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MESSAGE TO MEMBERS OF THE LONDON UNDERGROUND
RAILWAY SOCIETY FROM

J.P.THOMAS

FORMERLY GENERAL MANAGER
OF LONDON UNDERGROUND RAILWAYS

Your Chairman and Editor has asked me to send you a message and I have pleasure to do so. The subject of the London Underground is extensive indeed and I hardly know which theme to choose and which might interest you most: and so I take the present year, 1968, and its record in historical significance.

Firstly

The premier Underground Line, the District Line, this year celebrates its century of years, 36 by steam, 64 by electricity - the mainstay of the system.

Secondly

The London Underground completes its century of tunnels - 79 service route miles of the deep tubular cast iron type and 21 miles of shallow cut-and-cover (as on the District and Metropolitan Lines).

The completion of the Victoria Line (No. 7 Line) brings the total tunnel route mileage of the Underground Railway system up to 100 (of course, double tunnel and/or double track). This does not include any of the surface mileage.

Thirdly

The centenary of the Metropolitan Railway from Baker Street to Swiss Cottage is recorded in this year, 1968. This $1\frac{1}{2}$ mile section is a vital part of the system and, inclusive of the

Bakerloo service below, about 50 trains per hour in the one direction operate here. Were the local bus services in this lane of traffic included, then 75 units of public transport in one direction, or 150 in the two directions, cover this section per hour, and appears to exceed the maximum service of any other $1\frac{1}{2}$ miles of rail and bus routes in London.

Fourthly

The reconstituted Piccadilly Circus Station became effectual in December, 1928, and thus celebrates its 40th year of service of the eleven Otis escalators and ticket hall of 15,000 square feet - a diameter of 150 feet, which lineally is equal to 5 omnibuses end on. This station has stood up well to the traffic of 50 million passengers annually. Passengers from the six equal points of the Circus pour into the magnificent ambulatory below, spreading out the traffic flowing smoothly and efficiently to and from the depths of the trains. This, the premier Underground station in London, is in my view unexcelled as such anywhere in the world.

Lastly

The pioneer City & South London Railway celebrates its 78th anniversary next November and this may coincide with the opening of the eagerly awaited Victoria Line (No.7) - an interesting piece of Underground history indeed.

These are a few salient records to bear in mind when proceeding with your Underground Railway studies. May I wish that your Society will flourish in its Underground Railway pursuits and continue in its zest for knowledge, thus to bring high appreciation of your efforts to advance the cause of this great service which, by its "troglodyte" depths, may be rather out of sight yet never out of mind.

Sincerely yours

John P. Thomas

Formerly General Superintendent, London Buses
 General Manager, Underground Railways
 Consultant to General Post Office
 Underground Automatic Railway

May 1968

PRESENTATION TO J.P.THOMAS

As reported in the last issue of the Journal, the ninetieth birthday of Mr. J.P.Thomas fell on Saturday, the 8th June, and the presentation from the Society, also referred to last month, took place privately on the following day - when the Chairman and his wife had the pleasure of being entertained to tea by Mr & Mrs Thomas at their home in Woking.

As the Society gift was not ready in time to place on display at a meeting before being presented, and for the benefit of members too far away to attend meetings anyway, we now give a brief description of it.

The piece consisted of a brass whistle from a 1925 Tube Stock Motor Car, polished and lacquered, and mounted on a small block of varnished teak, which also carries a small brass plate with the inscription

Presented by
THE LONDON UNDERGROUND RAILWAY SOCIETY
to
JOHN PATTINSON THOMAS
on the occasion of his 90th birthday
8th June 1968

in Johnston type - for the use of which we are indebted to London Transport as it is a private typeface.

Mr. Thomas has expressed his great pleasure in receiving this memento of an important occasion, and has also said how appropriate he thinks the form it takes.

It should also be recorded that the ideas for the form of presentation were formulated by the Committee, and all members of the Committee took some part in providing the necessary ideas - but all the actual work on the gift, including the obtaining of the parts and materials needed, was done by two members, Joe Brook Smith and Chris Gooch. To them Mr Thomas has offered his congratulations on a fine piece of work; the Society as a whole should also add its own congratulations to those of Mr Thomas, for the finished product was worthy of the occasion.

Being a further chapter from "Under London; A Chronicle of London's Underground Life-lines and Relics" by F.L.Stevens, and now reprinted by the courtesy of J.M.Dent and Sons Limited, who originally published the book in 1939.

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The tunnel running under the Thames and connecting Wapping with Rotherhithe was an engineering enterprise on the heroic scale. It was the first tunnel ever driven under the Thames; in fact, it was the first tunnel driven under any river. It is a story with all the elements of suspense, fortitude, and romance. One day somebody will make a film of the building of the Thames Tunnel, and, if the job is done with any fidelity to fact, it will be a picture to remember and a tribute to two of London's most brilliant servants - Sir Marc Isambard Brunel, and his son, Isambard Kingdom Brunel.

At first sight, you may think Wapping station is not much to look at. The shaft down which the lift travels is unusually large, and the staircase, with its iron canopy, is a little odd and old-fashioned. More old-fashioned still are the old lanterns placed above the winding stairs and looking like something out of the property-box for the staging of a riverside melodrama. Long may those lanterns hang!

When I walked into Wapping station my mind went back to an engraving I had seen of an elderly man, holding a beaver hat, and bowing to a cheering crowd as he stood on the spiral stairs leading to the Thames Tunnel. That was a record of the tunnel's opening day - 25th March 1843. The man was Marc Isambard Brunel. He had triumphed over every possible hazard and obstacle, and held on to his gigantic pioneer task for nearly twenty years. They said he would never do it, and there were times when it seemed that he never would. Again and again the river broke through the tunnel workings, but Brunel triumphed at last.

It is curious that Londoners should forget such a chronicle of adventure as the making of the Thames Tunnel. I found one Londoner who had not forgotten. He was a railway official. He showed me with pride a picture of the Thames Tunnel as it looked before the railway was built in it. He, at least, knew the story, but shook his

head ruefully when I asked him if many people ever spoke of 101
the tunnel and the man who built it.

A tunnel from Gravesend to Tilbury was thought of, and, in fact, begun as early as 1799, but that had to be given up as a bad job. A few years later they tried again, about a mile below the present tunnel at Wapping. A shaft was sunk, and they actually burrowed under the river to within a hundred and fifty feet of the Middlesex shore. Then that work had to be abandoned. People in those days, if they wished to cart goods between Rotherhithe and Wapping, had to travel by way of London bridge, a four-mile circuit. That was plainly a waste of time. Four thousand people were ferried every day across the Thames at Rotherhithe.

Brunel senior was convinced that a tunnel could be built under the Thames. How to set about the task was discovered in a remarkable way. While he was pondering the problem of under-water tunnelling, Brunel happened to watch a timber-worm at work. In her book, "The Brunels, Father and Son", Celia Brunel Noble tells of her great-grandfather's discovery in the Chatham Yard, and how impressed he was with 'the pair of stron shell-valves wherewith the creature bored its way into the hardest oak, working under the protection of its own shell.' He realized that workmen burrowing under the Thames would have to be protected by a mechanism similar to that used by the worm. That was the origin of the shield, without which the Thames Tunnel would never have been completed.

Lady Noble quotes the description of the shield, given by a contemporary of Brunel's: "An engine almost a remarkable for its elaborate organisation as for its vast strength. Beneath those great iron ribs a kind of mechanical soul really seems to have been created. It has its shoes and its legs, and uses them too with good effect. It raises and depresses its head at pleasure; it presents invincible buttresses in its front to whatever danger may there threaten, and when the danger is past again opens its breast for the farther advances of the indefatigable host. In a word, to the shield the successful formation of the tunnel is entirely owing".

This shield, inspired by a chance meeting with a minute wood-eating mollusc, was a huge affair, consisting of twelve frames, each of which was divided into three

floors, providing thirty-six separate chambers from which the miners could attack the face of the tunnel. While they dug into the soil, bricklayers followed up behind to complete the work. When sufficient earth or clay had been removed from the tunnel boring, the 'Great Shield' could push ahead on its own 'Legs', and it offered protection to the men in the event of danger.

Armed with this novel apparatus, Marc Isambard Brunel set about the task of finding sponsors for his scheme. A meeting was held on 18th February 1824, a company was formed, and Brunel was appointed engineer. He decided, on the advice of experts, that the distance between the top of the tunnel and the river bed should be only fourteen feet.

Brunel's first step was to build a brick tower, forty-two feet high, with walls three feet thick. This tower, which was designed as the shaft for the tunnel, was sunk into the ground by the simple expedient of digging away the earth inside. The first brick was laid on 2nd March 1825, the bells rang out, and, at the dinner to mark the occasion, the guests were delighted to see a model of the Thames Tunnel in sugar. Amongst the visitors to the site, as the shaft tower was being sunk into position, was the Duke of Wellington, Brunel's staunchest ally in the trials that were to follow.

All went well for a few months. Brunel's son, then only twenty years old, was a brave and untiring assistant. The tunnel began to take shape and became the talk, not only of England, but of Europe and the world.

However the building of the tunnel was not to be accomplished without incident. Far from it! The river burst through twice in 1826 - once in January, and again a month later. Despite further incursions, the work, thanks to the effectiveness of the shield, pushed steadily on, and by the beginning of 1827 the tunnel had penetrated some three hundred feet.

It was then that Brunel's anxieties were greatly increased by a decision permitting the public to see the tunnel workings. For a shilling a head they could actually walk under the river. Nothing like it had ever been possible before. Wonderful!... Meanwhile, Brunel lived in dread that one day some of the tunnel's visitors would be caught by an inflow of the river.

All manner of troubles began to arise - strikes, mysterious diseases which turned some of his men blind, and, later, explosions from 'fire-damp'. But always the first fear in front of Brunel's mind was that the river would break through and overwhelm the sightseers.

"Notwithstanding every prudence on our part," he wrote on 13th May 1827, "a disaster may still occur. May it not be when the arch is full of visitors! It is too awful to think of it. I have done my part by recommending to the directors to shut the tunnel. My solicitude is not lessened for that; I have, indeed, no rest, I may say have had none for many weeks. So far the shield has triumphed over immense obstacles and it will carry the tunnel through."

A few days later, Brunel's fears were proved to have been justified. The river broke through, and in fifteen minutes filled the tunnel and the shaft with water and about a thousand tons of soil and rubbish. No lives were lost. The breach was examined and filled with three thousand bags of clay. The task of pumping the water out was long and tedious. When at last it was accomplished, the brickwork and the shield were sound. But on Saturday, 12th January 1828, again the river burst through, quickly filling the tunnel. Six workmen were trapped and drowned. Brunel's son, now the engineer in charge on the spot, acted with the utmost resource and courage. He was himself in one of the frames of the shield when the flood broke through. So great was the force of the water that men were washed from their places in the shield. Young Brunel, with three others, stayed behind, he directing the men how best to escape, and being the last to retreat to the tunnel mouth, He and his three companions had only proceeded a few yards when they were knocked down by falling timbers. Brunel was pinned under the water, but managed to extricate himself. Despite an injured knee, he struggled to the entrance where, such was the force of the water, he was actually carried up the shaft. Although unable to move because of his injuries, Brunel junior lay on a barge all Sunday and part of Monday learning what was the extent of the breach in the river bed.

This time some four thousand bags of clay were needed to fill the hole. The project, however, was temporarily abandoned for want of funds. The tunnel was bricked up and for seven years nothing was done. Through all this Marc Brunel refused to be shaken from his purpose; his faith in the ultimate success of his scheme was never seriously disturbed.

to be continued.

NEW TRAINS FOR CIRCLE AND HAMMERSMITH & CITY LINES

London Transport announced on the 20th May that it had placed a £3.5 million order with Metropolitan-Cammell Limited of Birmingham for new trains for the Circle Line and the Hammersmith & City service of the Metropolitan Line.

The order is for the bodies and bogies of 212 cars, making up 35 six-car trains with spare cars for maintenance purposes. Delivery is due to begin in the spring of 1970 and will be completed during 1971.

The new trains (incorporating many new features seen on new Victoria Line Tube Stock) will have bodies with an unpainted aluminium alloy finish, like all recent Underground stock. There will be four sets of double air-operated doors on each side of the cars for easy passenger movement in and out in busy peak-hour conditions. The provision of extra doors has meant some reduction in seating capacity compared with the cars now in use but has increased the space available for standing passengers - particularly valuable in the in-town sections of these lines where most passengers travel short distances. There will be side, double-glazed windows between the doorways, with pull-down ventilators carrying line diagrams above the windows, as in the Victoria Line stock.

Internally, full use will be made of modern materials and fluorescent lighting will be recessed into the ceilings; illuminated advertisements will be mounted over the gangways on the transverse screens by the doorways. These screens will be set back to keep standing passengers clear of the door opening as far as possible.

There will be four pairs of transverse seats in each of the three centre bays and two double longitudinal seats in each of the end bays, giving 32 seats in all. The passenger accommodation in both motor and trailer cars is identical, but the motor car is lengthened to take a driver's cab at one end.

An innovation will be the use of air suspension between body and bogie, using a new type of rubber/air springing

unit. As the passenger load increases, more air has to be supplied to the units to maintain the level of the car body. This fact is made use of to gauge the changing weight of the car and its load. As the weight increases, it is possible to use higher tractive effort to maintain acceleration and higher brake pressure, without wheelslip; these higher rates are automatically applied in proportion to the changing weight of the car.

The motor bogies will have two 300-volt motors in series in pairs and will have axlebox suspension of the rubber bonded "chevron" type. Rheostatic braking will be used in conjunction with Westinghouse electro-pneumatic and automatic air brakes. The parking brake will be of the hydraulically-operated type.

As the tracks of the Circle and Hammersmith & City Lines are not fitted for automatic train operation, the new trains will not have this equipment, but provision has been made for it to be fitted in the future if required. The motorman, or guard, will be able to speak to passengers through loudspeakers in each car and, using carrier wave equipment, there will be communication between the trains and the central control room at any time, whether the trains are in motion or not.

An unusual feature is the fitting of air-operated sliding doors to the motorman's cab; this is the neatest way of providing a draughtproof form of access without obscuring valuable equipment space in the cab, as would occur with a hinged door.

The trains will be composed of reversible two-car units comprising a driving motor and trailer car which will be used to make up four-, six-, or eight-car trains as required.

The performance built into the new trains will be higher than that of previous stock, but for the present will be limited by the need to work with trains of other types which share the Circle Line tracks.

The rolling stock being replaced with new cars will be transferred to the District Line, releasing older cars which will be taken out of service.

CIRCLING ROUND LONDON
H.Lourdes-Cresswell

The Broad Street-Richmond electric service having been rerieved some time ago now, to continue providing a useful amenity, there still seems to be a reluctance to consider it as an integrated part of London's transport system.

Its very existence seems to be regarded almost as a slightly shameful secret, only to be acknowledged to proven devotees of its cult. There is an excellent little postcard-size route map and timetable of the line in existence, which is obtainable only if asked for in the right places.

Visitors have no clue to its possibilities, the London Transport "Visitors' London" map folder shows it in just the same manner as any other of the main line railways.

If, however, its route is marked over with a coloured Biro, it immediately shows up as a useful outer route to that provided by the Metropolitan's Hammersmith-Baker Street-Aldgate line. It should be noted that the "Visitors' London" map shows the various lines geographically and not as the more usual "T.V.Circuit" displayed at stations. Even on this, the inclusion of Broad Street-Richmond as the "North London Line" would be useful if only to prove that the co-ordination of London's transport system is being taken seriously as a service to the public.

In these days of Joint Planning it is a mystery how London Transport contrive to ignore the presence of this route. It can only be that it is administered by the London Midland Region of British Rail and not by the London Transport Board.

It is reminiscent of the end of the nineteenth century, when most places in Kent were served by both the London, Chatham and Dover Railway as well as the South Eastern Railway, neither of whom admitted the existence of the other to the public at large.

There is a fairly well authenticated story of a night at Dover when the only passenger who had braved a very stormy crossing from France caused the guards of the two

rival trains, drawn up on opposite sides of the platform there, to come to blows for the honour of conveying him to London. It is also told that the two guards were brothers!

The Londoner of those days had the use of several circles around London; of these, only one now remains. Until the advent of London Transport it was known as the "Inner Circle" and was maintained by the District and Metropolitan Railways jointly.

The Great Western Railway, using its own locomotives and coaches operated the "Middle Circle". This was not a true circle as it started from Mansion House and terminated at Moorgate Street, running via Earls Court, Addison Road (now Olympia), and Edgware Road. The service ceased when the District line was electrified.

The "Outer Circle" was provided by the London and North Western Railway, also using its own locomotives and coaches; it survived in a truncated form under its successor the London Midland and Scottish Railway after the "Grouping" in 1923. Bomb damage to its viaducts finally brought it to a halt on the 21st October 1940. This service, which began in 1872, was then integrated with the still remaining Broad Street-Richmond service; it had always run over the same route from Broad Street to Willesden Junction, but thence had run via Earls Court to Mansion House.

When the District line was electrified in 1905, the L.N.W.R. coaches were hauled by special District line electric locomotives through the tunnels between Earls Court and Mansion House. Four years after this portion of the service ceased and was never revived, although the L.N.W.R. electrified its own portion of the route in May 1914, and used multiple-unit trains similar to those of the District. The only part of the West London Line section of the route used regularly by passenger trains now is that covered by the special "Olympia Exhibition" trains.

For a brief period the Midland Railway tried unsuccessfully an "Outermost Circle" from Earls Court to

Hammersmith, Acton and St. Pancras.

Another "Might Have Been" was a projected "Southern Circle", by the London and South Western Railway from Mansion House to Waterloo. This never materialised as Parliament insisted on the provision of extra platforms at Mansion House station for its use, and though approved they were not constructed.

Bearing in mind that with the exception of the Great Central Line from Marylebone, all the present main line services were in existence and operated radial suburban services from their central London stations, it is interesting to consider that private companies thought it worth while to provide these circle services through areas much less densely populated than today.

Obviously, it was quicker than the horse-drawn vehicles of the time, but in present road conditions it might still be quickest.

While the "North London Line" still offers its service between Broad Street and Richmond through North and West London, let it have the publicity it deserves and include it clearly on the maps seen by everyone.

THE NON-EVENT OF 1967

Our News Flash 665 (July 1967, p. 109), reported the publicity for the record 'At the Third Stroke' made by the group known as The Piccadilly Line. A leaflet was distributed promising (or threatening, whichever way you look at it!) an Orgy on the Piccadilly Line to launch the record.

This pamphlet is reproduced on the next page, as an example of one of the more unusual uses to which people sometimes try to put the Underground. The group and the publishers of the record both denied responsibility for the publicity, and in view of the dubious nature of the intended proceedings this was probably just as well!

The Police and London Transport evinced considerable interest, but they need not have worried - the Orgy, and therefore the dress-tops, did not come off!

NOTICE

ORGY

TO BE HELD
ON
PICCADILLY
LINE

PART OF THE 'LET'S HAVE A LOVING LONDON' CAMPAIGN

An orgy will be held on London Transport's Piccadilly Line during the next week.

The orgy is to launch the new record 'at the third stroke' by the Picadilly Line.

Champagne and milk will be served by topless teenage waitresses, and, it is expected that high-ranking Government Officials and Famous Pop Stars will be present. Train service on the line will be momentarily interrupted.

Clues to the time and date of the orgy are in the new record 'at the third stroke' by the Picadilly Line.

You are lovingly invited.

LETTERS TO THE EDITOR

Note Due to pressure on space, a number of letters have had to be held over - some for several months; for this the Editor apologises. The same position has arisen with News Flashes, which once again have been crowded out completely this month.

21 January 1968

Sir,

The Middle Circle

I have recently come across a note about the demise of the Middle Circle on the night of Saturday 30 June 1900. This service was worked by the Great Western Railway between Aldgate and Mansion House via Kensington, Addison Road and on that Saturday the last train to Mansion House was hauled by engine No. 1401, and the last train from Mansion House by No. 3565. Engine 1401 later left Mansion House station for the Great Western sheds.

The following day the Great Western trains terminated at Earls Court.

H.V.Borley

167 Cornwall Road,
Ruislip, Middlesex.

30th May 1968

Sir,

I wonder if I may point out a few errors in Kenneth G.Harris's article "Destination Unknown".

Northern Line

The 'VIA' boards, viz "Via Highgate & West End" & "Via Highgate & City" were located on both sides of one plate and not separately as implied by Mr. Harris.

Bakerloo Line

One plate that Mr. Harris omitted was 'Harrow & Wealdstone' at first with '(LMS)' and now '(LMR)'.

Piccadilly Line 'Green Park', I agree, is used for emergencies but its most common use is for football specials when Arsenal are at home.

East Barnet never existed. What Mr Harris means is Enfield West. When the Cockfosters extension reached the now Oakwood (Enfield West) in March 1933 the residents complained because Enfield West was nowhere near Enfield. It was eventually renamed Oakwood but I don't know the exact date. One destination omitted was Hyde Park for emergency use; this was carried on 1938 plates and 1956 and early 1959 blinds, but with the introduction of "new" blinds it is no longer carried. Also with the introduction of the new blinds 'Hounslow' is now 'Hounslow West'. What about 'Hounslow Town' and 'Ealing Common', and 'Hounslow Barracks'?

District Line It is true that there were no unused plates for this line but now East Ham, South Acton, Northfields, Hounslow - all of which I have personally seen amongst District destination plate groups. One I have yet to see is Willesden Junction, and also Addison Road.

Yours faithfully,

20 St Leonards Road,
Ealing, London, W.5.

C.I. Essex
Hon. Sec.
London Transport Railway Club

THE UNDERGROUND AND THE EAST COAST

While there was, so far as is known at present, no regular service of any kind, when the spur between the Metropolitan and Great Eastern railways at Liverpool Street was in use, there were occasional excursions run from the Met to destinations on the East Coast. It is to recall those days that the Society Family Outing for this year has been planned to go to Great Yarmouth.

There is room for research into these excursions; in "The Great Eastern Railway" C.J. Allen states that the last train over the Liverpool Street spur was an excursion from Rickmansworth to Yarmouth - with Met coaching stock throughout but with GER motive power north from Liverpool Street. On the other hand, H.V. Borley in "London Transport Railways" gives the last train as an excursion to Clacton.

So, if any member is looking for a fruitful field of research in the byways of Undergroundiana, here is a ready-made subject.

THE TIMETABLE

Thursday 4th July Library Evening at 62 Devonshire Road, Ealing, London, W.5. commencing at 19.00.

Friday 12th July Film and Slide Show presented by Roger B. Manley; this varied programme has as its centrepiece a film of the new Rotterdam Metro and its associated tramways; also in the programme are films or slides of North American Metros, the Boston tram subway system, the Hamburg U-Bahn and the tramways of Amsterdam. This will provide an excellent opportunity to compare other systems with that of London, and should provoke some interesting discussion. Commencing at 19.00 for 1915, the meeting will be at Hammersmith Town Hall.

Sunday 28th July Family Outing to Great Yarmouth (see page 111 for explanation!). The Party will depart from Liverpool Street at 09.30, arriving Great Yarmouth 12.23. Departure on the return journey will be at 17.50, arriving Liverpool Street at 21.13. The special fare for this excursion will be about 32/- return. Please send your name, and the number in your party, to the Secretary, J.P.Wirth, 43 Crestway, Roehampton, London, S.W.15.

Thursday 1st August Library Evening at 62 Devonshire Road, Ealing, London W5, Commencing at 19.00.

Saturday 10th August Visit to Dagenham Heathway Substation, London Transport. This is one of the few remaining LT substations with rotary rectifiers, and it is not expected that those left will be in service very much longer. Names to the Assistant Secretary, accompanied by stamped addressed envelope please - S.E.Jones, 113 Wandle Road, Morden, Surrey. This is a restricted visit, both in numbers and ages - full members over 16 only.

THE TAIL LAMP

There was a young man of Darjeeling,
 Who rode on the District to Ealing;
 A sign on the door
 Said "Don't spit on the floor"
 So he jumped up and spat on the ceiling.
 Anon.