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THE BRIXTON EXTENSION OPENED

As we go to press we have brief details of the opening of the Brixton Extension of the Victoria Line, which commenced a public service at 15.00 on Friday, 23rd July 1971.

On that day a special service was run, with all trains reversing south to north at Victoria until 15.00, and thereafter running a full service to Brixton. This Opening Day service ran also on the preceding Monday (19th July), but all trains ran empty between Victoria and Brixton, and special trains ran on the 23rd for the Official Opening by Princess Alexandra - details of which it is hoped to publish at a later date.

On Tuesday 20th July there was a Press Conference and Tour to show off the new line to the gentlemen of Fleet Street, and a very large number of their representatives turned up for a fairly exhaustive tour followed by a Conference at 55 Broadway. Some more detailed notes on the line will be published next month, which completes the Victoria Line as at present planned, except for the station at Pimlico - which was only added to the plans at a later date, and will not be completed until some time in 1972.

The public service began on the 23rd July with a train departing from Victoria and one leaving Brixton, both at precisely 15.00. As has happened for the openings of the preceding three sections of the Victoria Line, the railway enthusiasts turned out in force, and their numbers were swelled on this latest occasion by tourists and holidaymakers who joined in this London occasion with alacrity. The extension was well patronised for the rest of the opening day, also, as curious Londoners tried out the latest addition to their underground railway system.

NEW NORTHERN LINE TRAINS

London Transport announced on 5th July 1971 that the first of the 30 new 7-car trains for the Northern Line should be in service by Spring 1972, and all should be running by Summer 1973. The trains were ordered in agreement with the Greater London Council policy for rolling stock replacement and will cost £8 $\frac{1}{2}$ m. They will be similar to the Victoria Line stock but will be conventionally operated by a crew of 2 - although provision will be made for conversion to one-man automatic operation if required later.

Bodies and bogies are to be built by Metro-Cammell Ltd. of Birmingham under a contract worth £3 $\frac{3}{4}$ m; preliminary work has started, but full production will not commence until the 35 trains of C69 stock, also being built by Metro-Cammell, has been completed in a few months' time. The trains will be replacing a similar number of 1938 Stock trains which will be withdrawn, and the remainder of the existing Northern Line trains will be replaced by stock now running on the Piccadilly Line when that line receives its new stock.

Other contracts for equipment of the new trains are as follows:

Control Equipment & Wiring - English Electric - AEI
Traction Limited, Manchester
Traction Motors - Brush Electric Engineering Co.Ltd,
Loughborough
Brake Equipment - Westinghouse Brake & Signal Co.Ltd,
London
Doors - Dialoy Ltd, Caerphilly
Air-door Equipment - G.D.Peters, Slough
Axleboxes and Suspension Units - British Timken,
Northampton.

Each train will have four motor cars and three trailers, with the seating all longitudinal in the trailers, providing 36 seats each, and the motor cars will have 40 seats each, arranged in the conventional manner with longitudinal and transverse seating. The two-level armrests will be used.

Each train will be composed of 7 cars in a 4-car and a 3-car unit; the four-car unit will comprise two driving motor cars with two trailers between them; the 3-car units will each consist of a driving motor car, a trailer and an uncoupling non-driving motor car. The four-car units will be reversible.

Full automatic couplers will be provided, including electrical and pneumatic connections, and there will also be a mechanical coupler for emergency use at the outer (cab) end of the 3-car unit driving motor car.

Leading dimensions are to be as follows:

	ft	ins
Length over body end panels		
driving motor cars	52	9½
trailer and uncoupling		
non-driving motor cars	52	5
Width over lower panels	8	8
Height from rail over carlines	9	5⅛
Height from rail to top of solebar	2	2⅞
Bogie centres	33	11
Bogie wheelbase	6	3
Diameter of solid disc wheel	2	7

Construction methods and materials used for both bodies and bogies will be the same as for the Victoria Line stock, and the same traction control and rheostatic braking equipment will be employed, with all four axles of the motor cars being motored, using 300V motors in series in pairs.

PRINCIPAL ASSISTANT (HISTORICAL RELICS) APPOINTED

London Transport has appointed Mr P.R.Silverlock, C.Eng., M.I.Mech.E., as Principal Assistant (Historical Relics) in the Department of the Chief Public Relations Officer. He will be responsible for the removal and storage of the LT exhibits from the Museum of British Transport at Clapham if and when that museum closes; for relics elsewhere, and will also be responsible for matters affecting LT staff now employed at Clapham. Mr Silverlock was closely concerned with the movement of LT's exhibits into the Clapham museum when it was set up, and also with the restoration of the two LT locomotives in the museum.

Mr Silverlock is Divisional Engineer 'A' (Railways) at present, and he joined London Transport in 1937 as an engineering inspector, transferring to the Running Division of the railway mechanical engineering department in 1942.

WATERLOO AND CITY RAILWAY
DOUBLE-ENDED MOTOR CARS OF 1899

P.R.Davis

The original rolling stock provided for the Waterloo and City Railway comprised five trains of four cars each; every train consisted of a motor car at each end with two trailers between. The trains had through power lines which enabled them to be controlled from the leading cab, and this stock made the Waterloo and City the first line in the world to use motor cars in regular passenger service when it opened on 8th August 1898.

The line had been conceived from the outset as one to carry mainly commuter traffic from Waterloo to the City business centre of the metropolis, so that the expectation of traffic peaks was inherent in the planning of the railway. No provision had been made, however, for running shorter trains in off-peak times, which was probably an oversight - bearing in mind that each car was manned by a conductor, the operation of unnecessarily long trains was expensive in labour costs as well as involving the additional power and depreciation expenses as would be incurred by today's trains.

In addition to the five complete trains referred to above, the original stock included two spare motor cars, but these did not provide a solution because they were single-ended cars intended as replacements for motors being serviced.

Evidently this problem did not escape attention for very long. The Minutes of the London and South Western Railway, Locomotive and Stores Committee, record on the 6th July 1898 (before the public opening, be it noted):

"Waterloo and City Railway

"Rolling Stock

"The question of providing four additional Carriages for the working of the Waterloo and City Railway was considered and ordered to come up again."

This did not refer specifically to double-ended cars, nor did the next minute on the subject, relating to the meeting on 3rd August 1898:

"Waterloo & City Railway Rolling Stock

Referring to the minute of the 6th ultimo the question of

providing four additional carriages for the Waterloo & City Railway was again brought up.

"The General Manager to report further."

However, an original draft for this minute has survived, and is much more informative. This reads the same as the actual minute in the first paragraph, but the second reads:

"General Manager to suggest a report from the Electrical Engineers as to providing four coaches which should be self-contained."

The very next day, 4th August 1898, the then General Manager of the L&SWR wrote to W.H.Preece in the following terms:

"My Dear Sir,

"I have given very careful consideration to the question of the best service we can run upon the Waterloo and City Railway during the slack hours of the day.

"I am inclined to think that we should - say from 11 until 3 - make a sort of omnibus service.

"By this I mean we should run one car with a motor or motors at one or both ends so that it should be absolutely self-contained and be sufficient to accommodate say 40 passengers.

"Such a car ought, I imagine, to be worked easily by a staff of two men and would, I presume, not need more than half the power we use for the ordinary trains.

"If I am right in my ideas, with such cars we could maintain a five minute service during the slack times of the day reserving our other coaches for a similar service at the busier hours.

"Perhaps you will also kindly advise me as to the possibility of forming such cars, as I have suggested, into one complete train for use as circumstances may occasion.

"Will you be so good as to give this matter your fullest consideration and let me have your opinion upon it.

"I am writing to Professor Kennedy a similar letter and possibly he may confer with you thereon.

Yours faithfully,
C.J.Owens"

An almost identical letter did, indeed, go to Professor Alexander Kennedy that same day, but Kennedy was abroad at the time, his reply not being dated until 26th September. It was, however, encouraging:

"Dear Sir,

Waterloo and City Railway

"In reply to your letter of the 4th August as to carrying on of traffic during hours of light working in the middle of the day, I have to say that I have very carefully considered the matter. I have come finally to the conclusion, about which I have now no doubt, that the most satisfactory way, - and indeed the only satisfactory way, - of solving the problem is by using special coaches constructed with two motors and with a cab at each end so that they could run in either direction. Each coach would hold about 50 people and would therefore probably be ample for midday traffic. The use of these coaches would naturally tend greatly to economy of working as the Station would have to supply power only for this very light traffic instead of for the present heavy trains during the time the trains are running nearly empty.

"I have considered the possibility of altering the present motor coaches by the addition of a cab at what is now the inner end of each coach, but I find that the complications necessary for doing this would be very great, and the practical drawback of having to couple and uncouple coaches during the day would also be great. It would not be a mere question of uncoupling a coach, but also of uncoupling a very large number of electrical connections and re-making them so as to suit the single coach traffic, and this would necessarily take some time and cause considerable inconvenience.

"As the present siding space at Waterloo is all required to meet present requirements, and as you would want four or five double ended coaches, each about 48 feet long, you would require additional siding accommodation to the extent of 80 or 100 yards. I do not see, however, that there would be any serious difficulty in providing this if it were thought necessary, - it is a matter which you could no doubt bring before the Board of the Waterloo and City Rly. in case it were required.

"I remain,

Yours faithfully,
Alexander Kennedy"

Mr Preece did not reply so quickly, as he was on vacation in Wales, nor was he so enthusiastic when he did answer on the 9th October, and his conclusion was not the same as that come to by Professor Kennedy:

"Dear Sir,

Waterloo & City Rly.

"I have given much consideration to the question of the best mode of conducting the service during the slack portion of the day, but in connection with it is the important question of the unexpected weight of the coaches and the increase in the weight of the trains from 72 tons to about 120 tons. That we have suffered no serious inconvenience from this unforeseen event is due to the foresight and zeal of the Contractors, Messrs Siemens, who in the motors they supplied have far exceeded the conditions of their Contract. There remains the fact however that the motors are small for their work.

"It has been suggested that they should be strengthened by rewinding the armatures. I am informed by Messrs Siemens that it is just possible to lengthen the armatures by about one inch and to make room for another layer of wire by planing the field magnets but I am assured and I quite concur with the assurance that the increase in power would be very slight and quite out of proportion to the cost of making the alteration. I cannot recommend that it be done.

"I recommend that 5 new motor cars be ordered fitted with motors strong enough to move the heaviest trains, loaded even to the filling of the standing room, in either direction on the same line. These motors should be attached to the heavy trains and those replaced be coupled together two and two to work the light day traffic. At the present time if one line is broken down the whole traffic stops but I can see no difficulty in working either line, shuttle fashion, and so maintaining the railway at work if an accident occur.

"The coupled motor cars would entail no alteration at all for they would then have their proper weight, viz., 72 tons, and the new trains with the new motor cars at one end and the old one at the other would be exactly adapted to the heaviest work likely to arise.

"Moreover there would be no fear of not keeping time. The service should certainly be a five minutes service. It was

promised by the Chairman and its absence has led to much disappointment. I see no difficulty in obtaining it.

"There is the important question of signals. I have never travelled on the line without being checked near the bottom of the Incline. I am told that the present midway signals are in such a position that all trains must be slackened down before the signal comes in sight. This not only involves loss of time but it throws an extra and unnecessary strain on the motors and wastes energy.

"If an additional light, an advance signal, were placed in such a position that the driver could see it a good distance off this check would be prevented and the time of transit shortened. This would not alter the present system of signalling nor involve reference to the Board of Trade.

"I am assured by Messrs Siemens that there is no difficulty in working one line only even with the present trains if sand be provided for use on the 1 : 30 incline. On one occasion in the trial runs the wheels of a train on that incline turned round showing the motors were powerful enough but the train did not move owing to the slippery state of the rails.

"I have therefore no fear that with the new motors we should be able to work without any difficulty.

"The question of working with only one motor car requires further consideration. It means a new car with a cab at each end for it is not practical with the present cars.

"I recommend very strongly that orders be given to construct 5 new motor cars and that the details on the lines I have indicated be left for you and me to arrange with Mr Siemens.

"I am,
 "Yours very truly,
 W.H.Preece"

At the meeting of the Locomotive and Stores Committee on the 11th October, Preece's letter was considered, and instructions were given for plans and estimates to be prepared and submitted to the Committee for the construction of 5 new motor cars as suggested by Preece. Owens immediately wrote to Preece (who was still on

holiday at Penrhos, Carnarvon), asking him to get in touch with Siemens to get these plans prepared as quickly as possible.

Kennedy made arrangements for an experimental train to run on the evening of Friday 28th October, but neither he nor Owens could be present - which seems to have been rather unfortunate, because the experiments failed, due, according to Kennedy, "Siemens people neglected absolutely to carry out my instructions in preparing for them...."

In the meantime, Owens had consulted George T. White, Superintendent of the Line, on the question of sufficient siding accommodation for the extra coaches; in reply White, on 1st November, stated that there was insufficient siding space for the then existing rolling stock - one train having to occupy a platform line during the night. He concluded that accommodation in the shunting yard at Waterloo would have to be increased "unless it will be satisfactory to the electrical department to stable one train in the lift siding at Waterloo and another in the lay-by road at the City when taken out of service during the quiet time..."

White felt that the new coaches would have to be bigger than other people thought necessary, stating that accommodation for not less than 60 passengers would be required "as we frequently get that number for a train now during the slack time".

At this stage in the deliberations a number of reports were received, all dated at some time in mid-January 1899, which shed some interesting light on the attitude of the parties concerned to the motored stock. That there was some dissatisfaction is clear; Professor Kennedy says that "the motors must be rewound if any more frequent service or quicker speed is required", while a suggestion appears to have been made by none other than Mr Drummond that the motor cars should be replaced by locomotives at the end of each train; Drummond also appears to have suggested that the trains should be split; and each portion worked by a separate motor, the two trains being coupled in the morning and evening when traffic was heavy.

The comments of the Electrical Engineer, Heap, on Drummond's suggested locomotives are enlightening. Writing

on 16th January 1899, he states that he agrees that "alterations must be carried out at once to diminish the wear and tear of the tyre of the motor and trailer bogie wheels and the excessive wear of the rails. I consider the whole question a serious one and hope that an alteration will be authorised at an early date." He then strongly recommends one locomotive per train - "that is the present four motors per train should be placed in new and stronger bogies with the necessary frame and cab to take the controller gearing etc; (the bogie now in use being placed under the motor car).

Next comes this illuminating paragraph:

"A number of practical difficulties which we now deal with daily would be done away with, for instance, one train stands idle per day over the pits, so that the electrical equipment and motors can be examined and repaired; if locomotives are used it will only be necessary to place it over the pit for a few hours per day which leaves the passenger carrying stock available for use as required; the maintenance of the electrical appliances should be reduced, as the locomotive is self contained and carries all motors, controlling gear, under the eye of the motor-man. At present we have 2 sets of controlling gear in use per train as well as all the cables, cable connectors etc on the cars and three out of the four motors are quite out of the motor-man's view during traffic".

It was estimated that seven locos would be needed to maintain a five-minute service throughout the day, and the suggestion was that two entirely new locomotives should be built, so that the service could be maintained while the motors from the existing motor cars were removed for the building of the other five locomotives.

Heap was of the opinion that these new locomotives could not be delivered in under nine months, and therefore recommended the ordering of some single car stock immediately to reduce the wear and tear and working expenses as soon as possible. He suggested cars "such as the one in use by the Glasgow Corporation", but with "the bogies and motors being made strong enough for our rough work". The proposal was for these cars to work from 11 a.m. to 4 p.m. and from 7 p.m. to 10 p.m. It was pointed out that only two men would be needed to operate these cars, and that they would not weigh

more than twenty tons complete. For a five-minute service five cars would be required, but only three for a ten-minute frequency.

Heap also pointed out that the rewinding of the motors on the existing cars would be necessary if locomotives were to receive the motors because the weight of the loco-hauled trains would be greater than the existing trains.

A quotation was received from Siemens Bros & Co Limited on 30th January, dated that day and delivered by hand, giving a price of £375 each for the additional motors, based on the assumption that delivery of the first motor would be thirteen months from receipt of order; if delivery were required in seven months, Siemens' stated that this could be done, but the price would rise to £475 each. The same quotation includes a price of £150 each for electrically driven air compressors capable of supplying the brakes of the whole train.

On the following day Heap sent a long report to C.J.Owens, quoting Siemens' estimates and giving his own estimates of the cost of equipping the five locomotives to be built using the existing motors.

At this point the General Manager seems to have decided against the purchase of any single motor cars, for on the 3rd February 1899, Heap is writing again to C.J.Owens, asking him to reconsider this decision, stating that he considers the wear on the present stock excessive, and pointing out that the tyres will have to be replaced, necessitating the laying up of some of the cars. Whatever the effect of Heap's request, the Locomotive and Stores Committee, at its meeting on the 15th February had estimates presented to them by the General Manager "for five cars with a motor at each end to be used for single car working throughout the slacker portions of the day". Siemens' quoted £9350 for 13 months delivery or £10,000 for 7 months; Dick, Kerr & Co quoted £7000 for delivery "in August next", but suggesting a possible delay owing to the peculiar construction of the underframes. The Committee decided that the matter should "come up again". The next day, Owens wrote to both Professor Kennedy and W.H.Preece, seeking their views once more. In response to this request, Kennedy suggested that further quotations should be obtained, and put forward the names of Thomas Parker Limited and the Electric Construction Co. Owens agreed to this and

left the arrangements to Kennedy and Heap for these quotations to be obtained. These two gentlemen duly carried out the assignment - and requested an estimate from Mather and Platt Limited in addition.

The time of decision had arrived. On 1st March 1899 the Locomotive and Stores Committee met again, and considered tenders submitted as follows, together with reports from Preece, Kennedy and Heap:

<u>Name</u>	<u>Price per Car</u>	<u>Time of Delivery</u>
Siemens Bros & Co	£1870	Commence in 13 months
" " "	2020	" " 7 "
Dick Kerr & Co	1400	" " 6 "
The Electric Construction Co	2122	1st Car in 7 $\frac{1}{4}$ months
	or 2247	"

The actual estimates have not been seen by the writer, and it is not clear from the Minutes what differences there were in the two tenders from the Electric Construction Co. Whatever they were did not, in the event, make any difference, as the recommendation to purchase the cars having been approved by the Committee, the tender of Dick Kerr's was accepted.

Heap's struggle to obtain a decision favourable to his wishes had been successful at last - but now began what was almost as hard a fight to get delivery from the manufacturers. Dick Kerr received the contract principally because they had promised speedy delivery, and the first car should have been delivered by 6th September 1899; but it did not work out like that at all.

On the 26th July 1899 the builders were instructed by the Electrical Engineer to fit the five new cars with electric emergency lamps instead of the two oil lamps specified "as the latter are working most unsatisfactorily". The extra cost of this change was £12-10-0 per car, and the Electrical Engineer's action - which had been taken with the concurrence of the General Manager - was confirmed by the Locomotive, Carriage and Stores Committee at its meeting on 2nd August. This appears to have been the only alteration made in the specification during the building period.

The manufacturers did not succeed in keeping anywhere near the agreed delivery dates. Heap visited Dick Kerr's works on 22nd September (the first car having been due for

delivery on the 6th), and reported to Owens on his return that the work was "well in hand but at present well behind hand". This curious phrase presaged some alarming delays. At the time, the deliveries were expected to commence at the end of October, Heap expressing himself as well satisfied with the way the work was being done, even if he was not happy about the delay.

Heap made two further visits to the works, on 14th November and 30th November, and found on the latter occasion that little progress had been made since he was last there. The delay was apparently that of the builders, all the electrical equipment being available. On the strength of this report the Committee instructed the Secretary, on 6th December, to write to the contractors, and this was done three days later, expressing the disappointment of the Directors, and pointing out the penalties being incurred by late delivery. Replying to this letter on the 16th December, Dick, Kerr & Co. said that the delays were due to late deliveries by sub-contractors and the exceedingly difficult nature of the work required to make a satisfactory car of the type required.

By mid-January the promised delivery date was the end of the month, but on the 10th February 1900 Charles Owens was writing to Heap saying that he was very surprised that he had not heard regarding the delivery of the cars, and asking Heap what steps he had taken with the contractors "seeing that they have so signally failed to carry out their promise". Now the exchange of letters ceased, and telegrams became the order of the day. Whether this change of tactics had the desired effect, or whether it was purely coincidental we shall never know, in all probability; but whatever the reason, the cars were delivered on 18th February.

By 3rd March, the Electrical Engineer's Department had carried out tests and found that the cars were in accordance with requirements and running was satisfactory - despite the fact that the contractors still had a few electrical details to carry out. There had to be a final delay, however; it was found as tests continued that the cars were starting too quickly, and on 8th March it was estimated that this fault would take at least a week to rectify. The cars actually began to run on 2nd April 1900, presumably for crew training, and entered passenger service two weeks later, on the 16th April 1900.

Acknowledgement

The author gratefully acknowledges the assistance given him in the preparation of the above article by Mr R.H.G.Thomas, who supplied much of the documentation and information from which it was written. Mr Thomas has donated a batch of the relevant documents to the Society, and thanks are extended to him for this generous action also.

YET ANOTHER SERIOUS UNDERGROUND DELAY

Almost unbelievably, London Transport has allowed another incident to develop into an occasion when large numbers of passengers were held in stationary trains in tunnel.

On Sunday night, 12th July, there was a cable explosion at Barons Court, which delayed trains for over an hour on both Piccadilly and District Lines. Although engineering staff worked throughout the night it was not possible to restore a full service for the Monday morning rush hour. Notices were posted at the affected stations to the effect that there was a restricted service on the District and a very restricted one on the Piccadilly, and advising passengers to travel by alternative means.

What was not made clear, however, was that the trains which did run would be subjected to delays which, in the prevailing heatwave conditions, were potentially highly dangerous.

One victim of the incident reports that he was held in a Piccadilly Line train, which was packed to the doors, for approximately forty minutes between Caledonian Road and King's Cross on Monday morning without proper warning that this might happen. In his own words "There was no air; the temperature was terrific; everyone was frightened by it".

It seems incredible to this Journal that LT could allow such conditions to be endured by their passengers yet again - for it seems to be a regular occurrence now. There is, especially, little excuse on this occasion, for the origin of the trouble was the cable explosion many hours before, and there was adequate time both to ensure

that delays of this nature did not occur, and, as a second string to their bow, so to speak, to fully brief train crews on the appropriate action if, despite precautions, such delays took place. It seems that passengers were not given any information or reassurance on the particular train referred to above, which is inexcusable.

It would be interesting to learn LT's excuse for this further lapse from their usual consideration for their passengers - a lapse of a kind which is becoming monotonously frequent, cannot be justified and is potentially highly dangerous. Excuse or not, it is to be hoped that this is the last incident of the kind to need reporting in these pages.

UNIVERSITY OF LONDON EXTENSION COURSES 1971-72

The Department of Extra-Mural Studies, University of London, is running its usual courses for the Certificate and the Diploma in Transport Studies during the Session 1971-72. Both Courses are intended for those who have prior academic or professional qualifications, although there are no specific requirements for admission to the Courses. Study for the Certificate may be taken as either a two or a three year course, although to take it in two years involves day-time study. The Diploma is taken as a one-year course of post certificate study.

For those already holding the Certificate or the Diploma, there are various additional courses on transport and allied subjects commencing in the new session, and in addition again there are some shorter courses in Transport Studies organised in conjunction with the University Transport Studies Society. The subjects for these short courses in the coming session are

Current Changes in British Ports
New Modes in Transport
British Rivers and Waterways
Living in Hertfordshire

Further details of these courses may be obtained from the Editor at 62 Billet Lane, Hornchurch, Essex, RM11 1XA, or from the Deputy Director (Extension), Department of Extra-Mural Studies, University of London, 7 Ridgmount Street, London, WC1E 7AD - telephone 01-636 8000, Extension 264. Early application is advisable for all courses.

SOCIETY NOTICES

PHOTOGRAPHIC COMPETITION The Judge for the Photographic Competition was G.M.Kichenside, Editor of "Railway World", to whom the Society is indebted for his time and trouble. Both Judge and Society Committee were disappointed by the poor number of entrants, for, although there were a reasonable number of entries in some sections, they were submitted by far too few members - which is very disappointing when it is known there are a large number of photographers in the Society.

The following awards were made:

Black and White Prints - R.J.Greenaway - First
no Second and Third awarded

Colour Prints - no awards

Colour Transparencies - B.J.Prigmore - First
R.J.Greenaway - Second
C.H.Gooch - Third
R.J.Greenaway - Highly Commended

THE TIMETABLE

PLEASE NOTE that there is no meeting at Hammersmith during August.
Saturday 21st August Tour of East London Line and Visit to New Cross Depot. Names, accompanied by first class stamped addressed envelope, to S.E.Jones, 113 Wandle Road, Morden, Surrey, as soon as possible please.

19.00 for 19.15 Friday 10th September in the Small Hall at Hammersmith Town Hall (Please note - in the Small Hall, which is on the Ground Floor with a separate entrance in Nigel Playfair Avenue). A GLIAS Workshop, held jointly with the Greater London Industrial Archaeology Society. These Workshops are becoming a very important part of the GLIAS programme, and provide an opportunity for their member societies to show off what they are doing themselves, and to see what other societies are doing. A large attendance of GLIAS members is expected, as much of the research work done by TLURS members falls into the category of industrial archaeology, and it is hoped that a good number of our own members will come along to see what is being done by us and others. Full details will be published next month.

Wednesday 15th September It is hoped that a few places will be available in a Party to visit the LT Food Production Centre at Croydon. This will be a daytime visit, and is by courtesy of another Society. Names to Editor at address below.

Lithoed - Celtic Mailways, 93/4, Chancery Lane, London, W.C.2.

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