



Sheetlines

The journal of
THE CHARLES CLOSE SOCIETY
for the Study of Ordnance Survey Maps

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The Charles Close Society was founded in 1980 to bring together all those with an interest in the maps and history of the Ordnance Survey of Great Britain and its counterparts in the island of Ireland. The Society takes its name from Colonel Sir Charles Arden-Close, OS Director General from 1911 to 1922, and initiator of many of the maps now sought after by collectors.

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



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SHEETLINES

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Forthcoming visits

Gerry Jarvis has arranged the following varied programme of visits over the next few months. Full information about the 'three-day event' and AGM has been circulated in a separate mailing. Details of the other visits are given in *Sheetlines 65*.

- | | |
|--------------|------------------------------------------------------------------------------------------------------------------------|
| 2 May | National Trust Library at Belton, near Grantham, Lincolnshire, |
| 8 - 10 May | <i>Three-day event and AGM in Edinburgh,</i> |
| 7 June | John Samuels Archaeological Consultancy, Normanton, near Newark, |
| 19 August | A visit to view our archives at Cambridge University, |
| 19 September | Royal Commission on Ancient and Historic Monuments in Wales and
National Library of Wales Map Library, Aberystwyth, |
| 9 October | Visit to Ordnance Survey, Southampton. |

Note that the dates have now been agreed for our meetings at Belton and Cambridge. There will be a nominal charge per person per meeting of £1 to £2. If you would like to register for any visit, please contact Gerry Jarvis, Rulow House, Buxton Old Road, Macclesfield, Cheshire, SK11 0AG, visits@charlesclosesociety.org.uk, (01625) 611594.

Midland Group Meetings

The informal Midlands Group will hold two meetings at 19:30 on Thursdays at Voluntary Services Centre, Union Street Car Park, Union Street, Burton upon Trent (SK 246229).

- | | |
|--------------|-----------------------------------------------------------------------------------------|
| 22 May | More talk about the 1:25,000 following Roger Hellyer's presentation at the last meeting |
| 11 September | Open discussion session |

Lez Watson highlights the change of date for the May meeting, which avoids a clash with a prior booking by the Gardening Club. More information from Lez at 54 King Street, Burton upon Trent, DE14 3AF, Lez4Lynne@aol.com, (01283) 541303.

Lez's website at <http://www.watsonlv.addr.com/os-maps.htm> is well worth a visit. It contains summary lists of one-inch New Popular and Seventh Series maps, 1:25,000 Explorer maps and both British and Irish 1:50,000 maps. There is also a very useful guide to the available cartobibliographies for many other series. – CJH.

New small-scale mapping developments

Early in 2002 Ordnance Survey of Northern Ireland completed the republication of the 1:50,000 *Discoverer* series in digitally-produced form. Sheet 8, 9 and 13 have now been republished in a 'C' edition, which, apart from some revision to built-up and wooded areas, includes a minor specification change, in that casing is no longer used for the upper parts of cuttings. This has abstract logic, but does not seem to be an improvement in comprehensibility. The shades of 'red' for A-roads and 'brown' for B-roads are likely to appear rather similar, particularly under artificial light.

As was mentioned in *Sheetlines* 64, 6, Ordnance Survey of Great Britain are experimenting with a new specification for the 1:25,000 *Explorer*, using data taken directly from the large-scale *Mastermap* database. An experimental section of OL1, *The Dark Peak*, covering an area 393 to 415 km east and 380 to 390 km north on the National Grid, was printed late in 2002. Notable differences from the existing specification include: buildings are cased in brown; churches and chapels as such are not shown, but there are symbols in black for buildings with towers (suggestive of a castle) and spires (suggestive of a witch's hat); wind farms are shown by a new 'propeller' symbol; primary routes are shown in green; road numbers are boxed; no distinction is made between single and multiple track railways; 'access land' is shown in yellow with orange-brown limit-bands; new symbols include, in blue, 'beach' (a sandcastle), and, in red, 'large religious building' (in plan), public conveniences, police stations, library and post office. It is understood that the new specification was due to be settled in January, and will not necessarily include all the innovations mentioned here, so on this occasion readers are urged to restrain themselves from favouring OS with their comments!

Richard Oliver

On 5 March, an Ordnance Survey news release announced the completion of the Explorer series, with the whole series due to be brought together for the first time at the Ordnance Survey Outdoors Show at the National Exhibition Centre in Birmingham, 14 - 16 March (although official publication date of the final sheets is not until 19 March). – CJH

Changes at Southampton

An Ordnance Survey news release on 7 March added some detail to the outsourcing agreement noted in *Sheetlines* 65.

Headed 'Data collection boost at Ordnance Survey', it claimed that changes in the way Ordnance Survey manages a key part of its data collection strategy are bringing significant benefits. Six months into a new series of long-term supply agreements, a mixture of in-house and external suppliers is already helping to produce efficiency gains and enhancements in data quality, delivery times and cost control. The work involves revising data that is central to forthcoming layers of OS *MasterMap*, Ordnance Survey's new digital map data, including improvements to the positional accuracy of features in rural areas and selected rural towns.

"We rely fundamentally on our own field staff to maintain and enhance our database to a level of accuracy envied around the world," said Neil Ackroyd, Ordnance Survey's Director of Data Collection and Management. "To supplement this, we previously let short-term

contracts to a range of external suppliers. Now, the combination of our in-house resources alongside fewer, longer-term external contracts is optimising value for money.”

Three external suppliers won five-year contracts for the rural data capture: Simmons Aerofilms, IGN FI¹ and Kampsax A/S². Their work has to meet the same rigorous quality standards set for Ordnance Survey’s own data collection teams. The range of skills involved include land survey, digital map editing and software development.

On 27 January, the *Southern Daily Echo* reported that 400 Ordnance Survey staff had applied for voluntary redundancy after the agency said that it wanted to cut 300 jobs. An OS spokesman said that it was “great news” that they had managed to shed the staff with no forced redundancies. According to the *Echo*, it had now been decided that 350 staff would go, 250 from Southampton with another 100 from field offices scattered around the UK.

Twenty-five inch first edition OS maps of Lancashire

Roger Holden draws our attention to almost 1400 large-scale maps of Lancashire dating from 1888 to 1893, which are now available on three CDs:

Disc 1 - Northern Lancashire

Disc 2 - Manchester and the South East

Disc 3 - Liverpool and the South West

These high-resolution images have been produced using maps held by the Lancashire Record Office. On the CD the maps are indexed from a key map. You can print any of the maps, or zoom in to a selected area.

The CDs cost £20 each plus £1.50 p. & p. Order from Digital Archives Association, 3 Cedarways, Appleton, Warrington, WA4 5EW. Tel. 01925 265794.

One-inch England and Wales Third Edition (Large Sheet Series) sheet 125, price 1/-

In some private correspondence that he wrote in 1986, Guy Messenger referred to a copy of sheet 125 (Guildford) that he found in a bookshop, and bought. It was printed in colours but apparently made use of the Black Outline Edition plate in which the price at the foot of the map is 1/-, replacing the standard range of three prices for the coloured map.

Curiously, however, Guy did not include this state in his 1988 monograph, nor does this sheet appear to have remained in his collection, now in Cambridge University Library. The phenomenon of coloured issues having the 1/- price of the black outline state is recorded in respect of sheets 108 and 115. But I would be grateful if any member can confirm the existence of sheet 125, or indeed any other sheet, in this style, so that we can record this information in the forthcoming cartobibliography. My email address is roger.hellyer@ukgateway.net, my postal address is in the almanac.

Roger Hellyer

¹ IGN France International, a subsidiary of the French National Geographic Institute.

² A member of the COWI Group, Denmark.

Maps derived from the OSDs for Lincoln

R C Wheeler

Introduction

Lincoln was depicted on two Ordnance Surveyors' Drawings, OSD 277 and OSD 282, both completed by Henry Stevens in 1820.¹ As for many other urban OSDs, they were used not just for the engraved Old Series map but as a source for the maps produced by Lt Dawson to meet the needs generated by the Reform Act of 1832 and the Municipal Corporations Act of 1835. This article aims to show the relationship between the various maps and to establish just how much new material was incorporated in the maps of the 1830s. Lincoln is by no means a typical town – if indeed such a beast exists – and it should not be assumed that the practices followed in Lincoln necessarily applied elsewhere.²

In drawing these OSDs, Stevens was punctilious in his attention to detail. Indeed, the engravers may have thought him over-fussy. One of the two-inch tracings among the Hill Drawings³ covers the area around Blankney where OSD 277 abuts on OSD 278 by Budgen. The work of the latter has been traced in ink, Stevens' work in pencil. The road running east from Blankney past Cottagers' Common forms the boundary between their respective areas. Although their two depictions overlay one another tolerably well, they are of an entirely different character: Budgen's road twists and turns in a meaningless manner; Stevens' makes sense of itself with a constriction here where cottages have encroached on the verge, a sharp bend there, as it passes from open arable in among closes. The geographer would of course prefer Stevens' depiction; the engraver plumped for Budgen's.

Corrections applied to OSDs in producing the published one-inch map – The process in general

Seen through the pages of the OS Letter-book, the period between 1820 and the publication of the engraved maps in March 1825 appears to be a battle between an efficient central organization and a band of incompetent and careless surveyors out in the field. Close examination of the hill drawings suggests that the centre was far from organized. Survival of the material is patchy but for the south-east part of sheet 83 two separate proof impressions survive. The first has the line-work inserted and the names in hairline – i.e. in their proper form of writing but with the strokes not yet widened to produce the finished effect. The engraving of tree ornament in woods has only just started. The second impression has woods completed, county boundaries and a large proportion of the names. Neither impression has relief. The two proof states will for convenience be called P1 and P2 respectively. P1 has relief sketched by form-lines in red ink over most of its area. P2 has been cut with a penknife into two parts: a portion of the east part has form lines sketched in red ink (in an area where form-lines have not been added on P1); on the western part, hachures have been drawn in pencil. Thus a part of the area (including, by a happy chance, part of Harmston parish) had its relief sketched once with form-lines and then a second time with hachures. The author is

¹ Yolande Hodson, *Ordnance Surveyors' Drawings 1789-c1840*, Reading: Research Publications, 1989.

² I am indebted to Richard Oliver for drawing my attention to the PRO material described here. He has examined it for all the towns covered by Dawson as part of the Exeter Town Mapping project, under the direction of Professor Roger J P Kain and with funding from the Arts & Humanities Research Board.

³ BLML Maps 176.

flattered by the attention given to his own parish, but has difficulty in understanding what system the OS might have been following in all this.

It is, however, corrections rather than relief with which we are concerned here. P1 is marked up with a number of corrections, usually in red ink, sometimes in pencil. The greater part concern names: sometimes corrections, sometimes new names needed (eg *Hall* at Blankney). In a couple of cases, pieces of wood are marked for addition. Some of the corrections relate to changes which have occurred since the date of survey, for example the deletion of two areas of warren south of the Green Man Inn or the change of *Race House* to *Old Race House* east of Waddington.⁴ Scarcely anything could be described as correcting errors in the original survey. Some of the changes to names had already been embodied by the time P2 was produced. Most of the rest appeared on the engraved map, but some seem to have been rejected. For example, the sundry *Pits* (for road stone) by the side of the Lincoln to Sleaford road seem to have been deemed unworthy of inclusion; and the insertion of *Linwood Dales*⁵ by the side of the Witham fell foul of a general reconsideration of what ‘Dale’ names there was space for.

P2 is also marked with corrections but these solely affect streams and occur when the watercourses from the original survey conflict with the hills now being sketched; had they not been made, the streams would in many cases have been required to flow uphill. The corrections on the eastern part are marked in red ink, on the western part in pencil. This suggests that the corrections were marked up by whoever was sketching the hills. Almost all of the corrections are on the part of the map surveyed by Budgen. Generally, there is no problem where the stream crosses a road or other major feature; the most serious errors come about from misassociation between streams at one road and those at the next. It looks as though Budgen had been in the practice of noting streams when he ran traverses along roads but only joining them up when doing his fair drawing back at base. Clearly, it was not his practice to run traverses along the streams themselves, or even to sketch them in while on the ground.

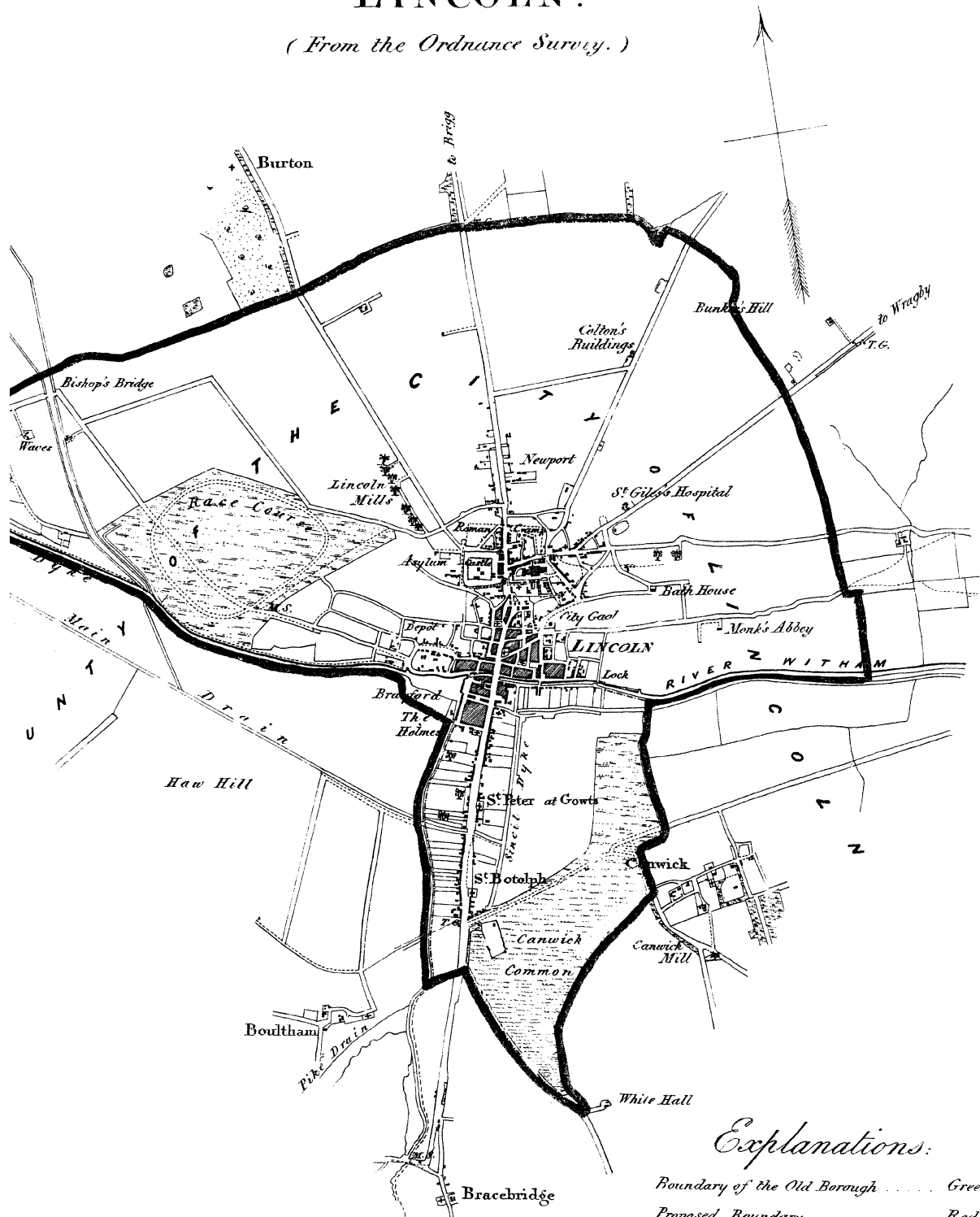
There are, besides, many corrections that have been made to the proofs which are not marked up on either P1 or P2. Many concern names and might have been provided by the local gentry. For example, *Temple* is inserted in the grounds of Coleby Hall, and the *ruins* at Skinnand are expanded to *Church in ruins*. Others suggest a more complex process. For example, where the Woodhall Spa golf course is now (TF 208641) is *Martin Moor* on P1; this is deleted on P2; on the published map *The Moor* has replaced it. *Roughton Moor*, on the other side of the present B-road, vanishes for good after P1. (Both names, incidentally, appear on the modern 1:50,000.) Some names simply move: *Dunston Pillar* is on the west side of the Lincoln to Sleaford road on P1, it vanishes from P2 and re-appears on the east side on the published map. Undoubtedly it is a landmark, but since the pillar can scarcely be distinguished on the published map from the surrounding copse the concern to position the name seems obsessive. Likewise, *Tanvats* moves from one side of Metheringham Delph to the other between P2 and the published map. The place did have a certain importance at the time – one of the Lincoln to Boston packet-boats made a scheduled stop there; was the name actually moved so that it should be on the same side of the Delph as the landing-stage?

⁴ As late as 2 March 1821, the Overseer of the Poor for Waddington still called it ‘Rase Hous’ [LAO Waddington Par 13/2].

⁵ The word is used here to mean allocations of fen; the term is peculiarly applied to the last portion of the Witham fen to be drained, immediately adjacent to the river and separated from the rest of the fen by a form of catchwater drain.

LINCOLN.

(From the Ordnance Survey.)



Scale, 2 Inches to 1 Mile.

Lithographed by J. Nethercliff, 54 Leicester Sq.

Explanations:

Boundary of the Old Borough Green
 Proposed Boundary Red.
 Boundaries of Parishes or Townships Brown
 Rivers Blue.
 The Bail & Close are coloured Pink.

Robt R. Dawson
 Lieut. R.E.

Figure 1: Lt Dawson's Reform Act map (reproduced courtesy of Lincolnshire County Libraries).

Spotting changes to the underlying detail is not so easy as spotting changes to names (especially when working from poor photocopies). Nevertheless, examples can be found, such as the extension of a footpath near Nocton Grange (inserted between P2 and the published map). I have given so many examples, not in the expectation that readers will rush off to the British Library with *Sheetlines* in their hands but to make the point that many of these changes are only likely to have been ordered by a surveyor walking the ground. Thus field inspection took place at least three times, once with changes being marked on P1, once with changes being marked on P2, and once more (at least) with changes being recorded on some other document or documents, now lost.

Corrections applied to OSDs in producing the published one-inch map – Lincoln

None of the correction documents for the Lincoln area survive. However, comparison of the OSDs with the published map show three categories of change.

First, there were simplifications which had the effect of making the map less cluttered. Certain footpaths were omitted and *City Gaol* became *Gaol*. (The distinction was important – the County Gaol was in the Castle – but there simply was not the space to make it.)

Secondly, there was the insertion of antiquities. The Roman defences of Lincoln were substantial and deserved to be shown. The medieval banks around Newport were more questionable and their insertion gave an enclosed character to that part of town which it did not in fact possess. To the east of the city, *Monks Abbey* became *Monks House* and was shown in a squarish embanked enclosure, instead of with tracks on each side as on the OSD. The new name appears to have been a pedantic invention of a certain William Marrat, who had published a plan of the city in 1817 whose depiction of antiquities was its strong point (perhaps its only strong point). This perhaps points to the revising officer having equipped himself with Marrat's plan.

The third change was the insertion of a track running east from the middle of Newport to the Nettleham road. This is not recorded on the 1807 enclosure map of North Lincoln nor on any other published map. It is shown as being fenced along its southern edge but this would only accord with the field boundaries if the track took a slight zig-zag to the south after leaving Newport. In short the existence of such a track is doubtful.

The Reform Act map

The reason this paper has dwelt at such length on the correction process is that, to produce his 1832 map, Lt Dawson went directly and solely to the OSDs. There would have been two reasons for this. First, as shown by the account of the correction process in general, there was no single 'revised OSD' at the two-inch scale and no single source (other than the published map) at the one-inch scale. Secondly, the account of the corrections applied within Lincoln itself has shown that, however instructive for the antiquary and however convenient for the engraver, they did nothing to enhance the topographical depiction of the city. For the purpose of drawing constituency boundaries, houses of long-vanished monks were unimportant, whereas houses containing potential voters were very important indeed.

A copy was made combining the relevant parts of the two OSDs⁶ which seems to have served as a fair drawing for the published map (which is shown at Fig 1). The copyist seems to have been punctilious in depicting detail but had a regrettably casual attitude to windmill symbols, omitting one of the eight mills along the Burton road and also the mill at the Bath

⁶ PRO T72/10 (Part 1), Lincoln folder.

House to the east of the city. Later maps continue to show these mills and there is no reason to suppose that their omission was an attempt at topographic revision.

The draft of Dawson's report notes that Mr Edward Willson (Lincoln's leading antiquary, who had assisted with the historical information on Marrat's plan) 'possesses a very splendid MS map of Lincoln which he is reducing for his history of the City, and smaller plans which shew the precise outline of the Bail and Close'. The importance of the Bail (the original Roman camp at the top of the hill) was that it was administratively part of the County rather than the Borough. The outline of the Bail and Close is duly shown on Dawson's map but one looks in vain for any topographical revision incorporating information from this 'splendid MS map'. Among Willson's papers is a large manuscript map which prominently marks the Bail and Close.⁷ The topography is disappointingly skeletal. If this is the map referred to there would have been little other information that Dawson could use.

Before leaving the 1832 map, it is worth noting two further features which appear to have been added to the fair drawing at a later date. First, there are parish boundaries, a feature not needed in 1832 but to be needed (and used) in 1835. Secondly, two corrections have been marked in red: a change in the line of the racecourse; and a rounding of the corner of the Sincil Dyke. In both cases, the change happened on the ground in or about 1826. There is no way of establishing when the corrections were marked up on the fair drawing.

The Municipal Corporations Act map

In 1835, Dawson was called in again to meet the needs of a further piece of legislation, the Municipal Corporations Act. The need this time was to define ward boundaries as well as municipal boundaries. Wards were most conveniently aligned with parishes, so knowledge (and depiction) of the often convoluted parish boundaries was important.

Once again a fair drawing was produced,⁸ this time at a scale of four inches to the mile. The prime source was again the OSDs. This time the copyist managed not to omit any mills. He also included a second building within the close by the side of the Nettleham road (marked 'To Rasen' on Fig 2). This corresponds to a mark on the OSD which might or might not be a building, so one cannot criticise his predecessors for failing to show it. Needless to say, drawing a four-inch map on the basis of a two-inch original is distinctly difficult and a more generalized style has been adopted which hides the inadequacies of the original.

However, what is of interest is not how accurately this map reproduces the OSDs but whether it provides any new information – besides the parish and ward boundaries. Undoubtedly, Dawson tried to update the map. In the folder with the fair drawing is an outline tracing of an original map at a scale of about eight inches to the mile, which shows a dock at right-angles to the Witham in the parish of St Botolph. The dock is known to have existed by 1842 but this tracing is currently the earliest known record of it. This dock was not shown on the fair drawing or the published map – possibly because it was irrelevant to the drawing of boundaries.

The two corrections marked on the 1832 fair drawing have already been described. That to the racecourse fell outside the area of the 1835 map and was not acted on. That to Sincil Dyke was, it has to be said, *fudged*. There were a couple of buildings standing on the inside of the old, sharp, corner. These were duly marked (as a single block) on the 1835 map. The

⁷ Society of Antiquaries, Willson Collection, 786K (microfilm in Lincolnshire Archive Office).

⁸ PRO T72/13, Lincoln folder.

rounding of the corner meant that they were in reality on the opposite side of the new line of the Dyke but this was too dramatic a change for the draughtsman, who contrived to soften the corner slightly, moving a bridge just a little (which had in fact been completely rebuilt) and warping two straight roads to get everything to fit. In consequence, it has to be said that the four-inch map of 1835 is of no value whatsoever as a record of topographic changes.

The Municipal Corporations Act map – the one-inch inset

In the top right corner of the plate is an inset at the one-inch scale showing the entire municipal area, including those extremities that would not fit on the four-inch map. It is clearly derived from the published one-inch map. Indeed, the fair drawing actually uses a cut-out piece of the published map, adding to it the boundaries copied from the fair drawing for the Reform Act map.

A couple of notes were indeed made on the fair drawing, instructing the engraver to make certain changes. The boundary between the West and East Wards was to run along the Wragby road rather than the Rasen road (requiring changes on both scales) and the Exchequer Gate was to be specifically named (four-inch map only).

In the event, far more changes than this were made.

1. Reducing clutter. Given the need to fit in administrative boundaries and names, the removal of unnecessary features is entirely understandable. Toll Gates and road mileages both disappear. Archaeological features also go: the embankment around Newport conflicted with parish boundaries, but that within the enclosure of Monks House conflicted with nothing – perhaps the engraver was afraid that the dots might be mistaken for a parish boundary.
2. Moving names. *Sincil Dyke* is shifted slightly so that it no longer conflicts with **St Botolph** and **St Peter's at Gowts**. (The last name has also acquired its apostrophe.) The previous clash had arisen because *Sincil Dyke* had been engraved on the plate before it was decided to add the two parish names (which are not on the proof state referred to above as P2). It is entirely understandable that this should be remedied.
3. Careless omissions. One of the mills to the south west of the city is omitted.
4. Possible topographical revision. The upper part of Sincil Dyke, running south west from the 'S' of 'St Botolph' is now shown by a double line, instead of the single line on the published Old Series. This part had actually been re-dug in or shortly after 1826. The link between the lower part of Sincil Dyke and the River Witham by the Lock is shown without water lining. This had ceased to be a waterway as part of those same improvements and would later become a dry-dock. The dubious track running east from the middle of Newport to the Nettleham road was removed.

Intriguingly, the corrections made to the OSDs for the published map have been almost entirely undone. Was this deliberate, or did it come about because the engraver had the OSDs (or the 1832 fair copy) available for guidance in interpreting the 1835 fair copy? Is the topographical revision intentional? Some of the changes could actually be careless omission or the removal of clutter. The double-lining of the upper Sincil Dyke could be merely to accord with the four-inch drawing. Furthermore, the two changes marked on the 1832 fair drawing have not been incorporated on the one-inch extract. The evidence is not strong enough to allow a conclusion to be drawn.

Conclusions

The reader who has struggled through a detailed comparison of eleven separate maps, all closely associated with the Old Series, is entitled to ask what he has gained by his labours. I suggest that four points are worth highlighting.

1. Some surveyors, some of the time, made painstaking and accurate surveys. Red ink corrections on the hill drawings and changes between OSDs and the published map do not necessarily imply deficiencies in the original survey.
2. Even when surveyors made palpably erroneous surveys, it is worth trying to understand the causes of error (as with Budgen's streams) in order to distinguish the unreliable from the possibly more reliable.
3. For Lincoln, at least, the Reform Act and Municipal Corporations Act maps are derived from the OSDs rather than the published Old Series. Although there was an attempt to incorporate topographical revision, it is just not possible to distinguish it from random changes brought about from copying or simplification.
4. Extracts from the Old Series occurring in the 1835 report or elsewhere are worthy of close examination for topographical changes.

The one-inch revision instructions of 1896

Richard Oliver

Introduction: 'mud on their boots'

In principle, anyone who wants to understand, and particularly anyone who writes about, the sort of mapping produced by the Ordnance Survey and similar organisations ought to lose no opportunity to compare the 'paper landscape' of the maps with the 'real landscape' on the ground. This is of course very much easier with mapping which is either current or recently superseded than it is with older mapping, particularly where there are either drastic landscape changes, or where there are nuances of detail or social assumptions taken for granted when the map was made, but which are increasingly strange to later audiences.

For this reason, an article by Jim Cooper published in these pages in 1998 broke new ground: it combined his experiences as an OS one-inch (1:63,360) reviser in the later 1960s with copious quotations from the official instructions. It went beyond the level of quotation and citation used by Brian Harley in his study of the OS and land-use mapping, published in 1979.¹ However, even if Harley had quoted more copiously, he could not have emulated the Cooper article in one respect: the period of which he wrote (1855-1918) was mostly beyond living memory. The earliest instructions for small-scale revision which anyone writing in

¹ Jim Cooper, 'One-inch revision in the 1960s', *Sheetlines* 52 (1998), 30-40; J B Harley, *The Ordnance Survey and land-use mapping...* (Historical Geography Research Series, no.2), Norwich: Geo Abstracts, 1979.

2003 could hope to supplement with direct experience are those of 1936, which are unique in that they were published, though the print-run of 200 suggests that no great sale was anticipated.² Beyond that we have only the texts, and the published maps and, as Yolande Hodson has noted in *Popular maps*, by no means all of these instructions survive: those of 1914 for field revision are a conspicuous gap.³ The earliest one-inch instructions which are known to survive are those of 1896, which are printed in full below.⁴ The recent publication of Tim Nicholson's study of the first OS one-inch maps in colour, which were based ultimately on the field revision to which these instructions relate, makes their wider dissemination opportune.⁵

Revision and a new specification: the need for guidance

For most of the nineteenth century the Ordnance Survey in Great Britain was not much concerned with revision of published mapping. There was too much pressure to complete the primary survey, and this pressure was effectively prolonged by the decision in 1863 to extend the 1:2500 survey into those parts of England and Wales hitherto only published at the one-inch scale, as the 'Old Series'. One of the better-known consequences of this decision was the authorisation in 1872 of a 'New Series' of the one-inch map, obtained by direct reduction from the larger-scale survey; this mapping was comparable in content and planimetric accuracy with that for northern England and Scotland produced after 1840. The New Series owed its ostensible origin to a realisation by the War Office that the Old Series was badly out of date in southern England; that in turn may have been the result of a report in 1870 by Captain Charles Wilson, R.E., on certain aspects of the Franco-Prussian war, in which he noted that, though the French had excellent maps of the territory beyond their frontiers, their own 1:80,000 staff map was seriously deficient. As the Director-General of the OS, Sir Henry James, was able to present some specimens of a replacement with surprising promptitude, it is possible that he was simply waiting his chance.⁶

Although a few one-inch Old Series maps had been wholly revised, re-engraved and re-published in the 1830s and 1840s, they were very much exceptions. Thereafter, there was fairly comprehensive addition of railways, accompanied by very piecemeal addition of new developments in their immediate vicinity, but from 1863, no doubt with something like the New Series in mind, revision was confined to the bare essential of railways. In Ireland, revision was the dominant activity of the OS after the completion of the initial six-inch (1:10,560) survey in 1842, and in 1888-95 some one-inch sheets were republished with revision made for the six-inch, but such revision was generally extremely limited in terms of change worth recording at the smaller scale, and there was no change in specification. The

² *Instructions for the revision and drawing of the one-inch (Fifth Edition) map*, Southampton, Ordnance Survey, 1936.

³ Yolande Hodson, *Popular maps*, London, Charles Close Society, 1999, 224.

⁴ At the time of writing there is no union list of surviving or accessible OS internal instructions: that in Richard Oliver, *Ordnance Survey maps: a concise guide for historians*, London: Charles Close Society, 1993, 186-7 lists only those then available in the British Library Map Library. Since then several more have become available at the Public Record Office (PRO), class OS 45, and more, including the only known original of the 1896 one-inch revision instructions, only seem to be known from copies either in the Ordnance Survey library at Southampton or in the collections of the Ordnance Survey of Ireland, some of which have now been transferred to the National Archives in Dublin. The text of the 1896 instructions derives from the late J B Harley's photocopy of 'Book 3' of 'Southampton Circulars', 30 August 1892 to November 1902: original in Ordnance Survey of Ireland, photocopy at Ordnance Survey, Southampton.

⁵ Tim Nicholson, *The birth of the modern Ordnance Survey small-scale map*, London: Charles Close Society, 2002.

⁶ Wilson's report is in PRO WO 33/22; the papers relating to the authorisation of the New Series by the Treasury, including the map specimens, are in PRO T1/7200B, papers in file 11660/72.

same applies to limited large-scale revision carried out at Edinburgh, Middlesbrough and around Portsmouth.⁷

By the early 1890s much of the OS mapping in Great Britain was getting out of date, and long-term revision was the most important of the matters considered by a Departmental Committee on the OS which sat in 1892, under Sir John Dorington, MP. This committee recommended that OS revision should be on the basis of every fifteen years for the one-inch, and every twenty years for the six-inch and 1:2500. These recommendations were accepted and implemented in 1893-4.⁸ In the spring of 1892 another committee met at the War Office, under Sir T D Baker, and including Colonel Sir Charles Wilson, Director-General of the Ordnance Survey 1887-94, to consider the military mapping of Britain. It concluded that the existing one-inch would suffice, provided that there were some modifications to the specification, notably in the classification of roads, railways and churches, and the inclusion of postal facilities and smithies, and provided that a new version of the one-inch in colour was produced for military use.⁹ The recommendations on map content were duly taken account of in the revision which began in 1893.

The Dorington Committee also recommended that the one-inch be published in colour: the protracted realisation of this has been studied by Tim Nicholson, and it is only necessary to note here that neither the instructions of 1896 nor the next known ones, of 1901, make a single reference to colour-printed mapping.¹⁰ However, both the 1896 and 1901 instructions order the collection of information which did not appear on the published maps, and it seems possible that this was a result of the Baker Committee recommending a coloured map which would have differed rather more from the monochrome civil equivalent than actually proved to be the case. The longest written submission to the Baker Committee was that by Lt-Col John Farquharson, Executive Officer (i.e. second-in-command) of the OS 1887-94, and Director-General 1894-9: as such he was presumably influential in framing these 1896 instructions. He would have been in an excellent position to decide on points of detail, and even to add them, but it is also worth bearing in mind that the inception of the one-inch New Series in 1872 was due in some measure to Wilson, and it may be that the 1896 instructions owe as much to him as to Farquharson. This is a point of some importance in view of information which was recorded by the revisers but was never published: see sections 6, 8, 10, 11, 14, 17, 21 and 23 below.

Though by 1893 there was some recent experience in Ireland of using the six-inch to revise the one-inch, that was of questionable relevance for the future, as the Dorington recommendation was for independent one-inch revision, and the Baker recommendation was for a changed specification, incorporating features which had not hitherto been recorded by the OS at any scale. This meant a new type of fieldwork, and a separate division of the OS for this was formed early in 1893, of 80 Royal Engineers.¹¹ Their job was to take the

⁷ The revision at Edinburgh was the result of updating the 1:1056 mapping of the city in 1877, and that at Middlesbrough of a drastic extension of 1:1056 cover some twenty years earlier: in both cases the revision was added to published mapping. The revision around Portsmouth was added to the New Series before it was published.

⁸ *Report of the Departmental Committee appointed by the Board of Agriculture to inquire into the present condition of the Ordnance Survey*, British Parliamentary Papers (House of Commons Series) 1893-4 [c.6895], LXXII, 1.

⁹ *Report of Committee on a military map of the United Kingdom*, printed at the War Office, 1892 [A.237]. This report was not published, and I am indebted to Peter Clark for access to a photocopy.

¹⁰ *Instructions to one-inch field revisers*, unpublished, 1901: copy in British Library Map Library Maps 207.d.14.

¹¹ *Copy minute of the Board of Agriculture... upon the Report of the Departmental Committee... to inquire into... the Ordnance Survey*, December 1893: see PRO OS 1/2/5.

published six-inch maps to the ground and both to revise them for changes since they had been surveyed (which could be half a century earlier in parts of northern England), and to collect the ‘military’ information requested by the Baker Committee. Their first priority was south-east England, and also parts of Wales and northern England, where most of the larger-scale mapping had been surveyed before 1880. It also included southern Lancashire and Yorkshire, remapped at 1:2500 in 1887-93, where the New Series would only be published in ‘revised’ form, to the new military-oriented specification. These areas were revised in 1893-4, after which the revisers moved into Scotland, in 1894-5, and then back into northern England. By the spring of 1896, the date of the instructions printed below, they were ready to complete the remainder of England and Wales, which they duly did in 1898. They then went to Ireland, which was revised in 1898-1901, before returning to Britain for a ‘second national revision’, which began in 1901. The ‘revised’ New Series of England and Wales was first published in 1895-9, and the revised one-inches of Scotland and Ireland in 1896-8 and 1900-03 respectively.

Given that by 1893 the large-scale survey was subject to a plethora of unpublished internal instructions, it is logical to expect that special instructions would be issued for the new one-inch revision. However, none are known to survive, and it is worth bearing in mind that the instructions which were putatively issued in 1893 may have differed in detail from those of 1896. If the greater elaboration of the 1901 instructions is any guide, those of 1893 may have been shorter and less explicit: as experience of revision was gained, so queries would be resolved and codified. The 1896 instructions certainly reflect the recommendations of the Baker Committee of 1892: they may also reflect field experience of 1893-5.

The text of the instructions, with comments

As far as practicable, spelling, italicisation and layout follow the original. Comments on the text are in italics and follow the section to which they refer.

INSTRUCTIONS FOR THE REVISION OF THE ONE-INCH MAP IN THE FIELD

The object of the revision is supply detail that has come into existence since the sheets of the map were published; to remove obsolete or unnecessary detail; to correct errors; to supply details of military importance; to secure uniformity by a systematic classification of the roads, &c.

The revision will be made on six-inch impressions, but no time should be wasted in inserting or correcting detail that, from its minuteness, cannot be reproduced on the one-inch scale.

Revisers should therefore make themselves thoroughly acquainted with the class of detail shown on the one-inch map.

In addition to the six-inch sheets, revisers should take with them impressions of the new series one-inch sheets in outline, and where published, with hill features, and copies of the old one-inch map of the county to be revised.

By 1896 all of northern England, Scotland and Ireland had been published both in an ‘outline’ version, and ‘with hills’, i.e. hachured, but at this time less than half of that part of England and Wales covered by the New Series had been published ‘with hills’. The ‘old one-inch map’ is presumably the Old Series: it is difficult to see what use it could

have been in the revision process, unless to draw attention to occasional landmarks or deficiencies in the New Series hachuring: see sections 40 and 44 below. In his evidence to the Baker Committee, Farquharson considered that, north of from the Thames to the Severn, the Old Series was 'still, I believe, a very valuable map'.¹² There was no 'Old Series' for Scotland, Ireland, or northern England; it would be interesting to know whether this was taken account of in the putative 1893 version of these instructions. The reference to 'county' is curious, as one-inch revision was by one-inch sheet lines, which cut across county boundaries: was 'country' really meant?

The six-inch field sheets which were to be used are believed to be lost, being either destroyed by enemy action in 1940, or else intentionally discarded earlier. This is a point of some importance in view of the information which was collected but was never published.

The following detailed instructions are to be strictly carried out:-

ROADS.

1. The different classes of roads are to be colored in the field as under.

1st class roads	Burnt Sienna.
2nd " "	Sepia.
3rd " "	Green.
4th " "	Yellow.

Note, here and elsewhere, the spelling 'color', which seems 'American', but which is actually good nineteenth-century English usage.

By the early 1890s the depiction of roads on the one-inch was being strongly criticised. Apart from the depiction of turnpike roads (practically obsolete by the late 1880s), it is unclear what other distinctions were being made on earlier one-inch mapping, but by 1886, when a legend first began to appear on one-inch sheets, roads were distinguished as 'Turnpike and Main', 'Ordinary Metalled' and 'Minor'. This codification was apparently in response to requests from 'the driving public':¹³ it did not appear on earlier sheets, which covered areas such as Aldershot which would be those most familiar to the Army. The military interest (shown by witnesses before the Baker Committee) was overwhelmingly in the distinction of metalled and unmetalled roads, epitomised by Farquharson: 'The main object of a military map must be to enable a General to move his troops to desired points by the most direct or advantageous lines, and for this a good road map is essential.' On the pre-1886 maps, 'Only main roads are distinguished; all others are shown alike, whether they are well-metalled roads or only grass, mud, or sandy tracks.' In its report, the Baker Committee recommended a threefold system, 'Country roads, 14 feet of metalling and over', 'All other metalled roads', and 'Unmetalled roads', which seems similar to that in use on post-1886 one-inch sheets. The fourfold system actually used is perhaps due to Farquharson, who in his evidence suggested standards of 18, 12 and 9 feet respectively for first, second and third

¹² *Report on... military map*, p.45.

¹³ T Pilkington White, *The Ordnance Survey of the United Kingdom*, Edinburgh & London, Blackwood, 1886, p.103.

*class roads: this may have been modified by practical experiment before revision began in earnest a year or so later.*¹⁴

1ST CLASS ROADS.

2. *First Class Roads*, colored *burnt sienna* are main trunk roads, generally leading from town to town. They must be metalled and kept in good repair; and the *minimum* width of metalled roadway exclusive of edges or footway must be *fourteen feet*.

It should be noted that 'metalled' and 'tarred' are two quite different things: a metalled surface is one of broken stones; tarring is applied on top of metalling. In 1896 very few roads had been treated with tar, and this only became widespread after 1918. Such tarred roads as there were in the 1890s would have been treated as 'metalled' by the revisers. Untarred road surfaces which are probably equivalent to 'First Class' are now very hard to find, but some cycle paths probably qualify for surface if not for width.

2ND CLASS ROADS

3. *Second Class Roads*, colored *sepia*, are metalled roads in good repair, and fit for fast traffic at all seasons *i.e.*, it should be possible to drive carriages and light carts over them at a trot. They are inferior to first class roads in width, but should be sufficiently wide, in all parts, to allow two carts to pass each other without difficulty.

The reference to speed in horse-drawn terms is interesting, given that by the 1890s the bicycle was well-established, and, on a suitable surface, could go much faster. However, on a stony, loose surface, an iron-tyred vehicle might have an advantage, and it would certainly not be liable to punctures, though stones might lodge in horses' hooves. It is worth bearing in mind that iron tyres tended to grind the surface and produce a powder which could be 'recycled' into the irregularities, whereas pneumatic tyres tended to suck up dust from the surface and gradually destroy it: with the advent of pneumatic-tyred motor vehicles from 1896 onwards this became a serious nuisance.

3RD CLASS ROADS

4. *Third Class Roads*, colored *green*, are all other metalled roads suitable for wheel traffic. This class will include all metalled roads which are not wide enough to allow two carts to pass each other; or which from want of repair are not fit for fast traffic.

Observe 'wheel traffic' rather than wheeled traffic: this is a caution to use one's critical faculties in interpreting these instructions.

4TH CLASS ROADS

5. *Fourth Class Roads*, colored *yellow*, are all unmetalled roads.

PRIVATE ROADS

6. *Private Roads* are to be distinguished by the letters P.R. and classed as ordinary public roads.

¹⁴ *Report on... military map*, pp 7 (recommendation), 45 (Farquharson): for other comments on road classification, see *ibid*, p.20, questions 72, 79, p.23, q.128, p.24, q.141.

N.B. Roads should be classified according to their general character, and not with reference to their best or worst portions. For instance; a second class road one mile long, which for a short distance, say 100 yards, is either out of repair or not up to the standard width, should be classed as a second class road throughout.

7. *Carriage Drives*, when not passing through ornamental grounds, to be classed as ordinary roads; when passing through ornamental grounds, to be colored *blue*, the *main* carriage drives being distinguished from the others by the letters M.C.D.

8. Important footpaths and bridle-paths are to be distinguished by the initials F.P. and B.R., as the case may be.

These include footpaths that are habitually used by the public. Unimportant footpaths such as short paths or those only used by farm occupants, &c., are to be crossed out on the six-inch impressions; and those recommended for insertion on the one-inch maps should have a blue dotted line drawn along them. Unimportant paths need not be remarked upon on the six-inch impressions, unless such a path be already shown on the one-inch, when it should be erased on the six-inch impressions. The same should be done should any path shown on the one-inch map have ceased to exist. Care should be taken that every road or path shown on the one-inch impression under revision is either classed or otherwise dealt with as above.

SHOOTING PATHS

Shooting Paths where open and forming a ready means of communication between roads and points should be shown. Those wide enough to allow the passage of wheel traffic, may be classed and colored as roads, and marked P.R., those wide enough for foot passengers only should be marked F.P. The number of such roads and tracks at present shown on the one-inch map may be taken generally as a guide as to the number of such tracks to be shown.

A general note for sections 6 to 8: In my experience, more enquiries, perplexities and misunderstandings pertaining to OS maps are generated by rights-of-way questions than by all others put together.¹⁵ The disclaimer 'The representation on this map of a road, track or footpath is no evidence of the existence of a right of way' started to appear on newly-published OS maps in 1888, and duly appeared on the one-inch maps produced using these instructions of 1896. One written submission to the Baker Committee suggested distinguishing public from private roads 'for peace manoeuvre purposes', but in 1893 the OS resisted any suggestion that roads should be distinguished according to whether they were publicly or privately maintainable.¹⁶ Apart from anything else, they might have invoked the Survey Act, 1841, which gave the OS powers to enter lands, but which provided that nothing done under the Act should affect any rights of property.¹⁷

Why, then, were the revisers instructed by sections 6 and 8 to record private roads if this information would not be published? The answer must surely be that it was of military interest, and it was judged worth recording in case of either future manoeuvre or future defence needs even if it was never published. As the information was recorded on the six-inch field sheets, which are believed to have been lost in or before 1940, this military need has left no tangible legacy, or ammunition for rights-of-way researchers. As for the

¹⁵ At any rate, this is my experience since publishing the *Concise guide* in 1993.

¹⁶ *Report on... military map*, p.44; PRO OS 1/2/5, notably Wilson to Elliott, 5 and 31 December 1893.

¹⁷ Survey Act, 4 & 5 Victoria, cap.30: especially section 12.

'unimportant paths' in section 8: it ought to be possible to identify these by comparison of the one-inch with the six-inch and 1:2500, but the categorisation seems ultimately subjective and, as those responsible can no longer answer, unlikely to yield objective evidence. Even if a path is not habitually used by the public, the principle still applies: 'Once a highway, always a highway'.¹⁸

Footpaths had been shown by a single pecked line on original New Series sheets published from 1886 onwards, and the Baker Committee's recommendation that they be shown can be traced to requests by witnesses.¹⁹ What these witnesses did not mention was the matter of selectivity. However, in mitigation of the suggestion of subjectivity, any comment is bound to be conditioned by the tendency to inclusivity of current OS 1:50,000 and 1:25,000 mapping, reflecting the courses of public rights of way even when these are not readily evident on the ground.

FENCED AND UNFENCED ROADS

9. *Fenced roads are to be shown by a firm line; unfenced roads by a dotted line.*

RAILWAYS

10. *Single lines are to be distinguished from double lines by writing 'single line'. Three, and four lines are also to be distinguished by writing. Railways, which have been constructed since the publication of the six-inch map, which consequently do not appear on that map should be carefully inserted even if they have already been added on the one-inch map; as these additions on the one-inch scale have been found at times to be considerably in error.*

Distinguishing railways with one to four running lines had been suggested by a witness (Col. Elliott Wood, RE) before the Baker Committee, but the published maps follow the report in only distinguishing single lines from those with two or more lines, and the 1901 instructions only specify that single- and double-track lines are to be distinguished.²⁰ Individual running-lines were recorded in detail on the 1:2500, so the loss of data due to the disappearance of the field sheets is not as serious as it might be: this seems to be another instance where information which was not published was nonetheless collected for military purposes. An example of a post-six-inch railway addition being 'seriously in error' is to be seen at East Grinstead on post-1884 states of England sheet 302, where the loop connecting a line from the north to that running west-east is considerably in error.

TRAM AND MINERAL LINES

11. *Tram and Mineral Lines are to be distinguished by writing 'Tram' or 'Mineral' line, and the gauge.*

One symbol was used for both on the published maps, except for street tramways, which were only shown, by annotation, when outside built-up areas. The 1901 instructions specify one symbol for both 'Mineral line and tramway'. Narrow-gauge railways were

¹⁸ Roads on the revised New Series and earlier and later mapping are discussed at length in Hodson, *Popular maps*, 127ff; see also Yolande Hodson, 'Roads on OS one-inch maps 1801-1904', *Rights of Way Law Review* (2000), Section 9.3: 119-27. Those wishing to use New Series mapping for rights of way and similar investigations are very strongly urged to consult these articles.

¹⁹ *Report on... military map*, pp 7, 16 (q.8), 52.

²⁰ *Report on... military map*, p.23, q.131.

only distinguished on newly-published one-inch maps from the early 1930s onwards: once again, the information seems to have been collected for military use.

RAILWAY STATIONS

12. *Railway Stations* are to be shown on that side of the line upon which the ticket office is situated.

CUTTINGS AND EMBANKMENTS

13. *Cuttings and Embankments* six feet and over in depth or height, are to be distinctly shown on railways, and the greatest depth or height shown in figures. On *Roads* only very important cuttings or embankments will be shown.

But what exactly was ‘important’? The greater sensitivity with which these earthworks had been shown on the Old Series and their military importance was drawn to the Baker Committee’s attention.²¹ For examples of treatment of cuttings and embankments on roads, see the unrevised and revised editions of England New Series sheet 220, on the future A5 north-west of Dunstable, and on the future A6 near Streatley.

BRIDGES

14. *Bridges over roads or railways*, are to be distinguished from those *under* roads or railways, and the revisers are to ascertain whether they are correctly shown on the six-inch map. Bridges are to be further shown as (M) Masonry or Brick, (W) Wood, (I) Iron, and (S) Suspension.

The general importance of bridges was drawn attention to by several witnesses before the Baker Committee, and their depiction was made bolder on the published revised one-inch. The revision also gave the opportunity to remedy some anomalies, such as crossings at Oxted on England sheet 286 appearing apparently as roads passing over the railway, whereas in fact they pass under, but these instructions provide no clue as to why three level crossings near Habrough on England sheet 81/82 were recorded as bridges over roads. None of the Baker witnesses requested the structural information, and it does not appear on the published maps, so, once again, one asks why it was gathered. Presumably the idea came from elsewhere (Farquharson?) and it was considered worth collecting for military intelligence even though it would not be published. Whatever the reason, the collection of this information was also prescribed, and in greater detail, in the 1901 instructions. Information on bridges was included on the early (c.1911-14) sheets of the 1:25,344 map of eastern England (later GSGS 3036): this was initially a ‘confidential’ series.

STREAMS

15. No *Streams* with deep well-defined channels should be omitted. Streams *fifteen feet* wide and over are to be distinguished by a continuous colored line along the stream, and the approximate width in feet shown here and there.

Again, this can be traced to a specific recommendation by the Baker Committee, although the approximate widths are not mentioned, and this information was not published.

²¹ *Report on... military map*, pp 20-1 (q.90), 45.

FORDS

16. *Fords* in rivers and streams exceeding 15ft in width to be written.

FERRIES

17. *Ferries* are to be written, a distinction being made between (1) those for foot passengers only; (2) those for horses, cattle, and carriages; and (3) steam ferries.

The Baker Committee recommended that ferries should be shown, but made no recommendation as to the distinction of foot and other ferries.²² The 1901 instructions are similar to those of 1896, but distinction between foot and vehicular ones only started to appear on published mapping from 1914. This seems to be another instance of someone deciding to include information for possible military use after the Baker Committee had reported.

CANALS

18. All Locks and Bridges are to be distinctly shown.

PONDS

19. Only those ponds that are of large size and of a permanent nature should be shown.

One is left wondering what 'large size' would be.

DYKES

20. Where districts are much cut up by dykes, either for drainage or irrigation purposes, the revisers should see that the most important appear on the one-inch map.

This also seems subjective; presumably the revisers' training included developing an eye for such things?

WELLS

21. *Wells* in the open country, and villages supplied by wells, should be distinguished by W.

Wells are only shown on published New Series mapping around Salisbury Plain: elsewhere the information was not published, though as wells are indicated on six-inch and larger-scale mapping, the loss of information is perhaps not great. Their inclusion was recommended by the Baker Committee, significantly in the section particularly concerned with the military version of the one-inch.²³ The 1901 instructions are similar to those of 1896 in this respect.

MARSHES, BOGS

22. *Marshes* and *Bogs* when not clearly shown on the six-inch map are to be distinguished by encircling them with a blue band, and writing 'M' or 'B', as the case may be.

Observe that no minimum size is specified: contrast with sections 27 and 28 below.

²² *Report on... military map*, p.7.

²³ *Report on... military map*, p.10.

HEATH OR ROUGH PASTURE

23. Rough Pasture is to be shown in the case of moors, commons, and uncultivated ground covering large areas which are not cut up by fences; small areas through which public roads run; sides of valleys or ravines; summits of hills, and along tops of cliffs by a band of *burnt sienna* and writing “R.P.” Rocky pasture unfit for camping grounds is to be distinguished from rough pasture by writing “Rcky. P.”

The importance of clearly distinguishing heath and similar uncultivated land from wetland had been urged by several witnesses before the Baker Committee, though in practice the problem seems to have been at least as much, if not more, of a cartographic than a data collection problem.²⁴ The 1901 instructions are similar, including the reference to camping grounds.

SEA COAST

24. The character of the coast line is to be corrected where necessary and distinguished as cliff, sand dunes, &c.

In practice this seems rather vague, and the reality of OS recording of coastal data was explored in an article of mine in 1996.²⁵ In particular, channels across foreshore and low water mark may not have been revised.

DOCKS, PIERS, LIGHTHOUSES

25. Docks, Piers, Lighthouses, not appearing on the six-inch map are to be inserted.

‘Lighthouses’ might include buildings which exhibited navigation lights, but did not, to the untutored eye, resemble ‘lighthouses’ as commonly understood. An example was the New Inn at Stallingborough, on England sheet 81/82.²⁶ The published maps also showed beacons and lightships: the former were perhaps regarded as honorary lighthouses; the latter were presumably supplied from published Admiralty lists of lights.

WOODS

26. Woods of coniferous trees are to be coloured light green, and those of deciduous trees dark green.

27. If a wood is made up of separate patches of deciduous and coniferous trees, these patches, if large enough (say 400 yards square) to be shown distinctly on the one-inch map, should be shown distinct on the six-inch by revision. If, however, they are very small the wood may be shown as “mixed” by shading with alternate stripes of light and dark green, and writing the word “mixed”.

The empiricism here is in marked contrast to the subjectivity in sections 8, 13, 19, 20 and 31.

PARKS, ORNAMENTAL GROUNDS, AND LODGES

28. Parks, and ornamental grounds where not distinctly shown are to be distinguished by a light shade of neutral tint. The principal lodges are also to be shown. Very small pieces of ornamental ground, *i.e.*, those less than 1/16th of a square mile in area should not be shown.

²⁴ *Report on... military map*, pp 7, 19 (q.65), 24 (q.148).

²⁵ Richard Oliver, ‘Taking to the water: some examples of Ordnance Survey mapping of the coast’, *Sheetlines* 45 (1996), 9-27.

²⁶ Oliver, ‘Taking to the water...’, 19.

'Neutral tint' is grey. It is unclear why the lodges were needed; the Baker Committee proceedings did not refer to them. It is useful to have the 1/16th square mile (40 acres: about 16 hectares) minimum specified.

GARDENS

29. Enclosed gardens round villages or detached houses are to be shown.

These were indicated on the published maps by diagonal dotted lines.

ORCHARDS AND MARKET GARDENS

30. Orchards are to be shown by light green stippling and writing "orchard" or "Or." Market gardens need not be shown.

Need not? On the original New Series market gardens were shown similarly to house-gardens (cf section 29), and covered extensive areas of south-west Middlesex on sheets 269 and 270. These areas were removed from the revised New Series. The 1901 instructions were more precise: gardens, market gardens and nurseries not already shown on the one-inch were not to be added.

GRAVEL PITS, QUARRIES

31. Only those gravel pits, and quarries which are deep, cover a large area, and are likely to remain as permanent features on the ground, are to be shown.

Again: what is 'a large area'?

INNS

32. All important country inns not situated in villages are to be shown, and their full names written. In villages one inn only is to be shown where more than one exist. By Inn is intended only fully licensed houses.

Named inns appeared in quantity on the six-inch and 1:2500. It is unclear here whether an 'inn' is to be defined as an establishment offering both food and overnight accommodation. The 1901 instructions were more explicit: 'inns' were to provide food and lodging. 'Landmark' isolated inns had been shown on earlier one-inch mapping, but inns at villages started to appear, rather spasmodically, on newly-published one-inch maps from the late 1880s onwards. On the revised one-inch they were shown as systematically as the instructions prescribed. The naming of inns was requested by the Baker Committee, but in practice few new named ones seem to have been added to the maps.²⁷

SMITHIES

33. All smithies not situated in villages are to be shown; in villages where there are more than one, only one is to be shown.

The depiction of forges was another of the things asked for by the Baker Committee for the military version of the one-inch.²⁸ In fact, as with inns, some smithies had been

²⁷ Report on... military map, p.7.

²⁸ Report on... military map, p.10.

shown on newly-published New Series sheets from the late 1880s onwards, but the depiction on the revised one-inch was far more rigorous.

WINDMILLS

34. All windmills are to be shown; and the purpose for which they are used should be noted.

The depiction of windmills on the New Series has been studied by Bill Bignell, and what follows is the barest summary.²⁹ They were shown fairly comprehensively on the Old Series, but rather selectively on subsequent one-inch maps published up to the late 1880s: this was perhaps partly because the mapping was prepared in the office, without field-checking, and could result in well-known landmark mills being omitted.³⁰ From the late 1880s onwards, windmills were shown extensively by symbol on newly-published New Series sheets, and from 1893 onwards earlier one-inch sheets were brought into line. This followed a recommendation of the Baker Committee, which in turn reflected evidence presented to it, one witness remarking 'Windmills are of course going out of date, but there are a good many about still, and they are most valuable landmarks in a strange country'.³¹ In practice, three categories of windmill can be distinguished on published maps deriving from the revision of 1893-1901: (A), symbol with annotation 'Windmill'; (B) symbol with annotation 'Old Windmill'; and (C) symbol without annotation. The intention seems to have been that (A) denotes working windmills; (B) denotes those no longer working, but recognisable as windmills; and (C) denotes those used for pumping, which might either be conventional tower mills, of a type still to be seen in quantity on the Norfolk Broads, or else less substantial structures, such as open trestles. The 1901 instructions refer explicitly to windpumps, and a symbol for them was introduced onto published maps deriving from this later revision. The classification was thus by function rather than by appearance.

CHURCHES AND CHAPELS

35. Churches with spires are to be distinguished by the symbol ☸, those with towers by the symbol ☨; those with a tower surmounted by a spire should as a rule be distinguished by the symbol for spire, but when the height of the tower occupies $\frac{3}{4}$ or more of the total height from the roof of the building to the top of the spire, and the top of the tower forms a platform and is accessible, the church should be distinguished by the symbol for tower ☨; those without either +. In towns the most conspicuous churches only need be shown. Chapels having towers or spires are to be shown as if they were churches.

The depiction of churches is the most enduring of the Baker Committee's recommendations. They were presumably included both for their value as landmarks, and as possible observation platforms, though only the former is mentioned in the evidence to the Committee.³² The depiction of churches was discussed in Sheetlines 28,

²⁹ Bill Bignell, 'Conventional signs and the Ordnance Survey: the case of mills and the New Series', *Sheetlines* 35 (1993), 10-13; William H. Bignell, *The cartographic representation of landscape features by the Ordnance Survey: a nineteenth century perspective*, unpublished University of Exeter PhD thesis, 2001.

³⁰ *Report on... military map*, p.16, q.13.

³¹ *Report on... military map*, pp 7, 21, q.90 (quotation).

³² *Report on... military map*, pp 7, 20-1 (q.90), p.25 (q.169).

*but the subject could do with revisiting.*³³ *It would seem that whereas Anglican churches were probably fairly comprehensively recorded, at any rate outside really densely built-up areas, those of other denominations were only shown if they had towers or spires, which was very much the exception rather than the rule in the 1890s: the system would favour Roman Catholic churches more than Protestant free-church chapels.*

POST AND TELEGRAPH OFFICES, LETTER BOXES

36. *Post Offices* to be distinguished by P.O.; *Telegraph Offices* by T.O.; both offices combined as P.T.O., only one should be shown in each town. *Letter Boxes* beyond the limits of towns and villages to be shown by L.B.

*The depiction of postal facilities was another of the Baker Committee's recommendations, and was requested by one witness.*³⁴ *They had been shown on some one-inch sheets published in the 1880s, but apparently not comprehensively. An oddity of the earlier sheets of the revised New Series (those published before September 1896) is that letter-boxes were shown, but not post or telegraph offices; on a number of Scottish sheets post offices were indicated, but not telegraph offices. Perhaps there was some uncertainty in 1893-5 as to how to proceed? Did the putative 1893 one-inch revision instructions fail to give sufficient guidance? At any rate, post and telegraph offices were indicated from September 1896 on the published maps by writing 'P' and 'T' below the name of the place, rather than in situ, a practice which was perpetuated on OS small-scale maps into the early 1950s. Letter-boxes were shown, in situ, at villages without post offices. Post and telegraph offices in towns did not appear on the published maps, and the 1901 instructions were worded accordingly.*³⁵

MILESTONES, DIRECTION POSTS

37. *Milestones* are to be shown. *Direction Posts* are not to be shown.

RIFLE RANGES

38. *Rifle Ranges* are to be shown by writing, when the firing range exceeds 400 yards.

ANTIQUITIES, &c

39. All *antiquities* such as castles, *Roman roads*, tumuli, &c., should be shown in writing; also sites of battles, monuments, &c. Most of these, however, are already shown on the six-inch map.

This would appear to favour both the amateur archaeologist of possibly more enthusiasm than skill, and those whose motto was 'When in doubt, leave it out.' In practice, archaeological depiction on OS mapping before the appointment of its first Archaeology Officer in 1920 would appear to have depended very much on the enthusiasm and

³³ Richard Oliver, 'Steeple and spire: the use of church symbols on Ordnance Survey one-inch maps', *Sheetlines* 28 (1990), 24-31.

³⁴ *Report on... military map*, pp 7, 21 (q.90).

³⁵ Richard Oliver, 'Design and content changes on one-inch mapping of Britain, 1870 – 1914', *Sheetlines* 62 (2001), 6-23, esp 17-18.

*knowledge, or lack of them, of those in supervisory positions.*³⁶ *However, pre-1920 OS archaeological recording is as yet imperfectly studied.*

PROMINENT LANDMARKS

40. All objects which are *prominent landmarks* such as towers, obelisks, conspicuous single trees, &c., though small on plan, should be shown by writing the word *conspicuous* and their names, if any, given to them. *Clumps of trees* of no importance should be cancelled. All features and objects of interest to tourists are to be shown by writing.

NAMES

41. Special attention should be paid by the revisers to the names: obsolete names, or names referring to very insignificant detail, should be removed from the one-inch map; whilst well known names that have been omitted should be added. Special attention should be given to hill, valley, forest, and district names, and to names of commons, and objects well known in the district. Large important farms should be named, but not insignificant cottages or buildings, unless they are landmarks in sparsely populated districts.

It should be noted that 'names' includes what lay people might consider as 'descriptions', e.g. Mill, Brick Works.

There is no section 42 in the original.

ALTITUDES

43. All *surface levels* or bench marks on the roads which show the heights of the tops and bottoms of marked ascents, should be noted on the six-inch impressions for insertion on the one-inch map. When a B.M. is noted for insertion, the height should be corrected by deducting the height of the [*space, evidently for arrow above the surface of the road.*]

There is no separate section corresponding to this in the 1901 instructions: altitudes seem to have been treated as 'names', but perhaps by 1901 it was felt that the representation of altitudes had been satisfactorily dealt with in the revision which had begun in 1893.

HILL FEATURES

44. Revisers should draw attention to any errors they may notice in the hill features of the one-inch map.

This presumably refers to the hachured version of the one-inch, rather than to the contouring.

16-3-96

³⁶ F J Haverfield, 'The Ordnance Survey maps from the point of view of the antiquities shown on them', *Geographical Journal* 27 (1906), 165-76; Maurice Beresford, ' "The spade might soon determine": the representation of deserted mediaeval villages on Ordnance Survey plans, 1849 – 1910', *Agricultural History Review*, 40 (1992), 64-70.

Cartographic discovery

Roger Hellyer

On page 231 of *A paper landscape*,¹ John Andrews discusses the Ordnance Survey's moves towards the production of the one-inch map of Ireland and how the original concept of publication of full sheet maps was overtaken by quarter sheets. To those of us who enjoy something a little unusual, he added the mouth watering comment "Later, a few 'combined sheets' were authorized – Dublin in 1862; Cork, Belfast, Galway, and Killarney in 1871". 'Authorized' does not, of course, mean 'published', and no suggestion that any of these maps ever saw the light of day has, to my knowledge, been noted in the Ordnance Survey's catalogues. What has been known for a long time, thanks to copies recorded in the British Library² and the Bodleian Library in Oxford is a *Dublin (Large Sheet)*. This comprises small sheets 111, 112, 120 and 121, united by electrotpe. But it is impossible to reconcile this map, if a first issue, with Andrews' statement above, because the date usually accorded this (undated) sheet is circa 1891, which derives from its British Library accession date. Furthermore the Director General noted in the imprint was Sir Charles Wilson, in control of affairs at Southampton from 1886 to 1894.

I thought I had discovered a third copy of the same map while working in Trinity College, Dublin in 1998. But it immediately became obvious that this was an earlier issue. But had I got my notes in a muddle? The heading on this particular copy announced *Sheets 101, 102, 111 & 112. (United by Electrotpe)* – that is an area twelve miles north of the ?1891 map. The copy of the earlier map in Dublin is unfortunately defective, part of the lower margin having been trimmed away. No date survives, but enough of the imprint is present to reveal the name of the Superintendent of the Ordnance Survey as 'Colonel' Sir Henry James. Sir Henry held this rank from 1862 to 1870, which ties this map in neatly with the authorization quoted by Andrews.³

So the map of Dublin authorized in 1862 was made, but apparently considered of too little consequence to be worth offering to the copyright libraries. And then a new map was made, twelve miles south, nearly thirty years later. What then of the other authorized sheets – Cork, Belfast, Galway, Killarney? I had never heard of the existence of any of them, and in my mind had long since given them up as 'unpublished', until last autumn a copy of a *Belfast (Large Sheet)* was brought to my notice. Unfortunately this copy proved to be defective in a major way, because its original purchaser seems to have had an interest in water catchment areas north of Belfast, and consequently simply cut off that part of the map south of the city which was apparently getting in his way.

The layout of the headings is consistent with those of the Dublin map. Top left is *Belfast (Large Sheet)*, in the centre *Ordnance Survey of Ireland*, and top right *Sheets 28, 29, 36 & 37 (United by Electrotpe)*.

We have two obvious clues as to date – the original user refers to an 'Act of 1865', and the railway south from Antrim to Lisburn, opened in 1871, is not present, which would

¹ J H Andrews, *A paper landscape: the Ordnance Survey in nineteenth century Ireland*, Oxford: Clarendon Press, 1975.

² K S Cook and R P McIntosh, *A preliminary list of Ordnance Survey one-inch district and tourist maps and selected precursors in the British Library*, London: The Charles Close Society, 1991, p.26.

³ These two maps are briefly described in section 22.5 of Roger Hellyer, *Ordnance Survey small-scale maps: indexes 1801-1998*, Kerry: David Archer, 1999. The British Library copy is at Maps 11805 (8), the Bodleian copy with the one-inch first edition hachured set, C.19 (24).

All of which gives me hope, for Cork, Galway, even an 1870s Killarney map?

Alan through his looking glass

Alan Lord

This article originally appeared in the Winter 1992 issue of Conserving Lakeland, the magazine of the Friends of the Lake District, from where it was rescued by Peter Warburton. It is reprinted here with the kind permission of the author.

Now absorbed into the sprawl of Preston, Fulwood, when I first came on the scene in 1929, was very much a place of its own. From the town centre only 1½d on the tram, it was nonetheless quite rural.

At Hutton Grammar School, following in my elder brother's footsteps, my interest lay in maths and sciences, and, still useful yet, in joinery. Competitive sport, a contradictory term I often thought, was not for me. Rugby I played but once. Stentorian bellow of the sports master, "Boot it you fool", it sounded good advice, but where exactly should I boot it to? I opted for cross country – far from authoritarian rage I quite enjoyed it. The Methodist Junior School which I had earlier attended has now, perhaps significantly, become a warehouse for antiques.

Only a young schoolboy then, my father showed me a leaflet on 'ribbon development'. Arterial roads, fringes of red tiled semi-detached, green fields behind, the wrongness of it all seemed obvious to me even then. It was my early first encounter with the CPRE.

Such little things can point our lives. My sense of beauty in vernacular architecture, the appropriateness of local materials in the landscape, was this where it began? Heredity perhaps? Grandfather, a master mason, would look askance at anyone who spoke of bricks.

With Ordnance Survey I learnt my drafting skills. A constant gauge of line, square ends and corners, 'a curve is a series of short straight lines, you only need a straightedge'. Dots were circles carefully penned and filled, pecked lines, each peck, and space carefully measured. After a time it was second nature, you could recognise a No. 8 line at twenty yards. Stable transparent drawing film still a thing of the future, we drew on matt white enamelled sheets. The camera was then in constant use, and studio work was mostly wet plate process, long since superseded.

Then to the 'field' in Manchester and the more practical skills of the land-surveyor. Relying then on public transport to take us out to work, there were other skills to learn, like how to hide the levelling staff behind the lamp-post when waiting for the bus, but it was a slick operator who could get it under the stairs unnoticed.

The abiding memories of the industrial Lancashire of 1946 are of grime and pollution. Factory smoke, railway smoke, household smoke, lace curtains washed every few days, the chemical factories, spillages of all colours, never step in a puddle – it could be anything. The Bury, Bolton and Rochdale Canal a bright purple from dyeworks effluent. How did we tolerate it? Well 'Cotton was King' and 'Muck was Brass', and thus it was decreed.

Not everyone accepted it, but those who had the vision lacked the means, and those who had the means lacked the vision. A familiar enough story still today with other actors and a global stage.

Then conscription, surveyor trig, Royal Engineers, more studying, exams and practical work from levelling to field astronomy. The training was excellent but I would never have volunteered for it. Guns were never amongst our childhood toys – the carnage of the trenches still too fresh a memory no doubt – so the army was not my scene. The shooting, the stifling

of initiative, the regimentation and the idiosyncrasies of the military mind were anathema to me then and still, but some of it I enjoyed. Back to the OS, Head Office, then at Chessington, computing. No electronics then, everything hand cranked on the double Brunsviga. There were eighty of us then in Minor Control Comps and the noise was like a weaving shed.

Out to the field again, minor control at Bolton, establishing a close network of coordinated control for the chain survey which was to follow. In 1946 the change was made to the twenty metre metric chain, about 4½ inches shorter than the Gunter's Chain, but very much the same design. Most people seem to know that Gunter's Chain is 66 feet (22 yards) long, but fewer perhaps will realise that Gunter was an Elizabethan mathematician, astronomer and parish priest of Southwark, born in 1581.

So Gunter's new technology worked well for three centuries, though it didn't last three minutes under a Salford tram and every chainman carried a few spare links, ready for a quick blacksmith's job at the kerbside. Some tramway systems took their power from a central slotted rail and if you had the misfortune to let the chain drop down the slot, you ended up with a blue flash and two brass handles. The chain is very much a museum piece now, but it was the work-horse of the resurvey in those early postwar years.

But back to Bolton. Working from the main triangulation we built up a framework of traverses, angles carefully observed with theodolite and distances accurately measured, sometimes in catenary, but usually on the road surface. Calibrated 30m steel tape, spring balance and thermometer, we measured to the millimetre. Meticulous work which, even with the lighter traffic of the 50's, could be a tricky operation.

A long line diagonally across the road, we made an early start. A policeman gently rocking on his heels looked on, we enlisted his assistance. Four tape-lengths down, he waved through a large Bentley. We picked up the pieces. Swearing at a policeman can be a refreshing experience. "Can't stop him Sir, its the Q Car".

So back to the little red flag, at least that was under our control, but equally ineffective when I tried to stop a Rolls on the East Lancs Road. Klaxon blaring, it swept by at great speed, a familiar flag on the front, and – oh dear – no number plates!

It was skilled team work, good friends and carefree happy days, at least in summer. Winter could be bitter cold. We took the jobs in turn; the booker had the worst of it. Sitting on the instrument box frozen to the marrow, he kept himself warm with thoughts of lunch – steak pudding and chips at the UCP maybe – a popular choice, of pre-cholesterol days. On such a biting winter's day, some wag once called out 375 degrees. I booked it neatly down, so cold I never saw the joke.

A mobile life, Ormskirk, Preston, Blackburn, Glasgow, Falkirk, Kirkcaldy, St. Helens, Liverpool – each time the office cleaner dusted Sunny Johnson's disposition board we moved again – or so the story went – but 18 homes in 24 years? – it held a grain of truth.

We could be sent anywhere at any time – authorised, as the old identity warrants so quaintly put it, 'to survey the boundaries of Gt. Britain, the Isle of Man and Berwick-upon-Tweed'. I can't answer for Berwick, but two long spells on the Isle of Man I thoroughly enjoyed, a second home almost. Headquarters on a course, two days to go, no one knew where – but just when things don't seem quite right, there's always someone who recalls a time when things were that much worse. "I once got posted from Bristol office to South Wales". We settled back to hear his tale. Three cases, wife and kids, on the station, Temple Meads, train just signalled, coming into view, when down the platform, frantically, a lad, red

bike and pillbox hat, – “Telegram for Mr. Jackson. Telegram for Mr. Jackson”. FOR TONY PANDY READ AUCHTERMUCHTY. He crossed the bridge and caught the train for Perth.

Brenda and I were married in 1955 and 37 years on it seems a brilliant idea still. Bowland, Silverdale, the Lakes perhaps, we walked for miles. Lakeside by train, then boat, we walked from Waterhead to Coniston. It rained, and how it rained. Good old Coniston Co-op, it served us well that day, and has done since. We bought a towel, it helped to mop us dry. Waiting for the train for Foxfield, we finished off our soggy sandwiches, and little thought the Lakes would one day be our home.

Optical distance measuring replaced the chain, and other towns were surveyed by air photography. Control work dwindled, so we joined our other colleagues on the detail survey side, the final stage of field completion.

Mostly we worked alone, optical square, tape, set square and scale, our 9H pencils needle sharp we plotted as we went. Striving for perfection, we measured and scaled, to be sure the new work fit within the skeleton outline of the earlier stage. 1:1250 scale in towns, it was meticulous work, we scaled to a tenth of a metre.

Half a metre lost behind a shed down some back alley, we searched until we got it right. Amazing the accuracy we achieved, our sketching cases resting on a dustbin lid, or more often pressed against a lamp post with your tummy, we plotted those intricate little juts and steps, our concentration often shattered as the sketcher slipped, and many a battered forehead told its tale.

Complex industrial sites that never fit the rules, elegant mansions all juts and corners, nothing straight, encircled in a sea of rhododendron, sordid alleys, haunt of cats, bike pedals lurking in the gloom to bark the shin, but railway marshalling yards were worse. A mass of lines that seemed to go for miles – look for some salient feature for a start.

The ever-present risk of moving trucks, the unexpected shunt, were hazards you could do without, as carefully you taped across the tracks. No leaning on the signal post to plot, that cheerful coloured semaphore was unpredictable. Pulled by some distant signalman, its cast iron counter-weight came swinging past your ear. Best find some quiet corner if you could, to see if it made sense – was that a switch or end of straight? – it must join back to there – then, horrors, that extra rail that joins nowhere – go back and start again.

Always of course you found a laugh somewhere. One sweltering day, a colleague hung his jacket on the buffer of a lonesome coal truck. An hour later it was the middle one of fifty more about to start for Leeds. The kindly engine driver eased the trucks apart – the jacket bore a few more scars, no matter, but his favourite pipe he mourned for months.

Such detailed work, there was hardly a corner that our mapping did not reach, factories, stately homes, prisons, yes those too, but never on the published plan. Inevitably too we'd many a glimpse of other people's lives, the struggling poverty of the poor, the affluence of the nouveau riche, it called for tact.

A scruffy part of town, that end of terrace house, they're always different from the rest. No rear access, it backed against a face of rock, but did it have a yard? – impossible to tell. An elderly lady answering to my knock, led me through to a tiny triangular yard, no more than ten feet in any direction. She'd gathered soil to make, along one side, a flowerbed, now bright with annuals, not a weed in sight. The remainder of the flagged yard was coloured grassy green with water paint. I stood in admiration. She smiled her thanks, “I always wanted a garden”. The pathos of those quiet words is with me still. God grant she has her garden now.

As the towns had mostly now been resurveyed, we moved into rural areas, 1:2500 scale. Mostly, old County Series plans of pre-war years recast onto the new National Grid sheet lines and then revised; in later years we had the help of air photography. Similar methods of graphic survey were employed but conditions were very different. Cows and grass took over from dogs and asphalt. At least the skewer on your tape would now stick in the ground, no need to carry half a brick to weight it down. No cosy cafe for a brew, you carried everything you needed on your back. Office transport dropped you by some field soon after nine: "See you at four".

Often you never saw a soul all day, alone but never lonely, we talked to cows, they seemed to understand, and if there were no cows, talked to ourselves. Always there was something took your eye, the newly emerging roadside plants in spring, the trees, some bird perhaps. One sunny lunchtime quietly sitting in the sun beside a stream, a crunching sound, what could it be? Holding a leaf of Ribwort Plantain in his paws like a stick of celery, across the stream a water vole was having lunch as well. We watched and munched companionably, he with his salad, me with egg and cress. All gone now in a culvert, underneath the M6 interchange.

Farmers we met of course, and mostly pleased that we had come. We talked of weather and the size of fields, of last week's auction and the price of pigs. The council roadmen too were mines of information. They knew each stick and stone, the local names and often showed us things we might not otherwise have seen. They too have gone. The new technology goes howling by, the driver earmuffed in his cab, his whirling brushes cover twice the ground in half the time, but tell you nothing that you want to know.

Sometimes you hear the OS have it wrong, it ought to be called this not that, but spare a thought, it's not so easy as you think. St. Thomas's Road, along its length I counted seven nameplates. They all agreed it was a road but five, yes five, different spellings of Thomas's. St. Thomas evidently not the only one to have his doubts.

Many a name is brought forward from an earlier edition, collected maybe in the 1840's. South country surveyors struggling with the strange dialect of a semi-literate rural population, they did their best. Way up the Lune Valley, an obvious hill, it surely had a name. I asked the farmer, "Taylor's Hill", but how to spell it sparked a family conference. "Dad, what do you call that hill aback o't house?" "Taylor's Hill my father always called it." "How do you spell it though?" A pause for thought – "Nay, I've never seen it written down." That was 1976, and who but me would want to write it down, but did I get it right?

Still moving round in 1966 we found ourselves in Cockermouth. Such lovely plans, the grime of industry a distant memory. I used to think how fortunate I was. In Borrowdale, at Ashness Bridge, those tourists saved up for a week, but I was paid to have my fill all year.

Then came promotion. My colleagues spurred me on; buoyed up by their good wishes, some envious maybe, I chose Southampton, Training Branch, to teach new entrants all I knew – it wouldn't take me long.

Those last few days, a winter anticyclone; it seemed almost that summer lingered on. Along by Bassenthwaite I stopped the office car, got out and sat upon a rock. It was idyllic. The last wraiths of mist lifting in the early morning sun; down by Beck Wythop, the purple lacework of the birches fretted on the clear blue sky; the great shoulder of Skiddaw mirrored in the waters of the lake. All was peace. Not a sound save for the occasional cry of a sheep on the fell above me, – and then I realised. Today was Wednesday, by Saturday I would have

left it all behind to tramp the streets of a busy city in a fruitless search for furnished accommodation.

What had I done? Too late of course to change my mind, thenceforth promotion's rosy glow took on for me a different hue. What values led us on towards that grail we all so diligently sought, and once achieved, what had we got?

Southampton, from earlier visits I knew well, a pleasant place with city centre parks and many a venerable tree, the open Common on the edge of town, and yet – I never settled. Too long the freedom of the field, it seemed a world away from sheep and fells and the cry of the curlew.

Five months and then a vacancy at Kendal. At Oxenholme we humped our cases from the train, leaned on the wall, took in the view and knew that we were home.

Staveley, a working village, is where we've lived since 1967. Others may think the village life a bore and choose instead the striving anonymity of city life. They may be right, but still, for me, community, the sense of place, a passing greeting and the shared concern are things too precious to be lost. Sedbergh, Kendal, Ambleside, and then we worked our way across Furness. Sandside, Meathop, Humphrey Head and Holker, lush countryside of fields and woods, and always out across the Bay, the ever-changing scene of sand and sea. From childhood holidays I'd known it, and love it still, it never palls. Then we set our sights on higher things, the 1:10,000 survey of the Lakeland fells. Basically an aerial survey, it required ground completion. On some far distant plans the helicopters saved us climbing time, but even so, each plan five kilometres square, we had to walk for miles. It sounds delightful, and it was, but four years five days a week of single handed humping gear on rough terrain was gruelling work.

Plane table and telescopic alidade we mostly used. The telescopic alidade a modern instrument, the plane table, older than the chain, so simple but ideal for the job. The whole of India was surveyed by plane table. After the Lakes we moved on to the Howgills and then the Bowland Fells.

All the while, the earlier plans could be getting out of date. A system of continuous revision had been kept going alongside the resurvey work. Our revision area was vast. Eskdale across to Stainmore in the east and south to Ingleton and Lancaster. Somewhat at the mercy of the building trade, a housing boom could put us well behind.

Meanwhile, electronic distance measuring appeared. Modulated light beams bounced back by a prism, electronically timed, gave distances almost instantly. Accurate to a few millimetres over several kilometres range, it revolutionised the work of distance measurement. The electronic theodolite followed in its wake, the data-store, then shot off down a wire to automatic plotting machines.

So our hard won skills give pride of place to new techniques that lack the human face, and Alpha Bootis, setting in the west, makes way for man-made stars and the global position system of the coming years. All heady stuff for agile minds.

J S Padley, Old Series ephemera, and foxhunting

R C Wheeler

The story to be recounted here starts in 1881 in Skegness, then a select coastal resort, when J S Padley, the Surveyor of County Bridges for Lindsey, was putting the finishing touches to his memoirs.¹ Most of this work is about Lincolnshire watercourses and what has been done to control them; however, an autobiographical element creeps into the Preface, where Padley describes the background to the Ordnance Survey of Lincolnshire and how he became involved.

‘One of the Engineers brought from Shropshire was Captain Stevens, by whom the author was engaged as assistant in his portion of the Survey, first near Alford, and then in the Lincoln district, the latter being in the form of a square extending from Wragby to Southwell (Notts) and from Dunsby Lane to Spital; of this part the author surveyed nearly the whole of the main roads during the years 1819 and 1820, Capt Stevens making the plans and sketching in the hills, etc. The author also assisted him in Notts, Derbs, and other counties.’

Now in 1816, Mudge had directed that civilian surveyors were only to be employed ‘by an express permission in writing from Colonel Mudge or the officers employed under his command upon the General Survey’.² However, Padley’s account of what he did accords well with what is known about the Survey. Henry Stevens was indeed responsible for precisely the areas stated; his previous work had been in Shropshire and he was next employed in the Leicestershire / Derbyshire / Staffordshire border area.³ Furthermore, running traverses along main roads seems to have been one of the stages by which the survey was produced and it was a stage where a subordinate’s work could easily be checked against the positions provided by the trigonometrical survey. So, whether or not Padley’s employment had official sanction, one is inclined to accept his account of what happened.

Padley’s memoirs continue:

‘After the Surveyors’ plans were completed they were tested on the spot by the Royal Engineers; the author has satisfaction in stating that Capt Stevens’ work was found so accurate that, as a reward, his salary was augmented, while the author received a copy of the map as a present, in token of the Department’s approval of his share of the work done.’

The ‘testing on the spot’ could refer to a visit by Capt Vetch and Lt Drummond in 1821 or by Lts Dawson⁴ and Robe in 1822. J B Harley, in his Introductory Essay to Margary, Vol V, gives the impression that work had been universally unsatisfactory; nevertheless, he does cite OSD 282, one of those by Stevens, as an example of the improved style that Colby was aiming for. Furthermore, comparison of the hill sketches for sheet 83⁵ with Stevens’s OSD 277 suggests that most of the corrections there relate either to names or to features

¹ J S Padley, *The Fens and Floods of Mid-Lincolnshire with a description of the River Witham in 1762 and 1825*, Lincoln, 1882.

² Quoted more fully in the introduction to Margary, *The Old Series Ordnance Survey Maps of England and Wales*, Vol III (1981), xxi.

³ Yolande Hodson: *Ordnance Surveyors’ Drawings 1789-c1840*, Reading: Research Publications, 1989.

⁴ Although Dawson was already in Lincoln on 10 November 1821 – Lincolnshire Archive Office PAD 2/50.

⁵ BLML Maps 176.

which had changed since the date of survey. Even so, the presentation of a copy of the map (the entire set of Lincolnshire sheets?) to a civilian assistant does not accord with what is known of Colby's practices. In any case, the map was only published in 1825, some three years after the 'testing on the spot' to which Padley refers.

In the hope of resolving this, I attempted to locate the copy of the map to which Padley had referred. Padley at this time was embarking on a career as a surveyor, and a set of the Lincolnshire sheets of the one-inch map would have been a useful as well as a valuable item, something that would live in his office rather than on the wall of his drawing room. Now many of the maps from his office were donated by his successor, J M Thropp, and found their way to Lincoln Central Library (LCL). It therefore seemed worth investigating whether LCL had a set of early Old Series sheets that was in any way out of the ordinary.

To my surprise I found two such sets. LCL Map 368 consists of the entire set mounted on coarse linen, the westernmost two inches having been lost. Built-up areas had been enhanced with carmine ink in a very untidy manner. Pasted over the Humber Estuary was the engraved title that is recorded in Margary (Vol V, xxxiii) but only as a label stuck to a wrapper. The other set, LCL Map 857, is dissected and mounted and accompanied by a diagram of sheet lines for the Lincolnshire part alone (Figure 1). Both of these seemed exciting finds; however, I subsequently discovered that Ray Carroll had encountered both title and index on a sheet at Boston some years ago.⁶

The Ordnance Survey already had an index sheet at the ten-mile scale.⁷ This new index is not a reduced and simplified version of it – it shows Spital in the Street, which is not named on the ten-mile index. It therefore seemed possible that it was produced by James Gardner, who had been appointed sole agent in April 1823.⁸ However, certain features of this index – notably the style of 'INDEX' at the top – seem to be derived from earlier Indexes to Parts which were provided as part of the label on the wrappers.⁹ Gardner did produce an index of his own, showing all the sheets that were available in 1825 and the price of each.¹⁰ So the Index at Figure 1 does seem likely to be an OS product, printed at the Tower.

Incidentally, OS pricing policy at this date is generally described as being one guinea for 'normal' sheets, with reductions where a large area was of sea. The Gardner index shows that fewer than half the sheets were 'normal': more details are at Appendix 1.

Returning to the maps at LCL, it seems most likely that both the engraved title and the index to the Lincolnshire sheet lines were sent out with all sets bought as a Part, which would certainly include all sets sent to subscribers. LCL Map 368 might well have come from Padley's office, although it seems a little unlikely that he would have allowed a map that recorded his connection with an institution he thought of so highly to be spattered with carmine in so untidy a manner. In the absence of any evidence that this was a presentation copy, it does not greatly matter whether or not it came from Padley's office. However, it does raise the possibility that Padley did have such a map, mounted on linen with engraved title, which he had acquired by some means or another, and that, not being aware of any other specimen with an engraved title, he gradually convinced himself that it must have been a presentation copy. The idea is somewhat speculative, but it may seem to some more credible

⁶ R A Carroll, *Printed Maps of Lincolnshire 1576-1900*, Woodbridge: Lincoln Record Society, 1996, 215.

⁷ R Hellyer, *The 'Ten-Mile' maps of the Ordnance Surveys*, Charles Close Society, 1992.

⁸ See Margary, Vol V, xxvi.

⁹ See Margary, Vol I, xx for Part I, Vol II, xxviii for Part III, Vol III, xxxii for Part V.

¹⁰ Society of Antiquaries, Willson Collection, 786K (microfilm in Lincolnshire Archive Office).

than the OS presenting maps to civilian assistants whose official existence may even have been questionable.

Does it matter if we conclude that, at the close of a long life, Padley's memory was reliable about what he had done sixty years before, but untrustworthy on matters that he had merely been told about? Actually, it does, because Padley (1881) provides the most unambiguous evidence for the prime role of the Burton Hunt in having Lincolnshire mapped out of turn. If that source cannot be relied upon for what happened after Padley's own work was 'tested on the spot', it can scarcely be relied upon for the motivation of the Lincolnshire gentry at a time before Padley had even embarked upon his career.

So what do we conclude from all this? First, I suggest, that ephemera can be important, and those associated with the Old Series are by no means fully understood. Secondly, the provenance of unusual maps is important and we should perhaps take more steps to record it within our own collections. Thirdly, the Burton Hunt may not have quite the cartographic importance that we have supposed.

Appendix 1 – Prices of one-inch sheets, 1825

Because pricing policy changed so rapidly about this time and because of the importance of prices for dating impressions, the prices given on Gardner's Index are listed here. The Index is undated but must post-date the issue of the Lincolnshire sheets on 30 March 1825 and pre-date the reduction in prices that took place later in 1825.¹¹ The quoting of prices for individual Lincolnshire sheets is noteworthy. Although Colby might have believed in December 1825 that 'the 8 sheets of the Ordnance Survey containing Lincolnshire and Rutlandshire, have not hitherto been sold in separate Sheets like the rest of the General Map, but collectively as a County Map',¹² the Index seems to suggest that Gardner was perfectly happy to sell single sheets.

<i>Sheet</i>	<i>Price</i>	<i>Sheet</i>	<i>Price</i>
1	21s	25-26	21s
2	8s6d	27	8s6d
3	18s6d	28-29	5s
4	8s6d	30-31	16s
5	20s	32	5s
6-8	21s	33,38	8s6d
9	20s	39	5s
10	16s	40	18s6d
11-12	20s	47	21s
14-15	20s	48	18s6d
16-17	18s6d	58	5s
18-19	20s	64-65	21s
20	13s6d	69	20s
21	21s	70,83	21s
22	13s6d	84	13s6d
23	6s	85	8s6d
24	11s	86	21s

¹¹ See Margary, Vol V, xxxiv.

¹² See Margary, Vol V, xxvii.

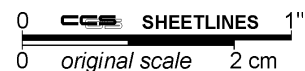


Figure 1: Index to Part X (reproduced courtesy of Lincolnshire County Libraries)

Puzzle corner

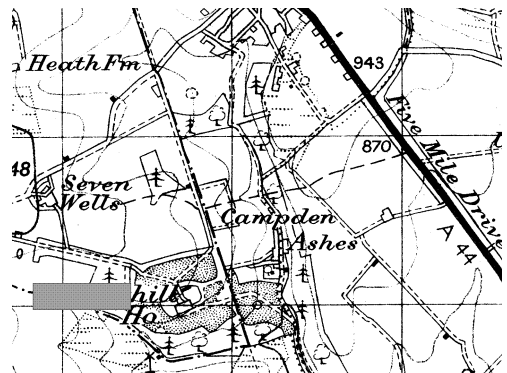
In *Sheetlines* 65 David Archer posed the question “Why is the *Popular Edition of England and Wales*, sheet 17, *Isle of Man*, sometimes found dissected in plain brown covers, roughly A4 in size, with *Sheet 4* printed on the front top right corner and an index diagram on the rear cover?”

His answer is that these maps are usually found in leather-cased sets of the *Half-inch Ministry of Transport Road Map*, in which sheet 4 was not published. The current one-inch map was used to make up the set and the index diagram is for the *Half-inch Map of England and Wales (Large Sheet Series)*.

This time, can you find the timely connection between the names blanked out below and make the maps used add up to 345? The extracts are in order of date and increasing scale. They are printed approximately to size apart from the last, which is about 60% of its true size. As usual there are no prizes, but the answers will be printed in the next issue.



Map 1

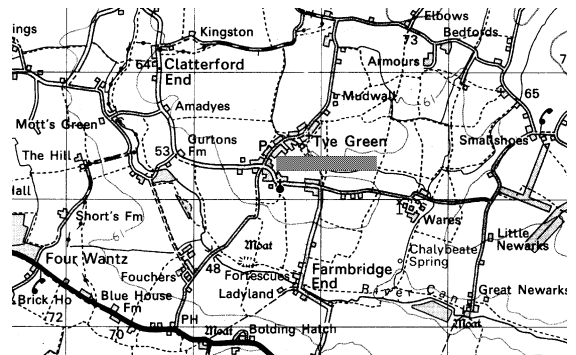


Map 3



Die Höhenangaben und Höhenlinienzahlen sind aus englischen Fuß in Meter umgerechnet.

Map 2



Map 4

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Exploring the mountains

A commentary on Explorer maps from the viewpoint of a keen hillwalker

David Purchase

Yes, there is at least one more supporter of the 1:25,000 map out there (*Sheetlines* 65, 61).

I cannot claim to have *every Explorer* yet published; as an enthusiast for the bumpier parts of the British Isles my collection is complete west of longitude 2° W, but the further east of that line you go, the more gaps there are. Still, I have more than 250 of them, so perhaps the Ordnance Survey will regard me as quite a good customer. I thought that, at a time when we are waiting only for the Outer Isles, it might be of interest to record some thoughts about the advantages and disadvantages of these maps for enthusiastic hillwalkers. (As I write, publication of the final sheets, 452 to 470, is imminent; it must be unusual for anyone, and unique for a government body, to meet exactly the schedule set six years ago – see *Sheetlines* 49, 37.) My comments, though not confined to matters of direct interest to walkers, are thus based mainly on my experiences in the higher regions of Great Britain, with a bias towards the Highlands of Scotland. This article is unashamedly written from the point of view of an enthusiastic map user, not a map expert!

In what follows, there are several references to the Munros, and a few to their Tops. For those readers, probably few in number, unfamiliar with these hills, the Munros are the 284 ‘separate mountains’ in Scotland that are at least 3,000ft (914.4m) high, and the Tops are 227 other ‘local high points’ of that height but which do not qualify as separate mountains. Although some, including the present author, have put forward objective bases for their classification, their listing has always remained pleasingly arbitrary, at the whim of successive editors on behalf of the Scottish Mountaineering Club. It is probably at least in part because the lists of Munros and Tops change with each new edition of *Munro’s Tables* that these hills have not been identified on any OS map before the *Explorers*. When the next revision comes along, perhaps the Ordnance Survey will wish that they had not started now!

Let me say at once that, in general, I consider that *Explorers* are excellent maps for use on the hill, and far superior to anything that we have had previously from the OS for regions not covered by the *Outdoor Leisure* series. I know that some walkers consider that in mountain country one does not need a scale larger than the *Landranger*. (I even know a few who still prefer their one-inch Seventh Series, arguing that ‘the hills do not change’: this may be broadly true, but the significantly less accurate delineation of contours, crags and cliffs makes that attitude, in my view, rather unwise.) Superficially this may seem reasonable, but the greater detail of mountain features on the *Explorers* seems to me well worth having. Even in the Highlands, and certainly elsewhere, the inclusion of walls and fences can often be an invaluable aid to navigation and in mist a real safety feature.

It is a pleasure to have a map produced to the standard of the *Outdoor Leisure* series rather than that of the *Pathfinders*. Although the basic mapping is of course the same, the general appearance is much improved and the greater area coverage, with generally well-planned borders, means that I rarely need more than one map for any particular walk. This coverage means that the ordinary user on a walking holiday, even away from the ‘honeypot’ *Outdoor Leisure* regions, can buy just a few maps to cover all his or her planned walks for a trip: from the OS viewpoint the result has clearly been that walkers *do* buy a few *Explorers* whereas they rarely bought any of the old *Pathfinders*.

Within the Charles Close Society I am among friends who share my dislike of ‘double-sided’ maps, despite the economy they provide; however I suspect that among the map-buying public it is just that economy that makes them popular. (I have not resorted to buying two copies of each double-sided map, though I often wish that I could justify such extravagance!) To be fair, with the *Explorers* the OS have made a real, and on the whole successful effort to design sheet borders which minimise the need to switch from one sheet to another, or from one side to another, during a single day’s walk. In part this has been achieved by an intelligent use of overlaps. There are still times when one would wish for more overlaps on double-sided maps; in the field it is very difficult to determine the bearing between two key points on opposite sides of the sheet without resorting to trigonometry, but such instances are far fewer than before. (The very worst was *Outdoor Leisure* sheet 17 in its earlier editions, when the border between the two sides of the map went straight through the main ridge of the Carneddau, a very popular walk and rightly so. Reversing the map in rain and a gale was fraught with difficulty; indeed I felt that the risk of losing it altogether made this design positively dangerous. From edition B in 1998 the map has a 1km overlap between the two sides which, though hardly adequate, is infinitely better than none at all!) And if you *have* to reverse a map ‘on the hill’, at least the *Explorers* are manageable whereas the larger *Outdoor Leisure* sheets can be very unwieldy!

Walkers have been quick to criticise the fact that the *Explorers* do not incorporate a complete resurvey and revision. But this was always an unrealistic demand; they are much better served by the completion of the coverage in just a few years rather than decades. However there are two particular features which, given that we are a key part of the target market, should have been updated more rigorously. One is estate tracks, which often occur ‘on the ground’ when not shown on the map (and sometimes the other way round), just one example being near the Shee of Ardtalnaig on sheet 378. The other is the extent of afforestation, and the location of gaps such as firebreaks, which can be vital when descending at the end of a long day. My experience is that sometimes the delineation of these features is precise, but at other times it seems to bear little relation to the real world (possibly deriving from a plan rather than a survey?); there are examples here in the vicinity of Innerdouny Hill at NO 032073 and Lendrick Hill at NO 019036, both on sheet 369. As both these features can be readily picked out from air photographs I am rather surprised by some of the errors and omissions.

Hill names are considerably more satisfactory on the *Explorers* than on previous maps. At long last the OS appear to have tacitly accepted that the names in established use by walkers have as much claim to be shown as those from any other source. (Though I am not sure whether they have admitted to this: I suspect that it has been done for purely marketing reasons.) Thus ‘Lurg Mhor’ is now attached to the summit (NH 065404 on sheet 429) rather than just a shoulder. Of course the derivation may well make this a rather unsatisfactory summit name: but for over a hundred years Munro-baggers, probably almost the only people who ever do refer to that hill, have called it that, and it seems only reasonable for it to be so mapped. In general, all Munros are now named conspicuously, and this practice extends to Tops except for those which are listed merely (for example) as the ‘South Top’ rather than by a separate name. This exception is reasonable, though I hope that it does not lead to complaints from walkers who fail to visit such a point as a result! When it comes to lower hills, however, there seems much less logic underlying the prominence with which any given name is displayed. There are sensible criteria which can be used, and perhaps this aspect

could be kept in mind for future revisions. On the other hand, the hill names on the ‘key diagrams’ on the back covers are a mess! I return to this at the end.

Like many hillwalkers, heights are very important to me. Over the last few years, efforts do seem to have been made to ensure consistency between mountain summit heights on the *Landranger* and *Explorer* maps (and also to show more such heights on the former), but of course there are still some differences. Frustrating though it may be for me, as one who compiles and studies lists of hills as well as walking up them, I know the probable errors of these heights and can live with discrepancies of 1m, but more is surely unacceptable. What is the true height of Coety (or Coity) Mountain at SO 231080, 581m on *Landranger* 161 but only 578m on *Explorer* OL13 through many editions of both maps? (A few other heights in the vicinity also differ by 3m.) I would also welcome more summit heights when these are not now shown, or are significantly above a trig point as with Moel Famau on sheet 265. What is the height of the highest point in the Clwydian Range?

And in view of the new-found emphasis on the Munros, it is slightly disappointing to find at least eight such hills which have no summit height shown on the *Explorer* map. It may not be very logical, but walkers always like to know exactly how high they have climbed!

Heights lead naturally to a discussion of contours. I find these extremely important and welcome the use of a 5m vertical interval in lower areas and a 10m one in the hills, despite confusing myself occasionally, especially when adjacent maps have different intervals. I do have a grouse (which applies equally to *Landrangers*) about the numbering of contour lines. It would be much easier for the user if, in hill country, a real effort were made to number only the lines which are multiples of 50m (in very high terrain, multiples of 100m would be enough) rather than inserting all sorts of strange values like 365m, 420m, 530m, 580m and so on – often even *instead of* the round numbers. Surely this would not be too difficult with the computer resources now available? (For just one example, see the slope stretching north from NH 218264 on sheet 415.) The removal of numbers thereby achieved should enable key contours to be numbered more frequently without cluttering the map; at present, tracing lines all the way along to the nearest number is sometimes difficult. I should like numbering about three times as often as it currently is, but suppose that would seem excessive. Perhaps we could just ‘double up’. (In low lying or fairly flat country, of course we do need contour numbers every 5m, 10m or 25m as well as the increased frequency of numbering.)

My impression is that the contours have been inserted to a high degree of accuracy, given the way in which they have been drawn. It is good to have, at last, consistent metric contouring for all of the Highlands; a few *Pathfinders* still had imperial contours with metric values. (For those familiar with Naismith’s Rule, the ‘climbing’ part converts to exactly 1 minute per 10m contour line, or 5 minutes per ‘thick’ line, which is very easy to use on the move.) Certainly minor features are much more conspicuous than at the 1:50,000 scale, a strong reason for preferring the *Explorers*. I have noticed only one instance of really poor work, on sheet 335 in the south-east corner (look at squares NS 9524 and 9827, for example). Even here, though the error is glaringly obvious to the map student, it would cause no difficulty for the user on the hill. (The second square mentioned appears also on sheet 336, but without any anomalies. Clearly the problem is with the interpolation of 5m contour lines, which are shown on sheet 335 but not sheet 336.) I have also spotted very occasional instances of mis-numbering, though perhaps fortunately I failed to record them!

By the way, has anyone else noticed that the OSI *Discovery* maps (though not the OSNI *Discoverers*) do *not* adopt the handy convention that contour numbers are always oriented

‘up the slope’? Of course OSI can argue that in the hills the excellent layer colouring makes this unnecessary. But paradoxically it is in low-lying country (of which there is quite a lot in Ireland) that the practice becomes really useful. In Great Britain such problems are confined to the fens. Who can tell which side of a 0m contour line is higher and which is lower?

I am glad that recent *Explorers*, unlike earlier ones, show the grid letters in the corners (and at any change). Grid numbers appear at adequate intervals within the map (it would be good if they always appeared once in each opening, but I realise that this is not very practical). Errors are so rare that the occasional one stands out – see sheet 336 (again) at NT 095260 and 095310, no doubt a hangover from the old *Pathfinders*.

I find it surprising that so many different boundaries are shown on *Explorer* maps, including county, unitary authority, parish and constituency boundaries. They are quite faint, so that if one is really interested they are difficult to follow; but they can easily become confused with field boundaries (why are these one of the few signs not shown in the legend?) or obscured by roads. Even worse, in Scotland, with no rights of way shown, they can be taken as paths. It is difficult to imagine that the *Explorer* series is used by local government officials for boundary work, so surely it would make sense to omit all the boundaries *except* those for counties, which are still of interest to many map users. On the other hand the *names* of counties shown in the border are rather difficult to find and could do with more emphasis; perhaps the *Landranger* method could be used. (There is one related minor problem which needs attention. Names of large areas such as Knoydart and Lochaber are placed on sheets almost at random and with no typographical indication that they are regional rather than local descriptions. And why the upper Dee valley is labelled ‘Braemar’ in square NN 9992 on sheet 403 I cannot imagine.)

I notice in *Sheetlines* 65, 16-17, a reference to a possible renumbering of the *Explorer* series. As one who already has a large collection and who has compiled several lists which include *Explorer* sheet numbers, I do hope this does not happen – unless a way can be found which enables the current numbers to continue in use alongside any new ones. My own solution would be to renumber the remaining former *Outdoor Leisure* maps from 51 to 83 (numbers which have never been used in either series) and allot the new numbers from south to north and west to east consistently with the *Explorers*. Or one could use 501 to 533 if three-digit numbers are preferred. And if it really is intended to revisit sheet borders (and I have mixed feelings about the desirability of this) with a view *inter alia* to dispensing with double-sided maps, then I hope that, for both *Explorers* and *Landrangers*, the next redesign will adopt a preferred overlap of 2 km with an absolute minimum of 1 km in all directions.

I will conclude with some observations about the ‘key diagrams’ on the back covers which show the area covered by the map. I admit that I have long disliked their design: the lack of *any* linear features, either rivers or important roads, makes it difficult to ‘recognise’ the area at a glance, and although there is an attempt to distinguish between villages, towns and cities, in my view this completely fails to work. Lakes, lochs and reservoirs appear, but without any rivers seem oddly detached from the landscape. Does the research *really* suggest that the public prefer the current almost abstract design to something slightly more representational?

But that is rather away from the main topic, of hill country *Explorers*. In the Highlands some emphasis is given to the recording of Munros on these key diagrams. In view of their popularity, which shows no sign of waning, this must be a useful aid to sales. But it would be desirable to get it right! I have already pointed out (*Sheetlines* 64, 53) the errors on sheet 411:

sheet 430 goes even further by adding six extra ‘Munros’ to the key diagram (by way of slight compensation, one Munro on the map is omitted). In this case the extras are all ‘Tops’ (though on the map itself there are two others); but why just on this sheet? (I certainly do not suggest that the practice is extended; to include all 227 Tops on the diagrams would confuse rather than enlighten.) To be fair, I have found only one other incorrect ‘extra’ Munro on key diagrams (Stob na Doire of Buachaille Etive Mor on sheet 384), but at least 14 Munros are *omitted* from them, well spread out across Scotland. I can supply details to anyone interested.

Leaving aside the Munros, the desire to appeal to walkers has led to a quite excessive number of other hills being shown on some of the key diagrams in Scotland. (Though not in Wales. It is not clear to me whether this reflects a recent change in OS policy, or a belief that Wales is not very hilly.) Examples are sheets 320, 329 and 399. A key diagram full of hills, with no indication of how they interconnect by ridges and no valleys or glens, again seems to me to fail to give any immediate picture of the location of the map. And the choice of hills to include, or omit, appears to have been made almost at random; important hills are omitted, yet trivial hills which even a keen walker will never have heard of are shown. And yet on other Scottish sheets few or no hills are marked. This just reinforces my feeling, probably already clear, that for a map series specifically designed for hillwalkers the OS would gain significantly by seeking input from those who are knowledgeable about our hills. Perhaps they have done this already. If so, I am afraid that it does not always show.

It is regrettably well nigh inevitable that an article such as this spends much more time on the criticisms than on the plaudits. I am very conscious that I have done exactly that. So let me conclude by repeating that – though of course they could be improved – I consider that *Explorers* are excellent for use on the hill. Yes, there is at least one more supporter of the 1:25,000 map out here!

Short queries

Chris Noble asks (*Sheetlines* 64, 27) if covers with Edward VIII’s cypher on are unusual or not. My experience is that they are no more unusual than might be expected for covers which were probably only being printed over a twelve to fifteen month period. It is worth noting that ‘George VI’ covers only seem to have been introduced well into 1937, and that one can meet with maps only issued in the spring of 1937 which are nonetheless in ‘ER’ covers, some four or five months after the abdication.

Richard Oliver

I would appreciate any help that CCS members can give me with regard to any of the following questions. Suggestions of published works that I should study will be very acceptable.

- 1 The Irish six-inch County Series First Edition maps show areas in acres, roods and poles. As all readers will know, a pole is a very small area (just over 25 sq. metres), so these areas are to a high degree of precision. But is there any information about their likely accuracy? My specific current project relates to the offshore islands and in that context it would be useful to know precisely what area was measured.

My impression is that areas within HWM estimated from the modern 1:50,000 *Discovery* maps are rather greater than the six-inch areas. Is this to be expected (and, if so, why) or is it an impression that would disappear with more accurate measuring of the modern maps?

Would any of the answers be different for areas on the maps for England and Wales or Scotland?

- 2 What is the best series of maps from which to trace contours in major conurbations? Areas of particular interest are Birmingham/Wolverhampton, Glasgow, Greater London, Greater Manchester, and Merseyside. Ideally the contour interval would be 50 feet or less; anything more than 100 feet will not be adequate. But the maps do not need to be recent.
- 3 There have been several recent comments in *Sheetlines* about detached parts of counties. Is there a convenient source of information about such detached parts and when they ceased to be such? (Details for Ross and Cromarty, Flintshire, and Dudley are already known to me.) And where is a good account of the status of Monmouth as English or Welsh prior to 1974?
- 4 Is there any readily available source of the altitudes of the bench marks on trig points to a greater degree of accuracy than 1 metre? Using older maps would provide values in feet but, to the best of my knowledge, still be 'ground level at the base of the pillar' and not the bench mark itself. In any case I should prefer values to a precision of 10cm or less.
- 5 Are there available anywhere tables showing the modern grid references of the south-west corners of sheets in old series of maps at 1-inch and 6-inch scales? Of course I recognise that the sheet lines do not follow modern grid lines. But, knowing the size of the sheets in question, this would be a useful way (sometimes easier than index sheets) of working from a modern location to the required sheet number – and in marginal cases it would be clear that two or more sheets might be needed. For this purpose four-digit grid references might be appropriate.
- 6 When did the OS change from lettering down the spine to lettering up the spine? Observation suggests that it was between the Sixth and Seventh Series one-inch maps, but no doubt it is not as simple as that.

In the publishing world this was long a matter for debate, and some entrenched positions, as there are valid reasons for either method. However current UK practice does seem to have settled on lettering down the spine, so that when a book lies flat on the table the title on the spine is the right way up. Personally I regard this as a justification which far outweighs the arguments for lettering up the spine. However none of those other arguments can really be applied to maps, whereas many people put maps on a table, or store them in horizontal piles: thus either the map or its title is upside down. So why did the OS change from the 'right' to the 'wrong' practice?

Although I think the current practice is the wrong one, I do hope that they do not change it back again which would produce serious filing problems!

David Purchase

I understand that the title runs up the spine so that it faces the customer when the map is upright in a retail display stand? – CJH

Book reviews

Tim Nicholson, *The birth of the modern Ordnance Survey small-scale map*, London: Charles Close Society, 2002. ISBN 1 870598 19 9, paperback, £8, 95pp+13pp plates.

This book is subtitled *The Revised New Series colour printed one-inch map of England and Wales 1897-1914*. The series of maps which it takes as its subject is also known, by those of us who cannot cope with labels more than two words long, as the 'second coloured'. The book starts with a 57 page historical account, followed by 38 pages of bibliography. It thereby completes the Society's cartobibliographical coverage of the regular series of the coloured one-inch map from its birth in 1897 to its death in 1976.

Cartobibliographies are remarkably personal things. Some authors content themselves with a mere list; others try to explain how everything they describe evolved, and when. I must confess to a strong preference for the second approach. Indeed, before I had even heard of the Charles Close Society, I was attempting to produce lists of what features changed when, based on a pathetically small sample of sheets. Quite often, it turns out that OS practice was well-behaved: the specification was changed on a certain date and all sheets produced after that date do indeed follow the new specification. Sometimes, the irregularities are instructive: for example, in 1958-60, the Seventh Series legends collapse *antiquities* from three periods to two; the change is prolonged because the legends do actually keep pace with the replacement of Early English lettering (meaning pre-Roman) on the face of the map with Lutheran (previously reserved for medieval). And sometimes irregularities appear without rhyme or reason.

The Revised New Series in colour is by no means so straightforward a series as one might suppose from its short life and it presents a number of irregularities in specification. The author is to be congratulated on resolving satisfactorily the most puzzling of these, namely the three different treatments of woods. A number of other problems continue to defy solution but all the evidence is now set out for anyone who wishes to try their hand at solving them.

Indeed, it is important that monographs such as this one should be seen, not as providing the last word on a subject, so much as providing a foundation for further work. Only with an accessible summary of what is known can the curious look into topics which, hitherto, would have seemed impossibly obscure. For example, Sheet 252 (Swindon) has an adjoining sheets diagram which shows sheets to the north and east but not to the south or west. Sheet 235 (Cirencester) to the north (published 8.99) is shown but sheet 266 (Marlborough) to the south (published 3.99) is not shown. Are there more examples of incomplete adjoining sheets diagrams and do they tell us more about the extent of the coverage provisionally authorized? Certainly, this instance seems to suggest an authorized block larger than the 28 sheets to which the book refers (page 20) as a first tranche.

The four-page inserts of 'User Information' listing map retailers are an attractive feature of the early maps and these too provide a fruitful field for further work. Simply measuring their dimensions may be worthwhile: my specimen of a Style 1 insert (following the author's terminology) would only fit a C1 cover; trimming it down to fit a C2 cover would cause some of typescript to be lost. Likewise my Style 1A insert would only fit a C2 cover. This seems to be borne out by the cartobibliography: Style 1 inserts go with C1 covers, Style 1A inserts with C2 covers. Perhaps the author thought it too obvious to remark on. All these four-page inserts show a block of five one-inch sheets by four. However, it is apparent that

the country was not partitioned into non-overlapping regions. Were there gaps between blocks: valleys of gloom with no map retailers to spread cartographic illumination? Or were there overlaps, and which insert(s) would a map in an overlap be given?

As the author observes, this whole field of user information extends beyond the one-inch map. But that is true of many aspects: the main title of the book quite correctly refers to the small-scale map in general rather than the one-inch in particular. The book is essential reading for anyone interested in the genesis of the coloured half-inch or the quarter-inch, or indeed the broader story of how the OS widened its focus from its official customers to the map-buying public. At £8 it is an absolute bargain. Buy it while stocks last!

R C Wheeler

Nick Millea, *Street mapping: an A to Z of urban cartography*, Oxford: Bodleian Library, 2003. ISBN 1 85124 041 1, paperback, 267 × 210 mm, 88pp, full colour, £12.95.¹

The current Bodleian exhibition, for which this beautifully illustrated catalogue has been produced, continues until 26 April. Dot Little's design in a landscape format allows well reproduced, full page illustrations of all the major exhibits to be shown to their best advantage – even if the resulting book will be too wide for many bookshelves!

The catalogue opens with a stunning reproduction of Braun and Hogenberg's 1581 map of 'Brightstowe'² and continues with Hamond's *Cambridge* (1592) and Blaeu's *Bologna* (1663) before reaching the only Ordnance Survey mapping to be reproduced here, an extract from c.1870 1:500 County Series mapping showing the area around Carlisle Cathedral.

However, this is not just an exhibition of historic mapping; Nick Millea makes us think about the purpose and design of street mapping by including a number of more modern, innovative or unconventional examples, including the 2000 city atlas of Milton Keynes.

The second section of the exhibition follows the development of the planned city of St Petersburg, 2003 being the three hundredth anniversary of its establishment. Plans of 1703, 1846 and 1994 are included. Then for something completely different: a section devoted to the A to Z map of London from Phyllis Pearsall's 1930s black and white originals to the present day. Geographers' A to Z Map Company is thanked for supporting the production of the catalogue, but the inclusion of this section is an entirely legitimate reminder that there are publishers other than Ordnance Survey whose output is worthy of study.

There is a strong section devoted to Oxford itself. The lack of change to the street pattern is noted, and demonstrated by the cover illustration, a patchwork map of central Oxford made from twelve panes extracted from the illustrations inside. These range from the Agas map of 1578, through an 1883 temperance inspired *Drink Map of Oxford* (usefully showing all licensed premises), the superb 1973 Soviet General Staff map, *Oxford*, with the OUP marked as a key installation, and, finally, the *Little AZ Map* of 2002.

The later sections cover plans of proposed development, war, and a miscellany of street maps from Boston in 1776 to Peking in 1901. Catch the exhibition if you can: if not, you will still enjoy the catalogue. Having created such admirable reproductions of these maps from their collection, it is hoped that the Bodleian will now make them available on their website.

Chris Higley

¹ Available by post from Bodleian Library Sales, Broad Street, Oxford OX1 3BG. Add £2 for UK p & p; £3.50 overseas.

² The modern spelling 'Bristol' is, of course, an artefact of the accent of the areal, which always likes to add an 'l'.

Kerry musings

David Archer

A chronology of the Ordnance Survey, Benjamin Baker, Romsey Road Books, 2003. Vol. 1 *Chronology to 1896*, xxxii, 704pp; Vol. 2 *Chronology 1897 to 2001* 1200pp; Vol. 3 *Index and appendices*, xvi, 400pp; and a CD of the whole.

When did the fire occur in the Tower of London, causing the Ordnance Survey's move to Southampton? When did Sir John Farquharson cease to be Director General? When were the first sheets of the *Fifth Relief* and *Fifth Edition* issued? Such questions are not too difficult to answer by rummaging through *Sheetlines* and various books, but finding answers will take time. When did a select Committee of the House of Commons recommend that a trigonometrical survey of Ireland should be carried out by the Board of Ordnance? Or, when, in 1918, did the Overseas Branch begin using four Quad Demy lithographic presses? Two far more difficult questions, probably needing a library visit, if you know where you want to look for answers.

This new chronology answers all the above, and is a truly magnificent work, even if one needs a small trolley to carry it around. The author started a card index of Ordnance Survey events in 1930, focusing on the previous 130 years or so, but soon decided to record current events as well. The opening entry is for William Roy's birth on the 4th of May 1726, and the last is for the 31st of December 2001, covering in full, the first two hundred years of the Ordnance Survey. No starting date is given for the Ordnance Survey, just increasingly more entries after the 21st of June 1791. Similarly, the compiler does not express an opinion by giving a date for the first Ordnance Survey map.

I must admit to having a weakness for reference books, and chronologies particularly. If I become interested in a new subject, the first thing I do is obtain an up to date bibliography, a good history, and, if I am lucky, a chronology. For our subject, the chronology at the back of *The national plans* is really only concerned with matters of large scale, whilst that in Owen and Pilbeam is a brief list of major events.

The present work consists of three tomes, the first two being the list of events and facts in date order, and the third, an alphabetical index to the chronology together with various related appendices. The format of the work (Demy Quarto, 11 ¼" tall by 8 ¾" wide), allows for eight wide columns across a double page. The first is headed Date, and the others are Administration, Technology, Map development and publication, Field work, Large scales, Small scales, and Related events. A most useful feature is that every entry has a coded reference to the information source. All the reference sources are listed in an appendix in volume three and would make an excellent bibliography if published separately.

Typical entries are:

1858 March 15th Eclipse of the Sun map available.

1886 December 22nd Treasury authorises revision of original 10 feet, 25 inch and 6 inch maps.

1887 September 6th Sir Charles Wilson reads a paper on the Ordnance Survey in Manchester.

1897 January 1st control of map sales transferred from Stationery Office to Ordnance Survey.
New structure of map agencies established, and ordering at many head post offices introduced.

1916 April 25th all civil employees report for work at Phoenix Park despite Sinn Fein Rebellion the day before.

1916 December 11th new sub-division of the OS established to make relief models of the fighting areas in France, making on average 36 models a week.

1918 June 8th last day of printing at Wardrecques.

1935 June 18th decision to review the sheet lines of the Fifth Edition.

1961 July 26th printing of Seventh Series sheet 188 completes the first printing of this series.

Having spent several weeks dipping into this work, I doubt whether the compiler can identify any known information that he has left out. In the introduction, he does not give the criteria for including an entry, and it seems at times as if he has included every snippet of detail recorded in the last seventy years. Don't get me wrong, it is all really good stuff, but in other hands, one can see much that an editor would have cut. For example, on the 20th of January 1827 the entry reads that *Table of logarithms of the natural numbers from 1 to 108000* by Charles Babbage was dedicated to his faithful friend Lieutenant-Colonel Colby of the Royal Engineers. On the 17th of July 1877 we are told of the sale at 3, Cumberland Terrace, Southampton of household furniture and effects (by order of the Executors of the late Sir Henry James) sold by Southampton auctioneer Mr W Furber. Peripheral, secondary, call them what you will, but such entries have been included, are very unobtrusive and great fun to stumble across.

Where possible, specific day dates are given and a nice feature is that in order to break long runs, introductory headings, sometimes with short notes to set the scene, are used to introduce important changes of policy or the introduction of new technology. The text is further broken at least every ten years, by some very nice colour plates, which show, for the major map series the current state of revision and publication. So that, for the one-inch, in the mid-1930s, we see coverage is a mixture of the Popular, Fifth and Scottish Popular editions, whilst in the mid-1950s, the Seventh Series, New Popular Edition and Scottish Popular with the National Grid are needed for coverage. I understand that these illustrations were prepared some ten years ago, and feel that with today's technology, it could be a fairly straightforward matter to link a database to a graphics programme, which would enable almost yearly diagrams to be produced. However, those in this publication are well suited to their purpose.

Volume three is a superb index to the first two volumes. I spent a whole afternoon trying to find something in one and not the other, but failed. Meticulous is the word, and the entries are what I call full, in that a couple of words introduce each sub-entry not just a list of dates after the initial entry (Fifth Edition - first published 5.1934, - revision of sheet lines 18.6.1935; rather than Fifth Edition - May 1934, June 1935). One of several excellent appendices is for Ordnance Survey agents. Entries in an alphabetical listing of towns are sub-divided chronologically to show when businesses held agencies. Thus, we see that in Taunton, Barnicott and Pearce were agents from the nineteenth century, to well beyond the First World War, whereas Aberystwyth had a series of different agents and periods without any.

A most remarkable feature of this publication is that the whole thing is duplicated on a CD. However, the information in the books cannot be altered or deleted from the CD, but purchasers can insert their own information in the relevant places. It is also possible to copy all of the inserted detail as a single file so that it can be sent to another purchaser to add to their copy. Therefore, the whole work can be kept up to date as knowledge improves, changes occur and time ticks by. And in time, perhaps we might get a work such as the above, which of course is fantasy, conjured as light relief from reading a final draft of *An illustrated dictionary of the Ordnance Survey and Ordnance Survey maps*, by the same author and publisher.

Ordnancemaps topics

Peter Stubbs

The hundredth member has recently joined the *ordnancemaps* Internet discussion group. Here is a summary of just a few of the topics covered over the past months.

Members may wish to check out past emails to the group in the *ordnancemaps* archive at <http://www.yahogroups.com/group/ordnancemaps>

Cartology?

What the correct term for the study of maps? ‘Cartography’ is defined as the science or practice of map making. People who make maps at the Ordnance Survey are Cartographers. Map collector is too specific – not all people who use and study maps are map collectors. Chris Board suggested ‘Cartology’ and I think this seems to be the best. Any comments or ideas?

Irish mapping on the border.

Alan Bowring asked:

I have in my Discoverer/Discovery collection sheets 27A, 28A, 28B and 36A which hover around the border between N Ireland and the republic and which have been published by the two Irish surveys at different times (the last named is a northern product). I am intrigued as to why each thought it necessary to publish these sheets, which are of course additional to the all-Ireland series, as originally conceived. Can anyone enlighten me?

Chris Higley replied that *Sheetlines* 59 contained an article on page 39 by Michael Richardson about the reasons for the layout of the Irish trans-border sheets and quoted his explanation for sheets 27A and 28A/B being produced because the Ordnance Survey Ireland sales office at Phoenix Park, unlike most retail outlets, is not permitted to sell products from its ‘sister’ organisation in Belfast. Chris added that the explanation left him profoundly depressed at this glimpse of the real state of cross-border co-operation.

Philip Fry responded that on the contrary, he thought relationships between all three Ordnance Surveys (OSGB, OSI and OSNI) were very co-operative. Recently the Ordnance Survey GB web had recently contained a news item including a picture taken at a meeting of all three heads of the Ordnance Surveys: Mick Coryall – Chief Executive of OSNI, Richard Kirwan – Director of OSI, and Vanessa Lawrence – Director General of OSGB. He also referred to a book titled *Ordnance Survey in Ireland – an illustrated record* jointly published in 1991 by OSNI and OSI at the time of the 200th Anniversary of Ordnance Survey. The book states ‘This book has been researched and compiled by the staff of both Ordnance Surveys in Ireland’. Reading through this very carefully had increased Philip’s impression that relations between these two has always been most excellent.

Philip remarked on the original question of duplicate coverage. First, it has to be realised that the two Ordnance Surveys would not have been funded to the same level and it should be born in mind just how much subsidy Northern Ireland has received since separation. With this in mind, a weak economy, plus a very rural landscape, one can understand it would not be easy for OSI to keep up mapping as they might have wished.

The 1:50,000 scale series was completed in the north by 1985. In the south however maps produced for this series was not even started until 1988. Sheet 26 was indeed published by OSNI, the area it covers is however almost entirely in the south, just a very small part of the northeast corner is in County Fermanagh, and most of that is mountain. This map has had extracts used for tourism purposes by the southern authorities, perhaps partly because of this, OSI has also published an edition.

The majority of the OSI 1:50,000's indicate they have been compiled from aerial photography by the French IGN, and that this was flown in 1973: it was almost twenty years before they were finally published. The history however makes no mention of this but relates, 'In the early 1970's both surveys acquired aerial cameras and now capture photography for Ordnance Survey use'. Philip had noticed that the last few sheets of this series to be published indicated they were compiled from aerial photography flown in 1995 – no mention as to who did it.

Fords

Brian Sussex asked

I am in the midst of doing a bit of research and the particular route I am looking at has a *Ford* clearly shown – does anyone know what rules the surveyors worked to and in what circumstances they would record a ford please? Is it indicative of pedestrian, horse or wheeled vehicle use? I can't imagine that OS would show a pedestrian-only ford on a footpath.

Alan Bowring replied:

A glance at any OS 1:25000 map of an upland area of the country will reveal many fords on routes which are shown as footpaths or as public footpaths. Some of these are inconsequential and could be stepped over with dry feet in all but the heaviest of weather. Others particularly in the Scottish highlands can, as I have found, involve wading in fast flowing water above the knee. I have always presumed that the OS has simply labelled as a 'ford' any crossing of a watercourse by a track of whatever status – private, public or undetermined – where no structure is present. On occasion stepping-stones are labelled.

A particular problem can arise where, for instance, a footbridge is shown on the map but does not exist in practice so necessitating either a detour or a fording of the river. I came across one of these on a recently published *Explorer* map of the Cairngorms where the bridge that had once been in place and was still shown as such on the map had evidently been washed away many years ago.

Richard Oliver stated that his green book, *Ordnance Survey maps – a concise guide for historians*, does not contain any reference to fords, which in turn means that there are none in the OS large-scale instructions used in the compilation of the book. This may seem odd, but then they fail to contain any definition of 'parkland' either, and no doubt there are other omissions.

Yolande Hodson added:

I am compiling a book on OS instructions relating to routes on all scales of OS maps up to the 1960s. This means that I am collecting information on anything that has any remote relevance to footpaths, bridleways and roads – fords are naturally one of these features. The book is already a couple of hundred pages long and I am adding a commentary to the instructions so that the reader will understand the context of their use by examiners, revisers, draftsmen, etc. I have not yet come across any instructions relating to fords on the early-engraved six-inch sheets, but the conventional signs sheet for this series, printed in 1847, does include a symbol of a double dotted line for a ford.

Black Letter Prayer Book

Hugh Brookes asked,

In a recently purchased *Catalogue of Maps of the OS*, 1924 edition, in the *Summary of Maps, Books etc (for sale)* section I notice the 'Black Letter Prayer Book, Facsimile Reproduction priced 42/-'. Why would the OS want to publish this? Was it because their printing presses were superior to other book publishers?

Richard Oliver explained,

The Black Letter Prayer Book was one of a number of photo-zincographic facsimiles produced by the OS between about 1861 and 1870: the best-known is the facsimile of Domesday Book, county volumes of which occasionally turn up second hand (including at the Charles Close Society AGM members map market): despite the optimistic expectations of Sir Henry James, DGOS at the time, sales were modest, which is why these 1860s productions were still being offered for sale (that seems more than usually the correct phrase!) in the 1920s.

The work was undertaken by the OS as it invented photo-zincography, at any rate in Britain (a Mr Osbourne in Australia beat them to it by a few months, a point Sir Henry James was never over-anxious to publicise), and, because of the size of available negatives and other constraints, the process in its earlier years was more suited to facsimile work such as Domesday than to mainstream map-production. There was therefore some logic in OS rather than anyone else undertaking this work. After 1870 OS activities became more narrowly focussed, and it was left with a near unsaleable stock.

Yolande Hodson recommended Ian Mumford's informative chapters in Seymour's *A history of the Ordnance Survey* (1980). On page 164 Ian writes:

Some of James's (Sir Henry James DGOS) rather eccentric enthusiasms must have done more to hinder than to help ... certainly more maps might have been printed if less effort had been directed towards the reproduction by photo-zincography of Domesday Book, the Black Letter Prayer Book and various historical manuscripts.

Peter Stubbs noticed that the book *Ordnance Survey - map makers to Britain since 1791* by Owen and Pilbeam has, on page 59, an article about Photo-zincography and also a picture of an extract from the Black Letter Prayer Book.

Letters

In support of the 1:25,000 map

Roger Holden (*Sheetlines* 65, 61) will be glad to learn that he is not the only member of the Charles Close Society to be buying all the 1:25,000 *Explorers* as they are published. I, too, am buying the lot! Apart from anything else, they are the best-looking of the present generation of OS maps.

Whilst the proposition that I have 'a bee in my bonnet' about 1:100,000 mapping will be assented to by many (including probably a majority of senior management at Ordnance Survey), I am rather puzzled by any suggestion that I might be 'anti-1:25,000': if anything, I should have thought that I appear anti-1:50,000! Consider this, from *Sheetlines* 58, 21-2:

'Could it be that the ... 1:50,000 is a naked emperor? A bad habit we have got into?... Part of the problem with the 1:50,000 is the burden of history. ...I suggest

that a suitable course for OS small-scale mapping is to replace the 1:50,000 by a 1:100,000, which would be aimed at the road-user, and treat the 1:25,000 as a pedestrian's map... Supporters of the 1:50,000 ought to consider well precisely what advantages it has which are not enjoyed by other scales.'

In *Sheetlines* 64, 14, the 1:50,000 is 'that sacred cow'! Hardly the sort of thing that the OS would wish to advertise on its website...

In defence of the 1:50,000, one advantage that has been urged on me by those who don't like my suggestion of a 1:100,000-and-1:25,000 policy is precisely the possibility of using it for both motoring and walking: one can carry complete regional cover, stop the car anywhere, and get out for a walk. My preference, reinforced by recent experience using the Philip 1:100,000 *Navigator Britain* atlas, and a boxful of *Explorers*, would be to carry a good contoured 1:100,000 for the motoring or cycling, and to carry 1:25,000s of likely areas for walking.

Now for the 'howls of protest'. For the second time in a week I find it necessary to announce to a sceptical audience that I am a member of the Ramblers Association! (The first time was when I had to reassure a county rights-of-way officer of this, having given some advice which seemed to favour an obstructive landowner more than it did the pedestrian public.) The point which I sought to make in *Sheetlines* 64 was that there is at present an inconsistency in OS small-scale map policy, whereby one supposedly 'uneconomic' series, the 1:25,000, is maintained for the 'social need' of one group of users (walkers), whereas another, a proper 1:100,000, is denied to another group of users (notably cyclists, and sedate and thoughtful motor-tourists). This I regard as downright inequitable! I described the development of the civil 1:25,000 in the 1940s as 'a questionable move', not because I am anti-1:25,000 – far from it – but because the initiative for the scale came from within the OS, and after some years it found that it had made a rod for its own back: a map series which was expensive to maintain and sold poorly, yet which had gone too far to be abandoned quietly. The 1:25,000 had its foot in the door.

Although I use the 1:25,000 for walking, I question whether it is really dispensable, at any rate if we also have a good 1:50,000. It has only been during the past twenty years that there has been widespread cover in England and Wales by 1:25,000 mapping showing public rights of way: before that we had of necessity to use either the 1:50,000, which showed rights-of-way but not field boundaries, or the 1:25,000 First Series, which it was difficult to take seriously, often being hopelessly out of date in precisely those 'minor details', such as field boundaries, which must be the justification for this scale in the first place. Observation of ramblers 'on the hoof' suggests that there are still a substantial minority, if not indeed a majority, who use the 1:50,000 rather than the 1:25,000. Apart from the reduced bulk of the smaller scale (a point which seems consistently overlooked in the questions of 1:25,000-versus-1:50,000 and 1:50,000-versus-1:100,000), the choice may be determined by the nature of the terrain, the lie of the sheet lines, and the degree of map-reading skill or confidence (by no means always the same thing) of the user!

The long-term answer is likely to be the development of a series of sub-databases from the OS *Mastermap* database, with the level of detail appropriate respectively for 1:25,000, 1:50,000, 1:100,000, 1:250,000 and 1:500,000 scales, with the scale and size of printout to be determined by the user. That way it ought to be possible to satisfy everyone, including those who want printouts at imperial scales.

Richard Oliver

I write to confirm the comments about the 1:25,000 OS maps made by Roger Holden in *Sheetlines* 65. I think they are absolutely wonderful productions. As a walker I would be lost without them.

My friends and I have discussed how walkers found country paths before the 1:25,000 maps were available, and it seems that, unless there was local knowledge, it was mainly a matter of luck and guesswork. This no longer has to be the case, and I regularly explore paths in areas new to me with just a 1:25,000 map as a guide. The 1:50,000 on its own would be hopeless for the purpose of following paths.

I think that the loss of the OS 1:25,000 maps would be a disaster.

John Langdill

It was the requirement, in the National Parks and Access to the Countryside Act 1949, for county councils to produce definitive maps of public paths that really made the difference. My recollection is that rights of way information began to appear on the one-inch Seventh Series, but not the 1:25,000 First Series, in the 1960s. After the period when one might need both the one-inch map, to see if the path was public, and the 1:25,000, to see, hopefully, which side of the hedge it went, the 1:25,000 Second Series, Pathfinder, maps were pure joy: field boundaries, public rights of way, a decent sheet size and, visually, very attractive. – CJH (also a member of the Ramblers Association).

Measuring on the map at Lower Weare

Without wishing to disappoint large-scale map users along the River Axe (*Sheetlines* 62, 57), I doubt that it will ever ‘flow between banks accurate to ± 0.4 m’. With a bit of luck sections, should they fall in the favoured 63% of the 1×1 km² map (or tile) may be relatively good to ± 0.9 m over a measured distance of 100m, and at worst ± 2.3 m (or worse!) over about 5% of the map. Also inside that 63% the National Grid accuracy should be ± 1.1 m.¹

However, the accuracy of even a well-defined point on a river bank is not to be compared with a building corner or fence junction (except perversely on some overhaul maps), so I think that the banks of the Axe are more likely to be at the ± 1.8 to 2.3 m confidence level over the same measured 100 m distance except, I trust, at the village itself which is bisected by the river. What was the overhaul error here I wonder?

At the moment (mid-February) ST 4053 is still in the overhaul category where the majority of detail may be accurate to ± 1.2 m and the minority ± 3.0 m (or worse and maybe 2.8 m or so away from National Grid correct positions).

What about the ± 0.4 m then? Well, this applies to just over 200 small towns and peri-urban areas due to be improved by October 2004² and a check in January revealed that Cirencester, Monmouth and the small Scottish towns of Lossiemouth and West Linton had thus far been attended to.³

John Cole

¹ Ordnance Survey Consultation Paper 3/1997.

² Ordnance Survey News Release 3/1997. A list of locations in the replotted counties appeared in *Sheetlines* 60.

³ Progress reports are available on the Ordnance Survey website, www.ordnancesurvey.co.uk

Hanging around again

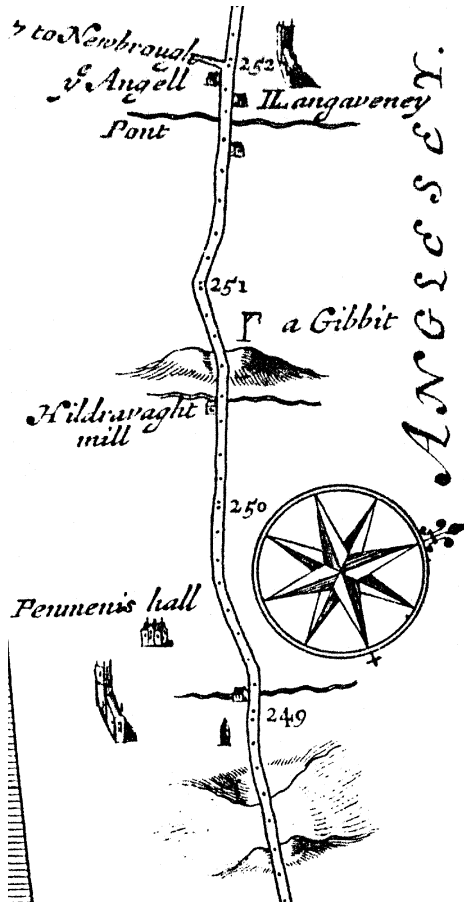
The piece on page 61 of *Sheetlines 65* by Fraser Donachie interested me. I do not claim to be a gibbet expert but I have looked through a copy of Ogilby's *Road Book* of 1675 and found one marked on map 24, the fourth part of 'London to Holyhead'. At mileage 251 he marked 'a gibbit'; this would be on Anglesey. This is the only one I have found, there may be more. My calculation of a grid reference would be SH 4775 and just off a major road.

I have also found 'gallows' marked and my list of these is below:

<i>county</i>	<i>grid ref.</i>	<i>map</i>	<i>column</i>	<i>mileage</i>
Bucks.	SP 8214	12	4	45
Shropshire	SO 7392	13	6	141
Staffordshire	SK 1208	22	6	118
Northants.	TF 1801	41	3	77
Monmouth	SO 5114	56	3	33
Somerset	ST 5444	58	2	19

I have not inspected any of these sites yet, but have found a 'Gibbet Post' in Leicestershire on a minor road. It is most likely the one mentioned in Fraser's list, but Ogilby's atlas does not mention this road.

David Webb



Fraser Donachie may like to know that Combe Gibbet was still there until recent years, although I believe that it has now been destroyed by vandals.¹ I understand that it was part of the tenancy agreement that the tenant farmer had to maintain the gibbet. It was set on the hill line and could be seen for several miles (see illustration).

Gibbets and gallows were frequently placed at crossroads near the scene of the crime, such as Gallows Corner (now Cemetery Corner), Reading – and, of course, Tyburn. Those shown by Ogilby are all outside towns, no doubt close to the assizes where the victims were tried. After hanging and a post mortem, the bodies were encased in a metal frame and hanged on a gibbet until they disintegrated – no doubt to encourage the others.

Eugene Burden



¹ Ian McLoughlin, *Berkshire murders*, Newbury: Countryside Books, 1992.

New maps

Jon Risby

This list covers small scale maps published between 26 November 2002 and 11 March 2003. They are listed by series, and in sheet number order. The columns are as follows: Sheet No. / Title / Edition / Copyright date / Full revision date / Latest revision date / Date of publication. There is also a list of those maps due for publication by OS up to 30 April 2003 (in order of their proposed publication).

After the list of OS maps is a resumé of maps published by Alan Godfrey between December 2002 and March 2003.

Landranger

11	Thurso & Dunbeath	<u>C</u> 1	2002	1998	2002	09/01/03
37	Strathdon	<u>B</u>	2002	2001	-	22/01/03
62	North Kintyre & Tarbert	<u>C</u>	2002	2001	2002	15/01/03

Explorer – new publications

417	Monadhliath Mountains North & Strathdearn	A	2002	2002	-	24/12/02
419	Grantown-on-Spey & Hills of Cromdale, Upper Knockando & Tomnavoulin	A	2002	2002	-	18/12/02
423	Elgin, Forres & Lossiemouth, Burghead & Findhorn	A	2002	2002	-	24/12/02
430	Loch Monar, Glen Cannich & Glen Strathfarrar	A	2002	2002	-	24/12/02
431	Glen Urquhart & Strathglass, Drumnadrochit & Muir of Ord	A	2003	2002	-	09/01/03
432	Black Isle, Fortrose, Cromarty & Dingwall	A	2002	2002	-	24/12/02
434	Gairloch & Loch Ewe	A	2003	2002	-	05/02/03
436	Beinn Dearg & Loch Fannich, Ullapool	A	2002	2002	-	04/12/02
437	Ben Wyvis & Strathpeffer, Dingwall	A	2003	2002	-	23/01/03
438	Dornoch & Tain, Alness & Invergordon	A	2003	2002	-	30/01/03
439	Coigach & Summer Isles, Inverpolly	A	2003	2002	-	05/02/03
440	Glen Cassley & Glen Oyckell	A	2003	2002	-	09/01/03
441	Lairg, Bonar Bridge & Golspie, Dornoch & Brora	A	2003	2002	-	09/01/03
442	Assynt & Lochinver	A	2003	2002	-	05/02/03
443	Ben Kilbreck & Ben Armine	A	2002	2002	-	04/12/02
444	Helmsdale & Strath of Kildonan	A	2002	2002	-	18/12/02
445	Foinavon, Arkle, Kylesku & Scourie	A	2003	2002	-	05/02/03
446	Durness & Cape Wrath, Kinlochbervie & Rhiconich	A	2003	2002	-	05/02/03
447	Ben Hope, Ben Loyal & Kyle of Tongue	A	2003	2002	-	09/01/03
448	Strath Naver & Loch Loyal, Bettyhill	A	2003	2002	-	23/01/03
449	Strath Halladale & Strathy Point, Melvich & Forsinard	A	2003	2002	-	23/01/03
450	Wick & The Flow Country, Lybster, Letheron & Dunbeath	A	2003	2002	-	23/01/03
451	Thurso & John O'Groats	A	2003	2002	-	05/02/03
452	Barra & Vatersay, Eriskay & Mingulay	A	2003	2002	-	27/02/03
453	Bebecula & South Uist, Eriskay	A	2003	2002	-	27/02/03
454	North Uist & Berneray	A	2003	2002	-	27/02/03

Explorer – new edition

140	Quantock Hills and Bridgwater	A1	2002	1997	2002	10/12/02
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Road Map series¹

1	Northern Scotland, Orkney & Shetland	27/03/03
2	Western Scotland and the Western Isles	27/03/03
3	Southern Scotland and Northumberland	27/03/03
4	Northern England	27/03/03
5	East Midlands & East Anglia including London	27/03/03
6	Wales and West Midlands	27/03/03
7	South West England and South Wales	27/03/03
8	South East England including London	27/03/03

Irish mapsDiscoverer maps – new editions

8	Ballymoney	C	2002
9	Larne	C	2002
13	The Sperrins	C	2002

Discovery maps – new editions

51	Clare, Galway	2nd	2002
81	Cork, Waterford	2nd	2001
89	Cork	2nd	2002

Street maps

Dublin Street Guide	December 2002
Dublin City and Environs Motoring Map	January 2003

Forthcoming Maps

The following maps have been announced for publication.

Landranger

76	Girvan, Ballantrae & Barrhill	C2	26/2/03
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Explorer – new publications

455	South Harris	19/03/03
456	North Harris & Loch Seaforth	19/03/03
457	South East Lewis	19/03/03
458	West Lewis	19/03/03
459	Central Lewis & Stornaway	19/03/03
460	North Lewis	19/03/03

¹ Although the date given above is the official publication date (from the OS website), I bought a full set of these in Waterstones, Folkestone on 11 March!

461	Orkney - East Mainland	19/03/03
462	Orkney - Hoy, South Walls & Flotta	19/03/03
463	Orkney - West Mainland	19/03/03
464	Orkney - Westray, Papa Westray, Rousay, Egilsay & Wyre	19/03/03
465	Orkney - Sanday, Eday, North Ronaldsay & Stronsay	19/03/03
466	Shetland - Mainland South	19/03/03
467	Shetland - Mainland Central	19/03/03
468	Shetland - Mainland North East	19/03/03
469	Shetland - Mainland North West	19/03/03
470	Shetland - Unst, Yell & Fetlar	19/03/03

Publication of the above Explorers will complete national coverage.

Alan Godfrey Maps

Details of Alan Godfrey's reprints from Alan Godfrey Maps, Prospect Business Park, Leadgate, Consett, DH8 7PW, <http://www.alangodfreymaps.co.uk/>, tel. 01207 583388, fax 01207 583399.

The columns are as follows: County / Sheet number / Title / Date of map / Month of issue.

Caernarvonshire	40.08	Pwllheli	1914	12/02
Cheshire	11.13	Romily	1897	12/02
Cheshire	19.02	Cheadle & Cheadle Heath	1897	02/03
Cheshire	19.10	Cheadle Hulme (South)	1907	03/03
Cheshire	20.13	Poynton (East)	1907	03/03
Denbighshire	19.07	Ruthin	1910	12/02
Denbighshire	28.14	Talwrn	1910	02/03
Derbyshire	49.12	Derby (NW)	1913	02/03
Herefordshire	17.07	Kington	1927	01/03
Herefordshire	41.04	Ledbury	1926	01/03
Lancashire	87.08	Bury (NW)	1908	03/03
Lancashire	94.15	Atherton (SW) & Howe Bridge	1906	03/03
London	42	Stratford	1867	12/02
London	78	Rotherhithe	1868	12/02
London	103	Peckham	1894	01/03
Suffolk	60.16	Aldeburgh	1925	02/03
Tyneside	28	Blaydon & Stella (new edition of Durham 2.13)	1895	02/03
Warwickshire	7.16	Handsworth	1913	12/02
Warwickshire	33.11	Leamington Spa	1923	02/03
Yorkshire	87.11	Thirsk	1910	01/03
Yorkshire	217.06	Pudsey (Chapelton & Fulneck)	1906	12/02
Yorkshire	232.05	Cleckheaton	1905	02/03
Yorkshire	282.08	Hoyland Nether & Hoyland Common	1903	12/02

England and Wales one-inch

131	Cromer & District	1908	01/03
142	Melton Mowbray & District	1912	12/02
165	Montgomery & District	1908	12/02
196	North Breconshire	1908	01/03
214	The Black Mountains	1908	01/03
253	Vale of White Horse	1893	12/02