



SHEETLINES

The Newsletter of
THE CHARLES CLOSE SOCIETY

No. 25 August 1989

Editorial	Page 2
Brian Adams. 198 Years and 153 Meridians, 152 Defunct.	3
Reprinting Old Ordnance Survey Maps, Postscript to <u>Sheetlines</u> 24.	7
Ordnance Survey Marketing Leaflets.	8
Guy Messenger. Was the OS Always Right? Early Railways in West Cornwall.	8
Letter to the Editor.	10
Charles Close Society News.	10
Acquisitions, OS Bicentenary, Visit to Lympne Castle, Sir Henry James	
Conferences and Events.	
Amsterdam June/July 1989, Bournemouth Sept/Oct 1991.	13
Review. Lake District Touring Map and Guide.	14
Publications.	15
British Library Catalogue, O.S. Bicentenary 1991, Smaller Scale Military Maps of Britain.	
Notes and Queries.	16
Including O.S. London Road, Southampton 1953.	17
Future Meetings	20

EDITORIAL

By now few readers of Sheetlines will not be aware that this year marks the bicentenary of the French Revolution. In June 1789 the representatives of the Three Estates, nobility, clergy and commoners, assembled at Versailles, resolved that regardless of royal opposition they would meet and deliberate as a unified National Assembly, which would sweep away the anachronisms of the past and lay foundations for a new rational order of society. Two centuries later, almost to the day, Professor C. Koeman opened the first session of the XIIIth International Conference on the History of Cartography at Amsterdam with his lecture "Two centuries of historiography of cartography" in which he distinguished three successive periods;

1. The period of the archivists, keepers of maps, and presidents of Geographical Societies (a group which incidentally included a sprinkling of titled gentlemen).
2. The period of university professors and of directors of surveys.
3. The period of a democratic society of historiographers: archaeologists, bibliographers, local historians, geographers and finally cartographers and private pensioners. (The editor was very pleased that this final element received a mention as it seemed to legitimise his presence!)

Professor Koeman drew a parallel between these three groups and the Three Estates of pre-revolutionary France. He spoke of the massive increase in publication in part in response to pressure on academics "to publish or perish" but also representing the vigorous growth of amateur studies, both by those interested in maps for their own sake and by an even larger group for whom old maps provide essential source data for local historical studies. Such amateurs had brought to our field great enthusiasm and a very wide range of experience and interests and could often offer new insights. They could be seen as the Third Estate of our community and like revolutionary France we needed to draw together all elements in that community of cartographic historians if its efforts were to bear the fullest fruit.

Looking through a list of members of our Society, while we are fortunate to include a number who have achieved considerable academic distinction, it is fair to see it as primarily representative of Koeman's "Third Estate". We should be pleased that such a distinguished historian of cartography should have given public recognition to the role of the amateur in his own field. Nevertheless such recognition does carry with it the implication that such amateurs will see their activities as something more than a private hobby interest, that they will seek to work as part of a larger community and that they will attempt to communicate with other members of that community and to keep them informed of the progress of their own researches. This is, of course, where Sheetlines comes in, as just one of a number of vehicles for such communications.

At readers' request a list of contents now appears, as an experiment, on the front page of this issue. The editor would be pleased to receive any comments on this or any other suggestions for improving Sheetlines.

Footnote At the time of writing the full text of Professor Koeman's lecture was only available in Dutch in:

C. Koeman, Twee eeuwen historiografie van de kartografie, Kartografisch Tijdschrift XV, 2 1989 pp 17 - 22.

but an extended English abstract appears in the collected abstracts distributed to all Conference participants.

198 YEARS AND 153 MERIDIANS, 152 DEFUNCT

by Brian Adams

"Most references to county meridians in OS publications for at least 60 years have contained errors"

"Ordnance Survey's most inaccurate maps"

"My only criticism of Guy Messenger's book"

These are all matters that I have felt moved to write to Sheetlines about in the past year. But they have a common component, Cassini's projection, and the Editor has suggested that some elucidation of this projection may be desirable for our less technical members. I am therefore putting these items together in a short series. It is hoped that our professional members will bear with the introduction to Cassini's projection, but the Editor and I both feel it will be welcomed by the wider circle of those who are fascinated by maps, but are not so familiar with the ways they are brought into being.

Part One - Winterbotham, Cassini and Messenger

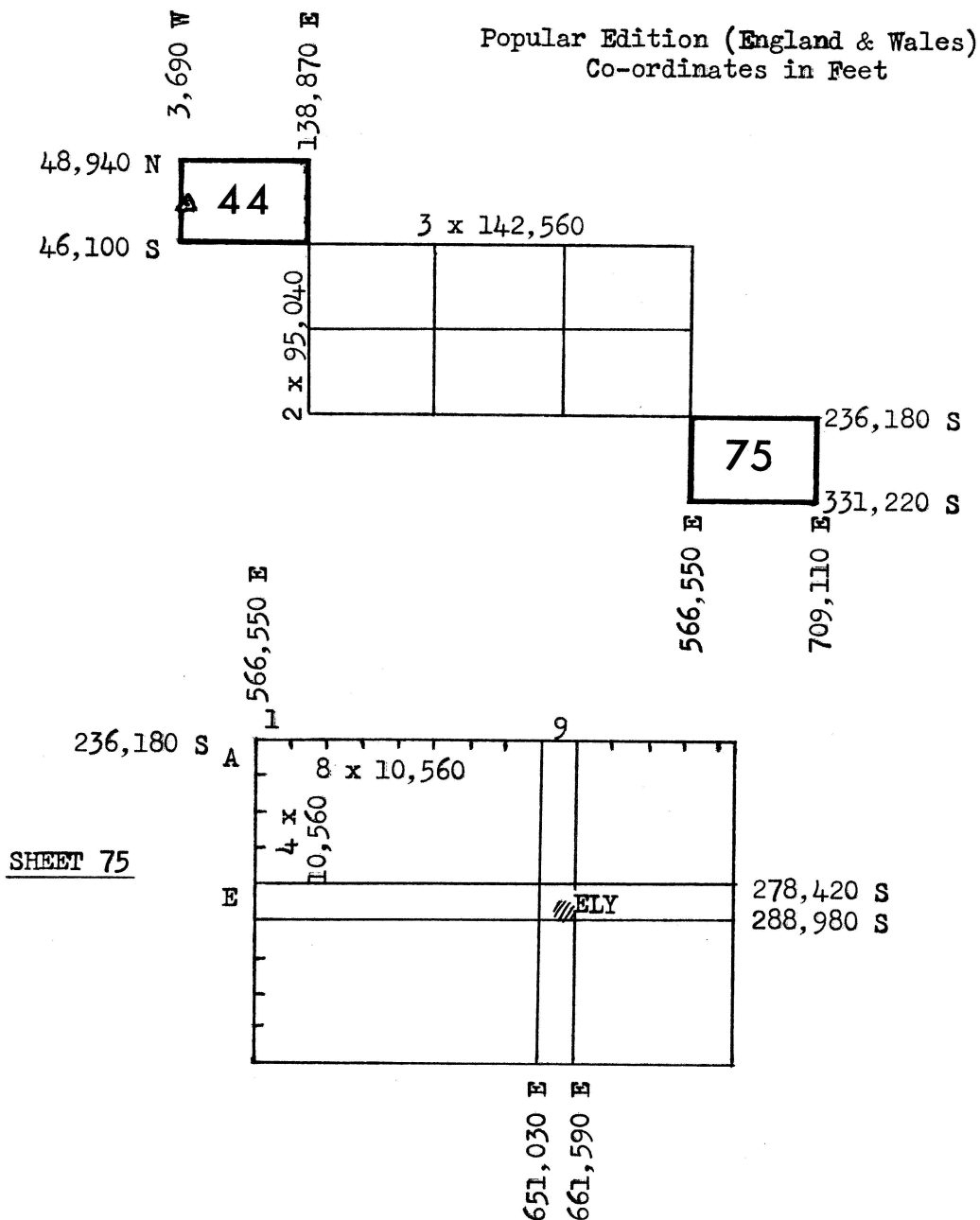
'150 Years and 150 Meridians' was the title of an article contributed to the Empire Survey Review by Brigadier H. St J.L. Winterbotham in 1938. The author confessed in his opening paragraph that his title was not a precise statement but an averaged one - in its then 147 years the Ordnance Survey had employed 153 fully authentic meridians in its mapping of Great Britain and the Isle of Man; the former DG excluded the numerous Irish meridians from his arithmetical survey although all had been established long before 1921. Since 1938 no new meridian has been adopted, but several had already been superseded by the time of the Survey's centenary and many more had gone or were obsolescent by the time of its sesquicentenary; by that time too the die had been cast which was to lead to the one single meridian remaining in use today, longitude 2°W, the central meridian of the National Projection and National Grid, a Transverse Mercator projection on which much has been published in past decades.

Only one other of the 153 was a round figure; longitude 4°W was the central meridian for the first three series of the one-inch maps of Scotland which were drawn on Bonne's projection, as were smaller scale maps of Scotland of the same period. (Bonne's is an equal-area pseudo-conical projection on which the scale is preserved along all parallels of latitude but on only the central meridian.) The remaining 151 were central meridians of Cassini projections, two of national extent and many county-wide, but the majority serving only the old large scale surveys of single towns. These meridians were drawn through the origins of the projections, which were normally specific topographical features upon which trigonometric stations were sited, and whose geographical positions were calculated through the national survey. Very few of the town surveys were in a position to adopt primary triangulation stations as their origins, but somewhat surprisingly less than half of the county origins were primary stations.

Cassini's projection was a very basic one in which distances on the ground were plotted true to scale along the central meridian (CM) itself and at right angles to it, along great circles. If one imagines a globe turned on its side with its equator lying along the CM, it can be seen that projection distances parallel to the CM are increasingly greater than true distances on the globe as one moves away from that CM; this distortion is of no noticeable extent in a local survey, and of manageable proportions across the width of a county, but becomes a considerable nuisance over a wider area, where its problems are more conveniently coped with by a more sophisticated projection such as the Transverse Mercator. A short technical description of Cassini's projection and tables for its construction were included in Methods and Processes (Ordnance Survey 1902).

What is not always appreciated by the layman is that in constructing most maps the familiar latitudes and longitudes, properly referred to as geographical co-ordinates, are no use in themselves and have to be converted to x and y rectangular co-ordinates by the projection formulae to enable the map detail to be drawn in. In modern times the projection co-ordinates have a dual purpose, serving also as the basis of a reference system; x and y become easting and northing, co-ordinate lines are drawn as a grid on the face of the map, and usually form its sheet lines. But this is nothing new; all the sheet lines of the New, Third and Popular series one-inch maps of England and the Popular of Scotland are actual co-ordinate lines of a national Cassini projection, the obvious difference from today being that they are not numbered. So, too, the system of two-inch squares drawn across the face of a Popular series map is in modern terminology an un-numbered grid.

DIAGRAM OF DELAMERE Δ - ELY CONNECTION



The reason the lines are not numbered will become apparent if we look for example at the fenland city of Ely, situated in square E9 on Popular Edition sheet 75; the co-ordinate lines bounding this square are:-

	278,420 feet south	
651,030 feet east		661,590 feet east
	288,980 feet south	

a far cry from the round thousands of figures of the National Grid squares. For the origin of this nationwide Cassini projection was an early primary station in Cheshire, Delamere, situated at an internal point on Popular Edition sheet 44, the unit was the foot (the Ordnance Survey's own 'foot of 0, '), and the co-ordinates were measured in four directions therefrom. Delamere was adopted as the origin of the projection and sheet lines of the Old Series maps from the Preston-Hull line northwards, and then for their extension south as the New Series and their conversion in turn to the Third Edition Small and Large Sheets and the Popular Edition, and in due course for the extension of the latter edition to Scotland. It was also used for all the smaller scale maps derived from those series.

The position of Delamere was latitude $53^{\circ} 13' 17''.274$ N
longitude $2^{\circ} 41' 03''.562$ W

and all the sheet lines of the map series mentioned above are parallel or perpendicular to the latter meridian. The co-ordinate lines bounding Popular sheet 44 are:-

	48,940 feet north	
3,690 feet west		138,870 feet east
	46,100 feet south	

and all standard size sheets are 27 miles x 18 miles or 142,560 feet x 95,040 feet. Hence, using a sheet index, the interested member can amuse him/herself by computing the Cassini co-ordinates on the Delamere origin of, say, his/her local Popular Edition sheet lines and thence his/her home; the diagram illustrates this exercise in relation to the Ely square mentioned above. This type of operation, formerly particularly familiar to the professional surveyor using the county series plans, is equally applicable to the one-inch and smaller scales, except that direct reference to the maps may be necessary to carry the arithmetic through where non-standard or overlapping sheets are involved. Caution is also required in extending this exercise to Scotland through the common sheets 3 & 86 or 5 & 89, because of the one-mile overlaps introduced on the Scottish Popular Edition as well as its many non-standard sized sheets.

To complete the picture I give the data for the sheets containing Delamere in the one-inch Third Edition; the co-ordinates are:-

Small Sheet 109	17,260 feet north	
51,210 feet west		43,830 feet east
	46,100 feet south	

Large Sheet 44	48,940 feet north	
51,210 feet west		91,350 feet east
	46,100 feet south	

Third Edition Small Sheets are all 18 miles x 12 miles or 95,040 feet x 63,360 feet, whilst the standard size Large Sheets have the same dimensions as the standard Popular Edition sheets. Hence we may again trace local Cassini co-ordinates on Delamere through the sheet line systems.

This leads on to the Society's The Ordnance Survey ... Third Edition (Large Sheet Series) by Guy Messenger; I have but one criticism of this major monograph, and I may say at once that Guy agreed with it fully as soon as I mentioned it to him. It is the absence of any explanation in the opening pages of the items in the Sheet Histories headed 'Coordinates'. It is implicit in what I have said above that the columns of sheets in this series from nos. 3, 5 & 6 through 44 to 142 & 143 run effectively due north-south, but away from the Delamere meridian the lines of latitude and longitude run at a small angle to the sheet lines, gradually increasing to one of $3\frac{1}{2}^{\circ}$ in sheets 68 and 88. This results in a difference of longitude of 2' 25" between the north-east and south-east corners of these vertical sheets.

Thus, strictly speaking, Guy Messenger's 'Coordinates' are the mean values of latitude and longitude along each of the four sides of the respective sheets, but they are in any case approximate, being quoted to the nearest minute only, and are provided basically for location purposes in the absence of any figures on the maps themselves. To be pedantic, it would have been better had they been headed 'Geographicals', for this is the conventional abbreviation for 'geographical co-ordinates' among professionals, whilst 'co-ordinates' unqualified would usually refer to rectangular projection co-ordinates. But this is clearly not a serious criticism, and I can but add at this late stage my congratulations and thanks to Guy Messenger for his monumental work.

Part Two - Confusion Worse Confounded, the Gridded Grid

Part One focussed largely on the application of Cassini's projection to the one-inch map, the favourite of the purchasing public, as Brigadier Winterbotham termed them, but by whom the properties or even the existence of the projection were frequently unappreciated; subsequent Parts will feature aspects of the six-inch and larger scale county series maps, wherein the projection often has a greater day-to-day impact on the user who is generally more familiar with its technicalities.

But here is someone else with a furrowed brow; he is, it seems, a Scottish ex-soldier. "You have explained" he says "how the Popular Editions of Scotland and England were constructed on a single Cassini projection, with the sheet lines parallel and perpendicular to the meridian of Delamere. But I defended these lands using these maps printed with a Cassini grid which lay at an angle to the sheet lines, and then after the war the Scottish Popular Edition was reprinted with the National Grid, a Transverse Mercator grid running at another angle to the sheet lines. Can you explain these, please?" Indeed I will try.

My sub-heading may appear over-dramatic, for one grid would not normally be printed over another one, except under the exigencies of wartime operations. But as I have indicated in Part One, grid lines on a basic map are in fact projection co-ordinate lines and are therefore still present as an invisible net even if not ruled on the map. So, to take the example of the Scottish Popular Edition with National Grid, we (apparently) have a Transverse Mercator grid on top of a transparent Cassini grid; not wholly transparent because the sheet lines are Cassini co-ordinate lines. The vital point to grasp is that the map and everything on it are constructed on Cassini's projection, and the National Grid is present here solely as a reference system. It is perhaps best in this instance to think of the grid lines as lines on the ground, cutting the topographical features exactly as they do on the Seventh Series map; the lines are then mapped on the Scottish Popular by Cassini's projection along with all other ground detail.

Thus, whilst on the National Projection maps of today the National Grid is an exact system of squares forming both a construction network and a reference system, when printed on any other map it will appear only as a reference grid composed of curvilinear rectangles, although often (as in the present example) they are only very slightly distorted squares. A similar effect occurs on GSGS 3907 and 3908, the military editions of the one-inch recently discussed by Richard Oliver (Oliver 1987). As stated thereon these maps carry the War Office Cassini Grid whose original was Dunnose, a primary triangulation station in the south-east of the Isle of Wight and

county origin for fifteen central counties. So even this grid, although a Cassini grid, was not quite an exact square grid when drawn on a map on Cassini's projection with a different central meridian, i.e. Delamere; and with a different central meridian the grid lines lie at an angle to the map sheet lines, technically the convergence of the two meridians. Yet another variation appears on the eleven south-western sheets of the War Revision versions of GSGS 3907, which were Fifth Edition sheets and carried the War Office Cassini Grid over the Fifth Edition Transverse Mercator projection, central meridian 2°W.

The reasons for the choice of Dunnose as the origin of the War Office Cassini Grid have never been published but are clearly connected with its prior status as the county origin for the central counties, especially Hampshire and Wiltshire which included many military establishments for which Dunnose co-ordinates would already have been in existence. The position of Dunnose is latitude 50° 37' 03".748 north, longitude 1° 11' 50".136 west, but the grid has a false origin 500,000 metres west and 100,000 metres south of Dunnose, and co-ordinates thereon are known as WOFO (War Office False Origin) co-ordinates; the grid itself was often familiarly referred to as the WOFO ("Woffo") grid.

To sum up, any grid may appear on any map for reference purposes, the projection of the base map remains paramount, and the quoted projection of the grid only refers in this case to the way it is laid down on the ground and not to its projection on the base map. The way it is laid down on that base map may confidently be left to the mathematical geodesist.

References

- Messenger, Guy, The Ordnance Survey One-Inch Map of England and Wales Third Edition (Large Sheet Series), London, Charles Close Society 1988, ISBN 1 870598 03 2.
- Oliver, Richard, One-Inch Military Maps of Great Britain, 1919-1950: Some Notes on GSGS 3907 and 3908. Sheetlines No. 20 (December 1987) pp 9-12.
- Ordnance Survey, Account of The Methods And Processes Adopted For the Production of The Maps of The Ordnance Survey of The United Kingdom: Second Edition, London, HMSO, 1902.
- Winterbotham, H.St. J.L. et al, The Choice of A Grid for British Maps, Geographical Journal Vol 63 (1924), pp 491-503.
- Winterbotham, H.St. J.L., 150 Years And 150 Meridians, Empire Survey Review Vol. 4 (1938) pp 322-326.

Homework

Puzzle Corner

Which county origin... has the same name as a wellknown TV presenter whose home is in that county?

REPRINTING OLD ORDNANCE SURVEY MAPS: "Sheetlines 24"

Alan Godfrey has pointed out that the marginal note reproduced on page 4 of our last issue, under the extract from his reprint of Staffordshire 1:2500 Sheet 68.10 (West Bromwich), could have misled readers. All material reproduced in Sheetlines is reduced to a scale about 2/3 that of the original. Consequently the true scale of the West Bromwich extract is about 1:6000 rather than 1:4340 as stated below it. Inevitably, given the reproduction processes currently available to us, some loss of image quality has taken place as in all other illustrations appearing on our pages.

ORDNANCE SURVEY MARKETING LEAFLETS

Tim Nicholson wrote a short note in Sheetlines 7 entitled "Fifty-Seven Varieties? First notes towards a listing of OS leaflets 1919-1939". In this note he drew attention to some of the bibliographic problems presented by this group of ephemeral publications. Finally he provided a provisional list of all such leaflets then known to exist (i.e. in 1983). Supplements to that list appeared in Sheetlines 8/18 13/22 and 18/17. Tim has continued to collect and collate such information so that it is now possible to offer readers a further supplementary list from data he has provided:

<u>No.</u>	<u>Short Title</u>	<u>Code</u>
No number	Abridged List of the Ordnance Survey Small Scale Maps of Scotland	30,000 1-4-1931
No number	Land Utilisation Maps of Great Britain	OSO 8789 5000 8-33
42/34	Important Notice Relating to Aviation Maps	OSO 5000 3-34
14/35	A Map of XVII Century England	OSO 10,000 17-6-35
52/35	Map of Britain in the Dark Ages (South Sheet)	5,000 10-35
6/37	Abridged List of the Ordnance Survey Small Scale Maps of England and Wales	OSO 9215 100,000 1/37
53/38	A Note on the Facsimile Reproduction by the Ordnance Survey of Symonson's Map of Kent 1596 (N.B. This leaflet is also found attached to the Map)	OSO 3291 1,000 11-38

WAS THE OS ALWAYS RIGHT? EARLY RAILWAYS IN WEST CORNWALL

Guy Messenger

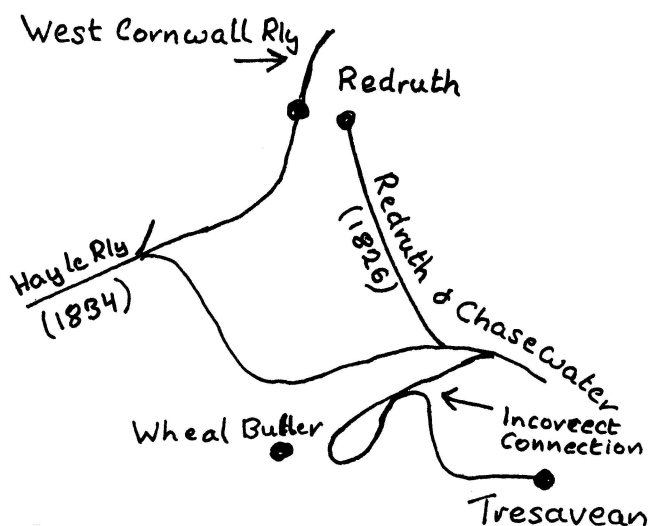
Railway historians and industrial archaeologists seem to have paid little attention to the 19th century printings of One-inch Ordnance Survey maps as a record of the development of rural railway systems in counties such as Devon and Cornwall. Can this be solely because searching for successive printing states is a laborious and time-consuming process, and when all have been found, the record is in any case discontinuous and incomplete, or have they like me discovered that it is by no means entirely accurate? Standards of accurate reproduction on copper plates of information recorded in the field and drawn out on paper were significantly raised during the period at the end of the 1830's when many of the earliest sheets were undergoing extensive revision and re-engraving. Nevertheless some early errors slipped through unchecked, and during my recent work on Old Series sheet XXXI (Truro) I found one probable and one certain error which seem to me worth a comment.

The first of these concerns the Poldice Tramway. This was one of the earliest commercially viable plateways to come into use in Cornwall, being opened for traffic in 1810. Its rails were L shaped with a vertical flange along the inner edge of a flat plate about three feet long and a few inches wide. The vehicles, drawn by horses, had ordinary cartwheels with iron tyres and the flanges on the rails stopped them slipping off sideways. The Poldice Mining area was in the neighbourhood of St. Dye (in later printings of the OS this was spelt St. Day) and the Tramway provided an outlet for its products to shipping on the north coast at Portreath. In the earliest printing states of sheet XXXI, the line is shown as a pair of fine drawn dotted lines following an easterly course from Portreath, and terminating about 300 yards short of the main east-west road through Scorrier, and nearly two miles short

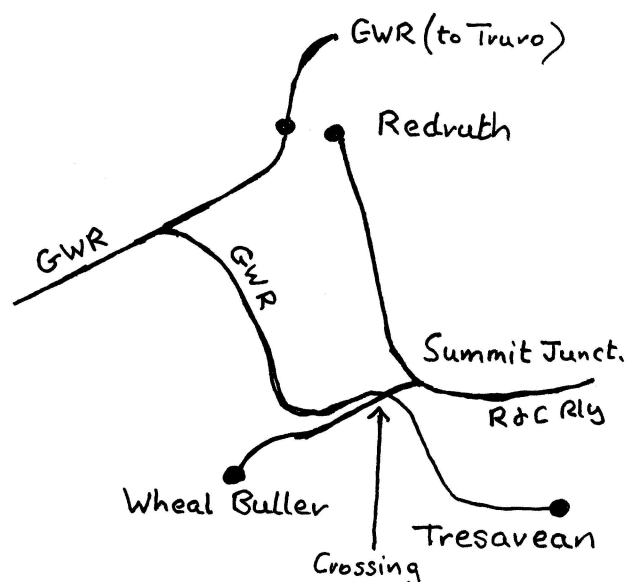
of its destination near St. Dye. So far as I have been able to determine, its extension to St. Dye does not appear on the map until almost its last state (Railways inserted to 1887). This seems to me to be clearly an anomaly, since the Poldice mines were virtually worked out by the 1850's, and a branch from the Redruth and Chasewater Railway into the area of which the first half mile was built in about 1856 was never completed. Accounts in the railway histories which I have consulted, by not mentioning the terminus at Scorrier and the subsequent extension of the line, imply that the full length of it was in operation when the productivity of the area was at its highest level in the 1830's and 1840's. In the last state of the sheet, not only was the line extended to its ultimate terminus but the word 'Railroad' printed in two places beside it was changed to 'Tramway'. It continued to serve other mines after 1856 until about 1865 after which it gradually fell into disuse, being finally dismantled at the end of the century. It is not shown on the first revision of New Series sheet 352 (1894).

The second case concerns a junction between the Hayle Railway and the Redruth and Chasewater Railway a mile or so to the south of Redruth. That a physical junction allowing direct transfer of traffic between the two systems was impossible is certain from the fact recorded in all the relevant histories, that the two were built to different gauges, the former to 4'8½" and the latter to 4'0", and rolling stock was therefore not interchangeable. The R & C R ran from Devoran wharves on Restrounguet Creek (a branch of the Fal) through the important Gwennap mining area to a summit at about 570 feet where it divided into two, the busier western branch serving mines in the area of Wheal Buller/Wheal Beauchamp, and the northern branch terminating in the outskirts of Redruth. Both branches were about one & a quarter miles long. The line was opened about 1826 and ceased to operate in 1915. The Hayle Railway, opened in 1834 was built principally to provide an outlet to the north coast at Hayle for the products of the largest and most productive complex in that part of Cornwall, namely Tresavean. Halfway between Redruth and Camborne a branch to Portreath provided a second outlet. The line from Tresavean is described in all the histories as crossing the Wheal Buller branch of the Redruth & Chasewater on the level without interchange facilities. (It continued to appear on One-inch maps, as a Great Western branch line, up to, and including, New Popular Sheet 190, published in 1946). The sketch maps below show clearly how OS XXXI got it wrong. In fact this mistake was not put right until the area was resurveyed on the six-inch scale for the 1:10560 map, and the correct layout first appeared at 1" scale on New Series sheet 352. States of sheet XXXI show the Wheal Buller branch as ending in a loop. No such loop is mentioned in the histories, and in sheet 352 the branch extends nearly three-quarters of a mile further west and no loop is shown. It seems useless to speculate on how such mistakes arose.

Railways as shown on Old Series Sheet XXXI
Electrotype 1888 and all previous states
show this error.



Railways as shown on New Series
Sheet 352 1894



These diagrams are not drawn to scale.

Reference

Barton, D.B., The Redruth and Chasewater Railway 1824-1915. Revised edition, Truro, D. Bradford Barton 1966, Reprinted 1978.

LETTERS TO THE EDITOR

Dear Sir,

Could I suggest a few subjects for the shorter articles that you hope may become a regular occurrence in "Sheetlines". I would certainly welcome some notes of a practical nature dealing with the day-to-day problems associated with collecting maps e.g.

- a reliable repair method for torn paper and cloth maps
- a safe way of removing the patina of ingrained dust that sometimes obscures the cover of an old map (a 'plastic' rubber appears to do a good job but perhaps there is a better way)
- a design for a lightweight box that will store a complete set of 1" seventh series
- what information should be included in a database and are there any pitfalls to avoid.

I am sure there are many practical tips that the more experienced collectors could pass on.

Yours sincerely,

Karol Gorny (Mr.) Letchworth, Herts. 9 August 1989.

CHARLES CLOSE SOCIETY NEWS

Acquisitions The Society has this year acquired from OS the following series of diagrams to the progress of the 1/2500 resurvey and/or overhaul:

- 1 Two folios covering Scotland: a set of the 7th series outline maps, top and bottom margins somewhat trimmed, and some outline sheets of the popular edition with National Grid marked-up in manuscript to show the following kinds of information:

Inter-region boundaries, boundaries of basic six-inch areas, overhaul block boundaries, 1/1250 resurvey areas, control points plotted for air survey areas or taken up for chain survey, air survey completed or chain survey completed, chain survey plotting completed (resurvey area etc.), by-passed plans, detail survey/revision in hand, ditto completed, field examination - final revision in hand, ditto completed, plans forwarded to region office, plans received at field HQ, ditto forwarded to ADLS for publication. All this information is dated.
- 2 Limits of NG Basic 6"/1:10 000 Areas Master Copies, Task and Progress for England, Scotland and Wales (Except SE England). Information is plotted in ms, similar to above, on outline sheets of the fourth ed. of the quarter inch.
- 3 Field revision diagrams, one-inch record sheets: information is plotted in ms on outline ed. of New Popular one-inch with NG (provisional ed.), there are a few 7th series outline sheets. Coverage is held for the Northern Region and South Eastern Region Offices.
- 4 Diagrams to the mainly interwar revision progress for England and Wales and for Scotland. The following information is recorded in manuscript on county indexes, published in the 1930s: Date of more recent revision, later date of revision,

advanced edition (usually outline) published, normal (full drawn) edition published, provisional ed (of Normal) published, current revision traces destroyed, plans of current revision destroyed, plans now superseded by NG series, six inch scale only, manuscript copy only produced, record store copy only exists etc.

- 5 The job file for the Battle Room Map, which was initiated in August 1945, and was designed to preserve, for historical purposes, the Situation Map which hung in the G-3 War Room of the Supreme HQ Allied Expeditionary Force at the time when the German delegates signed the capitulation at Reims. It was printed by OS.

These documents may be consulted, by prior arrangement, at the home of the Hon. Secretary, 16 Hertford Road, Tewin, Herts.

Yolande Hodson.

The OS Bicentenary 1991

The Society will be celebrating this event by mounting an exhibition in the House of the Royal Geographic Society, Kensington Gore, London. The duration of the exhibition has yet to be agreed, but it will probably run for about three months from July to October 1991.

Theme The theme of the exhibition will be the history and development of the one-inch map. This scale of map has been the major interface between the OS and the public throughout most of the last 200 years, and still survives today in several tourist maps although as these are overhauled the old Seventh Series One-Inch base material is being progressively replaced by photographic reductions from the Second Series 1:50,000 (as has been done for the Lake District and North York Moors). We feel that this aspect of OS cartography most closely reflects the interests of the majority of CCS members, and allows enormous scope for diversity within a coherent theme. Our aim is to produce a colourful, eye-catching show which will appeal to the 'man in the street', and therefore the display of related ephemera and experimental material will be a special feature of the exhibition. Exhibitions themselves are, of course, ephemeral; we wish to ensure a more permanent place for ours by producing an attractive catalogue.

Exhibits Many of the exhibits will be drawn from the collections of the RGS, but in order to make this exhibition truly representative of the CCS, we should like to involve as many members as possible by asking you to search your own collections for suitable material. You may, for example, have the earliest known state of the ten-mile index to the one-inch (anyone who can produce one for ca 1817-20 gets a special prize from me!). Original artwork, publicity leaflets, unusual printings of standard sheets, surveyors' instructions, and anything that you think is special, all merit consideration.

Expertise Exhibitions are expensive events to stage, and we are very fortunate to have support from the Ordnance Survey. However, we should be delighted to hear from any member who has any money and/or relevant skills and the free time to apply them.

Timetable By the time this issue of Sheetlines appears, there will be only about 21 months in which to accomplish what is an ambitious undertaking for this Society. We wish to finalise the list of exhibits by the end of this year, so please could you send any suggestions you may have to the Secretary by OCTOBER 20.

Title A title for the exhibition has not yet been decided. Members are invited to bend their minds to the problem and come up with a snappy solution.

More updates on the progress of the project will be given in future issues of Sheetlines. In the meantime, any member is most welcome to contact me for further information.

Yo Hodson.

CCS Visit to Lympne Castle

A group of CCS members led by Richard Oliver visited Lympne Castle, the home of Mr. & Mrs. H. Margary, on 15 April 1989. They were welcomed on arrival by Harry Margary who gave a short introductory talk on the history of the castle before taking them in small groups to see the photographic facilities he has set up in order to produce the master negatives for Margary reprints of the Old Series One-Inch map and for his other reproductions of engraved maps. These facilities impress the visitor as a blend of a photographic museum and something out of the works of Heath Robinson. His process camera was produced by Hunter Penrose about 1900 but the copyboard is all Harry Margary, designed so that large maps that cannot be accommodated on one negative can be photographed in four sections. (An associated Margary device permits plates in atlases to be held flat without risk of breaking the binding.) It would no longer be possible to obtain glass photographic plates for the work so that Kodalith roll film must be used, mounted on top of a glass plate in what is in effect a very large dark slide. For printing from the negative an ingenious printing down frame has been constructed in a stairwell permitting the use of a distant light source, thus minimising the effects of parallax and so helping to preserve the very fine detail of the original engraver's work. In all this work development times are extremely critical and original maps are not removed from the camera copyboard until processing is complete and the resulting negative judged satisfactory.

Following these demonstrations Richard Oliver talked to the group on current progress with the Old Series project with particular reference to the cartobibliographical work on Volumes 7 and 8/9 (combined) which he is undertaking in succession to Dr. & Mrs. Manterfield, which we hope will be the subject of an article in a future issue of Sheetlines. This produced a lively discussion.

All who took part will be very grateful to Harry Margary and Richard for arranging this visit. We must hope that Harry will receive all the support he needs to bring his splendid project to early completion.

Annual General Meeting - 13 May 1989

Ian Mumford on Sir Henry James

The Society's Annual General Meeting for 1989 was held by courtesy of Professor David Rhind in the Department of Geography, Birkbeck College. A full report of the formal proceedings will appear in a subsequent issue of Sheetlines but as in previous years these were followed by a most successful members' map market and by a talk by an authority on a topic of interest to many members. This year's talk, on the career of Sir Henry James (DGOS 1854 - 1875), was given by Ian Mumford under the title "Never on Half Pay".

James was a very forthright character who survived enquiries by at least 6 Royal Commissions or Parliamentary Committees during his 21 years in office (Ian commented that while he always gave his evidence first he usually managed to have the last word). During most of this period he also served as Director of the Topographical Department of the War Office. His self esteem is reflected in the initials "HJ" rather than "VR" displayed on a contemporary OS building at London Road, Southampton. Inevitably such a strong personality generated hostility from some, both within and without the Survey, and some of his critics have felt that he was all too ready to take credit properly due to members of his staff, notably to Alexander Clarke. It is also evident in retrospect that James' bold drive to introduce technical innovations (reflected for posterity in the first edition of Methods and Processes,

1875) was not matched by administrative effectiveness. The shortcomings of the Topographical Department W.O. under his regime, for example its failure to collect foreign maps, were to be criticised in a report by Captain Wilson. Nevertheless Ian saw James characteristically as a Victorian Captain of Industry. It is unfortunate, therefore, that he has never been the subject of a full length biography, apparently because of the lack of material, while he received very meagre treatment in contemporary obituaries. Some unpublished material is preserved in Dublin including a private memoir by Cameron. Arthur Hinks was working on some aspects of James' career shortly before his own death but none of his relevant papers appear to have survived. CCS members must hope that Ian himself will soon feel that his researches have reached a point where his findings could be safely committed to print for the benefit of a wider audience than that which could attend a fascinating meeting.

CONFERENCES AND EVENTS

Thirteenth International Conference on The History of Cartography Amsterdam and The Hague 26 June - 1 July 1989.

190 participants from 25 countries attended this conference, which was organised by the Netherlands Society for Cartography in collaboration with the International Society for Cartography. (32 of the participants were from the U.K.).

All proceedings were conducted in English which, while it undoubtedly contributed to the remarkably smooth running of sessions, led to the absence of all but a handful of representatives from Francophone countries. Apart from one day's session at The Hague, devoted to cartography as an element of colonial administration, all technical sessions were held in the Aula of the University of Amsterdam (which, built as a Lutheran Church, was notable for its excellent accoustics). In addition, participants visited no less than five exhibitions of maps and charts. For the writer the most remarkable exhibit was a siege plan of 1622 showing spot heights above the level of high tides in calm weather.

While conferences in this series are concerned with mapping of all (or any) parts of the world, inevitably the mapping of the host country (and its former colonies) will attract particular attention. Official topographic mapping of the Netherlands is the responsibility of a military department, the "Topografische Dienst", which while not quite as old as our own Ordnance Survey can trace its roots back to the Napoleonic Wars. It has recently been banished from its old headquarters in Delft to the remote town of Emmen on the German border, in consequence of Government policy for creating employment in disadvantaged areas. What was most surprising is that it has no national network of sales agents, those needing maps being expected to write or visit Emmen. (Indeed it seemed that it was as easy to buy a British OS map in Amsterdam as one of the excellent productions of the Dutch national survey). The TD has, however, gone into a co-operative programme with a leading commercial publisher who has issued a four volume 1:50,000 scale atlas covering the whole country and is in progress of publishing 1:25,000 scale atlases for the individual provinces. The quality of reproduction was very much better than that of all too many OSGB joint publications but it was evident that not all the basic map material was as up to date as atlas publication dates implied so a new road, or railway, (yes, they do have some new railways in the Netherlands) could vanish when you turned over from one page to another.

All in all this was a very enjoyable and very well organised event catering for a very wide range of interests including those of lovers of vintage trams. The fourteenth conference in this series is to be held in Sweden, at Uppsala and Stockholm, 14 - 19 June 1991. Those wishing to receive the First Circular, in April 1990, should send their names and addresses to:

The Organising Committee, The History of Cartography Conference,
Royal Military Archives, S - 11588 Stockholm, Sweden.

'Mapping the Nations' 1991

The 15th International Cartographic Conference and the 9th General Assembly of the International Cartographic Association is to be held at Bournemouth 23 September - 1 October 1991. Conference themes are to include the History of Cartography, Marketing topographical data and maps and National mapping organisations in the 1990s. Among the exhibitions to be mounted will be an International Exhibition of Maps and Atlases from ICA member countries and a National Exhibition of Mapping in the United Kingdom. Both of these exhibitions will be open to members of the general public. Those wishing to receive further information should seek a copy of the preliminary programme and advanced registration form from:

Conference Services Ltd.,
Congress House,
55 New Cavendish Street,
London W1M 7RE.

REVIEW

Ordnance Survey Touring Map & Guide 3: Lake District showing the National Park, where to go, what to see. Southampton, Ordnance Survey 1987 Scale 1:63,360 Map 77 x 91 cm on sheet 83 x 102 cm with tourist guide (undated) printed on reverse. The latter incorporates 5 small inset maps at a scale of about 1:250,000. ISBN 0-319-24506-3. Price £2.95.

The Lake District, one of the most popular of OS's One-Inch tourist series, has reappeared after a thorough overhaul, the thoroughness of which has been acknowledged by giving the new issue on "A" edition designation. The Seventh Series base has been replaced by one derived from the Second Series 1:50,000 bringing with it metric contours and spot heights. (One suspects that while the greater precision provided by such contours will be appreciated by hill walkers, they will be none too happy to lose familiar summit heights in feet). Once users have mastered the folds they will find the equivalent of a short guidebook to The Lakes printed on the reverse which is illustrated with colour photographs and five extracts from the 1:250,000 Routemaster series illustrating, for example, places associated with Wordsworth or the Beatrix Potter country. It also provides lists of useful addresses of tourist information offices etc etc.

Relief representation follows the style of the previous edition, that is contours are supplemented by two layers, green for low ground and orangy brown for high, as well as by very generalised oblique hill shading. It is evident that in both cases existing plates were used, presumably for the sake of economy. Unfortunately layer masks cut to the (former) 500 foot contour do not fit precisely its 150 metre successor giving the appearance of misregistration in some areas. The old hill shading plate, which also gives the appearance of not matching the new contours in some places, has been printed very heavily, almost completely obscuring the contours on, for example, the eastern slopes of Scafell Pike. Would OS have done better to have dropped the shading and provided some more layers cut to match the new contour plate?

A range of features adjudged of tourist interest, from information centres to danger areas, are represented by maroon symbols or text. Least happy is the overprinting of dense maroon blobs of "selected places of interest" which are in consequence barely legible. Prominent tree symbols have been added to the more extensive wooded areas which serve to make the larger plantings of conifers particularly uninviting to the visitor. In any case the prominence given to such wooded areas tends to "kill" the relief. Clearly this is a situation when the mapmaker has to decide which feature is most relevant to most users. This reviewer judges that OS decided that most maps would be sold to motorised visitors spending one or two weeks

holiday in the area who would need to quickly identify car parks and tourist "honey pots" but were unlikely to wander very far from a made road (serious hill walkers are expected to use a 1:25,000 "Outdoor Leisure Map"). After two weeks folding and refolding in confined car or on windy hillside to make full use of all the information offered, the map could be reduced to tatters. (If its owners return next year they can always buy the A1 edition?). Nevertheless a map which contains the same basic information, and some more, for a larger area of country than 1:50,000 Sheet 90, while selling for 20 pence less, must be good value. Sentimentalists can take comfort that OS decision to overhaul and re-issue such maps must surely guarantee the survival of some "- inch to the mile" maps into the Twenty First Century even though we may then have forgotten that Scafell Pike stands 3,206 feet above the sea.

PUBLICATIONS

The British Library Catalogue of Cartographic Materials: Accessions since 1975

Librarians and readers who rely on the BL's published catalogue as one of the master records of maps, atlases and related materials extant have found themselves increasingly handicapped by their lack of information on material catalogued since the publication of the last supplement. The Library has now announced first publication, on microfiche, of 11,500 records in MARC format of post 1975 accessions. The catalogue is organised in 3 sections:

Geographic names - a single alphabet sequence using BL Map Library headings

Names/titles - a single sequence

Subjects - reference works, books and serials relating to all aspects of cartography.

Fiche will be updated regularly. A complete set covering Accessions 1975-1988 is on sale for £50 from:

The British Library,
Publications Sales Unit,
Boston Spa, Wetherby,
West Yorkshire LS23 7BQ.

Those requiring a hard-copy may purchase a three volume set, price £360. (Orders and enquiries to Nigel Hope, Bowker-Saur Ltd, c/o Butterworths, Borough Green, Sevenoaks, Kent TN15 8PH.)

The Ordnance Survey One-Inch Map of England and Wales. Third Edition (Large Sheet Series). A Map Study Monograph by Guy Messenger. Charles Close Society 1988.

A four page leaflet of additions and corrections to this Monograph (A5 size) has been prepared and copies were available free of charge at the Annual General Meeting. The author will post a copy to anyone who missed the AGM who sends him a suitably stamped and addressed envelope.

K.G. Messenger, 5 Wheatley Avenue, Uppingham, Rutland, Leicestershire LE15 9SN.
(Uppingham (0572) 823313)

OS Bicentenary Publications 1991

It appears from a note in OS News 96 that Ordnance Survey has a number of interesting publications planned for bicentenary year. These include special editions of OS maps for Sheffield and Southampton, and possibly other places, the sale of full boxed sets of the Seventh Series One-Inch map and a hardback popular history of some 200

pages. In addition, it is proposed to produce a cheap soft cover booklet giving a condensed history in pictures.

Tim Nicholson. The Ordnance Survey and Smaller Scale Military Maps of Britain 1854-1914. Cartographic Journal Vol 25 No 2 (December 1988) pp 109-127.

In his article Tim Nicholson describes the development of custom-made military mapping of Britain from the establishment of encampments and training areas around Aldershot in the wake of the Crimean War to the initiation of the remarkable 2½ Inch to One Mile map of East Anglia shortly before the First World War. He discusses these developments in the context of the Army's changing requirements for maps for training, exercises and manoeuvres. Nine (monochrome) illustrations display extracts of the maps themselves or examples of their covers. What will be of particular interest to many CCS members will be the five pages listing all those maps of areas in Britain and Ireland that Tim was able to trace. He has quite deliberately omitted maps at scales larger than Six-Inch to one mile also standard OS publications issued unamended for military use. Maps produced by private publishers for the military market (such as the Bartholomew Half Inch sheets of the Aldershot and London areas) are discussed but not listed. What is not mentioned is the reproduction of OS material by private publishers for military use, for example the Two-Inch Manoeuvre Map of Delamere Forest, Cheshire, enlarged from the contemporary OS One-Inch map and printed by Bartholomew about 1906, apparently for the use of Western Command. Tim's research has revealed a wealth of material that has hitherto received but little attention but clearly many byways still remain to be explored.

NOTES AND QUERIES

The End of "Conventional" Large Scale Plan Production

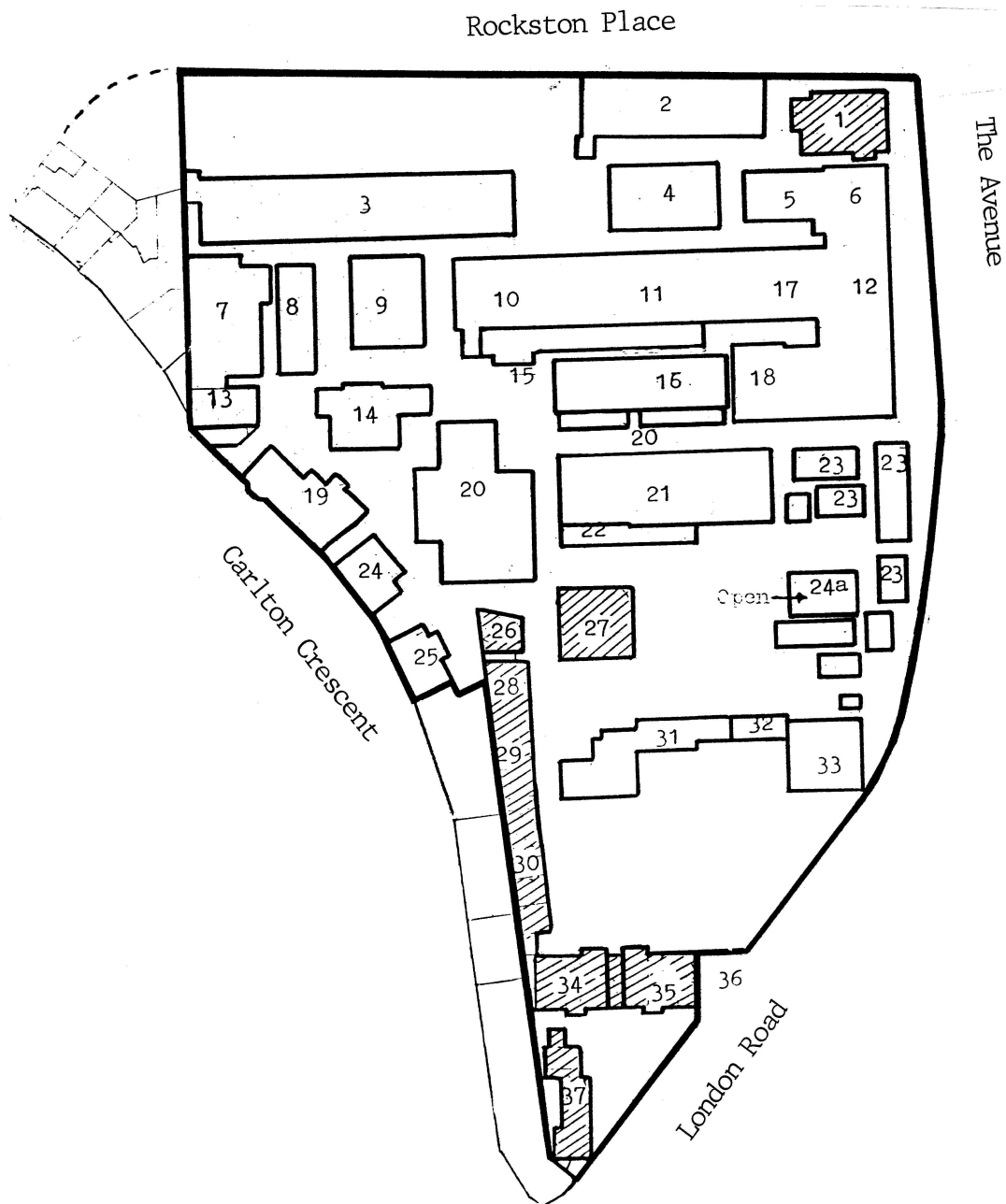
OS News No 97 records that with the printing on 17 May 1989 of OS 1:2500 plan TL 4096-4196 (March, Cambridgeshire) all production of new large scale plans by "conventional" (i.e. non-digital) methods ceased. It must be presumed that manually scribed sheets of some of the less rapidly changing areas of the country will remain current for quite a few years to come. Nevertheless a technology which represented a revolution in map making thirty or so years ago may soon join copperplate engraving and drawing on enamel as a technique only to be seen in museum displays.

"Reminiscences of mapping before the computer"

The editorial of Sheetlines 24 contained a plea for the recording of the memories of the older generation before they are lost to us. A good example of what can be done is a two page note by Mr. D. Hobbs, titled as above, which appeared in the June 1989 issue of the Cartographic Journal. Mr. Hobbs joined Ordnance Survey's South Kensington office in 1947 and was to work on the (then) new 1:1250 series. His tutor there had the saying that "a map is only as up-to-date as the moment the Ordnance Surveyor climbs on his bike and cycles away from the surveyed area."

Royal Geographical Society's Map Room

Readers will be pleased that the apparent threat to the service to the public provided by the RGS Map Room, which was the subject of the final paragraph of the Editorial in Sheetlines 24, has receded. However in times when "savings" and "economies" continue to be the watchwords in all branches of Government, complacency would be misplaced.

Ordnance Survey, London Road, Southampton, 1953

The disposition of offices between those sections of OS Headquarters remaining on its pre-war site at London Road was as follows:

<u>Basement</u>	<u>Ground floor</u>	<u>First floor</u>	<u>Second floor</u>
1 -	Ordnance House (formerly the DG's House) Areas	Areas	Areas
2 -	Staff canteen	-	-
3 -	North-west Block Planning, Investigation, Record Store, Photo Drawing	Large Scale Drg Office 2	LSD 1 Photo Studio

<u>Basement</u>	<u>Ground floor</u>	<u>First floor</u>	<u>Second floor</u>
4 -	'Q' Store Studio	Drawing School	-
5 -	Graining room	-	-
6 -	-	Areas	-
7 -	Workshops	-	-
8 -	West Block LSD2	LSD1	LSD3
9 -	Studio	Studio, LSD1	-
10 -	'ZP' Building Impression Exam	LSD1	'Crows Nest' 'Ladies' Rest Room
11 -	Printing	LSD3	-
12 -	Proving	Record Store	-
13 -	Stores	-	-
14 -	'R' Building Opticians, Photo Lettering Control (of work)	Opticians, Repayments, Control	-
15 -	Field Section	-	-
16 -	'Electro' Building Helio	Helio	-
17 -	Paper Store	Directors	-
18 -	Helio	Helio	-
19 Store, Establishments	Examination (of work)	Examination	Examination
20 Jubilee Block Stores	Stores, Record Store	Record Store	LSD5
21 -	Negative Store	-	-
22 -	Air-raid shelter	-	-
23 TA Huts	TA Huts	-	-
24a -	Fuel store (open)	-	-
24 Establishments	Areas, Establishments	Areas	-
25 Establishments	Security	Security	-
26 -	Stores	-	-
27 West Pavilion Stores	Boundaries	Boundaries	-
28 -	Boundaries	Boundaries	-
29 Western Range	Establishments	Stores	-
30 -	Stores	Large-scales HQ	-
31 South Range Stores	Car Park	-	-
32 Stores	Helio	-	-
33 Stores	LSD4	LSD4	-

<u>Basement</u>	<u>Ground floor</u>	<u>First floor</u>	<u>Second floor</u>
34 (and 35) Barrack Block Stores	Stores	-	-
35 Stores	Finance, Gate porters & Night watch	-	-
36 -	Main Gate	-	-
37 -	Finance	Finance	-

In addition to these, there was a mezzanine floor located at 17 which offered further accommodation for Directors and Large-scales headquarters.

There was also a detached office at the Bargate, about a mile to the south of the front gate: this housed the Land Registration section.

Small-scales mapping was carried out at Maybush (or Crabwood, as it was then known), about 2 miles north-west of London Road; and there was a field survey school in the Highfield area.

Within the London Road complex, other activities too numerous to list (staff restaurant, committee rooms, wine stores, rest rooms, store rooms, social club, dark room, works, machine rooms, etc) occupied offices in odd corners. An examiner, for instance, had a tiny office to himself in the Carlton Crescent block of converted Georgian houses. He claims to have labelled his door 'Broom Cupboard' and to have gone undetected for several years. The story is probably apocryphal.

The site is now occupied by a new-built Courts of Justice, most of the old Ordnance Survey offices having been demolished to make way for the handsome new, but complicated-looking complex. Those of the original buildings which are still standing are shaded in the plan layout.

John Paddy Browne

A Map Users' "Which"?

The August number of the Geographical Magazine contains an illustrated article by Dr Seppe Cassettari, of Kingston Polytechnic, entitled "Scaling the Heights" in which he offers an assessment complete with star ratings of the topographical maps of Europe. National series, particularly those at 1:50,000, are rated from one to five stars. OSGB earns four stars: the higher degree of generalisation, as compared with, say, Dutch or Swiss maps, seems to be Cassettari's main reason for denying it the top mark. (He includes in his description of British maps the curious statement that "The 1:25,000 ... superseded the old two-and-a-half inch to the mile scale" !). All in all an interesting and thought provoking piece but it is a pity that he has not taken account of ease of availability to the general public (here, at least, OSGB would win a star back from the Dutch).

FUTURE MEETINGS

Saturday
14 October Southampton. 10.30 for 11.00 am. Ordnance Survey, Romsey Road, Maybush, Southampton. Visit to OS HQ to see the new exhibition area and library. The announcement of, and the presentation to the winner of the Logo competition will be made at this meeting. The meeting will finish in the early afternoon; luncheon will be taken at a nearby hostelry. In order to comply with OS security regulations, would those who wish to attend please notify the Hon. Sec. (The date for this meeting was given at the AGM as 7 Oct., but had to be changed to 14 Oct.)

9 to 11 November Ninth Edinburgh 3 Day Cartographic Event. The times and venues for the BCS part of the weekend were not available at the time of going to press, but the proposed meetings are as follows:

Thurs. 9 Nov. pm Lecture on Geographical Information Systems.

Fri. 10 Nov. am CARTONET session; Edinburgh University Library, parallel session on GIS.

Fri. 10 Nov. pm Visit to British Coal to see a project to create a database from mining/shafts/pits shown on OS County Series 1:2500 mapping (all editions) which have been incorporated on one master plan (per sheet number) which will then be digitised into a vast database. (OS Nat Grid co-ordinates for sheet corners have been purchased from OS).

Friday
10 November Evening. At NLS Causewayside: the publishing launch, by Map Collector Publications, of Dr Jeffrey Stone's book on Timothy Pont.

Saturday
11 November 10.30 for 11.00 am - 1.00 pm. CCS visit to the British Geological Survey, Murchison House, West Mains Road, Edinburgh, EH9 3LA.

Further details of times and places may be obtained from the Hon. Sec. in October. In order to comply with security regulations, please would you inform the Hon. Secretary, Mrs Yolande Hodson (address below) if you wish to attend.

Wednesday
29 November London. 6.30 pm at the Royal Geographical Society, Kensington Gore, SW7. The EGR Taylor Lecture by Dr Chris Board: 'Do we need a National Atlas?'. A joint meeting with the RGS, the Royal Institute of Navigation and the Hakluyt Society.

THE CHARLES CLOSE SOCIETY for the study of Ordnance Survey maps is open to all at annual subscription of £5.00 (UK) for individual members, or £7.50 for family, corporate or overseas members, which falls due for renewal on 1 March of each year. Remittance (Sterling please) to the Membership Secretary.

Sheetlines Editor

C. Ian M. O'Brien
1B, Eastway,
Epsom,
Surrey,
KT19 8SG.

Membership Secretary

Dr Karen S. Cook
66, Compton Road,
Winchmore Hill,
London N21 3NS.

Society Secretary

Mrs Yolande Hodson
16, Hertford Road,
Tewin,
Herts,
AL60JY.