

City of Melbourne: social needs, gaps in transit

Dr James Reynolds

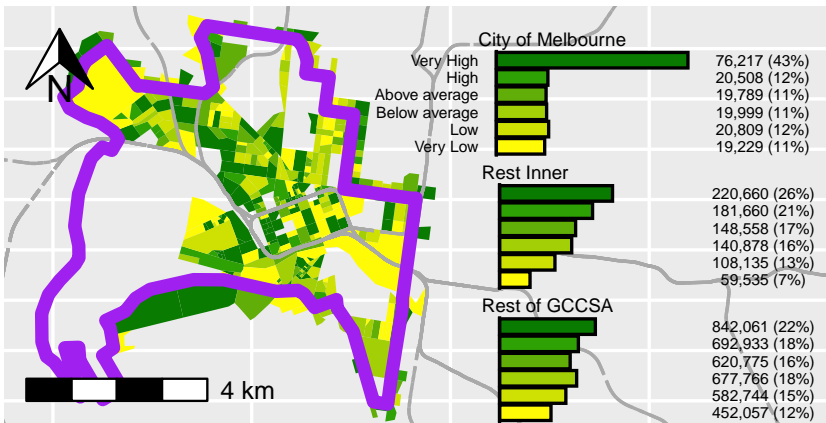
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This note explores social needs for transport, and transit provision in the City of Melbourne, using the Currie and Sendbergs (2007) methodology¹. In Victoria, public transport is managed by the state government, although Local Government Authorities (LGAs) may have influence through planning processes, advocacy etc. However, it is unclear how much transit is supplied or how well social needs are met for each LGA. This note examines the City of Melbourne in 2021 and 2023, and is part of a series on LGAs in Greater Melbourne².

METHODS:

Scores for transit supply and transport needs were calculated based on the Victorian GTFS feed³ and Australian Bureau of Statistics (ABS) data using the *gtfssupplyindex* R package⁴ as per Reynolds, Currie and Qu (in drafting)⁵. Results are shown for the ABS' Statistical Area 1s (SA1s), categorized based on averages across the Melbourne Greater Capital City Statistical Area (GCCSA).

RESULTS: Social needs for transport Figure 1 compares social needs for the Rest of the Inner SA4⁶ and the rest of Greater Melbourne with those for the City of Melbourne.



Needs were higher than the Melbourne average for 66% of the City of Melbourne's population, a larger share than for rest of the Inner SA4 (64%)⁷, or elsewhere in Greater Melbourne (56%)⁸.

Figure 2 shows the distribution of transit service in 2021 and 2023. Transit service levels were below the Melbourne average for 4% of

¹ Graham Currie and Zed Senbergs, "Identifying Spatial Gaps in Public Transport Provision for Socially Disadvantaged Australians: The Melbourne 'Needs Gap' Study," 2007; Graham Currie, "Quantifying Spatial Gaps in Public Transport Supply Based on Social Needs," *Journal of Transport Geography* 18, no. 1 (2010): 31-41.

² See https://github.com/James-Reynolds/gtfssupplyindex_melbournre_LGA_2024 but lookout, I misspelled "Melbourne"

³ Results are based on GTFS feeds for August 2021 and 2023, so may not match services run.

⁴ See <https://github.com/James-Reynolds/gtfssupplyindex>

⁵ James Reynolds, Graham Currie, and Yanda Qu, "Social Needs for Transport and Gaps in Transit Service: New GTFS Tools," *In Drafting*, 2024.

⁶ LGAs: Yarra, Port Phillip, Bayeside, Glen Eira and parts of Moonee Valley, Merri-Bek, Darebin, Kingston and Monash.

Figure 1: Needs in 2021 by population

⁷ Differences were statistically significant ($\chi^2(5) = 63.52, p < .001$).

⁸ Differences were statistically significant ($\chi^2(5) = 58.37, p < .001$).

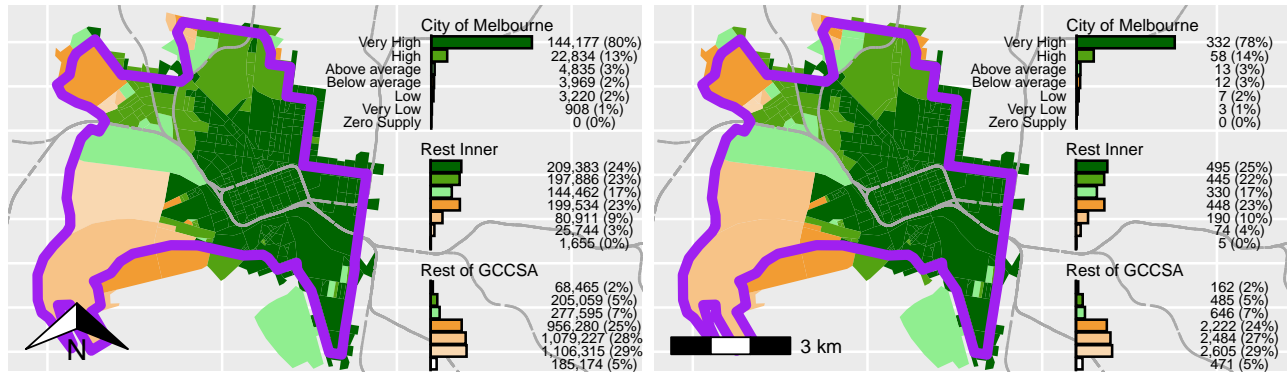


Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

City of Melbourne residents in 2021, which is less than for the rest of the Inner SA4 (36%)⁹ or the rest of Melbourne (86%)¹⁰. The distribution of transit supply, categorised with respect to the Melbourne average, appears similar in 2023 (Figure 2, right). Figure 3 directly compares 2021 and 2023 transit service levels.

⁹ Differences were statistically significant ($\chi^2(6) = 456.44, p < .001$).

¹⁰ Differences were statistically significant ($\chi^2(6) = 5090.57, p < .001$).

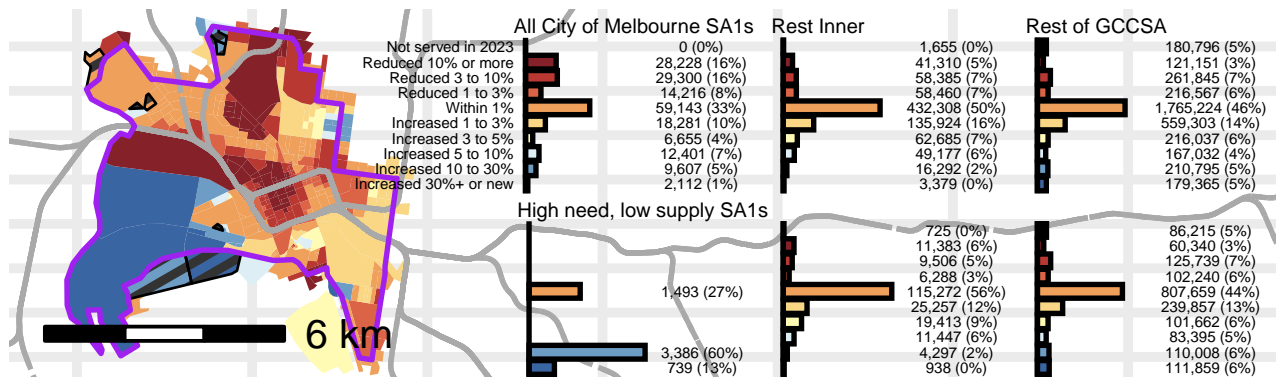


Figure 3: Transit service change 2021 to 2023. SA1s with needs above, but supply below, average highlighted in black.

Transit levels increased by 1% or more by 2023 in SA1s that were home to 27% of City of Melbourne residents in 2021, which is lower than for the rest of Inner SA4 (31%)¹¹ or the rest of Greater Melbourne (34%)¹². Only 3% of the City of Melbourne population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021¹³. However, for 73% of this cohort service levels increased 1% or more, a higher proportion than for the similar cohorts in the rest of the Inner SA4 (86%)¹⁴, and elsewhere (73%)¹⁵.

Overall, City of Melbourne residents appear less likely to have had transit service levels below Melbourne's average, and more likely to have seen increases, including for those with larger needs-gaps.

¹¹ Differences were statistically significant ($\chi^2(9) = 149.77, p < .001$).

¹² Differences were statistically significant ($\chi^2(9) = 285.96, p < .001$).

¹³ Shown with black in Figure 3. This compares to 24% of Inner SA4 residents and 47% of those elsewhere in Melbourne.

¹⁴ Differences were statistically significant (Fisher test $p = 5e-04$).

¹⁵ Differences were statistically significant (Fisher test $p = 2.64e-11$).