

U n d e r g r o u n d

The Journal of

The London Underground Railway Society

Issue No 23

Volume 2 No 11

November 1963

THE SOCIETY AND PRESERVATION

From the inception of the Society, suggestions have been made at regular intervals, by members and others, regarding suitable objects of Underground interest for preservation; invariably, it has been intended that the Society should take an active part in the proposed schemes. It was not so very long after inauguration that the Committee had to consider the general policy of TLURS in relation to preservation schemes. The conclusion then come to was first (fairly obviously), preservation of items of Underground interest was definitely within the objects of the Society; and, secondly, that the Society was not primarily a preservation body - and therefore, the main activities of the Society should not be strangled by a lack of finance due to heavy expenditure on preservation projects.

However, since that policy was decided upon, there has been a steady increase in tempo, withdrawals have come thick and fast, and within the past few months the Committee has been faced with a considerable number of approaches for funds for the rescue of worthy objects and good causes. All these appeals have been urgent and most of them have been expensive to a greater or lesser degree.

It had become obvious that a further review of preservation policy was needed when, in September, the Committee set up a Preservation Subcommittee of three members, to consider all the proposals then current, and to determine the future policy of the Society in relation to the whole field of preservation; also to control the expenditure to be authorised in this sphere.

The members appointed to the Subcommittee were K.R.Benest, P.R.Davis, and N.E.W.Fuller; all the referred matters have now been considered individually - and participation in all but one rejected. This may seem regrettable to some, but in every case there have been very sound reasons for not offering help - and in some cases conditional help was suggested, but the conditions were not fulfilled. Unfortunately, it is not possible to publish more than this vague statement, because in several instances there have been other bodies involved in the negotiations, and in some cases these are continuing discussions - hence the necessity for a

122 degree of secrecy.

However, during the consideration of these schemes two things emerged very clearly. Compliance with any of the requests made would have ruined the Society financially, or at least have had a crippling effect on other activities; and practically all the schemes considered have been so considered in an atmosphere akin to panic - mainly brought about by the lack of ready finance, and the consequent necessity of chasing money at the same time as making an offer for the relic on offer.

After careful consideration of this situation, and the means of remedying it, the Preservation Subcommittee have submitted a recommendation to the Committee of the Society to the effect that a Preservation Fund be set up within the Society, the monies of which should be kept entirely separate from the Society's other cash resources, and be available to the Preservation Subcommittee for purchase of relics, or for making contributions to other preservation funds.

This recommendation has now been accepted by the Committee, which, at a meeting in October, set up a Preservation Fund on the lines indicated above, thus giving members interested in preservation schemes an opportunity to make contributions at their convenience, in the knowledge that possibilities of acquisition will be looked for continually by the Preservation Subcommittee - and that future negotiations will be conducted with funds already available. If contributions are large, the Society will be able to consider acquiring items of motive power and rolling stock, as well as other large relics; if contributions are only small, it will still be possible to acquire items of historical interest such as maps, destination boards, station nameboards or signals.

Donations to the Preservation Fund are invited now, so that no further opportunities of acquisition are missed - and needless to say, any contribution, however small, will be gratefully accepted, but the larger the sum at the Society's disposal, the greater will be the chances of acquiring something worthwhile. It must be emphasised that a considerable sum is needed for the purchase of items of rolling stock, for not only has the vehicle to be purchased, but it has to be transported (or moved on its own wheels) and housed as well. All this takes Money - with a capital £.

The success of this scheme depends entirely on the members of the Society; it is already known that a considerable proportion of the total membership is interested in preservation - it is up to them to back their interest with hard cash. Valuable items are being withdrawn almost daily now - so early responses are hoped for.

On the 3rd October 1963, the London Transport Board announced that the last of the locomotives built for the Metropolitan District Railway Company had been withdrawn. There were two of these still in service, and at the time of scrapping they bore the LT numbers L30 and L31.

Both these locomotives were based on Lillie Bridge Depot, and were of the same type and manufacture, 0-6-0Ts built for the District in 1931 by Hunslet of Leeds - so that, for steam they were not of great age to be retired.

The Hunslet Engine Company Limited had provided in this type a highly satisfactory machine for Underground work, both powerful and adaptable. Now that they will be seen no more on their multifarious duties on service trains, it seems only right to record details of their main dimensions, and capacity.

Total length over buffers	33'11"
Total width over footplate	8'8"
Height to top of chimney	12'3"
Weight in full working order	44 tons $6\frac{1}{2}$ cwt.
Weight - light	34 tons $3\frac{1}{2}$ cwt.
Tractive effort at 80% b.p.	17,000 lb.
Coupled wheel base	13'0"
Wheel Centres	6'6"
Diameter of wheels	4'2"
Cylinders -	
Diameter	16"
Stroke	24"
Valve Gear	Walchaerts
Brakes	Hand and Steam
Injectors	2 No.8 m/m combination type
Length of boiler barrel	12'0"
Diameter of boiler barrel	3'10"
Number of Tubes	138
Outside diameter of tubes	$1\frac{3}{4}$ "
Heating Surface -	
Tubes	778 sq.ft.
Box	<u>74</u> sq.ft.
Grate area	14.5 sq.ft.
Working Pressure	200 lb./sq.in.
Water Capacity	1200 gallons
Coal Capacity	30 cwt.

K.R.Benest

Quite independently of the experiment undertaken jointly with the District Railway at Earls Court, the Metropolitan launched their own investigation into the practicability of electrical operation in 1899. This would seem to have been the Company's first serious excursion into the realms of electrical traction; though there had been earlier attempts, none successful, by sundry bodies to provide an effective rival to the Beyer-Peacock steam locomotives which then reigned supreme on the underground. Among these had been a proposal, never implemented, by a certain R. Ward to electrify a portion of the main line between Neasden and Harrow in 1889, but of the demonstration in Wembley Park, and of the granting of statutory authority to electrify the entire system, elsewhere ascribed to the year 1882, no trace is to be found, and it is reasonably certain that they are imperfect recollections of the events now under notice.

Following the stormy controversy that raged in the nineties around the question of tunnel ventilation, the Metropolitan took powers in their 1898 Act to work their system by electricity, but were, nevertheless, unwilling to be stamped into hasty action. Toward the end of that year they were approached by Thomas Parker, who had in view the promotion of Eykemeyer's design of traction motor, the patent rights of which were held by T. Parker and Company of Wolverhampton, of which firm Parker was Managing Director. He was successful in creating a favourable impression at Westbourne Terrace, and his services were retained by the Metropolitan, in consideration of his expenses and a personal fee of 500 guineas, to construct, or to specify for purchase, electrical apparatus to demonstrate the suitability of electrical power for propelling trains on the underground railways of the Company, and to benefit by his advice its chief engineer, Mr T.F. Clark.

It was first proposed that locomotives be employed, but this concept was bedevilled by the desire (later abandoned) to avoid the expense and inefficiency of a spur-gear reduction drive by mounting the motor armatures directly upon the axles. Obstinate, the calculations showed that, to develop the power required with the employment of two pairs of driving wheels would involve an unsprung dead weight of seven tons per wheel. For three pairs of wheels this figure reduced to $4\frac{1}{2}$ tons, and to something less than 4 tons for four pairs. It now became apparent that the non-revenue-producing locomotive could be discarded in favour of a bogie saloon with a driving cab; from this it was but a short step to think in terms of two such coaches with eight smaller motors, the weight

of which, estimated at 26 tons, or about $1\frac{3}{4}$ tons dead weight per wheel, compared favourably with the 32 tons of four motors on four axles only; it was thought that the cost would be little, if any, greater.

The final proposals, then, provided for two new bogie carriages with driving compartments, and 2'9" diameter wheels, all motor driven, to be constructed at Neasden works; an acceleration of one foot per second was to be aimed for. With conductor-rail, switch-gear, and two dynamos (to be driven by a locomotive engine) it was estimated that the total cost would be of the order of £7000-£8000, some 50% of which, it was anticipated, would be recoverable. The question of the final composition of the trains, whether they should have a motor carriage at each end, or whether the motor carriages should be permanently coupled as a twin unit and shifted from end to end at each terminus, was left unresolved.

In due course arrangements were completed for T. Parker & Co. to manufacture the motors under licence, but in the matter of the dynamos Parkers' was undercut by the Westinghouse Corporation of America, whose tender was accepted by the Board in April 1899. (These motors would seem to have been constructed at Neasden, probably by Parkers' men, as all the necessary materials were ordered on the authority of the Stores Committee.) Work on the carriages was pressed forward at Neasden in the meantime, while the first completed motor was tested satisfactorily towards the end of July. It was, therefore, with very considerable dissatisfaction, having regard to the overtime that had been incurred, that it was learned that the dynamos, promised for early August, would not - due it was said to the nondelivery of raw materials - be available until the 5th and 16th October respectively. The failure of the first dynamo to materialise on the date thus promised led to the immediate cancellation of the order. It was by then far too late to arrange a proper substitute, but Parker stated that there would be no difficulty in adapting some of the motors to generate the current required; this suggests that the tests, which seem to have continued intermittently into the summer of 1900, were carried out with the use of one car only, as no replacement dynamos appear to have been obtained. These generators were belt-driven, the prime mover being old Beyer-Peacock locomotive No. 1 (built 1864), raised on blocks as a stationary engine. Two grooved rings, some 5'11" in diameter and $10\frac{1}{4}$ " wide replaced the tyres on one pair of driving wheels (probably the rear pair, which, in addition to being more readily removable for modification, would afford greater clearances due to the coupling rods being

mounted outside the connecting rods) and drove an intermediate shaft by means of eight 90' long, 1 3/4" diameter cotton ropes, four a side. To enable this to be done it would have been necessary to remove the side tanks, and probably the bunker as well.

The trials were conducted on the long siding, constructed circa 1894 for the contractors engaged in the erection of the "Watkin Tower" on the Wembley Park estate. This line left the station goods yard in a westerly direction and made a wide sweep to terminate at the top of a hillock now surmounted by the Stadium. It was some 1200 yards in extent, and abounded in gradients as steep as 1 in 25, excellently suited to the purposes of the experiment. A four rail system was employed, the conductors being of channel-iron supported on insulators at intervals of eight feet.

From items ordered by the Stores Committee the motor carriages would appear to have possessed four ordinary compartments apiece, but of the leading ends little is known; guards' and luggage compartments may have been provided, but the not inconsiderable space that would have been required by the direct action controller, to say nothing of the presence of a small test-team, make their provision unlikely; the provision of no more than two 16 c.p. lamps, in addition to the two 8 c.p. lamps per compartment then standard, is additional argument against the sub-division of the crew-space. No generator nor battery was ordered by the Committee; it may be inferred, therefore, that the lights were fed from the traction supply. In the light of later developments it is apparent that the bodies and underframes conformed dimensionally to the "bogies" stock of the previous year.

Although no details appear to have survived relating to the course of the experiment, it is apparent that the results were considered to be satisfactory, and that the Company felt itself justified in retaining Parker's services as consultant for the forthcoming conversion on the basis of a commission on 1 1/2% on the estimated cost of £500,000.

For a time the two motor coaches disappeared into store; in 1908 they were exhumed to form the motive units of one of the 6-coach Westinghouse-equipped trains which appeared in that year. At that time they underwent considerable modification, and it would seem that not only were the bogies and electrical gear replaced completely, but the drivers' ends also were entirely reconstructed in the form which they henceforth retained until they were withdrawn many years later. At the time of reconstruction they were taken into the capital list as numbers 417 and 418.

LAMPE, David; The Tunnel - The Story of the World's First Tunnel under a Navigable River, dug beneath the Thames 1824-42; London, 1963; George G. Harrap and Co. Limited; 224 pp. and 11 pp. of plates; 21/-.

A graphic account of the building of this, the first, underwater tunnel, and the constant struggle of Sir Marc Brunel, his staff and workmen, against nature and the Directors of the Thames Tunnel Company. That the work was ever completed is almost a miracle - what is nearly as astonishing is the refusal of the Company, once in possession of the completed tunnel, to even try to raise the money needed to build the approach ramps.

To describe some of the hair-raising occurrences during the building would be to spoil the book for readers; written in an easy style, it is clear that an immense amount of research lies behind the finished work - which, once started, is difficult to put down until the last chapter has been read.

It should be pointed out that the book does not pretend to tell the history of the East London Railway's use of the tunnel; this is not even mentioned until the last chapter - and is not recorded there in much detail, nor particularly accurately - but this does little to detract from the value of the work. A delightful book, with much about it that will appeal to the readers of thrillers.

MOODY, G.T.; London Suburban Railways 1836-1960; Sidcup, 1963; Eltrac Publications for the Electric Railway Society; 56 pp., quarto, duplicated, in thin card covers; 7/- post free if ordered by 10th November 1963, 8/6d post free thereafter. Obtainable from ERS Sales, 14 Sopwell Lane, St Albans, Hertfordshire.

An extremely concise account of the development of the London suburban railway system, from its inception up to comparatively recently. The whole work displays the author's well-known attention to detail, and will prove a very valuable reference work; a good deal of attention is paid to the underground lines of the metropolis, dates are given, not only for openings and closures, but for various improvements, widenings, electrification, and so on.

The duplicating is of a high standard, being easy on the eyes, but in a different sense the book is not easy to read. The "meat" has been compressed to such an extent that many paragraphs are little more than a string of names and dates linked by a few narrative words. In fact, your reviewer is tempted to ask whether the book would not have been easier to follow, and more valuable as a work of reference, if it had been produced in the form of a chronology. The book is the latest in the series of Electric Railway Society

Monographs, and, despite the comments in the last sentence, is one of the best in that series; it is not illustrated (which could hardly be expected at the price), nor is there a map, but the publishers and author recommend the Ordnance Survey Greater London Half-inch District Map (price 5/6d from booksellers and cartographers), or the Authentic Map of London, published by Geographers' Map Co. Limited at 2/-.

This short work should be in every London railway library, and will save much time when dates are being sought.

WHITE, H.P.; A Regional History of the Railways of Great Britain - Volume 3 - Greater London; London, 1963; Phoenix House; 218 pp., also 44 half-tone illustrations, and 3-colour folding map; 35/-.

The Society can supply - see Notices for address.

Those of our readers who have purchased the first two volumes in this series of regional histories, will already know the general plan behind the series - more particularly so as H.P.White was the author of Volume 2 - Southern England, as well as the volume now under review.

The standard has been well maintained; easy to read, well illustrated, the book is a mine of information. All aspects of the subject are covered, but the information given on passenger traffic, number of train movements, and so on, is particularly valuable. The amount of space devoted to the Underground system is much more than is usual in a book covering the London railways generally - and on this core alone, the book can be especially recommended to readers of this Journal.

The past twelve months have seen the publication of a far greater number of books on London railways than is usual in such a period; it is to be hoped that readers will not jump to the conclusion that all the ground has been covered, and this new volume can be safely dispensed with. If anyone does think like this, he will miss a book which has a great deal of value in it, much that is not covered by recent publications, and a book which is a real pleasure to read. Strongly recommended, both as an authoritative source of information, and a literary delight.

BARTON, N.J.; The Lost Rivers of London - A Study of their Effects upon London and Londoners, and the Effects of London and Londoners upon them; London, 1962; Phoenix House Limited and the Leicester University Press; 148 pp., 24 pp of illustrations, a folding map, and seven maps in text; 21/-. The Society can supply. Though published over a year ago, this is a book which deserves mention in this Journal. While it is obvious from the title that it does not deal directly with the Underground, the railways are mentioned at several points in the narrative, and the illustrations

include some of direct Underground interest - Sloane Square, showing the pipe carrying the Westbourne over the platforms, for example. Of much greater importance, however, is the wonderfully clear picture the author gives of the ground through which the railways have been driven. He presents, in effect, a history of London from the time of the Romans up to the present, bringing out how the numerous watercourses in the region have influenced the building of the City and its life through the centuries. The author is an M.A., M.B. and B.Chir., and as befits a writer so well qualified academically, the book is particularly well annotated, indexed, and supplied with bibliography and list of maps used as authorities. To any student of the Underground interested in more than the most obvious aspects of the subject, this book will provide absorbing background reading, and will undoubtedly teach a great deal to all but the most erudite.

TUBE LINES INFORMATION SERVICE

Answers by Alan A. Jackson & D.F. Croome

Authors of "Rails through the Clay"

Question 1 During the period 27-3-1939 (when tube stock took over the Wembley Park-Stammore shuttle service) to 20-11-1939 (when the through Bakerloo Line service commenced running out to Stammore), was the shuttle operated by the Bakerloo Line or the Metropolitan Line? In other words, was the shuttle a Bakerloo service, or a Metropolitan one worked by Bakerloo trains, from the Operating Department's point of view?

Answer Metropolitan - it was merely a question of the former service being taken over by tube cars.

Q2 Is the old Charing Cross, Euston and Hampstead Railway station at Euston (at Drummond Street, closed 1914) now a substation? If so, when was it converted?

A The substation in Drummond Street, on the corner of Melton Street, is, in part, the original top station of the Charing Cross Euston and Hampstead Railway at Euston. There was a substation here from the opening of the line, adjacent to the top station, and after the passenger station was closed, part of the space was used for an enlargement of the original substation. The 1907 equipment consisted of two 800 kW rotary converters.

Q3 About 20-12-1960 a gate stock motor car arrived at Ruislip Depot (numbered L16). About a month later it was scrapped. Was this car one of the two which were still in service on the Aldwych branch in 1949, and why did it survive until 1961?

A This car, an ex-Great Northern, Piccadilly and Brompton 1906 motor car, was a ballast motor car, and others of similar type were

numbered L13-15 and L17-20. It arrived at Acton Works in 1955 and was stored at the extreme south end of the open vehicle park. The intention at that time was to restore it to its original condition for museum purposes, but this project was later abandoned on grounds of economy.

Q4 When Baker Street was the terminus of the Bakerloo Line, what were the reversing facilities?

A There was a crossover between the northbound and southbound tracks west of Baker Street station, controlled by a signal cabin on the northbound platform of what was later to be Great Central (now Marylebone) station.

Q5 When was the Aldwych branch taken over by 1923-31 stock?

A When the special Aldwych cars 3282/3 were transferred to service stock late in 1949.

Q6 What was the object of the wall booking office window at the top of the escalators at Kings Cross St Pancras?

A This is only one example of many supplementary booking offices which, in the days of easier staff conditions were used for extra booking facilities at times of heavy traffic, issue of season tickets, information, etc. Conditions at this station in the peak hours necessitate the control of passenger flow to the platforms, and only one down escalator is used- a further reason for not manning the wall office.

EXPERIMENTAL ARMRESTS

During the summer, a member reported seeing a set of City and South London cars (DMC 11015 - T 012493 - NDMC 30014) fitted with modified armrests; this set was seen at Euston on 4-7-1963. Very shortly afterwards, London Transport announced that this was to be a fairly extensive experiment, with an armrest built up to two different levels, with a view to solving the perennial problem of two passengers sharing one rest - with the consequent risk of a difference of opinion on the fair apportionment thereof.

It seems that the first car to be so fitted was an isolated one on the Bakerloo Line; all the other modified interiors belong to Northern Line cars, and 21 of these have the new rests now. Each modified car has the same type of rest - a normal level rest from the back of the seat to about two-thirds of the total length of the rest, with the third nearest the seat edge built up to about double the normal height.

Each car also carries notices drawing the attention of passengers to the experiment, and inviting them to write to the LTB and give their views on it. The response to this appeal has been quite good so far - with about 2/3rds of the writers in favour.

NF 222 On 10th September 1963, the London Transport Board engaged a firm of private coach operators to operate the bus service run as a substitute for the Northern City Line after 8 p.m. This was done after the crews of the LT buses normally working the service had refused to operate the service on a voluntary basis as they had done until then - the refusal being part of a ban on working special buses or extras from any garage suffering from a staff shortage affecting ordinary services.

NF 223 The London Transport Act 1963 received the Royal Assent on 31st July, by Royal Commission comprising the Lord Chancellor, the Archbishop of Canterbury, and Lord Morris of Borth-y-Gest. It is unusual for the Primate to be a member of such a Commission.

NF 224 On 6-8-1963 the LTB announced that a contract worth about £1m had been let to Taylor Woodrow Construction Limited for the civil engineering work in connection with the modernisation of Lots Road generating station. The contract covers the civil engineering work associated with the new plant, both within the station and on the site, including the construction of the foundations for the new turbo-generators and boilers and the building of the new pumphouse/switch-house.

NF 225 As from 9-9-1963, there was a revision of the London Transport area boundaries in the Kent-Sussex border regions; this has extended the area to include a further 17 Southern Region stations - Kemsing, Borough Green and Wrotham, Meopham, Tonbridge, Hildenborough, High Brooms, Tunbridge Wells Central, Tunbridge Wells West, Forest Row, Hartfield, Withyham, Hever, Cowden, Ashurst, Groombridge, Penshurst and Leigh Halt. This means that these stations have ceased to issue day return tickets to London, but now issue the even cheaper off-peak cheap day tickets.

NF 226 London Transport issued another appeal to employers to stagger working hours in its annual report, and the Location of Offices Bureau commenced an intensive campaign on 1st October 1963, to get people who can do so to actually move their offices out of the central area. The bureau are collating information from firms who have already moved out, trying to find reasons that keep others in the central area, and obtaining comparative information on costs and amenities in the central area against the provinces and suburbs. Local Authorities and Ministries are assisting.

NF 227 Mr Brian Harbour retires from the London Transport Board when his term of office expires on 30-11-1963. Mr Harbour will become a part-time Director of the Transport Holding Company, and his place on the LTB will be taken by Mr E.C.Ottaway, Chief Supplies and Services Officer, London Transport.

Met Stock Souvenirs Those of our members who have been with us from the start will recall that in the Preliminary Issue of this Journal, dated December 1961, we asked anyone who wanted to buy souvenirs to let us know what they would like to purchase, and how much they were prepared to pay. The acquisition of these items has proved a much more difficult and lengthy process than we ever envisaged two years ago. Now, however, we are able to report that, thanks to the untiring efforts of our Curator of Historical Relics, Chris Gooch, ably assisted by David Hibbert, the Society has been able to obtain some items from the last of the T stock - items actually removed from the last four cars while they were in the breaker's yard.

As so long has elapsed since members sent in their lists, it is now requested that members who originally applied and still wish to obtain souvenirs write, not later than 15th November, to the Curator at Fairmead, Northway, Pinner, Middlesex, and tell him that they would like their name to remain on the list. Please enclose a stamped addressed envelope.

It is regretted that no additional names can be accepted, as it is unlikely that all those from the original list can have their orders fulfilled.

Photographic Competition Members are reminded that the closing date for this competition is the 7th November. Full details of the contest appeared in the April 1963 issue of the Journal.

Preservation Fund Donations to this Fund, full details of which appear in the article on pp.121-2 of this issue, should be sent to the Treasurer, at 66 Hare Lane, Claygate, Surrey, with a clear indication that the money is intended for the Fund.

Book Orders All orders for books mentioned in the Journal as being obtainable from the Society should be sent to R.E.Labrum, at 134 Cranley Drive, Ilford, Essex, and should be accompanied by the appropriate remittance. All books are post free.

THE TIMETABLE

Saturday 9th November 10 a.m. A Study Tour of the Diversion Works in the Barbican Area. This "cut and cover" operation was referred to in the article on pp.109-10 last month. This is an unrestricted tour, and all are welcome, including visitors. No application is necessary - meet in the Metropolitan booking hall at Moorgate station.

Saturday 16th November 11 a.m. to 7.30 p.m. Stand at the Annual Exhibition of the Norbury Transport and Model Railway Club, at The British Legion Hall, London Road - nearest station, Norbury.

Early December Modellers' Evening - details next month.