the one-inch Old Series, surveyed around 1810 in this area. The handiest version to use was the late state reproduction by David & Charles, but fortunately Harry Margary's early state facsimiles gradually appeared for comparison. This was a rude awakening! We knew that no systematic revision had been undertaken, and that the early nineteenth century saw the greatest surge in road construction since the Romans, mostly by the turnpike trusts, and by 1880 some two thirds of this was either shown incorrectly or omitted. Dr J.B.Harley's comments on David & Charles sheet 74 (original sheet XXVII) confirm that the standard of the initial survey in the South West was definitely poor - standards improved later! - and the later sheets in other areas will also have picked up more new and altered roads in the first place. Nevertheless, these early maps represent a very creditable effort by an understaffed and underfunded organisation frequently hampered by military and political interference.

The interest lies not so much in the many changes which were never incorporated during revision as in those which did make an appearance in some form. The standard of the original survey was such that the distance between two points is usually within a quarter of a mile or less of the correct figure over, say, five miles. Orientation of minor roads is sometimes badly adrift. Accurate insertions of amendments on to a rather inaccurate base map would not be easy, but some of the errors seem quite incomprehensible and the information gathered by the OS must sometimes have been most peculiar. The area studied is on sheets XVIII (84), XIX (76), XX (75), XXI (83) and XXII (74), (David & Charles numbers in brackets).

Except for the short length north of Timberscombe, the whole of the Minehead - Bampton road, A.396, was new and was crudely added roughly in its correct position, but on an alignment more appropriate to a motorway than to the tortuous route along narrow valleys that actually exists. Conversely, A.303 exhibits the opposite tendency, the actual near straight road from the Devon boundary at Marsh to Horton Cross just west of Ilminster being shown as a succession of wide, sweeping (but imaginary) curves. At the other end of the county, the 1820 length straddling the Dorset boundary at Bourton (ST 750300 to ST 764303), which is virtually straight, is shown dipping too far south in a series of tight reverse curves along an old lane. Smaller bad examples include A.39 (ST 105419 to ST 120426), A.378 (ST322232 to ST 343231), and B.3168 (ST 357147 to ST 362159), but many others are good or at least tolerable. A general criticism is that, except for long, completely new routes such as A.396 and B.3227 (recently
demoted from A.361) from Wiveliscombe to South Molton, superseded roads are still shown as main whether or not they continued to exist at all, whilst the improvements are often shown merely as minor roads. Castle Cary is mentioned below in connexion with the railway, but other examples are A.30 at Crewkerne (ST 4309) and B.3190 at Watchet (ST 067427).

Sheets XX and XXVII in the David & Charles versions (75 and 74) show the coastline as re-engraved in 1838 using Admiralty charts of 1832. The OS map did not, of course, fit exactly, but coastal towns are unchanged and there are few intermediate roads to worry about. However, at Blue Anchor (ST 033435) the road junction has been shifted eastwards, severely distorting both B.3191 and the road to Chapel Cleeve for no apparent reason.

Exmoor somewhat naturally shows no change, nor would any improvement to A.39 west of Minehead be expected. It is better presented in the re-engraved coastal strip east from Lynton, but only two road additions have been found on sheet XXVII (74): A.361, Barnstaple - Braunton, and B.3230, Barnstaple - Ilfracombe, both Barnstaple Turnpikes and both reasonably accurate, though distorted due to a rather poor initial survey of the area. Another area bereft of main roads is around Weston-super-Mare, which was never of sufficient importance for roads to be provided at the time, except for one very late and very short suburban turnpike. A.370 is largely post-1920.

Canals can be dealt with quite briefly; some predate the original survey and are shown, although sometimes obscured by later change. Some others, built later, escaped notice. The Bridgwater and Taunton Canal is reasonably well shown, but the northern extension of 1841 to the Bridgwater docks is omitted. The Grand Western Canal, Taunton to Tiverton, opened in sections between 1812 and 1838, is shown, but inaccurately between Holcombe Regis and Tiverton (the earliest bit). The Glastonbury Canal is a mess: opened in 1833 it closed soon after the Somerset Central Railway opened in 1854, but survived to be shown (correctly) on One-inch Popular Edition Sheet 120 of 1918. The Old Series makes no distinction between roads, canals and drainage rhymes so is difficult to interpret; fortunately it was not available to the army at the Battle of Sedgemoor, or the Duke of Monmouth would probably have won! The west end of the canal, to the junction with the River Brue, is in fact shown correctly but only part can be identified from the map. The central length runs alongside the (later) railway and the South Drain between Shapwick and Ashcott & Meare stations. Here the South Drain, south of the railway, is named 'Old Canal' whereas the actual canal, north of the railway, is omitted altogether. The final length thence to Glastonbury is totally spurious, both canal and railway actually being on a completely different alignment further north. The small Westport Canal is omitted.

Railways have mostly been added with commendable skill - but often that is all that was done. Associated road diversions tended to be ignored, sometimes showing no means of crossing. Errors may sometimes be due to deviations from Parliamentary (?) plans.

Sheet XVIII 1865 (reproduced as David & Charles 84). The railways seem to be almost faultless. A minor crossroads was destroyed by the railway at Corkhill (ST 6231) and the diverted roads are omitted.

Sheet XIX, 1890/93 (reproduced as David & Charles 76). The line of the Somerset and Dorset Railway (ex Somerset Central Railway) is completely wrong between Glastonbury and Ashcott: see above under Glastonbury Canal. It is also wrong east of West Pennard. Further north it is a bit odd between Radstock and Wellow. Where the S & D crossed the GWR near Bruton, a spur is shown connecting the two: this was never built due to disputes, mainly about gauge! The northern part of Frome is shown as severed from the centre by the omission of a vital road diversion at ST 779484. Similarly, no crossing is recognisable east of Bruton at ST 705364 although the road diversion is partly shown: there is a strange blank spot on the map as if further work was meant to be done, but never completed. (Or was the plate very worn?) Castle Cary station involved closure of the road past the site, now A.371. The necessary road diversions are
shown, but only as minor roads, while the severed main road is still shown as the main through route!

Sheet XX, 1866 (reproduced as David & Charles 75). The West Somerset Railway is badly aligned between Bicknoller and Watchet. See sheet XXI for trouble further south. The extension, Watchet to Minehead, was too late for inclusion in 1866 but was added subsequently. The West Somerset Mineral Railway southwards from Watchet should have been added but was not, until later. Both were eventually shown correctly. The Weston-super-Mare loop also appeared in post-1884 printings.

Sheet XXI, 1890, (reproduced as David & Charles 83). As mentioned earlier, A.396 is very crudely shown, so there is no room left between road and river for the Bampton - Exeter railway line at SS 9418, resulting in four imaginary river crossings. The West Somerset Railway in the Bishop's Lydeard - Combe Florey area is in the wrong place, due to an OS attempt to align it relative to a turnpike road system destroyed by emarking 33 years earlier - unnoticed by the OS! There is another missing railway crossing link at Forton (ST 341070). At the west end of Taunton station the road is shown over, instead of under, the railway.

Sheet XXVII, 1890, (reproduced as David & Charles 74). The North Devon Railway was added to OS about 1863, but the Ilfracombe Branch did not open until 1874 so is clearly a later addition. Local survey inaccuracies have forced some distortion, but it is basically correct.

Our research was concentrated on roads likely to produce results or an interesting history, so cannot produce a total list of all changes noted or missed out by the OS, but the general picture is probably clear. Inclosure Awards were not studied except where involved with turnpike roads, and these did produce changes to the road pattern. One new road spotted incidentally but omitted by the OS is from Broadway to Bickenhall (ST 3115 to ST 2818) through the old Neroche Forest, made in 1833, 2.75 miles, plus 4.25 miles of associated side roads through the area. The survey of Exmoor was not to a sufficient standard to permit updating and many tracks/roads are too crudely shown to allow positive identification, let alone insertion of amendments. Greenwood's Somerset map of 1822, immediately after Inclosure, is more reliable.

Appendix

Ordinance Survey One-inch Old Series - late printings - assessment of updating

Substantial changes only are noted. Road/rail crossings are often not shown properly, but only a few examples are listed here. Dates are approximate.

A.30: Devon boundary to Chard, 3.5 miles: correct. West of Crewkerne (ST 4309), pre-1840, 0.5 mile: correct, but old road still shown as main. Crewkerne to Yeovil, total of new road 2 miles: correct. Babylon Hill, Dorset, 1830, 1 mile: correct. Milborne Port, Dorset boundary, 1823 (ST 7018), 0.5 mile of 2 mile diversion new: omitted.

A.36: Woolverton to Bath, 9 miles: correct.

A.37: North of Yeovil, 1852 (ST 5418), 1.75 miles: omitted. 1822 (ST 6137), 0.5 mile: omitted. North of Shepton Mallet, (ST 6247), 1842, 1 mile of 2 mile diversion new: omitted.


A.39: West of Bridgwater, except for 0.25 mile at Carhampton, new roads are shown, but the main change at West Quanoxhead (ST 105419 to ST 130427) is not correct. 0.5 mile at ST 2638 is shown correctly. Glastonbury, south (ST 4938): correct. Wells (ST 550464), 1833,
0.25 mile: omitted. Pen Hill, north to ST 569489, 1.5 miles: omitted.

A.303: Devon boundary at Marsh to Horton Cross (ST 336151), 1807-20, 5.75 miles. Shown, but not as built. Seavington St Mary (ST 4015), 1827, 0.75 mile: omitted. Bourton, Dorset, new road, 1820 (ST 7530), 0.75 mile: wrongly shown.

A.358: Catherine Wheel to Horton Cross (ST 3315), 1805, 0.75 mile: omitted. Bishop’s Lydeard to Yard Farm (ST 157326), 1829-39, 2.75 miles: omitted, which caused the railway to be wrongly shown. Halsway (ST 129375) to Sampford Brett, 1829-39, 3 miles: omitted.

A.359: Diversion for railway, Sparkford (ST 6026), 0.25 mile: omitted. New road, Wanstraw (ST 7141), 1810+, 1.75 miles: correct.

A.361: Bullaford, Devon (SS 809258) to Wiveliscombe, 1825, 19.25 miles, mostly reasonably correct. (Road recently renumbered as B.3227.) The new bridge at Burrow Bridge (ST 3530), 1824, eliminated the kink. Long lengths had been realigned by enclosures and turnpikes shortly before the OS survey. Charlton to Douling (ST 6342): new road at Charlton, 1835, too close to the old road to show, but extended on to Douling in 1870, 1.25 miles: omitted. West Cranmore (ST 665434), tramway under road, 1870: omitted. Dean to East Cranmore (ST 6744), 1828, 1 mile: omitted. Mere head (ST 6943), 1830, 0.5 mile: omitted.

A.362: Terry Hill (ST 7053), 1836, 1 mile: omitted.

A.367: NE from crossroads, ST 630464, 1842, 0.5 mile: omitted. Nettlebridge, ST 6548, 1830, 1 mile: omitted.

A.371: Dinder (ST 577443) to Shepton Mallet, 1856, 2 miles: omitted. Castle Cary station (ST 6333), 1856: the railway closed both main roads, now A.371 and B.3153, but both are still shown as the main routes, while the diversions are only shown as by-roads. South of Hadspen House, diversion (ST 6630), 1830, 1 mile: omitted.

A.378: Rock House diversion (ST 3323), 1834, 1 mile: shown, but on wrong alignment and 0.5 mile too far west. (The deposited plan shows yet another totally different version!)

A.396: completely new road, Timberscombe (SS 9542) to Bampton, 1825, 19.5 miles, also Bampton to Tiverton, 1820, 6 miles: very crudely shown, forcing the OS to move the railway across to west of the river twice - four imaginary bridges! (SS 9418). Road junctions wrong at Exebridge.

Old A.3088: new road, Montacute to Houndstone (ST 5116), 1828, 1 mile: correct.

B.3081: Stoney Stoke (ST 7132), 0.35 mile: cut-off to east far too long.

B.3136: Waterloo Road, Shepton Mallet (ST 620444), 1826, 0.25 mile: omitted.

B.3139: diversions both east and west of Kilmersdon, 1837: 0.25 mile new road on east probably too close to old to be worth amending; from ST 698523 to ST 705528 the old turnpike ceased to be a public road, but still shown as main route, while new turnpike, now B.3139, was an extensive realignment incorporating old lanes: all changes omitted.

B.3152: northern extension (ST 636324 to ST 633331), 1856, linking town to railway station, 0.5 mile: omitted. See also under A.371 for general muddle.

B.3153: short diversions at Somerton (ST 495287), c.1830, and at ST 512292, after 1839: omitted. Diversion at Castle Cary is unclear: see A.371.
B.3162: Winsham (ST 3706), new road from Chard 1862, 0.25 mile, and new road westwards, 1829, 0.25 mile: both omitted.

B.3165: diversion (ST 4614), after 1822, 0.25 mile: omitted.

B.3168: Ilminster, new road to north from ST 357147, 1822, 1 mile: shown, but northern half wrong. Hambridge, short improvement (ST 3921): correct.

B.3170: new road, Corfe to Brown Down (ST 234187 to ST 228150), 1840, 3 miles: omitted.

B.3188: Elworthy to Monksilver (ST 082350 to ST 074375), after 1806, 1.5 miles, part use of old tracks: omitted.

B.3190: at Watchet (ST 067427) the new road, 0.25 mile, is correct, but the abandoned old road on the east side is still shown as the main route.

B.3191: at Watchet the junction with B.3190 at Five Bells (ST 066423) has been added, although distorted. The old direct Leechway, north from ST 0744418, was closed in 1816 but still exists as a track or footpath: as it is not shown as a main road, this is OK. At Blue Anchor (ST 033434) the road layout has been re-drawn, presumably in connection with the revision of the coastline, but here giving a grossly distorted version of the road layout, which actually remains as originally surveyed.

B.3227: see under A.361 above.

Staple Fitzpaine to Bickenhall (ST 264183 to ST 283187), c.1845, 1.25 miles, built by local rector, and old road abandoned: omitted.

Curland to Bee Hive (ST 270168 to ST 274148), 1821; new road up Blackdown ridge, 2 miles: omitted.

Castle Plain to Holman Clavel (ST 266156 to ST 222160): This ridgeway, originally over unenclosed land, was ill-defined, but about 0.5 mile of its length approximates to a track shown on the original Old Series sheet. Turnpiked in 1830, it runs 3 miles westwards from the Curland to Bee Hive road: omitted.

A.30 at Devon Boundary to Wambrook (ST 268081 to ST 279081): This tortuous road, turnpiked in 1817, was later superseded by the present A.30; 1.25 miles. No part seems to relate to any of the numerous tracks on the original map. Omitted.

Pedwell to High Ham, cut-off north of Cradle Bridge (ST 4233), 1826, 0.25 mile: omitted.

Piper's Inn to Kingweston, diversion to new junction with B.3153 (ST 5230), realignment due to emparking; over 0.25 mile out of 0.75 mile is new road: omitted.

Langport to Muchelney, new road (ST 427266 to ST 429250), 1829, 1 mile: omitted.

Handy Cross to Bishop's Lydeard, new road due to emparking: see also A.358. Short diversion at ST 134312 plus new road from ST 140307 to present A.358 at ST 161304, 1826-9, 1.25 miles: omitted, causing the OS to misalign the railway later.

Taunton to Staple Fitzpaine: new road ST 252213 to ST 260205, 1821, 0.75 mile plus altered side roads: omitted.

Bruton to Maiden Bradley: extensive re-alignment at ST 705364 for railway crossing: shown, but not clear where the crossing is; re-drawing seems to be incomplete, but plate may have been
A.39. West Quantoxhead.

Bishop's Lydeard - Combe Florey.

A.358. & Railway.

A.378. Wrantage - Fivehead (Rock House).

badly worn.

Cattle Hill: This runs from Shepton Montague south to A.371 at ST 668297. The southern section was built c.1831, 0.5 mile completely new plus 0.5 mile upgraded farm access: omitted.

Spring Gardens to Frome: In 1854 the railway cut off communication between Frome town centre and the industrial and residential areas to the north. A new link to A.361 at ST 778483 was built just east of the railway, but is omitted.

Radstock to Kilmersdon and Babington Corner: this road, now partly B.3139 (see above) was extensively realigned in 1830-35 between ST 7051 and ST 7053, over about 1 mile, due both to emparking and the turnpiking of the B.3139 section: alterations omitted.

Farleigh Hungerford to Tellisford: This minor turnpike road, running south from A.366 at ST 800575, was completely realigned c.1820, due to emparking: 0.5 mile plus, omitted.

Neroche Forest, enclosure roads, 1833, Broadway to Bickenhall (ST 3115 to ST 2818), 2.75 miles, plus 4.25 miles of associated side roads: omitted.

Other enclosure roads were probably made, but have not been noted.
Parishes with scattered parts

Brian Adams’ note on the scattered county of Cromarty in *Sheetlines* 29 draws attention to the difficulties of surveying parishes with detached parts. He mentions that the parish of Glaisdale in North Yorkshire had at one time 27 parts. This is easily exceeded by the parish of Randwick near Stroud, Gloucestershire, which in 1841 had 42 parts. I have not seen the *Index to Tithe Survey* for that area but if it joins the detached parts to the centre by straight lines as is usually done, it will be very difficult to read! Randwick was formed out of the neighbouring parish of Standish in the thirteenth century and most of the detached parts are in Standish and Stonehouse parishes. Its actual area seems always to have been controversial. The figure used in the decennial census reports is 1260 acres but the first edition of the Six-inch of 1881 gives the parish area as 177.9 acres, clearly the central area only. Such parishes were the bane of tithe surveyors. The tithe survey and apportionment for Randwick were done by Charles Baker, a surveyor and architect of Painswick and Cheltenham, in 1842-44. His letter book, now in Gloucestershire Record Office, has several letters from him to the Tithe Commissioners, and copies of some of their replies, about various matters. Those about Randwick are particularly interesting. Baker had difficulty in persuading the landowners to pay his bills for the survey and related work. He wrote, ‘The parish of Randwick is notorious for being dreadfully intermixed with other parishes and consequently a great expense was incurred in ascertaining the boundaries.’ And again, ‘Considerable parts of other parishes had to be mapped...’ ‘The survey was a very troublesome one, being hilly, woody, and much covered with houses, the land being subdivided into small plots, the average being not more than 1 1/4 acres... and not having a good area of surveying to make up for the bad. The parish, as you are aware, contains 500 acres and the quantity necessarily surveyed was upwards of 1000, and in making copies of such a map as Randwick there is double trouble over a parish lying attached’.

Finally, ‘Your decision makes a difference of 9d an acre, being 1/3 off my bill.... I have always understood that in making a new survey, whether for a First or Second Class map, it was necessary to show the boundaries of all enclosures containing intermixed lands and that an allowance was made for this... Now... I am not allowed anything. I think my case is a very hard one and if I had been aware of the result I would not have undertaken the apportionment. All the surveyors I have spoken to on the subject agree with me’.

Baker’s tithe map and apportionment state that the parish contains 589 acres. There are some 417 enclosures, some of them single strips in the open fields of Standish of less than 2 roods each. The furthest detached parts are shown as being 333 chains from the centre, over 4 miles.

John Garrett

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1 *Victoria County History, Gloucestershire*, vol x, p.224.
2 Gloucestershire Record Office D 3917/2.
The Physical Maps of the Ordnance Survey
by Roger Hellyer

1. The 1:1,000,000 Physical Maps

Let me at once confess my sin of omission. While working, three or four years ago, on the Ordnance Survey (OS) period maps, I neglected to look at PRO OS 1/15/1. In mitigation I would plead that the catalogue gives as a reference 'Preparation of 1/M Physical Map 1920-26'. Had it followed the title of the file itself and added 'and Map of Roman Britain', I might have been more diligent.

But it gives us an opportunity now to re-examine the story of the making of the first edition of Roman Britain 1924 as told by O.G.S.Crawford (1955), and to look again at one of the mysteries that my period map research left unanswered: whatever happened to the first issue of one thousand that reputedly sold out within a few days at the beginning of August 1924? To this day, no-one has admitted owning one, and the obvious places to look, such as the copyright libraries, or the Haverfield Library in Oxford, all have first reprints. Could it have been destroyed before sale because of an error? We know there was one, because on 3 October 1924, Crawford wrote to Heawood at the Royal Geographical Society (RGS): 'Winbolt let me down over the Roman Map by telling me his Roman villa at Folkestone was a fort. I was v. annoyed as it appeared as such on the first thousand copies printed...'. A first issue should be recognisable both by its print code (or lack of one) and this error, because the reprints show the site at Folkestone correctly with the 'Other Civil Sites' symbol.

Development of the 1922 physical and 1924 Roman maps progressed in tandem. Crawford's account runs as follows:

Before I arrived Sir Charles Close had been talking and corresponding with Sir Charles Oman at Oxford about producing an Historical Map of England...Sir Charles told someone in the office to draw a map of the Oxford district on a scale of 1:1,000,000 and plot on it all the ancient sites of all periods that were already marked on the Ordnance maps. The result was an appalling amalgam of history and prehistory which also contained many errors...The first thing to do...was to get rid of all those...sites on the sample map...The decks thus cleared, I proposed that...we should produce a physical base-map upon which maps of one period only could be printed.²

How far, therefore, does the documentary evidence support his story?

PRO OS 1/15/1 opens with a letter from Sir Charles Close, not to Oman, but to Professor Spenser Wilkinson at All Souls' College, Oxford. References exist in the file to Oman, but they are all subsidiary to the Spenser Wilkinson correspondence, which fulfils all that Crawford suggested for Oman. Close's letter, dated 26 July 1920 (nine weeks before Crawford's appointment), includes: 'I enclose 2 proofs of the specimen portion of 1.million map of England and Wales to serve as a basis for historical studies.' He followed up this letter with another on 24 August 1920, wherein he posed three questions:

1 Will Historians accept this as a satisfactory base map for England and Wales?
2 Can you tell me if there is likely to be a sufficient demand to make it

¹ I am grateful to Francis Herbert for his transcript of this letter.
² Crawford (1955), p.162.
worth while proceeding with the matter?

3 If so, can you get a statement from other well known Historians at Oxford and Cambridge that the map should be proceeded with?

Spenser Wilkinson’s reply was encouraging. He supported the idea himself, and supplied a list of names of academics including Oman. He also enclosed possible wording for a letter of circulation to these men which would accompany copies of the specimen map. One of Crawford’s first tasks in his new capacity as the OS Archaeology Officer (AO) must have been to edit this letter, for Spenser Wilkinson’s draft includes annotations in Crawford’s handwriting which found their way into the final version. The wording describes the intentions of the map as giving the physical features, the water in blue, & the orography in contours and tints on the layer system. The county names & boundaries would be given & the names of places would be confined to those of some importance. The Roman roads would be shown...[from here on the wording is Crawford’s own]...and it would be for consideration whether the names of the principal Roman Stations should be printed also.

The specimen map is no longer on file, and no copy has been found. We know that Crawford was later scathing in his criticism of it, especially in view of its wide historical perspective, but perhaps this need not go entirely unchallenged. There is, after all, much meat both in the circular letter and the responses that it evinced. Certainly, in terms of area, it went far beyond Crawford’s reference to Oxford, and reached Stoke on Trent, Cambridge, and Ermine Street in Surrey at least. The letter was unquestionably describing a physical base map, and though the place names and county boundaries mentioned are items since regarded as irrelevant in this context, they are features that appeared on the 1922 map which resulted from this consultative process. While we have no detailed description of the overprint, it is evident that the confused historical representation that Crawford mentions was indeed applied, though perhaps it was not as widespread as he implied. John Myres commented on it: ‘the sample seems rather crowded with names; and these belong to various periods’. Oman himself replied: ‘The necessary condition would be that it should be absolutely accurate...It contains traces....of the celebrated forgery...of Dr Bertram, eg AELIA CASTRA for Alchester (Oxon). If we are to put in any mediaeval names at all, some of very high importance are left out.’ Another most interesting reply came from G. Hulme Wakeling of Brasenose College, Oxford, and one is left wondering whether this influenced Crawford’s later thinking, or whether it was coincidence. But he specifically suggested period maps, on the premise that one map cannot be a useful physical map and show historical matter. He even suggested a list of five titles.

There were many other replies, and the supplementary correspondence was conducted entirely through Close. On 2 January 1921, the Director General (DG) was in a position to write a summary and draft a specification:

Scale 1/M. Layer scheme generally as attached (ie as below)
Important battle names to be inserted
No Roman names to be inserted
All canals to be omitted
Roman roads (chief) to be put in. Put in also the chief old high roads
Put in a large number of town and place names of historical importance, such as Dorchester, Wallingford, Staines, Abingdon. AO will please select about 8 town & battle names per county
Put in names of hill ranges
Omit prehistoric camps and prehistoric antiquities generally
Put in Hadrian’s Wall
Put in Coast of France
County Boundaries in dots only
Use signs for battle, castle, abbey etc where names cannot be written.
E.O.: O.1" will please carry out this work in consultation with A.O.
A rough draught should be made first
No graticule lines across the face of the map but mark margins

This was passed to O.1" on 5 January 1921, and from it, with Crawford’s assistance, he created a full specification on 21 January (here condensed):

**Water.** Drawn on a ‘blue’ of the 10 Mile River Basin Map. The advantages of this Map are that (1) Natural Watercourses are clearly differentiated from Canals, (2) Artificial Lakes & Reservoirs are not shown, (3) The scale is convenient for reduction to 1/M

**The Coast line** to be drawn on the blue plate as in International 1/M

**River Names & names of Lakes & Marine features** (eg bays & inlets) to be in blue

**Canals etc.** All canals & artificial water ways, Lakes & Reservoirs to be omitted

**Marsh Symbol.** To be in blue as on the International 1/M & only used to indicate large areas of marsh land, eg The Fens & the Somersetshire Marshes. A.O. to supply model demarcating these areas

**Contours and relief.** Contours to be pentagraphed from the 1/4” on the water drawing. Contours to be shown at 200’, 400’, 800’, 1200’ & 2000’. Layers Colours: Below 200’- Strong Green; 200’-400’ - light Green; 400’-800’ - Brown No 1; 800’-1200’ - Brown No 2; 1200’-2000’ - Brown No 3; Over 2000’ - Super tone. Spot levels to be in brown. Trig point symbols to be omitted but heights of summits to be shown in brown

**Names of Physical Features** other than Rivers, lakes & marine names to be drawn on the Black Plate in block letters similar to those used in the International 1/M for the same purpose. Headlands, Islands, Hills etc will be shown thus

**County Boundaries** to be shown by means of a very fine dotted line on the Black plate

**County Names** to be omitted or written in very fine block Caps. AO in favour of omitting altogether

*It is a question for consideration whether it will not be expedient to make a separate black plate for Physical Feature names & County names & boundaries so that this information could be conveniently included or omitted from future Historical Maps dealing with Special Periods or Archaeological Maps for which the Physical Basis will be used.

**Historical Matter.** To be on Black Plate. This should be submitted to the 1" Dept by AO in the form of model maps, lists of names etc.

**Symbols -** (sample drawings for sites including Towns, Cathedral Towns, Abbeys, Castles, Roman Road, Old roads other than Roman, Battle Fields)

The size of the sheet at present suggested appears to be too great. The map would be unwieldy for use at a desk or table but not large enough for a wall map. I submit that the Channel Islands should be the southern limit

The differences between these two lists, and for this one must without doubt credit Crawford with great influence, are interesting. The physical aspects of the map are little altered, but are more fully developed. Even the inclusion of county boundaries and names, while questioned, is not vetoed. The important differences lie in the manner in which historical matter is dealt with. Close’s request for eight ancient names per county is ignored, and one can almost feel Crawford squirming as he read that instruction. The crux of the matter is contained in the sentence (marked with my asterisk) which qualifies the remarks on the overprint, beginning ‘It is a question’. Quite clearly, within a month, the concept of a period map confined to one historical period or archaeological subject was at the least an accepted proposition for debate within the OS. It was no longer a matter for private discussion between AO and DG, between fellow
archaeologists, but was now fast approaching official departmental policy. True, sanctioning any title remained the prerogative of the DG, and Crawford’s story\(^3\) about how he later prepared the model of *Roman Britain* before acquiring Jack’s approval is not open to doubt, but it was by no means the shot in the dark, the clear contradistinction with all previous principle, that Crawford would have us believe.

Close accepted the specification drawn up by O.1" and Crawford, and a year later the Physical Map was in print, devoid of any period content. Close sent pre-publication copies to Spenser Wilkinson, thanking him for his assistance:

> I am sending to you today two copies of the Physical Map of England and Wales on the scale of 1:1,000,000. This map was prepared in accordance with your suggestion and I hope that you will consider it a satisfactory production. After correspondence with the various authorities whose names you kindly furnished it was decided to omit all the archaeological and special historical information, and what remains is purely physical. For special purposes nothing could be easier than to overprint in another colour.

The north-south limits of the map are Edinburgh and Jersey. Jersey, the Dublin hinterland and the rivers flowing north into the Forth around Edinburgh extrude into the border. The Scilly Isles are omitted. The six layers differ from the original specification in that the second green layer was replaced by a light buff. Contours with values are in brown. The water plate, derived from the 1868 ten-mile map of Rivers and their Catchment Basins, carries coastline and rivers, with names in italic lettering, but no marine contours. On the black plate are summit heights, county boundaries, stipple for sandbanks, names of physical features, all in upright sansserif lettering in accordance with IMW practice, and important placenames with associated dots. There is also a graticule, coupled with a cumbersome alpha-numerical system, with two Roman numerals across and two lower case letters down per graticule. This fanciful scheme would seem to have been invented for period map use, though even on *Roman Britain* 1924 it had been abandoned in favour of a simple conventional system. Latitude and longitude values are in the border. A physical features map was also published, employing all but the black plate, so it has no title or publication details.

The Physical Map plates were used for *Roman Britain*, not with an overprint in another colour, but with one black plate exchanged for another. Coastal marine contours at five and ten fathoms were added to the blue plate: it was decided by May 1922 that these should be included on future reprints of the Physical Map, and the work was probably done independently of the preparation of *Roman Britain*. Application for drawing this was made on 28 March 1923. The only additional problem was the Roman wall running between Clyde and Forth, which was beyond the northern limit of the map. It was decided to add this to the black overprint plate, inset in the top right hand corner, and the area was blanked off from the sea plate. This blank area, and the marine contours, appear on the physical features map, evidence that this version must have followed *Roman Britain*. Ellis Martin began his famous Roman mosaic cover design in July 1923. 1000 copies of the map were printed in July 1924 and it was ready for publication at the beginning of August.

Crawford modestly suggested that newspaper publicity assisted in selling the map, but whatever the cause, a reprint of 1500 was already required by August 1924, a further 2000 in October, and a third reprint of 1000 in June 1926. The complete failure so far to locate a first issue has tempted me into thinking that, with its error, it may have been quietly destroyed. But I cannot believe that Jack would have permitted such action, and anyway, sales figures dated 29 July 1926 survive which tell us that by then 128 paper flat copies and 2895 paper folded copies had been sold, plus 1181 on cloth and 200 dissected. This totalled 4404, and there were a further 1000 on the trays, a total which accurately reflects the print runs given above. Unless the 1000

\(^3\) Crawford (1955), p.163.
stock copies were the first issue held back, they must have been sold. Furthermore, the sales figures tell us that at a unit cost of 9d for printing to paper flat stage, plus letterpress costs, against a net selling price of 1/8d, a profit was left to the OS of 100 per cent.

Crawford's reaction to this stunning success was typical: he immediately asked permission to prepare a second edition. His first approach was as early as 15 August 1924. He intended a more ambitious project, showing further detail, and he would be seeking the assistance of colleagues outside. Permission was granted, and Crawford prepared a circular for distribution explaining the new parameters. On 8 September he wrote again to the Executive Officer, this time asking for changes to be made in the Physical Map itself:

May authority be given for the Physical Map to be extended 2.5 inches further northwards, when the time comes to publish a second edition of the Map of Roman Britain? This extension is very desirable, as the map will then include the whole of Roman Britain, and the Northern Wall will not have to be shown as an inset. There is a Roman road & a row of signal-stations along it in Perthshire which will be included.

First reaction was that this would be expensive and unjustified. Nonetheless Jack had the matter investigated, and it was found that the extension could satisfactorily be achieved on the existing negative, though new colour plates would be required.

Interruption to these developments occurred late in 1925 as the first sheet of the new ten-mile map drew close to publication. Crawford was immediately attracted to a possible physical version of it as the base for his next Roman Britain. Withycombe (1925) described how such a map might be achieved:

The Roman information will be incorporated on new black plates which will be used with the water and contour plates instead of the present outline.

Though the idea of a ten-mile Roman Britain was abandoned in June 1926, the possibility of the ten-mile physical map lingered, especially with the future of the 1922 1:1,000,000 map in jeopardy. Not only was it an unsatisfactory base for Roman Britain, it had not proved entirely satisfactory as a physical map either. A letter from Dr J.E. Morris on 18 November 1926 was to prove pivotal. In criticising the 1922 map, he suggested deletion of placenames and location dots, and interpolating contours at 100 ft intervals. The OS seems immediately to have decided upon the map's revision, and on 4 December recommendations were put to the DG on how to proceed with the physical and Roman maps. There should now be a Physical Map of Scotland as well:

The new map of Roman Britain is to be extended 4-inches north in order to include the portion of Scotland in which Roman remains occur. The contours and water in this area will have to be drawn.

As the 1/M scale has now been decided on for the standard Physical Map and it is desirable to publish a Physical Map of Scotland, I suggest (a) that this shall be prepared in the same style as that of England & Wales omitting all town names and symbols and adding submarine contours, (b) that the Physical Map of Great Britain be revised - town names and symbols removed and submarine contours added (these are already on the Roman Map), (c) that the new Roman Britain map be made up from these two as far as the physical work goes, and that the drawing of the Roman Black Outline be corrected, extended and photographed.

If authority is given to produce the Physical Map of Scotland (1/M) the work can be put in hand at once.
On 8 December 1926, Jack approved all these recommendations, and work began immediately on all three maps. An enquiry was also initiated, both internally and by correspondence with geographers generally, as to the use made of physical maps both professionally and in schools, and to discover whether there was a place also for a physical map at the ten-mile scale. It fell to Lt Col. G.S.C. Cooke, as it happened one of Morris’s ex-schoolboys, to correspond with Morris, and conduct this debate, which continued through late December 1926 and January 1927. It soon became quite clear that the market could not sustain fully developed physical maps at both scales. For school use the 1:1,000,000 was preferred, and with the OS already committed to this anyway, the ten-mile idea was dropped.

As the draft specification had indicated, Morris’s suggestion that place-names be deleted from the 1:1,000,000 physical map was implemented immediately. County boundaries also disappeared. Provision of interpolated 100 ft contours required some experiment, but on 13 December 1926, in a letter to Hinks at the RGS, the OS pronounced them a great success - so much so that they also decided upon a 50 ft contour line in eastern England. Proofs were circulated in January 1928 with contours in red, but after sounding out opinion from Morris and others, the DG decided to publish the maps without contours.

Both sheets of the Physical Map have the same dimensions at 29 ins x 21.5 ins. They carry titles in the new Withycombe alphabet, and may be the first to do so. The England & Wales sheet is a revised version of the 1922 map, with identical sheet lines including the extrusions. Submarine contours at 20, 30, 40, 50 and 100 fathom depths, and more names, were added to the blue plate. There are nine coloured layers, in sienna where the 1922 map had been brown. The 50ft level was included for the eastern areas. The summit layer over 4000ft (on the Scotland sheet) was left uncoloured. The layer bar was brought within the border, overlaying France. More summit heights and physical features names appear on the black plate, which was further revised beyond the neatline with the loss of the alpha-numerical reference system, but with redrawn graticule values and a decorative border. There is a generous overlap between the sheets, with the Scotland sheet offset well to the west, which incidentally also allows coverage of the greater part of Northern Ireland.

No reprints of either map are known, though there was in 1929 a corrected reprint of England & Wales. Bridgewater Bay was altered to Bridgewater Bay. But it is better to consider this an entirely new map, since the copies seen have relief depiction of hills, together with the discarded 1928 contour plates (with contour values), rather than layers. This appears in fact to have been the completely unheralded prototype for the technique of relief that adorned the One-Inch Fifth Edition two years later, followed by the Half-inch maps of the Cotswolds (1932), Skye (1932) and Birmingham (1934). I have been unable to discover whether there is a partnering Scotland sheet. Further revision of the Physical Maps was considered in 1931, when comments were invited from geographers on the names placed on the map, but the economic problems of the time prevented any action being taken.4

The 1929 corrected reprint was used several times as a base for period maps, and the two Woodlands and Marshlands of England maps.5 The contours survive, but there is no hill depiction by layers or relief. The period maps are all layered, and uncontoured.6 Some copies of the uncorrected 1928 England and Wales Physical Map were overprinted...

with approximate lines of equal magnetic variation plotted at 15 minute intervals together with the positions of the stations the magnetic value of which have been determined and the value of each station for 1927 (i.e. the differences in degrees and minutes between the Magnetic and True North).7

4 Willatts (1943b).
5 In Wilcox (1933).
6 See the list below, and Hellyer (1987), (1989).
This magnetic survey was carried out by G.W.Walker in 1915, and the OS from 1925 to 1927. The OS continued surveying until 1932, and in 1933 published a new edition of the map with a completely redrawn overprint, and a partnering Scotland sheet. The values, now at one-degree intervals, were adjusted to June 1933.

The 1928 Physical Maps were to have a postwar metamorphosis. In 1948, the new AO, C.W.Philips, decided to use as the base to his planned third edition of Roman Britain the forthcoming two-sheet 1:625,000 Physical Map, expected in 1950. One consequence of the delay, and final cancellation, of this map (see next section) was the need to reconsider the Roman Britain project from first principles. The result was the creation of a new physical map at 1:1,000,000, specifically for the use of the Archaeology Department. It was authorised by the DG on 16 January 1953. Its development was quick, partly because the problem of a modern physical name plate did not arise - which may account for why it never appeared as a map in its own right. The map is derived from a combination of the 1928 Physical Maps. Top and bottom of the original sheets were removed, leaving only the Great Britain mainland. The eastern border was formed by extending the England & Wales sheetline northwards. The western sheetline falls slightly beyond the western edge of the old Scotland sheet, in order to encompass the whole of the Northern Ireland province, since it was anticipated that the Ordnance Survey of Northern Ireland would take part in the publication of period maps. This was not to be, and the island was left uncoloured. The Orkney and Shetland Isles were inset, and the Scilly Isles were introduced, breaking the southern border. What survives of France is layered. Layer colours were adjusted, and the layer box relocated. The offshore fathom lines were cleared. Accidentally swept away with these was the island of St Kilda. This was only reinstated after the first issue of Roman Britain. The National Grid (NG) at 100km intervals was exchanged for the graticule. Phillip's plan, authorised by the DG, was use to his new base for a series of at least eight period maps, though in practice it was used for only two: Roman Britain (authorised in May 1953), and Britain in the Dark Ages. The number of layer colours was reduced from nine to four in 1964.

A list of Ordnance Survey 1:1,000,000 Physical Maps

Projection: Minimum Error Conical Projection with Rectified Meridians and Two Standard Parallels (59° 31' 24" and 51° 44' 06")

Close’s sample map of Southern England, with overprint, 1920 [?L+C]

Physical Map of England and Wales (OSPR 1922/1): no code, 1922 [6L+C]

Roman Britain (OSPR 1924/3): ?no code [1924]; 1500/24; 2000/24; 1000/26 [6L+C]

(Physical Features Map of England and Wales, c.1924). Untitled: 6L+C, no black plate. Copies in Bristol, Manchester University Geography Departments


NB: A 9L+C proof copy is in PRO OS 1/15/2


NB: Copies in PRO OS 5/70 and OS Record Map Library, where there is also a 9L+C proof overprinted in mauve


Physical Map of England and Wales: Magnetic Edition (1933) (OSPR 1934/1): CR 3418 250/33, 1/9 [1933]; 100/46, 2/3; 3914, 2/6 [100 copies:14.6.54] [9L-C] NB: There

7 Ordnance Survey Leaflet No 5.
were also two wartime issues (not seen): 30:3.9.41; 24:2.2.44

*Roman Britain: Second Edition* reprints:
5000/31; 5036; 7239, all unpriced; 239:6046/Wa, 3/- [6725:22.6.46]; 239:3432, 3/- [7248:12.49];
3432, 3/3 [3337:6.4.54] [9L-C]


*The Woodlands and Marshlands of England*: Map A: (Prehistoric); Map B: (As deduced from early literature). Both maps CR 8791 1000/33 [O+C]

*Britain in the Dark Ages* (South Sheet) (OSPR 1935/4):
2035; 3035; 3263 [2000:23.9.47]; 3263. [6000:6.12.50], all 2/6 [9L-C]

*Physical Map of Scotland* (OSPR 1928/2): 7500/28 [9L-C]
*NB: A 9L+C proof copy is in PRO OS 1/15/2

*Physical Map of Scotland: Magnetic Edition* (1933) (OSPR 1934/1):
CR 3418 250/33, 1/9 [1933]; 50/46, 2/3; 3915, 2/6 [100:14.6.54] [9L-C]
*NB: There was also a wartime issue (not seen): 30:3.9.41

*Britain in the Dark Ages* (North Sheet) (OSPR 1939/1):
3000/38; 3366 [2000:1.12.48]; 3366. [4000:29.11.51], all 2/6 [9L-C]

*Roman Britain* (Third Edition) [9L-C] (OSPR 1/56):
4027, 3/3 [14157, 19.1.56]
4027/A, 3/3 [14981:25.5.56]; [6141:3.12.59]; 5/- [15000:2.4.62]

*Roman Britain* (Third Edition) [4L-C]:
4027/A, unpriced [20258:22.10.64]; [64900:26.6.67]; [34000:17.6.74]
*N.B.: There are many proofs of the physical map base and with Roman overprint in PRO OS 1/327, 1/825 and the job files

*Britain in the Dark Ages* (Second Edition) [4L-C] (OSPR 2/66):
B (published Chessington); B (published Southampton)

*NB: Number of L-ayers; + or C-ontours; R-elief; O-utline

* Sheets extended four inches northwards


Pre-war ten-mile maps showing physical features were very simplistic affairs. It will be recalled that in 1926 Jack had initiated a debate as to whether a market could be expected for physical maps at both 1:1,000,000 and ten-mile scales. Having received a negative response, all plans for the ten-mile version were cancelled. But a market had been perceived for versions with reduced characteristics. First to appear were sheets carrying literally nothing but the water and contour plates from the three-sheet 1926 map. The 1932 maps published with the addition of the layer plates were little more sophisticated. Some attempt at giving this *Physical Features alone* version some style was made in 1937 when it was recast on the new two-sheet base. The title panel was included, transferred from the black to the contour plate.8 This modification obviated
the need for an extra plate to supply it, and was made possible because MacLeod had decided against the use of contours on the coloured topographical map at a late stage in its production. But anyone wanting a fully developed physical map had to turn to the 1928 1:1,000,000 maps of England and Wales, and Scotland, which remained on sale until the war.

They remained on sale for twelve years afterwards as well, as the OS wrestled with the problems of creating a satisfactory physical map at the 1:625,000 scale. The title was in the first group of ten such maps approved for development by Lord Reith's Maps Advisory Committee on 4 September 1941,9 which were given Treasury approval on 17 January 1942. Contour and layer experiments (at 100m, 200m, 300m, 400m, 500m and 700m) were in hand in July 1942, these being derived from the 1:500,000 Aviation Map. OS work on the Physical Map began at the end of August. Printing of first proofs (Nos 1,14 in the list below) was completed on 16 February 1943, and they were shown to the committee at their third meeting on 22 February. Two colours masked provided the six coloured layers. There were no contours, though the meeting decided that a 50-metre contour line should be added. This appears on second proofs (2,15) printed on 15 October 1943. It was this layer scheme that was later to be employed on the 1:625,000 Topography, Roads, Railways, Monastic Britain and Ancient Britain. A blue spray was used for the sea. The water features plate of the pre-war ten-mile map was used on these early proofs, including canals and even canal tunnels: the south sheet plate had in general been repaired where overbridges cut across it, though time had not yet been found to deal similarly with the north sheet.

Delays in publishing the map, which developed into complete seizure, were caused by discussions over the names which were to appear on it. These started immediately the first proofs appeared. The allocation of names to physical features, and the extent of country they should cover, was a complex problem which had never been addressed by the OS, since it had never been one of their official tasks to enquire into and standardise their correct designations. Almost all the physical names that appeared on the pre-war ten-mile map were copied unchanged onto the early proofs. Italic lettering was used for coastal and lowland features, with Roman for hills. Upper case was used for important locations. Water names were on the blue plate in italics. Additional land feature names were taken and spaced much in accordance with their appearance on the 1:1,000,000 physical maps. These looked peculiarly incongruous because upright sanserif lettering had been used for all land features. Also supplied were some additional river names in overlarge lettering. Even one place name survived - Ramsey.

Dr E. Christie Willatts, who in 1941 was appointed Maps Officer at the Ministry of Town and Country Planning (MTCP) and for the previous decade had been the Organising Secretary of the Land Utilisation Survey of Britain, quickly recognised the shortcomings of this situation, and discussed them with MacLeod, who responded by suggesting that their correction was perhaps more a task for geographers than draughtsmen. At that 22 February 1943 meeting, Willatts agreed to look into the problem himself. He attempted to expedite matters by writing a note in the Geographical Journal,10 his intention being to provoke geographers into constructive criticism of the 1942 Physical Map proofs. He had a dyeline outline map Suggested Names for Physical Map drawn by his Maps Office in August 1943, which he made available to those Fellows of the RGS who responded to his note.11 A conference was held at the RGS on 18 September 1943, and the discussion written up.12 It was too late for any of the matters discussed at this meeting to affect the second proofs, and once this initiative had run its course, Willatts was careful to inform the OS that he was unwilling to take the burden of the Physical Map upon himself and his MTCP department. He wrote to the new DG, Cheetham, on 5 July 1944:

9 Information about this will appear in Hellyer (1992b).
10 Willatts (1943a).
11 Copies of this 1:625,000 map, in two sheets, are in Birmingham and Manchester University Geography Departments.
12 Willatts (1943b).
My view...is that the whole question is really one on which it is for you to make the final decisions; we have been concerned to collect the opinions of savants and cranks, to sieve them somewhat, and pass them on to you.

Other than the alteration of the grid to NG specifications (principally that the commas after grid values required for the Ordnance Survey Grid [OSG] were cleared), there was little further progress until 23 October 1944 when the Maps Advisory Committee met again. They were presented with a memorandum from Dr Geddes of University of Edinburgh, who suggested that major regional names should appear on an inset map. There would be five regions in Scotland, and similar coverage in England and Wales. This proposal lacked the sympathy of the committee, but the chairman stated that a mock-up was being prepared. This was made by R.H. Matthews of the Department of Health for Scotland (DHS), and was presented at the 13 April 1945 meeting. Third proofs followed (3,16), with some summit heights and additional names on both outline and water plates, by 7 September 1946. The inset map at 1:2,500,000 appeared, at least on Sheet 1. The job files do not admit to their distribution, though copies certainly reached Willatts, since he listed them in his internal departmental catalogue. But no contemporary comment on them has been located, and further work on them was cancelled on 27 February 1947. According to a 1951 document, the lettering was still too small, and the layers still lacked differentiation. Very similar must have been a private printing of 100 (4,17), done on chart paper on 1 November 1946, for LM&S Railway Co, School of Transport, Derby. The title was deleted on this issue.

Over the next two years, two facets in particular of the Physical Map underwent radical change. It was decided to scrap the metric layers and replace them with imperial ones to be derived from the quarter-inch map. These would be at 200 ft intervals to 1000 ft, then 1400 ft, 2000 ft and 3000 ft. Three colours would be used to achieve these eight coloured layers. Secondly, much of the lettering was altered, and standardised in accordance with Willatts's recommendations. Names on the blue plate largely survived intact, in spite of the curious anomalies in size, though some (e.g. Bristol Channel, Brancaster Road, Boston Deep, Moray Firth, Sea of the Hebrides, Ramsey Bay) were augmented. The names on the black plate that had been transferred from the 1:1,000,000 map were most altered so that they might conform to the convention of Roman alphabets for upland areas, and italic for lowland, forest, moors etc. Care was taken in redrawing to ensure that names covered more precisely the areas of land defined: almost always this meant an increase in size. The anomaly of having canals and reservoir references on a physical map was disposed of with their clearance, and breaks in the water plate for overbridges were further repaired. Proofs of Sheet 2 with the new imperial layers were issued on 20 October 1948 (18). They had a completely redrawn title, including, for the first time on a 1:625,000 map, a Cheffington address and a 1948 publication date. It is unfortunate that Butser Hill was the chosen exemplar for the NG reference, because it was wrongly sited and moved on later proofs, though the NG value was left unaltered in the example! In the event, this proof was not examined, probably because the manufacture of a new black plate with further amendments was already underway on 3 September 1948. The title on this was altered, doubtless from Physical Map Great Britain to what all later known examples have: Physical Features Great Britain. Layered proof copies were printed on 24 February 1949 and examined on 2 March 1949 (19). No copies have been found. Sheet 1 followed on 22 March 1949 (5) and was distributed three days later. By this time the title alteration had definitely taken place. An examination of the map was completed on 9 June 1949, and criticisms were levelled mainly at the lower layers which were still felt to lack distinction, and to some extent the names. Some small changes were made, mainly to spellings, such as Crossfell to Cross Fell, Rannoch Moor to Rannoch Muir.

In November 1949, the Ministry of Health (MOH) made a special order for copies of the Physical Map, ninety with only the black plate and water features, and ten with contours in addition (6,7,20,21). The job was cancelled in November for lack of contour plates, but they were quickly supplied and the maps were printed in December (8,9,22,23). Copies of all four sheet variants survive, and show the amendments to the black plate required of the 1949 proofs.
On 5 December 1949, Willatts wrote another memorandum to the OS on the deficiencies of the Physical Map, and his observations formed the basis of a special meeting between DHS, MTCP and OS representatives on 17 January 1950. The meeting made several recommendations:

1. The grid to be removed, but the grid figures should be left in the margin as a temporary measure
2. Names applied to individual hill features to be in smaller type. MTCP and DHS to supply lists of summits to be down graded to lower case
3. On some mountain or hill features, name to be moved off summit to allow relief to show (eg Malverns)
4. Writing used for ranges requires attention
5. More differentiation required in lower layers
6. Coast line - difficult to identify, especially in Western Scotland
7. Spot heights should be in smaller numerals. Heights of all named peaks and heights of highest points of ranges should be given
8. Drainage - Names for all over 20km. Inconsistencies in size of lettering should be removed
9. Styles of writing - MTCP suggested styles in 1947. These have not been adopted and the OS should look into this
10. Spelling - still some argument. OS can only adopt that authorised for use on their maps
11. Abbreviations - OS will investigate inconsistencies. Abbreviations of River should always be R., and not Riv.

Treasury approval for the map was reaffirmed on 23 February 1950, and the OS again began revising it, in accordance with the wishes of this meeting. For the next two years their attention was drawn yet again to the layers and the lettering. Two areas on Sheet 2, North Wales and East Anglia, requiring eight and two layers respectively, were chosen for specimen layer experiments, now using four layer colours, and different methods of masking. Four attempts were made, on 29 September (24) and 14 November 1950 (25), and 31 January (27) and 7 August 1951 (28) before the lack of differentiation between the layer colouring was corrected to the satisfaction of the Ministry of Local Government and Planning (MLGP, heretofore MTCP, and from November 1951 renamed Ministry of Housing and Local Government [MHLG]). Quite clearly these experiments with layers were kept entirely separate from the business of the lettering because the black plate used here is the 1949 one unaltered.

Work on the black plate began on 7 November 1950, with instructions to duff off the grid, layer box and all names, as the Maps Advisory Committee required. It was to be reconstituted with names 'in accordance with the Monotype & L.p (letterpress) styles & spelling as shown on the lists supplied by M. of T.C.P.' Thus on 28 November 1950 (Sheet 1) and 9 December 1950 (Sheet 2) the photowriters began some of the earliest OS experiments using Monotype names, at the same time as similar experiments were being undertaken for the forthcoming One-inch Seventh Series. There, as here, they were initially to be abortive. The new writing and revised frame were combined on 4 January 1951. Work was also done on the blue plate, to ensure the required consistency in river names.

In the midst of all this, yet another commission arrived for a printing of the Physical Map, again from the railway company at Derby, now British Railways (BR). They requested 100 copies of each sheet, layered but without contours, with the 'Physical Features' part of the title cleared. The order was printed on 5 January 1951 (10,26), using plates unaffected by the latest experiments.

Both layer and lettering experiments were to be brought together in a job initiated late in September 1951 which was to result in eighteen layered proof copies of each sheet (13,31). NG figures were to be redrawn in upright positions in all margins. Work continued until about April 1952, when it seems to have been interrupted and never resumed. Therefore no completed
### 1:625,000 Physical Map Great Britain

#### 1:625,000 Physical Features Great Britain [1949 and later printings]

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<td>1</td>
<td>commission 1948:np</td>
<td>0w</td>
<td>116:12.12.49</td>
<td>Ob</td>
<td>B2 for MOH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>1</td>
<td>commission 1948:np</td>
<td>+0w</td>
<td>16:14.12.49</td>
<td>RH,CCS</td>
<td>B2 for MOH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>1</td>
<td>commission 1948:np</td>
<td>8b</td>
<td>147:5:1.51</td>
<td>not found</td>
<td>B2 for BR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>1</td>
<td>proof</td>
<td>1948:np</td>
<td>8b</td>
<td>6:8.10.51</td>
<td>not found</td>
<td>D1 to MLGP</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>1</td>
<td>proof</td>
<td>0b</td>
<td>6:16.4.52</td>
<td>not found</td>
<td>D1 to MHLG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>1</td>
<td>proof</td>
<td>8b</td>
<td>18:</td>
<td>cancelled</td>
<td>D2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 14 | 2 | 1 | proof 1 | 1942:2/- | 6w | 6:15.2.43 | not found | A1 |
| 15 | 2 | 1 | proof 2 | 1942:2/- | 6b | 18:15.10.43 | Lkg,RH | A2 |
| 16 | 2 | 1 | proof 3 | 1942: | 6b | 30:7.9.46 | not found | A3 |
| 17 | 2 | 1 | commission 1942: | | 6b | 113:11.11.46 | not found | A3? for LM&S |
| 18 | 2 | 1 | proof | 1948:np | 8b | 18:20.10.48 | CCS | B1 |
| 19 | 2 | 1 | proof | 1948:np | 8b | 18:24.2.49 | not found | B2 |
| 20 | 2 | 1 | commission 1948:np | 0w | :11.49 | cancelled | B3 for MOH |
| 21 | 2 | 1 | commission 1948:np | +0w | :11.49 | cancelled | B3 for MOH |
| 22 | 2 | 1 | commission 1948:np | 0w | 110:12.12.49 | Ob | B3 for MOH |
| 23 | 2 | 1 | commission 1948:np | +0w | 16:14.12.49 | RH | B3 for MOH |
| 24 | 2 | 1 | proof 1 | 1948:np | 8w | 12:29.9.50 | not found | C1 layers |
| 25 | 2 | 1 | proof 2 | 1948:np | 8w | 12:14.11.50 | not found | C2 layers |
| 26 | 2 | 1 | commission 1948:np | 8b | 122:5:1.51 | PRO | B3 for BR |
| 27 | 2 | 1 | proof 3 | 1948:np | 8w | 12:31.1.51 | not found | C3 layers |
| 28 | 2 | 1 | proof 4 | 1948:np | 8w | 12:7.8.51 | CCS,PRO | C4 layers |
| 29 | 2 | 1 | proof | 0b | 6:8.10.51 | not found | D1 to MLGP |
| 30 | 2 | 1 | proof | 0b | 6:16.4.52 | not found | D1 to MHLG |
| 31 | 2 | 1 | proof | 8b | 18: | cancelled | D2 |

**NB:** All black outline, with blue water plate. Information in columns:
1. Serial number. 2. Sheet number. 3. Function of sheet. 4. Publication date given:price, or n-o-p-rice. 5. Number of layer colours, with w-hite or b-lue sea, + contours if present. 6. Number printed:date. 7. Location of copies (Lkg: King's College, London; Ob: Bodleian Library, Oxford; RH: the writer's collection; CCS: the OS Job Files, housed with Yolande Hodson; PRO: Public Record Office, 26 in OS 1/705, 28 in OS 36/4). 8. Sequence of characteristics: A. OSG, with metric layers; B. NG, with imperial layers; C. layer experimental sheets; D. Monotype and layer experiments combined. 9. Purpose or designation.

**NB:** For details of the other ten-mile physical maps, see Hellyer (1992b).

Copies of this version may be expected. However, it would seem that Willatts was sent some early pulls of the uncompleted work, before the layer plates were included. On 10 October 1951 the OS wrote to him:
We are forwarding...unexamined proofs without layers, of each of the above sheets [11,29. Further copies, 12,30, were sent in April 1952]. We are re-arranging the grid values...so that all figures will be read upright, hence the omissions and discrepancy in the S.W. corner of Sheet 1.

The interruption was caused almost certainly by Willatts himself, who, having inspected his pulls, wrote in forthright terms to the OS on 22 February 1952. He repeated his views of 5 July 1944, that this was an OS map, and they were responsible for its content. He had many criticisms for them to dwell upon: the reference panel should not overlap the coast (it had done since 1948 on Sheet 2); the title should be reversed to Great Britain Physical Features (Willatts supplied a mock-up of this); the selection of rivers was unevenly chosen; river names, lakes, coastline, summit heights etc all called for comment. Yet another meeting was convened on 9 April 1952, the starting point of the discussion being this letter. Willatts’s opinion again seems to have predominated, and decisions on the title and matters physical were made in accordance with the suggestions made by Willatts in his letter. But spelling had to be as OS was authorised. It was agreed that it was indeed an OS map and not a collaboration, which would, however, acknowledge MHLG and DHS help.

But it was now all too late, for by 12 May 1953 no further action was to be taken pending the publication of the new ‘Ten-mile’ base map. And indeed none was, except for some pulls of the black and blue name plates taken in 1954, doubtless with the creation of the new map in mind. Thus, it might be thought, ended more than eleven years of ultimately wasted endeavour. But this was not really so: the lessons of depiction and nomenclature of physical features had been painfully learned, and would be implemented, even if further refinement was required. MHLG would be ready with further information when the time of preparation arrived. An ugly duckling was transformed into a very fine swan indeed: the map born in 1957 has so proved its quality that for 34 years it has not proved necessary cartographically to alter it.

3. The 1957 Physical Map

With the development of its new 1:625,000 base map almost complete, the OS undertook a complete reappraisal of all 1:625,000 titles in order to decide which of them should remain members of the Planning Series, and thus the responsibility of MHLG, and which it would make OS publications. Though being prepared by the OS, the Physical Map had at least until 1952 nominally been a member of the Planning Series, but the decision was taken in 1954 to make a new one with full OS status. It would be part of the new family because its new sheet lines were identical, even though the map itself would have in many respects to be drawn separately. The position as at 31 December 1954 is made clear in the following minute:

This is a new map at 1/625,000 scale and replaces the maps at 1/M scale....The map was taken to proof stage more than 3 years ago, but was then held up owing to arguments on layering and awaiting some promised information on the river network to be supplied by MHLG. This proof was on the old 1/625,000 sheet lines and will have to be recast on the new sheet lines. Its layering and general design also require overhaul and specification as a new map.

Its production was recommended to the DG on 22 January 1955. He was persuaded that it had potential additional merits for educational reasons, and as an alternative base map. At the same time the fate of a replacement Topography map (base map plus hill layers), also under consideration, was sealed. Sales of the existing map were already low, and it was recognised
that a physical map would eat into them further. The decision about which titles to publish as OS maps on the new 1:625,000 base, including the Physical Map, was made official on 7 March 1955. At the same time:

The responsibility for the information and design of these maps will rest entirely with the OS Department. They will not be regarded as sponsored by any other department. The following maps which are now in hand will be dealt with as follows [including] Physical Features: This will become the OS Physical Map....It will be dealt with in SS Drawing under instructions to be issued separately.

Unfortunately, no-one seems to have thought to apprise Willatts and MHLG of the changed situation, and this remained so until he was surprised to receive in March 1956 proof copies of the new map - presumably from the same printing as those now in the RGS dated 18 January 1956. Acknowledgement of DHS and MHLG assistance was not displayed. Displeased, Willatts wrote to Director General Willis on 5 March 1956 complaining of the lack of consultation on a map on which MHLG and DHS co-operation had in the past been considerable. This was a unilateral change of policy. Willis investigated the whole sorry saga of the post-war Physical Map. He found nothing in writing in the files confirming Willatts’s official involvement in or responsibility for it, but he found plenty of corroborative references to his assistance. He replied on 22 March, noting that when it had been agreed in 1952 that the Physical Map was indeed an OS map, it had also been agreed that MHLG and DHS would be consulted. He could only apologise that this had not occurred, and now invited their comments, though at this stage he was not seeking major changes.

Nonetheless, as regards names, he seems to have got them. Willatts and his MHLG team submitted a long paper on 25 June 1956 recommending changes to the map, for example that tautological labels be expunged, and that names be applied to waterways longer than 20km. Thus, for instance, Peover Eye, not named on the proof, was added to the published map. Furthermore summit heights on more elevated peaks were preferred, for instance Blackstone Tor (1765 ft) for Dovestone Tor (1656 ft). The OS acted upon most of these recommendations, and added MHLG and DHS acknowledgement to the map, so delaying publication into 1957. The Physical Map differed in many ways from its 1955 parent coloured topographical map. NG 100 km squares only were drawn, with 10 km ticks at the neatline. Both have nine layers, though a stronger green was chosen for the Physical Map. Its river systems are more extensively drawn, and submarine contours are included, based on Admiralty charts. More physical names are given, but remarkably those shared by both maps often vary: to this day the topographical map (now Routeplanner) prefers the tautological “Cotswold Hills”.

The Physical Map has remained in print ever since, only once going to a readily identifiable reprint, when the publication address was altered to Southampton, and the price removed. There have been several others since. The expectation that it might be used as a base map has only twice been fulfilled, so far as I know. Sheet 2 was used in 1962 for Southern Britain in the Iron Age, with corrected reprints in 1967 and 1974, the last with only four coloured layers. An accompanying Northern Britain sheet never got further than the planning stage. And Sheet 1 has also been used once, with a replacement black plate, for an OS repayment service map: The Distribution in Scottish Rivers of the Atlantic Salmon, Salmo Salar L.\(^{13}\)

Bibliography

Hellyer, R., 1989. ‘The archaeological and historical maps of the Ordnance Survey.’

\(^{13}\) A 1986 Scottish Fisheries Publication, made and printed by the OS in 1985 (ISBN 0 903386 10 0). It is obtainable from the Scottish Office in Edinburgh.
Cartographic Journal, 26: 111-133.


Unpublished sources

The 1:1,000,000 maps: PRO OS 1/15/1; OS 1/15/2; OS 1/42; OS 1/327; OS 1/403, OS 1/825.
The 1942 map: PRO OS 1/156; OS 1/162; OS 1/432; OS 1/433; OS 1/556; OS 1/557; OS 1/558; OS 36/4.
The 1957 map: PRO OS 1/705; OS 1/1137.
Job files for 1:625,000 Physical Maps; 1:1,000,000 Base map for period maps, Roman Britain Third Edition, Magnetic Maps, now in the possession of the Charles Close Society.

Acknowledgements

I would like to thank Mr John Paddy Browne, Mrs Yolande Hodson, Dr Tim Nicholson, Dr Richard Oliver, Dr Christie Willatts, and map librarians at all institutions mentioned in this paper for their assistance.

Crown copyright material is reproduced with the sanction of the Controller of Her Majesty’s Stationery Office.
An interest in catalogues

This piece has been written following a suggestion from David Archer. I had approached David to ask if he had any copies of his very early catalogues that I could beg, borrow, steal or, if really necessary, pay for. He was able to fill the missing gaps except for his catalogues numbers 1 and 2. I should perhaps explain that my main interests are twofold: the Ordnance Survey and its development, and the antique maps of Cheshire. I am therefore always very interested in the older maps of the county.

But why the interest in catalogues? Like many others I am somewhat of an amateur in map collecting. As a result I tend to make much use of the expertise of others to gain most of my knowledge, be it from books or journals or by studying old catalogues.

What, then, do I get out of catalogues? This really can be summarised as ‘to learn and to get help’. Typical of the help that I have derived from published material including catalogues is:

- identification of a particular map;
- establishing the genuineness of a map;
- dating early maps;
- establishing the range of quality available;
- establishing what maps, editions, etc were published, to help avoid possible fruitless searching;
- assessing possible market values;
- understanding the cataloguing process itself and the factors one should consider when producing one’s own classified lists.

I find that my ‘learning’ is helped enormously by studying any illustrations which support the written word, either in catalogues or in other books, the picture being worth the proverbial thousand words. Such illustrations and their accompanying descriptions will often reflect a high degree of scholarly cartographic study by professional dealers or academics who may well have access to specialised reference material which is not readily available to the lay collector. A good catalogue can therefore be a reflection of much work, probably laborious, spent in tracking down detail. To the amateur such as myself it is like learning from an informed master.

The catalogues produced by dealers such as David and others will provide listings giving valuable data on editions, availability, quality and price. In the case of catalogues, collecting a series over time all produced to consistent high standards will produce a most useful indication of market trends.

Whilst collectors such as myself need to depend to an extent on their own knowledge, they can greatly enhance their knowledge and expertise by building good relationships with trusted dealers. Such relationships can only be built through experience and will take time to develop. A good start will often be through the dealer’s catalogues, and, once established, a good customer/dealer relationship will provide an invaluable source of regular cartographic information, including of course what we are all interested in from time to time: current selling prices.

So, just to repeat; this account of how I use catalogues started as a result of seeking David Archer’s early catalogues: I’m still looking for copies of Catalogues 1 and 2. So, if any reader has copies of these that they might be prepared to donate or sell, perhaps they would contact me.

David Parsons

Address: 1 Kent Drive, Congleton, Cheshire, CW12 1SD
What happened at Hendon Central in 1941?

The answer apparently is NOTHING, at least nothing of such topographical significance as to account for the curious discrepancies in detail there are thereabouts between Six-inch sheet Middlesex VII SW (revised 1935-6) and 1:12,500 GSGS 4157 sheet 56/20 SW (A), (revised 1941).

I was lucky enough to secure a copy of the GSGS sheet at the Charles Close Society AGM map market in July 1991, since it contained a large portion of what was then the Borough of Hendon, and my home at the time of its printing was in Alderton Crescent, barely 200 yards from Hendon Central Station on the Underground Edgware line. To my surprise, on a quite superficial examination I found that a length of almost exactly 600 yards of the underground line, from the south portal of the Hendon tunnel through the station south eastwards towards the footbridge by the Public Park was completely omitted, and that although the outline of the station building was shown, the building was no longer filled in with solid black and the word 'Sta' had disappeared. Closer examination showed that although much of the delineation of residential streets on the map as a whole showed houses separately, with garden boundaries, these had been replaced in several areas, of which Hendon Central was one and Preston, near Wembley, another, by simplified blocks of shading with boundaries of individual properties omitted. In addition, the crossroads at Hendon Central (Hendon Central Circus) had been redrawn to show buildings that never existed, even when the roundabout was replaced by traffic lights and a pedestrian subway several years later.

I was of course aware that the Circus was built about the time of the opening of the underground extension from Golders Green. We moved from Hampstead to Hendon in August 1924, timing the move to coincide with the opening of the railway, by which my father was to commute to Hampstead for the next 15 years. During those years I was to become familiar with every yard of the streets and footpaths for half a mile or more around our home, and with the shapes of many of the houses and blocks of shops and flats. I paid a visit to the 'old homestead' quite recently and can confirm that even the conversion of the A.500 'Watford Way' arterial road into the A.41 modern dual carriageway has made no difference to the facades of the buildings alongside either it or the B.551 which crosses it.

So I ask the question 'Who dreamed up the imaginative but largely false reconstruction of Hendon Central Circus portrayed on GSGS 4157 and why?' I have checked the details on the corresponding GSGS 3906 sheet, and the 1935 Six-inch sheet, and I find that the GSGS sheet is an outline reduction at 1:25,000 of the Six-inch, without details of buildings, even in block form, and is by no means a reduced version of GSGS 4157. Hendon Central Circus on GSGS 3906 is the same as on the Six-inch.

Guy Messenger
Above: extract from Middlesex sheet VII SW, revised 1935-6.

Below: extract from 1:12,500 GSGS sheet 56/20 (1941).
Some Questions on 'The Origin Of Species'

by Tim Nicholson

Most of the new Ordnance Survey One inch to one mile District maps put on sale to the public between 1919 and 1939 were composed straightforwardly of parts of standard Popular Edition sheets, retaining all their characteristics intact. The exceptions were *Barnsley and District; Bolton, Bury and District;* and *Huddersfield,* which formed a little subspecies on their own. None, at any time in their careers, seem to have had the Popular Edition’s alphanumeric squaring system or latitudes and longitudes around the borders; one had no magnetic variation diagram; the imprints of two were irregular to start with; and all carried the heading 'Parts of Sheets' (the figures following), as well as or instead of the normal, though not universal, 'Special Sheet Popular Edition One Inch Map'. The states known to the writer evolved as follows:

<table>
<thead>
<tr>
<th>Title</th>
<th>Imprint information</th>
<th>Mag var date</th>
<th>Heading</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Barnsley and District</em></td>
<td>Printed 1931 Roads revised to 3.27 Minor corrections 1931, 3500/31</td>
<td>1931</td>
<td>Special Sheet Popular Edition One Inch Map Parts of sheets 31, 32, 37, 38</td>
<td>No squaring system or lats and longs</td>
</tr>
<tr>
<td><em>Bolton, Bury and District</em></td>
<td>Ordnance Survey 1930 8000/30</td>
<td>none</td>
<td>Parts of sheets 30, 36</td>
<td>No squaring system or lats and longs</td>
</tr>
<tr>
<td>ditto</td>
<td>Published 1930 Roads to 1932-3 Minor corrections to 1933, 2500/33</td>
<td>none</td>
<td>ditto</td>
<td>ditto</td>
</tr>
<tr>
<td><em>Huddersfield</em></td>
<td>Printed 1930 2000/30</td>
<td>1930</td>
<td>Parts of sheets 31,37</td>
<td>No squaring system or lats and longs</td>
</tr>
<tr>
<td>ditto</td>
<td>Published 1930 Roads to 1933 Minor corrections to 1933, 2700/34</td>
<td>ditto</td>
<td>ditto</td>
<td>ditto</td>
</tr>
</tbody>
</table>

Their anomalies suggest maps produced originally not for public consumption but for some special purpose, commissioned from the Ordnance Survey by some other body, and subsequently offered by the OS to the public (with any identifying marks removed), perhaps because they were surplus to requirements. The references to 'Parts of Sheets...' are characteristic of such 'specials', as are the abbreviated imprints. There may be a parallel in the Quarter-inch to one mile *Glasgow and District* map of 1930, the original of which was the 1928 Glasgow conference map of the British Association for the Advancement of Science, reprinted two years later with road numbers, in conformity with the parent map's changes, and with some placenames added. In at least two cases it can be seen that the move was a commercial success, reprints being called for; and at the same time, the opportunity was taken to regularise the imprint. All three maps were still available early in 1938.¹

There is no indication on any map of what its original purpose may have been, but factors

¹ Public Record Office, OS 1/375, O Maps to EO 14 Jan 1938.
common to all may provide clues. The omission of a squaring system means that the first customers were not expected to use or need map references in fixing positions - though it is odd that the general public, who were the later customers, were not given one when in at least two cases the black plate was altered for a reprint. The absence of magnetic variation diagrams in one case, and of latitudes and longitudes in all, reinforce the impression of an original customer to whom navigation was less important than the depiction of ground features. All the maps were published in close succession, and all were centred on Yorkshire or Lancashire colliery or mill towns, which may be of significance.

Persuasive evidence for development along the lines suggested exists in the form of *Central Chilterns*, a roughly contemporary map (1929) which shares the characteristics of the other three, and was without doubt a special:

<table>
<thead>
<tr>
<th>Title</th>
<th>Imprint information</th>
<th>Mag var date</th>
<th>Heading</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
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<td>Ordnance Survey</td>
<td>none</td>
<td>Parts of sheets</td>
<td>No squaring</td>
</tr>
<tr>
<td>Chilterns</td>
<td>1929</td>
<td></td>
<td>94, 95, 105,</td>
<td>system or</td>
</tr>
<tr>
<td></td>
<td>2000/29</td>
<td></td>
<td>106</td>
<td>lats and longs</td>
</tr>
</tbody>
</table>

The full story of this map has been lost; but we know that some copies found their way to the Geography Department of Bedford College in Regent’s Park, London. There were no doubt other destinations; but one that is known indicates a 'special' ordered from the Ordnance Survey for educational use - by a geography field class, perhaps.

So here we have three maps at the end of their evolution, with no known ancestors, and one map in its original form, with no known descendant. Does anyone know anything of the birth of the four?

The writer’s grateful thanks are due to the following for their help and advice: David Archer; Anne Taylor and Karen Cook, Map Library, British Library; and Ron Halfhide, Royal Holloway and Bedford New College.

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2 [One point of difference between *Central Chilterns* and the other three maps discussed here is that on *Central Chilterns* some names which cut the neatlines have not been made good. (Ed., Sheetlines:)]

3 This is the suggestion put forward by Mr Ron Halfhide of the Department of Geography, Royal Holloway and Bedford New College, Egham, where no records survive.

4 The *Chilterns* District map of 1932 had entirely different sheetlines.
The 'unpopular' One-inch Fourth Edition: an insight into early twentieth century Ordnance Survey small-scale revision policy

by Richard Oliver

It has been the general practice hitherto to treat the One-inch 'Popular Edition' mapping of Great Britain published between 1918 and 1932 as synonymous with the 'Fourth Edition'. An exception to this general rule was the man primarily responsible for the 'Popular Edition', Colonel Sir Charles Arden-Close. In fact, as the present writer pointed out in his account of the development of the Ordnance Survey One-inch mapping of Great Britain between 1870 and 1914, the true 'Fourth Edition' is quite distinct from the 'Popular Edition', and, as the specimens reproduced on the following pages show, stylistically it owes nothing to the 'Popular' mapping of 1918-32 and everything to the engraved style which was fully developed by 1896.

Eight true 'Fourth Edition' edition maps were published, seven (Sheets 273-4, 289-90, 305-6, 321) of England, and one (Sheet 26) of Scotland; field revision was made for at least nine more sheets (271-2, 287-8, 304, 320, 330, 344, 345) in England and seven more (1-5, 33-4) in Scotland, and at least one Scottish sheet (34) was engraved but apparently not published. Until 1982, except for references buried in catalogues, they appear to have been wholly neglected in the secondary literature. The existence of these Fourth Edition maps begs two questions: why was the venture undertaken, and why was it abandoned?

For much of the nineteenth century the main work of the Ordnance Survey was the primary survey of the country and the creation of mapping; for the past hundred years its main work has been the revision and maintenance of this mapping. In 1892 the working of the Ordnance Survey was thoroughly investigated by a Departmental Committee under Sir John Dörington and its One-inch (1:63,360) maps were thoroughly investigated by a War Office Committee, with the result that in 1894 a policy was adopted, with Treasury approval, whereby revision would be conducted in such a way that no One-inch map would be more than fifteen years old and no 1:2500 or Six-inch map more than twenty years old. It is important to phrase it thus, as earlier writers have tended to give the impression that every sheet was to be revised once every fifteen years and once every twenty years respectively, which is by no means the same thing.

In fact, revision of the One-inch had started in 1893, not least in order that the published maps should be brought into line with military needs. The One-inch New Series, (the publication of the first edition of which was as yet incomplete in 1893), was based on 1:2500 ('twenty-five inch') and Six-inch (1:10,560) scale mapping, which had been made on a county basis, and the date of which (and thus of the derived One-inch mapping) varied from county to county. As a general rule the older maps were revised first, and then the more recent. The whole of Scotland was revised in 1894-5, but the revision of England and Wales was only completed in 1898, and, as a result of revising sheets according to their general out of datedness, there could be an interval of three or four years between the revision of adjacent blocks of sheets of this de facto

3 Richard Oliver, 'What's what with the New Series', Sheetlines no.5 (December 1982), pp.3-8.
5 Report of Committee on a Military Map of the United Kingdom, London, printed for the War Office, 1892.
second edition of the One-inch. In 1901 a "second national revision" commenced, publication of which, as the Third Edition of the One-inch New Series and One-inch map of Scotland, began in 1903. In Scotland, which like Ireland was treated as a separate unit for many operational purposes at this time, the revisers worked methodically from south to north, but in England and Wales the pattern was much more complicated, and although most of the sheets which had been revised early in the first revision/second edition phase were revised early during the second revision/Third Edition phase, there were exceptions, most notably in Lancashire, much of which was to be the last area revised for the Third Edition, in 1910-12. This had some most peculiar results, so that, apart from an interval of some seventeen years (1896-1913) between publications in Lancashire, some sheets in North Wales were published and then twice republished in ten to twelve years; the most extreme case was Sheet 118, first published in 1895, and published in the Third Edition in 1905. (The north Lancashire sheets were revised in 1896-7 and again in 1903-4.) The deviation from the theoretical fifteen-year cycle which this represents hardly needs stating, let alone emphasis.

The twenty-year cycle for the large scales (which largely eschewed such eccentricities, though it remains to be explained why Cheshire, surveyed between 1871 and 1875, enjoyed a second revision between 1904 and 1910, whereas Surrey, surveyed between 1861 and 1871 had to wait until 1910-13) meant that the One-inch and the large-scale revisions were out of step with each other, with the result that in most counties there tends to be the following sequence:

1. Initial survey at 1:2500/6-inch, serving as the basis for the first edition of the 1-inch.
2. First 1-inch revision, for the de facto second edition.
3. First national revision of 1:2500/6-inch.
5. Second national revision of 1:2500/6-inch.

The practical result of this was that there was a good deal of resurveying for the large-scales of detail already recorded for One-inch purposes, and although this would have benefits for later historians, in that it provides additional bird's-eye views of the landscape, in the later 1900s the cost of One-inch revision seems to have been causing some concern. Until its replacement by the 1:50,000 scale in the early 1970s, the One-inch was revised by issuing to the revisers the latest edition of the Six-inch, to which was then added whatever was necessary to bring the One-inch up to date. The One-inch revisers were apparently tending to record unnecessary minor detail, and it must have occurred to someone that, apart from reminding the revisers of this, the scope for recording superfluities and for surveying detail twice could be greatly reduced were One-inch and large-scale revision made part and parcel. It is possible that the someone was Col S.C.N. Grant, who was appointed Director-General of the Ordnance Survey in 1908, and who in April 1909 issued a circular complaining of "unnecessary minuteness", and accompanying instructions on One-inch revision from which the following is extracted:

**INSTRUCTIONS FOR THE REVISION OF THE 1" MAP 1909**

Up till quite recently the periodic cycle of the revision of the one-inch map was one of fifteen years and in as much as this did not coincide with that of the large scale revision it was necessary to establish a separate and independent revision for the one-inch.

The field revision of the one-inch has been carried out independently of the 25" scale and it was only when it became necessary to wait for the revised 6" that it can be said that the 1" revision was being carried out as part and parcel of that of the large scale.

Now that it has been approved that this fifteen year cycle be extended to twenty years, i.e. the same as that of the large scales, the revision of the small scale maps can become as much part and parcel of the 6" scale revision, as the 6" is of the 25" scale.

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7 The official terminology in the Ordnance Survey annual reports of the period.
It is evident that if each 1" sheet be taken up for revision directly the 6" is published, the bulk of the work will be draughtsmen's work and could be done in the office by making the 1" agree with the 6". But since the publication of the 6" is possibly some two or three years later than the revision on the ground and since an "office" reduction of the 6" will never make a satisfactory 1" map, it will be necessary when revising the 1" to send a man to the ground to insert any important alteration or improvements which have taken place since the revision or re-survey of the large scale, and also to note points of importance on the 1" scale...

This system will have the effect of materially lightening the field work of 1" revision, and without materially increasing the drawing. The field reviser should be able to very rapidly get over the ground because the documents which he will use in the field will be the drawing and erasure sheets and practically all the old tedious reference to the 6" plots will be done away with.

...[Drawing] will be done... at Southampton...

The 6" sheets are cut up into plots and all necessary detail, etc., transferred to the 1" drawing sheet, while all necessary cancellations are noted on the Erasure Sheet.

The drawing and erasure sheets having been corrected so far as to be, for 1" purposes, as far as is necessary in agreement with the 6", are forwarded to the Division Officer with the 6" plots and a clean impression for use as the Reviser's Fair Sheet...

...it must be impressed on the field reviser that [the drawing and erasure sheets] are the only documents which he is to examine on the ground: the 6" plots are only to be used for the purpose of recording corrections, etc which he discovers to be necessary in the course of his examination. The field reviser will find it useful to compare the drawing and erasure sheets with the 6" plots before he goes on to the ground: this comparison should give him a very good idea of the degree of assimilation required between the two scales.

It must be borne in mind that the 1" is not required to be in minute agreement with the 6 inch even with regard to those details which appear on the former scale. The exact shape or number of a group of farm buildings; small alterations to coast lines or the extent of rough pasture; the addition or correction of farm roads or rough cart tracks; alterations to footpaths but ill defined on the ground itself; minute changes in the shape of buildings; alterations, often very much a matter of opinion, in the classification of roads; and many other similar details are all points which generally entail a considerable amount of work without materially enhancing the value of the map.

The 1 inch map is essentially a touring, cycling and small scale Manoeuvre Map and the primary object is that the average man should be able to find his way about unfamiliar country with ease. To amend the map with a host of names and small detail is to defeat this object by obscuring the map so that it is very difficult to use. 8

It will be noted that though there was apparently no overt public announcement of the change from a fifteen- to a twenty-year cycle for one-inch revision, there was covert confirmation to be found in a careful reading of the Ordnance Survey annual report for 1908-9, in which the customary references hitherto to the fifteen-year policy are omitted, though the twenty-year policy for the large scales is still stated explicitly. Although five of the published Fourth Edition sheets carry a 1909 revision date, only in the 1910-11 annual report was the start of the 'third national revision' of the One-inch recorded. 9 For the 1911-12 report the format was changed, and no reference was made to the progress of one-inch revision in Great Britain, (though it was

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8 Ordnance Survey Office, Dublin, 'Southampton Circulars', Book 2 [now in National Archives, Dublin], circular by Grant, 8 April 1909, with accompanying 'Instructions'.

9 Ordnance Survey annual report, 1910-11, pp.4, 5.
for Ireland), and once again the old fifteen- and twenty-year policies were in force: 'each plan is revised every 20 years'; 'no 1-inch map is more than fifteen years out of date when issued to the public'.

It can be inferred from the published sheets of the Third Edition that further work on the 'third national revision' for the Fourth Edition in southern England and southern Scotland had been abandoned some time in 1911 in favour of concentrating the revisers on finishing off the second national revision in Lancashire, and that once Lancashire was finished the revisers were sent south to produce the material which from 1918 onwards would be published as the One-inch Popular Edition. At any rate, no further Fourth Edition sheets were published after 1912.

It is possible to interpret the surviving relics of the Fourth Edition and the instructions quoted above in two ways. Superficially, it could be argued that it simply meant that in future small-scale and large-scale revision were to go hand in hand, a much-needed rationalisation and an example of fresh thinking. Some convergence of small- and large-scale revision had been apparent a few years earlier, with the second revision of the One-inch maps of parts of Cornwall and Lincolnshire apparently simultaneous with the first revision of the 1:2500. Sampling certainly shows minimal differences between the two, though admittedly it could be argued that this reflects the slow rate of change on the ground, rather than Ordnance Survey processes.

Similarly, it is possible to interpret the pattern of One-inch revision in Yorkshire - the North and East Ridings in 1904-5, some years before their next large-scale revision, the West Riding in 1908-11, shortly after large-scale revision - as having been configured so as to take advantage of large-scale revision, though it must be emphasised that the only evidence as yet known for such a policy is the spread of dates of the resulting maps. But it could also be argued that the Fourth Edition and the attempt to tie small-scale to large-scale revision represents the final chapter in a story of an unsatisfactory system and that it merely represented stale thinking, a final attempt to reconcile supposedly independent One-inch revision with the legacy of the geographically discontinuous progression of the initial large-scale survey. A further complication which had developed since 1893 was that the One-inch revision had to serve not only the small sheet series engraved map, but also the One-inch Large Sheet Series introduced in 1906 and the Half-inch map, authorised in 1902, and the sheetlines of the last two were at odds with the small sheets, and all these small-scale sheetlines were at odds with the county boundaries which determined the large-scale survey programme. Further, the amount of change recorded by the revision for the Fourth Edition in east Kent was extremely small, and hardly worth the trouble.

In 1912 there appears to have been a complete change in small-scale revision policy, with two possible causes. One was the disruption to large-scale revision by counties brought about by the demands of out-of-turn partial revision of urban and suburban areas for land valuation purposes in the wake of Lloyd George's 'People's Budget' of 1909-10; by 1912 there was a policy of completing the partial revisions which, though the outbreak of war in 1914 seems to have prevented much being done, would have further complicated the relationship of 1:2500 revision to the various small-scale sheetlines. The other was the appointment in August 1911 of a new Director-General, Colonel Charles Close. Close is rightly credited with drastically changing the design and content of the One-inch map, but it appears to the present writer that he ought also to be credited with rationalising small-scale revision, so that its basis was geographical, a steady progress from one end of Great Britain to the other, rather than reflecting the ramifications of the original large-scale surveys many years before. The recasting of the One-inch 'large' sheetlines so that they coincided more closely with the sheetlines of the Half-inch map was symptomatic of this. For reasons which can only be surmised no announcement of this change of policy was made in the annual reports, but the practical effect was that from 1912 Great Britain was treated as a single revision unit, the revisers making their way northwards until the job was completed in the Orkneys in 1930. Regional irregularities, such as the revising of the midlands in advance of the flanking parts of Wales and eastern England, can readily be explained by the disruptions of

10 Ordnance Survey annual report, 1911-12, B.P.P. (H.C.) 1912-13, Cd. 6372, XLII, 64, p.4.
11 The sampling was carried out in sheet 90.
Figure 1. Extract from New Series first edition Sheet 290, published 1878.

Figure 2. Extract from New Series second edition Sheet 290, published 1895, with boundaries revised to December 1898.
Figure 3. Extract from New Series Third Edition Sheet 290, published 1905.

Figure 4. Extract from New Series Fourth Edition Sheet 290, published 1911.
Figure 5. Extract from One-inch Scotland Fourth Edition Sheet 26, published 1912, from a copy printed lithographically, late 1930s.

Figure 6. Extract from One-inch New Series Fourth Edition Sheet 290, published 1911. This should be compared with figure 7, below.

Figure 7. Extract from One-inch New Series, third revision, 'Popular Edition', sheet 117, published 1921, printed 1926. This should be compared with figure 6, above.
World War I and the subsequent economies; those economies prevented the fourth national revision of the One-inch of 1928-40 from reaching further north than Birmingham before it fell victim to World War II. Since then small-scale revision has been influenced by the ‘continuous revision’ concept which treats each sheet as an independent unit.

It remains to be explained as to why the maps published in 1918-32 carried the words ‘Popular Edition’ rather than ‘Fourth Edition’, which, it must be admitted, most of them were de facto, as generations of neat-minded writers have insisted on making them. There are two possible reasons. One is the fairly obvious one that there were already eight Fourth Edition sheets published, and that as Close’s redesigned One-inch map incorporated certain features, notably the road classification, which would entail revisiting the ground, which in turn implied revising the map for other changes, it would be necessary to republish them, with all the potential for confusion, both within and without the Ordnance Survey. This leads on to the second reason, which can be suitably introduced by the following circular of December 1906 by the then Director-General R.C. Hellard:

On the general revision of a County the terms “Second” or “Third” edition given on the heading of the 25-inch plans should be applied to each county throughout as a whole, and plans not previously issued on the 25-inch scale should bear the same heading, in spite of there not having been a previous edition of them on that scale.

In the case of intermediate revision of a few plans for some special purpose the plans should be headed simply “Edition of…”

The plans of Devon and Cornwall specially revised in 1902-4 were unfortunately headed “Second Edition of…” and now that the general second Edition of these Counties is in course of issue it becomes necessary to legislate specially for the new edition of these plans. They should be headed “Second Edition” to agree with the remaining plans of the general revision of the County, but with the addition of the heading (“Replacing the second edition of 1902-4 on the general revision of the County”) to distinguish them from those previously issued.”

Third editions masquerading as Second Editions, of which a few were published of the environs of Plymouth, were not found satisfactory for long, for by April 1907 there had been a change of policy: “Revised 25” plans... will be headed “Edition of”. As regards 6” plans, each county should as far as possible be headed throughout on the same system.” This system was put into effect for all counties which had not already been partially published with ‘Second Edition...’-type headings, so that for some years large-scale plans with both styles of heading were being published. Although cyclic revision of counties did not really start to break down until after 1918, the ‘Edition of’ style of heading was a harbinger of the future.

Although by 1910 the numbering of editions of the large-scale plans was on the way out, it was persisted with for the One-inch and Quarter-inch series, though not unfortunately for the Half-inch, which is the carto-bibliographically most complex of the early twentieth century Ordnance Survey map series. The Fourth Edition was born into an Ordnance Survey world in which revisions of odd small-scale sheets were (officially) unknown. By quitting that world in the way it did, it ensured that odd revisions of small groups of sheets were now an unfortunate fact. And so Close’s new look One-inch could not easily call itself ‘Fourth Edition’. The only pre-war revision diagram for it calls it ‘Large Sheet Series’, ‘3rd Revision’; the four surviving sheets from the early phase of this map’s development all omit any reference to ‘Edition’ in the top margin, and content themselves with what was surely an unnecessarily complicated publication

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14 Ibid., R.C.H. to E.O. (copy), 2 April 1907.
16 Ordnance Survey annual report, 1913-14, B.P.P. (H.C.) 1914 [Cd.7424], XLIV, 1, diagram no. 3.
imprint, setting out the revision pedigree, culminating with '3rd Revision'. Two of these four sheets - Sheet 145, dated 1914\textsuperscript{17} and Sheet 120, dated 1916\textsuperscript{18} - do not appear to have been formally published, but the other two, a pair of district sheets covering the Aldershot Command, were printed in quantity for military use, in two different versions, one in the style proposed by Close in 1912-14 for the One-inch, with relief shown by contours, hachures and hypsometric tints, and the other with relief shown only by contours. This latter style appears to have been that proposed in 1914 for cheap district maps,\textsuperscript{19} and is fundamentally the same as that of the 'Popular Edition'. By 1918 the Ordnance Survey felt unable to publish the 'Third Revision' One-inch as envisaged in 1912-14, and instead published it as a 'Popular Edition', so announced in the top margin and on the map covers. 'Popular Edition' was an adjective, not a proper name; at the time of its birth there was evidently still hope that the more elaborate style envisaged in 1914 could become a reality; otherwise, it is hard to see the justification for adding 'Popular Edition' in the upper margin. It can surely not have been to distinguish the maps from the old Large Sheet Series, as the four 'third revision' maps of 1914-16 managed to get by without any such title; and, indeed, the three-colour 'outline' equivalents of the Popular Edition were originally headed 'One-Inch Outline Edition Map', i.e. without any reference to 'Popular Edition'. However, no alternative fully coloured version of the Popular Edition ever appeared, and by the 1930s it was being used as a proper name rather than as an adjective, a process regularised in 1938-9 when a reformed version of the Fifth Edition was titled 'New Popular Edition'; the alternative 'Sixth Edition' was reserved for the spines of map covers and for internal Ordnance Survey use.\textsuperscript{20} (It could of course be argued that 'Popular' and 'New Popular' were more likely to appeal to public taste than '4th Edition' or '6th Edition', in the same way that 'Landranger' and 'Pathfinder' are officially presumed to do likewise today.)

Thus is confusion born.

Acknowledgements

I am grateful to the late Dr Brian Harley for the loan of his set of photocopies of the 'Southampton Circulars'; without the discovery of the circular and instructions of April 1909 it is unlikely that this piece would have been written. I am also grateful to Roger Hellyer and David Archer for the supply of various specimens used for reproduction in the illustrations.

\textsuperscript{17} Copy in Royal Geographical Society's collection; a remark by A.R. Hinks in his Maps and Survey, 2nd edition, Cambridge University Press, 1923, p.223, suggests that other copies may have been distributed and may survive.

\textsuperscript{18} Copy in private collection; for a description see 'Cartographic Discoveries' elsewhere in this issue of Sheetlines.

\textsuperscript{19} Report of the Departmental Committee on the sale of small scale maps (1914): copy in PRO OS 1/6.

\textsuperscript{20} See, e.g., PRO OS 1/219.
Reviews

Ordnance Survey of Great Britain - England and Wales - Indexes to the 1/2500 and 6-inch scale maps, reprinted with an introduction by Richard Oliver: Kerry, David Archer, ISBN 0 9517579 1 1, pbk, £15:00.

For almost ten years an index to the 25-inch maps has been a regular companion of mine, giving instant access to the sheet numbers for almost any map in the country. My own two volumes of these maps are well worn, so David Archer’s handsome reprint is most welcome, and is sure to become one of the best used volumes on my shelf.

For the most part this is a straight reprint of the 100 pages of index maps issued by the Ordnance Survey c.1905-6, giving comprehensive coverage for the 6-inch and 1:2500 maps for England, Wales and the Isle of Man. Scotland and Ireland were covered by separate volumes and are not included here. The maps have been reduced slightly in scale but are clearly printed on good paper. At the very least this book should become an invaluable tool for librarians, historians and collectors.

But I hope it will go beyond that and help standardise the numbering of maps in our public collections. For many archivists and librarians have, in the past, seen the OS numbering as too complex and have invented their own in its place. Too often I have rung up or called on a collection, asking about (say) Barsetshire Sheet 40.12, only to be told that the maps of Barsetshire are re-numbered from 1 to 67, and which do I really want? Some collections take it a step further, provoked by half-sheet photocopies, and so we might find the western half of our sheet is 33 and the eastern 34. Since nowadays many readers are family historians, likely to be exploring another area of Barsetshire the next day, and Hallamshire the day after that, it is difficult to see who this supposed simplification can really help. Even where the correct numbering is used, its concept is often misunderstood, and so many readers fail to realise that (unless we are at a county boundary) 40.12 will be immediately south of 40.08 and north of 40.16, while sheet 41.09 will be the next one to the east. Happily the preface to this index explains how each full size 6-inch map is divided into 16 for its larger scale companion.

I have always believed that reprint publishers should go beyond a mere facsimile and be prepared to add to their original source. That doesn’t, of course, mean tampering with the text or map, but it does, I think, mean putting some work in on behalf of the reader. If we buy a paperback of a classic novel, nowadays we expect an introduction. And so I am delighted that David Archer has served us so well, commissioning an introduction from the tireless Richard Oliver, and adding a wealth of other information too.

If I have a criticism of the introduction, it is that Richard concerns himself overmuch with the indexes per se, rather than with the large-scale plans they represent. A valuable insight into an unfashionable sort of map, but is it what the average reader will be after? And the accompanying bibliography is quite irritating: loyalty to the Charles Close Society is one thing, but in this context it is surely perverse to list the Society’s guides to the New Popular and Seventh Series 1-inch maps but to exclude Winterbotham’s The National Plans, let alone Seymour’s A History of the Ordnance Survey. But the list of survey and revision dates, given county by county, is admirable, just the sort of straightforward information the user needs by his side.

At the rear of the book the publisher has rightly dispensed with the original sample maps and given us more useful information. Especially welcome are the indexes to the New Series plans of Essex and Northumberland (though the overprinting of the latter has almost defeated the printer) while many of us will use the London conversion chart again and again. This shows the relative numbers for the three main editions, so we can quickly find out how sheet 89 in the 1894 edition was 55 in the first and 9.02 in the third. It is a bit of bad luck that four maps (125-128 in
the second edition) have been given the wrong first edition numbers, but few of us will have qualms about entering our alterations. Incidentally, it is wrong to say that London’s complex numbering is unique: go to Tyneside and you’ll find the old centre of Newcastle moving from sheet 97.07 to 18 to n94.16 over the years (and with a revision of the first edition thrown in for good measure!)

This is a publication I can heartily recommend; I hope that it will become a standard tool for libraries and historians everywhere, as it can only help to develop fuller understanding of our large scale heritage. But I suspect that the most welcome contents will be the six pages of conventional signs and writing. We get asked for these again and again - and at last there is a book we can refer people to.

Alan Godfrey

[The correct first edition numbers for sheets 125-128 in the second edition are 84-87 respectively.]

Great Northern Railway Society ‘Line Files’

In an excellent volume of facsimile Second Edition 1:2,500 maps, the Great Northern Railway Society has launched its series of “Line Files” with the Bourne to Sleaford line, opened in 1871. The use of the large scale has obvious advantages to students of railway history, not the least of which is that junctions such as those at Sleaford are simply impossible to depict at small scales, since the lines meet at such narrow angles. Complete track layouts and all ancillary features such as signal boxes, signal posts, bridges and layouts of stations, will also be shown. The wasteful disadvantage of large sheets showing very little railway has been skilfully overcome here, in using an A4 atlas format, and keeping a continuous sequence of line centralised upon each page. Distances are shown from Bourne East Junction. A sheet index is provided, and full details of OS sheets used (numbers, publication and revision dates) are listed. I look forward to an early continuation of the series.

Roger Hellyer

(The Editor is grateful to Mr John Minnis for drawing this to his attention: unfortunately, no address or like details are given on the ‘line file’, and it is not clear whether copies are available to non-members of the GNRS. Mr Minnis also draws attention to the Great Eastern Railway Society’s impressive list, which includes a number of OS 1:2500 reproductions: the address to write to is 75, Victoria Road, Rayleigh, Essex, SS6 8EG.)


‘There is an excellent Ordnance Survey Atlas of England and Wales and one of Scotland, in which maps based on the quarter-inch sheets of the layered edition are mounted and bound in atlas form, with a serviceable index. These atlases are rather costly to buy, and it is not everyone who desires or can afford sheets covering the whole country.’ observed John Bygott1 in 1934. Were he writing now, he would be more likely to observe that though everybody could afford a floppy atlas at this scale, they might think twice about buying a hardback atlas containing effectively the same mapping, possibly not quite so up to date,2 or the parent sheet mapping, possibly even less up to date, to say nothing of the present publication, which is unquestionably hopelessly out of date, and rather more expensive than any of the other atlases of Britain on offer

2 See the review of Ordnance Survey Touring Atlas of Great Britain, Sheetlines 31, p.43.
at present. Incidentally, this is a wholly AA publication, though as they obtained permission from OS to use out of copyright OS mapping, it is to be presumed that OS is on royalties, and thus interested and implicated.

To a certain extent the relatively high price is justified. What we have here is most of the 1922 Quarter-inch Atlas of England and Wales and three half-folios from the 1924 Atlas of Scotland, plus some 314 photographs from the Francis Frith Collection, with captions. The reproduction of the mapping is by far the finest feature of the book, and of outstanding quality, and if you fancy the Quarter-inch Third Edition plus some photographs, and don’t mind the fact that an original of the Atlas of England and Wales, with tatty binding but excellent maps, can be had for about £20-£25 secondhand, then you will probably be satisfied. However, there are a number of technical snags, quite apart from the intellectual and cultural ones. The first is that the Isle of Man, much of the Border country, Galloway, and the whole of mainland and island Scotland beyond the line Loch Lomond - Stirling - Kinross is omitted, apparently because the Frith Collection coverage of these parts is poor. The second omission is much more subtle, and the sort which is only likely to be noticed once one has paid one’s money and is examining the thing at home: there is a very small gap (about 1 mm) where the original folios have had to be split between (but not within) openings, resulting in a loss of some map information. As far as I am concerned that is a serious, and wholly avoidable, blemish, and means that any recommendation must be a qualified one.

The mapping is introduced by an anonymous (obviously OS Information Branch hackwork) ‘Two Hundred Years of Ordnance Survey’, which includes the following interesting statement: ‘Ordnance Survey mapping at four miles to one inch (1:250,000), first published in the Victorian age to the specification reproduced in this atlas...’ How interesting. How wrong! It is illustrated by two One-inch, one 1:50,000 and one 1991 Motoring Atlas extracts; the cognoscenti will have no difficulty in recognising reused artwork from the dust-wrapper of the forthcoming popular history of the Ordnance Survey. I suppose for £30 and 314 photos it would be too much to hope for a couple of proper introductory essays, commensurate with the mapping and, indeed, the photographic quality of its reproduction, one by say David Smith on the rise and fall of the library atlas, and one by say Chris Board on the development of OS Quarter-inch mapping. The atlas (mostly) reproduced here is of some interest in that it was the last new upmarket topographical library atlas of Great Britain to be published; the line begins with Christopher Saxton and appears to end with the second (1939) edition of Bartholomew’s Half-inch (1:126,720) Survey Atlas of England and Wales, first published in 1903, and still the most ambitious essay of its kind, in Britain anyway. By 1939 Bartholomew’s had published the first edition of the Fifth-inch (1:316,800) road atlas, which though not the first road atlas of Britain was probably the first to be a success, and set a pattern which continues to be followed today, not least by the Ordnance Survey. Incidentally, the dustwrapper and other publicity for the present publication claims it was the ‘first ever’ OS atlas, which is to confuse the form of the cover with the substance of the contents. The first OS atlas was the volume of indexes, reviewed above, and that is unquestionably Victorian/Edwardian. The source material and production methods for the Quarter-inch Third Edition apart, by (the time the mapping was being used for the atlases aerodromes had been added), it is difficult to see any great general historical value in issuing mapping at so small a scale: if we divide maps into those which say more about the landscape than about their makers and those which say more about their makers than about the landscape, then the only OS Quarter-inch/Quarter-million work which does not fall squarely in the latter category is the aviation mapping. For the general historical user, nothing less than the one-inch will do.

So much for the maps. What about the photographs? Well, technically they’re mostly pretty good, both as originally taken and as reproduced here. Unfortunately, praise has to stop there. I complained above of some avoidable loss of map detail, but that is a minor quibble as compared with the mauling these poor photos have undergone at, I suspect, the hands of a

4 (1) Yes, Sheetlines is prone to misprints, and (2), no, this isn’t one of them.
Designer who, so far from paying £30, was paid far more than that. The usual formula is one large and about six or seven small photos per opening, with the large photo split across the gutter. By the time one has reached Scotland, (the facsimile inverts the order of the original by going south to north)5 frustration is definitely getting the upper hand of the nostalgia which the dustwrapper would like to provoke in the purchaser. It is almost as if the original negatives had been neatly smashed down the middle. However, if you are prepared to grit, rather than grind, your teeth, and think a little, what you are looking at is an extremely one-sided picture of Britain a century or so ago. ( Mostly; is picture 7 on page 61 Swansea in 1896 or 1926?) Francis Frith set out in the 1860s to make a photographic record of Britain, with a view to selling the results as souvenir views. What we see, therefore, is the sort of thing which appeals to and records the pleasurable side of experience; picturesque towns, quiet seaside resorts, fishing boats at low tide, ruins, and so on, a superstructure on a base which hardly ever peeps up. The nearest approach to it is in some of the street scenes with occasional horse-droppings which, though possibly the most telling feature, are nowhere mentioned in the text.

Ah, the text. If you venture into that normally secluded bibliographic neighbourhood behind the title page there, amongst the other verbiage without which the heavens above Union Street, Plymouth would otherwise have been incomplete in 1904, is the attribution to Paul Atterbury. Mr Atterbury’s introductory essay on Francis Frith seems to me, knowing nothing of the subject, excellent; but I wish that he had not gone on to grapple with historical geography. I do hope he is more reliable on Francis Frith than he is on Frith’s subject matter. To be fair, he probably had an unenviable task, as he was presumably asked to provide dressing for a salad of others’ making. The main part of the book consists of a half-folio of the original atlas followed by photographs of places in that folio, the whole sequence repeating forty times. Fitting the photographs to the map sections has had some surprising results, the greatest being an entire opening (pp.164-5) devoted to Cockermouth. To avoid a lot of white paper, because of the disparity between the page-size of the original atlas and that favoured here, each map-opening is accompanied by a little essay, which usually covers something which is not represented by the photographs. There are some very curious ‘facts’ in these essays, which makes me wonder about those which I can’t immediately check on. ‘In the Victorian era Dover hardly featured as a cross-Channel port...’(p.54); pace p.71, Metroland was not a generic name to describe ‘the rapid urbanisation of previously rural regions’, (it was the Metropolitan Railway’s term for its patch of north-west Middlesex and Buckinghamshire); pace p.110, Melton Mowbray is not in the centre of The Dukeries, (they are the trio of Thoresby, Clumber and Welbeck, page 131, squares 12C, 12D). It is typical of the approach of these essays as a whole that whereas on page 110 there is mention of Nottingham’s goose fair, there is none of its housing. (Stuff the geese, where are the slums? They were some of the worst in England.) There is a real gem on page 135, (‘Lincolnshire’s architecture’): ‘With its town hall, its campanile-like clock tower and its grand waterfront, Grimsby must have had a definite renaissance air in the 19th century.’ The clock tower is in fact the dock tower, correctly illustrated and described thus two pages on, the town hall is as least unlike anything Italian as it is anything else, I suppose, but the grand waterfront? I lived in the place for nine years, before the redevelopers were let loose, and I never saw it. In short, the value of the text is at best questionable. The captions are not quite as bad, though there is far too much of cliché - ‘vital rail links’, etc - for me to enjoy, or commend.

I cannot help feeling that this whole volume would have been far more successful if it had concentrated on photographs, and forgotten about the maps, either to produce a cheaper volume, or one containing more than just 314 of the 60,000 negatives in the Frith Collection, and not split across gutters. As it is, apart from the incidental benefit of setting a new standard for colour reproduction of old mapping, it is neither one thing nor the other.

Richard Oliver

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5 Why must atlases start at Cornwall and work northwards? Bartholomew seem to be the culprits, having started to do this in the 1930s with their road atlas, and almost everybody has followed. An assertion of Scottish Nationalism from Duncan Street would be most welcome.


The Harry Margary facsimile of the One-inch Old Series, the final volume of which (VI, Wales) it is hoped will appear this summer, has been much admired, but the first two volumes suffered from one defect, in that the carto-bibliographies only described the pre-railway states of the sheets. It is understood that it was at Peter Clark's urging that from Volume III onwards the carto-bibliographies were extended to include the railway states as well. This work was undertaken by Yolande Hodson for Volume III, by John and Barbara Manterfield for Volumes IV and V and by this reviewer for Volumes VI-VIII. There were of course cartobibliographic notes on the sheets in Volumes I and II provided by the late Dr J.B.Harley for the David and Charles facsimiles, but although these provided a framework for dating other copies, they were never intended to be more than that: Brian Harley once confessed to your reviewer that the work was done by visiting the libraries and frantically dictating notes to a secretary.

Guy Messenger has now completed the task by extending and revising the cartobibliographies in Volumes I and II to cover the whole period of Old Series publication. These two booklets are essential for owners of Volume I and Volume II of the facsimile, and they are also essential for all those concerned with the cartography of the areas to which they relate. At last we have a comprehensive view of the development of the Old Series, and can make sure-founded generalisations. One of the more peculiar gaps in Ordnance Survey writing is the lack of any comprehensive study of the One-inch map; though bearing in mind the cartobibliographical gaps, this is perhaps not so peculiar. With the publication of these two booklets it is now less excusable.

Having been responsible for the cartobibliographies in the three final volumes of the Harry Margary facsimile of the Old Series, I know only too well how much labour is involved in this work, and how much uncertainty there must be about when enough has been done to merit publication. Therefore, none of the work so far published is definitive, and it will be very desirable some years hence to republish it all, revised to take account of the new states of these sheets which will inevitably come to light. That, however, will have to wait until these two booklets, together with the earlier cartobibliographic work for these facsimiles, has reached a wide audience.

Richard Oliver


This 'preliminary list' is rather like the 'Provisional Edition' of the OS National Grid 1:25,000: there is nothing makeshift about its appearance. Indeed, in looks it is by far the Charles Close Society's 'best yet', and it makes your reviewer's guides to the Fifth and New Popular Editions look shabbier than ever. (It is perhaps not co-incidental that it is the one CCS publication with the production of which he has had nothing to do!) It is 'provisional' in content, in that as the

6 See, for example, the reviews in *Sheetlines* 20, pp.18-19, and *Sheetlines* 31, p.36.
title indicates it only covers British Library Map Library holdings of these maps, which tend, particularly for pre-1960 mapping, to be limited to the first and possibly one or two reprint states; users are invited to write to Karen Cook at BLML with details of additional states in their own collections. (Post-1922 Irish mapping is excluded.) Against this, there are detailed descriptions of the covers for those maps which have them, using the 'Hellyer numbers', though there are prefixed 'MCA' rather than 'H', as is proposed for standard CCS practice.

Even if one disallows a few sheets which are arguably regular series sheets, (e.g. the Old Series mapping of the Isle of Man), the output of 'District and Tourist' maps by the OS is extraordinary, and the authors have performed a valuable service simply in gathering together a list of titles. I very much look forward to something more definitive; but some years at experience with carto-bibliography convinces me that that publication is some way off yet! Meanwhile, purchase is strongly recommended.

Richard Oliver

Ordnance Survey Annual Report 1990, [Dublin, Ordnance Survey], ISSN 0791-3400. [A4, pbk, no price]

Control: 65 stations were co-ordinated using GPS; its provision of height control is not yet as precise as that of spirit levelling, and conventional surveying methods remain more cost-effective on small projects.

Air survey: The 1:2500 mapping of the Republic is to proceed using mainly office-based technology with the minimum of fieldwork. During the year 38,400 ha were plotted digitally at this scale from air photos, together with 6256 ha at 1:1000 and 229,085 ha at 1:50,000. Following an experiment in County Wexford, air-digital methods will completely replace ground-based methods in rural areas in 1991-2, so that field surveyors will complete maps digitised from air photos.

Field revision: Baltinglass, Celbridge, Greystones, Kilcullen, Kildare and Rathcoole-Saggart have been mapped at 1:1000; 14 counties have seen revision and continuous revision at 1:2500.

Digital mapping: existing 6-inch (1:10,560) mapping will in future be available in two formats: vector format, with roads, major water features, administrative boundaries, railways and major placenames; and raster format, of the whole map; four hundred 6-inch maps were scanned using a new automatic flatbed scanner in the last two months of 1990.

Staffing: at 31 December 1990 OSI employed 352 staff, 46 of them military and 127 of them field staff.

Finance: total receipts were £1R 2,333,000, and total expenditure £1R 8,096,000, so that receipts were 28.8% of expenditure, as against 36.0% in 1989, though in fact expenditure was up by nearly £1R 2M, [why is not stated, though it could be investment in new technology]. The fastest-growing source of revenue has been royalties, which are 31% of receipts; contracts represent 26.6%, large scale sales 24.9%, small scale maps 16.8% and sundries 0.4%.

1:50,000 mapping: no further information is to hand.

Richard Oliver


This is the first of OSI's 'Outdoor Pursuit Series' at 1:25,000, derived from the 1:50,000 database. It covers an area 14 km W-E by 16 km S-N, centred on Lough Leane. Allowing for extra names (but not as many as the enlargement of scale would permit) it is very similar to 1:50,000 Sheet 78 reviewed in Sheetlines 31, the main difference being that yellow instead of cross-hatched black is used for built-up areas, contrary to normal European practice at this scale (and, it may be suggested, the main justification for it as against 1:50,000) no field boundaries are shown. On the reverse is a quadri-lingual brief guide to the National Park. One big defect common to both is that the Kerry Way (a path) is shown by a broad green line, as though it were
a road, and indeed the use of uncased colours for roads makes for a generally coarse effect. As on the 1:50,000, contours are at 10-metre intervals. Altogether, purchase can only be recommended to those who want a really complete set of OSI publications, and for whom the artefact is more important than the content.

Richard Oliver

A miscellany on covers

I - Reading - or Aldershot?

A curious anomaly in the matter of Ordnance Survey covers recently brought to light by David Archer seems to help to pinpoint a change of attitude on the part of the designers of the various series of small-scale maps towards the relationship between cover design and the identification of a map series by means of its cover.

First, then, to describe the anomaly. The cover concerned is, in the terminology introduced in my monograph on the One-inch Third Edition, Large Sheet Series (NS-3-LC),1 OS/E style, [Hellyer/Browne H.10.1] designed by Ellis Martin in 1919 and printed in black and vermilion on buff paper. The map inside is the Reading District special sheet, published in 1912 and coded in the monograph REA.Ou, having the price/copyright statements 'folded in Sections 2/6. All Rights of Reproduction Reserved'. The sheet name printed on the cover is 'READING DISTRICT' and the cover price printed is 2/-. The sheet diagram printed on the cover below the price is that appropriate to Aldershot District (North) instead of that for Reading District.

1. Date of issue. The cover must have been printed after the beginning of 1919, probably not much before July (Ellis Martin was appointed on 9 May of that year2) unless the design was already in hand before Martin joined the staff. The price was increased from 2/- to 3/- in January 1920 and the cover would have had a price change sticker if the issue of the map had been much later. The probable limits are therefore between June and December 1919.

2. Date of printing of REA.Ou. All copies of the Reading District sheet which have been seen in OS/F [H.10.2] style covers (red and brown on buff) have had 'Folded in Sections 3/-' printed at the foot of the map, but specimens of the F cover are known to have been printed before the 1920 price change, since they have a price change sticker on the front. No copies have yet been seen with all prices removed from the foot of the map, showing it to be a reprint later than January 1920. Neither have copies been seen in the OS/E style cover with the correct sheet diagram. It is not known when the Reading District sheet finally went out of print (it was still listed in the 1924 OS catalogue), but the Popular Edition-derived Middle Thames Tourist Map was issued in 1926 and includes nearly all of the area covered by Reading District.

3. Aldershot District (North) was first issued in 1905 and was followed by four dated reprints, the last being of July 1911. The sheet was then fully revised (in the third national revision) and reissued on the same sheetlines, with the date 1914, virtually in Popular Edition style. During the War large numbers of copies were issued mounted, with the usual wartime D-dp cover design [H.5], printed directly on the mounting material. No copy of this map has as yet been reported in an Ellis Martin cover. In 1919 a revised version with 'Popular Edition' at the top of the map and a new printing date was issued in Ellis Martin Popular Edition style covers.

2 John Paddy Browne, Map Cover Art, (Southampton, Ordnance Survey, 1991), p.66.
Discussion

An OS/E style cover would not have been out of place on a copy of the 1914 third national revision Aldershot District (North) map issued for sale in 1919 before the new 1919 printing was ready, since it would have been the logical successor to the style D [H.4] and D-dp covers used in 1914-18. But this is only true if the decision to distinguish between the Third Edition (Large Sheet Series) and the Popular Edition by means of entirely different cover designs was taken only in the last two or three months of 1919, and at the same time to make it quite clear that all One-inch maps based on the third national revision were thence forward to be associated with the Popular Edition and hence were entitled to be enclosed in Popular style covers. Yet straightaway, the York District special sheet of 1919, based on second national revision material and printed in a mixture of Third Edition and Popular Edition styles was issued in a Popular style cover, and the Tourist and District sheets derived from both Editions issued in the 1920s came out in a range of cover styles quite unrelated to the revision states of the maps they contained. Later, too, we find that the New Popular Edition came out in several printing styles and that the different sheets were based on two or three different revision phases.

All this suggests that if ever a decision was reached on the lines suggested above (to distinguish map series from one another on the basis of revision state related to cover style) it was abandoned as soon as it was recognised that a sequence of successive ‘national revisions’ was proving impracticable and uneconomic, and that every published sheet was eventually going to have its own revision regime, and map families and series were in the end going to be assembled on the basis of ‘presentation style’ rather than ‘revision state’. The distinction between Aldershot District (North) Third Edition style and in Popular Edition style happens to coincide with a distinction between second and third revisions. The distinction between Fifth and Sixth (New Popular) sheets covering, say, the Southampton area has no connection with their revision states which are identical.

One is almost forced to the conclusion that a small stock of English covers was prepared for Aldershot District (North) 1914 and was never used; that the last remaining stocks of Reading District REA.Ou had to be issued because REA.Ov was not ready; and that the Aldershot covers were issued with Reading titles in the hopes that no-one would notice the anomaly and that if they did it would not be considered as worthy of a formal complaint.

This sort of thing does not seem to have happened very often.

Guy Messenger

II - The advent of the Bender fold

'This map introduces the “Bender” system of folding - a new and more convenient method which it is proposed to use extensively for Ordnance Survey Maps. It consists of one main central horizontal fold and then six perpendicular folds, the cover being fixed to the side of the map at this juncture and is in one piece for back and front with a joint in the middle to enable the map to be folded in cover [sic] for the pocket. Any portion of the map can thus be read without opening it right out.'

Thus was announced the One-inch Fifth Edition-derived New Forest Tourist Map, published in September 1938. 'Bender' has been standard for most post-1945 folded Ordnance Survey maps, and appears to have been invented in 1937 by Mr A.R.E. Bender of the Ordnance Survey. It was a development of the 'Michelin' fold, first used by the Michelin Tyre Company for its 1:200,000 maps (publication of the British series of which began in 1914), apparently first used by the Ordnance Survey in 1927-8 for dissected issues of the Scotland Popular Edition [cover
H.16.2.a], and used as standard for the Quarter-inch Fourth Edition which began to appear in 1934. Sheets up to about 23 inches (58 cm) top to bottom could be folded so that any part of the sheet could readily be inspected without opening the whole, but at the expense of a map which though suitable for stowing in cars was awkward for the pocket or for storing at home. One can easily imagine how Mr Bender must have become fed up with this, removed the back cover of a Quarter-inch Fourth and folded the residue in half.

The invention was never patented, apparently because of doubts as to whether it was original enough, but it was very quickly imitated in Germany; perhaps, as with photozincography eighty years before, the same idea occurred to two people simultaneously. The earliest non-OS use of the Bender fold in Britain that I know of is on Jarrolds' map of the Norfolk Broads of 1947, but little or no use of it was made by the various commercial map-publishers for a long time; for example, only in 1963-4 did the Bartholomew Half-inch start to use it, and non-Bender street maps are still occasionally encountered.

One interesting feature of the first issue of the 1938 New Forest was that the back and front cover designs were so arranged that the spine was at their foot, whereas the second issue followed the usual Ordnance Survey practice of having the spine at the top.

Richard Oliver

III - Bender fold between the wars

Although the use of Bender fold on all suitably-sized OS sheets had been decided in principle by February 1939, it is less certain when it was actually introduced for other than the 1938 New Forest sheet referred to above. The dates of printing of the 'pre-war' One-inch and Half-inch sheets found in Bender fold covers range from 1937 onwards, though most are dated 1939, 1940 or 1941. There is no evidence of the abandonment of unused stocks of the earlier hinged covers and associated method of folding and of the wholesale substitution of Bender folding on a wide scale, and indeed the older method continued to be used for maps mounted in sections, to which Bender folding was quite unsuited.

The Bender fold is most ideally suited to a sheet of which the north - south dimension is between about 68 and about 88 cm (27 and 35 inches). When folded along an east-west axis into four thicknesses this produces a rectangle as long as the width of the map and of between 17 and 22 cm (6.75 and 8.75 ins) wide which its turn can be folded concertina fashion to produce a compact bundle 9 to 13 cm (3.5 to 5 ins) wide, depending on the width of the map and the number of such folds made. In Bender folding the folds are made in a different order, but the final dimensions of the folded map are the same.

Only a handful of the sheets issued before the war in Bender fold were long enough in the North-South dimension to stand three East-West folds and these were all either One-inch Fifth Edition sheets measuring 40,000 yards or more south-north, portrait shaped One-inch Popular Edition sheets, or tourist sheets. Standard landscape-shaped sheets of the Popular and Half-inch of England and Wales and Scotland and of Fifth Edition sheets 30,000 to 35,000 yards south-north were folded differently.

The first (back-to-back) fold was omitted and the whole map was equally concertina-folded along the North-South axis. The resulting bundle was then folded into three along the East-West axis. The result, officially 'semi-Bender fold', was similar but not identical to that of the 'true' Bender fold and could be adapted to maps of any size however inconvenient.

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6 Advice from Patent Office, 1937, in PRO OS 1/460.
7 Strassenzustands-Karte von Deutschland, 1:1,000,000, 1939; I am indebted to David Archer for drawing my attention to this.
8 Minute, 1 February 1939, item 9 in PRO OS 1/460.
It seems likely that all sheets of the One-inch Fifth Edition still in print at the beginning of 1939 were issued in Bender fold covers during that year or the two years following, though the issue in Bender fold did not necessarily coincide with the introduction of a new printing of a sheet. This is certainly not so in the case of the England and Wales Popular Edition, and reprints dated 1940 and 1941 are known in conventional folding and pre-Bender-fold cover styles, and among those dated 1939 there are, as might be expected, several cases of the same printing state being found both conventionally folded and covered and also Bender-folded. Examples of Scottish Popular Edition One-inch, England and Wales Half-inch and Scottish Half-inch are very much rarer in Bender fold and it would be rash to draw general conclusions from the few examples so far reported, but one phenomenon has been noted among Scottish maps but not yet seen in English examples that must be described at this point.

The front cover designs of Ellis Martin for the regular series of small-scale maps have one feature in common, namely that the sheet name was printed in the ground colour characteristic of the map series, namely red for the Popular One-inch, blue for the non-relief Fifth Edition, scarlet for the Fifth Relief Edition, green for the Half-inch, and blue for the Quarter-Inch, other lettering and price statements being in black for One-inch and Quarter-inch and sepia for the Half-inch. In the Bender-fold covers of those series that have them not only is the layout of names, scales, prices and other matter altered in relation to the decorative features of the design which remain unchanged, but sheet names are now printed in black, and scale and edition in the series ground colour. What seems strange is that in the Scotland Popular Edition, certainly, and possibly in other series, several examples of conventionally folded late reprints are known in conventional covers using the Bender-fold cover design. I have not seen this phenomenon among the Popular Edition of England and Wales, but I have an idea that it may occur among the Scotland Half-inch.

A certain number of examples of tourist sheets are known to have been Bender-folded during the period under review, and these are listed in the Appendix below. They use the same front cover designs as their conventionally folded counterparts. The opportunity is taken with these, as with the inner surface of Fifth Edition covers, to make a display of informative and advertising matter, an opportunity which notably was not taken with the Popular Edition of England and Wales and the Half-inch, though some use was made of it in some Scotland One-inch covers. The use of these inside surfaces only came fully into its own in post-war series, notably the New Popular and the Tourist sheets.

In conclusion, I think that any thought that the use of Benderfold by the Ordnance Survey in 1939-1941 was significantly wider than is suggested must be abandoned, and that many examples are still waiting to be found as more private collections come to light seems most unlikely. More are almost sure to be found, but not enough to justify the idea that Bender-fold became standard practice before the Second World War, or even that the decision to make it so was reached until the final decision to standardise the New Popular One-inch had been undertaken. Pre-war Bender-fold was not exactly experimental. The experimental stages had been passed when the OS adopted Mr Bender’s invention. But the pre-war OS Bender-fold phase certainly has the characteristics of a trial run, and may well have been an experimental phase as regards the materials used by them for their Bender fold covers are concerned.

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9 On the background to this see PRO OS 1/216, minutes Jan - July 1939.
10 [A copy of England Fifth Edition sheet 146 has been reported thus. RRO.]
Appendix

The following lists of the states of the sheets known to the author to have been issued by the OS pre-war (up to 1942) are almost certainly not to be regarded as definitive; it is hoped that those knowing of omissions will write to Sheetlines.

One-inch Popular of England and Wales: 3, 3038; 12, 3038; 13, 2039; 25, 3040; 26, 2039; 37, 3039; 41, 3039; 43, 3400/40; 45, 3040; 49, 4038; 53, 3039; 59, 2040; 60, 2039; 61, 2539; 62, 2539; 66, 2040; 68, 4039; 70, 2538; 78, 2038; 79, 2539; 82, 4040; 85, 3039; 90, 2040; 99, 4038; 109, 3040; 133, 4038; 134, 1239. [N.B. 135, 3041, has only so far been reported as conventionally folded.]

One-inch Popular of Scotland: 68, 1039; 74, 2539; 80, 1539; 92, 1539.

Half-inch England and Wales: 9, 2038; 23, 3037; 31, 4039; 35, 4039; 40, 3039 (all layers)

Half-inch Scotland: 5, 1910 (hills); 10, 1039 (layers)

One-inch Fifth Edition: 93, 6039*; 95, 4038; 106, 8039; 107, 10038; 108, 5039; 111, 6039; 112, 50/38+ and 3040; 113, 6039*; 114, 10038+; 115, 10038; 118, 5038+; 119, 4038; 125, 6038; 127, 3041; 129, 40/37 (both printings)+; 131, 5038+ and 5039; 132, 6039; 138, 5039+; 139, 60/37+ and 3040; 140, 80/37+ and 8039; 142, 6039*; 143, 6039; 144, 4040; 145, 6038 and 6039; 146, 8039. (* Announced on initial publication as Bender-folded. + Also known in conventional fold.)

Tourist and District sheets: Cotswolds (Half-inch), 100/37; Dartmoor, 4038; Dorking and Leith Hill, 8039; Hastings and Bexhill, 3038; Manchester, 1040; North East Wales, 40/37; Lake District, 12039; New Forest, 8038; Peak District, 10040; Snowdon, 6038; Trossachs and Loch Lomond, 40/38; Wye Valley 4039.

Note: the following One-inch Popular Edition sheets of Scotland have been seen in conventional fold covers with Bender-fold style printing: 1, 1931; 8, 1931; 10, 1930; 11, 1931; 16, 1930; 17, 1930; 22, 1930; 26, 10/37; 27, 1039; 30, 1930; 32, 1931; 38, 10/37; 46, 1539; 47, 20/38 and 2040; 50, 1540; 55, 1540; 85, 1039; 88, 1040.

Acknowledgements: A number of members have helped me with details of examples for the lists, but I've not named them because some contributions were by word of mouth, and I did not record the contributors' names. However, my thanks are due to all of them whether I remember their names or not.

Guy Messenger

IV - The decline of mounting on cloth and of mounting in sections

The Ordnance Survey started to do its own issuing of maps in covers and mounted on cloth or linen when it started to publish a coloured one-inch map on a production basis in 1896-7. For a few years the only style offered was cloth-folded, but some time before 1904 engraved outline sheets were being offered mounted in sections, in OS covers, though to judge from the paucity of surviving examples buyers of sectioned sheets continued to favour the offerings of such commercial firms as Stanford and Phillip. By 1904 folded maps were also being offered on paper, unmounted: far fewer seem to survive than of the mounted or sectioned counterparts, but this may simply be because the 'thin tough' paper favoured by the Ordnance Survey for colour printing until c.1930 was not that tough. At any rate, between c.1906 and 1945 all small-scale OS maps were notionally available either paper flat or paper folded, folded and mounted, or
mounted in sections. The first break with this policy seems to have come in 1945 when the new 1:25,000 map was offered only in flat or mounted and folded style, and in the late 1940s a shortage of mounting cloth meant that some One-inch New Popular sheets were not available in cloth folded style. At this time a One-inch sheet cost 3s cloth-folded and 5s mounted and sectioned; a price rise in July 1950 raised these to 5s and 10s 6d respectively, and, if surviving specimens are a good guide, this seems to have had a serious effect on sectioned sales: copies of sectioned One-inch sheets with printed price 10s 6d on the cover are rare, and those with price stickers (i.e. old stock) are unusual.

In 1952 there was another price rise, to 6s 6d for cloth folded, though sectioned prices remained unchanged. By 1955, sales had virtually ceased; as since 1952 no mention of the sectioned version had been made in the footnotes to the published maps this is perhaps not surprising. At any rate, section ed New Popular sales were - well, not running - at 260 per annum; 26,457 sheets remained in stock, or 100 years’ supply. The Seventh Series was available dissected, at 1s 6d per sheet, but the only regular purchases were on behalf of H.M. Queen Elizabeth the Queen Mother, for the library at Clarence House. Negotiations were put in hand. Yes, H.M. would be quite prepared to accept cloth folded. On 14 June 1955 it was decided that no further sectioned one-inch maps would be produced.11 The revised OS price list of 1 July 1955 merely indicated that prices for sectioned maps were available on application.

I said earlier that until about 1930 the paper used by the Ordnance Survey was not very durable. By the 1940s a paper-folded was not much inferior to a cloth-folded map, and by 1967 sales of cloth-mounted maps were declining in both relative and absolute terms; it was noticeable in a shop such as Stanford’s with a high turnover of stock how very often the cloth-folded offerings were in older covers than the paper folded. (It was also noticeable how, after a period of time, the mounting material would tend to contract and thus cause creasing in the map.) Though there were a few complaints from M.P.s and the public, further production of the cloth folded style was abandoned in 1967.

Richard Oliver

11 This paragraph is based on PRO OS 1/498.
Announcements and sundries

SITUATIONS VACANT

Publications Sub-Committee Secretary wanted
Since 1986 Richard Oliver has been acting as the Society’s Publication’s Sub-Committee Secretary, but he now wishes to relinquish the post, and seeks a successor or successors. There are two parts to the work, (1) clerical work, including organising and attending on meetings of the Sub-Committee, (on average twice a year), and seeking estimates from printers, and (2) preparing for the press the Society’s publications (other than Sheetlines). Personal efficiency and enthusiasm rather than profound cartographic knowledge are requisite! The two parts of the job could be performed by two different people. If anyone is willing to take on this work could they please contact Richard in the first instance, (address as Editor of Sheetlines).

Editorship of Sheetlines
Richard Oliver has also been Editor of Sheetlines since May 1990. This was initially for a year only, and he now expects that other commitments will oblige him to resign during 1992-3. If anyone is interested either in taking over the Editorship lock-stock-and-barrel or would be willing to undertake some of the work as part of a team, could they please contact Richard in the first instance, (address as Editor of Sheetlines).

Typists
The Society needs typists! The necessary attributes are to be able to spell not worse than the present Editor of Sheetlines, and to have access to a microcomputer capable of producing 5.25" or 3.5" IBM-compatible disks. Their services are certainly needed for the Society’s reprint programme, and may be needed for future issues of Sheetlines. Once again, anyone willing to help is invited to contact Richard in the first instance, (address as Editor of Sheetlines).

Advertisements

Early One-inch Seventh Series mountain for disposal. All 10-coloured, folded in original covers, good or better condition. 60-plus for swapping, 60-plus first states needed. Exchange wants list. Contact Tim Nicholson, 187 Russell Court, Woburn Place, London, WC1H OLR.

It’s true! There really are nutters who will take unwanted GSGS mapping off your hands!! (OK, you arrange postage/delivery.) Don’t believe it? Contact the Editor of Sheetlines!

WELL-PRESERVED RUIN SEeks IVY. Must like string quartets and water sports, (oh, and Fifth Reliefs). Contact ‘Levelling Staff’, c/o Sheetlines.

Sheetlines is willing to take private small ads; please contact the Editor.
NEW MEMBERS
(correct to 1 January 1992)

The following are new members, to whom we extend a welcome:

Irish OS maps printed from copper

Just before closing for press, Sheetlines learns that a limited edition has been issued of printings from Irish copperplates of 1837-55: there are two groups of four. The edition is limited to 200 sets, priced at £300 sterling or £IR350. We don't have further details: orders &c are to be directed to either The Director of Operations, Ordnance Survey of Ireland, Phoenix Park, Dublin 8, or to The Director, Ordnance Survey of Northern Ireland, Colby House, Stranmillis Court, Belfast.
(Continued from inside front cover)

Richard Oliver, An Introduction to the Ordnance Survey One-inch Seventh Series Map. 32 pp, £5:00. This is the 'de luxe' version of this author's guide to the Seventh Series, with a quite different introductory essay, prepared to accompany the OS 200 limited-edition reissue of the Seventh Series.

Back issues of Sheetlines

Four collections of back issues have now been prepared, grouped as follows: numbers 1-6; numbers 7-10; numbers 11-14; numbers 15-18. Until 28 February the price for each collection will be £4:00 each, or £16 for the set; for orders postmarked from 1 March onwards, the prices will be £5:50 and £20:00 respectively. (It has been found that the original selling prices were lower than was justified by the final cost.)

Two further collections of back issues are in preparation and it is expected that they will be issued some time in February or March: numbers 19-21; numbers 22-24. For orders postmarked on or before 28 February, these collections will be sold at £4:00 each or £8:00 for the two; for subsequent orders the price will be £5:50 each or £11:00 for the two. It is realised that a number of members have some but not all of issues 19 to 24, and in the hope of avoiding injustice ad hoc reprints of single issues will be undertaken on the following basis:

1. All orders must be postmarked on or before 28 February 1992.
2. All orders must be prepaid, by cheques payable to the Charles Close Society.
3. All orders must be sent direct to the Editor of Sheetlines.
4. No orders will be accepted for complete runs of numbers 19-21 or 22-24 as single copies.
5. The price of these single copies will be £2:00 each.

From 1 March 1992 complete sets of Sheetlines numbers 1 to 27 will be available for £35:00 each.

Individual issues of Sheetlines 25 to 27 are still available, and the price will be £1:00 per issue (or £3:00 for the set) until further notice. When stocks are exhausted they will be reprinted as a collection, which will certainly be sold for more than £3:00.

Individual issues of Sheetlines 28 onwards will be sold at £2:00 each from 1 March 1992.

Some individual issues of Sheetlines 1 to 23 (not complete sets) remain: it is proposed that they will be remaindered at the 1992 AGM, and pulped after the 1993 AGM.

Index to back issues of Sheetlines

It had been hoped to produce an index covering Sheetlines 1 to 30 in time to be issued with this current number. Unfortunately, pressure of other work has prevented this: it is now hoped to issue an index to numbers 1-33 with Sheetlines 33.

NEW PUBLICITY LEAFLET

A new edition of the Society’s publicity leaflet has been prepared; anyone wanting copies for display or distribution is invited to contact either David Archer or Roger Hellyer, (address on back cover).
NEW MEMBERSHIP SUBSCRIPTION RATES

At the AGM in July 1991 it was agreed to increase subscriptions for the first time since 1986. Subscriptions are due by 1 March 1992, and it would greatly help the Society if you would kindly ensure payment of the correct amount. Enclosed with this copy of Sheetlines are a subscription form and a standing order form, for those who may like to consider transferring to that system of payment. We are acutely conscious that the new rates are particularly disadvantageous to our Irish members, but they will realise that the Post Office now treats the Irish Republic as part of Europe, and charges accordingly.

Airmail rates have risen considerably, so members living beyond Europe now have a choice of rate, depending on whether they want their supply of Sheetlines quickly or cheaply.

Rates are now in three bands:

Band 1. United Kingdom and BFPO only - NOT Republic of Ireland
Band 2. European countries, INCLUDING Republic of Ireland; Other countries (SURFACE MAIL ONLY)
Band 3. Other countries (AIRMAIL)

Ordinary membership: Band 1. £7.50 Band 2. £11.00 Band 3. £15.00
Family membership: Band 1. £9.50 Band 2. £11.00 Band 3. £15.00
Corporate membership: Band 1. £11.00 Band 2. £15.00 No Band 3.

NOTICE

The editor and contributors to Sheetlines are individually responsible for the opinions which they express therein: the Charles Close Society as a body does not necessarily agree with all or any such opinions. The Charles Close Society does not dispute that certain material used in this issue of Sheetlines may be either Crown copyright or Government of Ireland copyright.

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Contributions

to Sheetlines, long or short, profound or (fairly) trivial are welcome:

Deadline for Sheetlines 33:

1 March 1992

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