

City of Moonee Valley: social needs, gaps in transit

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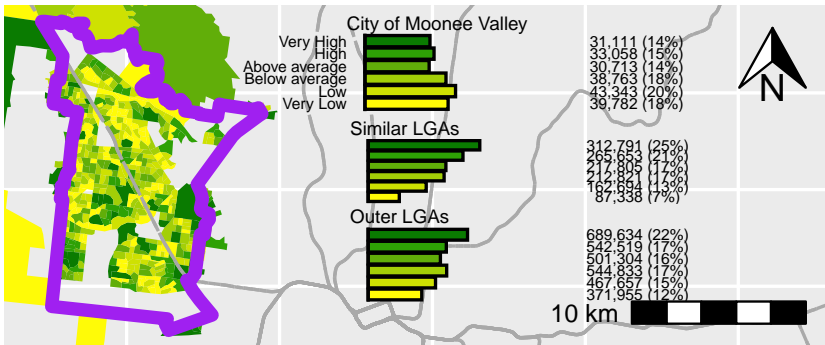
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This note is part of a series examining transit social needs-gaps in Greater Melbourne<sup>1</sup>. In Victoria, public transport is the responsibility of state government, although Local Government Authorities (LGAs) may have some influence through 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 explores social needs for transport, and transit provision in 2021 and 2023, in the City of Moonee Valley using the Currie and Sendbergs (2007) methodology<sup>2</sup>.

METHODS:

Scores for transit supply and transport needs were calculated based on the Victorian GTFS feed<sup>3</sup> and Australian Bureau of Statistics (ABS) data using the *gtfssupplyindex* R package<sup>4</sup> as per Reynolds, Currie and Qu (in drafting)<sup>5</sup>. 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 LGAs similarly located in the middle suburbs<sup>6</sup> and the outer parts of Greater Melbourne, beyond the inner and middle suburbs, with those for the City of Moonee Valley.



Needs were higher than the Melbourne average for 43.8% of the City of Moonee Valley's population, which is a lower proportion than for the other similar middle-suburban LGAs (63.2%)<sup>7</sup> or the outer parts of Greater Melbourne (55.6%)<sup>8</sup>.

Figure 2 shows the distribution of transit service in 2021 and 2023.

<sup>1</sup> See <https://tinyurl.com/4rctaxfc>



<sup>2</sup> 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.

<sup>3</sup> Results are based on GTFS feeds for August 2021 and 2023, so may not match services run.

<sup>4</sup> See <https://github.com/James-Reynolds/gtfssupplyindex>

<sup>5</sup> James Reynolds, Graham Currie, and Yanda Qu, "Social Needs for Transport and Gaps in Transit Service: New GTFS Tools," *In Drafting*, 2024.

<sup>6</sup> LGAs: Hobsons Bay, Brimbank, Moonee Valley, Merri-Bek, Darebin, Banyule, Boroondara, Stonnington, Glen Eira and Bayside.

<sup>7</sup> Differences were statistically significant ( $\chi^2(5) = 133.06, p < .001$ )

<sup>8</sup> Differences were statistically significant ( $\chi^2(5) = 37.68, p < .001$ ).

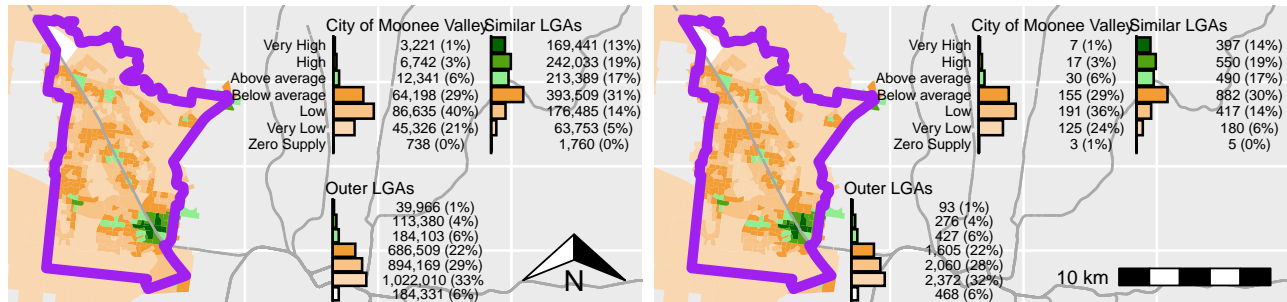


Figure 2: Transport Supply 2021 (left, by population) and 2023 (right, by SA1)

Transit service levels were below the Melbourne average for 89.8% of City of Moonee Valley residents in 2021, which is more than for the other middle suburban LGAs (50.4%)<sup>9</sup>, but similar to outer parts of Melbourne (89.2%)<sup>10</sup>. 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.

<sup>9</sup> Differences were statistically significant ( $\chi^2(6) = 440.07, p < .001$ ).

<sup>10</sup> Differences were statistically significant ( $\chi^2(6) = 80.84, p < .001$ ).

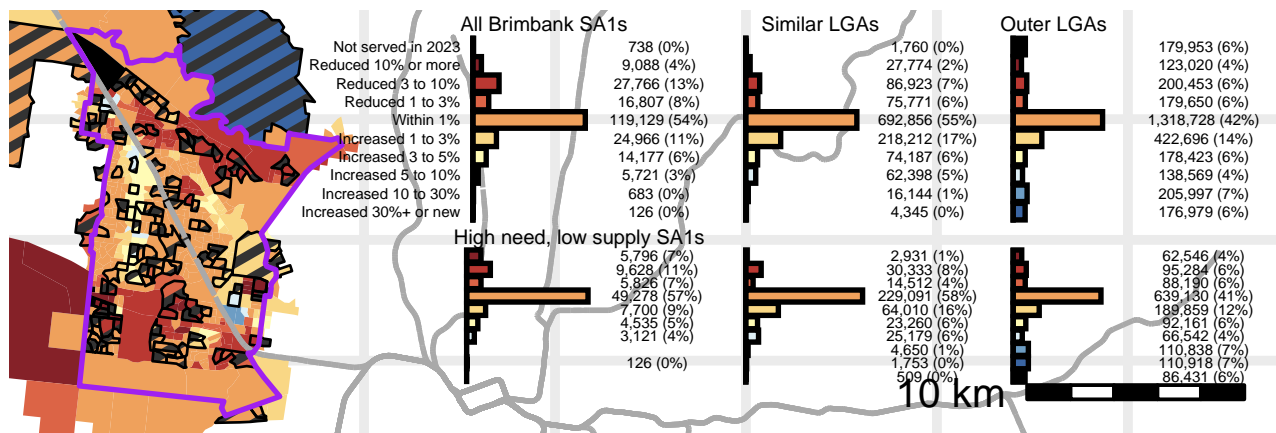


Figure 3: Transit service change 2021 to 2023. SA1s with needs above, but supply below, average highlighted in black.

Transit levels increased by 1% or more by 2023 in SA1s that were home to 20.8% of City of Moonee Valley residents in 2021, which is a lower proportion than for those in the similar middle suburban LGAs (29.8%)<sup>11</sup> or more outer parts of Greater Melbourne (35.9%)<sup>12</sup>. 39.2% of the City of Moonee Valley population lived in SA1s with *needs above, but supply below* the Melbourne averages in 2021<sup>13</sup>. However, for 18.0% of this cohort service levels increased 1% or more, a lower proportion than for the similar cohorts in the other middle suburban LGAs (30.0%) or outer parts of Melbourne (37.0%)<sup>14</sup>.

Overall, Moonee Valley residents appear less likely than those in similarly located, middle suburban, LGAs to have had transit service levels higher than the Melbourne average or to have seen transit increase by 2023.

<sup>11</sup> Differences were statistically significant ( $\chi^2(9) = 56.16, p < .001$ ).

<sup>12</sup> Differences were statistically significant ( $\chi^2(9) = 143.33, p < .001$ ).

<sup>13</sup> Shown with black in Figure 3. This compares to 31.4% of residents in the rest of the middle suburban LGAs and 49.3% of those in more outer parts of Melbourne.

<sup>14</sup> Differences with the similar LGAs were statistically significant (Fisher test  $p = 5e-04$ ), as were differences with more outer parts of Melbourne ( $\chi^2(9) = 44.30, p < .001$ ).

```
## [1] 1
```

```
## transit_supply City of Moonee Valley Similar LGAs
##      Zero Supply          3          5
##      Very Low          112         177
##      Low             199         415
##      Below average    160         899
##      Above average     30         486
##      High             17         550
##      Very High        7          389
```

```
## [1] 2
```

```
## transit_supply City of Moonee Valley Similar LGAs
##      Zero Supply      1.224703      6.775297
##      Very Low      44.242389    244.757611
##      Low          93.995941    520.004059
##      Below average 162.120035    896.879965
##      Above average  78.993331    437.006669
##      High          86.800812    480.199188
##      Very High     60.622789    335.377211
```

```
## [1] 3
```

```
## transit_supply City of Moonee Valley Rest of Greater Melbourne
##      Zero Supply          3          481
##      Very Low          112         2398
##      Low             199         2061
##      Below average    160         1595
##      Above average     30          414
##      High             17          262
##      Very High        7           90
```

```
## [1] 4
```

```
## transit_supply City of Moonee Valley Rest of Greater Melbourne
##      Zero Supply      32.641717     451.35828
##      Very Low      169.278324    2340.72168
##      Low          152.417933    2107.58207
##      Below average 118.359944    1636.64006
##      Above average  29.944054     414.05595
##      High          18.816196     260.18380
##      Very High      6.541832      90.45817
```

```
## [1] 5
```

```
## transit_supply City of Moonee Valley Similar LGAs
```

##	Zero Supply	3	5
##	Very Low	125	180
##	Low	191	417
##	Below average	155	882
##	Above average	30	490
##	High	17	550
##	Very High	7	397

## [1] 6

##	transit_supply	City of Moonee Valley	Similar LGAs
##	Zero Supply	1.224703	6.775297
##	Very Low	46.691795	258.308205
##	Low	93.077414	514.922586
##	Below average	158.752102	878.247898
##	Above average	79.605683	440.394317
##	High	86.800812	480.199188
##	Very High	61.847492	342.152508

## [1] 7

##	transit_supply	City of Moonee Valley	Rest of Greater Melbourne
##	Zero Supply	3	468
##	Very Low	125	2372
##	Low	191	2060
##	Below average	155	1605
##	Above average	30	427
##	High	17	276
##	Very High	7	93

## [1] 8

##	transit_supply	City of Moonee Valley	Rest of Greater Melbourne
##	Zero Supply	31.764976	439.23502
##	Very Low	168.401584	2328.59842
##	Low	151.810959	2099.18904
##	Below average	118.697152	1641.30285
##	Above average	30.820794	426.17921
##	High	19.760378	273.23962
##	Very High	6.744156	93.25584

## [1] 9

##	ratio_binned	City of Moonee Valley	Similar LGAs
##	Increased 30%+ or new	1	14
##	Increased 10 to 30%	2	41
##	Increased 5 to 10%	12	156

##	Increased 3 to 5%	34	170
##	Increased 1 to 3%	64	501
##	Within 1%	279	1591
##	Reduced 1 to 3%	41	175
##	Reduced 3 to 10%	72	198
##	Reduced 10% or more	20	70
##	Not served in 2023	3	5

## [1] 10

##	ratio_binned	City of Moonee Valley	Similar LGAs
##	Increased 30%+ or new	2.296318	12.703682
##	Increased 10 to 30%	6.582778	36.417222
##	Increased 5 to 10%	25.718759	142.281241
##	Increased 3 to 5%	31.229922	172.770078
##	Increased 1 to 3%	86.494636	478.505364
##	Within 1%	286.274282	1583.725718
##	Reduced 1 to 3%	33.066976	182.933024
##	Reduced 3 to 10%	41.333720	228.666280
##	Reduced 10% or more	13.777907	76.222093
##	Not served in 2023	1.224703	6.775297

## [1] 11

##	ratio_binned	City of Moonee Valley	Rest of Greater Melbourne
##	Increased 30%+ or new	1	388
##	Increased 10 to 30%	2	465
##	Increased 5 to 10%	12	323
##	Increased 3 to 5%	34	392
##	Increased 1 to 3%	64	979
##	Within 1%	279	3121
##	Reduced 1 to 3%	41	414
##	Reduced 3 to 10%	72	467
##	Reduced 10% or more	20	284
##	Not served in 2023	3	468

## [1] 12

##	ratio_binned	City of Moonee Valley	Rest of Greater Melbourne
##	Increased 30%+ or new	26.23477	362.7652
##	Increased 10 to 30%	31.49521	435.5048
##	Increased 5 to 10%	22.59292	312.4071
##	Increased 3 to 5%	28.73011	397.2699
##	Increased 1 to 3%	70.34155	972.6584
##	Within 1%	229.30132	3170.6987
##	Reduced 1 to 3%	30.68591	424.3141

##	Reduced 3 to 10%	36.35100	502.6490
##	Reduced 10% or more	20.50224	283.4978
##	Not served in 2023	31.76498	439.2350

## [1] 13

## composite\_needs City of Moonee Valley Similar LGAs

##	Very Low	143	333
##	Low	114	490
##	Below average	86	540
##	Above average	60	482
##	High	58	515
##	Very High	40	490
##	NA	27	71

## [1] 14

## City of Moonee Valley Similar LGAs

## 1	71.16562	404.8344
## 2	90.30260	513.6974
## 3	93.59176	532.4082
## 4	81.03312	460.9669
## 5	85.66786	487.3321
## 6	79.23903	450.7610

## [1] 15

## composite\_needs City of Moonee Valley Rest of Greater Melbourne

##	Very Low	143	1429
##	Low	114	1315
##	Below average	86	1300
##	Above average	60	1046
##	High	58	997
##	Very High	40	994
##	NA	27	220

## [1] 16

## City of Moonee Valley Rest of Greater Melbourne

## 1	103.87391	1468.1261
## 2	94.42482	1334.5752
## 3	91.58349	1294.4165
## 4	73.08177	1032.9182
## 5	69.71182	985.2882
## 6	68.32419	965.6758

## ratio\_binned\_less City of Moonee Valley Similar LGAs

##	Not served in 2023	0	1
##	Increased 30%+ or new	1	3
##	Increased 10 to 30%	0	9
##	Increased 5 to 10%	5	49
##	Increased 3 to 5%	8	46
##	Increased 1 to 3%	13	119
##	Within 1%	79	425
##	Reduced 1 to 3%	9	26
##	Reduced 3 to 10%	18	56
##	Reduced 10% or more	10	6

##	ratio_binned_less City of Moonee Valley Similar LGAs		
##	Not served in 2023	0.1619479	0.8380521
##	Increased 30%+ or new	0.6477916	3.3522084
##	Increased 10 to 30%	1.4575311	7.5424689
##	Increased 5 to 10%	8.7451869	45.2548131
##	Increased 3 to 5%	8.7451869	45.2548131
##	Increased 1 to 3%	21.3771234	110.6228766
##	Within 1%	81.6217441	422.3782559
##	Reduced 1 to 3%	5.6681767	29.3318233
##	Reduced 3 to 10%	11.9841450	62.0158550
##	Reduced 10% or more	2.5911665	13.4088335

##	ratio_binned_less City of Moonee Valley Rest of Greater Melbourne		
##	Not served in 2023	0	152
##	Increased 30%+ or new	1	183
##	Increased 10 to 30%	0	192
##	Increased 5 to 10%	5	115
##	Increased 3 to 5%	8	160
##	Increased 1 to 3%	13	333
##	Within 1%	79	1126
##	Reduced 1 to 3%	9	156
##	Reduced 3 to 10%	18	168
##	Reduced 10% or more	10	111

##	ratio_binned_less City of Moonee Valley Rest of Greater Melbourne		
##	Not served in 2023	7.656217	144.3438
##	Increased 30%+ or new	9.268052	174.7319
##	Increased 10 to 30%	9.671011	182.3290
##	Increased 5 to 10%	6.044382	113.9556
##	Increased 3 to 5%	8.462135	159.5379
##	Increased 1 to 3%	17.427968	328.5720
##	Within 1%	60.695667	1144.3043
##	Reduced 1 to 3%	8.311025	156.6890
##	Reduced 3 to 10%	9.368792	176.6312
##	Reduced 10% or more	6.094752	114.9052