Please note that the date of the Annual General Meeting has had to be changed to Saturday 7 May. I appreciate that this is extremely short notice to inform you, but this has been due to circumstances entirely beyond my control. However, I trust that this will not prevent at least as good an attendance as we enjoyed last year. The principal speaker will be Dr. A.M. Harley, whose name will be a household word to all of you, and his theme will be the nineteenth-century town plan. More details of the AGM are given on the last page of this issue and in the enclosed leaflet.

There have been only two nominations for the Society's election committee members, and the positions of Chairman, Secretary and Treasurer remain unoccupied. Nominations with proposers and seconders will be accepted by the Secretary up to 5 May. For the sake of speed, they should be sent to her home address, Cowper Cottage, Lower Green, Twamley, AL5 4QY. The growth of the Society has meant that its administration requires more specific rules than were formerly possible. Accordingly, a revised draft of the Annual General Meeting for the Society's approval, and a copy will be sent to members with the next issue of the Newsletter. If you have any suggestions for changes in the way the Society is run, please inform the Secretary, or come prepared to speak at the AGM.

The report of the Society's visit to the British Library is included in this issue, and those of you who were not able to get to Birmingham for the February meeting missed a most stimulating talk by Richard Pearson on the observations he has made with regard to the 5th edition one-inch map. This was illustrated by numerous examples which he had brought and was followed by a lively discussion which served to emphasise the need for even further work. We were given a most friendly welcome by the Library staff who had set out a varied selection of local materials, and we were shown the Ordnance Survey maps from the now famous collection of George Street (who had died only two weeks previously). In pristine condition, these items revealed the diversity of 'packaging' of OS maps, particularly for the nineteenth century. The Birmingham Central Library is well worth a visit for any member of the Society.

This issue's piece of ephemera is a sheet of conventional signs for the 1:50,000 First and Second Series showing the pre-joint OS/US2 specification symbolisation. Dated 1975, it is shortly to be replaced by a revised version.
THE ORDNANCE SURVEY'S OTHER ARTISTS

By

John Paddy Browne *

When the Ordnance Survey produced the third edition of its handsome Roman Britain map in 1956, the cover design they used was ostensibly the same as that which was specially designed for the first edition, back in 1926. I say ostensibly, for, apart from the use of colour overprinting on the original monochrome drawing, the most significant difference was the absence of the artist's initials. They had been removed, and the space filled with a tiny network of lines representing a Roman tiled floor.

It was part of the de-personalising process which started when OS abandoned the publication of the engravers' names, the overseer's name, and the director general's name in favour of the term 'printed and published by the Director General of the Ordnance Survey'. In the past year, even that credit has been abandoned, and now all maps are 'made and published by the Ordnance Survey', evoking in some map collectors' minds the image of a huge depopulated machine turning out its product by remote control.

What such a process has done for some aspects of cartography has, in fact, very little to do with map-making. All over the country, and all over the world, groups of enthusiasts are collecting maps which have been engraved or 'heliozincographed' by certain artists, or produced between certain years, or, in a rising cult - bound between the covers of certain artists' work. The spectre of collectors steaming of the covers of distinguished sets of celebrated Ordnance Survey maps must be a sobering image for those whose main concern is the actual maps themselves.

But such is likely to be the case when several art forms are combined in one product.

There have been a number of artists engaged by the Ordnance Survey over the years, but only two appear to have been full-time designers, and a few others seem to have been 'staffers' who contributed occasional cover drawings and paintings. J.C.T. Willis, later a general in the Royal Engineers, and Director General of OS between 1953 and 1957, produced a striking set of watercolours which decorated a series of tourist maps in 1934 and 1935, including the two-inch map of Jersey and the three-inch map of Guernsey.

In purely technical terms, Willis was the most artistically conventional of all the cover designers. His paintings were bold and free; they were bright and dramatic, and would have looked equally at home on a box of Cadbury's Roses. They conveyed nothing in the sense of period atmosphere, and for that reason possessed a certain timelessness. Not all his non-OS work was so confident, but the best of it would still be welcome in many a modern art exhibition.

Arthur Palmer lacked the flair of Willis's sweeping hand. He was a fussier artist who came near to spoiling his pictures by too much playing with the paint. His strength lay

* A version of this article, with different illustrations, was originally published in *Hampshire*, Vol.23, no.1, November 1982, pp.52-55. J.P. Browne is in charge of the Cartographic Library at Ordnance Survey.
in the sombre richness which he infused into his best work: the gloomy Scottish and Exmoor landscapes, and the stiff, formal figures of starch-collared men studying maps through pince-nez. Even his lighter works, such as the one-inch Isle of Wight cover of 1924, show holiday-makers spruced up to the nines and looking as though they had just left a very formal wedding.

The limpid, melting style of Palmer's calligraphy lends great charm to the cover designs, and the aftermath of the art nouveau movement is everywhere present in his work, giving it that definite pre-1920s 'fashionable' air of sophistication. Unlike Willis, who sent in occasional cover drawings for consideration, Palmer was a full-time illustrator, but unfortunately, little is known about him: his personal records were destroyed in the blitz and were never fully reassembled. We do know that he was born on 10 April 1875, and joined the Ordnance Survey at the age of 16 as a photo-draughtsman.

This branch of cartography is one involving considerable skills in lettering. Working almost entirely on large glass photographic negatives in the old days, photo-draughtsmen were required to be able to hand-print a wide variety of type styles in reverse, upside down and forward-reading formation. It lent itself to some wry humour, and we have one story of a photo-draughtsman demonstrating his skill to a visitor by printing the word 'OXO' and declaring seriously that he had just written it upside-down and back to front to show how difficult it could be! By the time Palmer retired at 60, a week after Christmas, 1935, his work as an illustrator had graced many of the Ordnance Survey's tourist map covers and catalogues, few of them as evocative as the magenta-filled watercolour he produced for the 1924 one-inch map of the New Forest.

But far and away the most prolific and, for many, the best of the Ordnance Survey artists was a man called Ellis Martin. Born in Plymouth on 12 November 1881, he came to the Survey almost by chance, and certainly very late in life. He was educated at King's College, Wimbledon, and later studied with Augustus John at the Slade. He worked as a freelance artist for many years, producing a series of elegant advertisements for Selfridges, in London, some of which show a style strongly influenced by the 'Arthurian'

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Detail from the OS Christmas Card for 1932. This example is in the possession of OS. Size of original: 93x235mm.

mode of engraved plate illustration. His pictures were crammed with detail and stand today as vivid impressions of a life-style long past.

During the First World War he joined the Royal Engineers and soon found himself in the map-making unit. All that we know about this period of his artistic life is that he spent the last years of the war producing illustrated maps for the Tank Corps, pointing out routes which would keep their AFVs hidden from the enemy while avoiding soft, marshy ground. Evidently impressed by his abilities, Martin's commanding officer suggested that, after the war, Martin should consider joining the Ordnance Survey.
MAP OF THE TRENT BASIN
SHOWING THE DISTRIBUTION OF LONG BARROWS - MEGALITHS HABITATION SITES

SCALE: FOUR MILES TO ONE INCH.
PUBLISHED BY THE ORDNANCE SURVEY SOUTHAMPTON

Ellis Martin's design for the cover of the Trent Basin map. Copy of the MS in the possession of OS. Size of original 30.5x21cm
He signed on with the Survey at Southampton on May 9, 1919 at the age of 38, joining the department as a designer. His wife Mabel (née Verstage) of Godalming, whom he had married in 1910, and their daughter, Gentian, who was to die tragically early in 1940, came to Southampton with him, and they set up home at number 6 Highfield Close. For a while they also lived at a house called 'The Anchorage', in the town's Hulse Road.

By 1934 Martin had risen to the rank of Superintendent, although of what is not known: his personal file was also destroyed in the German bombing raid which demolished a large part of the Survey's old London Road offices. Most likely his title was an honorary one, though certainly he was fully paid for the rank, his salary rising to an impressive £340 a year. He began his work for the survey before he actually joined the service, producing an exquisite Christmas card for 1918 which shows the old London Road offices in silhouette on a winter's night, lights blazing in all the windows, and the trees in Asylum Green towering over them like the lattice-work of so many Chinese fans. It is pure Art Impressionism, the colours muted and still. And, though barely a human figure can be seen at the windows, there is an unmistakable feel of industry going on within the bare walls and beneath the towering cupolas. It was an auspicious beginning to his new career.

A year later he turned out another Christmas card of the buildings, but this time the representation was quite a different one (see the cover of Sheetlines no.2). We see the whole complex of the offices from an imaginary point high above the street, London Road and The Avenue sweeping around the perimeter fence, the soldiers who once worked there on parade, other staff arriving for work, a trolley bus in the street, and the whole scene shrouded in snow. Around the drawing we find the architectural scrolls and flying banners which were to become a familiar feature of much of Martin's work in the years ahead. The ubiquitous Royal Arms, redrawn every time it was used (which was on every map cover) was, on Martin's covers, always prominently displayed, but by an expert artistic touch it never interfered with the design.

Ellis Martin was with the Ordnance Survey for 21 years, joining as one great war ended and leaving just as another was beginning. In that time many social changes took place, and they are all visible in his map covers. Attitudes and ways of life are as clearly chronicled as if they had been spelt out in words. In one of his 1920s drawings we see a cyclist resting on a high hill which sweeps down to a rich, wide valley. The cyclist is consulting his faithful tourist map, and his tweed cap, Norfolk jacket and plus-fours look uncomfortably cumbersome. A decade later, when the OS brought out a later series of the one-inch map, we have a drawing of exactly the same hill over the same valley and, seated in precisely the same spot, our cyclist is now a hiker, his open-necked shirt has the sleeves breezily rolled up, and the heavy tweed suit is changed for a comfortable pullover and slacks.

The changes are subtle; but what is even more subtle is the artist's perception of the minute changes which overtake us day by day, and his ability to translate the emotions such changes stir within us to a visual representation. To draw two pictures so superficially alike and yet so far removed in time and spirit is as major an accomplishment as two quite different drawings might have been. Attention to minor details, and a keen sense of time and place were among his secrets. More than any other Survey artist he evoked these qualities. A jaunty walk as two hikers step out over the bracing Chilterns; exactly the right kind of stone-work in a Cotswold house: the homely pub in Hertfordshire, with a familiar-looking country bus stopped outside. And - whenever a male figure appeared in a drawing - the briar pipe, symbol of manly calmness and contentment.

Martin's work ranged in style over a wide and varied canvas. To think of him as an artist with an exclusive fascination for minute detail, or even as a draughtsman with a bland economy of line and colour, would be to see only a single facet of a multi-gifted illustrator. Indeed, to think of him merely as an illustrator would be to do him injustice as an artist, for his work went far beyond the strictures of graphic or commercial requirements. The handsome landscape of Snowdonia which he bequeathed the Ordnance Survey is the work of a true artist. But it is as an illustrator that he will forever be sought out by enthusiasts. His cover for the one-inch tourist map of the
THE Great Store is built, and stands among its stone and steel four square to all the world.

The business is yet to build, and we mean to found and foster it by establishing Public Confidence in all we say and all we do.

We have everything to win, and—none to lose.

Already in the gathering of our stocks of merchandise from every quarter of the world there have been prudence and sound business principles that make for confidence.

For months our buyers have been busy at every fountain head of best supply. Every ebb and flow of market value has been used to the best advantage, with the result that here assembled are the largest, most kingly bought and best assorted stocks of dependable merchandise ever seen in London under one retail roof.

In distribution to the Public, the next great step, we shall begin to prove our principles by offering to our hundred separate Departments goods absolutely dependable in freshness, style and quality at London's Lowest Prices.

This is Merchandising as we believe in it; the straightforward way of dealing with the Public that involves implicit confidence, and the rule of Value-giving that leads to permanent success.

SELF RIDGE & CO.
OXFORD STREET, LONDON, W.

THE FOLLOWING IS A LIST OF THE SELFRIDGE KATALOGUE FOR TODAY'S LONDON PAPERS, MORNING AND EVENING—


One of Ellis Martin's 'Selfridges' advertisements. This copy is from The Daily Chronicle for Wednesday March 17, 1909.
Middle Thames is a stunning neo-French Impressionism in which a crowd of open boats, loaded with summer-dressed ladies with parasols and with white-flanneled men, negotiate a lock on the Thames. One can feel the heat of the day and can almost hear the hustle of excitement and the laughter.

By sheer contrast, Martin's cover for the Lake District is of a vast panorama of mountains and lakes, viewed from the top of some peak upon which not a leaf of vegetation grows, and the only sign of life are the tiny figures of two climbers pausing on the slopes to consider the scene around them. He produced a series of such 'empty' landscapes which, if not artificing masterpieces, are certainly imaginative minor works of art. Interviewed shortly before he died, Martin startledly confessed to having done very little field-work in preparation for his designs. If a certain landscape were needed for a cover, he used to write to friends who lived in that particular part of the country, asking them to send him all available postcards of the area; and it was from these that Martin constructed his famous illustrations! To reveal this is not in any way to discredit him as an artist, but rather to point out yet another element in his unique talent. There was nothing makeshift about his facility for making the clock stand still.

And more than anywhere else in Martin's work, the clock stands still in his 'landscapes with figures'. A ten-mile map from the 1920s shows a group of figures around a parked open saloon, the cross-roads which have confused them slightly in the background. The group is consulting an unfolded map, the only patch of colour on the design is the scarlet panel of the car's body: all else is solid black. It's pure Beardsley, and is as elegant a drawing as anything in commercial art.

The Survey's most remarkable map, valid for only one day - 29 June 1927 - of the eclipse of the sun on that day, called for even more stringent economy of design, and Martin produced a dramatic monochrome painting of a total eclipse above a group of massive elms, the cover set off with Martin's impeccable calligraphy in the 'black letter' style. A question was recently asked in Parliament by a Member who wished to know why the Ordnance Survey was suddenly showing so much interest in late in tourism and in producing maps for tourists. With an impressive flourish, a giant-sized folder was produced in which a collection of Survey map covers by various artists spanned nearly a century. It was a breathtaking testimony to the skills of a handful of gifted men whose names are now forgotten except by a band of admirers; and Ellis Martin is high on that shortlist.

With the outbreak of the second World War, Martin became a victim of economic measures within the Survey. He was, in effect, made redundant when he received a letter announcing the abolition of his office in 1940; he was 59. His offer to 'return to Southampton when things become more settled' was never taken up, and he spent the rest of his days in Sussex.

His cousin, Mr. John Elcock, told me of Martin's sense of humour and obstinate independence and of his reluctance to let others help him in old age. His wife died in 1966 and he lived alone from then on. Finally, however, the aging artist agreed to take up residence in a local nursing home where, increasingly frail and in poor health, he died on 30 September 1977, at the age of 96.

It may be rather late in the day to hope to find any of Martin's original Survey cover drawings: such things have a habit of vanishing into odd corners of sprawling departments. But it is not beyond reason to think that his magnificent designs could be regenerated and set into use once again, to the credit of the Ordnance Survey, whose claim to distinction may be essentially its cartographic output, but who once could boast at least one major design artist on its payroll, and probably a few others of significant ability. If no other purpose were served, it would get great covers back on great maps.

One might even find that Ellis Martin's initials have been restored to their rightful place on the fifth edition of the Roman Brittan map he helped to sell and which is still carrying the cover he designed for it nearly sixty years ago.
REPORT ON THE LONDON MEETING, 4 December 1982

This meeting was full to capacity with over 20 members converging from all corners of the kingdom, anxious to view the treasures in the Ordnance Survey collections of the British Library Map Library (formerly the Map Room of the British Museum). The morning was devoted to the inspection of OS incunabula — manuscript material which was not available, except in the form of photographic copies, in any other public collection. These included sheets of William Roy's unique map of the mainland of Scotland, begun in 1746 and finished in 1755 just before the outbreak of the Seven Years War. It was this map, a national survey in its own right, which is commonly regarded as having sparked off the idea for the foundation in 1791 of the official survey of Great Britain. Also displayed were accompanying sketches of surveying parties drawn by Paul Sandby, the 'Father' of the art of English watercolour, and who had been a draughtsman on the Survey of Scotland at the age of 19. These, and many other related manuscripts had come into the possession of King George III, and are now preserved in the Map Library in King George III's Topographical Collection — a vast assembly of printed and manuscript maps, plans, views and architectural drawings of all parts of the world — which came to the British Museum in 1828.

More recently acquired by the British Museum were the Ordnance Surveyors' Drawings on the scales of two, three and six inches to the mile. Covering the area south of

![Map Diagram](image)

Part of Ordnance Surveyor's Drawing no. 15, dated 1808. Scale 2" to 1 mile. Size of original 12x17cm. From a bromide copy. By courtesy of Cambridge University Library.

the Preston - Hull line, these purport to be the finished, or fair drawings which were submitted for payment to the Tower of London (HQ of the Board of Ordnance Drawing Room) by the surveyors, and illustrate diverse cartographic styles. More uniform in their representation of topographical detail were the MS one-inch Hill-Sketches of the 1820s and 1830s which depicted relief by horizontal hachuring, with the correction of detail in red ink, and, in some cases, the delineation of geological data on the reverse of the sheet. Both the King's Topographical Collection and the Ordnance Surveyors'
Drawings are now on microfilm. Other related manuscripts included Robert Kearsley Dawson's exquisite exercise book 'Essays towards the expression of Ground', which he had compiled in 1815-16 to illustrate the cartographic techniques of topographical representation, and which formed part of his submission as an RE candidate for the examination for a commission in the RE. Of even finer quality execution was the MS fair drawing, dated 1855, of part of sheet 2 of the first edition six-inch sheet of Edinburgh which was exhibited together with a rare, if not unique, example of an MS 'contents plot' dated 1850, of a first edition six-inch sheet of Yorkshire. More recent OS compilation work was represented by examples of the MS hillshading drawings and MS outline details, drawn on cartridge paper and laid down on zino, for the 1958 tourist map of the Lake District.

After an excellent 'value for money' lunch in the BL Staff Restaurant, the group reassembled in the Map Library and were guided by Y. Hodson (with not a little help from P.K. Clark) through the intricacies of the British Library catalogues, and were given hints on how to locate entries for OS material under what was often the last heading one would think of! This was accompanied by a large display of reference material, which included old catalogues and publication reports and many of the Ordnance Survey's unpublished 'instruction manuals', several of which had not been seen previously by members.

This was followed by the usual 'open session' of members' comments and queries; many had brought items of

Extract from 'Instructions for detail survey, revision and examination of large scale plans. (The Red Book) 1952. Coll. Y. Hodson. Size of original 13.5x7cm approx.

interest and after tea the meeting dispersed.

The Society is indebted to the generosity of the British Library in allowing us to visit the Map Library, and in particular we are grateful to Dr. Helen Wallis, the Map Librarian, for her kind hospitality on the day.
SOME RECENT PUBLICATIONS


The Ordnance Survey's layered one-inch maps have always been firm favourites with the public, and clearly the one-inch habit dies hard. Look closely at this map and you will see that below the familiar layering and hillshading the old one-inch has been re-cast and is really a 1:50,000 map reduced to 1:63,360 - an obvious way to revise a one-inch map, of course. Long distance paths are picked out in magenta diamonds, public rights of way have been revised to 1st March 1982; the latest full revision of the sheet was 1972-3 and selective revision was made in 1982.


This perennial best-seller, now famous for its innovative depiction of 'predominant vegetation', has just been re-issued in its old cover across which is emblazoned 'Now with Tourist Guide'. The claim is justified, for printed on the entire reverse of the sheet is a potted guide to each of the places worth visiting, together with a 'Nature Guide', giving the locations of gardens, parks and commons, zoos and museums, walks and nature trails, fishing and nature reserves. The whole is well-set out and interspersed with line illustrations and makes this sheet good value for £2.20.


This sheet, which was published at the end of November 1982, has been compiled from 1:25000 scale maps which themselves were produced from aerial photography flown by Hunting Surveys, HMS Survey, Fairley Surveys and Ordnance Survey between 1965 and 1980, with archaeological information revised by La Societe Jersiaise. Dressed in the livery of the OS's first series Outdoor Leisure Maps, the map shows tourist symbols prominently in blue, roads and contours (which are at 20 feet vertical interval) are orange; 'recommended walks' are shown as green dashed lines and woodlands, divided by symbol into coniferous and non-coniferous, is also in green. The card cover carries an illustration by Frederick Sands of La Corbiere and its lighthouse on the south-western tip of the island, and the reverse of the cover gives a location map for Jersey.


This enterprising exercise by the Borders Regional Council has resulted in a very attractive package of cards, each with an extract from a 1:50,000 map, overprinted with walking routes, none of which exceeds 9.5km. Below each map are printed the route instructions, and the reverse of each card carries a commentary on 'points of interest on route', and information on 'how to get there'. Each card is a handy size for the pocket and is laminated and should, therefore, be weatherproof. The first card gives a location map for all the walks, together with hints on basic walking equipment and the country code.


Compiled from sheets 41, 42, 50, 51, 56, 57, 63 and 64 of the 1:50,000 Second Series, these four maps have been specially prepared to accompany the guide to the West Highland Way, which is available separately. The two maps on each side of the sheet are separated by a column comprising the legend, and each is overprinted in magenta with the route - emphasised by a thistle at intervals of approximately 5km.

Hailed as 'the authoritative atlas of Great Britain, combining the unparalleled cartography of the Ordnance Survey with the best modern scholarship about the geography of the island', this volume is indeed far removed from its 1920s ancestor, the Quarter-Inch Atlas of England and Wales, and Scotland. Embracing the 'Routemaster' series in 126 maps, the book is also replete with no less than 25 thematic maps of Great Britain which illustrate topics such as rainfall, population, industry, farming types, transport and mineral resources.

The accompanying text is in three major parts: Introduction; the historical geography of Britain, and modern Britain. The first and last of these were written by Professor Michael Wise, a distinguished geographer and former President of the International Geographical Union and the Royal Geographical Society. His synthesis of the geography of modern Britain is most readable, and the layman will find himself turning from text and small-scale thematic maps to the 1:250,000 scale for further graphic information. The same is true of the historical synopsis, written by R.A. Butler, who guides the reader from prehistory to the late nineteenth-century in seven pages and seven maps, providing a wealth of readily assimilable information.

Almost apocryphal in contrast are the three pages devoted to 'a short history of the Ordnance Survey' and 'Ordnance Survey products', which, together with the conventional signs follow the introduction. These might better have been confined to one of the endpapers instead of repeating the 'key to atlas pages' which, incidentally, might have been enhanced by the inclusion of motorways, for this is, one presumes, primarily a road atlas.

This is as much as useful reference book for the armchair as for the passenger seat of a car; although not as ambitious as the rejected collaborative scheme for the AA/OS publication on similar lines but at the 1:50,000 scale, the present atlas is to be welcomed as an excellent general, as well as, motoring atlas.


This black, white and - of course - the colour, magenta, booklet has replaced those extravagant fully coloured glossy catalogues of recent times and resembles, in everything but shape, the earlier more conventional listings of OS products. Lacking any colourful extracts of the maps or indeed, photographs of maps in use (all still available in the fold-out OS Brochure), this catalogue gives all the usual details, with indexes, of the small scales, and more general information on the large scales.


This is the twenty-first sheet in Alan Godfrey's pioneering publishing venture of reproducing the county series twenty-five inch maps at a reduced scale with the consequential important benefit of reduced size, and this is the first sheet in his campaign to produce coverage for London (other areas already published are Durham and Tyneside). His cover 'blurb' does not underestimate the physical problems of using the original sheets: 'unfortunately, many of these plans are now difficult to find, while others are in danger of being damaged beyond repair through overuse. They are in any case too unwieldy for effective use in the field'.

The reproduction is taken from the edition of 1894-96, revised in 1895-4, published in 1897 and reprinted in 1911. The reverse of the sheet carries extracts from the Post Office Street Directory of 1894 and a 'thumb-nail sketch' of the history of the area by Brian Curle, the Local Studies Librarian of Kensington Central Library. An eye-catching integral cover, printed in red and with a photograph of Kensington High Street in the days of horse and carriage completes what is a most promising start to a now Godfrey series. Tourists should be persuaded to buy these in conjunction with the modern OS city map of London.
NOTES AND QUERIES

The depiction of underground structures on early Ordnance Survey maps and plans.
From: Paul W. Sowen, Secretary, Subterranea Britannica, 96a Brighton Road, South Croydon, Surrey CR2 6AD.

Research into the original purpose, history, and ultimate extent of underground structures of all kinds is frequently hampered by lack of documentation. Occasionally, however, at least in Surrey, the earlier OS maps and plans can be surprisingly helpful. Although we often find no more than 'entrance to subterranean stone quarry', as at Reigate and Godstone on the first 25" Surrey sheets, or the rather uninformative 'Devil's hole' at the latter place, we sometimes find a depiction of the form and extent of the underground void, in broken lines, as projected upwards onto the ground surface.

Road tunnels. In the case of canal, railway and road tunnels this was a fairly obvious necessity. The surface parts of these were usually public highways and thoroughfares were depicted, and the subterranean connections were almost always as close as maybe to a straight line. Early OS maps could provide helpful evidence for the development of road tunnels. Once the necessity of canal tunnels had been accepted, and turnpike trusts for road improvements were springing up, the use of short tunnels to reduce gradients and route lengths was only to be expected on the roads. What appears at present to be the earliest public road tunnel constructed was at Highgate Hill in 1609, although this collapsed in 1812 and was converted into an open cutting with an overbridge for Hornsey Lane. The earliest surviving public road tunnel seems to be that at Reigate, made in 1823 on the turnpike road through that town, although the work was funded by the landowner in this case. Two such short road tunnels still in use in Dorset were made by Turnpike Trusts - that at Horn Hill on the A37 from Seaminster to Crewkerne (ST 457032) and that at Wootton Fitzpaine on the A35 between Axminster and Charmouth (SY 349948).

However, I expect challengers to Reigate to emerge - and perhaps even earlier than Highgate. An interesting clue is provided in volume III of Harley & O'Donoghue's Old Series Ordnance Survey maps of England and Wales. On page xix are reproduced a number of conventional signs for use on the early OS sheets - including one for a road tunnel, although I have yet to discover such a thing in any of the maps reprinted in that volume, or in volumes I and II. The maps in volume III appear to have been surveyed c.1789-1822, and it therefore appears that the idea of a road tunnel was not too novel to deserve its place amongst the symbols used. Can any reader locate any other road tunnels, especially if earlier than Highgate or Reigate? The Park tunnel at Nottingham, the only other public road tunnel I know in the country, dates from c.1855. The Corporation Quary tunnel at Liverpool, known to have been in use for public access to the spa and ornamental grounds laid out in the disused quarry by 1774, was probably a feature of the quarrying operations and may in any case never have taken vehicular traffic - further research is needed here.

Antiquities. At Reigate the 1872 edition of the 1:5000 plan depicts the outline of the 'Barons' Cave' under the castle mound. But the numerous, larger and more complex rock-out cellars and sand-mines, some of them even in 1872 of some antiquity, in and around the same mound are evidenced only by the words 'entrance to cave' or 'air shaft' dotted about. Possibly, of course, the policy was to depict subterranean antiquities (the Barons' Cave was described by Camden) but not operational or recently defunct mines or underground quarries. However, at Beddington an intriguing small network of tunnels, the Beddington Caves, appear opposite the Plough Inn on the first and subsequent editions of the 25" plans (Surrey XIV,9). Intensive local research has failed to find any positive proof of antiquity for these tunnels in the Thanet Sand before about 1820 at the earliest. Their origin is probably a mixture of garden grotto, sand-mine and rock-out cellar. The small maze of passages just inside the entrance is accurately shown - access has been possible in relatively recent years and resurvey confirms the OS depiction. However an in all respects highly improbably long straight tunnel - the sort no English parish history is complete without - is shown on the OS sheets, heading due south and apparently terminating, presumably quite coincidentally, below the cutting of the Croydon & Epsom Railway. Did such a tunnel ever exist? On geological grounds alone it is improbable, as it would have involved tunnelling through the geological boundary between Thanet Sand and Upper Chalk. Can members point to other examples of oddities of this kind being shown on OS sheets? Lee & Russel, writing in 1924 on The Guildford chalk caves (South Eastern Naturalist & Antiquary for 1924, pp.63-4 and plate), inform
us that 'in that year, 1869, Captain James was engaged in making a large scale map of the immediate district for the Ordnance Survey, and wishing to determine the position of these caves instructed Corpl. Rob. Macdonald, his subordinate, to search for them. The entrance being discovered, blocked with loose chalk, had it cleared and the underground galleries surveyed - the survey is reproduced as a sketch in the plate. Presumably this, too, was depicted on the published sheet which I have not yet had the opportunity of examining,' Grose's Antiquities of England and Wales, 1775, contains a well-known plan and engraving of this site entitled 'Quarry Holes', and the street-name 'Quarry Street' still reminds us of the excavation's purpose in providing hard chalk for building stone (the Guildford stone used by Wren in St Paul's, for example, as well as its use locally in the Castle walls and in domestic interiors). Before the Quarries Act of 1894 confused things, an open chalk pit was usually called a pit, not a quarry, which was for squared stone for building.

Paul Sowen, who is Secretary to Subterranea Britannica, an organisation devoted to the study of man-made and man-used underground structures of all kinds and dates, would welcome further examples of similar and other underground structures depicted on early OS sheets.

**Six inch Town Maps**

From: Jeremy Thoday, East Lodge, Calcot Park, Reading, RG3 5RD.

I should like to know how many towns, and which were they in the series of Town Maps, with index to names, at the scale of six inches to one mile, and when were they published.

**Editor's note:** The background history to this series is to be found on pages 226 and 231 of SEMNOUR (Ed.), A history of the Ordnance Survey, 1981. The following is a list of the town plans published, together with the dates of the Annual Reports in which their publication was announced.

<table>
<thead>
<tr>
<th>Town</th>
<th>Date of Annual Report</th>
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<tbody>
<tr>
<td>Cambridge</td>
<td>1920/21</td>
</tr>
<tr>
<td>Canterbury</td>
<td>1920/21</td>
</tr>
<tr>
<td>Cheltenham</td>
<td>1923/24</td>
</tr>
<tr>
<td>Colchester</td>
<td>1923/24</td>
</tr>
<tr>
<td>Dundee</td>
<td>1922/23</td>
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<tr>
<td>Gloucester</td>
<td>1923/24</td>
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<tr>
<td>Hull</td>
<td>1920/21</td>
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<tr>
<td>Ipswich</td>
<td>1922/23</td>
</tr>
<tr>
<td>Keighley</td>
<td>1922/23</td>
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<tr>
<td>Leeds</td>
<td>1922/23</td>
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<tr>
<td>Leicester</td>
<td>1920/21</td>
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<tr>
<td>Lincoln</td>
<td>1920/21</td>
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<tr>
<td>Northampton</td>
<td>1921/22</td>
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<tr>
<td>Nottingham</td>
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<tr>
<td>Oxford</td>
<td>1922/23</td>
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<tr>
<td>Portsmouth</td>
<td>1922/23</td>
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<tr>
<td>Southampton</td>
<td>1920/21</td>
</tr>
<tr>
<td>Southend-on-Sea</td>
<td>1923/24</td>
</tr>
<tr>
<td>South Shields</td>
<td>1921/22</td>
</tr>
<tr>
<td>Wolverhampton</td>
<td>1920/21</td>
</tr>
<tr>
<td>York</td>
<td>1920/21</td>
</tr>
</tbody>
</table>
The Peak District and its Approaches  From: Richard Dean, 49 Grange Road, Riddulph STB 7XY

Externally my copy of this Special District half-inch map is a standard paper-folded issue with Willis's watercolour view on the cover, but with the initials W.R.F. in the top right hand corner, and the price of 2/3d blanked out. Internally the map is the original 8036 printing with the following additional note in red in the top margin, so far as it is still legible:

NOTE. This map ... [give it hard usage.] | It will be exchanged free of charge | for another copy on ordinary paper at any time within | six months of purchase. Your comments on it will be | appreciated by the Director General, Ordnance Survey, Southampton.

It would appear to be some form of experimental issue on a consumer test-run, but further information would be welcome.
MAP EXCHANGE COLUMN

Campbell Kennedy, 46 Close Crescent, Bishopbriggs, Glasgow, G64 2HN

Has varied OS interests, but in particular, welcomes contact with anyone seeking information and/or map exchanges particularly of the Tourist and District styles.

Tim Nicholson, 187 Russell Court, Woburn Place, London WC1H 0LR

Wanted: (in very good, or better condition): Most leaflets and Abridged Lists; some Descriptions and Tourist Maps pre-1940; some 4th District and Special Sheets, 5th Reliefs, Special District Reliefs, Half-Inch District Reliefs, and special purpose maps. All folded in covers.

Available: Index to 25 inch and 6 inch or ca. 1911; 8th edition (1935) and 1947 Small Scale Descriptions and 3rd edition (1926) Large Scale Description. 5th Reliefs 116 and 125; Dartmoor Special District Relief. Large six-inch sheet of all Wimborne area, 1919 etc.

37. RAILWAYS.

Normal Gauge Railways (passenger or mineral) with two or more lines are shown by a chequered line, the black interval to be one and a half times greater in length than the white.

Single lines are shown by a chequered line with the white interval one and a half times greater in length than the black. Narrow gauge lines are shown with sleepers spaced at intervals twice the width of the railway gauge (see Conventional Signs Sheet for symbols). Electric Railways are shown as ordinary railways. For Railway Names see para. 48.

Sidings and lines in Docks and Works are to be shown with the symbol for tramways.

38. RESERVOIRS.

The names of companies owning Reservoirs will be shown on the 1-inch maps, abbreviated where necessary, owing to lack of room. Also see “Railways,” para. 5, “Water Supply.”

39. ROAD CLASSIFICATION.

In future roads will be drawn on the Fifth Edition of the one-inch map as shown below. Gauges as in figures on gauge sheet.

Ministry of Transport, Class 1. ... ...
... 2. ... ...
14 feet of metalling and over ...
Under 14 feet of metalling, Tarred ...
... Un-tarred ...
Minor roads in towns, drives, private farm roads, unmetalled ...
Ministry of Transport Class 1 and 2 to be drawn to Gauge 1, line 11.
Fourteen feet of metalling and over to be drawn to Gauge 1, line 7.
Under 14 feet of metalling (tarred and un-tarred) to be drawn to railway Gauge, line 5.
Minor roads in towns, etc., to be drawn to Gauge 5.
Ministry of Transport figures written to Gauge 5. Dangerous corners when owing to the reduction in scale would be hardly perceptible when drawn) are to be reasonably accentuated.

40. ROAD MODELS.

Road Models are prepared for Z.P. from Revisers' Road Sheets, M. of T. Class 1 roads are shown in red, Class 2 and tarred roads in green.

41. RIFLE RANGES.

Service Rifle Ranges are shown by a dotted line, the butts being shown with the symbol [].

A page from: Instructions for the Revision and Drawing of the One-Inch (Fifth Edition) Map. Printed and Published by the Director General, Ordnance Survey, Southampton. 1936. 0.2.0. 10277 200 5-36. pp.31. 18.5cm

This booklet was one of the exhibits produced by Richard Dean to illustrate his talk on the Fifth Edition One Inch map at the Birmingham meeting in February.

Instructions for the Revision and Drawing of the One-Inch (Fifth Edition) Map

Printed and Published by The Director General, Ordnance Survey, Southampton - 1936

ERRATUM

A typing error crept into Alan Godfrey's report on the Ordnance Survey of Northern Ireland in Issue no. 5 of Sheetlines, December 1932, p.16, para.5. Instead of 'there are a few no-go zones' it should have read 'there are few, if any, no-go zones'.
MEETINGS 1983

LONDON
Saturday 7 May Annual General Meeting at Birkbeck College, 7-15 Gresse Street, London WIP 1PA. 10.30 for 11.00 to 4.30pm. See enclosed notice for full details. Please let Mrs. Y. Hodson know if you wish to attend. Her home telephone number is 043 871 7825.

SHEFFIELD
Saturday 18 June at Sheffield University Geography Department. For further details of how to get there, etc. please send s.a.e. to Alan Godfrey, 57-58 Spoor St., Dunston, Gateshead, NE11 9BD

BACK NUMBERS OF SHEETLINES

All back numbers, with the exception of no.1, which is out of print, are available at a cost of 50p each, including post and packing, from:

Alan Godfrey,

MEMBERSHIP

Membership of the Society is open to all at an annual rate of £3 for UK members and £5 for family, corporate and overseas (payable in sterling, please) members. The membership year begins on 1 March; those who join after 1 January will be considered as paid up for the coming year. Cheques should be made payable to 'The Charles Close Society' and sent to Alan Godfrey at the above address.

CONTRIBUTIONS to the Newsletter are welcomed. Typescript, double-spaced, is preferred, but legible manuscript is also acceptable. The printed or unpublished sources of information given in any text should be quoted in full and supplied as footnotes. Any member needing assistance with this is welcome to ask the Editor, to whom all contributions should be addressed: Mrs. Y. Hodson, c/o The Charles Close Society, Map Library, British Library Reference Division, Great Russell Street, LONDON WC1 3DG.

THE LAND UTILISATION SURVEY OF GREAT BRITAIN 1930-1938 was published in colour on a base map composed of the outline, water and contours of the Fourth (Popular) Edition Ordnance Survey one-inch map. Limited stocks of 73 of these maps remain and are being offered for sale at 50p per sheet exclusive of postage. They may be obtained from the Map Curator, Department of Geography, London School of Economics, Houghton Street, London, WC2A 2AE.

Sheets available: England and Wales 2, 4, 6, 8/9, 8/10/15, 10, 13, 14/15, 17, 18/19, 20, 21, 24, 25, 26, 27, 40/48, 41, 42, 50, 51, 54, 57, 59/68, 60, 63, 70, 74, 78, 79, 80, 83, 89, 90, 91, 93, 94, 103, 104, 112, 115, 127, 128, 129/139, 130/131, 136, 137, 140, 143, 144, 145, 146.

Scotland 30, 40, 51, 53, 56, 63, 64, 66, 75, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90.