

City of Monash: social needs, gaps in transit

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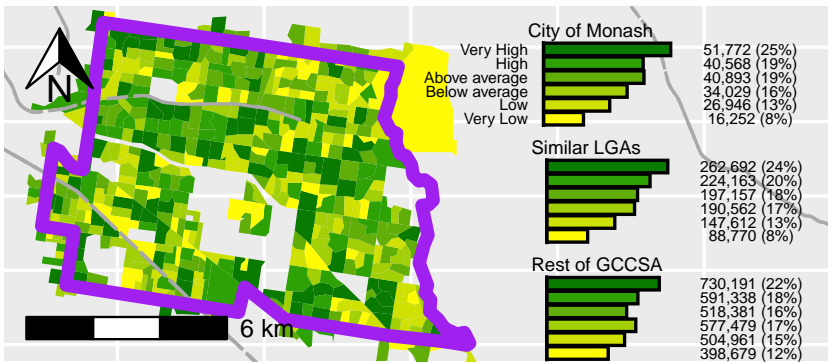
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This note is part of a series¹ examining transit social needs-gaps in Greater Melbourne. In Victoria, public transport is the responsibility of state government, although Local Government Authorities (LGAs) may have influence through planning processes and advocacy. However, it is unclear how much transit is supplied or how well social needs for transport are met for each LGA. The Currie and Sendbergs (2007) methodology² is used in this note to explore social transport need, and transit provision in August 2021 and 2023 in the City of Monash, with comparisons to surrounding LGAs and the rest of Greater Melbourne.

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: Figure 1 compares social needs for nearby LGAs⁶ and the rest of Greater Melbourne, with those for the City of Monash.



Needs were higher than average for 63% of Monash's population, which is a larger share than for those parts of Greater Melbourne beyond the City of Monash and its surrounding LGAs (55%)⁷.

Figure 2 shows the distribution of transit service in 2021 and 2023. Transit service levels were below the Melbourne average for 70% of City of Monash residents in 2021, which is a higher proportion than

¹ See <https://tinyurl.com/4rctaxfc>



² 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.

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 Greater Dandenong, Knox, Whitehorse, Boroondara, Glen Eira, Stonnington and Kingston
Figure 1: Needs in 2021 by population

⁷ Differences between the City of Monash and the nearby LGAs were not statistically significant ($\chi^2(5) = 1.35$, $p = .930$), but differences between Monash and the rest of Greater Melbourne were ($\chi^2(5) = 19.37$, $p = .002$).

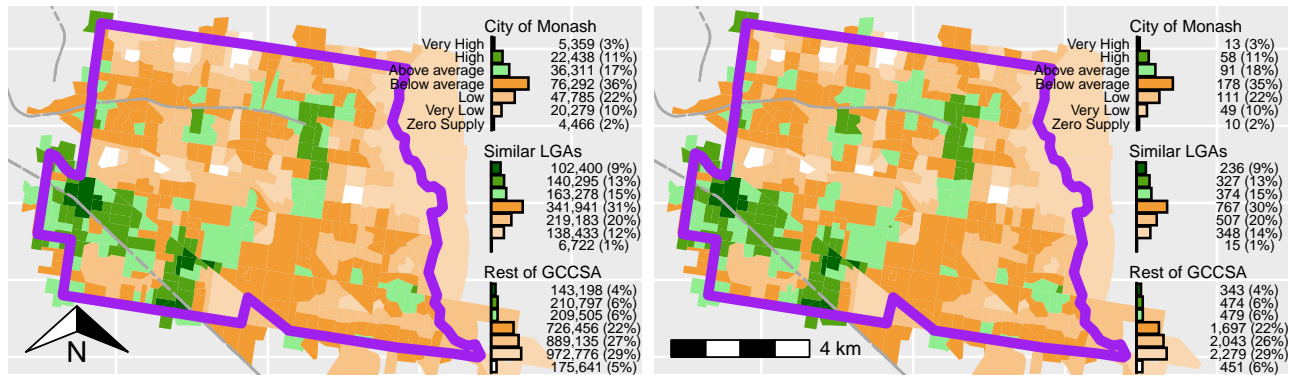


Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

⁸ Differences were statistically significant ($\chi^2(6) = 46.36, p < .001$).

⁹ Differences were statistically significant ($\chi^2(6) = 206.66, p < .001$).

in the nearby LGAs (63%)⁸ but lower than for the rest of Greater Melbourne (83%)⁹. Distribution of transit supply, categorised with respect to Melbourne's average, appears similar in 2023 (Figure 2, right). Figure 3 directly compares 2021 and 2023 service levels.

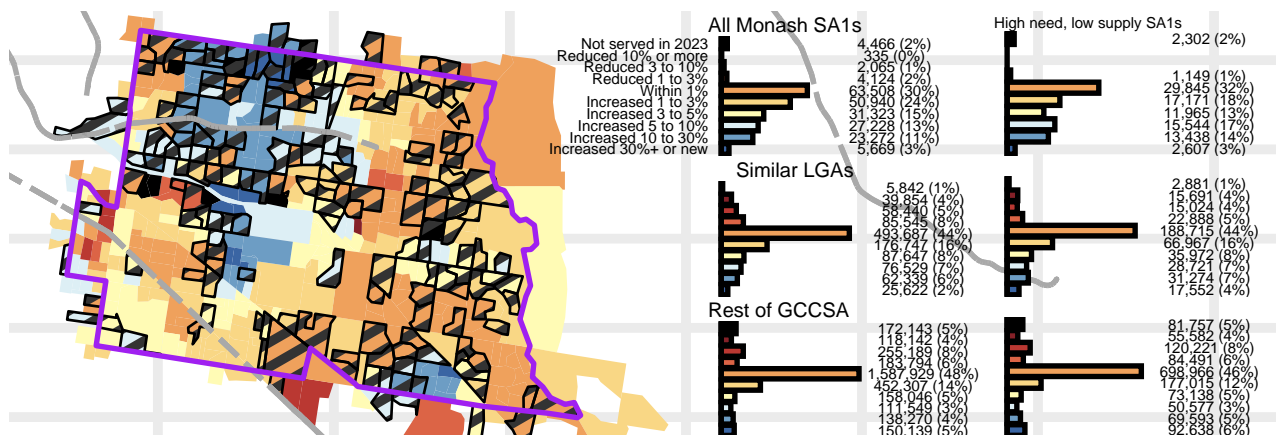


Figure 3: Transit service change 2021 to 2023, by population. SA1s with needs above, but supply below, average highlighted in black.

¹⁰ Differences were statistically significant ($\chi^2(9) = 165.25, p < .001$).

¹¹ Differences were statistically significant ($\chi^2(9) = 388.25, p < .001$).

¹² Shown with black in Figure 3. This compares to 38% of residents in the rest of the middle suburban LGAs and 45% of those in more outer parts of Melbourne.

¹³ Differences were statistically significant ($\chi^2(9) = 57.35, p < .001$).

¹⁴ Differences were statistically significant ($\chi^2(9) = 163.96, p < .001$).

¹⁵ Including for those with above average needs and below average supply.

Transit levels increased by 1% or more by 2023 in SA1s that were home to 65% of City of Monash residents in 2021, which is a higher proportion than for those in the nearby LGAs (39%)¹⁰ or across the rest of Greater Melbourne (30%)¹¹. 44% of the City of Monash population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021¹². However, for 65% of this cohort service levels increased 1% or more, a higher proportion than for the similar cohorts in the nearby LGAs (42%)¹³ or for those with above average needs and below average supply across the rest of Melbourne (31%)¹⁴.

Overall, City of Monash residents appear more likely have had transit service levels higher than the Melbourne average, but less likely than those in surrounding LGAs. However, they were more likely than others to have seen transit increase by 2023¹⁵.