City of Port Phillip: social needs, gaps in transit

Dr James Reynolds

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This note is part of a series examining transit social needs-gaps in Greater Melbourne[1]. In Victoria, public transport is the responsibility of state government, although Local Government Authorities (LGAs) may have some 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. This note uses the Currie and Sendbergs (2007) methodology[2]. to explore social needs for transport, and transit provision in 2021 and 2023, in the City of Port Phillip

[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] LGAs: City of Melbourne, Yarra, and parts of Moonee Valley, Merri-Bek, Darebin and Stonnington.

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).

Results: Social needs for transport Figure 1 compares social needs for the Rest of the Inner SA4[6] and the rest of Greater Melbourne with those for the City of Port Phillip.

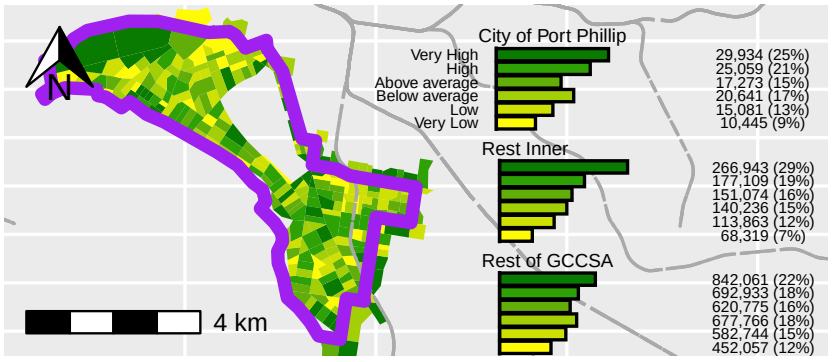

Figure 1: Needs in 2021 by population

Needs were higher than the Melbourne average for 61.0% of the City of Port Phillip's population, a similar share to the rest of the Inner SA4[7], and elsewhere in Greater Melbourne[8].

Figure 2 shows the distribution of transit service in 2021 and 2023. Transit service levels were below the Melbourne average for 15.6% of City of Port Phillip residents in 2021, which is less than for the

[7] Differences were not statistically significant ($\chi^2(5) = 3.02$, $p = .696$).

[8] Differences were not statistically significant ($\chi^2(5) = 6.64$, $p = .249$).

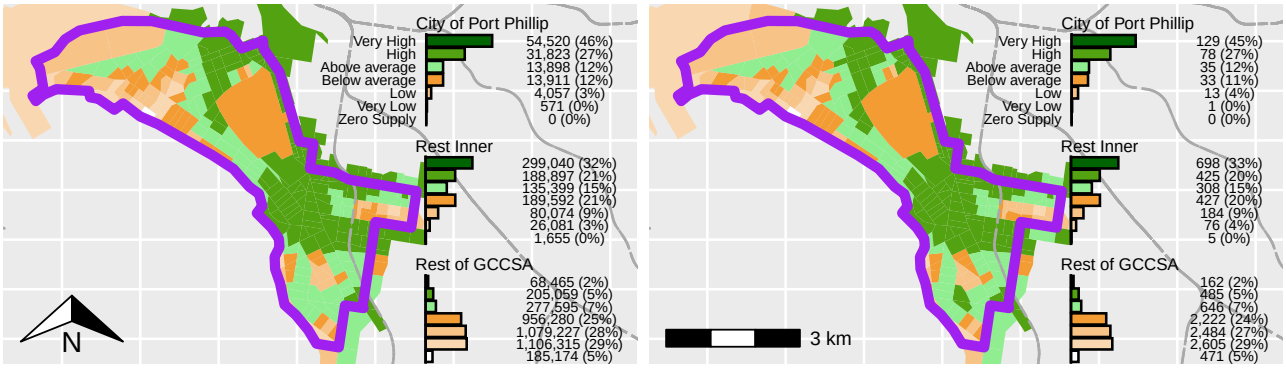

Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

rest of the Inner SA4 (32.3%)[9] or the rest of Melbourne (85.8%)[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.

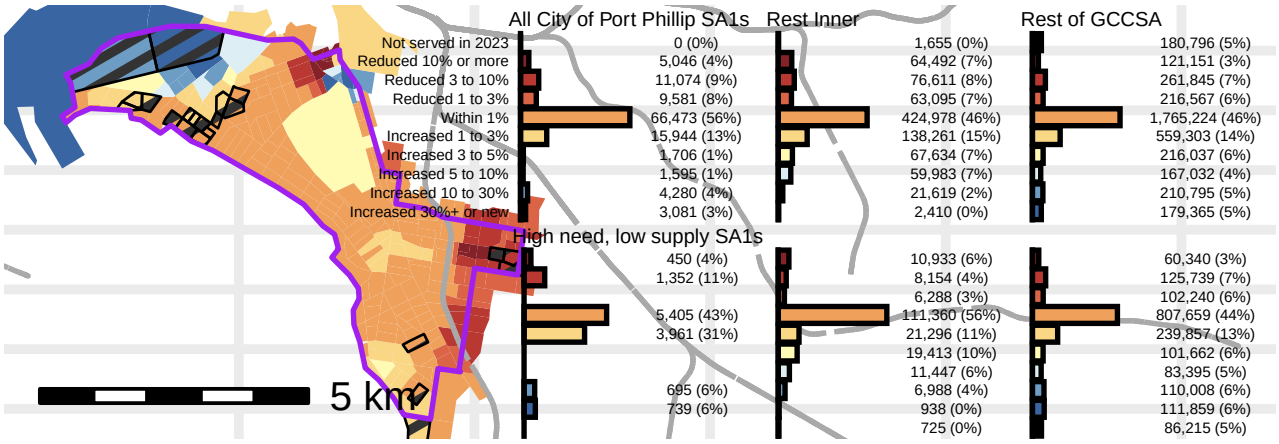

Figure 3: Transit service change 2021 to 2023. SA1s with needs above, but supply below, average highlighted in black.

Transit levels increased by 1% or more by 2023 in SA1s that were home to 22.4% of City of Port Phillip residents in 2021, which is a lower proportion than in the rest of the Inner SA4 (31.5%)[11] or the rest of Greater Melbourne (34.4%)[12]. Only 10.6% of the City of Port Phillip population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021[13]. However, for 42.8% of this cohort service levels increased 1% or more, a higher proportion than for the similar cohorts in the rest of the Inner SA4 (30.4%)[14].

Overall, City of Port Phillip residents appear less likely to have had transit service levels below Melbourne's average, and less likely to have seen increases in service between 2021 and 2023.

[9] Differences were statistically significant ($\chi^2(6) = 41.72$, $p < .001$).

[10] Differences were statistically significant ($\chi^2(6) = 2092.95$, $p < .001$).

[11] Differences were statistically significant ($\chi^2(9) = 52.11$, $p < .001$).

[12] Differences were statistically significant ($\chi^2(9) = 44.29$, $p < .001$).

[13] Shown with black in Figure 3. This compares to 21.5% of Inner SA4 residents and 47.2% of those elsewhere in Melbourne.

[14] Differences between this cohort in the City of Port Phillip and the similar cohort living in the rest of the Inner SA4 were statistically significant (Fisher test p = 0.016). However, differences between this cohort in the City of Port Phillip and the similar cohort living in Greater Melbourne but outside of the Inner SA4 were not statistically significant (Fisher test p = 0.249).