City of Hobsons Bay: social needs, gaps in transit

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This note explores social needs for transport, and transit provision in the City of Hobsons Bay, using the Currie and Sendbergs (2007) methodology[1]. 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 Hobsons Bay in 2021 and 2023, and is part of a series on LGAs in Greater Melbourne[2].

[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_melbounre_LGA_2024` but lookout, I misspelled "Melbourne"

Methods:

Scores for transit supply and transport needs were calculated based on the Victorian GTFS feed[3] and Australian Bureau of Statistics (ABS) data using the *gtfssupplyindex* R package[4] 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).

[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.

Results: Social needs for transport Figure 1 compares social needs for LGAs similarly located in the middle suburbs[6] and the outer parts of Greater Melbourne[7] with those for the City of Hobsons Bay.

[6] LGAs: Maribyrnong, Moonee Valley, Merri-Bek, Darebin, Banyule, Boroondara, Stonnington, Glen Eira and Bayside.

[7] LGAs beyond those listed above.

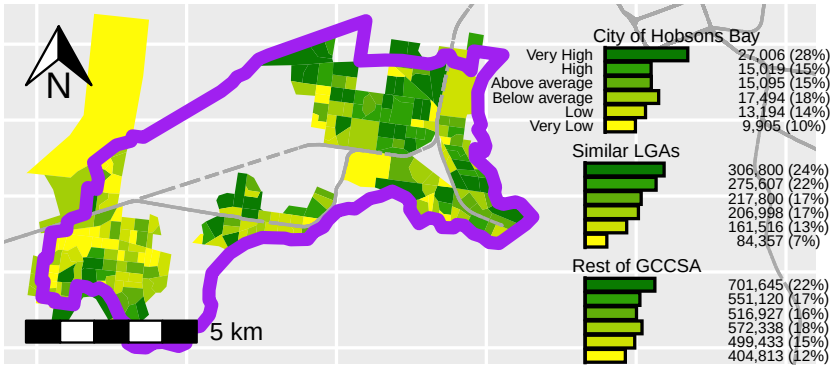

Figure 1: Needs in 2021 by population

Needs were higher than the Melbourne average for 58.5% of the City of Hobsons Bay's population, and appear similar to other middle LGAs and the outer parts of Melbourne[8].

Figure 2 shows the distribution of transit service in 2021 and 2023. Transit service levels were below the Melbourne average for 72.9%

[8] Differences between Hobsons Bay and either group were not statistically significant ($\chi^2(5) = 9.67$, $p = .085$)($\chi^2(5) = 5.41$, $p = .367$).

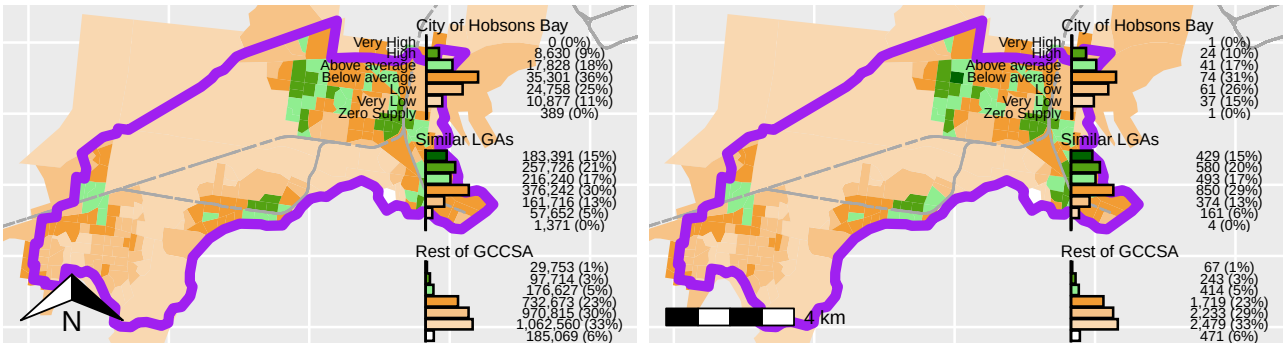

Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

of City of Hobsons Bay residents in 2021, which is more than for the other middle suburb LGAs (47.6%)[9], but less than for the outer parts of Melbourne (90.7%)[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 ($\chi^2(6) = 105.62$, $p < .001$).

[10] Differences were statistically significant ($\chi^2(6) = 120.28$, $p < .001$).

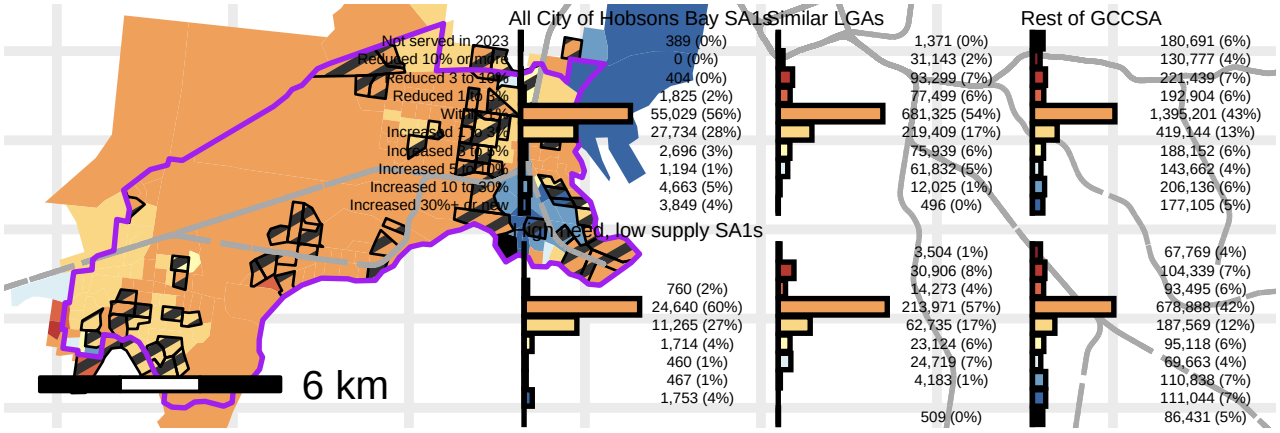

Figure 3: Transit service change 2021 to 2023. SA1s with needs above, but supply below, average highlighted in black.

Transit levels increased by 1% or more by 2023 in SA1s that were home to 41.0% of City of Hobsons Bay residents in 2021, which is lower than for the rest of Inner SA4 (29.5%)[11] or the rest of Greater Melbourne (34.8%)[12]. Only 42.0% of the City of Hobsons Bay population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021[13]. However, for 38.1% of this cohort service levels increased 1% or more, a higher proportion than for the similar cohorts in the rest of the middle suburban LGAs (30.4%)[14].

Overall, City of Hobsons Bay residents appear more 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 ($\chi^2(9) = 200.30$, $p < .001$).

[12] Differences were statistically significant ($\chi^2(9) = 98.18$, $p < .001$).

[13] Shown with black in Figure 3. This compares to 30.1% of residents in the rest of the middle suburban LGAs and 49.3% of those elsewhere in Melbourne.

[14] Differences were statistically significant (Fisher test p = 5e-04). Differences with the outer parts of Greater Melbourne were not statistically significant (Fisher test p = 0.367).

but not for those with higher needs-gaps.