

City of Stonnington: social needs, gaps in transit

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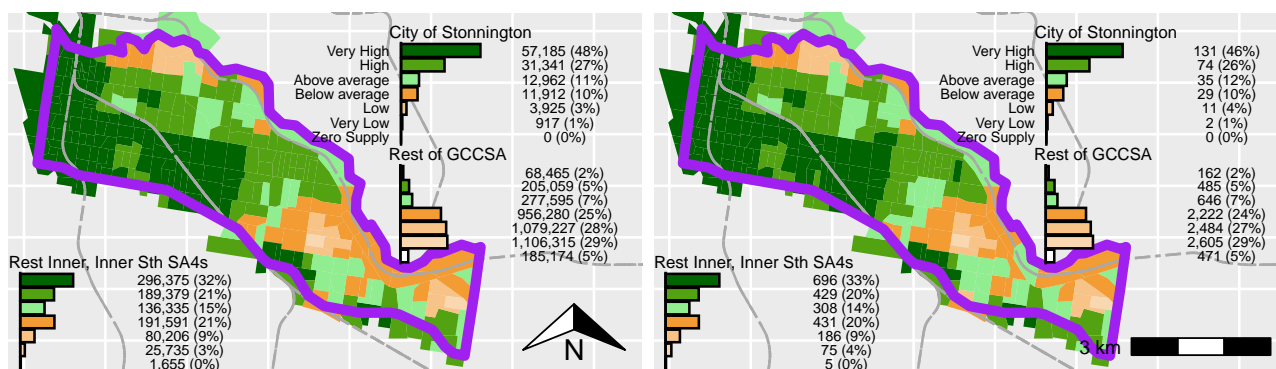
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In Victoria, public transport is managed by the state government, although Local Government Authorities (LGAs) may have some influence on service levels through planning processes, advocacy etc. However, not much is known about how much transit is supplied or whether social needs for transport are being met within each LGA's boundaries. This note explores social needs-gaps in the City of Stonnington, using the Currie and Sendbergs (2007) methodology¹. It is part of a series examining each LGA in Greater Melbourne².

Methods

This note maps transport supply and a composite needs indicator based on Australian Bureau of Statistics (ABS) data. The methodology is as per Reynolds, Currie and Qu (in drafting)³, and involves Transit Supply Indication (SI) scores, which are based on service frequency and how much of an area is within walking distance of stops/stations⁴. Results are shown for ABS' Statistical Area 1s (SA1s), categorized into seven groups based on the average scores for SA1s across the Melbourne Greater Capital City Statistical Area (GCCSA).

Results



In 2021 almost half of City of Stonnington's population lived in SA1s with Very High transit service levels (Figure 1, left),⁵. However, as shown in Figure 2, coverage and frequency of transit appears to have decreased by 2023 for more of those in the City of Stonnington⁶.

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 Forthcoming hopefully, but using the *gtfssupplyindex* R package (see <https://github.com/James-Reynolds/gtfssupplyindex>) to process the Victoria GTFS feed. Note that results represent what is in the GTFS feed for August 2021 and 2023, which may not match services provided.

⁴ 400m for tram and bus, 800m for train.

Figure 1: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

⁵ Differences with the Rest of the Inner and Inner South SA4s (covering the City of Melbourne, Yarra, Port Phillip, Glen Eira and parts of Moonee Valley, Merri-Bek, Darebin, Kingston and Monash), by SA1, are statistically significant in 2021 ($\chi^2(6) = 46.52$, $p < .001$) and 2023 ($\chi^2(6) = 45.84$, $p < .001$). Differences with the rest of Melbourne are also statistically significant (2021: $\chi^2(6) = 2186.48$, $p < .001$, 2023: $\chi^2(6) = 2124.21$, $p < .001$).

⁶ Differences are statistically significant with the Inner and Inner South SA4s

than in other parts of Melbourne

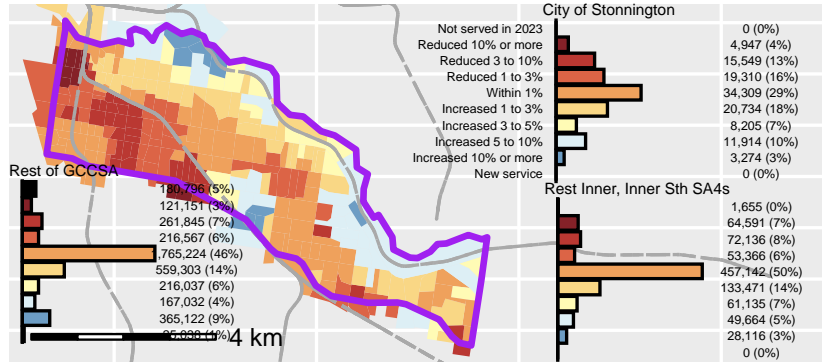


Figure 2: Change in SI score between 2021 and 2023 by SA1 and population

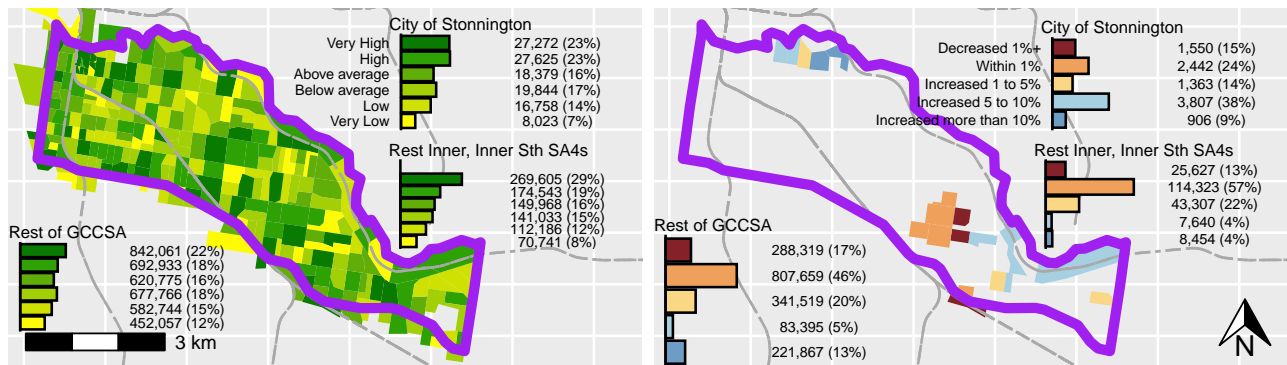


Figure 3: Needs by 2021 population (left) and change in SI to 2023 for those SA1s with needs above average, but below average supply (by 2021 populations right)

Social needs for transport in the City of Stonnington in 2021 (Figure 3, left) were Very High or High for 46% of the population. This is similar to those of the rest of the Inner and Inner South SA4s, but higher than elsewhere in Greater Melbourne⁷. Figure 3, right, shows how transit service levels changed between 2021 and 2023 for those who were living in SA1s with needs above, but supply below, the Greater Melbourne average⁸. Those in the City of Stonnington in 2021 were more likely to have had more transit in 2023 than those elsewhere.

Overall, residents of the City of Stonnington appear less likely than those elsewhere in Greater Melbourne to have transit service levels that are below the average. They are also less likely to have above average needs, but supply below average, than those in the rest of the Inner and Inner South SA4s or other parts of Greater Melbourne⁹, and if they did appear to be more likely to have seen service levels increase by 2023 than those in a similar situation elsewhere.

⁷ Differences with the rest of the Inner and Inner South SA4s were not statistically significant ($\chi^2(5) = 5.24$, $p = .388$). Differences with the rest of Greater Melbourne were statistically significant ($\chi^2(5) = 14.92$, $p = .011$).

⁸ There are significant differences between the City of Stonnington and the rest of the Inner and Inner South SA4s ($p = 4.18e-06$) and the Rest of the GCCSA ($p = 3.51e-05$).

⁹ 8.5% of City of Stonnington residents had above average social needs for transport but below average transit supply, compared with 21.6% in the rest of the Inner and Inner South SA4s and 44.9% across the rest of Melbourne.