



Sheetlines

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

This edition of *Sheetlines* was published
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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.



SHEETLINES

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Editorial

Two themes have cropped up repeatedly in this edition of *Sheetlines*. One is the publication of detail before it is actually complete on the ground such as new roads being shown as open when they were still under construction at the publication date. The other is the continuing story of errors on OS maps.

OS policy on the former seems to have varied over the years but premature depiction to be ahead of the game can cause considerable embarrassment if something serious goes wrong with the planned programme. Also it could be said to be representing a false picture if the map is believed to be a true 'snapshot' of the landscape at the publication date. There is an example in the current Motoring Atlas of a road shown as being under construction that is not even in the Department of Transport's programme.

Gerry Jarvis as the representative on the RGS/OS Education Consultative Committee has asked that any comments on errors occurring on OS maps should be referred directly to OS, which ties in with a proposal by David Kimber who has suggested that as new Ordnance Survey maps are published we feature reviews by people who live on those particular maps. This would certainly generate considerable extra copy for *Sheetlines*. However, it would be useful to test the water, so have a look at what's new in your area and let us have any comments you may have. Could CCS become the OS quality control department by default?

David Rhind's departure from the OS is one of those mileposts at which it is a good opportunity to assess the enormous changes that have taken place in mapping since the beginning of the digital age. Are there any members out there who would like to put pen to paper, or even better put fingers on the keyboard and send us their views? You can of course send copy on disc (in Word 6 or 7).

Society Publications

A revised Publications List appears with the AGM Minutes and Membership List. *Sheetlines* 28 to 30 are now available as a combined volume. It is anticipated that this will be the last combined volume and that *Sheetlines* 31 onwards, if reprinted, will be done so as single issues.

HELP NEEDED URGENTLY

Peter Haigh took over from David Watt as the Publications Officer for the Society at the AGM in May. The storage space for the bulk of the Society's publications which was available to David is no longer available to the Society. The stock has been transferred to a temporary store with a member. The Society is therefore seeking storage space for approximately 100 cu. ft. of publications in cardboard boxes.

Commercial rates for storage are quite high and it is possible that some members may have unused space available, such as an attic, loft or spare bedroom. It is envisaged that Peter Haigh will keep a stock of publications which will last, say, six months and that every six months a visit to the stock will be required to top up his holdings.

So, no matter where you live, if you can offer some safe dry space and think we can come to an arrangement, please contact Peter as soon as possible.

His address is:

11 Riverdale
Wetherby
West Yorks
LS22 6RP

Tel: 01937 583 176

Binders for *Sheetlines*

It was suggested to the Publications sub-committee that we investigate the possibility of providing binders for storing copies of *Sheetlines*. I have received a very attractive example from an established manufacturer. The binder would have the society's name and possibly logo foil blocked in gold on the spine. I think at this stage the price per binder might be about £4.25, although this could reduce if we ordered in sufficient quantities.

I anticipate that a maximum of five binders would be required to house the complete set of *Sheetlines* from issue 1 to issue 58, August 2000 cover date. In order that the sub-committee might gauge the interest of the members, could anyone who might be interested in purchasing binders please write to me at the following address:-

Mike Cottrell, 'Ramblers', 17 South View Road, Marlow, Bucks, SL7 3JR

Landranger Study Day in Derby, 4 July 1998

Twenty-two members of the Society met early in July at the Friends' Meeting House, Derby for an all-day session to consider characteristic and unresolved aspects of the Ordnance Survey 1:50 000 *Landranger* map. The venue was an excellent choice in all respects and the meeting went off smoothly with only one change to the advertised programme.

There were four formal presentations, each followed by a pause for discussion, and a 'trivia quiz' on the *Landranger's* evolution and content.

Dr Richard Oliver kicked off with an action-packed review entitled 'The pre-history of the *Landranger*', emphasising the map's organic development as successor to the One-inch and highlighting key technical aspects of its production. Richard first covered the OS's switch of projection from Cassini to Transverse Mercator, initial legal objections to the abandonment of Imperial measurements and the influence of the Common Market on the eventual adoption of a metricated grid for all OS scales. Richard then described the protracted debate over which should become the new 'popular' scale, focusing on the relative merits of the 1:100 000, 1:75 000 and 1:50 000. The transition to 1:50 000 led to a multiplicity of problems, including revised contour intervals, new colour combinations, different ways of depicting footpaths, new sheet sizes, uneconomic sheet overlaps, marginalisation of important towns (Wolverhampton in particular) and the marketing headache of unrepresentative sheet titles. Richard concluded by pointing out how the proliferation of leisure symbols has coincided with a loss of cultural details such as the distinction between single and multiple railway tracks. Could overcrowding of information lead ultimately to two separate versions of the 1:50 000, one for the tourists and another for scholars and planners?

Bill Henwood tackled the subject of 'Errors on *Landranger* Maps', a theme chosen not in any spirit of mockery or *Schadenfreude* towards the OS but simply to advise map users as to where errors can occur. Bill identified more than a dozen types of error, ranging from confusions over rights of way to unexplained deletions between editions, incorrect edition codes and one case of inaccurate picture captioning on a sheet cover. Other difficulties which Bill demonstrated by examples included road use of footpaths, confusions as to whether certain railway stations were open or closed to passengers at the date of publication, premature depiction of major road works, mis-spelt place names, National Trust properties not outlined and the wrong tree symbols applied to areas of woodland. Sheet 164 *Oxford* qualified in Bill's judgement as 'the unluckiest sheet in the series' on the basis of the number and variety of errors perpetrated. Diplomatically, Bill omitted from his otherwise comprehensive presentation the problematical question of airfields which provided the theme of the next talk.

Dr Ron Blake, standing in for Lez Watson who was unable to attend, used viewfoils to summarise his current research concerning 'The depiction of airfields at 1:50 000 scale - conventions, inconsistencies and enigmas'. Ron began by identifying the apparent OS practice whereby active military airfields

are place-named (e.g. 'Lyneham Airfield') while 'inactive' airfields (those relegated to gliding, parachute exercises, etc.) are labelled simply as 'Airfield'. He quickly demonstrated however that there are many exceptions to this practice which cannot possibly have a security explanation and are more likely to be due to local differences in survey resulting from a lack of guidance. A second general inconsistency identified by Ron relates to the unexplained usage of 'Aerodrome' for some large RAF airfields (e.g. Manston and Northolt), a terminology which possibly reflects a civil flying element in their histories. Disused airfields represent the third major area of inconsistency where no logical relationship seems to exist between surface conditions and OS description. Enigmas highlighted by Ron included the fact that only one reference to the Royal Air Force appears on any *Landranger* map, namely the RAF College Cranwell, one of whose twin airfields (Cranwell North) has ironically never been labelled! 'RNAS Yeovilton' is also exceptional in having the air arm which operates the airfield acknowledged across the runways on the map. Ron brought his presentation to a close with a viewfoil of a Dutch 1:50 000 topographical map showing the perimeter fence of Eindhoven airfield - an aid to land-use measurement not replicated on British OS maps.

The fourth and concluding presentation was made by David Watt who dealt with miscellaneous defence aspects of the *Landranger*. David began with a comparison of maps of the Thames Valley region which had been overprinted by different military organisations and electricity supply authorities, stressing the negative effect of recent privatisation on the public availability of utility data. David went on to explain that the standard *Landranger* sheet size is generally considered too big for Army operational purposes and that the OS spheroid, grid and datum have all been judged inappropriate in the modern era of global positioning. David amplified his critique by referring to the poor registration of scanned-in road colourings on certain sheets and also the need for up-to-date contouring of open-cast mineral workings. Echoing Ron's satisfaction with the Dutch 1:50 000, David remarked finally on the superior clarity of the topographical maps produced by a number of foreign governments.

The event was organised and chaired by Rod Sladen to whom the participants and Society extend their thanks.

Ron Blake

For the benefit of those who were not at Derby here are the challenging quiz questions devised by Bill Henwood. No prizes but it would be interesting to see your answers (Ed).

1:50,000 Trivia Quiz

1. Which bit of the mainland of Great Britain was inadvertently left off the earliest 1:50,000 mapping?

2. ... and which offshore bit was added in 1984?
3. Which sheet has the smallest area of land on it?
4. Which sheet has so far had only two editions?
5. ... and which currently holds the record with thirteen editions.
6. Which early sheet 'could lead you to your death'?
7. On which sheet was standard gauge railway track initially less than 4' 8½".
8. Which sheet was the first to be converted from First to Second Series specification, and when?
9. ... and which was the last, and when?
10. 'The new map has roads and rights of way in magenta'. Which four sheets and when?
11. Which city (other than London) features in the titles of two sheets?
12. ... and which town?
13. How many sheets were issued with integral covers?
14. In what way was Sheet 131 unique until 1982?
15. Why might Sheet 174 at one time also have been called 205?
16. Which was the first sheet to be issued in a nine panel format (rather than the usual eight)?
17. ...and which was the second?
18. Which sheet has now reached Edition D?
19. Until February 1998, which sheet had the shortest title?
20. What contribution have Alan Reid and Julie Meech (among others) made to recent *Landranger* maps?

Ordnance Survey trade marks in the later 1930s

Richard Oliver

Purchasers of the Charles Close Society's recently issued combined reprint of *Sheetlines* 28-30 will have noticed that it contains a striking design on the front cover (Figure 1). It is taken from an OS letter-heading of 1877, at a time when its 'sponsoring ministry' (to use an anachronistic term) was Her Majesty's Board of Works;¹ it is for further investigation whether any other such 'insignia', 'badges', 'logos' or 'trademarks' were in use during the nineteenth century, apart from the blind-stamps used to 'seal' map impressions and illustrated in *Sheetlines* 50.² However, they were certainly not used on OS writing paper of the later 1850s and 1860s of which there are several examples scattered in Treasury files in the Public Record Office, and for much of the twentieth century OS writing paper was decorated only with the contemporary style of the Royal Arms. The familiar 'compass points' OS logo, which has recently been modified and coloured, and is a registered trade mark, first appeared in 1969, as part of the creation of a 'corporate image' for the Ordnance Survey by the Central Office of Information, and appeared thereafter on both the covers of maps and, usually, their faces.³

The Board of Works insignia is not so far known other than on OS writing paper, and it is perhaps an exaggeration to claim it as a 'trade mark'. However, the familiar OS logo was not the first attempt at a conscious OS trademark; the OS tried one in the late 1930s, or rather, to be accurate, they tried two. Why they should have essayed a trade mark at this time is not clear, but two possibilities can be suggested: John Bartholomew and Sons had recently started putting the Royal Arms with 'By appointment...' on the face of their well-known half-inch maps, and there was a wholesale move within the OS at this time towards greater standardisation and streamlining, exemplified by the scheme for recasting the large-scale mapping on national metric grid sheet lines. It may also be worth examining the practice of mapping agencies elsewhere, though this may merely show parallel rather than related developments.⁴

The first trade mark (Figure 2) was ready by early December 1937, and formed the centrepiece of a proposed standard cover design for small-scale maps. For this reason, it may be going a little far to suggest that it was initially

¹ I am indebted to David Archer for drawing it to my attention, and for supplying a photocopy.

² Richard Oliver, 'Ordnance Survey One-inch Old Series sheets: some notes on development and dating', *Sheetlines* 50 (December 1997), 11-31, esp. 20-1.

³ It should be noted that the logo appeared on the face of redesigned maps, but it never appeared on the faces of the two maps best known to the public in the early 1970s, the One-inch Seventh Series and the Quarter-inch Fifth Series.

⁴ For example, insignia appear bottom right on Swiss Federal mapping published after 1935, and by the early 1940s on New Zealand Mapping Service sheets. A much earlier use of insignia in Britain is top centre on each of the 14 sheets of the 1:2160 plan of the area administered by the Wigan Local Board, which was engraved in 1879 by Issac W. Petty & Son of Manchester: copy in Cheshire Record Office, LBWd 3904.



Figure 1.



Figure 2.



Figure 3.



Figure 4.

Figures 1 to 4: Ordnance Survey trade marks, circa 1875-1945.

1. from an Ordnance Survey letterhead in use 1875-77; 2. the '1937' design; 3. the '1938' design; 4. the '1945' design.

(1 and 2 by courtesy of David Archer; 3 by courtesy of Roland Trowell)



“ONE-INCH” ORDNANCE MAPS

are essential for the full enjoyment of a holiday in any part of Great Britain. The large amount of accurate and informative detail which it is possible to show by the use of a scale of one inch to one mile puts these maps in a class by themselves. Footpaths and unfrequented byways, quaint villages and delightful hamlets, woods and streams, antiquities, every little valley and hill: these and many other features which give charm to the countryside can only be shown clearly on One-Inch maps.

The only series of One-Inch maps covering the whole of Great Britain are those published by the Ordnance Survey. Specially elaborate “Tourist” maps are available for all the noted holiday districts. Prices range from 1/9 per sheet, according to style of mounting.

Ask any Bookshop or Bookstall
to show you the Local Sheets.

Full particulars post free (on mentioning this announcement) from
the DIRECTOR GENERAL,
ORDNANCE SURVEY,
SOUTHAMPTON

Figure 5

The Ordnance Survey's advertisement in the 1938 issue of Ward Lock guide books. (By courtesy of David Archer)



“ONE-INCH” ORDNANCE MAPS

used in conjunction with these guide-books,
are essential for the full enjoyment of a holiday
in any part of Great Britain.

Only on the scale of One Inch to One Mile
is it possible to show clearly, besides the usual
map features, footpaths, byways, woods,
streams, antiquities and the many other small
details which give charm and interest to the
countryside.

The only series of One-Inch maps covering
the whole of Great Britain are those published
by the Ordnance Survey. Specially elaborate
“Tourist” maps are available for all the
noted holiday districts. Prices range from
1/9 per sheet according to style of mounting.

To reach your holiday centre by car or
cycle, use “Quarter-Inch” Ordnance maps.

Ask any Bookshop or Bookstall
to show you the Local Sheets.

Full particulars post free (on men-
tioning this announcement) from
THE DIRECTOR GENERAL,
ORDNANCE SURVEY,
SOUTHAMPTON

Figure 6

The Ordnance Survey's advertisement in the 1939 issue of Ward Lock
guide books. (By courtesy of Roland Trowell)

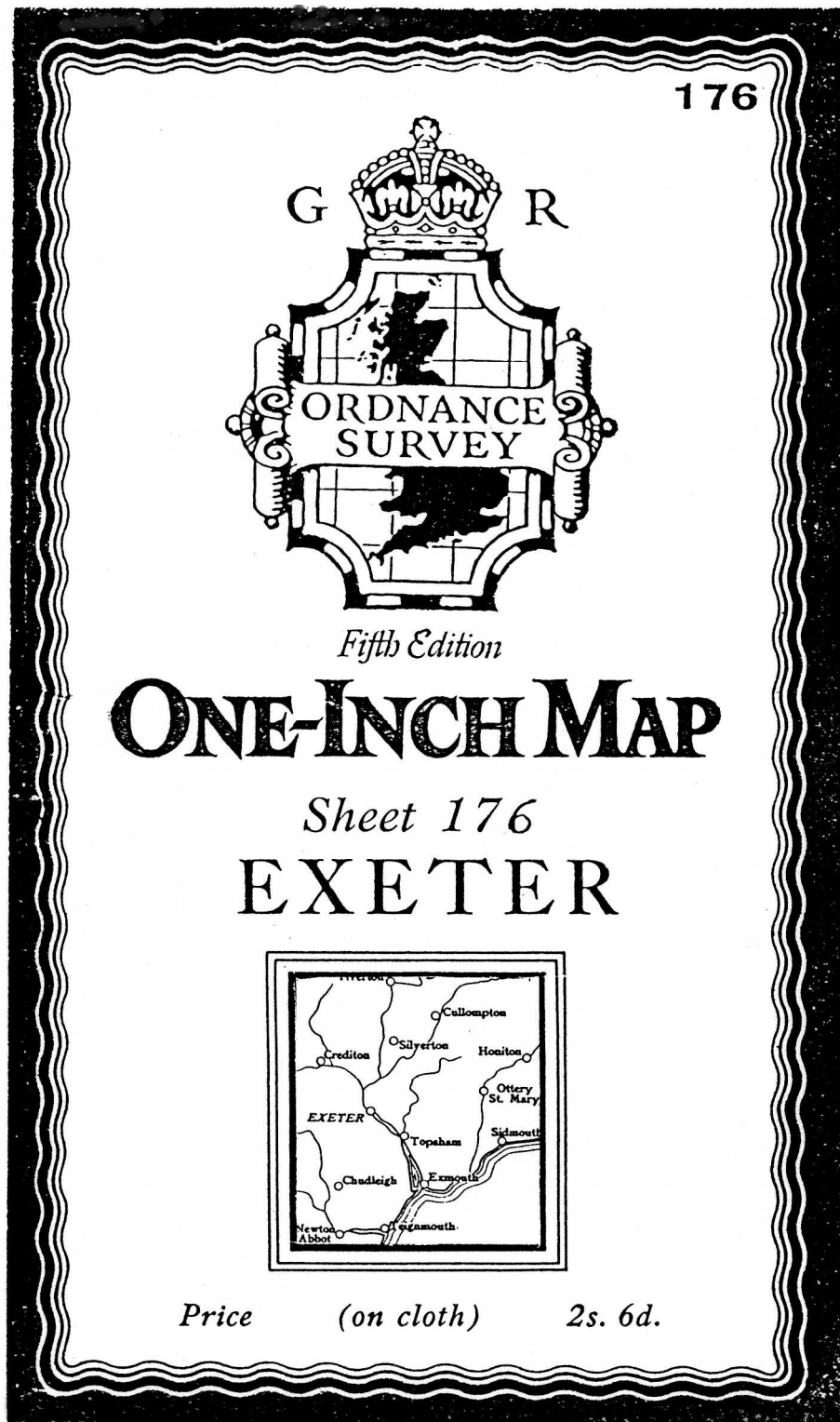


Figure 7

A map cover that never was. The '1937' trade mark combined with elements from the standard One-inch Fifth Edition and New Popular covers

designed or intended as a trademark. As a map cover design it was approved on 9 December by Brigadier M. N. MacLeod, the OS Director-General, and two proof versions of the cover were prepared.⁵ Both had the sea area in orange. One had the design only (measuring 109 by 84 mm), the other added below ‘ONE-INCH MAP, Fifth Edition, NORFOLK BROADS’, which, as work on the Fifth Edition was nowhere near Norfolk at that time, must have been someone’s whimsy.⁶ Possibly, having seen the proof, MacLeod had second thoughts (the orange seems questionable), and the design never did grace small-scale map covers. However, the work on it did not go wholly to waste, as it appeared, considerably reduced in size (to 29 by 22 mm), at the top of an OS advertisement included in the issue of Ward Lock’s guide books for the 1938 season (Figure 5).⁷ As such, it seems intended to function as an insignia or trade mark. The writer would be interested to know of any other appearances of it.

Did the considerable reduction suggest an alternative approach? At any rate, by late 1938 a new design had been worked out (Figure 3), which was ready in time to be used on the Survey’s Christmas Card that year,⁸ and was, by its shape, evidently intended to occupy a much smaller part of any map cover than its predecessor had done. It then appeared at the head of the OS advertisement in Ward Lock’s guide books issued for the 1939 season (Figure 6). MacLeod probably had something to do with it: he referred to it later as ‘the Ordnance Survey “trade-mark”’.⁹ It went into use in 1940 on the covers for the One-inch New Popular Edition (and proofs exist of covers for the Quarter-inch Fourth Edition using it),¹⁰ but these only reached the public in the late summer of 1945, by which time a modified design had been substituted (Figure 4). This design continued in use until about 1964, with the minor modification of omitting ‘GR’ after 1952; apart from the One-inch New Popular Edition, it appeared on other map covers, including those for the Quarter-inch Fourth Edition, the 1:625,000 Road Map, a general-purpose cover used for non-standard sheets such as later issues of the 1945 printing of the One-inch Lake District tourist sheet and Second War Revision Sheet 17 (covering the Isle of Man), and the two-inch map of the Isles of Scilly, and it was also used on standard covers for bench-mark lists. However, it was conspicuously absent from the covers of both the various post-war issues of the *Descriptions* of large, medium and small scale OS maps and the new 1:25,000 maps. So it never achieved ubiquity, and it is certainly not known to have ever appeared on the face of any published OS map. The writer has not encountered it in any post-1945 OS publicity or advertising, but would be interested to learn otherwise. The design would have been most familiar to the public by way of the covers

⁵ They are in Public Record Office (PRO) file OS 1/460, which, as it is titled ‘Map folding’, presumably explains why this design has hitherto been largely overlooked by students of map cover designs. The writer must confess to having ‘sat upon’ the information since 1986.

⁶ See Richard Oliver, *A guide to the Ordnance Survey One-inch Fifth Edition*, second edition, London, Charles Close Society, 1989.

⁷ Once again, I am indebted to David Archer for supplying material for a photocopy.

⁸ I am indebted to Tim Nicholson for this information.

⁹ MacLeod to Toye, 22 July 1941: item 14A in PRO OS 1/374.

¹⁰ In PRO file OS 1/216.

of the One-inch New Popular Edition, and as this was already obsolescent by the late 1940s this may explain why use of the trade mark was not pursued very vigorously.

It remains to consider briefly why the 1937 design was abandoned completely and why the 1938 version of the 'trade-mark' was later modified. There is no documentary record of either decision, but a possible pedantic objection to the '1937' design might be that the lines in the sea, though looking like grid lines, do not actually conform to 100 km lines of the Transverse Mercator metric grid which was in contemplation at that time. A more substantial objection to the design in its original dimensions is that there is no provision for an index diagram of the area covered by the map inside. (These index diagrams were a standard feature of the covers for the One-inch Popular Edition of England and Wales (1919-40), but were omitted from the covers of the Popular Edition of Scotland (1924-40) and the early (1931-4) covers for the Fifth Edition. Their restoration to the Fifth Edition covers and addition to those of the Quarter-inch when it was republished from 1934 in the Fourth Edition, suggests that such diagrams had been found to be definitely desirable.) Neither objection seems to me wholly convincing, and, as, Figure 7 shows, a smaller version of the design could have been used at the top of a cover with a sketch-map below. What Figure 7 also shows is that, as compared with the familiar standard small-scale cover design adopted in 1940, the '1937' design is rather fussy, and I suspect that it was this element which worked against it. The '1938' design is much simpler and more clean-cut. However, as comparison of Figures 3 and 4 shows, it was capable of being made still more clean-cut (though perhaps less characterful) by replacing the lettering with a style closer to the 'Withycombe' style employed on the maps inside the covers. This would explain the change effected in or before 1945.

'On The Map'

David Kimber has brought to our attention a series of articles that have appeared in the *Wolverhampton Express & Star* titled 'On The Map'. The copy David sent us was an eight page colour supplement containing a centre page spread of an enlarged section of 1:50000 mapping with the remaining pages having a number of articles about places of interest in the area plus a number of advertisements including one for OS. All in all a very worthwhile piece of journalism that many local papers could copy.

However David was rather annoyed that this particular article although featuring part of Landranger 139 did not mention that a new version had been published at about the same time as the article appeared i.e. March 1998. What's more for the first time for more than 70 years the name *Wolverhampton* appeared in the title of the map. David expressed his views to the editor with the result that the following article appeared on 15th April.

Back on the map 'Wilderness' years ending

By Sabra Aslam

Wolverhampton has been put on the map after more than 70 years. For decades the Ordnance Survey map covering the borough has been labelled *Birmingham & Surrounding Area*.

But the latest edition in the Landranger series is called *Birmingham & Wolverhampton*. Map enthusiast David Kimber who noticed the change, said 'I believe the last time that the name of Wolverhampton appeared on the cover of an Ordnance Survey map at this scale of one inch to a mile was in the 1920s.

'The fact that the name Wolverhampton has appeared on the cover of a Landranger is an event in itself.

'There is a picture of Tamworth Castle on the front though I did think it would have been preferable to have had a Black Country landmark instead.'

A spokeswoman for the Royal Ordnance Survey (sic) said it was not clear why Wolverhampton's name was dropped from the front cover.

She added 'It could have been an attempt to simplify the map titles. We have reintroduced the name to give more information to people who might not be familiar with the area.'

Birmingham landmarks had featured on the front cover for the past two editions.

The spokeswoman said 'Tamworth Castle was used to show a scenic area outside Birmingham but we will listen to anyone who has ideas about other landmarks.' The new map shows the Black Country Route and the Black Country New Road in full as well as the Midland Metro Line One.

Selected cycle routes, long distance footpaths and information in French and German are also included.

The article also included copies of the covers of both the current edition and that of One-inch Popular Edition of the 1920s.

So, thanks to David Kimber, the *Express & Star* have more than made up for their omission and as a result given OS a valuable piece of free publicity.

Editor's note: David has also sent us a review of that sheet and comments 'I would like to see a feature in *Sheetlines* where new editions of Ordnance Survey maps could be reviewed by Charles Close Society members who live in the area covered by the map(s). Naturally, this could not be done for every edition but it would help to get more people involved and may also be able to provide an historical perspective.'

So members, it's up to you. If you send them in we will do our best to publish them.

Landranger Sheet 139: *Birmingham and Wolverhampton*

Personal comments and observations by David C. Kimber

General:

The recent publication of a new edition of Sheet 139 of the Landranger Series at 1:50 000 scale covering the Birmingham, Wolverhampton and West Midlands area is welcomed. As a map user, I like maps to be up-to-date, accurate and the information displayed in the clearest form possible. I welcome innovation and additional information that gives a map 'added value'. Overall, I am impressed with the new edition and would recommend people to buy the map.

Title:

The title of this map has always been '*Birmingham & surrounding area*' but this new edition is titled '*Birmingham & Wolverhampton*'. I believe that the last time that the name 'Wolverhampton' appeared on the cover of an Ordnance Survey map at this scale (one inch to one mile) was in the 1920s. The map in question was Sheet 61 Wolverhampton.

As a resident of Wolverhampton, I welcome the inclusion of Wolverhampton in the title and the deletion of the term '& surrounding area'. I understand that this is nothing new and is part of a change of policy by the Ordnance Survey. The aim is to include more of the names of towns covered by the maps in their titles. However, names like 'The Black Country' are not included.

With the change in name, it would have been pleasing to have included a Wolverhampton landmark on the cover such as St. Peter's Church or other local landmark like Dudley Castle. The map features Tamworth Castle. The Ordnance Survey have indicated that they will listen to anyone who has ideas about other landmarks. So members of the Charles Close Society get your suggestions off to the Ordnance Survey.

Release Date:

The original release date for Sheet 139 was 11th March 1998 but it only went on sale in the shops in Wolverhampton during the week beginning Monday 30th March. I purchased my copy from Beatties, Wolverhampton (a local department store) on Thursday 2nd April. With the closure of Booklands, Queen Street, there is now no official Ordnance Survey dealer in Wolverhampton. The nearest is the HMSO bookshop, Bull Street, Birmingham.

Major Roads:

The period covered by the updating is 1995-97.

The new edition of Landranger Sheet 139 shows the Black Country Route and the Black Country New Road in full. These are major strategic roads and consequential changes to the surrounding network are also included. Other strategic roads such as the A5 diversion in Tamworth, Alvechurch Bypass and

improvements on the A45 at Stonebridge near the National Exhibition Centre are also shown.

The name of the motorway service area called Hilton Park was changed by its owners Granada to Birmingham North as the name Hilton Park did not give road users any idea of its location. The service area is still referred to by many people as Hilton Park and that name is still shown on Sheet 139.

Midland Metro Line One:

The route and stops along the proposed Midland Metro Line One, currently under construction, are shown. Unlike with major new roads, the line is displayed in solid form as opposed to a dashed form. The line was programmed to open in late Summer 1998 but will not now open until October 1998. Late deliveries with rolling-stock mean that a full service will not start until January 1999.

It is disappointing that there are some errors such as the location of the proposed Black Lane tram stop. Kenrick Park and Wednesbury Great Western Street tram stops are also incorrectly shown [is this the result of OS taking information from outside sources without adequate field checking? - Ed], and the St. Pauls, Soho, Winson Green and Handsworth tram stops between The Hawthorns and Birmingham Snow Hill and the on-street tram stop to be known as The Royal in Wolverhampton are not shown at all.

The status of the light railway route is the same as heavy rail routes like the Birmingham to Wolverhampton rail line. Is this the correct one for light rail routes? From the mapping point of view, should light rail routes be treated as segregated rail systems or like a series of bus routes? Should there be a separate symbol for light rail routes as opposed to heavy rail routes? There are differences in the method of operation and bylaws that apply to passengers carried. Midland Metro will not carry bicycles whereas trains operated by Central Trains do.

I understand that in earlier years the Ordnance Survey did not usually show on-street tramways on the One-inch maps, even where they had segregated tracks on a central or roadside reservation, but did mark on some stretches of private right-of-way, e.g. Blackpool's Fleetwood route near Rossall. For Liverpool's tram routes out to Prescot and Kirkby Industrial Estate, the OS printed 'Elec Tramway' alongside the East Lancashire and other roads but showed no track. Where track of this sort was shown, the symbol was the same as that for mineral railways and sidings.

The principal difference between the trams of yesteryear and the light rail transit of today is that the health and safety regulations insist on raised platforms for the latter, which for mapping purposes are quite different from the mere sign attached to - or even simply painted on - a pole of a bus or tram route but little different from many of the smaller 'heavy-rail' routes.

Wolverhampton and Walsall rail service:

A new passenger service was introduced between Wolverhampton and Walsall on Sunday 24th May 1998. The service has been in the planning stage for some time and the date of its introduction was known about in 1997.

The introduction of this service raises the 'old chestnut' of the status of railway lines. On Sheet 139, the line from Wolverhampton to Pleck Junction, Walsall is still shown as a freight-only route. This is the correct designation at the time of survey but what about planned future changes? As with new roads under construction, could not the status of the line be changed to show its new status? (I would add the rider that the new service has been given an experimental status for one year. If the service is well used, it will continue beyond the year.)

Railway stations:

I do not fully understand the policy adopted by the Ordnance Survey for naming railway stations but from my point of view, I would like to see them all clearly labelled. On Sheet 139, where are Bloxwich North, The Hawthorns, Jewellery Quarter and Stourbridge Junction stations.

I welcome the clearer demarcation of Tamworth station on the new edition of Sheet 139. At least it implies that the station serves both the West Coast Main Line (Trent Valley line) and the Birmingham to Derby Cross-Country Line. A previous edition in my possession shows a station on the Trent Valley line. I might be 'splitting hairs' but is that not what it is all about?

Public Rights of Way and other routes with public access:

New features are the inclusion of selected cycle routes, National Cycle Network numbers and long distance footpaths. There is also more customer information in French and German. I welcome the new information.

Tourist Information:

I personally welcome the greater emphasis given to tourist information. However the name of the Black Country Museum was changed to the Black Country Living Museum in 1997 and this change has not been included.

Local Authority Boundaries:

In April of this year, the County of Hereford & Worcester was abolished and replaced by the counties of Herefordshire and Worcestershire. At the time of the survey, the county of Hereford & Worcester still exist but regard to forward planning, why could not Worcestershire have been shown on the map?

Wolverhampton:

The change in status of the former polytechnic to a university is reflected, although I personally do not like the use of the abbreviation 'Univ'.

The following area names are included for the first time: Scotlands, Newbolds and Pendeford.

At Dunstall Park racecourse, Sheet 139 shows the new all-weather race track instead of the previous conventional one.

Around the former Low Level station, the road network was changed in 1996-97 in connection with the development of a major new sorting centre for the Royal Mail. This however has not been included. Sheet 139 still shows the

disused railway line that served the Low Level station. This disappeared in 1997.

At Wolverhampton Steel Terminal, construction of a major warehouse building was taking place in 1997. The line affected by the construction is shown 'dotted' but still exists and serves the new warehouse. Was it necessary to delete the line in the first place?

The Royal Hospital was closed in 1997 and its functions transferred to New Cross Hospital, Wednesfield. It is still shown on Sheet 139 with the 'Hospl' symbol.

Merry Hill Shopping Centre:

Merry Hill is a major regional shopping facility serving the West Midlands area but you would not think so from looking at the map. The name Merry Hill is in small letters similar in size to a housing area of the same name in Wolverhampton. The size of the nearby local centre Brierley Hill should have been reduced and that of Merry Hill increased.

The Merry Hill Monorail is clearly shown but it has not operated for at least two years or more. I understand that the vehicles have been sold abroad. Given that the structures are still there but there are no services operating, should the monorail have been shown in such a prominent form?

Birmingham:

The National Indoor Arena (NIA) is shown and referred to as Arena. The Sealife Centre is shown and referred to as Aquarium. Should not the correct titles be used?

There is no naming referring to the International Convention Centre (ICC).

GSGS Misc Series 1999 and 2000

David Forrest

While carrying out a study into the design of 1:100 000 scale topographic mapping, I was recently introduced to GSGS Misc. Series 2000 which are full colour reproductions at 1:100 000 of OS Seventh Series One-inch maps, produced in the early 1960s. In parallel with the six sheets in this series are the same six sheets designated Series 1999 reproduced at 1:50 000. As these series do not appear to be well known, these notes will both alleviate that situation and contribute to the current debate on the potential for a series of maps at around 1:100 000.¹ Summary details of the printing and publication information of the two series are given below.

¹ see Oliver, R. (1998) Ordnance Survey maps for the cycle-tourist, *Sheetlines* 51 and Forrest, D., Kinninment, E. (1997) What might a 1:100 000 scale map series of GB look like? *Proceeding, British Cartographic Society Annual Symposium*. A modified version of the latter is planned for a future edition of *Sheetlines*.

GSGS Misc. Series 1999, 1:50 000

- 166 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 167 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 168 Printed for D.Survey (WO and AM) by Ordnance Survey
red lines are overprinted through Director General of Ordnance Survey, data &
price info
- 178 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 179 Printed for D.Survey (WO and AM) by Ordnance Survey 20,000/62/6388/OS
red lines are overprinted through Director General of Ordnance Survey, date &
price info
- 180 Printed for D.Survey (WO and AM) by Ordnance Survey
red lines are overprinted through Director General of Ordnance Survey, date &
price info

GSGS Misc. Series 2000, 1:100 000

- 166 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 167 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 168 Printed for D.Survey (WO and AM) by Ordnance Survey
red lines are overprinted through Director General of Ordnance Survey, date &
price info
- 178 25/11/63/423/SPC Published by D.Survey, War Office and Air Ministry, 1963
- 179 Printed for D.Survey (WO and AM) by Ordnance Survey 20,000/62/6388/OS
red lines are overprinted through Director General of Ordnance Survey, date &
price info
- 180 Printed for D.Survey (WO and AM) by Ordnance Survey
red lines are overprinted through Director General of Ordnance Survey, date &
price info

There are some obvious differences between the sheets printed by the OS and those printed by SPC (Royal Engineers). The OS printed sheets are identical to the One-inch source material except for enlargement or reduction in scale, the printing and publication details indicated above, and the following three aspects: 1/63360 above the scale bar is replaced by the correct 1/50,000 (including comma) or 1/100000 (no comma); 'One Inch to the Mile' is removed from the top left corner, so we are left with a rather oddly positioned '(Seventh Series)'; and a GSGS designation box added in red in the bottom left corner, to the right of the sheet number. The sheets printed by SPC are smaller in format than the corresponding OS sheets, do not include the legend panel

and are printed on different stock. Above the scale bar they are designated 1:50,000 or 1:100,000. In addition to the missing 'One Inch to One Mile', these sheets also have the large sheet numbers removed from the corners resulting in the only place the sheet number is to be found is in the GSGS box, which is printed in black.

All sheets have the typical GSGS 'military' grid numbers overprinted in red. The registration of printing is generally much better on the OS sheets, with some of the SPC ones having the green and yellow significantly out of register. The inks used are clearly different with the SPC sheets having a brighter green and a much 'greyer' black. Both of these have consequences on the overall appearance of the maps, particularly at the reduced 1:100 000 scale.

My examination of the sheets concentrated on the 1:100 000 sheets, but some comments are also made about the appearance of those at 1:50 000. The 50 000 version is fairly similar to what became known as the new 1:50 000 First Series ten years or so later. Generally the 1:50 000 sheets look sparse of information, particularly in rural areas while the 1:100 000 maps look interesting, busy maps.

On 1:100 000 sheets 179 and 180 the blue water tint is considerably darker than the original and the 1:50 000 versions. It is also rather patchy indicating poor control over the photographic reduction. In contrast, sheet 178 printed by SPC retains more or less the correct, even, pale blue tint.

Looking first at sheet 180, *The Solent*, the aspect to suffer from the reduction is not the urban space which still allows a clear distinction of the road patterns and built up space versus open areas, but, in the writer's view, it is the some of the larger woodland areas where the combination of tree symbols, dashed minor road casings, names and other features combine to produce a very cluttered appearance. The dominant use of black on the later One-inch Seventh Series maps, repeated in these sheets, probably does not help. Were the point symbols and grid (at reduced spacing) in grey a less cluttered look may have resulted.

The other main feature to suffer is the names. Not the main town names printed in Times Caps, although some could be a little clearer, but the smaller town and district names Sans serif lower case lettering of various sizes. On this sheet it is not so much the size of the text that is the problem, but the poor contrast with the background. Reducing the grey built up area tint would make a significant difference without doubt. In fact, most of the descriptive names (e.g. hospl., works, etc.) remain quite legible.

The grid at 1km intervals in black is rather dominant and a two or five kilometre spacing would be more appropriate.

Impressions of the *Bournemouth* sheet (179) also printed by OS are similar, but on this sheet it is more obvious that the contours also suffer reduced contrast due to the reduction.

The *Dorchester* sheet (178) printed by SPC, in addition to retaining the lighter water tint, uses a stronger (more saturated, yellower) green for woodland and does not include the tree symbols. This improves the appearance of these areas considerably. The lack of sizeable urban areas on this sheet and

the significant relief feature running diagonally across the centre of the area makes the relief seem much more important and certainly the contours stand out more. Large military camps such as Bovington and Blandford stand out strongly as their buildings are all shown in solid black, not being reduced to the grey urban fill of similar size towns.

Frome (166) and *Salisbury* (176) are much like the Dorchester sheet. The final sheet, *Winchester* (168) is like *The Solent* and *Bournemouth* sheets.

On the whole, the printing of the SPC sheets seems less harsh, with the black being much less dominant. This may be partly explained by the OS printed sheets having much more urban area and by the elimination of the tree symbols on the SPC versions, but the black is definitely less 'black' on the SPC sheets. Comparing features in the overlap between sheet 179 (OS) and 178 (SPC) such as Blandford Forum and Blandford Camp, the grey urban tint and the solid black of the Camp buildings is less strong on sheet 178.

The corresponding six sheets at 1:50 000 are similarly split into two sets of three with the above noted differences in specification and colouring.

Printing information indicates that only 25 copies of each of the SPC sheets were printed at each scale, which presumably means that these were experimental only. For two OS printed sheets there is no indication of the print run, but sheet 179 (Bournemouth) indicates that 20,000 of both scales were printed. It is difficult to see any reason for printing such large numbers of both scales. The writer would be most interested in any further light that can be shed on these two series or information about other printings at 1:100 000.

A Map In My Collection

Reminiscences of the 1/1250 survey

John Cole

In fact two maps in my collection - SO9682NW in 1954 and its digital print-out successor of 1994.

The survey or 'field completion' of the former was carried out by myself as a rather frightened but enthusiastic seventeen year old in the Autumn of 1952. Having undergone the six months 'mass production' training at Southampton, I was posted far from my native Devon to the alternative scenic delights of the Black Country.

This huge area when completed in the mid 1960s comprised some 1223 1:1250 maps - 130 more than the neighbouring Birmingham, and indeed one of the earliest constituents Wolverhampton had commenced in 1945 being the third such town attempted during the war years.

The 1:1250 map is dimensionally the most accurate Ordnance Survey map as a national series and covers areas as large as London to towns as small as Lydd in Kent. By 1990 a figure of 57,000 maps had been exceeded and the number has grown along with the built up area.

Field Completion (or Examination as it was still known when I joined) entailed building up from a skeleton survey by means of lines of sight and/or short tape measurements. This was a very considerable skill in the early days but far less exacting (and less prone to human error) as advanced technology produced vastly improved skeleton surveys from the mid 1950s onward.

From the six inch surveys of the mid nineteenth century to the early days of the 1:1250, the basis of the map was the running of chain lines between computed points and the positioning of sufficient points of detail - building corners, fence or hedge junctions - by offsets (short measurements at right angles) from these lines.

By 1:1250 days the computed points were established to a considerable density in urban areas - as many as eighty to the square kilometre. Known as Revision Points (RPs) they were to control the skeleton survey, and being sited on detail of likely permanence would serve future revisions.

These points were established by traversing (angular measurement and steel taping) between triangulation points and subsequently photographed for future identification. The vast majority would have been building or wall corners but on the fringes of built up areas or in parks or allotment gardens they could be in the form of nails in concrete blocks, and it is possible to come upon these to this day.

Bournemouth and Edinburgh, both started in 1943, were the first modern 1:1250 surveys and RP and chain was to be the rule for all the major cities commenced from 1945 onwards, with the following three methods introduced gradually.

Graphically plotted surveys from air photographs were tried at Southend in 1947 and subsequently at a number of other places where it was advantageously used in conjunction with chain survey for railway marshalling yards and large areas of third rail electrification; industrial installations such as chemical or munitions works; docks; and the lines of high and low tides - especially the latter.

The contact scale of the photography was normally 1:2500 and about three ground control points (identifiable clearly from the air) fixed by traversing, were required on each photograph.

The overall accuracy was probably as good as achieved using chain survey as a basis but a certain amount of over confidence crept in, and the use of the method in hilly areas was unsound.

For that matter chaining was not overly brilliant where sharp gradients and broken ground were involved and many a line had to be re-chained up to three attempts before being accepted. Sparse RP fixation (in the interests of economy) could exacerbate this situation.

In 1952 at Banstead in Surrey, a surveying instrument capable of angular and distance measurement (with a range of 160 metres) was tried. This was the Tacheometer and subsequently proved to be the answer in areas such as the Black Country and the Welsh Valleys. 'Tachy' survey became the standard tool of the Continuous Revision section though its accuracy could sometimes be

something of an embarrassment when merging with other forms of survey (though seldom a serious one).

In 1954 the city of Oxford was surveyed by air photography methods with the detail plotted by a stereoplotting machine. This was far more reliable than graphic plotting and proved to be the cheapest means for an initial 1:1250 survey. The majority of urban areas tackled from the mid 1960s onwards were surveyed in this manner (including many by private contractors for OS in the 1980s).

My experience of 1:1250 map completion included all the above methods except graphic plotting from air photos. From 1952-54 and from 1956-59 in Birmingham and the Black Country all were chain survey based maps and in 1958 I did some of the last of the actual chain surveying to the north of West Bromwich. Up to 1963 tachy control predominated until the first air survey maps were encountered at Sutton Coldfield and the north of Birmingham.

From 1964 a series of moves involved me mainly in 1:2500 work but at the same time a few 1:1250 maps (all tachy) were completed at Reading, Redruth and Plymouth.

In 1968 I spent a year on one of the smaller 1:1250 towns - St. Austell in Cornwall and in 1980 Brixham in Devon. They were similar in several respects in that although air surveyed, the semi-rural perimeters (especially where wooded) needed extra tachy and chain surveys, and both required tidal surveys. Brixham had originally been resurveyed at 1:2500 utilising RPs and chain in the 1950s. The majority of the RPs still existed and had been re-plotted on the 1:1250 documents. Thus in the case of one area of badly overgrown hedges it was possible to re-plot from the old 1:2500 chain survey books at 1:1250 scale - a far more successful undertaking than the re-plotting of Lancs. and Yorks. from six inch surveys in the 1890s!

No attempt was made at either St. Austell or Brixham to utilise old town series maps dating from the last century at 1:500 scale. The number of maps was small and with the advent of air survey the old information was of less value than it had been in the Midlands where reductions to 1:1250 of the old survey proved most useful.

From 1981 I was based at a Continuous Revision office at Redruth (later Truro) which was responsible for 1:1250 map maintenance at Camborne/Redruth, Falmouth/Penryn and St. Austell and from the late 1980s Truro and Penzance/Newlyn.

The most common 1:1250 activity was adding (or adding to) large areas of development to existing maps - normally housing but occasionally diverse features such as a yachting marina or industrial estates. Additional instrumental control was usually needed before graphic completion.

Occasionally the amount of change would justify a new edition of a map and I produced five - three at Falmouth and two at Camborne up until 1992 when the practice of new editions ceased.

A further six maps (four at Illogan, one at Redruth and one at Penryn) were resurveys of areas previously at 1:2500 scale and in all cases the framework was stereoplotted air survey.

In 1988 unrectified photographic enlargements were supplied for all the existing 1:1250 areas for the specific purpose of revising 'back garden' and other relatively less important detail. In my eyes the value of this photography went far beyond its immediate task in that it provided an immediate check on the concept of continuous revision and was also a very good guide to the accuracy of the map. Although the photos could not be used to correct errors other than minor e.g. kerbs, they could be used to trace such for further ground investigation. Not simply large errors, but down to a dimension of about 0.7 metres. No time was wasted as every 'suspected' error proved justified. Some dated from the original survey whilst others were incurred in subsequent continuous revision.

This is not however to suggest that the 1:1250 (at least in Cornwall!) was unreliable. Indeed the accuracy was probably better than anticipated on certain maps and remarkably consistent between tachy surveyed or air surveyed towns. And it should also be remarked that 'obvious' mistakes were few and far between which in itself justified the quality control through the years.

Put simply, the field completion of the map involves two things - what to put on it and how to put it on. For more than twenty years after commencement of the 1:1250 survey the guidance manual was known as the 'Red Book'. Initially (1948-52) it was for the 1:2500, instructions for the 1:1250 being contained in a 'Green Book' but from 1952 the instructions were combined but with the loss of certain survey methods contained in the latter.

Since both of these books are obtainable from the OS library via the local public library it is only necessary to describe some of the section headings. Those which the surveyor (at either 1:1250 or 1:2500) needed to particularly memorise were:

- A: Principles governing the detail to be shown on Ordnance Survey large scale plans.
- C: Representation of detail, and,
- D: Names and house numbers.

Possibly next in importance were:

- B: General technical rules and instructions, and,
- J: Duties of surveyors and administrative instructions.

Section E: Field Division boundary procedure was of interest limited to senior surveyors or those in charge of sections, as boundary perambulation and mereing was deemed a task only for the most experienced and was carried out at the stage when a percentage of the map was checked. That was the case up to the late 1960s.

Of the remaining sections, F: dealt with antiquities, H: entry onto private property, G: Continuous Revision, K: survey methods, L: sheet systems of OS maps and M: - not introduced until about 1956 until which time a separate booklet existed - surveys for Land Registry.

Whilst various alterations to instructions were made through the years, they have not drastically altered map content and appearance except that stippling to denote roofed areas and the 'tadpole' symbol for artificial slopes have been

casualties of digitising. Possibly the most radical 'loss' in earlier years came in 1968 when cliff and foreshore detail had symbols replaced by annotation.

Thus it is interesting to compare the 1954 and 1994 editions of SO9682NW. Along the edges, administrative and other names have increased from ten to sixteen. A boundary has had its description altered from 'Boro Const & MB Bdy, Co Const & RD Bdy' to 'Euro Const and Boro Const Bdy, Co Const Bdy' but the mereing CR (centre of river in this case) still applies.

The middle section of the map and about half the total area, rural in 1954, is now occupied by some 240 mainly semi-detached houses, bounded to the south by the dual carriageway Halesowen bypass.

The northern portion has much less in the way of change. Some forty (mainly Victorian) properties have gone. Similarly a cinema and a public house, the latter has been replaced by a large modern establishment close by, whilst a block of flats occupies the cinema site.

A block of some sixty Victorian properties remains virtually unaltered including a garage and warehouse still serving the same purpose in 1994. A further fifty mainly detached houses are, save for minor alterations, unchanged, but a nursery (horticultural) no longer serves that function and has two detached houses added to one existing in the grounds.

Losses in the major area of development include three detached residences with large gardens (one house apparently rebuilt); four fields and parts of three others (one containing some orchard trees); an area of allotment gardens; three ponds; two streams, a ruined building and part of a cart track which now acts as a path to the new development.

South of Manor Way (the bypass) is the area of least change. The River Stour runs unaltered east to west, joined by the unculverted remains of one of the original streams. Two streams have disappeared - either culverted or their source lost. A couple of areas of what under 1952 instructions were closely grouped bushes and openly spaced trees (and shown by symbol) are now just described as NC (non-coniferous) and Sc (Scrub). One small building and one large but undescribed, have appeared in the fields. And a small section of country lane now has a name, which since it appears in the northern part of the map also, points to an error originally.

On this subject, two dimensional errors which escaped the original (quite rigorous) check were noted when the maps were placed over each other - a 2.0 metre discrepancy in a fence intercept (which could possibly be an alteration to position) and a general 1.0 metre error respecting a detached house.

A further ten road and close names have been added to the original five plus the river.

Of the original horizontal control, four of the ten revision points (RPs) still survive though they no longer have the importance as at the time of the 1952 survey. More serious is the loss of the only two bench marks though there may of course be others close at hand to the east and west. Alterations to spot height positions indicates a re-levelling, the original having been dated 1948, but any new BMs established have also been lost - a not uncommon problem in developing areas.

Some observations on collecting Ordnance Survey maps

Richard Oliver

In *Sheetlines* 51 Hugh Brookes poses a number of questions, some of which can be answered readily, and some of which are nearly unanswerable, but raise interesting points, so I hope that readers will not object to my broadening the discussion a little. I will take them in order. Incidentally, a friend suggests that this may be a good place to put in a 'plug' for sales of back numbers of *Sheetlines*: a set of them makes a very good nucleus of an Ordnance Survey library!

First, 'print run numbers'. These have been discussed in the past in *Sheetlines*, notably in an article of mine published in 1988,¹ and more briefly and recently in 1997.² In the instance cited, '25000/6/46 Wa', it indicates 25,000 copies printed (or rather, intended to be printed), in June 1946, at the Britannia Printing Works, Waddon, Surrey, which had been requisitioned on behalf of the Ordnance Survey in 1940 or 1941. It is unusual for the month to be cited in this way on civil printings (though usual on post-1940 military printings); a common practice was to run quantity and year together, e.g. 10045 for 10,000 copies in 1945.

Second, the apparent lack of an explicit publication date on 1:25,000 maps published in the late 1940s: this is indeed the case, and it seems to apply to all new publications and reprintings of these maps between early in 1948 and some time in 1950. Thus the magnetic variation date is the nearest we have to an explicit date, though I understand that, even so, it may not be completely reliable. This is part of a wider phenomenon of not dating OS maps explicitly at this time: the early issues of the six-inch (1:10,560) Provisional Edition on both county and National Grid sheet lines (1943-50) and of the 1:2500 and 1:1250 on National Grid sheet lines (1948-50) also lack explicit publication dates and, unless one seeks out the monthly publication reports, the only way of dating them, once print codes incorporating dates were replaced by letter codes early in 1947, is by the latest date on the map, which is likely to be a survey, revision or boundary revision date. Just to complicate matters, explicit publication dates were retained on 1:2500 County Series maps right up to the last to be published late in 1947! I do not know the reason for this coyness as to the date of publication, which one would have thought to be desirable for copyright; I know of nothing in the list of OS records in the Public Record Office (PRO) which would shed light on the matter, and I suspect that we will never know.

Third, the issuing on 'cloth' of One-inch Seventh Series maps: a 'closed' file in the PRO indicates that the OS decided to abandon mounting in November 1967, as demand was falling rapidly, and it would save having to install the necessary equipment in the new building at Southampton. I have never seen any one-inch or quarter-inch sheet which was issued in 1968 or later mounted on cloth; as the 'red cover' was introduced for the Seventh Series (and

¹ Richard Oliver, 'Edition codes on Ordnance Survey maps', *Sheetlines* 22 (August 1988), 4-7.

² Richard Oliver, 'Print code suffixes', *Sheetlines* 49 (September 1997), 41-2.

the 'blue cover' for the Quarter-inch Fifth Series) in March 1969, I think it safe to say that one will not find a 'red cover Seventh' mounted on cloth by OS, though the work of amateurs cannot be ruled out! (OS 'old stock' mounted on cloth did continue on sale for a while after 1967, and Bartholomew were still offering their half-inch map on cloth in 1972.)

Mr Brookes's remaining questions are somewhat harder to answer satisfactorily. 'Are there any rarities amongst the Popular, New Popular and Seventh Series maps?' If the thrust of the question is 'Are some of these more valuable than others?', then the answer is 'No'. As an illustration of that, let me cite Seventh Series Sheet 167, edition B. This was issued in July 1971, but was withdrawn from sale almost immediately, as it showed public rights of way and 'yellow roads' in the live firing area around Imber, on Salisbury Plain (ST 9648); it had the shortest time on sale of any Seventh Series sheet, and a B/* version, suitably amended, was issued in its stead three months later. The recalled stock of edition B which had been put into covers was presumably pulped, but the paper flat stock - reportedly some 21,000 copies of an original run of 27,500 - was overprinted for use by the military. The point of this is that the B edition of 167 is 'unusual', but the dealer who supplied me with my copy charged me the same price as he would have done had it been the 'common' B/* edition, notwithstanding that he knew perfectly well that the B edition was 'unusual' and that I was anxious to secure a copy.

The most unusual issues of One-inch New Popular Edition and One-inch Seventh Series material are possibly the two-inch manuscript drawing 131/5 for Sheet 131 of the New Popular, of 1939-40, and the reprint of Seventh Series Sheet 137 made in 1991. On a print-run basis they are unquestionably 'rare': 30 monochrome copies of 131/5 were produced for the Society by Ordnance Survey in 1991, and we took delivery of 100 copies of the printing of Sheet 137. The reprint of Sheet 137 was made in order to supply a deficiency in OS's stock when it was making up the sets of the Seventh Series which were offered as a 'collector's item' for the 1991 Bicentenary celebrations; the Charles Close Society still has a number in stock for sale to members. 131/5 has, I believe, the unique dubious distinction of being so out of date when it finally reached its public that it was provided with historical notes from the start. Notes also accompany the Society's issue of Sheet 137, and, though 'uncommon', the fact that we still have stocks six or seven years later suggests that the demand is more modest than we would like! It also demonstrates that what excites a few of us evidently fails to move the majority.

The opposite of this is the map which was certainly printed in quantity but of which copies are not seen very often. A particularly good example of this is the One-inch Fifth Edition London sheet published in the spring of 1937, which is both a replacement of the tourist map derived from Popular Edition material, and a disguised form of Fifth Edition large sheet series Sheet 114. According to the print-code, 10,000 copies were printed (a big run for a civil map at this period), and apparently 2309 copies were sold in the first nine months

following publication;³ at that rate, one might have expected most of the 10,000 copies to have been sold by the time that the OS was bombed on 30 November and 1 December 1940. So where are they? I have seen very few, and a perusal of dealers' catalogues for the past twenty years will suggest that, for some reason, comparatively few come onto the market, particularly as compared with some roughly contemporary Popular and Fifth Edition sheets which were printed in much more modest quantities. (However, if you haven't got a Fifth London, don't be too disappointed: the printing quality is the worst of any pre-war Fifth!) But perhaps a correspondent, whose groans may be a feature of provincial bookfairs and bookshops every time he sees yet another beastly Fifth London, will write and tell us otherwise? It is quite possible.

There is also the question of how one defines 'rare': the maps of some geographical areas do tend to turn up less frequently than others, but I do not know any that I would call 'rare'. My own impression is that, for mapping current between about 1925 and 1975, it is harder to find sheets covering the Outer Hebrides, north-east Scotland, Galloway, the East Riding, Lincolnshire, parts of the south-east Midlands and southern Wales (except Pembrokeshire), i.e. areas which are not really 'touring areas', than it is for some other parts of Britain, but this is only partly borne out by the only publicised list of 'difficult' One-inch Seventh Series sheets that I know of: this was prepared by Alan Godfrey in December 1978 (in those days he dealt in old OS maps, instead of republishing them), and listed sheets 53, 95, 96, 97, 102, 114, 124 and 189!⁴ I suspect that the distribution may have been distorted temporarily by the OS remaindering large stocks of many Seventh Series sheets during 1978, which would account for the only 'difficult' Scottish sheet being 53, which goes against my experience. (A recent OS list shows 189's successor, 1:50,000 Sheet 204, to be in the top two-dozen sellers.)⁵ I regard north-east Lincolnshire as a difficult area (is that because I was born there?), but one of our dealer members tells me that the 1:50,000 sheet, 113, turns up in extraordinary quantities, and he has no difficulty at all in supplying copies of the final Seventh Series equivalent, edition B/ of Sheet 105. Again, I remember that in 1978-9 no copy of New Popular Edition Sheet 141, Brecon, appeared in any of Alan Godfrey's monthly catalogues, and that I discussed the point with Alan on the 'phone: we did wonder if it had ever been published! Perhaps needless to say, at the end of 1979 I found a nice copy, in a large hoard in a bookshop at whatever the 'going rate' was then, and a few months later obtained an even better copy in a jumble sale, just as Alan listed one in a catalogue... Since then I have lost interest in further sightings of this sheet!

And so one might go on. What it comes down to, is that whether a map is 'common' or 'uncommon' depends partly on whether one is looking for it (the best way is not to look for a desired sheet: it then seems much more likely to turn up), and partly on the accidents of what one encounters. Also, a particular

³ Recorded in Public Record Office file OS 1/375. This contains some useful information on sales of pre-war tourist and district sheets.

⁴ Supplement to Alan Godfrey's catalogue 25, 4 December 1978: copy in writer's collection.

⁵ Ordnance Survey News Release 45/98.

sheet might be common enough if one is not too fussy about condition or presentation, but suddenly become 'difficult' if one needs it in a certain form. To give a concrete example, for my talk to the Society's AGM in 1995 I had some slides made. Some of them were to be of the New Forest tourist map of 1938.¹ I believe this to be a very interesting map, and it is unique in several ways, but I had not hitherto regarded it as very hard to find (and that wasn't just because I'd owned a folded copy since 1968!). In order to furnish good slides, I wanted to supply my photographer with a paper flat copy. I asked map dealers, I asked flat-map collectors, but no paper-flat New Forest was forthcoming, and so a folded copy had to be used after all. So if any reader has a paper-flat New Forest of 1938 to dispose of...

Paper-flat maps do not usually attract as much attention, or as high prices, as their folded equivalents, which is a pity, as most of the really 'unusual maps' are most likely, or will only, be found in that form. If I am pressed to give advice on 'what to look out for', I would suggest anything with an official OS 'proof' stamp on it, (but don't pay more for it than if it were the equivalent sheet in its published form), as these may (I don't say they always do) differ in small respects from the published map. This may be no more than altering the dates of publication and magnetic variation, but it may be more interesting. As an instance, I have a proof copy of Seventh Series Sheet 105, edition A, which is '1st proof 6 Dec 1954'. That publication and magnetic dates are 1954 rather than 1955 is not very exciting, even to me, who had been born on the sheet a few months before, but what is interesting is that on the published version, printed and issued in May 1955, some altitudes have been amended and a number of triangulation stations have been removed, as have been a number of radio masts. The triangulation stations may have been deleted because they were the older sort, marked by a buried stone rather than by a concrete pillar, and the radio masts were presumably removed on 'security' grounds, which makes one wonder why the description 'WT Sta' was added by photo-writing at a late stage⁶ to the naval wireless station site at Waltham (TA 289055), only to be removed from the published map! (Radio masts are always noticeable, and a wooden one at Waltham was particularly so on 31 January 1934, when it caught fire and blazed merrily for two days and nights.⁷)

The only straightforward answer which I can give to the fifth question, 'What is the likelihood of finding One-inch Third Edition maps in second-hand bookshops or other outlets?' is, 'Less now than it was fifteen or twenty years ago', but then seasoned collectors have given me to understand that fewer were to be found then than fifteen or twenty years before that! These and other pre-1918 maps do still turn up (I found a couple of Thirds in a bookshop in Matlock just before submitting this article), but it is quite impossible to say how often. One can strike lucky, as did one member who, on his way to visit me in Exeter in May 1997, stopped off in Crewkerne and secured about fifteen or twenty one-inch outline sheets of Ireland, printed around 1880, for

⁶ That is, the addition was made to the outline negative at 1:63,360 which was the result of photographing the original (positive-reading) 1:40,000 drawing.

⁷ Peter Chapman, *Images of North Lincolnshire*, Derby, Breedon Books, 1993, 113.

something like £45, or about £2.50 a sheet, which goes to prove that older material does still turn up, and at inexpensive prices.

And this leads to the final question, as to a price-guide for second-hand maps. I have to say that this is something which the Society has resisted hitherto, and I hope that it will continue to resist it. That said, I would suggest that it is unreasonable to pay for anything 'collectable' - maps, gramophone records, children's books, topographical books, postcards, what you will - anything like the same price to a general dealer as one would to a specialist. If one deals with the latter, then there is a 'convenience factor' which it is reasonable to pay for, whereas doing the rounds of the general sellers usually involves something in time and travel costs. As a very rough guide, I would suggest that I do not expect to pay for maps in a general bookshop more than half to two thirds what I would pay for similar items to a dealer or at the map market at the Society's AGM.⁸ Translated into Figures, this suggests prices of around £3 to £3.50 for post-war one-inch maps, £4 to £6 for inter-war small-scale maps (perhaps a pound or two more for those in well-preserved decorative covers) and large-scale maps, and perhaps £5 to £7.50 for colour-printed pre-1918 maps, in each case for copies in reasonable condition. One should not expect to pay more than about £2 or so for 1:50,000 and 1:25,000 maps issued in the last 25 years, unless they are current editions in perfect condition, in which case £3 is reasonable, given that they would cost from £4.95 to £5.95 new. Again, though I think these are fair prices, willingness to pay them will depend on how much money one has at one's disposal, and how desirable a particular item is: each of us will have a different response to these. There is the further complication that, relative to the above, some of the stock in a particular shop may appear over-priced, and the rest under-priced... and so on.

I will close with what is probably the most extraordinary price ever asked for second-hand Ordnance Survey maps, which was spotted by the late Rod Monnington in the *Exchange and Mart* around 1990-91. It was for what was described as a complete set of inter-war one-inch maps of the British Isles, for £83,000. On the assumption that there would be 236 sheets for Britain and about 170 for Ireland, and that one might expect to pay an average of £8 to £10 per sheet in reasonable condition at dealer's prices, anyone wanting such a set might budget for spending £4000 or so then, and perhaps £5000 now. Unfortunately, the story has no proper ending: Rod rang the number, but it turned out to be a mobile phone which was switched off. So we don't know if the vendor really meant £83,000, but if he did, I rather doubt that he got it!

⁸ These observations only apply to maps: I would suggest, for example, a much greater generalist:specialist ratio for gramophone records, for instance, not least because we who seek interesting classical bedrock in junk shops and charity shops often have to delve through huge drift deposits of the likes of Mrs Mills, Twenty Stone-cold Hits from Twenty-Five Years Ago, and the soundtrack recording of *The Sound of Music*. The map-seeker does not suffer such tribulations, as the offerings are usually all in one place.

One-inch Revision in the 1960s

Jim Cooper

In March 1965 I reported to the OSHQ at Chessington to begin a two month course to train to be a 'Small Scales Reviser'. As with all OS surveyors I had begun my career on the field completion and revision of 1:1250 and 1:2500 and so had become quite adept at graphic survey. I had up until now been based in South Yorkshire, Derbyshire and Nottinghamshire and felt that I had seen enough of pit tips and it was now time to spread my wings and seek fresh pastures.

At that time I had no idea as to the practicalities of One-inch revision and so was surprised to hear after my first week that I would be expected to appear the following week with a bicycle. Since my cycling days had I thought finished when I left school, this meant that I had to go and buy one.

It all made sense of course. To try and revise at a satisfactory rate on foot would have been impossible and by car could have been disastrous. What's more you are better able to see over hedges from a bike than you are from a car. And I had thought that cyclic revision had meant that the revision was done cyclically rather than on a cycle. Never mind.

So I duly purchased a sensible straight-handlebarred, three Sturmey Archer geared bicycle - long before mountain bikes of course - went by train from Newark to Kings Cross and cycled across London with rucksack on my back to my digs in Colliers Wood.

Having by now learned how to classify roads and vegetation and how to wield the appropriate coloured pencil I was ready to be let loose in the field. Six colleagues and I went down to Ripley in Surrey to get a taste of the real thing.

We were each given an eighth of a standard block to cover. This consisted of an area 5 km x 2.5 km, the standard area being 10 km x 10 km. The survey scale was six inches to one mile and the field survey documents were 2.5 x 2.5 butt-jointed six inch quarter sheets each being numbered with its National Grid sheet number, followed by a letter to indicate the quadrant, 'a'(NW), 'b'(NE), 'c'(SW) and 'd'(SE). These six inch plots were prepared from the latest published material available either National Grid or County Series. They were often the Provisional edition with more recent housing additions shown as hollow rectangles. It was emphasised that we were not revising the six inch document but we were revising to six inch accuracy.

Before leaving the office the plots had been in the hands of Small Scales Prep, who had added whatever information they had to hand. This included any large scale information on published maps and any in transit for new editions as well as any available air photography. The former was added to the six inch plot in black and the latter in violet. Detail from the air photographs was surveyed graphically.

Small Scales Prep, maintained an intelligence system built up from information received from the Ministry of Transport, O.S. Region Officers and

members of the public. They kept records of all proposed major road improvements with estimated start and completion dates and held any site plans available.

An additional field document was the 'One-inch Slip'. This normally consisted of a section of the current coloured One-inch sheet covering the 10 km x 10 km block with a one km border all round. This is what we were there to revise.

I think we were also issued with an outline copy on which we could record our daily progress.

Our 'Bible' for Small Scales Revision was the Green Book. Section C describes the principles and methods of revising field documents:

Houses and buildings will be shown 'on the road' on the Six-inch plots unless the distance from the building to the road is over 10 metres.

Rows of houses will be generalised where the distance between the houses does not exceed 20-25 metres.

The graphic method will be used for supplying new detail. Measurements will normally be made by pacing. No distance over 200 metres will be paced without a check being made to old detail. An independent check will always be made to new detail supplied.

My natural stride was a consistent 0.9m so I could walk naturally and knock off 10% to be 'near enough for One-inch'.

The policy on names that appeared on the map allowed a certain discretion on the part of the reviser. He was to ensure that the most useful and important names were used and that an even balance was maintained.

The Green Book contained guidance on the depiction of particular items of detail, of which I will select some of the more important ones. There is a strong subjective element in some of the criteria and the reviser's judgement will be seen to come into play in many instances.

Aerodromes and Airports, etc: Survey and name those not subject to security restrictions. Annotate 'disused' where applicable.

Bridges and Footbridges: Show by the symbol those bridges with a span of over 8 metres. Show smaller bridges which are obviously of local importance. Show footbridges by symbol and annotate.

Buildings: Show in a generalised form all permanent buildings over 7 metres square, and smaller buildings that form landmarks, are of considerable importance, or are of use to the map user, e.g. mountain and moorland shelters. In order to illustrate the characteristics of buildings of special interest, e.g. cathedrals, large churches, colleges, the Houses of Parliament, Law Courts, etc, show all projections that can be drawn to scale.

Bus and Coach Stations: Show and annotate those which are terminals or junction stage points (generally with waiting rooms) from which long distance

bus or coach services operate on a regular time-table. Bus garages or depots as such will not be shown. Stage points on bus and coach routes will not be shown.

Canals: Show all canals. Show the towpath by a firm line if it is fenced and by a pecked line if open.

Show as slopes old canals from which the water has disappeared: annotate 'old canal'.

Stretches of canal still containing water but no longer navigable can also be termed disused and care is necessary in ascertaining this condition.

NOTE : The term disused constitutes a change of name and as such must be authorised. Close liaison with region offices is necessary as they hold information about canals.

Show canal locks by symbols drawn correctly in plan, with the arrow heads pointing into the higher levels of the canal.

Carriage Drives: Show when of such a length and character as to be similar to minor roads.

Caves and Potholes: Show those notified to Small Scales Prep. Group by the Cave Research Group and any others of importance.

Churches, Cathedrals, Chapels and Mortuary Chapels: Show churches and chapels of all denominations in solid with a symbol alongside to indicate whether there is a tower, a spire or neither. If in doubt as to whether the tower or spire symbol should be used, use the tower symbol if the height of the spire is less than a quarter of the height of the tower and spire together. Show a dome as a spire.

Cliffs: Show rocky scarps or cliffs where they are distinct and prominent features. Steep ground with outcrops of rock should not necessarily be shown as cliff. In mountainous districts where cliffs are numerous, show them only if over 15 metres high.

Cuttings and Embankments: Show on railways when at least 2m. in height, and on roads and canals when at least 3m. in height if they do not obscure more important detail.

Electricity Transmission Lines: Only those electricity transmission lines carried on pylons will be shown. In addition, however, in open and sparsely populated areas, transmission lines carried on poles may also be shown when they are of special topographical importance.

Footpaths: These are defined as all recognised ways found on the ground which, owing to their width, or the existence of stiles, swing gates, or similar objects, could not be traversed by horses without jumping, and are therefore suitable for pedestrians only. It is essential for the reviser to consider which

footpaths are the most important and to ensure that these are selected, and marked, for showing on the One-inch map.

They will be shown if:-

- (i) they are clearly marked and permanent, i.e. gravelled, paved or defined by stiles, gates or permanent gaps.
- (ii) they lead to some place the public want to visit, e.g. groups of houses, a church, public well, place of local interest, or from one road to another.

The alignment of unmade paths will not be altered if it is still correct, but any new alignments will be shown as running straight between stiles or other points defining them in temporary pasture or arable lands, unless deviations are necessary because of obstacles such as clumps of trees, ponds or boggy land which it is necessary to avoid, or in hilly ground where the line of least resistance would determine its alignment. The actual alignment of permanent made paths, i.e. gravelled or raised, which would not be ploughed up, will be shown.

Coast guard paths will be shown even though indistinct on the ground. Unimportant paths such as short paths or those used only by farm occupants, etc., will not be shown.

Gaols and other Government Detention Establishments controlled by H.M. Prison Commissioners: These establishments will be surveyed and annotated but prior notice of survey must be given to the governing authority.

Garages: Show and annotate large garages giving full service in rural areas and remote from towns.

Gates and Toil-Gates: Show the outer gates only on private roads where there a series of gates. Show by a heavier symbol those across first class roads and other motoring roads, and annotate.

Golf Courses: Show all public golf courses and those maintained by a club. Define the boundary by a band of broken yellow. Show club houses and annotate 'CH'. The term 'Links' is to be used only when requested by the Club. Private golf courses are not to be shown.

Gradients: Three observations with the curved bicycle level will be taken at the steepest part of the hill at 5 metre intervals, and the average taken as the maximum gradient. On Red, Broken Red, Green, Broken Green and Blue class roads of 1 in 5 and steeper will be shown with 2 arrows, and 1 in 7 to under 1 in 5 with 1 arrow at the steepest point of the gradient, the arrow pointing downhill.

High Water and Low Water Marks: The H.W.M. will be checked and revised at the time of revision in the same way as other detail. The L.W.M. will normally be transferred to the Six-inch plots by Small Scales Prep. Section from the latest available air photography. The reviser will check on the ground

that this line gives a reasonable depiction of the situation at the time of revision. Should he discover that it does not do so, he will make what corrections may be necessary, either by graphical methods on the ground, or, if this is not reasonably practicable, by comparing the line plotted on his field documents with the records held by the local Harbour Master or similar authority.

Hotels, Public Houses, Beer Houses, Inns and Hostels: In open country all hotels, inns and hostels which are of local importance will be shown, but when two are close together, only the more important one will be shown and annotated. In towns and villages of over 300 inhabitants where it is usual for there to be inns, no reference will be made to them. ‘Temperance Hotels’ which are of sufficient importance to appear on the One-inch map will be described as hotels. In the case of an important country inn such as an old coaching inn, the name of which is well known, the reviser will call special attention to the name, with a view to it being written in full on the One-inch map.

Lakes, Lochs, Ponds, Reservoirs and Moats: Show the outline of the water at normal winter level as a firm line. Annotate. In the case of moats annotate ‘W’ if the moat contains water. Indicate covered reservoirs by the slope symbol only. Treat tidal ponds in the same way as fresh water ponds, but timber ponds, the limits of which are not bound by firm line features, will be bounded by pecked lines and not annotated. Outline new ponds in blue. The height of the Top Water Level of reservoirs will be obtained by local enquiry and shown on the field document.

Landmarks: Cairns, fences, walls and banks which traverse hills, moors or mountains, and which form prominent landmarks, or would be an aid in locating positions on the One-inch map in very open country, will be shown and described. Conspicuous towers, prominent chimneys, obelisks and monuments will be shown by a dot and named. Features such as the ‘White Horse’ and ‘Long Man’ will be shown in position. Other features in the same category will be shown at the discretion of the reviser.

Marsh and Bog: The extent of marsh and bog exceeding 8 hectares will be shown by sketched ink pecked line and a band of blue. The initials ‘M’ or ‘B’ as appropriate, and ‘Sk’ written to the ink pecked line.

Mills: All mills will be annotated ‘Mill’. Where the buildings are no longer used as a mill but solely as a private residence, the name should be retained if of sufficient importance for the One-inch map; otherwise it should be cancelled.

Mines: Show buildings at mine workings. Add ‘disused’ where applicable. Show detached shafts by a hollow circle, annotate ‘shaft’ or ‘shaft disused’ as appropriate. Ignore open cast mining operations.

Oil Refineries, Oil Storage Installations and Installations of similar nature:

(a) Survey within such installations will show:-

- (i) Normal factory detail such as buildings and roads,
- (ii) Oil storage tanks.

(Detail peculiar to oil installations, e.g. oil pipe lines, will not be surveyed.) Where the installation has previously been shown the reviser will indicate the detail now required to be shown by annotation, hatching or road classing. It is not necessary to cancel the other detail.

(b) It is permissible to extend this treatment to other installations such as tar distilleries which, by reason of the complicated nature of their construction, present the same type of difficulty as an oil installation.

Orchards: Show orchards of 8 hectares or over, and pen the trees in character, but not in position. If the orchard is large and the trees are in rows, the rows on the outside will be penned in, and 'Orch' written inside. Narrow belts or margins of orchard trees will not be shown. Pecked lines will be drawn to show the extent where no firm detail exists. The extent will be shown in yellow.

Ornamental Pasture: Show, annotate 'OP' and outline in broken yellow areas 8 hectares or more in extent.

Parks and Ornamental Grounds: Show if more than 8 hectares in extent, but public and historical parks, recreation grounds and grounds attached to institutions will be shown when of lesser extent provided they are of sufficient interest to the public, and the legibility of the map is not impaired. Annotate O.P, outline in broken yellow. It is not necessary to distinguish between private and public parks or grounds.

Post and Telegraph Offices: Show all village post offices but not town post offices. The letter 'P' will be written as close as possible and the actual building indicated by an arrow.

Public Buildings: Name large public buildings where the name can be published without obliterating detail on the One-inch map.

Railways:

- (a) Normal gauge, single or multiple track, will be shown by conventional signs. Those in the course of construction will be so annotated, the proposed alignment being indicated.
- (b) Dismantled railways will be shown by pecked line if no embankment or cutting exists. Annotate 'dismantled railway'.
- (c) Mineral and narrow gauge lines will be so annotated and described as 'narrow gauge' as appropriate.

- (d) Tramways in towns are not shown, but where trams or railways run along country roads write the description along the road. Show sections that leave roads by appropriate conventional sign and annotate. Show other tramways such as those inside large quarries, but ignore temporary portions near working faces. Distinction in annotation must be made between normal tramway and very narrow gauge.
- (e) Level crossings will be shown by an 'X' symbol when occurring on all roads down to and including cart tracks. Annotate 'LC'.
- (f) Mile posts or stones are not shown.
- (g) Signal posts, signal bridges and signal boxes are not shown.
- (h) Stations. Stopping places for passenger traffic are described as 'Stations' or 'Halts'. The former applies to permanent stations that have buildings, booking office, station officials, etc. Stations in rural areas will be given their distinctive name if the built-up area is not close or if the station bears a different name. To assist the draughtsman, principal stations in towns will be so marked.

Roads

Classify roads as follows

<u>Class</u>	<u>Colour</u>	<u>Description and Action</u>
Motorways	Red	M.O.T. Motorways 'M' - give route number.
1	Red	M.O.T. 'A' road - give route number.
	Broken Red	M.O.T. 'A' roads which are narrow and provided with passing places (distances below 1km to be ignored).
2	Green	M.O.T. 'B' road. Give route number.
3	Broken Green	Good through motor road, tarred and metalled, maintains average width of 14 feet and over, two-lane traffic. Usually running between Class 1, 2 or 3 roads, but can start from a Class 1, 2 or 3 road and lead to a village or town.
4	Blue	Through motor road, tarred and metalled, average width under 14 feet, in certain cases may not be a through way, but leads to a place of public interest.
5	Broken Blue	Motor road, metalled but not tarred, average width under 14 feet, not necessarily a through road.
Minor roads	Yellow	Private roads, occupation roads, services roads, roads to farms, carriage drives, all tracks usable by vehicles. Width or metalling are not to be taken into account.

NOTES:

- (i) Roads will be classed in sections. A section is a 'complete' portion of road lying between two road junctions, two villages, two higher class

roads, or between a village and a road of equal class. The length of the section will vary with the class of road.

- (ii) Where a section of road comprises two stretches differing in grade, the road will normally be given the lower classification. The exception will be where there is a definite break, e.g. through a gate to a farm house.
- (iii) Where variation of width occurs care should be taken to strike a fair average when classing. Discretion should be used and the variations clearly marked on the plot.
- (iv) Examples of 'places of interest' are churches, isolated railway stations, monuments, spas, villages, local beauty spots, etc., but not private dwelling houses unless of historical interest.
- (v) This guide has been compiled to assist consistency of road classification, but it must be borne in mind that careful consideration must be given to area peculiarities and individual cases to maintain the value of the One-inch map to the public.

Schools: Show and, where space permits, write the names of universities, colleges and schools. Do not annotate small schools, whether public or private, in towns and villages. Those in rural areas will be annotated. Name large buildings with names of interest to map users, that are used as private schools.

Shooting Rides and Paths: Show where open and forming a means of communication between roads and features of interest to the public. When suitable for wheeled traffic treat as unmetalled roads and colour yellow. Show as footpaths those suitable for pedestrians only. Where they are numerous, select and retain the important ones only.

Spa Wells: Show and name including the medicinal property, e.g. 'Chalybeate', 'Saline', 'Sulphur', 'Bromine' or 'Mineral'.

Streams: Show streams with well-defined channels, hilly country streams which help to define the main hill features, and those which cross the contours at a marked bend. Do not show minor streams which cross contours with no appreciable depression. Streams will not be surveyed up a hillside beyond a point where they have well defined channels. Show streams 8 metres and over by a double line and annotate 'over 8m.'.

Telephone Call Boxes: Show by a dot, and indicate ownership of telephone call boxes that are not in towns, villages or near P.Os.

Trees: Clumps of trees will be shown in character and banded in green. The clumps should also be shown when small if they are isolated and of topographical interest.

Windmills: Windmills with sails which are in use from time to time to drive any sort of machinery will be shown and annotated '(Sails in use)'.

Windmills with sails which serve no useful purpose will be shown and annotated '(Sails disused)'.

Windmills without sails will be shown only when they form a conspicuous landmark. If they are shown they will be annotated '(Without sails)'.

Windpumps: Show by conventional sign when isolated, but when numerous in a rural area show only the most prominent. Cancel disused wind pumps unless they are landmarks.

Woods: Show if one hectare or more in extent. But smaller woods may be shown if they form prominent landmarks. The classification is to be in general terms for each area that is clearly defined, e.g. a large wood that is cut in two by a wide shooting ride might have two separate classifications. This can be one of the following:- coniferous, non-coniferous or mixed.

If a coniferous wood has been cut down and not replanted cancel unless thoroughly satisfied from enquires made of responsible persons, such as factors, agents or afforestation officers that the area is to be replanted in the near future.

Where a wood of non-coniferous trees or a mixed wood has been felled and the non-coniferous undergrowth is springing up, the reviser must use his judgement as to whether the area should be shown as 'wood' or 'scattered trees on R.P.'

In areas of afforestation great care must be taken to ensure that the forest name to appear on the One-inch sheet is the correct name and not a name used by the Forestry Commission for purely administrative purposes.

Many of these instructions leave room for interpretation; for example what is a town? What is a village? What is a landmark? What is isolated? Large or small? Such decisions as to how buildings were grouped together when generalising, road classification, the distribution of public houses were all quite subjective and no two revisers would come up with the same completed map however hard they tried to stick to the rules.

In early May I was off in my Ford Prefect with my bike projecting from the boot to Devon where I was to meet my Grade 3 supervisor Tom Jones who in spite of his name, and that he lived in South Wales, was in fact a Scot from Glasgow. We met at Barnstaple where I was given my first real block. One hundred km squares of the Exmoor Tourist sheet.

Now it was most important that I found somewhere to stay as near to the centre of the block as possible. Our Chief Surveyor, George Fugler was most insistent that we did. There would be no car mileage allowance for journeys within the block. (In fact there were some revisers who didn't have a car at that time.) All mileage would be at cycle rate. So whether there was a five star hotel or number 5 The Council Houses at the centre, that is where we would stay if at all possible. If not he wanted to know why. George was one of the old school. An ex-army man of course, who one crossed at one's peril. Although he had been a Captain I think, he was very much a Sergeant Major at heart. He had a

particular way of saying 'Mister' with a severe snarl, accompanied by a narrowing of those piercing eyes that turned many a leg to jelly. Needless to say with an eye to survival you did your best to keep your nose clean.

I aimed for Stoke Rivers at the centre of my block and was lucky to find a farmhouse doing B & B and evening meal. I spent a very pleasant three weeks there. That meant an average of about 7km squares a day progress. Not bad for a beginner but it would get better.

Every morning I was out at 8 o'clock on the dot. George had a habit of picking a reviser to visit whenever he was out in the field and he always chose to be there unannounced at 8 o'clock. On one occasion he waited outside someone's digs until 8.30 and they still hadn't appeared. On approaching the landlady he was told that the surveyor had gone out at 7.45. This resulted in a memo emphasising that we should not leave before 8 o'clock in case anyone needed to contact us. So from then on it was 8 on the dot.

The Exmoor Tourist sheet occupied us for most of that summer. The curved bicycle level was frequently in use to check the many steep gradients on the Devon lanes. I was doing about 25 miles a day on the bike as well as quite a bit of walking so I was getting pretty fit by this time. All this with a sketching case slung over the shoulder and the 'One-inch slip' in hand.

At this time there was a lot of change taking place on the moors. Much of the old rough grassland was being reclaimed and improved and especially in the Minehead area there was a lot of afforestation. The former meant that the brown pencil was much in evidence as the extent of the BHG changed and the green pencil defined new wooded areas. Many of the woods though were not easy to spot as they were small conifer saplings often no more than a foot high. Looking back I wonder if some weedy fields of thistles were shown as woodland.

One of the keys to One-inch revision in those days was that every inch of the block was at least seen, if not actually trodden on. It was sometimes possible to observe the other side of a valley using binoculars without actually visiting it. However if you did miss anything you could be sure that your supervisor would pick it up. He always had a nose for the error and if he found one, or an omission, the result would be ignominious green ink on the map. You could say although the phrase wasn't used then, that there was rigorous quality control.

After completing a day's field perambulation the results were 'penned up' usually in the bedroom, often sitting on the end of the bed. Sometimes with dubious lighting. The detail applied to the six inch field document was as neatly as possible penned in red ink with a crow-quill pen. It's surprising how neat you could be in those circumstances.

After Exmoor I moved up country to the Bristol and Gloucester area. This was when the M4 and the Severn Bridge were being constructed and I was given the job of surveying the M4 from the Almondsbury interchange with the M5 to Newport - a 'Special Revision' task. This was largely from engineers' plans which were used to define the centre line. This was checked in the field and all the embankments and cuttings defined as well as all the junctions. This

information was subsequently published as a 'reprint with major changes' just about the time the road was due to open. Then unfortunately the tunnel at Newport collapsed and that section of the M4 wasn't open for another two years. Small Scales management of the day said that never again would OS publish until the road was actually in use.

I spent the next five years on Small Scales revision, sometimes working on the updating of the Quarter-inch as well as the One-inch. I visited most English counties and quite a lot of Wales, and had a brief spell in Perthshire and Fife. I subsequently returned as a supervisor in the 1970s just as the conversion was taking place to 1:50,000. But that's another story.

Recent small-scale mapping from the Ordnance Surveys of Great Britain and Ireland

Richard Oliver

If you turn back through the more recent issues of *Sheetlines*, you will see that, a few years ago, the greatest interest was provided by developments in Ireland, mostly in the form of the 1:50,000 series, with Britain providing variations on well-established themes. In broad terms that continues to be the case, but the OSI 1:50,000 is now only about nine sheets from completion, and the most interesting recent publications from Phoenix Park have been a set of four 1:250,000 *Holiday Maps* covering the whole of Ireland, on the same sheet lines as the series first published in the early 1980s, and a 1:210,000 road atlas.¹ The cartography of both is stylistically related to the 1:50,000 series, providing a sense of integration lacking in Britain between the 1:50,000 *Landranger* and the 1:250,000 *Travelmaster* and its offshoots, and I suspect that the 1:50,000 database provided everything necessary for the new smaller scale publications. Whilst 'common sense' might suggest this, there is more concrete evidence, in the *Road Atlas* in particular, in the form of the depiction of woodland and of minor streams, which are shown in extraordinary detail, which corresponds remarkably with their depiction on the corresponding 1:50,000 sheets. The atlas was published first, and it may be that someone decided that the minor streams were a bit too much of a good thing; at any rate, they are considerably reduced in number on the sheet maps.

In practically every respect the new cartography is an improvement on the old: it exhibits a very delicate touch, exemplified by the yellow-infilled minor roads. The only substantial drawback is the treatment of relief. The Atlas has layers (no contours) at 120, 300 and 600 metres; the sheet maps have contours and layers at 120, 240, 450, 600 and 750 metres. As the 1:50,000 mapping is contoured at 10 metre intervals, one would have liked to have seen 50 metre

¹ *The complete road atlas of Ireland*, Dublin, Ordnance Survey, 1997, ISBN 1-901496-81-3 (£17.99; £7.99 in UK); *Holiday Map of Ireland: North; West; East; South*: Dublin, Ordnance Survey of Ireland, 1998 (£4.50 in UK).

interval contours on the 1:250,000. The old (early 1980s) had 60 metre contours to 300 metres, and then at 150 metre intervals, which were presumably derived from the 100 ft contours on the old half-inch map; it seems strange that, now Ireland is furnished with contours at much closer intervals, so few appear at these smaller scales.² Hitherto, it has been policy in Ireland to produce a 1:100,000 from the 1:50,000 data, and indeed the treatment of the edges of built-up areas seems much more appropriate to the smaller scale, but there are no signs as yet of the 1:100,000 appearing and, should it be quietly dropped, cyclists will be even worse off in Ireland for contours and mapping than they are in Britain.

Incidentally, this is not the first time that OSI have essayed a road atlas using their 1:250,000 material. The first, in a fairly small format (something like 15 by 22 cm page size) was published in about 1985: it does not appear to have been sold widely, if at all, in Britain. Another appeared in 1993, published as a joint venture with Ordnance Survey of Northern Ireland:³ the page size was much increased, to 25 by 35 cm, and it included 30 town plans. Although it was a convenient way of buying the 1:250,000 mapping at about half the price of the separate sheets, it was not a complete bargain, in that a few names across gutters were not made good, whereas others were partly repeated, so that on page 22 Athlone was renamed 'E', whereas on pages 16-17 there was a town called 'Carrick on Shannon n Shannon'. The new atlas is smaller in format, with a page size of about 21.5 by 27 cm. All the town plans have been 'redrawn', though those of towns in Northern Ireland differ in style, and probably in completeness of side streets, from those in the Republic, for which the style is altogether more bold. As before, the Atlas costs about half the price of the set of sheet maps. The folding of the latter has been changed from an awkward semi-Bender, measuring 15.7 by 24.2 cm when folded, to an ordinary Bender or cross-Bender, measuring 11.5 by 26.7 cm. This seems singularly maladroit, and it would be interesting to know why the legend areas could not have been moved so as to permit printing on paper trimmed to the same size, and foldable to the same handy size, as the 1:50,000. Incidentally, the tourist information on the back of the old *Holiday Maps*, which was perhaps a justification for the awkward semi-Bender, is omitted from the new ones.

Nothing so radical has appeared from Ordnance Survey of Great Britain this year. Both the 1:25,000 and the 1:50,000 series continue to be subject to detail modifications. The depiction of boundaries in 'grey' has been criticised, and on the latest 1:25,000 Explorer to be issued, 169 *Cirencester & Swindon*, a notably stronger 'grey' is employed. (There is also a recent boundary abbreviation innovation to be seen on this sheet: 'UA', for Unitary Authority.) Whether this will satisfy everybody remains to be seen; the 1:25,000 map would surely be improved (and its revision marginally simplified) were all references to Westminster and European parliamentary constituencies to be

² It may be noted that on the old five-sheet 1:250,000 map, which first appeared in the late 1950s, contours were at 200 and 500 feet, and thence at 500 feet (152 metres) interval.

³ *Road Atlas of Ireland*, Dublin, Ordnance Survey of Ireland, and Belfast, Ordnance Survey of Northern Ireland, 1993.

omitted, as they were from the 1:25,000 Provisional Edition/First Series; that they are present at all is surely only the result of the use of a common drawing for both the 1:25,000 and the old 1:10,000 analogue map, which is now rapidly being replaced by the digital *Landplan*.

The 'common drawing' also explains the greater detail in which buildings are shown on the current 1:25,000, as compared with its First Series predecessor. Whether this is altogether a good idea seems more and more doubtful, as it is not particularly easy to distinguish roads from garden areas in some housing estates. There are plenty of examples of this on *Explorer* 169, which also has numerous short public footpaths shown in some of these housing estates, for example around SU 120840 and 180840, which reduce overall legibility even more. One hopes that this will remain a Swindonian peculiarity: perhaps the town's Unitary Authority might like to consider sponsoring an OS 1:10,000 or 1:12,500 of their domain, on which these curious short paths could be shown more clearly.

An alternative to hard-to-read suburbs is hard-to-read city centres. There is a good example on *Explorer* 114, *Exeter & the Exe Valley*, in which large blue symbols dominate the western part of the old city; the three museums (SX 918928, etc) appear far more conspicuous on the map than does the bus station (SX 925929), though a visitor to the city would no doubt disagree. The placing of tourist symbols is particularly inept in the Haven Banks area (SX 920920), where intricate buildings and streets nearly disappear. This sort of thing will not do. Perhaps it is the result of haste and corner-cutting, and perhaps such haste explains outright errors in placing of three of the railway station symbols. At St James Park (SX 926009345) the error is a fairly small one, but is betrayed by the position of the waiting shelter some 30 metres to the east; at Polsloe Bridge (SX 94029352) it is about 150 metres in error, and is on the wrong side of a busy road to boot (the current 1:50,000, Sheet 192, edition B, gets it right), and at Pinhoe (SX 96259417) it is about 175 metres out, and the true relationship of the station, and its access, to the level crossing immediately to the east (SX 96429416) is thereby destroyed.

Explorer 114 is a double-sided map: the latest index to be issued indicates that these nuisances will still be in a minority for those sheets to be issued over the next year or so, though some counties, such as Essex, appear to be more ill-favoured with them than others. All *Outdoor Leisure Maps* are to be double-sided, and those which have hitherto existed in single-sided form have all recently been taught the error of their ways. The four Lake District sheets (numbers 4, 5, 6 and 7) have been republished in such a way that the doubling of each sheet takes the form of retaining the former single-sided area on one side, and adding an extension to north or south on the other: as a result, we can presumably look forward in a few years to a couple of *Explorers*, one (replacing *Pathfinders* 583 and 593) covering St Bees Head, Whitehaven and Workington, and with a heavy overlap onto the Lake District *Outdoor Leisure* sheets and another (replacing *Pathfinder* 578) on the sides of the Pennines with an even greater overlap onto the Lakes and Pennines *OLMs*. However, strangest of all is the treatment meted out to *OLM* 29, *Isle of Wight*. This has

hitherto been a single sided sheet, with the problem of the excessive west-east length of the island met by insets, but now it has been doubled. In order to justify this operation, there is now a vast overlap across the Solent onto the New Forest *OLM*. One would be interested to know the economics and reasoning behind this, and why it would not have done to demote the island to a single-sided Explorer, as was done a little while ago with the Isles of Scilly: the appearance to the uninstructed purchaser, £5.95 the poorer, is of a manic desire to go for double-siding at all costs.

Having handed out the criticism, let me redress the balance a little and point out that two of the original *Explorers* of 1994, 4 and 5 covering the Mendips, have now been republished and renumbered, as 141 and 142 respectively, to the current specification. The 'image quality' is much improved, despite the inevitable daubing with purple bands for 'access land'. This is all the more interesting, as the same raster scans of the analogue 1:25,000 material seem to have been used, as is clearly exemplified by the 'wobble' in 'ELM CP' at ST 747497 on *Explorer* 142. Possibly some sort of line-cleaning process has been used; software is now readily available which is capable of taking an analogue line of varying thickness which has been raster-scanned, and converting it into a single vector line of uniform thickness.

Further modifications to both the 1:50,000 and the 1:25,000 are announced.⁴ On the 1:50,000 *Landranger* the National Cycle Network is to be shown in full, using green dots and dashes: the new scheme is to be tried on Sheet 172 (*Bristol & Bath*), which should be on sale by the time that this article appears in print. On the 1:25,000, 'Paths... are shown by black pecked lines, which can sometimes be difficult to follow in rugged terrain. In such areas, the path symbol will be enhanced by increasing the line gauge and, where necessary, removing some surrounding detail.' In Scotland, it is proposed to superimpose a purple pecked line on paths 'which are generally recognized as major routes'. National boundaries are to be added to the 1:25,000, using a similar symbol to that on the 1:50,000. 'There are no problems in depicting the boundary between Wales and England, but the boundary between Scotland and England has never been legally defined, although it is established and accepted as a matter of political fact.'

Further 'minor changes' are either proposed or being implemented for the specification of the 1:25,000: 'Many of these are aimed at tidying up anomalies, adding information or removing unnecessary detail...' They are: enhancement of civil parish boundaries; enlargement of bunk house and youth hostel symbols by 25 per cent; addition of names to named bridleways; large electricity substations to be shown and annotated; narrow roads with parking places to be identified by pecked colour infill, rather than by text; a Park and Ride car park symbol to be added; motorway numbers to be enlarged; only off-road cycle routes to be shown; all ferries assumed to be vehicular unless annotated 'Foot passenger only'; and underground stations to be shown by symbol and named (in magenta) 'where the name cannot be easily inferred'.

⁴ OS Consultation Paper 1/1998: available on the World Wide Web at www.ordsvy.gov.uk.

RGS/OS Education Consultative Committee

Gerry Jarvis

The latest meeting was held on 1 May 1998, and a précis of the items covered appears below. For background information on the committee see *Sheetlines* 49.

During discussion on errors in OS mapping, their representative indicated that they would welcome details of errors found, and I have already sent them a copy of *Sheetlines* 50, highlighting John Cruickshank's article. I also said that I would mention this in *Sheetlines* to encourage our members to write in. You can either send comments to me and I will forward, or write direct to:-

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Director General's Conference 1997

The role of copyright in Ordnance Survey

Two page annex - Contact me if you would like a copy (sae please).

Consultation paper 1/1998

Proposed changes to small-scale map specifications.

Landranger, Explorer and Outdoor Leisure maps.

Information paper 1/1998

Enhancing the National Topographic Database.

Feedback on Consultation paper 2/1997.

Information paper 2/1998

National Interest Mapping Service Agreement (NIMSA)
and Trading Fund status.

An update.

Information paper 3/1998

Historical maps and map data

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Responses

Historical data

Access to digital map data

Ordnance Survey as a 'place of deposit'

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Positional accuracy of large-scale data and products

Feedback on Consultation paper 3/1997

Introduction

Responses

What we are doing

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Information paper 5/1998

Miscellaneous items of interest

Accreditation to ISO 9001

Government proposals for a Freedom of Information Act

Government review of Crown copyright

Award for Annual report

Information paper 6/1998

Promotional events

List of shows and events with which Ordnance Survey
will be involved, through to November 1998

Information paper 7/1998

Ordnance Survey and the information age

Background

Standards

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Currency

Summary

Comments

Passing By
A Postscript

John Cole

Since the article in *Sheetlines* 50, unexpected additional information has been forthcoming from Ordnance Survey. This was in the form of map figures for individual counties and are as follows:

Devon 1674; Dorset 193; Hampshire 69; Kent 25; Leicestershire 21; West Lothian 42; Northumberland 5; Staffordshire 6; Sussex 104; Warwickshire 87; Cornwall nil and Essex nil.

It is possible that the Cornish figure is included in that for Devon which even after a check appears to be about 100 too many. However the total of the above 2226 is considerably at odds with the 2483 (less 101 revised at 1:2500 scale before publication) given to me by OS last year.

Having also obtained a more accurate picture of the 1:2500 maps published by March 1957 I have, to a certain extent, been able to amend or add to figures I gave previously:

Devon

SS62NW	8	SS63NW	20
SW	6	SW	7

Revision dates: 1903, with two maps SS6032 and SS6033 part 1903, part 1940. The Six-inch maps from which these details are taken were another OS 'expedient' of the day, being what were known as 'Part Regulars', Areas, amounting at times to more than half the map, were from the Six-inch dating in parts of Devon back to the 1880s and revised for significant change only in the late 1950s. The explanation (taken from a Six-inch map in the Tedburn area) reads as follows: 'The figures shown are the dates of survey of the plans from which part of the map has been completed. The remainder was compiled from surveys dated 1883-6 last revised for major change only in 1957. In this area symbols of the obsolescent Six-inch County Series are used. These differ in some respects e.g. railways from those used in the remainder of the map which conform to the footnotes.' SS63NW was an extreme example with just 4 Kms of old Six-inch (apparently unaltered) added to the 20 bypassed of 1903 with just one solitary 1:2500 map revised in 1955.

The Devonshire figure would now appear to be 1176 plus approximately 400 revised before publication of the Six-inch from which these Figures were taken.

The figure for Cornwall is amended to 143 excluding one map SX3490 which falls mainly in Devon. For similar reasons SX3390 has been counted as Cornish.

Kent

TR15NE	1	TR25NW	1	4 not located according to OS total
24NW	5	26SW	9	Dates of revision 1937, 1938, 1939 &
24NE	4	26SE	1	1940

Sussex

TQ21SE	2	TQ31SE	2	TQ33SW	5	42 not located but 27
22NE	4	32NW	5	40NW	3	possibly revised before
22SW	1	32NE	6	42NW	7	Six Inch publication.
31NW	1	32SE	11	42NE	3	Dates of revision: 1908,
31NE	3	33SE	9			09, 29, 37, 38 & 39

Warwickshire

SP18SE	4	SP28NE	11	46 not located. This Figure seems high
27NW	2	28SW	9	when related to the area known to have
27NE	2	28SE	7	been revised. Dates of revision 1936, 37.
28NW	6			SP2689 is quoted as 1924/36

West Lothian

NS96NW	5	NS97SE	11	NS9478 falls in Stirling.
97NW	1	NT07NE	5	NS9678, 9071 & 9171 partly in Stirling.
97NE	2	07SW	10	NS9266 mainly in Lanark.
97SW	6	07SE	2	Dates of revision 1913, 14.

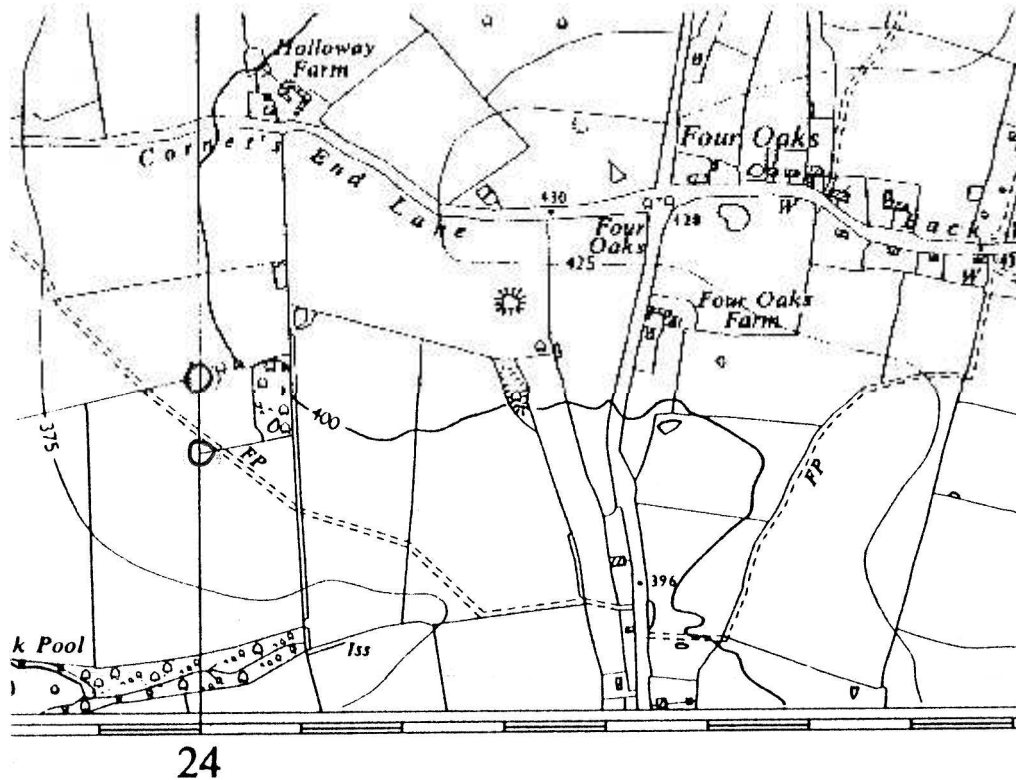
My thanks are due to CCS member Peter Milne for supplying the West Lothian details and also for drawing my attention to the unusual circumstances surrounding NT3473 part 74. At first sight this appeared to be a B edition of a bypassed map - an (almost) impossible circumstance.

The explanation was as follows. NT3474, an extension of 3473 contained only foreshore revised in 1912; low water mark ordinary spring tides and river estuary revised from air photos dated March and April 1947. NT3473NE, SW and SE were 1:1250 maps (redrawn at 1:2500) of the Musselburgh vicinity (part of the Edinburgh 1:1250) surveyed 1947/48 whilst the NW quadrant was again no more than foreshore and possibly some estuary, revised 1912. In the 1950s new editions of the 1:1250s appeared with greater frequency than in later years and all three of the above were revised in 1951/52, and thus the part derived 1:2500 having first been published in 1950 appeared once more in 1955 during the bypassed era.

It is thought that there may be similar examples in other early 1:1250 towns and cities.

Regarding the remaining bypassed maps little further information has been obtained. For Leicestershire the likely area should be amended to: SK60 and SP69, and additionally SK50. Staffordshire should be amended to: SJ75SE, SJ85, SJ90 and SJ94 as the probable locations for the six maps involved. A possible location for Northumberland's five is NZ29SE. Wiltshire has been recalculated as just two maps - ST9418 and 9419 but revision dates are not available.

The lack of bypassed 1:2500 in Essex is somewhat mysterious. The area north of Chelmsford was the subject of an early air revision experiment (see also *Sheetlines* 29 - January 1991) and this is thought to have been concentrated in TL61, 71. From the location list given in *Sheetlines* 50, TL63, 91, and 93 should be deleted, but by March 1957 considerably more of Essex had been published: TL64, 74 (Haverhill area) TQ67, 68, 69, 78, 79, 88 and 89 (Southend/Brentwood/Tilbury) and parts of TM13, 22 and 23. The last group named in North East Essex was a suggested area in *Sheetlines* 29.



The map extract is from a 1:10560 sheet just to the west of Coventry. Component bypassed 1:2500 map SP2380 revised in 1937 falls next to SP2480 revised in 1952 and a couple of edge mismatches will be noticed. Such mismatches were carried forward to the 1:25,000 in Devon, Cornwall and Sussex but were not quite so apparent at that scale. The list of dates in Sheetlines 48 gives some indication of where they are likely to occur.

OS Map extracts folded into guidebooks

Two further occurrences of OS map extracts in the Ward Lock Red Guides during 1935-1938 can be added to *Sheetlines* 44, p48. Firstly a Ten Mile extract (showing roads in Dorset) is also in Lyme Regis 1935-1936 and, from faint lettering on one, the entirety of these imprinted CR5210 by OS can be dated 1934.

There was a prior event however:- Lynton and Lynmouth 1932-1933 contains an extract 'Minehead, Porlock and District' at One-inch scale and sized 13 x 16 inches (viz 40% of Popular Sheet 119). Although printed by Bartholomew and identified '1630' this is clearly an OS plate, but colours differ from standard OS Popular (brown contours, all roads equally cherry red, no yellow etc.) to pleasing overall effect. Could this be an anticipation of the 5th Edition, or were OS conducting a discreet trial out-of-house? For whatever reason, on this occasion the buying public got the look and feel of real maps for their modest 2/- outlay.

These big extracts were folded badly by Ward Lock. Their up-market peers folded better but those extracts were smaller and less adventurous. (The concertina fold was widely prevalent, with mitre cuts for sticking out bits; there was also the one pull New Fold (DRP282585)!)

Ward Lock eventually succumbed to production costs. Their preface to *Southsea and Portsmouth 1947* refers sadly to use of material already existing, incomplete sets of maps, plans and illustrations, costs and ‘... every effort being made to keep the price within reach of all ...’. Regrettably, rather, it was the quality that slipped, and so this distinctive series declined gently thereafter.

In its heyday a Ward Lock guidebook proclaimed ‘... if you wish to Reach a Good Class TRAVELLING PUBLIC advertise here...’. Similarly understated was the OS (although not by name) advertising ‘... details only clearly shown on a ONE-INCH ORDNANCE map, available for the whole of GB ...’. Bartholomew (by name and address) claimed to be ‘... suppliers of the most up-to-date maps available ...’. A vanished world indeed.

...And in Map Reading Tracts

The enjoyment of these was communicated with affection in *Sheetlines* 31, p4. Not only the military and school teaching but the lay public were also catered to. *Map Reading for the Countrygoer* (S. F. Marriott, Ramblers Association 1946, 47pp, 2/-) contained OS supplied extracts of Folkestone and Clydebank (folded and with imprint 25000/46); conventional signs and indexes for the Popular, New Popular and Fourth (Scotland). The text is excellent, there is a proper advertisement by OS and a Foreword by its DG; an altogether charming booklet. Equally good is *The Way to Camp* (S. H. Walker, Woodcraft Folk/Pilot Press 1946, 178pp, 3s 6d) but sadly without map extracts in conformity with the Book Production War Economy Standard.

As may be expected the military manual (loc cit) *Notes on Map Reading* (Part 1, War Office 1940) is more lavishly supplied with correctly attributed OS extracts, genuine look and feel, eccentrically folded but run off in huge quantity (85000/40). In later editions the GSGS referenced extracts are fewer but better folded; the text less fun.

In school textbooks the last with genuine OS extracts does indeed appear to be *Map Reading* 1941 (loc cit), first published 1937; the imprint is 10,000/37 10,000/37 20,000/38. Example questions were not easy and the text was worthy (rather like the School Certificate examinations of that time!). Postwar, educational publishers have managed to reproduce the OS look and feel in facsimile, although attributing the map extracts correctly and presenting them with care (even the questions got easier!). One dedicated publisher (Hodder and Stoughton) actually increased the dimensions of a text book when OS scale had changed to 1:50,000 in 1975, so extracts previously at One-inch could continue. Another vanished world, probably.

John Seeley

The Information and Research Sub-Committee of the Charles Close Society

Richard Oliver

At its meeting on 5 April 1998, the Society's Committee decided to create an Information and Research Sub-Committee (IRSC), and I was asked to act as its chairman. At the time of going to press in mid-July the membership of the sub-Committee has not yet been settled, but it is possible to give an outline of the sort of functions which the Sub-Committee will be expected to undertake. Any further suggestions from readers will be most welcome, and will be carefully considered.

The title 'Information and Research' was decided on as, although we wished to create something which would help facilitate formal research, we did not wish to give the impression that the new sub-committee was far more interested in elaborate investigations leading to publication, than in helping those who just want to 'find things out'. For that reason, the IRSC can be expected to be closely involved with the Society's web site, and in handling some of the enquiries which will certainly be generated, and it will also probably be closely involved with any Ordnance Survey bibliography which the Society may embark on. In *Sheetlines* 51 David Archer suggested a more wide-ranging scheme for an Ordnance Survey chronological database.¹ This will no doubt help solve many questions, but it will need someone to manage it, and someone will be needed to handle enquiries from the public which are attracted by the web site. For this reason, what has provisionally been termed an Information Officer will be needed. He or she will be responsible, not for carrying out research or information-seeking on behalf of enquirers, but rather for pointing them in the right direction. It follows from this that creation of an Ordnance Survey bibliography is necessary, but that will take time, and we cannot hold off appointing our Information Officer until the bibliography is, if not complete, at any rate well advanced. Probably a considerable number of straightforward enquiries will be capable of being answered by sending a standard reply, and only a minority will be at all demanding to deal with.

That minority will include what may be designated 'research' enquiries, which cannot be answered simply by referring the enquirer to a book or article. Such enquirers may include those who are thinking of writing for publication themselves, but it may also include those who simply want to get something 'straight in their own minds'. The Information Officer may well pass on such enquirers to those with specialised knowledge. There will also be those who want to research and write for publication, but who are uncertain how to set about it, and would welcome guidance. Accordingly, we hope to be able to arrange for knowledgeable members to provide that guidance. As well as including advice on sources and on the critical handling of documents, this may also include advice on libraries to use, and the arranging of introductions and recommendations.

¹ David Archer, 'More wishful thinking?', *Sheetlines* 51 (April 1998), 31-4.

What the IRSC will not do is the actual work of finding the information, but it will be very willing to point enquirers in the right direction. It has been pointed out that an important part of map-related questions is not ‘What maps exist?’, but ‘Precisely what does such-and-such a feature on a map mean?’ Rob Wheeler has occasioned several short contributions to *Sheetlines* exploring these points,² and there is a great deal of scope for taking what is shown on the map, particularly at the larger scales, and then investigating what it means in ‘reality’. This is something which might appeal to those who have no great relish or opportunity either for carto-bibliography or for institutional history, but are interested in ‘local history’.

The motive which is, we hope, explicit in the IRSC’s title is that of enabling those who so wish to extend their knowledge of Ordnance Survey maps and matters. I have tried to cover above some activities which have been suggested by members of the Society’s Committee, but, as I said before, and further suggestions will be most welcome. And, of course, it would be nice to think that the IRSC would lead to a greater variety of contributors to *Sheetlines*!

New Maps

Ordnance Survey of Great Britain

New publications between 1 March 1998 and 30 June 1998 included the following. Dates following edition codes are those of general revision (where available); all 1:50,000 and 1:25,000 sheets are assumed to show Access Land and cycle routes unless annotated [X]; bracketed dates thus (1/98) indicate month and year of publication.

1:50,000 Landranger (Second Series)

16	B	1997	<i>Lairg & Loch Shin, Loch Naver</i>	(5/98)
21	B	1997	<i>Dornoch & Alness, Invergordon & Tain</i>	(3/98)
32	C	1997	<i>South Skye & Cuillin Hills</i>	(6/98)
41	C	1997	<i>Ben Nevis, Fort William & Glen Coe</i>	(6/98)
54	A4	1984	<i>Dundee & Montrose, Forfar & Arbroath</i>	(6/98)
58	B	1997	<i>Perth to Alloa, Auchterarder</i>	(6/98)
89	C	1996	<i>West Cumbria, Cockermouth & Wast Water</i>	(5/98)
96	C	1997	<i>Barrow-in-Furness & South Lakeland</i>	(4/98)
97	C	1997	<i>Kendal & Morecambe, Windermere & Lancaster</i>	(4/98)
104	C	1997	<i>Leeds & Bradford, Harrogate & Ilkley</i>	(6/98)
110	B2	1986	<i>Sheffield & Huddersfield, Glossop & Holmfirth</i>	(6/98)
111	B4	1982	<i>Sheffield & Doncaster, Barnsley & Thorne [X]</i>	(3/98)
129	B3	1989	<i>Nottingham & Loughborough, Melton Mowbray</i>	(4/98)

² See for example Rob Wheeler, ‘Triangulation points - primary, secular and sacred’, *Sheetlines* 45 (April 1996), 5-8, and Richard Oliver, ‘Bogs, safe or otherwise’, *Sheetlines* 49 (September 1997), 28-9, which owes more to R.W. than R.O.

131	C	1997	<i>Boston & Spalding</i>	(3/98)
139	C	1995-7	<i>Birmingham & Wolverhampton</i>	(3/98)
142	C	1997	<i>Peterborough, Market Deeping & Chatteris</i>	(4/98)
170	C1	1995	<i>Vale of Glamorgan, Rhondda & Porthcawl</i>	(5/98)
189	C	1997	<i>Ashford & Romney Marsh, Rye & Folkestone</i>	(4/98)
197	C	1997	<i>Chichester & The Downs, Bognor Regis & Arundel</i>	(4/98)
198	C	1997	<i>Brighton & Lewes, Haywards Heath</i>	(6/98)

As it was not always possible to inspect copies before going to press, a few revision dates have been omitted from the 1:50,000 lists published in *Sheetlines* 50 and 51. The missing dates are as follows:

Revised 1994-6:	74, B.
Revised 1995:	13, B; 56, B; 65, C.
Revised 1996:	154, C; 200, C.
Revised 1996-7:	62, B.
Revised 1997:	23, C.

1:25,000 Explorer [Second Series]:

102	A1	<i>Land's End, Penzance & St Ives</i> [renumbered]	(4/98)
103	A1	<i>The Lizard, Falmouth & Helston</i> [renumbered]	(5/98)
119	A	<i>Meon Valley, Portsmouth, Gosport & Fareham</i>	(3/98)
122	A	<i>South Downs Way, Steyning to Newhaven</i> [renumbered]	(4/98)
123	A	<i>South Downs Way, Newhaven to Eastbourne</i> [renumbered]	(4/98)
130	A	<i>Salisbury & Stonehenge</i>	(3/98)
132	A	<i>Winchester, New Alresford & East Meon</i>	(3/98)
139	A	<i>Bideford, Ilfracombe & Barnstaple</i>	(3/98)
141	B	<i>Cheddar Gorge & Mendip Hills West</i>	(4/98)
142	B	<i>Shepton Mallet & Mendip Hills East</i> [renumbered]	(5/98)
153	A	<i>Weston-super-Mare & Bleadon Hill</i>	(3/98)
157	A	<i>Marlborough & Savernake Forest</i>	(3/98)
165	A	<i>Swansea</i>	(3/98)
167	A	<i>Thornbury, Dursley & Yate</i>	(3/98)
168	A	<i>Stroud, Tetbury & Malmesbury</i>	(3/98)
169	A	<i>Cirencester & Swindon</i>	(6/98)
239	A	<i>Lake Vyrnwy & Llanfyllin</i>	(3/98)

1:25,000 Outdoor Leisure Maps [Second Series]:

4	A	-	<i>The English Lakes - North West</i>	(3/98)
5	A	-	<i>The English Lakes - North East</i>	(3/98)
6	A	-	<i>The English Lakes - South West</i>	(3/98)
7	A	-	<i>The English Lakes - South East</i>	(3/98)
17	B	-	<i>Snowdon & Conwy Valley</i>	(3/98)
18	C	-	<i>Harlech, Porthmadog & Bala</i>	(3/98)
23	C	-	<i>Cadair Idris & Bala Lake</i>	(3/98)
29	A	-	<i>Isle of Wight</i>	(4/98)

The following are announced for publication: proposed publication dates are given in brackets:

1:50,000 Landranger (Second Series)

33	C	<i>LochAlsh, Glen Shiel & Loch Hourn</i>	(8/7/98)
79	C	<i>Hawick & Eskdale, Langholm</i>	(15/7/98)
152	C1	<i>Northampton & Milton Keynes, Buckingham & Daventry</i>	(15/7/98)
172	C	<i>Bristol & Bath, Thornbury & Chew Magna</i>	(15/7/98)
95	B	<i>Isle of Man</i>	(22/7/98)
171	C	<i>Cardiff & Newport & Pontypool [sic]</i>	(22/7/98)
5	B	<i>Orkney, Northern Isles</i>	(29/7/98)
99	C	<i>Northallerton & Ripon, Pateley Bridge & Leyburn</i>	(29/7/98)
193	C	<i>Taunton & Lyme Regis, Chard & Bridport</i>	(5/8/98)
7	B	<i>Orkney - Mainland - Southern Isles</i>	(19/8/98)
182	C	<i>Weston-super-Mare, Bridgwater & Wells</i>	(19/8/98)
6	B	<i>Orkney – Mainland</i>	(26/8/98)
113	C1	<i>Grimsby, Louth & Market Rasen</i>	(26/8/98)
114	B	<i>Anglesey</i>	(26/8/98)
167	C	<i>Chelmsford, Harlow & Bishop's Stortford</i>	(26/8/98)
88	C1	<i>Newcastle upon Tyne, Durham & Sunderland</i>	(9/98)
25	B	<i>Glen Carron & Glen Affric</i>	(9/98)

1:25,000 Explorer [Second Series]:

154	A	<i>Bristol West & Portishead</i>	(15/7/98)
179	A	<i>Gloucester, Cheltenham & Stroud</i>	(29/7/98)
183	A	<i>Chelmsford & The Rodings</i>	(29/7/98)
192	A	<i>Buckingham & Milton Keynes</i>	(29/7/98)
198	A	<i>Cardigan & New Quay /Aberteifl a Cheinenewydd</i>	(29/7/98)
195	A	<i>Braintree & Saffron Walden</i>	(5/8/98)
166	A	<i>Rhondda & Merthyr Tydfil</i>	(26/8/98)
182	A	<i>St Albans & Hatfield</i>	(26/8/98)
185	A	<i>Newcastle Emlyn</i>	(2/9/98)
152	A	<i>Newport & Pontypool</i>	(9/98)
156	A	<i>Chippenham & Bradford-on-Avon</i>	(9/98)
158	A	<i>Newbury & Hungerford</i>	(9/98)
159	A	<i>Reading</i>	(9/98)
160	A	<i>Windsor, Weybridge & Bracknell</i>	(9/98)
170	A	<i>Abingdon, Wantage & Vale of White Horse</i>	(9/98)
189	A	<i>Hereford & Ross-on-Wye</i>	(9/98)

The following 1:25,000 Pathfinders have recently been officially withdrawn from publication (though residual stocks of some sheets may remain on sale); as a result this series has been completely superseded in the area south of northing 160 on the National Grid:

566-568, 575-577, 625-627, 635, 636, 647, 669, 736, 867, 1107, 1127, 1132, 1133, 1151, 1152, 1169, 1181, 1185 and all remaining sheets in the range 1193-1372.

Ordnance Survey of Ireland

The following 1:50,000 Discovery series sheets have recently been published: Sheets 46, 52, 53 (all as 'First Edition').

The following 1:250,000 Holiday map sheets have recently been republished using digital data: *East; North; South; West*.

The Godfrey Edition

The following were published by Alan Godfrey Maps between 23 March and 1 July 1998. Dates following sheet numbers are those of survey or revision; bracketed dates thus (1/98) are those of publication.

1:63,360

England	19	1866	[1856-61]	<i>Allendale & Hexhamshire</i>	(7/98)
England	269	1887	[1863-74]	<i>Windsor Forest</i>	(6/98)

1:2500 reduced to 1:4340

Ayrshire	27.14	1908	<i>Prestwick</i>	(6/98)
Brecknockshire	47.07	1915	<i>Brynmawr</i>	(4/98)
Derbyshire	5.15	1896	<i>Birch Vale</i>	(6/98)
Lancashire	72.14	1908	<i>Waterfoot</i>	(3/98)
Lancashire	95.03	1927	<i>Little Lever</i>	(3/98)
Lancashire	95.04	1927	<i>Radcliffe</i>	(6/98)
Lancashire	95.06	1907	<i>Stand & Outwood Gate</i>	(7/98)
Lancashire	99.11	1906	<i>Aintree</i>	(4/98)
Lancashire	107.04	1906	<i>St Helens (SW)</i>	(6/98)
Lancashire	110.06	1904	<i>Carrington</i>	(4/98)
London	1	1894	<i>Lower Edmonton</i>	(5/98)
London	2	1894	<i>Edmonton (Pickett's Lock)</i>	(5/98)
London	4	1894	<i>Edmonton (SE)</i>	(6/98)
London	75	1914	<i>Westminster & Victoria</i>	(4/98)
Middlesex	11.01	1895	<i>Burnt Oak & Little Stanmore</i>	(4/98)
Northumberland	46.04	1896	<i>Amble</i>	(5/98)
Suffolk	10.04	1904	<i>Lowestoft (North)</i>	(7/98)
Suffolk	10.08	1904	<i>Lowestoft (South)</i>	(6/98)
Surrey	13.08	1894	<i>Beddington Corner</i>	(4/98)
Surrey	14.06	1911	<i>West Croydon & Selhurst</i>	(6/98)
Surrey	14.07	1911	<i>Croydon (Woodside)</i>	(3/98)
Wiltshire	20.14	1899	<i>Chippenham</i>	(3/98)
Worcestershire	4.10	1901	<i>Stourbridge (North) & Amblecote</i>	(6/98)

Richard Oliver

Centres of Countries

Michael Holroyd

In his response to Mr Hunt's question about the centre of London (*Sheetlines* 51) Mr Smith raises some interesting general questions about 'centres' of countries and of areas in general, as well as introducing a few misconceptions. In discussing these, I shall, like Mr Smith but unlike Sir Charles Arden-Close, ignore the curvature of the earth and any inaccuracies introduced by map projections.

Mr Smith points out that the points which Sir Charles found were in fact what are generally called the centres of gravity of the shapes of the countries on the map. Sir Charles may have avoided this term because strictly it can be defined only where the gravitational forces can be assumed to be parallel over the area concerned, which would be true for his sheet of cardboard but not for an actual country. His centres could be referred to as 'centres of mass', or perhaps more appropriately for plane areas as 'centroids'.

The centroid of a plane area is best thought of as representing the mean position of the points in the area. Its distance from any straight line in the plane not intersecting the area will be the mean distance of the points in the area from that line. This property probably makes it the best candidate to be considered the 'centre' of an irregular area. It also has some other convenient properties, but does not in general have all the properties of the centre of a regular area.

On the subject of methods of estimating the position of a centroid, Mr Smith rightly points out that the cut-out figure of the area could in principle be balanced horizontally on a vertical point as an alternative to being suspended in a vertical plane in the traditional method, although this might prove awkward in practice. Another method would be to balance the shape horizontally on a knife-edge in several orientations and find the point of intersection of the lines of balance.

Another method suggested by Mr Smith (involving partial immersion of the cut-out figure in liquid) depends on the assumption that straight lines through the centroid divide a figure into two parts of equal area - an assumption which has the support of the Oxford English Dictionary (see 'centre of mass'). Nevertheless, it is false in general. In a triangle, for instance, a line through the centroid parallel to a side divides the area in the ratio 4:5. This can easily be seen for an equilateral triangle by dividing it into nine equal smaller triangles as in Figure 1, where G must be the centroid by symmetry. The three lines parallel to the sides of the triangle which divide it into two parts of equal area (not shown) will each pass between the centroid and the corresponding side, and will not meet at a point.

One of the less desirable properties of the centroid as the centre of a country is that if the boundary is concave (with 're-entrants') the centroid may lie outside the country. Mr Smith rightly points out that this occurs with an annulus or ring-shaped area, but he is wrong in thinking that if a 'C' is joined up to make an 'O' the centroid will suddenly jump from the mid-point of the

arc to the centre of the circle, which he claims demonstrates 'the absurdity of the concept of a geographical centre'. In fact the centroid of the almost-closed 'C' will be very near to the centre of the 'O'.

Mr Smith also refers to the case of a country which includes off-shore islands, and suggests that to find the centre one has to include arbitrary intervening areas of sea.

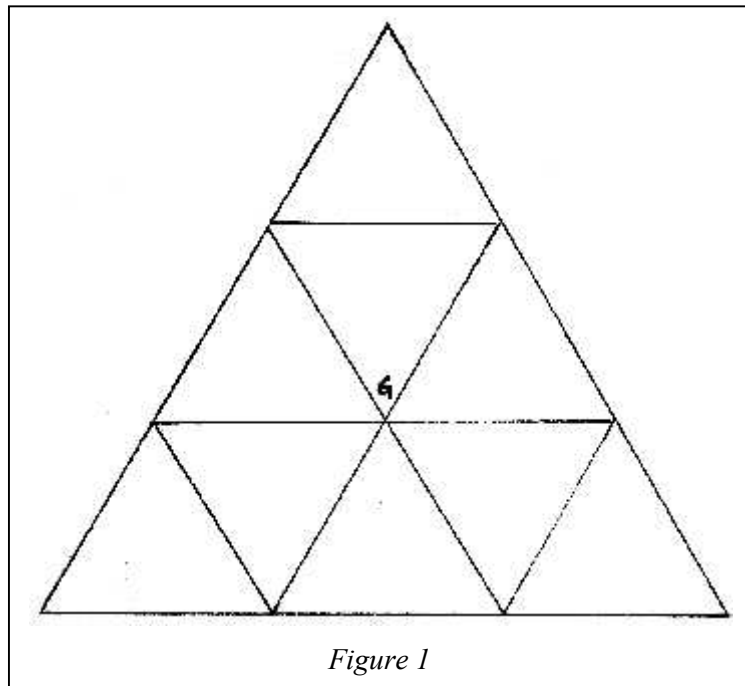


Figure 1

The inclusion of islands will certainly cause practical problems with the mechanical balancing methods of finding the centroid, but in principle the separate components could be attached to a sheet of negligible weight or connected by light struts. However, this Heath Robinson image really draws attention to the inherent crudity of these physical methods, and points the way to less entertaining but more efficient, accurate, and versatile methods based on calculation.

I have no information other than that given in *Sheetlines* 36 about the digital method used by the OS in 1988, when it claimed to have left the 'sticks and strings' era behind it. However, I think that Mr Smith must have misunderstood the method when he suggests that the position of the centre of Great Britain, including the 401 principal off-shore islands, was obtained by enclosing the area within rectilinear boundary lines and finding the intersection of the diagonals. The simplest digital method would be to represent the areas concerned approximately by a set of squares of a fixed size - the National Grid is tailor-made for the purpose. If 1km squares were used, there would be about 227,000 of them, providing an excellent approximation to the form of Great Britain and its islands. It is then straightforward to find the arithmetic mean of the eastings and northings of the centres of these 1km squares, giving the grid reference of the centroid. No doubt a computer would help; but the task would be quite feasible by hand. The method works equally well whether the country consists of one connected area or many separate ones.

To illustrate the procedure, I have made such a calculation myself. Since, unlike the OS researchers, I am an unpaid amateur, I have used 22 100km grid squares, as shown in Figure 2, rather than 227,000 1km squares. Each 100km grid square was included if at least half of its area consisted of land (some borderline decisions may be open to question). The resulting averaged grid reference, to the nearest 10 km, was at SD 77, near Ingleton. This seems to be

about 20 km north of the position obtained by the OS (near Slaidburn), by what was presumably a much more accurate calculation.

Mr Smith ended by suggesting that a possible use for the centroid of a country might be as a site for some major national facility (how about a Millennium monument?). The centroid is actually the point which minimises the mean squared straight-line distance from all points of the country. Whether this would be an appropriate criterion is perhaps a question beyond the scope even of *Sheetlines*.

To come back to earth - Sir Charles Arden-Close began his article reprinted in *Sheetlines* 36 by referring to the traditional competing claims of Meriden and Leamington to be at the centre of England. The points in question are Meriden Cross (SP 245820) and the Lillington Oak (SP 328675) (*Wonders of Britain*, Eric Newby and Diana Petry, 1968). Is it possible that these points were located by physical or arithmetical methods from some early maps of England? Perhaps someone may like to investigate.

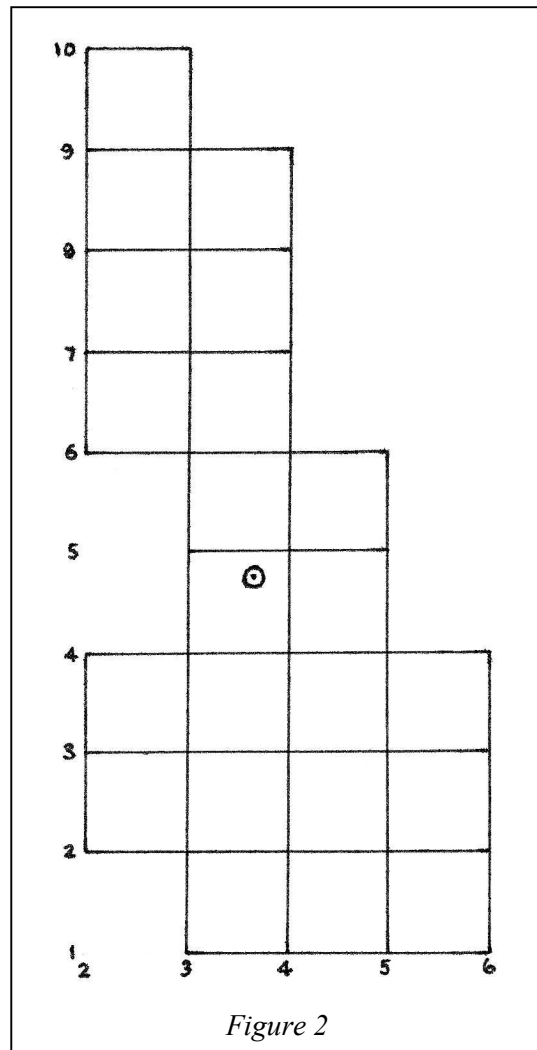


Figure 2

The Centre of London- the OS's official answer?

Jon Risby

The British Tourist Authority's Helpdesk recently received the following query from an American who was shortly to visit the UK.

'When my wife and I were in Paris, we found a brass plaque set in the ground in front of Notre Dame. It is called point zero. From this point, all official measurements are taken. Makes sense. A few days ago in Washington DC we found the same thing, only its a pretty good sized milestone instead. Well, now that we have pictures at two zero points, the question arises as to where it is in England. If you could let me know, it would be a nice addition to what is turning out to be the start of a somewhat bizarre collection.'

The BTA were at first a little stumped as to how to answer the query. They tried the National Heritage Library, who couldn't help; they tried the office of the Mayor of London and the Guild Hall - again to no avail. Then someone suggested they rang the Ordnance Survey's Helpdesk. The OS's answer was that measurements were taken from the King Charles Statue, outside Charing Cross Station in the Strand.

Perhaps this can be said to be the centre of London?

Letters

As an older new member, I would like to congratulate you on your *Sheetlines* publication. Having been involved with Ordnance Survey mapping since the early 1950s, from hiker, cyclist, motor cyclist to aerial photographic survey for mapping (abroad) and since the 1980s lecturing and organising the college mapping resources, I am delighted to see so many other enthusiasts in your membership list.

I may be able to cast a little light on John Coles (*Sheetlines* 51) strange story regarding the hamlet of Twenty on the A151, between Bourne and Spalding. I spent some time, whilst based nearby in the Air Force exploring the Fens, I was told that the name came from the location of Twenty which stood near the twenty foot drain with its confluence with the South Forty Foot Drain to the north-east. There are two farms called Forty Foot on the latter drain to the north.

I read Richard Oliver's paper 'Ordnance Survey maps for the cycle-tourist' with great interest and some understanding. Having been there in the 1950s cycling in Wales and the South-West. I am afraid I chickened out in trying to cover the area at 1:63360 and went for Bartholomew's Half-inch. I also carried Inglis's *Contour Book of England & Wales - Western Area* which gave relief profiles of the vast majority of routes at that time. This was a pocket book taking up very little space and was found to be essential in planning the next day's itinerary.

Alan Leather

Since becoming a member of the Charles Close Society I have been fascinated by the level of detail applied to the study of Ordnance Survey maps. My interest is largely through a deep interest in railways.

In addition to the comments made in *Sheetlines* 51 by John Cole in his article on Railways and Maps, surely the OS was going too far in trying to apportion ownership to railway lines on One-inch maps. They did not give church denominations, public house names nor indicate whether bus services plied for trade on a particular road. It should be enough to indicate on the railways on One-inch maps that there are stations and that they are open or

closed for business together with representation of all other visible features. Maybe, bus stops should be indicated on larger scale maps.

However, this is only a prelude to venting my wrath at the apparent downgrading of railway features which appears to have occurred between the printings rev. A and rev. C/* of Sheet 112. In the Seventh Series One-inch maps railways were shown as Multiple Track, Single Track, Mineral Line, Siding or Tramway and Narrow Gauge. The first and the last I have no quarrel with as they are representative of what is on the ground. It is the apparent change from Single Line representation to Mineral Line or Siding on many Colliery lines on Sheet 112 (and maybe others) that has disturbed me. Coming upon a railway formation one can only see whether it is multiple track, single track, narrow gauge and probably tramway if that was meant to mean that tramcars plied for trade. The distinction between single track with regular passenger and goods service, a standard gauge mineral line to a quarry or pit or a very long siding is not apparent to the onlooker, and therefore I believe common representation should have been applied. Was there trying to be a distinction made between British Railways track and National Coal Board or other owner's track?

Tim Hadfield

On Landranger 172, Bristol and Bath of Jan. 1996 the new Second Severn Crossing is shown as complete, i.e. the new bridge and the re-routing of the M4. But this was not open until June 1996, five months after publication. The M49 between the Second Severn Crossing and Avonmouth is shown as complete, but this road was not open until July 1996.

Would this new data be added on the basis of planned completion dates that have subsequently slipped or on the basis of being 'one jump ahead'.

Also on Landranger 172 in updating from the April 1992 edition at least two village names have disappeared. Barrow Gurney (at 528 679) and Dundrey (552 669) have been deleted.

Are the names now applied/produced from a separate computer programme to the mapping data? These village names still appear, in slightly different positions, on Explorer 155, Edition A of 1997, so the printing process worked in this case. Why not on Landranger 172?

Donald C. Clayton

OS Maps... and Supermarkets?

John King has written in pointing collectors of OS ephemera in the direction of their local Sainsbury's supermarket. The link is that Sainsbury's have published a directory of their stores entitled *Fresh ideas. Your nearest Sainsbury 's home and away*, which includes a road map produced by Ordnance Survey's Solutions Centre.

Richard Porter responds to Richard Oliver's notes in Sheetlines 51 about the sizes of folded maps

Pocketing a map

Richard Oliver comments (*Sheetlines* 51 page 21) on folded maps that are too big for a coat pocket or cycle pannier. My own criterion is, rather, the width of the inside pocket of a sports jacket, a safer haven than a side pocket. It is usually 125-130mm wide, though it used to be up to c. 140mm.

Compare those Figures with the width of a folded OS One-inch or 1:50 000 in its covers:

Third Edition Large Sheet Series

White cover with location map or sheet name, e.g 1907-09	96mm
--	------

Popular Edition

Folded into 8 panels	97mm
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Folded into 7 panels	109-111mm
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Fifth Edition

	108-112mm
--	-----------

New Popular

	124-125mm
--	-----------

Seventh Series

Early Short covers	126mm
--------------------	-------

Later longer covers	127-128mm
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Landranger

	132-133mm
--	-----------

In order to take the thickness of a folded map into account, a further 4-8mm should be added to the widths before comparing them with the pocket sizes.

It is then clear that the last map, in the inexorably widening sequence, that had much chance of fitting without damage into the pocket was the New Popular. The 'maximum' that I would advocate is therefore distinctly less than Dr Oliver's.

Richard T Porter

Richard Porter also adds to Richard Oliver's review of *Mapping for Development: The contributions of the Directorate of Overseas Surveys* in Sheetlines 48

Histories of DOS

In his review, Sheetlines 48 (April 1997) pp 68-70, of Gerald McGrath's *Mapping for Development: The contributions of the Directorate of Overseas Surveys*, Richard Oliver notes on p.70 that the map extracts 'appear to have been prepared from original reproduction materials'. In fact, he could have gone further and, for the record, I shall do so: they were cut from stock copies of original printed map sheets. There are three clues:

- i) the comment on the list of extracts (facing p.264) that 'it has been necessary to obtain extracts from several map sheets' (i.e. where DOS did not have enough stock of any one sheet, as can be deduced from the lack of a sheet number for several of the extracts;

- ii) the varying colours and weights of the paper used - the thinnest and greyest is the oldest!
- iii) it may well be that every copy of McGrath's monograph has a unique combination of prints; the two that I have just compared have not a single extract in common. And one does not need two copies, as the 'perfect' binding of a working copy will soon begin to disintegrate.

I hope that I may list here the few minor but still significant errors in the book:-

- p. 130: The Sarawak sheet number is 2-111-16 not 2-III-16;
- p. 143: Note 1: Mr Rainsford's initials were H.F., though his signature was indistinguishable from H.J.R.!
- p. 149: Miss Windsor was the third Chief Computer - the first was C.G. Fannin, 1946 - 47;
- pp 20, 21, 182: According to the DOS Annual Report 1966, it was the Pool of Soil Scientists (not Surveyors) that was assimilated in FLU Section.

Richard T Porter

Wayne Debeugny, who works for the Ordnance Survey writes.

A Map in my Collection 21, Sheetlines 49

With regard to the above, in which 'OS Studiosus' posed the question; 'really a reduced map area?', I perused Issue 50 for an answer. Having seen nothing, I decided to try and do the decent thing.

Before the current representation of the area coverage diagram on the *Pathfinder's* front cover came in, it was shown using an extract from the *Route Planning Map* overprinted with the sheetlines of the map and its neighbours. Some of the issues with this form of area coverage diagram had the wording 'Reduced map area' - the *Padstow and Wadebridge* sheet was one of them. The note ceased to be used from December 1985.

I hope that this clears up the matter.

Wayne Debeugny

Brian Dobbie writes in reply to the question raised by Hugh Brookes in Sheetlines 51, about finding old OS maps.

My first thought is that the Society is to some extent not providing the service to new members that I found readily available when I joined about five years ago. In particular there are the Society publications. Those Society publications that are still available have not been mentioned in *Sheetlines* for several issues, nor has the availability of back numbers of *Sheetlines*. These are essential sources of information and would answer the first queries raised by Hugh Brookes.

With regard to finding Third Edition maps in secondhand bookshops the answer is yes but (very) rarely. Other sources are 'Book Fairs' and 'Antique and Collectors' or just 'Collectors' fairs. Collectors fairs can be found advertised in the local papers generally on a Friday night. Finding the right fairs takes practice. Avoid fairs billed as 'Quality Events' as they are full of secondhand crockery and furniture. Similarly for 'Date Lined' events. Maps are generally a side line to most dealers and are often found buried in boxes of paperwork under the dealers' stalls.

Book fairs can be a better bet. These are local events or organised by the Provincial Booksellers Fairs Association (PBFA) A copy of their calendar can be obtained from the PBFA at The Old Coach House, 16 Melbourne Road, Royston, Herts, SG8 7BZ, telephone 01763 248400. Specialist maps dealers can be found at some of these events.

As regards prices, dealers' lists such as David Archer's, provide a guide. However, some dealers have excessive ideas as to the value of their stock. Most dealers are quite friendly and often give a discount if asked, especially if you are buying several maps. Be prepared to pay the full asking price for early material.

The geographical distribution of maps will not be found to be uniform across the country. For example Popular Edition maps are difficult to find for the eastern side of the country, the extreme north of England and for 'Industrial' areas. Popular editions of 'Holiday' areas are relatively common. For the Third Edition maps of the north are found relatively more frequently but overall quantities are small.

Brian Dobbie

Two Press Notices from Ordnance Survey which will be of interest to members

OS names new Director General

The new Director General of the OS is to be Dr Geoffrey Robinson, CBE, FEng. The OS made the announcement on the 10 July and Dr Robinson will succeed Professor Rhind when he retires in October. The appointment has been made by the Government Minister responsible for the OS, Nick Raynsford.

Dr Robinson is former Director of Technology of IBM UK Ltd. He has been a Non-Executive of the OS for the last 18 months. He has previously served the OS on the Science and Technology Advisory Committee from 1986-89.

Ordnance Survey maps out record year

The OS has recently published its Annual Report 1997/98. It showed that turnover increased by 8.7% to a record of £74.8million. Operating costs rose to £77 million so the Agency covered 97% of its costs. However the report points

out that the OS achieved this high percentage in part because it was not allowed to invest more of its increased earnings on key services and equipment, having to return £3.8 million to HM Treasury to help fund other Government programmes.

The number of staff is 1846, almost 500 less than five years ago. The report is published by the Stationary Office Ltd, price £12 (which includes a CD-Rom featuring extensive highlights from the OS website). Enquiries about availability of the report should be made of The Publications Centre on 0171 8730011.

Editor's note - the full text of these notices is available on the OS's website - www.ordsvy.gov.uk

From the Observer of April 16th 1922:

THE NEW ORDNANCE MAPS

LONDON DISTRICT, EXMOOR AND DARTMOOR

(By a Correspondent)

In readiness for Easter and the Spring the Ordnance Survey has just issued three new sheets of the new one-inch-to-the-mile Tourist District Maps: London and the country around, Exmoor, and Dartmoor. The sheets already issued are: the New Forest, the Lake District, and the Snowdon country.

These maps are without doubt the most beautiful ever issued, and every class of tourist must be delighted with their completeness, clearness, and simplicity. They exhibit certain features new to the series, and they differ in certain other points from the form of the present large-sheet series with which for many years travellers have been familiar. The features most useful and noteworthy are the showing of altitude both by layer-colouring and by contours spaced at intervals of 50ft. (in the existing maps the contours are at intervals of 100ft) and slopes are indicated by hatching and the colour system for roads and rivers. First-class roads are shown in red, second-class in brown, and rivers, streams and water generally in blue. The altitude colours are green and brown - green in two tones for the lower levels and brown in varying tones for the higher.

It is this system of colouring that makes the maps of such singular beauty, so that it is a delight to pore over them for their technical excellence alone, but, after all, clearness and simplicity are the virtues sought for by users and it is because the colour system is so admirably designed to set out the relief of the country that these maps will be useful to all travellers by road or footpath. Indeed, the Exmoor and Dartmoor maps have almost the effect of relief maps, so clearly are the blocks of country indicated by the severing rivers in blue, the heights by the increasing darkness of the tone, and the slopes by the thickly

clustered contour lines. Motorists should find it particularly easy to visualise from these maps the lay of the country they are passing through.

Londoners will be interested first in the map of the London district. The country depicted reaches on the North to Amersham, Watford, and Enfield, so that much of Epping Forest and the approaches to the Chilterns are included; on the West to Windsor Park and the Forest, and Bagshot Heath; on the South to Woking and Leatherhead, while at its south-eastern corner it includes the ridge of the North Downs at Tatsfield; and on the East to Chislehurst, Orpington and Knockholt and Chigwell-row, Hainault Forest. The layer colouring is better adapted for mountainous districts than for the closely marked surfaces of the home counties, and the one defect in the system is that it is not easy to discover the exact boundaries of parks and commons, as e.g. at Richmond and Windsor. Inasmuch as the colour shadings are varied to suit the heights of the country depicted (in the Dartmoor map each tone is used for 300ft. altitude and in the London district for different and varying altitudes) it would be helpful if a colour key could be printed in the margin.

The Exmoor map covers the whole hinterland of the North Devon and Somerset coast from Ilfracombe to Blue Anchor Bay for a depth of more than twenty miles, so that it includes not only the whole of Exmoor but the country in the rear for several miles and the course of the River Exe to within a mile of Tiverton.

The Dartmoor map covers an area of twenty-eight miles by twenty-two miles and includes the whole range of the moor, extending to Okehampton in the North. It is also wisely planned to include the whole of Plymouth and Devonport, so that it will serve for all exploration of the moor based on a sojourn at those towns.

These wonderful maps are priced, mounted on linen, and folded, at 3s. each.

(Thanks to David Archer)

Really?

David Archer has also discovered this interesting entry in the :-

LIST OF MEMOIRS, MAPS, SECTIONS, &c
Published by the GEOLOGICAL SURVEY OF GREAT BRITAIN
and the
MUSEUM OF PRACTICAL GEOLOGY
To 30th June 1928

‘Index of Colours used in the Six-inch Maps of the North Staffordshire
Coalfield. Price: Coloured, 1/9; Uncoloured, 1/0’