

SUMMARY STATEMENT

1. My name is **Chris Morahan**. I am a Principal Advisor within the Christchurch City Council's strategic transport team. I have a Bachelor of Engineering (civil with honours) from the University of Canterbury and have worked for the last 15 years in transport engineering and planning.
2. I have prepared evidence on behalf of the **Christchurch City Council** (Council) to assist in the understanding of the transportation-related impacts of Plan Change 14 to the Christchurch District Plan, including the impacts of including a qualifying matter relating to low public transport accessibility.
3. I subsequently participated in joint witness conferencing which produced the Joint Witness Statement of Transport Experts, dated 26 September 2023.
4. I understand that questions were asked by the Panel in the first week of hearings relating to public transport. To assist the Panel a note containing my additional commentary relating to these questions is being provided.
5. One of the key points I make in my evidence is that growth focussed around our public transport network will result in better transport outcomes than growth dispersed away from it. I stress the difference between the core and the non-core components of the public transport network.
6. The core public transport network is inflexible. For the last hundred years it has been located on largely the same streets, and future public transport plans do not deviate significantly from this. These routes are straight, direct, connect our highest activity areas, and include a high level of infrastructure provision such as bus lanes, shelters and real-time information screens. The core network attracts relatively high use, and proposals to improve these routes tend to have a relatively strong case for investment.
7. In contrast, the non-core network is more flexible and historically has shifted around more. Routes are generally less straight and direct, do not service the highest activity areas, and have lower levels of infrastructure provision with no bus lanes and no shelters at most stops. The non-core network attracts relatively low use and proposals to improve these routes generally have a weaker case for investment.
8. I also reiterate one of Mr Kleynbos' points that he has recommended retaining the low public transport accessibility area qualifying matter over

some areas east of Ferrymead, despite them being within a walkable distance of route 3 (formerly known as the purple line), part of the core public transport network. Growth can be accommodated here, but it is through a restricted discretionary consenting pathway rather than being a permitted activity. I understand this seeks to ensure that there is both adequate public transport accessibility and three waters servicing. From a transport point of view, I would consider that this area does have adequate public transport accessibility.

9. I welcome any questions from the panel.

Date: 2 November 2023

Chris Morahan

Additional commentary on public transport

Plan Change 13 & 14 Hearings

Chris Morahan

19 October 2023

Background

On Wednesday 11/08/2023 (recorded in morning session #2 at 1:37-1:41), during a session involving Rebecca Foy speaking on the social impacts of housing intensification, Commissioner Munro asked several questions relating to public transport. One related to any information on the proportion of travel that is theoretically possible to be serviced by public transport. The second related to the risk that bus routes may change in future. This document provides additional information in response to these questions.

Data on public transport use

There is a wide variation in travel habits of residents throughout Christchurch. Some residents use public transport and walking almost exclusively for their travel needs, as evidenced by the fact that approximately 9,500 households in Christchurch do not own a car (7%)¹ and that these households tend to be located on core public transport routes in areas highly populated with younger adults, students, or older retirees.

At the other end of the spectrum, a large proportion of residents never use public transport for any trips. The Ministry of Transport conduct annual travel surveys where they ask a sample of residents to keep detailed travel diaries over a three week period. In Christchurch, of the 3,597 people surveyed, 63% had not used public transport at all in the last year, compared to only 34% in Wellington.²

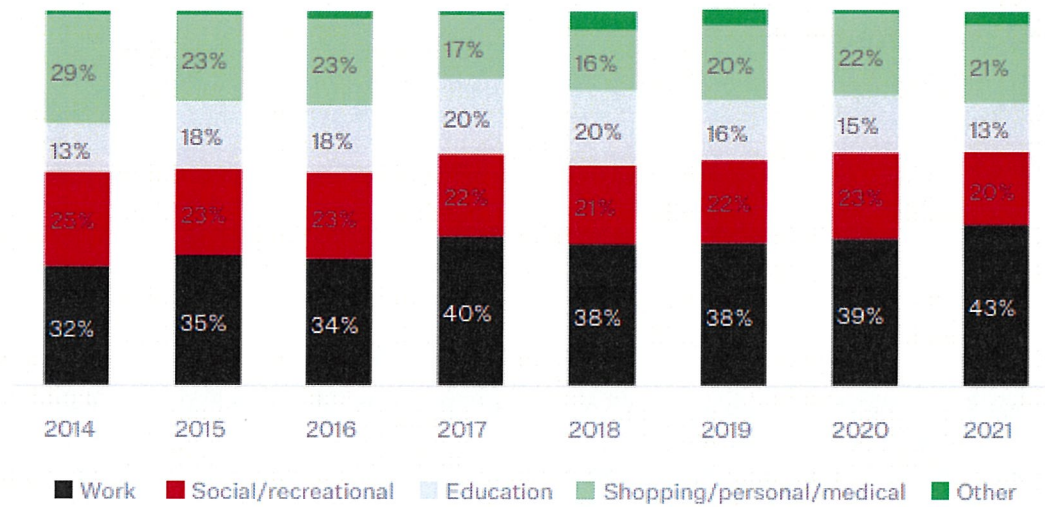
Ecan conducted annual surveys asking a sample of public transport users a range of questions. These show that people currently use public transport for a range of trip types. In 2021, 43% of trips were for work, 13% education, 20% social/recreational, 21% shopping/personal/medical, and 3% other.³

¹ Census 2018

² 25 Years of Travel in New Zealand, Ministry of Transport, 2015, available online here: <https://www.transport.govt.nz/assets/Uploads/Report/25yrs-of-how-NZers-Travel.pdf>

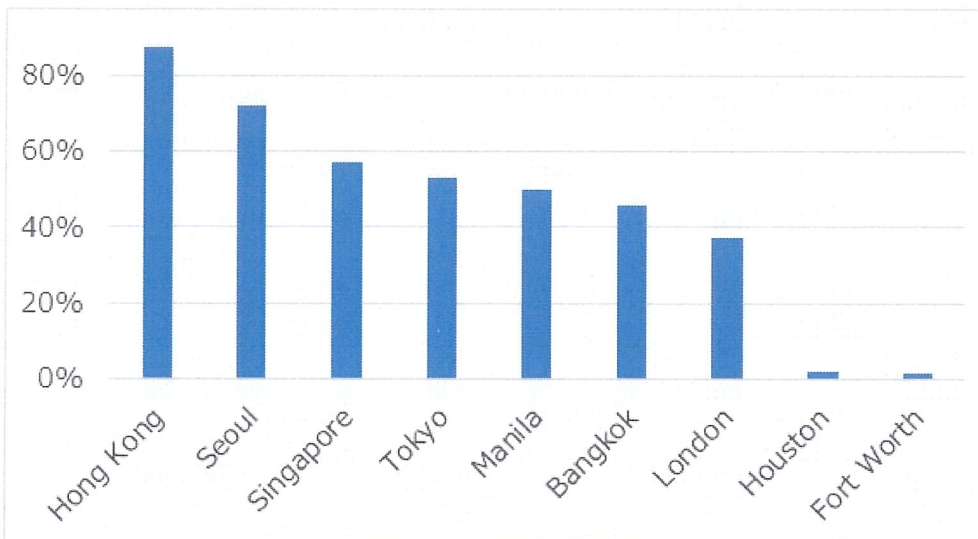
³ Metro user surveys, Ecan, available online here: <https://api.ecan.govt.nz/TrimPublicAPI/documents/download/4533465>

Figure 3.5: Main trip purpose, over time



Public transport mode share varies wildly in cities across the world. At one extreme, 87% of travel in Hong Kong is undertaken on public transport. For many other cities across the world it is close to zero, as shown in the graph below.⁴

Comparison of public transportation modal share in each city



In the Canterbury Region, approximately 5% of all travel is completed on public transport, compared to 11% in the Wellington region.⁵ In conclusion, it is difficult to put a number on what proportion of travel could theoretically be undertaken on public transport in Christchurch. For some people it is close to 100%, for others it is close to zero. Globally, public transport modal shares as high as 87% are observed.

⁴ Comparison of cities' transportation modal shares and post-coronavirus prospects, Sakutaro Itokawa, 2020, available online here: https://www.sc-abeam.com/and_mobility/en/article/20201203-01/

⁵ Waka Kotahi Transport Agency Transport 2035 online dashboard, NZTA, available here: <https://transport2035.mrcagney.works/dashboard>

Flexibility of bus routes

There is a distinction to be made between core public transport routes, which are inflexible and tend to attract high usage, and non-core public transport routes, which are more flexible, but tend to not attract significant usage. The evidence of Mr Morahan includes two quotes from the Christchurch Transit Alternatives Report, commissioned by ECan in 2016 on this topic (paragraphs 63 and 35 respectively):

“The Metro Lines [top-tier routes] are the top performers, with 20-35 people getting on the bus for every hour a bus is operating... Suburban Links [third-tier routes], by contrast, are delivering disappointing performance, with some attracting fewer than 10 boardings for every hour a bus is in service. This is exactly what should be expected, because these two kinds of service are focused on different purposes. Metro Lines – straight, frequent, and linking many dense areas and attractions – are the kind of service that attracts high patronage all over the world. The Suburban Links – which tend to be circuitous, infrequent, and focused on areas of lower demand – resemble lower-ridership services all over the world.”

“the Metro Lines are likely to be a persistent feature of the city’s public transport network – indeed they typically reflect tramway routes established over a century ago and remain largely unchanged over recent decades. In addition, most suburban interchange locations have been key activity centres on these main corridors for many years and are unlikely to change. There are few opportunities for significantly restructuring the core of the city’s PT network.”

Plan Change 14 may result in additional medium density housing in areas not currently serviced by the core public transport network, depending on the final form of the plan change. Even under the notified plan change, the low public transport qualifying matter does still include provision for intensification within it, but through a consenting pathway rather than as a permitted activity. If this intensification happens, then theoretically it may catalyse investment to improve public transport in that area. However, the critical mass required to do this is high and would be larger than what would be realised in the foreseeable future. Even if development was at a scale that was able to justify investment, it would likely be only low frequency service, not enough to warrant bus priority lanes, and therefore unlikely to be useful enough to attract high usage in the way that the core routes do.

Mr Morahan’s evidence discusses how the return on investment for public transport improvements tends to be higher when applied to the core routes than when investment is applied to non-core routes (paragraphs 39-40 and 59-63). This means that, if that same residential growth occurred on a core public transport route, then it would result in more public transport use and would catalyse further investment in public transport to a greater degree than it would if it were to occur away from the core public transport network.

