

UNDERGROUND NEWS

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THE TIMETABLE

Friday 9 August

Talk, '120 Years of Underground Tickets' By Mr J.E. Shelbourn, General Secretary, Transport Ticket Society 19.00 for 19.15 in the Conference Room, Baden-Powell House.

Monday 9 September

Library Evening, 18.00 The Society's Library open for inspection at 62 Beauval Road, London, SE22 8UQ.

Friday 13 September

Talk, 'The Snow Hill Line' by Mr C. Austin, Passenger Planning Officer, (London & the South East), British Rail, 19.00 for 19.15 in the Conference Room, Baden-Powell House.

Saturday 21 September

Sarah Siddons Rail Tour on the Southern Region of British Rail, to Folkstone.

Friday 11 October

Presidential Address, 'British Railway Bridges' by Mr P.D. Stephens. 19.00 for 19.15 in the Conference Room Baden-Powell House.

Friday 18 October

Library Evening, 18.00 The Society's Library open for inspection at 62 Beauval Road, London, SE22 8UQ.

Saturday 26 October

The First John Prigmore Memorial Lecture, Details as in Underground News 283.

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PINNER CENTENARY

by

Dennis F. Edwards

It was on 25 May 1885 that the Metropolitan Railway was extended from Harrow-on-the-Hill to Pinner. One hundred years later (plus a day!), on Sunday 26 May 1985, Pinner Local History Society celebrated the event by running a special train.

Events at Pinner station began soon after 09.00 with a jazz band playing in the station forecourt and an exhibition in the station waiting room. The platform awnings were decorated with red, white and blue flags, and many of the 400 passengers were dressed in the fashions of 1885.

The eight-car train of A62 stock (north end: 5168-6168-6169-5169+5200-6200-6201-5201 :south end), complete with a headboard at each end, commemorative banners on each car window (and a super set of flattened wheels on car 6201!), departed from Pinner southbound at 10.00. It had previously ran empty from Neasden depot, reversing north to south at Northwood. From Pinner, the train travelled to Harrow-on-the-Hill, where it reversed and ran to Uxbridge. There was a short break here, from 10.26 to 10.54, before returning to Harrow. After reversing in the siding, the tour train continued to Amersham, arriving there in a thunderstorm at 11.50. The rain and storms continued into the early afternoon when the train left Amersham at 13.22 and went to Watford, running via the North Curve between Rickmansworth and Croxley. This was the last break of the tour and departure was at 14.20, Pinner being reached at 14.33.

OPO CONVERSION FOR A STOCK

The London Underground's Acton Works has won a major train modification contract in competition with outside manufacturers, both public and private. The contract, worth about £2½-million, is for the conversion of the Metropolitan Line's A60/62 stock, to make them suitable for one person operation. It includes the provision of complete kits of parts, to manufactured at Acton, and the conversion of the cars themselves.

A total of 112 four-car units are to be converted, 25 at Acton Works (which will also be half-life overhauled at the same time) and the rest (87 units) will be done at a new 'satellite' workshop at Ruislip depot - four-car 1938 tube stock unit 10172-012259-12061-11172 has already been converted at Acton to provide the accommodation of the extra staff transferred from Acton. The work is expected to take about 18 months, but the first train in converted form, but crew-operated, is expected to be in service on the Metropolitan main line later this summer. Total OPO with A60/62 stock is currently scheduled for October 1986 - after all the conversion work has been completed.

The door controls will be removed from the passenger saloon on driving motor cars and new panels will be located on the back wall of cabs. A second set of door controls will be provided in front of the driver, to be operational in OPO conditions, to save the train operator having to turn round - a disadvantage found with OPO on C69/77 stocks. Other work includes fitting public address throughout the trains, new 1973 tube stock type headlights, air-operated D stock type windscreen wipers, and press-button spring applied parking brakes to replace the existing manually operated handbrakes. The

existing train driver's cab window - at the driving position - will be replaced by a missile-proof window for greater protection.

The 112 units, making 56 trains in all, are to be designated 'A' end (44 units), 'D' end (44 units) or 'double-ended' (24 units), and will thus lose their present operating flexibility. The middle motor cars of the 'A' and 'D' units will be regarded as Uncoupling Non-Driving Motor cars and will not be able to be used at the outer ends of trains, as their cabs will not be equipped for OPO. They will, however, retain their automatic couplers to enable opposite end UNDMs or DMs of double-ended units to be coupled to form eight-car trains. A full-length A stock OPO train could, therefore, be formed in one of four ways:

	<u>North-end Unit</u>	<u>South-end Unit</u>
(1)	← 'A'-end unit → 'A'DM - T - T - 'D'UNDM	← 'D'-end unit → 'A'UNDM - T - T - 'D'DM
(2)	← 'A'-end unit → 'A'DM - T - T - 'D'UNDM	Double-ended unit 'A'DM - T - T - 'D'DM
(3)	Double-ended unit 'A'DM - T - T - 'D'DM	← 'D'-end unit → 'A'UNDM - T - T - 'D'DM
(4)	Double-ended unit 'A'DM - T - T - 'D'DM	Double-ended unit 'A'DM - T - T - 'D'DM

It will be recalled that the A stock originally comprised 116 4-car units - 31 trains of A60 stock and 27 trains of A62 stock - both types being almost identical and operationally wholly compatible. The number of serviceable units has been reduced over the years, due to mishaps etc., by four, although only two cars (5170 and 6170) have actually been scrapped. These four units are:

5034 -	Derailment at Harrow on 7.9.81
6008 - 6009 - 5009	Buffer-stops collision at Amersham on 12.8.81
5036 - 6036 - 6037 - 5037	Cannibalised from 19.7.77 for spares
5116 - 6116 - 6029 - 5029	Kilburn collision on 11.12.84
5170 - 6170 - 6171 - 5171	Collision at Neasden depot on 27.8.75

The 24 double-ended units, will comprise 18 de-icing sets and six non-de-icing sets. Unit 5116, damaged beyond repair in the Kilburn collision of December 1984, which was a de-icing unit, is to be replaced by the now-designated Chesham shuttle unit (5060-6060-6061-5061), which has Davies and Metcalfe experimental braking equipment - as yet to have de-icing equipment fitted.

The four-car unit salvaged from the Kilburn collision (5028-6028-6117-5117) is now to become a double-ended non-de-icing unit, replacing 5138-6138-6139-5139, which will become an 'A' end unit when repair of 5139 (and its present partner, 5092) is complete. To avoid having odd-numbered units, 5028-6028-6117-5117 is to become 5232-6232-6233-5233, which is right at the end of the A stock numbering series. Indeed, 5028-6028 acquired their new numbers (5232 and 6232 respectively) on 12 June 1985! It will be interesting to see if the other mis-formed unit (5008-6034-6035-5035) will be similarly treated.

The A stock OPO conversion contract follows the successful completion by Acton Works of structural alterations to a number of District Line D stock trains to improve ventilation.

A list of A60/62 stock formations, as currently proposed, appears opposite.

NORTH END UNITS 44 x 4-CARS				SOUTH END UNITS 44 x 4-CARS				DOUBLE-ENDED UNITS 24 x 4-CARS			
DM 'A'	UNDM 'D'		UNDM 'A'	UNDM 'A'		DM 'D'	DM 'A'	UNDM 'D'		UNDM 'A'	
End North	'A' Trailer	'D' Trailer	End Middle	'A' Trailer	'D' Trailer	End South	End North	'A' Trailer	'D' Trailer	End South	
5000	6000	6001	5001	5140	6140	6141	5141	5056	6056	6057	5057
5002	6002	6003	5003	5144	6144	6145	5145	5058	6058	6059	5059
5004	6004	6005	5005	5146	6146	6147	5147	5060 †	6060	6061	5061
5006	6006	6007	5007	5148	6148	6149	5149	5062	6062	6063	5063
5008	6034	6035	5035	5150	6150	6151	5151	5064	6064	6065	5065
5010	6010	6011	5011	5152	6152	6153	5153	5066	6066	6067	5067
5012	6012	6013	5013	5154	6154	6155	5155	5088	6088D	6089	5089
5014	6014	6015	5015	5156	6156	6157	5157	5090	6090D	6091	5091
5016	6016	6017	5017	5158	6158	6159	5159	5092	6092D	6093	5093
5018	6018	6019	5019	5160	6160	6161	5161	5094	6094D	6095	5095
5020	6020	6021	5021	5162	6162	6163	5163	5096	6096D	6097	5097
5022	6022	6023	5023	5164	6164	6165	5165	5098	6098D	6099	5099
5024	6024	6025	5025	5166	6166	6167	5167	5100	6100D	6101	5101
5026	6026	6027	5027	5168	6168	6169	5169	5102	6102D	6103	5103
5030	6030	6031	5031	5172	6172	6173	5173	5104	6104D	6105	5105
5032	6032	6033	5033	5174	6174	6175	5175	5106	6106D	6107	5107
5038	6038	6039	5039	5176	6176	6177	5177	5108	6108D	6109	5109
5040	6040	6041	5041	5178	6178	6179	5179	5110	6110D	6111	5111
5042	6042	6043	5043	5180	6180	6181	5181	5112	6112D	6113	5113
5044	6044	6045	5045	5182	6182	6183	5183	5114	6114D	6115	5115
5046	6046	6047	5047	5184	6184	6185	5185	5118	6118D	6119	5119
5048	6048	6049	5049	5186	6186	6187	5187	5120	6120D	6121	5121
5050	6050	6051	5051	5188	6188	6189	5189	5122	6122D	6123	5123
5052	6052	6053	5053	5190	6190	6191	5191	5232 *	6232	6233	5233
5054	6054	6055	5055	5192	6192	6193	5193				
5068	6068	6069	5069	5194	6194	6195	5195				
5070	6070	6071	5071	5196	6196	6197	5197				
5072	6072	6073	5073	5198	6198	6199	5199				
5074	6074	6075	5075	5200	6200	6201	5201				
5076	6076	6077	5077	5202	6202	6203	5203				
5078	6078	6079	5079	5204	6204	6205	5205				
5080	6080	6081	5081	5206	6206	6207	5207				
5082	6082	6083	5083	5208	6208	6209	5209				
5084	6084	6085	5085	5210	6210	6211	5211				
5086	6086	6087	5087	5212	6212	6213	5213				
5124	6124	6125	5125	5214	6214	6215	5215				
5126	6126	6127	5127	5216	6216	6217	5217				
5128	6128	6129	5129	5218 †	6218	6219	5219				
5130	6130	6131	5131	5220	6220	6221	5221				
5132	6132	6133	5133	5222	6222	6223	5223				
5134	6134	6135	5135	5224	6224	6225	5225				
5136	6136	6137	5137	5226	6226	6227	5227				
5138	6138	6139	5139	5228	6228	6229	5229				
5142	6142	6143	5143	5230	6230	6231	5231				

Notes:

‡ Chesham shuttle unit from April 1985 - to become a de-icing unit on OPO conversion.

D De-icing trailer

* Renumbered from 5028-6028-6117-5117 respectively.

† 5218 fitted with D stock bogies and air suspension.

ISLE OF WIGHT ALL-CHANGE

The standard tube stock on the Isle of Wight is undergoing many changes - probably the most major, appearance-wise, since it first operated on the Island from 1967. The situation, correct to 10 June 1985, is summarised below:

At the beginning of the year the stock comprised 37 cars, forming five seven-car trains with one motor and one trailer spare. The original stock total of 43 cars (six seven-car trains, plus one spare motor) has been reduced over the years, the story of which has been told in Underground No.11 (pages 15-48) - it is now time to bring readers up to date.

The accent is on improvements, but economies as well. Looking at the latter first, it has been decided that five-car trains will suffice, even during the busy summer period, the first such train operating on 6 March 1985. The existing fleet of 37 cars has thus been organised thus:

- five five-car trains formed M-T-T-T-M,
- seven 'spare' cars (which could form one other five-car train and give two spare motors),
- five cars withdrawn (two motors, two trailers and one control trailer).

As an experiment, two-car operation (M-M) was

tried at the end of the winter period, the first such train to carry passengers being S2+S9 on 4 March 1985. A number of various two-car formations were operated on an occasional basis until the end of April - presumably next winter will see two-car trains on a regular basis?

Turning to the improvements being made to the standard stock (the newest vehicles being just 51 years young, the oldest 62 years!), seats were replaced during 1982 and 1983, using moquette identical to the Underground's D stock. Repainting of vehicles continued through 1984, but by the end of the year the rate of repainting slowed down and attention turned to re-wiring and re-newing interior car lighting. The first car was completed on 17.12.84 and to date three trailers have been so converted, with three more under way. The lights, utilising existing fittings, (no mod-cons like fluorescent lighting!) have been removed from cant rail level and are re-located along the centre of the ceiling, alternately each side of a cable-carrying metal duct, which runs from one end of the car to the other, requiring the end ventilators to be blocked off. Noted on trailer cars were additional steel poles fitted at the transverse seat positions (at the ends and centre of the cars) which carry the new wiring and also serve as additional grab poles. On control trailer cars, the opportunity has been

taken to remove all the equipment from the cabs, including the headlights, which has meant the external shutters being removed and these positions being panelled over. The door which separates the saloon from the redundant cab is retained - the demuded position, however, is not available for public use. Former control trailer S31 retains its de-icing equipment in the cab and a pair of lights have been fitted at solebar level to illuminate the track when de-icing.

In addition to the three trailers with lighting modifications completed, the first driving motor car was finished on 6 June 1985. This represents a major change of appearance to the front of motor cars, making them less non-London looking than ever! As well as saloon lighting modifications, improvements for drivers have been made. The front communicating door has been panelled over giving a flat appearance to the yellow driving end, on which 'Ryde Rail' in black appears, with an all-black 'blob' in the shape of the Isle of Wight itself. This is also applied to the car sides in white and is extra to the 'Isle of Wight' name. As the conduit for the new lighting cables goes right to the end of the car at the guard's end, the centre ceiling mounted pilot light has been removed and a new pair - one on each guard's panel - have been fitted. In the driver's cab itself, changes have been made to the positions of some switches, making them more easily accessible.

As the new five-car formations do not represent any previous unit formations (although trains still carry their previous class and unit numbers), temporary numbers '1' to '5' have been applied to motor car ends, for identification by depot staff at Ryde. The spare seven cars, although enough to form another complete train, are to be utilised to replace other cars to have lighting modifications made. Below is a list of formations as at 10.6.85, but it must be stressed that these may not remain constant. By the time you read this, they could all be different. It will also be interesting to see if any 'new' class and unit number system is adopted in the future.

No.1

Car No.	2	47	41	27	11
Car Type	A DM	T	T	X CT	D DM
Old LT No.	3706	7279	7286	5279	3705
Livery	B/G	B/G	B/G	B/G	B
Last Unit No.	043	031	041	041	045
Previous Unit No.					035
First Unit No.					036
Notes				A,C	

No.2

Car No.	22	42	29	28	3
Car Type	A DM	T	X CT	A CT	D DM
Old LT No.	3010	7280	5293	5305	3251
Livery	B/G	B/G	B/G	B/G	B
Last Unit No.	042	042	042	032	032
Notes	B				

No.3

Car No.	6	31	46	43	15
Car Type	A DM	X CT	T	T	D DM
Old LT No.	3084	5283	7283	7275	3273
Livery	B	B/G	B/G	B/G	B/G
Last Unit No.	045	043	036	043	042
Previous Unit No.			046		
Notes		C,D		A	B

No.4

Car No.	8	49	44	33	7
Car Type	A DM	T	T	X CT	D DM
Old LT No.	3074	7296	7286	5291	3209
Livery	B/G	B/G	B/G	B/G	B/G
Last Unit No.	036	036	044	044	034
Previous Unit No.	046	046			
Notes		A,C	A	A	A,B

No.5

Car No.	10	93	34	94	9
Car Type	A DM	T	A CT	T	D DM
Old LT No.	3696	7282	5302	7287	3223
Livery	B	B/G	B	B/G	B
Last Unit No.	Sp	Sp	045	034	035
Previous Unit No.		033	035		
Notes				A	

Spare Motors

Car No.	1	4	5	20
Car Type	D DM	A DM	D DM	A DM
Old LT No.	3703	3702	3185	3308
Livery	B/G	B	B/G	B/G
Last Unit No.	041	044	043	041
Previous Unit No.	031		033	
Notes			C,E	

Spare Trailers

Car No.			
Car Type	A CT	A CT	T
Old LT No.	5294	5290	7285
Livery	B/G	B	B/G
Last Unit No.	031	034	032

Withdrawn Cars

Car No.	13	21	36	95	96
Car Type	D DM	D DM	A CT	T	T
Old LT No.	3141	3041	5350	7292	7290
Livery	B/G	B/G	B	B	B
Last Unit No.	031	044	035	045	035
Previous Unit No.	041		036	035	036

Codes & Notes Used Above

- A DM 'A' end Driving Motor.
- D DM 'D' end Driving Motor.
- T Trailer.
- A CT 'A' end Control Trailer, to become X CT.
- X CT Former Control Trailer, equipment removed

Liveries:

- B All-blue
- B/G Inter City Blue & Grey

Notes:

- (A) Red-painted step plates.
- (B) Vents removed - separate from lighting mods.
- (C) Lighting mods & vents removed.
- (D) De-icing trailer.
- (E) Restyled front end - front communicating door removed and panelled over.

In UN263 (November 1983, page 199), a list was published of the livery changes and subsequent modifications to the standard stock. The table at opposite top updates that list, correct to 10 June 1985.

LONDON REGIONAL TRANSPORT AND THE DISABLED

Introduction

There are some 500,000 'transport disabled' people in Greater London, ranging from those with severe handicaps who are confined to wheelchairs and require special facilities, to those who find using public transport difficult because they have impaired sight or hearing, arthritis or similar illness or general problems related to old age. LRT is very conscious of the need to make its public transport system more convenient and easy to use, and is embarking on a programme that will steadily improve the travel facilities it provides for people with disabilities.

Buses

From 1986 all new double-decker buses will incorporate extra entrance and exit steps. The lower step heights thereby achieved will make

Unit	Car	Ex Unit	LT No.	Grey Doors	B/G Exterior	Lime Green Interior	D Stock Moquette	Lino	Colour	Lighting Mod
1	2	043	3706	9.12.78	6.2.82	19.2.82	28.10.82	-	-	-
1	47	031	7279	13.5.80	8.3.82	18.6.81	22.12.82	13.6.81	Black	-
1	41	041	7286	7.6.80	31.3.82	18.4.81	11.11.82	-	-	-
1	27	041	5279	15.2.80	24.3.82	28.3.81	23.11.82	-	-	12.4.85
1	11	045	3705	16.10.76	-	-	18.1.83	5.2.83	Orange	-
2	22	042	3010	21.1.79	3.5.83	28.5.83	8.12.82	-	-	-
2	42	042	7280	7.4.79	26.3.83	13.11.82	25.11.82	27.8.82	Black	-
2	29	042	5293	7.10.78	23.4.83	26.7.82	8.12.82	-	-	-
2	28	032	5304	28.4.79	16.7.83	12.9.81	21.2.83	-	-	-
2	3	032	3251	17.2.79	-	14.10.81	21.2.83	-	-	-
3	6	045	3084	27.11.76	-	-	11.3.83	-	-	-
3	31	043	5283	20.5.78	7.4.82	30.4.82	28.10.82	-	-	17.12.84
3	46	036	7283	11.8.79	30.1.82	14.2.81	11.3.83	-	-	-
3	43	043	7275	26.3.78	4.1.82	14.12.81	28.10.82	10.4.82	Black	-
3	15	042	3273	10.3.79	5.1.83	5.1.83	8.12.82	-	-	-
4	8	036	3074	14.7.79	30.1.82	7.3.81	25.11.82	3.12.82	Orange	-
4	49	036	7296	22.9.79	13.2.82	31.1.81	11.3.83	17.1.81	Black	-
4	44	044	7281	3.6.77	21.7.84	21.7.84	4.4.83	21.7.84	Black	7.2.85
4	33	044	5291	30.7.77	10.12.84	10.12.84	2.4.83	18.12.84	Black	-
4	7	034	3209	1.5.76	2.4.84	2.4.84	27.1.83	-	-	-
5	10	Sp	3696	15.5.76	-	-	17.5.83	-	-	-
5	93	Sp	7282	28.1.78	5.9.83	7.11.83	26.4.83	12.83	Orange	-
5	34	045	5302	18.6.76	-	-	10.3.83	-	-	-
5	94	034	7287	17.4.76	19.7.84	19.7.84	27.1.83	3.6.82	Black	-
5	9	035	3223	11.1.77	-	-	17.5.83	-	-	-
Sp	1	041	3703	26.1.80	4.3.82	19.11.81	22.12.82	-	-	-
Sp	4	044	3702	9.4.77	-	-	2.4.83	-	-	-
Sp	5	043	3185	11.2.78	1.1.82	22.1.82	11.11.82	-	-	6.6.85
Sp	20	041	3308	22.3.80	17.3.82	22.5.81	24.11.82	-	-	-
Sp	26	031	5294	15.1.80	12.3.82	26.9.81	22.12.82	-	-	-
Sp	32	034	5290	11.5.76	-	-	27.1.83	-	-	-
Sp	92	032	7285	12.8.78	9.8.83	5.8.81	21.2.83	18.7.81	Black	-

a significant difference to the accessibility of the regular bus services to elderly and ambulant disabled people. An existing double-deck bus, incorporating the lower steps and other features was to be displayed at the DoT's 'Mobility Roadshow' at Crowthorne on 13-15 June. Other improvements to be introduced on new buses from 1986 include thicker, non-slip and better positioned handrails, repositioned bells, and illuminated 'stopping' signs.

The Underground

Access to the Underground is much more difficult for travellers with certain disabilities than access to buses. Overall, the policy for the future is that when stations are rebuilt or renovated, the designs will take into consideration the problems and potential hazards that can be incurred by passengers with disabilities, and measures will be adopted to help them as much as possible.

Future station modernisation and renovation schemes will take into consideration and incorporate where practical extra measures to help ambulant disabled passengers and those with impaired sight or hearing. These will include clearer definition of the tops and bottoms of stair risers, larger-diameter handrails on stairs, clearer signing and improved lighting. Textured flooring at the top and bottom of stairs and escalators and at lifts will be considered to help visually handicapped passengers.

More seats, some with handrails, will be provided on platforms and, where possible, in ticket halls and concourses. At ticket offices, induction loops (accompanied by internationally recognised publicity symbols) are being provided to help hearing aid users.

Better signposting will be installed and greater use will be made of loudspeakers at stations. Platform edges will be clearly defined by textured surfaces and bold white lining for the benefit of the partially sighted, and on some

narrow 'island' platforms textured grids will be used. At stations where there are larger numbers of visually handicapped passengers, consideration will be given to textured routes on platforms, as has already been done at Stamford Brook.

The cost and practicability of providing wheelchair access at a limited number of stations on the surface and shallow-depth sections of the system is being assessed, and special consideration will be given to interchange stations. The major changes needed at Liverpool Street as a result of the British Rail development scheme will enable wheelchair access to be provided to at least one of the Circle/Metropolitan Line platforms.

The LRT Board has given careful consideration to the possibility of permitting wheelchairs to use the deep-level tube tunnel sections of the Underground - they are already permitted at most times on the open or shallow-depth sections, which represent over 70% of the network. However, for safety reasons, both for the wheelchair user as well as other passengers and staff, especially for emergency evacuation of trains, it is considered undesirable to extend the area of wheelchair acceptance beyond that which is already permitted.

Consideration is being given to fitting audible door warnings on new trains - such a decision will be taken after passenger evaluation of the three prototype trains for the Central Line due to be delivered next year. These prototypes will include other features designed to help disabled passengers.

When opened in 1987, the new Docklands Light Railway, which will run from Tower Hill to the southern end of the Isle of Dogs and to Stratford, will incorporate full provision for the needs of passengers with all types of disabilities, including those in wheelchairs.

Both London Buses and London Underground staff

now include within their training programmes for new staff special sessions on how to help passengers with disabilities, with special video films to draw attention to particular problems and how to assist them. Both businesses are also running continuing campaigns to alert operating staff to be on the lookout for passengers who may need help, especially those with hidden disabilities.

It can be seen that much is being done to improve travelling conditions over the whole London Regional Transport system for passengers with disabilities. However, because most Underground stations and many buses and trains were designed many years ago, they cannot be changed overnight, and some desirable changes will take years to achieve. Nevertheless, LRT is now taking a positive approach to the travelling needs of all passengers with disabilities, and is anxious to achieve tangible results as quickly as possible.

PHONES BY TUBE AND TRAMWAY

Miles of fibre-optic telephone and other communication cables will be housed in tunnels of the London Underground in a deal announced by LRT and Mercury, the telecommunications company. Many more miles of Underground track and cable ducts under London's streets are available from LRT for similar use. The Mercury deal will help to provide the capital with a new independent telephone network, as well as television and satellite-linked communication and business document transmission.

LRT has nearly 300 miles of Underground track - including over 100 miles in its own tunnels under the crowded inner London area. There are even more miles of tramway cable-ducting, originally installed for tram and trolleybus power supplies but now suitable to carry cables of the new fibre-optic and electronic technology.

The ducts and track have already proved successful in other commercial cabling operations. A combination of both facilities was recently used for the Charing Cross and Westminster Medical School's two-way lecture circuit, linking students and lecturers in six hospitals via fibre optics.

The agreement negotiated with LRT gives Mercury access to all the authority's train tunnels, providing wide-ranging coverage throughout London in secure space, with good access for maintenance. The contract provides that all cables and equipment will meet LRT's stringent safety requirements, including the use of low-smoke emission materials.

The new cable system has been installed and supplied by TCL, the major British telecommunication cable systems company, which is also responsible for Mercury's London-Bristol trunk link. A ten-fibre cable leaves the Willesden building through a specially installed duct and runs briefly alongside British Rail tracks to meet the Grand Union Canal. A new duct has been built along the towpath as far as Paddington Basin, where the cable enters the LRT Underground system at Paddington.

Twenty-fibre cable is installed in the Circle Line tunnels from Paddington to Tower Hill, using LRT-approved materials. This high-capacity cable is the first section of a planned 'London ring', using LRT tunnels and other routes to connect local networks in major areas of business activity. At Tower Hill the cable reverts to ten-fibre, and runs through London Hydraulic Power ducts, sub-ducted by TCL, and the private LHP Thames subway to the Guy's Hospital microwave distribution node.

AYLESBURY STATION OPEN DAY

8th June 1985

The Open Day was the climax of Aylesbury Rail Week, which could be said to have begun when 46229 "Duchess of Hamilton" came to Aylesbury via the Princes Risborough branch on Sunday evening, 2nd June. The week was intended mainly for organised parties, and the final (open) day was due to start at 10a.m. However, by 8.30a.m. folks were rolling up!

46229 trundled up and down through Platform 3 all day; the south end of Platform 2 was occupied by a rake of various freight vehicles and a service-stock brake-van; a diesel shunter gave short cab-rides from the other end of the platform. 50007 "Sir Edward Elgar", resplendent in near-GWR livery stood on Platform 4 with two grey liveried freight locomotives of classes 58 and 20. Behind these was a standard Chiltern Line 4-DMU repainted, and then the Pullman and maroon coach labelled "Friends of the N.R.M." which had arrived with the Duchess.

Also using Platform 3 was a free 4-DMU shuttle service linking Princes Risborough and Quainton Road, calling at all stations. This bore card destination 'blinds' reading "Princes Risborough, Aylesbury and Quainton Road for Railway Centre", below which were placards proclaiming the train to be "The Chiltern-Quainton Link". These trains ran packed to the doors! A third type of train which made a conveniently-timed appearance through Platform 3 was the Northolt-Calvert GLC rubbish train in both directions, whose nature was explained to the crowds by officials with loudhailers.

On the Platforms were a poster display by London Underground similar to the Met. miscellany posters in general use; a model display by Princes Risborough Model Railway Club; a Quainton stand; stands for Aylesbury & District Passengers Assoc., and Chiltern Trains; miniature train rides by "The Vale of Aylesbury Model Engineers Society, besides BR's own stands and those selling flowers etc. An anonymous grass-green diesel shunter stood on a siding, and in the station forecourt were displays by BT Police, the Fire Brigade, the Royal Greenjackets, two steam road engines and two veteran cars.

The day ended when 46229 left with her two coaches, running tender-first via the GW & GC lines.

ENGINEERING WORKS

Rickmansworth-12.5.85

Bridge repair work at Rickmansworth caused the Metropolitan Line service to be suspended between Moor Park and Chorleywood until about 19.30 on Sunday 12 May 1985

All trains to and from Baker Street worked to and from Watford, including the hourly 'fast' service-giving Watford four trains per hour instead of two as on a usual Sunday. Two trains shuttled between Chorleywood and Amersham, operating on the southbound line, which was designated single line, between Chalfont & Latimer and Chorleywood.

To link the two services, a substitute LRT bus service operated at half hourly intervals between Croxley and Chorleywood, calling at Rickmansworth.

Embankment-Waterloo - 9/16/23.6.85

Recontitioning of track between Embankment and Waterloo on the southbound Bakerloo Line caused the main part of the Bakerloo Line service to reverse south to north at Piccadilly Circus Throughout Sundays 9, 16, and 23 June. There was no change to service intervals on the Piccadilly Circus-Queens Park section. A single line service was provided between Elephant & Castle and Charing Cross on the northbound track, operating every 24 minutes, and thus the only section not to be served was from Piccadilly Circus to Charing Cross. The single line service was operated with trains as follows:

9 June	10291 + 11012 (restored 1938 stock)
16 June	1232 + 1051
23 June	1072 + 1239

Stanmore - 29/30.6.85

Because of point renewal work at Stanmore, the Jubilee Line did not serve Stanmore throughout Saturday and Sunday 29 and 30 June 1985. Until 10.30 on Saturday, all Jubilee Line trains reversed north to south at Wembley Park, after which, all trains terminated at Canons Park, running empty to and from Stanmore sidings to reverse.

Substitute London Bus services operated between Stanmore and Wembley Park (calling at Canons Park, Queensbury and Kingsbury) about every 10 minutes until 10.30 Saturday morning, after which buses worked between Stanmore and Canons Park, connecting to and from trains at the latter - thus at the appropriate Jubilee Line service interval.

FROM THE PAPERS

Daily Telegraph:

7.5.85 - Mr Colin Marshall, Chief Executive of British Airways, has appealed to his staff to write to their MPs and councillors, and the government, in support of a fifth terminal at Heathrow to retain the airports international eminence.

The Russian deputy Minister of Defence has denied that Volgograd will be renamed Stalingrad in the near future, so contradicting a current rumour

9.5.85 - The driver of the passenger train which collided with a freight train near Wembley Central last October admitted at Brent Town Hall yesterday, where the inquest on the deaths of the three passengers is being held, that he told a passenger and the police at the time that he had overrun a signal.

10.5.85 - Medical experts were yesterday unable to explain the temporary amnesia of the driver involved in the Wembley Central accident on 11th October 1984.

11.5.85 - Yesterday Mrs Chalker, Transport Minister, said that the Government was looking at more park and ride schemes for London.

Leyland Bus has been selected by the Bangkok Mass Transit Authority to supply 4,500 buses, but the deal is subject to approval by the Thai Government.

13.5.85 Mr J.B. Sherwood, who controls the Venice - Simplon - Orient Express, is sounding out the possibility of buying the Ryde Pier Head - Shanklin Railway. Last year his Sea Containers company bought the Sealink ships and harbours business from British Rail. He has ordered a catamaran express ferry for the Portsmouth - Ryde route, costing £1,800,000.

14.5.85 Yesterday the Queen Mother named a locomotive "The Royal Anglian Regiment" to inaugurate the electric service to Ipswich.

Four London Boroughs and the GLC failed in High Court yesterday with their pleas that they should be able to cross-examine witnesses and make submissions at the hearing into the proposed closure of Marylebone and four other stations.

Mr Ridley Transport Secretary, yesterday authorised London Regional Transport to spend £135 million on a new Underground ticketing system. Work will start this year and should be finished by 1989. Most ticket halls will need rebuilding. The dual aim is to combat fraud and make staff safer from robbers. Roving ticket inspectors will be able to levy "spot fines" and ticket collectors will be withdrawn from many stations. Banks of ticket machines will be built into walls, and cash will be emptied from behind. Some machines will issue fixed price tickets, and others a variety.

15.5.85 British Rail yesterday announced the electrification of the Sanderstand - East Grinstead section, whilst the North Woolwich-Dalston section of electrified line was formerly opened on the same day.

17.5.85 The complete closure of the British Rail engineering works at Swindon, with a loss of 2,300 jobs, was announced in the Commons yesterday.

The NUR has called an official all-out strike on the London Underground from midnight on Sunday 19th May, in protest against the further introduction of driver-only trains.

18.5.85 The NUR has decided to go ahead with the strike, on the London Underground, despite the granting of an injunction by a High Court judge ordering the union to call off the strike until a ballot is held.

20.5.85 The Central Transport Consultative Committee has warned that the new sliding-door trains on BR could be a death-trap in the case of a fire.

21.5.85 Yesterday the NUR called off its strike on the London Underground after 12 Hours, as seven out of ten trains were still running. The Union General Secretary said that staff had been confused by LRTs legal action.

The former Swan & Edgar department store at Piccadilly Circus has been completely refurbished and transformed into a mixed office and retail development. The two levels of Shopping will be approached either from the station concourse or from the street. The building is now on the letting market.

BR says that it is considering allowing sliding doors on modern suburban trains to be opened by passengers in emergencies.

24.5.85 The proposal for a short-take-off-and-landing airport between the King George V and Albert Docks has been granted outline planning permission, but with severe restrictions on the number and times of flights. There are plans to extend the Docklands Light Railway to the site.

25.5.85 BR want to celebrate, in 1986, the 150th anniversary of the opening of the London and Greenwich Railway, but appear not to want to draw attention to the old uncomfortable rolling stock and the unreliable service.

27.5.85 BR has started a country-wide drive against dropping litter at stations.

A fire on Saturday 25.5.85 at Gloucester Road underground station was still causing problems last night on the District Line.

28.5.85 During the construction of the Single-pore Mass Rapid Transit Railway a concrete wall collapsed, with a consequent threat to the safety of the 123 year old Anglican Cathedral. More than 200 lorry-loads of earth were used to fill the void, but it is not certain that the Cathedral is safe.

Because of overcrowding on the concourse at Victoria, when the Gatwick passengers clash with commuters, BR are to move buildings there elsewhere to provide a larger clear area.

29.5.85 The latest edition of Jane's Urban Transport Systems says that building more arterial roads will not solve London's traffic problem. About 70% of London commuters use trains and only 20% use cars. Of the latter, 79% have either a company car or financial help with their own car.

The BBC has made an offer for the former White City greyhound stadium as the possible location for a new Broadcasting House. Producers and radio departments heads regard a move away from Central London as a potential disaster.

31.5.85 The Chairman of British Rail Engineering, Mr James Urquhart has decided to resign from the BR Board because, he says, the Government has so diminished his job.

1.6.85 A boy, employed for three weeks as a page boy at the Ritz Hotel, has lost his pill-box during an altercation with a train door on the Jubilee Line at Green Park. Such hats, specially made, now cost 65 guineas. The hotel is taking a stern line, but is offering a bottle of Ritz champagne if the hat is returned.

5.6.85 Soccer fans in Budapest are giving concern to the authorities by damaging underground trains.

7.5.85 Trackwork will mean that there will be no Bakerloo trains between Piccadilly Circus and Charing Cross on Sundays 9, 16 and 23 June.

8.6.85 A White Paper on Airports Policy, published yesterday, includes the following provisions: 1. Stansted's capacity to be raised to 15 million passengers a year (8 million by 1990). 2. Heathrow's leading position in world aviation to be maintained, but with no commitment at this stage to a Fifth terminal. 3. The British Airports Authority and the Thames Water Authority to study urgently the removal of the Perry Oaks sludge works (on the site of the proposed Heathrow Terminal Five). 4. The limit of 275,000 air transport movements a year at Heathrow not to be imposed.

On the Railway aspects, the White Paper says that the possibility of supplementing the Underground service to Heathrow by a high quality rail service should be explored, and BR will be asked to study possible rail links to Stansted.

The NUR has accused BR of "resorting to every dirty trick in the book" to try to eliminate guards from more trains. The General Secretary says that BR is determined to introduce driver-only-operation on the Eastern Region in October and in Strathclyde by the end of 1985.

10.6.85 Residents of Iver and Slough fear that the Perry Oaks sludge works could be moved to their areas.

The dispute between the British Airports Authority and the British Airways Corporation over the use of Terminal Four has been settled. KLM, NLM City Hopper and Air Malta will share the terminal with BA when it opens early next year.

Corporation of London planners are expected to disclose later this week the Name of the successful developer for the car park site at No.77 Minorities. The London Docklands Development Corporation has pressed the City and the L.B. of Tower Hamlets to make up their minds on

the development of this cross-boundary site. The hope is that the Docklands Light Railway terminal will be built into an office block by the time it opens in April 1987.

12.6.85 A police constable from Harlow was fined £75 with £50 costs yesterday for attacking a 12-year old boy and dragging him through Bank station because the boy had kicked a chocolate machine. Transport Officials and travellers complained to the station-master about the action of the constable who was off duty.

13.6.85 British Shipbuilders is to merge the Vickers and Cammell Laird shipbuilding businesses.

14.6.85 B.K. Enterprises, a travel firm which went bankrupt with £13,700 debts, was run by two former London Transport workers, Messrs R. Cole and K. Chaney.

15.6.85 LRT has called in Hawker Siddeley to plan the closure of Greenwich and Chelsea power stations by 1990, and draw power from the National Grid. The £40-£50 million scheme will save £150 million on re-equipping the present plants.

17.6.85 The Central Line is expected to be normal today, following its restriction to half-service last week when about 40 trains were damaged by a faulty conductor rail.

19.6.85 BR is increasing the price of many Saver tickets from July 7th.

21.6.85 It has now been confirmed that the BBC has bought the White City site for £30 million and will build a new broadcasting centre there.

25.6.85 British Airways has cut its asking price in an endeavour to sell the long leasehold interest in the West London Terminal. The price has dropped from £20 million two years ago to £12 million.

LRT is to seek tenders for another 10 London bus services, with many more to follow in the autumn.

28.6.85 The LRT Chairman, in presenting a strategy report after public consultation, has said that the prospects for more reliable services, cost cutting and broadly-stable fares, for the next three years, look good. The need for subsidaries will be reduced by at least £95 million per annum, by 1987/88. "Vast extensions" to the light rail network are being studied, as are ways to make the Underground and buses safer from vandals and muggers.

LETTERS TO THE EDITOR

Sir,

PURPLE LAMPS

Some years ago you printed a query of mine on what colour lens was used in oil lamps to give a purple aspect. I have recently been able to inspect a Southern Railway handlamp which includes a purple aspect formerly used to signal a 'limited backshunt'. The glass is quite clearly ultramarine blue! Experiments with a separate blue glass shows that the exact colour of the aspect depends on the thickness of the pigment; dense colouring gives a distinct violet-purple; thinner blue gives a steely blue light, while very thin pigment gives almost a pale grey. I still haven't found the answer to my second question - whether any company used both blue and purple aspects as separate colours. I still suspect that the difference would only be in nomenclature, i.e., the LMS referred to 'blue' headlights on trains working over LT lines, but the Metropolitan called them 'purple' -

different names for the same blue-purple colour!

Yours Sincerely,
Albin J. Reed.

Stoke Mandaville, Aylesbury.

Sir,

The Metropolitan's Outer Branch Line

I read the report of Mr Dennis Edward's address to the April meeting of the society on this subject with interest, but assuming that the speakers remarks were faithfully reported, one or two points call for comment in the interests of accuracy.

I find it a little odd to see the Hammersmith & City described as a Metropolitan Railway branch line when, as opened, it formed a branch from the GWR main line at Green Lane Junction (now Westbourne Park). The link with the Metropolitan at Bishop's Road (Paddington) was 100 per cent GWR trackage. The first services were worked entirely by the GWR, the Metropolitan not taking over the Hammersmith trains until 1st April 1865.

Turning to Watford, it is stated that "The station in the High Street was actually built but was never used for its intended purpose..." This is not so. The building at 44 High Street, Watford was erected in 1915-16 as a restaurant and used as such for many years. It was not bought by the Metropolitan until late in 1927, two years after the opening of the branch and no significant alterations to it were made by the railway company. I related the sequence of events in an article in The Railway Magazine in December 1961 and I will return to it in greater detail in the full history of the Metropolitan Railway based on original records which I am now completing and hope to see published next year.

The goods yard at Watford is described as "enormous". Well; it was fairly large by Metropolitan standards, and of course was shared with the LNER. It had six sidings, a cattle siding and a horse and carriage loading dock. The facilities were designed in anticipation of development of traffic in both directions between Watford and the Midlands and the North via the Rickmansworth North Curve. It is then stated that on the opening of the branch each company ran 70 trains each weekday. If this figure refers to passenger workings, as it presumably does, it is incorrect the Metropolitan's initial service 43 up and 40 down, the LNER's 30 up and 29 down. The provision was soon found to be far too lavish for the traffic offering and by mutual consent was reduced from 1st March 1926 to 33 up and 32 down Metropolitan and 18 up and 12 down LNER. This even before the General Strike in the following May, when, as Mr Edwards stated, the regular LNER passenger service disappeared for ever.

As regards the Stanmore branch, I have found no evidence in the Metropolitan papers of any intention to go beyond Stanmore, to Elstree, or anywhere else, but it is certainly true that (at some considerable cost) it would be possible to tunnel onwards under the hill above the platforms without substantially altering the buildings, and they may have been planned with this contingency in mind. As for Queensbury, I do not understand the statement that this was "the last Metropolitan station to be opened". It did not open until the LPTB was almost 18 months old, on 16th December 1934, and there is little or no evidence of any Metropolitan hand

in its design or architecture.

Yours sincerely,
Alan A. Jackson

Dorking, Surrey.
5 June 1985.

POINTS OF INTEREST

Nigel Hyde writes:

Kilburn Accident
UN 280, Page 42

P 42 3rd paragraph line 8
.. REAR .. rather than advance. (An advance starting signal is beyond the starting signal).

P 43/47
The South Western lines out of Waterloo on the Southern Region have different operating characteristics but where two lines in the same direction side by side beyond Wimbledon, signal locations are the same for both lines to avoid driver confusion. Some signals on the Fast/Through lines are without a RED aspect and are in effect distant signals

P 47
A defective train stop would not allow a CLEAR signal to be displayed. Both RED and GREEN aspects would show.

P 48
I believe that there were at least four collisions in the decade after the end of the war in 1945. At Northwood on 31 December 1945, on the Central Line east of Stratford on 5 December 1946 and 8 April 1953, and also between Eastcote and Rayners Lane involving Metropolitan and Piccadilly trains.

NF 43/85
All saloon stock had centre of ceiling dim lights which were heavily shrouded. I seem to think that the lights were more orange than white.

THAT WAS A WEEK, THAT WAS
UN 281 Page 54

The Piccadilly line was originally provided with emergency crossovers at North Ealing and Sudbury Hill. Both were controlled by 2 lever ground frames. Bridge renewal in the Alperton area in the late 1950s/early 1960s necessitated use of both on at least two Sundays when the service was suspended between North Ealing and Sudbury Town - EB trains terminating at latter station returned wrong road to Sudbury Hill.

WATFORD

It was believed that the GRANGE furniture store in the High Street was the site of the projected Metropolitan Railway terminus. (On my first visit to Watford High Street in some 20 years recently, I didn't get as far as that to check the furniture shop was still in existence.)

Incidentally the Metropolitan Railway itself ran a bus service between the town centre and the joint station from 2 November 1927. Four 28-seat single deck buses were bought. This feeder service was apparently successful but the Metropolitan Railway failed to obtain Parliamentary powers to run motor-bus services at a time when such facilities were granted to the main line railway companies. The Metropolitan Railway buses ran until May 1929 when they were disposed of to the subsidiary company - the North West Land & Transport Co Ltd,

which in 1930 was amalgamated into the Lewis Omnibus Co Ltd which itself was absorbed by the LPTB in 1933.

EAST LONDON LINE 'Q' STOCK

Re J. Graeme Bruce - FROM STEAM TO SILVER (1983 Edition)

28 cars of 'Q38' stock were retained for the East London Line which has been worked by 4-car units of 'Q' Stock since 9 September 1963 and until September 1971 when 5-car 'CO/CP' stock replaced them. It is also stated that seven 'Q27' DMs were turned from East to West and I can recall seeing 4-car unit with 1927 DMs in Ealing Common Depot in the early 1960s carrying East London destination and Metropolitan Line plates. Until that time all 1927 DMs had faced East.

'R' STOCK STORY

P 4

The practice of using side destination plates and non-stop indicators on trailer cars of 'F', 'H' and 'Q' stocks continued until the late 1940s I seem to remember. Receptacles for the destination plates were provided alongside the draught screens. At the terminal stations guards had to open all the doors on 'F' and 'Q' stocks before changing ends in order to adjust the plates and the indicators. The destination plate holders can be seen on the 'Q31' stock car shown on p 5. It would be interesting to know if any record exists of the non-stop indicators as regards the actual stations allowed for - certainly Ealing Common was one. The blank side showed initial letters in small print to assist guards.

Train 73 SX working (see also p 18) was my regular train leaving Ealing Broadway at about 4.15pm and was in fact used for the third 'R' stock train to be introduced into service.

P 7

4-car trains continued on the Putney Bridge-Edgware Road service off peak some trains reduced to 3-cars (5-cars in peaks) during the 'R' stock conversion period mentioned on p 10.

Whilst the majority of the old Inner Circle 5-car trains were withdrawn in 1950 - the last working was I think on 31 December, a few 'P' stock trains had been introduced earlier than the main changeover. 'P' stock trains working on the Circle and District Lines had the regenerative brake isolated as the traction system was unable to cope with the extra current produced during braking. 'P' stock trains on the District Line operated on the workings based on Parson Green to facilitate empty stock workings to/from Neasden Depot via Baker street.

P11

Apparently during the existence of Purchase tax there was a financial advantage in fitting fluorescent lighting tubes in new rolling stock after delivery. The initial introduction of 'R' stock into service on the District Line was apparently deferred at the last moment. The Traffic Circular advice of the first working appeared twice but I cannot recall the time interval involved - possibly a couple of weeks.

F14

In addition to Working Timetables (the Sunday one was separate from the weekday ones) the District Line had a set working book in view of the complicated rolling stock working at the time.

The 'Q31/35' DMs to be converted to trailers originally ran with the motors and control

equipment isolated. Car numbers had an 'O' as a prefix.

P 16

As far as I can recall the coupling up at Ealing Broadway was performed in the sidings with shunting crews taking trains out from the platforms after arrival.

P 27

A number of District Line stations had very restricted platform lengths for 8-car working. There was a scheme at one time to extend platforms at a number of central area stations to take 8-car trains. The EB platform at Ealing Common was a very restricted site with little or no opportunity for improvement. I can recall a number of occasions when 8-car trains were 'tripped' at the starting signal because drivers had misjudged braking. The introduction of the tripcock reset cord operated from outside the front end central door could have been occasioned by the restricted access at track level at Ealing Common. On at least one occasion I saw a driver nearly struck by a WB train when descending to track level to reset the tripcock.

Mr J.F. Aylard writes:

Northern Line Dot Merix Signs

UN 279 Page 30

On the night of Monday 13th May, on the North-bound platform at Embankment the indicator showed Golders Green- 3 mins. and High Barnet- 15 mins. This seemed a long gap and shortly the moving band stopped advising passengers to change at Camden Town for a through train to unannounced destinations and came up with 'Check destination on front of train' all in lower case lettering.

The moving band then vanished and an Edgware was forecast in 9 mins, this duly arrived. This is a further twist on my previous tale as the computer managed to produce an answer to the missing destination which it did not do on the previous occasion. Obviously they haven't got the bugs out of the system. At least it helps to while away the wait while looking to see what it will come up with next.

SMALL ADVERTISEMENT

UNDERGROUND

A rare opportunity to obtain a small double sided illuminated UNDERGROUND bullseye which is thought to have originally been placed over the escalator connection from the Waterloo BR concourse to the tube station. The sign is just under 3ft in diameter and is without the supporting pole. It has been mounted on a mobile wooden stand.

Unfortunately some of the glasses are broken and would need replacing. There is also no guarantee that the electrical system is in working order.

Please phone David Glynn on 01 642 4356 (weekdays after 7.00pm or weekends) for further details or offers.

SOCIETY SECTION

A MESSAGE FROM THE NEW EDITOR

In taking over as editor, I would like to take this opportunity to thank Brian Hardy for his excellent work over the past seven years as editor of Underground News.

I hope that members will continue to send in items for newflashes and ARTICLES short or long for inclusion in Underground News as at present.

June Baden-Powell House Meeting

Desmond Croome introduced Mr R. Blakey, Development Engineer (Signalling) of London Underground Ltd for his talk "From Programme Machines to Computers - The Development of Modern Signalling Practices". (During his talk, Mr Blakey showed a selection of slides.)

Since Mr Blakey last spoke to the society on the use of computers at Watford (Metropolitan Line), computers which had been used for non-vital functions have now spread to vital functions. Their first use has been for track circuits, where vane relays had been used for the last 70 years and had served L.T. very well for detecting trains. The use of computers for track circuits deletes the need for insulated (block) joints in the running rails and hence the consequent saving to the Permanent Way Engineer. The running rails are electrically continuous, but the sections are divided by heavy copper or aluminum bonds, the circuit being tuned to a particular computer detector. A jointless track circuit had been in use at Totteridge since about October 1984

The second use for computers has been for the replacement of mechanical interlocks (interlocks being a legal requirement), the first experiment to be in Neasden yard, from about May 1987. The advantage of Neasden Yard being that public use of trains does not take place in the depot, and therefore the system will be easier to test.

Non Safety use is to provide information to the public, in particular, train descriptions, the first example being the dot matrix display at St James's Park. This system is now being installed on the Northern Line it is worked by a computer from Coberg Street and can "look back" for 15 minutes and beyond junctions, thereby giving time of arrival.

A mechanical automatic route setting machine had also been tried at Wood Green but had not been very successful and was subsequently replaced by push button control. They have now been replaced by computers, which are developments of the Watford installation. The "Watford" computer had been transferred to Heathrow Central but had worn out and was replaced in 1983. Route setting replacements have been via the use of visual display units (VDUs), in the form of coloured layouts of the tracks, signals etc, together with a new feature, that of point indications. A system to this arrangement has been installed at Earls Court covering the East end of the Piccadilly Line. Separate commands on the VDU can Bring up the signal aspects and the track circuit numbers.

Development was still being undertaken to show train running numbers, and this together with the above, will be introduced on the Northern Line at the end of 1985 then on on the Metropolitan and Jubilee lines towards the end of 1986, when the signalling control is changed to Baker Street.

For the future, jointless track leads to the use of automatic train operation, a facility to be incorporated on the Central Line. After answering some questions from the audience, the latter showed their appreciation for a very interesting and informative talk.

DMH

ROLLING STOCK ALTERATIONS

1938 Tube Stock: JUNE 1985

From Ruislip, sold to Booths taken to Chatham Dockyard.
10177-11177 28th

1959 Tube Stock:

From Stonebridge Park to Golders Green, transferred Bakerloo to Northern:
1220-2220-9221-1221+1222-2222-1223 4th
1212-2212-9213-1213+1198-2198-1199 27th
From Golders Green to Stonebridge Park, transferred Northern to Bakerloo:
1032-2032-9033-1033+1042-2042-1043 5th
1052-2052 9053-1053+1034-2034-1035 28th

1972 MkI Tube Stock:

From BR, Derby; returned to Morden Depot by road, fitted with steerable bogies:
3305 20th

'A' Stock OPO Conversion

Unit/end	Neasden/Acton	Neasden/Ruislip
5222*(D)	3/6/85	-----
5006*(A)	7/6/85	-----

Note* For half-life overhaul in addition to OPO conversion.

Miscellaneous Movements

892-692-893 Hainault to Acton (ETT unit for conversion to standard) 23rd
L48 From Lillie Bridge (2nd buckeye) 28th
L26 To Lillie Bridge (overhaul, mods & 'A' end buckeye) 28th

Service Stock

From Procor, Wakefield, delivered to Ruislip
GP902-GP904-GP905-GP906-GP927-GP928-GP938
GP939-GP940-GP941

Livery Alterations

From maroon to yellow:
L26

Renumbering of Stock

A 60:	From	To	
	5028	5232	12th
	6028	6232	12th

Units to Acton works for overhaul

Piccadilly 112-512-312 6th (D)
Northern 1194-2194-1195 14th (A)
Central 1456-2456-9457-1457 17th (B)
Metropolitan 5717-6717 20th (D)
Northern 1176-2176-9177-1177 26th (A)

Units from Acton works after overhaul

Piccadilly 162-562-362 6th (D)
Metropolitan 5224-6224-6225-5225 7th (B)
Northern 3411-4511-3511 13th (D)
Central 1428-2428-9429-1429 14th (B)
Bakerloo 1152-2152-9153-1153 18th (A)
Victoria 3038-4038-4138-3138 18th (C)
Metropolitan 5713-6713 20th (D)
Northern 1184-2184-9185-1185 26th (A)

Notes on overhaul codes:

(A) Standard heavy overhaul
(B) Half-life overhaul
(C) 18 year overhaul
(D) 9 year overhaul

NEWSFLASHES

NF 80/85 - On Wednesday 29 May 1985, a failure of points at Watford South Junction caused a 77 minute shut-down to the Metropolitan main line service between Northwood, Watford and Rickmansworth at the beginning of the evening peak, although six southbound trains were able to work first to via Rickmansworth. However, eight trains reversed north to south at Northwood, while others were diverted at Harrow to Uxbridge.

An interesting consequence of this incident was the re-routing of at least one Marylebone-Aylesbury train (the 17.40) via High Wycombe. Although the train departed at 17.58, some 18 minutes late, the run was truly non-stop, not even one signal check, with the 43½ miles being completed in 1 hour 2 minutes. The (late) departure from Marylebone was heralded by the rather Irish (but true!) station announcement that the train was for Amersham via Aylesbury

NF 81/85 - From Monday 3 June 1985, a full 34-train service was restored on the Victoria Line, having been working one train short since 20 August 1979.

NF 82/85 - It has been announced, through station posters, that the fire damaged northbound Victoria Line platform is to receive the same murals as recently applied to the Bakerloo Line platforms (i.e. people travelling on escalators) including the the southbound Victoria Line platform, which was not affected by the fire. The Victoria Line blue and grey colours will be retained but the walls and ceilings will have vitreous enamel panels instead of tiles - grey on the platform, off white on the ceiling. A blue and black frieze will incorporate the station name.

NF 83/85 - A fire in a Fleet Line tunnel occurred on Friday evening 31 May 1985. This in fact was a trial boring made in the New Cross area long before the decision was made to abandon this part of the line.

NF 84/85 - This year's poster for Wimbledon tennis fortnight depicts "Squash?" with a picture of a traffic jam on the top half and "Tennis" with a picture of an LT bullseye on the lower half, with Wimbledon superimposed on the blue bar. It is interesting to note that this bullseye is of the lined type - clearly the best way of advertising the Underground and obviously seen as more effective and striking than the modern unlined equivalent!

NF 85/85 - 1973 Tube Stock UNDM car 314, which has never yet carried a fare-paying passenger (with trailer 514) has been noted in use as a temporary 'canteen' at Northfields depot, while the modernisation of the actual canteen takes place.

NF 86/85 - Having been closed since the end of March 1984, two tracks in Highgate depot have been made available for stabling Engineers

trains. The two roads involved are No.25 road (see diagram on page 54 of UN 269), which is able to accommodate two trains in the open, and No.26 road, which is under cover for accommodating one such train. All pointwork involved is hand operated by the person in charge of such trains.

NF 87/85 - In the early afternoon of Thursday 13 June 1985, a defect in the permanent way east of St.Pauls station on the eastbound Central Line, caused a number of trains to sustain damaged positive shoebeams. By 16.30 the situation had got serious, with eight trains discovered, and others continuing to be found all over the line, that services were suspended between Leytonstone and Marble Arch cut back further from 17.30 to White City. Through services of a restricted nature were resumed on the eastbound from about 22.00 and westbound from about 23.00, the latter being due to the need to repair a number of train-stops broken by the defective trains. At the end of the day, some 55 four-car units had to be taken out of service, with 78 shoebeams damaged. This meant that for the morning peak on Friday 14 June, only 43 eight-car trains out of 72 were available for service, the situation being only marginally better than the evening peak. To augment the restricted service, two four-car trains worked in the morning peak shuttling between White City and Ealing Broadway. These bore the set numbers of '1' (unit 1598) and '2' (unit 1412).

For the morning peak service on Monday 17 June a full complement of trains was available - a remarkable feat achieved by the engineers and depot staff at Ruislip and Hainault, to whom great credit is due.

NF 88/85 - Although modification of the D stock with ventilation improvements had been completed at the beginning of this year, it is still necessary for such trains to have all doors open at stations during the summer months, including the East London Line. This occurred from Monday 10 June and was due to last until Sunday 22 September. It is interesting to note that such action on 1983 Tube Stock has been found not necessary - presumably the ventilation on this stock is superior to that on the D stock?

NF 89/85 - It is reported that the lifts at British Rail stations, which have interchange with London Underground services, i.e. Barking, Upminster, Richmond and Wimbledon, are to be made available to severely disabled passengers.

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