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“The Lightning Cities and Road Map  
Company Limited”

*Roger Hellyer*

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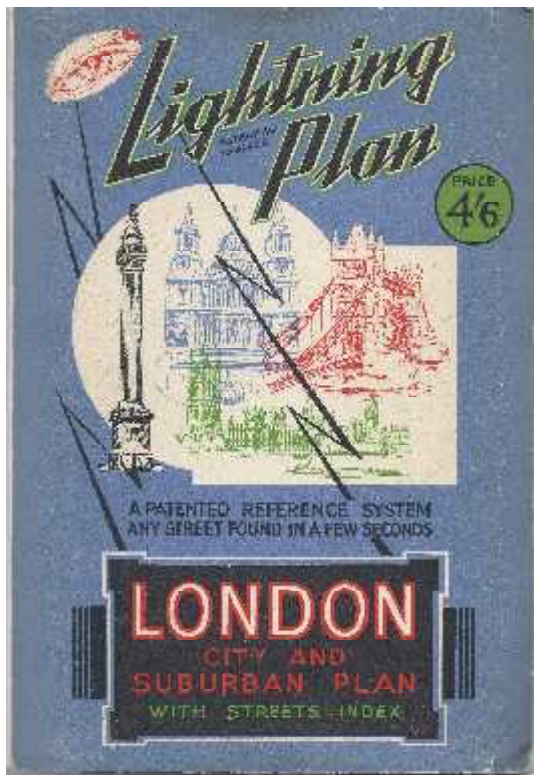
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The Charles Close Society was founded in 1980 to bring together all those with an interest in the maps and history of the Ordnance Survey of Great Britain and its counterparts in the island of Ireland. The Society takes its name from Colonel Sir Charles Arden-Close, OS Director General from 1911 to 1922, and initiator of many of the maps now sought after by collectors.

The Society publishes a wide range of books and booklets on historic OS map series and its journal, *Sheetlines*, is recognised internationally for its specialist articles on Ordnance Survey-related topics.



## ***The Lightning Cities and Road Map Company Limited***

***Roger Hellyer***

### ***1. The County of London map***

In his article about GSGS 3786 1:20,000 *County of London* in the 1995 *London Topographical Record*,<sup>1</sup> Christopher Board described the origins and purpose of this 1926 map, and the steps that led to its successors as the Ordnance Survey's "3-inch" map of 1933, the Lightning Plan of 1934, and on to the continued use of the mapping during the Second World War. On the British side this was as the London sheets of GSGS 3906 1:25,000 Great Britain,<sup>2</sup> and on

the German the 1:20,000 *Militärgeographisches Stadtplan von London*. It is ironic that, had Board written the piece a few months later, he could have included in his discussion GSGS 3786A, the same 1926 map with a secret overprint "showing vulnerable points, magazines, police and fire stations, etc",<sup>3</sup> which was available for official use during the General Strike. At the time he was writing all copies were thought to have been destroyed, following instructions to do so in 1933, but only weeks later a copy was released to the safe keeping of the British Library.<sup>4</sup> Board quickly remedied the matter of the secret overprint with a report on it in *Sheetlines* 43,<sup>5</sup> where he investigated the nature of the sites involved, and noted the overprint colours as blue, green and brown.

The 1926 map was prepared by M.I.4 and drawn and printed by the Ordnance Survey at Southampton, with gridded proof copies printed as early as 1924.<sup>6</sup> Its two sheets were in seven colours – black outline, red for railways, tram routes and the County of London boundary, yellow main roads, screened green parkland, blue water with a continuous tone blue infill, and purple grid. The magnetic variation date remained 1924. The specification was notably different from the 1:20,000 topographical map of the country currently in production, GSGS 2748, which was in four colours only – black outline and grid, blue water, brown contours and red grid values. There was no indication of heights on the

<sup>1</sup> Christopher Board, 'The secret map of the County of London, 1926, and its sequels', *London Topographical Record* 27 (1995), 257-280.

<sup>2</sup> GSGS 3906, sheets 56/18 NW, 56/18 NE, 56/20 SW, 56/20 SE.

<sup>3</sup> *Intelligence Division War Office catalogue of maps*, reference 310, 11 March 1926, now in The National Archives (TNA) at WO 408/38. The catalogue was classified 'Confidential'.

<sup>4</sup> The British Library copy is at Maps CC.5A.170; they now hold a second copy at Maps MOD GSGS 3786a, transferred as part of the Ministry of Defence Superseded Collection. An Ansell fold copy without the secret overprint is at Maps 60.d.52.

<sup>5</sup> Christopher Board, 'The three-inch map of London, and its predecessors of 1926', *Sheetlines* 43 (1995), 48-50. Board went on to make further observations on the subject in "The really secret map of London is re-discovered", *London Topographical Society Newsletter* 44 (May 1997), 3-4.

<sup>6</sup> There is a partial copy with a 1924 imprint at TNA OS 1/538, 113A.

London map, either contours or spot heights. Railways were shown by a thick solid red line, rather than the black chequer symbol. Building infill was selective. The same Egyptian font was used for the lettering of both maps. The London map was in effect a street map, with roads drawn wide enough to allow for the inclusion of street names. The accompanying gazetteer consisted of a 133-page *General Index to Streets, Public Buildings, Railway Stations, Hospitals, Theatres, Clubs and Hotels, &c.*, published by M.I.4 in February 1926, each location being supported by a six-figure grid reference,<sup>7</sup> and an appendix describing that system of reference, which was in fact a very early form of the Modified British System of the War Office Cassini Grid.<sup>8</sup>

The steps that led from the 1926 map to the “3-inch” map of London of 1933 were thoroughly explored by Board and do not require repetition here.<sup>9</sup> The newly revised map was published in four sheets, each with the print code 6000/33. The scale was of course different, with the metric 1:20,000 replaced by the imperial 1:21,120, and the metric purple military grid by the yard grid then in vogue, with grid lines in red 1,000 yards apart. Its sheet lines were set just within those of its predecessor. There were several changes in specification. The number of colours was reduced from seven to six, with the loss of the purple grid and just one blue water plate and the introduction of the colour grey for railways and tram routes, though railway names and stations were still red. Parkland was altered from screened green to solid green, and main roads from yellow to brown, the new primary routes encased by heavy black lines, their Ministry of Transport (MOT) numbers added in red. The County of London boundary was omitted. There were also security deletions, the most obvious of which was the loss of the entire Royal Arsenal site on Plumstead Marshes. The buff book-fold cover carried a circular image of St Paul’s Cathedral dominating the skyline drawn by Ellis Martin.<sup>10</sup> A list of the options was printed inside the cover of the NW sheet of the forms in which the map could be purchased: each sheet paper flat (1/-) [5p], or mounted and folded in covers (1/6d) [7½p], the four sheets mounted together in Ansell (misspelled Ansel) fold between stout rexine covers together with the gazetteer (10/-) [50p], or a presentation edition of the same in a red French Morocco Gilt Lettered Case in which space was provided for a small-scale map (15/-) [75p]. The 132-page gazetteer retained much from the 1926 printing: the setting of abbreviations and street names generally is identical, though of course with completely different six-figure grid references.

## **2. The Sanwald patents**

What at the time was an entirely unrelated incident occurred on 25 August 1925 when Karl Sanwald, of 27 Parkstrasse, Pasing, near Munich, filed an application in

<sup>7</sup> *Gazetteer to accompany the 1:20,000 map of the County of London*, London: His Majesty’s Stationery Office, 1926.

<sup>8</sup> This appendix was illustrated in Roger Hellyer, ‘Some notes on the origin of the Modified British System of the War Office Cassini Grid’, *Sheetlines* 55 (1999), 3-11.

<sup>9</sup> Board, *op cit.*, 259-264.

<sup>10</sup> The cover was illustrated in *Sheetlines* 104 (2015), 56.

Switzerland for a patent for a method of map referencing.<sup>11</sup> The border of the map would be measured off horizontally and vertically, typically into short numbered sections, and an apparatus comprising a transparent horizontal ruler on sprung sliders carrying the same means of reference as those printed around the map could be used to pinpoint any location listed in the accompanying gazetteer or street index, even on a double sided map. Sanwald went on to apply for similar patents in France and Germany.<sup>12</sup> The earliest map traced so far designed to be compatible with this device was the ca 1:27,000 *Sanwald-Plan Berlin*, published in 1926.<sup>13</sup> Following this Sanwald plans are recorded for Bochum,<sup>14</sup> Düsseldorf, Garmisch-Partenkirchen, Hamburg, Herne, Kissingen, Landshut mit Achdorf und Berg ob Landshut, München, Stuttgart and Würzburg, as well as the *Auto-Strassen-Karte Sanwald* at scale 1:300,000 in twenty sheets, 1934.<sup>15</sup> Publication dates were haphazardly applied to these maps, but apparently new titles continued to appear until about 1936. Street or place name indexes formed an integral part of each publication.

Sanwald continued to develop his ideas and in 1932, in the name Else Sanwald,<sup>16</sup> he applied for a patent in the United States of America for a far less cumbersome method which involved a combination of map folding and referencing.<sup>17</sup> The fold was hardly new, being described as zig-zag – we might prefer concertina (for instance Michelin maps had long been folded in this way, as later was the Ordnance Survey Fourth Edition quarter-inch map), but the related method of map referencing was the feature essential to the patent. This constituted the same numbered sections to about half an inch in width around the completely assembled map. It had always been straightforward to add eastings in the top and bottom borders of a map, but southings similarly located instantly disappeared once the map was turned over to the next section. Sanwald patented a way to overcome this, by printing the southing values on the end card covers of the map, the width of which would be slightly greater than the map sections so allowing those values always to be visible wherever the map was folded. The claim was that any place named in the index could be found on the map in seconds by means of the combination of its southing and easting values.

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<sup>11</sup> Patent No. 115,728 for a *Suchereinrichtung an Landkarten, Stadtplänen und dergleichen*: the application filed 25 August 1925, patented 1 July 1926.

<sup>12</sup> French patent No. 603,449 application filed 21 September 1925, patented 15 April 1926; German patent No. 464,297 application filed 9 January 1928, patented 14 August 1928.

<sup>13</sup> There is a copy in the Staatsbibliothek zu Berlin Preussischer Kulturbesitz, at Kart. 19016. It may also be viewed online at [test.berliner-stadtplanarchiv.de](http://test.berliner-stadtplanarchiv.de) by clicking the time bar at 1926.

<sup>14</sup> There is a copy in the Bodleian Library, Oxford, at C22:45 Bochum (3) – so far the only copy of a Sanwald map the writer has traced in the United Kingdom. The street index to this map is on the reverse side.

<sup>15</sup> There is a copy in the Deutsche Nationalbibliothek, Leipzig / Frankfurt am Main.

<sup>16</sup> The writer has been unable to confirm that Karl and Else were husband and wife.

<sup>17</sup> Patent No. 1,921,332 for a *Zig-zag folding map*: the application filed 15 July 1932, patented 8 August 1933.

Sanwald followed this with successful applications for similar patents in Great Britain, Austria and Canada.<sup>18</sup> This writer has no information as to whether the patent rights were ever taken up elsewhere, but in Great Britain they were purchased by Mr Koenig and Mrs Rawson, as co-directors of The Lightning Cities and Road Map Company Limited, with offices in Halton House, 20-23 Holborn, London EC1, their aim being to market maps using the zig-zag fold and the associated reference system as “Lightning” maps and plans.

### **3. *Lightning Cities and the Ordnance Survey***

The patent is central to the next chapter in the history of the Ordnance Survey’s “3-inch” map of London, which had been published in July 1933, the Survey’s intention being to follow it with revised editions. But while by late 1934 the folded versions of the map had sold well enough, the flat sheets had not, and they could not justify publishing a revised edition until they had reduced the stock of an already obsolescent first printing. Even before it was published, the map had received more than its fair share of criticism both within the Survey and outside,<sup>19</sup> but that hardly seems sufficient reason for the Ordnance Survey then to approve a revised version of the map put out by another publisher, and in the process largely destroy the market for their own. But such was the case. We first learn of this from correspondence with Waterlow & Sons Ltd, the commercial printers notable for their supply of bank notes and postage stamps, in the final week of October 1934.<sup>20</sup> This prompted a memorandum from Martin Hotine (O.Maps) to the Executive Officer on 3 November,<sup>21</sup> which reported that Waterlow’s were to put on sale a revised version of the OS map “in facsimile”, folded, cased and with a gazetteer at a price (3/- [15p], corrected in another hand to 3/6d [17½p])<sup>22</sup> which undercut even that of their own paper flat version. He recommended withdrawing the OS map since, although the Survey were not the publisher of the more up-to-date Waterlow map, “we have connived at its publication and if he knows his business he will certainly advertise the fact that it is an O.S. map. If we continue selling our own map in the hope of catching a few fools who are prepared to pay double for a superseded map, we are certain to arouse a storm of criticism from anyone who finds out about it afterwards”.<sup>23</sup> Hotine went on to write that “if Waterlow’s map flops – as it may owing to its

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<sup>18</sup> The application in Great Britain was under Else’s name: patent No. 394,936 for *Improvements in folding maps*: the application filed 11 March 1933, complete accepted 6 July 1933. It was under Karl’s name in Austria (No. 136,351, patented 25 January 1934), and Else’s in Canada (No. 359,863, patented 18 August 1936). Perhaps Else had better command of the English language.

<sup>19</sup> Board, *op cit.*, 264.

<sup>20</sup> Reference to five letters between RC Slacke at Waterlow’s and the Ordnance Survey are listed in TNA OS 1/338, minutes 61 to 65: the texts are no longer on file.

<sup>21</sup> TNA OS 1/338, minute 80.

<sup>22</sup> No doubt this was a notional price, which on publication had risen to 4/6d [22½p].

<sup>23</sup> There was in the event no attempt to make capital out of the fact that this was an Ordnance Survey map. The tiny marginal record of the print run, 25,000/34, was standard practice for the Ordnance Survey with any repayment service product.

unwieldy format – we can of course consider re-publication in a revised form, but there is no room on the market for both at present”. But in spite of Hotine’s protestations, Director General Winterbotham was not inclined to withdraw the map,<sup>24</sup> and sanctioned its appearance in the next edition of the small scales Description booklet.<sup>25</sup> It was still present in the 1937 edition.<sup>26</sup> Clearly sales of the map did continue, as is evident from the need to print additional covers with an “ER” royal cypher.

The puzzling thing about these documents is that, while it was Waterlow with whom the Ordnance Survey were in correspondence about the new edition, it was not to be a Waterlow publication, but that of The Lightning Cities and Road Map Company Limited, who entitled it *Lightning Plan : London City and Suburban Plan with streets index*.<sup>27</sup> The patent number 394,936 is present on the cover almost as part of the title. That it is the same map is surely unarguable when Hotine writes of the “unwieldy format” of the new publication, which, as we will see, is an apposite description of the Lightning product. But the Lightning Cities name does not appear in Ordnance Survey files, and, other than as printer of the gazetteer, Waterlow’s does not appear anywhere on the map, and as yet the author has been unable to learn what if any their relationship was with Lightning Cities. It seems that for whatever reason they were acting as an agent.



Figure 1.  
Part of central London, as depicted in the *Lightning Plan*. Note the southing values and the screened red circles added around the terminal railway stations

<sup>24</sup> TNA OS 1/338, minute 82.

<sup>25</sup> *A description of the Ordnance Survey small scale maps, 8th edition* [1935], 18-19.

<sup>26</sup> *A description of the Ordnance Survey small scale maps, 9th edition* [1937], 19.

<sup>27</sup> Advertised later as *The Lightning Plan of London & suburbs with streets index / scale, 3 inches to 1 mile / Obtainable from The Lightning Cities & Road Map Co Ltd. Halton House, 20-23 Holborn, EC1.*

The Lightning Plan of London was a revised edition of the 1933 map. 25,000 copies were printed by the Ordnance Survey in 1934 – a huge number, more than four times greater than the Survey’s own printing the year before, and most of that was still unsold. Such was Hotine’s obvious acquaintance with the product that a provisional if not a final version must have been ready in October. As to specification, the colour of the railways and tram routes, red in 1926, grey in 1933, was altered to black. There was no grid, and, with MOT road numbers deleted, all that remained on the red plate were railway names and stations, with screened red circles added around the terminal stations Waterloo, Charing Cross, Victoria, Paddington, Marylebone, Euston, St Pancras, Kings Cross, Liverpool Street and Fenchurch Street (see figure 1). There were any number of topographical changes – for instance in the north-west corner one finds the Stanmore Branch of the Metropolitan Railway open rather than under construction, and crossed by a projected extension to Kingsbury Lane, infill of several of the buildings in the Wembley Stadium complex, the alignment of the London Electric Railway altered between Brent and Hendon Central, and the North Circular Road completed between Harrow Road and Hanger Lane.

For the purposes of this map the Ordnance Survey printed the four sheets of the original “3-inch” map of London in three extended sections – the NW and NE sheet east to the Isle of Dogs, the NE sheet from the Isle of Dogs and the SW sheet to Battersea Park, and the SW sheet from Battersea Park and the SE sheet. The three were glued together to form a map which was over nine feet long, made even longer by end covers made of soft cardboard. The whole, including the covers, was folded once along the long axis, then again in concertina or zig-zag fashion into twenty sections, or eleven openings. All detail outside the neatline of the four original sheets was deleted, and replaced around the edge of the map assembled into its new format by the serially numbered reference sections of the Lightning Plan patent. These start at 1 in the north-west corner, the eastings reaching 210, the southings 43. It was clearly not of importance to the publishers for the easting sections to be the same width as the southings – the former are just over half an inch wide (perhaps to give enough space for three digit numbers) and the latter just over a centimetre. The southing values are reprinted along the outer edge of the slightly wider covers to ensure they are always visible. In the index southing values precede easting. They are also printed in a bolder font than the eastings, a nicety that dated back to Sanwald’s map of Berlin, and which was replicated in the gazetteer, the work of Waterlow & Sons Ltd, London Wall. This was affixed inside the front cover of the map, and its weight unquestionably made the format unwieldy, as Hotine had noted. Though completely reset, it was a further derivative of that of the 1926 map, which is evident from the fact that all the same abbreviations are present and all are identical. In its 59 pages there are some 21,000 entries, all more complex than the earlier versions in that area names are given for all entries, not just suburban ones, and postal district codes are added. The map cover was an expensive production in four colours, black, blue, green and red, the centre piece being a composite illustration of well-known landmarks, St Paul’s Cathedral, Tower

Bridge, Nelson's Column and the Palace of Westminster, the whole criss-crossed by zig-zag lines suggesting lightning – and at the same time perhaps an allusion to the fold of the map.<sup>28</sup> The designer was not named. On the reverse was a well considered “Diagram of map before folding to show method of joining sections”.

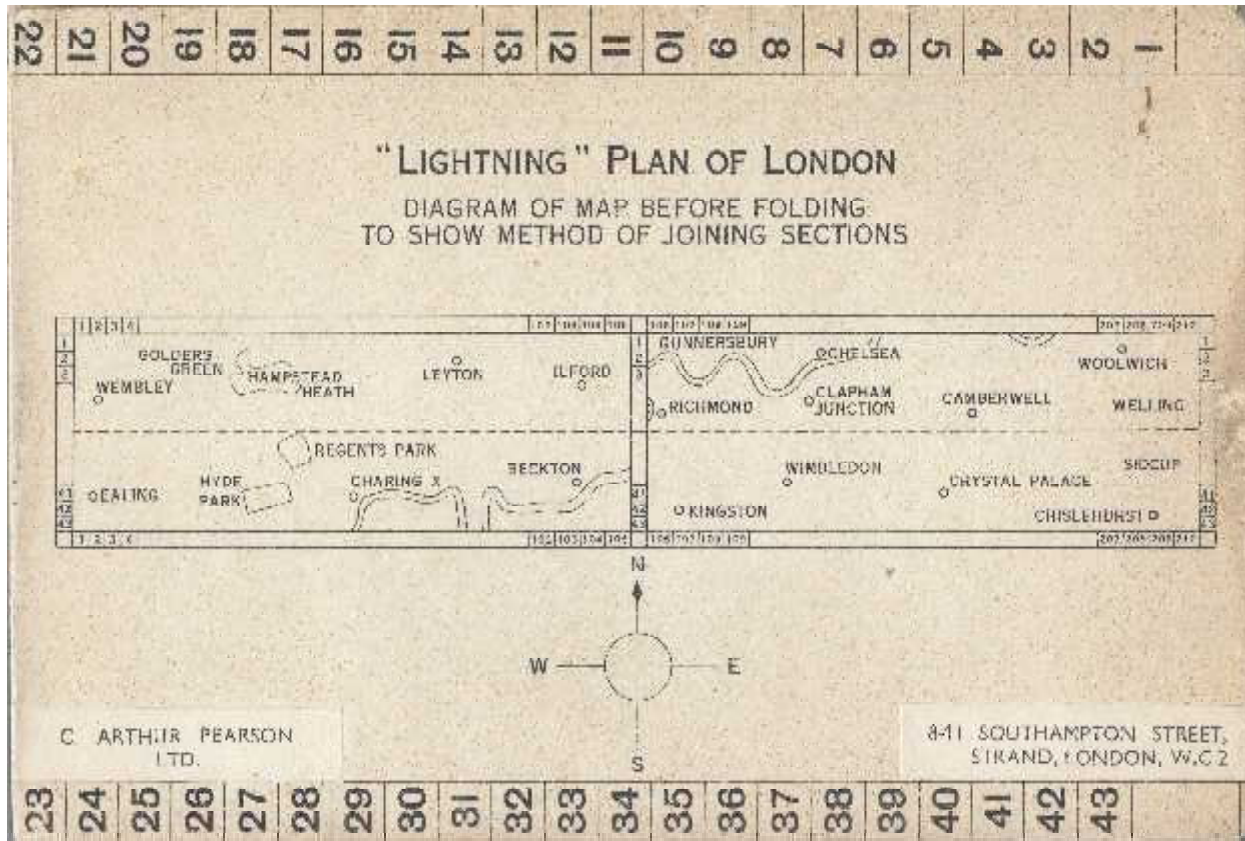


Figure 2. The back cover of the *Lightning Plan of London*, showing the edge strips containing southing values, the diagram, a compass, and, on this copy, the trade labels of C Arthur Pearson Ltd (see section 6)

#### 4. *Lightning Cities and John Bartholomew*

In order to place the later history of the *Lightning Plan of London* into context it is necessary to make a diversion into the affairs of John Bartholomew & Son Limited, Edinburgh. *Lightning Cities*, to use the abbreviated name for the company adopted by Bartholomew, certainly had grandiose aspirations. The *London Plan* itself was offered in four formats: on paper, priced 4/6d [22½p], on linen (12/6d) [62½p], on linen, dissected (15/-) [75p], and a de luxe edition, on linen, dissected, with leather bound cover blocked in gold (21/-) [£1.05]. And *Lightning Cities* had a second, yet more ambitious, project in mind in a road map of England and Wales – a map that within two years would lead to the company's ruin. The first idea appears to be what was advertised within the gazetteer of the *London Plan*: a three miles to one inch motoring map of England and Wales, to be published in June 1935 in fourteen sections priced at 3/6d [17½p] each. The publisher's puff offered seven reasons why the motoring public could not afford

<sup>28</sup> The cover was illustrated in *Sheetlines* 104 (2015), 56 and at the head of this article.



**THE "LIGHTNING" MOTORING MAP**  
OF  
**ENGLAND AND WALES**  
(2 MILL TO 1 INCH)  
**PUBLISHED IN 14 SECTIONS**

THIS new patented map will revolutionise the presentation of road and city maps throughout the country. It is indispensable to all who use the roads either for business or pleasure.

Consider the following advantages it offers :-

1. Any place can be found within a few seconds by means of the patented Double Grip Reference System. It is so simple that a child can operate it.
2. The map does not need to be opened at more than one page, but can be spread out flat if required.
3. The map is arranged so that one can travel the whole section simply by turning it over page for page.
4. A new and up-to-date Alphabetical Index is provided giving the name and location of every place shown in the map, together with a diagram of every important city and town that is included in the section.
5. On the back of the map is printed a complete plan of all the main roads throughout the country.
6. The map will last for years owing to the fact that it does not need to be opened out and thus only gets the minimum of wear.
7. Valuable assistance is given to motorists by the listing of Hotels, Garages, etc., in the area covered by the Map.

PRICE PER SECTION . **3/6**  
**TO BE PUBLISHED IN JUNE, 1935**

Obtainable from :-  
**THE LIGHTNING CITIES AND ROAD MAP CO. LTD.,**  
HALTON HOUSE, 30/31, HOLBORN, LONDON, E.C.1  
and all authorised selling agents

Figure 3. Lightning advertisement for the planned 1935 road map of England and Wales

to be without a copy (see figure 3). But what base map at this scale they had in mind is not revealed, and no such map was ever published.

Lightning Cities had met Bartholomew representatives in the Edinburgh firm's London office as early as March 1934 in order to demonstrate their patent system for indexing maps [62/768].<sup>29</sup> But it seems that their next move was to ask Waterlow's to provide them with a road map. Waterlow, not being a publisher of maps themselves, first sought to use Ordnance Survey plates, but Winterbotham ruled on 7 November that "With regard to the proposal for the printing by Waterlow of certain quarter-inch maps, I have already written to the firm telling them that I am sorry I cannot go further with that proposal".<sup>30</sup> Waterlow thus turned to Bartholomew, only to be refused on 12 December for a second time [62/859]:

Set of quarter-inch Maps.

We acknowledge receipt of your letter of 10th inst. In reply, we would inform you that we have already quoted direct for this work,

including the furnishing of printed copies. In any case, it is against our rules to supply plates of any of our copyright maps for printing by outside firms. In the circumstances we regret that it would not be possible for us to undertake the work of preparing printing plates for you for this particular piece of work.

Lightning Cities had indeed asked Bartholomew on 20 November to prepare a set of road maps for them [62/747], and were met with a positive response "..... we shall be only too pleased to let you have quotations for furnishing you with specially printed editions of any of our maps, and we shall be glad if you will kindly let us have full particulars of your requirements" [62/768]. Their interest lay in the Bartholomew quarter-inch *Automobile Map of Great Britain*, a map with

<sup>29</sup> The full references to all the Bartholomew documents quoted are listed at the end. For brevity, and in order to reduce the number of footnotes, letterbook references are recorded within the text in the form letterbook volume number/page number, e.g. [62/900].

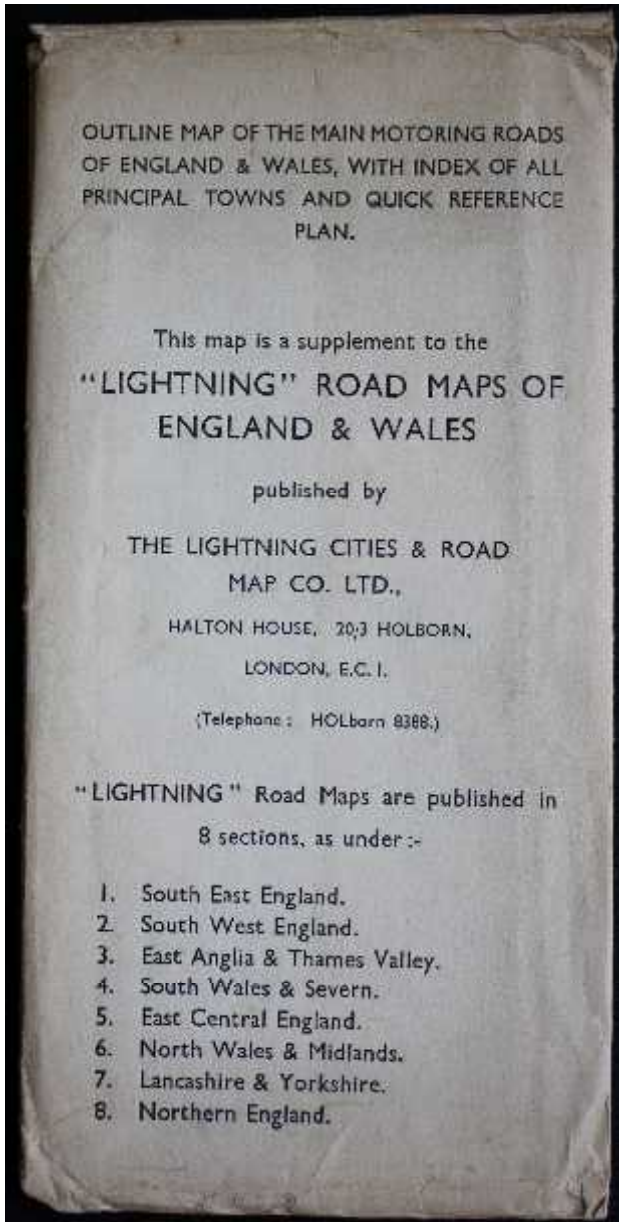
<sup>30</sup> TNA OS 1/338, minute 82.

contour colouring first published in 1929 and revised in 1933. It appears that Bartholomew were currently undertaking further revisions to the map, foremost among which was the introduction of the Ministry of Transport's own road classification. At the same time the yellow plate used for second class roads was abandoned, and replaced by red pecks. The green for layers to 500 feet used on the 1929 but not the 1933 map was reintroduced. But Lightning Cities were not interested in this five-colour map as it stood, in 23 sheets, sixteen of them covering England and Wales, because they required their map sections to be as long as possible in order to maximise the benefit of their zig-zag map fold and referencing system. Thus reassembling the England and Wales sheets in a layout of nine or ten sections was considered, which after further discussion, by dint of squeezing in several land extremities as insets, was reduced to eight measuring some 40 inches by 18½ [63/365]. The sheets were numbered from the south east, with the Bartholomew border replaced by Lightning Cities' patent system of numbered reference sections, each now precisely one centimetre wide. Each sheet was to be "folded and inserted in special covers in three printings and with two-colour advertisements" [62/790]. Formal orders were placed for 10,000 copies of sections 1 to 3 on 29 March 1935 [63/478], and of the others on 17 May [63/688].<sup>31</sup> On 14 May Lightning Cities informed Bartholomew that "we intend to issue on January 1st next year" [63/927].

However, over the coming months Lightning Cities' list of additional demands continued to grow, each adding to the cost. They requested the compilation of indexes listing every city, town, village and hamlet (but no estates or gentlemen's seats) named on each sheet [63/815]. They asked for plans of significant towns, 72 in all, to be added into these place-name indexes [63/608], which once printed mostly ran to over forty pages. Bartholomew were asked to add road mileages, which they were reluctant to do: "The required road mileages and MOT road numbers can only be done at an extra cost – we think to include both would be confusing" [63/430]. Nonetheless mileages were added in blue to join the already present road numbers, with blue circles at the end points of each section. Lightning Cities requested an outline map at twenty miles to the inch of England and Wales with a comprehensive list of place names to be printed on the reverse of each sheet. With nothing of the kind available, Bartholomew had to prepare one specially [63/375]. It was entitled "*The Lightning*" *Road Map of England and Wales*, and incorporated towns, three categories of road and county boundaries. The border carried the same style reference system as the maps, and the bottom half of each sheet was given over to an index of every place-name. They enquired about the special OS pure rag paper, only to be told that this could not be used within the price quoted [63/106]. The question of backing on Jaconet was raised [63/688], and it was later agreed to print 8,000 copies of each

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<sup>31</sup> The job number 1110 was allocated to sheets 1 to 3, and 1136 to sheets 4 to 8. These numbers appear on various documents throughout the Bartholomew Archive, ultimately to the Trade Record (Acc.10222/593), Trade 6, 1933-36, where the two numbers come together to produce a combined invoice for the eight sheets. They also appear as print codes on the maps themselves.



*Figure 4. The envelope designed for independent copies of the map of England and Wales [National Trust collection at Shaw's Corner, NT 3203319]*

sheet on paper and 2,000 cloth backed [63/767]. Three times Bartholomew asked what to do about the printing planned for the reverse side of the cloth-backed stock [63/688, 722, 767]. This was resolved by a further change to the order, to 8,000 double sided, 2,000 single sided front and 2,000 single sided reverse [63/787] – numbers themselves later altered to 6,000 and 4,000 respectively [63/812]. Some if not all of these single sided printings of the outline map of England and Wales were packaged separately in specially prepared envelopes (see figure 4).<sup>32</sup>

Though Bartholomew agreed contracts with Lightning Cities, and to undertake most of their additional requests, a note of caution was present from the start. On 28 November 1934 they advised the London Office “Some arrangement regarding payment would of course require to be made as we have no information regarding this Company”, and “As an alternative would they not be inclined to consider imprinting their numbers on the copies of our existing sheets, which would really be much less expensive” [62/790]. By 31 January 1935, the concern was greater: again to the London Office [63/107]:

I greatly fear it is a somewhat risky business having dealings with these people unless we are assured of payment. You mention that Waterlow are allowing them three and six months credit, but I wonder if you know what the O.S.

arrangement was with them about the plan of London. For your private information I am enclosing Stubbs's Report.....From this you can gather that there is not much spare cash, and that they would probably only be able to pay if they sold the maps and were able to obtain payment from the garages through whom I understand they hope to sell the maps.

By November it was the intended pricing of the maps that was causing problems: on 1 November, again to the London Office [64/367]:

<sup>32</sup> A copy is held by the National Trust in their property Shaw's Corner, at NT 3203319.

You will doubtless have fully realised that in the event of their issuing the ¼" series at a lower published price than our own, we would be in for no end of trouble both with the trade and the A.A., and it would practically put a stop to the sale of our own series..... Lightning Cities .....indicated they would be publishing at a considerably higher price than our own series.

His apprehension notwithstanding, Bartholomew completed the double-sided printing of sheets 1 to 3 by 29 July, and sheets 4 to 8 by 16 December 1935.<sup>33</sup> Sheet 2, which was taller than the others, was printed singly, as was sheet 8, the others in pairs.<sup>34</sup> The 16,000 single-sided England and Wales diagrams required to accompany the cloth backed copies were printed in pairs on 29 October.<sup>35</sup> Folding and trimming the maps seems to have been a job initially shared between Bartholomew and Waterlow, but in September Bartholomew wrote that "There are several difficulties connected with the mounting and folding, and we feel that to do proper justice to your patent method, it is indispensable for the processes of mounting, folding and casing to be co-ordinated under one control. We suggest, therefore that it would be better for you to entrust Messrs Waterlow with the remainder of this part of the work" [64/226]. With the finishing work now conducted elsewhere, Bartholomew wrote to Lightning Cities on 10 December to request completed copies for reference purposes [64/574]. The first three sheets were received three days later [64/601].<sup>36</sup> First quotations for the final part of the contract were submitted on 19 December [64/625], for a four-page prospectus displaying an index of the map, a description of the reference system against an exemplar map of the Isle of Wight (see figure 5), an advertisement for the Lightning Plan of London, and a list of the advantages to the motoring public of purchasing a Lightning product. The print run of 50,000 copies requested was completed, in blue, by 24 January 1936.<sup>37</sup>

Bartholomew's problems with this contract now began in earnest, when Lightning Cities failed to pay the first instalment of their account rendered at the end of 1935 [64/744]. From evidence later in the correspondence, it is clear that the map did actually go on sale and that the total stock of some 80,000 sheets had been reduced by 6,000, presumably as 750 sets of maps, before Lightning Cities were compelled to cease trading. This is perhaps not the place to relate the events of 1936 in detail, just to piece together enough of the sequence from their failure to pay the first bill in order to explain how it was that Bartholomew ended up publishing the unsold stock of the road map, owning the rights in it to the patent,

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<sup>33</sup> Job Register 1925-1939, Bartholomew Archive, Acc.10222/283.

<sup>34</sup> Copies in this form are in the Bartholomew Printing Record, at Acc.10222/PR/83a: folio 12 (sheets 1 and 3), folio 15 (sheet 2), folio 10 (sheets 4 and 5), folio 14 (sheets 6 and 7), folio 13 (sheet 8). Each record a print run of some 6,000 copies: presumably the cloth backed copies formed a separate job.

<sup>35</sup> A copy is in the Bartholomew Printing Record, at Acc.10222/PR/83a, folio 11.

<sup>36</sup> These copies appear not to have survived in the Bartholomew Archive.

<sup>37</sup> A copy is in the Bartholomew Printing Record, at Acc.10222/PR/83a, folio 42. 51,164 sheets were printed, eight at a time on 6,396 sheets.

settling Lightning Cities' debt to Waterlow – and, in addition, acquiring the remnant stock of the Lightning London Plan. From the correspondence we learn a few names: that the Managing Director of Lightning Cities was a Mr Koenig, who with his co-director Mrs Rawson jointly owned the Lightning patent, that their sole agent from February 1936 was Messrs EJ Larby Limited, of 30 Paternoster Row, London EC4, the map publisher and retailer now managed by EW Larby, that Bartholomew's contact within Waterlow's was VE Goodman, the general works manager.

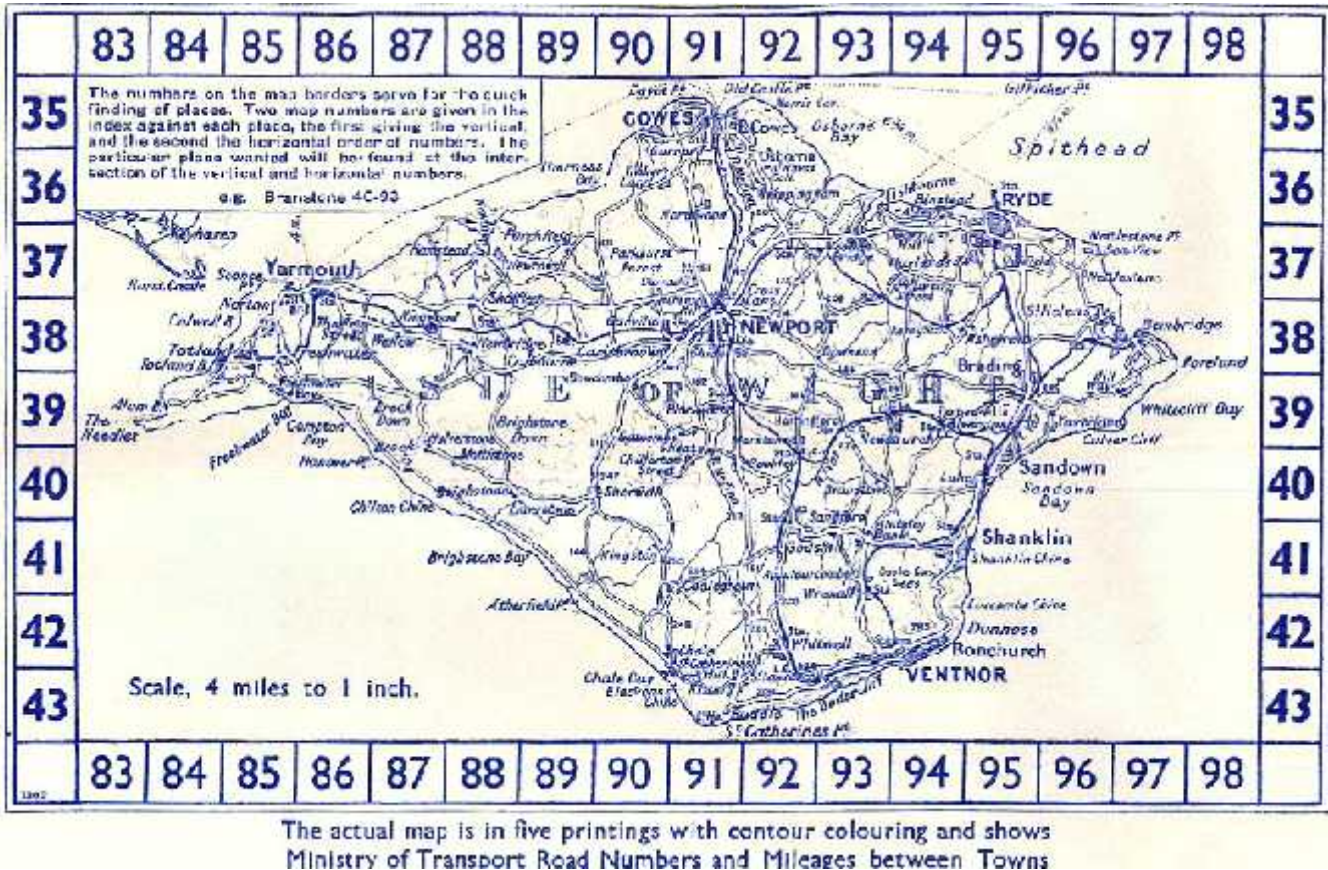


Figure 5. Sample map of the Isle of Wight, showing the Lightning system of referencing [National Library of Scotland, Bartholomew Archive, Acc.10222/PR/83a folio 42]

In hindsight it is clear that Lightning Cities never were in a position to meet their obligations, which were debts of some £3,000 to Bartholomew and more than £600 to Waterlow (see figure 6).<sup>38</sup> They found a succession of excuses by which to withhold or delay or reduce payment, one ploy being initially to agree to an arrangement, then to find problems with it which would cause further delay. First they challenged Bartholomew's costings and actually achieved a five per cent deduction off the total amount [64/775], and also asked for their bills to be rescheduled, which Bartholomew were prepared to consider [64/776]. They then invited Bartholomew to quote for covers for one hundred copies of the London

<sup>38</sup> The debt to Waterlow's was in the event much higher, as the figures in the statement of their account (figure 6) will reveal. That statement also confirms that the only payment ever made by Lightning Cities to Bartholomew was a cash advance of £300 in March 1935.

Plan [64/787], and prevaricated further by enquiring about printing additional copies of the road maps [64/890], and even went so far as to ask if Bartholomew could supply similar road maps of Canada and the United States [64/981]. Next they offered to liquidate their liability at the rate of 1½d for every copy sold,<sup>39</sup> which was refused outright by Bartholomew, though they were prepared to accept monthly payments of 10d per copy “with the addition of 5% on any outstanding balance” [65/272].

With no response to this offer forthcoming, Bartholomew decided on 12 May to seek an ally in Waterlow’s as another creditor [65/312]:

We are holders of Bills of considerable amount against this company, and understand that your firm along with ourselves are probably the principle [*sic*] creditors. We have been informed in respect of the first Bill, which is now due, that funds are not available to meet it. While we are unwilling to compulsory wind up the company if it can be carried on on a profitable basis, we would point out that the offer so far made to meet our claim is quite inadequate.

The purpose of this letter is to ask whether you would be good enough to give an opinion with regard to the position of this company, and also whether the writer might call and discuss with you during his next visit in London a possible solution of the difficulty.

And on 4 June Bartholomew suggested to Waterlow “that unless we can get some immediate and reasonable assurance regarding payment from the above Company, we should close them up and offer to take over the stock ourselves, as we feel we might do better with the disposal of it than they are able to do at present” [65/448].

It appears to have been VE Goodman at Waterlow’s who entered into negotiations on Bartholomew’s behalf and persuaded Lightning Cities to appoint Bartholomew publisher of the quarter-inch map. On 16 June Bartholomew confirmed proposals “that we would purchase these at 40% of the published price, that we should make a settlement with Larby under which he will agree to surrender his sole agency, that out of the proceeds we should liquidate our own and Messrs. Waterlow’s accounts, responsibility for the latter of which we would assume, that Messrs. Waterlow would hold the stock of this map on our account” [65/517]. Bartholomew might also wish to change the cover and title of the map to hide its association with Lightning Cities. They urged haste, partly because the second bill became due on 4 July, but also because “a publication contract, unless fixed up at once, would not be able to make anything of the current season”. Bartholomew was all too aware of the early onset of obsolescence in a road map. They sent a copy of this correspondence to Goodman at Waterlow’s [65/519], asking him to send it on to Lightning Cities if he agreed the contents.

On the same day Bartholomew wrote to Lightning Cities’ agent EW Larby, from which we learn more of Bartholomew’s ideas should they acquire the publication rights of the road map “which we believe we can place on the market

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<sup>39</sup> Which would have grossed £500 had every one of the 80,000 sheets been sold!

as the R.A.C. ¼" Map of England, the contract for which we have just been awarded by the Club. Such an arrangement, I need hardly say, would greatly enhance the selling value of the map" [65/520]. But in order to achieve this it was essential that Larby surrender his company's sole agency with Lightning Cities, currently valued at £100, and if he agreed to Bartholomew's becoming the publisher instead, they would, in place of a £100 settlement, increase his discount from 50% to 55%, "which certainly would not be shared by any other wholesaler".

But still something was not to Koenig's liking. We do not have his letter of 18 June to Bartholomew, but we do have the reply of 23 June [65/555]. Koenig had obviously tried to get the London Plan included in the transaction, but Bartholomew replied "we may say that since your London map is not of our production we are not keen on undertaking its publication". And Koenig was clearly not happy with the 40% valuation, which would have been paid on sales of the map achieved every month once the Bartholomew and Waterlow accounts had been settled. Bartholomew therefore offered an alternative of purchasing the remnant stock of some 74,000 sheets outright at 10d a copy, with a royalty to Koenig of 2d per copy sold for use of the "Lightning" patent incorporated in the index, and settling Lightning Cities' debt with Waterlow. Koenig negotiated an increase in these amounts to 11d per copy, whether on cloth or paper, and 3d royalty [65/580].<sup>40</sup> The matter seemed settled and Bartholomew instructed their solicitors to draw up an agreement on these terms [65/582], and advised Waterlow of the arrangement [65/592].

Koenig now tried to muddy the waters still further, as may be inferred from Bartholomew's memorandum to their London Office on 2 July, when they stipulated that "It should be obvious that in so far as our offer covers payment for all the work already done on this map it should include delivery of everything pertaining to the stock (added in manuscript: Maps, Covers, Index & Backing Map)", and further "under no circumstances will we accept additional liability, e.g., for money spent on the London Map or other objects" [65/614]. Bartholomew went on:

In any further negotiations with this Company you should keep in mind that the following is our attitude to them – In our dealings up to the present we have followed the procedure which is customary in dealing with any honourably conducted firm. If this Company is sincere in its pretence that it cannot earn sufficient money to pay for the goods it has ordered, it should be very pleased to have the opportunity of selling these to defray expenses and still retaining a substantial royalty in respect of their patent, along with the possibility that this might be increased with the extension of the series say to Scotland and Ireland under the R.A.C. Our next Bill for £1100 will be duly presented on 4th July and if it be dishonoured and this Agreement not effected, we see no alternative but to proceed with the winding up of the Company, in which case any attempt to use the debenture holder as a

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<sup>40</sup> These tiny amounts do not convert readily to decimal currency, twelve old pence being the equivalent of five pence now.

fraudulent means of evading their just debts will be proceeded against with every energy.

Meanwhile Larby had written to Bartholomew accepting the terms of their new agreement. But Bartholomew felt it necessary to warn him of the current situation [65/630]:

..... although we made them a very generous offer, which at first they seemed disposed to accept, the Agreement has so far not been ratified, and we find it a little difficult to avoid the impression that their manoeuvring savours of sharp practice. .... I should like to mention that you would be conferring a considerable obligation on our firm if you would refuse to cancel or modify in any way your Agreement of February last with them, unless of course they consent to honour their debts in some such way as we have suggested to them.

Matters reached crisis point on 6 July, when Bartholomew wrote to Lightning Cities “We beg to give you formal notice that your Bill for £1100, due 4th July, has to-day been returned dishonoured” [65/632].

Two months went by. At the start of September it seems that Koenig quarrelled with his co-director Rawson, who, anxious to protect her half of the patent, threatened to put in the Official Receiver on her own account [65/878]. To forestall her, Koenig made another approach via Goodman at Waterlow’s, this time to sell the map stock outright for £3,000, and a further £1,500 personally in lieu of his patent royalty, an offer which Bartholomew noted “strikes us as most improper”. Their view was that now that the season was over, the value of the map stock had much depreciated. Bartholomew therefore pressed Goodman to join him in taking steps to wind up the company [65/867]. Confronted with this threat it seems that Koenig was finally persuaded by Goodman to agree a price of £3,000 for the entire map stock, this now including the London Plan, and a royalty payment set at £1,000, to be shared by Koenig and his co-director, which would give Bartholomew the right to sell the stock but not reprint it, so far as the patent was concerned, without further consent. Foremost in Bartholomew’s mind was avoiding the risk of being sued by Mrs Rawson [65/875]. The valuation of the stock, set at £3,000, effectively wiped out Lightning Cities’ debt to Bartholomew.

The clearest description of the settlement is set out in a letter from Bartholomew to Goodman at Waterlow’s on 5 October [65/976]. Once the agreement is signed and the royalty fee paid, Goodman “will collect and dispatch the whole of their stock, including unbound letterpress and covers, to our works in Edinburgh, excepting only the London Map which will be retained pending our further instructions.” Furthermore Bartholomew would make a cash payment to Waterlow of £500 in return for their surrendering their lien on the goods, and would make additional payments over the next three years proportionate to future sales of the map. By 9 November the stock of the road map had been delivered to Edinburgh [66/124]. Unsold copies held by the agents EJ Larby were considered part of the agreement, and in November a formal request was made of Larby for their return. “Mr Bartholomew is asking our solicitors to send you an



official letter instructing you to dispatch this stock to us as it is our property” [66/167]. Lastly, on 14 December, Bartholomew sent both words of appreciation and a cheque for £500 to VE Goodman at Waterlow’s [66/272].

### **5. John Bartholomew and the Royal Automobile Club**

The final chapter of this saga may be found in the correspondence between Bartholomew and the Royal Automobile Club (RAC). It will be recalled that the initial contract for Bartholomew to supply the RAC with a road map had been signed early in June 1936, when it first seemed possible that the eight sheets of the Lightning Cities map might be available for this purpose.<sup>41</sup> The arrangement had been confirmed before 14 December when we learn of the plan to extend the area covered into Scotland. “The maps of England & Wales could be completed fairly early in the New Year; those for Scotland have not yet been put in hand but could probably be ready for the summer” [66/274]. These would be the seven sheets of Bartholomew’s *Automobile Map of Great Britain* which covered the Scottish mainland, reformatted as the four sheets 9 to 12.<sup>42</sup> Early in 1937 discussions took place concerning the new RAC cover design to replace the Lightning one,<sup>43</sup> and the sheet price, which Bartholomew again were at pains to ensure did not undercut that of their own map. The essential points of their agreement were laid down in a memorandum of 30 March 1937, including the stipulation that the map would be sold direct to its members by the RAC, and to the general public by Bartholomew [66/768-770]. However sheet prices remained a contentious issue for several more weeks. Bartholomew’s letter to the RAC of 22 April is revealing [66/885]:

We are sorry to learn from our London Office that you have not yet seen your way to approve of the prices at which the new series should be sold. When the first of these similar sheets were put out on sale by the Lightning Cities Co. they found a ready market at 3/6d and 6/- [17½p and 30p] respectively for paper and cloth mounted editions. It was felt that a considerable concession had been made, especially in view of the rising costs, when we suggested reducing these prices to 2/6d and 5/- [12½p and 25p] respectively. Compared with the A.A. series they are more up to date. They also have an extra green printing, mileages, index, a general outline road map printed on the back, and a map surface nearly double the area.....In order to meet your views however and to popularise the new map we are prepared to reduce the price of the cloth mounted copies to 4/6d [22½p] each, provided the paper edition remains at 2/6d as previously suggested. This would make the set of 12 sheets on cloth only 54/- [£2.70], a

<sup>41</sup> See above for the letter to EW Larby on 16 June 1936 [65/520].

<sup>42</sup> The job number 1587 was allocated to these sheets. Work began on them as an internal Bartholomew publication on 24 March 1937, and 5,000 copies of each were printed by 11 August. They were noted in the Order and Cost Book (Acc.10222/321) as publications ‘to complete Lightning Cities series’. Proof copies of all except sheet 11 in this form are in the National Library of Scotland, in the Bartholomew proof maps drawer 18.

<sup>43</sup> Both front and back sides of the cover were illustrated in *Sheetlines* 104 (2015), 56.

price which compares most advantageously with that of any other series on the market.

The *Royal Automobile Club Quarter-inch Map* as published was something of a hybrid: sheets south of the border retained their Lightning gazetteers, glued into the front cover in order to hide any reference to Lightning, the Lightning imprint top left on each sheet was covered by a strip of paper glued over the name. But there was no hiding “The Lightning” Road Map of England and Wales on the reverse. The Scottish sheets had no such gazetteers, and no such map on the back, and in place of the Lightning numeric reference system on all sides was an alpha-numeric system, with lettered southing sections each two centimetres in height, this alteration presumably being deemed sufficient to nullify any claim that the Lightning patent had been infringed. Consistency in the actual mapping was achieved with the addition of road mileages into the Scottish sheets. But even the title on the front board of the cover distinguished between *of England & Wales* and *of Scotland*. Copies of the England and Wales sheets were dispatched to the RAC in July 1937, the Scottish ones in August.

### **6. John Bartholomew and C Arthur Pearson**

And what of the Lightning Plan of London? This of course had now become a Bartholomew property. Three letters explain its fate. On 29 October 1936 Bartholomew wrote to Messrs C Arthur Pearson, of Henrietta Street, London WC2 [66/89]:

.....we have pleasure in confirming that in the event of your ordering 1,000 copies of the Lightning Cities Map of London by January 1st, we would be prepared to grant you the sole selling rights for this map for a period of six months, and provided that you took not less than 2,000 during the six months, we would be willing to continue the agency for a further period of six months. The price for paper copies, complete with covers and index, to be 1/4d [ca 7p] per copy, and flat sheet copies of the map 11d [ca 4½p] per copy. We understand that the stock of the complete map is approximately 6,600, and the stock of the sheets approximately 14,700.

The covering note to the London Office commented “They will of course understand that it is quite possible that a certain number of copies will be in the hands of the trade on January 1st. We cannot of course recall these, as in all probability they will not have been supplied by us, though this I do not think will cause any serious objection on Pearson’s part” [66/71]. And on 3 November Bartholomew advised the agents EJ Larby of the proposed arrangement [66/98]:

Referring to our telephone conversation yesterday and your further order today for copies of the Lightning Cities London Map, I should like to confirm that we have offered the sole agency for this map to a publishing firm from the 1st of January, 1937, for a period of six months, with the option of a renewal for a further six months. Therefore, on and after the beginning of next year, we shall be unable to supply you with further copies of this map, though, as I understand the firm in question intend to offer them in some

sort of gift scheme, it is not likely that either yourselves or the retail trade will wish to handle them. I think it only fair that you should know of this arrangement and not be tempted to lay in a stock.

Thus of the original 25,000 it seems that Lightning Cities sold some 3,700 copies in nearly two years. Pearson's had been in business since the late 1890s as a publisher of books, newspapers, magazines and comics, and the sale of a map would seem to have been a new departure for them. This writer knows of no record of how well they succeeded with this one, which by 1937 was already some three years out of date. Copies of the Lightning Plan sold by Pearson are easily identifiable by two labels stuck to the back board, the company name on the one, and the address 8-11 Southampton Street, Strand, London, WC2 on the other.<sup>44</sup> It is likely that the bulk of the remainder, possibly as many as 20,000 copies, never were sold, but would remain in store at Waterlow's until they were scrapped.

The Lightning Cities and Road Map Company failed to fulfil their legal deposit obligations with both their maps. Their history was terminated on 18 November 1938, when the company was formally "struck off the Register, and ..... hereby dissolved" according to the terms of the Companies Act, 1929.<sup>45</sup>

I am most grateful for the assistance and advice of David Archer, Christopher Board, Heather Hewitt, Yvonne Lewis, Maria Mealey, Richard Oliver, and especially Chris Fleet, of the National Library of Scotland, who kindly ensured that all the relevant documents from the Bartholomew Archive were available to me. The material used from the Bartholomew Archive is with permission of HarperCollins Publishers. I am also very grateful to the National Trust for permission to publish figure 4.

### ***Bartholomew Archive papers, held by the National Library of Scotland***

Correspondence files

N.B. each volume of correspondence contains 1,000 letters (sent, not received), whereupon a new volume is begun.

Acc.10222/BR/814: letterbook 62, 15 June 1934 to 16 January 1935

Acc.10222/BR/815: letterbook 63, 16 January 1935 to 6 August 1935

Acc.10222/BR/816: letterbook 64, 6 August 1935 to 5 March 1936

Acc.10222/BR/817: letterbook 65, 6 March 1936 to 8 October 1936

Acc.10222/BR/818: letterbook 66, October 1936 to May 1937

Acc.10222/BR/819: letterbook 67, from May 1937

Bartholomew Printing Record

Acc.10222/PR/83a folio 10: sheets 4 and 5, printed together

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<sup>44</sup> See figure 2. One such copy was donated to the Bodleian Library, Oxford, at C17:70 London d.93.

<sup>45</sup> *London Gazette* 34571 (18 November 1938), p.7276.

Acc.10222/PR/83a folio 11: England and Wales diagram and gazetteer, two copies printed together

Acc.10222/PR/83a folio 12: sheets 1 and 3, printed together

Acc.10222/PR/83a folio 13: sheet 8

Acc.10222/PR/83a folio 14: sheets 6 and 7, printed together

Acc.10222/PR/83a folio 15: sheet 2

Acc.10222/PR/83a folio 42: 4-page prospectus, printed in sets of four copies

Acc.10222/283: Job Register, 1925-1939

Acc.10222/321: Order and cost book September 1930 to August 1937

Acc.10222/593: Trade record: [vol.] 6 trade, 1933-36

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Statement

14 December 1936

THE LIGHTNING CITIES & ROAD MAP CO. LTD., LONDON

Dr. to John Bartholomew & Son Ltd -

1935			
May 15	100 $\frac{1}{4}$ " Gt. Britain assorted sheets	2:10: 0	
June 5	Fd. Dwg. Index Map for Sections	3: 3: 0	
Dec. 31	Compiling 6 indexes & Dwg. 72 Town Plans	386:16: 0	
"	10,000 ea. 8 $\frac{1}{4}$ " England Sections; 4,000 ea. mounted etc.	2852: 4: 7	
1936			
Jan. 25	51,000 copies 4 pp. Prospectus	<u>50:10: 6</u>	
		<u>£3295: 4: 1</u>	
1935			
March	By Cash	<u>300: 0: 0</u>	
		<u>£2995: 4: 1</u>	
	John Bartholomew & Son Ltd paid to Kenneth Brown, Baker Baker (Royalty £1000; £4:15:11 being difference between s/c and £3000 - purchase price)	1004:15:11	
	John Bartholomew & Son Ltd paid Kenneth Brown, Baker Baker (legal fees)	<u>64:12: 6</u>	
	<u>Balance owing to Messrs. J.B. &amp; Son, Ltd</u>	<u>£4064:12 6</u>	
	Lightning Cities due Waterlow	£1767: 8: 4	
1936			
Dec.	By Cash from Messrs Bartholomew	<u>500: 0: 0</u>	
	<u>Balance owing to Messrs Waterlow</u>	<u>£1267: 8: 4</u>	

Figure 6.

*Lightning Cities' statement of account with Bartholomew as at 14 December 1936*

*[National Library of Scotland, Bartholomew Archive, Acc.10222/BR/818, letterbook 66, 273]*

*If any reader has a copy of the quarter-inch map in covers, please get in touch with the editor*