E RG R

THE JOURNAL OF

THE LONDON UNDERGROUND RAILWAY SOCIETY

Issue No 88

Volume 8 No 4

April 1969

A ROYAL OCCASION

The Victoria Line, having been completed to its first-planned terminus at Victoria itself, was opened by Her Majesty Queen Elizabeth II on Friday 7th March 1969.

The ceremony commenced at 11.00 when the Queen arrived at Green Park Station, to be welcomed by Field Marshal Sir Gerald Templar, Her Majesty's Lieutenant of Greater London. having presented to her a number of Westminster City dignitaries, and Mr Maurice Holmes (the Chairman) and other members and officers of the London Transport Board, the Queen left the reception area (a dais and awning erected over the entrance stairs on the south side of Piccadilly) and went to the subsurface ticket hall where she inspected the new hall, and purchased a ticket from a machine. There was a slight contretemps at this stage in the proceedings. when two successive sixpences supplied to Her Majesty by her equerry were rejected by the machine; the situation was saved by Mr F.E. Wilkins, LT's Chief Public Relations Officer. who managed to produce a coin acceptable to the machine.

The station master and a number of those who worked on the line, including a miner, met the Queen in the Booking Hall before she travelled down one of the new escalators to the Victoria Line level of the station, which was then inspected prior to the declaring open of the Line - which took place from a dais erected at the northern end of the Victoria Line northbound platform.

The Queen then entered the cab of the Royal Train, drawn up at the northbound platform, and pressed the buttons to start it, travelling in the cab to Oxford Circus where the official party and guests alighted to sip champagne on the platform. Here also a tour of the new platforms and subsurface concourse and booking hall took place prior to the train returning south to Victoria, the Queen travelling this time as a passenger. On arrival at Victoria a reception was held and the Queen unveiled a plaque in the Booking Hall to commemorate the event. The proceedings came to an end when the Queen left Victoria by car at approximately 12.50 to attend a luncheon being held in her honour by Westminster City Council at City Hall.

During her visit to the Victoria Line, the Queen was attended by the Lady Fairfax of Cameron, Lieutenant-Colonel the Rt Hon Sir Michael Adeane and Lieutenant-Commander John Slater, R.N.

During her speech, the Queen referred to the Line as being to her family an almost domestic undertaking, and said that the progress being made in burrowing underneath the Mall had been of constant interest. She also made reference to the visit made in 1968 to the Brixton extension workings by Prince Philip and the Prince of Wales.

An historical link came when Her Majesty made reference to a similar occasion in 1890 when her great-grandfather, King Edward VII, as the then Prince of Wales opened the City and South London Railway.

PUBLIC SERVICE ON THE NEW SECTION

The Royal Opening over, preparations were put in hand at once for the opening of the new section to the public, timed and widely advertised for 15.00 the same day. Partitions and dais were swept away, carpets rolled up, booking offices staffed and opened up, ticket machines and automatic barriers made serviceable, interchange passage gates unlocked and opened, and platform and supervisory staff stationed ready for the rush. And rush it was; a long queue had formed at Victoria well before the booking offices were open for business, and not all the ticket machines were in use early enough to relieve the pressure on booking clerks - whose task was

made more difficult on the one hand by their lack of experience of the new charges via the Victoria Line, and on the other by curious requests from ticket—collecting enthusiasts. The net result was to dis—appoint a number of people who obviously had hoped to be on the first train — for at the time of departure there were still long queues up in the booking hall—and with automatic barriers and squads of inspectors on duty it was impossible to dispense with the formality of buying a ticket.

However, what was probably not realised by the disappointed passengers was that they could not possibly have all got on the first train. This was timed to leave Victoria for Seven Sisters at 15.00, the corresponding first southbound train being scheduled out of Warren Street at $15.00\frac{1}{2}$ for Victoria. The northbound train left Victoria dead on time, packed to the doors, and made a completely uneventful journey over the new section and on to Seven Sisters.

Trains throughout the rest of the day were well patronised in both directions, and a great many first-day passengers appeared to be very favourably impressed, both with the line itself, its stations and trains, and with the manner in which it had opened up the West End with quick and easy journeys from points further north-east.

There seem to have been few hitches on opening day, but just after 16.00 a train left Victoria after being wrongly indicated on the platform as destined for King's Cross, when it was in fact going to Walthamstow Central — an error corrected by the train operator over the passenger address sytem after the train had left Victoria — and left a number of passengers on the platform who obviously wanted to go further north than King's Cross. However, if that was the only thing that went wrong in a very harassing day for London Transport, they are to be congratulated on their arrangements.

Passengers will now have to make use of publicity provided to enable to work out their new routes - but already there is no doubt of the benefits of the new line.

Warren Street-Oxford Circus-Green Park-Victoria. What is it like? To anyone who is acquainted with the first two sections of the Victoria Line, and has patronised the stations between Walthamstow Central and Warren Street, will have a general idea of the station layout and design - which are both continued on the newly-opened section. Considerable comment was passed, both on the press preview of the line on Wednesday 5th March, and on the opening day itself, about the station motifs which appear in the tiled recesses behind the platform seats; these motifs are described and discussed later in this issue.

All the new stations have easy and straightforward access to the Victoria Line platforms from the street and booking hall; interchange with other lines, where cross-platform facilities do not exist, is sometimes a lengthy business - but with the complexities existing below ground all over the West End this is probably not to be wondered at - and any interchange is, after all, better than none at all.

By no means all the automatic barriers are working at the time of writing, so it is impossible to judge their efficiency in dealing with the West End crowds — but some criticisms have already been made about the inadequacy of the facilities for getting luggage through the barriers at that Mecca of shoppers, Oxford Circus. No doubt if the complaints prove to be justified by experience over a period, it would not be too late to make some modifications to alleviate the trouble.

All the booking hall and circulating areas appear to be adequate for their purpose, and once the commuters have found their way around and know automatically where they are going there should be little confusion. The subsurface hall at Oxford Circus, where improvement was most needed, will make life much easier for the regular traveller than it has been hitherto, but a first view does not give the favourable impression created by the similar but much older hall at Piccadilly Circus — where the inner ring of shops create a circular subway and help to keep pedestrian traffic flowing in an orderly manner. This arrangement does not exist at Oxford Circus

so that there seems to be too much freedom of direction of movement. The Victoria booking hall, not having access from all directions in quite the same way, does not seem likely to give rise to the same problem. Green Park and Warren Street both appear to have adequate circulating area, but at the former the interchange with the Piccadilly Line is a fairly long walk and involves a number of stairs.

Altogether it would seem that the new line will be popular with passengers; the general layout is good and the foregoing comments are really matters of detail only and will do little to detract from what is a fine new underground railway, which will do much to improve the Londoner's travelling facilities, and encourage more people to take advantage of the speed and convenience of tube travel - thus helping to relieve the pressure on the streets.

STATION MOTIFS

One of the most interesting features of the new line from a design point of view is the use of an individual motif for each station, executed in coloured tiles which fill the alcoves behind the seats on the platforms. This is an elaboration of the much older system of using the colour of tiles to distinguish stations. But these new motifs are very much more attractive, and help to give each station an individuality of its own, an impression which is heightened by the design in each case having some relevance to the station where it is used.

From north to south, the motifs are as follows.

Walthamstow Central - an elaborate tapestry design in the style of William Morris. who lived at Walthamstow.

Blackhorse Road - a black horse. Outside the street level entrance to this station, there is also a bas relief of a black horse.

Tottenham Hale - a woman being ferried across a river in a punt; the Lea river runs near the station, and there used to be a ferry near this point.

Seven Sisters - a representation of seven trees; the "sisters" were seven elms marking the spot where a martyr was burned at the stake.

Finsbury Park - crossed pistols with a tree behind; this used to be a favourite spot for duellists 200 years ago,

Highbury and Islington - a stylised version of Highbury Castle.

King's Cross - five crowns in the form of a cross-a punning motif.

Euston - a stylised version of the late lamented Doric Arch.

Warren Street - an elaborate representation of a maze; another pun, this time on the word "warren"

Oxford Circus - a series of coloured circles in the form of a cross, with a large ring superimporsed; an illusion to the circus in the name.

Green Park - an irregular arrangement of coloured blobs, roughly circular in shape, representing the trees and flowers in the Park.

Victoria - a reverse-silhouette of Queen Victoria's head in white on a blue oval, the surrounging tiles being pink. A pleasant design reminiscent of a "bun-head" penny.

It will be an interesting exercise in the next year or so to speculate on motifs for the stations still to come - Pimlico, Vauxhall, Stockwell and Brixton - and see how near our ideas are to LT's when the last stage is opened.

PUBLICITY

London Transport have widely advertised the Victoria line during recent weeks. Posters have appeared at most stations, in trains and on buses, announcing the opening from 15.00 7th March; newspaper advertising has been on a generous scale both before and after the third stage was completed - many of these adverts having been full - or half-page and generously illustrated. Pamphlets have been issued in profusion, one of these being the latest version of those brought out for the opening of the first section of the line.

Entitled "The New Victoria Line - Stage 3" this gives a description of the Line, notes about automatic barriers, a map of the whole system in black on white with the Victoria Line shown in blue (and the Brixton extension in outline); a fare table, schedule of running times between station, table of first and last trains and one of service intervals completes this leaflet. For those who collect London Transport literature, it should be noted that this publication has been seen printed on no less than

four entirely different papers although identical in every other way. On opening day, large numbers of girls wearing Victoria Line sashes were employed on handing the leaflet to passengers at each of the stations served by the new section.

Other leaflets have appeared for the new stations explaining use of the automatic barriers - these have been brought out in different versions naming the stations where they are issued - presumably to drive home to the passengers that the contents do affect them as users of that particular station. A large diagrammatic sheet has also appeared giving details of the revised Northern Line timetable, designed to fit in with the Victoria Line service and provide adequate interchange services.

The 1969 pocket line diagram came out on 7th March, showing the Victoria Line open to Victoria. For collectors who wish to add it to the list published last month, it is dated 1969, titled "Underground Diagram of Lines and Station Index", is designed by P.E.Garbutt, printed by Johnson, Riddle & Co Limited, and referenced 768/1881Z/1,000,000. A larger printing than is usual now — and presumably in anticipation of greater demand.

A new edition of the Underground Guide, in force from 10th March has also appeared, including the new services.

A special postmark was used at all ten London District Offices by the GPO during the period 7-20 March; this read "Victoria Line through the West End now open" and showed LT's "Bar and Circle over V" device used for the line to the right of the inscription.

It should be noted that LT publicity has made frequent and prominent use of the catch-phrase "London's Pride" for its new service; it remains to be seen whether this name is intended to stick, or whether it is merely part of the opening fanfares.

London Transport has not been so much in the news, nor has it boosted itself so much, since the Centenary celebrations in 1963, and a great deal has obviously been staked on the success of the new line. So far, only one serious holdup has been reported, on 12 March.

RUNNING TIMES BETW STATIONS IN MINUTE Walthamstow Central - Bi Blackhorse Road - To Tottenham Hale - Seven Sisters - Finsbury Park - Highbur Highbury & Islington - King's C	Box	Peak Sund B			Peak South Bound			
Warren Street -				2		ri	14	
Oxford Circus	-			2		2	2	
Green P				2		11	11	
					11	NDAYS	T -	
TIMES OF FIRST AND LAST TRAINS	FIMES OF FIRST WEEKI							
			T	-	╁—		┥ ′	
Walthamstow Central			05 46	1		2 23 24	1	
Blackhorse Road			05 48	1		· -	1	
Tottenham Hale			05 50	t	-, 5	6 23 28	i .	
Seven Sisters Finsbury Park	05 32	,	05 52	1	07 4	8 23 30		
Highbury & Islington	05 36	05 46 05 49		I			· .	
King's Cross		05 52				8 23 40	1	
Euston	05 43			1	07 4	1 - '	1	
Warren Street	05 45		_		07.5		1	
Oxford Circus	05 46		_		075	1		
Green Park	05 48	05 58	06 08	1 -				
Victoria	05 50	06 00	06 10	00 34	07.5	6 23 48	:	
	First		Last	<u> </u>	Fire	nt 1	ast	
Victoria	05 36	00 09	00 19	00 27	074	1 23 30	23 33	
Green Park	05 37	00 10	00 20	00 32	074	2 23 31	23 34	
Oxford Circus	05 39	00 12	00 22	00 36	074	4 23 33	23 37	
Warren Street	05 41	00 14	00 24	00 38	074	6 23 35	23 40	
Euston	05 42		_	1		7 23 36		
King's Cross	05 44	00 17	l	, ,				
Highbury & Islington	05 47		_	1		2 23 44		
Finsbury Park	05 49	1	-	1 -		4 23 47	1 -	
Seven Sisters	05 54	00 27	1 -	00 55	07.5	9 23 51	1	
Tottenham Hale Blackhorse Road	05 56		00 39		080			
Walthamstow Central	05 58	ł	00 41		080		1	
w attoainstow Central	36 00		30 43	1	1000	2 45 39	' L	

NUMBER OF MINUTES BETWEEN TRAINS		NDAYS RIDAY		SATURDAYS			
	Peaks	Mid- day	Even- ing	Until 1100	11 00 to 20 00	After 20 00	
Between Victoria and	Mins	Mins	Mins	Mins	Mins	Mins	
King's Cross Seven Sisters	2-21	3-31 31-61	4-8	4-8	3-3± 3±-6±	4 4-8 12	
Walthamstow	41	10	12	12	10		
	S	UNDAY	rs		4		
	Until 12 00	12 00 to 17 00	After 1700				
Between Victoria	Mins	Mins	Mins				
King's Cross	71	6	4				
Seven Sisters	71	6	4-8				
Walthamstow	15	12	12				

Victoria						1	VICTORIA LINE					
5	Green Park SINGLE FARES											
9	9 5 Oxford Circus											
1/0	9	9 5 Warren Street										
1/0	9	9	5	Eus	uston							
1/0	t/o	9	5	5	Kin	King's Cross St. Pancras						
1/6	1/3	1/3	1/0	9	9	Hig	ghbury & Islington					
1/9	1/6	1/6	1/3	1/0	1/0	5	Finsbury Park					
2/3	2/0	2/0	1/9	1/9	1/6	1/0	9	Sev	en Sisters			
2/6	2/3	2/0	2/0	1/9	1/9	1/3	1/0	5	Tot	tenham Hale		
2/9	2/6	2/3	2/3	2/0	2/0	1/6	1/3	9	5	Blackhorse Road		
3/0	2/9	2/6	2/6	2/3	2/3	1/9	1/6	1/0	9	5 Walthamstow Central		

LITERATURE AND BROADCASTS

Naturally, the Victoria Line has attracted a great deal of attention from the press, and there were numerous reports of the stations, services offered and the actual opening ceremony in all London papers, on radio and television. In addition, there were the following items which delved a little deeper than the ordinary news story.

Press Supplements

Victoria Line - A Financial Times Survey. A 12-page supplement appearing with The Financial Times issue of Wednesday 5th March, and dealing with engineering, design, automation, economics and history - a very interesting article by Charles E.Lee, giving the story of the tubes, being included.

The Victoria Line - A Special Report. A 10-page supplement with The Times of Friday 7th March; covers much of the same ground as the supplement mentioned above, but it includes an article by Maurice Holmes, LT Chairman. The historical side is covered by Charles Klapper.

Railway Gazette. It is understood that this Journal has also produced a special supplement, but at the time of writing this has not come to hand.

Television

How they dug the Victoria Line; BBC 2 in colour; 21.55 Monday 3rd March; British Transport Films in association with the BBC; produced by John Shearman and Harry Hastings, with a commentary by Macdonald Hastings.

Quite a creditable job, with some excellent shots of the tunnelling work in progress; the main criticism is that too much time was spent on the erection and dismantling of the Oxford Circus umbrella bridge.

Radio

The Victoria Line - Mind the Doors! BBC Radio 4; 21.30 Wednesday 5th March.

An interesting programme in which Nigel Murphy explored, largely through interviews with those responsible, the intricacies of building and operating the new line. A much more detailed review than that on television, and to that extent more useful to the enthusiast. One of those programmes that proves that steam radio is not dead yet.

Book

The Victoria Line - A Pictorial Record published on the occasion of the opening of the Line by Her Majesty the Queen; $48pp\ 12\frac{1}{2}$ " x $9\frac{1}{2}$ ", profusely illustrated, largely in colour, all printed on heavy art paper, with scale drawings of cars as endpapers; bound in limp card with clear plastic dustjacket; London Transport, March 1969; price £1-10-0.

This is an excellent picture—history of the Line, its building, design and operation. Two very valuable features are series of photographs giving nearly all the station motifs, most of them in colour, and reproducing most of the station posters which came out during the building years. Altogether a very valuable record, with text which is informative but not highly technical, very well produced and an essential for the enthusiast. Well worth the money, and can be obtained from the Society—send your order accompanied by the appropriate money to Norman Davies, 87 Woodland Drive, St.Albans, Herts. And order quickly, as there has only been a restricted printing of this book, and the Society stock is quite small.

WHAT COMES NEXT?

Now the original Victoria Line is completed, and the Brixton extension well on the way, one wonders what will follow - for it has been known for a long time that LT favour a rolling programme of new tube lines, so that the teams of engineers, miners and designers may be kept together to move on from job to job.

On the stocks at the moment are the extension of the Piccadilly Line Aldwych branch from Aldwych to Waterloo; the extension of the Piccadilly Line from Hounslow West to Heathrow Airport via Hatton Cross — though this line will be mainly cut—and—cover and it is believed that it may be to large dimensions, to enable District Line trains to return to this line because of their greater luggage—capacity; then there is the first stage of the Fleet Line from Baker Street to Strand; and of course there is always the southward extension of the Bakerloo from Elephant and Castle to Camberwell Green!

THE SUBTERRANEAN STRUCTURE OF LONDON:

HOW TO MAP TT.

John M. Crowhurst

A conference on this subject was held at the Centre for Advanced Studies in Environment on October 15th-17th, 1968. The initiative for this came from Ellis Hillman of The Architectural Association, and its purpose was to examine the possibility of setting up a central computerised information unit where details of all underground workings, from a half-inch water main to a tube tunnel, would be readily available.

Representatives from GLC, Civil Engineering firms and London's essential services, including London Transport, attended the conference. The lectures covered all aspects of civil engineering under London including the Underground and time was given for questions and discussion. Those present saw the benefits of centralised information and the savings it would make possible in time, labour and cost to any new works carried out under London.

Since the conference there has been more exchange of information, and the GLC has debated the co-ordination of site information. A committee has been set up to explore the possibilities of the idea and they are hoping to execute a pilot scheme in the form of a strip map of the Victoria Line. Much of the information required is already available from research carried out by the contractors on the line.

There was a follow-up seminar on 28th January. Ellis Hillman outlines the problems of such a map and summed up the developments since October. Following this, representatives of the water, gas, electricity boards and the GPO outlined the methods by which they kept their records. Unfortunately neither BR or LT were represented to give details of their records. Mr J. Stonehouse then gave a

talk on the "Problems of a Borough Engineer", which was followed by a talk by Mrs Dorothy Castle on her sociological London Atlas. After dinner a highly informative and entertaining talk was given by John C.Craig entitled "London Beneath the Plan".

The writer, as Assistant Cartographer, has represented the Society in this project, and is following up contacts made as well as keeping in touch with the Organisers. It may well be that there will be ways in which the Society can assist in this project (as in fact happened during the Follow-up Seminar when, in the absence of an LT representative, it was possible for the Society representative to deal with some points raised during discussions). Further news will be published in the Journal from time to time, and perhaps too there will be requests for volunteers to work on the project.

THE CHANDOS PAPERS

After a number of delays, mainly due to the recent changes in Society Officers, it is now possible to ask the Huntington Library to prepare copies of that section of the Chandos Papers relating to the Wotton Tramway.

Would all those members who have offered to donate money towards this project please, therefore, send their promised contributions to the Editor at 62 Billet Lane, Hornchurch, Essex, RM11 1XA, during April.

The Society is still not in a position to have all the relevant papers copied, but fortunately these fall into well-defined sections and the money already promised is sufficient to obtain a full set of the most important group. This does not mean that the Society would not like to complete the exercise, so if any other members would like to contribute they can still do so by sending their gifts to the Editor as above.

The copies will be held by the Society first for use in research by those who have contributed, then for other Society members, and lastly for non-member students.

ASPECTS OF UNDERGROUND RAILWAY DESIGN AND EQUIPMENT Desmond F. Croome

Being The President's Address For 1968

4

(4) Station Spacing

In the Planning of a rapid transit line, the question of the average distance between stations ranks next in importance to alignment.

The average distance must, inevitably be a compromise. On one hand, each station incurs substantial capital, operating and maintenance costs, whilst additional station stops reduce the average speed of the trains and increase their power consumption and the expenditure on braking. On the other hand, the attractiveness of a rapid transit system depends on the accessibility of its stations; to carry passengers is the whole object of the exercise, and the passenger is king.

Many of the station sites will have been fixed when the alignment was determined; all important interchange points, rail or road, must have a station so the area of choice is limited to the additional stations between those for interchange.

There is a limit to the number of passengers who can board or alight from a train during the period of the maximum desirable station stop; thus it may be desirable to have closely spaced central area stations to spread the load and avoid creating a bottleneck. The central area will, in any case, have more closely-spaced stations than the suburbs; in the centre, passengers will expect to be able to walk to their objectives from the nearest rapid transit station, but in the suburbs they can be brought to the stations by bus or car.

Two features of overseas systems call for a

slightly different approach from that adopted in Dwelling in flats, instead of houses, this country. results in an area of high population density surrounding the central business area, so that the level of traffic may justify continuing the central-area spacing into Secondly, the widespread use of the inner suburbs. flat fares on road services means that the average length of journey is greater than with graduated roadservice fares (because the high level of the flat fare "kills off" the very short-distance traffic); a rapid transit line with closely spaced stations can then replace a parallel road service completely. since the walking distance from station to objective will form a small proportion of the total journey distance.

The adoption of deep-level construction tends towards more widely spaced stations. The stations are dearer to build and operate, and they are less convenient for short-distance traffic because of the extra time taken to travel vertically between surface and platform. Further, mechanised tube tunnelling with power-driven cutting shields is best suited to long runs.

In the closeness of its station spacing, Paris probably leads the world, with an average figure for the urban network of .32 of a mile (550 yards). It is claimed that no point in the central area is more than 550 yards from a station. Other systems with a low overall figure are Madrid, at .34 miles, Milan, .37. and Lisbon.40. The author calculates that the London figures, with the Victoria Line, are .50 miles for the central area. .98 for the outer area. and .85 overall. On the Victoria Line itself the average spacing is about .95 miles, but this line is not typical, as its principal raison d' - etre is to fill gaps in the system, so that other lines serve some of the intervening localities (e.g. at Drayton Park and Manor House), and it also crosses two "trafficless zones" (Green Park and the Lea Valley).

Moscow, another deep-level system, has averages of about .76 miles in the central area, 1.06 miles in the suburbs, and .93 miles overall, the latter figure being similar to Leningrad's. Stockholm with some deep-level central sections, but wide natural water barriers, has an overall average of about .53 miles, (covering .43 miles in the centre and .56 in the suburbs). The latest plans for Manchester envisage a .37 mile spacing in the centre (Victoria-University) and 1.01 miles elsewhere, giving an overall figure of .83 miles.

One useful way to widen the station intervals but to maintain convenient access is to build double ended stations (i.e. with street access to each end of the platforms). In central Stockholm five out of six successive stations are double-ended. With a deep-level line, the street access points can be further apart because of the angle of the escalator shafts from the platform ends. Costs for such a station are naturally a compromise between those for one and two separate stations, but the scheme does have the advantage of fewer station stops for the trains, and more even train loading.

to be concluded

THE TIMETABLE

Thursday 3rd April 18.00 Library Evening at 62 Devonshire Road, Ealing, London, W.5.

Friday 11th April 19.00 for 19.15 at Hammersmith Town Hall. Victoria Line Film Show - the programme postponed from the February meeting, when it could not be shown because the films were lost in the post.

Saturday 12th April Visit to Golders Green Depot, LT. Names, accompanied by a stamped addressed envelope to the Assistant Secretary, S.E.Jones, 113 Wandle Road, Morden, Surrey.

Thursday 24th April 13.45 Visit to Johnson, Riddle & Co Limited, Printers of LT Route Diagrams and Posters. The Works are at St Mary Cray, and a very interesting programme has been arranged for the afternoon. Names to J. Brook Smith, 34 Barnehurst Road, Barnehurst, Kent, with s.a.e.

Copyright TLURS