



# *Sheetlines*

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

This edition of *Sheetlines* was published in 1996 and the articles may have been superseded by later research.

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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.

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## Meetings

### Notice of the Annual General Meeting

**Notice is given that the Annual General Meeting will be held on 18th May, 1996, at Birkbeck College, London, commencing at Noon.**

Professor D.W. Rhind, Director General, Ordnance Survey, will address the meeting at 1100 on **History and the Ordnance Survey**.

Coffee will be served from 1030

The annual Map Market will be held in the afternoon, following lunch.

Full details and AGM Agenda are enclosed with this issue of *Sheetlines* together with a map showing the location of Birkbeck College.

Please note the need to inform the Honorary Secretary (using his *new* address) of your requirements for lunch and table requirements for the afternoon Map Market.

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### Oxford

The next Oxford Seminar in Cartography will be held on **Thursday, 23rd May, 1996**.

#### **Maps in the collection of Sir Robert Cotton, 1571–1631**

by Peter Barber, Deputy Map Librarian, British Library

Commencing at 5 p.m., the meeting will be held in the Schola Astronomiæ et Rhetoricæ, Schools Quadrangle, Bodleian Library, Oxford.

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### Hendon

A visit has been arranged to the **RAF Museum at Hendon** on **Saturday, 8th June, 1996**.

Starting at 1400, the visit is intended as a follow up to Tim Nicholson's talk on aviation maps at the last Shap Meeting. Members wishing to attend should contact the Honorary Secretary at his new address.

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### Branston

The next meeting of the Midlands Group will be on **Tuesday, 25th June, 1996**, at 7.30 p.m.

The topic will be 'Large Scale Maps of the area within 25 miles of Branston.

Details of the meeting venue have been given in previous issues of *Sheetlines*, and other details can be obtained from Lez Watson, telephone: 01283 541303.

(The autumn meeting will be held on Tuesday, 29th October, the speaker yet to be arranged.)

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# Sheetlines

Published by THE CHARLES CLOSE SOCIETY  
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Sheetlines 45

April, 1996

## Editorial

After fifteen years of existence it is undeniable that the Charles Close Society is here to stay. It is in a healthy position with nearly 350 members and what is interesting, compared with other organisations and clubs, is that we do not suffer an annual turnover of members who join and then leave after a year because the Society doesn't meet their needs.

In no small way, the founding of the Charles Close Society and its development is due to Yolande Hodson who has given unstintingly of her time and energy. She was the first Editor of *Sheetlines*, laying foundations upon which subsequent Editors have been able to build, as well as the Society's Honorary Secretary, which post she held until 1991. She has been Chairman of the Charles Close Society since 1992. This year, Yolande is standing down at the Annual General Meeting, but it is pleasing to know that she is still willing to be a member of the Publications Committee.

It is also pleasing to note that the pre AGM talk will be given by the Director General of the Ordnance Survey, Professor David Rhind, on the subject of 'History and the Ordnance Survey'. Perhaps at some time in the future we will have an address on 'The Charles Close Society and the history of the Ordnance Survey'. The Society has produced a range of Monographs and there are proposals for a number of other publications.

On behalf of the members of the Society I would like to thank Yolande for her hard work and dedication.

## Marginalia

### *Eila Campbell, 1915–1994 and Guy Messenger, 1920–1993*

Among the several bodies to which both Eila Campbell and Brian Adams belonged, as well as the Charles Close Society, was the English Place-Name Society, and it was always a surprise to Brian that there was no other familiar name from the map world among the members of the latter Society. When Brian mentioned this to Eila's brother, Professor Peter Campbell, he said that there was a matter on which Brian might be able to help him. The most recent publication of the English Place-Name Society, which had been despatched to Eila before news of her death

reached them, was *The Place-Names of Rutland*, a massive "triple volume" equivalent to three of the Society's annual publications.

When Peter Campbell asked Brian Adams if he could suggest a suitable home for this book, it did not take him long to think of our own Guy Messenger, an enthusiastic adopted son of that county, who had taught at Uppingham School for over thirty years and remained a resident of the town for the rest of his life, dying just eight months before Eila. A telephone call having established that

Uppingham School library had not then purchased a copy of the place-name volume, Peter Campbell readily agreed that the school would provide a most appropriate home for the book, in joint memory of two of our

Society's most senior and well loved members.

Professor Campbell has accordingly presented *The Place-Names of Rutland* to the library, and the librarian is arranging to have a suitable inscription inserted in the front.

### ***Honorary Secretary's change of address***

Rob Wheeler, the Honorary Secretary is about to move during the period between the publication of this issue of *Sheetlines* and the AGM. Members who need to write to him

should use his 'old' address, as given on the rear cover of previous issues until 30th April, and from 11th May his new address as given on the rear cover of this issue.

### ***Subscription reminder***

Members are reminded that subscriptions were due on 1 March. Roger Hellyer, the Membership Secretary, requests that *those*

*who have not yet paid should do so without delay.* The rates were listed in *Sheetlines* 44.

### ***Properly addressed***

*Apropos* the report in *Sheetlines* 44 of the Metropolitan Police's locational difficulties and of their adopting the OS's Address-Point:

this database has now been completed for the whole of Britain, and contains every address with its precise grid reference.

### ***Apology***

I must apologise for the error which occurred in the list of contents on the cover of *Sheetlines* 44, where Colonel Richard Arden-

Close was unintentionally knighted. I hope that the error has not caused any distress to his family or members of the Society.

### ***Wrong price***

In the New Books review of *The Tithe Maps of England and Wales*, Roger Kain and Richard Oliver, Cambridge University Press, 1995, (*Sheetlines* 43) the price was

inadvertently given as £35; the cost should have been shown as £135. I apologise for this mistake and hope that no members have been caused any embarrassment.

## **Ordnance Survey News**

### **'The future history of the landscape'**

In the course of delivering the first Eila Campbell Memorial Lecture, at Birkbeck College on 26 February, Professor David Rhind, Director-General, Ordnance Survey, announced three developments. First, Ordnance Survey is preserving an annual 'snapshot' of the National Topographic

Database; the first such was made in December 1995. Second, OS is negotiating with the Public Record Office to become an official place of deposit for OS mapping. Third, from 1 April 1996 OS will begin converting all its historical map series into scanned computer form: it is intended that

deficiencies in OS holdings due to war losses, etc, with be supplied with the assistance of

the legal deposit ('copyright') libraries.

### **Ordnance Survey co-operation with Russia**

The magazine *Mapping Awareness* for February 1996 contains the interesting news that OS and Roskartografia (the Federal Service of Geodesy and Cartography of Russia) have signed a Memorandum of Understanding, so that each can learn from the other's particular strengths. Co-operation

will include database research, intellectual property rights and the use and distribution of detailed Russian satellite images. The first joint project will be creating detailed mapping of urban and rural areas in Britain using Russian satellite photography.

*Richard Oliver*

### **The Landmark Information Group**

In recent years there has been increasing concern about 'contaminated land', where previous industrial and other environmentally unfriendly land uses may cause problems after a site has been redeveloped; for example, houses built on a former quarry which has been infilled with refuse may subside. In 1990 a register of contaminated land sites was instituted, but it was abandoned in 1993 after pressure from various interests who feared that commercial and residential property values might be very seriously harmed where there was any suspicion of previous use contaminating the land and presenting a real or possible threat to health. Whilst it is only a small minority of sites which are thus blighted, nonetheless suspicions remained, and though the central contaminated land register might have been killed off, the suspicions were not: almost overnight there arose an army of 'land use consultants', who offered a service of reporting on potential contamination in or near a development site, mainly on the basis of what was shown on superseded 1:2500 and larger scale OS maps. Most of this work is carried out using the collections of the copyright libraries, which have been placed under considerable pressure. The resulting

reports are usually illustrated by photocopies of questionable quality, and tracings.

Landmark, whose main office is in Exeter, has been set up to offer a much more refined version of this, based on access to the OS Record Map Library and the current OS Landline database, supplemented by a search of nineteenth and twentieth century trade directories such as White's and Kelly's. With the full co-operation of OS, Landmark is scanning in all the 1:2500 and larger scale mapping held by the Record Map Library, a process which began about a year ago and is expected to take another four or five years to complete, when it will be amongst the largest GIS (Geographic Information Systems) databases in Europe. Apart from having the ability to print out facsimiles of the OS mapping - which is not Landmark's main concern - the system can, and does, provide site-centred mapping, overlaid if necessary, with locations and lists of potentially contaminated sites and other environmental information, drawn from the National Rivers Authority, British Geological Survey, National Buildings Record and other sources, including two of Landmark's own databases, one listing petroleum storage sites and the other gas works. To obtain a Landmark 'SiteCheck' report, the customer has simply

to tell Landmark where the property is situated; Landmark then faxes to them a copy of a current OS large scale map, the customer confirms that the site is correctly identified, and Landmark then searches its data, for the site and for a zone 250 metres (or larger if required) around. The finished report is delivered within ten days, or within three days if sent by express service. (Your correspondent must add that he does not know what *prices* are charged for this!) Landmark point out that they can only provide reports based on data to which they have access, and that it is up to the property owner, developer, etc, to make any further investigations, such as a site report, to establish whether a site is actually contaminated or not.

Each report includes both the relevant historic and current OS large-scale mapping

for the site and 250 metres around, and so OS benefits from exploiting both its Record Map Library and its current data. It was therefore entirely appropriate that Landmark's offices in Exeter were formally opened on 3 November by Professor David Rhind, Director-General, Ordnance Survey, who observed that of all the national mapping organisations OS was probably the most businesslike, and was now recovering about 78 per cent of its costs. No doubt Landmark are seeking to do better than that! Whilst in the short term the customers for SiteCheck will be 'professionals', it is to be hoped that in due course Landmark will be able to offer less sophisticated 'old mapping' to a wider, and less moneyed, public. Site-centred historic mapping has potentially great attractions.

*Richard Oliver*

## Meetings

### Branston, 7th February, 1996

Eight members of the Society were brave (or foolhardy) enough to venture out on a night of snow and ice to attend the Midlands Group meeting at Branston, and to show and discuss some of their Ordnance Survey maps and ephemera. After warming refreshment, the tables soon disappeared under layers of maps old and new.

At least two items related to articles in *Sheetlines* 44: a proof copy of Landranger sheet 93 with off-road cycle routes marked, and a 1928 edition of the *Homeland Handbook for Littlehampton and District*, still using a One-inch Third Edition map extract.

One-inch New Series sheets of Chatham and Portsmouth areas provided examples of apparent suppression of contours around the naval ports, presumably for security reasons.

More information on this policy would be welcomed.

Students of Northern Irish mapping were not disappointed: a 1947 OSNI street plan of Belfast at 8 inches to one mile lay beside the One-inch *Mourne Mountains* sheet of 1935, and the modern 1:25,000 *Outdoor Pursuits Map* of the same area. Other highlights included a 1921 Town Map of South Shields, and a Large Scale Indexes volume of England and Wales, slightly different to that reprinted by David Archer.

A milder evening is confidently (? *Ed.*) predicted for the groups next meeting in June, details of which are given in *Forthcoming Meetings* inside the front cover.

*Bill Henwood*

## Bath, 16th March, 1996

The Bath meeting was again held at the Manvers Street Baptist Church, a most convenient location in the centre of the city. Eleven members of the Society attended for an interesting day.

The morning talk was given by Rob Wheeler on the subject of ‘Trig. Points, Primary, Secondary and Secular’. Rob’s specific interest in this topic was aroused by one of his tours of mediaeval churches in the Cheltenham area, during which he found that churches seemed not to exist — well according to his A printing of the Seventh Series of the map — and a mushrooming of non visible trig points. He also told of ‘Up’ and ‘Down’ trig points, the explanation of which is not railway related. A resumé of his talk is included in this issue of *Sheetlines*.

Lunch was enjoyed in the church Coffee Shop, after which some members appeared to be practising for the following day’s Bath half-marathon by legging round the bookshops of in record time!

After lunch Richard Oliver talked on the difficulties of mapping disappearing coastlines, principally that of Spurn Head at the mouth of the Humber, although other areas of the east coast were included. His talk is reproduced in this issue of *Sheetlines*, and it only remains for me to say that in his usual manner, Richard included a plethora of interesting snippets, which seem to be a hallmark of his expositions.

Thank you both to Rob Wheeler and Richard Oliver for two interesting talks.

*Lionel Hooper*

## Triangulation Points — Primary, Secondary and Sacred

Rob Wheeler

Until two years ago I had assumed that the triangle-with-dot symbol on the One-inch 7th series sheets denoted a triangulation pillar. I wasn’t *far* wrong; that was how it was used on the later sheets, and it seems to be what the Ordnance Survey had intended all along. However, on finding that on sheet 144, edition A, a significant number of triangles appeared to represent *churches*, I realised that things were more complicated and proceeded to delve more deeply. This paper is the result.

The policy on the representation of trig points seems to have been decided in the late summer of 1950. There were two main questions to be addressed:

- (a) Should non-pillared trig point be shown?
- (b) Should ‘up-stations’ be shown?

‘Up-stations’ are features whose position is determined with such accuracy that they can be used in the same way as normal trig points (‘down-stations’), except that bearings are taken *to* them, not *from* them. Church spires are often used for this purpose. An agreement appears to have been reached between Brigadier Willis (of D Mil Survey) and Brigadier Metford (of OS) on 5th September, 1950.<sup>1</sup> On the One-inch maps all pillared trig points would be shown, and no others. On the 1:25,000 maps, D Mil Survey wanted all trig points, old or new, visible on the ground, to be shown, and those not visible on the ground to be omitted. The OS agreed to keep this in mind as a target.

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<sup>1</sup> OS 1/785 minute 142A. I am indebted to Richard Oliver for this information and that from the following two footnotes.



Unfortunately, there was one further issue: on 25th August, 1950,<sup>2</sup> Supt Small Scales Drawing I wrote to ‘OSD’ asking whether 3rd and 4th order trig points should be shown as well as 1st and 2nd order ones. The following day, Deputy Director Small Scales (DDSS) wrote to Director Map Production (DMP) expressing the view that as not all rivers and ponds are shown, so it would not cause difficulty if tertiary pillars were omitted.

This would appear to be a curious argument; it is apparent on the ground whether a river or pond is such a size that one might expect it to be shown, whereas a rambler on a misty hill top can hardly be expected to know whether the pillar he has stumbled across is secondary or tertiary. Indeed it strikes me as the sort of argument that is deployed in substitution for another reason, more cogent, but much less fit to be put forward. More of this later.

DMP did not reply until 2nd October, 1950,<sup>3</sup> and then in unhelpful terms: pillared trig points were to be shown; for non pillared trig points, spot heights only were to be shown. This first part was simply a summary of the agreed policy; the second part seems to have neglected the possibility of trig points on buildings. From what follows, it would seem that DDSS took the absence of any qualification about which order of trig points this applied to as an endorsement of his proposal to show just primary and secondary ones. That, at least, was how the maps appeared for the first few months; the legend reads “Trigonometrical pillar (primary and secondary)” (or sometimes *station* instead of *pillar*) and there are correspondingly fewer triangles—with-dot on the face of the map.

The first sheet to show a change from this was 116 (publication announced 5/53);

the legend now read “Triangulation Station (primary, secondary and tertiary)” and the symbols appear on the map with their expected frequency. It would be nice to suppose that the Ramblers Association had complained. However, the outline drawing for this sheet was signed off in 5/52, just two months after the first production sheet (142) had been printed and four months before the publication of the latter was announced, so the deviation from the specification seems to have been picked up internally. One assumes that a forceful message went down the chain, that henceforth *all* trig points were to be shown. All trigs, or all *pillared* trig points? From what happened subsequently, it would seem that orders once again lacked the necessary clarity.

For sheet 116 there was no problem; it covered hill country in which all trig points were pillared. It seems to have been followed by sheet 143, which covers the area around Cheltenham that started my investigation. Several church towers had served as trig points; there was no symbol at the 1-inch scale for this; assuming that the instruction had reached the draughtsmen as ‘Show all trig points’, what could they do but show the triangle and omit the church symbol? Sheets after 116 omit the “(primary, secondary and tertiary)”; presumably the presence or absence of quaternary trig points was not thought to be a matter of great moment to the map-buying public.

The situation continued for almost a year with fifteen maps being issued to this specification. (Details are given in the appendix.) The last of these was sheet 121 (publication announced 4/54). This sheet, it is said, did attract adverse comment, from the Leicestershire Archaeological and Historical Society, incensed that the county’s most important Anglo-Saxon church (Breedon-on-the-Hill) should have supplanted by a mere concrete pillar. Again, whilst the

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<sup>2</sup> OS 1/785 minute 135 (1)A.

<sup>3</sup> OS 1/785 minute 145.

thought of the OS changing specification at the behest of Leics Arch and Hist Soc is appealing, the lag between the outline drawing and publication was such that the problem was almost certainly picked up internally.

This time the OS seems to have reacted remarkably mildly. After sheet 121, no new drawing depicted churches as trig points; however, when old material was used on overlaps such depiction was acceptable. Moreover, trig points on secular buildings continued to be shown. Because the triangle symbol could overlie the grey-green fill without giving a congested appearance<sup>4</sup>, it is easy to suppose that there was considered to be no harm in continuing to draw such trig points.

This state of affairs continued at least until some of the sheets announced in 9/54 were drawn, i.e. for a further five months. It may even have continued later; many sheets are unlikely to have trig points on secular buildings, and scanning sheets looking for them is an unrewarding job. However, it is clear that by 1957, when sheet 101 was re-issued in A/ form, a rigid policy of showing pillared trig points only was being followed. Interestingly, it was not until 1961 that the legend was altered from “triangulation station” to “triangulation pillar”.

This would seem to explain events affecting the 1-inch map. Initially, it appeared that comparison with the 1:25,000 would be helpful. After all, the 1:25,000 shared common revision material with the one inch and had symbology which could accommodate buildings which were also trig points. Closer investigation showed that the 1:25,000 suffered from three problems of its own.

1. There were two sets of symbols for trig points. The first, shown on the legend in 1948 before it was deleted to save paper, did not distinguish between down stations and up stations. When the legend reappeared in 1964 on the Scilly Isles sheet, it distinguished between trig points (down-stations in the earlier terminology) and intersection points (up-stations). The new symbols had already been appearing on the maps from at least 1956.
2. This new system, as described in the legend, made certain over-simplifications about what types of building might be used for up-stations and down-stations. Specifically, down-stations on chimneys were not allowed for; up-stations on churches with towers were to be shown as if the church had no steeple; down-stations on churches with spires as though the church had a tower only. In practice, the draughtsmen created new symbols. Chimneys as down-stations do appear (e.g. in Aldershot), as do church towers as up-stations (such as Ivinghoe with its central fleche). Both are shown by the obvious extension of the standard symbology. I have never seen a spire recorded as a down-station nor a church without steeple used as a trig point. Indeed, there is a church in Windsor with a tall fleche on the nave roof regarded as steepleless by most series, but as a spire-as-up-station by the 1:25,000.
3. The early 1:25,000 sheets that I have inspected have a distinct dearth of trig points. Many of those shown would have been invisible on the ground, e.g. because they are in the middle of roads; hardly any are on churches — I have encountered just three church spires so used prior to 1956. The implication

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<sup>4</sup> The effect on the military version with its coarse black screen for building infill is less satisfactory.

would appear to be that the trig points on the early 1:25,000 maps were taken directly from their constituent Six-inch sheets without any updating.

Now the early One-inch sheets were drawn from blues of the constituent 1:25,000

sheets, so that trig points on the 1-inch would have to be updated from the triangulation records. Perhaps *that* was why DDSS was so keen in 1950 to avoid including tertiary trig points.

***Appendix: One-inch 7th Series maps in chronological order between 3/53 and 10/54***

Maps announced from 3/53 to 10/54 are listed with their type, as follows:

- (2) Primary and secondary trig points only,
- (3) “primary, secondary and tertiary”,
- (T) at least one church shown by a triangle symbol,
- (B) trig points on secular buildings or church on overlap with earlier sheet,
- (X) no sign of non-pillared trig points.

Month	Sheets	Month	Sheets
3/53	106(2) 107(2) 115(2) 128(2)	1/54	133(T)
5/53	78(2) 116(3) 117(2) 143(T)	2/54	95(T) 120(T) 145(X) 156(T)
6/53	131(T) 155(2)	3/54	94(T) 130(T)
8/53	144(T)	4/54	121(T)
9/53	110(T) 118(T)	6/54	132(B)
11/53	111(T)	7/54	102(B) 125(X)
12/53	101(T) 119(T)	9/54	112(B) 124(B) 137(X) 146(X)
		10/54	96(X) 126(X) 148(X)

## Taking to the water: some examples of Ordnance Survey mapping of the coast by Richard Oliver

Whilst it is primarily concerned with mapping ‘dry land’ the Ordnance Survey of Great Britain of necessity must map ‘the coast’ where the land meets the sea, which last is the province of hydrographic charting. A fundamental difference between land and hydrographic survey is that the latter is much concerned with mapping depths, wrecks, rocks and other ‘invisible’ features, whereas (administrative boundaries being perhaps the most important exception) land mapping is almost wholly concerned with ‘visible’ features. Though charts do record features above high water mark, they do so only as aids to navigation: the use and purpose of hydrographic charting diminishes rapidly above low water mark, as is often apparent from their depiction of minor creeks and channels as compared with OS mapping, and land mapping is potentially of equal or greater importance for recording changes to the coast, in both its natural and cultural aspects.

The present paper does not set out to provide a comprehensive study of OS mapping of the coast: rather, it picks out a number of examples from the east coast of England where what appears on published OS mapping differs in some way, either locationally or chronologically, from ‘the truth’.<sup>1</sup> Two of the examples, Spurn Head and Orford Ness, have been studied in detail in the past, from the standpoints of both geomorphology and historical cartography: in

<sup>1</sup> For more on this (including an alternative view of some of the material covered in the present paper) see Richard Oliver, ‘The weak spot? The Ordnance Survey and the mapping of the foreshore’, *British Cartographic Society 1995 annual symposium proceedings*, (Cambridge, British Cartographic Society, 1995).

addition, both are well documented. There is therefore an alternative of sorts against which to test OS mapping.

The emphasis here is mostly on OS mapping at scales of between 1:25,000 and 1:63,360: whilst the value of larger-scale mapping as a source of record is not disputed, there is a tendency to treat all OS mapping as of potentially equal value as a historical source, within the obvious limits of scale.<sup>2</sup> Whilst this may be so for land mapping, (though it could be argued that this is an illusion fostered by a lack of both alternative mapping and non-cartographic documentation), the examples which follow suggest that smaller-scale OS mapping of the coast must be used much more critically and that, in particular, the apparent carrying forward of a feature from one apparently comprehensive revision of a map to the next should not be interpreted as indicating that that feature has not undergone alteration on the ground.

### *The surveying of shorelines*

Before the advent of air photography the surveying of shorelines was a difficult business, as some late nineteenth century Instructions to OS Surveyors make apparent. (See Box.<sup>3</sup>) It is therefore unsurprising there was a disinclination to revise shorelines on the One-inch maps. For example, in 1936 revisers were told: ‘No notice should be taken by revisers where the low water is

<sup>2</sup> J.H. Andrews, *History in the Ordnance Map* (1975, reissued Kerry, David Archer, 1993) p.11; J.B. Harley and C.W. Philips, *The historian's guide to Ordnance Survey maps* (London, 1964), chapter I; review of my *Ordnance Survey maps: a concise guide for historians* (1993) in *Cartographic Journal* 31 (1994), pp79–81.

<sup>3</sup> I am indebted to the Ministry of Defence for supplying a photocopy of these instructions.

The high-tide line will in all cases be surveyed, but the low-tide line may often be left with advantage to the examiner to insert at the discretion of the division officer.

As such surveys can only be made in calm weather, difficulty will often be experienced in carrying out the work. Superintendents must therefore bear in mind whenever the area allotted them contains coast work that they must set about the tide surveys at once...

When the actual survey is to be carried out every available surveyor should be told off to such a portion of the tide line as he can complete without fail within the time at his disposal.

The high-water line of the selected tide, generally marked by seaweed, &c., can be pegged out and surveyed at leisure, but in the case of low-water mark, the time available is very limited, and surveyors should be on the spot, a full hour or more before the selected tide has reached its lowest... in order to take the fullest advantage of the period of slack water for the survey, for the half hour or so before and after low tide.

Bearing in mind that the low-tide line presents the greater difficulty, superintendents should make their arrangements to best advantage, so that no opportunity is lost, whether late or early,... even availing themselves of moonlight nights if necessary.

Untitled instructions to surveyors, 'O.S. 307',  
apparently first prepared c.1878-9.

continually altering, e.g., mud flats or sandbanks in estuaries, the shape and position of which are liable to constant change'.<sup>4</sup> It is against this background that OS mapping of the coast should be considered.

#### *Spurn Head and the Holderness Coast*

Described by someone as 'the oddest place in England',<sup>5</sup> Spurn Head is the south-eastern extremity of Yorkshire, a sand and shingle spit running some three miles out into the River Humber. Explanations of its formation and growth vary<sup>6</sup>: what is more certain is that it was severed from the mainland on 28 December 1849, reunited with it from 1856 onwards by filling the

breach with chalk, and is expected to be severed from the mainland again in the near future. (Indeed, the narrow neck making the connection was very seriously damaged in a storm in February 1996, and the road connecting the community living at Spurn with the mainland was destroyed.) The first lighthouse was built there in 1675-6, a replacement was built in 1776, and a further replacement (68 yards to the north-east) in 1895, which since 1985 has been redundant. The first two lighthouses were 'high' lights, supplemented by a long series of 'low' lighthouses: the last but one of these, built on the North Sea side of Spurn, lasted from 1831 until December 1851, when it was destroyed in a storm. Its replacement was built on the Humber side of the spit, was first lighted on 24 June 1852, and went out of use when the 1895 lighthouse was completed. It still stands, with its lantern replaced by a water tank: at one period it was used as a store for

<sup>4</sup> *Instructions for the revision and drawing of the One-inch (Fifth Edition) map*, Southampton, Ordnance Survey, 1936, p.12.

<sup>5</sup> *The Guardian*, 24 January 1992.

<sup>6</sup> See G. de Boer, 'Spurn Head, its history and evolution', *Transactions of the Institute of British Geographers*, 34 (1964), pp71-89; [J. Pethick,] *Spurn Heritage Coast Study Final Report*, Hull, Institute of Estuarine and Coastal Studies, 1992.

explosives for destroying wrecks.<sup>7</sup> In 1914 the army took over most of Spurn, laid a railway along it, and built two permanent batteries, one at Spurn and one at Kilnsea, to the north of its landward end. The railway closed in 1951 and the military relinquished Spurn in 1959: most of the peninsula passed to the Yorkshire Wildlife Trust, and the remains of the battery at Kilnsea became a caravan site.<sup>8</sup> Since 1810 Spurn has been the home of the only full-time lifeboat crew in the country,<sup>9</sup> and the difficulties of providing both a lifeboat crew on constant call and one with a home life has complicated decisions as to the best course of action, or inaction, with regard to Spurn.

Spurn lies at the south end of the coast of Holderness, which is well known as being composed almost wholly of glacial till and as being subject to erosion at the rate of about two metres per year. This rate first seems to have been determined with the assistance of Ordnance Survey Six-inch (1:10,560) mapping.<sup>10</sup> The present village of Kilnsea, which lies to landward of the old battery, is a development of the past 150 years: it replaces the old village of Kilnsea, recorded in part on the earliest OS One-inch and Six-inch mapping, and destroyed by erosion in the first two-thirds of the nineteenth century (Figs 1 and 2).

This outline of history is to be borne in mind when considering the OS mapping of Spurn and Kilnsea. In order that the One-inch (1:63,360) Old Series mapping of Lincolnshire might be complete to the neat line, it was necessary to include part of

Holderness, including Spurn. The resulting Old Series map (Sheet 85) was apparently surveyed in 1821.<sup>11</sup> In common with Greenwood's Three-quarter-inch to One mile (1:84,480) map of Yorkshire, surveyed in 1815–17, it shows Spurn Head as very broad, connected to the mainland by a neck so narrow that it must be represented by a single line. This presents a striking contrast to the present shape of Spurn, where the variation in width between neck and head is much less pronounced, and whilst this might be attributed to the engineering works of the later nineteenth century, the enclosure and title mapping of Spurn<sup>12</sup> of *circa* 1818–43 suggest that the very narrow neck shown on the OS Old Series and Greenwood is an exaggeration, exceeding the normal limits of planimetric discrepancy on these maps as compared with modern OS mapping. The first detailed Hydrographic chart (109, published 1830) of the area was surveyed in 1828, and shows Spurn Head connected to the mainland by a series of low hills, with the annotation 'Overflows on high springs'.

A further striking contrast is between 'old' and 'new' Kilnsea, both in the position of the two villages, and in the nature of the coast. Greenwood and the OS Old Series show a rather irregular coast line (Fig. 1), whereas later comparable OS mapping shows it to be much smoother (Fig. 2). In fact, as is apparent on modern OS 1:10,000 and 1:25,000 mapping, and even more so on 1:2500 mapping, although the general tendency of the Holderness coast is towards smoothness, there is considerable local irregularity, of a sort which it is impracticable

<sup>7</sup> G. de Boer (1968), p.66.

<sup>8</sup> Kenneth E. Hartley and Howard M. Frost, *The Spurn Head Railway*, 3rd edition, Patrington, South Holderness Countryside Society, 1988; Jeffrey E. Dorman, *Guardians of the Humber*, Hull, Humberside Leisure Services, 1990.

<sup>9</sup> Roy Benfell, *Spurn lifeboat Station – the first hundred years*, Hull, Roy Benfell, 1994.

<sup>10</sup> J.A. Steers, *The Coastline of England and Wales*, Cambridge University Press, 1946, p.412.

<sup>11</sup> On Ordnance Surveyors Drawing 285, which has since disappeared: see Yolande Hodson, *Ordnance Surveyors Drawings, 1789–1840*, Reading, Research Publications, 1989, p.111.

<sup>12</sup> The title map (1842) is at the Public Record Office, IR 30/41/113; the enclosure map (1840) is at the East Yorkshire Record Office, Beverley, PC 15/1, where also is earlier associated mapping, DDX/92/4 and DX/127.

*fig 1*

*fig 2*



to map at much smaller than 1:25,000 scale, and which, thanks to the laws of perspective, appears much more prominent on the spot, as one looks up and down the cliffs, than it does on the map. Thus at present, seen from Easington (TA 408187), the old battery site at Kilnsea (TA 417161) is seen to be on a promontory.

There are three possible explanations for this contrast between the locally irregular coast of the earliest OS, Greenwood and present day ‘reality’ on the one hand, and the smooth coast of later OS One–inch and 1:50,000 mapping on the other. It could be due to actual change on the ground, or to a change in rules for generalisation, or to a deliberate avoidance of strict planimetric accuracy.

The argument that it represents actual change on the ground is rendered unlikely by the great contrast between the irregular coast recorded by Greenwood and OS around 1815–21 and the smooth coast recorded on the first OS Six–inch survey of the Holderness coast in about 1850–1, and by the great similarity between the Holderness coast then and today. The ‘actual change’ argument supposes that between about 1820 and 1850 there was variable erosion of the Holderness coast that converted an irregular coastline to a smooth one, whereas since 1850 erosion has been regular and the smoothness has been retained. In view of the geological homogeneity of Holderness and the comparative frequency of subsequent OS surveys and revisions which all show a similarly smooth coast, such an argument is improbable. It is still more improbable when comparative measurements of erosion along this coast are made using later 18th and earlier 19th century enclosure maps.<sup>13</sup>

<sup>13</sup> See the following enclosure maps held in the East Yorkshire County Record Office, Beverley: Atwick (1769); Barmston (1819); Hollym & Withernsea (1794); Holmpton

The second and third arguments are two sides of the same coin. For the smooth coastline on later mapping to be the result of greater generalisation presupposes that Greenwood and the OS Old Series recorded the true planimetric position of the coast around 1817–21, but this is rendered unlikely by the geological argument put forward in the previous paragraph. Therefore, the irregular outline must represent a deliberate move away from strict planimetric representation. This argument gathers strength if one bears in mind the form of relief representation used by Greenwood and the Old Series: hachuring, which is in effect an attempt to give a three dimensional illusion in a two–dimensional medium. Therefore, I suggest that displacement of the true position of the coast is an attempt to give emphasis to minor promontories which, at true map scale, would not be very clear. This is consonant with the military origins of the OS Old Series, and its one undisputed superiority over all previous mapping of similar scale: its portrayal of relief, designed to facilitate warfare conducted on a graphical basis.

The painful surveying, revision and publishing of the Lincolnshire Old Series mapping in 1817–25 marked a move to much greater planimetric accuracy for the Old Series<sup>14</sup>, and this was succeeded by the adoption of the Six–inch scale, which was characterised by absolute planimetric accuracy within the limits of scale.<sup>15</sup> Six–inch mapping of this sort formed the basis of the first published OS One–inch mapping of most of Holderness; there was a small overlap with the earlier mapping, at Tunstall

(1807); Hornsea (1809); Kilnsea (1818/1840); Owthorn (1812); Skipsea (1764); Tunstall (1777); Ulrome (1787).

<sup>14</sup> See J.B. Harley’s introduction to Harry Margary, *The Ordnance Survey Old Series*, Lympne, Harry Margary, vol. V, 1987.

<sup>15</sup> Which does not mean that accuracy was necessarily retained when that mapping was ‘replotted’ at 1:2500: but that is a subject for future investigation.



(Fig. 3). The Six-inch employed contours for relief, which, nominally anyway, provided precise height information against the indefinite pictorialism of contours.

Apart from the new vertical precision, increased planimetric accuracy, and the greatly increased information of the larger scale, the published Six-inch had one potentially useful minor innovation for OS mapping: a survey date. (Survey dates were already appearing on Greenwood and Hydrographic mapping.) Not only was the landscape fixed planimetrically and vertically, it was fixed chronologically.

The published Six-inch mapping of the Holderness coast carries survey dates in the range 1850 to 1852; the mapping of Spurn and Kilnsea claims to have been surveyed in 1852, and this date was accepted uncritically by de Boer in his published geomorphological investigation of Spurn.<sup>16</sup> It is therefore of great interest that Six-inch Yorkshire Sheet

269 shows at Spurn the Low Lighthouse which was destroyed in December 1851. (Fig. 4) As it also shows the breach at Spurn, which began on 28 December 1849 and thereafter widened rapidly, it is reasonable to suppose that the 'situation date' for Spurn is 1851 rather than 1852. No Six-inch manuscript mapping of Spurn of this period survives, but it is known, both from documentary evidence, and from comparison of manuscript and published Six-inch mapping in Ireland, that for mapping prepared before 1888 the 'survey date' is in fact the date on which the fair drawings were certified as fit for publication. Only in 1888 was the present practice adopted, whereby the 'survey date' is the date of the last visit to the ground.<sup>17</sup>

In 1888 Spurn and Kilnsea were resurveyed at 1:2500; derived mapping was published at Six-inch and One-inch scales. (Fig. 5) The two smaller scales present an

<sup>16</sup> De Boer (1964), p.72.

<sup>17</sup> Oliver (1993), p.54.

*figs 4 and 5*

interesting contrast to the early 1850s Six-inch, but an interesting support for the Greenwood and Old Series mapping, in that they show a 25 foot contour at Kilnsea. Not only did the earlier Six-inch mapping fail to date itself properly, it failed to record vertically as completely as it should have done. This may have been because the contourers tied their work to earlier levelling, which ran mostly along roads, and did not go over 25 feet in the vicinity of Kilnsea. Contouring had its limits, as it was sampling at rigid intervals; but the sample was more valid when it was systematic.

#### *Navigation aids around the Humber*

Lighthouses and beacons have been erected as aids to navigation, but they can also act as landmarks, which is probably why they have been shown relatively prominently by symbol on most OS small scale mapping. (The main exception is One-inch mapping first published between 1847 and 1895, where such features were only identified verbally; a subsidiary exception is most Half-inch mapping published before 1940.) There are four instances around the Humber estuary where the depiction of navigation aids on small scale OS mapping is somewhat at odds with 'the truth'.

The first is the placing of the High Lighthouse at Spurn on all editions of the

One-inch New Series and its derivatives, from the 1890s until replaced by the wholly recompiled Seventh Series in 1955. It is shown south-east of the 1852 low lighthouse (see Fig.2), which is correct for the 1776 lighthouse, although, as Fig.7A indicates, the 1895 lighthouse is really nearly due east of the 1852 lighthouse. As the discrepancy is only equal to about 0.05 inch at 1:63,360, and is only clearly apparent with some magnification, it was perhaps not thought worthwhile to move the symbol for the high lighthouse.

From about 1930 onwards the 1852 low lighthouse at Spurn was omitted, presumably as a security measure in view of its use as an explosives store, and much other building at Spurn was also omitted for security reasons (Fig. 6). (This had the incidental result of disguising the positional inaccuracy of the 1895 lighthouse.) By 1970 there was no security reason for these omissions, and so the 1852 low lighthouse was duly mapped when Spurn was revised at 1:2500 in 1970 (as it had been at previous 1:2500 revisions in 1908 and 1927) (Fig. 7A), but for some reason it was omitted from the derived 1:10,000, and consequently the 1:25,000 *Pathfinder* 709 (TA 40/41), as well as from all One-inch and 1:50,000 mapping prepared between 1955 and 1987. In 1992 it made a

belated reappearance on the newly revised 1:50,000 Sheet 113, as a circular building rather than as a symbolised 'Disused Lighthouse', but unfortunately it was shown incorrectly in relation to mean high water (Fig. 7B).

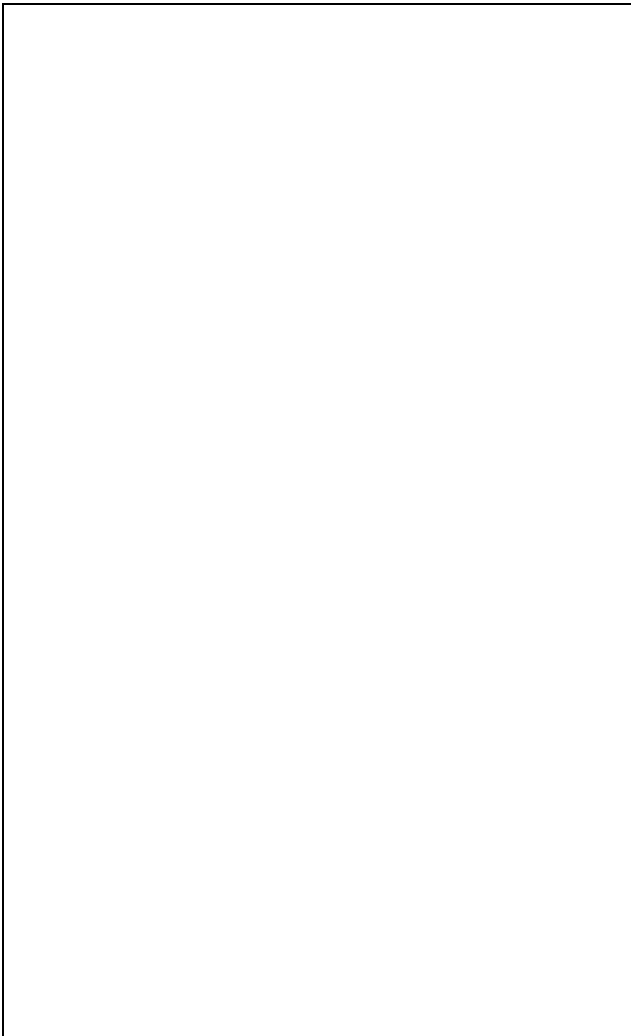
A third peculiarity is the Kilnsea Beacon. In 1896 the existing beacon at Kilnsea, duly shown on One-inch New Series Sheet 80/81 published the previous year (Fig. 2), was threatened by coast erosion, and a replacement was erected some 520 feet inland, equal to about a tenth of an inch at

1:63,360.<sup>18</sup> The new beacon was duly recorded in its new position at the next revision of the 1:2500, in 1908, but on both the One-inch Third Edition, revised in 1905, and the One-inch Popular Edition, revised in 1920 (which in turn was used for various military editions and for the New Popular Edition of 1946, which was only superseded in 1955), not only was the beacon still shown in its pre-1896 position, but the associated shoreline was shown in its unrevised position

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<sup>18</sup> Arthur Storey, *Pilotage and navigational aids of the River Humber (1512-1908)*, Hull, Trinity House, 1971, p.70.

as well, which is probably that of 1888. Perhaps the ‘moral’ of this is that ‘the primary object is that the average man should be able to find his way about unfamiliar country with ease’:<sup>19</sup> therefore it was more important for the map to say ‘here is a beacon, somewhat to the north of Kilnsea village, to landward of high water mark’ rather than ‘here is a beacon at this precise position (which, if you compare this map with that published in 1895, you will see happens to differ by 520 feet)’. It is similar thinking to that which may account for the planimetric displacement of the cliffs on the Greenwood and OS Old Series map: i.e. schematically rather than planimetrically correct.



Another peculiarity affecting a navigation aid was to be found on the second and Third editions of New Series small Sheet 81/82, at what the One-inch Old Series calls ‘Stallingborough Kiln Ferry and Light’, and where the two later maps show a lighthouse symbol (Fig.8). Knowing no more, the present-day student might assume that this represented a tower of the usual pepperpot sort: but it appears to have been a light house in the most literal sense:

‘By agreement with the proprietor of the Ship Inn, which stood on the south east side of Stallingborough Haven, a white light was exhibited at the window of an upper room facing the river...’<sup>20</sup>

The ‘light house’ (light-inn?) had evidently ceased to function thus by the time of the revision for the Popular Edition (Sheets 33, 34) in 1920, so the symbol was deleted, although the building itself lasted until after the second revision for the Seventh Series in 1960. Here, the map is symbolically rather than architecturally correct.

#### *Haile Sand Flats*

That it was not the practice to revise shorelines save where very substantial changes had taken place can be seen by an instance on the Lincolnshire side of the Humber, where the distinctive pattern of coastal creeks shown in Figs. 9, A–C, appears on the first three editions of New Series small Sheet 90, respectively surveyed in 1888, and revised in 1897 and 1905–6. This area is referred to as Sand Haile Flats on the first 1:2500 and 1:10,560 survey and on the first and second editions of the New Series; although the fort at TA 349061 built during World War I is called Haile Sand Fort, since 1905 the OS has confined the name ‘Sand Haile Flats’ much further to the south-east, around TF 455970. Unusually, the 1905–6 revision coincided with a 1:2500 revision,

<sup>19</sup> OS circular, 8 April 1909: copy in OS library, Southampton.

<sup>20</sup> Storey (1971), p44.

*fig 9*

but, possibly because the latter was not available in a convenient form in time for publication, the 1888 creek pattern was retained. Not until the Popular Edition (Sheets 34, 40) appeared in 1923 did the 1905 foreshore appear at the One-inch scale,<sup>21</sup> by which time the pattern of creeks could have changed again; there was no further 1:2500 revision hereabouts until 1972, and the next One-inch revision, in 1951 for the Seventh Series, retained the 1905 shorelines. That these probably bore little resemblance to the truth is suggested by the next One-inch revision, in 1960. (Fig. 9,D–F). It may be noted, incidentally, that both the 1951 and 1960 revisions are described on the published maps as ‘Full revision’, although, in respect

of the foreshore at least, that of 1951 is demonstrably incomplete. It was perhaps because of difficulties of this sort that in 1970 the Ordnance Survey reverted to the phrase ‘Revised’ for small-scale mapping; as there was no claim that the revision was full, the public could not reasonably complain that the foreshore was only partially revised, as it was when the 1:50,000 mapping of this area was revised in 1991.<sup>22</sup>

#### *Skegness*

Recently, two adjoining 1:25,000 Second Series (*Pathfinder*) have been republished, 783 (TF 26/36) and 784 (TF 46/56): both are edition ‘A1’. On both the only revision information is ‘Revised for Selected Change 19xx’: 1994 for 783, 1995 for 784. As compared with the ‘A’ editions, 783 contains

<sup>21</sup> But not at the half-inch scale: the ‘1888’ pattern remains on the 2500/31 printing of England and Wales Sheet 14.

<sup>22</sup> See *Sheetlines* 36 (1993), pp 40–1.



hardly any changes which could not have been supplied by the recent revision of 1:50,000 Sheet 122, whereas 784 has numerous changes (mostly deletions) to field boundaries and ditches which can only have been supplied by 1:2500 revision. It is noticeable that the foreshore has not been revised on 784, and, given the known changeability of foreshores, and the rather different shape on 1:50,000 Landranger Sheet 122, edition B, which claims revision (not selected, apparently) in 1991–2, it is apparent that, whatever its merits as a record of changing cultural features, Pathfinder 784 appears to be less reliable as a record of the changing shoreline. A visit to the ground will confirm that the 1:50,000 is closer to the present situation than the 1:25,000. (Fig. 10)

#### *Covehithe and Easton Bavents*

Parts of the Suffolk coast are as subject to erosion as that of Holderness, at a rate of 2 metres or so annually, and locally erosion may be even faster. To some extent this is reflected in Ordnance Survey mapping: at Covehithe (TM 528819) the 1:2500 survey and revisions of 1883–1981 suggest an annual erosion rate of about 3·6 metres. In practice, the rate can vary markedly: between August 1878 and May 1882 130 feet were lost, an annual rate of 10·5 metres per year, and between 1878 and 1887 172 feet were lost, an annual rate of about 5·8 metres overall, but only about 2·5 metres annually for 1882–7<sup>23</sup>. As the annual rate of erosion in 1883–1903 was about 3·6 metres it is possible that there was another period of more intensive erosion between 1887 and 1903. There was a similar period of intensive erosion in 1991–5, at a rate of about 6 metres per annum, which appears to have attracted some attention from visitors, and some additional visitors: recent reports suggest that

the erosion rate has slackened once again.<sup>24</sup> Further south, at Easton Bavents (TM 515782), OS mapping suggests a steady erosion rate of about 1·5 to 2 metres per annum, and at present this is exactly what is happening. Thus whilst there is no reason to doubt the veracity of the successive OS 1:2500 surveys of this coast, by themselves they may give a misleading impression of what may happen in the short term.

#### *Orford Ness*

If Spurn is ‘the oddest place in England’, then Orford Ness<sup>25</sup> must be a strong contender for runner-up. It has some features in common with Spurn: it is a long spit of shingle, gradually built up by the sea but liable to some erosion in storms, notably the narrow ‘neck’ at Slaughden which has had to be protected artificially, and has a lighthouse and a history of military occupation, which have been reflected only incompletely on Ordnance Survey mapping. The extreme end of the shingle is at North Weir Point, which in the past has proved very changeable. As at Spurn, military occupation began during World War I, with the establishment of an airfield and bombing range, but whereas in the 1950s Spurn was being run down, Orford Ness was being built up, as a base for non-radioactive atomic research work. This was transferred to Aldermaston in 1971, by which time another enterprise was under way, marked by ingenuity, security and expense (mostly borne by the USA) rather than by success: Cobra Mist, a mass of radio antennae which was an attempt to eavesdrop comprehensively on Soviet radio traffic. It was abandoned rather hurriedly in mid-1973, and some of the erstwhile highly secret

<sup>23</sup> W. Whitaker, *The Geology of Southwold and of the Suffolk Coast* (1887), cited in Steers (1946) p.385.

<sup>24</sup> Information from Mr Rowland Trowel; personal observation.

<sup>25</sup> This seems to be the name of the promontory: the spit as a whole seems to be generally known as ‘Orfordness’.

*figure 10*

*figure 11*

antennae appear to have found a humble use as fruit canes. Most of the next two decades were spent in clearing the area of unexploded ammunition: on 1 April 1993 most of Orford Ness was transferred to the National Trust.<sup>26</sup> It may be noted that from the 1930s through to the 1970s none of the ‘secret’ buildings were shown on OS mapping (Fig. 11); and that an excellent view of Orford Ness is to be gained from the top of Orford Castle, and that no obstruction appears to have been placed in the way of photography even in the 1950s and 1960s,<sup>27</sup> so that any enterprising person so minded might have mapped the ‘secret’ buildings by simple photogrammetric means.

The pattern of Ordnance Survey mapping of Orford Ness is somewhat different from that of either Spurn, Holderness and the Humber shore, or of Covehithe and Easton Bavents, but, in common with Spurn, it was first mapped as a necessity to square another map: this time the four-sheet map of Essex, the first ‘in-house’ OS production, published officially on 18 August 1805. Orford Ness appears near the edge of Sheet 48. Comparison with later mapping suggests that the coast, at least, was not mapped with complete planimetric fidelity: for example, the ‘fat’ look of the Landguard peninsula, south of Felixstowe. The completion of the Old Series mapping of Suffolk in 1835–8 was made the occasion of wholly revising Sheet 48; an indication of the changing standards of planimetric accuracy since 1805 is that the north sheet line of Sheet 48 was moved slightly south, so that Orford town was transferred to Sheet 50.

<sup>26</sup> A most useful account, gratefully plundered, is Gordon Kinsey, *Orfordness – Secret Site*, Lavenham, Terence Dalton, 1981; an interesting fictional treatment (a reading of which can usefully be accompanied by having One-inch New Popular Edition Sheet 150, ideally edition 1207) to hand is Tyler Whittle, *The Runners of Orford* (London, Jonathan Cape, 1956).

<sup>27</sup> I am indebted to Mr Rowland Trowel for information on this point.

The Board of Ordnance minutes leave one in no doubt that the revision was indeed carried out in 1836–8.<sup>28</sup> It is therefore somewhat puzzling that investigations by A.P. Carr indicated that the ‘situation date’ for the remapping of Orford Ness is more probably about 1820 than 1835–8.<sup>29</sup> As at Spurn, other surveys call the O.S. work into question, chronologically if not planimetrically: an Admiralty Hydrographic survey, and the tithe survey of Orford made in 1838.<sup>30</sup> The latter is unusual in that it carries not only construction lines, but principal angles, thereby making the work to an extent independent of distortions inherent in preservation on paper, and an early example of *de facto* digital mapping:<sup>31</sup> it was made by Bland H. Galland, a former employee of the Ordnance Survey of Ireland. The answer appears to be that in about 1820 a start was made on surveying north from Sheet 48, and that some revision of existing work was undertaken in order to make a smooth transition from the old work to the new, but that once the defects of the work in Lincolnshire became apparent further work in Suffolk was abandoned for the time being. Evidently the 1820-ish work was reused after 1835.

Orford Ness was surveyed and revised at 1:2500 in 1880 and 1902, and independent revisions for One-inch purposes were made in 1893, 1905, 1914–19 and *circa* 1938.<sup>32</sup> As

<sup>28</sup> Public Record Office WO 47/1712, pp 3080–83.

<sup>29</sup> A.P. Carr, ‘Cartographic record and historical accuracy’, *Geography*, 47 (1962), 135–44, esp. p.139; A.P. Carr, ‘The growth of Orford spit: cartographic and historical evidence from the sixteenth century’, *Geographical Journal*, 135 (1969), 28–39, esp. pp 34–5; see also Hodson (1989), pp 84–5.

<sup>30</sup> PRO IR 30/30/311.

<sup>31</sup> This is a development of an idea thrown out by Brian Harley in his address ‘Why cartography needs its history’ to the British Cartographic Society, Exeter, 10 September 1983.

<sup>32</sup> One-inch New Popular Edition Sheet 150 claims to be fully revised in 1930, but having regard to the revision information in various OS annual reports and the

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availability of the finished mapping by 1941, a date of 1938–9 seems to me most likely.

around the Humber, the One-Inch revision did not take account of changes to tide-lines, and this may have helped mislead Orford Ness's most notable student, the late J.A. Steers, when he wrote that 'the spit's maximum length was reached in 1897',<sup>33</sup> which was later strongly criticised.<sup>34</sup> Fig. 12 shows the distal end of North Weir Point on the first, second and Third Editions of the New Series and on the New Popular Edition: it will be seen that the Third edition and the New Popular show two small 'islands' at the south end, but, in view of the spit's volatility, their repeated inclusion must be considered extremely questionable. Here, the map says more about the circumstances (or economies) of its making than it does about the landscape

<sup>33</sup> Steers (1946), p386.

<sup>34</sup> Carr (1969), p35.

which it purports to depict. It is perhaps unnecessary to add that the various military installations at Orfordness were omitted from OS mapping so long as they were in active use: they appear on current 1:25,000 and 1:50,000 mapping, though the 'pagodas' and other non-radioactive though asbestos-ridden atomic ædificational souvenirs are somewhat difficult to 'read', particularly on the 1:25,000, as they do not stand out well from the shingle ornament.

'The Survey was never very happy about taking to the water' observes John Andrews of tide-mark surveying during the Ordnance Six-inch townland Survey of Ireland in the 1830s;<sup>35</sup> like so many comments about OS work in Ireland it is applicable to Britain, too.

<sup>35</sup> J.H. Andrews *A paper landscape*, (Oxford University Press, 1975), p.118.

### **Did the Ordnance Survey only record what existed?**

This question was raised by John King in *Sheetlines* 38 (p38) and evoked response in *Sheetlines* 39 (pp.44–45).

I recently acquired copy of the 1995 OS Motoring Atlas (remaindered at £1.99), and in particular looked at the A4 Batheaston by-pass/A46 deviation which is correctly shown as 'road under construction' for that date. However, I noted that the originally proposed spur to connect the Batheaston by-pass with the A36, Bath to Southampton road is also included. A great deal of traffic travels from the M4 (originating in the West Midlands and South Wales) to Southampton, and needs to drive from the A46 to the A36 through the eastern suburbs of Bath, causing congestion along the A4 London Road. The intention of this spur was to obviate the need for such traffic movement. Although the 1995 Motoring Atlas was published in 1994, this spur had been abandoned (unfortunately in

the writer's opinion) at least a year before. The 1996 edition does not show the spur.

*Lionel Hooper*

## Magnetic Variation and the Dating of Maps

By Richard Porter

There seems to be an implicit belief that the date given on maps for the Magnetic Variation diagram is of significance for dating the production or publication of the map itself. This presumably lies behind the inclusion of column 7 in Roger Hellyer's list of the Quarter-Inch Fifth Series<sup>1</sup>, for example, which list well illustrates the non-contemporaneity of these dates.

In a more recent issue of *Sheetlines* Tim Nicholson<sup>2</sup>, in his discussion of the 1:31680 *War Department Land on Salisbury Plain*, refers to the printing date of June 1898, and adds "but the magnetic variation diagram date was 1899, which indicates a publication date of 1899." Similarly, John Cruickshank<sup>3</sup> mentions the contoured edition, GSGS 2526, of the 1:80,000 series of France, where the "magnetic variation diagrams preserve the dates of the uncounted maps."

In point of fact, it can not be taken for granted that the date given on a map sheet for the Magnetic Variation (MV) represents either the date of compilation or of publication, and, indeed, on many sheets there is no intention by the publisher that it should. Admiralty Charts showing Curves of Equal Magnetic Variation world-wide have been published at varying intervals since 1858 (chart 2598) and all have shown, either on a small inset, or by a different symbol, the approximate Annual Change of the Magnetic Variation for the same epoch as the main map. It is, therefore, a simple matter for any publisher to consult the latest such chart and,

by applying the Annual Change (AC), arrive at a figure for the MV for any desired date in the near future (or, indeed, past). After 1858, the charts were published for epochs 1871, 1880, 1895, 1907 and then at 5-yearly intervals until 1947, 1955, and thence again at 5-yearly intervals. The 1895 chart was unusual in being first published in 1892 and then re-issued with amendments to the isogonals in 1895, 1896 and 1898; most charts, however, were published in the year of the epoch concerned, or in the following year.

The Directorate of Overseas Surveys (now Ordnance Survey International) produced a number of its map sheets in two simultaneous editions, Edition 1 (e.g.) constructed on a local grid, and Edition 2 carrying a Universal Transverse Mercator (UTM) grid. Here, the policy was to show the MV on Edition 1 for the last epoch for which the chart had been published (or, latterly, the corresponding data tape made available): the MV date could thus be up to 5 years behind the printing date. On Edition 2, however, the aim was to apply the AC and thence show the MV as at a date 2 years after the planned publication date. Occasionally, if the printing was delayed, the actual time gap may have been reduced to 1 year after publication. Another factor which influenced the date chosen was the desire to avoid giving the impression that the MV was based on an as yet unavailable epoch; thus a UTM gridded map published in 1973 may well show the MV as at 1974 rather than 1975. Later, this precaution was obviated by the introduction of a note stating that, say, a 1986 MV was based on Epoch 1980·0.

Recent Ordnance Survey (GB) practice is documented in the *Ordnance Survey Technical Manual, Module 7, Drawing*

<sup>1</sup> Roger Hellyer, 'The editions and printings of the Ordnance Survey of Great Britain Quarter-Inch Fifth Series (1:250,000), 1957-1978', *Sheetlines* 37 (August 1993), centre section, p1.

<sup>2</sup> Tim Nicholson, 'A major military "Special": The 2-inch/mile Map', *Sheetlines* 39 (April 1994), p24.

<sup>3</sup> John L. Cruickshank, 'Small scale Maps of the Western Front', *Sheetlines* 39 (April 1994), p29.

*Instructions and Specifications*. At 1:250,000, for example, (Section O, para 2087, Oct. 1986), the magnetic data “will be correct for the year following the year of publication” (as exemplified in Hellyer<sup>4</sup>). At 1:50,000 (Section M, para 2323 f 3, August 1986) magnetic data are not less “than 1 year in advance of publication date”, and at 1:10,000 (Section E, para 5538, Dec. 1984) a date

“approximately two years ahead of the publication date” was specified.

Where the date of the Magnetic Variation is called in aid to date a map to the nearest year, it should, therefore, be accompanied by explicit reasoning, based on documentary evidence or other related contemporary maps, to show what the likely relationship is between the Magnetic Variation date and the publication date.

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<sup>4</sup> *Op. cit.* in note 1.

### **Mirrors of History—(3) Booming London**

Tim Nicholson

During the reign of Queen Victoria, London’s population grew faster than that of any other British city. Most of this growth was outside the centre, creating a seamless expanse of suburbia out of a patchwork of villages and small country towns. There the population rose from 414,000 in 1861 to over 2 million 40 years later. Most of these people were middle class commuters, who worked in the city centre but lived outside it. They were enabled to do so by the spread of railways from London to other cities and to the coast. Stations within commuting distance of the capital became the nuclei of new suburbs. Then, as the number of potential passengers grew, new lines and stations might be built in response.

The spread of railways is graphically illustrated on successive states of the Ordnance Survey One-inch map *London and its Environs*, first published in 1857 just as growth was picking up speed, and reprinted several times up to 1897. This was a composite sheet — what would later be called a district map — created by cutting up electrotype copies of Old Series 1, 6, 7 and 8, reassembling the parts needed into the new sheetlines, then finally electrotyping the finished article as a printing plate.

In conformity with normal OS practice, little except railway development was updated from printing to printing. Most new building construction was ignored. The consequence was that new line and stations appear to be isolated in the middle of open country, when, in fact, suburbs may be growing around them. And even in respect of its railways, a printing was likely to be out of date. On the states of the London map seen, railways were confined to those already appearing on the latest reprints of the component Old Series sheets, which might have been published several years earlier. The London map was not updated independently, so none of the railway construction that had taken place since the last printings of the component maps was taken in. Similarly, the London map did not keep up with the changes in railway ownership. For example, although the Croydon Railway had been absorbed by the London, Brighton & South Coast in 1846, it retained its former name on printings of the London map at least as late as 1864.

As can be seen in the extracts from the electrotypes of 1857 and 1864 shown here, the growth of the city was especially striking on London’s southern fringes. At least two specific examples of cause and effect can be



*extract from London and its environs 1857*

*extract from London and its environs 1864*

identified in the area shown. Bromley received its first railway station in 1858; and its population nearly doubled between 1861 and 1871. At Sydenham, middle class villas began to proliferate after the Croydon Railway got there in 1839; but 15 years later the process was reversed when local development prompted new railways. In 1854 the astonishing glass structure that had housed the Great Exhibition in Hyde Park was re-erected at Sydenham as the Crystal Palace, and at once became a visitor attraction. Exceptionally, the new building was shown on the Ordnance Survey map; but it did not figure on the London map's first printing because the component sheet 6 had not been reprinted since it was erected.

The London, Brighton & South Coast Railway built a spur from Sydenham Junction to the Crystal Palace in the year the Palace opened. In 1856 the West End of London & Crystal Palace Railway arrived from Balham and Streatham, tunnelling through Sydenham Hill. In the same year the WELCPR opened a branch to Croydon; in 1857 it extended eastwards to Beckenham, and reached Shortlands (for Bromley) in 1858. Other companies were active in the same area. The Mid Kent Railway was extended from Lewisham to Beckenham in 1857, and in 1858 the London, Chatham & Dover Railway inaugurated its own service to Beckenham

and Shortlands. Already, in 1855, the Wimbledon and Croydon Railway, which linked up with the London & South Western Railway at Wimbledon, had been completed, and intermediate stations had been opened at Mitcham and Beddington. The Mid Kent Railway's branch to Addiscombe (for Croydon) was opened in 1864. None of the 1854–1857 railway building mentioned was shown on the first printing of the London map, because the component sheets concerned — 6 and 7 — were not reprinted before it was prepared. However, all the lines and other features described were in the 1864 electrotype, and may have figured on intermediate states of the map which the writer has not seen.

For an account of the evolution of Sheets 6 and 7, see Harry Margary, *The Old Series Ordnance Survey Maps of England and Wales*, volumes 1 and 4, and Guy Messenger, *The Sheet Histories of the Ordnance Survey One-inch Maps of Essex and Kent*. The latter also contains a history of the map *London and its Environs*. Information on Railway development in south London can be gleaned from H.V. Borley, *Chronology of London Railways*, 1982, and its *Supplement of Additions and Amendments*, 1985. The writer is also grateful to the Croydon Local Studies Library for assistance.

## **Military use of UK maps 1900–1913: an Examiner's Perspective**

Rob Wheeler

In view of the influence which military needs exerted on the development of the Ordnance Survey maps in the early years of this century, it would be useful to know more about military use of the UK maps in this period. One source of this, albeit not without its limitations, is the series of examination

papers for entrance to the Staff College at Camberley, published each year by HMSO together with the comments of the examiners. From these reports it is clear that their intention was that candidates (generally of the rank of Captain) should be able to prepare themselves best by the intelligent conduct of

their regimental duties and by the sort of background reading that would occur naturally to any officer who took his profession seriously; nevertheless, the military crammers continued to prosper, so perhaps the examiners' actions did not always match their intentions.

Taking the period 1900–1912, three topics made use of UK maps: Military Engineering, Tactics, and Military Topography. The first of these used scales from two to twelve inches to the mile; maps were generally specially drawn, but OS six-inch material was used on a couple of occasions. Tactics made considerable use of the One-inch (Coloured Edition) material. The 1902 paper used the SE District Manoeuvre Map of 1897 (as had the 1899 paper); the 1903 paper required the One-inch map of WD Land on Salisbury Plain (date not given). Use was also made of specially drawn maps at larger scales (usually two-inch). As the quality of the drawing of these fell short of OS standards, the larger scale could be explained as an alternative means of providing the same information as the OS one-inch; at any rate, it would be difficult to argue from this that the organisation of tactics required a better map than the OS one-inch.

Military Topography changed significantly during the period. At the start it reflected the belief that all staff officers should be capable of producing the sort of work that formed the basis of the One-inch Old Series (though not to such high standards). Scales were typically three to eight inches to the mile. From 1906, map interpretation, especially of relief, played a more important part. OS one-inch and six-inch material was used for this, as well as specially drawn sheets at scales of one-inch and larger.

It will be apparent that, throughout this period, no UK map of a scale *smaller* than one-inch appeared, which is perhaps curious

given that the OS Half-inch had been produced at the War Office's behest to meet the needs of military training. Then, in 1913, the Military Topography papers changed again, setting the whole task within a clearly stated tactical situation. The first paper "particularly set for the officer with a working knowledge of the subject" came with a half-inch extract (hill shaded style). The reason for the choice is suggested by the examiners' comments: "Questions 2 and 3 were a distinctly severe trial in map reading, as the colouring of the layers (*sic*) in the map detracted considerably from its clearness." In other words, the examiners wanted to place the candidate in a difficult tactical setting where they only had a nasty inferior map available, and the OS half-inch was thought suitable for this.

What the Staff College examiners really wanted from the Ordnance Survey was not, it would seem, the half-inch, but a contoured six-inch with ten-foot vertical interval. The six-inch sheets used in 1909 (for Military Engineering) and 1910–1911 (for Military Topography) all have contours inserted to this interval, which corresponds to that used for the High Wycombe 'War Games maps'.<sup>1</sup> Indeed, the last of these comes from the area of the War Games maps and, like them, employs sienna fill for 1st and 2nd class roads (but does not employ green for woods). Richard Oliver has already remarked on the affinity between the War Games maps and the 'Map of East Anglia'.<sup>2</sup> These contoured six-inch special sheets should perhaps be seen as an intermediate stage in the search for a militarily usable presentation of six-inch material.<sup>3</sup>

<sup>1</sup> *Sheetlines* 21, p22

<sup>2</sup> *Sheetlines* 36, p3

<sup>3</sup> Although by this time the WO had already produced a two-inch map by reduction from 1:2500 material. *Sheetlines* 39 p24

## Popular works on the Ordnance Survey

Richard Oliver

In *Sheetlines* 44, Brian Dobbie asked if Sir Charles Close's *The map of England* (1932) was the first such to be published for the popular market. Strictly, no, though it was the first for nearly fifty years! There were two later nineteenth century predecessors, both written by serving OS officers.

The first was a short work of 77 pages by Captain H.S. Palmer, R.E., *The Ordnance Survey of the Kingdom; its objects, mode of execution, history and present condition*, published in London by Edward Stanford in 1873, and 'Reprinted, with permission, and slightly altered, from *Ocean Highways*' (whatever that was!). Palmer was at this time the OS Divisional Officer based at Tunbridge, Kent: he was also the son-in-law of Major-General Sir Henry James, the then Director-General of the OS, a point which Palmer modestly omitted to mention when referring to 'the able administration of Sir Henry James, assisted by an accomplished head-quarter staff' on page 4, and likewise on pages 76–7, and the section on 'The Great Triangulation' includes a good deal — some would say a disproportion — on the geodetic work carried out under James in the 1860s.

The second was a somewhat longer essay, Lieut.-Colonel T. Pilkington White, *The Ordnance Survey of the United Kingdom*,

published in Edinburgh and London in 1886 by William Blackwood and Sons. White was the Executive Officer of the OS (i.e. second-in-command) at the time, and the book is dedicated to the then Director-General, Col. R.H. Stotherd. In the preface White writes 'My aim throughout these pages has been to convey to the general reader an intelligible idea of the National Survey, without overburdening them with technical details. In this sense the book is intended to be a short popular account of what might seem at first sight a dry scientific subject, suited only for experts.' (It was reissued in a limited edition of 250 by Meridian Publishing Co, Amsterdam, 1975, with an 18th century map of Gloucestershire on the cover!!!) Both Palmer and White conclude with a plea for systematic revision, and White concludes (pp 173–4): 'We have upreared a monument of priceless scientific and practical value, which is the envy of foreign States and peoples. Let us as its custodians not grudge the means to keep it in proper order. Else, instead of being what our great Continental neighbour has been pleased to designate it — the model for all the civilised nations of the world — the Ordnance Survey will become a reproach to us, nay, nothing short of a national disgrace.'

## Ordnance Survey maps in books and on film and TV

Although the astuteness of those who make a serious study of Sherlock Holmes could, no doubt, provide much greater detail the following items might be of interest:

1. *The Engineer's Thumb* was printed about March 1892. In addition to the extract quoted the 'circle with Eyford at its centre' was drawn with a radius of 10 miles, and the discussion over features on the map

included small villages and hills. The *detail* of most locations in Sherlock Holmes stories is fictitious (although often taken from his personal experience, suitably disguised) and 'Eyford' is, I believe, no exception. We are told that it is a small Berkshire village on a railway line from Reading, but not the Great Western main line as the engineer had to change

trains at Reading. A perusal of a pre-grouping (1922) Bradshaw suggests either The South Eastern Railway through Earley, Wokingham, and on to Farnborough, or the London and South Western service, also to Wokingham but then to Bracknell and Ascot.

2. *The Priory School* was printed in the spring of 1904. Somewhere in the huge category of ‘books–I–know–I–own–but–cannot–actually–find’, there is one about Conan Doyle’s life in the midlands and the Sherlock Holmes stories he set therein. This went into some detail about his role in a medical practice in, I think, south Yorkshire, his frequent trips to the moors there and in north Derbyshire, and some good candidates for the setting of the story (which mentions the road to Chesterfield). While one could suggest a likely one inch map for ‘Eyford’, the ‘Priory School’ map could have been any 6– or 25–inch sheet for that area from the original survey, or in some cases the first revision. (When Granada Television filmed this story, much of the exterior action took place at Robin Hood’s Stride, Harthill Moor, near Birchover, Derbyshire; and if the camera had panned a few more degrees to the east, I would have seen the farmhouse where my mother spent some of her childhood.)
3. With regard to Richard Oliver’s question in respect of map references, I refer members to *Evans tries an O–Level*, a

There is another Sherlock Holmes reference, in Chapter II of *The Hound of the Baskervilles*: Holmes has several OS maps on a scale which he describes as ‘very large’, which suggests 1:2500, but which enables him to cover twelve or fourteen miles of country, apparently on a single sheet!

Conan Doyle was of Irish descent, as was Bram Stoker, who notes, a few hundred words into his *Dracula* (1897) that in Transylvania ‘there are no maps of this

short story by Colin Dexter (1977), currently available in the collection *Morse’s Greatest Mystery and Other Stories* (Pan). The story involves a prisoner whose escape involves sitting a fake examination in his cell. The ‘invigilator’ instructed him to write down his index number and centre number. Having escaped, he goes to a hotel, The Golden Lion, only to find the prison Governor waiting for him.

*Prisoner*: Ow did you know which Golden Lion it was? There’s ‘undreds of them.

*Governor*: Same as you, Evans. Index number 313; Centre number 271. Remember? Six figures? And if you take an Ordnance Survey map for Oxfordshire, you find that the six–figure reference 313/271 (*sic*) lands you bang in the middle of Chipping Norton.

A question which I have often pondered: detective series such as ‘Morse’ and ‘Wexford’ often include shots of the office, invariably with a large, presumably OS, map on one wall. In a series like Morse, with a genuine setting, I assume the map is of the appropriate area, but what about those other series, e.g. Wexford, in a fictional setting? Can anyone identify these maps more precisely?

*Christopher Moss*

country as yet to compare with our own Ordnance Survey maps’. Thus Jonathan Harkness was unable to locate Castle Dracula precisely! Another Irishman was James Joyce: John Andrews records in *A paper landscape* that in *Ulysses* hachured “‘special ordnance survey charts’ ... make a fleeting appearance.’

The early Ordnance Survey of Ireland was the subject of a whole play, *Translations*, by Brian Friel: this has been strongly

criticised by Professor Andrews as being ‘a grossly false account of the organisation of the Ordnance Survey, of the training and competence of Ordnance Survey employees, and of the powers vested in Ordnance Survey officers. More important, it seriously misrepresents the Survey’s treatment of Irish placenames.’<sup>1</sup>

Sir Compton Mackenzie has a long episode in *The Darkening Green* (1934), in which a young man, armed with OS maps, goes about Hampshire in the late 1890s seeking out footpaths, and appealing to the authority of the map when challenged by indignant farmers. This may seem like artistic licence, but Mackenzie’s autobiography<sup>2</sup> shows that it is based closely on the activities of Sir Robert Chalmers, a future high-ranking civil servant. Perhaps Chalmers was using OS maps from which the rights-of-way disclaimer had either been cropped, or else which had been printed before its introduction in 1889!

The most authentic map references in fiction which I know of are in Alan Sillitoe’s *Down from the Hill* (1984), mostly set in July 1945, in which there are about a dozen references to the (unnamed) W. & A.K. Johnston Three-mile road atlas (first published in 1941), all completely authentic, and a single reference to an OS One-inch map: clearly Popular or War Revision Sheet 61, as Stafford is noted as in a corner! Those who have read Mr Sillitoe’s preface to Peter Chasseaud’s *The topography of Armageddon* will know that he is fully carto-literate! There is another, very brief, juxtaposition of commercial and OS mapping in Anthony Buckeridge’s *Leave it to Jennings* (1963): the

only OS reference in children’s literature which I know of.

There are two OS references in novels by Tom Sharpe, a passing one in *Blott on the landscape* (1975), and a longer one *Ancestral Vices* (1980), where one of the characters appears to buy an OS street map in a stationer’s in a small town: which seems improbable, as it is difficult to imagine a small-town stationer stocking the ordinary 6-inch maps, and at that time small towns benefited neither from OS town maps nor the county street atlases.

There are many passing references to maps in fiction: an advantage of the medium is that you don’t have to be too specific in order to make your point. A disadvantage of film and TV is that for a map to register it has to be depicted distinctly. This leads to such difficulties as in a Hercule Poirot adventure transmitted about four or five years ago, which was set in about 1935 and in which Poirot and Hastings were seen using a Bender–folded One–inch New Popular in a distinctly post-war cover! Railway enthusiasts will no doubt remark that this pales into insignificance beside some of the railway absurdities in Poirot and many other TV dramas: to which it may be replied that whereas railway authenticity is conditioned by size and availability of ‘large relics’ (to say nothing of ‘express trains’ constrained by Light Railway Orders), ‘authentic’ OS maps survive in quantity, and are surely a good deal less troublesome than making up authentic wardrobes.

Difficulties with cartographic authenticity should disappear in contemporary settings. This was neatly exemplified by an incident in ‘Who made a bit of a splash in Wales, then?’ in the series *Last of the Summer Wine*, first telecast early in 1978, where, *apropos* getting lost, one of the characters (Compo, I think) remarked ‘It’s more fun by Ordnance Survey’, and proved

<sup>1</sup> J.H. Andrews, ‘Irish placenames and the Ordnance Survey’, *Cartographica*, 31 (3) (1994), 60-1; see also report of his lecture at the Warburg Institute, London, on 12 May 1992 in *Sheetlines* 34 (1992), 21-2.

<sup>2</sup> Compton Mackenzie, *My life and times 1891 – 1900*, London, Chatto and Windus, 1963, pp 230-1.

the point by punching a large hole in an OS Quarter-inch Fifth Series map. There was a passing reference much more recently (about two or three years ago) in the same series, to collecting OS maps as a symptom of terminal male eccentricity. (Charles Close Society members and OS publications division please note!)

I have not seen *The Englishmen who went up a hill but came down a mountain*, cited by Mike Meredith, but it appears to bear a similar resemblance to *Translations* to recorded history. It would appear to be at fault on three points:

“Miss Marple”. In the BBC’s dramatisation of Agatha Christie’s *The 4.50 from Paddington* Miss Marple (Joan Dickson) is seen coming out of the front door of her cottage holding a well used New Popular One-inch map. I was unable to read either the sheet number or name on our television set, but when she gets to the village shop she displays the section covering the area around ‘Rutherford Hall Park’ (the scene of the crime) to the village postmistress. What is seen is quite a credible imitation of

(1) by 1917 the OS had long since completed its work on providing hilltop altitudes;

(2) the work would be undertaken by far lower-ranking personnel than commissioned officers; and

(3) at the height of the First World War OS staff would have had far more pressing calls on their attention, such as surveying hilltops on the Western Front.

*Richard Oliver who thinks this probably says more about what he reads than about the subject when viewed more objectively!*

the real thing, though I felt that the names didn’t quite match the standard expected of OS draughtsmen of the period. Was the map based on an actual OS map or was it totally fictitious?

OS maps have, of course, appeared on a number of programmes made for schools, for example the “Zig Zag—Maps and Mapping” series which has recently been (re-?) shown on BBC2.

*Ian O’Brien*

### **Map framing on One-inch New Popular Edition covers**

In *Sheetlines* 42, p.59, Walter Patterson asked why two identical copies of New Popular Sheet 183, edition 1157, had differently framed location maps on the covers. The short answer is that the earlier style, with two fine outer rulings and a thick inner one, was devised for use with the original cover design of 1940, which only appeared on the eleven sheets (157, 158, 161, 167, 169, 171, 172, 179, 182–4) printed in 1940–41. When work on the New Popular was resumed at the end of the war, the cover was redesigned, with the location map frame simplified to a fine inner and a thick outer

ruling. For all covers prepared before 1949 typed Old Style Roman was used for the names on the cover-maps, but in 1949–50 most of the blocks were remade, using Times Roman, and these blocks were retained for the successor sheets of the Seventh Series, right up to the introduction of the new-look ‘house-style’ cover in 1969.

The long answer would mean a whole article, which I want to write, but which if it was published so soon after the New Popular essay in *Sheetlines* 44 would probably try the patience of many readers!

*Richard Oliver*



## Maps on packaging.

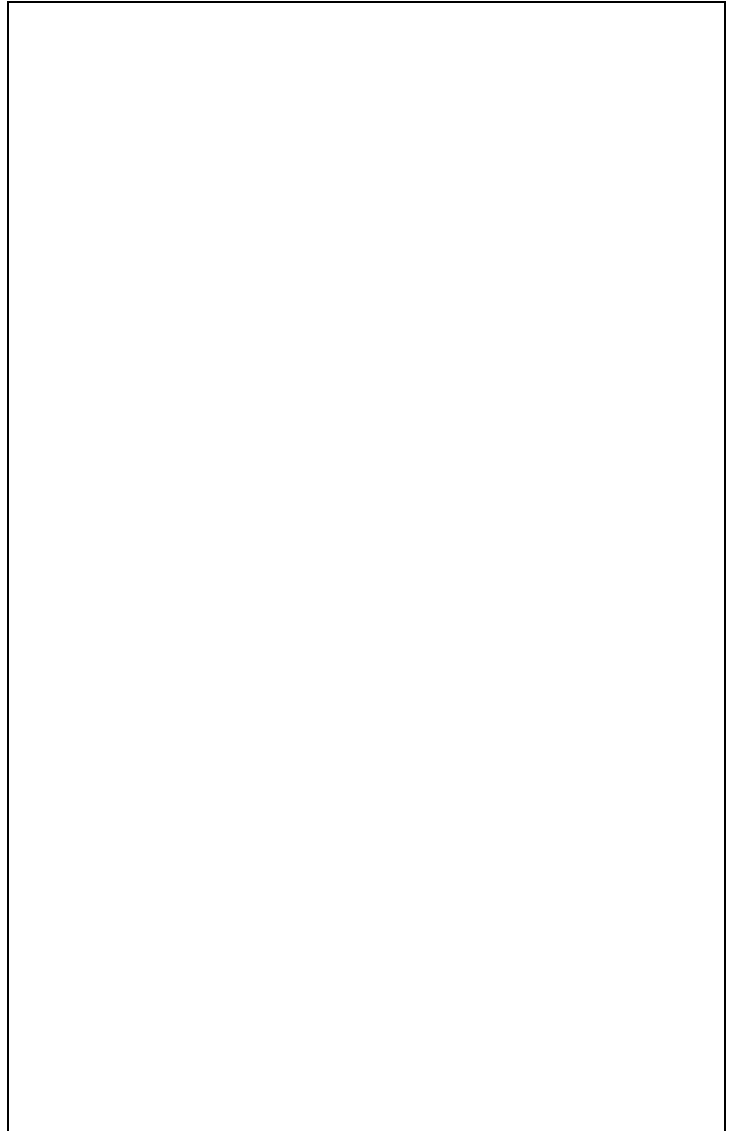
### *Best foot forward*

Any member of the Society thinking of climbing Rivington Pike, north west of Bolton (SD 643138) is advised to do so in a pair of “Drew Brady Active Socks”, as the purchase of these will furnish him or her with the necessary map. The label round the socks includes an extract from a six inch map, to County Series specification, but with National Grid lines. It is, therefore, either from Lancashire sheet 86NW, Provisional Edition with National Grid, or from SD 61 SW Provisional Edition. Are there other such examples of aids to ramblers?

*Bill Henwood*

### *Knowing where to go*

Produced by Lledo plc of Enfield for Lilliput Lane Limited of Skirsgill, Penrith, the packaging for the Special Edition of its Ford Model T van is underprinted with an Ordnance Survey map of the area. The map appears to be (and I haven't actually destroyed the packaging to flatten it out) a Third Edition (Large Sheet Series) One-inch map, sheets 5 and 6, but it might be part of the Carlisle District map, of which I do not have a copy, printed to a reduced scale, approximately 75%. The area depicted is six miles north of east of Carlisle and sits astride the River Irthing, from Irthington to Greentarn Rigg. The rear of the package is printed much fainter and covers an area



through which runs the River Gelt, to the south east quadrant from Castle Carrock, which is to the south of the main map.

Skirsgill is not on the area covered by either map; Penrith is 15 miles to the south!

*Lionel Hooper*

## New maps

### **Ordnance Survey of Great Britain**

New publications between 1 October and 31 December 1995 included:

#### *Conventional paper maps:*

1:250,000 *Travelmaster* 3, B (12/95).

1:50,000 *Landranger* (2nd Series):

44, B (revised 1994) (12/95)	63, A2 (10/95)	67, A2 (12/95)
92, B (revised 1994) (10/95)	100, B1 (12/95)	106, B3 (12/95)
109, B4 (10/95)	115, B4 (12/95)	120, B1 (12/95)
148, A2 (12/95)	159, B1 (10/95)	187, B3 (12/95).

1:25,000 *Explorer* (2nd Series): Sheets 10, *Gower* and 11, *The Trossachs* were to be published in February 1996.

1:25,000 *Outdoor Leisure Maps* (2nd Series):

16, *The Cheviot Hills - East and West*, A (10/95); 19, *Howgill Fells - Upper Eden Valley*, A (12/95); 35, *North Pembrokeshire*, A (12/95); 36, *South Pembrokeshire*, A (12/95).

[As a result of this, the following *Pathfinders* will presumably be withdrawn

474 (NT 62/72),	598 (NY 81/91),	1055 (SM 62/72),	1104 (SN 00/10),
475 (NT 82/92),	607 (NY 60/70),	1056 (SM 82/92),	1124 (SR 89/99),
486 (NT 61/71),	608 (NY80/SD89),	1057 (SN 02/12),	1125 (SS 09/19),
487 (NT 81/91),	617 (SD 69/79),	1079 (SM 81/91),	1126 ( <i>Gower</i> ).]
498 (NT 60/70),	1010 (SN 04/14),	1080 (SN 01/11),	
499 (NT 80/90),	1032 (SM 83/93),	1102 (SM 70),	
597 (NY 61/71),	1033 (SN 03/13),	1103 (SM 80/90),	

*Digital mapping* Superplan and Address-point coverage for the whole of Britain are now complete.

### **Ordnance Survey of Ireland**

The following 1:50,000 *Discovery* series sheets have recently been published:

'First edition': Sheets 51, 57, 62, 63, 71, 77. Sheet 71 was first published in 1992; at the time of going to press, Sheets 56 and 79 are the only sheets in the original style to remain in print, and those wanting a specimen of the style are strongly urged to purchase immediately. The 1996 publication programme is to comprise sheets 55, 58, 64, 72, 76, 80, 82 and 86-89.

### **Ordnance Survey of Northern Ireland**

The following has recently been published:

1:25,000 *Slieve Croob Outdoor Pursuits Map*

### **The Godfrey Edition**

Between 1 December 1995 and 6 March 1996 coverage was extended to the following places:

Bangor (Co. Down);	Black Hill & Shotley Bridge (Co. Durham);	Exeter;
Petworth;	Tisbury;	Warrington;
		Wootton Bassett.

*Richard Oliver*

## Reviews

Ordnance Survey of Northern Ireland, 1:25,000 *Slieve Croob Outdoor Pursuits Map*, Belfast, Ordnance Survey of Northern Ireland, 1995, £3·80.

The only comprehensive 1:25,000 cover of Ireland ever prepared was GSGS 3906, produced by the British military in 1940 by direct reduction from the 1:10,560. It was never placed on sale, although in the course of disposing of stocks after it became redundant copies found their way into various libraries in Ireland and Britain. To date, only six civil 1:25,000 sheets have been issued in Ireland, three by Ordnance Survey of Ireland, and three by Ordnance Survey of Northern Ireland. The publication of a seventh is therefore something of an event in a way which it would not be in Britain.

It must be said frankly that neither the OSI nor the OSNI sheets are comparable with those published by Ordnance Survey of Great Britain. The OSI sheets derive from the 1:50,000 database, and lack field boundaries; the main advantage is the greater sense of 'elbow room'. The OSNI sheets are more complicated in origin, being a mixture of a direct reduction of the 1:10,000 printed in grey, thereby supplying field boundaries and some buildings, and apparently specially-drawn material: names, road casings and some buildings and other detail in black, road infill and contours in brown, water in blue, woods in green, and tourist information in red. Three such 'Outdoor Pursuit Maps' have been published: *Mourne Country* (1981), *Fermanagh Lakeland — Lower Lough Erne*

(1984) and *Fermanagh Lakeland — Upper Lough Erne* (1986). Townland names are retained on the 1:10,000-derived material in the Fermanagh sheets, but not on the Mourne sheet.

Superficially, *Slieve Croob* (which joins on the northern end of *Mourne Country*) is similar to the previous three (no townland names), but a subtle difference is that the road casings appear to be obtained by enlargement from the 1:50,000, rather than by *ad hoc* redrawing, as was used for the three earlier sheets: this is betrayed both by the occasional unevenness, and by the coincidence of pecked lines. The isolated buildings which appear on the black plate are evidently the result of redrawing; built-up areas are indicated by the 1:10,000-derived element, with the result that the street patterns emerge far less clearly than they do on the 1:50,000: which seems perverse. Two new colours are used: yellow for 'Recommended scenic route', and green for 'Area of outstanding natural beauty': not something which this reviewer felt about the map, which has rather a 'cold' feel to it. But the most interesting feature is the reverse of the map, where all the 'black plate' detail is repeated, with the addition of a generalised screen for built-up areas: according to a note on the back cover of the map, this is 'for the user to make their own notes on favorite routes and places'.

Isle of Man Government, *Isle of Man: public rights of way and Outdoor Leisure Map*, Seventh Edition, 1995, ISBN 0-90486-954-7, £6·95.

Like Ireland, the Isle of Man was mapped in haste at 1:25,000 in 1940 as part of GSGS 3906. It differs from both Britain and Ireland in that it has been independent of Britain

financially since 1866, the positive side of this being that it enjoys very low taxes, and the negative side that any large-scale mapping by Ordnance Survey must be on a

repayment basis. As a result, following the initial survey in 1863-9, the island has not been revised systematically at larger than 1:50,000 scale: such mapping is deemed as covered by the subvention for defence which the Island pays to the Imperial Government at Westminster. The only larger scale post-1870 OS civil mapping appears to be complete 1:10,560 Provisional Edition cover, published about 1957, and limited 1:2500 and 1:1250 urban mapping prepared in the 1960s and 1970s: the first was possibly and the second was certainly undertaken a repayment basis.

This historical diversion is necessary in order to appreciate the 1:25,000 map under review. As a 'strange mixture' it puts *Slieve Croob* in the shade. At the bottom of the pile is engraved 1:10,560 mapping, first published in 1870-1. The next layer is Times Roman and other indicators of the 1:10,560 Provisional Edition phase. The top layer is newly-drawn roads, names, rights of way and tourist information, in an up-to-date sans-serif style, though the shade of (synthetic) sienna infill for the roads has rather a 'dated' feel; not quite the 1870s, but rather more the 1930s than the 1990s. How up to date this is is uncertain: the quasi-OS 'Compilation and Revision' merely states 'Base map compiled from photographically reduced 6 inches to 1 mile Ordnance Survey map material.' Presumably the Manx government would not thank me for pointing out that, if the engraved names are any indication, some of this data is about 130 years old. There is no note of who was responsible for the (presumably) post-OS cartography and design.

Although nominally one map, it is split into north and south sheets, and they are split into east and west halves, printed back to back, an imitation of mainland practice which this observer could do without. Against this, there are 2 km overlaps between each section. It may be added (smugly and perhaps inconsistently) that had this been produced by Ordnance Survey of Great Britain, it could have been produced as a single large back-to-back sheet, with an overlap between the northern and southern halves.

The two sheets are Bender-folded and supplied in a clear plastic wallet. The pictorial covers are of some interest and, as far as this observer is concerned, one is innovative, though whether the example is advisable of imitation by OSGB is perhaps more questionable. The south sheet is conventional enough: 'The Calf of Man viewed from the Mull Peninsula'. The north sheet offers 'Norman Wisdom, a popular local resident, admiring the view over Ramsey towards the point of Ayre'. (If you don't believe me, buy the map.) It might be carping to suggest that, unless he has an eye where most people have their left ear, Mr Wisdom appears to be looking in the south of east, roughly in the direction indeed of Walney Island and Heysham: but the possibilities of developing this are fascinating: and whilst an official department such as the Ordnance Survey of Great Britain ought not perhaps to be declaring certain individuals 'popular local residents', it might seek out a few who are now safely gone from us.

*Richard Oliver*

## Sheetlines and overlaps on the One-inch Fifth and New Popular Editions

Rob Wheeler

I found Richard Oliver's on this subject in *Sheetlines* 44 lacking in clarity. He himself, after quoting Llanwrytyd Wells as a tight point, admits that it may not have been significant enough to affect sheetlines. The preference for butt-jointing (which certainly assists users as they cross a margin) gave less scope for individual sheetlines, so it is rarely possible to see what drove the precise positioning of any particular sheet. One exception is my own sheet, 159, where there was scope for North-South adjustment which could have accommodated both Aylesbury and Reading. I can see only one reason why this was not done and that was to include Ivinghoe Beacon, and thereby have the whole of the Chilterns (in walkers' terms, if not geographers') on one sheet. This should serve as a warning in assuming that sheetlines were drawn up according to what could be seen on a certain index map.

Trying now to be more constructive, Richard put forward a hypothesis which I will call (O):

The England and Wales New Popular sheetlines were drawn up for 41 x 46 km sheets. The West (and South) edges of these had km Eastings (and northings) which on division by 5 km gave a remainder of 0 or 2. These sheetlines were cropped by 1 km on two sides to produce the sheetlines that were ultimately used.

Note that the limitation of such remainders to 0, 2 or 3 on the published sheets could be explained directly by the intention of using grid lines at 5 km spacings and wishing to avoid a grid line so close to the neat line. Note also that (O) is independent of the hypothesis that 41 x 46

km sheets were planned when the margin was drawn.

(O) contains sufficient information to enable one to reconstruct the hypothesised sheetlines and to determine which two sides were cropped. Assuming that the original sheetlines were drawn up to avoid tight points, it seems reasonable to deduce:

There will be more tight points on the cropped than on the uncropped sides.

As already noted, the concept of 'tight' points is rather subjective. The easiest way round this is to assume that extrusions were used if and only if the OS tightness threshold had been breached; in other words, one counts extrusions rather than tight points. This too is not without its difficulties, because there are at least five types of extrusion:

- (a) *Names*. These occur particularly when sheetlines have been changed after the names have been drawn, e.g. for Special and District sheets. This is irrelevant here and such extrusions will be ignored.
- (b) *Symbols*. This is essentially a random occurrence and will likewise be ignored.
- (c) *Roads or rivers*. These are sometimes extruded when they wander off a sheet and return. They seemed unlikely to have been taken into account when drawing up sheetlines so were ignored.
- (d) *Towns and villages*.
- (e) *Coastline*. This was interpreted to include extrusions where only submarine contours or isolated rocks were extruded.

It was therefore hypothesised that cropped edges would have more extrusions of types (d) and (e). Another hypothesis that seemed

worth investigating was that the 41 x 46 km sheets were designed to have a number of small extrusions but (because of their narrow margins) would not have large ones. I therefore defined *big* extrusions to be those that broke the outer marginal lines of the published sheets and hypothesised that the cropped edges would have more big extrusions. (Note that the presence of a single lightship outside the outer marginal lines was not regarded as making an extrusion big, on the grounds that the OS has never purported to show all such vessels and they were an optional extra.)

Note also that these hypotheses apply to any randomly chosen subset of England and Wales New Popular sheets. I therefore tested them against a sample of about 80 sheets, being those that I happen to possess. The results were as follows:

Extrusions	Towns	Coastline	Big
Cropped	7	7	4
Uncropped	8	5	2

No statistical test of this nature can prove a hypothesis. What it can do is to disprove a null hypothesis, in this case ‘extrusions of

these sorts are equally common on cropped and on uncropped edges’. The data has signally failed to disprove the null hypothesis, so much so that it did not seem worth the effort of extending the work to a 100 % sample.

It leaves me highly sceptical about (O).

I would also question Richard’s assertion of haste in the laying out of New Popular sheetlines; he is assuming that the OS in 1938 held the same values that he holds now. We are agreed that the OS placed a significant value on sheetlines continuing uninterrupted across the map. Richard refers to this as being butt-jointed, which is the negative consequence (which would indeed be mitigated by provision of an overlap). The positive consequence is that one can follow a route from one sheet to the next far more easily. (I notice this as a particular failing of the 1:50,000.) Just because the 1:50,000 slices fewer towns at the expense of this continuity of sheetlines does not mean that its sheetlines are ‘better’ in terms of the OS’s 1938 values. I cited Sheet 159 specifically to show that slicing towns was *not* at the top of their priorities.

*Richard Oliver* comments that he is still considering Rob’s statistical testing, though he is glad to note that it does not invalidate his contention that the original concept of the New Popular was as a 41 x 46 km map, as exemplified by *New Forest!* Support for Rob’s argument might come from trying a similar test with the 1:50,000 of Ireland (which was presumably not laid out with overlaps). Richard admits the justness of the comment that the OS in 1938 did not necessarily hold the same values as he does now (which he ventures to suggest were also held by the OS of 1970–71 when the present 1:50,000

sheet lines were devised): this is all the more telling a reproof, directed as it is from a mathematician and statistician to a historian!! However, he still feels that greater trouble was probably taken with the sheet lines in southern and south-east England than elsewhere: for example, Sheets 167 and 169 cover Salisbury Plain and the Aldershot Command area very conveniently: the treatment of Arran (originally split between four sheets) and Gower (split between sheets 152 and 153), for instance, appears much less easy to defend by reference to policy, as opposed to haste. Further comments and correspondence would be welcome.

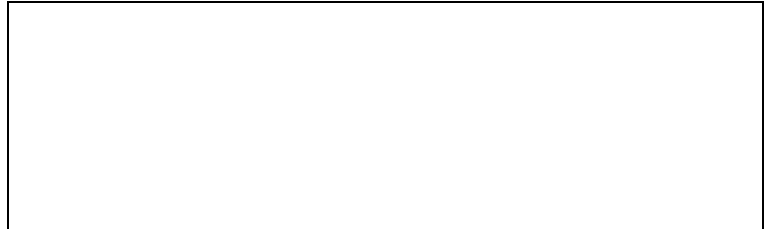
## Off-road Cycle Routes on *Landranger* maps

Bill Henwood

David Watt's article in *Sheetlines* 44 on the special edition of *Landranger* sheet 124, *Dolgellau*, described experimental copies of sheets 90 and 160 with shaded relief. Another innovation on sheet 124 is the depiction of off-road cycle routes, and this was tried out on at least one other sheet as an experiment.

I have been given a proof copy of sheet 93, *Middlesbrough and Darlington*, on which about 25 miles of cycle routes are depicted. Some follow sections of disused railways in County Durham; others form suburban networks around Middlesbrough.

The legend includes a cycle track symbol of 2mm long orange dashes (Fig. 1), though



the French and German translations had evidently not been finalised! On the face of the map, the orange dashes have been printed over the black dashes of the path symbol, making them difficult to pick out, especially in built-up areas. The orange dots symbol adopted on sheet 124 is much clearer.

The proof of sheet 93 is based on edition B1, which was published in August 1995 without cycle tracks, and with a few other minor amendments.

### A Map in my Collection

#### 7 — 1:50,000 paper covers

Andrew Cook has written to say that he thinks that Bill Batchelor has got almost all the answer to this question (*Sheetlines* 44), but it needs 'a tweak' to see the business from the printing shop viewpoint.

Sheet 103 First Edition, as issued with integral paper covers in 1979 or 1980 for a consumer evaluation exercise, has the solid pink 'cover' area inverted at the lower left side of the map with the old 'inside cover' text (from the inner of the card cover) above it, and the legend and conventional signs occupying the full height of the map at the right. The trimmed width of the paper is 112 cm.

The 1984 issues (my examples are sheets 142 and 186) have the solid pink cover areas at the upper left side of the map, with the legend and conventional signs condensed

below it. Nothing to the right of the map area. The trimmed width of the paper is 100 cm, the same as for the paper in the card cover issues.

To print sheet 103 in 1979/80 demanded the preparation and maintenance of stocks of paper in a non-standard size, and awkward adjustments throughout the press, and in the trimmer and folder, to work this single non-standard sheet. I think this may have been the main reason for suspending the integral-cover experiment after 1981, until the creation of the second layout type in 1984, which incorporated the pink cover area and the legend in the same paper width as was used for maps in card cover issues. Then it did not matter in the printing shop whether the job was an integral-cover one or not: it

used the same paper stock and press settings as sheets for the card–cover issues.

I think the changes happened this way:

1. 1979/80: Sheet 103 First Edition experimental issue on 112 cm width non–standard paper stock for consumer testing. Printing cover and sheet together on the same pass allowed a multicolour image on the outer cover, hence the experiment with the 1:625,000 map extract as the ‘location diagram’.
2. December 1981: Sheet 103 Second Edition on same non–standard paper stock as part of the same test, the new issue dictated by the general 1:50,000 change to the Second Edition specification.
3. March 1984: Sheet 204, the first of the new layout on the 100 cm standard–width paper, continuing to experiment with the 1:625,000 extract as ‘location diagram’. Sheets 40, 119, 132, 150, 186 and 197 followed, according to print code. (My copy of sheet 186 has code 32300/8/84/841177 S, and I think Bill Batchelor’s list of print codes might need checking here.)
4. September 1984: Sheet 142, the next integral–cover sheet on the 100 cm standard–width paper, and the first to go along with the card–cover sheets in changing from a cover map extract to a multicolour cover photograph. Sheets 125 and 65 followed, according to print code.

If the copy of sheet 142 which Richard Hillier has seen (*Sheetlines* 43) really is printed in the old layout on the wider paper trimmed to 112 cm, would he please pass on the print code to Bill Batchelor to include in his list.

Also, if anyone can confirm Bill’s surmise that there was a third integral–cover issue of sheet 103, this time in the 1984 100 cm width format, please pass that print code on, too.

In the days of hand–press for book and map printing, minor changes of presentation could more often be explained by simplifications for ‘printers’ convenience’ than by any other reason. The same, I suggest, may be true in the modern Ordnance Survey printing shop.

### 15—‘*Vision of England Series*’

(Richard Evans, Francis Herbert and Philip de Paris have written on this enquiry, and the Editor has endeavoured to meld the information into a single item)

The *Vision of England* was a series of books published between 1946 and 1950 by Paul Elek (London), the series editors being Clough and Amabel Williams–Ellis (of Portmerion fame). The books are about 60 pages with many photographs and a reproduction of an early map as well as, in many cases, an Ordnance Survey extract. In the case of *Suffolk* the early map is a 1610 Speede. The design of the books bear a close resemblance to the Shell Guides, edited by John Betjeman, published in the 1930s, but which had Bartholomew maps.

The volumes with OS Quarter–inch / Stanford maps in similar style to that of the *Isle of Wight* are

<i>Cornwall</i>	1947 (3·47)
<i>Dorset</i>	1947 <sup>1</sup>
<i>Norfolk</i>	1948 (130?)
<i>Northumberland</i>	1948 (D419)
<i>Somerset</i>	1949 (D149)
<i>Suffolk</i>	1948 (D419)

Volumes with Outline Quarter–inch maps:

<i>Cotswolds</i>	1950
<i>Dorset</i>	1947 <sup>2</sup>
<i>Essex</i>	1949

<sup>1</sup> Reported by Philip de Paris

<sup>2</sup> Reported by Richard Evans



*Kent* 1950 3 pages: east Kent on one page, west Kent on two pages with a gap of 4 km between!  
*Oxfordshire* 1949 2 pages  
*Shropshire* 1949  
*Surrey* 1950  
*Warwickshire* 1950  
*Wiltshire* 1949  
*Worcestershire* 1949  
*South Wales and Monmouthshire* 1949 8 pages

These are all based on the pre-war Quarter-inch, but with the 10 km National Grid squares.

Other volumes contain W & A.K. Johnston's  $\frac{1}{3}$ " maps  
*Black Country*

#### 16—Wrong covers

In looking for the requisite One-inch Seventh Series map (144 *Cheltenham and Evesham*) for Rob wheelers talk at the Bath Meeting, I struck lucky; well, so I thought. In fact, the map that I picked up had written on it 'Wrong Cover', which I think was probably by the original map seller, as, in different writing, the number 144 had been crossed through with the number '175' hand written underneath, and repeated above the original

#### 17—Reprint before publication?

In August 1995 I was attracted by the offer of a reduced price map — the 1:25,000 Outdoor Leisure sheet 21, *South Pennines*, which I was told was being sold off (for £2.50) because there was a new version with new sheetlines. What has puzzled me about the 'old' map, however, is that it appears to be a rare example of a map being reprinted *before* it was even published. The publication details read "Made, printed and published by the Ordnance Survey, Southampton, Great Britain. Crown Copyright 1994 Reprinted with selected change 1993." This is version B1.

*Chilterns*  
*Derbyshire*  
*Sussex*  
*Scotland* (Johnston's  $\frac{1}{8}$ " map)

Other volumes in the series are:

*Cambridgeshire*  
*Devon*  
*Lancashire*  
*London South of the River*  
*The Scilly Isles* has no maps, but on p66 recommends OS maps at 25", 6" and 2" to 1 mile series, and Admiralty chart No. 24.  
*Yorkshire East Riding*  
*Yorkshire North Riding*

title. Sheet 175 is, in fact, *Okehampton*, but this title has not been written on the cover. Interpolating the appropriate information in Richard Oliver's *Ordnance Survey One-inch Seventh Series Map* dates this error between 1962 and 1965.

Was this a common mistake, and does any other member have the 'companion map' to mine?

*Lionel Hooper*

The new sheetlines of OL21, together with the new coverage for OL1, *The Peak District, Dark Peak area*, now mean that these two sheets abut each other; possibly another step towards a 1:25,000 Large Sheet Series? What seems to be a new development on OL1 is that the publication details are more prominently displayed under 'Customer Information'. Regrettably, OL1 is another "...double-sided map to give extra area coverage"; however, there is a 5 km overlap which does somewhat reduce the inconvenience.

*Donald Binns*

## Letters

### ***Revision at county boundaries on OS County Series 6-inch and 1:2500 maps; from Richard Oliver***

I was asked recently what the practice was on OS large-scale county series mapping, as regards showing detail along county boundaries where the counties on each side of the boundary were revised at different times, and whether one could be certain that the non-appearance of a feature on an earlier revision and its appearance on a later revision meant that that feature had appeared between the two revisions. My questioner was interested in a footbridge across a stream which divides two counties: he thought that it was built in 1895, but it does not appear on either the 1894-5 mapping of a county on one side of the stream, nor on the 1899 mapping on the other side, but it does appear on the 1915 revision.

My answer was that I would infer from that that the bridge had been built some time between 1899 and 1915. At 6-inch and

1:2500 a footbridge is quite an important feature, and I think it would be difficult to argue either that it had been overlooked in error, or omitted as a ‘small and unimportant correction’, such as an OS circular of 13 December 1892 indicated should not be made. Another circular, of 4 November 1899, stipulated that where a county boundary ran along a watercourse, the opposite bank to the county in hand was to be surveyed or revised, ‘but only so much of the detail will be drawn and published as will make clear the course of the bank, or serve as prominent landmarks’. I interpret ‘prominent landmarks’ as including footbridges. (These two instructions are cited in my *Ordnance Survey maps: a concise guide for historians*, (London, Charles Close Society, 1993), pp 66, 49.)

### ***Landranger sheet 149, Editions A3 and A3/; from Bill Henwood***

In the *New Maps* listing in *Sheetlines* 44, Richard Oliver noted that 1:50,000 Second Series sheet 149, *Hereford and Leominster*, Edition A3 was published in May 1995, and Edition A3/ was issued three months later.

Edition A3 was published with the symbols for “bridleway” and “byway open to all traffic” transposed in the legend. The sheet was soon withdrawn by the Ordnance Survey and agents were asked to remove it from sale.<sup>1</sup> Following a hurried reprint the corrected Edition A3/ was published in August. All other detail, including the GSGS print code, is unchanged.

When the numerical suffix was introduced in 1988 on small scale maps for reprints with selected change, OS announced that “it will not be necessary to identify RCs (Reprints with minor corrections) separately, and the use of the ‘/’ symbol will be discontinued. In practice, Reprints with Minor Corrections will be avoided if at all possible.”<sup>2</sup> A reprint to correct the error on sheet 149 was evidently unavoidable, and OS felt the need to distinguish the amended version: hence the rare use of the ‘/’.

<sup>1</sup> Information from staff at Stanfords, Long Acre, London.

<sup>2</sup> Ordnance Survey Publication Report 8/1988.

***Homeland Handbooks: from Philip de Paris***

In *Sheetlines* 44 Lionel Hooper raised the question of the use of Ordnance Survey maps in the series of Homeland Handbooks. From copies available to me, I am able to add the following additional information.

No. 1 *Tonbridge* (1896) contains no map at all, no. 2 *Tunbridge Wells* (1897?) contains a map at a scale of 3 miles to the inch, a reprint of a map by G.W. Bacon & Co. Ltd. Both of these were in fact published by Beechings Ltd. As Beechings' Homeland Handbooks, vols. I and II, the Homeland Association not having yet come into existence. When it was set up (as a subsidiary company?) they were counted as being nos. 1 and 2 in its series of Homeland Handbooks.

The second edition (1906) of *Tunbridge Wells* contains a reproduction of a one-inch Ordnance Survey map similar in size, style and marginal information to the Littlehampton map that Hooper describes, Tunbridge Wells itself being placed in the centre of the sheet. I judge it to be a reproduction of New Series second edition mapping: the railway line between Redhill and Tonbridge is named 'South Eastern

Railway', although this and the London, Chatham and Dover Railway had amalgamated in 1899 to form the South Eastern and Chatham Railway.

No. 5 *Wolfeland: a handbook to Westerham..* (Second Edition, [ca. 1900] has a three mile the inch map with no origin indicated, but it is clearly the same Bacon mapping as used for the first edition of *Tunbridge Wells*. The third edition is listed as having an Ordnance Survey map.

By September 1910 the series had reached no. 78. Of these, 58 were listed as containing an Ordnance Survey map at a scale of 1 inch to the mile; fourteen (including numbers 74, 75, 76 and 77) as just having a map, presumably not OS, and six as having no map at all. These latter included *Tonbridge* (a slow seller, still available in 1916 it never reached a second edition) and no. 55, *Our homeland churches and how to study them*, which would not have needed one. No. 4, *Lyonesse: the Isles of Scilly* was listed as containing a chart, and no. 47, *Luton Church* had a plan.

***Red Guides, Homeland Handbooks and other contemporary books: Richard Evans***

Ian O'Brien mentions the ubiquitous Ward Lock Red Guides (*Sheetlines* 44) and poses a question about the commercial considerations of the company using Ordnance Survey maps. John Vaughan's *The English Guide Book, c1780–1870* mentions a history of Ward Lock in its bibliography — E. Liveing, *Adventure in Publishing: the House of Ward Lock 1854–1954* (1954). This volume might assist Ian in answering the question he posed.

I have only one copy of a Homeland Handbook, no. 28 *Hindhead and Haslemere*. The map is a Third Series outline OS One-inch. Fernhurst is spelt as such on the

Handbook map, but appears as Farnhurst on my LSS coloured Third Series.

The two contemporary volumes of *Murray's Architectural Guides* which I have also use the OS Quarter-inch map without road numbers, They are *Berkshire* (1949) and *Buckinghamshire* (1948). A third volume, *Lancashire*, was also published in this series, which was edited by John Piper and John Betjeman.

In these two books woods and the county boundary are shown with a green overlay, but there is *no* colouring of main roads. The 10 km grid squares are numbered in yellow with cross references to the Gazetteer section.