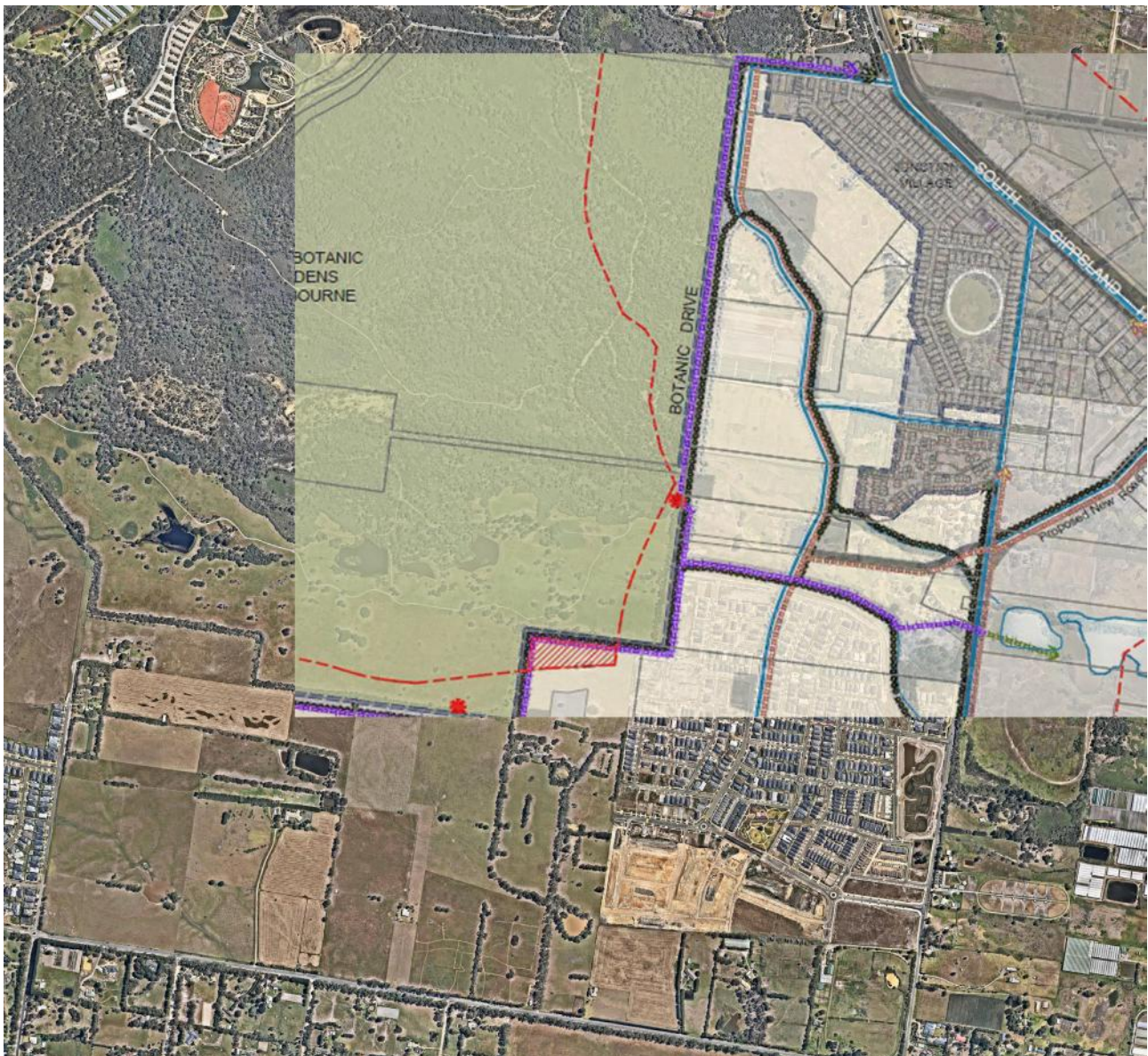


NEWSLETTER no 05

Early delivery of equitable and healthy transport options in new suburbs:
Critical reforms and tools



Source: Nearmap and PSP Botanic Ridge

Welcome

Welcome to the fifth newsletter of the “Early delivery of equitable and healthy transport options in new suburbs: Critical reforms and tools” project. This internal newsletter is to update RMIT’s project partners on activities both undertaken and planned, and to report preliminary insights. This project is funded by RMIT’s Urban Futures Enabling Capabilities Platform, the Victorian Planning Authority, the City of Casey, the City of Wyndham and Stockland Corporation.

Activities this quarter

In the last few months the project team has focused on the analysis of the resident survey, preparing the resident interviews, and the GIS analysis of transport criteria.

We’ve also followed up and summarised international examples on early delivery of transport and finalised the briefing paper on development contributions in Victoria.

Some points from emerging insights

Of the participants in the resident survey:

- 69% stated that their overall travel times were longer than they expected when moving to their suburb.
- 64% said that travel times have a negative impact on their family life and 48% that travel times have a negative impact on their health.
- 19% report ‘my destinations are too far away’ as (one of the) main reason(s) for not walking (more often), and 8% give this as a main reason for not cycling (more often). Weather is also an important reason, with 16% of respondents giving it as a reason for not walking (more often) and 8% for not cycling (more often).
- 21% say that lack of suitable public transport near their home is a reason for not using public transport more often, and 26% say that driving is faster/more

reliable than public transport in their area.

- Those living in the Truganina South PSP area have comparably long and variable distances to walk to get to their closest bus stop, with the average distance being a bit more than 2km. Reason for this is that currently, only three bus lines travel on the border of the Truganina South PSP, but none of them go within the PSP area.
- International example of interest is the Vancouver region with its extension of public transport into the growth area south of the Fraser river.

More detailed overviews of the project team activities, insights and further relevant news – are set out in the ‘Comprehensive update’ on the next pages.

Activities July - October 2019

Work across the three work streams “Policy and process analysis”, “Funding approaches and modelling” and “Resident Research” has included:

- Resident Research: analysis of survey; preparation of interviews:
- GIS analysis of transport criteria in PSP areas;
- Summarising first results from the resident survey and GIS analysis for a presentation at the International Conference on Transport and Health in Melbourne in

November, and a planned journal article;

- Researching international examples of early transport delivery and preparing the briefing paper;
- Participation in seminars and workshops on shared mobility; rail transport infrastructure, the 20 minute city neighbourhood, and the “Soft City”.
- Developing the results from the briefing paper on transport goals into an article for PlanningNews.

Some preliminary insights

Some more results from the resident survey

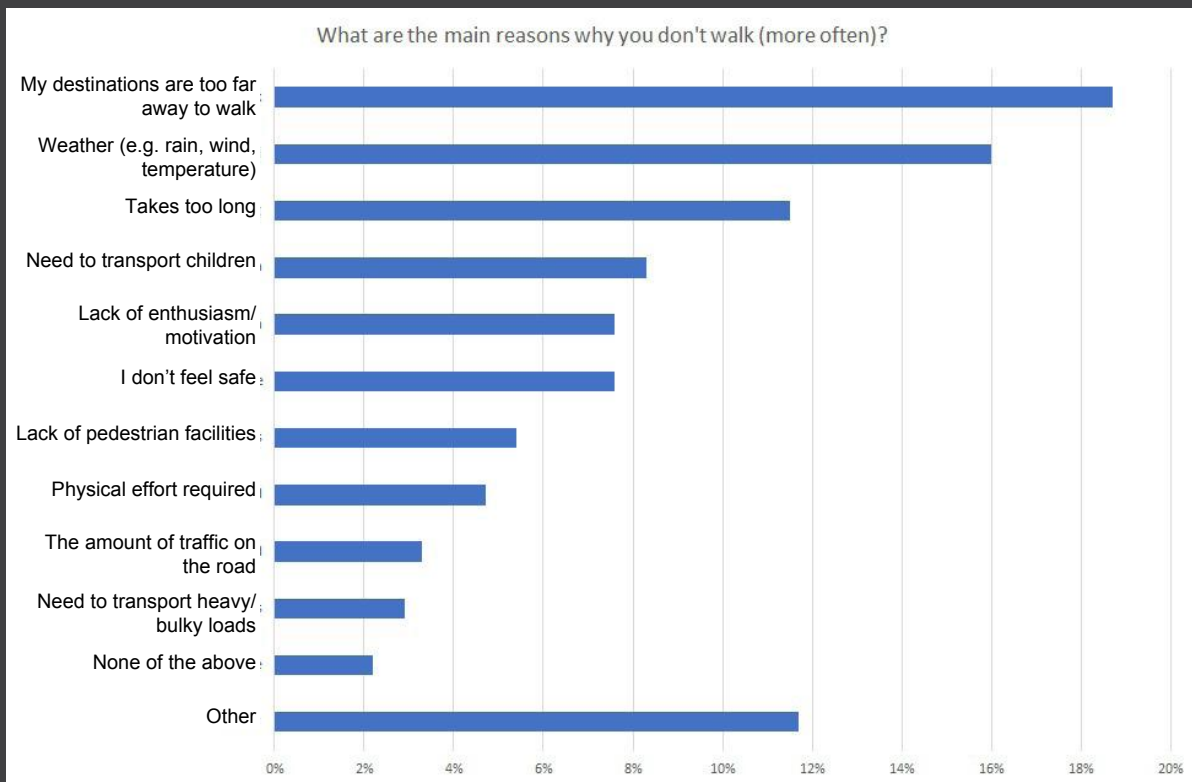
In the survey residents have been asked for their main reasons why they don't walk or walk more often as well as why they don't cycle (more often). As can be seen in figure 1, the two main reasons for people not to walk or walk not as often were that their destinations were too far away to walk and weather, i.e. rain, wind, temperature etc. Other reasons were that it takes too long, they needed to transport children or weren't feeling safe.

For cycling, the main reason given was that respondents didn't have a bicycle available; and then after that 'the amount of traffic on the road' and 'my destinations are too far away to cycle' were also

important reasons. Other reasons are 'weather', lack of off-road and on-road facilities, the need to transport children, the attitude of motorists towards cyclists and that it takes too long.

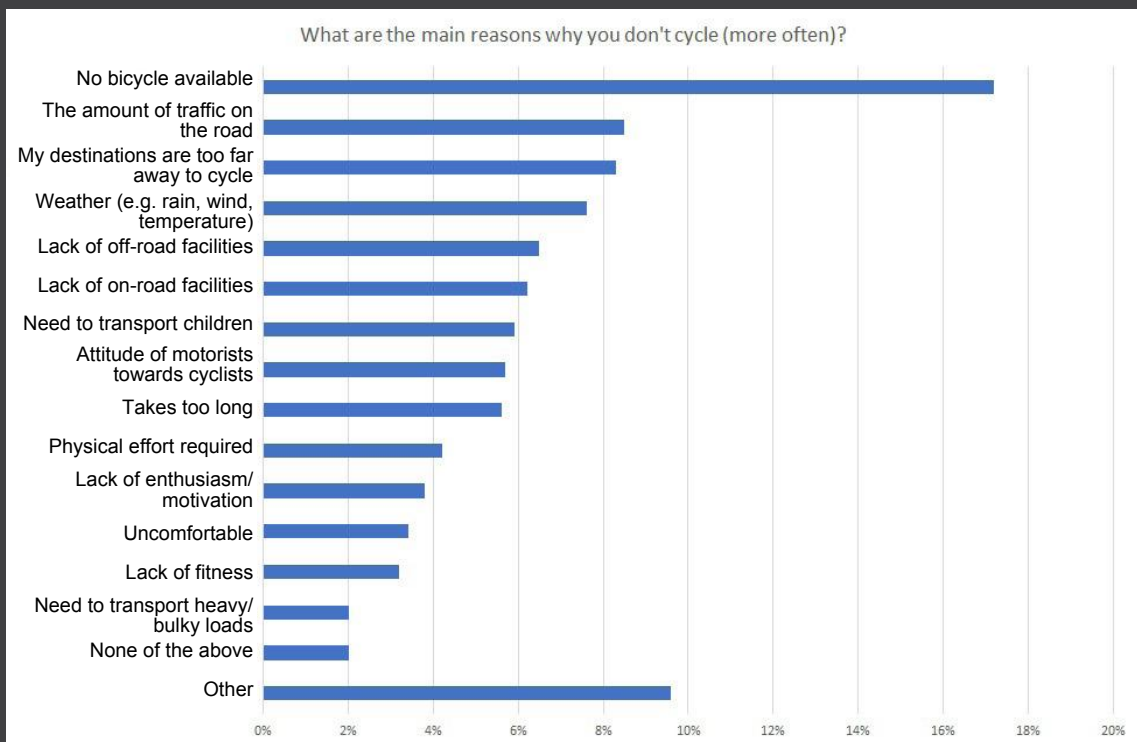
When looking at public transport, respondents gave as main reasons for not using public transport more often that driving was faster/more reliable than public transport in their area and that there was no suitable public transport near their home. Other reasons given were safety concerns about using public transport, that respondents don't like using public transport and they need to stop on their way.

Figure 1: Reasons for not walking (more often)



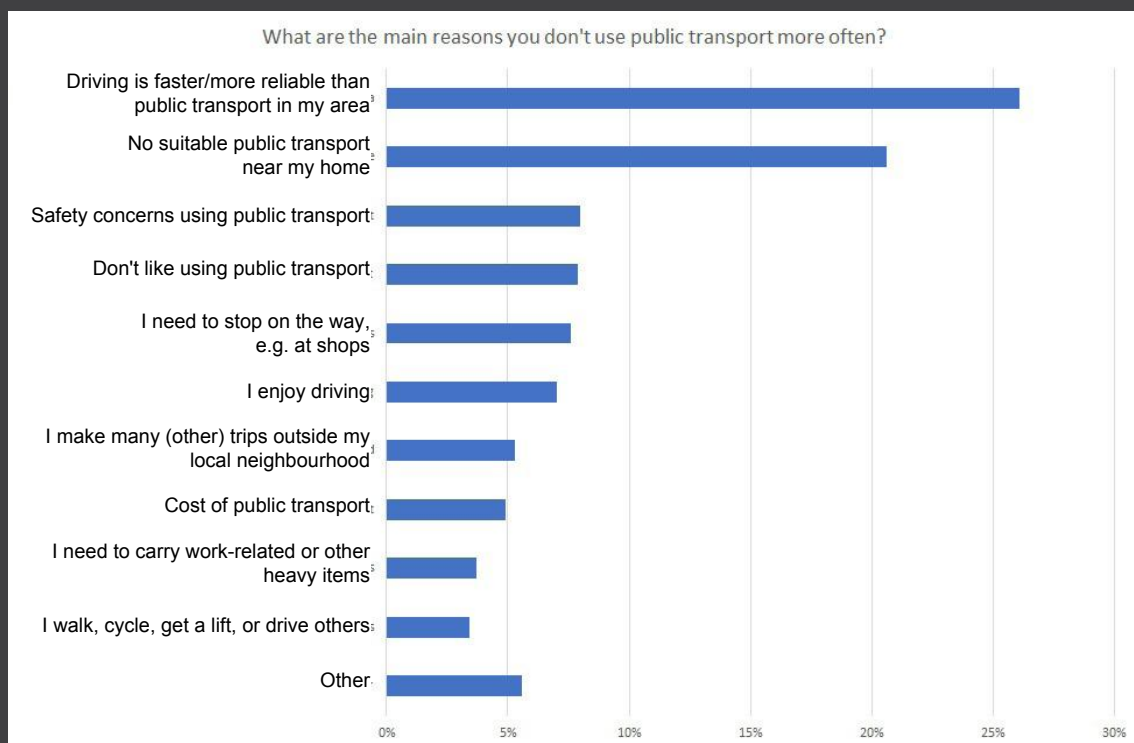
Respondents were able to select several responses, n= 295

Figure 2: Reasons for not cycling (more often)



Respondents were able to select several responses, n= 302

Figure 3: Reasons for not using public transport more often

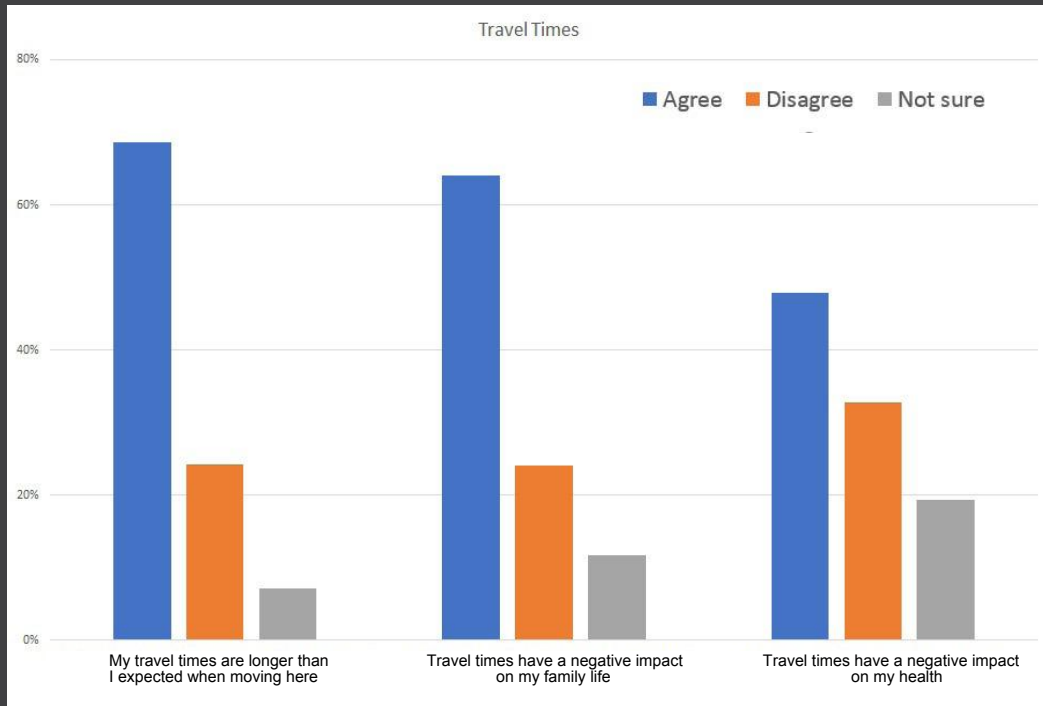


Respondents were able to select several responses, n= 277

Regarding their travel times overall 69% of respondents stated that their travel times were longer than they expected when moving to their suburb. Nearly two third of

respondents (64%) said that travel times have a negative impact on their family life and nearly half (48%) said that travel times have a negative impact on their health.

Figure 4: Travel times and their impact



n= 312 for the first question and n= 307 for the questions on travel time impacts

Access to bus stops in Truganina South and Cranbourne East PSPs

What a difference a bus stop makes! We measured the average distance from every address point in urban areas of Melbourne and the closest bus stop.¹ Results are presented below for the PSP area of Truganina South and Cranbourne East (divided into Casey Fields and

Selandra Rise). As a comparison, we also calculated average distances for metropolitan Melbourne and for the more established inner LGA areas of Stonnington and Yarra (combined) and the City of Melbourne where public transport is known to be readily accessible.

Table 1. Average distances in metres from address points to the closest bus stop

Area	Average Distance (metres)	Standard Deviations
Truganina South PSP	2044	1077
Selandra Rise	523	2875
Casey Fields	932	297
Cranbourne East PSP	704	355
Metropolitan Melbourne urban areas	460	746
Inner LGAs (Stonnington + Yarra)	495	397
City of Melbourne	308	191

¹Distances to closest bus stops are based on the street network using road centre lines and pedestrian ways. These calculations may not pick the shortest street network route if some or all of the pedestrian ways are not included in the street network.

The results in the table show that in areas where there is a prevalence of bus stops the average distance is a lot lower. Those living in the Truganina South PSP area have the longest and most variable distance to walk to get to their closest bus stop. Figure 5 below shows why. There are three bus lines that travel on the border of the Truganina South PSP (routes 150, 151 and the night rider 945), but none of them go within the PSP area. This can be contrasted with the suburb of Selandra Rise which has a quarter of the distance to cover when compared to Truganina South PSP (i.e., 523m compared to 2043m) due to a local bus that travels through the suburb to the Cranbourne train station and back².

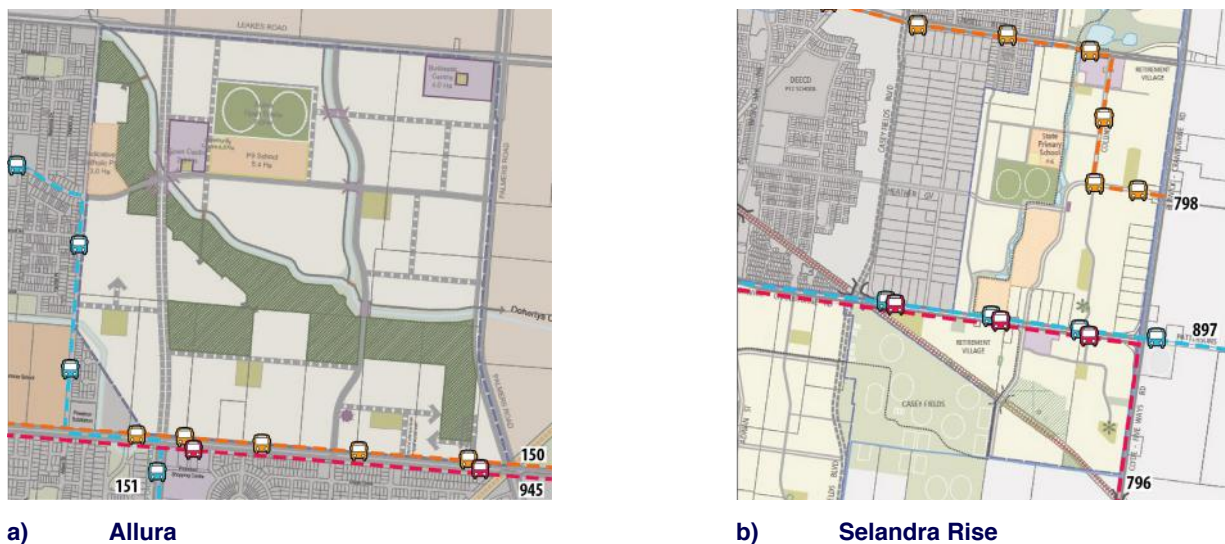
Current transport policies in Victoria stipulate that 95% of dwellings should be within 400m of a bus stop. The results here suggest that it's only in the LGA of the City of Melbourne that the policy is being met in terms of distance - at an average of 308m to the closest bus stop, however the policy still isn't being met with only 73% of dwellings being within the 400m threshold distance. The Creating Liveable Cities in Australia³ report has similar results: at the suburb level only 60% of dwellings across the Greater Melbourne

area have access to bus stops within 400m, and only 3.5% of all suburbs meet the full policy stipulation (i.e., of having 95% of dwellings within 400m).

What these results show is that distance does matter. Research examining access to destinations indicates that a distance of 800m is considered to be easy to walk, or walkable, taking around 10 minutes to cover for the average person. This is also supported by international evidence using data from Canada which found that a majority of people (75%) walked approximately 800m to get to light rail stops and around 400m for bus stops.⁴ Other research from the USA suggests that some people walk considerably longer distances to reach transit hubs and to get to the best transit route⁵. Despite this exception, the 800m distance is more commonly supported in the literature and is now being incorporated into planning processes here in Victoria as the distance supporting 20-minute neighborhoods⁶.

Detailed results for access to bus, train and tram stops across all of Melbourne will be released in 2020 with the launch of the RMIT Urban Observatory and more details on this data can be obtained from the project team.

Figure 5. Bus routes in Allura and Selandra Rise estates



² Delbosc A, Currie G, Nicholls L, Maller C: The impact of a new bus route on a new suburban development in Melbourne. In: Australasian Transport Research Forum. Sydney, Australia; 20

³ Arundel J, Lowe M, Hooper P, Roberts R, Rozek J, Higgs C, Giles-Corti B: Creating liveable cities in Australia: Mapping urban policy implementation and evidence-based national liveability indicators. 2017.

⁴ O'Sullivan, S., & Morrall, J. (1996). Walking distances to and from light-rail transit stations. *Transportation Research Record*, 1538(1), 19-26.

⁵ Durand, C. P., Tang, X., Gabriel, K. P., Sener, I. N., Oluyomi, A. O., Knell, G., ... & Kohl III, H. W. (2016). The association of trip distance with walking to reach public transit: Data from the California Household Travel Survey. *Journal of transport & health*, 3(2), 154-160.

⁶ State Government of Victoria: Department of Environment, Land, Water and Planning. 20-Minute neighbourhoods: Creating a more liveable Melbourne. 2019.

International example: Vancouver

In Vancouver, Canada, public transport is planned, governed and delivered by Translink, which is a statutory authority of Metro Vancouver⁷. Much of the urban core, and increasingly the middle suburbs of Burnaby and New Westminster, are covered by a grid of frequent buses running at least every 15 minutes until 9pm. While coverage is not as extensive in the growth municipalities south of the Fraser River, such as Surrey and Langley, there is still a fairly high level of service, given the low density, sprawling development type.

The City of Surrey is one of the fastest growing municipalities in the Metro Vancouver Regional District, at 10.6% from 2011 to 2016. Its population in 2016 was 517,887; about a fifth of the 2.46 million residents of the overall regional district⁸.

The Vancouver Skytrain extends into the very north of the City of Surrey. The Skytrain is a fully driverless, high frequency, and medium capacity metro service. Services from Surrey run to downtown Vancouver in just under 40 minutes and are every 2-5 minutes in the peak, 6-8 minutes in the interpeak, and 8-10 minutes late night. The Skytrain can run at such high frequencies, despite Surrey being a relatively low-density suburb, because of the high-frequency network of feeder buses across the entire region. Many of these services feed into the Skytrain at Surrey Central, and at certain key points throughout the region, bus services are used to feed each other. The 96 B-Line⁹ is the core of the frequent bus service in the City of Surrey. Services are every ten minutes, with some additional peak services. Outside of the B-Line service, there is a network of not-quite-as-high frequency routes connecting the region together.

To improve public transport quality, capacity, and availability in the major growth area of the region Translink recommended a series of light rail corridors to connect the growing suburbs to the Vancouver Skytrain. However, these new lines are essentially incremental improvements – the

ridership foundations for these light rail projects have been laid down for some time through the existing bus services.

The light rail was the preferred option because the Skytrain has a higher operating cost than surface light rail as it would have to run at the same frequency and capacity as the rest of the Surrey line. Furthermore, because the Skytrain extension would be elevated, it had a higher capital cost¹⁰. Finally, most of the observed and forecast travel is still south of the Fraser river, so that a connection without transfers to downtown Vancouver is not the main objective, especially since high frequencies on most services mean that transfer times are usually bearable¹¹.

However, part of the population disagreed and preferred the Skytrain solution, despite the higher costs, as they saw it as 'true' rapid transit, while they feared that light rail would offer lower quality and lead to congestion¹². Thus, the expansion of public transport in Surrey became a municipal election issue and in November 2018 the newly-elected council of the City of Surrey voted unanimously to suspend works on the light rail¹³ and subsequently voted to advance an extension of the Skytrain. This was despite the light rail being fully funded, and agreed upon by Translink, the previous Surrey city council, the provincial government, and the federal government¹⁴. While opinions on the best solution still differ between different population groups, traders etc., Translink has now ceased work on the light rail and began early planning works on the Skytrain extension.

Despite this somewhat problematic back and forth, Vancouver is still an interesting example for public transport in growth areas with existing comparably frequent public transport options in the region's growth area through buses and further expansion occurring. Forecasting indicates that the City of Surrey will be more populous than Vancouver in the next thirty years¹⁵ and early travel forecasting for

⁷ Metro Vancouver is a federation of 21 municipalities, one Electoral Area and one Treaty First Nation that collaboratively plans for and delivers regional-scale services. <http://www.metrovancouver.org>

⁸ Statistics Canada: <https://www.statcan.gc.ca/eng/start>

⁹ The B-Line moniker is being deprecated in favour of Rapidbus, which will also include improvements to prioritisation and branding, but this doesn't start until 2020.

¹⁰ Cross, G (2017). South of Fraser Rapid Transit – Surrey-Langley technology decision. URL: https://www.translink.ca/-/media/Documents/plans_and_projects/rapid_transit_projects/SRT/Surrey-Langley-LRT-Memo.pdf

¹¹ Translink (2018). Surrey-Newton-Guildford LRT: Business Case Summary. URL: https://www.translink.ca/-/media/Documents/plans_and_projects/rapid_transit_projects/SRT/Business-Case/sng_lrt_project_business_case_summary.pdf

¹² <https://safesurreycoalition.ca/sky-train/>, <https://skytrainforsurrey.org/tag/skytrain-vs-lrt/>

¹³ City of Surrey (2018). Regular Council Minutes – November 5 2018. URL: https://www.surrey.ca/bylawsandcouncilibrary/MIN_RC_2018_11_05.pdf

¹⁴ Saltman (2018). Surrey council candidates continue to debate LRT versus SkyTrain despite LRT being fully funded. Vancouver Sun, September 7. URL: <https://vancouver.sun.com/news/local-news/surrey-council-candidates-continue-to-debate-lrt-versus-skytrain-despite-lrt-being-fully-funded>

¹⁵ Translink (2018). Surrey-Newton-Guildford LRT: Business Case Summary

the Surrey Langley Skytrain extension indicates potential ridership of 62,000 per day in 2035 and 71,200 per day in 2050¹⁶. Again, it has to be kept in mind that this is supported and enabled by an extensive network of metropolitan wide buses.

This shows an important difference in thinking. The approach to public transport planning in Vancouver (and

other Canadian cities) is much geared towards thinking about public transport as a network, and then incrementally upgrading service provision as needed. Where in Melbourne a railway line like Mernda is directly extended, Vancouver would start with running buses along that corridor and add trains as needed. While this might not be as popular with transit users (who often prefer trains), it sometimes means a better level of service can be provided across a wider area.

Miscellaneous/News

New staff member

Xavier Goldie has recently started as a new team member on the project. Together with Lucy Gunn he will focus on GIS analysis and the development of models of alternative infrastructure financing scenarios. Xavier also works part-time as Outreach Manager at the Australian Urban Research Infrastructure Network (AURIN) and is undertaking (also part-time) a PhD at RMIT on developing a more comprehensive model of transport disadvantage in Australian cities. His background is in statistics and biology. We welcome Xavier to the project!

Impact of urban form on health and economic benefits

Project team member Lucy Gunn and a team of researchers

were recently awarded funding by the Research and Translation Grant from RMIT's Enabling Capability Platform to apply their health impact assessment model on active travel. The project will be undertaken in partnership with the Department of Transport and will provide valuable insights in relation to our topic.

Some relevant news links

https://www.abc.net.au/news/2019-10-09/tarneit-suburb-on-melbourne-fringe-feeling-growing-pains/11537562?_lrsc=a2eb68cf-1082-47d1-a534-1cc85726218d

<https://www.starweekly.com.au/news/petition-calls-for-more-trains/>

<https://theconversation.com/australian-city-workers-average-commute-has-blown-out-to-66-minutes-a-day-how-does-yours-compare-120598>

Planned activities

- Finalise briefing paper on international examples of early delivery of transport
- Resident interviews in Selandra Rise and Allura
- Further analysis of resident survey in Selandra Rise and Allura
- Further GIS analysis
- Start the work on modelling and funding approaches
- Project Advisory Group: 21st November 9.30-11.30 am, Building 37 (411 Swanston St), Level 2 – the same room as last time

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¹⁶ Translink (2019). Surrey Langley Skytrain Benefits. URL: <https://surreylangleykytrain.ca/benefits>