Australasian Transport Research Forum 2025 Proceedings
18-21 November, Auckland, New Zealand
Publication website: https://australasiantransportresearchforum.org.au/

Public transport in Wellington City: Insights from the Pōneke / Wellington Transport Survey

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1 Introduction

In Aotearoa New Zealand, the transport system is dominated by private vehicle travel while rates of public transport in most New Zealand cities remain low (Ministry of Transport 2015). Although the Wellington Region urban area (including the Wellington City, Upper Hutt, Lower Hutt, Porirua and Kāpiti Coast urban areas) has the highest rates of public transport use in New Zealand (18%) (Ministry of Transport 2015), the rates of private vehicle ownership are high and private vehicle travel remains the most common mode of transport (StatsNZ n.d.).

Expected population increase coupled with increased housing needs will impose further pressure on the existing Wellington City transport network in the upcoming decades. Wellington City's transport vision is to support more people to travel efficiently and safely around the city with fewer private motor vehicles (Wellington City Council 2021). Wellington City also has a strategic goal to reduce greenhouse gas emissions by 43% by 2030 and become a net zero carbon city by 2050 (Wellington City Council 2019).

Public transport is a tool for enabling and facilitating mode shift from private vehicle travel towards sustainable transport modes and contributing to reducing transport-related greenhouse gas emissions. Available, accessible, affordable, reliable, convenient and frequent public transport is essential for supporting a transition from private vehicle travel to more sustainable transport modes (Mindell et al. 2021). Yet, these aspects of public transport are usually examined in isolation (Ipsos 2025) without considering their cumulative effects on attractiveness of public transport and ultimately on residents' transport choices.

In addition, the concept of transport poverty could provide further insights for transport strategy and transport planning in urban areas. The concept of transport poverty considers a combination of factors such as transport affordability, mobility poverty, accessibility poverty and exposure to transport externalities (Lukas K et al. 2016) and how they may influence transport patterns, costs, accessibility, equity and population health and wellbeing (Martens K et al. 2019). Transport poverty can be considered on a spectrum with transport poverty on one end (with no transport options available) to an abundance of transport choices on the other end.

This research examined residents' perceptions of public transport and the concept of public transport deprivation in Wellington City, New Zealand.

2 Methodology

Data were collected from 3,025 adults living in Wellington City (New Zealand) via the online Pōneke / Wellington Transport Survey in 2024. The Pōneke / Wellington Transport Survey is an annual 10- to 15-minute online survey initiated and managed by Wellington City Council since 2023. The research protocol has been reviewed and approved by the Aotearoa Research Ethics Committee (Reference: AREC23_03; April 2023).

Respondents self-reported their sociodemographic and household characteristics, home location (suburb and street name only), usual transport modes as part of their lifestyle and perceptions of various aspects of public transport.

Perceptions of public transport were assessed using a question with the stem: “To what extent do you agree or disagree with the following statements about public transport in Wellington City” with six response categories (‘strongly agree’, ‘agree’, ‘neither agree nor disagree’, ‘disagree’, ‘strongly disagree’ and ‘I don’t know’). Participants indicated their level of agreement with the following statements:

- It is easy to get to public transport from my home. (Accessibility)
- Public transport is affordable. (Affordability)
- Public transport is reliable. (Reliability)
- Public transport gets me to where I want or need to go. (Convenience)
- Public transport is frequent (i.e., comes often). (Frequency)

Based on their perceptions of accessibility, affordability, reliability and convenience of public transport, respondents were classified into one of 7 categories of the public transport deprivation spectrum ranging from ‘deprived’ (‘1’ = no easy access to public transport) to ‘abundance of choice’ (‘7’ = public transport being perceived as easily accessible, affordable, reliable and convenient) Figure 1):

- Category ‘1’: ‘Public transport is not easily accessible from home’
- Category ‘2’: ‘Neutral perceptions of public transport accessibility from home’
- Category ‘3’: ‘Public transport is accessible, but not affordable, reliable or convenient’
- Category ‘4’: ‘Public transport is accessible; also reliable and/or convenient, but not affordable’
- Category ‘5’: ‘Public transport is accessible; other perceptions are neutral and negative’
- Category ‘6’: ‘Public transport is accessible and affordable, but not reliable and/or convenient’
- Category ‘7’: ‘Public transport is accessible, affordable, reliable and convenient’.

The categories of the public transport deprivation spectrum were created as mutually exclusive categories.

Due to an exponential increase in complexity of data analysis with inclusion of an additional variable, perceived frequency of public transport was not considered in the public transport deprivation classification in this research.

Data were analysed using descriptive statistics for the total sample. Public transport perceptions were recoded into a 3-category variable: ‘strongly agree’ and ‘agree’ were coded as ‘agree’; ‘neither agree nor disagree’ was coded as ‘neutral’; ‘strongly disagree’ and ‘disagree’ were coded as ‘disagree’. ‘I do not know’ and non-responses were treated as missing data and excluded from the analysis. Comparisons of sociodemographic characteristics, public transport use and home location (by city zone and by ward) among the public transport deprivation groups was conducted using the Chi-square test. Due to a large sample size, p-value of less than 0.001 was considered statistically significant. Data analysis was conducted using the SPSS Statistical Software (version 26.0).

3 Main findings

Among 3,025 respondents, 36% were young adults (age 18-39 years), 47% were middle-aged adults (age 40-64 years) and 17% were older adults (age 65+ years). Overall, 52% were female, 44% male, 2% gender-diverse, 1% preferred to self-describe their gender and 1% preferred not to disclose their gender information. In the total sample, 72% of respondents identified themselves as New Zealand European, 8% were Māori, 1% Pacific, 6% Asian and 12% identified as ‘other’ ethnic groups.

Overall, 91% of respondents had a driving license, 20% were parents of school-age children and 20% experienced at least some difficulty walking or climbing stairs. In the total sample,

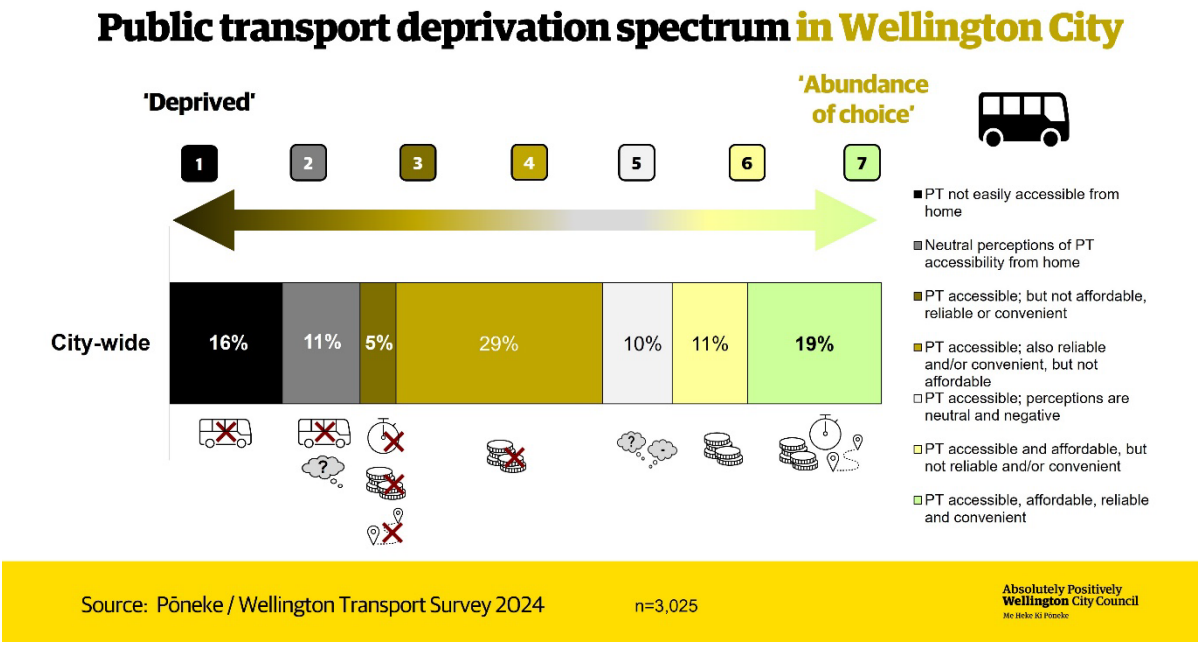
86% of respondents had paid or unpaid (voluntary) work. In this sample, 11% of respondents were enrolled in an education institution (5% full-time and 6% part-time).

Overall, 11% of respondents used public transport 5 or more days per week, 17% used public transport on 3 to 4 days per week, 21% used it 1 to 2 days per week, 31% used it less than once a week on average and 20% never used public transport as part of their lifestyle.

In the total sample, 74% of residents perceived public transport to be easily accessible from their home, 55% perceived it as convenient, 45% frequent, 44% reliable and 35% affordable.

When public transport perceptions were considered together as part of the public transport deprivation spectrum, 19% of residents perceived public transport to be easily accessible, convenient, reliable and affordable (i.e., had an abundance of public transport choices) whereas 16% of residents experienced the highest level of public transport deprivation (i.e., perceived lack of easy access to public transport from their home) (Figure 1). Overall, 5% of residents who had easy access to public transport perceived it as neither affordable nor reliable or convenient. An additional 29% of residents perceived public transport to be unaffordable (despite being perceived as reliable and/or convenient).

Figure 1: Proportion of survey respondents across the public transport deprivation spectrum in Wellington City in the total sample



Public transport deprivation levels were significantly different across city zones. Abundance of public transport choices was highest in the central city (29%) followed by inner city suburbs (20%) and lowest in outer city suburbs (15%) ($p<0.001$).

In contrast, highest public transport deprivation levels (i.e., perceived lack of easy access to public transport) were more frequently reported by residents living in outer city suburbs (19%) and inner city suburbs (13%) compared to the central city (8%). It is important to note that 54% of respondents in this survey lived in outer city suburbs and an additional 30% lived in inner city suburbs whereas less than 20% lived in the central city.

Significant differences in public transport deprivation were observed across different areas in the city when data were analysed by ward. Lowest levels of public transport deprivation and highest levels of public transport abundance were observed in the Lambton General Ward (area corresponding to the central city) compared to the other four wards. The Northern General Ward (ward located furthest from the central city) had the highest proportion of

respondents who reported not having an easy access to public transport from their home (24%).

Significant differences in sociodemographic characteristics of respondents and frequency of public transport use were observed across the seven categories of the public transport deprivation spectrum (data not presented).

4 Discussion

Key findings of this research are:

- although three quarters of Wellington City residents perceived having easy access to public transport from their home, nearly two thirds of residents experienced public transport deprivation based on perceived accessibility or affordability of public transport;
- public transport deprivation levels varied across the city, with abundance of choice of public transport being more frequently reported by central city residents and the highest levels of transport deprivation observed among residents living in the outer city suburbs; and
- respondents' sociodemographic characteristics and frequency of public transport use differed across the public transport deprivation spectrum and need to be taken into account when planning improvements in public transport services.

Taken together, these findings demonstrate the importance of looking beyond the simple reporting of the proportion of residents agreeing with specific characteristics of public transport as a tool for monitoring and evaluation of public transport performance and interventions aimed at improving public transport provision in urban areas.

Although greater Wellington Region urban areas have the highest rates of public transport use in the country (18%) (Ministry of Transport 2015) and the Wellington City has the highest use of public transport in the Wellington Region (Wellington Transport Analytics Unit, 2025), this research shows that for the majority of residents public transport is not perceived to be easily accessible from their home or is unaffordable which may at least in part explain the low rates of public transport use compared to reliance on private vehicles.

The current findings also provide evidence for varying levels of public transport deprivation across the city, with a greater proportion of residents in the central city experiencing higher levels of public transport choice compared to those living in the inner and outer suburbs. It is important to note that in this research, less than one fifth of residents lived in the central city whereas approximately one third lived in inner suburbs and over half lived in outer suburbs. Therefore, the higher proportion of public transport deprivation observed in the outer suburbs translates into a greater proportion of the overall city population which is exposed to lack of easy access to public transport or perceived public transport to be unaffordable. Further analyses should examine the effects of population density in various areas of the city on public transport provision. Population density will likely impact the routes, frequency and convenience of public transport and the economics of service provision.

Strengths of this research are a large sample size of residents from a single city, availability of street-level home location data, and comprehensive assessment of residents' perceptions of various aspects of public transport.

Study limitations include lack of comparison of public transport perceptions among residents who use public transport regularly or occasionally versus those who do not use it at all and absence of spatial analysis to identity spatial patterns across the city.

Future research will need to take into account how the distance from the central city and/or other main destinations in various areas of the city affects the public transport fares and therefore affordability of public transport since those travelling longer distances would pay higher public transport fares. Future research should also examine perceptions of public

transport in other parts of the Wellington Region which have more limited public transport provision and access compared to Wellington City.

In conclusion, nearly two thirds of Wellington City residents experience public transport deprivation based on perceived accessibility or affordability of public transport, which may in part explain low rates of public transport use compared to private vehicle travel.

To achieve Wellington City's vision of moving more people with fewer vehicles, a coordinated effort of relevant actors and an appropriate level of funding will be necessary to improve accessibility, affordability and quality of public transport and turn the tide from predominance of private vehicle travel to more sustainable transport modes in the future.

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