

MINUTES FROM THE ENGINEERING COMMITTEE MEETINGS

No.23 HELD ON 9 JANUARY 1934

Bakerloo Line – Camberwell Extension: Properties

Mr. Cooper submitted a memorandum stating that the Consulting Engineers had advised that the working site, which is already restricted, would be seriously limited by the loss of the property in Camberwell Road, as the total frontage, now only 62 feet, would be reduced to 46 feet, and that in the circumstances it would be inadvisable to limit the site to this extent. Mr. Buller reported that Messrs. Cluttons had been so informed. Noted: For reconsideration in six months' time.

Knightsbridge Station – North Entrance

Mr. Cooper submitted a memorandum, together with a drawing showing proposed plan and elevations of stairwells and railings forming the north entrance to Knightsbridge station.

This was approved subject to the railings of both stairwells being extended on the north side to balance those on the south side, and for the purpose of accommodating bullseye direction signs indicating 'To the Trains'.

Knightsbridge Station – Platform Tiling

Mr. Cooper submitted for consideration a drawing showing the proposed tiling, poster spaces, etc. for the eastbound and westbound platforms at Knightsbridge Station, as recommended by the Station Committee.

This was approved. The layout signs to read alternately 'Way Out, Sloane Street' and 'Way Out, Brompton Road'.

Parsons Green Station – Reconstruction

A drawing showing the proposed scheme for the reconstruction of the booking hall, etc. at Parsons Green station at a cost of approximately £20,000 as recommended by the Station Committee, was submitted by Mr. Cooper for consideration.

This was approved in principle and referred back to the Station Committee for the preparation of detailed plans, elevations and estimates.

Moorgate Station

The Vice-Chairman gave instructions for the preparation as soon as possible of a new scheme for the display of commercial advertisements on escalators, with special reference to the proposed construction of escalators connecting the platforms of the Edgware, Highgate & Morden Line with those of the Great Northern & City Line at Moorgate station.

Escalator Tunnel Design

Arising out of consideration of the lower escalator landing layout at Leicester Square station, Mr. Cooper submitted a memorandum as to the possibility of having a smaller sized tunnel at the lower landing of an escalator station, together with a diagram showing clearances. There appeared to be no satisfactory solution.

After consideration the Vice-Chairman stated that so far as new escalator schemes are concerned, an attempt should be made to get a standard form of connecting structure between the horizontal and inclined tunnels.

Charing Cross Embankment – Proposed Coach Station

With reference to an earlier Minute, Mr. Cooper submitted for consideration a drawing showing proposed coach station to be located inside the District Line station, with a through road from the foot of Villiers Street to the Embankment. After discussing the proposal in detail, the Vice-Chairman directed that a fresh scheme was to be prepared with a view to making a model.

Morden Station Garage

At an inspection, consideration was given to a proposal to enlarge the forecourt of Morden Station Garage at the west corner, by setting back the parapet of the bridge at this point, and to increase the petrol installation at an estimated cost of roundly £500. It was agreed that this proposal represented a desirable improvement.

A decision was deferred pending a report by the Audit Officer as to the financial results of the garage during the last year. The Vice-Chairman directed Mr. Buller to satisfy himself that the boundaries of the Board's property in front of the Garage are properly marked.

Tooting Broadway Station

At an Inspection of Tooting Broadway Station, the following matters were noted and decisions taken:

(a) Escalator Tunnel Lining

That the experimental treatment of the escalator tunnel lining with a bitumastic solution covered with a waterproofing cement, executed by Messrs. Telling to the specification of Messrs. Chemical Building Products at a cost of approximately £200, and guaranteed by the former firm to prevent the percolation of water for a period of three years, appears to be successful; but that having regard to the low rainfall since the work was done, the results at this station should be watched for a further period, say, three months – before the method is adopted elsewhere

Further as the new lining might not remain waterproof if broken at any point, it is desirable that the escalator advertisement frames, when replaced, should be fixed to the escalator balustrading and not to the tunnel iron: Mr. Duncan, in consultation with Mr. Robertson, to prepare and submit for approval a new design of escalator advertisement frames complying with this requirement.

(b) Outside Walls – Discolouration

That the stone facing of the outside walls adjoining the station entrance is badly discoloured and marked by contact with clothing, etc. up to shoulder level.

The Station Committee to submit for approval a suitable proposal for cleaning and treating, or, alternatively, for refacing, the dirty surfaces, so that the unsightly discolouration will not recur.

No.24 HELD ON 15 JANUARY 1934

Special Expenditure Requisitions

The following Special Requisitions were submitted for approval and the signature of the Vice-Chairman :

- (a) H.20 for the installation of escalators between the platforms of the Edgware, Highgate & Morden Line and those of the Great Northern & City Line at Moorgate Station, at a cost of £49,170 the work to be executed by the Chief Engineer.

Approved: To be charged to Capital Account

Knightsbridge Station – North Entrance

In accordance with a recommendation contained in a memorandum, submitted by Mr. Cooper, it was Decided that the stairwell railings for the north entrance to Knightsbridge Station be erected, which provides for the extensions of the railings at pavement level to be placed on the north side of the staircases away from the kerb and to carry bullseye direction signs, 'TO THE TRAINS', there being no occasion to extend the railings on the south side of the stairwells as they are set back several feet from the kerb. The extension pieces of the railings to be made easily removable, if practicable, as they are likely to be obstructive in the event of the pavement being widened on the north side of the stairwells to the suggested future building line.

Osterley Station

Mr. J.P. Thomas reported that local residents, who would be prejudiced by the removal of Osterley Station from its present site in Thornbury Road to its new site on the Great West Road, were bringing increasing pressure to bear upon the Board to provide a footpath from the present station site alongside the line to the new station in order to shorten the walking distance. Having regard to the relatively small number of passengers concerned and to the fact that the provision of the proposed footpath would be likely to involve the Board at a later stage in providing a footbridge connection between the footpath and the east end of the platforms and to employ an additional Collector for this purpose, the Vice-Chairman stated that the proposal should be firmly resisted.

Metropolitan Improvement Programme

The Vice-Chairman stated that as a matter of urgency a comprehensive programme for the improvement of the Metropolitan Railway system should be drawn up, and directed Mr. Cooper, in collaboration with Messrs. J.P. Thomas, Millen and Agnew to prepare and submit at the next meeting a complete list of works to be undertaken, with provisional estimates for each, in order to bring the Metropolitan Lines and services up to the best standard of the Board's railways, under the following headings and upon the assumptions indicated below:

(a) Inner Circle Line

Assume breaking of Circle service at South Kensington, but continued operation of a through service between the north side of the Circle and the District Line over the west curve at Aldgate.

Provide for:

- (i) Reconstruction of South Kensington and Gloucester Road Stations and flyunder at Cromwell Curve East Junction.
- (ii) Reconstruction or modernisation of other Circle Stations, where required, including complete replanning of Baker Street, Kings Cross and Aldersgate top stations.
- (iii) Resignalling, relighting and other improvements, as required.
- (iv) Additional power supply, if required.

(b) Hammersmith & City and Addison Road Lines

Assume operation of through service of 8-car trains from Hammersmith to Barking and Upminster Line, in substitution for existing service to East London Line.

Assume operation of through service from Earls Court via Addison Road and north side of Circle to Baker Street either in substitution for existing L.M.S.R. service from Earls Court to Willesden (if L.M.S.R. will agree), or in addition to that service (if track capacity at Earls Court Station will permit).

Provide for:

- (i) Reconstruction of Aldgate East Station and of the south curve and junction at Aldgate East to admit of the operation of 8-car trains over the north curve.
- (ii) Provision of reversing facilities at Baker Street to supersede existing facilities at Edgware Road.
- (iii) Reconstruction or modernisation of stations on Hammersmith & City and Addison Road Lines, where required, including rebuilding of Hammersmith Station on the vacant Broadway frontage, and lengthening of platforms throughout for 8-car trains.
- (iv) Resignalling, relighting and other improvements, as required.
- (v) Additional power supply if required.

Main Line (Baker Street to Harrow) and Met, & G.C. Joint Line

Assume operation of 40 trains per hour into and out of Baker Street at peak periods; electrification to Amersham; operation of all trains originating or terminating beyond Amersham to and from Marylebone Station, and not Baker Street; operation of through trains between the Stanmore Branch and Baker Street; and closing of St. Johns Wood (except for cricket matches at Lords), Marlborough Road and Swiss Cottage Stations.

(c) Great Northern & City

Assume extension of the Line northwards, and consequent increase in traffic; possible extension of the Line southwards to Lothbury or linking of the Line with the Waterloo and City Line at Bank; operation of the Line by new rolling stock of L.E.R. type.

Provide for

- (i) New rolling stock.
- (ii) Permanent way and other alterations required to suit new rolling stock.
- (iii) Reconstruction or modernisation of stations, where required.
- (iv) Resignalling, relighting and other improvements, as required.
- (v) Additional power supply, if required.

NOTE: Provisional estimates to be added for (vi) extension of the Line northwards, when route and terminal have been agreed, and (vii) linking with Waterloo & City Line, if this proves upon further examination to be a satisfactory proposal.

Metropolitan Line Improvement Programme (cont.)

In connection with the above proposals, the Vice- Chairman further directed Mr. J.P. Thomas.

- (1) To enquire into and report upon the practicability of abandoning or modifying the L.M.S.R. service between Earl's Court and Willesden, in order to permit of the proposed service between Earl's Court and the north side of the Circle via Addison Road, with a view to the matter being referred at an early date to the Special Preparatory Committee.
- (2) To submit proposals for the northern extension of the G.N.& City Line, with a view to the matter being referred in due course to the Special Preparatory Committee.
- (3) To consider and report (a) upon the need for additional track capacity on the Met. & G.C. Line north of Harrow and in this connection (b) upon the desirability or otherwise of submitting to the L.N.E.R.

and the Special Preparatory Committee a proposal that all L.N.E.R. fast trains between the Midlands and Marylebone should be worked via High Wycombe and not Aylesbury and (c) upon a proposal that such additional track capacity as may be required north of Harrow could be afforded by the provision of a third track only, and need not involve four-tracking.

Metropolitan Line Rolling Stock

Mr. Agnew submitted a memorandum calling attention to a number of principles which should be laid down before it was practicable to submit a comprehensive programme for dealing with Metropolitan Line rolling stock. It was –

DECIDED: that Mr. Agnew submit as soon as possible a complete synopsis of all rolling stock transferred to the Board from the Metropolitan Railway, together with particulars of the age and the accrued depreciation to date in respect of each type, and that a complete programme for the replacement of this rolling stock, or for its modernisation and improvement, as required, be prepared on the following assumptions:

- (a) That it is not intended to introduce on the Metropolitan Line any additional compartment stock.
- (b) That trains capable of District Line speeds will be acceptable for Metropolitan Line services.
- (c) That the retirement of all wooden rolling stock is desirable in principle, but it is not to be regarded as an immediate necessity.
- (d) That the necessary adjustments should be made to secure that all modern compartment stock is interchangeable.
- (e) That for the Metropolitan Line services, the District Line standard of a 4-car main portion with additions of 2 cars to make 6-car and 8-car trains to be adopted.
- (f) That air doors are not required but that on new or reconstructed stock the doors should be designed so that air engines may be easily fitted.
- (g) That in view of the intention to provide L.E.R. type stock on the Great Northern & City Line old Metropolitan Line stock cannot be transferred to the Great Northern & City Line, but that on the other hand a use should be found, if possible, for the present Great Northern & City Line cars which are in good condition.
- (h) That, if possible, an arrangement will be made with the Great Western Railway, whereby the Board will own the stock employed on the Hammersmith & City Line services on the same basis as applies under the Board's Agreement with the L.M.& S.R. to the stock employed on the Watford and Barking services.
- (i) That in new Metropolitan stock the District Line train formation should be followed, with partitioned First Class cars.
- (j) That the saloon stock should be painted red and cream and the compartment stock left its present brown colour.
- (k) That the haulage of trains by electric locomotives will be continued, but that no more electric locomotives will be bought.
- (l) That no decision can be given at this stage as to the desirability of providing automatic couplings.

MEETING No.25 HELD ON 22 JANUARY 1934

Metropolitan Improvement Programme

Consideration was given to an Interim Report on Physical Conditions of the Metropolitan Line, submitted by Mr. J.P. Thomas, and generally to proposals for the improvement of the Line. It was

decided that Mr. Cooper proceed with the preparation of a comprehensive programme of works to be undertaken for the improvement of the Metropolitan Railway system, with provisional estimates, upon the assumptions set out in the previous Minute, subject to the following adjustments and additional comments:

(a) Inner Circle Line

Provisionally assume operation of services as shown on a diagram in Mr. J.P. Thomas' Report, viz: 7 and a half minute service Wembley Park to Wimbledon, via Aldgate; shuttle service Baker Street to South Kensington, via High Street; and shuttle service Edgware Road to Putney Bridge, via High Street, together providing 16 trains per hour on the west side of the Circle.

Provide for:

- (i) Reversing facilities at Baker Street for proposed shuttle services between South Kensington or Putney and Baker Street, via High Street with direct platform interchange to trains going to and

from the east (as previously contemplated for proposed shuttle service between Earls Court and Baker Street via Addison Road).

(ii) Complete replanning of Liverpool Street, in addition to Baker Street, Kings Cross and Aldersgate.

(b) **Hammersmith & City and Addison Road Lines**

Abandon proposal for operation of a through service from Earl's Court via Addison Road and north side of the Circle to Baker Street, which is not practicable owing to goods trains routed via Addison Road.

(c) **Main Line (Baker Street to Harrow), Met. & G.C. Joint Line, and Stanmore, Uxbridge and Watford Lines**

Assume maximum operation of 40 trains per hour into and out of Baker Street on the main line, consisting of 8 Wembley, 8 Stanmore, 8 Uxbridge, 8 Watford and 8 Rickmansworth trains.

Assume retention of Swiss Cottage Station and stopping of all trains at this station.

Provide for –

(i) Reconstruction of Baker Street Station main line tracks and platforms to provide, if practicable, for the two reversing tracks to be in the centre and the two through (City) tracks on the outside. Alternatively provide for No.4 (Terminal) road to be connected to the outer-rail Circle Line independently.

(ii) Improvement of escalator connection between Metropolitan main line and Bakerloo platforms at Baker Street Station. Consideration to be given to the practicability of a two-flight escalator scheme between (a) Bakerloo platform level and an intermediate landing having easy access to the Metropolitan platforms, and (b) the intermediate landing and the street.

(iii) Widening of south end of down platform at Swiss Cottage Station.

(iv) Retention of existing flat junction at Finchley Road and reversal of present arrangement of fast and slow lines as far as Wembley Park.

(v) Complete reconstruction and replanning of Neasden Station including re-alignment of tracks.

(vi) Flyunder or flyover junction east of Wembley Park Station and complete reconstruction of the station itself to provide platform interchange between the fast and slow lines in each direction; flyunder and flyover junction west of the station between the slow lines and the Stanmore Line; and facilities for dealing with a shuttle service to and from the Stanmore Line if the traffic warrants the operation of more.

(vii) Two additional tracks from Harrow to Rickmansworth or alternatively, from Harrow to Amersham, although in the event of the L.N.E.R. agreeing to the diversion of their express trains via High Wycombe this widening will not be required.

(viii) Alterations to Neasden Car Shops and Depot.

No.26 HELD ON 29 JANUARY 1934

Moorgate Station – Interchange Escalators

In accordance with a recommendation submitted by Mr. Agnew and Mr. Duncan, it was decided that as an experiment, the interchange escalators to be installed at Moorgate Station be fitted with the latest style of escalator balustrading in Indian grey wood, as at Tottenham Court Road Station, but with bronze mouldings; and further that the present standard type of escalator frames be provided.

Metropolitan Line Improvement Programme

Hammersmith and City Line

The Vice-Chairman, accompanied by Officers concerned and by Messrs. Cox and F.W. Green of the G.W.R., inspected the Hammersmith & City Line on Friday 26 January, when the following decisions were reached:

(a) **Hammersmith Station**

Mr. Cooper to prepare plans and estimates for the reconstruction of Hammersmith Station, extending the station building over the vacant site on the corner of Beadon Road, providing entrances on either side of the public house and a new front on the building line of Beadon Road (the pull-in and taxi rank being removed); extending the platforms to 8-car train length, the extensions being carried out at the north end as far as is possible without altering the existing junctions and the balance at the south end; forming a Guard's room in the staircase structure at the north end of the island platform; removing the footbridge at the north end of the platforms, including the staircases and the extension of the bridge towards the disused Grove Road Station (subject to the rights and interests of the Southern Railway, if any); and improving the platform lighting without replacing the existing fittings.

Mr. Duncan to send to Mr. Cooper, for incorporation in the scheme, particulars of proposals for panelling the west side platform wall for commercial advertisements, the windows being dispensed with; and for replacing the existing station name boards with standard Underground bullseye station names.

(b) **Hammersmith Depot**

Mr. Agnew to submit at the next meeting plans and estimates for the improvement and partial replanning of the Depot, including the provision of a washing plant.

(c) **Goldhawk Road Station**

Mr. Cooper to submit drawings and estimates for the reconstruction of Goldhawk Station, providing for the extension of the platforms for 8-car trains; opening out the booking hall by replacing the bridge abutment by columns; providing a wide entrance under the bridge; and substituting a passimeter for the present booking office.

Consideration also to be given to replacing the footbridge over the abandoned L. & S.W.R. Line by a level crossing.

(d) **Shepherd's Bush Station**

Mr. Cooper to submit drawings and estimates for the reconstruction of Shepherds Bush Station on similar lines to Goldhawk Road, the platforms to be lengthened at the south end, if possible, and a Porter's Room and Stores to be provided. Mr. Hally to note and rectify the misuse of the sand bins on the platforms.

(e) **Wood Lane Station**

Mr. J.P. Thomas to consider the desirability of closing this station altogether. In any event, having regard to its occasional use (for the White City only) no expenditure to be incurred upon it beyond the minimum required for economical maintenance.

(f) **Latimer Road Station**

Mr. J.P. Thomas to review and report upon the relative merits of placing the station entrance on Latimer Road instead of its present site in Bramley Road. When the choice between these sites has been made, Mr. Cooper to submit plans and estimates for the new station on Latimer Road or the modernisation of the existing station entrances, as the case may be, and for the reconstruction of the platforms and the platform roofs. If the station entrance is retained in Bramley Road, consideration to be given to refacing the bridge over the road, opening out the booking hall under the arches, installing a passimeter, and closing the approach passage to the booking hall from the south side of the bridge.

Mr. Cooper to submit a scheme and estimate for the modernisation of the signal cabin.

Mr. Cooper to arrange for the Fogmen's huts to be removed.

Mr. Dawson to watch for a favourable opportunity for securing the removal of Mr. Dyer's stall adjoining the north side of the station entrance.

(g) **Ladbroke Grove Station**

Mr. Cooper to submit plans and estimates for the reconstruction of this station, providing for lengthening the platforms for 8-car trains at the west end. Removing the west end crossover, and providing a ground frame for operating the crossover and siding connection at the east end, and opening out the entrances to the station to afford a more spacious booking hall, with passimeters if possible, and new staircases further west if required, according as the structural conditions of the bridge abutment and the embankment permit. Alternatively, if cheaper, a scheme to be prepared for a new station entrance and booking hall adjoining the bridge abutment on the side from which the heavier traffic is derived.

(h) **Westbourne Park Station**

Mr. Cooper to submit a scheme of minor improvements only.

With reference to the costly scheme for lengthening the platforms for 8-cars, Mr. Cooper to approach the Engineers of the G.W.R. with a view to ascertaining whether this could not be avoided by alterations to the G.W.R. siding to permit of the lengthening of the platforms at the west end.

(i) **Lengthening of Platforms Generally**

Having regard to the fact that 8-car trains are not required to deal with the traffic on this Line except for the purpose of the proposed through running to the Barking Line, Mr. J.P. Thomas to consider and report upon the practicability of continuing to operate 6-car trains on this Line and providing the 8-car train services required for the Barking Line by projecting some part of the main line service from Wembley Park (e.g. 6-car service Hammersmith and City Line to Wimbledon Line via Aldgate, and 8-car service Wembley Park to Barking Line).