

**Before a Panel of Independent Hearing Commissioners
appointed by Wellington City Council**

IN THE MATTER OF the Resource Management Act 1991 (**RMA**)

IN THE MATTER OF the hearing of submissions on the Proposed Wellington City Plan,
Stream 2 – Residential zones and Character Areas

**STATEMENT OF EVIDENCE OF ALASTAIR CRIBBENS FOR WAKA KOTAHI NZ
TRANSPORT AGENCY**

Dated: 16 March 2023

1. EXECUTIVE SUMMARY

- 1.1 My full name is Alastair James Cribbens. I am a Principal Planning Advisor at Waka Kotahi NZ Transport Agency (**Waka Kotahi**).
- 1.2 My evidence outlines my expert opinion on the importance and benefits of accessibility. Accessibility is most succinctly described as people's ability to reach goods, services and activities, collectively known as opportunities.
- 1.3 Central Wellington has high levels of accessibility to opportunities, when considered both at a regional and a local scale. Enabling development in these areas can have wide ranging social, economic, and environmental benefits.

2. QUALIFICATIONS AND EXPERIENCE

- 2.1 My full name is Alastair James Cribbens. I am a Principal Planning Advisor at Waka Kotahi. I have been in this role since August 2021. My role within Waka Kotahi includes leading the involvement of Waka Kotahi in planning processes including spatial planning, planning policy frameworks and partnerships.
- 2.2 I hold a Bachelor of Planning degree with Honours from the University of Auckland.
- 2.3 I have 16 years of experience as a planner. Prior to my current role I was employed as a Principal Transport Advisor in the Transport Strategy team at Auckland Council for four years, a Senior Transport Planner at Auckland Transport for four years, and a Planner at Auckland City Council for six years.
- 2.4 My relevant experience in spatial planning, plan changes, and transport planning/policy includes:
 - (a) Involvement in Future Proof and SmartGrowth, including the recent review of the Future Proof Strategy and the on-going SmartGrowth Future Development Strategy review process.
 - (b) The on-going Auckland Development Strategy review.
 - (c) The development of Auckland Council's initial position on applying the NPS-UD provisions relating to walkable catchments, rapid transit, and accessibility.
 - (d) The Proposed Auckland Unitary Plan submission and hearings process on behalf of Auckland Transport (as part of the Auckland Council group), including leading

Auckland Transport input into the transport, business, heritage and special character, air quality, and zoning topics.

- (e) A range of transport projects including The Congestion Question, Additional Waitemata Harbour Connections, and the introduction, monitoring and evaluation of rental e-scooters in Auckland. In my role at Auckland Council, I was also involved in work on transport policy and regulatory matters such as the Clean Car proposals and Accessible Streets package.

2.5 I am authorised to give evidence on behalf of Waka Kotahi.

3. CODE OF CONDUCT

3.1 While I acknowledge that I am an employee of Waka Kotahi, I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Code of Practice Note 2023 and I agree to comply with it. I confirm that the issues addressed in this brief of evidence are within my area of expertise as a spatial planner. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

4. SCOPE OF EVIDENCE

4.1 The purpose of my evidence is to outline my expert opinion on the importance and value of accessibility. I explain the concept of accessibility, describe the level of accessibility of central Wellington, and set out the wide-ranging potential benefits of enabling development in these highly accessible locations.

4.2 As part of preparing this evidence, I have reviewed the following documents:

- (a) The planning evidence by Michael John Scott of Waka Kotahi dated 16 March 2023.
- (b) The following s32 evaluation reports:
 - (i) Part 2: High Density and Medium Density Residential Zones
 - (ii) Part 2: Character Precincts and the Mount Victoria North Townscape Precinct.
- (c) The following s42A reports from Stream 2, Part 3, Residential Zones:
 - (i) Part 1 – Overview and General Matters;
 - (ii) Part 4 – Character Precincts and Design Guides.

4.3 My evidence addresses the concept and value of accessibility, especially as it relates to inner and central Wellington.

5. ACCESSIBILITY

What is accessibility?

5.1 “Accessibility, the ease of reaching destination, is the most comprehensive land use and transport systems performance measure”¹.

5.2 Accessibility² is most succinctly described as people’s ability to reach goods, services and activities, collectively known as opportunities³. How accessible a city is determines how much time and money, people and businesses must devote to their transportation.

5.3 Over the second half of the 20th century and the early 21st (especially in English speaking new world countries, such as NZ, Australia and the US) transport planning and assessments have had a primary focus on improving ‘mobility’. Mobility is the moving of people and goods, improving this can be through moving greater numbers and/or doing so at greater speeds. Outcomes such as level of service (LOS) and travel speeds are often used to measure mobility. A focus on mobility though is a focus on one means to an end. A focus on accessibility on the other hand is a focus on the end itself, of which there is more than one way to achieve it.

5.4 The main differentiator therefore of a focus on accessibility rather than mobility is the recognition of the role land use location and urban form have on people’s ability to reach opportunities. Once this is considered it can be seen that accessibility can be improved by moving land uses closer together, even if people’s mobility (i.e. speed of travel) decreases or is unchanged.

5.5 In fact, a 2012 study⁴ looked at the impact of these two factors and found: “that denser metropolitan regions have slower travel speeds but greater origin-destination proximity. The former effect tends to degrade accessibility while the latter tends to enhance it. Despite theoretical reasons to expect that the speed effect dominates, results suggest

¹ El-Geneidy & Levinson (2022), Making accessibility work in practice, *Transport Reviews*, 42:2, 129-133

² A note on terminology: The term ‘accessibility’ is often used in relation to the transport and access needs of people with disabilities/reduced mobility. However, confusingly, it is also used to refer to a broader population level transport concept applicable to all user groups and modes accounting for a range of factors including distance, travel time, and other costs of reaching destinations. It is this second concept to which the NPS-UD refers and to which this evidence relates.

³ Litman, T. (2022), Evaluating accessibility for transportation planning. VTPI.

⁴ Jonathan Levine, Joe Grengs, Qingyun Shen & Qing Shen (2012) Does Accessibility Require Density or Speed?, *Journal of the American Planning Association*, 78:2, 157-172

that the proximity effect dominates, rendering the denser metropolitan areas more accessible.”

Why accessibility?

5.6 Policy 1 of the National Policy Statement – Urban Development (NPS-UD) recognises the importance of accessibility in creating a well-functioning urban environment, specifically identifying that these urban environments have “good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport”

5.7 Cities themselves exist because people want to have good access to opportunities. People are willing to pay more and/or willing to live in less space to live in cities, to have better access to other people, to jobs, schools, entertainment and cultural facilities. The economist Edward Glaeser⁵ described cities as:

“Cities are the absence of physical space between people and companies. They are proximity, density, closeness. They enable us to work and play together, and their success depends on the demand for physical connection.”

5.8 As can be seen, this view on the importance and value of cities ties closely to the concept of accessibility and the recognition of its value. As a guide to transport access⁶, produced by a range of international experts, says:

“Transport aims to connect people with goods, services, and activities. The places and activities people seek via transport include schools, jobs, shops, restaurants, hospitals, health care, concerts, social gatherings, parks, nature trails, and so on. Transport also enables packages or food deliveries to reach the individuals who ordered them. [Accessibility] recognizes a wider range of transport problems and potential improvements than analysts typically consider. [...] This broader approach can be described as a shift from mobility- to access-oriented transport planning and engineering.”

Measuring accessibility

5.9 Analysis of accessibility can occur at both regional and local levels. A regional assessment can provide an understanding of how accessible a location is to other parts

⁵ Glaeser, E. (2011). *Triumph of the City: How Urban Spaces Make Us Human*. MacMillan

⁶ Committee of the Transport Access Manual (2020), *Transport Access Manual: A guide for measuring connection between people and places*.

of the region; while a local assessment provides an understanding of how accessible a location is, usually by walking, cycling, or a short public transport trip, to more day-to-day shops and services. Enabling intensification in locations where people can serve their day-to-day needs within walking distance can enable people to reduce their level of car ownership and the amount they drive.

- 5.10 This approach of measuring regional and local accessibility is in keeping with the approach of a range of international examples. A recent guide to measuring accessibility⁷ described the emerging best practice as “to consider access to jobs by driving or transit as a regional indicator and access to non-work destinations by walking or biking as a local indicator”.
- 5.11 The use of access to jobs looks at the number, or proportion, of jobs a person can access from any particular location. This approach uses jobs as a proxy for all opportunities, reflecting the fact that, at least at a regional scale, job locations tend to be correlated with other opportunities such as commercial and social services. Proximity to jobs has been found to be one of the strongest predictors of household vehicle travel⁸.
- 5.12 While both forms of access are important, the level of regional accessibility has been found to possess a stronger relationship with driving mode choice and vehicle distance driven by drivers than local accessibility⁹.

6. ACCESSIBILITY IN WELLINGTON

Current situation

- 6.1 The most accessible areas in the Wellington region by walking and public transport, using the ‘access to jobs’ measure, are located in and around the city centre and, to a slightly lesser degree, near the inner rail stations. Figure 1 below shows the proportion of jobs within the Wellington region that can be reached by public transport within 45 minutes. Meanwhile Figure 2, which shows the proportion of jobs that can be reached within 30 minutes’ drive, shows that even if a person were to drive they are still relatively well placed to access most jobs (and other opportunities) within the region.

⁷ Sundquist, E., McCahill, C. & Brenneis, M, *Measuring Accessibility: A Guide for Transportation and Land Use Practitioners*, State Smart Transportation Initiative (2021)

⁸ DeWeese, J., & El-Geneidy, A. (2020). How travel purpose interacts with predictors of individual driving behavior in greater Montreal. *Transportation Research Record: Journal of the Transportation Research Board*, 2674(8), 938–951.

⁹ Ibid.

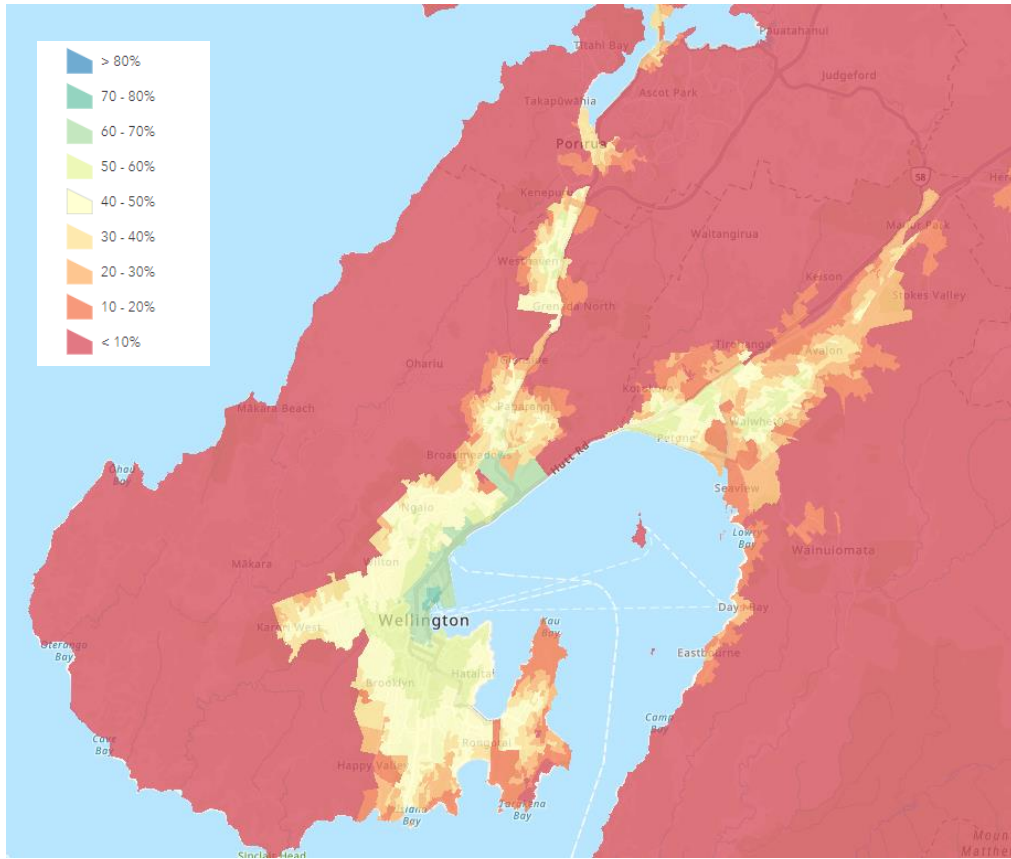


Figure 1 – Access to jobs by public transport (proportion of jobs accessible in 45 minutes)

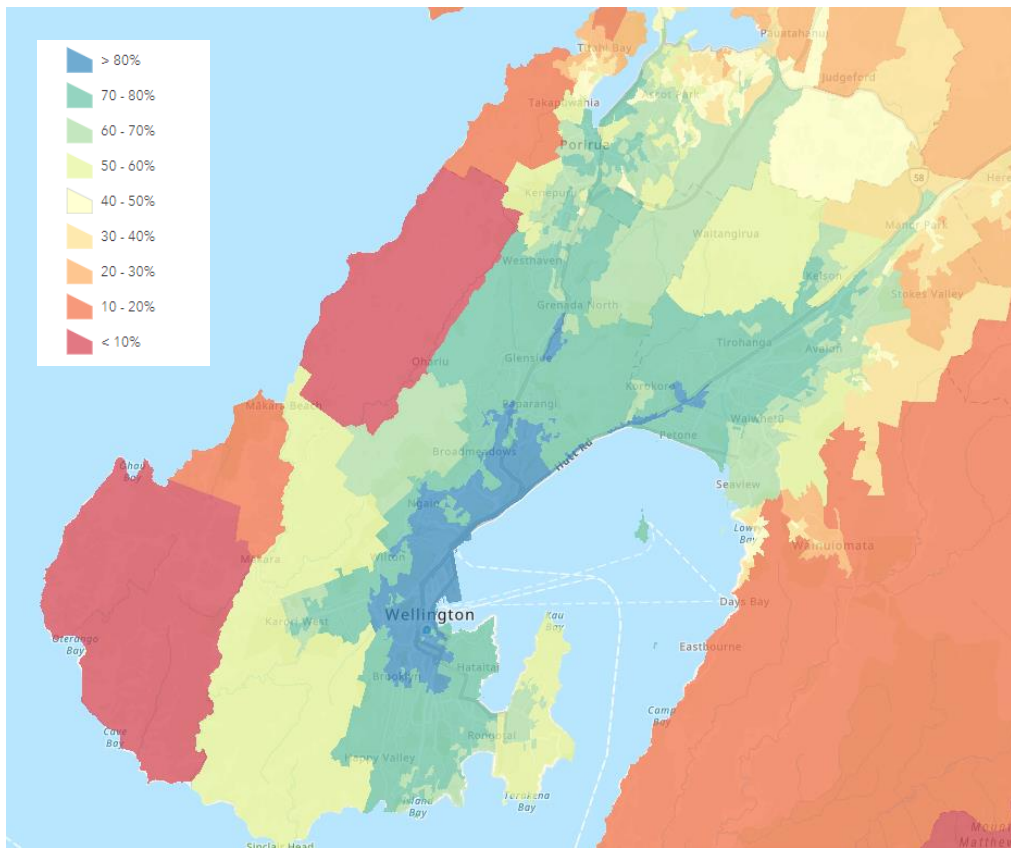


Figure 2 – Access to jobs by private vehicle (proportion of jobs accessible in 30 minutes)

6.2 This high level of accessibility by walking and public transport is reflected in the journey to work mode share seen in the last census, with up to 80% of trips from inner suburbs being by public and active transport modes (figure 3).

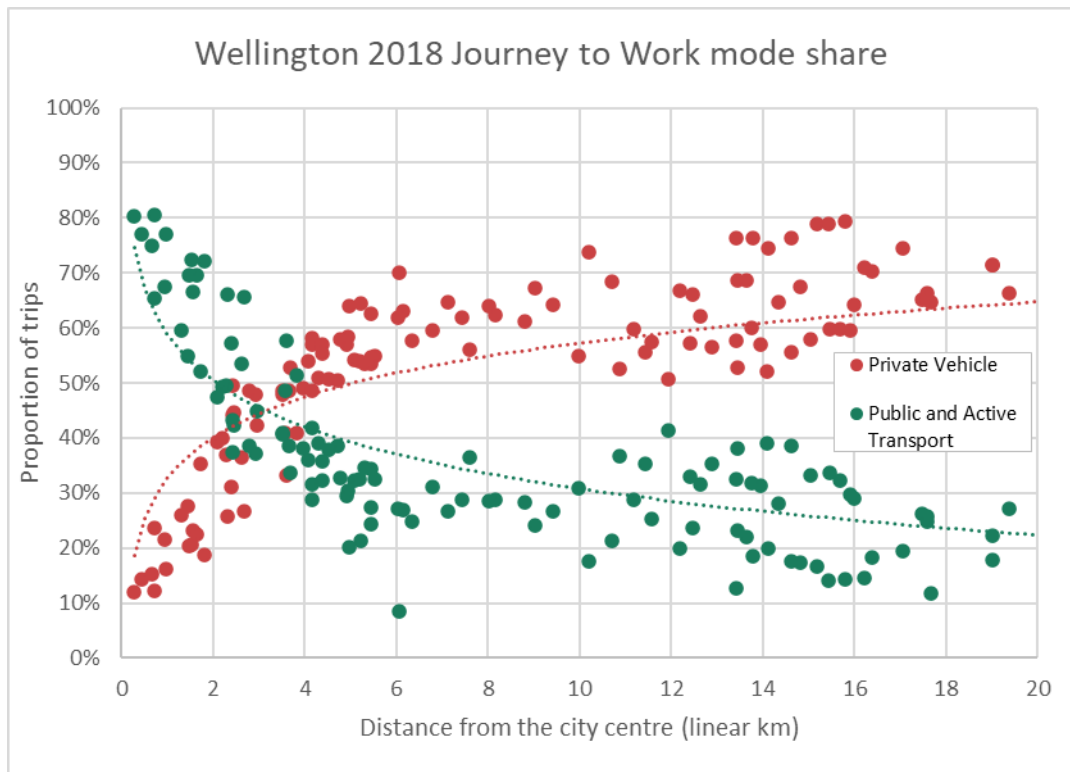


Figure 3 – Journey to work mode share – Census 2018

6.3 These inner-city suburbs are also well provided for by local services, with most areas having many day-to-day needs served within a 5-10 minute walk¹⁰, as shown in the collection of maps attached in Appendix 1.

7. THE BENEFITS OF ACCESSIBILITY

Accessibility, health, and well-being

7.1 Good accessibility is an important element of enabling people’s well-being. A minimum level of accessibility is needed to enable people to meet their basic needs; while higher levels of accessibility can be instrumental in allowing people freedom of choice, to develop their capabilities and to flourish¹¹.

7.2 Enabling people to access opportunities like jobs and education, supports them in improving their financial situation¹². Access to medical services supports better health

¹⁰ The maps in Appendix 1 assume a walking speed of 1.34 m/s and do not adjust for topography or other factors.

¹¹ Preprint: Pereira, R. H. M. & Karner, A. (forthcoming) *Transportation Equity*. In R. Vickerman (Ed.), *International Encyclopaedia of Transportation* (2021). 1st Edition, Elsevier. <https://osf.io/preprints/socarxiv/gykud/>

¹² Olof Åslund, John Östh, Yves Zenou, How important is access to jobs? Old question—improved answer, *Journal of Economic Geography*, Volume 10, Issue 3, May 2010, Pages 389–422

outcomes¹³, access to supermarkets and grocery stores supports people to be able to eat healthily¹⁴, and access to parks and open space enables better mental¹⁵ and physical¹⁶ wellbeing. Access to centres enables people to reach the above activities as well as many other social and commercial opportunities.

- 7.3 The health benefits of active transport, and indirectly public transport (as walking forms the start and/or end legs of a public transport trip), are well documented. Walking and cycling are associated with a reduced risk of premature death, and prevention of chronic diseases such as coronary heart disease, stroke, type 2 diabetes, osteoporosis, dementia, and cancer¹⁷. People who live in more accessible¹⁸ and walkable¹⁹ locations are more likely to walk.
- 7.4 Accessibility can also affect mental health²⁰, with longer car and public transport commutes having been found to be associated with higher levels of depression, stress and/or anxiety. On the other hand, shorter trips and active transport modes have been found to be associated with better mental health. The negative health effects of car commuting can be especially bad for women and low-income commuters.
- 7.5 A recent Waka Kotahi research paper on the relationship between transport and mental health concluded that many of the features of New Zealand's car dominated transport system were associated with poorer mental health outcomes:

“Overall, whether the measure is commute satisfaction, quality of life, subjective wellbeing, or prevalence of mental disorders, Aotearoa’s transport system is characterised by the high use of transport modes associated with poorer mental health outcomes. Car use is predominant, and the types of car trips increasingly being taken in our larger urban centres (15 minutes plus, in congested conditions) are associated with:

- *poorer overall life satisfaction (Drobnič et al., 2010; Gottholmseder et al., 2008; Sposato et al., 2012)*

¹³ Environmental Health Intelligence NZ. 2022. Unmet need for GP services due to a lack of transport. Wellington: Environmental Health Intelligence NZ, Massey University

¹⁴ Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes. California Center for Public Health Advocacy, PolicyLink, and the UCLA Center for Health Policy Research. April 2008

¹⁵ Nutsford D, Pearson AL, Kingham S. An ecological study investigating the association between access to urban green space and mental health. *Public Health*. 2013 Nov;127(11):1005-11.

¹⁶ Pearson AL, Bentham G, Day P, Kingham S. Associations between neighbourhood environmental characteristics and obesity and related behaviours among adult New Zealanders. *BMC Public Health*. 2014 Jun 4;14:553.

¹⁷ British Medical Association (2012). Healthy transport = Healthy lives

¹⁸ Sallis JF, Cerin E, Conway TL, Adams MA, Frank LD, Pratt M, Salvo D, Schipperijn J, Smith G, Cain KL, Davey R, Kerr J, Lai PC, Mitáš J, Reis R, Sarmiento OL, Schofield G, Troelsen J, Van Dyck D, De Bourdeaudhuij I, Owen N. Physical activity in relation to urban environments in 14 cities worldwide: a cross-sectional study. *Lancet*. 2016 May 28;387(10034):2207-17.

¹⁹ Saelens BE, Handy SL. Built environment correlates of walking: a review. *Med Sci Sports Exerc*. 2008 Jul;40(7 Suppl):S550-66.

²⁰ The relationship between transport and mental health in Aotearoa, Waka Kotahi Research Paper 675

- a reduction in partnership stability and satisfaction with family life (Kley & Feldhaus, 2017; Sandow, 2014)
- declining participation in community activities (Mattisson et al., 2015; Putnam, 2001)
- lower levels of employee productivity and higher levels of stress-related work absences (Navaco et al., 1990)²¹.

Economic benefits of accessibility

- 7.6 The benefits of improved accessibility don't just flow to individuals though, but also to other parts of society such as businesses, and community and social organisations. For instance, while an individual may benefit from a wider choice of jobs, businesses themselves can benefit from having access to a wider number of potential employees giving them a better chance of finding a person with the skills and/or experience they are after.
- 7.7 Improving accessibility can also have wider economic benefits. Shorter distances between firms leads to many economic advantages as a result of the agglomeration of economic activity²². Better accessibility, and better alignment between employees and employers, has been shown to improve the productivity of society²³.
- 7.8 Lower accessibility is also correlated with increased transport costs, often offsetting any reduction in housing costs²⁴. In 2014 a study²⁵ looking at combined housing and transport costs in Auckland found that there was a trend of higher combined values as average commuting distances increased and that therefore the evidence “strongly suggests that accessibility to employment centres plays a large role in [combined housing and transport] affordability.”
- 7.9 Other work undertaken by Fairgray²⁶, and Polkinghorne²⁷ around the same time, looking at non-commuting data, suggests that, at least in Auckland, households in areas with higher average commute costs also tend to travel further to retail, and spend more on fuel purchases (respectively).

²¹ Ibid.

²² Rosenthal, S. S., & Strange, W. C. (2003). Geography, industrial organization, and agglomeration. *Review of Economics and Statistics*, 85(2), 377-393

²³ Melo, P., Graham, D., Levinson, D., & Aarabi, S. (2017). Agglomeration, accessibility, and productivity: Evidence for large metropolitan areas in the US. *Urban Studies*, 54(1), 179–195

²⁴ Nunns, P., (2014) Location Affordability in New Zealand Cities: An Intra-urban and Comparative Perspective

²⁵ Mattingly, K., & Morrissey, J. (2014). *Housing and transport expenditure: Socio-spatial indicators of affordability in Auckland. Cities*, 38, 69–83.

²⁶ Fairgray, S (2013), “Auckland Retail Economic Evidence Base”, Auckland Council Technical Report TR2013/046.

²⁷ Polkinghorne, J (2014), “Household Spending on Transport Fuels in Auckland”

Mode share, emissions and accessibility

7.10 Improving accessibility, in particular by active and public transport, is essential to getting more people to use these modes of transport and reduce the amount they drive²⁸.

Reducing the amount of driving will have environmental and other benefits as a result of lower carbon and other tail-pipe emissions, reduced pollutants in road run-off, and a decrease in health impacts through improved safety outcomes and reduced air and noise pollution.

7.11 There are two main elements to this reduction:

- 1) Higher accessibility by active and public transport enables and encourages people to reduce their levels of car ownership and their level of car usage; and
- 2) Even if people choose to drive, if located in a more accessible location their trips will on average be shorter as they are on average closer to opportunities.

7.12 The most recent Intergovernmental Panel on Climate Change report on mitigation of climate change (released in 2022) stated that between now and 2050 a spatial planning approach that achieves compact and resource efficient urban growth through co-location of higher residential and job densities, mixed land use, and transit-oriented development could reduce urban energy use between 23% and 26%²⁹.

Co-benefits of enabling development

7.13 Enabling greater levels of development in accessible locations can also have other benefits less directly related to accessibility, which can further support the objectives of the NPS-UD and amplify many of the benefits outlined above.

7.14 Just a few of these benefits include:

- (a) Density – A number of studies have shown a relationship between higher densities and lower private car use³⁰. Increasing the density of people near public transport services also supports those services, making existing services more profitable and service improvements more viable. Both improved profitability and service levels benefit not just those people in the denser area but all ratepayers and other users of the service (respectively).

²⁸ Ministry for the Environment (2022). Te hau mārohi ki anamata: Aotearoa New Zealand's first emissions reduction plan

²⁹ IPCC, 2022: *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA

³⁰ For instance: Newman, P. (2014). Density, the Sustainability Multiplier: Some Myths and Truths with Application to Perth, Australia. *Sustainability*, 6(9), 6467–6487.

- (b) Land use mix – Enabling greater development in locations with access to land with, or with potential for, commercial and community services can also support an increase in local services and land use mix. Like density, land use mix has been found to have a relationship with transport use, with walking for instance being found to have a strong relationship with land use diversity and the number of destinations within walking distance³¹.

Opportunities to improve accessibility

7.15 Improvements to accessibility through land use³² can be achieved through two primary methods:

- (a) Enable more people to live closer to opportunities; or
- (b) Enable more opportunities to establish closer to people.

7.16 While this evidence has primarily focused on the benefits of enabling greater residential density near opportunities, accessibility can also be improved by enabling opportunities to locate near residents. This could be achieved in a number of ways including by increasing the extent of commercial and/or mixed-use zoned land near residential areas, or by better enabling community and/or commercial activities to establish in residential areas.

8. CONCLUSION

8.1 In conclusion, the importance and value of enabling development in accessible locations needs to be appropriately realised. Enabling development in highly accessible locations will have many social, economic and environmental benefits. In doing so it will support the application of the NPS-UD and help achieve a well-functioning urban environment.

Alastair James Cribbens

16 March 2023

³¹ Ewing, R. & Cervero, R. 2010. Travel and the built environment: A meta-analysis. *Journal of the American Planning Association*, 76, 265-294

³² Improvements to accessibility can also obviously be made by improving the transport network. A range of such improvements are signalled in the Wellington Regional Land Transport Plan and Regional Public Transport Plan as well as other documents and programmes such as Lets Get Wellington Moving.

Appendix 1 – Local accessibility maps of central Wellington

Map legend

Walking time to nearest location using a walking speed of 1.34 m/s

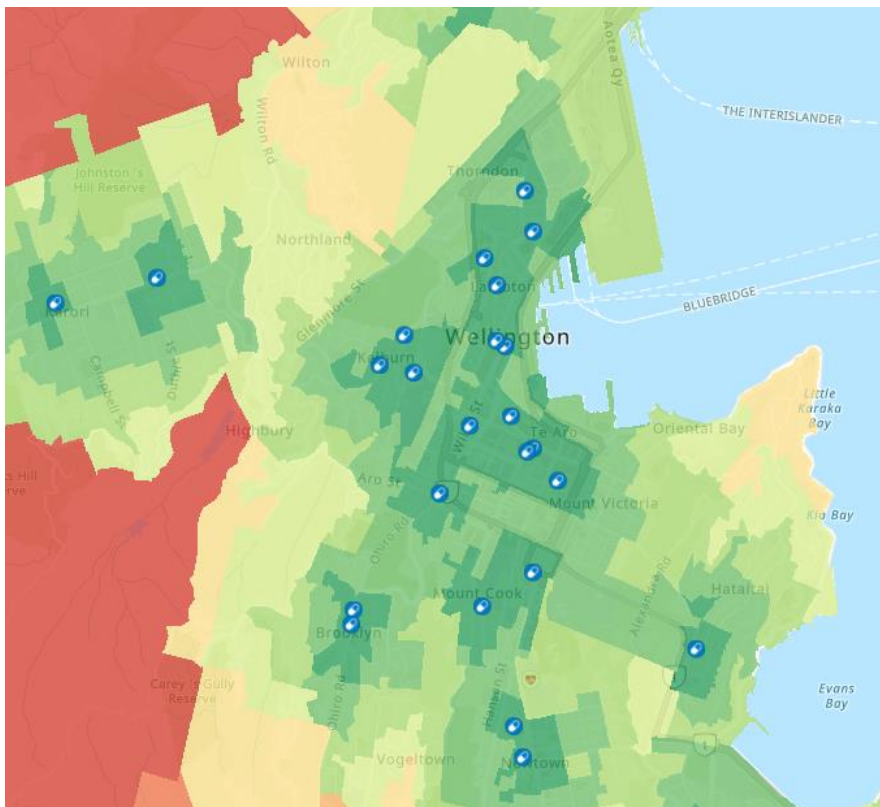
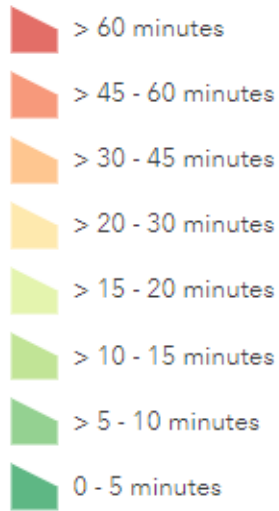


Figure 4 - Walking access to GPs

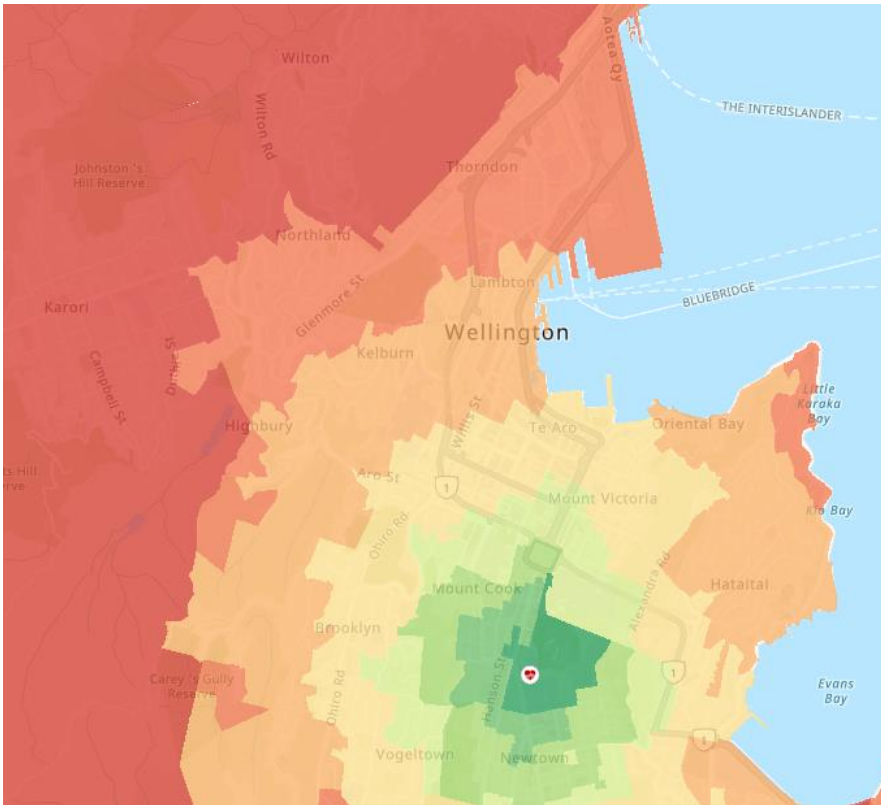


Figure 5 - Walking access to hospitals

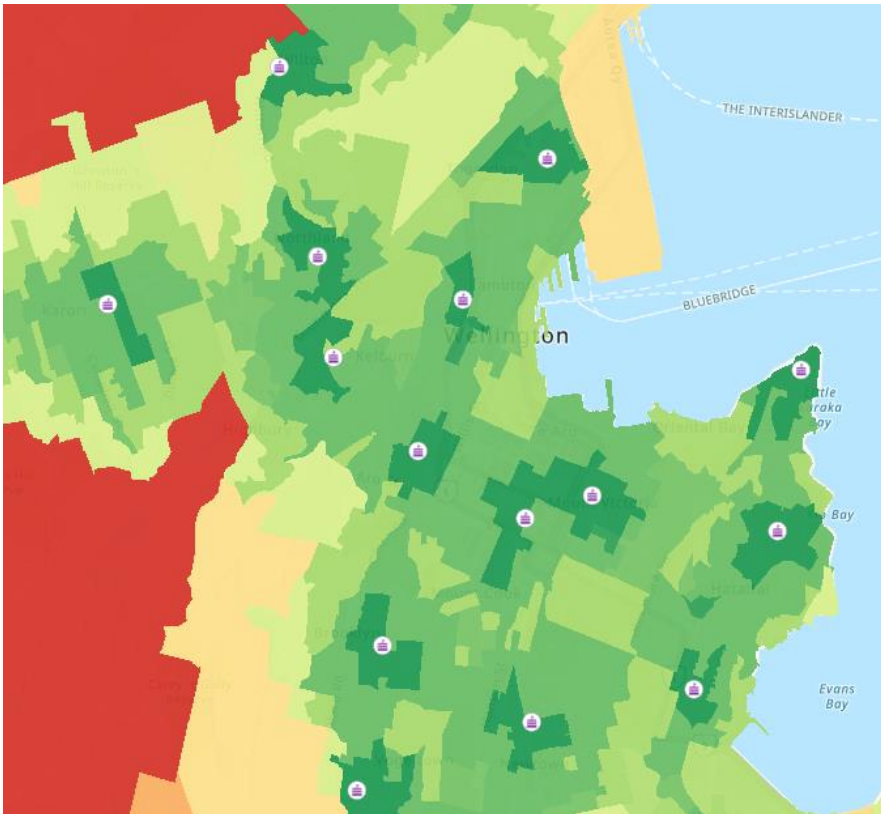


Figure 6 – Walking access to primary schools

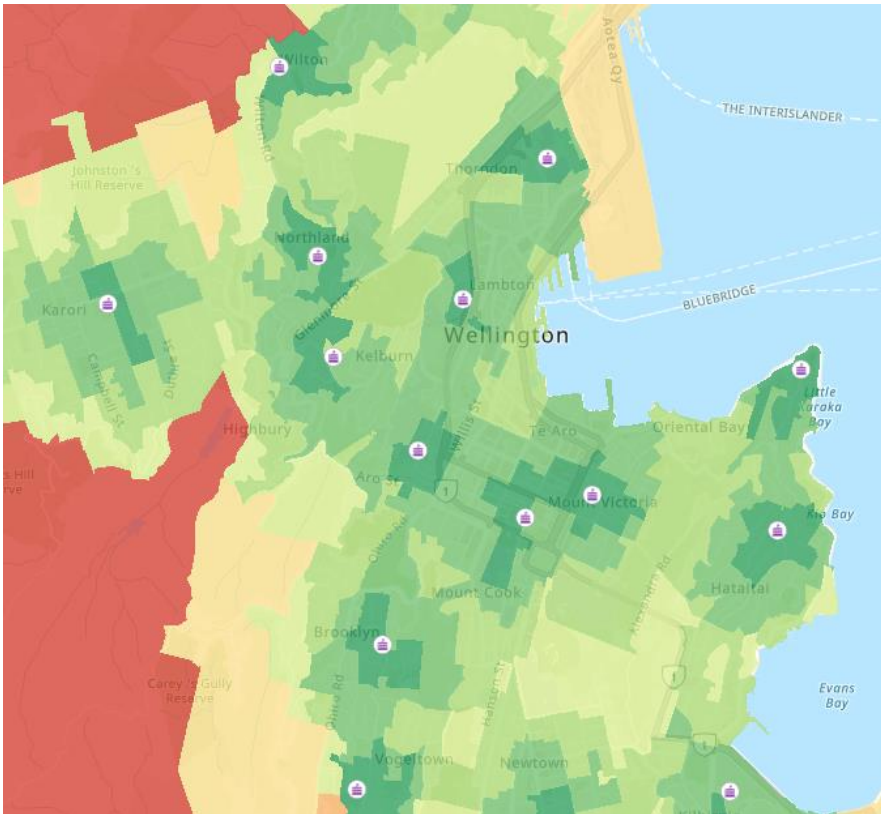


Figure 7 – Walking access to intermediate schools

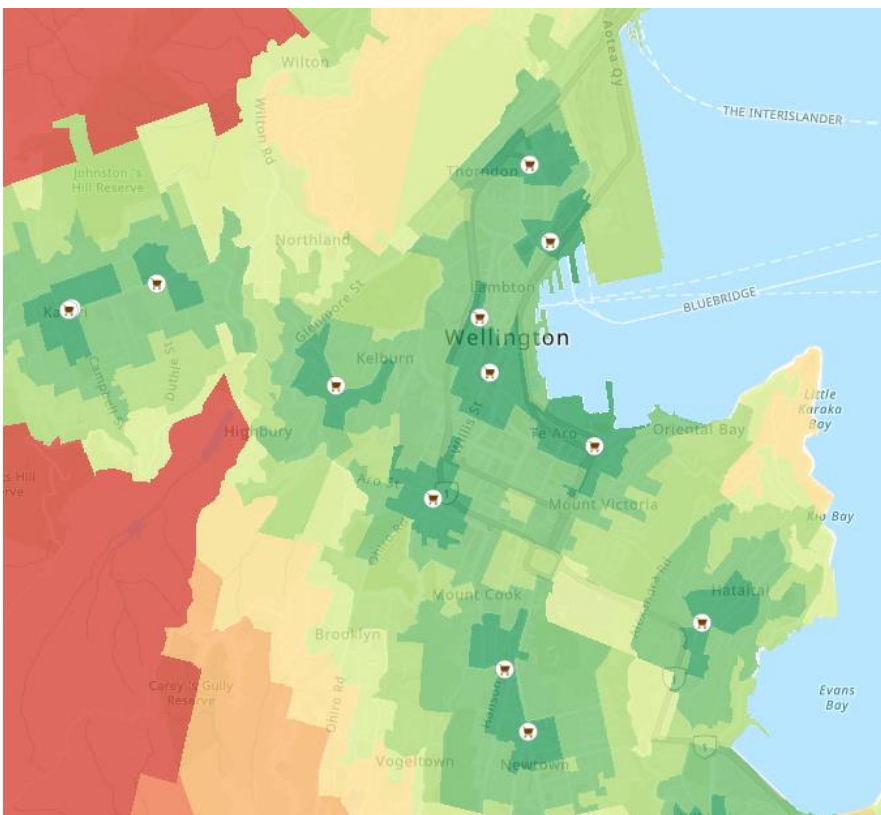


Figure 8 – Walking access to supermarkets

Nb. Access to secondary schools has not been mapped