

City of Yarra: social needs, gaps in transit

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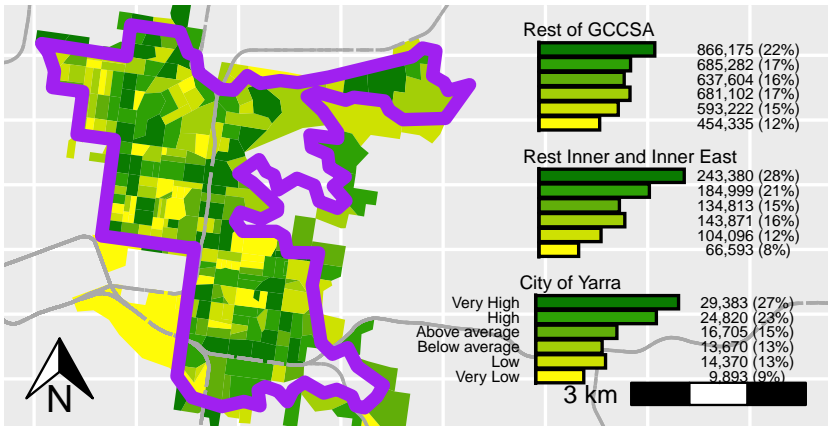
This note explores social needs for transport, and transit provision in the City of Yarra, using the Currie and Sendbergs (2007) methodology¹. In Victoria, public transport is managed by the state government, although Local Government Authorities (LGAs) may have influence through planning processes, 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 Yarra 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 Australian Bureau of Statistics (ABS) data and the Victorian GTFS feed³ 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:

Figure 1 compares social needs for transport in the Rest of the Inner and Inner East SA4s⁶ and for the rest of Greater Melbourne with those for the City of Yarra.



Needs were higher than the Melbourne average for 65.1% of the Yarra population, more than elsewhere in Melbourne (55.9%)⁷.

Figure 2 shows the distribution of transit service in 2021 and 2023. Transit service levels were below the Melbourne average for 11.3%

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_melbourne_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: City of Melbourne, Port Phillip, Boorondara, and parts of Moonee Valley, Merri-Bek, Darebin, Stonnington, Whitehorse and Manningham.

Figure 1: Needs in 2021 by population

⁷ Differences between Yarra and the rest of the Inner and Inner East SA4s were not statistically significant ($\chi^2(5) = 3.80, p = .579$). Differences with the rest of Greater Melbourne were statistically significant ($\chi^2(5) = 15.00, p = .010$).

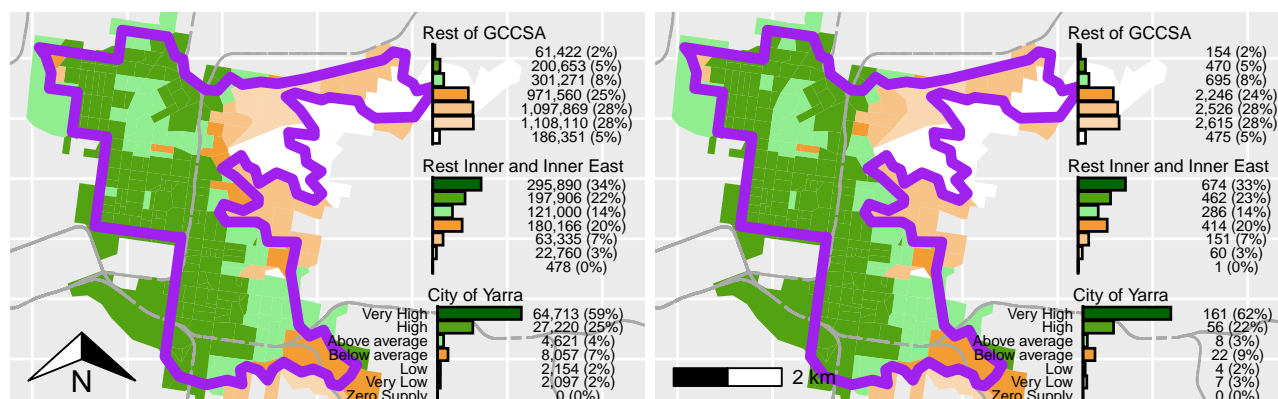


Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

of Yarra residents in 2021, which is less than for the rest of the Inner and Inner East SA4s (30.3%)⁸ or the rest of Melbourne (85.7%)⁹. 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.

⁸ Differences were statistically significant ($\chi^2(6) = 104.60, p < .001$).

⁹ Differences were statistically significant ($\chi^2(6) = 2996.30, p < .001$).

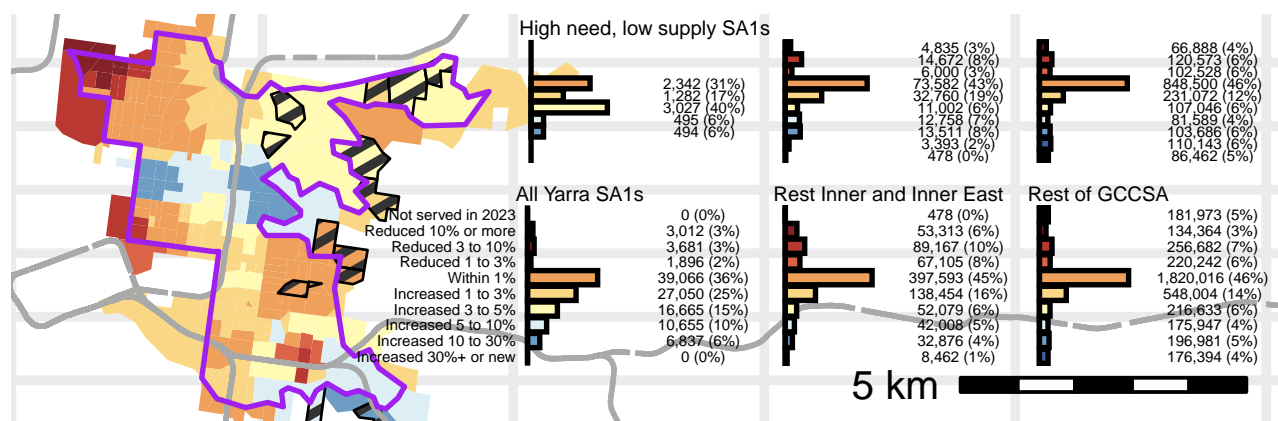


Figure 3: Transit service change 2021 to 2023. SA1s with needs above, but supply below, average highlighted in black.

Transit levels increased by 1% or more between 2021 and 2023 for 56.2% of Yarra residents, which is a great proportion than in the rest of Inner and Inner East SA4s (33.5%)¹⁰, and the rest of Melbourne (33.5%)¹¹. 7.0% of the Yarra population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021¹². However, for 69.3% of this cohort service levels increased 1% or more, a higher proportion than for the similar cohort in Greater Melbourne living outside the Inner and Inner East SA4 (34.1%)¹³.

Overall, Yarra 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.

¹⁰ Differences were statistically significant ($\chi^2(9) = 102.66, p < .001$).

¹¹ Differences were statistically significant ($\chi^2(9) = 138.01, p < .001$).

¹² Shown with black in Figure 3. This compares to 19.6% of Inner and Inner East SA4s residents and 47.3% of those elsewhere in Melbourne.

¹³ Differences with 'the rest of the GCCSA' were statistically significant (Fisher test $p = 0.0104$), but not with 'the rest of Inner and Inner East SA4s' (Fisher test $p = 0.141$).