

# THE JOURNAL OF THE LONDON UNDERGROUND RAILWAY SOCIETY

Issue No. 136

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April 1973

## THE GREATER LONDON COUNCIL AND TRANSPORT

Since the GLC took over control of London Transport there has been a significant change in attitude from the Council to public transport, and within recent times large sums have been allocated to the bus and Underground services - mainly in the form of capital grants.

This does not mean, however, that the GLC is now free from the possibility of error, and two recent decisions seem to reflect bad judgement.

### Proposed Channel Tunnel London Station

In our February issue (p 30) a consultative document on this subject was reviewed, and some adverse comments made on the parochial attitude of the Council, also the fundamental error of referring to the proposed station all through the document as a terminal. It is now understood that, despite unfavourable reactions by a number of organisations, including this Society, the GLC has opted in favour of the Surrey Docks site. To anyone taking a National or European view of the tunnel project, this is one of the worst of the sites which were considered and has obviously been chosen solely because it fits in with the GLC's plans for the docks area. Significantly, particularly in view of the following paragraphs, Surrey Docks would be about £17m more expensive than the White City site favoured by British Rail.

### Modernisation of Russell Square Station

London Transport intend to bring Russell Square station on the Piccadilly Line up to current levels of efficiency, and recently placed two alternative schemes before the GLC. The first involved the construction of a new station on the north-east corner of Russell Square, and an estimated cost of £3m, with new escalators to the existing platforms and using the existing lift shafts as ventilation and draught relief shafts. The other provides for renewal of the lifts

and modernisation of the existing station at a cost of £715,000 plus an additional £380,000 on new shafts for ventilation, etc. At the Council meeting on the 20th February 1973, the GLC approved the less expensive scheme. This is an incredibly bad decision; to even consider renewal of the lifts instead of replacement by a bank of escalators is sheer stupidity in these days, and to try to economise at this particular station, which is right in the centre of the tourist belt pays little regard for the need to provide London's visitors with the best in the way of public transport. To make matters worse, the adopted, cheaper, scheme will involve closure of the station completely for six months - which would not have been necessary had the better proposals been chosen.

This is the second time that the lifts v. escalators point has arisen recently; Strand-Trafalgar Square had a narrow escape a few months ago, but common-sense prevailed on that occasion. In view of the Council's apparent willingness to spend an extra £17m to get the Channel Tunnel station where they want it, rather than put it where the people who are going to operate it think it should be, it would be ludicrous to claim that shortage of money was the reason for choosing the cheaper plans for Russell Square. The GLC should think again - there is still time.

To those interested in the siting of the London station for the Channel Tunnel, the July meeting of the Society will be of great value; this is to be a joint meeting with the Channel Tunnel Association, and will be addressed by Dr. A.W.T. Daniel of the National Council of Inland Transport, who will consider possible London sites, put forward a scheme of his own organisation's and discuss a number of other proposals in relation to their practicability operationally from BR's point of view, and their suitability for linking to the LT Underground system for easy transfer of passengers and their luggage.

This meeting will take place on Friday, 13th July 1973, at Hammersmith Town Hall, and further details will appear in The Timetable in due course.

## UNDERGROUND REVENUE CONTROL TO USE A COMPUTER

A small computer has been installed in the Revenue Control Office at Harrow-on-the-Hill, and could play an important part in planning future Underground services on existing lines and in shaping proposals for new construction.

In this office, it is possible, from information obtained from booking offices and used tickets, to determine the number of passengers travelling between various stations, and to build up a travel pattern for the whole underground network.

Introduction of the computer-based system will mean that the analysis of the information will be accomplished by the computer in a few days, compared with several months taken by traditional methods. It will be particularly valuable when the detailed annual survey is made. All tickets received at each station on one weekday, a Saturday and a Sunday, are processed according to type and station of origin; the tickets are received at the revenue control office from destination stations, already separated by day of issue. With 249 Underground stations and some 750 British Rail stations issuing through tickets to the Underground, about 2½m ordinary tickets are processed for the three days in the test week. With the new system it is expected that the time taken for processing the survey will be halved.

In addition to being used by a number of LT departments for future planning, the survey provides basic material for the Commercial Advertising Department so that prospective advertisers can be advised of the number of people who enter and leave stations or use trains on particular lines on which the advertiser plans to have his posters displayed.

It is also necessary to ascertain the pattern of travel in order to provide the basic data to enable receipts from tickets for through journeys to be apportioned between LT and British Railways.

The computer is a standard Digico Micro 16V system built by Digico Limited of Stevenage, and installation was completed in February 1973. It will be used to carry out the 1973 annual survey, and with the reduction in time needed to process this, a number of additional but limited surveys will be carried out in future. Each of these will cover a small section of the Underground system and will supplement the larger annual operation.

## LETTERS TO THE EDITOR

31st January 1973

Dear Sir,

Over the years "Underground" has covered a wide range of subjects about London Transport, but there has been one major omission - rolling stock changes.

Details of new and withdrawn locomotives and rolling stock of British Railways are a feature of many society journals and other magazines, perhaps being the more important news to many. London's buses also get adequate coverage in various sources.

I would like to see corresponding information about the railway rolling stock published in "Underground". Would other members?

Therefore I would suggest that the 1st January 1972 should be taken as the starting point because of:-

1. 1938 Tube stock (including associated 1927 and 1949 stock) withdrawals.
2. 1938 Surface line stock withdrawals in progress following District Line changes.
3. Reforming of remaining 1938 Tube stock following withdrawals and renovation of 34 trains.
4. 1972 Tube stock being delivered.

Certainly it would take up to three pages or so to record changes in 1972, but once in hand subsequent changes would only require limited space.

Yours faithfully,

Hawthorndene,  
Station Road,  
Staplehurst,  
Tonbridge, Kent.

J.W.P. Rowledge.

Editor's Note There can be no possible objection to publishing rolling stock changes, if sufficient members want them, and if someone will be willing to supply the accurate information the notes would require. Opinions and comments please!

3 March 1973

Sir,

With reference to the "Editor's Comments" in the Journal for March. I think it very undesirable to mix the 12hr method with the 24hr method. Certainly one can say "fourteen o'clock". The

railways of India adopted 24 hour time very many years ago, and Officers and men who had been in the Army in India and whom I met during the first World War frequently spoke of fourteen o'clock, fifteen o'clock etc.

In German one says "vierzehn Uhr" which is fourteen o'clock Uhr is clock: the German for hour is Stunde. In the Scandinavian languages one finds: Kl. 14, kl. 14.25 etc: kl. 14 = klockan fjorton = clock fourteen. The word "hundred" sometimes used in England and which the Astronomer Royal has described as "illogical and absurd" does not occur in other languages.

167 Cornwall Road,  
Ruislip, HA4 6AE.

H.V. Borley.

4 March 1973

Dear Sir,

London Transport have obtained under the London Transport 1972 Act, the following powers:

- (1) The Final powers for the Fleet Line, to build the 1272 yard link from a point just south of NEW CROSS to a point 70 yards east of the junction of Lewisham High Street and Albion Way.
- (2) To build a ventilation tunnel connected to the two Northern Line tunnels between Stockwell and Clapham North. Also to build a draught relief shaft connected to the station tunnel at Clapham North. Similar work to take place at Kentish Town and Russell Square.
- (3) To build a connecting subway between the Metropolitan Line and the District & Piccadilly Line stations at Hammersmith - a length of 220 yards.

London Transport have just started a program for withdrawing the turret type door controllers on District Line 'R' stock trains. These controllers require the use of a key to operate the doors (in addition to the usual position-switch key).

This section of the guards control panel, including the signal bell button, is being replaced by the lower half of a 1938 stock push button panel, the odd buttons not required being blanked off. The remaining TRIGGER type switches on the 'R' stock panel remain unaltered.

Yours faithfully,

33 West Avenue,  
London, NW4 2LL.

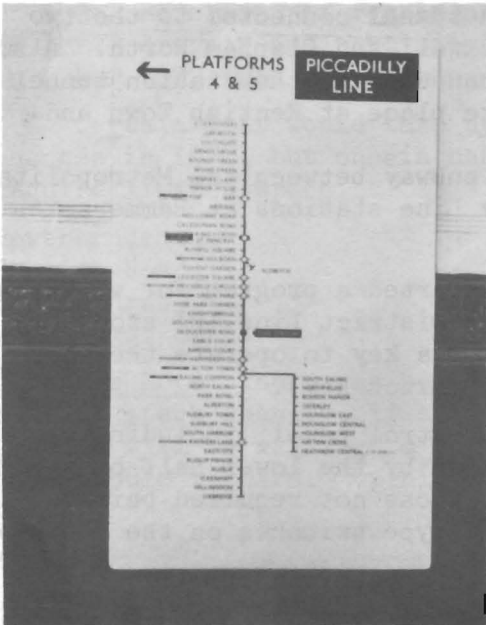
M.A.C. Horne.



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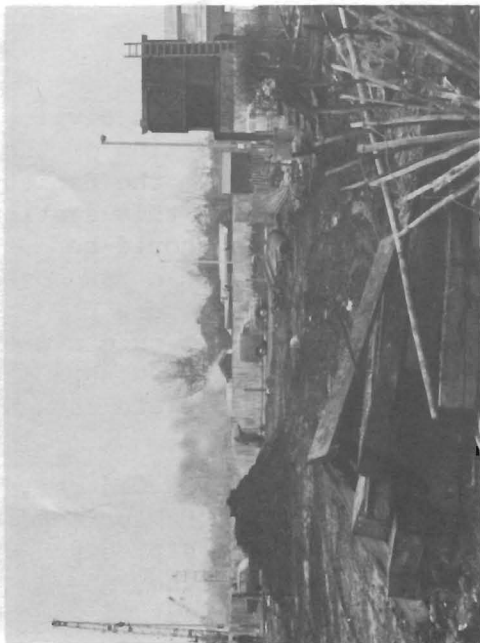
HEATHROW EXTENSION PROGRESS REPORT  
R.J. Greenaway

In December last, London Transport announced that civil engineering works on the Hounslow - Hatton Cross section of the airport extension had reached the half-way mark. As the Society has recently had its third walk along the length of this section, it seems appropriate that details of the progress should be reported in the pages of this Journal, together with a few notes on construction methods. In general, this report covers the period up to the end of 1972, by which time progress on a number of structures was obviously well advanced, while less conspicuously, a proportion of the tunnels was already complete enough to be buried out of sight.

Work has now started on the station at Heathrow Central, and photograph (1) shows its location relative to the surrounding airport buildings. First effects of the extension's presence are being noticed along other parts of the Piccadilly Line, and photograph (2) shows a line diagram recently fitted at Gloucester Road station, including on it, the two new station names.

As most readers will know, the extension can be divided into two main parts - the cut-and-cover section from Hounslow to Hatton Cross (with a 600-yard open section to cross the River Crane), and the deep-level tube section from Hatton Cross under the airport to Heathrow Central. As the former can be observed closely throughout its length, and the second section has not long been started, this report will concentrate on the section to Hatton Cross, which is due to be opened in 1975.

The diversion of the Piccadilly Line will start just before the platforms at Hounslow West. The sharp left-hand curve into the station will be eased, and a new island platform built to the West of the present platforms, although the existing booking hall will be retained, and connected to the sub-surface platform by a new passageway and stairs. The existing bayroad was out of use at the time of our first visit on 4-12-1971, and had been partly removed. This can be seen in photograph (4), taken on that occasion, which also shows the old District Railway signal box, then still in operation. Since then, the signal box has been taken out of use and demolished, the signalling being transferred to a temporary structure on the East side of the station. The small cul-de-sac, Elm Road, which paralleled the platforms on the



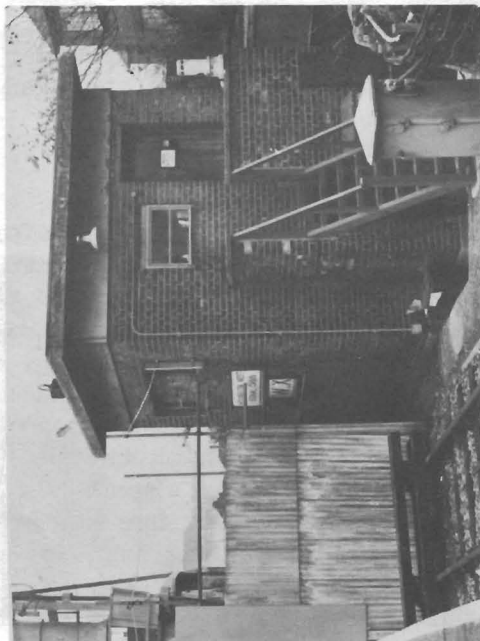
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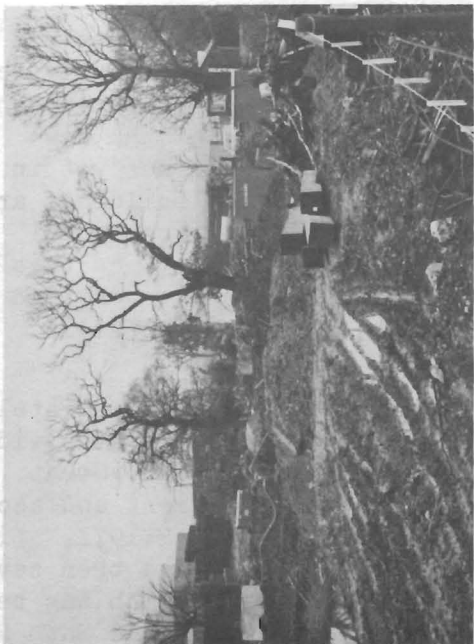
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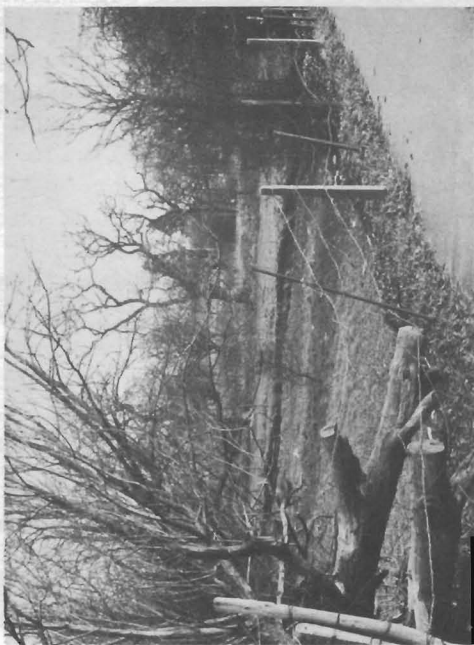




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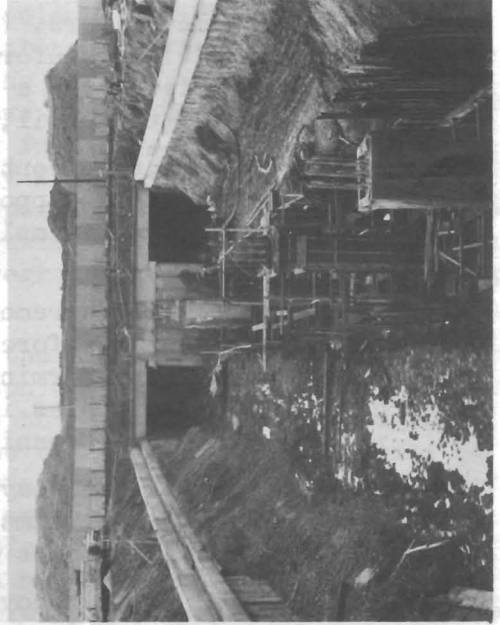
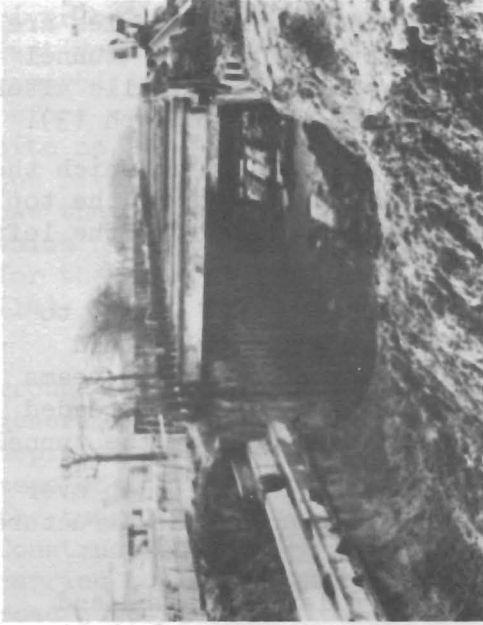
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West side, has been completely obliterated, since the site was needed, not only for the new station tunnel, but also partly for a temporary diversion of Vicarage Farm Road. Photograph (5) shows a view from Bath Road looking East along the line of the new tunnel, with the Vicarage Farm Road diversion, then not yet in use, running across the picture. Hounslow West station buildings are on the extreme right. A large part of the new station tunnel structure has now been built and lacks only a roof. Once this has been put on, work on the platforms, track, etc. can be carried out under cover. A section of the station structure is shown in photograph (3).

Having left the new station, the line will almost immediately cross Bath Road at an oblique angle, and continue under the wide verge on the South side as far as the junction with the Great West Road (A4). Photograph (6) shows the wide pavement and access road opposite Hounslow West station as it was on 4-12-1971. Since then, in order to excavate under Bath Road, there have been severe restrictions placed on Eastbound through traffic, (which has been diverted via Great West Road and Vicarage Farm Road) and Bath Road, has been diverted over part of the access road shown in (6). Until recently, only minor work had taken place on the section from Vicarage Farm Road to the Great West Road, but by the beginning of December last, work had started on tunnel construction under the wide grass verge and access road paralleling Bath Road. Photograph (7), looking West along the line of the tunnel, depicts the scene at the junction of the A4 and A30 near "The Travellers" Friend" public house, shown on the right. The line here makes a wide sweep towards the South West, and continues under another conveniently wide verge on the North side of the A30. Work on this section was well advanced even a year and a half ago, and although, due to the method of construction, it is not immediately obvious, a fair part of the tunnel structure on this section is now well on the way to completion, and buried out of view. A word about the construction of the cut-and-cover sections would be appropriate here, as it differs from the classic method of digging a wide trench, building a tunnel in the bottom of it, and then covering the tunnel over. The method is as follows:-

- a) The line of each tunnel wall is marked out on the surface, by two parallel baulks of timber secured in the ground. Between these timbers, a series of adjacent, 30ft. deep circular holes is drilled along the line of each wall by



13 15

12 14



...the amount of steel piping had been ...  
...the time of our second walk ...  
...months later ...

- means of pile-drivers, (photograph 12). These holes are then filled with reinforced concrete to form the tunnel walls themselves, and a good example of these walls after excavation of the spoil, can be seen in photograph (3).
- b) A roughly L-shaped, continuous concrete beam on which the roof is eventually supported, is then cast along the top of the walls. An example of this can be seen on the left of photograph (13).
  - c) Just enough soil is removed from between the walls, to enable pre-cast reinforced concrete beams to be laid across them, thus forming the tunnel roof. These beams have a series of holes in them, into which are threaded reinforcement rods running along the length of the tunnel.
  - d) The next stage is to lay a reinforced concrete slab over the series of roof beams, and to waterproof the structure by placing a bituminous layer over the top.
  - e) The 'tunnel' is next covered with a layer of sand and gravel, and from this point on, the progress of the tunnel's construction is not evident from above.
  - f) Finally, the earth between the walls is excavated by conveyors and mobile mechanical shovels working in from the ends of each section, and the tunnel floor laid.

Since the tunnel is being built in short sections, it is often possible at any one time to see all these stages in progress.

After crossing The Parkway, the line will come into the open in order to cross over the River Crane. Photograph (13) depicts this point, looking West, and shows a change in construction methods. On the left, and still partly buried, is one of the walls, complete with L-shaped capping as described earlier, which will form part of the main tunnel structure. The excavations for the Eastern ramp commence immediately beyond, the trench being supported by sheet steel piles, cross-braced at the top. These excavations have now largely been completed, but the final structure of the ramp has mostly still to be built. Photograph (8) depicts the site of the River Crane bridge (looking towards Hounslow) with the river running in a shallow trench across the middle of the picture, as it was on 14-2-1971, before work started. Photograph (9) is exactly the same view at the time of the first Society walk ten months later. By the time of our second walk (8-7-1972), a large amount of sheet piling had been sunk into the

river bed so that the abutments could be built, but by December last year, these were largely complete, and the piling had been removed. Photograph (10) shows the bridge site on 14-2-71, before work started, and (14) shows a similar view of the same site on 3-12-1972. There are, in fact, two parallel bridges over the river - one for the Piccadilly Line (nearer to the A30) and one that appears to be for an airport road. It is this second one which has had the span laid, and this, together with the abutments for the railway bridge in the foreground, are depicted in photograph (14).

Having crossed the river, the line will then descend underground again before reaching Hatton Cross. However this ramp is generally not so well advanced as the Eastern one. Photograph (11) depicts the garden in front of the Champion Spark Plug works as seen on 14-2-1971 - before work started. This was an area where the tunnel construction started, and was completed quite early on. Construction of the line and station at Hatton Cross has been carried out in conjunction with a much-needed alteration to the road junction. Basically, this previously consisted of two closely spaced T-junctions, one road leading to Feltham, and the other into the airport. These have now been combined to form a single cross roads.

Hatton Cross station has slowly been taking shape from the early days of work on the extension, this being one of the longest single jobs. Photograph (15) shows the West end of the wide station tunnel, taken from about the position of the station building, on 26-11-1972. The station building is now beginning to rise above ground level, as the bulk of the sub-surface structure is virtually complete and roofed over.

After Hatton Cross station, the line extends a short distance into the airport in cut-and-cover tunnels, and then descends rapidly in twin tube tunnels to Heathrow Central. This work is still in its early stages, but tunnelling is now well under way on both tubes. Expected completion of this section is by Summer 1974, after which it will be fitted out for opening in 1976.

Further details of the history of the airport extension proposals, can be found in the notes which have accompanied each Society walk. Copies of these are available in limited quantities from George Jasieniecki, 6 Redcliffe Street, London, SW10. on receipt of a foolscap stamped addressed envelope. Photographs are all by the author except No.'s 1 and 2, which are by courtesy of London Transport and G. Jasieniecki respectively.

## REVIEWS

Television

BBC 2; 22.10 Monday 26th February 1973; Metro-land - A celebration of suburbia; text prepared and narrated by Sir John Betjeman; film cameraman John McGlashan, film editor Edward Roberts, producer Edward Mirzoeff.

The Poet Laureate has long been known for a declared devotion to the Met, and he did not let it or his admirers down in this programme. Sir John set out to evoke the spirit and nature of the suburbia built at the behest of the Metropolitan Railway Company, which set out to fill its trains by building homes for commuters in the beautiful countryside of unspoilt Middlesex and Buckinghamshire. It can be safely said that both Sir John and the Metropolitan succeeded, and while the programme covered much more than the railway itself, enthusiasts will not have been disappointed. For them the highlight of the programme will have been the length of black-and-white film (the rest of the programme was, of course, in colour) shot on the Metropolitan main line in 1910. It was interesting to note how many points were clearly identifiable today despite the many changes surrounding the line. Sir Edward Watkin's Wembley Tower got a showing, as did the midsummer revels in Croxley Green, Moor Park's magnificent Georgian mansion now doing duty as the Golf Club House, and numerous other scenes around the line.

There are rumours that this programme is to be given a repeat showing; if missed the first time round, every effort should be made to see the second screening, for it is an excellent programme.

Booklets

Charles E. Lee; The Bakerloo Line - A Brief History; 24pp 8½" x 5½" + 12pp illustrations and frontispiece; card covers; London, 1973; London Transport; 25p.

This is a revised version of the earlier booklet "Sixty Years of the Bakerloo", also by Mr. Lee and published by LT in 1966. This new version is in the same series as that on the Metropolitan Line published recently, and has been up-dated to take account of the changes which the Fleet Line will bring about. Recommended as up to Charles Lee's usual high standard.

## Timetable Booklet

Ed. John H. Price; Cooks Continental Timetable - March 1973 - Centenary Issue; 512 pp; 9.6" x 6.4"; London, 1973; Thomas Cook & Son Limited, 45 Berkeley Street, London, W1A 1EB; £1, or £1.12 inc. postage.

This special edition commemorates the 100th anniversary of the inception of Cook's concise guide to the principal lines of railways, steamers and diligences in Europe, in March 1873.

There is a silver cover with pictures of a P.L.M. 2-4-2 express loco of 1877 vintage, and a guard's Fusee Lever watch. An eight-page commemorative supplement includes a full-size reproduction of the 1873 cover, and 16 reproductions (3.8" x 2.8") of timetables, covers, maps and advertisements selected from 100 years' issues. There is also a two-page history of the timetable, and a further page about the current editorial and production methods. The main timetables, of the principal rail services in Europe (incl. Gt. Britain), North Africa, the Near East and the USA, and local shipping services in the North Sea, Baltic and Mediterranean, provide endless interest for the armchair traveller. There are also 21 index maps of countries, 75 sketch maps of the railway layout in major towns with more than one principal station, and many pages of miscellaneous travel information. Incidentally, Mr. Price hopefully foresees the opening of the Channel Tunnel in May 1980.

Although not of direct Underground interest, this booklet can be whole-heartedly recommended to all members interested in European railways or the mechanics of publishing timetables.

## NOTICES

London Transport Magazine The March 1973 issue of the London Transport Magazine was the last, as it is to be replaced with a fortnightly newspaper - LT News. This will not be on sale to the public at booking offices as has the magazine, but it will be obtainable by postal subscription. Prices are £1 a year for monthly despatch, £1.30 a year for twice-monthly posting. Orders can be taken at Society meetings, or may be placed direct with LT News through the post to 55 Broadway, London, SW1H 0BD. Publication dates will be the first and third Fridays of every month, i.e. 24 issues a year, and not quite the same as fortnightly.

## THE TIMETABLE

19.00 for 19.15 Friday 13th April at Hammersmith Town Hall; an Illustrated Talk by John H. Price, Editor of Cook's Continental Timetable and Member of Council, The Transport Trust, on "Rapid Transit in Japan". John Price has recently returned from an extensive tour of Japan, and his talk will be illustrated with many of the colour slides he took while there.

Saturday 14th April Visit to Cockfosters Depot, LT. Names, accompanied by a first class stamped addressed envelope, should be sent at once to S.E. Jones, 113 Wandle Road, Morden, Surrey.

21.00 Saturday 14th to 02.00 Sunday 15th April at the Museum of British Transport, High Road, Clapham, London, S.W.4.

A Farewell Ball given by the Mayor of Lambeth before the final closure of the Museum on 23rd April. The theme of the Ball is 'The Roaring Twenties' and music will be provided by three bands, including The Temperance Seven. Tickets will be £3-50 single and £6 double, and can be ordered from the Editor at 62 Billet Lane, Hornchurch, Essex, RM11 1XA. Cheques should be made payable to "The Mayor of Lambeth's Welfare Fund" or "Roaring Twenties Account" and crossed.

Sunday 22nd and Monday 23rd April Open Day of the Quainton Railway Society Limited each day; a special dmu service will operate between Aylesbury and Quainton Road on Monday only; another opportunity to travel over this normally goods-only section of former Metropolitan Line.

19.00 for 19.15 Friday 11th May at Hammersmith Town Hall; Illustrated Talk by A. Hawes on "Southern Region PEP Stock". This is a Joint Meeting with The Electric Railway Society, and both speaker and subject are very appropriate for such a meeting - PEP Stock owes a lot to LT practice, and Mr. Hawes, who is responsible for the Stock on SR, commenced his railway career with London Transport.

10.00 Sunday 13th May ex Moorgate. London Transport's "Metro Tube Tour". Tickets £2-25 each from Fares and Charges Assistant, LT, 55 Broadway, London, SW1H OBD. For further details see Supplement to the March Timetable.

19.00 for 19.15 Friday 8th June at Hammersmith Town Hall; an Illustrated Talk on "The Work of the Consultative Panel" to be given by W.O. Skeat, B.Sc. (Eng), F.K.C., C.Eng., F.I.Mech.E., Hon. M.I.W.E Secretary to the Consultative Panel for the Preservation of British Transport Relics, and Council Member and Editor to The Transport Trust.