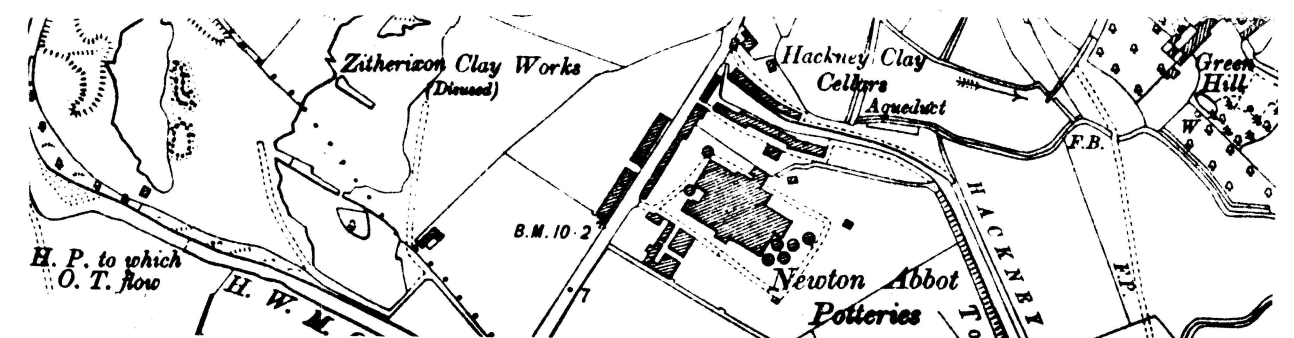


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CHARLES CLOSE SOCIETY ANNOUNCEMENTS

'AN INCH TO THE MILE'

Designed originally to accompany the CCS/RGS OS bi-centenary exhibition this is *THE ONLY* comprehensive account of the OS One-inch map in print. £2:00, post free: order from the Publications Manager. The best bargain of all C.C.S. publications.

FUTURE MEETINGS

30 April 1992, (Thursday), at the Warburg Institute, Woburn Square, London WC1: as part of the Maps and Society series, there will be at 4 p.m. a showing of the J.B. Harley video on Maps and the Columbian Encounter, followed at 5 p.m. by Betty Ingram, 'Maps as "readers" aids': Genevan Bibles in the sixteenth century'. This will be an unusual opportunity to hear the voice of the Ordnance Survey's best known historian, even though speaking on a somewhat different subject. Meeting is open to anyone interested.

2 May 1992, (Saturday), at the R.E. Museum, Chatham, 2 p.m. to 5 p.m.: 'Royal Engineer surveys in the Holy Land', a selection of talks, including Yolande Hodson (Hon. Sec. Palestine Exploration Fund), 'The survey of Western Palestine 1871-1878'. There will also be a tour of the Royal Engineers' museum. This is *not* organised by C.C.S., but will no doubt be of interest to many members. Admission by ticket, price £5:00: please apply to Director, R.E. Museum, Brompton Barracks, Chatham, Kent, ME4 4UG, tel. 0634-406397.

14 May 1992, (Thursday), 5 p.m., at the Warburg Institute, Woburn Square, London WC1: John Andrews, "More suitable to the English tongue": the cartography of Celtic placenames'. (It is understood this will include some reference to Ordnance Survey work in Ireland.)

16 May 1992, (Saturday), 10.30 for 11 a.m., the CHARLES CLOSE SOCIETY ANNUAL GENERAL MEETING, in the Geography Department, Birkbeck College, London, WC1. There will be the usual map market, and the speaker will be Chris Board, on censorship, security deletions and Ordnance Survey maps.

10 July 1992, (Friday), at 2 p.m.: visit to the Imperial War Museum map collection. Those interested in attending should contact David Archer, (address as Hon. Sec., on back page).

SUBSCRIPTIONS

Members are reminded that subscriptions were due on 1 March. The Membership Secretary (address on back cover) would welcome the early payment of outstanding contributions. The current rates were tabulated on the back page of *Sheetlines* 32.

Publications Manager: change of address

David Watt remains Publications Manager, but with immediate effect his new address is: Flat 9, 33 Cotswold Way, Langley Avenue, Worcester Park, Surrey.

Sheetlines house style, etc.

Following the proposals made in the Supplement to *Sheetlines* 31, pp 14-18, Richard Oliver is preparing a revised version for submission to the Society's Committee. If any member would like to have a copy of this revised version, which will embody suggestions which have been rejected, they should write to the Editor of *Sheetlines*.

(Continued inside back cover.)

BRIAN HARLEY, 1932-1991:
Historian of the Ordnance Survey - and much else

John Brian Harley was born in Bristol on 24 July 1932. At the age of three he was adopted, and was brought up in Staffordshire. He attended Brewood Grammar School as a boarder; he then did two years' National Service, in Trieste, Egypt and Cyprus. Both school and the army were 'character-building', and no doubt the latter particularly gave him his lifelong dislike of heavy-handed authority. In 1952 he went to the University of Birmingham to read geography, with history as a subsidiary subject, narrowly missing a First. In 1955-6 he spent a year at University College, Oxford, reading for the Diploma of Education, and then returned to Birmingham to work under Professor Harry Thorpe on the geography of mediaeval Warwickshire. 1958 was a notable year; he married Amy Chatten, he published an influential article on population and agricultural trends based on the Warwickshire Hundred Rolls of 1279 in the *Economic History Review*, (a considerable achievement for one who was still a research student), and he moved to Liverpool as an assistant lecturer in geography. He completed his thesis the following year; only those who have actually undertaken a doctoral thesis will fully appreciate what it means to complete one in three years full-time, never mind one when the last year of work must have been much less than full-time.

Harley once said that the formative years of his life were spent in Liverpool. It was there that he made the transition from mediaeval historical geography to cartographic history, though it would be quite wrong to imply that henceforth he concentrated on the latter: he was co-editor of a research series on historical geography, and contributed a number of historical-geographical essays to various symposia. Harley was a strong advocate of humanistic historical geography; in working on his thesis, he had come into contact with Rodney Hilton, the Marxist mediaevalist, and thus a humanocentric attitude was to be expected. Harley was always very much a man of the Left, and for a short period at Liverpool he was a member of the Communist Party; he said later that he joined because he was interested in the ideas rather than anything else. Though of the Left, he was also an individualist, and it is nearly as hard to imagine him in the CP as in the British army. Certainly he was free of that gloomy secular puritanism which has been so characteristic of much of the British Left, and was capable of being genuinely amused and interested by the activities of friends who campaigned for the Conservative Party. He was also on occasion given to expressing his views in a somewhat disconcerting manner. One day in April 1979, after the unveiling of a plaque to William Roy, he walked a little way home with two friends, and, immediately after parting from them, shouted 'VOTE LABOUR!' to the street. The friends are still wondering to this day what effect that had on improving the Conservative vote a few days later.

At Liverpool Harley was in a department when most of the members were of much the same age as he, and lack of promotion prospects led to his becoming a sponsoring editor with Messrs David and Charles of Newton Abbot, Devon in 1969. This was a short but very productive phase, and the resulting books filled a long shelf in his home. It also kept him extremely busy, with a desk ever overflowing with paper. In 1970 an unexpected vacancy came up, for a lecturer in historical geography at the University of Exeter. Harley applied, was successful, and in 1972 was promoted to Montefiore Reader in Geography. By this time his reputation as a writer on cartographic history generally and the Ordnance Survey in particular was secure, and he was busy expanding his research interests to include North American mapping. Unfortunately, his academic standing did not progress correspondingly. Although very highly thought of by both his colleagues at Exeter and by other cartographic historians outside, and capable of forming warm friendships with those of very different opinions to his own, he was not an 'establishment' man. At the same time, he suffered personal losses: in June 1983 his wife died, and his son died a few months later. He was also depressed by the activities of the Conservative government; in 1985 he wrote in a letter: 'These are sad times to live in and I am sorry I can offer no support or advice', adding in manuscript '- apart from shooting Thatcher'.

The combination of bereavement, the refusal of a personal chair and the direction of British politics meant that the University of Wisconsin-Milwaukee were knocking at an open door when in 1985 they sought a Professor of Geography with an interest in cartographic history, and invited Harley to fill the post. In August 1986 he moved to Milwaukee, and there entered into a particularly fruitful phase of his career. Air travel meant that it was easy to return to England twice a year to see his family and confer with collaborators and friends. In some ways he became Americanised; one recalls meeting him at Baker Street station, fulminating against the

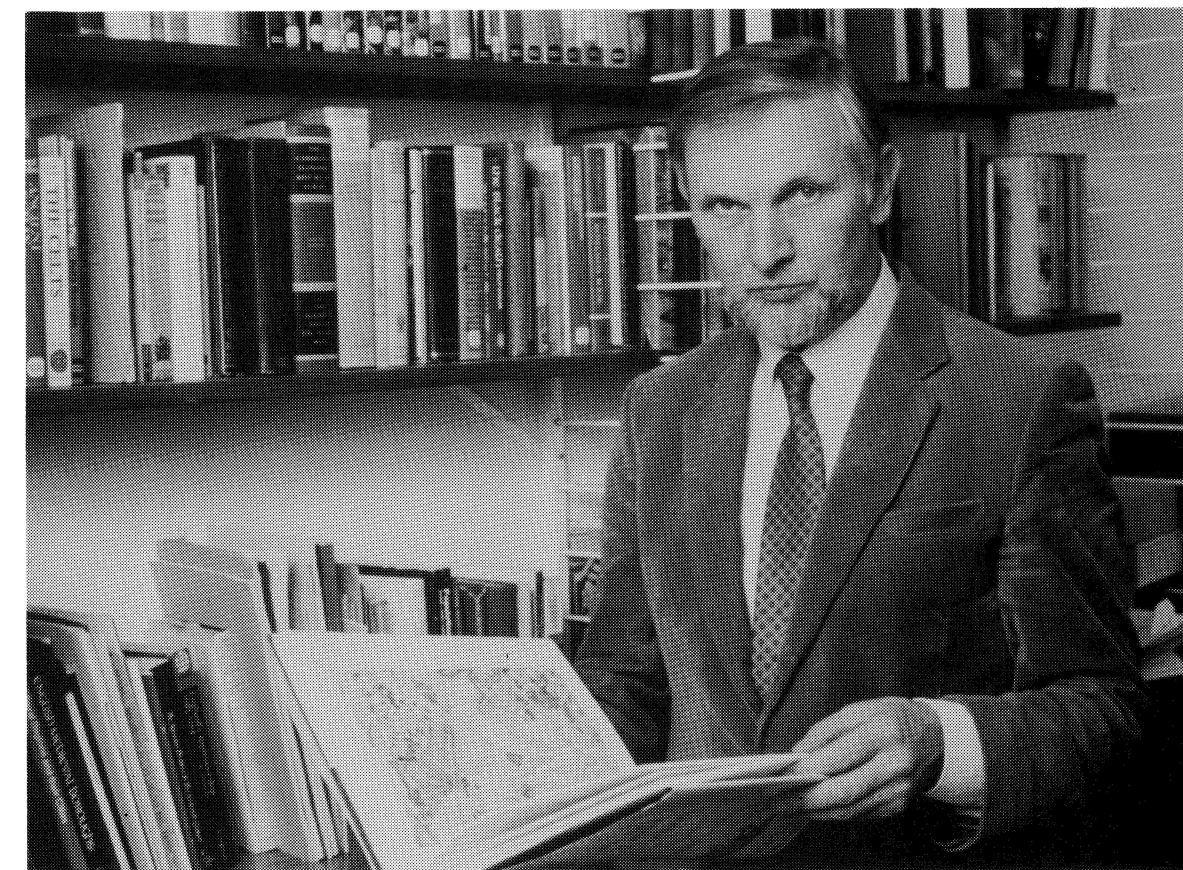
inability of London Transport to accept credit cards for a single from Metroland: 'In America you pay for *everything* with a card. You pay for *beer* with them.' (This tendency to italicisation was a marked feature of his speaking style, both in conversation and in addressing an audience, though it found no place in his epistolary style.) On the other hand, distance did not lend enchantment to the view of British politics: the one thing guaranteed to enrage him in Milwaukee was any mention of Britain's first woman Prime Minister. He was also prepared to be in a minority: he was a forthright opponent of the Gulf War. But there were compensations: he was able to move into a house large enough for an entire floor to be given over to his study-cum-library, there to write and to telephone around the world, the floors not bare but covered with neat piles of folders waiting to have their contents processed. (His one definite failure took place here: he was unable to master a micro-computer. When the house was burgled, it was the only thing stolen: Harley cheerfully wrote it off as 'an Act of God', and went back to his portable typewriter.) He developed new interests in his spare time, too. Apart from his well-known partiality for a tippie, he enjoyed his food, and as well as exploring to the full the numerous ethnic restaurants in Milwaukee he was an enthusiastic cook. Those who had known him at Exeter commented on how Milwaukee seemed to have given him a new lease of life, which made his sudden death from a heart attack on 20 December 1991 all the more shocking, particularly for those who had had the pleasure of meeting him on his last visit to England just over a fortnight earlier. His three daughters survive him.

Brian Harley had something of the artist as well as of the scholar about him, and one can divide his career into the customary artistic 'early', 'middle' and 'late' periods. The divisions come first around 1960 when he made the move from historical geography/economic history to cartographic history, and then around 1980, when he moved away from an empirically-based approach towards one more of interpretation.

The primary reason for the change of specialisation around 1960 was that Harley felt that he could not compete satisfactorily in the area of economic history, to which his thesis pointed, but a secondary reason must have been that Harry Thorpe, who had been his supervisor at Birmingham, was an enthusiast for studying past landscapes through maps; it was at this time that Thorpe and P.D.A. Harvey were completing their *Printed Maps of Warwickshire 1576-1900*. There was also the association with Rodney Hilton; it was at Hilton's suggestion that *Christopher Greenwood, county map-maker* was written and published, in 1962. Shortly afterwards there appeared a series of articles in *The Amateur Historian* which in 1964 were reissued as a booklet, *The Historian's guide to Ordnance Survey maps*. *Christopher Greenwood* and the *Historian's guide* both broke new ground; if the Ordnance Survey was more apparently 'mainstream', and was also attracting attention at this time from R.A. Skelton, then head of the Map Room at the British Museum, the fact remained this was the first 'user's guide' to old maps to be published. Although in later years Harley practically disowned the *Historian's guide* and refused to allow it to be reprinted, and its accounts of the small-scale maps in particular have been superseded, it still stands up quite well in parts; perusal of the notes (he approved of those who took the trouble to look at foot and end-notes) will show how much work went into compiling it. It may be suggested that, for British audiences at least, it is possibly his best-known work. In 1967-9 he wrote another series of articles, this time on non-OS maps, which were republished in 1972 as *Maps for the local historian*.

For a few years after the appearance of the *Historian's guide* Harley reverted to studying county map-making of the period just before or contemporary with the early years of the Ordnance Survey, but then came an unusual and extraordinary opportunity. In the later 1960s one of the most remarkable British publishing houses was David and Charles, run by David St John Thomas, interested in railways, and Charles Hadfield, a canal historian. David and Charles were publishing a considerable number of facsimile books at this period, and it seemed a logical development to observers when they announced a reissue of the 'First Edition' of the Ordnance Survey One-inch map. They recruited Harley as editor of the series, and as author of the cartographic notes. As with the *Historian's guide*, the fact that these maps have effectively been superseded, and are now not much thought of, should not blind us to what an extraordinary achievement they were in their day. They were published in 1969-71 at the rate of one a week, and the carto-bibliographic notes were compiled by dictating notes to a secretary in the British Museum map-room and elsewhere. These notes have subsequently been put to the test by map collectors and others and found fully adequate. Harley himself knew that they were merely an outline, and that there was room for improvement. He also knew that the facsimiles were less than ideal; he said that he 'fought tooth and nail' to have them described as 'Old Series' rather

than as 'First Edition', which explains why the former appears in the notes and the latter in publicity. David St John Thomas had insisted that the maps reissued should be states showing railways, which meant using late states, often complicated by other revisions and defaced by plate-wear. Harley was apparently genuinely surprised that the maps were continuing to sell in the 1980s; he also believed the labourer to be worthy of his hire, and was a little irritated that his percentage from the sales of the maps was only half that of the OS!



Brian Harley in his office at Exeter, early 1980s. He is holding a copy of Volume III of The Old Series Ordnance Survey; on the shelves behind him are various works on mediaeval history, and on the shelf at the top of the picture is a row of books published by David and Charles. Although this might seem to epitomise his career, this was emphatically his office; his study with its huge collection of books on the history of cartography was at his home in Newton Abbot. (By courtesy of the Department of Geography, University of Exeter.)

At the same time as the David and Charles series was appearing so too were a number of articles on the *Old Series*, in the *Cartographic Journal* and elsewhere, and more (notably one on the unpublished OS work in south-west Scotland in 1819-27) were planned but not completed. 'I am glad you like the Scottish episode: one of many started but unwritten papers with which my life is littered', he wrote in a letter in 1983. All this was to be a preliminary to a full-scale monograph on the *Old Series*. This monograph might have been yet another of these abortive projects, in common with David and Charles' scheme to reissue the early one-inch OS maps of Scotland, (according to Harley, this latter project was dropped because of the oil crisis of 1973), but it started to be written in disguise. In 1972 Harry Margary of Lympe Castle, who had started to issue high-quality facsimiles of pre-OS county mapping, invited Harley to provide the necessary introduction to accompany a multi-volume facsimile, the *Ordnance Survey Old Series*,

this time based on early states. It was an unusual opportunity for Harley to improve on unsatisfactory work; for him the best was always to come. Although each introductory essay was to be capable of being read as a self-contained entity, Harley had in view combining the essays into a single coherent narrative. His working title was *The First National Survey*, but as the years passed his ideas for the book expanded beyond a mere scissors-and-paste job; by 1990 he was thinking in terms of creating something which would enjoy the same status as W.G. Hoskins's *The Making of the English Landscape*. He said this during a railway journey back from an excellent lunch at Lympne Castle, passing through a countryside of oast houses, hop-yards and orchards straight out of a travel-poster: Harley talked expansively both of the projected book and of one day retiring to such a landscape. America had sharpened his taste for England.

The Margary *Ordnance Survey Old Series* introductory essays were written in collaboration with others: Volumes 1 to 3 with Yolande Hodson, Volumes 4 and 5 with John and Barbara Manterfield, and Volumes 7 and 8 with Richard Oliver. Harley proposed to start reworking the draft of the essay for volume 6 on 27 December 1991; when it appears, Volume 6 of the *Ordnance Survey Old Series* will be a sort of ironic memorial to him, as the contrast with the previous volumes in style and handling will be striking.

Indeed, what was striking about Harley was the extent to which he collaborated: Harley and Blakemore, Harley and Laxton, Harley and Phillips, Harley and Walters, Harley and Woodward... Of course, there were many articles which he wrote by himself, but it was an unfulfilled ambition to write a book which would have his name alone on the title page, which he could call truly his own. That said, the collaborations were mutually beneficial. Harley needed material to work on, but increasingly he had less time to do the collecting, and a growing urge to interpret rather than merely to describe. That was where the collaborator came in, providing the basic material which Harley could develop; 'you're too **** empirical!', he once said good-naturedly to this writer, but these collaborations, particularly on the *Ordnance Survey Old Series* project, meant that each partner could do what he or she was best suited to.

At the same time as the Harry Margary project was getting under way, Harley was at work on *Ordnance Survey maps: a descriptive manual*, which has probably had an even wider circulation than the *Historian's guide*. It was intended as a replacement for the various *Descriptions* of Ordnance Survey maps, that is as a companion to and explanation of current mapping, but Harley managed to give it an extra dimension by including some historical material, arguing that the present could not be understood without reference to the past. It was written at the instigation of the OS, who supplied Harley with copies of various internal instruction manuals. It was finally published in 1975, and though it won wide praise at the time it is possible that, in the long run, it will be found to be amongst the least satisfactory of his works. Harley said that he put a lot of hard work into it, but it had to appear as an official publication, and thus 'safe'; he was unhappy with the way that the OS would not allow any references in the footnotes to its internal manuals, and he was particularly indignant when they insisted that he return a list of 'secret' installations which were not allowed to be shown on the maps! He hoped that that it would be possible to update and reissue the *Descriptive manual* at intervals, but the book did not sell well enough to make this possible in an atmosphere of obsession with 'full cost recovery'. By the early 1980s he was thinking - once again, as a collaborative venture - of a new work which would be a combination of, and a replacement for, both the *Descriptive manual* and the *Historian's Guide*.

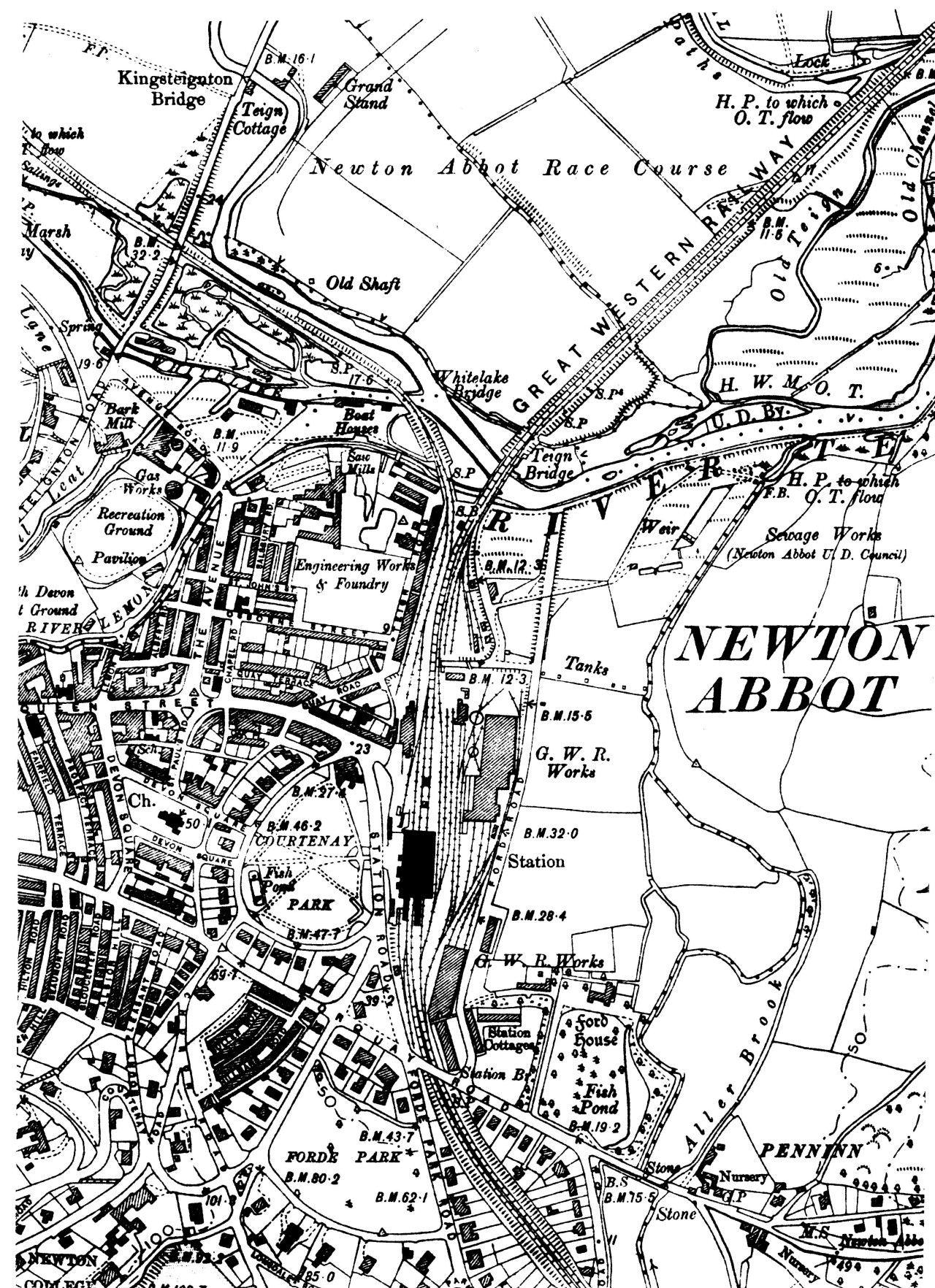
Some idea of what this 'descriptive historical manual' might have been like - at any rate had it been written around 1980 - can be found from Harley's booklet on the Ordnance Survey and land-use mapping, 1855-1918, which appeared in 1979. If the *Descriptive manual* is one of the least satisfactory of his works, this study of land-use mapping must be considered as perhaps the best of Harley's writings on the OS. It had no successor; a proposal for what seems to have started as a booklet but then developed towards a monograph on the OS 'town scales' of the nineteenth century got no further than a conference paper, an article on the 1:500 plans of Exeter, and an essay on Warwickshire 1:528 plans in a memorial volume for Harry Thorpe. Harley was glad to write something as a tribute to Thorpe, but felt that otherwise publication was premature. One suspects that most of his readers would disagree. As usual, the apparent failure to pursue the project was not because the spirit was unwilling nor the flesh weak: more than once Harley said that the history of cartography was a field where the vineyard was large and the labourers few. In this case it was a question of using the one available collaborator either to gather the grapes of map-content on OS 1:500 plans in the British Library or the hops of new *Old Series* states in various repositories in the north of England. The hops won.

In the 1960s and 1970s Harley's output was generally empirical in nature; the booklet on land-use mapping was the culmination of this phase, this 'middle period'. Hitherto Harley's writing had certainly stated 'the reason why', but working on first the *Descriptive manual* and then the land-use study must have made him a little of impatient of 'because the documents say so'. Why? The explanation had to be wider. In 1981 there appeared an essay, written in collaboration with M.J. Blakemore, *Concepts in the history of cartography*. In characteristic style, it drew on a remarkably wide range of secondary literature as a starting point, building on that base a whole new edifice; it was full of new possibilities and suggestions, perhaps the most remarkable chapter being 'Cultural meaning: the iconography of maps', which turned to developments in the study of art history to provide new stimulus for cartographic history. Though described, characteristically, as 'containing preliminary rather than mature thoughts', *Concepts* provided a long agenda for further work.

If the study of map history was to be seen in a wider context, then so must be *Concepts*: the context now was an impressive scheme for a five- (later six) volume general *History of Cartography*. It was yet another collaborative venture, by far the grandest, and perhaps the most complicated in gestation. Back in 1960 Harley had spent some months in America as a visiting fellow at the John Carter Brown Library, there pursuing an interest in eighteenth century North American mapping. This work, encouraged by Skelton, was a logical counterpart to the work on contemporary English county mapping, as the same publishers issued both sorts of map. Harley published a number of articles and papers, the bi-centenary of the Declaration of Independence in 1976 providing a suitable context for the presentation of those on mapping the American Revolution. In 1975 Harley outlined a scheme for a four-volume history of North American mapping, and discussed it with David Woodward, a native of the English midlands who had moved to North America some years before. In 1977 Woodward visited Harley in Newton Abbot, and there, half-way up the hill on the footpath leading to Highweek church - Woodward has said that he can point to the exact spot - the idea of a general *History of Cartography* was conceived. The history of American mapping was suspended, and Harley got to work with Blakemore on the concepts which were to guide the enterprise. The project officially started in August 1981, and Harley and Woodward set about recruiting some 130 authors, the list of which reads like a *Who's who* of cartographic historians around the world. 'The world' is the right word, for this *History of Cartography* was to give equal weight to all cartographic cultures, and not, as less ambitious predecessors had done, tend to concentrate on Europe and North America. It was a neat marriage of scholarship and social and racial justice. The first volume (of nearly 500 pages, in double-column) appeared in 1987, the second is due to appear in 1992, the third is hoped for in 1993 and there are three further volumes after that.

It would have been wholly reasonable had Harley decided in the early 1980s to abandon all his other interests and concentrate on the *History*; it would also would have been out of character. The *Ordnance Survey Old Series* project continued, and Harley continued to study the map in its social context. A series of papers and articles on this theme appeared in 1988-90, but, once again, they were to be no more than a preliminary to a book on mapping and ideology, which absorbed a considerable part of his attention in 1985-6, at a time when he was also working on the introduction to volume III of the *History*. Of all the projects which he started, this is the one which no-one but he could have seen through. The *History* will continue, the *First National Survey* can be realised without difficulty, and there are authors who can provide the substance, if not the style, of replacements for the *Historian's guide* and the *Descriptive manual*, but the study of mapping and ideology remains the most personal of these schemes. The loss is by no means complete: the published material expounded ideas of both symbolism on maps and of 'silences', 'hidden agendas', and sought to explore questions of cartography and ethics, drawing on such modern thinkers as Foucault and Gramsci. All this may seem a very long way from the Ordnance Survey's recording of the English landscape; in fact Harley set out the guidelines which some rising scholar could follow with much profit. So far the OS 1:50,000 map has not been 'deconstructed' much beyond noting that it needs four passes through the press.

Another distraction - it does not seem too strong a word, and he would probably have used it - was the Columbus Quincentenary. Apart from getting into controversy about the 'discovery' of America - Harley was a strong advocate of the phrase 'Columbian encounter' - he prepared for a travelling exhibition both a 40,000 word catalogue and a commentary for a half-hour video. The latter will have a permanent value presumably not contemplated when it was made, preserving as it does his voice, though alas not his visual presence, speaking with great urgency and conviction. Indeed, it is an extraordinary document; the *avant-garde* in map-history scholarship reaches out to a wide public in terms no-one can misunderstand. It is also to be suspected that



not everyone, at least in the United States, will care for its message, and a knowledge of the author's background would merely confirm old prejudices. One is left with the feeling that Brian Harley was unable to cheat death, but at least for once he was able to cheat his critics.

It was perhaps in keeping with his 'last period' that Harley should have been invited to the meeting in December 1980 which led to the formation of the Charles Close Society, but have been unable to attend. Indeed, it might be supposed from the published record that his contribution to the Society was limited to addressing its annual general meeting in 1983 and paying his subscription. In fact, his was one of the loudest voices calling for *Sheetlines* to be turned into a proper journal; when the writer took over as editor he hoped that it would be possible to bring it to a standard where it would have been difficult for Harley to refuse at least an invitation for a review on grounds of presentation. In the event the improvement came too late, but it was with considerable satisfaction that the editor received the comment, following the publication of number 31: 'I enjoyed [this] issue not only because of its content but also because of the greatly improved standard of production. It looks much more professional...' Incidentally, his favourite map was Devon Six-inch sheet 109 S.E., revised in 1904; in an article for *The Map Collector* he interpreted it as not merely an artefact of geography, but as a biography of the surveyors and draughtsmen who made it, and the landscape it shows, and of where he lived for seventeen years, and, indeed, now rests.

It is not easy to do justice to either Brian Harley's character or work in the space of a short essay. He was both co-operative and an individualist; he stood at the head of his profession and yet was never part of the establishment; he was a man of the Left who somehow managed to write a standard reference book for a British government department; he was an enthusiastic immigrant to the United States, yet remained part of England; he developed vast areas in the history of cartography, and yet died leaving an enormous labour of clearing-up for his surviving collaborators and assistants. In Britain he remains best known for his work on the Ordnance Survey, yet by the early 1980s he was anxious to be known as something other than 'O.S. Harley'; it remains to be seen whether his writings of the late 1980s will ultimately be recognised as his most important work.

As a friend he was to be valued, and he was always prepared to take trouble. He hated humbug, and was by nature modest: when asked by the writer how to address him in Milwaukee, he said 'Dr.', and of one favourable review he commented to a journal's editor: 'Does he really believe all this or did you have to pay him!' His personal modesty, together with a temperamental disinclination to rest on any laurels which might have been awarded him, made one not forget, but not even realise just how much he had accomplished; his landscape was a vast canvas, and he could give the impression that all that he had done *so far* was to paint a few trees and figures. But Harley also knew that he had done more than that; he hated plagiarists, and he could be 'wound up' very easily by mention of certain authors whose labours in the vineyard had been agreeably lightened by the *Historian's guide* and *Maps for the local historian*, and who showed it by not bothering to seek out his other work. One of the ironies of his career was that it was celebrated on 17 March 1992 at the Royal Geographical Society, an institution which, despite his being presented with life membership as a leaving present by his Exeter colleagues, he by no means entirely approved. And he might well feel that this notice is as full of misguided zeal and misdirected loyalty as it is of factual information; as a reader of *Private Eye* he would perhaps regret that these remarks are too diffuse and prolix to find a place in its 'O.B.N.' column; though perhaps he would relish its 'silences'.

'This is a field where the vineyard is large and the labourers few.' Well, now they are one fewer.

R.R.O.

This notice has been compiled partly from the obituaries in The Independent (27 December 1991), The Guardian (28 December 1991), and The Times (30 December 1991), partly from the proceedings of the celebration of Brian Harley's life at the Royal Geographical Society on 17 March 1992, partly from the reminiscences of friends, and partly from the writer's own memories and from letters and other papers in his possession. He accepts full responsibility for what is written here.

An Ordnance Survey playlet of 1842

by J.H. Andrews

The following short play comes from the papers of the eminent Irish scientist John Tyndall (1820-1893) in the Royal Institution of Great Britain. It was written for Tyndall's amusement by his friend and compatriot William Ginty when both men were in their twenties and employed as civil assistants on the six-inch Ordnance Survey of Lancashire, Tyndall at Preston and Ginty near Liverpool.¹ Ginty had been surveying in England for about four months after several years as a plotter and draughtsman in Ireland. The letter containing his play is dated 5 October 1842 and the action is set in Ormskirk four days earlier. The text is now available only in typescript, the original manuscript having been retained by Tyndall's family but apparently not preserved. It is printed here by kind permission of the Royal Institution, with speakers' names supplied where necessary and with a few changes of spelling, punctuation and layout to improve readability.

The Inspection

A farce in two acts

By the author of 'The Moonlight Shore'

Dramatis Personae:

Hamley, a lieutenant of Engineers

Sheppard, the corporal in charge

Bracken, the corporal out of charge

Ginty, one of the squad

Labourers, lookers-on, etc. etc.

Scene: a highway with a \triangle in the perspective (a propos)²

Act 1st, The Stores

Bracken (transferring the stores to Sheppard): William Geenty!

Ginty: Here!

Hamley (interrupting him): You're a draughtsman, are you not?

Ginty: Yes, sir. *(Aside)* A kind of one.

Hamley: Which do you like best, surveying or drawing?

Ginty: Drawing, sir. I'm hardly able to stand the fatigue.

Hamley (in a loud tone of astonishment): The devil! You not able to stand it. You seem to thrive on it then.

Ginty (with a blunt emphasis and audible grin): Oh do I? I'm very sure I don't.

(A general giggle and move.)

Hamley: Why are you not?

Ginty: I've never been used to such awful walking.

Hamley (looking pale and in a tone approaching the pathetic): I only wish I could bear as much.

Ginty: I'm willing at all events, sir, to do my best.

Hamley: Very right, very right.

(Exeunt)

Act the 2nd, The Books

Hamley (taking my book): You learned to survey since you came to England?

Ginty: I learned the practical part, sir -- chaining.

Hamley: Hum. *(Turning over to some awful big figures in a diagram.)* Well! Them are

¹ Letters from or about Ginty are in volume xi (ff. 3578-3655) of Tyndall's correspondence. The play is on f.3584. For Tyndall see A.S. Eve and C.H. Creasey, *Life and Work of John Tyndall* (1945).

² The dot-in-triangle symbol for a trigonometrical station was commonly used by Survey personnel in writing as well as on maps. Ginty's phrase 'a propos' is apparently unknown to theatre historians as a technical term. Perhaps he meant simply that the 'stage' was appropriately furnished.

whoppers.

Ginty: So much the better for the office men, sir.

Hamley: Ah, oh, yes, I can't say there is any particular objection.

Ginty: No, sir! There can't be!

Hamley (turning another page and seeing 'total 167'): That's a good day's work. (Another, 114.) That's passable.

Bracken: He is a very excellent, steady and diligent workman, sir.

Hamley: Oh! Oh!

Ginty: My work, sir, for the last two months has been very very difficult, all demesnes.

Hamley: Not hereabouts, eh?

Ginty: No, sir, Crosby, and Ince Halls.

Hamley: Oh, Ince Hall. I hope you will make a clever job of that.

Ginty: (A nod).

(Finis)

A few words of comment may be appropriate. Ginty's dialogue, colloquial and plain-spoken but neither witty nor profound, suggests a quick ear and nothing more. However, his knowledge of play-text conventions reveals him as an educated man and this impression is confirmed by his other letters in the Tyndall collection, which are amusing, exuberant, high-flown, and enlivened by foreign-language tags and allusions as well as by specimens of his own accomplished light verse -- though not, regrettably, by the text of his otherwise unrecorded work 'The moonlight shore'. In short, he and Tyndall, like several of their Irish comrades on the Survey, were intellectually over-qualified for their duties, a circumstance that helps to explain their general resentment of authority and the vigour of their agitation for higher wages. They spent much time collecting evidence of the Survey's supposed mismanagement in both Ireland and northern England, believing that the money lost in correcting inaccurate work supervised by incompetent officers could have been more than saved by employing well-paid professional land surveyors in the first place. It therefore seemed appropriate for Ginty to score off Hamley, who in his apparent gormlessness anticipates the Ordnance Survey subaltern in Brian Friel's play *Translations*. But although Ginty offered his play as a 'verbatim et literatim' record, it is hard not to suspect an element of dramatic licence at this point. In real life Lieutenant William George Hamley was an officer of some experience, commissioned as early as 1833 and portrayed in Ginty's other letters as reasonably competent and decisive. He eventually became lieutenant-governor of Bermuda and retired with the honorary rank of major-general.³

An important element in the Survey's low-wage system was the division of labour between surveying and plotting. Ginty had begun as an 'office man' but was now proud of his skill in the field. He could lay out long lines through difficult country and, as he implied, one long line was easier to plot than a succession of short lines. His rate of work was also regarded as creditable. (The figures that Hamley reads from his field book are chain-lengths measured per day; in an earlier letter Ginty told Tyndall that he was averaging 130 chains, which he regarded as equivalent to an area of forty acres.) His preference however was evidently for indoor work, and Hamley obliged by restoring him and some of his colleagues to office duties before the onset of winter.

By a 'demesne' Ginty meant an ornamental park attached to a large country house. The difficulty of a demesne survey lay in carrying chain lines through such obstacles as woods, shrubberies, and walled gardens. Perhaps more interesting is the hint of class prejudice in Hamley's apparent implication that special pains should be taken in surveying the house and grounds at Ince Hall.⁴ On the same theme, Ginty was later to suggest that Hamley had acted

³ Obituary in *Royal Engineer's Journal*, 1 June 1893, pp.132-3. Richard Oliver points out that Hamley is named in the footnotes of a number of first-edition Lancashire six-inch sheets as the officer responsible for the survey, and signs a number of three-chain Ordnance Survey tithe maps. (The six-inch sheets are Lancashire 14, 18-20, 24-6, 29-32, 34, 37, 38, 42-4, 50-52, 58-60, 67, 68, 83-6, 90-93, 98-101, 107-9, 114, 115, 118; the tithe maps are: Cantsfield (Public Record Office, London (PRO) IR 30/18/61), Leck (PRO IR 30/18/196), Tunstall (PRO IR 30/18/312) and Yealand Conyers (PRO IR 30/18/353).

⁴ Ginty's plural 'Ince Halls' was intentional, there being several houses of this name in the same area. (*Victoria county history, Lancashire*, iv (1911), p.104). Hamley was presumably referring to whichever of these houses he regarded as most important.

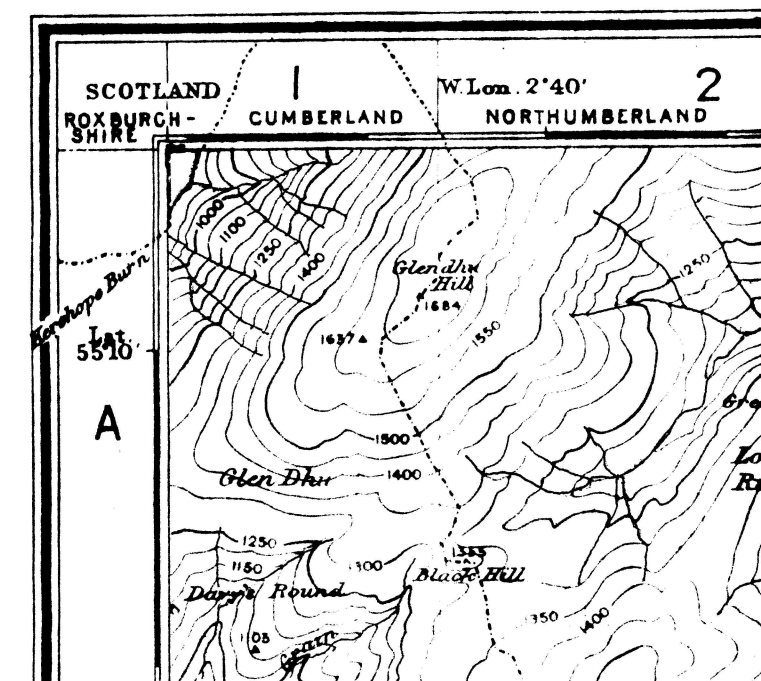
improperly in promising a separate large-scale plan of Hornby, near Lancaster, to the tenant of the castle there 'for friendship's sake', though no such plan is known to survive either at Hornby Castle or in the Lancashire Record Office.

William Ginty left the Survey in November 1843. No one has written his biography, but like some of the department's other malcontents he seems to have done well in later life, allegedly making a fortune in Rio de Janeiro and being knighted by the emperor of Brazil. His letters, and those of other civil assistants in the Tyndall papers, give a unique worms'-eye view of the Ordnance Survey at a crucial period. Except in relation to Ireland they do not seem to have been used by cartographic historians.⁵

Puzzle corner

What is the answer to this riddle? 'There are five; some would say there are only four; some would say there are six.'

The answer to the puzzle in *Sheetlines* 32 (p.8) is England and Wales Popular Edition sheet 6; the small portion of Scotland in the north-west corner is left blank, as can be seen on the extract.



⁵ J.H. Andrews, *A paper landscape: the Ordnance Survey in nineteenth-century Ireland* (1975), pp 81, 92. Apart from the Ginty letters there is relevant material in volumes x and xi of Tyndall's correspondence and in a volume entitled 'John Tyndall, early life', also at the Royal Institution.

Henry Crook, 1853-1935, and the centenary of the Dorington Committee

1991 was celebrated as the official bi-centenary of the Ordnance Survey, and this issue of *Sheetlines* will coincide with the centenary of the appointment on 26 April 1892 of the Departmental Committee on the Ordnance Survey, under the chairmanship of Sir John Dorington, M.P. The 'battle of the scales' of 1851-8 had established that the Ordnance Survey was to map the whole country at very large scales, and the Dorington Committee had the practical effect of ensuring that those surveys, once made, were kept up to date.

Closely associated with the Dorington Committee, and its star 'lay' witness, was Colonel Henry Tipping Crook, (1854-1935). A nephew of Joseph Crook, sometime M.P. for Bolton, and educated in Manchester, Crook was a practising civil engineer, and early in his career worked in Ireland; this included laying out drains in Dublin. He became Vice-President of the Institution of Civil Engineers of Ireland, and was awarded their Mullins gold medal. In 1884 he opened a practice as a civil engineer in Manchester, and by 1890 he had had enough experience of Ordnance Survey maps to address the British Association on these maps' defects. In 1892 he published these comments as a pamphlet, *The maps of the Ordnance Survey, As they are and as they ought to be.*¹ Crook's criticisms were well-informed and it has been suggested² that he was 'a "plant"', intended to secure an official inquiry into the Ordnance Survey. If so, the plant worked. It is germane that Crook was a Captain in the 1st Lancashire Volunteer Engineers; perhaps also of significance that he was Secretary to the Manchester Liberal Unionist Association and that in the general election of July 1892 he stood (unsuccessfully) as a candidate at Sowerby.³ Sir Charles Wilson, at that time Director-General of the Ordnance Survey, was also a unionist, and had been in charge of the Irish Survey in 1876-9, 1883-4 and 1885-6, which makes one wonder whether he may have made Crook's acquaintance considerably before the time of the Dorington Committee. At any rate, Crook's repetition of his charges considerably enlivened the Dorington Committee's proceedings; the *Times*' comments on his pamphlet, 'vivacity... at once highly entertaining and perfectly just' applies also to Crook's evidence.

At the same time as he was giving evidence to the Dorington Committee and seeking votes in Sowerby, Crook joined the Manchester Geographical Society; he was made a member of its council in 1893, served as president from 1923 to 1926, and shortly before his death he handed over his map collection to the Society. He was a magistrate, in 1917 he was Vice Lord Lieutenant of Lancashire, and his interests included 'town and regional planning, the preservation of the countryside, common rights and rights of way, national parks and ancient monuments; but his interests knew no local limitations, and ranged as far afield as China, the Himalayas and the Arctic.'⁴

Described as of 'tall, commanding figure and striking personality', Crook was awarded the V.D. in 1907 for 'the brilliant organisation of his regiment'. Indeed, though it is to be suspected that Crook's present reputation rests on his Ordnance Survey agitation, it is possible on a mere word-count that he will be found to be of more military than cartographic significance. He was the author of *War-game maps* (1888) and *Studies in practical topography* (1909), both published by the Manchester Tactical Society; in 1921 the *Army Quarterly* wrote, 'Colonel Crook's are amongst the best strategical-tactical studies which have been published in the English language.'⁵

Studies in practical topography was accompanied by five complete Ordnance Survey maps,⁶ and although its main object was military it is also of cartographic interest. Some snippets from the opening pages give excellent examples of Crook's style and thinking. The synopsis of the first chapter opens with: 'The 6" map as produced for the examinations in tactics and topography - Some erratic contours and a canal - Absence of hedgerow trees'. In his introduction Crook strongly deprecates the study of tactics using maps of 'invented' country: at the time he published his previous book, 'high authority had just placed its imprimatur upon, the

¹ Manchester, J.E. Cornish, and London, Simpkin, Marshall, 1892.

² By Ian Mumford in W.A. Seymour (ed), *A history of the Ordnance Survey*, (Folkestone, Dawson, 1980), p.188.

³ See *The Times*, 1 July 1892, p.5.

⁴ Obituary in *Journal of the Manchester Geographical Society*, XLV (1934-5), 57-8.

⁵ H.S. Wilkinson, 'An experiment in military education', *Army Quarterly*, 3 (1921), 51-69.

⁶ NS-2-H 68, NS-3-LC 43 and 51, and Half-inch England layered 8 and 9.

acme of artificial absurdities, a map for tactical exercises of which the component sheets were interchangeable.' 'For the study of ground the essential thing is practice with the best possible maps.'

'The agitation for the reform of the Ordnance Survey... although it has, as yet, effected but a moiety of the improvements... desired, has, at all events resulted in the production of several new maps on various scales, which are fairly up-to-date as regards the artificial features and which shew the ground forms, in some cases, with more or less passable success. There is still, however, much to seek in the quality of official cartography. So long as the Survey adheres to the practice of producing the smaller scale maps by purely mechanical reduction, it will never succeed in making really satisfactory readable and artistic maps. Small scale maps must be designed for the scale upon which they are to be produced. None of the new maps has been so designed.

'One of the principal improvements asked for, additional contours, has, so far, been practically ignored. These are particularly required on the six-inch maps.

'Before the South African war there was a demand for a general topographical map on a larger scale than the one inch to the mile. For manoeuvre purposes special maps were usually prepared on the scale of two inches to the mile. The enlarged map gave no more information than the one inch, whilst the area depicted on a sheet of equal size was 75 per cent less. Now the use of smaller scale maps is enjoined and the issue, for military purposes, of any of greater scale than the one-inch is strictly limited to a few special cases. Of course the idea is that officers and others should be practised in the use of the kind of maps which would alone be likely to be available on active service. But this is rather to confuse instruction with the application of its results in the field. It might, with equal force, be argued that the whole voluminous library of instructional works should be suppressed with the exception of the field service pocket book. Up to quite recent times officers could purchase direct from the Ordnance Survey, maps on any scale at half the published prices. This privilege, for some unexplained reason, was curtailed in 1905 and is now limited to the one-inch and smaller scales.

'Adequately contoured, a good six-inch map, such as the old engraved map of the counties of Lancashire and Yorkshire, is a topographical text book. It is the best medium for the initial stages of instruction in map reading, in the study of ground forms and physiography generally.'

Acknowledgements

I am grateful to Richard Dean, Ian O'Brien and Charles Toase for supplying the materials on which this note is based, though any subjectivity is mine entirely!

Richard Oliver



Henry Tipping Crook, 1854-1935. From the frontispiece to Vols XXXIX-XL (1925) of *Journal of the Manchester Geographical Society*.

The Ellis Martin covers of the Ordnance Survey Half-inch map series 1918 - 1942

by Guy Messenger

Among the map covers designed for regular map series by Ellis Martin between the first and second world wars, those for the One-inch Popular Edition of England and Wales and for the Half-inch (1:126,720) Large Sheet Series hold pride of place, as the only two that remained unaltered in all but minor details throughout the twenty-four year period. Among the remainder, the one to hold sway longest was that for the One-inch Popular Edition of Scotland, and a descriptive article dealing with this is already in the pipeline for future publication in *Sheetlines*. A monograph is being planned for the Popular of England & Wales. Very little has so far appeared in *Sheetlines* about the Half-inch, and now seems a good time to break silence.

A CCS map-study meeting on the Half-inch map was held in 1984, and the report on this¹ gives a fairly comprehensive account of the Half-inch story before the first world war. Beyond that, though, it is sketchy in the extreme, not least because the development of the map itself is complex and confused, as it was before the war, and another full day's discussion would have been needed to complete its unravelling. Up to 1914, the Half-inch was cartographically very much an experimental map, but between 1912 and 1915 a determined effort was made to produce fully standardised versions for England & Wales and Scotland, and an Irish Half-inch was completed in 1918. A common front cover design (H.12) was produced for these three series in 1918, and remained in use for the first two until the coloured Half-inch map fell into disuse after the second world war. The Ordnance Survey of Ireland began making its own coloured reproductions of the series and selling them in its own covers during the 1920s.

To describe the development of the Ellis Martin covers for the series it is necessary first to attempt a rational classification of the maps themselves. The difficulty lies in the fact that in the England & Wales series there is no more consistency about the sequence of stages in the revision and printing style among the different sheets of the series after 1912 than there was before, and it is necessary to try to make sense of this before tackling the development of the covers. As I see it, it is hopeless to try to base a classification of the maps on groups of publication dates or revision dates, and the best hope lies in the style of presentation. Looking at the England & Wales series as a whole it seems to me that there are four principal *modes* of presentation running in two parallel streams through the series, and that the earliest of them has to be divided into *submodes* to a greater extent than the others because it was subject to more experimentation than the others. The modes can be immediately distinguished from one another by means of significant features as follows:

	HILLS ONLY	HILLS/LAYERS	LAYERS ONLY
Without 2" grid squaring	1H EWS	1HL EW	1L EWS
2" grid squaring added, road infill brown; stations black (as mode 1) or uncoloured (I only)	2H EWSI	-	2L EWSI
Road infill red and yellow; stations red filled, or not	3H EW ?S	-	3L EWS
Sheet name and other marginalia in 1" Popular style	-	-	4L EW

(EW = England & Wales, S = Scotland, I = Ireland.)

The LSS Half-inch series of maps was generated mainly from the Third Edition of the One-inch, and the marginal details of sheets of the first two modes of the former have much in common with those of the latter. In particular, it is convenient to use the same features in the identification of printing states and substates, namely dates of publication and reprinting as these

¹ 'The "Half-inch" at Tewin', *Sheetlines* 9 (April 1984), pp 14-16.

appear on the sheets, printed prices and copyright statements. Coding conventions for the latter can be applied exactly as was done in my Third Edition LSS monograph,² and extracts from my catalogue of my own collection of Half-inch maps shows how this can be done. It is obvious that a complete account of the covers of a series of maps can only be given if the maps themselves can be precisely identified.

A systematic examination of my own collection and those of one or two friends has led me to conclude that the development of cover design during the period under review proceeded in more readily recognisable stages than did that of the maps themselves. Eight main phases of development are recognisable, in some of which subdivisions have been identified. These eight phases coincide in time with similar phases in the cover development of other map series which were produced concurrently, in particular, the One-inch Popular Edition of England & Wales, and in a future article I hope to show how the covers of the Scotland Popular conform, in the main, to the same pattern. Just as there are parallel streams in the categorisation of the modes of the maps so there are similarly streams in the sequences of cover development. The most obvious is that of the method of mounting and folding; within each phase covers for Paper folded (P), Cloth mounted (M) and Mounted in sections (D) sheets are distinguished by their printed price and by details of wording, and with the words 'Hill-shaded' or 'Layers' printed on each cover; this means that, without any further refinements, there are potentially six different front covers for every one of the sheets in the series, in each of the eight phases. This however does not take into account the fact that one of the most fascinating aspects of this, and indeed all map series of this period, namely the diversity of styles of lettering used for the sheet names printed on the covers, and the alterations of the names and wording on successive covers produced for the same sheet. Such changes sometimes occur in successive covers within a single phase, and this is especially the case in some sheets of the England & Wales Half-inch series, though not in others, and such alterations cannot be relied upon to coincide with changes of phase. To do justice to this aspect of the covers labyrinth, one would have to study a far more comprehensive collection than mine. In my catalogue, having compared the cover styles of each sheet, I simply code the styles of lettering found in a sequence upwards from A to E or beyond, but make no pretence to equate the sequence for one sheet with that for another. Prices as originally printed on covers are coded (nos 1 to 8) according to the list below, and 'PCL' in the Notes column of the catalogue indicates a price change label obscuring the original price; nevertheless in the majority of examples it has been possible to lift the label and check the original price underneath. On a few Scottish covers a second label covering the first restores the original price (2/-) after it has been raised to 2/3. With only a single exception known, every cover in Phases 1 and 2 was issued with a price change label printed by the Ordnance Survey including both Scale and Price lines printed in black exactly in the form used in Phase 3, and this raises the question whether the Phase 1 and 2 sheets were ever actually retailed at their original prices, which of course were those charged from 1915 to 1919.

Prices code:	1 - Price: Two Shillings
	2 - Price: Three Shillings
	3 - Price: Three Shillings Net
	4 - Price - 2s.9d.
	5 - Price: 4/-
	6 - Price: 4/- Net
	7 - Price: One Shilling & Sixpence
	8 - Price: Two Shillings & Sixpence

The method of affixing covers is also coded:

- a - adhesive
- b - Benderfold
- f - bookfold
- h - hinged

N.B. A few sheets (e.g. E. & W. 40) are the right shape for folding in true Benderfold style.

² Guy Messenger, *The Ordnance Survey one-inch map of England and Wales, Third Edition (Large Sheet Series): a Map Study Monograph*, London, Charles Close Society, 1988.

Back Covers: A minority of covers examined consist of a single folded card (in Benderfold or bookfold style) in which the front and back cover designs are printed as a single unit, but in the great majority, front and back covers are affixed separately, and there is considerable variation in the pairing between front covers of the eight Phases and the 17 different variants of back cover design that have been identified. The principal component of back cover design is a Sheet Index Diagram, and this is accompanied by a heading, and in some versions a statement of Authority for publication. Most versions are printed in brown, but the earliest are in black. There are three different index diagrams for the England & Wales sheets, namely North (N), Midland (M) and South (S), one each for Scotland (Sc) and Ireland (Ir), and one for the whole of Great Britain (GB). The full coding in my catalogue is as follows:

	NORTH	MIDLAND	SOUTH	SCOTLAND	IRELAND	GT BRITAIN
BLACK	N1b	M1b	S1b	Sc1b	-	-
BROWN	N1	M1	S1	Sc1	Ir	-
NEW HEADING	N2	M2	S2	-	-	-
+ AUTHORITY	N3	M3	S3	Sc2	-	GB

(The black printed BOS versions appear identical with those used before the war on white inged card covers.)

The Phases: Deliberately, I have left the most important matter until last. By using the term 'phase' I have tried to emphasise the fact that at certain points during the passage of time certain identifiable changes in practice occurred in the printing or affixing of covers, or in the method of folding of sheets, not only in all sheets of a series, but in all series in production at the time. Some of the changes in the variable features I have so far described actually signal the end of one phase and the beginning of the next. Others do not. Minor changes may occur during a phase which do not appear to affect all sheets. Only in the cover development of the Half-inch and of the and of the England & Wales Popular are all eight phases fully represented. At the end of the descriptive notes on each phase that follow there are reference lists of the map series known to be represented in each.

PHASE 1. 1918. E & W 10 examples; Sc 1 example; E & W 1 f, rest a; Sc only a; All Mode H; Price 7 all PCL; BOS [Back outer surface] N1b3; M1b 5; Sc1b 1; Sheet 4 *Isle of Man* has BOS blank, and price 7.

The front cover design has the major part of the FOS design in black on buff paper or card, but sheet name, sheet number and mode in vermilion, and in bookfold examples, scale and price lines as well, though not in any of the adhesive examples seen. No 1P or 1D yet recorded, and no Irish examples.

1" 3rd LSS; 1" E & W Pop; None reported for Sc 1" 3rd.

PHASE 2. Probably 1919-20. E & W 7 examples; Sc 9 examples; Ir 2 examples; Sc 2 Mode L, rest Mode H; all a; Price 7 all PCL; All 2M, no 2P or 2D; BOS, N1b 1; M1b 3; S1b 2; Sc1b 8; S1 1; Sc1 1; Ir 2.

The major part of the FOS design is in dark brown, with a dark green border varying slightly in width, depending on the dimensions of the map when folded; also in dark green are the Sheet name, Sheet number and Mode. There are 3 examples in the collection without a sheet number in the border, top right (like Phase 1); the rest have this added (like Phase 3). No 2P or 2D yet reported.

1" 3rd LSS; 1" E & W Pop; 1" Sc 3rd; 1" Ir.

PHASE 3. 1920-28 or later. MODE H: E & W 3D 1, 3M 38, 3P 3, Sc 3M 18, 3P 3, Ir 3M 13 examples; MODE L: E & W 3D 3, 3M 53, 3P 2, Sc 3M 10; Ir 3M 10.

The Price regime is stabilised in Phase 3 at 3D 5, 3M 2, 3P 1, with the exception of England & Wales sheet 4 which is 3M 8. Towards the end of the Phase, 'Net' is added to 3D and 3M prices, and perhaps also to 3P prices, though no examples of the latter have been seen. In other respects, the FOS design resembles Phase 2; the price and scale lines of covers for dissected sheets become standardised in the form:

Scale: 1/2 Inch to 1 Mile. Price 4/-
Mounted in Sections

A few examples of Scottish sheets in pre-war hinged white card covers have been found with 3M front covers stuck over them and cut to shape. They are coupled to Sc1b covers on the BOS. Seven England & Wales and nine Scottish 3M covers have been found with black-printed back covers. The remainder of this collection of getting on for 100 sheets have back covers fairly evenly spread among the twelve possible types printed in brown (excluding GB), though there is some evidence that the 'authorisation' statement was not added until towards the end of the phase.

1" 3rd LSS; 1" E & W Pop; 1" Sc 3rd; 1" Sc Pop; 1" Ir (Prices as for Small Sheets); 1/4" 3rd E & W and Sc. No comparable covers for the Irish Quarter-inch series have yet been found.

PHASE 4. A transitional phase during which Phase 3 front and back covers were stuck onto buff card shaped with a hinged tongue to be stuck to the edge of the folded map, and large enough to provide a buff surround to the coloured border of front covers. So far only two examples of England & Wales Half-inch sheets have been found so covered, but they are not uncommon in collections of England & Wales 1" Popular.

PHASE 5. 1928-30. E & W 21 examples; Sc 11 examples; all direct printed on hinged card; one example 5P, the rest 5M; all Mode L2 or L3; BOS all N3, M3, S3 or Sc2.

Standard format hinged covers were almost certainly introduced gradually over an extended period of perhaps two years, but it is difficult to deduce when the first examples were issued. There is no reason to suppose that the Half-inch was the first to have direct-printed hinged covers, but it is quite possible that Phase 5 was a transitional phase and that some sheets never had them. I have seen no 5D sheets, and only one 5P. The essential distinguishing feature is that the lettering is still hand delineated, and in addition all prices are 'Net'. Sheet names are usually in the same style of lettering as their counterparts at the end of Phase 3. PCLs (to 2/9) are sometimes found.

1" E & W Pop; 1" Sc Pop; 1/4" 3rd. The 1" 5th Relief covers of style H.20 probably belong to this Phase.

PHASE 6. About 1933. E & W 6D 3, 4/- Net; 6M 3, Three Shillings Net; 6P 1, Two Shillings Net PCL (2/3) f. BOS 3N, 3M, 3S.

The great majority of the known examples of this phase belong to the three One-inch series. Distinguishing features are typeset lettering of sheet names (red, green or blue), scales and price lines (ground colour); and in most cases a distinctive style of sheet name lettering which is not carried forward into the next Phase. This is a short-lived transitional phase. In the Half-inch covers the Sheet number, top right, is surrounded by a small buff rectangle within the green border.

1" E & W Pop; 1" 5th Relief (without location diagram, H.23.1.a); 1" Sc Pop.

PHASE 7. About 1934, for most series, but perhaps not until 1936 for the Half-inch. Some covers printed in 1936 have E R in place of G R at the top of the FOS design, and in the Half-inch, these may be the earliest in the Phase. The maps are nearly all Mode 3 or Mode 4. (i) E R: 7D none, 7M 5, 7P (f) 1; (ii) G R: 7D none; 7M 13, 7P (h) 10; Sc 7M 2. BOS, E R mostly N3, M3, S3; G R mostly GB. Price 2/9 (7M), 2/- (7P).

There are rare examples of sheets with identical lettering of sheet name styles on Phase 6 and 7 covers, but in most cases the Phase 7 cover style is different. Covers in this style continued to be issued until the demise of the series, and in only a small proportion of sheets is it known to have been replaced by Phase 8.

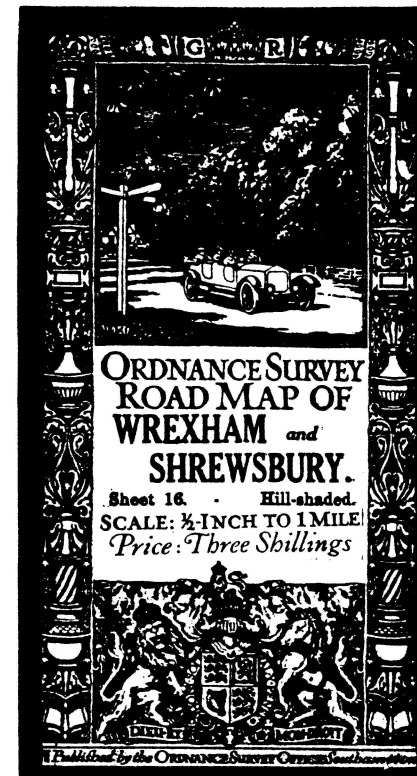
1" E & W Pop; 1" 5th Relief (H.23.1.b); 1" 5th non-relief (H.23.2.a.); 1" Sc Pop.

PHASE 8. 1939. The total number of Half-inch sheets in covers in Phase 8 style so far reported by members in consequence of the the article in *Sheetlines* 32 on 'Benderfold between the Wars' is E & W 6 (all L); Sc 2 (1 H, 1 L). All BOS are GB and no hinged examples have been reported, all being in Benderfold style. The Scottish Hill-shaded example (Sc sheet 5 *Lewis*) encloses a Mode 1 paper folded sheet dated 1910, and must be one of the most long term examples recorded of OS stockpiling of small scale regular sheets. Price (paper) is 2s.0d., and (cloth) is 2s.9d.

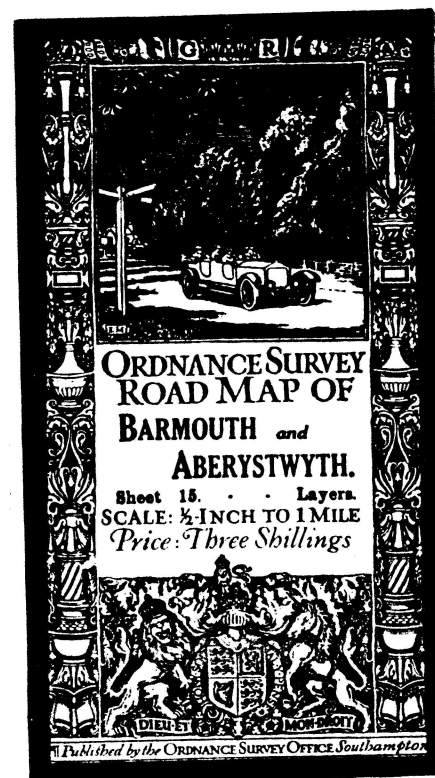
In Phase 8 covers, the Sheet name is in base colour (in the Half-inch, brown) and other matter is



Phase 1 - E & W 10H
PCL Three Shillings over Two Shillings
Map in mode H2



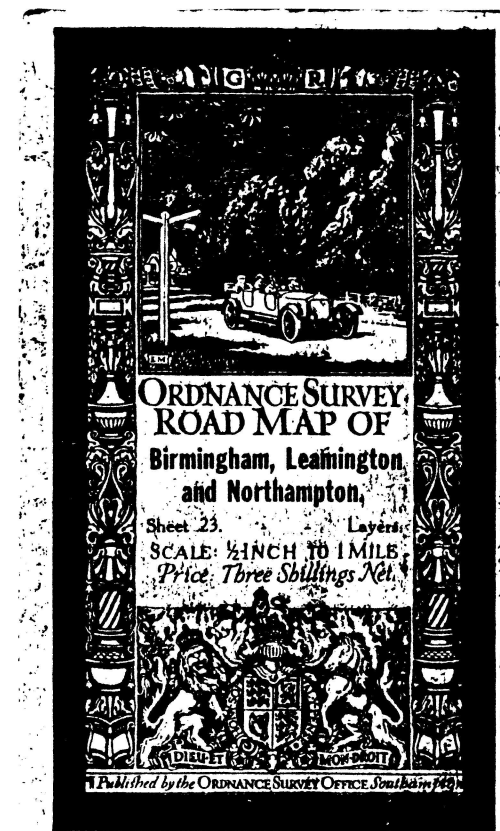
Phase 2 - E & W 16H
PCL Three Shillings over Two Shillings
Map in Mode H2



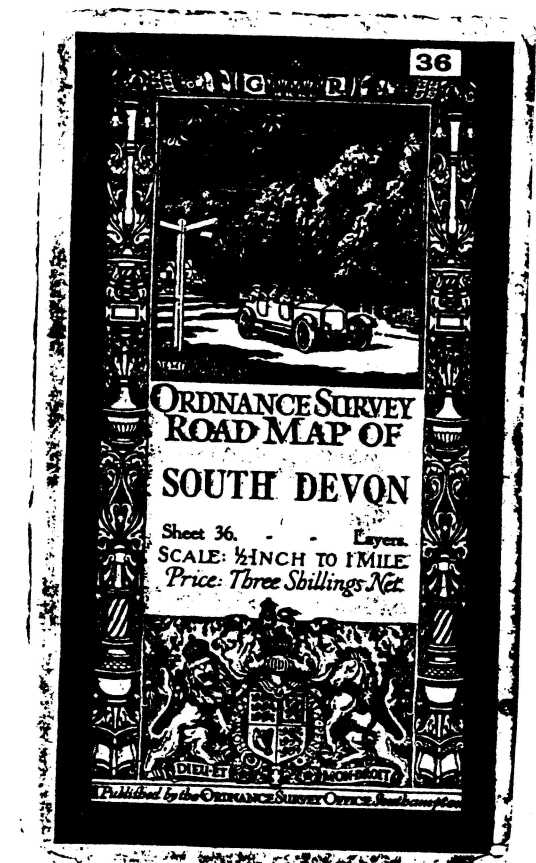
Phase 3 - E & W 15L
Map in mode L2



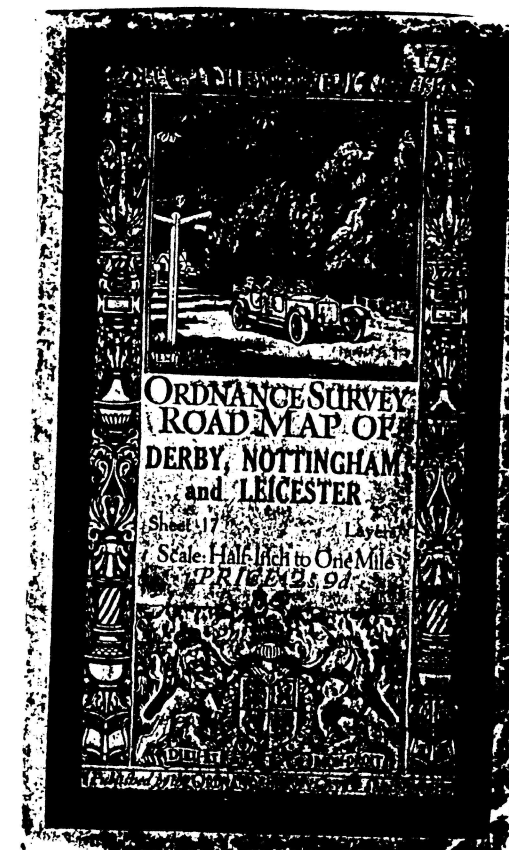
Phase 4 - E & W 11L
(The edge of the adhesive Phase 3(ii) style cover
is virtually indistinguishable in a photocopy.)
Map in mode L2



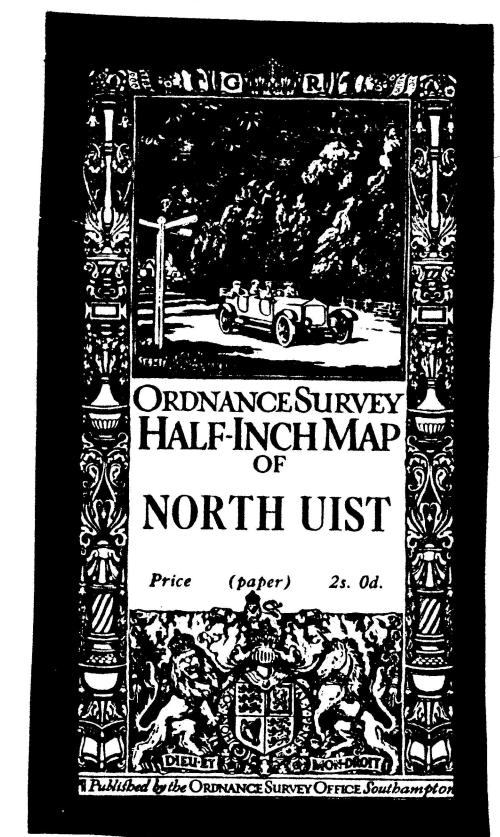
Phase 5 - E & W 23L
Design direct-printed on buff card.
Map in mode L4



Phase 6 - E & W 36L
(Phase 6 is much more distinctive in One-inch
E & W Popular than in Half-inch.)
Map in mode L4



Phase 7 - E & W 17
Map in mode L4



Phase 8 - Sc10
(The map is in mode L3, but there is no
indication of this on the cover.)

in the series colour (green). In the Half-inch layout, the words 'ROAD MAP OF' (brown) are deleted, and 'HALF-INCH MAP OF' (green) substituted.
1" E & W Pop (b only); 1" Sc Pop (b & h); 1" 5th (b & h, H.23.2.b).

Examples from Catalogue of coll: KGM

1	2	3	4	5	6	7	8	9	10	11
A, England and Wales										
6y	H2	1912		MIDDLESBROUGH, RICHMOND AND RIPON	3M	A	2	a	H(i)	N1b
6z	L2	1912	9.22	"	3M	A	2	a	L(i)	N3
6z	L3	1912	3500/30	"	5M	B	3	h	L(ii)	N3
6z	L3	1912	3250/32	"	6M	C	3	h	L(ii)	N3
6z	L3	1912	3250/32	"	7M	C	4	h	L	N3
40y	H2	1914		CHATHAM, MARGATE AND HASTINGS	2M	A	1	a	H(PCL)	S1b
40y	L2	1914		"	3D	A	5	a	L	S1
40z	L4	1928	3500/28	"	3M	B	2	a	L(i)	S3
40z	L4	1927	4000/32	"	5M	C	3	h	L(PCL)	S3
40z	L4	1928	3039	"	7P	D	1	f	L	GB
40z	L4	1928	3039	"	8M	E	4	b		GB
B, Scotland										
9x	H2	1913		DORNOCH AND CROMARTY	1M	A	1	a	H(PCL)	Sc1b
9x	L2	1913		"	2M	A	1	a	L(PCL)	Sc1b
22y	H2	1914		OBAN AND KILLIN	3M	A	2	a	H(i)	Sc1
22x	L2	1914		"	3M	A	2	a	L(i)	Sc1
22x	L2	1914		"	5M	B	3	h	L(ii)	Sc2
22z	L2	1914	2000/32	"	5M	B	3	h	L(ii)	Sc2
28x	H2	1914		NORTH BERWICK, BERWICK ON TWEED AND SELKIRK	3M	A	2	h	H(iii)	Sc1b
28y	L2	1914		"	5M	B	3	h	L(ii)	Sc2
28y	L2	1914		"	7P	C	1	f	L	GB
C, Ireland										
11z	HI	1914		SOUTH MAYO	3M	A	2	a	Hi	Ir
11y	LI	1914		"	3M	A	2	a	Li	Ir
25y	HI	1916		CORK	3M	A	2	a	Hi	Ir
25y	LI	1916		"	3M	B	2	a	Li	Ir

The columns:	
1	Sheet number and substate code
2	Map Mode
3	Publication date printed on sheet
4	Reprint or other date printed on sheet
5	Cover sheet name
6	Cover Phase and mounting style
7	Cover sheet name lettering style (letters A - E in order of issue)
8	Price printed on cover (see table on page 15)
9	Attachment of cover
10	(i) Price without 'Net'; (ii) Price with 'Net'; (iii) 3M cover on prewar hinged card; (PCL) Price change label
11	BOS style (see page 16)

One-inch military 'Specials' 1923-1940

by Tim Nicholson

Before the First World War, very little British small-scale mapping was tailor-made to the requirements of the Army. Standard Ordnance Survey 'civilian' offerings included features introduced at the behest of the military, but they were compromises, dictated by the financial impossibility of giving the Army its own small-scale map. Most military 'specials' were *ad hoc* affairs, consisting of civilian maps with military areas or manoeuvre information overprinted. All lacked a grid - that is, a squaring system on a particular projection extending across all the sheets of a map from a single point of origin, enabling positions to be identified with unique combinations of letters and/or figures over as wide an area as possible. By 1914 there were a few lettered and numbered squaring systems,¹ but these were not grids, for each related to a single sheet only. During the war, specialised military mapping for use on battlefields and for training became essential. Squaring systems with squares small enough for accurate plotting to fine limits were generally adopted, but still there was no Western Front 'theatre grid'.

After the war the specialised military training map on the 1:20,000 scale - GSGS 2748 - was perpetuated. The usefulness of a grid was accepted, and one on the War Office Cassini projection was introduced on GSGS 2748. Civilian maps were still adapted for the Army, but in a more thorough-going way. From 1923 or thereabouts,² Popular Edition sheets for military use were given an overprinted purple grid on the War Office Cassini projection, with 10 km and 1 km squares, the civilian map's two mile squaring system being deleted. The overprint included an index to the relevant sheets of GSGS 2748. War Office printing information was added to the black plate.

Each of the 10 km squares of the grid was identified with a hollow capital letter at its centre, repeated in the map margin; and within each of these squares were 10 x 10 1 km squares without any identification. It was possible to pinpoint a location to within 100 metres by using a letter and four figures, but in the absence of grid figures for the 1 km squares, this 'British System' grid was slow to work and vulnerable to operator error. Worse, any combination of letters and figures would recur every 50 km, which could easily confuse when manoeuvres spread over wide areas, and - as might now be the case - involved fast-moving mechanised forces.

The British System grid lasted about eight years on the One-inch map, with few changes. The original hollow lettering had been hatched, but this presumably obscured detail, because around 1925 the hatching was removed. The resulting 'ghost' lettering promptly became lost in detail, where this was dense. Grids on some special sheets - military area maps, and manoeuvre maps - differed in colour, and in their orientation. On standard sheets 'grid north' diverged from 'sheetline north', because the grid followed the War Office Cassini projection on the Dunnose meridian, and the sheetlines followed the Ordnance Survey Cassini projection on the Delamere meridian. On most special sheets with sheetlines designed specifically for the Army, the military took the opportunity to have sheetlines following the War Office Cassini projection, and so coinciding with the grid.³

In 1931 the 'Modified British System' grid was introduced on the One-inch map, and the gridded map was given GSGS numbers: GSGS 3907 for England and Wales, and (from 1933) GSGS 3908 for Scotland. Lettered squares were retained, although the letters actually appeared only on the index (which now bore the sheetlines of the relevant Popular Edition sheets). The kilometre squares were now identifiable, by means of grid figures in the map margins. Quick six-figure map referencing had arrived. Including the letter, a reference repeated only every 500

¹ Such as those on GSGS 3036, a 2½ inch to 1 mile (1:25,344) military map.
² The earliest War Office printing date found by the author on a gridded Popular Edition sheet.
³ Examples were *Colchester* and *Catterick* among military area maps, and the majority of manoeuvre maps. There was no consistency, however. The special map of the *Blandford* area had the discrepancy between grid north and sheetline north, in spite of not being based on an OS standard map. *Farnborough* (q.v.) had a grid coinciding with its sheetlines, and also 5000-yard grid lines on the new Transverse Mercator projection as found on the civilian Fifth Edition *Aldershot (North)* and *Aldershot (South)* maps, but not on the corresponding Fifth Edition-based, single-sheet *Aldershot Command* military map. This suggests that *Farnborough* was extracted from the civilian, not the military, map. Why this should be so, and why the "civilian" grid should then have been confusingly retained, is a mystery.

km, while the six figures on their own recurred only every 100 km,⁴ double the previous interval. The maps that are the subject of this article were ‘specials’ in the sense that all were used for special purposes, in this respect differing from the standard gridded One-inch map. Some were on standard sheetlines: either standard gridded sheets with some other overprint as well as the grid; or else sheets without additional overprint, listed in the tables that follow when they were used for a special purpose, and may or may not have been reprinted for the occasion. Other maps were standard to the extent that they were composites on the same sheetlines as District and Tourist ‘civilian’ maps offered by the Ordnance Survey, but with grids, and other information added or deleted for military purposes.⁵ Yet other maps were more specialised, of the sort described above, occurring on ‘Army’ sheetlines only.

These maps were used in a variety of contexts. They could illustrate manoeuvres, depict areas of military land, or accompany military textbooks or examination papers. Nearly all were based on the Popular Edition. A few were derived from Fifth Edition material, where an existing Fifth Edition map’s sheetlines met requirements, or an extract could be taken from it.⁶

In the tables, the maps are grouped by purpose. Reprints up to 1940 are included; later ones, and specials first seen during the Second World War, are not. All have been seen only as flat sheets, or as sheets folded to go into the pocket of a book or report. The tables are self-evidently incomplete: they consist only of maps seen. Many reprints other than those listed can be inferred from the reprinting histories. It is known that other manoeuvres were mapped,⁷ though the scales used are unrecorded. As well as the One-inch map, the Ordnance Survey Half-inch, Quarter-inch, Ten-mile and 1:1,000,000 scales were all overprinted with military information for manoeuvres. Military area maps were derived from GSGS 2748 and its successor, the 1:25,000 GSGS 3906. There was even an experimental 1:50,000 map of Aldershot, published in 1933.

Until the coming of GSGS 3907 and 3908, road colouring followed that of the Popular Edition, except for composite manoeuvre maps, on which the best roads, as well as second class roads, were coloured yellow instead of the Popular Edition’s red. Thereafter, nearly all maps had yellow roads.⁸ Green woods were dropped from military One-inch maps in 1931-3, and then reinstated.

Notes on the tables

Publication date]: This is the date of the latest printing shown on the map. It may also be the original publication date.

Short title, etc: The title (sometimes abbreviated) is that given at the head of the map. The subject, if different or not given on the map, is in brackets.

M[agnetic V[ariation date]: Military maps were usually given an up-to-date magnetic variation diagram as part of the coloured overprint. The date shown is that on the latest diagram on the map, and has been condensed in the form (e.g.) 1/28 for Jan. 1928.

Overprint: This refers not to the grid (which is taken as read), but to military information: the disposition of troop formations, area boundaries, danger zones, etc. The descriptions are abbreviated. The colour shown can take the form of solid, dotted or dashed lines, or solid, hatched or cross-hatched blocks of colour, thus distinguishing between different kinds of information.

Remarks: Maps may have either one of two types of imprint, or both. The Ordnance Survey printing details come first; then the corresponding military (WO) details. A suffix ‘C’ denotes Causton, a commercial printer. ‘CR’ and a figure denotes an Ordnance Survey Central Registry file. Reprints noted in some states of a map do not necessarily recur in later ones.

The quoted numbers of standard sheets making up a composite map are not always those sometimes noted at top right of the map. The numbers quoted reflect the index on the map.

⁴ Not 60 miles (96 km), as the map had it.
⁵ For instance, *Aldershot Command, Salisbury Plain, Dartmoor, New Forest*.
⁶ For instance, *Aldershot Command 1932, Farnborough, Dartmoor*.
⁷ Manoeuvres that encroached on private land needed authorisation by an Order in Council. The *London Gazette* record of Orders in Council notes that manoeuvres in the following areas, not seen or covered in the tables, received maps: Oxfordshire, Buckinghamshire and Berkshire, and also Kent (1927); Essex and Suffolk (1928); Norfolk and Suffolk (1930); Cambridgeshire, Essex and Hertfordshire (1934); and Kent (1937). No scale was given.
⁸ The only exception known to the author is *Thames Valley 1939, q.v.*, on which all the best roads are red.

All maps are based ultimately on the Popular Edition unless otherwise stated. All grids are purple, and all woods green, unless otherwise stated. Where the colouring of first class roads varies from the norm, the colour is given. For instance, yellow roads on some pre-1931 manoeuvre maps are mentioned because other military maps still retained the Popular Edition’s red and yellow roads; but road colour is not mentioned post-1931 because with one exception it is always yellow. ‘On Place’s paper’: some maps were on Place’s Waterproof Paper, which was impregnated with a waterproof solution after printing. See *Sheetlines* 14, (December 1985), 10-13.

One-inch Manoeuvre Maps

Pub	Short title, etc	M.V.	Overprint	Remarks
1925	Manoeuvre Map 1925	none	Manoeuvre area boundary, out of bounds areas, gallops, frontier between opposing ‘states’ in red	Imprint: OS 1925 Reprint 2000/25 (some copies) Yellow roads Sheet 1: Parts of sheets 111, 112, 121, 122, 130, 131 Sheet 2: Parts of sheets 112, 113, 122, 123, 131, 132 Sheet 3: Parts of sheets 113, 114, 123, 124, 132, 133
1927	War Office Staff Exercise No.2, 1927 Salisbury and Winchester	1/27	none	Imprint: OS 1927 WO 7/27 1250/27 Red and yellow roads Parts of sheets 122, 123.
1928	War Office Exercise No.4 (1928), 30 April - 3 May. Map No.2 Map Shewing Situation 1 May on front of 1st Corps	1/28	‘Northland’ positions in red, ‘British’ positions, corps and divisional boundaries in blue	Imprint: OS 1919 Red and yellow roads Conventional signs panel uncoloured Based on part of standard Popular Edition sheet 105
1928	War Office Exercise No.5 (1928) 6th Div Harrogate	1/28	Formation boundaries in purple, RE dumps in red, ‘vital ground’ in purple and red	Imprint: OS 1924 Reprint 3000/27. WO reprint 3750/28 Red and yellow roads Black grid, purple 5 km grid figures, black 1 km Based on standard Popular Edition sheet 26
1928	(Sussex Manoeuvres) Guildford and Horsham	1/27	Manoeuvre area boundary, divisional boundary, out of bounds areas, restricted areas, gallops in red	Imprint: OS 1920 Minor corrections 1925 Roads revised to 11.25 Reprints 5000/23, 1000/26, 3000/27 Red and yellow roads Based on standard Popular Edition sheet 124

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1928	(Sussex Manoeuvres) Tunbridge Wells	1/28	as above	Imprint: OS 1920 Minor corrections 1924-5 Reprint 5000/27 Red and yellow roads Based on standard Popular Edition sheet 125
1928	(Sussex Manoeuvres) Brighton and Eastbourne	1/28	as above	Imprint: OS 1920 Minor corrections 1923 W.O. 1.24 Red and yellow roads Based on standard Popular Edition sheet 134
1928	(Sussex Manoeuvres) Chichester and Worthing	1/28	as above	Imprint: OS 1920 Minor corrections 1924-? Roads revised to 3.26 Reprints 2500/23, 8000/24, 3500/26, 3500/28. Red and yellow roads Based on standard Popular Edition sheet 133
1929	(War Office Exercise No. 1) Aldershot Command	1/27	Command boundary in red	Imprint: OS 1920 WO. 8.23 Reprints 2000/24, 5000/24, 5000/25, 7500/27, 3400/29 Red and yellow roads Based on standard <i>Aldershot Command</i> military map
1930	(War Office Exercises Nos 1, 2, 4) Buxton and Matlock	1/28	none	Imprint: OS 1923 Minor corrections 1928 Reprint 3000/30 WO 3750/30 Red and yellow roads Based on standard Popular Edition sheet 45
1930	(War Office Exercise No. 3) Tunbridge Wells	1/30	none	Imprint: OS 1920 Minor corrections 1924-9 Reprints 5000/27, 2000/29 WO 3750/30 Red and Yellow roads Based on standard Popular Edition sheet 125
1933	Salisbury Plain Training Area Aug-Sept 1933	1/31	Training area boundary, out of bounds areas, RAF danger and bombing areas, restricted areas in red	Imprint: OS 1920 Minor corrections 1926 GSGS 3907: WO 1931 Reprints 1500/25, 5000/25, 5000/27, 1650/29, 5200/29, 8500/31, 17000/33 Sheet 122, parts of sheet 111, 112, 121 Sheetlines as for standard <i>Salisbury Plain</i> District Map

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1934	Southern Command Manoeuvre Area 1934 Southern Section For Official Use Only	1/31	Manoeuvre area boundary in purple, WD land boundary, out of bounds areas, gallops, restricted areas, RAF danger and bombing areas in red	Imprint: OS 1920 Minor corrections 1926 GSGS 3907: WO 1931 Reprints 1500/25, 5000/25, 5000/27, 1650/29, 5200/29, 8500/31, 17000/33, 5500/33 11000/34 Otherwise as above
1934	Southern Command Manoeuvre Area 1934 Northern Section For Official Use Only	1/34	as above	Imprint: OS 1934 Reprint 16700/34 Roads to ? Minor corrections to 1931-? [much of imprint illegible in copy seen] Parts of 103, 104, 111, 112
1935	Army Manoeuvres 1935	1/35	Manoeuvre area boundary, out of bounds areas, gallops in red	Imprint: OS 1935 GSGS 3907: WO 4035, CR 4610 Blue grid and co-ordinates Sheet 1: Parts of sheets 112, 113, 122, 123, 131, 132 Sheet 2: Parts of sheets 113, 114, 123, 124, 132, 133
1936	Manoeuvre Area 1936	1/36	Manoeuvre area red with black border, out of bounds areas, restricted areas in red	Imprint: OS 1936 GSGS 3907: WO 1936 WO 20000/36 Blue grid and co-ordinates Sheet 1: Parts of sheets 124, 133 Sheet 2: Parts of sheets 124, 125, 133, 134
1937	East Anglia Manoeuvre Area 1937	1/37	Manoeuvre area boundary, out of bounds areas, restricted areas, list of compens- ation officers in red	Imprint GSGS 3907: WO 1937 23500 1937 Blue grid and co-ordinates Sheet 1: Parts of sheets 84, 85, 95, 96, 106, 107 Sheet 2: Parts of sheets 75, 76, 85, 86, 96, 97, 98, 107, 108

Pub	Short title, etc	M.V.	Overprint	Remarks
1938	Aldershot Command Manoeuvre Area 1938	1/38	Manoeuvre area boundary, out of bounds areas, restricted areas in purple	Imprint: OS 1938 GSGS 3907: WO 1938 22500/28 [no doubt error for /38] Black grid, blue co-ordinates Sheet 1: Parts of sheets 112, 113, 114, 123, 124, 131 Sheet 2: Parts of sheets 131, 132, 141, 142 Roads dark reddish-orange [probably colour error] Based on 5th Edition
1939	Aldershot Command Manoeuvre Area 1939	1/34	Manoeuvre area boundary, out of bounds areas, restricted areas, area allotted to London District, list of compensation officers in purple	Imprint: OS 1932 GSGS 3907: WO 1934 WO 14400/39 Black grid, blue co-ordinates Parts of sheets 113, 114, 123, 124, 132, 133 Based on standard <i>Aldershot Command</i> military map (5th edition)
1939	Yorkshire Manoeuvre Area Goole and Pontefract	1/39	Out of bounds areas, restricted areas in purple	Imprint: OS 1924 GSGS 3907: WO 1932 WO 19800/39 Black grid, blue co-ordinates Based on standard Popular Edition sheet 32
1939	Thames Valley	1/39	none	Imprint: OS 1939 GSGS 3907: WO 1939 15200/39 CR4752 Black grid, blue co-ordinates Parts of sheets 94, 113 (large sheets), <i>St Albans</i> Special District, <i>London</i> Special District. Red roads Based on 5th Edition [In spite of lack of overprint, probably a manoeuvre map: no major military areas]

One-inch Military Area Maps

Pub	Short title, etc	M.V.	Overprint	Remarks
1924	Aldershot Command	1920	Command boundary in red	Imprint: OS 1920 WO 8.23 Reprint WO 2000/24 Parts of sheets 113, 114, 123, 124 The standard <i>Aldershot</i> <i>Command</i> District Map, with grid Red and yellow roads

Pub	Short title, etc	M.V.	Overprint	Remarks
1927	Aldershot Command	1/27	as above	Imprint: OS 1920 WO 8.23 Reprints WO 2000/24, 5000/24, 5000/26, 1500/27, 7500/27 Otherwise as above
1928	Aldershot Command	1/27	as above	Imprint: OS 1920 WO 8.23 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 1100/28 Otherwise as above
1929	Aldershot Command	1/27	as above	Imprint: OS 1920 WO 8.23 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 3400/29 Otherwise as above
1929	Aldershot Command	1/27	as above	Imprint: OS 1920 WO 8.23 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 3400/29, 5500/29 On Place's paper Otherwise as above
1930	Aldershot Command	1/27	as above	Imprint: OS 1920 WO 8.23 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 1100/28, 3400/29, 5500/29, 1100/30 On paper. Occurs with A.H.C. Kearsey, <i>Tactical</i> <i>Schemes</i> , 3rd edition, Aldershot, 1930
1931	Aldershot Command	1/30	as above	Imprint: OS 1920 WO 8.23 GSGS 3907: WO 1931 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 1000/30, 1500/30, 2000/31 No green woods On paper. Occurs with A.H.C. Kearsey, <i>Tactical</i> <i>Schemes</i> , 4th and 5th editions, Aldershot, 1932 and 1934
1931	Aldershot Command	1/30	as above	Imprint: OS 1920 WO 8.23 GSGS 3907: WO 1931 Reprints 2000/24, 5000/24, 5000/26, 7500/27, 17900/31 No green woods

SE No. 4 (1928) OXFORD, 30th APRIL - 3rd MAY.
SITUATION 1ST MAY ON FRONT OF 1ST CORPS.

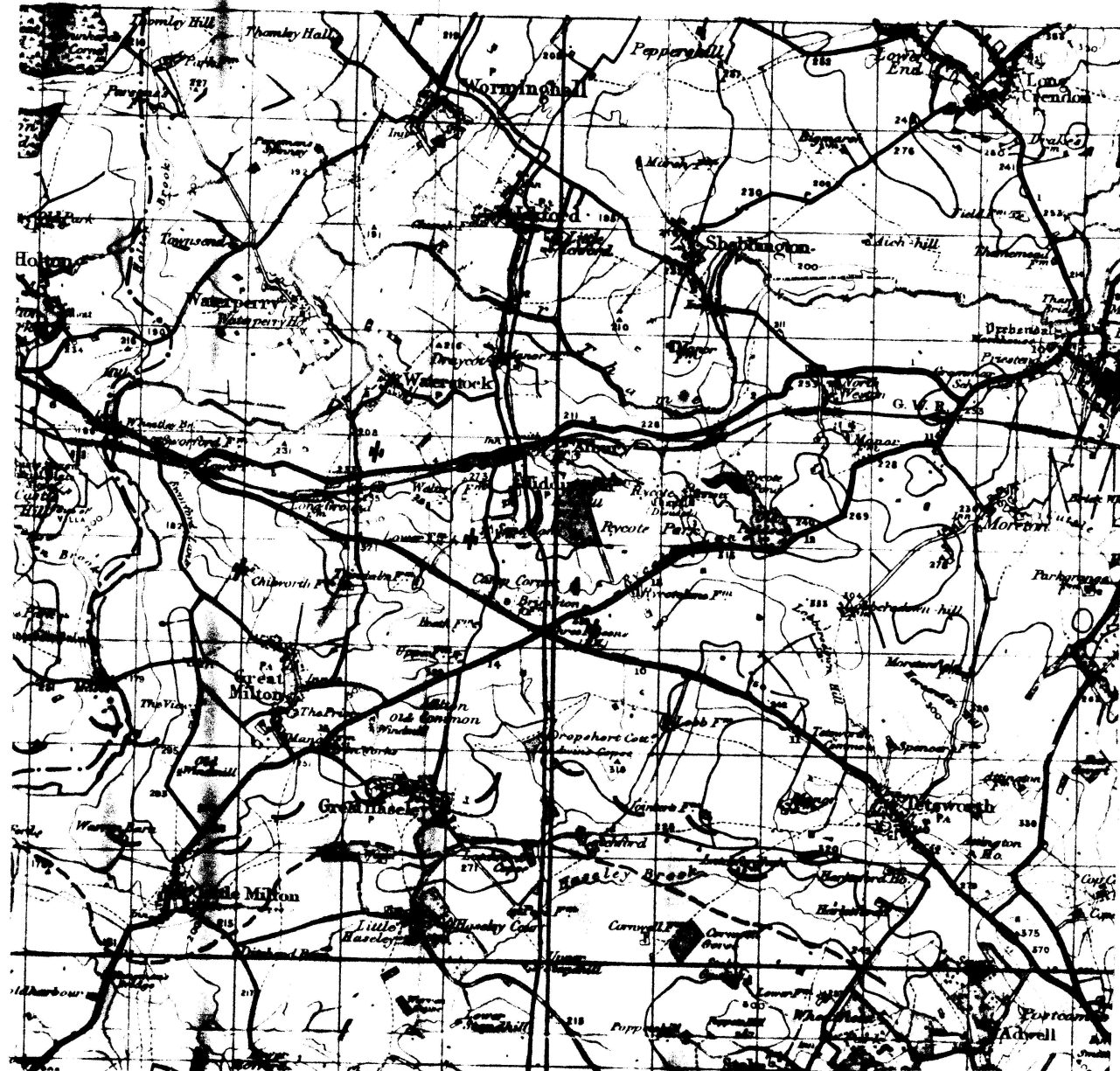


Figure 1 War Office Exercise No. 4 (1928), Map No. 2. Part of Popular Edition sheet 105, British System grid. Grid north coincides with sheetline north (both on WO Cassini projection); no 1 km grid figures; hollow letters unhatched. Overprint shows 'Northland' and 'British' positions and boundaries. (Reduced to 70 per cent of original scale.)

ead (b) (iv).

OXFORD

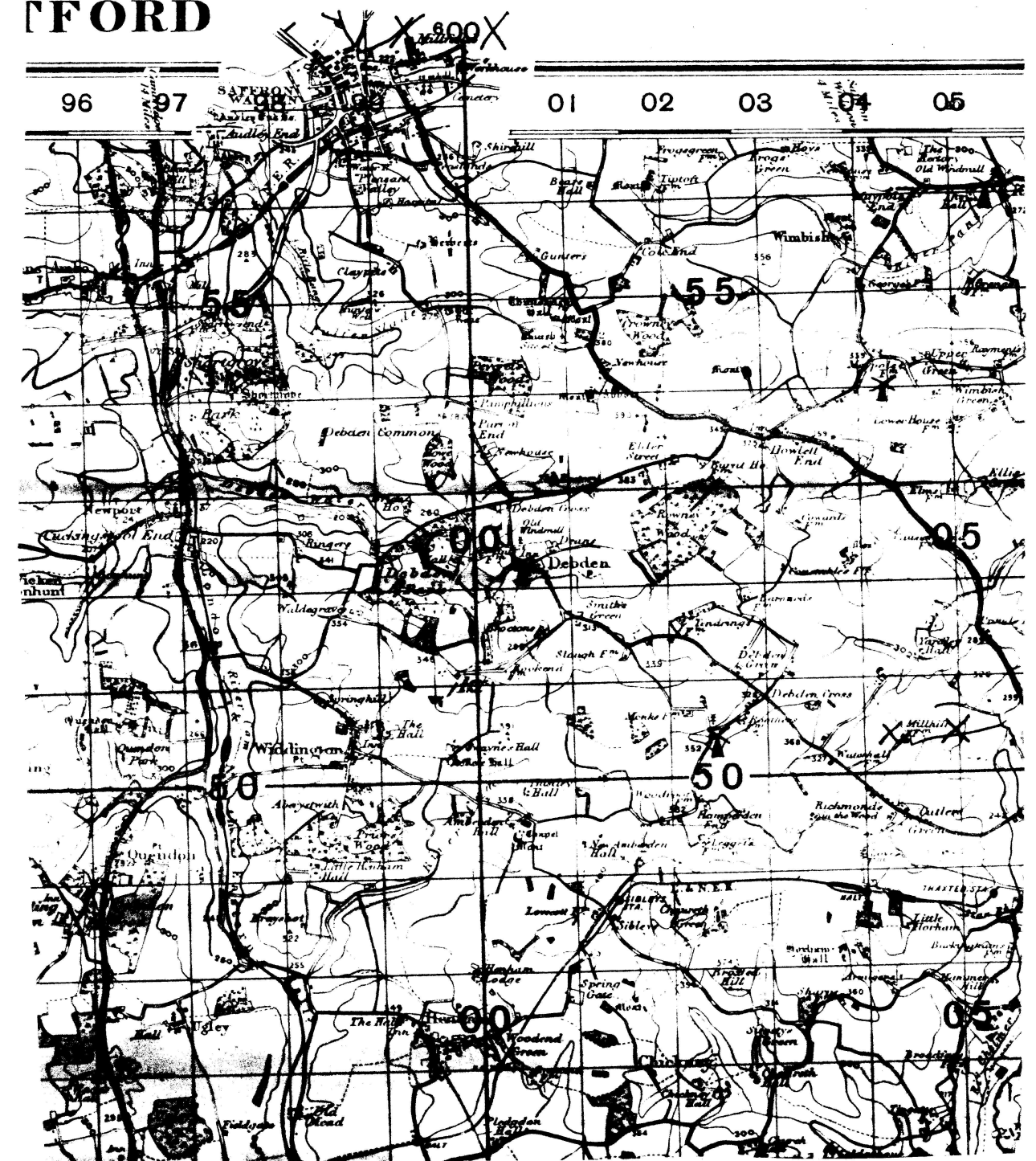


Figure 2 Examination for Promotion, October 1936. Popular Edition sheet 96. Modified British System grid. Grid north (on WO Cassini projection) diverges from sheetline north (on OS Cassini projection); 1 km squares with grid figures; windmills and crosses added crudely by hand. (Reduced to 70 per cent of original scale.)

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1935	Aldershot Command	1/34	as above	Imprint; OS 1932 GSGS 3907: WO 1934 WO 13000/35 Parts of sheets 113, 114, 123, 124, 132, 133 Based on 5th Edition On Place's paper
1936	Aldershot Command	1/34	as above	Imprint: OS 1932 GSGS 3907: WO 1934 WO 17036 Otherwise as above
1937	Aldershot Command	1/34	as above	Imprint: OS 1932 GSGS 3907: WO 1934 WO 10000/37 Otherwise as above
1939	Aldershot Command	1/34	as above	Imprint: OS 1932 GSGS 3907: WO 1934 WO 40000/39 Otherwise as above
1940	Aldershot Command	1/34	as above	Imprint: OS 1932 GSGS 3907: WO 1934 WO 75000/40/R Otherwise as above For other states of <i>Aldershot Command</i> map, see also War Office Exercise No 1 (1929), Aldershot Command Manoeuvre Area 1939
1924	Blandford	1/24	none	Imprint: OS 1924: WO 2.24 Parts of sheets 130, 131, 140, 141
1939	Blandford	1/31	none	Imprint: OS 1924: WO 2.24 GSGS 3907: WO 1931 Reprints 1100/31, 2000/33, 400/33, 2000/36, 5000/39C
?1934	Bordon			This map is shown, with <i>Farnborough</i> (q.v.), as an extract from the <i>Aldershot Command</i> area on some map indexes between 1934 and 1939, but has not been seen. The earliest map seen with an index showing <i>Bordon</i> is the 1934 <i>Southern Command Manoeuvre Map</i> , (q.v.). It is not yet shown on the <i>Farnborough</i> map's index.
1925	Catterick Area	1/25	Boundary of training area and WD land in red	Imprint: OS 1925: WO 12.25 Parts of sheets 13, 14, 15, 20, 21

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1932	Catterick Area	1/31	as above	Imprint: OS 1925; WO 12.25 GSGS 3907: WO 1932 16125/32 No green woods On Place's paper
1940	Catterick Area	1/31	as above	Imprint: OS 1925; WO 12.25 GSGS 3907: WO 1934 Reprint WO 27000/40
1934	Colchester Area Special Sheet	1/33	none	Imprint: OS 1933 GSGS 3907: WO 1933 Roads to 1932, minor corrections to 1932 Reprint 8000/34 Parts of sheets 86, 87, 97, 98
1939	Colchester Area Special Sheet	1/33	none	Imprint: OS 1933 GSGS 3907: WO 1933 Roads to 1932, minor corrections to 1932 Reprints 8000/34, 100/35, 1000/35, 10000/39C
1937	Dartmoor	1/37	none	Imprint: OS 1936 Reprint 237 Parts of sheets 137, 138, 144, 145 Based on 5th Edition Red and yellow roads The standard <i>Dartmoor</i> Special District Map, with grid, without relief
1939	East Kent Special Sheet	1/35	none	Imprint GSGS 3907: WO 1935 7000/35 Reprints 8000/37, 8000/39C Parts of sheets 116, 117, 126
1934	Farnborough	1/30	none	Imprint: OS 1933 CR 4275 500/34 Parts of sheets 113, 114, 123, 124 Outline, blue water Map comprises extract from <i>Aldershot Command</i> map (q.v.)

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1935	Netheravon	1/31	WD land, out of bounds areas, aerodromes, agricultural land, rifle range danger areas, RAF danger and bombing areas in red	Imprint: OS 1933 10000/33 Reprint 1500/35 WD information revised to April 1935 Parts of sheets 112, 122 Outline, blue water, brown contours Black grid, blue grid figures Map comprises extract from <i>Salisbury Plain</i> map (<i>q.v.</i>)
1924	New Forest	1920	none	Imprint: OS 1924 Minor corrections 1923 WO 1.24 Parts of sheets 131, 132, 141, 142 Sheetlines as for standard <i>New Forest</i> Tourist Map 1920, but headed 'Popular Edition One Inch Map', and no Tourist Map relief Red and yellow roads Squaring system removed, no grid added; suggests uncompleted map
1931	New Forest	1/31	none	Imprint: OS 1924 Minor corrections 1923 WO 1.24 GSGS 3907: WO 1931 Reprints 3000/24, 1000/24, 2200/31 Sheetlines as for standard <i>New Forest</i> Tourist Map 1920, but headed 'Popular Edition One Inch Map', and no Tourist Map relief No green woods On Place's paper
1936	New Forest	1/31	none	Imprint: OS 1924 Minor corrections 1923 WO 1.24 GSGS 3907: WO 1931 Reprints 3000/24, 1000/24, 2200/31, 3000/36 Green woods Otherwise as above
1939	New Forest	1/31	none	Imprint: OS 1924 Minor corrections 1923 WO 1.24 GSGS 3907: WO 1931 Reprints 3000/24, 1000/24, 15000/39C On cloth Otherwise as above

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1925	Salisbury Plain	1920	WD land boundary, cultivated areas in red	Imprint: OS 1920 Minor corrections 1925 Reprints WO 1500/25, 5000/25 Sheet 122, parts of sheets 111, 112, 121 Sheetlines as for standard <i>Salisbury Plain</i> District Map Red and yellow roads
1927	Salisbury Plain	1927	as above	Imprint: OS 1920 Minor corrections 1926, roads revised to 5.26 Reprints WO 1500/25, 5000/25, 5000/27 Otherwise as above
1931	Salisbury Plain	1/31	WD land boundary, out of bounds areas, cultivated land, rifle ranges, RAF bombing and danger areas, aerodromes in red	Imprint: OS 1920 Minor corrections 1926, GSGS 3907: WO 1931 Reprints 1500/25, 5000/25, 5000/27, 1650/29, 5200/29, 8500/31 No green woods On Place's paper
1940	Salisbury Plain	1920	as above	Imprint: OS 1919 (<i>cf</i> above) GSGS 3907: WO 1940 Reprints 1500/25, 5000/25, 5000/27, 1650/29, 5200/29, 62500/40/R WD information revised to April 1939 [No military m.v. diagram] For other states of <i>Salisbury Plain</i> map, see also Manoeuvre Maps for 1933 and 1934

One-inch Miscellaneous Maps

<i>Pub</i>	<i>Short title, etc</i>	<i>M.V.</i>	<i>Overprint</i>	<i>Remarks</i>
1932	Dartford and Sittingbourne	1/30	none	Imprint GSGS 3907: WO 1932 Minor corrections 1930 2000/32 Parts of sheets 115, 116 No green woods Occurs with R.P. Pakenham-Walsh and E.E. Dorman-Smith, <i>Elementary Tactics</i> , 2nd edition, London 1934

Pub	Short title, etc	M.V.	Overprint	Remarks
1936	Hertford and Bishop's Stortford Examination for Promotion, Lieutenants, Captains October 1936	1/30	none	Imprint: OS 1919 Minor corrections 1928 Reprints 2000/23, 3000/30 GSGS 3907: WO 1931 Reprints 2600/31, 1000/36 Based on standard Popular Edition sheet 96

Acknowledgements

This article was inspired by Richard Oliver's introductory study, 'One Inch Military Maps of Great Britain 1919-1950', (*Sheetlines* 20, December 1987, 9-12), and is in a limited sense a sequel to the author's 'The Ordnance Survey and Smaller Scale Military Maps of Britain 1854-1914', (*Cartographic Journal*, 25 (1988), 109-27). It is otherwise based entirely on a study of such maps as the author has been able to see, and his experience of using maps 'in the field' under adverse conditions. Some of its conclusions may well be modified by the evidence of other maps.

The author is grateful to Roger Hellyer for a sight of his collection and the loan of maps; to Peter Clark and Richard Oliver for advice and avoidance of pitfalls; to Yolande Hodson for providing quantities of tea and sultana bread and an uncomplaining ferry service; and to the following for kindly digging out maps and making library services available:

Dr P.B. Boyden (National Army Museum); Betty Fathers (Bodleian Library); Francis Herbert (Royal Geographical Society); Peter Milne (National Library of Scotland); Shiela Noxon (Aldershot Military Museum); Andrew Tatham (King's College, London); and Tim Ward (Prince Consort Library, Aldershot).

Thanks are also due to the Whitehall Library, Ministry of Defence; the Royal Engineers Library, Chatham; the Staff College Library, Camberley; the Public Record Office, Kew; the British Library Map Library and Official Publications Library; Cambridge University Library Map Room.

The most fruitful single source of manoeuvre maps is class WO 279 at the Public Record Office, Kew. This includes Reports of Military Manoeuvres, with maps in the pockets. There is a considerable miscellaneous collection of 'specials' in Section 15/16 of the Liddell Hart Papers, held by the Liddell Hart Centre for Military Archives, King's College, London.

The transfer of the Ordnance Survey to Southampton in 1841

by Richard Oliver

1991 was both the official bi-centenary of the founding of the Ordnance Survey, and the 150th anniversary of the move of its headquarters from the Tower of London to Southampton. Why was Southampton chosen? In the semi-official history of the Ordnance Survey,¹ E.J.S.Parsons remarks, correctly, that in 1841 Southampton was the only place where accommodation for the Ordnance Survey could be found in the aftermath of the fire at the Tower of London on 30 October 1841. He goes on to quote a contemporary newspaper report that "it had long been the wish of the Officers of the Survey Department to remove their headquarters to Southampton", and the observation eight years later by the Surveyor-General of the Ordnance that it was desirable for the Ordnance Survey to return to the Tower. Parsons comments that 'The "wish of the Officers... to remove to Southampton" has never been authenticated or explained.' He also quotes an undated newspaper cutting which says that the Ordnance Survey moved into its new headquarters on 31 December 1841. Since the publication of Parson's account documents in the Public Record Office have come to notice which throw further light on the move to Southampton.

The first of these² is from J.W.Gordon, of the War Office, to Richard Byham, Secretary to the Board of Ordnance and is dated 21 November 1840. Gordon wrote that the General Commanding-in-Chief, Lord Hill, believed that it was the intention of the Commissioners of the Royal Military Asylum 'to withdraw the whole of the Children and Establishment from Southampton' during the current year [1840-1], and put them in the Asylum at Chelsea; it was understood that these buildings were originally constructed as a cavalry barrack, and that they were enlarged in 1815, to receive 'the Female Establishment of Soldiers' Children... it having been found upon the experience of some years, to be objectionable that the Boys and Girls should remain under the same Roof' (at Chelsea). About 400 children were accommodated at Southampton, and various enlargements of the premises were made. All the premises would now be delivered to the Ordnance, and Lord Hill was 'very desirous' that they should be available for troops, as it was thought that with slight adaption they might accommodate 9 officers, 4 ensigns, 1 assistant surgeon, 16 NCOs, 4 drummers, and 216 rank-and-file. The barracks were very healthily situated, on rising ground, and Southampton was a place for embarking and disembarking troops; it was about four hours from London by rail. Lord Hill hoped that the Master General and Board of Ordnance would concur with him in keeping these buildings as a barracks 'for the accommodation of a complete Depot'.

On 2 December 1840 the Board of Ordnance ordered that a plan and estimate for reconversion to a barracks be produced. However, by 21 May 1841, the Board had decided that all the papers be sent to the Ordnance Solicitor, John Hignett, saying that the Board intended to sell the property, by tender, and that Hignett prepare an advertisement immediately. Four days later Hignett told the Board that he had looked at the deeds, 'which I am sorry to say are drawn in a very slovenly manner'. He had prepared the advertisement, but would retain the deeds in order to settle questions of title in the event of a sale. An advertisement was duly placed in eight newspapers, as follows:

... To be sold by Tender... The extensive and valuable Freehold Buildings and Land known as the Royal Military Asylum containing about 3a.3r.0p.
The situation is a healthy elevation above the Town of Southampton, and is well drained, and from its proximity to the Port... and having the advantage of the Rail Road to London..., the property is well adapted either for private Residence or for any Public or Mercantile Establishment.

Tenders were to be submitted by 7 July 1841.

Four tenders were received of between £5500 and £8500, which were far short of the estimated value, according to 'Mr Tucker', of £12,750. On 7 June 1841, the War Office wrote to Byham, asking that the Ordnance suspend the sale 'for a short period', so that the Secretary at War could

¹ W.A. Seymour (ed), *A History of the Ordnance Survey*, (Folkestone, Dawson, 1980), p.111.
² The following documents are all in PRO WO 44/559, papers 'Royal Military Asylum Buildings given over to the Ordnance Survey (from the Tower).'

investigate whether the building could be converted to an Asylum for Insane Officers and Soldiers, the present one at Fort Clarence, Chatham, being urged to be 'by no means satisfactory'. On 23 June 1841 the War Office wrote again to Byham to say that the Military Medical Officer had reported that 'with a few alterations to the gates and fences, that would be a most suitable place for the Army Lunatic Asylum... the Secretary at War has received a report from a Board of Officers upon the state of the Lunatic Asylum at Fort Clarence; and also a representation from the Commandant of the Garrison, by which the unfitness of that building, more particularly for Officers of the Army, is so strongly shewn that he feels compelled to abandon it at the earliest possible period...'

On 25 June 1841 the Ordnance decided to seek Lord Hill's opinion as to whether there was any objection to the lunatic asylum scheme, which would release Fort Clarence for urgently needed hospital accommodation at Chatham. By 12 July the Ordnance had changed their minds again, reverting to the idea of selling the Southampton barracks, and using the barracks at Christchurch as an asylum instead. On 16 July 1841 the War Office wrote to the Ordnance that Lord Hill now hoped that 'no minor consideration will be allowed to interfere' with the Southampton asylum scheme. The Southampton buildings were very desirable as an asylum, being away from the town, and not in any 'confined street', so there seemed to be nothing more against siting it there than in Chelsea or other part of London, 'where the Inhabitants are not only not annoyed, but many are not even aware of their existence'. Lord Hill thought that there were the strongest objections to Christchurch: there was hardly sufficient cavalry barrack accommodation for the horses, and when the next Cavalry Regiment came home from India, all the cavalry barracks in the south and south-west districts would be required. Thus Lord Hill hoped that the arrangement proposed by the Secretary at War could be effected as soon as possible.

On 19 July 1841 Sir Hussey Vivian, the Master-General of the Ordnance, wrote that Christchurch was to be preferred to Southampton for the asylum: Southampton was designed for cavalry. He thought it objectionable to have an asylum, not only in the middle of the town, 'but in the middle of the very best part of it'. He would have preferred to have used Southampton as a barracks, rather than incur the very great expenditure on new barracks in the Northern Districts, and he was reluctant to give up all thoughts of so using Southampton.

Meanwhile, the Ordnance Survey had an accommodation problem.³ On 19 June 1841 Col. Thomas Colby, Superintendent of the Survey, wrote to his immediate superior, the Inspector-General of Fortifications (IGF), asking for additional accommodation at the Tower of London for 'the Survey Department'; more particularly for 'the employment of the additional Computers, Draftsmen and Engravers, that will be immediately required' in connexion with the six-inch survey of northern Britain which would be put in hand following the imminent passage of the Survey Act. He had already transferred about 130 civil assistants from Ireland to assist with the secondary triangulation, and a large amount of data would be produced. As such work in Ireland was now finished, their work would not be interrupted 'if they can be at once removed to this office'. There were between 70 and 80 assistants in this computing branch, so 'several large rooms' would be required for them, and there was no room left 'in this house' for the additional draftsmen and engravers to be accommodated. To reduce the cost of superintendence (a favourite Colby theme) all the office accommodation should be 'contiguous', and not less than double its present amount. Good light was needed for the engravers and draftsmen, and good housing would be needed so as to provide cheap lodgings within easy reach for them and for the computers, printers, etc. London had the advantage of being in communication with all parts of the country, so what was needed was some large building 'in London or its immediate vicinity'. (At this point someone, possibly the IGF, has pencilled alongside 'Warley, Croydon - Rail Roads to'.) Colby had not been able to find out what suitable buildings in London were likely to be vacant: he thought that those at Somerset House were now all occupied.

On 2 July 1841 Vivian minuted that the Ordnance Survey could indeed be accommodated in London, but at 'an enormous expense'. He thought that much of the Survey work might be carried on 'at a distance from Town', somewhere where there would be 'ready communication' with London. There were large unoccupied buildings at Weedon, which was connected by railway with London, so this distance was hardly greater than from the Castle to Phoenix Park in Dublin.⁴ In short, he thought that Colby could carry on much of his work in an unoccupied

³ The next group of documents drawn upon are in PRO WO 44/702.

⁴ As a matter of fact, Phoenix Park to Dublin Castle is about seventy minutes' brisk walk (empirical experiment, April 1984); Weedon is just seventy miles from London, and the journey could not have been performed in anything like seventy minutes by rail in 1841!

barracks: it was 'quite out of the question' to get accommodation in London, such as Colby suggested.

Colby was not going to have his department leave London if he could help it, and he commissioned his deputy, Lieut William Yolland, to come up with something. On 22 July Yolland produced a report, pointing out that no.6 house in the Tower was vacant and that the least expensive course would be to move 'the Gentlemen of the Ordnance Office' of no.1 house, which was about equal to the proposed expansion, into no.6, so as to use no.1. On 26 July Colby wrote to the IGF, saying that this idea would obviate the expense of moving into a vacant barracks with its attendant inconvenience. On 30 July the matter was referred to the Commanding Royal Engineer (CRE), London District, for a report. It was noted that it appeared that compensation would be payable if, for example, the occupants of no.1 [presumably certain Board of Ordnance dignitaries] were moved elsewhere.

On 12 August 1841, the CRE London District, Lt-Col L.A. Hall, (who would succeed Colby as head of the Ordnance Survey in 1847), with the Chief Clerks of the Surveyor General and the Clerk of the Ordnance, wrote to the Secretary to the Board of Ordnance, as to additional accommodation at the Tower: even not taking the inconvenience of moving into account, they considered the transfer to no.6 'altogether impracticable', as it would only accommodate one senior clerk, and would cause the Board to have to pay £157.10s p.a. house allowance to the other occupants of no.1. To alter no.1 as suggested by Yolland would cause 'considerable expense and delay' and Yolland had suggested even then that no.1 would not be 'permanently sufficient'. As to take over no.1 would be a temporary expedient and might lead to greater expense later on, they agreed with the Master General's view that the Ordnance Survey should obtain a large building somewhere.

This report bears a pencil note apparently in Vivian's writing: 'Mem. The Barracks at Southampton would in my opinion be peculiarly well adapted for a Survey Office. Lodgings in the town of Southn. near and ['cons'?] comm[unicatio]n with London.'

On 2 September 1841,⁵ Colby wrote to the IGF, that Yolland had visited 'Weedon, Warleigh, and Southampton, to examine the facilities at each of those places' for an Ordnance Survey office. '... in consequence of his report, I yesterday went over the Barracks at Southampton... and I am of opinion that it may be made a convenient Office for the Survey at a very small expense.' He therefore requested that the Board would authorise moving to Southampton 'with the least possible delay - as great inconvenience has already been occasioned by the want of an adequate Office for the Survey.' On 13 September the Board of Ordnance decided to point out that there were buildings at Yarmouth which might perhaps do for the military asylum. The War Office wrote on 14 October 1841 that '...as the situation [of the Southampton barracks] would not in all respects be desirable for a Military Lunatic Asylum, the Secretary at War no longer contemplates appropriating it for that object.' The Master-General and Board of Ordnance immediately authorised the move of the Ordnance Survey to Southampton.

The next development seems to have been on the fire in the Tower on 30 October, which destroyed the existing Ordnance Map Office, and made the move to Southampton an urgent necessity.

In fact, preparations were already in hand for the move to Southampton. On 29 October 1841 Colby requested issue of 8 grates for the Ordnance Map Office, 'Southampton Barracks', with the least possible delay; however, the IGF thought he should have the specific orders of the Master General and Board about the Southampton Barracks, as to whether they should come under the barrack-master at Winchester (who would therefore be responsible for supplying grates, etc), whereas Colby proposed to do the work himself. On 1 November, two days after the fire at the Tower, it was ordered that the grates be supplied and that Colby be authorised to prepare the buildings at Southampton 'with the least possible delay'.⁶

On 2 November Colby wrote to the Clerk of the Ordnance that if the Board trusted him with the removal of various plates, stores and fittings, and if the preparation of the buildings at Southampton could be met out of the Survey Vote, 'I shall with great exertion and the assistance of Carpenters and Labourers, from the Store Department and some empty Musket or Sword Cases, and rough wood for packing, together with the aid of a Detachment of... Sappers... or of the Royal Artillery to assist in packing the stores and in accompanying them to the South Western Railway [at Nine Elms, the London terminus for Southampton] be able to clear this Building [the Map Office in the Tower] in one week from the time when I receive the requisite

⁵ The following documents are in *loc. cit.*, PRO WO 44/559.

⁶ WO 47/1914, pp.14333-7.

authority.⁷ I have not been able to trace 'the requisite authority'; on 19 November the Board of Ordnance authorised the supply of stores for a temporary Map Office at the Tower.⁸ On 22 November 1841 the Board granted Colby's request that the Engineer Officer at Southampton be authorised to pay the wages to 'the Printer, Printer's Labourer, Clerk, Messenger, Draftsmen and Computers' thereat, 'instead of them attending at Whitehall, as at present'.⁹

It is unclear from these papers in the PRO exactly when the move to Southampton took place. What does seem to be clear is that it took place at least a fortnight before 31 December 1841, and although it may indeed be true that the first Ordnance Survey party to turn up at the barracks had difficulty in gaining admission,¹⁰ they did not turn up on New Year's Eve. On 18 December Colby was working at Southampton.¹¹

On the roads

The up-to-dateness of road atlases:

David Kimber of Wolverhampton writes:

I was interested to read the note by Guy Messenger (*Sheetlines* 32, p.4). I purchased a copy of the 1991 *Motoring Atlas of Great Britain* and I believe that it is a good companion to the 1:50,000 *Landranger* series of maps. I personally like the style and format of the atlas, but I share Mr Messenger's disappointment with regard to the accuracy of some of the road network information. Most highway authorities are continually pestered for up-to-date information by organisations involved in map production such as the A.A., R.A.C. and Bartholemew. It is naturally in their interest to keep road map information up-to-date so that when a new road opens to traffic it fulfils the transport objectives that justified its construction.

Despite the pressures on staff time, I believe that highway authorities try to produce consistent and up-to-date road map information for the various enquiring organisations. It is then up to the map-making organisations to bring up to date their publications at a suitable opportunity. *OS Publication News* listing all maps published in September 1991 stated that the 1992 *Motoring Atlas* had been fully revised and updated. As Mr Messenger points out, the Kettering Southern By-Pass opened to traffic on 8 November 1991 and despite the misgivings about the 1991 *Motoring Atlas*, the Kettering Southern By-Pass is still not shown in the 1992 *Motoring Atlas*!

In contrast to this, an updated version of Sheet 164, *Oxford*, in the 1:50,000 *Landranger* series was published in May 1991 showing the M40 motorway and changes to the classified road network consequent on the construction of the motorway. The remaining sections of the M40 motorway opened to traffic in January 1991 and the Ordnance Survey should be given credit for producing an updated version to coincide with the opening of the completed motorway. It is a pity that 1:50,000 Sheet 151 *Stratford-upon-Avon* has not yet been updated as, like Sheet 164, there have been many changes to the road network.

Mr Messenger points out that the A46 now consists of three quite distinct sections separated from one another by gaps of 15-20 miles while the two remaining sections of the A34 are nearly 40 miles apart. (There is also a gap, be it of only a few miles, in the A34 in Birmingham where it connects with the A41 before continuing as A34 onwards from the City centre.) The comment regarding the A46 raises the thorny question of whether road numbers such as A46 should be retained following major changes to the strategic road network. The A46 was a trunk road running from Bath through Cheltenham, Stratford-upon-Avon, Coventry, Leicester, Lincoln and onwards to Grimsby, but its original function has been overtaken by the development of the motorway and strategic trunk road network.

The remaining southern sections of the A46 no longer fulfil this long-distance strategic function and could be renumbered in line with their current function, e.g. A4600. Others would argue that the number A46 should be retained for continuity with the past but with suitable changes to the traffic sign legends. I believe that road numbers should not be treated like road names and are not sacrosanct: they are a means to an end rather than an end in themselves. I would agree that there is no point in change just for the sake of change. In the ambit of the M40 motorway the highway authorities considered it necessary to reclassify and renumber sections of

⁷ PRO WO 55/961, Colby to Clerk of Ordnance, 2 November 1841.

⁸ PRO WO 47/1915, p.15177.

⁹ PRO WO 47/1916, pp.15406-7.

¹⁰ Newspaper account, 1891/2, quoted by Parsons in Seymour, (1980), p.111.

¹¹ Acknowledgement of 18 December 1841 on letter in PRO WO 55/961.

the former A34 and A41 trunk roads to reflect their new status following completion of the motorway. In selecting numbers like A3400 and B4100 they have tried to retain a degree of continuity with the past.

These points only confirm the need to update road map information to aid motorists and other road users on their journeys on a consistent and regular basis. However, you can not expect people to buy a new road atlas every year and the forward planning scale of new road construction needs to be reflected in an atlas.

Parish Roads and Public Roads

Following Michael Holroyd's query as to the distinction between Parish Roads and Public Roads, arising out of mentions of these in the OS 'Books of Reference' accompanying the early 1:2500 plans, (see Sheetlines 31, p.50), John Bentley writes:

Since 1555, all highways, including roads, bridleways and footways, had been maintained by parishes, so Parish Roads were also Public Roads, no matter what appears on the 1866 map of Detling! The Highway Act, 1862, combined parishes into highway districts to streamline administration, but without affecting the responsibility of the individual parish; in practice, this does not seem to have included bridleways or footpaths, and this might explain the distinction. I have not seen the 1866 map, but Public Roads could refer to through routes, possibly turnpiked, which extended beyond the parish boundary; Detling would have had at least one turnpike, now A.249, but the Pilgrims Way, shown as a through route by the OS in 1801, is not a road on Sheet 172 of the One-inch New Popular Edition, so seems an unlikely candidate. (The current OS *Motoring Atlas* shows it back in use!)

Turnpiking was a temporary expedient only; roads remained parish roads, and parishes were fined at quarter sessions for the shortcomings of turnpike trusts. By 1866, turnpike trusts were often hopelessly insolvent, and were being dissolved by the state in large numbers, so any separate category was obsolescent.

This information is depressingly negative, but may help to clear the air. The local record office may have parish, turnpike trust or highway board records which can throw some light on the local situation, and the detailed lists of Main Roads issued by the county justices under the Highways & Locomotives (Amendment) Act, 1878, 41 & 42 Vict. c.77, will indicate which roads were important at that time. We shall probably never know for certain what precisely the surveyor or parish clerk really meant!

Gridded signposts

Sheetlines is indebted to George Jasieniecki for drawing its attention to the February/March 1992 issue of *The Countryman*. On page 139 appears an illustration of one of the gridded signposts in Dorset, with the comment 'As far as we know this idea is unique to Dorset'. Readers of *Sheetlines* know better than that, of course; but *The Countryman* adds: 'Probably some 400 such signposts were erected, made of cast aluminium, and sited in the countryside rather than the towns. It is doubtful if more than 250 now remain. According to Brian Toop, a former county council official who has made a special study of the matter, many were destroyed within a few months when national standards for signposts were first introduced. This harsh and unnecessary policy has now been modified. Dorset's own special finials are preserved wherever possible and repositioned on new signposts if necessary.' The signpost illustrated in *The Countryman* is at God's End Green, SU 032032; it was one of the first two to be erected, the other being at Amen Corner, SU 005103.

'Mr Toad'

Published land-use mapping of Britain and Ireland:

some notes by Richard Oliver

Sheetlines has received a number of enquiries as to the extent of published land-use mapping, and it is hoped the following notes and lists will be of some use. Anyone able to provide corrections or amplifications is asked to write to the Editor.

It is perhaps worth pointing out that all the maps described here were produced and published by agencies other than the Ordnance Survey, and that, although OS base mapping was used, almost all the printing was undertaken by commercial firms. They therefore fall into a similar category to geological and facsimile OS maps, being part of 'the greater Ordnance Survey'.

Great Britain

The first Land Utilisation Survey

At the instigation of L. Dudley Stamp,¹ the whole of Great Britain was surveyed, mostly in 1931-5, though some remote areas were surveyed a little later; the information was plotted on ordinary OS 1:10,560 sheets. Most of these manuscript sheets survive, and are held by the London School of Economics. The extent of publication - the whole of Britain except for most of the Scottish highlands and islands - is shown by the appended index diagram. The base map was the 1:63,360 Popular Edition, but with some modifications to the sheetlines. It was originally intended to publish only specimen sheets, (England sheets 115 and 142 were the first to be published, in January 1933), but the success of these sheets led to an extension of the publication programme; the first sheets were printed by the OS, but from about 1935 all the printing was by commercial firms. Existing stocks were destroyed by enemy action in 1941, but the value of these maps for planning and administration was such that not only was reprinting put in hand, but it was decided also to publish the whole of lowland Britain. The whole of Britain was also published at 1:625,000 in two sheets.² Publication was completed in 1949, and the maps were accompanied by county reports. At first - and certainly until the mid 1940s - the sheets could be had in covers as well as paper flat. The normal run for post-1945 printings seems to have been 1000 copies; sales were not so great as to justify reprinting, and indeed residual stocks of 73 sheets were still available as late as the winter of 1982-3.³

The second Land Utilisation Survey

A second land utilisation survey, also using OS 1:10,560 sheets as base maps, was carried out under the direction of Professor Alice Coleman in 1958-68.⁴ 120 sheets were published between 1961 and 1977, (all but 5 in 1961-70), at 1:25,000, using the OS 1:25,000 Provisional Edition as a base-map, but with the sheets combined into pairs, and numbered in two consecutive sequences, running south-north, for England & Wales and for Scotland. In the majority of cases these sheets corresponded to 20 x 10 km sheets of the OS 1:25,000 Second Series, or 'Pathfinder'; a few early sheets were produced before the OS adopted the 20 x 10 km format, and the LUS sheetlines were altered on conform to the OS proposed sheetlines for the 1:25,000 Second Series. The pattern of publication reflects local enthusiasm, with some County Councils more willing than others to subsidise publication. The maps were produced to a very high standard, being printed in eleven (originally ten) colours: the four OS colours, plus seven land-use colours.

In the following list the 'Pathfinder' number is given first, (it being considered to be the most 'user-friendly'),⁵ in ordinary text, followed in italics by the National Grid 1:25,000 sheet numbers in round brackets and the LUS number in square brackets.⁶ In cases where a LUS sheet was split between two 'Pathfinders', the latter numbers are given the suffixes 'e' (east) and 'w' (west); 'Pathfinders' published only in Outdoor Leisure Map (OLM) format have the 'ghost' Pathfinder number, preceded by 'p' in square brackets, followed by the OLM number, unbracketed.

¹ See L.D. Stamp, *The Land of Britain*, London, Longmans, 1948, 3rd ed 1962. This remains the best account of the first land-use survey. See also E.C. Willatts, 'The maps of the Land Utilisation Survey of Britain, 1931-49', *Sheetlines* 23 (December 1988), pp.2-5.

² This is something of a generalisation, as initial publication was at 1:633,600: see Roger Hellyer, *The 'Ten-mile' maps of the Ordnance Survey*, London, Charles Close Society, forthcoming. Related to the LUS map are 1:625,000 and 1:633,600 *Land Classification, Types of Farming, Vegetation: Grasslands... and Vegetation: Reconnaissance Survey...* maps: *ibid.*

³ See *Sheetlines* no.6 (April 1983), p.16.

⁴ For the Second Land Utilisation Survey see Alice Coleman, 'The Second Land Use Survey: progress and prospect', *Geographical Journal*, 127 (1961), 170-86; Alice Coleman, 'Some cartographic aspects of the Second Series Land Use maps', *Geographical Journal*, 130 (1964), 167-70; Alice Coleman, 'Some technical and economic limitations of cartographic colour representation on land use maps', *Cartographic Journal*, 2 (1965), 90-4.

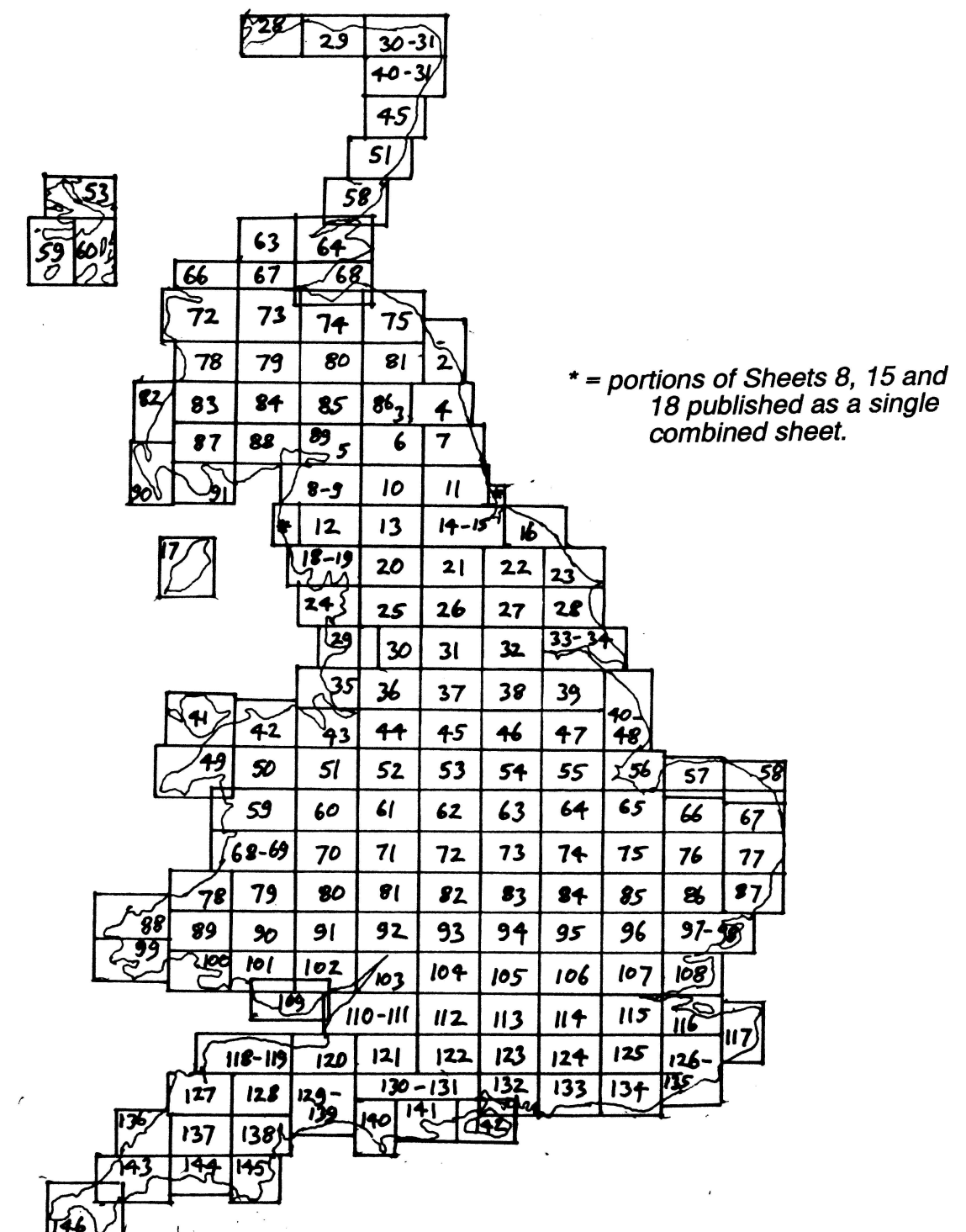
⁵ A free index to the 'Pathfinder' is obtainable from Information Branch, Ordnance Survey, Romsey Road, Maybush, Southampton, SO9 4DH. It is perhaps worth pointing out that in some map collections these maps may be filed under their National Grid rather than their LUS numbers!

⁶ This list has been compiled using the holdings of the Royal Geographical Society and the Department of Geography, University of Exeter. It is open to addition and correction.



FIRST LAND-USE SURVEY

Diagram of published One-inch sheets



394 (NT 08/18) [S138]; 463 (NT 83/83) [838]; 524 (NZ 28/38) [825]; 536 (NZ 27/37) [820]; 549 (NZ 26/36) [815]; 572 (NZ 24/34) [801]; 581 (NZ 23/33) [793]; 582 (NZ 43/53) [794]; [p605] parts OLM 6,7 (NY 20/30) [757]; [p622] parts OLM 26, 27 (SE 69/79) [753]; [p633] parts OLM 26, 27 (SE 68/78) [742]; 641 (SD 27/37) [723]; 642 (SD 47/57) [724]; 637s,648e (SD 46/56) [713]; 643 (SE 67/77) [730]; 655 (SE 66/76) [719]; 664 (SE 45/55) [708]; 665 (SE 65/75) [709]; 673 (SE 44/54) [698]; 674 (SE 64/74) [699]; 683 (SE 23/33) [687]; 684 (SE 43/53) [688]; 685 (SE 63/73) [689]; 692 (SE 22/32) [675]; 693 (SE 42/52) [676]; 694 (SE 62/72) [677]; 696 (TA 02/12) [679]; 704 (SE 41/51) [666]; 705 (SE 61/71) [667]; 716 (SE 40/50) [654]; 717 (SE 60/70) [655]; 721 (SJ 29/39) [637]; 724 (SJ 89/99) [640]; 738e,739w (SH 38/48) [620]; 768e,[769w], part OLM 17 (SH 46/56) [586]; 770 (SH 66/76) [587]; 772 (SJ 06/16) [589]; 785, part OLM 17 (SH 45/55) [570]; 786 (SH 65/75) [571]; 787n, part OLM 16 (SH 85/95) [572]; 788 (SJ 05/15) [573]; 787s, part OLM 16 (SJ 84/94) [558]; 850 (SJ 82/92) [515]; 855 TF 82/92 [525]; [p865] parts OLM 18, 23 (SH 61/71) [487]; 877e,878w (TF 11/21) [499]; 894e,895w (TF 50/60) [481]; 904 (TG 40/50) [486]; 908 (SO 09/19) [448]; 909 (SO 29/39) [449]; 912 (SO 89/99) [452]; 914e,915w (SP 39/49) [454]; 921 (TL 69/79) [461]; 924 (TM 29/39) [464]; 925 (TM 49/59) [465]; 926 (SN 57/58) [425]; 943 (TL 88/98) [442]; 971 (SO 26/36) [388]; 980 (TL 06/16) [397]; 1002 (TL 05/15) [376]; 1025 (TL 04/14) [355]; 1048 (TL 03/13) [333]; 1072 (TL 02/12) [310]; 1079 (SM 81/91) [271]; 1082 (SN 41/51) [274]; 1086 (SO 21/31) [278]; 1087 (SO 41/51) [279]; 1089 (SO 81/91) [281]; 1095 (TL 01/11) [287]; 1103 (SM 80/90) [249]; 1106 (SN 40/50) [252]; 1107 (SN 60/70) [253]; 1108 (SN 80/90) [254]; 1109 (SO 00/10) [255]; 1117 (SP 60/70) [263]; 1117e,1118w (SP 70/80) [264]; 1118 (SO 80/90) [264A]; 1126 (SS 49/59) [230]; 1127 (SS 69/79) [231]; 1128 (SS 89/99) [232]; 1129 (ST 09/19) [233]; 1130 (ST 29/39) [234]; 1131 (ST 49/59) [235]; 1140 (TQ 29/39) [244]; part 1145 (SS 48/58) [210]; 1145e,1146w (SS 68/78) [211]; 1146e,1147 (SS 88/98) [212]; 1148 (SJ 08/18) [213]; 1149 (ST 28/38) [214]; 1152 (ST 88/98) [217]; 1159 (TQ 28/38) [224]; 1160 (TQ 48/58) [225]; 1161 (TQ 68/78) [226]; 1162 (TQ 88/98) [227]; part 1163 (SS 87/97) [193]; 1164,1165w (SJ 07/17) [194]; 1167 (SJ 67/77) [197]; 1175 (TQ 27/37) [205]; 1176 (TQ 47/57) [206]; 1177 (TQ 67/77) [207]; 1163s (SS 96) [175]; 1180 (SJ 06/16) [176]; 1191 (TQ 26/36) [187]; 1196 (TR 26/36) [192]; 1198 (ST 45/55) [160]; 1208 (TQ 45/55) [170]; 1212 (TR 25/35) [174]; 1214 (SS 64/74) [140]; 1232 TR 24/34 [158]; 1252e (TR 23/33) [138]; 1264 (SU 42/52) [110]; 1272 (TR 01/02) [118]; 1284 (SU 41/51) [91]; 1307 (TQ 30/30) [77]; 1314 (SX 89/99) [50]; 1301s, part OLM 22 (SZ 09/19) [56]; part 1335 and part OLM 29 (SZ 38/48) [44]; [1336], part OLM 29 (SZ 58/68) [45]; 1354 (SX 05/15) [13]; 1356 (SX 45/55) [15].

There have been more recent land-use surveys, but no maps have been published.

Ireland

Northern Ireland

The six counties of Northern Ireland were surveyed in similar manner to Great Britain in 1937-9 and published at 1:63,360 in 1947-51, using the eleven sheet One-inch Popular Edition as a base. The published maps were very similar to those of Britain. (The survey did not extend across the border, and the portions of the Republic falling on these sheets were left uncoloured.)

Republic of Ireland

Despite several proposals, no formal land-use survey of the twenty six counties of the Republic has been made; some limited, unpublished, work has been done by University field classes.⁷

Great Britain: Agricultural Land Classification maps

Maps covering the whole of England and Wales were published between 1966 and 1975 by the Ministry of Agriculture, based on the OS One-inch 7th Series; sheets 64 and 70 were combined, sheet 87 was not published, and areas of Scotland on cross-border sheets were not coloured. All sheets were described as 'Provisional', top left. There were five classifications of agricultural land, plus land in urban use, which included land used for industry, and 'Other land primarily in non-agricultural use', a category which included woods and airfields. The maps were printed, in black plus up to seven colours by H.M.S.O.; some were reprinted, and most are still available.⁸

Richard Oliver

⁷ I am indebted to Professor John Andrews for assistance here. See also J.H. Andrews, 'Ireland in Maps', *Irish Geography*, 16 (1983), pp.280-92.

⁸ According to *MAFF Publications Catalogue 1991*, the following sheets are still available, at £6.25 each, plus a postage charge according to value of order: 64/70, 71, 75-78, 82-86, 88-103, 105-132, 137, 138/151, 139, 141-148, 150, 152-167, 169-171, 173-181, 183, 185-190. Catalogue is available, free, from MAFF Publications, London, SE99 7TP, and, for the non-agriculturalist, includes some diverting book titles.

REVIEWS

Maps and history in south-west England. Edited by Katherine Barker and Roger J.P. Kain. Exeter Studies in History No. 31. University of Exeter Press (1991). ISBN 0-85989-373-1. Pp.xi, 148; 39 illus. Price £9.95.

This neatly produced, A5 sized book, is a collection of six essays, five of which are based on lectures given on behalf of the Centre for South-Western Historical Studies in 1990. They are complemented by the text of Professor William Ravenhill's 1990 University of Exeter Harte Lecture in Local History. The stated precept of the contributions to this book is that maps are 'historical phenomena of great significance'. These essays view maps in one of, or a combination of, five different defined concepts: history of maps; maps in history; history in maps; historical cartography, and the history of cartography.

The book opens with an elegant discourse by Professor Ravenhill on 'The south-west in the eighteenth-century re-mapping of England'. Prefaced by a scene-setting account of Saxton's mapping (the copperplates for which survived into the eighteenth century, when they were still being used for map printing), Ravenhill draws on his own pioneering work on Joel Gascoyne to illustrate this prolific surveyor/cartographer's work in Cornwall. This is followed by vignettes of the more prominent eighteenth-century map-makers and their work in the south-west, ending with a synopsis of Professor Ravenhill's original research on the Devonshire Clifford family's cartographic interests. The story of the creation by Robert Edward in the 1790s of a series of 'skeleton', or outline maps of southern England constitutes an important contribution to our knowledge of military mapping requirements of the eighteenth century.

The second chapter, 'An Elizabethan map of north-west Dorset: Sherborne, Yetminster and surrounding manors' by Katherine Barker, is the complete reversal of the first in its treatment of the subject matter. Whereas Professor Ravenhill paints a broad canvas in his story of the mapping of the south-west, Mrs Barker dwells in minute detail on the information to be gleaned from a single map of 72 square miles: practically every line and pen stroke is described. Contemporary documentary evidence is matched to the map image to present a living landscape from over 400 years ago. This kind of study is absolutely invaluable for local historical purposes, and one can imagine that the audience at Sherborne, where these lectures were given, were fascinated by this account, but it has to be said that for one unfamiliar with the localities described, that it makes heavy reading, and too few examples from other parts of the country survive to allow for comparison.

In 'Patronising the plotters: the advent of systematic estate mapping', Graham Haslam illustrates his theme by taking us through the history and use of estate plans by the Duchy of Cornwall. In so doing, we are treated to a very useful potted history of the Duchy, during which Haslam attempts to assess when maps became an essential part of management technique, and whether the Duchy is, and was, typical of the way in which other landowners saw property management. Having divided estates into three categories (but not from a map using point of view) we learn that the Duchy is typical of the largest, scattered estates. After five pages of interesting history we eventually arrive at John Norden, the quality of whose work is well-known from his county surveys and by the beautiful map of Windsor Castle, which was part of the Duchy output. Norden's work is followed by descriptions of later maps and surveys of the far-flung parts of the Duchy. Not until 1844 was the first full-time surveyor employed, just before the advent of the Ordnance Survey large scale plans which marked the demise of the private estate surveyor. It is, perhaps, not within the scope of this paper to introduce comparisons with the mapping of other similar estates, and yet this would have been a useful yardstick by which to judge the extent of the Duchy's cartographic heritage; not once is the scale of any of the maps mentioned, precluding any useful comparison with other estate maps. Even so, this paper makes a valuable contribution to our pool of knowledge on estate mapping nationwide.

The fourth chapter, on 'The interpretation of enclosure maps and awards' by John Chapman gives a detailed account of the various forms of enclosure, and of the evidence required to be able to interpret the information presented by the maps as accurately as possible. The complexity of the subject is underlined by the mention of the maps themselves in only four paragraphs scattered throughout the text. This paper contains valuable advice, and cautions on the interpretation of the material, which have been derived from case studies which demonstrate how the maps varied greatly in the amount and type of information portrayed, and that seemingly logical assumptions are not always borne out by thorough investigation.

'The tithe surveys of south-west England' by Roger Kain, Richard Oliver and Jennifer Baker is an excellent precis of the subject, and is well-recommended as an introduction to tithe maps for those who have no knowledge of these surveys. First, the maps, apportionments and files are considered, in the context of south-west England, from the point of view of the evidence they provide of, for example, past farming systems, landscapes, societies and economies. A second section describes particular characteristics of the maps: their scales, categorisation into classes, the surveyors, and the non-statutory detail included in the map. The chapter is concluded by very brief references to some Dorset tithe maps.

Lastly, we come to a breathless resume by Richard Oliver of 'The Ordnance Survey in south-west England'. We, in this Society, are by now well-accustomed to Richard's information-packed presentations, and this chapter is no exception, and is a model of its kind for those who wish to undertake similar studies for their own area. Here they will find the major cartographic landmarks in Ordnance Survey's history carefully pin-pointed, and each rung on the chronological ladder easily identified. Three useful appendices complete the chapter: the first, a list of OS urban surveys at 1:1250, 1:528 and 1:500; a second giving the survey or initial revision dates for National Grid mapping at 1:2500 for small towns; the third lists the published six-inch air photo mosaic sheets for south-west England.

In seeking to consider the 'practical and political purposes for which maps were used, the symbolic and ideological roles of maps in the history of south-western England and the ways in which map evidence can be used to recover facts about the past for use in the writing of history' this book has certainly achieved its aim. The sequence of papers has been well thought out to provide a comprehensive coverage of the types of mapping available for any one region, and point the way, perhaps to a national cartographic history on these lines. Its physical production is to be commended, and the quality of the black and white illustrations is excellent.

Yolande Hodson

Place names on maps of Scotland and Wales. A glossary of the most common Gaelic and Scandinavian elements used on maps of Scotland and of the most common Welsh elements used on maps of Wales. Ordnance Survey, Southampton, 1968; reprinted with corrections 1981; reprinted 1990. A5, pbk, 24pp, ISBN 0-319-00223-3, £3.15.

For many years this has been advertised in the marginalia of 1:50,000 'Landranger' maps, regardless of whether they include any Scottish or Welsh territory, but copies are rarely seen in the bookshops. It is self-recommending in all but one respect: the price, which is sheer greed on Ordnance Survey's part.

Richard Oliver

Gordon Biddle, *The Railway Surveyors. The story of railway property management 1800-1990.* Shepperton and London, Ian Allan and British Railways Property Board, 1990, 23 x 17 cm, 288pp, illus, hbk, ISBN 0 7110 1954 1, £19.95.

Gordon Biddle is well known as a writer on railway stations, and the present volume at first sight looks like diversification. In fact, architecture starts to appear rather prominently in the later chapters, and 'surveying' in the planimetric sense is rather less to the fore than might be expected from the main title; indeed, it seems practically absent in the second half of the book. That said, the first half is worthwhile reading for those interested in the relationship between railway engineering and surveying, as a recital of the chapter titles shows: 'Antecedents', 'Promoting a railway', 'Preparing the route', 'Land for the line' and 'The influence of the railway'. It is particularly commended to those interested in the Ordnance Survey in the middle third of the nineteenth century. At the same time, purchase, rather than borrowing, is only recommended to those who have a strong interest in railways as well as in cartography and surveying. The illustrations are good, (for once we have a railway book with not a steam locomotive in sight), but it is a pity that there are not more of nineteenth-century railway plans. Incidentally, the maps were drawn by Richard Dean, a former editor of *Sheetlines*.

Richard Oliver.

Ordnance Survey in Ireland. An illustrated record. Dublin and Belfast, Ordnance Survey of Ireland and Ordnance Survey of Northern Ireland, 1991, 25 x 17.5 cm, pbk, illus, ISBN 0-904996-02-6, £8.00 [in Great Britain].

Ireland has hitherto been fortunate in its cartographic history; as yet Great Britain has nothing

to compare with Professor John Andrews' history of the nineteenth century topographical survey⁹ or with Professor Gordon Herries Davies' history of the geological survey.¹⁰ Unfortunately, this present publication is not in the same league; it was produced jointly by the two Irish Ordnance Surveys, and was perhaps something of a rush job. This particularly shows in some of the illustrations of the gridded maps, (e.g. pp.42-3, 77, 82-3), where the grid is not square to the illustration edges. And does someone *really* believe the 1953 map of Belfast on page 42 to be a 'first edition'?! The rather scanty 'further reading' list at the back excludes *Sheetlines*, to say nothing of *Sheetlines* 13, and some of the text suggests the works which are listed remain 'further reading' for the authors as well as for their public.

At the same time *Ordnance Survey in Ireland* should not be written off as yet another ghastly bicentenary effusion. Some of the illustrations, such as of early name-books, proof correction lists, a drawing on a ferro-prussiate drawing-key and of butt-jointed plates, are extremely useful (a picture being worth a thousand words, and a map more), and will make those who have worked on Irish Ordnance Survey archives in the past feel nostalgic! Recommended with reservations.

Richard Oliver

Cartographic Journal, vol 28, no. 2, December 1991

This contains three articles of Ordnance Survey interest.

T. Nicholson, 'The first Ordnance Survey District Maps of England, Wales and Scotland 1857-1898' (pp 176-80) is described by its title, complements articles about later district and tourist maps in *Sheetlines*, and is most welcome. He lists both maps which are known to exist and those which are listed in catalogues but of which as yet no copies are known, most notably a *Glasgow* district map, derived from the first edition of the One-inch of Scotland.

A.B.T. Davey, 'The Ordnance and the Ordnance survey - offspring or foundling?' (pp 181-7) is a strange thing: it's not really about maps at all, more about why this author thinks the OS got started in the first place. There seem to be some errors of fact which put me off a bit. For example, near the beginning it says, or at any rate strongly implies, that in 1791 it was decided to turn the Hounslow Heath baseline into one-inch and six-inch mapping of the British Isles. In fact, all that happened in 1791 was that the triangulation was put onto an official basis. Topographical survey had been going on for some time, and as the introductions to the Harry Margary series show, it simply isn't the case that in 1791 the Board of Ordnance decided to make a one-inch map. It's significant that Davey doesn't list the Margary volumes in his bibliography at the end. In short, interesting, definitely original, but for the moment stick to previous writers for the facts.

D.W. Rhind, 'The role of the Ordnance Survey of Great Britain' (pp 188-99) is a shortened and polished version of his paper given on 23 May 1991, (see *Sheetlines* 31, pp 26-7). Conspicuously absent is the advice on what the next OS Director-General *ought* to do, perhaps partly because David Rhind is of course now 'the next DG' and I gather that he is taking at least some of his own advice!

There are also several good articles of non-OS interest, notably the text of Barbara A. Bond, 'Map and chart collections in crisis: change or decay?', (see *Sheetlines* 29, pp 4-5), D.H. Maling, 'The origins of that definition', (of 'cartography'), and David Smith, 'The enduring image of early British townscapes', though the last seems to have as much in the footnotes as in the main text!

'Viator'

Isle of Portland (Fortuneswell and Grove) (Dorset Sheet 58.11); *Isle of Portland (Easton and Weston)* (Dorset sheet 58.15). Both £1.75 each, published by Alan Godfrey Maps, 57 Spoor St, Dunston, Gateshead, NE11 9BD.

Readers of *Sheetlines*, noticing the frequent mentions of the Godfrey Edition of late, might wonder whether the Editor is failing to declare an interest; are he and Mr Godfrey in the same

⁹ J.H. Andrews, *A paper landscape: the Ordnance Survey in nineteenth century Ireland.* Oxford University Press, 1975, hbk, ISBN 0 198232 09 8, £48.00 (in UK, March 1992). See *Sheetlines* 2 (December 1981), p.7 for review.

¹⁰ Gordon L. Herries Davies, *Sheets of many colours: the mapping of Ireland's rocks 1750-1890*, Dublin, Royal Dublin Society, 1983, hbk, ISBN 0 86027 008 4, (15.00 (in UK, March 1992). See *Sheetlines* 16 (August 1986), p.15 for a review.

Masonic lodge, perhaps?! By no means; it is simply that Alan Godfrey is now the most important facsimile map publisher in this country, at any rate in terms of numbers of titles, and those who have managed to collect most of what is collectable at the small scales, and can only stomach (or afford) so much of the current output from Southampton, nonetheless still have a supply of Godfrey novelties monthly. Indeed, in compiling the 'New maps' listing for *Sheetlines* with a view to drawing readers' attention to publications likely to be of general interest, your reviewer has great difficulty in 'fattening up' the modern OS offerings and 'slimming down' the Godfrey offerings so as to maintain some sort of balance. Most of the facsimiles are of OS 1:2500 plans of the decade or so either side of 1900, but all scales and most dates from 1:500 to 1:633,600 are represented, admittedly often by single items used as 'fillers' or indexes. Most are of urban areas, though some are of rural areas which have since been urbanised: good examples of the latter are Middlesex 15.07, *Greenford 1894*, and London 45, *Perivale 1895*.

So much for generalities; now for the reason for this review. Two particularly interesting examples of 'rural' or 'sub-urban' 1:2500 mapping have recently been published, both covering part of the Isle of Portland, and both well worth the attention of a much wider audience than that with a particular interest in this locality. Portland is well known as one of the few places when open-field strip-farming survives, or did so until recently, and Dorset 58.15 duly shows the strips as they were in 1926-7, before many were built over. There are excellent notes by Stuart Morris. Although one does not look to the 1:2500 for pictorialism, here is an exception: extensive hachuring, and drawings of boulders on the beaches so vivid that they seem to be flying about, mapped in motion as it were. The 1:2500 sheetlines cut up Portland rather inconveniently, and both sheets under review contain 'odd bits' of adjoining sheets.

Dorset 58.11 has more pictorial rockery, and also a great deal of 'uncultivated' vegetation ornament. Together these make for a striking visual effect; but to find out what is most striking of all you must turn to the notes, this time written by Alan Godfrey himself, who lived on this map during part of his childhood. 'Where do we start on a map whose two greatest buildings have been censored out of existence?' he asks. These are the prison and the Verne citadel; each is a striking illustration of 'cartographic silence', and it is a cause for regret that Brian Harley died before this map was published, for he would have relished it. Few Ordnance Survey maps can be so full of 'layers of meaning', several of which are brought out in the notes on the back. Even the quarries, so apparently solid and unyielding, are to some extent an illusion, for they were 'liable to change within the hour'. Comparison of the 1926-7 map with the 1889 map on the reverse brings this out to some extent, but what only becomes apparent with a little thought is that although each quarry face is as it was when the Ordnance surveyors passed that way, it is very unlikely that all the quarries were mapped on the same day; the revision of this sheet would have been a gradual process, over weeks if not months. Incidentally, the 1889 map on the back falls into that annoying category, the 'revised first edition'; Portland and Weymouth were mapped at 1:2500 in the early 1860s as part of the defence surveys, and were revised in the late 1880s when the rest of Dorset was surveyed at 1:2500. As pointed out elsewhere in this issue of *Sheetlines*, these early 1:2500 maps were contoured, and it is to be hoped that they will one day be reissued, both for their cartographic and for their topographic interest.

Meanwhile, here are two maps deserving the widest audience, together costing less than a single new OS 1:50,000.

Richard Oliver

Maurice Beresford, "'The spade might soon determine': the representation of deserted mediaeval villages on Ordnance Survey plans, 1849-1910", *Agricultural History Review*, vol 40, no 1, (1992), pp 64-70.

Maurice Beresford is well known for his work on deserted mediaeval villages (DMVs), starting with *The lost villages of England* (1954). Here he describes the mapping of DMVs in the East Riding of Yorkshire. The local officer in charge of this survey between 1849 and 1852 was Lieut John Bayly, R.E., who unlike his brother Engineer officers had an eye for DMVs, and caused his subordinates to record twenty-five of them. This was in stark contrast to Warwickshire, surveyed over thirty years later, where the 1:2500 surveyors managed not to record any DMVs.

This a most useful article, and one which I must confess to wishing that I had written myself!

Richard Oliver

Notes, queries, answers, news and editor's jottings

'NOT ENOUGH MAPS IN BRITISH HOMES' SHOCK

Shame of the non-purchasers

New OS boss to act

The above¹ was inspired by reading a recent interview² with Professor David Rhind, the new Director-General³ of the Ordnance Survey.⁴ 'David Rhind has a simple mission in life. He says: "There was a recent survey which showed that the majority of homes in Britain do not contain a single map. That is a sin and we are going to do something about it." ... The number of people who do not own any of the Ordnance Survey's products⁵ is especially startling when one considers that the OS print about 11 million a year of them, ranging in scale from 1:1250... up to... maps which show the whole country on a single sheet of paper.'

This is an understatement of the problem. Only the other day your Editor visited a well-known London map-shop, and bought three 1:50,000 and two 1:25,000 maps. No great mathematical ability is needed to demonstrate that he bought *twenty-five times* the number of maps which he ought to have bought during the whole year (and this was only March!). To put it another way, each inhabitant of Great Britain only buys one OS map every five years.

A suggestion: Were the Ordnance Survey to introduce a proper⁶ topographical series at 1:100,000 or 1:125,000 they might sell a few more maps. Even that obvious cartographic glutton, the Editor of *Sheetlines*, would buy them.

Or is this too *imaginative*?

Interesting goings-on near Portsmouth

1:50,000 Sheet 196, edition B, published in January 1992, is interesting for two reasons. First, the definition of antiquities evidently now includes post-1860 military remains: several of the 'Palmerston Follies' forts around Portsmouth (e.g. at SU 656065 and SU 678065) are now named in gothic. Until quite recently only pre-1800 buildings qualified as antiquities: one wonders how long it will be before some of the pillboxes and other leftovers from this century's wars will be treated as 'antiquities'! The second interest is related to the first: buildings appear in square SU 6101, which rouses suspicions that squares SU 5902, 5903 and 5904 are being coy.

Map covers and mounting of the 1940s

Following the note in *Sheetlines* 32, p.5, it appears that most if not all of the Quarter-Inch Fourth Edition sheets and England & Wales were issued in 1945-6 in covers with 'pre-war' index diagrams and no country prefix to the sheet number.

Philip de Paris cites another example of a map 'mounted' by pasting it on top of another map. This time the map is GSGS 3906 1:25,000 Sheet 41/18 NE (*circa* 1940-41), pasted on top of Bartholomew Half-inch [old series] sheet 32. The pasting was not very well done, and as the GSGS map was not sectioned it has cockled considerably at the folds; it has been laminated with a transparent film.

¹ We ask the queasy *not* to cancel their subscriptions to *Sheetlines*, as we do not propose to make a habit of such headlines.

² In *OS News*, March 1992, reprinted from *The Times Higher Educational Supplement* of 28 February 1992, under the headline 'Here Be Dragons'. We can only assume the last to refer to some specification change as yet not announced to the public.

³ Now, it seems, *Director-General and Chief Executive*, but even Sir Henry James was content to be 'Director-General'. A pleasant *next step* (we assume one of these was responsible) would be a verbal deflation.

⁴ Connaissanceurs will be glad to learn that *the* definite article is used throughout the interview, *even as reprinted!*

⁵ [A courtesy title for some of them. - *Ed.*, *Sheetlines*.]

⁶ i.e. *not* a photo-reduction from the 1:50,000 outline, current cost £10.00.

Gasging away?

Collectors of the *Godfrey Edition* of OS 1:2500 reprints of London will have noticed that there is a curious omission from London sheet 53, 1914: the gasholders at Bromley gasworks are omitted! The omission is all the more strange as the southern part of the gasworks duly appear on London sheet 65. The notes for Sheet 53 were written by Isobel Watson, who consulted the Editor of *Sheetlines*; both parties remain puzzled. There is no question of the gasholders having been demolished just before the revision in 1914, and then reerected immediately afterwards. It is also difficult to explain the anomaly by reference to 'security considerations': although from the mid-1920s onwards gasworks were given 'undescribed' treatment, whereby the buildings were shown but not named, it never appears to have been the practice to omit gasworks completely - unlike, for example, oil storage tanks, which from the mid-1920s were omitted altogether, at all scales. A convincing explanation of the anomaly at Bromley would be most welcome.

Parish Lists of the 1930s

Brian Adams draws our attention to lists of parishes with the relevant Six-inch sheet numbers published by the Ordnance Survey in the 1930s; an extract from that for Bedfordshire, dated 1934, appears below, and a collection of them for England and Wales has printing dates varying from 1932 (Oxfordshire and Warwickshire) to March 1939 (Yorks, West Riding). It would be interesting to know why these lists were produced; were they a replacement for the more elaborate *Catalogues*, of which the last had appeared in 1920, or were they to serve some administrative purpose?

Hockliffe ...	28 N.E., S.E.; 29 N.W., S.W.	Toddington	25 S.W., S.E.; 29 N.W., N.E., S.W., S.E.
Houghton Conquest ...	16 S.E.; 21 N.E.	Totternhoe ...	28 S.E.; 29 S.W.; 31 N.E.;
Houghton Regis ...	29 S.W., S.E.; 32 N.W., N.E.		32 N.W., S.W., S.E.
Hulcote and Salford ...	20 N.W., N.E., S.E.	Turvey ...	10 N.E., S.E.; 11 N.W., S.W.
Husborne Crawley	20 S.E.; 24 N.E.; 25 N.W.	Upper Stondon ...	26 N.E.
Hyde	33 N.W., N.E., S.W., S.E.; 35 N.W., N.E.	Westoning ...	25 N.W., N.E., S.W., S.E.
Kempston ...	11 S.E.; 16 N.W., N.E.	Whipsnade ...	32 S.W., S.E.; 34 N.E.
Kempston Rural ...	11 S.W.; 15 N.E., S.E.;	Wilden ...	8 S.W., S.E.; 12 N.W., N.E.
	16 N.W., N.E., S.W., S.E.	Willington ...	12 S.W., S.E.; 17 N.W., N.E.
Kensworth ...	32 N.W., N.E., S.W., S.E.	Wilshamstead ...	16 N.E., S.E.; 17 N.W., S.W.;
			21 N.E.; 22 N.W.

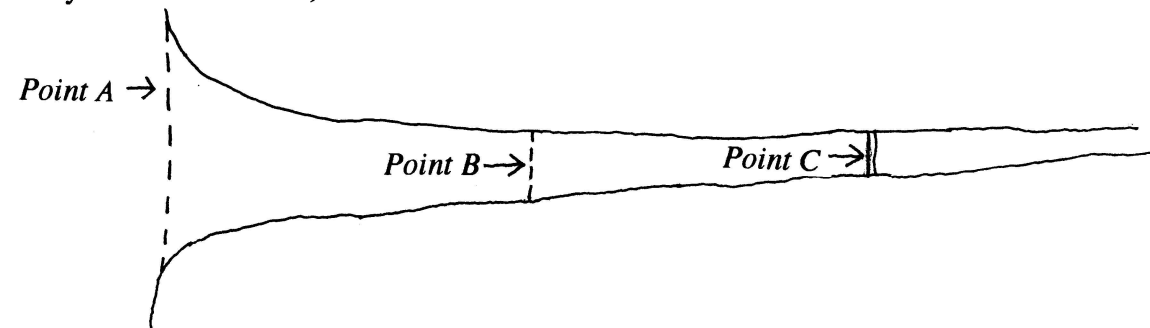
Point 'A', 'B' and 'C' seaward boundaries; or, mucking about with bottles in boats

Those who notice boundaries on Ordnance Survey maps will have observed that maps which include estuaries and inlets have, or had, various boundaries extending across the mouths of estuaries and, sometimes, creeks. There are three types of boundary, Point A, Point B, and Point C.

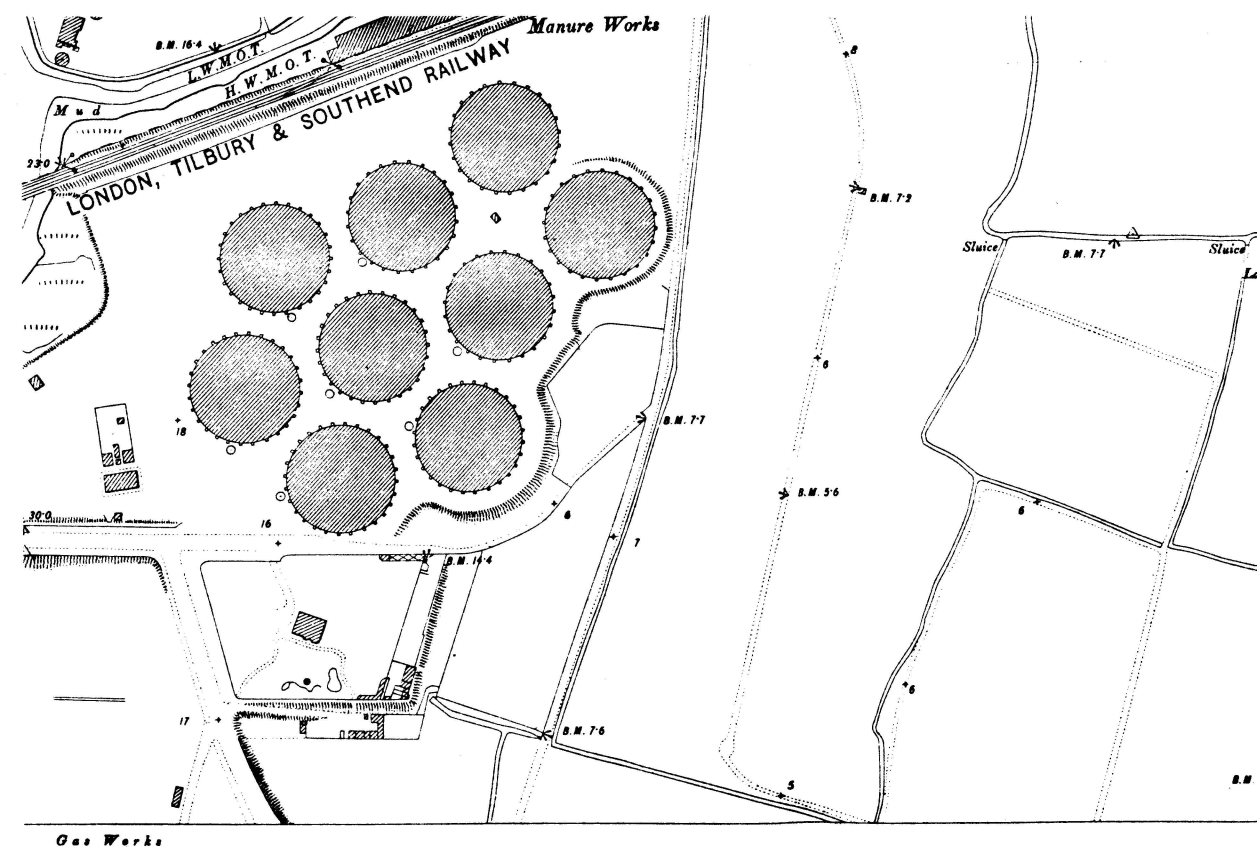
Point A boundaries are now obsolete; a point A boundary was the place where low water mark was assumed to be had there been no river.

Point B boundaries are the point at which the river is assumed to meet the sea. To define Point B it is necessary to establish, at the appropriate state of the tide, the meeting-place of the levels of the river and of the sea at low water, an operation performed with the assistance of a weighted bottle. 'The number of future cases is expected to be very small' observes the Ordnance Survey's boundary manual.⁷ The significance of point B and low water mark are that they are the limit of local government areas.

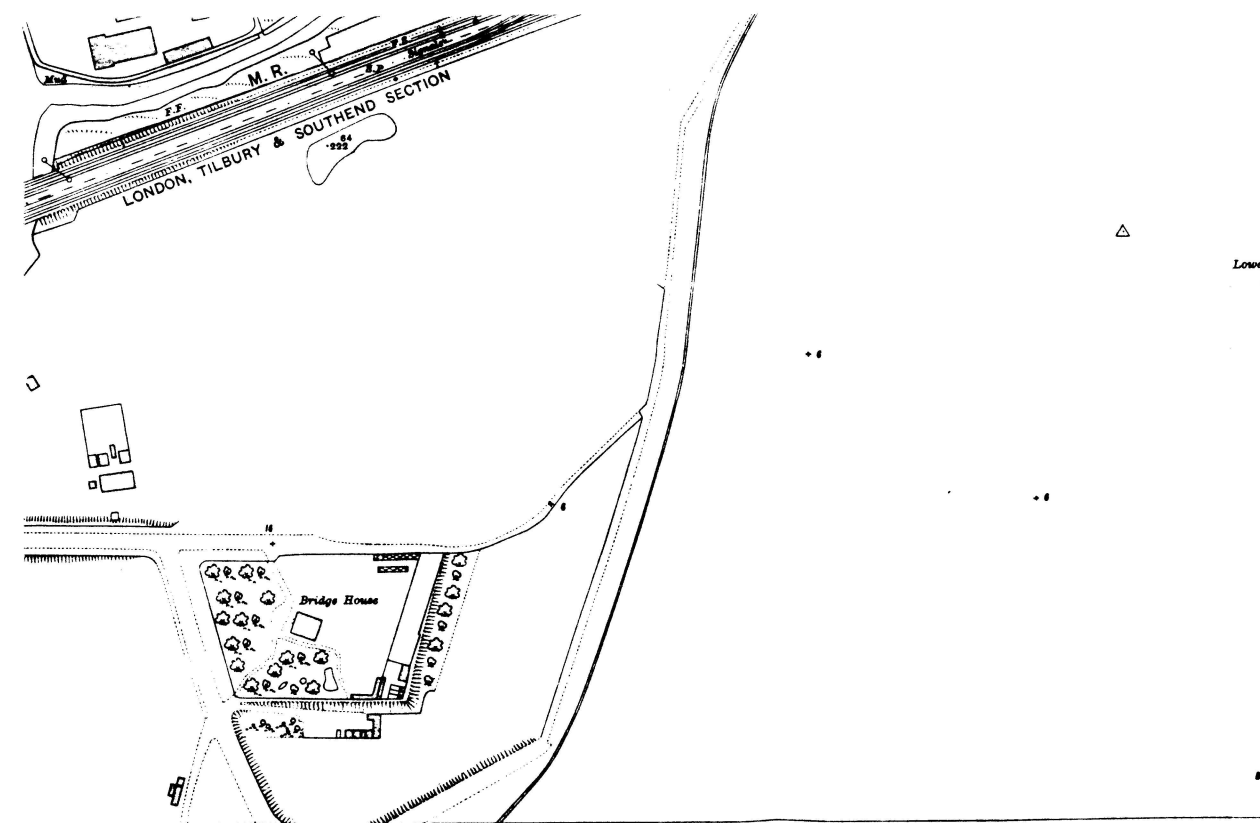
Point C is at the highest point of ordinary or medium tides in a river; it may sometimes be marked by a definite feature, such as a weir.



⁷ J.R.S. Booth, *Public boundaries and Ordnance Survey 1840 - 1980*, Southampton, Ordnance Survey, 1981, pp 227, 324.



First you see it, then you don't. The Bromley gas works of the Imperial Gas Company, (above) as shown on 1:2500 London sheet 53 (revised 1893, published 1897) and, below, as notshown on 1:2500 London sheet 6.5 (Essex sheet N.86.5), (revised 1914, published 1916). (The scale has been considerably reduced in these extracts.) Both maps have been published in the *Godfrey Edition*, as Bow, Bromley and West Ham 1893 and Bow, Bromley and West Ham 1914.



General Roy in French

Some time ago Ed Dahl, of the National Archives of Canada, came across *Description des moyens employés pour mesurer la base de Hounslow-Heath*. He supplied some photocopies to the late Brian Harley, who passed them on to the Editor of *Sheetlines*, who has been awoken to his duty. (See opposite.) The account appears to be a straight translation of that published in England in the *Philosophical Transactions*.

Hardynyms

'Hardynyms' has been coined by *The Countryman*⁸ for the pseudonyms devised by Thomas Hardy for the real places which appear in his novels. Though the word is new, its cartography is older, as about ten years ago a version of OS 1:50,000 Sheet 194 was issued, with the title *The Heart of Wessex*, overprinted in purple with 'Hardynyms', and with an accompanying gazetteer. It was compiled by Betty Drewitt, who before retiring was a Deputy Director of the Ordnance Survey, and published by Wessex Heritage Tours. The map is apparently now out of print; but your Editor is curious to see a copy.

Contours and the 1:2500 map

It is axiomatic that the Ordnance 1:2500 map 'has never been contoured', and so therefore Richard Dean was somewhat surprised recently to encounter Essex first edition sheets 77.3 and 77.11, both printed in 1868, with contours. Further investigation has shown that these are not isolated instances; from investigations in the British Library Map Library it appears that 1:2500 maps were furnished with contours for a considerable part of south Essex and north Kent, and for the environs of Weymouth. The reason for this is not far to seek. These were some of the areas surveyed at 1:2500 out-of-turn in the early 1860s as part of the preparatory work for an extensive fortification programme, ('Palmerston's follies'), and further contoured 1:2500 mapping was probably prepared around Plymouth, Milford Haven and Portsmouth, for the same reason. Some contoured sheets around Enfield in Middlesex have also been found. Most of the Kent and Essex maps were contoured at the standard vertical intervals used for the Six-inch, but some areas of particular importance were contoured at 25 ft VI, and the vicinity of forts, existing or proposed, at 10 ft or even 5 ft VI.

The known contoured 1:2500 sheets in Dorset, Essex, Kent and Middlesex are summarised below. (As usual, additions and corrections will be welcome.) From the late 1870s altitude information in the vicinity of fortifications was removed from maps for public consumption, and some of these sheets will almost certainly be encountered in both contoured and uncountoured form.

This is a summary only; most of the sheets listed below were in fact published by parishes, and thus in several parts. Sheets asterisked * have been noted with 10 ft or 5 ft contours, but it is possible that isolated areas of these will be found on other sheets.

Dorset: 52.8,12; 53.2,5-7,9,10,13-15; 58.2,7*,11*,12,15; 60.3,7.

Essex: 66.16; 67.9-16; 68.9,12,13,16; 69.9,13-16; 74.4,6,8,11,12,16; 75-77 *passim*; 83-4 *passim*.

Kent: 5.10*,11*,13-15; 9.2-13; 13.1*,10-12,14-16; 15.4,7,8,12; 16.1,2,5,9; 17.1-12,15; 18.1-12,14; 19 *passim*; 20.5-16; 21.9-13; 30.2,4; 31.1,3,4,8; 32.1; 33.1; 67.16; 68.3-5,7-14; 75.4; 76.1.

Middlesex: 1, 2, 7 *passim*.

Incidentally, further examples of close-interval contouring at very large scales are to be found on various 'official use only' plans of forts and barracks prepared in the 1860s by the OS for the War Office: there are numerous examples in the Public Record Office (class WO 78), and there is a convenient multi-volume collection in the British Library, Map Library, Maps 150.d.1-6.

Circular landscape features

Following the notes on the circular enclosure at Harlow Hill, Harrogate, (*Sheetlines* 31, p.46, and 32, p.4), Ian O'Brien writes to point out that an analogous feature is the Wells Estate on Epsom Common, Surrey. 'This is particularly clearly shown on Surrey Six-inch Sheet 18, first edition 1871, but is still preserved by the back garden fences of twentieth century housing development. It apparently owes its existence to the decision of a mid-seventeenth century Lord of the Manor to exclude from Epsom Common an area 40 rods in radius centred on the original Epsom Well, (NG ref TQ 192601).'

⁸ February/March 1992, pp.137-8.

DESCRIPTION DES MOYENS EMPLOYÉS POUR MESURER

LA BASE DE HOUNSLOW-HEATH

DANS LA PROVINCE DE MIDDLESEX,

Publiée dans le vol. LXXV des Transactions philosophiques

PAR LE MAJOR GÉNÉRAL WILLIAM ROY.

TRADUITE DE L'ANGLAIS

Par M. DE PRONY, Inspecteur des Ponts et Chaussées.

CONTENANT,

Indépendamment du journal historique des opérations, la description la plus détaillée de tous les instruments dont on s'est servi, la manière dont on les a construits et étalonnés, et celle de les employer aux usages ordinaires :

La description particulière d'un pyromètre microscopique, le plus parfait qu'on ait encore exécuté, et dont on s'est servi pour évaluer la dilatation dont les différents métaux sont susceptibles, à divers degrés de chaleur.

PREMIÈRE PARTIE

D'un discours préliminaire du traducteur, auquel il a joint trois tables, dont les deux premières sont destinées à rapporter au thermomètre de Réaumur et à la toise de l'Académie les opérations faites avec le thermomètre de Fahrenheit et le pied anglais, et la troisième, à présenter le résultat des expériences sur la dilatation des métaux, faites avec le pyromètre microscopique, et rapportées pareillement au thermomètre de Réaumur et à la toise de l'Académie.

SUITE

De deux tables, dont l'une contient le tableau général de la mesure de la base avec les corrections pour la réduction au niveau moyen de la mer, la température, etc.; et l'autre, le résultat général des expériences sur la dilatation des métaux, joint à une description détaillée de la forme, des dimensions et du poids des verges mises en expérience.

Le tout accompagné de planches gravées en taille-douce avec beaucoup de soin, où les plans, coupes et élévations des machines et de leurs détails, sont représentés sur de grandes échelles, et souvent de grandeur naturelle.



A PARIS,

DE L'IMPRIMERIE DE DIDOT L'AÎNÉ.

Chez DIDOT FILS AÎNÉ = JOMBERT JEUNE, rue Dauphine
N. DCC. LXXXVII.

32

MESURE DE LA BASE

table, ou table générale, jointe à ce mémoire, contiennent le détail de tout ce qui est relatif au nivellement de la base, celui de la troisième section ayant été nivelé le 22 juin. En examinant cette table, on verra que la différence de niveau de la première section, est de 10,555

celle de la seconde. 8,580

de la troisième. 12,130

TOTAL. 31,265

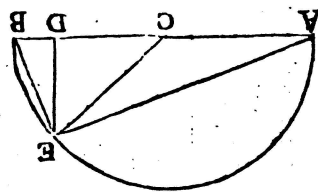
entre l'extrémité la plus basse à Hampton Poor-House, et l'extrémité la plus élevée près de King's-Abour.

Les nombres calculés dans la septième colonne sont les réductions dépendantes des hauteurs susdites, ou les différences entre les hypothèses de 600 pieds chacune, et les bases ⁽¹⁾.

Quant aux autres colonnes de la table qui sont à droite, on les expliquera ci-après, lorsqu'on fera entrer en considération la dilatation des métaux, déterminée très soigneusement par des expériences faites avec le pyromètre.

Jusqu'à ce moment on n'a voit encore fait aucun usage de l'instrument des passages; car, pour l'appliquer avec utilité, il étoit nécessaire de placer en terre la roue portant le tuyau central de l'extrémité la plus basse de la base, et d'y adapter le pa-

(1) J'ai calculé la septième colonne au moyen de la différence entre le quart donné de l'hypothèse, et celui de la hauteur trouvée par le nivellement. Le lieutenant-colonel Calderwood a fait le même calcul par une méthode plus courte. Dans la figure ci-à côté, CE étant l'hypothèse de 600 pieds, DE la hauteur verticale donnée par le niveau, DB la différence cherchée entre l'hypothèse et la vraie base; alors substituant la corde BE à la place de DE, on a la proportion suivante, AB : BE :: BE : DB = $\frac{BE^2}{AB}$, c'est-à-dire que le quart de la hauteur verticale, divisé par le double de l'hypothèse, ou par 1200 pieds, est, sans erreur sensible, égal à la réduction DB. En effet, si DE égale 4 pieds, qui est la plus grande hauteur verticale, il ne sera surpassé par la corde BE que de $\frac{1}{1000}$ de pouce. La différence entre les résultats des deux méthodes est si petite, qu'elle ne mérito pas qu'on y ait égard.



Revision, security deletions and the One-inch Seventh Series

The work of defining successive revision states of the One-inch *Old Series* by comparing various copies is well-known; it might be thought the use of edition-codes on more recent maps would do away with such interesting but time-consuming work. Such is not necessarily so. Christopher Moss has recently been investigating One-inch Seventh Series sheet 110, editions A/ and A//. Edition A// is something of a curiosity, as the only 'intentional' revision on it is the 'security treatment' of industrial premises,⁹ but Mr Moss has shown that the interest does not stop there, as there are a number of curious non-security alterations.

First, the 'security' alterations. In 1957 the Ordnance Survey adopted a new policy on security, which was both a liberalisation and a tightening-up. From the late 1950s onwards airfields were shown in much more detail than hitherto, including runways and buildings, but excluding arsenals;¹⁰ airfields used purely for this purpose were not mentioned at all.¹¹ On the other hand, industrial premises were in future to be described purely as 'Works' or 'Mine', whilst reservoirs were not to be named at all. Changes which Mr Moss has noted as effected on Sheet 110, edition A//, are summarised below.

Reservoir and water tower names removed, and not replaced: 23 instances, at SJ 622554; SJ 627715; SJ 794475; SJ 794482; SJ 798401; SJ 818553; SJ 840396; SJ 852359; SJ 885534; SJ 889629; SJ 892556; SJ 908361; SJ 914443; SJ 919701; SJ 922658; SJ 929730; SJ 945595; SJ 946716; SJ 963713; SJ 964542; SJ 989689; SJ 992593; SJ 996568.

Descriptions or proper names of works and factories replaced by 'Works': 16 instances, at SJ 653668; SJ 683742; SJ 694558; SJ 732662; SJ 805463; SJ 829461; SJ 853635; SJ 879391; SJ 893404; SJ 908347*; SJ 938541; SJ 941713; SJ 946719; SJ 962403; SJ 974572; SJ 978391*, (* = changed to 'Mill').

Names or descriptions of collieries changed to 'Mine': 9 instances, at SJ 683742; SJ 820494; SJ 880554; SJ 884533; SJ 885434; SJ 894460; SJ 915418; SJ 916451; SJ 993444.

Security changes not made: 2 instances, at SJ 822516, SJ 972526.

Second, Mr Moss has noted a number of non-security changes. Some of these restore to A// features deleted from A/, for example the reinstatement of two trig. points (at SJ 653694 and SJ 710586) and of 'Old' to 'hall' at SJ 772445; but a building at SJ 787653 which appears on editions A, A/ and B is omitted from A//. Some detail is repaired, such as a contour at SJ 861508, (omitted on A, sketched on A/) and 'Cross', dot and wood at SJ 952674.

A third category of difference noted by Mr Moss is that between different printings of edition A//. There were three printings of this, 4878 copies printed in March 1960, 3663 copies printed in March 1961, and 2706 copies printed in June 1961. All were in 10 colours; the March 1960 printing has printed price 3/6 in the bottom margin (coded 10F in the *Seventh Series Guide*),¹² and the other two 4/6. Mr Moss has one '4/6' state and Richard Oliver has the other, though it is at present unclear which is from which printing. Differences noted are: trig point at SJ 838701 (present on A, absent on A/ and B) is smeared on Oliver, absent on Moss; building at SJ 838702 is present on Oliver, deleted from Moss, but present (redrawn) on B; at SJ 841702 the 'n' in Siddington Heath is broken on A, A/ and Oliver, but repaired on Moss (and replaced on B); at SJ 881500 a trig point (present on A, absent on A/ and B) appears almost solid black on Oliver, but as a rough undotted triangle on Moss.

There are two morals to be drawn from this. The first is that the researcher should not take *everything* in official OS records on trust! The alterations to Sheet 110, edition A// embraced more than security changes. Second, the problem of states of the map identifiable *only* by detail changes on the map face (which, incidentally, may or may not have anything to do with actual

⁹ See the 'job file' for Seventh Series Sheet 110, held by the Charles Close Society.

¹⁰ 'Black Holt' wood at TF 241577 is in fact merely a screen of trees surrounding the bomb-dump for R.A.F. Coningsby; something to be learned by inspection of the ground rather than of the map, (it adjoins the B.1192). The bomb-dump for R.A.F. Waddington at SK 997654 (Seventh Series Sheet 113, 1:50,000 Sheet 121) does not appear at all, although, being as it is next to the A.15 with its watchtowers, fences and searchlights, it is highly conspicuous!

¹¹ A striking case is R.A.F. Faldingworth in Lincolnshire, TF 040855. This appears on edition A, but is omitted from editions A/, B and B/* of Seventh Series Sheet 104.

¹² Richard Oliver, *A Guide to the Ordnance Survey One-inch Seventh Series*, London, Charles Close Society, 1991. The printing statistics are from the 'job files'.

changes on the ground) is not one confined to nineteenth century engraved maps.

It would be interesting to hear from other readers of similar cases. The following will do as a start. On 1:50,000 Second Series Sheet 113, edition A/*/*/*/, there are some curious changes to 'Point B' boundaries in the three dated printings, 7/87, 1/89 and 5/91. The pair at TF 484928 and 486926 appear on all three printings, but those at TA 337159 and TA 347069 appear on the 7/87 printing, are omitted from the 1/89 printing, and reappear on the 5/91 printing. Explanation?!

Area numbers and acreages on large-scale OS plans

Sheetlines understands that it is the 'firm intention' of Ordnance Survey to discontinue the calculation and publication of parcel numbers and areas on large-scale plans. There have been some protests from farmers and valuers; it is suggested that those readers who feel strongly about this should write, stating reasons, to: Ordnance Survey, Romsey Road, Maybush, Southampton, SO9 4DH.

Tunnel cards

The editor's attention has recently been drawn to British Railways' 'Tunnel Emergency Information Cards'. There is one per tunnel, they are produced strictly for official use only, and their distribution is limited to five within British Railways and three emergency services. Apart from containing information about the tunnel itself, such as its length, lining and access, each is accompanied by an OS 1:25,000 or 1:50,000 map extract, complete with the grid references for each end of the tunnel. The specimen seen by the editor used a colour photocopy, and so these Tunnel Cards are illustrations of the use of maps, rather than yet another cartographic variation.

Ordnance Surveyors' Drawings and hill sketches in the British Library, Map Library

As confusion sometimes arises as to which is what, and the pressmarks were revised some little time ago, the following notes will be of use to interested parties:

Original drawings at 2-inch, 3-inch and 6-inch scale: these are the true 'Ordnance Surveyors' Drawings', and were described in Yolande Hodson, *The Ordnance Surveyors' Drawings 1789-c.1840* (1989). Pressmark: O.S.D., plus the number of the required drawing. (Readers are usually referred to microfiche or film versions in the first instance, for conservation reasons.)

Original drawings for 1-inch Old Series sheets 48-50, 66, 67, 71, 79-82, 87-90: These are regular rectangular 'section drawings', circa 1837-41, each full Old Series sheet being divided into 24 sections, A to F west-east, 1 to 4 north-south. Pressmark: Maps 176.n.

Hill sketches and revision sketches for the 1-inch Old Series. Pressmark: Maps 176.o, plus the sheet number of the drawing, (Old Series sheet number plus piece number).

Recent meetings

Only half-a-dozen members attended the study meeting in Stratford-on-Avon on 8 February on the 'Ten-mile' map family, led by Roger Hellyer; it is to be hoped that this was because of the short notice. Those who did were given a comprehensive account of everything from the earliest 'Ten-mile' map of circa 1817 through to the latest 'Routeplanner'; there was a useful exchange of questions and views, and *Sheetlines* looks forward to Roger's monograph on this map family, due to be published this autumn.

Even fewer, of those not habitually doing so, troubled on 27 February to hear Richard Oliver, 'Base and superstructure: the nineteenth century Ordnance Survey and the recording of the landscape', at the Warburg Institute, London. This was possibly because of the title, possibly because of the day and time, and possibly because they thought they had heard it before. In the event some slides were of districts remote from National Grid square TA, and the 'base and superstructure' probably owed as much to clothing and music as it did to anyone Gallic. That said, there was quite a good audience, mostly of those with non-OS interests, the speaker was more fluent than usual, and the slides were excellent.

R.R.O.

A thought until the next issue

'Some scholars are so insecure that they have to invent the world all by themselves.'

Brian Harley, 10 December 1991

Additions and corrections

To Richard Oliver's article, 'What's what with the New Series', Sheetlines no.5 (December 1982), pp.3-8.

p.3, section 'Old and New': although the renumbering of *Old Series* sheets 91-110 was devised no later than the turn of 1873-4, it is apparent from surviving copies, most notably the sets in British Library Map Library Maps 1175 (309) that the new sheet numbers were only added to the plates of the maps in the winter of 1881-2.

p.3, bottom: the reference to 'cadastral' survey should have been in quotation marks in the original; otherwise it is merely playing Sir Henry James' game of pretending that the map was need for cadastral purposes which, in 1863, were at best speculative.

p.5, NS-1-H: the Royal Geographical Society has, in its OS Specimen Drawer in the map room, a copy of NS-1-H:345, not later than June 1890, with hills double-printed in brown. This is the earliest *surviving* double-printed engraved sheet yet known.

p.5, section 'Advance mapping': (1) With reference to note 5, it can now be confirmed that NS-1-O:90 was at some time after 1890 completed with the Yorkshire portion. (2) Coverage in NS-1-AO style extended beyond the area covered by the 88 numbered sheets, as 1-inch indexes in this style to the 1:2500, by full sheets (i.e. covering 24 sq miles), were issued during the 1880s. Examples have been seen for Northamptonshire and Norfolk, but their full extent remains for investigation. A much cruder form of 1-inch advance mapping is represented by the index maps accompanying the 1:2500 Parish Area Books of the 1860s; their relationship to NS-1-O (perhaps as drafts?) has yet to be investigated.

p.5, NS-1-D: Most of the NS-1-D maps were printed direct from copper: see Tim Nicholson, 'The first Ordnance Survey District Maps of England, Wales and Scotland, 1857-1898', *Cartographic Journal*, 28 (1991), 176-80. The first NS-1-D seems to have been of the Isle of Wight, published in 1885, and was a straightforward joining by electrotype of sheets 330, 331, 344 and 345.

p.5, NS-2-H: from the mid-1890s onwards some hill-plates were engraved by outside firms, for example Malby, who engraved Admiralty charts. After 1902 the remaining hill-engravers at the OS were kept at work replacing the 'outside' plates, some 28 having been replaced by 1911-12. The only instance yet known where a plate was first engraved outside and then replaced is sheet NS-2-H:93, where the British Library set contains both the earlier and the later versions; the much greater refinement of the later, OS, engraving is most striking.

p.7, S-1, and issue of sheets in incomplete form: it is possible that more incomplete S-1-O sheets will come to light, since between *circa* 1859 and 1878 only S-1-H sheets were sent to the copyright libraries.

To 'Viator's' review of Ordnance Survey Touring Atlas of Great Britain, in Sheetlines 31, p.43: Ian O'Brien writes to point out that in fact the 1:50,000 mapping of the Channel Islands was mentioned, in Sheetlines 20, p.23. He remarks also that 'it is curious that Jersey appears as an inset on IGN (France) 1:100,000 Sheet 6 but not the other "Isles Anglo-Normandes", despite large sea areas which could have been used to display them'.

To Guy Messenger's lists of 'pre-war' Bender-fold sheets, in Sheetlines 32, p.57:

One-inch Popular of England and Wales: 25, 3500/40; 27, 2539; 46, 3040; 48, 2039; 54, 3038; 56, 1539; 63, 3038; 69, 2039; 72, 5038; 79, 2538; 83, 3036; 89, 2540; 92, 2539; 116, 1239; 134, 3038.

One-inch Popular of Scotland: 41, 539

Half-inch England and Wales: 4, 1.13 (hills); 6, 2038; 22, 2038; 28, 20/40; 32, 25/40.

One-inch Fifth Edition: 94, 6038+; 131, 5038 [sheet name in blue]; 141, 10038+; 145, 6038+; London, 10037+; St Albans, 60/38+.

(A 'Bender' front cover design was used on 5th Edition sheets mounted in sections which were issued after the adoption of the Bender-fold for ordinary paper-folded and mounted-and-folded sheets: sheets 113, 6039, 132, 6039 and 140, 80/37 have been reported in this style.)

Tourist and District sheets: Brighton and the South Downs, 6038; Dorking and Leith Hill, 8037; Forest of Bowland, 3036+; Ilkley, 4038; Liverpool, 4039; The Middle Thames, 4038 and 6039; Oban, 4036+; Peak District, 8038; Snowdon, 5038+.

+ Also known in conventional fold.

To the Additions and Corrections in Sheetlines 32, p.8, to Richard Oliver's Guide to the New

Popular Edition, etc: The information given for Scotland sheet 57 in fact applies to sheet 58.

To Richard Oliver's Guide to the One-inch New Popular Edition, etc:

Searching in the University of Exeter Department of Geography map collection has produced the following addition states of the New Popular Edition:

p.27, Sheet 85: edition C, MV 1952, National Grid C, publication note DC, price/colour 8D.

p.39, Sheet 186: edition B, MV 1953, National Grid C, publication note DC, price D, (outline edition).

The collection includes another copy of Sheet 126, edition 145/Ch.

To Richard Oliver's Guide to the One-inch Seventh Series:

p.46, Lake District Tourist Map, edition B///: there is also a 10tf printing.

p.46, Lorn and Lochaber Tourist Map: copies of edition A, price/colour 10tf, and edition A/, price/colour 10tg, are reported.

p.47, New Forest Tourist Map, edition A: there are two versions of this, one with the Forest boundary shown by green dashes, the other with the boundary shown by a continuous green line.

(Thanks are due to David Archer, Tim Bleasdale, Mike Cotterell, David Ellis, William Henwood, A.A.Lee, Guy Messenger and Tim Nicholson for drawing attention to these.)

New maps

Ordnance Survey

New publications between 1 December 1991 and 29 February 1992 included:

Conventional paper maps:

1:50,000 'Landranger', Second Series, revised sheets: 152, 154, 195, 196 (all edition B).

World Map Series: 1:63,360: *British Virgin Isles*. 1:50,000: *Dominica*; *St Vincent*.

England and Wales Project Maps, 1:50,000 scale: twelve of these, each covering an area 20 x 20 km, are announced in OS *Publication News* for February 1992.

Price rises: As usual, OS increased its prices on 1 November 1991: the 1:25,000 coloured sheets are now £3.45 each, and the 1:50,000 coloured sheets are now £3.95 each. It is perhaps a sign of the times that the price-list excludes any mention of the cost of the 1:10,000 and larger scale maps, etc: presumably this reflects in part the complexity arising from the various alternative formats resulting from the digitising programme.

Digital mapping:

'Superplan': at mid-March 1992 the area covered by the various blocks was as follows:

Full Superplan service: London to M25, 1600 sq km.

Limited Superplan service, ('at scale' plots only): Ashford, 450 sq km; Basildon, 200 sq km; Birmingham, 125 sq km, plus whole City of Birmingham; Bristol, 150 sq km plus 1:1250 coverage in another 25 sq km; Canterbury, 50 sq km; Cardiff, 150 sq km plus 1:1250 coverage in another 50 sq km; Chester, 275 sq km plus 1:1250 coverage in another 150 sq km; Coventry, 350 sq km; Crawley, 150 sq km; Dudley, 225 sq km; Dunstable, 125 sq km; Egham, 300 sq km; Glasgow, 175 sq km; Guildford, 125 sq km; Hamilton, 50 sq km; Harlow, 150 sq km; High Wycombe, 150 sq km; Hyde, 175 sq km; Maidstone, 125 sq km; Manchester, 300 sq km; Milton Keynes, 375 sq km; Northampton, 275 sq km; Plymouth, 100 sq km plus 1:1250 coverage in another 125 sq km; Rochdale, 225 sq km; Southampton (Hedge End) 75 sq km; Stockton, 200 sq km; Swansea, 75 sq km; Tunbridge Wells, 100 sq km; Wigan, 175 sq km.

The names of the towns are of the local OS offices responsible; the usual practice is to issue complete 5 x 5 km blocks.

The Godfrey Edition

Between 16 December 1991 and 17 March 1992 coverage was extended to the following: Annan; Appleby (Westmorland); Balfron & Killearn (Stirlingshire); Barnet Common (Middx); Beckenham; Bournemouth; Bromley; Castleford; Clevedon; Glastonbury; Newtown/Y Drenewydd (Montgomeryshire); Penge.

Warminster and Broughty Ferry are expected to appear shortly.

Cambridge was published some time ago, but overlooked by *Sheetlines*. The Hertfordshire series is now complete.

The price is now £1.75 per sheet.

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

**A preliminary list of states of the Popular Edition
One-inch map of England and Wales**

by Yolande Hodson

The purpose of reproducing this list in *Sheetlines* is to invite amendments and additions from members so that the final list can be made as comprehensive as possible. The list is very basic. It comprises the full listing of the imprint codes for nearly one thousand states of the Popular Edition, together with the outline version. However, it does not indicate where apparently identical imprints belong, in fact, to different states, and does not include revision dates, except where these form an integral part of the later imprint codes; nor is any codification for the complex variations in the form of publication data and other standard marginalia included. All this, together with the military versions, the outline variations, and the states of the Land Use Survey and London Passenger Transport maps, will be given full treatment in the forthcoming monograph on the Popular Edition.

Publication dates in published sources

The figures in round brackets following the earliest publication date refer to the first entry for that sheet in the *Supplement to the Catalogue of England and Wales*. The first figure within the brackets refers to the quarter of publication: 1= 1 Jan.-31 March; 2= 1 Apr.-30 Jun.; 3= 1 Jul.-30 Sept.; 4= 1 Oct.-31 Dec. The two digits following the slash refer to the year of publication. Before 1920, the Supplements were issued monthly; to avoid confusion, monthly issues are referred to by standard abbreviations: Feb, etc.

The figures in round brackets following subsequent reprints refer to the Annual Report in which a reprint for that sheet is mentioned. This practice only began for the Annual Report for 1936/7; before this, only general statements of revision were made for this series.

Inferred states

An inferred, but not seen, state is indicated where figures stand alone in square brackets. Figures within round brackets, and enclosed in square brackets, indicate that a different state has been inferred from either the Supplement, or from the Annual Report.

Outline states

The addition of the symbol '+O' indicates the existence of the Outline version. The inclusion of this symbol within the round brackets indicates a mention in the publications of the outline version as well as the standard coloured sheet. At least seven forms of the outline edition are known, but they are not differentiated in this listing. Where the state is known only in the outline edition, the entry is preceded by O=.

Abbreviations and punctuation

The letters 'ID' followed by two digits refer to an imprint date where this differs from a previous state. The states of each sheet are separated by a semi-colon. Where a succession of reprint codes is given for any one state, each is separated by a full stop. The full stop is also used at the end of a sheet record, and to separate the month from the year in the early reprints, thus: 6.21 signifies a reprint in June 1921. In order to avoid confusion, no attempt has been made to transcribe the commas and full stops of the reprint codes. These were, in any case, used inconsistently, and spaces have been used instead where these make it easier to read the figures.

- 1 1926(3/26+O); 15/37 M36 R32(36/7).
- 2 1925(1/26+O); 3000/32; 1537 M36 R29(37/8).
- 3 1926(1/26+O); 2150/34(ID25); 3038 M38 R37(ID25); [39/40+O]; O=1,000/8/42LR.
- 4 1925(4/25+O); 2500/34; M38 R37 2038(38/9); O=1000/11/41LR.
- 5 1925(3/25+O); 3000/32; O=1000/8/42LR.
- 6 1925(1/26+O); 3500/32; 2538 M37 R37(38/9); O=1000/11/41LR.
- 7 1925(1/26,+O 4/26); [500/29]; [1000/30]; 500/29.1000/30.3500/32; 2035; 3036 M36 R29 (36/7); 1000/11/41LR +O.
- 8 1925(1/26+O); 3000/32; O=1000/11/41LR.
- 9 1925(3/25+O); 1035; 1536 M36 R31(36/7); O=1000/1/42LR.
- 10 1925(1/26+O); 2200/34; 2038 M37 R36(38/9); O=1000/11/41LR.
- 11 1925(1/26+O); 3000/32; 2038 M37 R 37(37/8); [38/9]; O=1000/11/41LR.

- 12 1925(4/25+O); 2500/29; 2200/34; O=336;3036 M36 R31(36/7+O); M37 R37 3038 (38/9); O=1000/11/41LR.
- 13 1925(3/25+O); 3300/30; 1537 M35 R31(37/8,ID24); 2039 M38 R38(39/40).
- 14 1925(2/25+O); 3300/30; 1535; 2038 M38 R37(38/9).
- 15 1925(4/25,+O 1/26);[(O=4/30)]; 3750/31; 2538 M37 R36(38/9).
- 16 1925(3/25+O); 3000/29; 3000/29.3000/32; 3035; 3038 M37 R36(37/8); WO 8500/40; O=1000/11/41.
- 17 1921(1/21,+O 4/21); 6000/24; 6000/24.5000/27; 6000/24.5000/27.5500/31; 4000/34; 4038 M37;O=1000/11/41LR.
- 18 1925(4/25+O); 1035; [(37/8)]; 2039 M38 R37(39/40).
- 19 1925(4/25+O); 2500/28; 2250/34; 3036(36/7); O=1000/12/41LR.
- 20 1925(2/25+O); 4000/29; 3000/33; 1535; 1535.2536(36/7); 1535.2536.838(37/8); 2538 M38 R37(38/9).
- 21 1925(3/25+O); 3000/29; 1535; 25/36 M36 R33(36/7).
- 22 1924+O; 1925(2/25+O); 3800/30(ID24); 3000/34; 737 M37 R36(37/8); 3039 M39 R38(38/9); [39/40].
- 23 1925(1/25+O); 3000/32; 2035; 2035.3036 M36 R29(36/7).
- 24 1924(3/24+O); 3030/30(O=4/30); 1535; O=1000/8/42LR.
- 25 1924(3/24,+O 4/24); 3500/28; 3500/28.3500/32; 3500/34; 3037 M37 R36(37/8); 3040 M39 R38; 3500/40; 3040/3540.
- 26 1925(1/25+O); 3000/27(ID24, and for all subsequent states); [3000/29]; [500/30]; 3000/27.3000/29.500/30.4500/31; 2035; [3036 M36 R33]; 3036 M36 R36(36/7); 3039 M38 R38(38/9+O); [39/40]; 1000/1/42LR.
- 27 [1923];1924(3/24+O);3000/29;2035;2539 M37R37(38/9);[39/40].
- 28 1924(3/24+O);2500/30;2500/30.3000/31; 3039 M38 R37 (39/40).
- 29 1924(1/24,+O 2/24); 3500/28; 3500/28.2250/30(O=4/30); 638(38/9); 3039 M37 R37(39/40).
- 30 1924(4/24+O); 6000/29; 5000/33; 3038 M37 R37(38/9).
- 31 1925(1/25+O); 500/29.3000/29; 500/29.3000/29.250/30; 2035; 3036 M36 R33(36/7); O=538(37/8).
- 32 1924(3/24+O); 2000/34; [O=36/7]; 2038 M37 R37(38/9).
- 33 1924(3/24+O); 3000/31; [1933]; 1536(36/7).
- 34 1923; 1924(3/24,+O 4/24); [(O=4/30)]; 2039 M38 R37(39/40).
- 35 1923(4/23+O); 3500/27; 2537 M36 R34(37/8).
- 36 1924(2/24+O); 500/28; 500/28.2000/29; 500/28.2000/29.2500/31; 4037 M36 R34(37/8).
- 37 1924(2/24+O); 500/29; 500/29.4000/31; 2536 M36 R35(36/7); 3039.
- 38 1923(4/23+O); 3000/29; 2035; 539(38/9+O); 2040 M38 R37 2000/40.
- 39 1923(3/23,+O 4/23); 1535; 1537 M37 R36(37/8); [O=(39/40)]; O=1000/4/42LR.
- 40 1923(4/23+O); 1035; M37 R37 2038(38/9).
- 41 1922(1/23+O); 3500/27; 3500/27.3750/31; 3000/34; 3036.3000/34(36/7); 538(38/9); M37 R37 3039(39/40).
- 42 1922(4/22+O); 3500/28; [2500/30]; 2500/30.2300/31; 3000/33; 3036(36/7); [O=(37/8)]; 3538 M37 R37(38/9).
- 43 1924(1/24+O); [1926];6000/27;3200/34; 3036 M36 R32(36/7+O); [3039]; M38 R38 3039.3400/40.
- 44 1923(4/23,+O 2/24); 500/27; 3000/30; 3000/34; 3036(36/7); 3039 M38 R37(39/40+O).
- 45 1923(3/23+O); 1000/27; 3000/30; 3036(36/7); [(39/40+O)].
- 46 1923(3/23,+O 4/23);3000/30;[500/30];3000/30.500/30.4000.32; 3036 M36 R33(36/7); [(38/9+O)]; 3040 M39 R39(39/40).
- 47 1923(3/23,+O 4/23); 2250/30; 2500/34; 2538 M38 R37(37/8); O=1000/1/42LR.
- 48 1923(3/23,+O 4/23); 2200/34; 2039 M38 R37(39/40).
- 49 1922(1/23+O); 3000/27; 3000/27.3500/30; 3700/33; 3700/33.4000/36(36/7); 4038 M33 R37(38/9).
- 50 1921(1/22+O); 2700/34; 3037 M36 R34(36/7); 2500/40.
- 51 1921(4/21+O); 3000/32; 2035; 2037 M37 R29(37/8); 3039 M38 R37(39/40).
- 52 1921(3/21,+O 4/21); 3200/33; 3039 M38 R37(39/40).
- 53 1921(3/21+O); 3500/32; 2200/34; 2535; [(O=36/7)] 3038; 638; 3039 M38 R37(38/9).
- 54 1921(4/21+O);3000/31; 3000/33; 3036(36/7); 3038 M38 R37(38/9).
- 55 1922(3/22+O); 3800/30; [(O=36/7)]; 2038 M38 R38(38/9).
- 56 1922(3/22,+O 4/22); 2200/34; 1539 M38 R38(39/40).
- 57 1921(4/21,+O 3/22); 1535; 2038 M37 R36(38/9).
- 58 1922(?);3500/29;1536(36/7);M37 R37 2038(37/8);O=1000/4/42LR
- 59 1921(4/21+O); 2036 M36 R29(36/7); 2040 M38 R38.
- 60 1921(3/21+O);1535;2036 M36 R29(36/7);2039 M38 R38(39/40+O).
- 61 1921(3/21,+O 4/21); 2700/33; 2036(36/7); 538(38/9); 2539 M38 R37(39/40+O).
- 62 1921(3/21,+O 1/22); 2700/33; 2036(36/7); [(O=37/8)]; 2539 M38 R37(39/40).
- 63 1921(3/21,+O 4/21);3000/30;2500/33;3036;3038 M38 R37(38/9); O=1000/12/42LR.

- 64 1922(+O(1/22, O?); 2500/30; 1035; 2037 M36 R34(36/7); [(O=37/8)]; 2040 M38 R37(39/40); O=1000/11/41LR.
- 65 1922(+O(3/22,O?); 3500/32; O=1000/11/41LR.
- 66 1921(1/22+O); O=1000/3/42LR.
- 67 1921(1/22+O); 1000/24; [500/29]; 1000/24-5.500/29.3750/31; 2535; 2539 M37 R37 (39/40); O=1000/8/42LR.
- 68 1922(4/22,+O 1/23);3000/29.3000/32;2035;4036 M36 R29(36/7); 4039 M39 R39 (39/40); O=1000/11/41LR.
- 69 1922(4/22+O); 2700/34; 2039 M38 R37(39/40); O=1000/6/42LR.
- 70 1920(3/20); O=1924(3/24); 3000/32 (ID20, and in all subsequent states); 2000/35; 538(37/8); 2538 M38 R37(38/9); O=600/7/43.
- 71 1921(2/21+O);3000/29;3200/34;3036(36/7);2539 M37 R37(38/9); [(39/40+O)].
- 72 1921(2/21+O); 3500/27; O=500/28; 3500/31; 4500/34; 4036 M36 R31(36/7); 5038 M36 R37(38/9); O=1000/11/41LR.
- 73 1920(3/20); O=1924(3/24); 3300/31.800/31; 2036; 2039 M38 R37(39/40); O=1000/2/43LR.
- 74 1920(4/20);O=1923(2/23); 2500/30; 2036; 2038 M38 R37(38/9); O=1000/10/41LR.
- 75 1920(3/20); O=1923(2/23); 1537 M36 R34(36/7); 2039 M38 R37(38/9); O=1000/10/41LR.
- 76 1920(4/20,+O 3/21); 1537 M36 R34(36/7); 2040 M38 R37.
- 77 1921(1/22,+O 4/21); 2500/33; 2037 M36 R34(36/7); 1537 M36 R36(37/8+O); 2538 M38 R37(38/9); O=1000/11/41LR.
- 78 1923(3/23,+O 4/23);1535; 2038 M37 R37(38/9); O=1000/3/42LR.
- 79 1923(3/23,+O 4/23);2500/33; [(O=37/8)]; M37 R37 2538(38/9); O=1000/11/41LR.
- 80 1920(3/20); O=1924(2/24); 3000/32 (ID24 and for all subs. states); 20/38 M37 R37(38/9); O=1000/11/41LR.
- 81 1920(4/20);O=1924(4/24); 5000/28; 3036; 3038 M38 R37(38/9).
- 82 1919(Oct/19); 1000/23+O(O=1/25); 3500/30; 3000/33; 2635; 4037 M36 R33(37/8); 4040 M39 R39(39/40+O); O=1000/11/41LR.
- 83 1919(Dec/19);O=1924(1/25);500/25; 3000/30;O=3000/30.500/31; 1535; 1535.435; 3036 M36 R33(36/7); O=1000/10/41LR.
- 84 1919(Oct/19); O=1923(2/23); [750/24]; 750/24.2500/30; [1535]; 1535.2036(36/7+O); 2038 M38 R37(38/9); O=1000/10/41LR.
- 85 1920(Feb/20); O=1923(2/23); 3000/29; 3500/32; 3036; 3039 M38 R37(39/40).
- 86 1921(2/21,+O 3/21);2735;2538 M38 R37(38/9); O=1000/10/41LR.
- 87 1921(2/21,+O 3/21); 2700/33; 25/37 M37 R36(36/7); [(37/8)].
- 88 1923(2/23,+O 4/24); 1535; 2037 M36 R31(37/8); 3039 M39 R38(39/40); O=1000/11/41LR.
- 89 1923(2/23,+O 1/23); 2036(36/7); O=1000/11/41LR.
- 90 1923(3/23,+O 4/23); 3500/31; 2038 M37 R37(37/8); 2040 M39 R39(39/40); O=1000/11/41LR.
- 91 1919(Jun/19); 7-21; 1000/24(+O 2/25); 2000/34; 2537 M37 R32(36/37).
- 92 1919(Jun/19); 6.21; 3500/28; 3000/33; 3036; O=538(37/8); 1000/11/41LR.
- 93 1919(Oct/19); 9.21; [O=(2/25)]; 3000/30; 3000/30.3000/32; [1535];1535.3036(36/7); 4038 M36 R36(37/8); 1000/11/41LR+O.
- 94 1919(Oct/19); 10.21; [O=(2/25)]; 500/28; 500/28.2500/30; 500/28.2500/30.3500/32; [O=(36/7)]; 2038 M37 R37(37/8); [(38/9)]; 1000/10/41LR +O.
- 95 No date [1919](Jan20); 10.21; [O=(3/23)]; 500/26; 500/26.3000/29; 250/31; 500/26.3000/29.4500/32; [1035]; 1035.3535; [O=(36/7)]; 1000/6/42 +O.
- 96 1919(Jan20); 6.21; 1923(+O 2/23); 2000/23.3000/30; 3500/33; 3036+O(36/7); [O=(37/8)].
- 97 1921(2/21,+O 3/21); 3500/32; 2536; O=436(36/7); 2538 M38 R37(38/9).
- 98 1921(2/21,+O 3/21); 3000/29; 3000/29.3000/32 +O; O=3000/34; 3036; [(39/40 +O)]; O=1000/10/41LR.
- 99 1922(1/23); O=1923; 2750/30; 3000/34; 3037 M36 R31(37/8); 4038 M38 R37(38/9).
- 100 1923(3/23,+O 4/23); 3500/32; O=537.3500/32(37/8); 3038 M37 R37(37/8); O=1000/12/41LR.
- 101 1923(2/23,+O 1/23); [500/27]; [500/30]; 500/37.500/30.3250/31;2035; [(O=36/7)]; 2538 M38 R37(38/9).
- 102 1919(Jun/19); 1000/24 (+O 12/24); 1000/24.3000/31; 3000/34; 2035; M36 R32 537(37/8 +O); 3038 M37 R36; [(+O 38/9)].
- 103 1919(Jun/19); 6.21; [(O=2/25)]; 500/28; 500/28.3000/29; [500/30]; 500/28.3000/29.500/30.200/32; 3000/33; [135]; 135.1036; 2536(36/70); 3038 M37 R37(38/9).
- 104 1919(Jun/19)+O; 8.21; [(O=4/24)]; 3000/29; 3000/33; 3036(36/7); 1000/11/41LR +O.
- 105 1919(Sep/19); 7.21; [500/25,+O(1/25)]; 500/25.2500/26; 500/25.2500/26.3500/28; 500/25.2500/26.3500/28.4500/31; 3500/34; 3036 M36 R31(36/7); O=437(37/8).

- 106 1920(Jun20); 7.21(+O 3/21); 5500/24; 5500/24.3000/27; 5500/24.3000/27.5000/28; 5500/24.3000/27.5000/28.8500/30; 5500/24.3000/27.5000/28.8500/30.8000/32; 1000/34; 1000/35.2000/36; [(O=36/7)].
- 107 1920(Jun20); 7.21(+O 3/21); 11.21; [500/25]; 500/25.5000/26; 500/20.2400/21.3500/27; [5000/29]; 500/25.5000/26.5000/29.500/29; [500/30]; 6000/21.6000/21.500/25.5000/26.5000/29.500/30.4500/31; 6000/21.6000/21.500/25.5000/26.5000/29.500/30.4500/31.8000/32; 8000/34; [2035]; 2035. 3036 M36 R32; [(O=37/8)].
- 108 1921(1/21,+O 3/21); 3500/26; 3500/30; [200/30]; [500/30]; 3500/30.200/30.500/30.4500/32.
- 109 1922(3/22+O); [500/27]; 500/27.3500/31; 3500/33; 937(37/8); M36 R31 3038(38/9); 3040 M39 R39.
- 110 1919(Jun/19); 1000/24(+O 3/24); 1000/24.2000/32; 2036(36/7).
- 111 1919(Jun/19); [500/20]; 7.21; 11.21; 500/25(+O 1/25); 500/20.2400/21.3500/27; 500/20.2400/21.3500/27.3500/29; 500/20.2400/21.3500/27.3500/29.3500/32; 2035; 2035.3036 M36 R32(36/7).
- 112 1919(Jun/19);5.21;[(O=1/25)];[500/27];2000/21.500/27.4500/29; 2000/21.500/27.4500/29.4000/32; 3035; [(O=37/8)].
- 113 1919(Oct/19); 5.21; [(O=1/25)]; 3000/26; 1000/21.3000/27; 1000/21.3000/27.4000/29; 1000/21.3000/27.4000/29.1500/33; 3200/34; [(O=36/7)].
- 114 1920(Jun20); 7.21(+O 3/21); 5000/23; 5000/27; [6000/29]; 5000/27.6000/29.500/29; [6500/31]; 5000/27.6000/29.500/29.6500/31.2500/31; 5000/27.6000/29.500/29.6500/31.6500/32; 10000/33; [(O=36/7)].
- 115 1920(Jun20); 1.21; 9.21(+O 3/21); 5000/24; 5000/24.5000/26; 5000/24.5000/26.5000/28; [5000/29]; 5000/24.5000/26.5000/28.5000/29.5000/30; 5000/24.5000/26.5000/28.5000/29.5000/30.8500/31; 5000/24.5000/26.5000/28.5000/29.5000/30.8500/31.10000/33; 10000/33; 8000/34; [(O=36/7)].
- 116 1921(1/21,+O 3/21); 5000/25; [2000/25]; 2000/25.5000/29; 2000/25.5000/29.6500/32; 2035; 2035.3036 M36 R31(36/7); 3038; 3038 M37 R31(38/9); 1239 M37 R31(39/40+O).
- 117 1920(4/20,+O 3/21); 3000/23; 3500/26; 5500/28; 5500/29; 5500/29.6300/31; [2500/33]; 2035; 4036; 4038 M37 R31(37/8); 1239 M37 R31(39/40).
- 118 1919(Jun/19); 2500/23(+O 2/23,ID 1918 and for all subsequent states); 2500/23.3500/27; 2500/23.3500/27.4000/29; 2500/23.3500/27.4000/29.4500/32; 2500/23.3500/27.4000/29.4500/32.3500/34.
- 119 1918(Jun/19); [1500/22]; 1500/23; [(O+4/24)]; 3500/25; 3500/25.3500/28; 1500/22.3500/25.3500/28.6500/31; [600/36]; 1500/22.3500/25/3500/28.6500/31.600/36.500/36(36/7).
- 120 1918(Jun/19); O=1924(4/24); 2500/26;3000/29;3000/29.4500/31; 2535; 2535.2036 M36 R32(36/7).
- 121 1919(Jun/19); 5.21; 7.21; O=1924(4/24); [500/28]; 000/21.2500/21.500/28.2800/31; 2000/34; 2037 M36 R32(37/8).
- 122 1919(Jun/19); 6.21; O=1924(1/25); 3500/27; 3500/27.3500/31; 2035; 2037 M37 R31(37/8).
- 123 1919(Jun/19); [1921]; 12.21; 2000/23(+O 1/23); 1000/21.1600/21.2000/23.3500/29; 1000/21.1600/21.2000/23.3500/29.3500/32; 1000/21.1600/21.2000/23.3500/29.3500/32.800/36(36/7+O); 1000/21.1600/21.2000/23.3500/29.3500/32.500/38(38/9).
- 124 1920(3/20); 5000/23; [(O=4/24)]; 3000/26; [1000/26]; 5000/23.3000/27; 5000/23.1000/26.3000/28; 5000/23.1000/26.3000/27.6000/29; 5000/23.1000/26.3000/27.6000/29.6500/31; 5000/23.1000/26.3000/27.6000/29.6500/31.8000/32; 5000/23.1000/26.3000/27.6000/29.6500/31.8000/32.1000/35;[(37/8+O)].
- 125 1920(4/20,+O 3/21); 3500/24; 5000/27; 5000/27.2000/29; 5000/27.2000/29.4000/30; 5000/27.2000/29.4000/32; 3400/34; 3400/34.1500/35; 3400/34.1500/35.300/35.2000/36(36/7); 2038 M38 R37(38/9).
- 126 1921(1/21,+O 3/21); 3500/27; 3500/27.4500/31; 2535; 3037 M36 R31(36/7); 3038 M37 R31(37/8+O); [(38/9)]; O=1000/10/41LR.
- 127 1919(Jun/19); 5000/23; [(O=3/25)]; 1000/27; 2500/28; 2500/27.500/30.2500/31; 2500/34.
- 128 1918(Jun/19); 19[2]0; [(O=2/25)]; 835.
- 129 1919(Jun/19); 1-21; [(O=3/25)]; [500/28]; 500/28.2300/31; [835]; [436]; 835.436.1037 M36 R32(36/7).
- 130 1919(Jun/19); 9.21; [(O=3/25)]; 500/28; 500/28.2800/31; 1535; 1535.2535.
- 131 1919(Jun/19); 10.21; [(O=2/25)]; [500/28]; [2000/29];500/28. 2000/29.6500/32; 637(37/8+O).
- 132 1919(Jun/19); 7.21; 4000/23(+O 4/23); 2000/25; 2000/25.3000/28; 2000/25.3000/28.5000/29; 2000/25.3000/28.5000/29.5000/32; 4035+O; 2538 M37 R32(+O37/8); [(38/9)].
- 133 1920(3/20); 2500/23(+O 1/23); 2500/33.3000/24; 2500/23.3000/24.3500/26; 2500/23.3000/24.3500/26.3500/28; 2500/23.3000/24.3500/26.3500/28.6000/29; [500/30]; 2500/23.3000/24.3500/26.3500/28.6000/29.500/30.4500/31; 5000/33; 5000/33.3000/35; 5000/33.5000/36; 1037; 4038 M37 R33(37/8).

- 134 1920(4/20,+O 3/21); 4000/23; 4000/23.3500/27; [500/28]; 4000/23.3500/27.500/28.5000/28; 4000/23.3500/27.500/28. 5000/28.5500/30; [5000/30]; 5500/33; 5500/33.2000/36; 5500/33.2000/36.4/36; 3036 M36 R33(36/7+O); 3038 M38 R33(38/9); 1239(39/40); O=1000/10/41LR.
- 135 1921(1/21,+O 3/21); 3500/26; 3500/26.5000/28; 3500/33; 3035; 3037 M36 R31(36/7); M39 R38 3041LR.
- 136 1919(Jun19); 9.21; [(O=3/25)]; 3000/28; 3000/28.3800/31; 3500/34.
- 137 1919(Jun19); 1.21; [(O=3/25)]; 3500/28; 3500/28.1200/32; 3500/28.1200/32.3000/33.
- 138 1919(Jun19); 3000/25(+O 1/25); 5000/27; 5000/27.3300/31; 5000/27.3300/31.1000/32; 2500/33; 2500/33.1000/36.
- 139 1919(Jun19); 6.22; 1923; 2000/24(+O 1/25); 2000/24.3500/28; 2000/24.3500/28.4000/32; 5000/33; R31 M36 2537(36/7).
- 140 1919(Jun19); 11.22; [1000/24(+O 4/24)]; 1000/24.3000/30; 2000/33; 2034; 2036(36/7).
- 141 1919(Jun19); 4000/23; O=1924(4/24); 4000/23.3500/26; 4000/23.3500/26.5000/28; 4000/23.3500/26.5000/28.5500/31; 5000/33; 2535+O; 2535.3036(36/7); 3037 M37 R32(37/8).
- 142 1919(Jun19); 12.20; 4000/23(+O 4/23); 4000/26; 3000/26.4500/28; 3000/26.4500/28.6500/30; 3000/26.4500/28.6500/30.6000/32; 3035.
- 143 1918(Jun19); 11.19; [1000/24]; O=1924(4/24); 1000/25; 3500/19.1000/24.3500/27; [4000/29]; 3500/19.1000/24.3500/27.4000/30; 3500/19.1000/24.3500/27.4000/29.5500/31.
- 144 1919(Jun19); 6.22; [(O=3/25)]; 5000/27; 3500/27; 5000/27.2000/31; 3500/33.
- 145 1919(Jun19); 10.21; 2000/25(+O 2/25); 2000/25.4000/26; 2000/25.4000/26.4000/29; 2000/25.4000/26.4000/29.5000/31; 2000/25.4000/26.4000/29.5000/31.3500/34.
- 146 1919(Jun19); 1921; 2000/25(+O 2/25); 2000/25.3000/26; [5000/26]; 2000/25.3000/26.5000/28; 2000/25.3000/26.5000/28.5500/31; 3000/33

Please send any amendments and additions to: Mrs Y. Hodson, 16 Hertford Road, Tewin, Herts, AL6 0JY.

Two inter-war oddities

Tim Nicholson has recently come across two curious maps, and he (and your Editor) would be grateful if anyone can help.

The first is a version of the One-inch Popular-based *North Staffordshire* District Map of 1930 in the standard 'Outline Popular' style, i.e. black outline, blue water, and orange-red contours. It has the same '5500/30' print code as the coloured version. There is a copy in the Bodleian Library, (pressmark C17.55 (20)). Questions: (1) were any other Popular-based District or Tourist sheets printed in this style, and (2) if not, why was *North Staffordshire* published in this style?

The second is a One-inch Third Edition *War Department Land on Salisbury Plain* map, with 1926 WD revisions, in a reprint of 2150 copies dated 1927. The latest reprint he had previously seen was dated 1914. Comparison with the 1914 edition shows there to have been not only revision to the red plate (which shows the boundaries, etc, of artillery ranges) but also to some of the other plates: new 'orange' roads have been added in training areas, sometimes without casing, (squares 10F-11F, 11J, 12H); airfields have been revised (10C, 10D-10E); new military railways have been added (11H, 12E); camps have been revised (9F, 12H, 13D-13E); and, most surprisingly, 'Golf Links' have been added (11F-12F, 12E). There is no grid or squaring on the map face. The prices printed on the map below the scale are 1/6, 2/-, 2/6, the last of which had been obsolete since 1915! The map itself is headed 'For Official use only', but it is sectioned and given a H.7.2b cover, with price four shillings. Can anyone suggest why this out-of-date map should have been revised and reprinted when a Popular-based map to military requirements had been available since 1925? (See table in article, p.33 above.) Did someone want a map with hills? And if the map was 'For official use only', why was it put into a cover with a price?

(Continued from inside front cover)

HELP!

Dictionary of Land Surveyors and Local Cartographers of Great Britain and Ireland c.1540-1850, by Peter Eden. This was published in 1979, and Dr Sarah Bendall is now preparing a second edition, which will increase the number of entries from 9075 to over 12,000. She will be glad to hear from anyone who has any information correcting or supplementing that in the first edition. Address: Department of Geography, University of Cambridge, Downing Place, Cambridge, CB2 3EN

Early OS/WO 1:25,344, 1:25,000 and 1:20,000 maps: Richard Oliver is preparing an article on the development of the OS 1:25,000 map for *Sheetlines* 34, and would be glad to hear from anyone who owns copies of sheets of GSGS 2743, 3036 and 3906 dated 1914-39. (Post 1939 GSGS 3906 are usually not dated!) Could anyone willing to help please write in the first instance with details of: GSGS number; sheet number; any dates on the map. Richard will then write back asking for further details. (Address as for Editor of *Sheetlines*.)