



Effects of opening the Sydney Harbour Bridge and extension of heavy rail on tramway traffic in the CBD

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THE EXTENSION of the railway into the City in two stages: -

- (i) From Central Station to St. James Station in December 1926,
- (ii) From Central Station to Wynyard Station in February 1932,

and the opening of the Sydney Harbour Bridge in March, 1932, were epoch making events in the history of transport in Sydney.

From the beginning of this century, and perhaps even prior to that, enthusiasts advocated a Bridge or a Subway to connect North Sydney and the city, and the extension of the railway into the city. As the years passed their advocacy increased and, so far as the City Railway is concerned, was strongly supported by the transport Authorities, principally on the ground that saturation point on existing tramways in the city had been reached. In this regard, the following extracts from the report of the Chief Commissioner for the year ended 30th June, 1912, and the Report of the Commissioners for the year ended 30th June, 1924, are interesting:-

Report of 1912

“A year ago attention was specially directed to the growth of the business on the Sydney Tramways, and the experience of another year only confirms the statement then made that, so far as the main thoroughfares are concerned, the limit had very nearly been reached.

“It is now quite impossible, with any system of surface trams in connection with which the size of unit and the speed in narrow thoroughfares are necessarily limited to cope satisfactorily with the loading which has to be dealt with during the crush periods of the day in the business portions of the city.

“A remedy was indicated in the report of the Royal Commission for the Improvement of the City of Sydney and its suburbs of the 25th June, 1909, and it is more than ever necessary to deal promptly with this all-important problem.

“Further experience only tends to show that a comprehensive scheme on ample lines, including not only electric suburban railways but rapid transit tramways underground, is absolutely necessary,

The experience with large passenger flows during the Sydney Olympic Games is not new. Historically, it was commonplace for the Sydney tramways to carry over one million passengers each working day! At the heart of the system was the dense array of city and suburban lines that fed the CBD and provided remarkable mobility for passengers within the city. Pitt and Castlereagh Streets experienced particularly intense tramway operations. These routes linked ferry wharves at Circular Quay with heavy rail services at Central Station and served the retail and administrative core of the city. This resulted in some 30 million annual passenger journeys on these streets alone prior to the opening of the City Railway extension in the mid 1920s. To put this figure in perspective, the largest private bus company in western Sydney today (Westbus), achieves a similar patronage figure over its entire network! Common pm peak period loadings experienced on all city lines combined (George, Elizabeth, King, Pitt and Castlereagh Streets) were in the order of 90,000 passengers each and every working day!

This paper is slightly biased towards the priority of traffic flows rather than passenger flows. However the information on the capacity of the tram system and the large number of passengers moved is relevant today.

Neale states that under-grounding the trams would be a good idea and that the opening of the city underground railway was successful in providing relief for the congested CBD tram network. In this regard, it must be stated that it was the belief of the day (in the 1930s) that separation of public transport from road traffic flows was best done by under-grounding the public transport services. Today this is believed to be necessary only when heavy rail is being considered. The primary benefit of light rail is its ability to provide a high capacity ‘on-street’ mode of travel and it is on-street that most passengers prefer, for convenience sake, to access transport services.



Trams intermingle with pedestrians, private cars and buses at the intersection of George Street and Martin Place in the 1950s.

and that a large total expenditure is involved.

“It is fully recognised that, even if the money were available, the whole scheme could not be proceeded with at once, but it is desirable at the outset to decide upon the main features of a proposal, so that the lines to be constructed in the first instance may eventually form part of a complete whole.”

Report of 1924

“The need for improved passenger transport within the metropolitan area has been stressed for a great number of years. The saturation point on existing tracks, both rail and tram, has already been reached,

and the transport problems of the city and suburbs must become a matter of very grave concern, even if large sums of money are made available without delay. Failing that, the problems will be impossible of efficient and safe solution.

“There is to-day world-wide admission that well-designed electric services are more satisfactory for the swift and safe handling of great numbers of passengers than any other yet evolved. *The perfecting of those electric tramways which exist, together with the early completion of the greater railway services designed and commenced, are now matters of the greatest urgency.* Suburban areas have been built upon and peopled as a direct result of the construction of railways and tramways, and people when making homes in these areas naturally anticipated that the transport services would be adequately maintained. The services are to-day the best that can be given under existing conditions, but neither from the public nor Departmental point of view can they be deemed adequate.”

Now that these facilities have been established, I propose to examine their effect upon tramways traffic, and whatever may be said as to the wisdom, from a financial point of view, of their provision, it is beyond question that they have had the effect of materially improving the operating conditions of the tramways.

The immediate incidence of the opening of the Sydney Harbour Bridge, so far as Tramways are concerned, was to create a record revenue on any one day, namely, £16,613, and to so alter the flow of traffic as to render comparatively lifeless that portion of the city north of Hunter Street. Pedestrian, vehicular, and tramway passenger traffic has been reduced by more than 50 per cent in this area, with a corresponding decrease in business activity.

The principal passenger traffic is discharged in the city between Liverpool Street and Hunter Street. Liverpool street, from a comparatively unimportant business centre, is now probably the busiest shopping centre in the city and attracts very large numbers of suburban residents daily, and particularly on Fridays when the shops remain open until 9.00pm.

For the first three months after the opening of the Bridge there was a very considerable amount of novelty traffic which yielded a substantial amount of revenue, and as the Harbour Bridge is one of the chief attractions of Sydney, it will always command, apart from the ordinary daily traffic, patronage from tourists and, incidentally, increased revenue to the Tramway Department.

The decision to operate trams across the Bridge has resulted in a material saving in time, increased frequency of service, and the culmination of irritating delays and inconvenience in changing from

tram to ferry at North Sydney, and again to tram at Circular Quay, for those passengers desiring to travel into the centre of the city.

The present direct tramway services from the various suburbs at North Sydney to Wynyard Station give reasonably direct access to the centre of the city without the inconvenience of changing and with increased speed.

The journey across the Bridge from North Sydney Station to Wynyard Station is 1 3/4 miles, and is accomplished by tram in eight (8) minutes with only two (2) stops, namely, Milson's Point Station and Argyle Steps, and as it is undertaken in an exclusive right-of-way, and delays and inconvenience inseparable from operation in public streets are avoided.

Twenty-eight thousand (28,000) passengers are conveyed by tram to and from Wynyard over the Bridge daily, and a special fare of 3d. is charged for adults and 2d. for children between North Sydney and Wynyard Stations, a separate ticket being issued to each passenger for the journey over the Bridge.

The service during the slack portions of the day is at intervals of approximately three (3) minutes, and during the business hours at intervals of approximately one (1) minute.

Operation of trams over the Bridge necessitated deviation of the route at Mount Street, North Sydney, and resulted in discontinuance of the tramway services to Milson's Point and McMahon's Point wharves, elimination of the ferry service, which ran at six (6) minutes intervals during business hours, with boats each capable of carrying 2,000 passengers, between North Sydney and Circular Quay, and the absorption of a considerable proportion of the ferry traffic carried between Athol, Mosman, Cremorne, and Neutral Bay and Circular Quay.

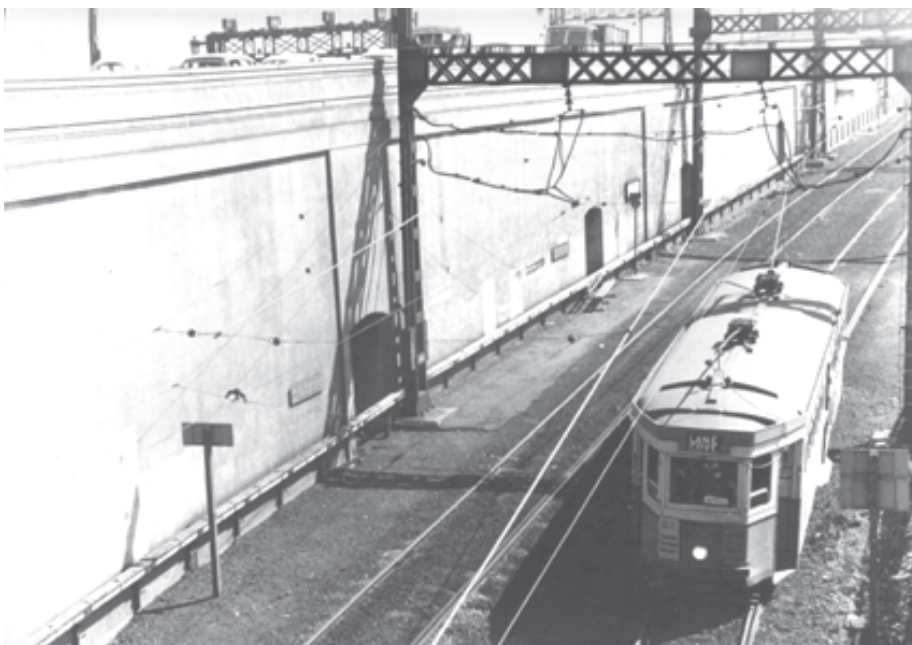
The additional tramway traffic gained at North Sydney, as a result of the provision of the Harbour Bridge, largely off-set the decreased traffic carried on the city side between Circular Quay and the Central Railway Station consequent upon discontinuance of the North Sydney ferry.

There can be no question that travel from North Sydney has been made immeasurably more convenient, as, for example, a person desiring to travel from Northbridge, The Spit, or Balmoral to a railway station on the main suburban line, can do so with one change at North Sydney or Wynyard Stations, whereas previously it was necessary to travel by tram, change into a ferry, change again into a tram at Circular Quay, and change again to the train at Central Station.

There was, perhaps, no tramway service operating anywhere which was so advantageously placed as that running between Circular Quay and Central Railway Station, via Pitt Street on the journey to



The underground city terminus for the North Shore trams at Wynyard platforms 1 & 2. The high-level railway platforms 3 & 4 are in the background. After closure of the North Sydney trams in June 1958 this terminus was converted to a car park.



A tram pauses at Argyle Street stop on the Harbour Bridge southern approach before entering the tunnel to Wynyard. The Cahill Expressway runs over the top of this location today.

sydney's trams

JUNE 1950



the station, and via Castlereagh Street on the journey to Circular Quay, a distance of approximately 1 1/2 miles. Unlike the vast majority of services where the principal loading is in one direction only at the same time, excellent loading was obtained in both directions throughout the day, from the ferries at one end and from the trains at the other end.

About 33 per cent of the passengers travelled either through to the Railway or through to Circular Quay, the remaining 67 per cent travelling to and from intermediate point on the route.

About 30,000,000 passengers per annum were carried on this route, and it necessitated the provision of a service at one and two minutes interval during the business hours.

The extension of the railway to St. James Station in 1926, and to Wynyard Station in 1932, had the effect of reducing tramway revenue by at least £125,000 per annum.

It might here be mentioned that it is still found necessary to operate a service of trams between the Railway and Circular Quay at intervals of three and four minutes during the slack hours, and two and three minutes during the business hours, nor withstanding the extension of the railway into the city, to provide for short distance passengers to Liverpool Street, for those requiring contact with points east of Castlereagh Street, and for the convenience of persons desiring to catch the ferries from Circular quay to Manly and other points on Sydney Harbour served by ferries, and vice versa.

This service has had to be strengthened at week ends and on holidays, as railway passengers with Sydney Harbour as their objective find it more convenient and cheaper to change at Central Station than to travel to Wynyard and there change into trams for Circular Quay.

Tramway traffic in the city had practically reached saturation point in 1912, and congestion in the evening business hours was so acute that notwithstanding the location of a large number of Tramway Officers at the various street intersections and the co-operation of the Traffic Police, it was a daily experience for trams to occupy fifteen minutes more than the running time allotted in negotiating the journey from Fort Macquarie to Central Station.

The reduction in the tramway service operating between Circular Quay and Central Railway Station, via Pitt Street and Castlereagh Street, consequent upon the provision of the City Railway and the Sydney Harbour Bridge, made it practicable for 31 per cent of the trams which formerly traversed George Street and 19 per cent of those which formerly ran in Elizabeth Street to be routed in Pitt and Castlereagh Streets, thus materially relieving the congestion and distributing the traffic approximately evenly along the main routes.

The services provided in the peak hour at the three points are at intervals as indicated hereunder:

Under normal conditions the services operating in these streets are now running practically on time during the peak hours, and are rarely more than two minutes late at Darlinghurst on the eastern system and Central Square on the western system.

The most congested route, so far as vehicular and tramway traffic were concerned, was formerly George Street West, which carried the whole of the peak hour traffic to the Western Suburbs, including that through Newtown to Dulwich Hill, Cooks River, Canterbury, and Earlwood, but the re-routing of the services has made it practicable to eliminate from George Street West trams which start in the City for these destinations, a subsidiary service of considerably less frequency being run to the Newtown District from Rawson Place via George Street West during this hour, with the result that



383. GEORGE STREET,
AT CENTRAL RAILWAY STATION,
SYDNEY, N.S.W.

Railway Square in 1925, a year before the extension of the City railway to St James would eventually shift the retailing hub from this part of the city further north towards Circular Quay.

there is practically no congestion in this locality.

Without the City Railway, I am satisfied that the time would not have been far distant when it would have been impracticable to carry the city traffic on the surface by trams or any other method of transport, and incidentally at this stage it might be appropriate to say that it is my considered opinion that it would not be practicable to carry the "peak hour traffic" of Sydney to-day without a considerable proportion of coupled units of large carrying capacity. I agree with the contention frequently made that the ideal tramway system is one where single units, at frequent intervals, are run, but the tramway of Sydney is such that the route space available is insufficient to operate in this way during the peak period of loading without causing serious congestion and confusion.

The traffic of Sydney traverses five main streets, four of which are parallel, namely, Elizabeth, Castlereagh, Pitt and George Streets, and one at right angles to these, namely, King Street which has always been a serious traffic hazard so far as the main services to the Eastern and Western suburbs are concerned, and effectually demonstrates the impracticability of operating with any degree of success any appreciable additional services crossing the main routes.

The advent of the Bridge has had the effect of diverting a very large amount of vehicular traffic, which was formerly carried by punt from Dawes Point and Benelong Point to North Sydney, through Park Street which is now probably the most difficult street in Sydney for trams to cross at the peak hour.

For many years after the electrification of the Sydney tramways, the Eastern Suburban services terminated at Circular Quay, but owing to the growth of tram and ferry traffic, and the consequent increase in the number of people who crossed the tram lines at Circular Quay, it was found necessary, in the interests of public safety as well as to relieve congestion at Circular Quay, to extend these trams to Fort Macquarie.

The diversion of probably 50 per cent of the passengers formerly carried by ferries to Circular Quay to trams terminating at Wynyard, and the re-routing of the tramway services whereby 31 per cent less trams travel to Port Macquarie than formerly, now make it practicable to short circuit the services at Circular Quay.

Congestion points have been created by the crossing of pedestrians in Elizabeth Street at St. James Station, and in George Street at Wynyard Station, and it is curious that although a subway has been provided where people can cross in safety from Wynyard Station to the eastern side of George Street, it is used to a very limited extent.

The provision of a subway in Elizabeth Street at St. James Station was considered but was not

Circular Quay was a major interchange for tram and ferry commuters in the 1930s long before the completion of the overhead railway station in 1956 completed the City Circle.





Trams heading to Circular Quay via Castlereagh Street in the 1950s. The railway lines emerging from the underground at Goulburn Street towards Central are in the background.

proceeded with. As a consequence trams are seriously impeded by the continuous flow of surface pedestrian traffic during the peak hours to and from this Station.

The opening of the Harbour Bridge was responsible for the abandonment of a loop line, via York Street, round Victoria Markets which permitted the short-circuiting of a large number of trams which have not to be extended to Circular Quay, although not required for traffic purposes at that end. This was rendered necessary as the operation of trams in York Street was against the flow of traffic, and the increased number of vehicles using this route during peak hours since the opening of the Bridge made the position untenable.

The direct route to the city via the Harbour Bridge has already resulted in much development on the north side of the Harbour. The indications are that this will continue and warrant tramway expansion in that district.

The route space made available in the City by the material reduction in the tramway service between circular Quay and Central Railway Station consequent upon the present extension of the railway into the city and the operation of trams over the Sydney Harbour Bridge, has definitely made practicable efficient operation of large capacity tramway vehicles for surface passenger transport and, providing the gradual accomplishment of the comprehensive city Railway scheme be undertaken concurrently with expansion of population and surface traffic, justifies, in my opinion, the modernisation of the Sydney Tramways.



Eco-Transit Sydney Inc. is a not-for-profit organisation fighting for more and better public transport and against excessive private motor vehicle use, urban sprawl, air pollution and greenhouse gas generation.

Forty-four years after Sydney's last tram departed for La Perouse in February 1961, the push to return to light rail (the modern term for trams) as a pollution-free and energy-efficient way to solve Sydney's worsening traffic congestion has gathered pace.

As this paper was being prepared for publication, the City of Sydney Council was circulating a proposal for an extensive light rail network for Sydney, which would expand on the successful line from Central to Lilyfield via Star City. The new proposal sees several lines to Bondi, Burwood, Mascot and Maroubra Junction radiating from a city loop through George Street towards Circular Quay. The city loop is of particular importance to any light rail expansion as it provides the anchor point for commuter traffic which will make any light rail expansion viable.

EcoTransit Sydney has led the campaign against tollroads – which benefit big business – in favour of an expanded light rail network and a better CityRail system – solutions which benefit everyone – to solve Sydney's worsening traffic congestion. In 2000, we launched Baylight Express, an innovative light rail proposal linking the Sydney CBD with the eastern suburbs of Kensington, Randwick, UNSW and the southern beaches.

During 2004 we launched the Light Rail West proposal, as a public transport alternative to the M4 East tollroad proposal. Light Rail West would extend the existing Lilyfield service to more of the inner west, better serving Leichhardt, Ashfield, Balmain, Abbotsford, Drummoyne and westwards to Parramatta.

EcoTransit believes Sydney is falling behind major cities around the world by continuing to pursue tollroad expansion as a short-term 'solution'. EcoTransit will continue to campaign for innovative, high-capacity transport solutions to curtail unrelenting traffic congestion and make Sydney a livable city.

For more information visit our website: www.ecotransit.org.au

