

UNDERGROUND NEWS

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SOCIETY ALL-CHANGE - A MESSAGE FROM THE CHAIRMAN

Twice a year, in January and July, a list of Society Officers appears in Underground News, so that members can direct their correspondence to the relevant Officer. This issue is no exception and an updated list can be found on page 91. There are, however, a number of changes, some of which were announced at the 1985 Annual General Meeting on 29 March.

As Society Chairman and Editor of Underground News, it is necessary for me to give up this latter post with effect from this issue. Your new Editor will take over from the next (August) issue and will be Del Lomas, who has kindly offered to take over from me. The new Editorial address appears in the new list of Society Officers in this issue and, of course, in the usual place on the back page. Brian Panting has also offered to help as Assistant Editor, but members are asked to send all material intended for publication to the Editor.

I would like to thank all members who have contributed to Underground News in the last eight years or so that I have been Editor, be it in a large or small way. This is YOUR journal and its continued success, content and variety depends not only on the Editor(s), but Society members as well. It is now more important than ever for all members in the London area to put pen to paper on a regular basis, so that all our members, not only at 'home', but those world-wide as well, can share the benefit of being informed of what happens on the London Underground. After all, isn't that we pay our subscriptions for? PLEASE, flood your new Editor with UNDERGROUND NEWS!

In my absence at monthly Baden-Powell House meetings, Desmond Croome will be (and already has been) deputising for me. Both he and I will be pleased to receive offers from members before meetings start, to write, on an occasional basis (if enough of you volunteer!) a review of the meeting for the journal. Members will be aware what is required, as this has been a regular feature for many years.

I look forward to your help and continued support.

Brian R.J.Hardy
CHAIRMAN

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THE UNDERGROUND IN THE FUTURE

The London Underground is the result of more than a century of evolution. Just as a city can grow or change, so does its transport network. Because many developments take years to plan and construct, today's planners have to look forward at least 20 years so that the Underground can continue to serve London well.

London was the first city in the world to have an Underground railway and in places the system is showing its age. London's population is no longer growing and predictions are that it will remain stable, or perhaps slightly decline, over the next 20 years. With a good network of British Rail as well as Underground lines, little expansion of the system is planned. Instead, the emphasis is on renewal and modernisation of the existing network and making it more efficient.

There are four types of investment in the Underground. These are:

(a) Expansion

With the high cost of tunnelling and the stabilisation of London's population, expansion is likely to be limited to special projects, like the current expansion of the Piccadilly Line to serve Heathrow's Terminal 4. A scheme to extend the Jubilee Line through London's Docklands has been dropped, and a less costly light railway system is being developed by LRT and London Docklands Development Corporation.

(b) Essential Renewals

The Underground has to invest tens of millions of pounds every year on renewal of equipment, without which the system would eventually come to a stop. The trains themselves have to be replaced, as do lifts and escalators, track, signalling, station buildings, bridges and so on.

(c) Efficiency

One of London Underground's tasks is to reduce the day-to-day cost of providing services. Often this means investing in new methods or equipment. Modern trains, for example, need less routine maintenance and can be operated with only one member of staff, and new ticketing equipment can save passengers time in ticket offices and also reduce costs and prevent fraud.

(d) Improving the Environment

In today's competitive world, the Underground has to be much more attractive if it is to keep or win back passengers. Attractive new station decor, new automated cleaning methods and up-to-the-minute information about services are all steps being taken to achieve this.

Managing Projects

Some projects come into more than one of the four categories. Railway track itself, for example, has a role in all four: new track is needed for expansion of the system; rails have to be renewed as they wear; the type of rail and trackbed now being developed needs less maintenance; and rubber mountings are being tested to reduce noise and vibration and improve the quality of the ride.

Many projects also involve several different departments of London Underground. The new ticketing system, for example, involves planners, architects, engineers and operators. The Underground has therefore developed a strategic planning process, drawing together the different types of investment and the different skills needed, so that future investment can be carefully planned and monitored.

The Central Line

By the mid-1990's, more than £300 million is expected to be spent on modernising the Central Line. Individual projects for the line include renewal of the signalling system, station mod-

ernisation schemes and new trains. Some of the first results of the current station modernisation programme can be seen at Bond Street, Oxford Circus and Tottenham Court Road, where platforms have been re-tiled and re-fitted with striking decor. Another scheme almost complete is at Shepherds Bush and work is under way at Marble Arch and Holborn. Chancery Lane and St. Paul's are on the list for a new look, as is Bank, which will take its decorative theme from the financial world.

Because the Central Line's trains and signalling fall due for renewal at about the same time, automatic train operation is being considered. This would be a development of the type of signalling used on the Victoria Line. A proposal to have unmanned trains on the Central Line is not, however, being pursued. Trains for the Central Line will be needed in the 1990's and will represent a major advance in Underground train design. Many of the developments expected are to be tested in three four-car prototypes, to be delivered in 1986, and described in UN 270 (pages 65-67).

The prototypes for the Central Line will help to shape future trains for other lines. The Northern is expected to be the next line after the Central to have replacement rolling stock.

The Metropolitan Line 'A' stock would normally be due for replacement at about the end of the century, but these trains are being given a major refurbishment which will extend the life of them well into the 21st century. This possibility arises from the use of aluminium alloy, which does not corrode like steel.

Underground engineers are also conducting or managing a range of development projects which will influence trains of the future. The use of commutatorless traction motors, steerable bogies and condition monitoring equipment are all under investigation.

Station Modernisation

New trains cost more than £2 million each, and normally take up the bulk of the investment money available for the Underground. But with no bulk orders for the second half of the 1980's, the opportunity is being taken to update many of the Underground's older stations.

A major programme, covering half of the stations on the network, began in 1981. All stations are graded according to their condition and then the number of passengers using them is taken into account to arrange an order of priority and an indication of the scale of work which is justified at each. The biggest schemes are, therefore, generally at old but busy central London stations.

The emphasis is on modern, easy-to-clean materials like ceramic tiles or vitreous enamel. Major schemes involve three elements of design: the maps, nameplates and signing are characteristic of the Underground as a whole; cable ducts and platform furniture and fittings are usually from a standard 'kit of parts' in the colour of the line; and a local theme, based on the station name, the locality it serves, to provide individuality. At Charing Cross, for example, murals run the whole length of the platforms. On the Northern Line platforms, murals designed by David Gentleman depict the construction of the medieval Eleanor Cross at Charing, while the Bakerloo Line platforms at this station are inspired from paintings at the nearby National Gallery and National Portrait Gallery.

At some stations, architects will restore, rather than rebuild, so as to preserve the Underground's architectural heritage. Such a completed scheme can be seen at Baker Street, platforms 5 and 6. Although modernisation schemes are on the drawing board for many more stations, some of the bigger projects will be at Bank, Waterloo,

Euston, Kings Cross and Earls Court.

As well as the major schemes, there are dozens of smaller projects in line. These include renewal of station lighting to new, brighter levels. Station works in progress also include the replacement of lifts and escalators. The biggest, and most complex, escalator project is taking place at Holborn, where each of the seven old escalators is being replaced. Those at Marble Arch, Maida Vale, Warwick Avenue and Hyde Park Corner are also being renewed, with many other stations having to be tackled in the 1980's.

The earliest tube stations had lifts, but as many of these as possible were replaced by escalators during the 1920's and 1930's, for convenience. However, at some stations, lifts had to remain and many are now being renewed - in some cases after more than 70 years of service.

Lift and escalator renewal is one of the most complex engineering jobs on the Underground. The actual installation of the escalator or lift cage can only take place after considerable preparatory work in the shaft - work which includes the removal of old equipment and the fitting of new machinery. In addition, much of the work can only be carried out during the few hours when the system closes at night. With these restrictions and the need to keep stations open for passenger use, these projects can take many months or even years to complete.

Underground Ticketing System

Perhaps the most significant change in the next few years will be the introduction of a new Underground ticketing system (UTS), considerably improving passenger facilities, reducing costs and limiting fraud. Details of the new system can be found in the next article in this journal.

One-Person-Operation

Since opening in 1968, the Victoria Line has always operated without guards, but only recently has driver-only operation been introduced on other lines. The Circle Line and Hammersmith & City section of the Metropolitan Line were converted to this mode in 1984 and are operating successfully.

The East London Line and the District Line are planned for conversion in 1985. On the tube lines, a system for dealing with trains in single track tube tunnels in the event of a mishap to the driver is needed before OPO trains can run. The Victoria Line has automatic operation, but on other lines it is expected that a radio system will be able to warn controllers if the 'deadman's handle' is operated in tunnels.

Terminal 4

Heathrow Airport was connected to the Underground network in 1977, with subways and moving walkways linking the station to the three air terminals, but the growth of air travel led to the construction of a fourth terminal on the south-east side of the airport. Plans were drawn up for a further extension of the Piccadilly Line, this time as a single track loop from Hatton Cross to the new terminal, then on to the existing station at Heathrow Central, which is being renamed Heathrow Terminals 1,2,3. Plans were accelerated by using extra tunnelling machines and access shafts, and the station will be ready to open at the same time as the air terminal itself.

The new loop is nearly four miles long. It is mainly in deep-level tube tunnel, but a large area near Hatton Cross was excavated from the surface to build the junction with the existing railway. The loop passes below the cargo area on the south side of the airport and swings round the west side before opening into two tunnels at Heathrow Central. If a fifth terminal were built

on the west side of Heathrow Airport, it could be connected to the line. The new station at Terminal 4 is beneath the car park alongside the air terminal. A short subway links the spacious ticket hall with the bank of lifts and escalators to the arrival and departure lounges.

Communications

The Underground has a proud reputation for its maps and signposting, and a detailed study is in hand to ensure that new systems are as good.

Up-to-the-minute information to passengers about the state of services, particularly if there has been a delay, is of great importance, and this is an area of rapid development. All trains since 1967 have public address systems, so that passengers can be informed of any problems. But until recently a driver had to stop his train and use track-side facilities to contact the Line Controller, and the Line Controller had no way of contacting a driver. The problem was that radio could not work in the twisting iron tunnels. The development of radiating cable, which carries radio signals along tunnels so that they can be picked up by moving trains, has brought on-the-move communications to almost the whole of the Underground. All lines will be so equipped by about the end of 1986.

Controllers and their Information Assistants can now also talk to passengers at selected stations on a line, to advise of any delays or problems down the line which local station staff might not know about. This centralised public address is being extended throughout the Underground. With fewer staff on the platforms, closed circuit television plays an increasing role, not only helping supervisors to control crowds at busy times, but also providing security at quiet times.

Modern destination indicators, offering up-to-the-minute information on services, are now appearing on Northern Line platforms and will gradually be adopted throughout the system. These 'dot-matrix' indicators provide 'rolling' information on the destinations of approaching trains and advise waiting passengers when each train is expected. They can also give travel advice and information on service delays. Development work is also under way on similar indicators for use in station ticket halls.

Train Maintenance and Overhaul

In the same way that modern cars have been designed to reduce servicing, so Underground trains have gradually improved and the maintenance workload reduced. Ways of exploiting the engineering changes of past years, such as aluminium bodies, rubber suspension and rheostatic braking, by tailoring maintenance practices to the reduced needs of such equipment, are still being found.

Improvements already achieved include extending the wheel changing period at depots from one year to four years, and heavy overhauls from four years to nine. The changes have also radically affected the type of work involved in overhaul and the facilities required. The mechanical, body making and coach painting crafts needed for maintaining steel and timber constructed cars have been drastically reduced, to be replaced by electrical and electronic expertise. The emphasis of train maintenance has changed from keeping the car body in a satisfactory state to dealing with complex systems and equipment with their associated fault diagnostic requirements.

Train maintenance is carried out at the depots associated with each line and heavy overhaul at the main works at Acton. Studies have shown that overhaul should be transferred to the line depots, avoiding duplication of effort and saving several millions of pounds a year. The transfer of this work is to begin later in 1985.

There are proposals to establish a new factory at Acton - on a part of the existing site - to handle those items of equipment overhaul which can be carried out cost effectively within London Underground.

Depots, Track, Power and Signals

As well as the investment needed to take on additional overhaul works, the maintenance depots on most lines are in need of other investment. Several train washing machines have to be replaced if standards of cleanliness are to be maintained and improved. New lighting, too, is planned for most depots - essential to modern requirements for safe working conditions. Local authorities are consulted on lighting schemes to minimise any inconvenience to neighbouring residents.

The Underground is switching from traditional bull-head rails to flat-bottomed rail in a programme that will last into the next century. The new system is easier and cheaper to maintain. Different forms of track bed, in some cases using concrete sleepers mounted in rubber 'boots' to reduce noise and vibration, have been developed for different Underground locations, and new adjustable rail clips are being tested. New track is being pre-fabricated at a new depot in Ruislip.

The power needed to run the Underground is enough to supply a large town and with the cost of fuel rising, determined efforts are being made to find ways of reducing the electricity bill. The need to replace expensive equipment at the Underground's two generating plants could mean a complete switch to the national grid. At present, about two-thirds of the electricity used by the Underground comes from the natural gas and oil-burning power stations at Lots Road and Greenwich, while the rest is already drawn from the national grid. Studies have shown that it could be cheaper to invest in equipment which would enable the Underground to buy all its power from the Electricity Authorities, and discussions are under way. Distribution of power is via a network of substations, control of which is gradually being centralised and monitored by computer.

There is a rolling programme of signal renewal on the Underground. Local computers now perform many of the routine functions. Electronic track circuits without blockjoints are now coming into use, permitting more extensive use of continuous welded rail and also making maintenance easier. Electronic safety devices may also replace electro-mechanical trainstops which prevent trains from passing danger signals.

Other Developments

The future of the London Underground will be influenced by many hundreds of other projects. As well as passenger amenities, it is necessary to improve staff amenities to provide safe and satisfactory working conditions. Today's micro-processors enable many complex clerical tasks to be handled by computers. There are dozens of small schemes improving efficiency in the Underground's engineering departments. New methods of training staff and managers are being investigated to ensure that the system is run effectively, and new ways of promoting the Underground, often in conjunction with London Buses and British Rail, are being explored.

NEW UNDERGROUND TICKETING SYSTEM

Work is to start immediately on London Underground's £135 million ticketing system, which was approved by Transport Secretary, Mr. Nicholas Ridley, on 13 May 1985.

The new system, when fully operational by 1989, will speed up ticket issue and reduce queuing

for passengers, mean better security and modern accounting facilities for ticket staff, get to grips with fraud which currently costs about £12½ million a year, and will reduce London Underground's costs.

The main features of the new scheme will be:

- Modern self service ticket machines, issuing a wide range of tickets and giving change;
- Secure ticket offices for staff;
- Automated ticket checking on entry and exit at busy central stations;
- 'Open' suburban stations, with no ticket checks, but
- Increased on-train and spot ticket checks;
- an effective penalty fare system, imposing a high charge on passengers without valid tickets.

The major part of the project, costing £105-million and covering the cost of ticket issue and improved security for booking clerks, was agreed by the Greater London Council in 1984. Subsequent planning work has included detailed equipment specification and the placing of a management contract with Taylor Woodrow Management Contracting Ltd.

A contract for provision of passenger-operated ticket machines, booking office machinery, supervisory computers and systems support is being placed with Westinghouse Cubic Ltd., who have been closely associated with the development of the system to its present stage.

The rest of the system, costing £30 million, deals with ticket checking - automatically in central London and by roving inspectors elsewhere.

New Ticket Machines

Improved versions of two types of passenger-operated ticket machines tested at Vauxhall in 1983 will form the basis of the new system. All but the quietest stations will have at least one machine which will issue any of the ten most popular tickets from that station. These machines will be quick and easy for passengers who know the fare.

Another machine will issue a complete range of tickets to all stations. Both machines will accept a wide range of currency and give change. Booking clerks will also use new machines for ticket issuing. These machines will also 'read' the magnetic codes on tickets in case of queries.

Most of the Underground's existing ticket issuing machinery is obsolete, and modernisation, even without many of the benefits of the new system, would cost nearly £50 million. All tickets issued from the new machines will be credit-card size. The whole system will be monitored by computers and is designed to be fully compatible with British Rail. The new ticket machines will also honour a commitment to booking clerks to introduce a system of individual accountability.

Improved Ticket Offices

New self-service machines will be wall-mounted so that they can be serviced from the rear. Ticket offices in the centre of booking halls will be replaced by wall offices. This involves a large amount of building work at many stations and this accounts for a large proportion of the cost of the scheme. At some stations, it will be necessary to close or move shops and kiosks to provide the necessary space.

Automated Ticket Checking

Checking magnetically-coded tickets in electronic gates is more effective than manual methods and brings the biggest reduction in fraud. Mod-

ern gates are quick and efficient, but passengers with heavy luggage or other difficulties will be able to use a wide gate controlled from the booking office. This is particularly important in view of LRT's commitment to making transport as accessible as possible for all passengers, including those with disabilities.

Open Stations and Penalty Fares

Electronic gates are expensive, however, and their cost in relation to the number of passengers at some outer stations would be high. The provision in the 1984 London Regional Transport Act for penalty fares makes it possible to transfer much of ticket checking to trains, with a greatly increased force of mobile ticket checking staff, but no regular barrier staff. Passengers will have to have a valid ticket or other authority to travel before starting their journeys.

Any passengers without a valid ticket will have to pay a penalty fare. The level for such a fare was set, in the London Regional Transport Act, at 25 or ten times the normal fare, whichever is the greater, but the Secretary of State has power to vary this. No date has yet been set for the introduction of penalty fares.

Open stations would be impractical in central areas because many journeys are short and on-train checking would be impossible in rush hours. The new system therefore has automatic checking at central stations and on-train random checks with open stations (the term does not imply unstaffed) outside central London. About 40% of Underground journeys start or finish in this zone, so 80% of journeys would be automatically checked either on entry to the system or on exit.

The open station concept represents a major change in thinking for London's Underground, but it is common in much-envied Continental systems and is used by British Rail.

Staffing

The new system will reduce staffing requirements at stations on a progressive basis over several years, and this will be achieved by natural wastage and perhaps a limited amount of voluntary retirement. Although there will be fewer staff in ticket halls, more mobile staff will be needed for ticket checking, and this development will, to some extent, ease the apprehension of some passengers - particularly women - about using the Underground at night.

NEW WORKING TIMETABLES

From Monday 13 May 1985, new timetables were introduced on the Jubilee and Bakerloo lines, the latter coinciding with the new B.R. timetable for the L.M.R. d.c. electric lines service, which also saw a substantial change to rolling stock and patterns of operation.

Jubilee Line (WTT No.4)

Apart from small changes to the times of early-morning and late-night trains, improving connections with Metropolitan Line trains at Wembley Park, the only significant change to the previous timetable is that of an increased service after the evening busy on Mondays to Fridays. This is represented by two additional departures from Charing Cross between 18.40 and 19.40, reducing intervals from 7½/15 minutes to 6/12 minutes. The last stabler after the evening peak is therefore later, at 20.04 instead of 19.37. One train stabling at Stanmore after the evening peak (18.52 ex-Charing Cross) runs direct from Canons Park, now making two trains each day legitimately terminating there.

The 'rusty-rail' workings to and from Finchley Road, introduced during the currency of WTT No.3

are included in the timetable, with staff taxi and staff trains summarised together, but separate from the main timetable pages.

Bakerloo Line (WTT No.5)

The new Bakerloo timetable, as well as incorporating changes connected with the LMR d.c. electric service, also includes a number of improvements to the service in general. The number of trains in service at peak times remains at 25 and the maximum period of operation is broadly the same (08.30 to 09.29 and 16.38 to 18.36, as against 08.35 to 09.33 and 16.40 to 18.31). A total of eleven trips in each peak work to and from Harrow & Wealdstone, an increase of one in each peak. Times of the Harrow service are as follows:

From Harrow & Wealdstone to Elephant & Castle (or * Waterloo)		From Queens Park to Harrow & Wealdstone (ex-Elephant & Castle or Waterloo *)	
WTT5	WTT4	WTT5	WTT4
07.07	07.06	06.37 *	06.37 *
07.27	07.20	06.57	06.50
07.36	07.37	07.18	07.22 *
07.51	07.50	07.28	07.39
07.57	08.08	07.39	07.55
08.06	08.23	07.55	08.10
08.27	08.38	08.08	08.24
08.36	08.53	08.18	08.40
08.51	09.08	08.38	08.59
09.07	09.28	08.57	
09.26			
16.48	16.46	16.17 *	16.18
17.06	17.08	16.37	16.38 *
17.24	17.25	16.54	16.56
17.38	17.47	17.09	17.14
17.48	18.05 *	17.18	17.35
18.08	18.25	17.39	17.53
18.25	18.37	17.54	18.08
18.36	18.50	18.09	18.23
18.49 *	19.15	18.18	18.38
19.09		18.39	18.48
		18.54	

There has been no change to the number of trains reversing at Stonebridge Park - four in the morning peak and eight in the evening peak, nor to the central area peak service interval of 3 minutes. It is the Monday-Friday evening off-peak and weekend services that have been mostly altered - to the credit side as far as the passenger is concerned, with increased services. A full summary of service intervals and trains in service is shown in the table at the top of the next page.

With the increase of trains in service on Sundays, the number of changeover trains to and from Stonebridge Park has been increased from three to four. In the previous timetable, the three trains were changed over during the late-morning/midday period, but in the new timetable two are changed over at this time, the other two in the early evening. All workings in both directions north of Queens Park continue to run empty.

The LMR d.c. electric service, over whose territory part of the Bakerloo Line works, has undergone changes, operative from 13 May, but not as much as was planned! It was intended that by that date, spare class 313 EMU's from the Great Northern line (Moorgate-Hertford/Welwyn) of the Eastern Region would provide the motive power for the service between Euston and Watford, also Broad Street in the peaks - all trains operating in three-car formations only. At the same time, Southern Region refurbished 2-EPB units, running singly, were to take over the North London Line, retitled NORTH LONDON LINK, and diverted to serve the newly electrified section to North

	Stonebridge Park - Queens Park		Queens Park - Elephant & Castle		Trains in Service	
	WTT5	WTT4	WTT5	WTT4	WTT5	WTT4
<u>MONDAY TO FRIDAY</u>						
Morning Peak	5-10	5-15	3	3	25	25
Midday off-peak	-	-	3½	3½	17	17
Evening Peak	5-12	6-12	3	3	25	25
Evening off-peak *	-	-	6	6½-7	11	10
<u>SATURDAY</u>						
Before 08.15	-	-	7½	7½	9	9
08.15 to 11.00	-	-	5	7½	11	9
11.00 to 18.00	-	-	5	6	13	11
18.00 to finish	-	-	7½	10	9	7
<u>SUNDAY</u>						
Before 09.00	-	-	10	10	7	7
09.00 to 17.00	-	-	7½	10	9	7
17.00 to 21.00	-	-	7½	7½	9	9
After 21.00	-	-	10	10	7	7

Note * WTT5 interval 5 minutes between 19.00 and 19.45.

Woolwich. The latter change happened to schedule and in fact some 2-EPB units worked passenger services on the North London Line into Broad Street prior to 13 May.

On the Watford line, difficulties with crew training and (dis-) agreement on class 313 empty stock movements to and from Hornsey, caused the few trains of this type to be taken off after about a week, with the class 501's continuing to reign supreme, and Croyley Green depot (once host to LT trains) continuing to flourish - for the time being, at least. The revised schedule came into effect on time however, which saw an increase in the peak service to and from Euston (20 minutes instead of 30 minutes, but in three-car formations only), although a small number of class 501 workings have been reported by the end of May. Broad Street and Dalston Junction are now served at peak times only, having lost their daily service to the diversion of the North London Line to North Woolwich. Although Broad Street trains carry passengers in both directions at peak times, there are seven arrivals in the morning peak (one from Willesden and six from Watford) and six departures in the evening (all to Watford), generally at 30-minute intervals. The two one-way journeys via the City Loop and Hampstead Heath that previously started from Watford now start from Willesden (low Level) at 07.59 and 08.32 and work to Camden Road and Stratford respectively. On the Watford line, the revised peak service with shorter trains, has meant that whenever possible, a seven-car Bakerloo train from Harrow precedes a three-car LMR train, so that the Bakerloo train will clear the passengers 'through the road'.

And so expectant of traffic on the new North London Link are BR (or the GLC, who funded the scheme), that two-car trains (instead of three) are considered sufficient to ply their way to and from Richmond. The new service means that the North Woolwich branch now has a service daily, every 20-minutes, instead of Mondays to Fridays as previously. In addition to the LT stations that the North London Line offers interchange with, West Ham (District and Metropolitan lines) and Stratford (Central Line) are added to this list on a daily basis.

Returning to the last all-day operation of Broad Street, which was Sunday 12 May 1985, the last train for Richmond departed at 22.22, some five minutes late. There was one later train (at 22.37) but to Willesden only. Your writer may well have purchased the last Sunday ticket from Broad Street and rather surprised pre-occupied staff into realising there was still a sale to

be made. A lone photographer with flash bulbs did his best with the unpromising photographic potentialities of Broad Street! One or two passengers had a subdued sense of occasion, but most were simply making an ordinary journey. As we went through Hamsptead tunnel, the driver managed to produce a remarkably good, if cheerful, equivalent to the Last Post. Fortunately, this did not cause any recurrence of the land-slip at Hampstead Heath, which so devastatingly disrupted the North London service from early in December 1984 to re-opening on 15 April 1985.

The 'official' opening of the North London Link took place on 14 May, with a special train leaving North Woolwich at 11.15, stopping on the way at Homerton for the opening of that new station by the Mayor of Hackney. The special eventually reached Richmond, to be greeted by a mini-demo asking for the return of the direct line to the City.

THE STRIKE THAT HARDLY EVER WAS

With the management of London Underground Ltd. announcing that One Person Operation would commence on the East London branch of the Metropolitan Line on Monday 13 May 1985, subsequently deferred by one week to 20 May, the National Union of Railwaymen decided to call an indefinite strike from the latter date, in the cause of requiring a 45-minute break for train operators after two hours of driving, because of the stress that one person operation is alleged to cause.

In the event, the majority of London Underground staff reported for work for the morning shift on 20 May (which included station staff, signalmen, station supervisors, as well as train staff) and London Underground were therefore able to operate 66% of the train service. Throughout the day the situation improved dramatically, with 85% of train services operating during the evening peak, by which time the N.U.R. had called off the strike, admitting on TV news in having 'to take a step backwards'.

By 07.00 all Underground stations except East Acton were open and all sections of line were served, except for the Watford branch (no signalman at Rickmansworth, with the cabin operating in 'king' for through running), and Chesham (no crew for the shuttle). On the Bakerloo Line, which was one of the worst affected lines, separate shuttle services operated between Harrow and Queens Park, and Queens Park to Elephant & Castle. Ironically, the line over

TRAINS IN SERVICE - MONDAY 20 MAY 1985

Line	Morning Peak		c11.00		c14.00		Evening Peak		Evening	
	Sched	Actual	Sched	Actual	Sched	Actual	Sched	Actual	Sched	Actual
Metropolitan No.1	30	26	25	19	25	20	30	28	18	18
Metropolitan No.2	40	27	16	9	16	16	40	38	14	14
East London	5	5	3	3	3	3	5	5	3	3
Jubilee	23	10	16	6	16	7	23	16	11	7
Northern	82	55	46	19	46	27	82	69	36	32
Victoria	33	27	23	23	23	21	33	31	19	18
District	66	41	41	28	41	31	66	59	27	27
Piccadilly	71	40	46	28	46	28	71	55	39	34
Central	75	60	38	32	41	30	75	70	23	23
Bakerloo	25	10	17	7	17	7	25	12	11	11
Totals	450	301	271	174	274	190	450	383	201	187
% Operating		66.8%		64.2%		69.3%		85.1%		93.0%

which the dispute was about - the East London - was operating a 100% service!

As this item was being typed, it was announced on Thames News (ITV, 18.00 on 30.5.85) that both the NUR and ASLEF (the latter not being involved in the dispute, but instructed their members not to cross NUR picket lines) had agreed for the continuation of OPO on the London Underground.

MAY - THE MONTH OF RAILTOURS

During the month of May 1985, there were no less than four railtours operated which were of interest to Society members, some being more so than others. The first was on Saturday 11 May, with the intention of saying a farewell to the class 501 EMU's on the LMR d.c. lines, which have been running alongside Bakerloo Line trains for nearly 30 years. Sundays 12 and 19 May saw two identical tours over the London Underground system using the restored train of 1938 tube stock, while to conclude, on 26 May, an eight-car A62 stock trains visited the Metropolitan's extremities, to celebrate the centenary of Pinner station.

Class 501 Farewell - 11.5.85

As mentioned elsewhere in these pages, the class 501 stock operating between Euston/Broad Street and Watford did not bow out as planned, but the farewell tour, on Saturday 11 May, operated to schedule. The mainstay of the d.c. service since the late 1950's - the sole stock from 1963 - the original build of 57 three-car sets has been reduced, mainly through service reductions over the years, so that by the beginning of 1985 just 27 three-car units (81 cars) were enough to work all surviving d.c. electric services. It is worth recalling here that in the heyday of the LMS d.c. electric lines in 1932, the total amount of stock comprised 331 cars!

The railtour did serve a purpose 'farewell-wise', for class 501's no longer work the North London section. It also visited North Woolwich, the first and only time that such stock has carried passengers on this branch. The whole of the d.c. electric system was covered, including the Croyley Green branch and the City Loop at Willesden. The six-car train (composed of sets '152 and '180, with footboards trimmed and trip gear removed) also visited parts of the Southern Region - believed to be the only time a train of this type has carried passengers on SR metals. The tour was something of a marathon, starting from Broad Street at 07.43 and arriving back there over 12 hours later at 20.12.

The itinerary of the class 501 farewell tour can be summarised, in order of operation, thus:

London Midland Region

Broad Street - Willesden Junction (LL) - Euston - Watford Junction - Croyley Green - Watford Junction - Kilburn High Road - North Woolwich - Richmond.

Southern Region

With photo stops, the train visited: Woolwich Arsenal (just opposite, but a river's width away from the other Woolwich visited three hours earlier), Sundridge Park, Blackfriars, Carshalton, Horsham and Gypsy Hill. Return to Richmond was via Clapham Junction and the Hounslow loop.

London Midland Region

Richmond - Broad Street.

Starlight Express 12/19.5.85

The London Underground railtours for 1985 took advantage of displaying the new company's name on the rectangular headboard, one being affixed to each end of the train. The headboard design incorporated the bullseye, on the bar of which was 'Starlight Express' and above which was 'London Underground Ltd.'

Using the seven-car train of 1938 tube stock restored to original condition (units 10291 and 11012), each tour lasted well over nine hours, covering some or most of the Bakerloo, Jubilee, Metropolitan, District and Piccadilly lines. The order of running was:

Queens Park - Stonebridge Park depot - Kilburn High Road - Harrow & Wealdstone - London Road depot - West Hampstead - Baker Street (Met).

Baker Street - Barking sidings - Upminster - Gloucester Road - Northfields - Heathrow Central - Acton Town - Rayners Lane - Neasden - Baker Street (Jubilee to Bakerloo) - Elephant & Castle - Baker Street - Queens Park.

The tours included several interesting sections of line, some of which needed special DoT dispensation for them to operate. These were Stonebridge Park and London Road depots, West Hampstead siding, Barking sidings, Acton Town (east) sidings and Upminster depot.

The tour commenced at 10.03 from the 'up' LMR platform at Queens Park (used only by LT trains for winter sleet working), but perhaps the highlight of the tour was the trip on LMR metals to Kilburn High Road, which still retains the fourth rail for emergencies. Such emergencies are, however, very rare (when was the last occasion??), for the negative rail had to be

'cleaned' beforehand. This occurred on Friday 10 May, when a number of trips were made by a pair of battery locomotives (L15 and L22) and a seven-car train of 1959 tube stock - empty, of course. Despite this, the operation of the tour trains on both Sundays still produced a magnificent display of arcing, with the associated spitting and spluttering - those there to record the event on cine film or video were well rewarded!

Another 'first' was the trip to Heathrow Central, not visited before by 1938 stock trains. Hatton Cross, of course, was served by 1938 stock trains from its opening in July 1975 until December 1975.

Notes on the Pinner Station Centenary special train will be in the next issue of Underground News.

THE PARIS METRO - AN UPDATE

by
Bert Steinkamp

Once again, in 1984, the RATP managed, for the fourth year in succession, to attract more passengers, with the exception of the buses within the city walls, which showed a minimal decline. The rail figures are in millions of journeys:

	1983	1984	Increase
Metro	1156.4	1177.1	1.8%
R.E.R.	256.9	278.0	8.2%
Total	1413.3	1455.1	3.0%

All activities together generated 2238.2 million passengers, of which 1284 million travelled on the Paris forerunner of the London Travelcard, the Carte Orange.

For the first time, the boundary mark of five million passengers a day was passed in 1984, with another landmark being the all time high of 55,000 passengers in the busiest peak hour on RER line A. The Metro lines which saw their custom grow most significantly are line 1, suffering originally from the opening of the central part of line A. With the continuous overcharging of that line, some passengers are now returning to line 1. Also still on the increase is line 4, in spite of the extension of line B to Gare du Nord. Line 6 is doing well because of the completion of housing schemes in the 13th and 15th 'arrondissements'. Lines 8 and 13 see more passengers as a result of the abolition of the suburban surcharges on fares since 1.11.82, and there is an increase on the northern part of line 7.

On the RER line B shot up by 16.1% as a result of the Interconnexion with the SNCF at Gare du Nord; the eastern branches of line A saw 4.4% more passengers. Behind all these favourable figures is the influence of the compulsion on employers to refund half of home-work transport costs of their employees.

All the same, the budgetary situation of RATP is not without its worries. The huge investments of the past twenty years charge the 1985 budget with a financial burden amounting to 12% (staff costs: 58%, energy: 5%). Fares, after the increase on 1.7.84 (carnet ticket 2.40 francs), went up again on 1.4.85 to 2.65. This is still far from the real cost (4.95) thanks to the subventions by national and regional governments. The total 1985 budget represents 14,430 million francs, with an investment programme of 2,870 million: 40% for new stock, 26% for upkeep of the system and 24% for extensions. Of the latter the 2.6 km long southward extension of line 7 went into service on 23.2.85 (for passengers on 28.2.85). There are three new stations:

ions:

Villejuif-Leo Lagrange
Villejuif-Paul Vaillant Coutrier
Villejuif-Louis Aragon *

Two months later, on 26.4.85, saw the public opening of the northern extension of line 5, over 3.03 km from Eglise de Pantin, with two new stations:

Bobigny Pantin-Raymond Queneau
Bobigny Prefecture-Pablo Picasso *

Note * Terminal stations

Work is going on at the extension of line 7 northwards to La Courneuve in early 1987, and around the same time will see the opening of St.Michel station on line B, linked to a re-opening of Cluny on line 10. In 1987 or 1988 the western Interconnexion at Nanterre Prefecture will link the SNCF Cergy and Poissy lines with line A. In the meantime, preparations are under way for enlarging Chatelet-les-Halles RER station to receive SNCF Nord trains from Orry la Ville, at about the same time. One year later should see the opening of the newly constructed tramline, 9.1 km long, between St.Denis Basilique and Bobigny, largely along the route of the current 354 bus.

At a February press conference the Director General of RATP stated that the capacity of the system had increased by 70% with a staff total equal to 1970 figures (38,850 against 38,636). If we had not managed to increase our productivity, he continued, we would find ourselves in the same position as the network in London and be overstaffed to the tune of 14,000 persons.

Since my notes in UN 271, pages 77/78, the only other operational change of any consequence was an increase of the number of RATP-SNCF trains interconnecting on line B. Introduced on 1.10.84, it means that during the peaks no trains terminate at Gare du Nord from the south, these additional four trains per hour run to/from Mitry Claye. This resulted in fewer turns for the Z stock, confined to the Monday to Friday peaks only, with eight 8-car trains in all. These trains carry passengers only in the direction of the peak flow (i.e. TO Paris in the morning and FROM Paris in the evening), with all other runs being empty. However, in the past winter, conditions were such that the MI79's could not cope. Interconnexion had to be partially abandoned and as many as 13 Z-trains were running, some throughout the day and late into the evening! By the end of February their total number had been reduced through scrapping to 14. Next September the total of interconnecting trains will be stepped up to 16 with four again terminating at Gare du Nord.

As indicated above, the success of line A is still on the increase. However, the toll appears to be heavy: especially to the MS61's, where more and more traction motors have been giving up the battle. After an initial transfer of 15 four-car units of MI79 from line B to A in late-1983/early-1984, nine more have now followed in order to keep sufficient MS61's for re-motoring. Since early this year the MI84's are being delivered, so that gradually the MI79's can be returned to line B where the end of the Z8s is now foreseen for May 1986. But we've heard so many definite final dates for these 'old faithfuls' that we had better wait and see! Especially also as the interval on line A is to be further reduced from this September, requiring six more trains in service, and as a system of automatic driving, cab signalling and automatic speed control will have to be built into the MS61's for a further reduction of train intervals.

Changes to Timetables

Since my last survey a year ago, timetable changes are as follows:

Date		M-F	Sat	Sun
2.4.84	Easter reductions, except lines 4,7b,9 & 13.	518		
16.4.84	Winter service restored.	556		
2.5.84	1st phase of summer cuts, except lines 4,7,7b,9 & 13.	521		
2.6.84	Reduction line 7 MF and all lines weekends, except 3b,7b & 2 Sat, 9 Sat, 4 Sun.	518	239	215
9.6.84	Reduction 9 Sat.		231	
1.7.84	Summer cuts, 2nd phase MF as well as 2 Sat & 4 Sun.	435	225	214
30.7.84	Holiday service, except 3b,7b.	358		
3.9.84	Restoration of July service, winter service 4 Sat.	518	232	
1.10.84	Winter service, except 12 weekend, where special service operates because of exhibition.	556	286	243
20.10.84	Winter service 12 weekend.		292	245
12.11.84	Reduced service 4 because of industrial dispute.	544		
26.11.84	Normal service resumed on 4, permanent reduction on 12.	553		
21.12.84	Christmas holiday cuts, as over Easter, but also line 9.	514		
3.1.85	Winter service resumed.	553		
15.2.85	Spring holiday reduction, except on 2,3b,4,7,7b,11,13.	518		
18.2.85	Spring holiday reduction on 2 & 11.	514		
23.2.85	Winter service resumed, opening of line 7 extension to Villejuif.	555	293	246

On the RER the changes were similar to last year's as far as line B is concerned, for line A the picture is:

26.3.84	Increase in peaks	36	21	21
1.7.84	Summer reductions, 1st phase	31	17	17
1.8.84	Holiday service	27		
3.9.84	Winter service resumed	36	21	21

The new line A service brought a 2½-minute service on the central section in the direction of the busiest passenger flow - westward in the morning, return at night.

On line 7 the new timetable now brings exactly equal running times to each of the two branches (46min 35sec southbound and 48min northbound in the peaks, 44'05" and 45'.00" in the evening low). As the traffic is equally balanced, both branches are now served on a 1 to 1 basis all through the day, every day. It remains to be seen if this will hold after the bus travel patterns have settled down following the cutting back of routes to the new Metro terminus. (This occurred late-March because of construction delays resulting from winter conditions.)

During 1984 all the remaining Sprague cars were taken from the books, though many are still around waiting for a (museum) destination or a buyer. At the end of February 1985, RATP lists showed the following totals:

	Motor	Trailer
Articulated †	60	40
MP55/59/73	612	315
MF67	904	579
MF77	560	373
Total Metro	2136	1307

	Motors	Trailers
Z	112	-
MS61	254	127
MI79 *	136	136
MI84	10	10
Total RER	512	273

Note: * Total excludes 102 motors and 102 trailers in SNCF ownership.

† In comparison with conventional stock, the Articulated class (MA52) comprises 40 units (120 car bodies) or 20 two-unit trains, equal to 20 5-car trains of standard stock (100 cars).

SMALL ADVERTISEMENT

COACH TOUR TO SANDTOFT TROLLEYBUS MUSEUM:

28 July. Also Crich Museum on 26 August and Heaton Park Tramway on 1 September.

Details: SAE to - Rovaway Tours, 34 Pelham Road, London, N22 6LN.

SA56/283/85

SOCIETY SECTION

New Address List

A new address list is now in use and you are asked to inform the Despatch Officer immediately if there is any error in the address used to send this journal to you. His address can be found at the back of this and every journal, usually at the bottom of the last page.

Underground News No.282

Sent out with the above issue were the following additional items:

- Membership leaflet for the Electric Railway Society.
- Notes of the 1985 Annual General Meeting.

Society Sales

New to the Society Sales stock is issue No.52 (Spring 1985) of LONDON BUS MAGAZINE.

Price: £1.70 from the Sales Stand at monthly meetings.

May Baden-Powell House Meeting

The May 1985 meeting was an illustrated talk by Mr.D.G.Jobling, Principal Project Manager, London Underground Ltd., on 'Early Construction Works for London Transport'.

The period covered was 1822-1926 and our speaker described four main areas of construction: The Thames Tunnel between Wapping and Rotherhithe; the Tower Subway; The Paddington to Farringdon section of the Metropolitan and subsequent District Railway construction; and finally, the King William Street/Bank to Stockwell section of the present Northern Line, and its 1926 extensions.

Mr.Jobling commenced with a brief outline of the method of shield-driven soft-ground tunnelling, including various views of shields over the years. The basic principles have remained the same, although more modern equipment is now used - mechanical cutters, for example, instead of men with picks and shovels. The blue clay of London is particularly suitable for tunnel construction.

Attention was then turned to the Thames Tunnel,

which was engineered by Marc Brunel, the father of Isambard Kingdom Brunel, who also assisted in the construction. It was started in 1823 and was intended to be a road tunnel linking Rotherhithe and Wapping. The tunnel was driven from one end using the shield method, and was very shallow with the roof being only a short distance below the river bed. This accounted for much of the difficulties encountered in the tunnel's construction. The tunnel was lined with bricks which were laid immediately after the shield had been driven forward. There were several occasions when the river burst into the workings, often causing loss of life. The resulting holes were generally plugged by ramming clay-filled bags into them until filled, and then pumping the water out - a considerable engineering feat for that time. The tunnel finally opened in 1843 but due to a lack of funds, the necessary road approaches were never built and it remained as a pedestrian way with the two shafts for access. In about 1869 it was leased to the railway and has been used by trains ever since, currently by the East London Line. Pedestrian access at Wapping station is still via the original working shaft.

Turning to the Tower Subway, this small tunnel was built by Barlow and his assistant, Greathead. Its diameter was 6ft 7 $\frac{1}{2}$ ins, and was used for a cable-hauled railway under the Thames adjacent to the Tower of London. It was the first deep tunnel to use cast-iron segments to line the tunnel, and used the shield method of construction, being completed in 1869. The railway was in use by 1870, with a stationary engine at one end. The passenger car held twelve people, in 1st and 2nd classes, but the only difference was the position one obtained in the queue.

Moving to the Metropolitan Line between Paddington and Farringdon, which was opened in 1863, several slides were shown of work during construction and shortly after completion. In one view, dual gauge track could be seen, allowing through running from the GWR and GNR. This section of line was constructed by the 'cut-and-cover' method rather than by shield tunnelling. The general principle was that a large trench was dug, normally along a main thoroughfare. The trench was supported initially by timber, then permanent brick arches (often seven or eight courses thick), or brick walls and cast-iron cross beams, were constructed. Several mishaps occurred during construction, notably when the Fleet River burst into the workings near Kings Cross, delaying work by two or three months. Several views were shown of the locomotives that worked on the Metropolitan, including the well-known 'Fowlers Ghost' and later, more successful condensing engines. It is notable that none of the locomotives had enclosed cabs, and working conditions could not have been pleasant. Drivers were given special dispensation to grow beards in an attempt to reduce the effects of fumes.

The construction of the District Railway was similar to that of the Metropolitan and several views were shown of work in progress, notably along the Embankment, around 1866. The size of the labour force was quite amazing - about 2,000 men, with 200 horses and 58 engines and locos of various sorts, and a special kiln was established at Earls Court to bake the 140-million bricks needed to build this section. In the Westminster area, special precautions were taken to prevent excessive noise from the trains, and 20ft of peat was packed behind side walls. This has had the effect of perfectly preserving the timber used in the cutting.

Finally, Mr. Jobling described the King William Street to Stockwell section of tube. This opened in 1890 with a 10ft 2ins diameter tunnel (10ft 6ins south from London Bridge), constructed by the shield method. Cast-iron segments were used, and indeed were used for all subsequent tube railway construction until the Vic-

toria Line, when concrete was first used. The line was planned to be cable-hauled, but opened with electric trains, mainly due to the cable company going out of business. There were problems at first with loss of power because there was only one generating station - Stockwell - and so stations were gas-lit at first so that power could be saved for operating the trains. Views were shown of the well-known 'padded cell' type of carriage, with only tiny slits for windows.

In 1926, the line was extended and tunnels on the old sections were enlarged to standard tube dimensions. This involved dismantling the existing tunnel segments, driving forward with a shield, excavating the necessary soil, and inserting a new, larger iron segment behind the shield. Some of the segments from the 10'6" diameter tunnels was used again by inserting small key-pieces around it to extend it in size. By the time this new construction was done, excavation was by air-driven clay spades rather than the hand method.

Mr. Jobling concluded his talk by a brief outline of how tunnels were aligned to very exacting limits, and generally, accuracy in the older tunnels was very good, although he had detected a few 'kinks' in some places where small errors had occurred. Nowadays, the use of lasers has made alignment easier. Mr. Jobling expressed his great admiration for the early engineers who constructed the first parts of the Underground system.

Among the points raised in an interesting question and answer session, was that many of the cast-iron cross-girders used in early construction had been replaced over the years due to increasing pressure of road traffic above. When asked if there was any deterioration in the iron segments used in early tube construction, e.g. the Central London Railway, Mr. Jobling replied that there was generally very little, and they would not need replacing for many, many years to come. In one or two places, high acidity in the surrounding soil had eaten into the ironwork and at one point near Old Street on the Northern Line, the lining had to be continually patched with new metalwork because of the problem. When asked if tunnels could be distorted by a disturbance of the surrounding soil, e.g. foundations for a large building, Mr. Jobling said that this could occur, and in some instances, the tunnel segments had been unbolted to allow movement and prevent cracking, and rebolted when work was completed. Modern tunnel segments were now smooth concrete and are not bolted together but held in place by the pressure of the surrounding earth. This method was quicker and cheaper than using iron, but if the surrounding soil was disturbed by major building works, there could be problems with tunnel distortion.

The audience showed their appreciation for a most interesting and informative evening.

JCB

The Timetable

Tuesday 2 July

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

Saturday 6 July

Morning visit to Acton Works. Fully Booked.

Friday 12 July

Talk, 'From ATO to OPO', by Mr. D.K. Ware. 19.00 for 19.15 in the Conference Room, Baden-Powell House.

Tuesday 30 July

Library Evening, 18.00. Other details as for 2 July.

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. Other details as for 2 July.

Friday 13 September

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

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. Other details as for 2 July.

Saturday 26 October

The first John Prigmore Memorial Lecture, in conjunction with the Electric Railway Society and the Light Railway Transport Association, and with the support of the Institution of Electrical Engineers. Talk, 'A Hundred Years of Development of Electric Traction' by Mr.J.G.Bruce, OBE,C.Eng. 14.30 in room 408 at the Imperial College of Science and Technology, Exhibition Road, London, S.W.7.

ERS/LRTA Joint Meetings

A warm invitation is extended to LURS members living in the Midlands to come along to the ERS/LRTA joint meetings in Birmingham. Meetings are held on the third Friday of each month from October to April, in the New Lecture Hall of the Museum of Science & Industry, Newhall Street. The speaker on 18 October will be Mr.R.Jones on the Docklands Light Railway.

Society Officers

The following list supersedes that previously published in Underground News No.277 (January 1985) and is correct to 1 July 1985. The next updated list will be published in January 1986. This list has been compiled to allow members to send their correspondence to the correct person - failure to do so will mean a delay in reply. Please note that the addresses are for correspondence only and NOT for callers without prior arrangement. Further, please do not use the telephone to contact Society Officers, unless you have been previously invited to do so.

The President of the Society for the year 1985-86 is Mr.P.D.Stephens.

The Committee of the Society comprises Messrs. B.R.J.Hardy (Chairman), F.W.Ivey (Vice-Chairman), L.A.Bartrip, A.R.Blake, D.G.Down, G.A.Finch, R.J.Greenaway, J.P.Herting, S.R.Johns, D.Lomas, B.R.Panting and J.F.Wright.

The Society Officers are:

Chairman: B.R.J.Hardy, 'Heidi', 13 Castleton Road, Eastcote, Ruislip, Middlesex, HA4 9QQ.

Vice-Chairman and Treasurer: F.W.Ivey, 37 Raglan Court, Empire Way, Wembley, Middlesex, HA9 ORE.

Meetings Chairman: Mr.D.F.Croome.

Secretary: G.A.Finch, 161 Valetta Road, London, W3 7TA.

Registrar: A.R.Blake, 54 Beech Avenue, Eastcote, Ruislip, Middlesex, HA4 8UQ.

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Exhibitions Sales Manager: Vacant.

Curator of Photographic Collection & Assistant Editor of Underground News: B.R.Panting, 409 Bowes Road, New Southgate, London, N11 1AB.

Trade Sales Manager, Editor of Underground & Curator of Thomson Collection: R.J.Greenaway, 26 Fishery Road, Boxmoor, Hemel Hempstead, Hertfordshire, HP1 1ND.

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Preservation Group Chairman: R.S.Logan, 105 Herlwyn Avenue, Ruislip, Middlesex, HA4 6HP.

Sound Librarian: S.B.Jimack, 70 Gospatrick Road, London, N17 7JA.

Curator of Tickets: J.M.Crowhurst, 35 Walton Street, St.Albans, Hertfordshire, AL1 4DQ.

Modelling Secretary: I.J.Robins, Top Flat, 47 Buckingham Place, Brighton, Sussex.

Information Officer: J.F.Wright, 15 Beardsley Way, Acton, London, W3 7YQ.

Roving Secretary: M.J.Sherman, 28 Lyttons Way, Hoddesdon, Hertfordshire, EN11 9NQ.

Overseas Visits Organiser: J.F.Thomason, 12 Berestede Road, London, W6 9NP.

United States Representative: G.H.Arnold, 60 Blake Road, Brookline, Massachusetts, 02146, United States of America.

Australian Representative: S.Hamer, 44 Tarakan Avenue, Broadview, South Australia, 5083, Australia.

ADVERTISEMENT

For Sale:

London Transport Magazine - a run of complete copies in excellent condition (a few rusted staples), April 1961 to March 1973 (end of publication). 143 issues (December 1970 not published), £25 o.n.o. Would split. Many other individual quality LT Magazine backnumbers from April 1947 onwards.

LT/LRT News - many backnumbers from April 1973 onwards. From 3p to 6p per copy.

Underground (monthly) - May 1965, Jan-Dec 1969, Jan, Jul, Aug, Nov, Dec 1970, Mar, Jul-Oct 1973, Jan-May, Nov, Dec 1974, all 45p per copy. Indexes for 1965, 1966, 1968, 1969, 1973, 1974 at 20p each.

Underground (occasional series from 1975) - Numbers 1,2,3 at 75p each, 5 at £1.25, 6,7,8 at 95p each.

Underground News - January 1975 to January 1982 (with a few gaps). Many in ring binders, plus indexes. Any reasonable offer considered.

LPTB/LT/BTC Annual Reports, various years.

All enquiries to Peter Bancroft, 12 Raven Square, Alton, Hampshire, GU34 2LL, or telephone: Alton 89264.

SA57/283/85

May, 1985

1983 Tube Stock:

From Metro-Cammell, Birmingham, delivered to Neasden -

3625-4625-3725 11th

Entered service, Jubilee Line -

3624-4624-3724 2nd

3625-4625-3725 30th

A60/62 Stock OPO Modifications:

Units	Neasden - Acton	Neasden - Ruislip
5094+5110		1. 5.85
5096+5108		2. 5.85
5100+5088		13. 5.85
5106		14. 5.85
5226 *	20. 5.85	

Note * Unit for half-life overhaul in addition to OPO mods.

Miscellaneous Movements:

3230-4230-4305-3330 Acton to Northfields for tests (experimental bogies) 2nd

10172-012259-12061-11172 Acton to Ruislip after conversion to staff accommodation 3rd

L27 Lillie Bridge to Acton (2nd buckeye mod) 10th

L44 Acton to Lillie Bridge ('A' end buckeye mod, overhaul & yellow livery) 10th

L40 Ruislip to Acton (collision) 22nd

Livery Alterations:

L44 from maroon to yellow

Units to Acton Works for Overhaul:

Northern	1184-2184-9185-1185	1st	(a)
Central	1422-2422-9423-1423	2nd	(b)
Jubilee	3450-4550-3550	13th	(d)
Metropolitan	5715-6715	14th	(d)
Northern	1168-2168-9169-1169	15th	(a)
Piccadilly	369-569-169	17th	(d)
Metropolitan	5716-6716	23rd	(d)
Jubilee	3258-4258-4358-3358	24th	(d)
Central	1448-2448-9449-1449	28th	(b)
Piccadilly	365-565-165	30th	(d)
Northern	1126-2126-1127	30th	(a)

Units from Acton Works after Overhaul:

Northern	1132-2132-9133-1133	1st	(a)
Central	1442-2442-9443-1443	2nd	(b)
Jubilee	3449-4549-3549	13th	(d)
Northern	1116-2116-9117-1117	15th	(a)
Piccadilly	307-507-107	17th	(d)
Metropolitan	5168-6168-6169-5169	20th	(b)
Metropolitan	5711-6711	23rd	(d)
Central	1432-2432-9433-1433	28th	(b)
Jubilee	3250-4250-4350-3350	29th	(d)
Piccadilly	371-571-171	30th	(d)
Northern	1130-2130-1131	30th	(a)

1938 Tube Stock Position - May 1985

As on page 78 of UN 282 - i.e. no change.

Withdrawal is currently planned for October/November 1985. All 1983 stock is now delivered, with unit 3603 remaining to enter service.

NF 72/85 - Further to NF 61/85, St.Pauls station was also closed throughout Saturday and Sunday 11/12 May 1985, enabling more essential work to be carried out. Chancery Lane station was opened on Sunday 12 May.

NF 73/85 - One of the new reverse direction maps in D stock trailer 17040, by 'E' and 'G' doors, which incorporate the East London Line, has no colour on the Circle and Piccadilly Line interchange symbols.

NF 74/85 - Most DMUs operating on the Marylebone-Aylesbury/High Wycombe line have been fitted with stickers identifying the service as 'The Chiltern Line'. It will be interesting to see if London Underground recognise this name in the next issue of the system diagram, between Harrow and Amersham !!

NF 75/85 - By the Spring Bank Holiday weekend, it had been observed that the speed restriction over new bridge D.29 at Hanger Lane Junction on the District and Piccadilly lines had been removed. A permanent 20 and 25 mph westbound to the Ealing and Rayners Lane branches respectively now applies. The small access bridge, to the east of the new bridge has been removed, and work is progressing well on clearing the working site. Much of the ground has been levelled and many FK site huts have been removed.

NF 76/85 - Eight double-cab units of D stock are allocated to the East London Line, all converted for OPO. These are: 7504,7508,7510,7516,7518,7528,7534,7538. Normally, six are based at New Cross, with the other two at Ealing for maintenance purposes. When the District main line is converted to OPO later this year, any double-cab D stock unit will be able to operate on the East London.

NF 77/85 - Those who like doing 'first days' will have been well rewarded if they 'did' the first day of the new Tesco's supermarket at Neasden on Tuesday 4 June 1985, for in the reception area are about eight large photographs depicting Metropolitan Railway subjects.

NF 78/85 - A fire in the escalator machine room at Manor House during the evening of 31 May 1985 required the station to be closed from 20.25 for about two hours. During this time, all Piccadilly Line trains ran non-stop.

NF 79/85 - A fire in a building next to the District Line tracks between Earls Court and Gloucester Road, which started at about 04.00 on Saturday morning 25 May 1985, caused a suspension of service from the start of traffic. Until about 07.00 District Line services reversed east to west at Parsons Green and West Kensington, west to east at South Kensington, while Circle Line services were suspended between Edgware Road and South Kensington. After 07.00 and throughout Sunday and Bank Holiday Monday, services worked: Ealing/Richmond-High Street and Wimbledon-Edgware Road, South Kensington-Upminster, with Circle Line trains operating as normal. Through services were resumed on Tuesday 28 May, with a 5 mph speed restriction past the affected building, which had to be secured with scaffolding.

Underground News is printed and published by the London Underground Railway Society. Correspondence for this journal should be addressed to the Editor Underground News, 116 Kingshill, Brandon Street, London, SE17 1UH. When writing to any Society Officer, please quote your membership number on all communications, including applications for visits. Members requiring a reply to their correspondence are asked to enclose a stamped addressed envelope.

The last full list of Society Officers' addresses can be found on page 71 of this issue of Underground News.

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