

UNDERGROUND NEWS

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THE TIMETABLE

Friday 8 June

Talk, 'The Terminal 4 Extension Loop' by Mr.D.J.Hornby, Civil Engineer (Development), London Transport. 19.00 for 1915 in the Conference Room, Baden-Powell House.

Sunday 1 July

LPTL's annual memorial walk over the abandoned Northern Line extensions. Details on page 51 of UN 269.

Saturday 7 July

Sarah Siddons Rail Tour - deferred from 28 April. There are still a few seats left, available from the Society, price £15 per person. Applications, with SAE and cheque/postal order made payable to 'The London Underground Railway Society', to: Mr.R.J.Greenaway, 26 Fishery Road, Boxmoor, Hemel Hempstead, Herts., HP1 1ND.

It is hoped that this tour will differ slightly from that of 19 May in that the outward route between Raynes Park and Guildford will be via Epsom, Leatherhead and Effingham Junction, and not direct via Woking. The midday break will be at Portsmouth & Southsea station (not Portsmouth Harbour). There will also be two photo-stops in each direction.

Friday 13 July

Talk, 'The Central Line Extensions of the 1935-40 New Works Programme' by Mr.A.A.Jackson. 19.00 for 19.15 in the Conference Room, Baden-Powell House.

Saturday 14 July

All-day Society study tour/walk over what is left of the former Metropolitan Line from Quanton Road to Verney Junction, including a visit to the site of Waddesdon station. A coach will be provided, leaving Ruislip (Met) station at 09.00, returning by 18.00. The fare will be collected on the day - it will vary between £1 and £2, depending on the numbers taking part. It is NOT intended to visit the Quanton Railway Centre. Participants should be athletic and not afraid of animals, as the walk involves climbing over about 20 gates or fences, jumping across a ditch and crossing fields which may be occupied by horses,

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The Timetable (Continued)

sheep or cows. There are no intermediate re-freshment facilities or shelters of any kind, so participants should bring packed lunches and waterproof clothing. Friends and relatives of members are welcome to participate, but this tour is unsuitable for younger children. To apply for places, please send letter and SAE to Mr.G.A.Finch, 3 Caverswall Street, London, W12 0HG, stating numbers in your party. Closing date for applications: 7 July 1984.

Friday 10 August

Talk, 'The History and Development of Acton Works' by Mr.J.G.Bruce, O.B.E. 19.00 for 19.15 in the Conference Room, Baden-Powell House.

Friday 14 September

Talk, 'London Transport Station Architecture' by Mr.O.Green, Curator, London Transport Museum. 19.00 for 19.15 in the Conference Room, Baden-Powell House.

APRIL BADEN-POWELL HOUSE MEETING

Speaker of the month was the Society's own Brian Hardy, recently appointed Chairman, whose subject was London Transport Service Locomotives and Miscellaneous Vehicles, from 1933 to the present. Brian compressed a tremendous amount of information into the time available for his talk, excellently illustrated with many slides. Your reviewer can do no more than pick out a few of the highlights in an attempt to give an idea of the wide-ranging content of Brian's address.

He began with the steam locomotives inherited by London Transport at its formation, including the five 'A' class 4-4-0 tanks built by Beyer Peacock for the Metropolitan Railway. Only one, L45, was destined to be renumbered by LT and lasted in service until 1948. It was, of course, restored to 1903 condition for preservation, and took part in the Underground Centenary of 1963. Brian took us through the types which hauled passenger trains from the limit of Metropolitan electrification outwards, and those that performed non-passenger duties on the Underground system generally. The age of the steam fleet in the mid-1950's, coupled with the cost of maintaining it, led LT to begin the acquisition of ex-Western Region 0-6-0 pannier tanks, until a total of eleven existed by 1963. However, only three remained available for service by 6 June 1971, when the end of steam on the Underground was 'celebrated'. Thus, GWR locomotives had both ushered in and seen out steam haulage on the Underground system. One will remember that the GWR provided locomotive haulage between Bishops Road and Farringdon in the early months of the first section of the Metropolitan in 1863. To replace the last three steam locomotives in 1971, three second-hand diesel shunters of 1967/8 vintage were purchased from Thomas Hill of Rotherham. These were provided with tenders, for operating track circuits, the bogies for which came from withdrawn Q stock.

Brian devoted a section of the talk to the Metropolitan electric locomotives, which became surplus to requirements with electrification to Amersham and Chesham in 1961. Four were retained for other duties, including No.12, the famous 'Sarah Siddons'. She visited Shildon in 1975 for the '150 Years of Railways' festivities, and did leaf clearing on the Metropolitan in the late-1970's. Recently, the locomotive has been used on rail tours and ventured onto SR metals in 1983 for the Eastleigh and Brighton Open Days.

The full range of other vehicles in the service fleet were also covered, too numerous to mention in detail here, but including battery and sleet locomotives, brake vans, flat, cable drum, rail, hopper, match and concrete mixer wagons; steam and diesel cranes and their jib carriers, gauging cars and track maintenance machines. The now out-of-use rail grinding cars were also seen,

and interiors of same, showing the water tanks fitted in the former passenger saloon.

The Tunnel Cleaning Train had a long gestation period between 1972 and 1977 at Acton Works. It is composed of two heavily modified 1938 tube stock motor cars separated by three purpose-built cars - two filter cars and a nozzle car. This giant vacuum cleaner visits all tube tunnel sections of the Underground system in turn.

The new 'Unimog' service vehicle was also seen. It is a road/rail vehicle having rubber tyres (and a registration number) as well as small metal wheels for railway work. It performs the present-day leaf clearing function on the country section of the Metropolitan Line between Rickmansworth and Amersham. Another Unimog is now used for shunting duties.

A glimpse of the future was included when Brian showed a slide of a mock-up in Ruislip depot of a design for six new battery locomotives, scheduled for delivery in 1985. They are to be built by Metro-Cammell and will have buck-eye couplers and retractable buffers.

The evening was rounded off with a question-and-answer session, which included clarification of the difference between ballast motor cars (used on engineers trains when current is required on) and pilot motor cars (for ferrying individual cars of passenger stock between depots and works). The Chairman of the meeting led the members and guests present in a warm round of applause for a highly entertaining and informative illustrated talk.

DNR

BAKER STREET RESTORATION COMPLETED

Part of Victorian history has returned to the Underground at Baker Street. On Tuesday 10 April 1984 London Transport marked the completion of the restoration of the 1863 platforms to their former Victorian style at a small ceremony on one of the world's first Underground platforms. The ceremony took place by the War Memorial at the eastern end of platform 5. A plaque fitted to the new wall adjacent to the Memorial was unveiled, but was removed later in the day. Two of the gates to 'Metroland' were closed and passengers went round this area to reach the platform. A group of London Transport Players dressed as Victorians alighted from an eastbound Hammersmith & City service train at about 10.30, to greet some eminent Victorians (such as Gladstone and Disraeli) who were visiting the station briefly by courtesy of LT's Baker Street neighbours, Madame Tussaud's. Cameras were there to record the event for Thames News and a brief mention was made on the BBC regional news programme.

The Chairman of London Transport, Dr.Keith Bright, welcomed everyone to the ceremony and described briefly the work being carried out by LT to improve much of the system. He congratulated the building contractors, Henry Boot, on doing a splendid job in restoring the platforms and then handed over to Mr.Michael Robbins, former Managing Director of the Underground and transport historian. Mr.Robbins outlined the origins of Baker Street, stating that the road itself had existed since the 1770's, the development of the junction with the Marylebone Road, and that how necessary that the Underground should have a station built here when it was constructed. He described the original station and how it was lit by gas lamps at night and during the day by natural daylight filtering through a series of shafts above the platform walls, which also allowed smoke and steam from the early trains to escape. Mr.Robbins then described the building of the 'main line' platforms and the gateway to Metroland, together with the building of the tubes, greatly expanding the existing station. He continued by saying how the

original platforms had bridges built over them, became black and grimy and were eventually hidden by advertising. The yellow London brickwork has been cleaned and restored and the ceramic tiles in the light shafts renewed. New sodium lights have been installed in the original light shafts to create the effect of the Victorian station, and the fluorescent lighting removed. New platform seats, resembling the originals, have been provided in some of the recesses with small advertising panels above, and there is a series of four panels explaining the history of the station in pictures and drawings. The platforms have been resurfaced. Mr. Robbins then concluded by saying how well the restored platforms compared with the originals, and how impressive they were. Finally, he revealed a plaque to commemorate completion of the work.

After this, photographs were taken of the platforms and of the LT Players with the waxworks dummies. At about 11.00 the guests were invited to refreshments, courtesy of the building contractors.

The building work has been carried out by Henry Boot Building Ltd., Southern Division, High Wycombe. The whole project, costing about £1.5 million, is part of the £70 million station improvement programme being funded by the GLC.

The Editor wishes to thank the London Transport Press Office and Society member Richard Clowser for the above article.

TERMINAL FOUR DEVELOPMENTS

On Thursday 5 April 1984, a number of invited guests toured the Terminal 4 extension of the Piccadilly Line and had 'lunch with a difference' - underground, in the main running tunnel at the Wessex Road site. Access to the tunnel workings for the guests was via a 'bucket' from surface level, lowered down by a crane. Among the guests who inspected the tunnels and the progress to date were engineers from the contractors Thyssen-Taywood and executives from London Transport. This included Thyssen-Taywood Chairman Mr. Dick England, LT Chairman Dr. Keith Bright and LT Managing Director (Rail) Dr. Tony Ridley. The special lunch was provided by Thyssen-Taywood, contractors for the Terminal 4 loop line. Smoked Salmon, cold meats, red and white wine were served by shivering waitresses!

Dr. Bright explained that tunnelling work on the £20 million Piccadilly Line extension to serve Heathrow Airport's new Terminal 4 was scheduled to be completed the next week, when tunnel miners will make the final breakthrough into the west end of the new Terminal 4 station, after driving a 12 ft 8 in diameter tunnel $1\frac{1}{4}$ miles from a working shaft at Wessex Road on the western perimeter of the airport. Other tunnel mining teams recently completed more than $\frac{3}{4}$ -mile of new tunnel from a working site near Hatton Cross station to the east end of Terminal 4 station, and from the Wessex Road shaft about $\frac{3}{4}$ -mile to meet the existing Piccadilly Line tunnels west of Heathrow Central station. A new junction has been constructed at Hatton Cross and a $\frac{1}{4}$ -mile section of tunnel just east of that station was built in a deep trench and the ground above afterwards restored. Dr. Bright continued by saying that construction of the extension (some 6 km) originally planned to open in 1987, but had been speeded up to open in 1985 at the same time as the new air terminal. The British Airports Authority have shared LT's desire to have the rail link ready when the terminal opens, and have helped enormously by providing extra working sites.

Contractors Thyssen-Taywood started work on the £10.6 million civil engineering contract for the $3\frac{1}{4}$ -mile single track loop in February 1983 on a

74-week construction programme. They will move out in the early summer of 1984 after providing all the tunnels with basic trackwork. Installation of other trackwork, signalling and other equipment will take about another year. The new track will be the first part of the Underground in tube tunnel to be equipped with flat-bottomed rail on pre-stressed concrete sleepers. For part of the length these sleepers will be mounted in experimental resilient 'boots' to reduce noise and vibration.

The new station is being built beneath the car park at Terminal 4 by the British Airports Authority. It is expected that the new air terminal, at the south-east side of the airport, will handle eight million passengers a year. When the new loop opens, all Piccadilly Line trains to Heathrow will travel clockwise around the loop, first serving the new Terminal 4 station, and then to Heathrow Central station. The trains will then return direct to London via Hatton Cross. LT expects more than two million extra passengers a year to use the line.

How the Tunnel was Built

The contract for the tunnel construction was awarded to Thyssen-Taywood, a joint venture between Thyssen Great Britain Ltd., and Taylor Woodrow Construction Ltd. Design and project management was undertaken by LT's own staff.

The bored tunnel was constructed in three sections, using three shields. Most of the route is lined with 3.81 metre internal diameter precast concrete rings expanded against the ground. At enlargements, junctions and in areas of shallow clay cover, bolted segmental cast iron lining was used. The single tunnel of the new loop divides at a step-plate junction to link with the two original overrun tunnels at Heathrow Central.

At Hatton Cross a subsurface box construction, using a diaphragm walling and precast prestressed roof beams, forms the junction with the existing tunnel structure. Approximately 250 metres of 3.85m internal diameter cast iron tunnel constructed in open cut descends from the junction to the bored tunnelling in London clay. Most of the route is situated in London clay at depths down to 17 metres below ground.

Working Sites

Thyssen-Taywood set up its headquarters for the contract at a site in Wessex Road at the west end of the airport where the first ventilation shaft and the first temporary access shaft were sunk. There were also three 'satellite' sites: (1) adjacent to Heathrow Central station, for construction of the step-plate junction; (2) Hatton Cross, for construction of the junction with the existing railway and the tunnel to Terminal 4; (3) Bedfont Road, for construction of bored tunnel and ventilation works. Work went ahead simultaneously from all four sites, but had to comply with the special requirements of an operational airport. The height of plant and stockpiled material was limited to avoid radar interference.

Hatton Cross

The junction was formed in the gravel layers at the west end of Hatton Cross station. A new south retaining wall was constructed using the diaphragm wall technique. The roof of the original box, consisting of prestressed concrete inverted T beams, was carefully split into panels to aid staged removal. As the retaining walls had to be propped by the roof beams for stability, the original beams were removed in 3 metre panels, the original south retaining wall locally reduced in height and new precast prestressed box beams installed. The remainder of the original south retaining wall was demolished on completion of the re-roofing operation. For safety reasons, this work (which was adjacent to and

directly above the operating railway) was carried out at night.

Just west of the junction the construction changes to cast iron tunnel lining, proposed by the contractor at the tender stage, instead of diaphragm walling and prestressed roof beams. The 403 rings of cast iron were built in an open cut excavation, with a sheet pile cut-off wall surrounding the area to keep it dry. The tunnel was waterproofed, the trench backfilled and the piles removed.

At the west end of the site a 6.5 metre internal diameter chamber provided access for a tunnelling shield. This chamber was also constructed in an open excavation, the sides of which were supported by Larssen 4A sheet piles. The excavation was backfilled and a temporary vertical access shaft and a sloping drift incorporated to service the tunnel drive. This chamber forms a pump room and sump in the permanent works. Tunnelling procedures were similar to those for Wessex Road (q.v. below) but the shield used was a refurbished Lawrence machine 2.1 metres long using a Dosco boom cutter. At Hatton Cross, 39,000 cubic metres of ground were excavated, most of which was re-used as backfill.

Ventilation Works

There are two new ventilation shafts on the loop, in addition to the existing shaft in the airport centre. One is adjacent to the animal quarantine building at Bedford Road and the other near Perry Oaks Sewage Farm at Wessex Road. The shafts were constructed by hand tunnelling methods using bolted cast iron segmental lining in various diameters. The shafts are linked to the running tunnel which has been enlarged locally to form an air circulation chamber.

Tunnelling

Three shields were used for the bored tunnelling. Two drives started from a temporary working shaft at Wessex Road: towards Heathrow Central westbound overrun tunnel (about 1,150m) and to Terminal 4 (c2,900m). The third drive was from Hatton Cross to Terminal 4 (c1,350m).

The two Wessex Road shields were manufactured by Grosvenor Steel Fabrications. Twelve hydraulic rams provided 600 tonnes of thrust to shove each shield forward, with two further rams generating around 15 tonnes thrust to push home the wedge segments of the expanded lining. A Dosco TM 1800 boom cutter was mounted within each shield, each having a laser aligning system, the cutting head being fitted with face attack picks. Power was provided electrically with boom and ram movements under hydraulic control. A segment erector at the rear of the shield provided mechanical assistance in building the tunnel lining.

Excavation was carried out by the boom cutter leaving an annulus (approximately 100mm) of ground inside the shield cutting edge. This was trimmed to the correct profile when the shield was shoved forward. Spoil was removed by a conveyor discharging into Mulhauser side-tipping skips. Each ring created about 10 cubic metres of spoil which was transported in skips, hauled by an 8-tonne 37 h.p. battery-driven locomotive on 600mm gauge jubilee track. Spoil was brought up from the shaft bottom on a conveyor housed in an 18° inclined drift tunnel.

Most of the tunnel was lined with expanded pre-cast concrete segmental rings. Segments were made by the contractor in a concrete pre-casting factory set up for this contract by Taylor Woodrow at Southall. The segments were brought from casting yard to tunnel face as complete rings.

Step-Plate Junction

An aircraft parking stand at the back of Terminal 3 was used as a construction site from which part of the step-plate junction and the connections to the existing overrun tunnels west

of Heathrow Central station were constructed. In one corner of this site a 3.85 metre diameter access shaft was sunk and connected to the line of the running tunnel between the junction and the eastbound overrun tunnel. From this point hand tunnelling proceeded in two directions: 270m east to the overrun tunnel and west into the site for the step-plate junction, where it formed a pilot tunnel for the subsequent enlargement to the 9.0m and 8.25m diameter sections. These sections were enlarged by hand methods. Meanwhile the shield from Wessex Road drove the concrete-lined tunnel to meet the cast iron pilot tunnel. The last 78 metres of this tunnel formed a pilot for the enlargement to the smaller sections of the step-plate junction. The shield was then driven from the junction to meet the westbound overrun tunnel at Heathrow Central. Nearly 4,000 cubic metres of clay were excavated from the step-plate junction, being lined with 160 cast iron rings of various diameters weighing about 900 tonnes.

Note: A diagram of the Terminal 4 loop line was published on page 81 of UN 256 (April 1983).

UNDERGROUND AT EASTER

Arrangements for Underground train services at Easter, 1984, were as follows:

Good Friday (20.4.84)

Sunday timetables on most lines, but with additional early-morning Piccadilly Line trains between Kings Cross and Heathrow. On the Metropolitan main line, because of an LMR service operating between Marylebone and Aylesbury, LT Amersham services operated every hour as on Saturdays, with a 20-minute service to Uxbridge and Watford. No early-morning District Line service operated between Aldgate East and Upminster. Station closures were as on a normal Sunday, plus Borough, Mansion House, North Ealing, South Ealing, West Finchley, West Ham and West Harrow.

Easter Monday (23.4.84)

Sunday services on all lines, the exceptions being on the Piccadilly, District and Metropolitan main line (q.v. above), but finishing as on weekdays. Station closures as on Sundays, plus Borough, North Ealing, South Ealing and West Finchley. Shadwell station was open until 22.00.

Other Notes

Holborn station was also closed on Easter Sunday and Easter Monday, to allow the removal of fire-damaged material, some of which contained a small amount of white asbestos. For this to be carried out, Chancery Lane station (normally closed on Sundays and Bank Holidays) was open on both days.

The special value Sunday Underground fares applied also to Good Friday and Easter Monday, with a maximum of 80p single and £1.40 cheap-day-return, except for journeys to and from Heathrow. A 20p single maximum child's fare applied on all four days of the holiday.

Unusually, the special reduced peak-hour timetables did not operate on the working days either side of the holiday period. However, a new TTN 31/84 for the Northern Line was issued, incorporating service 'A' (reduced peak) and service 'B' (Bank Holiday Mondays), the latter being used on 23.4.84. This was issued to take into account of the closure of Highgate depot.

NEW TUBE ROLLING STOCK

Jubilee Line 1983 Tube Stock

The 1983 tube stock for the Jubilee Line made its debut on Tuesday 1 May 1984, exactly five years to the day and date that the line was

first opened to the public. On this day, a six-car train (units 3607 and 3609) formed train 420 conveying invited guests from transport users' groups. To celebrate the Jubilee Line's fifth anniversary, coffee and birthday cake were served at Stanmore. On departure an emergency stop was demonstrated. Your reporter suggests that the train's suspension (at the now, new stage) is much better than that on the 1972 stock, but the internal noise level on the new trains is quite high.

The following day, 2 May, the same train operated in the same timings for the benefit of the press and broadcasting organisations. It was also made available to the public on departure from Stanmore at 11.38, to Charing Cross and back to Wembley Park. A small number of enthusiasts were present to make the first passenger run. The train was scheduled to carry passengers on Mondays to Fridays as additional train 420 from 8 May 1984, with the hope of it being used in the timetabled service from 29 May. The timings of train 420 are as follows:

| | | | |
|---------------|-------|-------|-------|
| Stanmore | 11.38 | | |
| Canons Park | 11.40 | 14.14 | 15.48 |
| Wembley Park | 11.50 | 14.24 | 15.58 |
| Neasden | 10.23 | 11.53 | 14.27 |
| Finchley Road | 10.32 | 12.02 | 14.36 |
| Baker Street | 10.40 | 12.10 | 14.45 |
| Charing Cross | 10.46 | 12.16 | 14.51 |
| Charing Cross | 10.56 | 12.26 | 15.01 |
| Baker Street | 11.03 | 12.33 | 15.08 |
| Finchley Road | 11.10 | 12.40 | 15.15 |
| Neasden | 11.19 | 12.49 | 15.25 |
| Wembley Park | 11.22 | 12.52 | 15.28 |
| Canons Park | 11.31 | 13.02 | 15.37 |
| Stanmore | 11.34 | | |

The fifteen trains, costing £36 million were described in UN 265 (January 1984). It is interesting to note that the units used for the above runs had been delivered in modified condition, with all others already delivered (units 3601-6/8) outstanding to have the all-round grab poles by the doors replaced with floor-to-ceiling poles.

1986 Prototype Tube Stock

Three new four-car trains, to be known as the 1986 Prototype Tube Stock, are to be built for the Underground, to be the forerunners of a new fleet to be delivered in the early 1990's for the Central Line. Delivery of the prototypes is expected by the summer of 1986, following which, evaluation and testing will take place, some of it in public service, before the specification for the main order is determined. The three trains will cost £11.7 million, which includes commissioning and testing. The project is being funded jointly by the Greater London Council and by a Government research and development grant.

The purpose of the prototype trains is to test fully new techniques and materials and to try out various arrangements for the passenger accommodation. The design objectives, all aimed at reducing costs, are improved use of energy, better reliability, reduced maintenance needs and better passenger amenities.

Metro-Cammell Ltd. of Birmingham will build two of the four-car prototypes and the third will be built by British Rail Engineering Ltd. at Derby. Electrical equipment for one of the Metro-Cammell trains will be supplied by GEC-TPL of Manchester, and for the second by Brown Boveri of Zurich. Brush Electrical Machines Ltd. of Loughborough, a member of the Hawker-Siddeley Group, will provide the equipment for the BREL-built train. All three prototypes will differ slightly, but the basic shape and dimensions are dictated by the strictly limited space in tube tunnels. However, each of the three trains will have a distinctive front end. All three trains will depart from the plain external 'silver'

finish by bringing back some colour. To give a feeling of spaciousness, all three trains will have windows in the car ends, and in one design the side windows will be extended up into the curve of the roof.

Each of the three prototypes will consist of two 2-car units, with one car having a driving cab and the other no cab. The lengths of the cars will be about 16m (52.49 ft) and 15.6m (51.18 ft) respectively, and will be semi-permanently coupled as a pair. The automatic coupling arrangements between units and the controls of all three trains are designed to be compatible so that any combination of two-car units can couple to form an eight car train for service trials. This will increase flexibility during service trials and will allow an eight-car train to be tried in public service while engineers are making special tests on the remaining four cars.

The car bodies and the floor structure will be made from wide aluminium extrusions, welded together instead of riveted, which will be both lighter and cheaper to manufacture than existing tube car bodies. This form of construction requires external sliding doors which do not need 'pockets' in the body structure. Passenger facilities will include door-opening buttons mounted on the doors and internal door-closing buttons for use at terminal stations. There will be special audible tones to indicate when doors may be opened or are about to close.

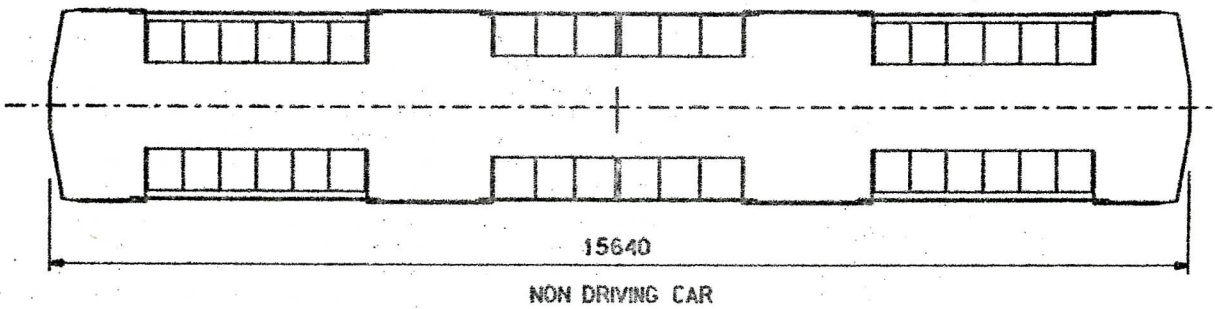
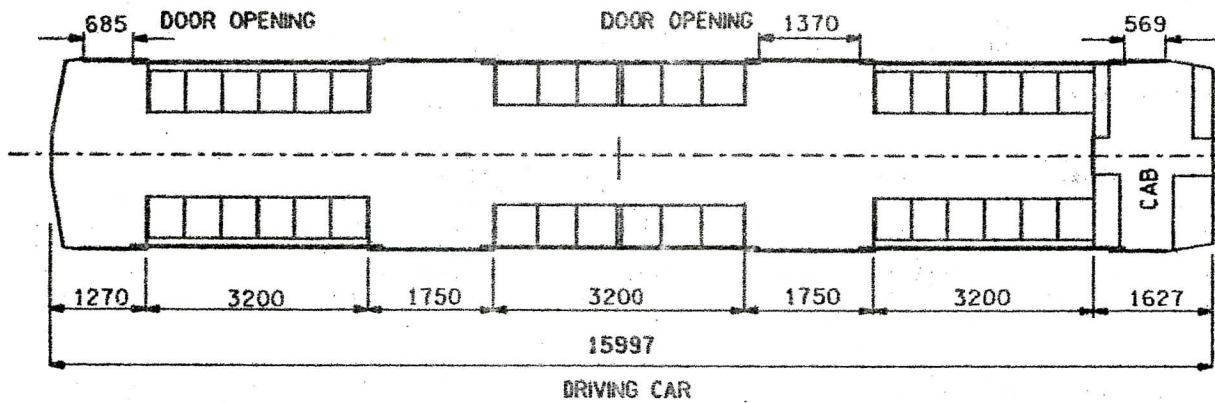
Three different internal layouts have been evolved by David Carter Associates and are designed to make passenger access and circulation easier. The double doorways will be 1370mm wide, and the single doorways 685mm wide, similar to those on most Underground rolling stock. The main aisle down the centre of the cars will be as wide as possible to provide more standing space. The number of seats per car will vary between 32 and 42, depending on interior layout. In one train, all seats will be arranged along the sides and the ceiling shape altered by reducing its height slightly over the seats, but allowing maximum headroom in standing areas (36 seats). The second design (32 seats) combines some single seats in the centre bay, to give more comfortable conditions for the longer distance passenger, but at the same time having more standing space for the short-distance passenger and also more handholds. The third concept will have 30 seats along the car sides, but will also have 'perch' seats beside each door (10 on driving motor cars and 12 on the non-driving motor cars).

Welded steel box construction will be used for the conventional bogies for two trains, with rubber chevrons for the primary suspension. Air bags with an anti-roll bar will provide the secondary suspension. The thyristor-controlled traction equipment will be capable of providing most of the braking requirements - either regenerative or rheostatic - but friction brakes on the wheel treads will also be provided. All axles will be motored and with thyristor ('chopper') control energy will be saved as well as the train giving smoother acceleration and braking. The Metro-Cammell trains will have lightweight fully sprung motors with flexible drives to axle-mounted gearboxes, to reduce vibration.

On the steered bogies, being developed by British Rail in conjunction with LT, the axle-hung motors will be cross-braced to each other with a transverse steering arm attached to each of the cross-bracing links. The steering arm will be attached to the car body by drag links that will transmit the traction, braking and steering forces. Two side frames, with lateral dampers, will transmit the vertical load to the axles. There will be little primary suspension, but resilient wheels - incorporating rubber sandwich springing within each wheel - will be used.

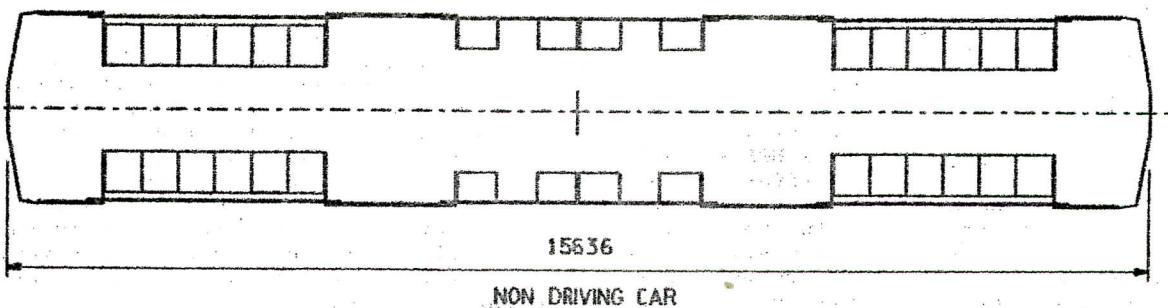
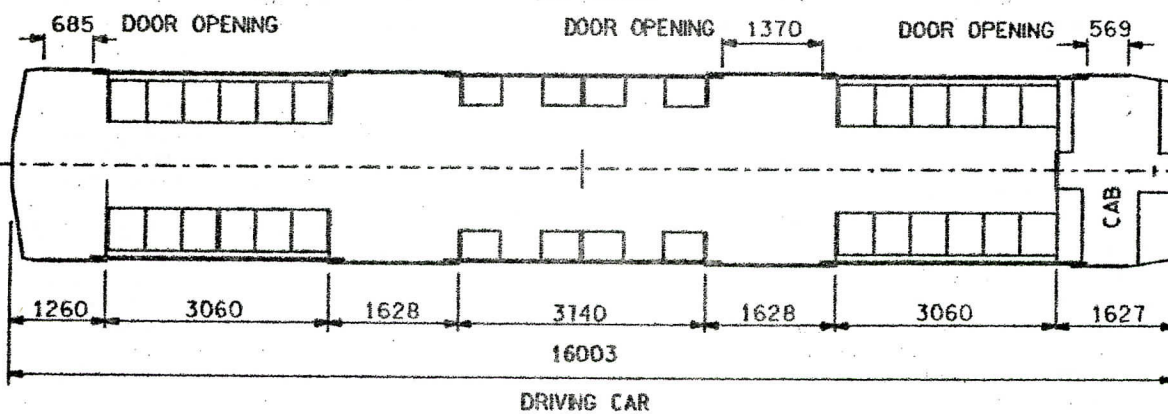
**PROTOTYPE TRAIN
1986 TUBE STOCK (A)**

36 SEATS



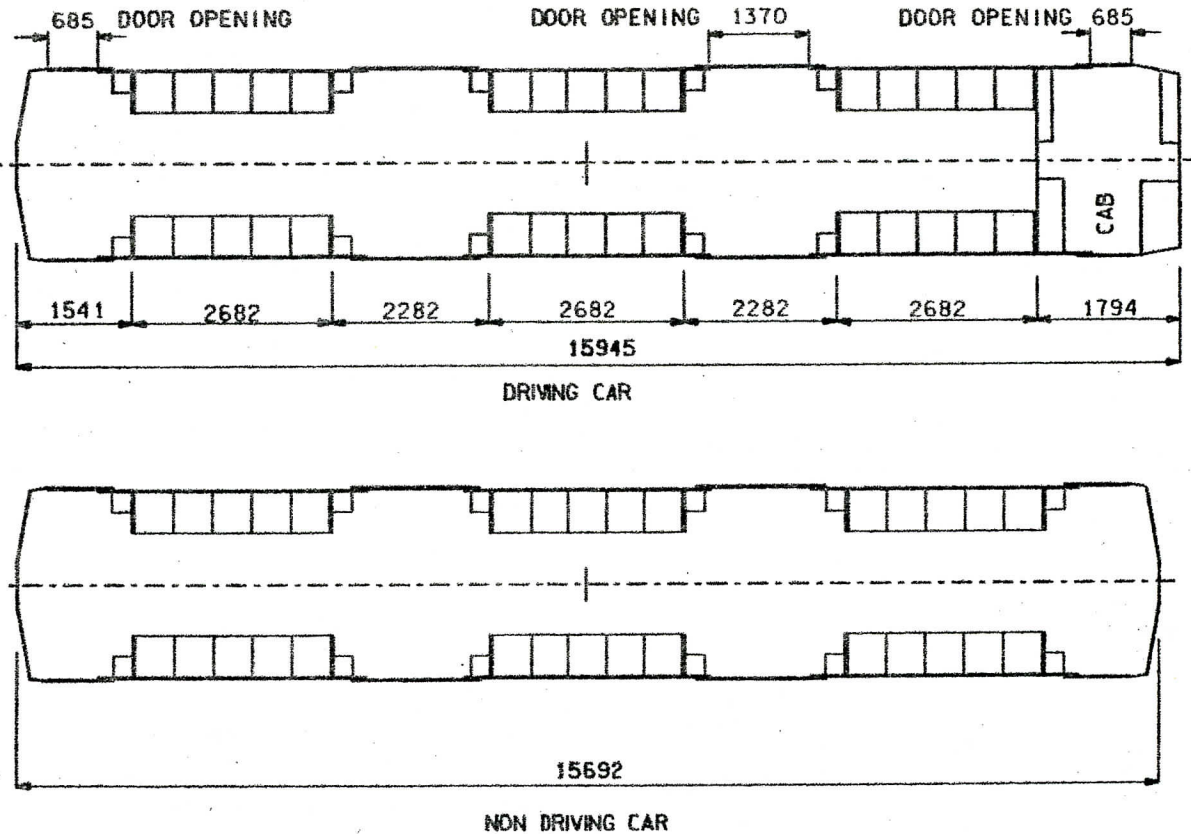
**PROTOTYPE TRAIN
1986 TUBE STOCK (B)**

32 SEATS



PROTOTYPE TRAIN
1986 TUBE STOCK (C)

30 SEATS
PLUS 10 OR 12 PERCH SEATS



Air bags and an anti-roll bar will provide the secondary suspension. Friction braking on these bogies will be by disc brakes on the motor shafts.

A computer-style databus system with multiplexing will be used for much of the electrical control of the trains. This will reduce the number of cables needed but safety controls, such as braking, will be separately wired as well.

Dot matrix train destination indicators on the train front will be linked to similar indicators inside each end of every car. The interior indicators will normally show the destination but, as the train approaches each station, trackside 'trigger' equipment will change the display to name the next station and an audible signal will sound.

FROM THE PAPERS

Daily Telegraph:

30.3.84 - A new book 'Family Life in the Seventeenth Century' (Routledge: £10.50) relates the story of the Verneys of Claydon House in that period.

6.4.84 - Mrs. Lynda Chalker, Transport Minister of State, has denied that the transfer of control of London Transport from the GLC to the Government will lead to the closure of 33 stations and the abandonment of 32 bus routes. If the LRT Bill keeps to its planned Parliamentary timetable, LT will be removed from GLC control in the middle of July 1984.

9.4.84 - In a review of pubs near railway stations, the buffet bar at Liverpool Street (Met) is described as 'hard to beat' as the commuter

can stand on the platform and be served through a hatch as he waits for his train. The former Hole in the Wall in the Kings Cross (Met) booking hall is now a coffee shop. At Baker Street, the bar has changed with plush green carpets and upholstery and a new name (Moriarty's) invoking Sherlock Holmes.

10.4.84 - Mr. Ridley, Transport Secretary, yesterday told the Commons that ratepayers' share of the subsidy for transport in the capital would have been about 10% less if London Regional Transport already existed.

11.4.84 - At the official opening yesterday of the Baker Street Circle Line platforms restored to 1863 condition (see page 62, this issue), two wax figures were borrowed from Madame Tussauds. Gladstone was alright, but Disraeli's thumb was broken off while he was being carried down an escalator!

12.4.84 - British Airways are set to become the major occupants of Heathrow Terminal 4 when it opens in 1985. The BAZ said that negotiations would begin shortly with BA and certain foreign short-haul airlines.

14.4.84 - Royal Assent given this week to the Bill for the Docklands Light Railway from the City to the Isle of Dogs and Stratford means that the purchase of land and the selection of contractors can start immediately. The GLC has asked London Transport to start Parliamentary proceedings for a 4½-mile extension to Beckton. The contractor will probably be selected in the summer, and opening of the first section is expected in 1987.

13.4.84 - Plans to modernise 54 British Rail stations in London at a cost of £3.5 million

shared equally between BR and the GLC, were announced yesterday.

14.4.84 - Laird Group, parent company of Metro-Cammell, last year increased pre-tax profits by more than 10% to £21 million.

16.4.84 - An overhead railway to link Cardiff's city centre with a new £100 million development area in the old dockland is being considered by South Glamorgan County Council.

17.4.84 - A MORI Poll published yesterday shows that 62% of Londoners oppose the Government's plans to abolish the GLC.

19.4.84 - A further 176 jobs are to go at British Steel Corporation's railway and ringed products plant in Rotherham, which manufactures locomotive axles and wheels. The cutback is blamed on fewer railway orders at home, low-cost far-eastern goods and heavily-subsidised Iron Curtain country products.

25.4.84 - The GLC is to seek Parliamentary approval for a 4½-mile extension of the Docklands Light Railway via the Royal Docks and Custom House to Beckton, adding £45 million to the £77 million cost of the first section. It is also offering £370,000 to restore off-peak Bakerloo Line services to Harrow & Wealdstone, and is making several other offers to the Southern Region.

A letter reminds readers that the original provincial Passenger Transport Authorities were set up on 1.4.1969, long before the reorganisation of local government in 1974.

The Times

19.3.84 - A correspondent describes the history and present state of the WWII Prime Minister's shelter at the disused Down Street station on the Piccadilly Line. (In a later issue a correspondent states that the suburban bunker 'Paddock' was in the Post Office Research Establishment at Dollis Hill).

Various

12.4.84 - Metro-Cammell Ltd., Birmingham, builder of underground rolling stock, failed to win a major contract to supply trains for Singapore's new urban rail network. The Japanese manufacturing giant, Kawasaki, won the £196 million contract to supply 396 cars by 1992. Metro-Cammell's workforce of 900 (1,800 two years ago) will have to be swiftly and substantially reduced, although a number of smaller projects are in hand. These include four prototype light DMU vehicles for BR, light railbuses for BR, prototype tube trains for LT (described on page 65 of this issue) and the possibilities of up to 40 carriages for the Docklands light rail project.

MAGAZINE SUMMARY

A Letter to the Editor in MODERN RAILWAYS (January 1984) suggests a possible link-up between the GN electric line at Moorgate (formerly LT's Northern City Line) and the Waterloo & City Line at the Bank terminus. Such a scheme would involve enlarging the Waterloo & City tunnels and building some 800 metres of new tunnel. Two photographs accompany the letter, one of the Waterloo & City Line at Bank, the other of the MIDLAND terminal platforms (not the GN platforms) at Moorgate!

In RAILWAY MAGAZINE (May 1984), a look back at 50 years ago recalls that on 8 March 1934, the first of the reconditioned trains for the Inner Circle went into service. The reconditioned trains were repainted red and cream, replacing the all-brown livery of the old Metropolitan Railway. The refurbished interiors and painted in blue and cream, with new upholstery and light fittings.

The May 1984 issue of RAILWAY WORLD contains an article on the Heathrow extension, including the

Terminal 4 loop, now under construction. Passengers using Heathrow Central station reached a peak of 8.8 million in 1979, but since then has fallen off slightly. Hatton Cross station, it is stated, has failed to win much traffic.

POINTS OF INTEREST

Nigel Hyde writes:

Northwood Hills Station

Referring to UN 267, Station Names, according to the telephone directory, the developers of Northwood Hills - Belton Estates - still have an office there. Their representative in the late 1940's and early 1950's was still Mr.H.E.Peachey, who was apparently referred to locally as 'Mr.Northwood Hills'.

Berlin U-Bahn

'Along the Edge of the Forest - An Iron Curtain Journey' by Anthony Bailey (Faber & Faber, 1983, £4.95) describes the East Berlin transport scene near to the 'Wall':

'West Berlin U-Bahn Line 6 runs through East Berlin with station entrances sealed up, platforms guarded and trains not stopping (except at Friedrichstrasse). At this station, barricades of sheet metal and girders festooned with barbed wire prevent East Berliners from climbing aboard West-bound trains.

SOCIETY SECTION

Postal Auction:

For Sale - A Metropolitan compartment stock line map, slightly faded at edges. One copy only, reference No.: 37-4309-3,000. With the line in green, it shows from Rickmansworth, Watford, Uxbridge and Stanmore to Aldgate.

Postal bids to Mr.D.M.Hibbert, 26 Beacon Way, Rickmansworth, Herts.

Only the successful bidder will be notified. Closing date - 30 June 1984.

Society Sales:

The new edition of METROPOLITAN ELECTRIC LOCOMOTIVES by Ken Benest should be available for purchase from either the Society Sales Stand at meetings or by post from the Postal Sales Manager, 118 Elm Drive, North Harrow, Middlesex, HA2 7BZ.

This A5 book has 108 pages, and includes 65 black-and white photographs as well as three colour photographs.

Price: £3.50 (post-free to members).

Instant Sales Managers

How many members have we that are on reasonable terms with their newsagent or bookseller? If so, why not ask him if he would like to profitably sell some LURS publications and copies of Underground, details of which may be found inside the front cover of Underground No.12.

Be your own Sales Manager, help reduce our stock and promote the Society. This will make way for further productions.

This scheme is working well in one area - contact your bookseller, and Bob Greenaway, NOW !

LURS/ERS Joint Visit to the Netherlands

On 14 March 1984 15 LURS and two ERS members met at Liverpool Street station to set out on what was to prove a most rewarding visit to various Metro-type installations in the Netherlands. The party boarded the 09.40 'Day Continental' for Harwich Parkeston Quay, where the Dutch vessel 'Koningin Juliana' was waiting for the next leg of the journey. During the voyage the opportunity was taken to study brochures, maps, etc..

relevant to the visit, which had been brought by the organiser. After Customs formalities at Hoek van Holland, the party joined the Amsterdam Centraal train, but changed at Leiden to the train for Amsterdam RAI, which was a short walk from the well appointed hotel that was used as a base throughout the visit. The line to Amsterdam RAI (so named after the nearby RAI exhibition centre) is of recent construction serving Schiphol airport by means of an underground station, and terminating at RAI station where cross-platform interchange with tram route 4 is provided. A new NS line to give direct service between Schiphol and Amsterdam Centraal is under construction.

The next day (Thursday) was largely devoted to the Amsterdam Metro system. The party travelled to Amsterdam Centraal Station by tram, and first collected some maps and other leaflets from the information office. Two additional members who had travelled overnight joined the party here. The rest of the morning was spent in touring the system which consists of a single line that starts underground at Centraal Station and comes to the surface five stations further on at Amstel Station, where cross-platform interchange with NS is provided. The line splits at Duivendrecht into two branches to Gein and Gaasperplas, serving a vast area of new housing to the south-east of Amsterdam. The rolling stock consists of unpainted stainless steel cars, coupled in two-car sets and operating at 750V d.c. third rail underside contact. Although trains are from a single order, it was noticed that some sets had end windows between the cars and others did not. This is because the fitting of end windows is still in progress, as a deterrent to vandalism, like in the Paris MF77 stock. Stations are modern and spacious but devoid of all but minimal non-functional decor. This was said to be because surfaces were intended to be graffiti deterrent, but had not been designed with spray cans in mind!

After returning to Centraal Station for lunch (the station self service restaurants in Holland are to be recommended), the party assembled outside the station once again and were met by Mr. du Bois of the Gemeentevervoerbedrijf (municipal transport undertaking, to you!) for the start of the formal visit. Mr. du Bois distributed wallets of information about the Metro and other Amsterdam public transport and then led the group to an out-of-service train, where the driver, Mr. Dissel, was introduced. The party was then taken by train to the depot at Diemen-Zuid. During the journey the cab bulkhead door was removed (from its lift-off hinges) and members took it in turns to ride in the cab. On leaving the train, Mr. Zeilmaker (Depot Manager) and Mr. Ripke (Depot Engineer) were introduced and the tour of the clean and functional depot began. Inside, power is taken from an overhead conductor by a small pantograph built into the cars. The conductors are sectionalised along each depot road and each section has a clear power-on/off indication in the form of red and green fluorescent tubes. One depot road is equipped with an in-situ wheel lathe.

Following the depot visit the special train took the group to the control centre at Spaklerweg where tea and cake were provided. The control centre has the usual train and power distribution control desks and mimic diagrams. There is also a panel for controlling the local area in the event of a failure of the main system. A more unusual feature is the viewing gallery above the control room, from which the train mimic diagram is visible. From the control centre, the special returned to Centraal Station to enter public service at the build up to the evening peak later on. There was no other organised activity for the afternoon and many members took the opportunity to explore the extensive Amsterdam tram system. The more gastronomically

adventurous participated in an Indonesian meal in the evening.

Friday morning saw the party catch an NS train from Amsterdam RAI to Rotterdam where, on arrival, maps and brochures were obtained from the information office outside Rotterdam Centraal before an informal morning tour over the Metro lines. Rotterdam has two lines: the 'blue' line was experienced first and is a true Metro throughout. It currently runs between Centraal Station and Zalmplaat to the south-west, having an interchange with the 'red' line at Beurs/Churchillplein. This is one station with a different name for each line - similar to London's Bank/Monument. The trains of the blue line are formed in two-car articulated sets finished in a livery of dark blue with a cream band forming an 'M' motif on the front. Electrification is at 750V d.c. third rail underside contact. The underground stations, of which there are only four, are very spartan, particularly compared to those of the red line.

Under the present economic circumstances, the Dutch Government has stopped financing further Metro construction, which has generated the concept of the 'sneltram' (fast tram). This is, to all intents and purposes, a Metro that is subject to no track circuit signalling and hence a restricted maximum speed. This Metro ban seems to have caught the red line in mid-construction, resulting in this having a dual personality - of Metro operating on third rail underside contact underground and on the surface as far as Capelsebrug, and beyond, a change to sneltram with overhead conductor and pantograph, running on reserved track but having many level crossings. Electrification for both third rail and overhead systems is 750V d.c. As if to enforce the legal loophole, the Metro section stops are referred to as a 'station' whereas the sneltram stops are called 'halte'. The red line trains are two-car articulated sets finished in a striking livery of dark blue with red doors. At the time of the visit the red line runs between Coolhaven (Metro) and Binnenhof (sneltram) but a sneltram branch to De Tochten was scheduled for opening on 19 April. The track and overhead at the junction were seen to be complete. Extension beyond Coolhaven to Marconiplein is due for 1986 and the blue line from Zalmplaat to Spykenisse for 1985, though both of these presumably constitute Metro construction. The rest of the day was free. Some members went to Arnhem or worked their way back to Amsterdam by way of the tram systems in Den Haag. Some preferred to make more detailed photographic studies of the Rotterdam and Amsterdam Metro systems, while others visited the steam preservation centre where preparations for Saturday's steam tour were in hand.

Saturday found a few members taking part in the SSN steam railtour from Rotterdam, but most members chose to make a shatteringly early start in order to visit the fascinating Wuppertal Schwebebahn in Germany. To get to Centraal Station, tram route 4 was used yet again - by now this route was becoming familiar with its narrow street section served by single track with passing loops on the bridges over the canals. Travelling from Amsterdam Centraal Station on the 'Lorelei' international express, and changing to a local train at Dusseldorf, the party arrived in time to collect maps, souvenirs and brochures from the tourist office before it closed for the afternoon. The Schwebebahn (literally, suspended (hover) railway) was constructed at the turn of the century. At such a period (before even London's Circle Line was electrified), it was a bold and unique step for a solution to rapid transit in an urban environment with limited ground space. It is in a sense the mirror image of an underground railway, providing an exact analogy of function but suspended from a steel framework above the River Wupper for most of the

way and above the street at the western end. The system has been much modernised over the years and now has aluminium articulated three-section sets dating from 1972-74, finished in blue and orange livery. The two end cars are each suspended from two overhead bogies having double flanged wheels running on a single rail. The short central section has no direct suspension. The sets are single-ended, the unobstructed rear window providing an excellent photographic vantage point. One original train has been retained for specials, usually on a Saturday, but was not operating during the visit. The line has turning loops at each end of a very tight radius, producing characteristic squeals from the wheel-flanges, and also sports an intermediate short working terminus at Zoo-Stadion station in the form of an overhead 'turntable'. Unfortunately, this was not seen in action. Mention must be made of two recent stations: Alter Markt, which forms one end of a long suspension span over a road junction, and Ohligsmühle, an architecturally outstanding angular structure in green tinted glass. One cannot help but suspect that the railway has survived the years as much for its novelty value as for its transport value. Certainly the first experience of so radically different a form of railway is a little mind-blowing, and a visit to it should be regarded as a gricer's pilgrimage!

Members returned to Amsterdam in two groups - some preferring to make the most of every bit of daylight in Wuppertal photographing the Schwebebahn, trolleybuses and trams. The later group, on finding some time to spare at Dusseldorf whilst waiting for the return 'Lorelei', went outside the station and were rewarded by seeing a 'Speisertram'. This is a normal articulated tram, but has a buffet facility on board!

On Sunday 18 March, some members of the party who did not wish to travel back overnight departed for home, whilst the remainder travelled to Amsterdam Centraal Station to take a train to Utrecht, where another sneltram had recently been opened. The entire system is surface reserved track with road crossings, using two-car articulated sets with overhead pantograph current collection. Superficially, the trains are reminiscent of Tyne & Wear Metro in both appearance and yellow livery. The line starts near Utrecht Centraal Station and essentially serves new housing to the south of Utrecht with two branches to Nieuwegein Zuid and a temporary terminus at Doorslag. The line has been completed for some way beyond the latter, but it is not yet open to passengers. While travelling on the system, the friendly driver, on realising his train was carrying a group of enthusiasts, contacted control on his cab radio and arranged an impromptu depot visit. The Utrecht sneltram is operated by Westnederland services, who also operate the buses. The depot accommodates both trams and buses and drivers work alternately on buses and trams. The sneltram part of the depot is small, but clean and well equipped. Unusually the guide's English was limited, but his German was much better, so one of the party, Geoff Nolan, was pressed into service as an interpreter. The afternoon was free and some members went to Arnhem for the trolleybuses, while others visited the Netherlands Railway Museum in Utrecht. This Museum was well worth a visit, with its model railway, prints, paintings and photographs, models of opening bridges and canals (challenging one to deduce how they all worked!) and a splendid collection of preserved full-size rolling stock, including electric and steam - and horse-drawn trams, locomotives, DMU's and carriages. The Museum occupies a disused station, but the tracks between the halves of the full-size exhibition sheds are still open for freight traffic, part of the Utrecht avoiding line.

The remaining members of the party assembled at the hotel in Amsterdam for a quick meal and to

collect luggage before departing from Amsterdam RAI station for Hoek van Holland with one change at Schiedam. The vessel was once again the Koningin Juliana but this time participants had berths for the night crossing which was uneventful, if somewhat noisy. After docking at Harwich at 06.45 on Monday morning and passing through Customs, the party joined the scrum for the 'Hook Continental'. After a routine journey through Essex, arrival at Liverpool Street was shortly before 09.30, where participants went their separate ways, at least one going straight to work - having started his journey at Arnhem at 16.30 the previous day!

The whole visit was most successful and went to schedule without a hitch, for which thanks are due to the Society's Overseas Visits Organiser, John Thomason, for his careful planning and excellently produced programme.

ARB

To conclude, the organiser would like to thank all those members who took part, and to the following individuals: Mr. du Bois of GVB Amsterdam and his colleagues Messrs. Dammuller, Zeilmaker, Ripke and Dissel.

Dick Franklin of the LCGB, W.J. Wyse of the LRTA and Michael Mueller for information about Wuppertal. He also wishes to record that he received assistance from Netherlands Railways, The Netherlands Tourist Office, Sealink UK Ltd., and Louise Saunders who organised hotel accommodation in Amsterdam.

Members may wish to know that future plans for overseas visits include a tour of all the remaining installations in Belgium, the Lille, Lyon and Marseilles systems in France and the Metros in Spain. Proposals will be published in Underground News in due course. Any member who wishes to make any observations or suggestions on continental visits is asked to write to the Overseas Visits Organiser: John Thomason, 51 Head Street, Pershore, Worcs., WR10 1DA, enclosing an SAE if a reply is required.

JT

AGM Morning Meeting

For the third year running, John Herting presented a video film show in the morning preceding the Annual General Meeting. Lasting about 90 minutes, it recorded many of the events which had taken place in 1983 (some of them unique), and some which have taken place in the first few months of 1984.

The film commenced with shots of the Society's Q stock car, mainly showing the delicate operation of re-uniting the body with the bogies, which had been thoroughly cleaned and repainted. We then moved on to see everyone's favourite locomotive, 'Sarah Siddons', leaving Neasden depot after the Open Day events and then some interior shots of the run between Ealing Common and Acton Town. The film then moved on to see 'Sarah' being prepared for the rail tour to Rugby - the tour itself was covered by views at Rickmansworth and Croxley. The farewell R stock tour was then featured and it was seen leaving Whitechapel and later approaching High Street Kensington. One of the great advantages of video shows was soon brought home to members with the tremendous send-off the R stock had from Ealing Broadway - running over a number of detonators! The film then returned to Sarah Siddons and the transfer by battery locomotive to Wimbledon Park depot on the Southern, prior to the trip to Eastleigh. The afternoon test run was seen at Norbiton and Raynes Park.

Returning to the Society's Q stock car, we then saw it being prepared for movement to the Acton Works Gala weekend - by now the exterior had been fully repainted in underground red on one side and two ends. At the Gala, we saw a 1962 stock

lifted from its bogies, carried across the workshop, returned and re-united with its bogies. The two Jubilee tours were represented by views of the second tour at Rickmansworth, Ruislip depot and Ealing Broadway, where the special was seen using the Central-District connection. With the delivery of the 1983 tube stock, views were seen of gauging runs at West Hampstead, Queens Park and Neasden.

The delivery of the first six-car train of this new stock was seen at Aylesbury with the locomotive running round the train, and then on its way to Neasden at Stoke Mandeville and north Rickmansworth.

The film continued with 1984 events, starting with the Isle of Wight celebrations on 28 January 1984, showing car S43 (ex-7275) on its 60th birthday. The Society's visit to the Post Office Railway on 14 February then followed, with the new 'Greenbat' stock in service. A few of the old 1930-36 cars were seen in the depot at Mount Pleasant. Back to LT, a 1983 stock train on gapping tests was seen, which ventured north to Stonebridge Park, as well as shunting between the north and south sheds at Queens Park. This sequence also included interesting shots from the cab between Harlesden and Queens Park.

The film concluded with two very recent events: the BR track recording train that visited the Uxbridge and Watford branches of the Metropolitan Line on Thursday 22 March, and the last trains out of Highgate depot on Sunday 25 March.

As last year, the Science Museum's TV monitors were not up to standard, but the subject material more than made up for this.

BRP

ROLLING STOCK ALTERATIONS

April, 1984

1983 Tube Stock:

From Metro-Cammell, Birmingham, delivered to Neasden

3609-4609-3709 10th
3607-4607-3707 20th

D Stock Ventilation Modifications:

| Units | Ealing - Ruislip | Ruislip - M.C.W. | Ealing - Acton |
|-----------|------------------|------------------|----------------|
| 7010+7079 | 2. 4. 84 | 3. 4. 84 | |
| 7508 | | | 3. 4. 84 |
| 7020+7007 | 9. 4. 84 | 10. 4. 84 | |
| 7002+7009 | 16. 4. 84 | 17. 4. 84 | |
| 7506 | | | 25. 4. 84 |

| Units | M.C.W. - Ruislip | Ruislip - Ealing | Acton - Ealing |
|-----------|------------------|------------------|----------------|
| 7100+7121 | | 2. 4. 84 | |
| 7512 | | | 3. 4. 84 |
| 7040+7085 | 4. 4. 84 | 6. 4. 84 | |
| 7058+7103 | 11. 4. 84 | 13. 4. 84 | |
| 7094+7037 | 18. 4. 84 | 19. 4. 84 | |
| 7522 | | | 25. 4. 84 |

Miscellaneous Movements:

5519-6519 Hammersmith to Acton (collision damage) 12th
L23 Lillie Bridge to Acton (mods) 24th
L20 Acton to Ealing Common (overhaul, collision, mods and buck-eye) 24th*

*See list at end for battery locomotives fitted with buck-eye couplers.

Service Locomotives:

Scrapped by Booths of Rotherham

ESL102, ESL108 - at Hainault 12th
ESL104, ESL106 - at Golders Green 13th
ESL101 - at London Road 25th
ESL114 - at Cockfosters 26th

Livery Alterations:

From maroon to yellow - L20

Units to Acton Works for Overhaul:

| | | | |
|--------------|---------------------|------|-----|
| Central | 1410-2410-9411-1411 | 2nd | (b) |
| Victoria | 3003-4003-4103-3103 | 4th | (c) |
| Metropolitan | 5572-6572 | 5th | (d) |
| Metropolitan | 5182-6182-6183-5183 | 11th | (b) |
| Piccadilly | 359-559-159 | 11th | (d) |
| Northern | 1046-2046-1047 | 12th | (a) |
| Central | 1416-2416-9417-1417 | 16th | (b) |
| Jubilee | 3454-4554-3554 | 17th | (d) |
| Northern | 1072-2072-9073-1073 | 18th | (a) |
| Metropolitan | 5575-6575 | 24th | (d) |
| Metropolitan | 5118-6118-6119-5119 | 27th | (b) |

Units from Acton Works after Overhaul:

| | | | |
|--------------|---------------------|------|-----|
| Central | 1420-2420-9421-1421 | 2nd | (b) |
| Victoria | 3007-4007-4107-3107 | 4th | (c) |
| Metropolitan | 5558-6558 | 5th | (d) |
| Metropolitan | 5174-6174-6175-5175 | 11th | (b) |
| Piccadilly | 361-561-161 | 11th | (d) |
| Northern | 1074-2074-1075 | 12th | (a) |
| Central | 1708-2708-9709-1709 | 16th | (b) |
| Jubilee | 3443-4543-3543 | 17th | (d) |
| Northern | 1052-2052-9053-1053 | 18th | (a) |
| Metropolitan | 5567-6567 | 24th | (d) |
| Metropolitan | 5164-6164-6165-5165 | 27th | (b) |

Summary of Battery Locomotives fitted with Buck-eye Couplers:

| Loco No. | End | Date ex-Acton | Loco No. | End | Date ex-Acton |
|----------|-----|---------------|----------|-----|---------------|
| L18 | 'A' | 19. 3. 81 | L56 | 'D' | 5. 10. 83 |
| L38 | 'D' | 6. 4. 81 | L28 | 'A' | 14. 11. 83 |
| L21 | 'A' | 12. 1. 83 | L51 | 'D' | 15. 12. 83 |
| L61 | 'A' | 9. 3. 83 | L24 | 'D' | 26. 1. 84 |
| L39 | 'D' | 7. 6. 83 | L31 | 'D' | 16. 2. 84 |
| L27 | 'A' | 20. 7. 83 | L22 | 'A' | 29. 3. 84 |
| L48 | 'A' | 18. 8. 83 | L20 | 'D' | 24. 4. 84 |

1983 Tube Stock:

Units 3607 and 3609 have been delivered in modified condition, i.e. with floor-to-ceiling grab rails by the doors. Units 3601-6 and 3608, at present used for testing and crew training, will be returned to Metro-Cammell for modification in the future, to have the all-round grab rails removed.

NEWSFLASHES

NF 77/84 - A new one-day Travelcard was introduced by LT from Sunday 22 April 1984, following the success of the weekly, monthly, quarterly and annual versions of the ticket. The new Travelcard gives unlimited travel on most of London's buses and the Underground after 10.00 on Mondays to Fridays and all-day at weekends and bank holidays. The ticket costs £2 for adults and £1 for children under 16, although prices are higher outside the Greater London area. The new one-day ticket can be purchased on the day from any Underground station, and no photograph is needed.

Comment: The new off-peak all zone day Travelcard has done nothing to simplify the ticket system, which it was promised would happen with the introduction of Travelcards generally. It complicates the system by having the same availability as any other all-zones Travelcard, with the exception that it is not valid at Heathrow. Why confuse passengers and staff with this exception? At one station, over several days, each passenger was asked if they would be travelling to Heathrow. In every case the answer was NO, certainly not, and had no intention of doing so. Is this exception in the validity really necessary?

NF 78/84 - From 1 May 1984 the GLC travel passes for senior citizens and disabled persons were made available for travel on the underground and buses from 09.00 instead of 09.30, for an experimental two-month period.

NF 79/84 - It is reported that five of the deep tube shelters (beneath existing stations at Goudge Street, Stockwell, Clapham North, Clapham Common and Clapham South) are to be let by tender on 18 July 1984 from the Property Services Agency.

NF 80/84 - During the Ideal Home Exhibition at Earls Court (7 March to 1 April 1984, including Sundays) West Brompton station, normally closed on Saturdays and Sundays, was opened for this special event.

NF 81/84 - Early-morning services were badly disrupted on Sunday 22 April because of a signal and point failure at Baker Street (Met). The first southbound Jubilee Line train (07.24 ex-Stammore) was held at Willesden Green until 07.56 behind another train, and did not leave Kilburn until 08.04. It was overtaken by, and then overtook Metropolitan train 21, which caught up again at Finchley Road, by when running seemed to be normal. However, nothing seemed to be moving northbound (at this time the 'local' service is provided by Metropolitan Line trains), with the exception of a Circle Line train 201 which went to Uxbridge, seen leaving Willesden Green at 07.48, apparently empty!

Another instance of a Circle Line C-stock train venturing onto the Metropolitan 'main line' occurred on Friday 27 April, at the end of the evening peak. The Circle Line service had been disrupted by a person under a train at Embankment, and the Metropolitan main line service was running late because of two separate train defects. Thus, Circle Line train 204, formed of 6-cars of C69/77 stock formed the last through train from Aldgate to Amersham, departing Aldgate at 18.31.

NF 82/84 - Withdrawn DM car S19 on the Isle of Wight was taken to Sandown on 8 March 1984, for use as a stores van, replacing two PMV's which, it is reported, are to be preserved by the Wight Locomotive Society. The other withdrawn tube car (S30), which was also destined for Sandown, is now to be scrapped instead.

NF 83/84 - Further to NF 70/84, the full services on the Midland Suburban electric lines (Bedford-Moorgate/St.Pancras) were introduced on 23.1.84, although a number of class 313 EMU's still help out on the St.Pancras services.

NF 84/84 - Croxley tip siding is now fenced off and the land seeded. About a two-coach length of track has been left connected, with buffer stops.

NF 85/84 - The new booking hall at Hatch End was brought into use from Monday 6.2.84, having been damaged by fire in January 1982, costing about £40,000. On Sunday 15.4.84 the rebuilt booking hall at Headstone Lane, damaged by fire in May 1982, was reopened at a cost of £65,000 for refurbishing. The temporary wooden steps to the 'dustbin' entrance, used since 22 May 1982, have been removed.

Further to NF 63/84, despite careful observation the fourth rail is in situ on both lines north of Harrow and Wealdstone to Watford Junction.

NF 86/84 - From Monday 24 April 1984, the two escalators between the District and Piccadilly line platforms at Earls Court were taken out of service for modernisation - estimated to be for about two years. Special posters have been advising passengers making an interchange between the two lines to do so at either Hammersmith or South Kensington, and can also be found inside trains of 1973 and D stock. Recorded announcements, operating with a train standing in the platform, have been noted in use at Hammersmith (eastbound Piccadilly) and South Kensington (westbound Piccadilly), as well as at Earls Court (District Line).

NF 87/84 - The final stage of Newcastle's Tyne & Wear Metro system opened to the public on Saturday 24 March 1984, with the extension from Heworth to South Shields. The official opening ceremony, which was featured on TV news programmes, took place the previous day. From about 07.00 to 18.00 a total of 34 two-unit trains are required for service, bearing the following set numbers:

| | |
|---------|--|
| 101-109 | South Shields-Bankfoot |
| 110-128 | St.James-Heworth-St.James-North Shields-St.James |
| 129-134 | Heworth-Benton |

It is hoped that a fuller description of the Tyne & Wear Metro will be given in a future issue of Underground News.

NF 88/84 - 1983 stock three-car unit 3601 operated on the South Ealing test tracks on Wednesday 2 May 1984, for the benefit of the Railway Inspectorate. This was to have taken place on 28.3.84, but had to be cancelled due to the one-day LT strike against the Government's proposals to abolish the GLC.

NF 89/84 - Very few LT rail services operated on 28 March 1984, due to the one-day strike (q.v. above). Four Victoria Line trains in service returned to depot by 07.00. On the District Line, two trains operated between Wimbledon and Earls Court until 12.00. On the Piccadilly Line one train shuttled between Arnos Grove and Cockfosters between 09.15 and 11.00, and at the western end of the line a one-train service (set No.200!) operated three trips from Heathrow to Earls Court (District Line!) at 08.51, 11.23 and 12.45. There were no other train services running on this day although many crews turned up for work. The lack of signalmen, regulators and station staff prevented any other trains running.

INFORMATION WANTED

Unit formations of the 1938 tube stock on the Northern City Line (Highbury branch) during 1975 up to the time of its takeover by British Rail in October 1975.

Contact your Chairman/Editor at: 'Heidi', 13 Castleton Road, Eastcote, Ruislip, Middlesex, HA4 9QQ.

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The last full list of Society Officers' addresses was published in Underground News No.269 (May 1984), page 58.

For non-receipt of journals and changes of address, correspondence should be addressed to the Despatch Officer, 67 Weltmore Road, Luton, Bedfordshire, LU3 2TN. Members are asked to wait until the 1st of the next month, before writing about journals not received.

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