

Sydney's Suburban and City Underground Railway Map No1, 1939: an investigation

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Abstract— In 1939, Sydney's rail commuters were offered a completely different map for navigating the metropolitan railway system. The Sydney Suburban and City Underground Railway Map, No. 1, 1939 was issued by the Office of the Commissioner for Railways, New South Wales. This double-sided folded pocket map showed a schematic map of the entire rail network, over and underground, with a map of the location of underground stations and entrances in the central city area.

It was unlike what was provided by the Commissioner for Railways before or after.

The map is, most obviously, a copy of Beck's design for London. It was produced and published by Sydney Publisher, Waite and Bull, who had produced maps and other printed matter for the Department of Railways, New South Wales.

This paper outlines an investigation of the background of this copy of Beck's design, as well as a brief description of the development of Sydney's suburban rail system, and subsequent system maps.

Keywords— metromap, Sydney

Introduction

When exploring metromaps, one is continually drawn to Harry Beck's map of London and the influence that it has had on how transportation networks are depicted using schematic maps. Beck's concepts have been exported and applied to the development of metromaps for cities large and small. We know of his proposal for a schematic map for Paris [1] and the designs developed from his schema for New York and Berlin [2, 3]. But, scant information is available about a metromap for Sydney's rail network, published in 1939.

This contribution provides information about a project that seeks to find additional information about this map. In so doing, information is also provided about the development of Sydney's metropolitan rail system, and associated large engineering and construction projects like the Sydney Harbour Bridge. The map can be seen as one of the artefacts that illustrates what was being done during the heady days of construction and development in Sydney, and Australia, during the 1930s, which slowed significantly at the beginning of World War II, when Australia's focus moved from development to survival.

A. SYDNEY METROPOLITAN RAILWAY

The history of Sydney's suburban rail network can be traced to 1855, when the line between Sydney (now between Central and Redfern stations) and Parramatta (now Granville) opened [4]. In the city proper there were grand

plans to develop a rail system and, in 1877, plans were published about improvements and extending the Sydney and suburban rail network. This included a city 'loop', servicing the Central Business District of Sydney (Figure 1).

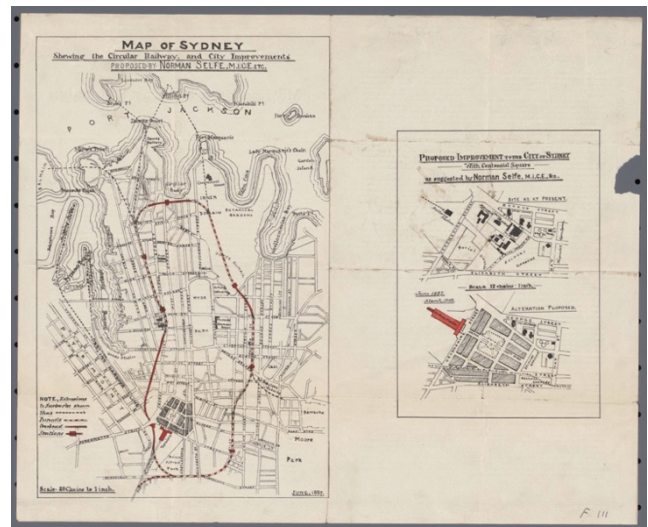


Figure 1. Map of Sydney shewing the Circular railway and city improvements / proposed by Norman Selfe. 1887.

Inset: Proposed improvement to the city of Sydney with centennial square.

Source: National Library of Australia.

Persistent link: <http://nla.gov.au/nla.obj-229912651>

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In 1912 Dr. John Job Crew Bradfield (1867-1943) (considered as the father of Sydney's modern rail system [4, 5, 6]) proposed the building of the Harbour Bridge. (Bradfield was making the case for the Bridge as early as 1903). This coincided with the construction of a system of underground tracks and stations - the City Circle. It was proposed that a city rail system would link Central Station (the terminus for country and interstate train services) to a city 'loop', linking new stations that would be constructed - underground stations at Town Hall, Wynyard, St James and Liverpool Street (later re-named 'Museum') and an elevated station at Circular Quay, linking to the cross-harbour ferries. As well, the city rail network would link to North Shore suburbs via the Sydney Harbour Bridge. A formal 'Deposited Plan' (Figure 2) was provided in 1913, defining the location of underground lines and stations. However, this underground map did not include the planned Harbour Bridge connection.

Sydney's public transportation system continued to grow, and by 1923, when excavation for the underground began, it was already a comprehensive network of trains, trams and buses. The late 1920s to early 1930s saw Sydney's rail

network beginning to be electrified, with electric trains replacing steam engines, allowing them to enter the underground subway tracks. Electrification was completed in 1932. By 1939 a clear hierarchy of city stations had been established, with Wynyard and Town Hall Stations (both opened in 1932) being the key commercial stations [7].



Figure 2. The city railway with tramway connections : deposited plan
Department of Public Works. New South Wales. 1913
Source: National Library of Australia.
Persistent link: <http://trove.nla.gov.au/version/22244332>
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So, by the mid 1930s Sydney had an electrified underground rail system that linked its CBD. All it needed now was a good map.

B. MAPPING SYDNEY’S RAIL SYSTEM

Initially maps of the rail system were produced by overprinting the rail network atop existing suburban maps. The map shown in Figure 3, from private map publisher, John Sands, Sydney (1903), is typical of this era



Figure 3. City of Sydney and Adjacent Suburbs.
John Sands 1903
Source: National Library of Australia.
Persistent link: <http://nla.gov.au/nla.obj-231540665>
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Later, the Department of Lands, NSW, produced rudimentary maps of the network (Figure 4). This continued over a number of years – well after the 1939 map. A map from 1941 is shown in Figure 5.

Schematic maps of the network continued to be developed, by the Department of Railways, and later Transport Sydney.

Between the maps shown in Figures 4 and 5, the 1939 map appeared.



Figure 4. Extract from: Railways and Tramways, Sydney District
Department of Lands, NSW 1937
Source: State Library of NSW
Photograph attribution: Author
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Figure 5. Railways and Tramways, Sydney District
Department of Lands, NSW 1941
Source: State Library of NSW
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C. RAILWAY MAP – SYDNEY SUBURBAN AND CITY UNDERGROUND RAILWAY, 1939

In 1939 the Department of Railways, New South Wales, issued a pocket map for citizens, tourists and visitors to Sydney. On its launch, Sydney daily newspapers, *The Sydney*

Morning Herald and *The Sun* ran announcements of this new map. From *The Sun* (4 March 1939, p. 8): “A map, in the form of a pocket folder, just issued by The Department of Railways, should be useful to tourists from abroad, and other visitors to Sydney. It shows the location of the City Railways, the principal streets, and the various means of access to the underground stations. On the reverse side, the whole of the 170 stations in the metropolitan area, on both sides of the Harbour, are shown. The map is printed in seven colours, enabling each section of the line to be readily distinguished. Copies are obtainable at Sydney Station, Challis House, and at the Tourist Office at Wynyard Station.”

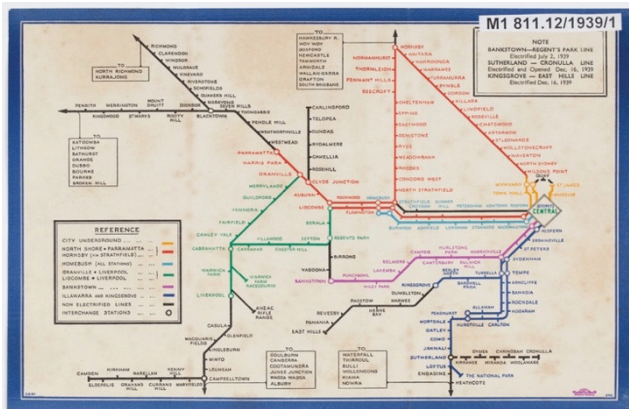


Figure 6. City Underground Railway Location of stations & entrances. Office of the Commissioner for Railways. New South Wales. 1939. Source: State Library of New South Wales.

Persistent link: <http://archival-classic.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=1293135&suppress=N&imgindex=1>

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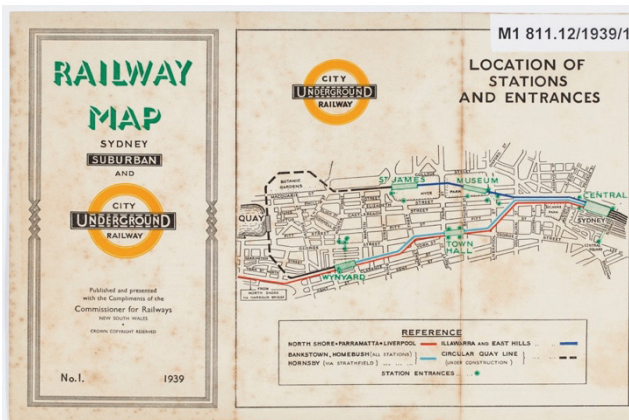


Figure 7. City Underground Railway Location of stations & entrances. Sydney, Waite & Bull for the Office of the Commissioner for Railways. New South Wales. 1939. Source: State Library of New South Wales.

Persistent link: <http://archival-classic.sl.nsw.gov.au/album/ItemViewer.aspx?itemid=1293135&suppress=N&imgindex=2>

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As stated in the introduction, the map was altogether different to what the Department of Railways had offered before. Previously, what was available for rail commuters were maps like that shown in Figure 4 - ‘standard’ line maps, produced by Government mapping agencies like the Department of Lands, NSW. The new pocket map was smaller – a folded map, rather than a large map – and a schematic map, for the first time. Users could now navigate the entire metropolitan system with an at-hand, simple

representation of the network. (It must be noted that the number of underground railway stations in operation when the map was produced were just 4. Later, by additional underground and open-cut stations were added.

The map was only in use for about a year. It was replaced with a more conventional map, like the 1941 map, shown in Figure 5. It would not be until much later that schematic maps returned, like the 1969 map of Sydney, a fairly rudimentary map of the system (Figure 8).

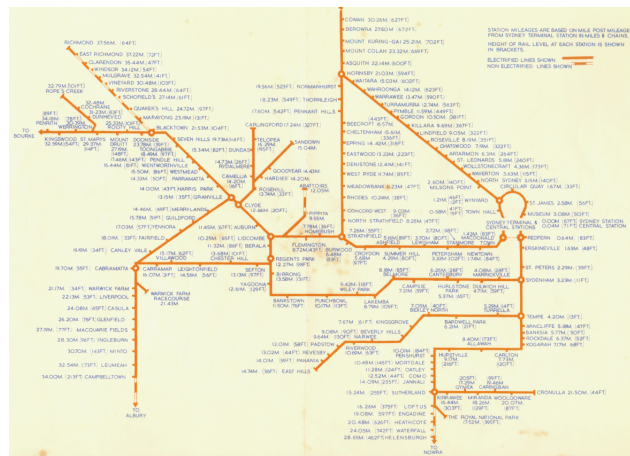


Figure 8. Sydney network schematic map, 1969.

Source: NSW Railnet

<https://nswrail.net/maps/images/syd-network1969.gif>

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The 1939 map is undeniably based on Harry Beck’s London Underground map. Dobbin [8] noted that it used similar design principles as Beck’s representation. Rail lines are colour-coded, all lines are drawn horizontal, vertical or at 45°, stations are shown as ‘ticks’ and interchanges as circles.

As well, the cover for this folded map is almost identical to the Central London map of the previous year, 1938. When looking at the two covers (Figure 9), the layout, type, logo and graphics border, the similarities are obvious.

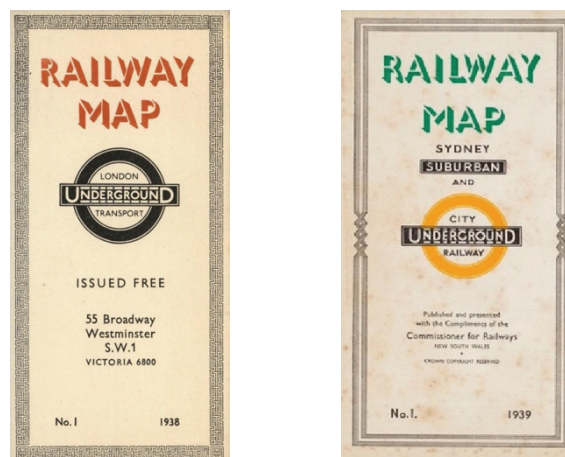


Figure 9. Folded map covers: (L) Railway Map. London Underground Transport. Interchange Stations Central Area. H.C. Beck. Underground railways, London, 1938. Source: David Rumsey Collection <https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~268682~90042938:Railway-Map--London-Underground-Tra#> (R) City Underground Railway Location of stations and entrances.

However, on the main map, for the central CBD area, which included the only underground stations in the system

at that time, the scale was not exaggerated for clarity, instead an enlarged map showing the ‘locations of stations and entrances’ was included on the verso.

D. INVESTIGATION

The investigation took two routes. The first was to explore government archives related to the New South Wales Government bodies that were involved in Sydney’s development during the 1930s. These were:

- Ministry of Transport
- Department of Railways
- Way and Works Branch, Department of Railways, NSW
- NSW State Archives

Archivist, Mike Jones [9] informed me that: *“if there are any surviving records on the decision-making process, whether there were licensing agreements with London, etc. the most likely place they will be is in NSW State Archives & Records”*.

A search of the NSW Archives was fruitless.

It proved to be impossible to uncover anything whatsoever about the 1939 map from these records. Something as small as a map, compared to constructing the railway system, the underground system and the Sydney Harbour Bridge deemed that small publications, like the map, just ‘disappeared’.

The second route was to look at the archives of Waite & Bull, fine printers, based in Sydney. Waite & Bull produced the Sydney Suburban and City Underground Railway, 1939 map for the Office of the Commissioner for Railways, New South Wales. Waite and Bull also produced and published a number of other maps, posters, etc. for the Department of Railways, NSW.

The company no longer exists, but selected archives from the company are held in the State Library of New South Wales. The particular records that could provide the required information were the archive of their records, ca. 1921-1971, correspondence, 1935-1971 and papers regarding Benjamin Waite’s trip abroad, 1935. Benjamin Waite was the managing Director of John Sands Ltd. and the proprietor of Waite and Bull [10].

The archive comprised only two storage boxes. They contained mainly accounting materials and correspondence. Documentation on some printing jobs was included in the correspondence, but nothing about the map.

So, what was discovered? The company Waite and Bull designed, produced and printed many items for the Department of Railways, including the 1939 Sydney Suburban and City Underground Railway Map No1. Only one issue of the map was made. The map design elements – differently coloured lines drawn horizontal, vertical or at 45°, ticks for railway stations, circles for interchanges – closely resemble Beck’s design. And, the cover design for this folded map is almost identical to the London 1938 map.

E. CONCLUSION

One of the problems about trying to find historical documents in Australia is the ‘Tyranny of Distance’ (as

expounded by Geoffrey Blainey, in his book *The Tyranny of Distance: How Distance Shaped Australia's History* (1966), Sydney: Macmillan). In many instances few records were kept and when taking ideas from other parts of the world (including London and the successful Underground map), being so far away – literally and legally – often, liberties were taken with ownerships of copyright and intellectual property, like the underground station signage, illustrated in Figure 10, that still exists today.



Figure 10. Sineage – St. james Underground station, Sydney
Photograph attribution: Author

As archivist Mike Jones said (personal correspondence, 2016), when relaying the general information from a local Sydney archivist, somewhat a railways buff, that: *“The branding would have been approved by the Railway Commissioners, and, possibly, the Minister. I would be astonished if they got formal approval from LU. Intellectual property concerns were far less of an issue in those days, and the NSWGR was well known for just using patents (for example).”*

ACKNOWLEDGMENTS

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REFERENCES

- [1] Ovenden, M., 2009, Harry Beck: The Paris Connection. <https://www.creativereview.co.uk/harry-beck-the-paris-connection/> Web page accessed 30 November 2016.
- [2] Roberts, M. 2005. Underground Maps After Beck, Harrow: Capital Transport Publishing
- [3] Heller, S. 2011, Ahead of Its Time | An Icon Goes Digital, T Magazine, NY Times, 16 September 2011. <https://tmagazine.blogs.nytimes.com/2011/09/16/ahead-of-its-time-an-icon-goes-digital/>
- [4] Transport Sydney, 2011, History of Cityrail: Introduction (1855-1932). <https://transportsydney.wordpress.com/2011/09/08/history-of-cityrail-introduction-1855-1932-2/> Web page accessed 30 November 2016.
- [5] Spearritt, P., 1979, 'Bradfield, John Job Crew (1867–1943)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/bradfield-john-job-crew-5331/text9011>, published first in hardcopy 1979. Web page accessed 12 February 2017.
- [6] The Daily Telegraph (Sydney), 2014, “JJC Bradfield: The visionary who built the Bridge”. November 13, 2014.
- [7] Spearritt, P., 2000, Sydney's Century: A History. Sydney: UNSW Press.
- [8] Dobbin, C., 2011, London Underground Maps: Art, Design and Cartography, Farnham, Surrey: Lund Humphries.
- [9] Jones, M., 2016, Personal Correspondence.
- [10] The Sydney Morning Herald, 8 November 1947, p. 15