1922.

VICTORIA.

REPORT

FROM

THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS

ON THE PROPOSED

FLEMINGTON-ROAD, PEEL AND WILLIAM STREETS ELECTRIC TRAMWAY

(ESSENDON AND WEST BRUNSWICK EXTENSIONS):

TOGETHER WITH

MINUTES OF EVIDENCE AND PLAN.

Return to an Order of the *House*,

Dated 26th September, 1922, *for*—

A COPY of the Report from the Parliamentary Standing Committee on Railways on the proposed Flemington-road, Peel and William Streets Electric Tramway (Essendon and West Brunswick Extensions): together with Minutes of Evidence and Plan.

(*Mr. Barnes*).

Ordered by the Legislative Assembly *to be printed, 26th September*, 1922.

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS.

(*Fourteenth Committee.*)

R. F. TOUTCHER, Esq., M.L.A., Chairman;

The Hon. J. W. Billson, M.L.A.,	The Hon. H. F. Richardson, M.L.C. (Vice-Chairman),
A. F. Cameron, Esq., M.L.A.,	R. H. Solly, Esq., M.L.A.
The Hon. W. Kendell, M.L.C.,	

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REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS, to which the Honorable the Minister of Public Works, in accordance with the requirements of section 35 of the *Melbourne and Metropolitan Tramways Act* 1918, No. 2995, referred the special scheme for bringing the Essendon electric tramways, and also the proposed West Brunswick electric tramway, into the city by constructing an electric tramway along Flemington-road and Peel-street, North Melbourne, and William-street, Melbourne, has the honour to report as follows:—

ELECTRIC TRAMWAYS IN THE CITY.

1. As this was the first proposal submitted by the Melbourne and Metropolitan Tramways Board to construct an electric tramway in the city, it raised several important questions, including a uniform tramway system for Melbourne in the future. Among these were whether electric tramways should be permitted in the principal streets of the city; and if so, should the power be conveyed to the tram-cars by overhead wires supported by poles at short intervals in the centre of the road, or supported by span wires stretched across the streets from poles placed along the edges of the footpaths, or should the current be carried along rails in a conduit below the surface of the road. This in turn gave rise to the question whether the conduit or narrow tunnel along which the cable runs to operate the existing cable tram-cars could be used to carry the rails conveying current to the electric tram-cars whilst pasing through the city, and thus avoid vehicular traffic in the busy thoroughfares being impeded by a row of poles in the centre of the road to carry the electric wires, or the leading streets of the metropolis being disfigured, and the efforts of the Fire Brigade to subdue an outbreak of fire and perhaps to save lives hindered by rows of span wires stretched across the streets. Added to this was the high cost of installing the conduit system and the difficulty of readily determining a fault and quickly remedying it if the power were conveyed underground. If, as was declared by the Board's officials, it would be much too costly to supersede the cable system by the conduit system for the full length of the cable tramways, then there would be delays at the entrance to and exit from the city in bringing the conduit system into operation by lowering or raising the plough or slipper which has to be used to convey the electric current from the conduit rails to the tram-car. These delays, it was said, would offer an objectionable impediment to the tram traffic during the "peak loads" or busy hours in the mornings and evenings.

2. A further matter raised by the Board was that the cable tramways, which have been in operation for 35 years or so, had now reached their maximum carrying capacity or "saturation point." The boilers in the power-houses were becoming worn out, and in a few years the pressure on them would have to be reduced, or new boilers obtained, or electricity adopted as the driving power. The rails were likewise deteriorating, and before long the Board would either have to face very costly renewals or supersede the cable tramways by the electric system, which would have a greater capacity and be able to cope with the increasing tram traffic for the next generation or two—which the cable tramways could not do even if expensive renewals were faced. Coupled with this, however, is the outstanding fact that the existing suburban electric tramways, when taken as a whole, do not pay their way, and the Board has had to meet the annual deficits on these electric undertakings out of the profits of the cable tramways, the tracks of which were handed over to the Board practically free of cost to it. This opened up the important question whether the metropolitan tramways would be able to pay their way on the present fares if a sum, roughly estimated at £4,000,000, had to be expended in substituting electric tramways for the existing cable ones, after making provision for the interest charge and annual sinking fund contribution to redeem that large capital outlay at the end of 30 or 40 years. The improvement made in recent years in motor omnibuses and their increasing competition in other cities with electric tramways, causing traffic congestion in the principal streets of those cities, and the need for roads specially constructed to carry these heavy and fast-running vehicles were also brought into the consideration of this subject. The Committee allowed these varying views to be put forward, being of opinion that the public desired knowledge on these several important matters before acquiescing in any uniform transport system, and it therefore did not confine the evidence wholly to the William-street proposal.

POWERS OF THE MELBOURNE TRAMWAYS BOARD.

3. It is not generally known that Parliament by Act No. 2995, section 53, gave the Melbourne and Metropolitan Tramways Board power, without having to obtain the sanction of the Melbourne City Council or any other body, "to convert any cable tramways or part thereof under its management into electrie tramways," and to erect centre or side poles with span wires over any street, or to place "any apparatus or thing under any road in connexion with the transmission of electricity." The same section also empowers the Board, with the consent of the Governor in Council, to carry on the business of motor omnibus proprietors for the purpose of stimulating or developing the traffic of any tramways.

4. The Committee therefore took the view that, as Parliament had permitted the Board at any time the latter thought fit to convert the cable tramways passing along the leading streets of the city to electric traction, no opposition is likely to be offered by the Legislature to the construction of an electric tramway in one of the streets of Melbourne having less vehicular and pedestrian traffic than the leading thoroughfares along which the cable tramways operate, provided this additional tramway is considered to be a necessary public utility.

OVERHEAD WIRES AND THE CONDUIT SYSTEM.

5. Alderman Sir David V. Hennessy, of the Melbourne City Council, when appearing before the Committee strongly opposed overhead tramway wires being allowed in the principal streets of Melbourne, contending they would disfigure the city, and that all the successful work of himself, whilst Lord Mayor of Melbourne, and others who had urged the undergrounding of the telephone wires because they were unsightly, spoiling the appearance of the streets, will have been in vain if tramway wires are to be stretched across or along the principal thoroughfares of the city, destroying the vista. He added that there was no occasion for overhead wires, as the tramways in the central avenues of Paris and other cities were operated by an electric current carried underground, and on reaching the outer area of the city the overhead wires were brought into use.

6. Mr. Harrie B. Lee, Chief Officer of the Metropolitan Fire Brigade, said he would like to see the tramway current carried underground. If it had to be the overhead system then the wires should be supported from centre poles in the middle of the street and not from span wires stretched from side poles, which would seriously interfere with the erection of fire ladders.

7. Alderman F. Stapley, speaking on behalf of the Melbourne City Council, took a similar view as to the unsightliness of the overhead wires and their danger in case of an outbreak of fire in a neighbouring high building. For these reasons he supported the adoption of the conduit system within the city limits. Mr. H. E. Morton, City Engineer, however, when asked by the Committee for his personal opinion, based on his recent observations in Europe and America, said he favoured the overhead system on centre poles in streets over 80 feet wide, because of the great expense of the conduits. He said:—"It would be absolute madness to throw away money on a conduit system. Everywhere I went abroad, in London and New York, I never found a tramway man who had anything good to say about the conduit system. It was too expensive to install, costing, with the track and all the equipment, up to £80,000 a mile when I was in London; but it is cheaper now. Road construction in Australia is very different to that in America or England. With the conduit system fares would have to be so high that people would not use the trams. They would travel by motor omnibuses." It was also pointed out by Mr. Morton that the shallow tunnels of the cable tramways could not well be used as conduits to carry the underground rails conveying the electric current, as they were only 9 feet apart, which was too narrow a space for the modern large electric tram-cars.

8. Mr. T. P. Strickland, Chief Engineer of the Melbourne and Metropolitan Tramways Board, informed the Committee that he was formerly one of the engineers in charge of the Sydney electric tramways, and that the span-wire construction in the leading streets of that city had not been a serious menace to the work of the fire brigade. The span wires did not convey the current. They supported the live wires. There the tramway staff promptly cut off the power supply if the brigade wished it or cut away the wires if necessary. He could recall to mind two instances only where it was necessary to cut away the wires in Sydney, and that was because of some danger of the walls of the building on fire collapsing. In speaking of the conduit system, which he had seen in operation in New York, he stated no engineer responsible for operating a tramway would adopt it of his own volition. In New York the tram-cars did not change from the conduit to the trolley or overhead wires. In London the change was done expeditiously—from 20 to 30 seconds—but at times there was delay. The inclusion of a short length of conduit in an overhead system

was feasible, but it was open to grave objections from an operating standpoint. Every car using this dual system would have to be fitted with plough carriers as well as trolley poles. These carriers weigh about 250 lbs., and they would have to be carried all over the system. An appreciable time is taken in making the change, and, he said, on a dense service this would be highly objectionable. In the London conduit system two men are required on each shift at each point where the change is made to bring the plough into operation or to disengage it. The wages of these men would run into several thousand pounds per annum, and added to that would be the expense of constantly cleaning the conduits and the heavier maintenance of the conduits, conductor rails, and tram-cars. With the conduit system it would be difficult to locate faults, particularly at night, and he felt certain these faults would be of common occurrence in this climate, and with such low-lying streets as Swanston, Elizabeth, and Flinders there would be drainage troubles, especially during and after heavy downpours of rain flooding the conduits and interfering with the electric current. The success of the conduit system depended almost entirely in keeping the conduit dry and clean. New York was reasonably elevated, and there were consequently no drainage difficulties. Of the three conduit systems in England two had been abandoned (at Bournemouth and Blackpool) after all the cost of undergrounding the current had been incurred. It was the same in Berlin. If the cable system were superseded, even within the city only, by the conduit system, the period required for conversion would be materially longer than if the overhead system were adopted, and the inconvenience to the public would be more serious. The surface contact system, which had steel studs projecting slightly above the track every 10 or 15 feet, had been tried in some cities. The tram-car had a long shoe which bridges these studs. By a magnet on the car the studs, by means of a switch under them, were made alive as the car passed over them. On the car passing the switch is supposed to fall down and leave the stud dead. But it was found some of the studs were left alive and horses and people got shocks. That system was used in Wolverhampton and Paris, but it has now been rejected as impracticable.

9. According to the evidence of Mr. Strickland there is a popular but erroneous opinion in Melbourne that the cable tramways lend themselves to the use of the conduit system. He added—"I wish to state most emphatically that this is absolutely out of the question. The drainage difficulties, the lack of space in the existing conduit at the part where the conductors must be placed, the lack of width in the groove or slot have all been pointed out by experts examined by the Traffic Commission in 1911. The same opinion has been expressed by the Acting General Manager of the London County Council tramways in answer to the Melbourne Tramways Board's inquiry on the matter. The present tracks would not last long under fast and heavy electric cars. The rails are of an unsuitable section, and are not fastened down sufficiently for heavy traffic. The cost of reconstruction of tracks would be equivalent to the cost of new tracks, except that a certain amount of excavation would be saved; but the important point is that the distance between the track centres or slots of the cable tracks is 9 feet only, whereas the Board's standard section for electric tracks is 11-ft. centres. . . . . The cost of the conduit system would certainly be twice that of the overhead wire system. The flooding of a conduit might easily tie up the main arteries of the tramway system for hours at a time. The same machinery in the sub-stations cannot be used for supplying the trolley system and the conduit system at the same time." The Traffic Commission said:- "A further objection to conduits is that transverse wooden sleepers, which form the best type of tramway track, cannot be used."

COST OF THE CONDUIT SYSTEM.

10. In answering questions put by the Committee Mr. Strickland estimated the cost of conduits for a double-track electric tramway in William-street from Lonsdale-street to Bourke-street at £10,800, and from Lonsdale-street to the north side of Collins-street at £20,000. This would be at the rate of over £50,000 a mile. That was for the conduits alone, and made no allowance for drainage or for removing water pipes or for special work at junctions. In London the conduit construction alone cost £25,000 per mile of single line without including the cost of preparing the trench.

11. It was ascertained during the inquiry that the municipal tramways in Vienna had the conduit system in use in the centre of that city. But the change-over points and the conduit system were the cause of so much trouble that the overhead wire system had recently been adopted throughout these tramways. Also that, after much consideration and a Minister of Transport inquiry into the matter, the cable tramways in the famous Prince's-street, Edinburgh, had been superseded this year by the electric system, the overhead conductor wires being carried on central poles. In Brussels the electric tramways use the conduit system for part of their journey. Each car carries its plough, which is of a collapsible type, and operates very simply. The plough is lowered by the driver through the ordinary slot into the conduit and raised again when not required. There is no plough hatch necessary, and several cars can change over at the same time, which is

a great advantage with a frequent service. In the London and other Continental systems one car only can change over at a time, which leads to delays. The Brussels system, however, has the disadvantage of heavy maintenance costs, and its manager thought the London system the better. To avoid having overhead wires self-propelled tramway cars have been given a trial on several important systems, but so far had not been a success. This is the ideal form of traction for city traffic, and if such a vehicle can be developed and can successfully compete, as regards expense of operation, including maintenance, and seating capacity, with the electric cars it will be of service to all large cities.

MOTOR OMNIBUSES.

12. The question of installing a system of modern motor omnibuses for city traffic instead of electric tramways, with their disfiguring overhead wires, was raised by Mr. W. J. Carre-Riddell, Chairman of the Melbourne and Metropolitan Board of Works, who recently returned from a visit to Europe. These omnibuses were making headway in most of the cities he visited, including London and Paris, and were serious competitors with the much-more-costly electric tramway system. He stressed the financial aspect because of the large capital outlay required for the electric tramway system, which was not expected to redeem, by a sinking fund, its capital expenditure till after 30 or 40 years, whereas the motor omnibuses were expected to repay their capital cost within about seven years, after which period the omnibus could be sold or scrapped and the money invested in any more modern and better vehicle for passenger transport which may come on the market. Further reasons given by him in support of the motor omnibus as a means of city travel were its mobility, not being confined like a tramway with its flanged wheels to those streets along which the grooved rails were laid, and its ability to draw up alongside the kerb to pick up passengers or permit them to alight, thus avoiding passengers having to cross to and from the centre of the roadway to reach the tram-car or on leaving it. Their passage across a street crowded with vehicles was always dangerous, and often resulted in fatal accidents, which were recorded against the motor or vehicle striking the passenger and not against the tram-car, though the latter was the passenger's objective. Furthermore, in the early morning, when the bulk of the traffic was in to the city, motor omnibuses and other inwards vehicles could use two-thirds of the road, as the remaining third was usually ample for the outwards flow of traffic. In the evenings, when the city workers were making homeward, the position could be readily reversed without impediment to the street traffic. The fares of the motor omnibuses were as cheap as those of the electric tramways, and the former vehicles performed the journey in less time. The double-decked motor omnibuses were well patronized in London and other cities, and ran at short intervals.

13. Mr. Alexander Cameron, Chairman of the Melbourne and Metropolitan Tramways Board, attributed much of the successful competition of motor omnibuses with electric tramways to the special local conditions prevailing. For instance, many of the busy streets of London and other cities were narrow, and consequently unsuited for tramways. Again, no tramways were allowed on the surface in the heart of London within an area over 2 miles square. The motor omnibuses were permitted to enter that part, and that gave them a distinct advantage as regards the city passenger traffic. No one would willingly travel partly by tram and partly by motor omnibus if he could use the latter class of vehicle for the full journey, thereby avoiding the inconvenience of changing cars. In Paris and Berlin tramways were prohibited in the principal portions of those cities, but the motor omnibuses were not so restricted. Notwithstanding the claim frequently made that motor omnibuses could, by reason of their mobility, use any route, they invariably ran along the tramway tracks wherever these tracks were available in the suburbs of London and other cities. The motor omnibuses, to be a successful financial undertaking, had to use good roads; but, unlike the tramways, they had not to bear the cost of those special tracks and their upkeep. He submitted a diagram showing that the top rail of the seats on the upper deck of the motor omnibus was between 12 and 13 feet from the road surface, and that the underside of most of the railway bridges spanning streets in the suburbs of Melbourne was between 13 and 15 feet from the road level, so that passengers riding on the upper deck of these vehicles would be liable to be struck on the head while passing under such structures. A further diagram exhibited by him showed how overcrowded Swanston-street, between Bourke and Flinders streets, would be by motor omnibuses in a few years' time if no tramways were allowed in that thoroughfare. There would be little room for any other vehicles. In Paris, where tramways and motor omnibuses were operated by the same authority, the management favoured the former as being more economical.

REFERENCE TO THE COMMITTEE.

14. The question submitted to the Committee was the construction of an electric tramway from North Melbourne into the city by way of Peel and William streets. But as uniformity of construction and operation within the city was thought desirable, the question broadened out to the use of the conduit system or the overhead wires system in the principal streets

of Melbourne. The Committee, recognising that this wider question had not been referred to it, did not pursue the matter sufficiently far to enable it to make a recommendation as to the best course to follow in handling the traffic problem of the city. Nevertheless, the Committee considers there is no need to have an expensive conduit system in William-street, as that road is not one of the busy thoroughfares of Melbourne. The suspension of the electric wires from centre poles along that street would meet the requirements, as those poles would offer no greater obstruction to vehicular traffic than the existing electric light standards, and certainly would be a less hindrance to traffic than the present plantations, cabmen's shelter, and lorry stand in the centre of that road.

FLEMINGTON-ROAD, PEEL AND WILLIAM STREETS ELECTRIC TRAMWAY.

15. The proposal submitted by the Melbourne and Metropolitan Tramways Board was the extension of the Essendon and Flemington electric tramways (which the Board took over on 1st August, 1922) from Flemington-bridge south-east along Flemington-road to the intersection of Abbotsford-street, North Melbourne, where this tramway would join the proposed extension of the West Brunswick electric tramway from Royal Park station southwards, passing under the Coburg railway by piercing the embankment at the rear or west side of the Zoological Gardens, and following a semi-circular road, which is seldom used, adjoining those gardens to its most southerly point, and thence in a direct line across the open area in Royal Park used for cricket and football matches to the corner of Flemington-road and Abbotsford-street. These combined double-track electric tramways would then continue as a double track south-eastward along Flemington-road to near the Hay Market, and thence southward into the city along Peel and William streets, terminating for the present in Little Flinders-street between the Western Market and Customs House, where the roadway is 66 feet in width, and eventually linking up in Market-street with the south suburban tramways when they are converted from cable to electric traction, thus permitting the through routeing of the northern and southern suburban tram-cars. The proposed electric tramway in Flemington-road between Flemington-bridge and Abbotsford-street, which is estimated to cost £10,000, would eventually take the place of the cable tramway in that road, the electric lines being constructed in the narrow plantation or reserve in the northern portion of that road. The length of the new electric tramway from the intersection of Flemington-road and Abbotsford-street, North Melbourne, to Little Flinders-street, Melbourne, would be 2·09 miles. The estimated cost of this double-track tramway was £58,800, including overhead span-wire construction, with £80,500 added for rolling-stock, sub-stations, plant, &c. It was estimated that the section of the tramway through Royal Park to Abbotsford-street would cost £14,700. Where the tramway passes through Royal Park and plantations in Flemington-road and Peel-street it will be laid as open ballast construction, but in the other parts, where the track will be used as part of the street, it will be either of concrete construction with wood-blocked surface, or of macadam (blue metal) with a tarred surface. The Board suggested the sections of the proposed tramway should be—from Flemington-bridge to the intersection of Flemington-road and Peel-street, 1·3 miles; from Royal Park at the new entrance to the Zoological Gardens at the rear of those gardens to Flemington-road and Peel-street, 1·3 miles; and from the corner of Flemington-road and Peel-street to the city terminus in Little Flinders-street, 1·3 miles. This suggestion would necessitate a re-arrangement of the sections on the proposed West Brunswick tramway as follows:—From the new entrance to the Zoological Gardens to the intersection of Dawson and Pearson streets, 1·31 miles; and from the latter corner to Moreland-road terminus, *viâ* Dawson-street and Melville-road, 1·37 miles. Although only an alteration of a few chains the Committee still favours these sections being at Royal Park station and the intersection of Dawson-street and Melville-road, West Brunswick. The fares suggested would be the same as on the Board's other electric tramways, namely, 1½d. for one section, and 1d. additional for each further section travelled, with a concession of ½d. on the through fare from Essendon and West Brunswick to the city and *vice versâ*.

REVENUE AND EXPENSES.

16. It was estimated by the Board that the total number of passengers on this new city tramway would be 6,120,000 in the first year of operation, and the revenue £41,204. The annual charges were set down by the Board as follow:—12 per cent. interest (including sinking fund and renewals contributions) on the capital cost of the permanent way and overhead construction, £7,056; 12 per cent. interest and sinking fund and renewals contributions on the capital cost of rolling-stock, sub-stations, plant, &c., £9,660; and operating expenses—418,000 car miles per annum at 15d. per car mile—£26,125, or a total yearly expenditure of £42,841, leaving a deficit of £1,637 on the first year's operation. The Board expressed the belief that with the growth of population and riding habit this annual loss "should rapidly disappear." When it was pointed

out by the Committee that the Board's estimated revenue was equal to 23·6d. per car mile, whereas the receipts for the year ended 30th June, 1921, from passenger fares for all the cable tramways averaged but 19·538d. and for the whole of the electric tramways only 19·409d., the Board explained its excess estimate by stating there would be such a frequent service in the city that it would encourage "pick-up" or one-section travel. Seeing, however, that this new tramway will not traverse the busy portion of the city where the cable tramways have also the advantage of a large pick-up or one-section traffic, the Committee is of opinion that the revenue estimated by the Board in the first few years of operation will not be reached. Nevertheless, the Committee does not consider the annual loss will be such that the construction of this city tramway should not be recommended.

QUEEN-STREET OR WILLIAM-STREET ROUTE.

17. In hearing evidence as to the route of the proposed electric tramway in to the city the Committee ascertained that the Melbourne City Council thought William-street should be used in preference to Queen-street, which was a busier street at its lower end, having more vehicular traffic. The tramway would also cause the removal of the plantations and public conveniences in Queen-street. The Melbourne and Metropolitan Tramways Board also preferred William-street, as it better divided the western part of the city, being midway between Elizabeth and Spencer streets. Moreover, it enabled a better connexion to be made with the southern suburbs by way of Market-street and Queen's-bridge or by the bridge suggested by Mr. H. E. Morton, City Engineer, to be built across the Yarra in alignment with William-street. If the northern suburban electric tram-cars were run down Queen-street into Flinders-street and thence across Queen's-bridge there would be a bottle-neck formed in that part of Flinders-street which would seriously interfere with the operation of the Richmond tram-cars.

18. The only objection to William-street route is that the running of electric tram-cars at short intervals past the Law Courts may disturb proceedings in the Banco Court, the windows of which open on to William-street. The Chairman of the Committee had an interview with the Chief Justice on this aspect of the matter. Sir William Irvine said that, whilst he did not wish to stand in the way of any public utility, he feared there was a likelihood of the Banco Court being disturbed and the proceedings interrupted by the passing of the tram-cars, especially when jury cases were being heard and a witness with a weak voice was giving evidence, there being 20 or 25 feet between the jury box and the witness stand. On informing the Board of this interview, its Engineer stated that the noise of the passing tram-cars could be so lessened by running at half speed past the Law Courts (as was done when services are being held in adjacent churches) that no interruption would be caused to the proceedings of the Banco Court. At the suggestion of the Committee the Chairman and Engineer of the Board interviewed the Chief Justice on the matter: but the latter, while receiving their assurance that the Court would not be disturbed by the electric tram-cars, reserved to himself and his brother Judges the right to object when the tramway is in operation if the noise is objectionable. The Board, therefore, in entering on the construction of this tramway does so with the full knowledge that if the tram-cars interfere with the proceedings of the Banco Court the disturbance must be abated or removed.

TRAMWAY THROUGH ROYAL PARK.

19. Objection was taken by the Board of Directors of the Australian Natives' Association and by representatives of cricket and football clubs using Royal Park for their matches to the proposed tramway being run through the southern portion of that reserve, as it would interfere with their playing spaces and be an improper encroachment on an area specially reserved for the public use. The trustees of the Royal Park also objected to the tramway cutting across these playing grounds. Some of them suggested that the tramway should cross the Coburg railway either at the level crossing at Royal Park station or by a bridge over the cutting at the north end of that station, thence along the north and east sides of the Zoological Gardens to their main entrance, and follow the horse-tramway track to the rear of the lodge at the entrance to Royal Park, and thence southward along Park-street, Parkville, to Flemington-road, where it would join the route into the city proposed by the Melbourne Tramways Board. It was said that this alternative proposal would for its full length be along roads or strips reserved for roads in Royal Park, and would consequently not sever those public lands or interfere with any playing space. Moreover, this route would better serve residents of Parkville, who frequently were unable to board the cable tram-cars running to and from Brunswick, as in the busy hours of the day the cars were over-loaded on reaching Parkville. Several of the trustees of the Royal Park subsequently met the Chairman and Engineer of the Melbourne Tramways Board, and after discussion it was agreed to make a slight deviation in the tramway route through the southern part of Royal Park by carrying it along an avenue leading from the junction of the roads at the south end of the Zoological Gardens to Abbotsford-street, North Melbourne. This would avoid crossing or interfering with the playing grounds.

20. The Committee inspected this proposed deviation, and is satisfied that if the tramway is confined or kept close to that avenue, which is about 50 feet wide and not much used by pedestrians, it will offer no impediment to or interfere with the football and cricket spaces. The tramway will have convenient crossing places in its course through Royal Park, so that it cannot be said its track will be an alienation of public lands. Moreover, the Committee in its Report on the West Brunswick electric tramway gave reasons why that undertaking should not be constructed along Oak-road and Manningham-street on the western edge of Royal Park. The large number of workers who will in the course of the next few years reside in West Brunswick and Coburg should not be required to unnecessarily waste their time daily by using a tramway following a round-about route when there are little-used avenues and roads through a public reserve suitable for a more direct route. Those workers are as much a part of the public as the cricket and football teams who wished to have a monopoly of the reserve.

21. As to the alternative route on the north side of the Zoological Gardens and passing through Parkville, it would cause the construction of about 30 chains of additional double-track tramway compared with linking the West Brunswick electric tramway with the extension of the Essendon and Flemington electric tramways at Abbotsford-street. That extra length of construction would necessitate an increased capital outlay of at least £12,000, the interest and sinking fund and renewals charges on which would come to £1,440 per annum, to which would have to be added the maintenance expenses of the 30 chains of double track. It was pointed out by the Board there was no need to carry the tramway through Parkville so close to the Brunswick cable tramway, as this electric tramway to West Brunswick and Coburg would relieve the traffic on that cable line, and thus allow the Parkville passengers to board the Brunswick cable tram-cars. A further reason given by the Board against this deviation through Parkville was that it would not give the West Brunswick and Coburg passengers the advantage of the alternative route to West Melbourne and North Melbourne by way of Abbotsford and Errol streets, and would not allow that route to be availed of if the Peel and William streets route were blocked or put out of running by some unforeseen cause.

COMPETITION WITH THE RAILWAYS.

22. It was stated by the Railway Department that the proposal to extend the Essendon and Flemington electric tramways into the city by an electric tramway along Flemington-road and Peel and William streets would avoid the present necessity for passengers changing cars at Flemington-bridge, where the electric and cable systems meet. The running of the electric tram-cars through to the city would, it said, shorten the time of travel and provide a more efficient and attractive service. The fare on the Essendon electric tramway from its terminus in Keilor-road, beyond Essendon railway station, to Flemington-bridge is 2d., and on the Flemington electric tram from its terminus at Maribyrnong River to Flemington-bridge it is also 2d. The fare on the cable tramway from Flemington-bridge to the city is 2d., so that the through fare by either route is 4d. The Melbourne Tramways Board considers these fares are too low for the distance carried, namely, 6·7 miles from Keilor-road to the foot of Elizabeth-street, and 6·3 miles from Maribyrnong River to that city terminal, and it may shortly take steps to increase them slightly. But accepting the existing tramway fares as a basis for comparison with the railway fares, the through fare by tramway would be 4d. each way, or 8d. return, as against the following charges for a second-class return ticket by rail:—Kensington, 5d.; Newmarket, 5d.; Ascot Vale, 6d.; Moonee Ponds, 7d.; and Essendon, 8d. It will therefore be seen that except Essendon the fares are lower by rail than by tram, and if periodical railway tickets are used they are lower still. The railway, having the advantage of electric traction, would still be the quicker service, notwithstanding the construction of the proposed electric tramway into the city. The journey by train from Newmarket to Flinders-street station occupies 11 minutes, while that by the through electric tramway would be 22 minutes. The trip by train from Ascotvale occupies 14 minutes as compared with 23 by the through tramway; from Moonee Ponds 16, as against 26; and from Essendon 18, as compared with 34 by electric tramway.

23. The Railways Commissioners estimated there would be a loss of £6,125 a year to the railway revenue by the extension of the Essendon and Flemington electric tramways into the city, avoiding the inconvenience of changing tram-cars at Flemington-bridge, and by the electric tram-cars travelling from there into the city in 16 minutes, as against 24, the time taken by the cable tram-cars. This annual loss was in addition to the expected yearly loss of £3,291 on the Brunswick and Coburg railway caused by the construction of the Royal Park–West Brunswick electric tramway. They went on to say:—"The Commissioners offer no objection to the construction of the proposed Flemington-road and Peel and William streets electric tramway, but deem it their duty to point out its probable prejudicial effect on the railway revenue." The Commissioners added they still held the view, as previously expressed, that the proposed West

Brunswick electric tramway " is unnecessary from the point of view of the public requirements, and that the existing railway service is able satisfactorily to meet the needs of the district that will be served by the proposed West Brunswick tramway." They, however, went on to say :— " The Commissioners recognise that an isolated section of electric tramway terminating at Royal Park station cannot be regarded as a satisfactory arrangement by the tramway authority. To insure efficient operation such a tramway requires to be connected up to the main electric tramway system, and to be operated in conjunction therewith ; and it seems a reasonable arrangement that such a tramway should be linked up with the proposed electric line to the city along William-street." The Commissioners further said : " They do not persist in objecting to a proposal which on examination by the Committee may prove to be advantageous to the public and necessary for the efficient and proper working of the proposed tramway." They added :— " Looking at the matter from the point of view of broad policy, the Commissioners do not wish it to be thought that they are adopting an attitude that tramway development is to be made subservient to railway interests within the inner circle short-haul metropolitan zone, though within this zone they do not consider it either desirable or necessary that closely-paralleling tramway lines should be constructed. Outside this short-haul area, however, the Commissioners are very definite in their opinion that, generally speaking, new tramways should be constructed so as to act as feeders to the high-speed electric railways." The Commissioners concluded by stating that if the West Brunswick tramway passed under the Coburg railway near Royal Park station it would be less objectionable to railway working than crossing the line on the level or overhead.

RECOMMENDATION OF THE COMMITTEE.

24. The Committee considers that the proposed extension of the Essendon and Flemington electric tramways and the West Brunswick electric tramway into the city is a necessary public utility, and that a new route into Melbourne is desirable to relieve the traffic congestion in Elizabeth-street and avoid further congestion on the narrow passenger platforms at Flinders-street station. It is also of opinion that the estimated loss of railway revenue will, in the course of a few years, be more than compensated for by the increased railway travel that will be caused by the large additional population which will be induced to reside in the West Brunswick and South Coburg districts by reason of these tramway facilities, as there is always a fair proportion of residents who wish to travel daily by rail to other suburbs and not by tramway into the city. The Committee recommends the extension of the Essendon and West Brunswick electric tramways into the city along Flemington-road, Peel and William streets, terminating in the latter street on the north side of Collins-street. This terminal point can be extended later on either to Market-street along Little Flinders-street, or over the proposed bridge across the Yarra in alignment with William-street, as may be thought desirable by the Board when the south suburban tramways are converted to electric operation. In the meantime through passengers will be able to readily change tram-cars by walking in Collins-street the short distance between William and Market streets. As the south suburban tram-cars do not pick up or set down passengers on the hill in Market-street the terminal point in William-street at Collins-street will be just as convenient to them as the Board's proposal to terminate in Little Flinders-street.

25. There was a division of opinion among the Committee as to the present terminal point, the Hon. J. W. Billson, M.L.A., favouring Little Flinders-street, but on his motion being rejected he supported, with the Chairman (Mr. R. F. Toutcher, M.L.A.), the Hon. W. Kendell, M.L.C., and Mr. A. F. Cameron, M.L.A., the proposal to terminate in William-street on the north side of Collins-street ; while the Hon. H. F. Richardson, M.L.C., and Mr. R. H. Solly, M.L.A., voted for the terminal point in William-street on the north side of Lonsdale-street, being of opinion no electric tramway operated by overhead wires should extend beyond Lonsdale-street into the city.

R. F. TOUTCHER,
Chairman.

Railways Standing Committee Room,
State Parliament House,
Melbourne, 21st September, 1922.

[Minutes of Evidence are not printed.]

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