UNDERGROUND NEWS

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Second series Issue number 195
THE TIMETABLE for period beginning 9th June 1978

Friday 9 June Talk by Mr.D.G. Jobling, Design and Construction Engineer (Civil Engineering) London Transport, on L.T. Railway Bridges. 1900 for 1915 at Hammersmith Town Hall.

Sunday 18 June
The Society will be operating its Sales Stand at the B.R.
Open Day at Selhurst Depot. 1200 to 1700.

Saturday and Sunday 24 & 25 June
The Society will be operating its Sales Stand at the
National Showbus Rally, Hillingdon Show, Uxbridge,

Wednesday 5 July
Library evening. The Society's library open for inspection
at 9A Dunrobin Court, 389 Finchley Road, London NW3 6HE.

Thursday 6 July
Morning visit to Parsons Green Works and Building Depot
Restricted numbers. Applications with SAE to Mr.G.A.Finch,
161 Valetta Road, London W3 7TA.

Talk by Mr.P.Cassell. Vegetation Control on London Transport.
1900 for 1915 at Hammersmith Town Hall.

Tuesday 1 August Library evening 1830. Other details as for 5 July.

Talk by Mr.F.G.Rutty, Traction Engineer, London Transport.
Train Performance and Testing on London Transport. 1900 for 1915 at Hammersmith Town Hall.

Saturday 19 August
The Society will be operating its Sales Stand at the B.R.
Open Day at Wolverton. PROVISIONALLY 1400 to 1800.

Friday 8 September 1900 for 1915 at Hammersmith Town Hall. Details to be announced.

LAST MONTH'S MEETING

In future, it is hoped to include notes on Hammersmith meetings in Underground News.

On 12th May 1978, our Chairman Piers Connor, addressed us on the Development of Train Equipment, 1900 to 1938. After pointing out that the principle of multiple unit operation had originally been seen in the adoption of continuous brakes, Piers explained the working of the basic Westinghouse compressed air brake and subsequent refinements. He then showed us how the electro-pneumatic brake had, as its ancestor, the electrically-controlled release valves used on the District from 1914. The full E.P. system was first introduced on the District in 1928 for full-scale trials. Developments in the compressed air supply were then described, followed by traction equipment, and the two main schemes of multiple unit control - British Thomson Houston and British Westinghouse. The problems caused by the Board of Trade embargo on power bus lines on tube stock were explained, with particular reference to units with control trailers. The middle motor cars on the Watford Joint Stock (Bakerloo) in 1920 caused further complications.

The history and method of operation of power-operated sliding doors were then described, including the special air-operated control system on the converted wooden Central London cars of 1926-8. Tripcock and deadman's handle development was then outlined, and reference made to the 1907-1909 period when the Central London had neither assistant drivers nor deadman's handles. The Central London also maintained continuous current collection at crossings by using a very wide shoe and special conductor rail arrangements (central 3rd rail system).

The fascinating problems of coupling cars mechanically, pneumatically and electrically were then explored, with special reference to the 'north side driving position' of the original C.L.R. motor cars, and the anomalies caused by introducing control trailers and subsequently turning the whole train round upon conversion to air doors. Finally, the unusual arrangements on another odd man out, the Great Northern & City, were explained.

Mr. Connor's talk was illustrated by diagrams shown on an overhead projector and by appropriate slides.

After such a thorough exposition, there was little that remained to ask questions about, but Piers answered the few questions that were put to him, and the meeting concluded with a hearty vote of thanks.

DFC 24.5.78

D.J.CARSON

Construction of Hong King's £640m Mass Rapid Transit Underground system is well under way and in addition to the rolling stock being built by Metro-Cammell of Birmingham (two of these new cars are now being tested at the Tyne and Wear P.T.E. Metro Test Centre at Backworth), another British company has won a £3m contract to design, supply install and commission equipment for the repair and maintenance of rolling stock and stationary plant.

Part of this contract, all of which was won by Vickers Ltd. Engineering Group, was to design and construct a combined Traverser/Turntable unit for the M.R.T's Kowloon Bay Depot. Vickers Ltd. sub-contracted the construction work to British Rail Engineering Ltd. Swindon Works, where it took 7 months to construct. The 45 tonne traverser/turntable is long enough to take one car, has 3-phase electrical pick-up for traversing 10 tracks in the depot and turns on the 5th track. In addition the unit has hydraulically powered raise/lower equipment to enable the traverser wheels to be raised and the turntable wheels to be lowered for a turning manoeuvre, and vice-versa for traversing operations.

Now, the world's only turntable/traverser is somewhere between B.R's Swindon Works and H.K.M.R.T's Kowloon Bay Depot.

FORTHCOMING EVENTS

Some interesting operations on London Transport (Underground) in the next few weeks:-

- 1) Kilburn Bridge Renewal. This will be the last major stage and will involve two weekends, June 11th and June 18th, where the Metropolitan Line will reverse south to north at Wembley Park all day and the Bakerloo Line service will work southbound over the southbound Metropolitan Line, and northbound over the southbound Eakerloo Line as described in UNs 185 and 188. A further report with diagrams will be included in a future issue.
- 2) Single Line Working-Golders Green to Hampstead for 3 weeks commencing 25th June. This is in connection with the removal of blue asbestos found in the tunnel linings between the two stations. Details of the workings, timetables and the temporary signalling alterations will be reviewed after the event.
- 3) Scrapping of 1938 Tube Stock-West Ruislip to Birds, Long Marston. Only a few units are now left for scrapping, and this summer may well see the last of these moves for some time. Although the dates are not known at this stage, when the move operates it is USUALLY on a Thursday morning. Times are: (subject to alterations etc.) West Ruislip dep. 1015, Southall 1050, Maidenhead 1147, Reading 1216, Oxford 1340, Ascott Under Wychwood 1450, Moreton in Marsh 1520, Evesham arr 1620. Departure for Birds is usually early next morning. Photographers-good luck !!

Since the mid 1950's, the liveries of red Pre-1938, 1938 and 0/P stock trains (which was until then red with cream between the passenger windows) remained virtually unchanged, being red with gold transfers and car numbers until 1972. During the E.H.O. programme, several developments resulted in detail differences between the units as they were EHO'd. The most obvious is the livery.

The first 26 units were painted in the standard train red with gold transfers and car numbers: - (The dates shown are EHO dates and do not necessarily correspond with those shown on the car ends).

10012 7 10116 2 10143 5 10155 4 10156 12 10164 4	2/72 10174 5/72 10177 4/72 10179 2/72 10180	5/72 6/72 12/71 6/72 10/72	10186 10188 10189	10/72 1/73 12/71 8/72 3/72	10205 10207 10214	9/72 7/72 1/73 11/72 11/72	10231 10284 10291	12/72 12/71 3/71 2/72 9/72
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From February 1973, the gold transfers and car numbers were replaced by white LT roundels and car numbers, but the 'train red' livery was retained. Up to now, no trains had been fitted with stabling lights, but these were fitted starting with the third train to receive this revised livery:-

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10162 7/73 10178 9/73 10197 8/73 *10208 2/73 10211 6/73 10216 11/73 10242 6/73 10258 10/73 *10261 5/73 10318 11/73 (Note * not fitted with stabling light)
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Gold transfers continued to be used however for the 'No Entrance' signs above the side cab doors and for the car numbers in the driving cabs (and occasionally in the passenger saloon underneath the ventilator grilles where the number plates were missing.)

The third livery change started from December 1973, when the train red livery was replaced by the lighter shade of 'bus red' which had first been tried out on non-E.H.O. 4-car unit 10218 on the Northern Line on October 1972. This unit was unique in that it had gold transfers and car numbers, although in bus red livery. It was scrapped in April 1977. The units that were E.H.O.'d in bus red (and fitted with stabling lights) were:- (in DATE order)

```
10184 11/73 10167 5/74 10249 7/75 10044 2/76
                                               10142
                                                     9/76
10149 12/73 10139 6/74 10267 9/75
                                    10151 2/76 10148 9/76
10222 1/74 10187 6/74 10204 9/75
                                   10262 3/76
                                                10279 10/76
10316 2/74 10220 6/74 10032 10/75 10221 4/76
                                               10213 12/76
                                                10161 12/76
            10240 8/74
                       10319 12/75
                                    10036 5/76
10229 3/74
            10248 4/75 10297 12/75 10236
                                          6/76
10254 3/74
10050 4/74 10308 6/75 10275 1/76
                                   10255 9/76
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In addition, some cars have been E.H.O.'d individually, being:-

Trailers 012256 and 012380 (both 6/76), replaced 1949 stock trailers 012495 and 012503 that were non standard in units 10012 and 10321 respectively. This resulted in the two units having

cars of mixed liveries; each having three cars of train red with gold transfers and car numbers, and one in bus red with white roundels and car numbers. These ran in service like this as a mixed livery formation until given an ordinary overhaul in 1977.

Two driving motor cars 11154 (6/76) and 11055 (1/77) were E.H.O.'d to replace cars damaged in collisions, and were renumbered 11284 and 11036 respectively, these being the numbers that they replaced. Also in 1/77, N.D.M. 12098 replaced 12007 in the same unit as 11036 (ex. 11055). At the time of writing, a further driving motor is to be E.H.O.'d, being 11235 which will replace 11188 (see NF 1996 in UN 194).

At the start of the E.H.O. programme, non-E.H.O. 1938 tube stock was still being given ordinary overhauls, and these continued into 1974, but the train red livery with gold transfers and car numbers was retained on these overhauls only (after the revised livery had been introduced on E.H.O. units.) Five further ordinary overhauls took place during 1975, being 10056 (5/75), 10078 (11/75), 10084 (3/75), 10106 (9/75) and 10136 (2/75). These units were allocated to the Metropolitan East London Line, and broke the ordinary overhaul tradition by appearing in bus red, with white roundels and car numbers and being fitted with stabling lights.

A start was made in June 1976 in overhauling units that were already E.H.O.'d. So far, all but one unit in the train red with gold car numbers and transfers (10214) have been dealt with, as has 10208 of the second livery (train red with white roundels and car numbers). Some have not been fitted with stabling lights (*). The units so far dealt with are: - (in DATE order)

10177 11/76 10164 3/77 10195 8/77 *10321 12/77 +10205 4 10116 12/76 10179 4/77 10174 8/77 *10219 1/78	0012 6/77 *10181 10/77 *10 0195 8/77 *10321 12/77 +10	10195	3/77			10177
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Units outstanding at Acton are: - 10207 and 10186 (both first livery). Note + fitted with stabling light on 10205, but not on 11205. This now leaves unit 10214 only in the first livery.

QUEENS PARK TO WATFORD JUNCTION

A look at the services on this B.R. owned line and operated jointly by both B.R. and L.T., the now unique signalling system and recent track alterations.

The Bakerloo Line rises to the surface south of Queens Park station, and the station comprises two island platforms of which the Bakerloo has the two inner faces. The L.M.R. d.c. electric services from and to Euston and Braod Street use the two outer faces. South east of the station is a two road car shed for L.T. trains for four trains, each road accommodating two 7-car trains. North of the station, there is a four road car shed, in which the two outer tracks provide the connection with the L.M.R. north of

the shed. The two inner tracks are used during the day for reversing the Bakerloo service, and (with the northbound connecting track) are used to stable trains at night. The southbound connecting track is used only occasionally to stable trains. This area is controlled by Queens Park LT signal box (code BB) but has no control over the L.M.R. signals or tracks. Beyond the shed, the two outer LT tracks join the L.M.R. tracks to Watford, and at this point until January 1977 an L.M.R. signal box (Queens Park No. 3) controlled the junction and also an emergency crossover.

The next controlled area is at Willesden Junction (New Line Station), so called because this line was the last to be built through Willesden Junction, the Main Line and North London Line being there many years before 1915. There are two through platforms and a centre bay platform, which is only capable of accommodating an L.M.R. 3-car train. Connections are also provided to and from the North London Line and the electric depot, which deals with both d.c. and a.c. electric stock. An emergency crossover is also provided north of the station.

From 30th January 1977, Queens Park No.3 signal box was closed (and subsequently demolished) and the operation of the relevant L.M.R. signals in the area was transferred to a panel in Willesden Junction (New Line) signal box. The emergency crossover north of Queens Park has been retained, and an additional signal installed so that L.M.R. trains could reversed from the up platform at Queens Park to the down line within a signalled move (previously all movements over the crossover had to be handsignalled).

After Willesden Junction, a new depot connection at Stonebridge Park for L.T. trains was commissioned in January 1977, being controlled from another panel in Willesden Junction (New Line) signal box. As L.M.R. trains are prohibited from using the depot, detection equipment is installed in the negative rail on the approach side of the signals to depot (in Stonebridge Park platforms) so that the presence of a negative shoe will allow the signals to be cleared. (L.M.R. trains operate on the 3rd rail system, having no negative shoes).

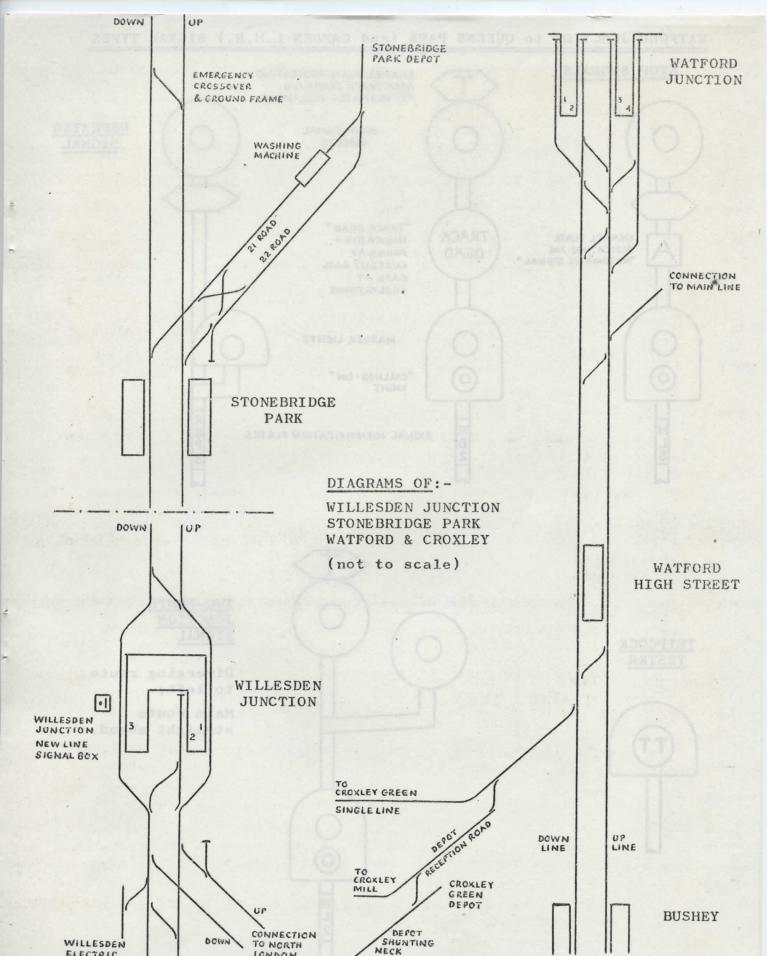
North of Stonebridge Park, there is an emergency crossover which was controlled from a signal box (Power House) until it was replaced by a ground frame on 30th January 1977. (The signal box at Power House controlled points and signals into Stonebridge Power House and L.M.R. electric depot, since closed.) All train movements over the crossover are now by handsignal, and the release of the crossover is from Willesden Junction (New Line) signal box.

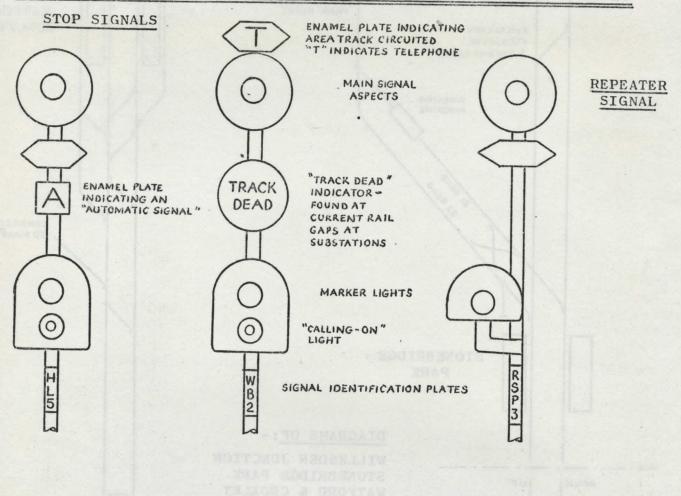
At Wembley Central, an emergency crossover north of the station is controlled from a small cabin at the north end of the up platform.

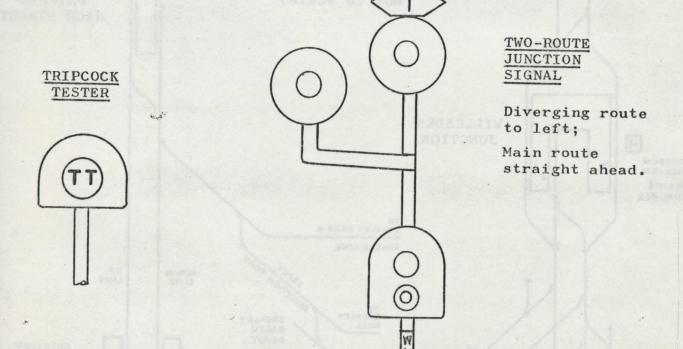
The two reversing sidings at Harrow & Wealdstone are now used only very occassionally and are controlled from Harrow No.2 signal box at the north end of the down platform.

An emergency crossover at Hatch End, north of the station, is controlled, like Wembley Central, from a small cabin, but half way along the down platform.

The next controlled area takes in the approaches to Croxley Green







depot, to Watford High Street and Watford Junction, all controlled from Watford Junction Power Box, opened when the main line was electrified. (The main line signalling controlled from the same power box controls from Harrow to Tring,) There is a connection south of Watford Junction station between the d.c. electric lines and the a.c. electric main line.

Signalling

Identification of signals is by letters and numbers, the letters being related to the station in most cases:-

P Har	row & Wealdstone	HR
G Hea	dstone Lane	HL
L Hat	ch End	HE
D Car	penders Park	CP
P Bus	shey	BE
В		
W Cro	oxley Green depot	
K Wat	tford High Street	WJ
T Wat	tford Junction	
	IG Head IL Had ID Car IP Bus IB IW Cro	Headstone Lane Lane Lane Lane Lane Lane Lane Lane

The signalling system is now unique (a similar system existed on the District Line between Bromley and Upminster until the late 1950's) and was installed during 1932 and 1933. The system comprises basically two types of signal; stop and repeater, and both types are of the searchlight type. The top main signal aspect of stop signals is able to show red or green (or sometimes yellow), and repeaters show red, green or yellow. Beneath the main aspect on both types of signal is a red marker light, illuminated when the main red aspect is displayed. On repeater signals, the marker light is offset slightly to the left. Underneath the marker light on stop signals only is a small yellow calling on light which illuminates when a train has been detained at that signal for one minute, and when illuminated permits the driver to procede at extreme caution. Additional identification on automatic stop signals is by a black letter 'A' on a white plate. Repeating signals are identified by the letter 'R' preceding the signal number at the base of the signal.

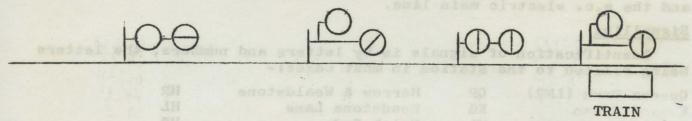
At substation gaps (Queens Park, Willesden, Harlesden, Wembley, Kenton, Harrow, Hatch End, Bushey and Watford) the signal approaching the gap has a 'Track Dead' indicator, illuminated when current is switched off in the section ahead, the signal also remains at danger. A board at the side of the track reads 'Section Gap'.

L.M.R. d.c. electric trains are also fitted with tripcocks like L.T. trains and stop signals are fitted with electrically operated trainstops (unlike L.T. whose trainstops are air operated). Tripcock testers are located at Wembley Central (down line), Harrow & Wealdstone (up line) and the approach to Croxley Green depot (both directions on the single line). The indication is a black 'TT' on a white background, unlike L.T. tripcock testers which have a blue, white or purple light.

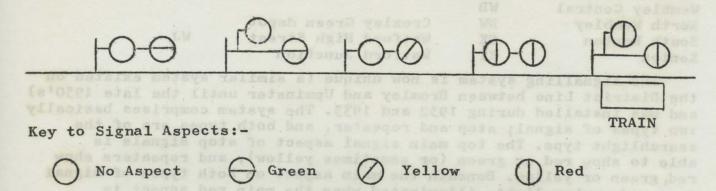
Under normal conditions, trains do no approach a repeater signal showing red, as the stop signal to the rear also at danger provides

the protection. Thus, when a train clears the section, the stop signal changes from red to green and the next repeater from red to yellow.

Example:-



Example where a stop signal incorporating a yellow apect is used:-



L.T. Services, Past and Present

The services now provided by L.T. over this section are four trains up in the morning peak and four trains down in the evening peak.

It was from 14th June 1965 that the daytime service of Bakerloo trains was withdrawn over this section and the peak hour service then comprised 6 trains in each peak (from Watford in the morning, and to Watford in the evening) and a further 6 working both ways in each peak to Harrow & Wealdstone. From 14th October 1965, the number of Watford Junction trains was reduced further to 4 trains. The six trains to Harrow in each peak were withdrawn at a later date during a bad spell of staff shortage, and were never reinstated.

It is worth comparing the L.T. services between Watford Junction and Queens Park looking at two timetables; one in the mid 1950's and the other just prior to the alterations in June 1965. Shown are Bakerloo departures from Watford southbound, bearing in mind that a similar service operated in the opposite direction. Note that times underlined indicate 4-car trains. Monday to Friday:-

0557 0552 0608 0621 0633 0647 0654 0459 0512 0525 1957 0806 0819 0834 0701 0714 0722 0735 0741 0753 0937 0952 26 46 past each hour then at 06 0903 0922 until 1426 1522 1440 1507 1537 1552 1608 1621 1636

Additional trains from Harrow & Wealdstone at:-Saturdays from Watford Junction: -as Monday to Friday until:-1432 1447 1717 1732 2202 2217 2245

Additional trains from Harrow & Wealdstone at:-

0657 0744 0816 0828 0841 0859 0916 1237 1249 1307 1320 1338 1353 1413 1439

This timetable included uncoupling at Watford, Queens Park and Stanmore and provided a total of 47 trains at peak periods. This frequent service worked in with the L.M.R. service to Euston and Broad Street. Below are shown the times prior to 14th June 1965 and it will clearly be seen the service reduction that had taken place, and how the Saturday Morning and Midday peaks had almost disappeared by then (this was common to most lines).

Monday to Friday from Watford Junction: -

0530 0558 then at 35 55 past each hour until 1515 1705 1721

Additional trains from Harrow & Wealdstone at:-

0741 0758 0812 0827 0842 1700 1714 1730 1745 1800 1815 1830 1851

Saturdays from Watford Junction: -

0535 then at 55 15 35 past each hour until 2255

No additional trains from Harrow & Wealdstone

Some of the L.M.R. workings to and from Euston and Broad Street non-stopped some stations in the direction of the peak traffic, being (not necessarily all at once) South Kenton, Stonebridge Park and Kensal Green. All Bakerloo Line trains however stopped at all stations. One L.M.R. train also worked direct to and from Croxley Green and Broad Street in each peak, via the direct line north of Bushey at Colne Juction (signal box and connecting tracks since closed and removed, although the bridge which used to carry the tracks over the road is still in position).

Services Today

In order that a further comparison can be made of the service reductions over the years, the Monday to Friday off peak service is every 20 minutes Watford to Euston (30 minutes at peak periods and after 22.00). During the peaks there is of course the four remaining Bakerloo trains one way only in each peak, and the 30 minute Euston service is supplemented by a 30 minute Broad Street service. In the morning peak two L.M.R. trains operate through to Broad Street via the North London Line connection at Willesden Junction, but there are no corresponding return workings in the evening peak.

Total southbound departures from Watford 0730 to 0830 in 1965:-12 (plus 1 ex Croxley Green to Broad Street and other Bakerloo trains from Harrow & Wealdstone). In 1978: - 10.

Total northbound arrivals at Watford Junction 1800 to 1900 in 1965:-12 (plus 1 to Croxley Green from Broad Street and other Bakerloo trains reversing at Harrow & Wealdstone). In 1978:- 8.

ROLLING STOCK ALTERATIONS

APRIL 1978

Broad Street, Below are shown the times prior to 14th June 1967 mental be 1938 Tube Stock as twee add mans od y land to Liky th bus

10299-012240-12043-11299 White City to Neasden 10th 10280-012343-12142-11280 Neasden to White City 10th

10170-012400-12141-11170 Golders Green to Neasden 20th

From Neasden to Ruislip (condemned)

10247 10233 11233 11306 012328 012330 10th

From Ruislip to Birds (Long Marston) for scrap

10134 10217 10233 10247 11233 11306 012249 012328 012330 13th

Units reformed at Neasden

10252-012348-12438-11300 13th for Sand Drag Tests, Upminster. 10300-012325-12132-11252 13th for scrap

1959 Tube Stock

From Northfields to Golders Green

1112-2112-9113-1113 7th

25th W. H.M. J. off To amo? 1168-2168-9169-1169+1022-2022-1023

Unit reformed at Morden was a standard to the Mission and the

1312-2312-9313-1313 (1312 2312 ex. Acton, 9313 1313 ex. spare)

1962 Tube Stock

Unit reformed at Ruislip

1642-2642-9642-1643 28th (1642 ex. Acton, 1434 spare with 1435, 2434, 9435.)

1973 Tube Stock

Ruislip to Northfields 242-642-442+870-670-871 12th Entered Service Piccadilly Line 242-642-442+870-670-871 21st

CO/CP Stock

From Ruislip to Kings (Newmarket) for scrap 53037 53044 53196 54051 54216 54230 4th From Ruislip to Ealing Common (Pilot Units Returned) 53205-54268+53238-54027 26th

C77 Stock

From Metro-Cammell to Ruislip
5727-6727 11th

From Ruislip to Hammersmith

5707-6707+6708-5708+6709-5709 2nd 5724-6724+6725-5725+6726-5726 20th

Entered Service Hammersmith & City and Circle Lines

5707-6707+6708-5708+6709-5709 7th

From Ruislip to Barking for crew training

5701-6701+6705-5705+6706-5706 2nd

From Barking (ex crew training) to Hammersmith for service 5701-6701+6705-5705+6706-5706 9th

Miscellaneous Movements

L130-1312-2312-L131 Acton to Golders Green (ex. repair) 4th L130-1312-2312-L131 Golders Green to Morden for reform 5th 5190-6190-6191-5191 Neasden to Acton for roof repair 11th 21107-23311-23407 Ealing Common to Acton for repair 19th 53194-013099-54213 Acton to Ealing Common (ex. repair) 21st L130-1642-L131 Acton to Ruislip (ex. flood) 23rd L130-PC851-L131 Ruislip to Acton 28th

Units to Acton for Overhaul

Central 1712-2712-9713-1713 4th Northern 1120-2120-9121-1121 7th 21106-23306-23406 District 13th 1744-2744-9745-1745 Central 14th 5208-6208-6209-5209 Metropolitan 18th District 53256-014094-54202 21st 1094-2094-1095 21st Northern Bakerloo 10207-012296-11207 26th District 22634-23549 27th

Units from Acton after Overhaul

Central	1410-2410-9411-1411	4th
Victoria	3034-4034-4134-3134	12th
District	22658-23566 14th	
Central	1406-2406-9407-1407	14th
District	22654-23552 17th	
Piccadilly	1022-2022-1023 18th	
Metropolitan	5202-6202-6203-5203	18th
Piccadilly	1098-2098-1099 21st	
Northern	1040-2040-9041-1041	26th
Bakerloo		26th
District	22657-23557 27th	

Additional notes:-

Under the Rolling Stock Alterations for February 1978, three 4-car 1938 stock units were transferred to Ealing Common for eventual Sand Drag tests at Upminster, to where they were transferred in March. All three units have since been returned to Neasden via Ealing Common, during April.

NEWSFLASHES

- NF 2004 Finishing oddities:- The first two units of A60 stock were fitted with grey painted 'J' cab doors like those on 1959/62 tube stock. They can still be seen on 5000, 5002 and 5003, but 5001 has a standard red door, presumably a replacement at some time. The first three units of C69 stock have passenger doors with grey painted interior surfaces instead of the usual hammered metalic finish.
- NF 2005 R38 stock driving motor 22683 was seen on 17.5.78 still with all six headlights in position; i.e. the top four not yet painted out.
- NF 2006 One of the destination plates on CO stock driving motor 54010 reading 'PUTNEY' was a sticker over 'PLAISTOW'.

 The sticker has since been partially torn and on 17.5.78 was seen to read 'PUTSTOW'.
- NF 2007 1938 tube stock driving motor car 11142 has been fitted with Storno Radio equipment
- NF 2008 On 24.5.78 further gauging with 1973 tube stock from Uxbridge to Ruislip depot via Ruislip siding took place after the morning peak. NF 1984 refers.
- NF 2009 On Sunday 2.4.78, the Piccadilly Line service was suspended all day between Acton Town and Rayners Lane, where 15 coaches calling at intermediate stations substituted. Bridge D14, the second underbridge after leaving Alperton (westbound) was being reconstructed.

- NF 2010 During recent months, the catch points on uphill gradients on the Metropolitan Line are being progressively removed and plain track substituted.
- NF 2011 All distant signals (yellow disc with black fishtail band) were taken out of commission on the Metropolitan Line north of Harrow-on-the-Hill in September 1975, and most have now been removed. The ones on the Central Line east of Leyton were removed in May 1971, and on the Northern (Barnet branch) in September 1964. One signal however at Park Junction still has a distant identification plate in position.
- NF 2012 After the close of traffic on 15.4.78, three Fog Repeating signals were taken out of commission on the Metropolitan Line between Edgware Road and Paddington. The signals were FR OP 11/12 (westbound junction signal at Praed Street), FR 134 westbound line east of Paddington H.& C. and FR OP 37 eastbound line east of Paddington H.& C. All three signals were located in tunnels and were used when steam trains used to operate through the area.
- NF 2013 With reference to NF 1981, two C stock trains were scheduled on the District Line from 8th May 1978. From Tuesday 30th May this has increased to three, with one train running to and from Hammersmith depot after the morning peak and before the evening peak. As this now mixes the stock on the District, it is no longer possible to record details of units used solely on the District. For the record however, the units used up to 28.5.78 are shown below, as they were exclusive to the District a week at a time.

17.4.78 23.4.78 30.4.78	to	30.4.78	5535	5595 5517 5529	5508
7.5.78	to	14.5.78		5523 5555	
14.5.78	to	21.5.78		5581 5725	
21.5.78	to	28.5.78		5537 5588	

- NF 2014 Four car trains of A stock started running on the Metropolitan (main) from Saturday 20.5.78. Eight car trains will be run however, where special events at Wembley require full length trains.
- NF 2015 A new substation at Morden was commissioned on 2.4.78 feeding current to Morden depot.

- The Taunton Cider Co. has staged an exhibition on the up escalator from the Victoria Line at Green Park station.

 All 52 advert spaces are taken up of which 18 are prize winners and runners up in a competition called 'Image of Rural Britain'. The exhibition, which started about 1st June, is Students Graphic Art and all entries appear to be the original paintings and drawings. At some other stations with escalators, certain advert frames are devoted to advertising the exhibition.
- NF 2017 Two new Permanent Way sidings and a Tamping Machine spur were commissioned in Hainault depot on the west side from 17.3.78.
- NF 2018 From Tuesday 7th February 1978, the stop lights at Aldwych were moved 10ft westwards and the stopping mark 5ft westwards, so that a 3-car 1973 tube stock train could fit completely in the platform. This alteration was presumably the result of the incident on 30.12.77, NF 1955 refers.
 - NF 2019 1959 tube stock 3-car unit 1098 which was overhauled 4/78 has returned to service on the Piccadilly Line. This is the first overhauled 1959 stock unit for some time that has worked on the Piccadilly Line, From January 1977 units overhauled were normally transferred to the Northern Line.

HELP REQUIRED FOR SALES STAND

Due to the increase in the number of occassions when our sales stand is operated, we now require more assistance in the manning of it. If any member would like to help on a regular or occassional basis, especially at the National Showbus Rally at Hillingdon on 24/25th June, we would like to hear from them. Please write to The Sales Manager, 26 Fishery Road, Hemel Hempstead, Herts, HP1 1ND.

FORMATION OF A PRESERVATION GROUP

The Committee has agreed to the formation of a Preservation Group within the Society whose function it would be to work on our preserved vehicles. Work so far has largely been confined to the movement of the various items to places of safety, since all would have been scrapped if this had not been achieved. At present we have two City & South London coach bodies at Ruislip and Q35 trailer 08063 to be returned to London in the relatively near future. Any members who are interested in joining the group, whether they have stated their intentions previously or not, are requested to write to:-R.J.Greenaway, 26 Fishery Road, Hemel Hempstead, Herts, HP1 1ND indicating any special skills or interests that they may have.

Correspondance for UNDERGROUND NEWS (with SAE if a reply is required) to:- 13 Castleton Road, Eastcote, Ruislip, Middlesex, HA4 9QQ.