
EQUITY IN AUCKLAND'S TRANSPORT SYSTEM

SUMMARY REPORT

Ministry of Transport

Final Report: November 2020

 **MRCagency**

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EXECUTIVE SUMMARY

This report investigates equity in Auckland's transport system. Equity is an important consideration because access to transport affects peoples' lives in positive and negative ways. Understanding those impacts is important if transport policy and investment are to contribute to an overall improvement in wellbeing.

Inequity in transport arises as a consequence of two main factors. First, a lack of transport choices means that people have limited options to participate in everyday activities, known as 'transport disadvantage'. Second, some people overcome a lack of choices by paying more than they can afford for mobility, typically by buying and operating a car. People who pay more than they can reasonably afford for travel are defined as having 'transport poverty'.

Both transport disadvantage and transport poverty are apparent all around the world. Some groups of people are known to find it more difficult than others to access transport safely. Groups investigated for this report include Māori; low-income groups; women; the LGBTQI+ community; disabled people; older people; and ethnic minority groups.

International evidence suggests that while there is wide variation in peoples' transport behaviour and experiences, there are disadvantaged people within each group.

Māori experience transport inequity because they have lower incomes on average than other Aucklanders and are more likely to have a disability at younger ages than other ethnicities. Many Māori live and work in areas that are not well served by public transport. However as a whole, Māori are underrepresented in Household Travel Survey data and there is a need for more specific information about what their transport needs are.

Women who work part-time, have caring responsibilities, and have a larger role in managing households have complex trip patterns compared with people who work fulltime and travel in peak hours. Women are also more likely to consider personal security and the risk of harassment or attack when making their travel choices. At

night, they are more reluctant to use public transport or to walk. At all times they choose routes more selectively than men, based on how confident and safe they feel.

There is little local evidence on the transport needs and experiences of the LGBTQI+ community. Transgender and non-binary people are more likely than other groups to report harassment and to feel vulnerable when walking and using public transport. However, avoiding those modes introduces costs, and this group is also more likely to have a lower income than other groups. Therefore, they are prone to transport poverty.

Disabled people are also more likely than others to experience transport poverty due to lower incomes on average than other groups. Further, disabled people have specific needs for accessibility of transport, which reduces their choices.

Older people have markedly different transport patterns than other groups. They are most likely to travel for social and recreation reasons. The impacts of transport disadvantage and transport poverty are acute for older people because they are vulnerable to social isolation, given that many of them do not otherwise spend much time in the company of other people.

There is a gap in understanding the needs and challenges faced by ethnic minority groups in Auckland. There are many diverse communities, with some having low incomes and difficulty communicating in English, while others have high incomes and do not necessarily lack transport choices.

All of the evidence internationally about different groups is replicated in Auckland, however, low-income populations are the most uniformly disadvantaged of all of the groups studied. People in other groups with a high income have more capacity to overcome transport challenges, whereas people on low incomes in Auckland face distinct disadvantages. They are more likely to live in places less well-served by high quality public transport, and they are more likely to work part-time or shifts that do not align well with public transport timetables.



EXECUTIVE SUMMARY

Low-income families in Auckland are more likely than others to live in crowded households, placing a wider variety of transport demands on families. All of those factors combine to reveal a high incidence of transport poverty in Auckland.

While people on high incomes can overcome challenges related to transport choices, inequities remain for many groups. People in Auckland who have disabilities and would like to walk and use public transport often cannot do so easily, because transport infrastructure and services are inaccessible to them. Women and LGBTQI+ people who would like to walk and use public transport are often discouraged from doing so due to fear of harassment or attack. Although people on higher incomes can choose modes that feel more accessible or safer to them, the inequity remains because their choices are restricted.

The prevalence of transport poverty and transport disadvantage in Auckland was confirmed through four case studies involving interviews with staff of key non-government organisations. All interviews revealed that many people seeking advice or social support in Auckland find it difficult and expensive to get around the city. They have challenges locally, for example if affordable groceries and other shopping are not close to where they live. Getting across Auckland for work or other reasons is particularly difficult. Many low-income people in Auckland consider it essential to own a car, because they have no other way to do what they need to get done in their lives. Work and other activities are not close enough to walk to; the cycling networks are not safe enough; and public transport is neither frequent nor direct for people who do not work in the central city and live close to train lines or rapid bus routes.

Evidence from literature and case studies confirms that there is inequity in Auckland's transport system. People who travel to work in peak hours and whose home and workplace are well served by public transport have the most choices. There are many people and families whose situations do not fit that model. They need to travel outside of peak times when high-frequency services are running, and the need to get to places that are not easily

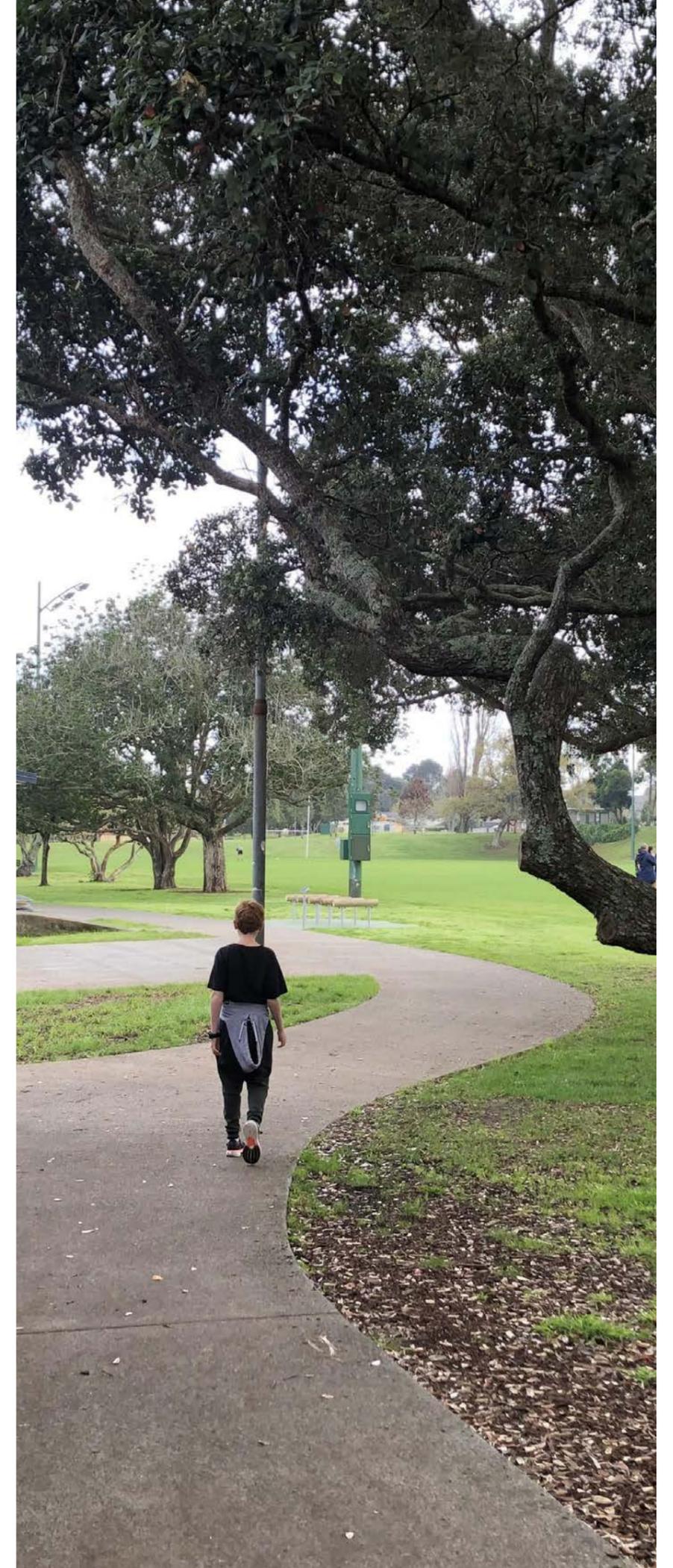
accessible by public transport. The quality of walking and cycling infrastructure may not be equal around the city, and many of the places people need to get to are not local regardless. Transport inequity affects many different groups. Transport poverty is apparent for many people on low incomes, and it is exacerbated for low-income people who also identify as LGBTQI+, and/or who have a disability.

Responses

There is a range of policy responses that could reduce transport poverty and transport disadvantage in Auckland. While some recommendations are for the Ministry of Transport, some involve organisations such as Waka Kotahi New Zealand Transport Agency (Waka Kotahi), Auckland Transport, and others outside of the transport sector. Some recommendations are not aimed at a specific agency but are intended to be considered by government in terms of which agency is best-placed to action them.

The recommendations are grouped into two sections. Firstly, four recommendations are provided relating to overarching issues and how the transport sector in Auckland considers and responds to inequity in transport. These recommendations are:

1. The Ministry of Transport to make equity a more central consideration in transport policy, with a greater number of measurable outcome indicators, so that links can be made to desired outcomes for those people who suffer transport inequity most acutely.
2. The Ministry of Transport to work with other ministries, particularly the Ministries of Social Development and Health, to create shared policy and accountability for transport equity and its links with wellbeing.
3. That equity is made an explicit component of other transport strategy documents delivered by the Ministry of Transport and other sector partners.
4. The Ministries of Transport and Social Development to investigate financial services and support for people to access for their transport costs, to act as a safety net for people with no other choices.



EXECUTIVE SUMMARY

These issues are central to real change in equity in Auckland's transport system. Without high-level strategy that includes measurement and engagement with social service organisations, there will be no way of knowing whether other investment is having any impact on reducing inequity.

Following the overarching recommendations, fifteen additional specific recommendations are made to improve equity for specific groups of people in Auckland. They are:

To address transport poverty and transport disadvantage:

5. The Ministry of Transport to commission bespoke surveys of those under-represented by the Household Travel Survey in Auckland, including disabled people, Māori, ethnic minority groups, and LGBTQI+ people.
6. Waka Kotahi and local authorities to collect data on diversity of participation on public streets and transport services, to understand the extent to which inclusive access goals are being met.

To improve transport sector engagement with groups suffering transport poverty and disadvantage, and with the agencies that represent and support those people:

7. The Ministry of Transport to develop policy for collaboration with social service agency leaders to inform local engagement processes and indicators of successful engagement.
8. Waka Kotahi and Auckland Transport to lead engagement with social service organisations to review their programmes and projects, to refine investment options that will address inequity.

To address the lack of access low-income and older people have to affordable, accessible goods and services:

9. Investigate mobile service provision that takes services to where people live so that transport is not a barrier to affordable goods and services.

To improve transport choices:

10. Investigate community transport nationally, including in Auckland.
11. Investigate the provision of support for access to low-cost finance and car-share options for people who need them.
12. Improve public transport in low-income areas.

To improve transport affordability:

13. Build on the Total Mobility scheme, to provide more affordable access to taxis for low-income people without disability.
14. Investigate increasing public transport subsidies for low-income people.

To improve equity in road safety:

15. Promote high-quality public transport as a road safety investment, by providing a realistic alternative for people who might otherwise travel in an unsafe vehicle.

To improve personal security while using transport:

16. Improve personal security on transport links and services, through co-designing specific solutions at local stops and stations with local communities of greatest need.

To improve accessibility of information about transport:

17. Develop 'easy read' wayfinding policy, accessible for people who cannot read or write in English, as well as being inclusive to people who have learning disability, brain injury, or neurodivergence such as autism.
18. Provide wireless internet at bus stops and train stations as part of transport information services.

To improve accessibility of transport infrastructure and services:

19. Develop guidelines for infrastructure accessibility audits.

The intervention considered to have the greatest potential to deliver ongoing change from inside the transport sector is Auckland-specific research into who is not making trips and the impact of travel for low-income people. That is because data and evidence can drive policy investment across the city as a whole, as well as informing details and scope for projects at a local community level. Without data there is no accountability, so the problem of transport poverty and disadvantage remains hidden unless more honest monitoring happens.

The widespread inequity in Auckland's transport system cannot be solved within the transport system alone, or with one-off interventions. Sustained improvement will require fundamental changes to the way that transport, health, land use planning, and social services co-exist in a rapidly growing city. The problems that people have accessing transport in Auckland, and the consequent impacts on wellbeing, seem to fall through the gaps currently. The transport industry has tended to focus on operating transport networks in a safe and efficient way, with little regard for considering whether it enables all people to get where they need to go, in an affordable way. It is clear that there is huge opportunity to both find out more about where inequity is most acute in Auckland, and to work on responses to improve transport choices so that all Aucklanders can live better lives.

INTRODUCTION

This report provides insight into equity in Auckland's transport system. Equity is an important consideration because the positive and negative impacts that access to transport has on peoples' lives are not distributed equally. This report explores how those impacts affect people in Auckland.

The report includes a literature review, case studies, and policy recommendations. The literature review is of international and locally relevant evidence concerning equity and transport. The case studies provide insights into groups of Aucklanders who would benefit from changes to the affordability, availability, and quality of transport. Policy recommendations build on the evidence and case studies, suggesting early intervention opportunities, as well as longer term work to provide an 'equity lens' on all transport policy and investment decisions.

By combining high level data mapping, international literature, local evidence and case studies, the report provides a targeted assessment of what problems exist regarding transport and equity in Auckland, and how best to address those problems with policy. The method itself aligns with recommendations from literature, including for example this thought piece from Massey University by Spoonley et al. (2016):

Quantitative data-driven audits can be limited, however, because they fail to account for differences within groups and location. Any further research would benefit by focusing on the experiences of those who might (or might not) use the range of transport modes available.

Spoonley et al., 2016 (p7)



Inequity of Auckland's transport system: Summary of Literature

The main insights to arise from the literature review were:

The importance of income

Across all of the groups investigated, income inequality results in transport inequity. People who can afford their preferred transport choice can overcome challenges, at least insofar as they can get where they need to go. Fears for personal security related to gender identity or other marginalization, and difficulties disabled people have with inaccessible transport choices remain, but people with high income can choose where in Auckland to travel to with more freedom. Transport inequity related to low income arises due to the combined effects of living further away from good public transport connections; having to travel a long way to access activities; negative effects on wellbeing related to poverty induced by forced car ownership; and increased exposure to transport-related harms including air pollution and road trauma.

Income is not the only factor in equity of transport

Overcoming transport difficulties by paying for better options does not remove the fact that inequities exist. All Aucklanders should be able to choose to travel by any mode, without fear of harassment or attack, and without accessibility barriers preventing their movement. Currently many people in Auckland are restricted because of genuine fears about whether a journey will be safe and/or accessible to them.

Auckland has some characteristics typical of many cities, so some proven interventions can be readily applied

Some aspects of transport equity are similar for Auckland as they are in other cities, so lessons learned from other places could be readily applied in general terms. The main examples are regarding the need for a variety of affordable, safe, accessible choices so that people can use transport, regardless of gender, age, ethnicity, sexual orientation, ability, or income. Principles in transport policies that promote inclusive access, such as step-free routes and easily understood wayfinding, are as applicable in Auckland as they are in any other city.

Auckland has some unique characteristics that need Auckland-specific solutions

Moving from generic policy to specific interventions, there are pockets of need in Auckland that could benefit from targeted interventions. The maps appended to this report show that some areas (particularly West and South Auckland, and the area around Glen Innes / Tamaki) have concentrated areas of ethnic minority groups, crowded households, low-income people, and people who have difficulty walking. People who live furthest from high quality, high frequency buses and trains are also at a disadvantage. Auckland's ethnic diversity means that interventions targeting accessibility cannot be directly related to its overall age structure, as many Māori and Pacific Peoples aged less than 65 years have a disability, and they have a lower overall life expectancy.

Perceptions, fears, and confidence affect transport choices

Even though people with a good income have more choices about how they travel, sometimes those choices are affected by fears for personal security. Equity in Auckland's transport system would mean that all Aucklanders could use buses and trains, including walking to and from the stops and stations, with no fear that they may be harassed or attacked. Evidence suggests that problems evident around the world related to racism, ableism, and abuse of trans and non-binary people are also apparent in Auckland's transport system.

LITERATURE REVIEW

Averages are unhelpful to highlight variation

The overall differences in travel between males and females, across different age groups, and between ethnic groups were not illustrative of the range of challenges faced by different groups.

The literature review summarises evidence related to transport equity in Auckland. It discusses aspects of transport disadvantage (defined as a relative lack of transport choices) and transport poverty (defined as poverty induced by people paying more than they can afford for their mobility). The evidence is described as a whole, and then separately for different groups of people, namely Māori; low-income groups; women; LGBTQI+ people; disabled people; older people; and ethnic minority groups. These groups were selected to represent likely clusters of people facing transport disadvantage and/or poverty. They are similar to groups defined using a sociological approach to transport disadvantage:

“Bonsall and Kelly (2005) propose a ‘sociological’ approach that focuses on people who may be at risk of social exclusion or who face constraints on transport choices. They identify the following groups as relevant:

- *people with low incomes*
- *people with disabilities*
- *elderly people*
- *women (eg due to security fears when using other modes)*
- *ethnic minority groups (if language/cultural barriers make use of other modes difficult)”*

Nunns et al. (2019), p25

The benefits and costs of transport are experienced differently by people, depending on whether they belong to a disadvantaged group, and depending on where they live and work. The review therefore also considers transport disadvantage and transport poverty as a whole and how they are distributed spatially around Auckland.



Defining Transport Equity

In this report, the phrase 'transport equity' describes how transport's benefits and harms affect different people and communities in Auckland. There is no internationally agreed or precise definition of transport equity (Ecola & Light, 2009).

Equity is an important consideration because people in Auckland do not all have the same access to transport. The costs of accessing and using the transport system are different depending on many factors. Costs include those paid through national and regional taxes, including taxes on fuel, and rates apportioned to transport infrastructure construction, and transport service operation and maintenance. They also include fares paid for public transport trips. Costs that are less direct include the effects of transport emissions and air quality on health, and harm associated with road crashes and trauma.

As described by Nunns et al. (2019) "Whereas efficiency describes the total benefits and costs of a policy, equity considers the relative distribution of those benefits and costs between individuals and social groups" (p16). The following excerpt from New Zealand's transport Economic Evaluation Manual (NZ Transport Agency, 2018) defines equity and describes how equity is (or should be) considered in transport project appraisal:

Equity refers to how the benefits and costs of transport projects are distributed across population groups. There are four types of equity related to transport:

- *egalitarianism - treating everybody the same, regardless of who they are*
- *horizontal equity - whether benefits, disbenefits, (including externalities) and costs are applied equally to people and groups in comparable condition*
- *vertical equity with respect to income - whether lower-income people bear a larger portion of the impacts*

- *vertical equity with regard to mobility needs and abilities - whether transport systems adequately serve people who are transport disadvantaged...*

... An analysis of the distribution of benefits and costs among different groups of people is not required for the economic efficiency evaluation of the project.

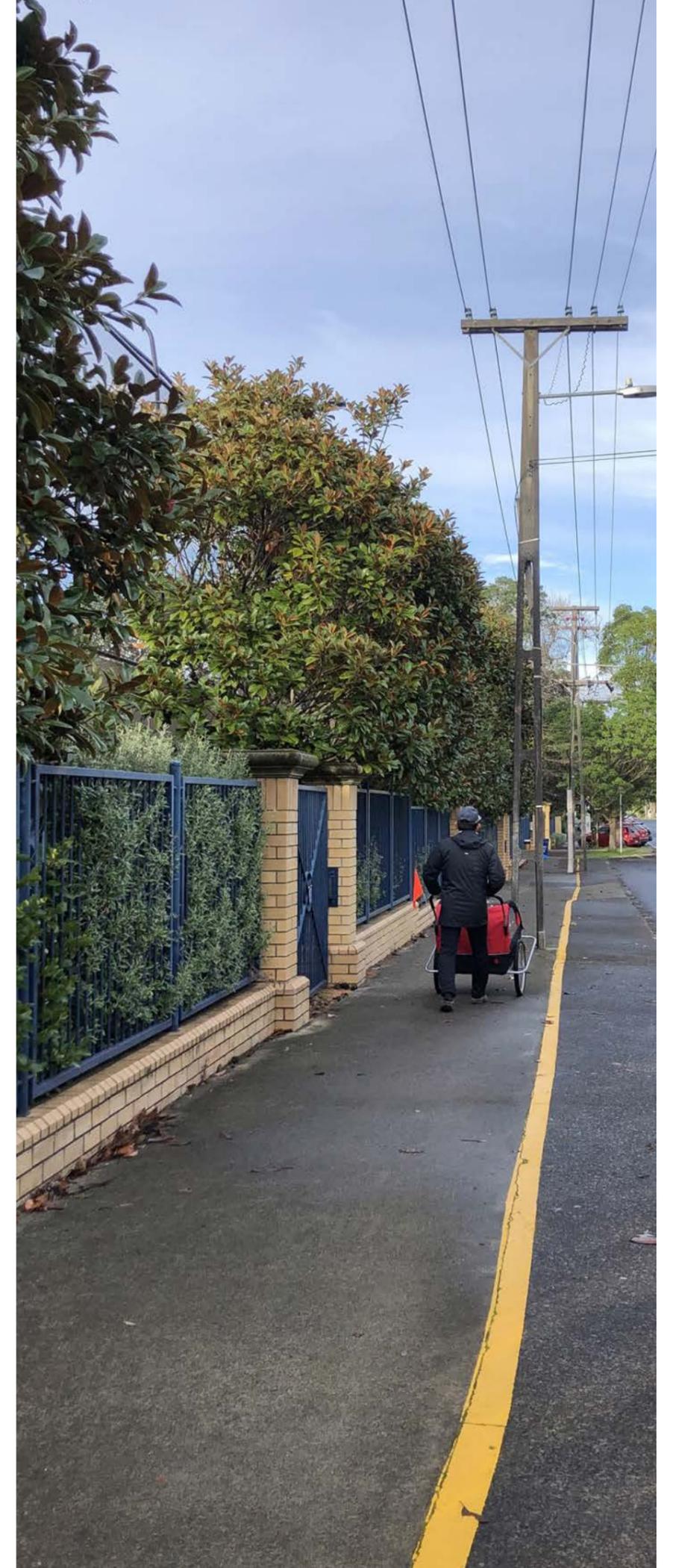
However, reporting of the distribution of benefits and costs, particularly where they relate to the needs of the transport disadvantaged, is part of the funding allocation process.

NZ Transport Agency (2018), Appendix A17

As described above, reporting the equity impacts of transport investment decisions is part of Waka Kotahi's (formerly the NZ Transport Agency) funding allocation process. However, the extent of that reporting varies, in part because the distributional effects of decisions are not always obvious.

The benefits of different transport policy and investment decisions also affect people differently. The phrase transport disadvantage is used in a variety of ways but typically describes relative lack of access to transport, related to the interaction of individual circumstances such as income, with land use patterns and the nature of the transport system (Currie & Delbosc, 2011). In contrast, transport poverty describes an inability of an individual or household to be able to pay for transport, even if they have a theoretical level of access to different choices.

Transport poverty includes the effect of costs related to 'forced' car ownership on individuals and households where alternative access to activities is not practical. Transport disadvantage and transport poverty can both lead to social exclusion, sometimes defined as 'transport-related social exclusion'.



LITERATURE REVIEW

Transport Equity for Affected Groups

Seven groups which may experience transport inequity were defined by the Ministry of Transport to be investigated for this research. Literature related to transport equity for each group is discussed below. The literature is first summarised for the group in general terms, regardless of where they live. Any literature or other evidence specific to the group in Auckland is then presented. The seven groups are:

- Māori
- Low-income people
- Women
- LGBTQI+ people
- Disabled people
- Older people
- Ethnic minority groups

As an initial investigation into how some of the interest groups travel differently, analysis of the Ministry of Transport’s Household Travel Survey data for Auckland (2015 – 2018 combined) was summarized (R Paling, personal communication, 20 May 2020). Only those groups identified within the Household Travel Survey were included. Tables appended to this report show the mean number and lengths of trips, mean number of journeys, trip data by mode and purpose for the survey sample as a whole, and for sub-groups of Aucklanders. A comparison of interest group trip and journey rates, and journey length, relative to the overall sample mean, is shown in the figures on this page and the following.

The purpose of the figures is to highlight relative differences in trip-making between different groups of people. The graphs also show that there is a lack of data about the way that different groups of people travel in Auckland.

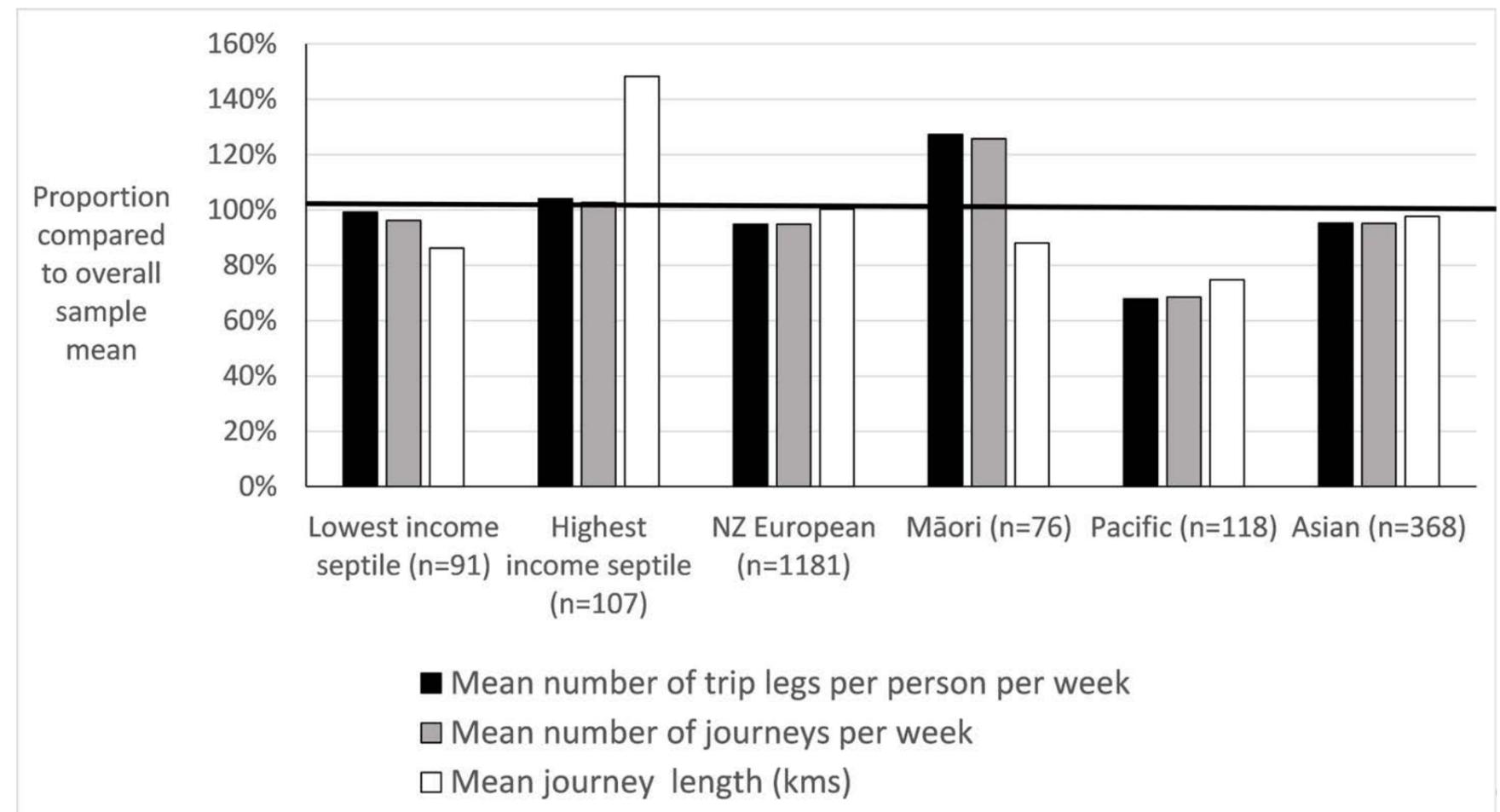
Some groups (particularly Māori and Pacific people) are significantly under-represented by the data. Other groups (including LGBTQI+ and disabled people) are not included. The sample sizes and bias make it difficult to compare travel between groups.

Overall and noting data limitations, the travel data show that there is variation in the mean numbers of trips, journeys, and distances travelled by Aucklanders with different characteristics. Travel as a car driver is by far the

most dominant mode for all groups. The amount of travel as a car passenger is similar to that for walking. Relatively few trips are taken by public transport, with a very small proportion for bicycling.

Travel for social engagement was the most common trip purpose for almost all groups, closely followed by travel for employment.

Household Travel Data, Auckland, 2015 – 2018: Income and Ethnicity



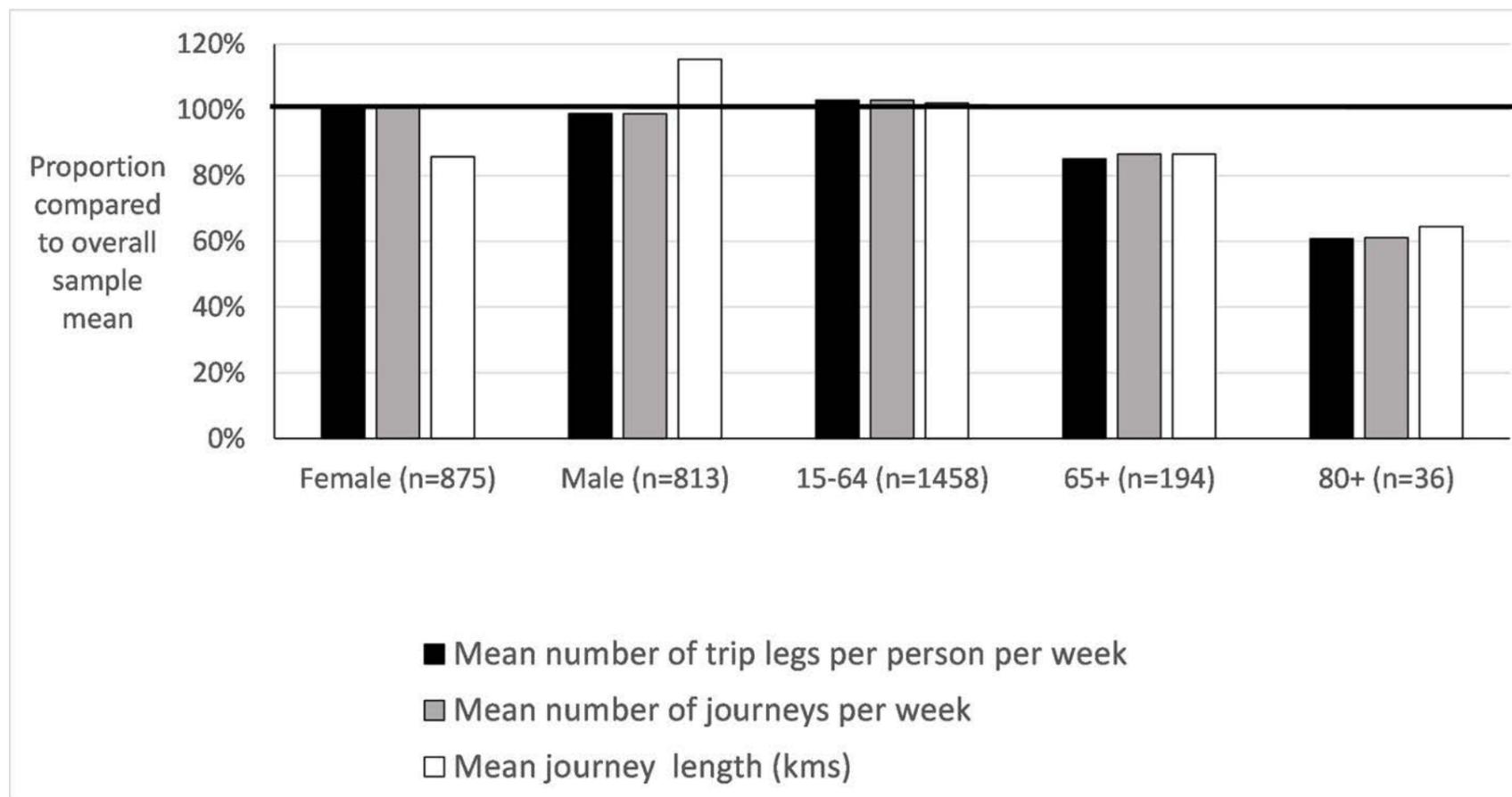
LITERATURE REVIEW

It is important to note here that interpreting travel data is not straightforward. More trips do not necessarily equate to a greater good (Jones & Lucas, 2012). For example, it may be that a parent drives their children to one or more schools because it is too difficult or unsafe for the children to walk, ride a scooter, or cycle. Conversely, making fewer trips than average may be due to having several shops or services located in the same place, meaning multiple trip purposes can be combined - or fewer trips may be because journeys are too difficult, and activities are foregone. Furthermore, what is a satisfactory number of trips for social engagement purposes for one person or

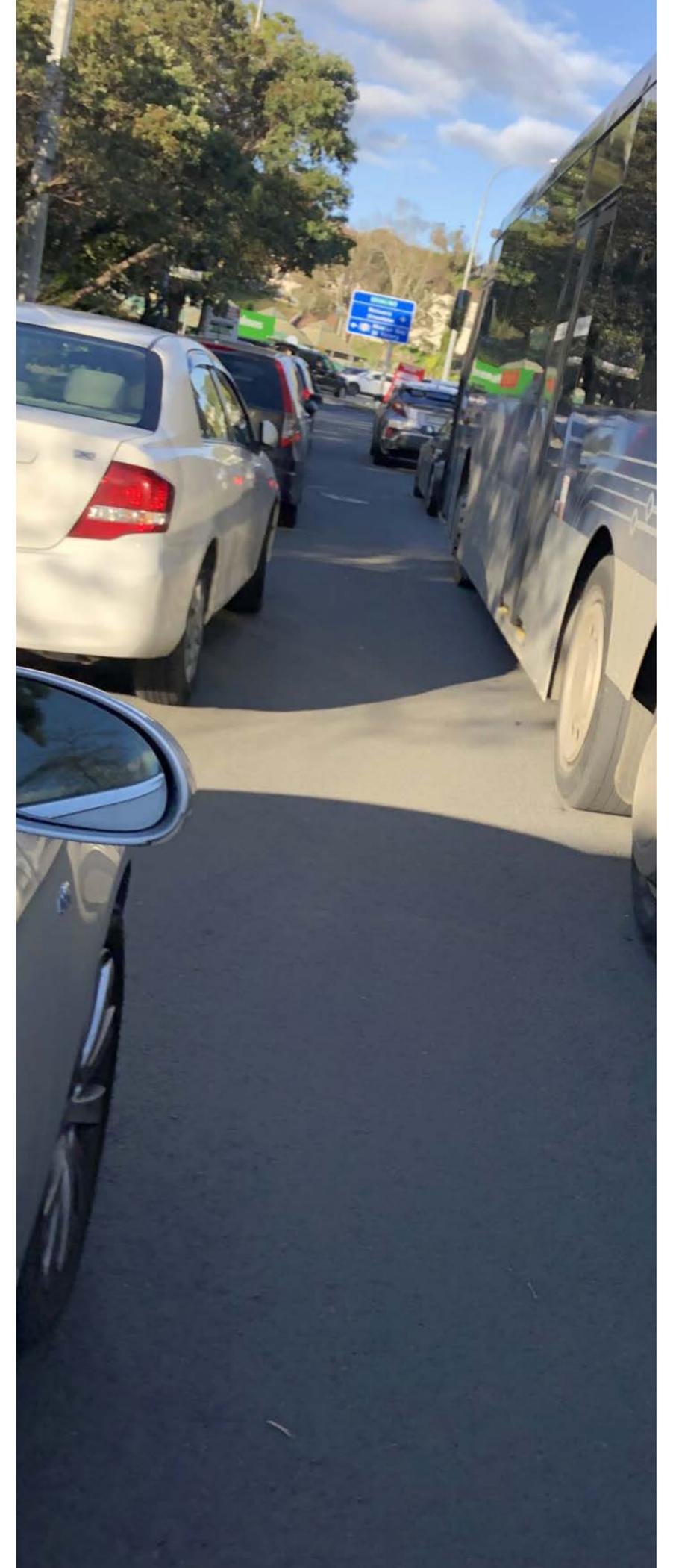
family may be quite different for another. Therefore, equity and transport cannot be wholly understood by analyses of average trip rates for different groups.

The data related to individual interest groups where there is data available are discussed in the relevant sub-sections below. A collection of maps to represent available data by interest group, across all of Auckland, is included in the Appendix to this report. Maps are included to show how relative disadvantage is experienced around Auckland.

Household Travel Data, Auckland, 2015 - 2018: Gender and Age



Source: Summary of 2015- 2018 Household Travel Survey (2020)



LITERATURE REVIEW

Māori

Evidence about transport for Māori

In New Zealand, there are Treaty commitments to ensure that transport services are provided for Māori in an equitable way:

A political connotation with respect to Māori is that transport demand, alongside other equitable service delivery commitments for Māori, exists through the Treaty framework and in the status of Māori as Tangata Whenua. This includes the capacity of Māori to participate in decision-making, and to have any specific transport requirements in relation to social interaction (such as access to marae) and social and educational services considered.

Spoonley et al. (2016), p6

That is, despite changes in the proportions of different ethnic groups in different parts of Auckland, Māori as Tangata Whenua have specific status in policy, so their transport needs should be explicitly catered for.

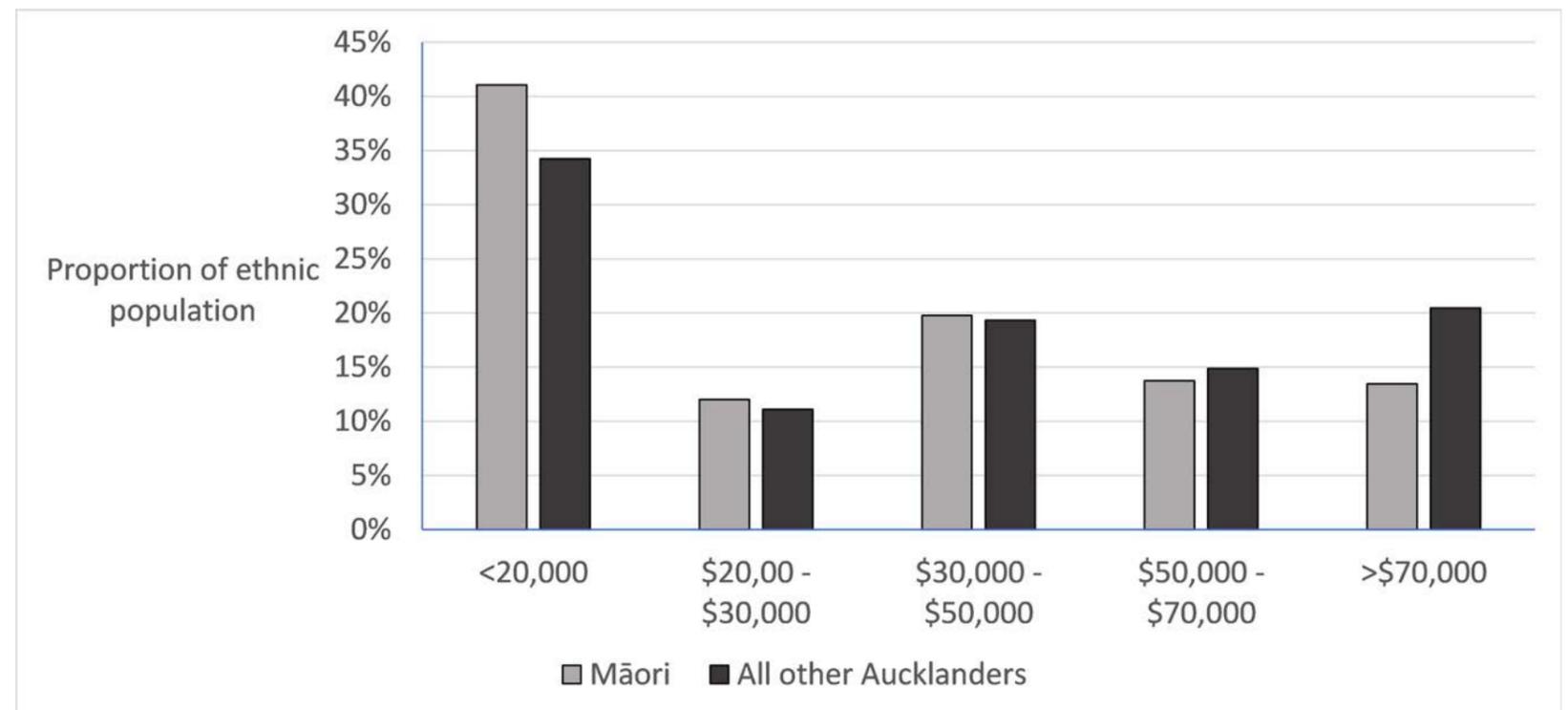
The main challenge concerning equity of access to transport for Māori in Auckland, and meeting Treaty of Waitangi obligations is that there is limited data to understand whether or not their needs are being met. For example, Household Travel Survey data underrepresents Māori in Auckland. The most recent dataset included just 76 responses from Māori in Auckland, compared with 1,181 from New Zealand European Aucklanders. Reporting average trip rates and lengths gives no indication of the challenges some people might face, because their experiences are not clear.

However, it is clear that one of the main factors affecting access to transport for Māori in Auckland is related to income. The figure on this page shows the relative individual income of Māori in Auckland, compared to all other ethnicities combined. In summary, Māori are much

more likely than Aucklanders of other ethnicities to have a low income (below \$20,000 per year), and less likely to have a high income (greater than \$70,000 per year). Māori are also over-represented in indicators of poverty in Auckland, which means that as well as being more likely to have a low income, they are more likely to live in overcrowded households; to not have access to a vehicle; and to not have access to a mobile phone or internet (Marriott & Sim, 2014).

Māori of all ages face higher risk of road trauma than all other ethnicities (Hosking et al., 2013). The reasons for higher risk are not made explicit by Hosking et al. (2013), but are likely due to a combination of higher rates of travel in less safe vehicles; lower levels of driver education; and higher exposure as a pedestrian due to lower overall rates of access to a vehicle, particularly for children. The influences of individual behaviour and cultural factors on road trauma is a gap in evidence.

Proportion of population earning within particular income brackets, by ethnicity



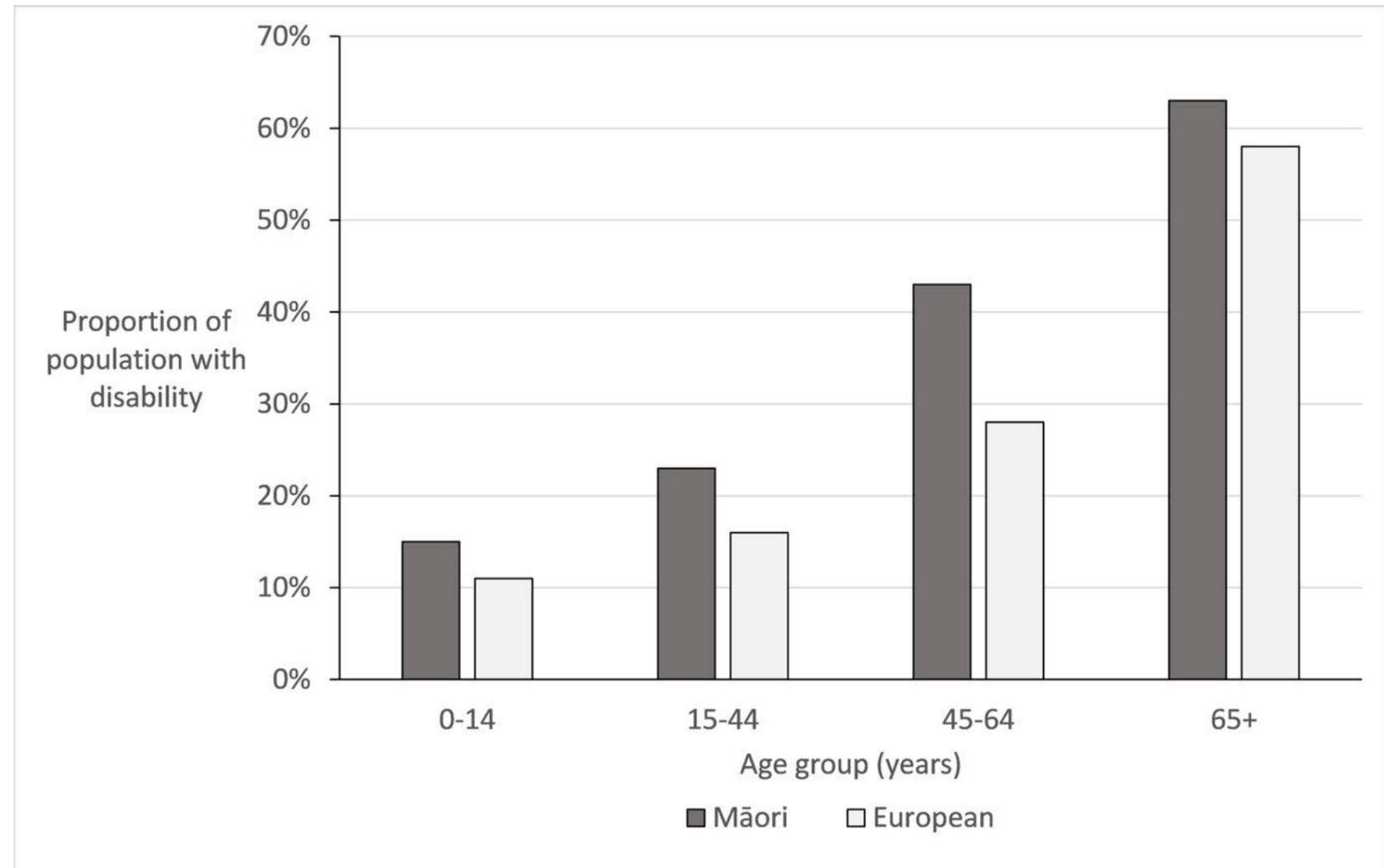
Source: Statistics NZ (2018)

LITERATURE REVIEW

There is limited evidence about the transport experiences of Māori, beyond the implied disadvantage related to those Māori on low incomes and living in deprived areas. Whether transport barriers affect cultural and spiritual connectedness, for example, is unknown. As a starting point to address this gap, recent research from the University of Auckland studied mobility of older and disabled people across Auckland (Ameratunga et al., 2019). The research involved 'go-along' interviews with fifteen Māori people from Te Puea Marae in Mangere. Many of those interviewed expressed challenges getting around, including to access significant ancestral burial sites due to challenges crossing arterial roads and Auckland's Southern Motorway. Other challenges moving around were not related to being Māori particularly, but many of the participants reported that the combination of low income and limited mobility affected the places they went, and how often they left the marae.

Finally, transport accessibility for Māori in Auckland is important because Māori have higher rates of disability in every age group compared to other ethnicities. As an example of the differences in disability rates for Māori compared to other New Zealanders, the figure opposite shows the proportions of disabled Māori compared to disabled European New Zealanders.

Proportion of population with a disability, by ethnicity



Source: Statistics NZ (2013)

Low-Income People

General evidence about transport for low-income people

It is clear from a raft of international literature that income affects equity of transport systems in two main ways. First, peoples' connectedness to local and regional opportunities depends on the breadth and quality of transport choices that link where they live to where they want to get to. Land use and transport systems interact to provide different levels of connection for different people. More choices tend to result in higher costs of living, so lower income people experience transport disadvantage because they cannot afford to live in high amenity areas, or to pay for as many transport choices.

Second, for people without good public transport, walking, and cycling choices, reliance on car travel can induce transport poverty and increase exposure to transport-related harm. That is, peoples' reliance on a car to get to work and to travel for all other reasons can come at a cost to other spending that supports their wellbeing. The implication of a lack of choice means that low-income people often need to own and operate a vehicle, which they cannot easily afford (Currie & Delbosc, 2011). Harms related to transport, particularly air pollution and likelihood of being involved in a crash, are higher for lower-income groups (Forkenbrock & Schweitzer, 1999; Marshall et al., 2009; Tonne et al., 2018). They are less likely to travel in a vehicle with good safety or environmental features, so are exposed both while traveling as a driver or passenger, and while walking, to risks associated with crashes and poor air quality.

The lack of choices available to low-income people is perpetuated by inequity of investment in high quality walking and cycling infrastructure. Smith et al. (2017) completed a systematic review of the effects of the built environment on levels of walking and cycling. Although the evidence was weak, it suggested that investment in

walking and cycling may benefit wealthier communities more than poorer communities. One reason for that conclusion may be that lower income people typically have a smaller discretionary travel budget and more constraints on their travel, so changes to the built environment do not necessarily remove all of the barriers they faced to walking and cycling in the first place. They are also more likely to live in places with lower amenity. If there are fewer options for local shopping, employment, recreation and cultural activities, people will still need to travel long distances (typically by car) to get to the places they need, and want, to access.

How easy and pleasant it is to walk in an area, defined as 'walkability', is measured based on measurable built-environment indicators such as footpath widths and the density of street networks. Adkins et al. (2017) found that walkability affected the amount of walking in wealthier areas more strongly than it did in poorer areas. Research summarised by Adkins et al. (2017) deduced that people in poorer areas walked more out of necessity, regardless of the built environment walkability. People in poorer areas were also more likely to declare other barriers as preventing them from walking more often, such as fear of crime.

As noted in relation to all groups of people discussed in this report, having access to a car can come at extreme financial disadvantage for people on low incomes (Curl et al., 2018; Currie & Delbosc, 2011). Evidence suggests that people feel compelled to have a car to meet their everyday needs, even if they cannot afford it. Furthermore, once they have a car, some low-income people see it as being key to providing them with a chance of improving their life circumstances because without it, they cannot reach well-paying jobs, or education and training. Minor changes to public transport in places where people need a car for at least some of their daily needs are unlikely to make a difference, because the incremental cost of a trip by car when it is already owned is often less than a public transport fare.

On average in New Zealand, households spend 11% of their income on vehicle purchase, and private transport supplies and services (such as taxis) (Statistics NZ, 2020). The proportion is similar for low-income people as high income, meaning that lower income people spend less overall, despite their transport needs being similar to higher income people. There is likely to be large variation in the proportion of income spent on transport, within the low-income group. Many households have no access to a car, while others spend on servicing a car loan as well as other transport-related costs.

In summary, people on low incomes are susceptible to both transport disadvantage and transport poverty. They have complex needs of transport most readily met by car ownership, which often carries a price higher than they can reasonably afford.

LITERATURE REVIEW

Auckland-specific evidence about transport for low-income people

A wide-ranging summary of the issues affecting low-income people and access to transport in New Zealand, with Auckland examples, confirmed that transport-related social exclusion is a problem in Auckland (Rose, Witten, & McCreanor, 2009). Many Auckland participants in interviews confirmed that lack of equitable access is hampered by low incomes and reliance on a vehicle. Specific examples of issues faced by people in Auckland on low incomes included:

- Decades of car-centric planning has led to an inefficient public transport network across many Auckland suburbs, resulting in enforced car dependency;
- The time required to travel on indirect, infrequent and unreliable bus systems means that public transport is not a realistic option for many people;
- The cost of paying back a loan for a car means that sometimes people could not afford basic household needs, including food;
- Rent arrears that can result in people being evicted from their homes are often due in part to the burden of paying for and operating a car;
- Many work locations are difficult to access by public transport, perpetuating poverty by limiting peoples' employment prospects, and/or enforcing expensive car ownership;
- An inability to afford and use cars can lead to people paying more for everyday groceries at local corner shops/dairies, rather than being able to choose a more affordable supermarket further away; and
- People traveling with large families face compounding challenges related to public transport cost and inconvenience, and the number and length of trips needing to happen by car.

Rose, Witten, & McCreanor (2009)

As a whole, the issues highlighted by Rose, Witten & McCreanor (2009) highlight that having a bus or train stop nearby is not enough to enable access for people on low incomes. The fare itself is not necessarily as much of a barrier as the inconvenience of indirect, infrequent bus routes, and trains that are limited in the places that they can reach. While technically much of Auckland can be accessed by public transport, the time and inconvenience of those trips makes public transport an unrealistic option for many people, particularly those on low incomes.

The issue of poor public transport access for low-income people in Auckland was explored by Chowdhury et al. (2017). They used Census data to define public transport connectivity based on the extent of train and bus services, stops, and stations in Auckland. Results showed that low-income Auckland communities have poorer connectivity to public transport. On average, people in poorer areas live further from their destinations so their journey times are longer. Having to transfer between services and poor frequency also worsened connectivity for low-income Aucklanders (Chowdhury et al., 2017).

Adli, Chowdhury, and Shiftan (2019) proposed income as being the basic metric of transport disadvantage across different people in society. Their case study of four cities around the world included Auckland. They measured the relationship between income and access to public transport around the city for different area units equivalent to approximately two square kilometres each. In Auckland, it was found that public transport generally benefits higher income people, who are particularly likely to live close to the highest number of job opportunities. That is, lower income people tend to both live further away from job opportunities, and have poorer bus and train connectivity to those opportunities, than wealthier people (Adli, Chowdhury, & Shiftan, 2019). More work is warranted to understand public transport equity in Auckland. It is unclear who is served well by high frequency services that take them where they need to go, and where those options are not practical.

The complex association between built environment, walkability and propensity to walk was explored in an Auckland context by Thorne (2019). Qualitative analyses of a series of interviews and focus groups revealed that the predominantly low-income Pasifika population in Mangere, South Auckland, faced many barriers to walking and cycling. The barriers were wide-ranging, including time and cost factors; concerns for personal security (fear of attack) and safety (fear of collision with a car or truck). Improvements to walking and cycling infrastructure in low-income areas can improve some peoples' choices, but do not address the underlying reasons why many people choose to travel by car.

It is widely accepted that people in lower income communities suffer disproportionately high rates of road trauma and air pollution (Christie et al., 2007) and the same evidence has been found in Auckland (Hosking et al., 2013; Blakely et al., 2007). Reasons that lower income people are more exposed to these transport harms may include higher exposure to traffic as pedestrians, and higher likelihood of traveling in a vehicle with fewer safety features (because a newer, safer vehicle is not affordable). Links between driver training, licencing, and road trauma is an evidence gap in the Auckland context.

Issues that affect low-income people in Auckland are concentrated in South Auckland, the West, and the area around Glen Innes / Tamaki. However, there are low-income people all over Auckland who experience transport disadvantage and poverty. Within the communities where needs are concentrated, more evidence is needed to understand where interventions could be most effective at improving transport equity.

LITERATURE REVIEW

Women

General evidence about transport for women

There is extensive international research related to women's travel. The International Transport Forum (2018, 2019) summarise the issues as related to two main factors: the nature of women's trips; and their personal security while traveling. First, women's travel patterns are different from men's. They are more likely to make complex trips involving different modes. Women are also more likely than men to be encumbered when they travel. They are more likely to have care responsibilities for people who cannot travel independently, including for example young children, older and adult children with disabilities, or an ageing parent who cannot travel independently. Second, women's perceptions of personal safety affect when, where, and how they travel. The interaction of complex travel patterns and the need for safe and secure options mean that women's travel choices can be more costly than men's, on average (Chowdhury, 2019; Ng & Acker, 2018).

An example of research into women's travel by Stark & Meschik (2018) involved surveys to understand the link between fear and transport choices. They concluded that women's fears about harassment and for their personal security constrain their transport choices, including modes, routes, and trip times.



LITERATURE REVIEW

Auckland-specific evidence about transport for women

Analysis of household travel survey data for Auckland shows that of those sampled, women make similar numbers of trips to men, but their trip distances are shorter on average. They make most trips by car as a driver, but travel less than men. They also make fewer trips by bicycle. Women make relatively more trips as a car passenger and as a pedestrian. Their rate of trips using public transport is similar to men's on average.

Further analysis of household travel survey differences between men and women in Auckland by Ng and Acker (2018) showed that there is a lot of variation in women's travel in Auckland. Women's roles in the home and in their careers are divergent, changing in different ways for different groups of women within a city. For example, while gender is strongly correlated with mode choice, so too are income and age. Women are increasingly likely to continue driving well into older age (Ng & Acker, 2018). The relationship between level of education, income, and housing affordability makes it likely that wealthier women in Auckland are more likely to commute and to work fulltime, whereas lower income women are more likely to work part-time and balance voluntary (care and household) work with their paid employment responsibilities.

Issues related to women's safety (actual and perceived) are definitely apparent in Auckland, where there is a willingness from both the public and private sector to collaborate to improve safety for women (Women in Urbanism, 2019).

A 2018 survey of 385 women, including 56% from Auckland, found that safety concerns (harassment, discrimination, violence) were the most commonly cited 'problems encountered with travel' for women. To overcome those challenges, some women reported that they would avoid public transport if they did not feel safe, and would take a longer walking or cycling route to avoid routes perceived as unsafe. Many also reported avoiding travel by bicycle, walking, or public transport after dark.

Other challenges related to women's travel in Auckland included:

- Barriers to more use of public transport included that it is not flexible; family-friendly; frequent enough; fast enough; reliable; accessible; or located near their home;
- Barriers to more cycling included that it is too dangerous; not possible (for example, across the Auckland Harbour Bridge); and not suitable for travel with children; and
- The cost of running a car can be prohibitive to that form of travel.

Respondents were asked to name the most common problems they encountered with travel. As well as safety concerns, responses were:

- Travel time and length (49% of respondents);
- Infrastructure issues (including lack of accessible routes, footpath quality, parking issues) (47%);
- Travel unreliability (36%);
- Lack of transport choices (e.g. no buses where they live, no access to a car) (28%);
- Costs of travel (28%);
- Lack of comfort (e.g. feeling unable to carry out caring duties, such as breastfeeding) (8%);
- Lack of knowledge about available transport options (e.g. not sure about bus timetable) (5%).

The most common responses to the question "What changes to your city's transport system would most improve your journey?" were:

- Protected cycle lanes;
- More frequent, reliable, extensive and connected public transport, with longer operating hours;
- Crime Prevention through Environmental Design (CPTED) improvements, such as increased public surveillance and improved street lighting;
- Prioritised universal design; and
- Road safety improvements, such as lower speed limits and more road crossings.

Women in Urbanism, Personal Communication

It is noted that many of the concerns raised in the above survey may not be unique to women, particularly challenges related to travel time and length and reliability, parking issues, and variability of transport choices. There is no known data about the challenges that low-income women in Auckland face, or those with other challenges such as being a solo parent, or a disabled woman.

LITERATURE REVIEW

LGBTQI+ People

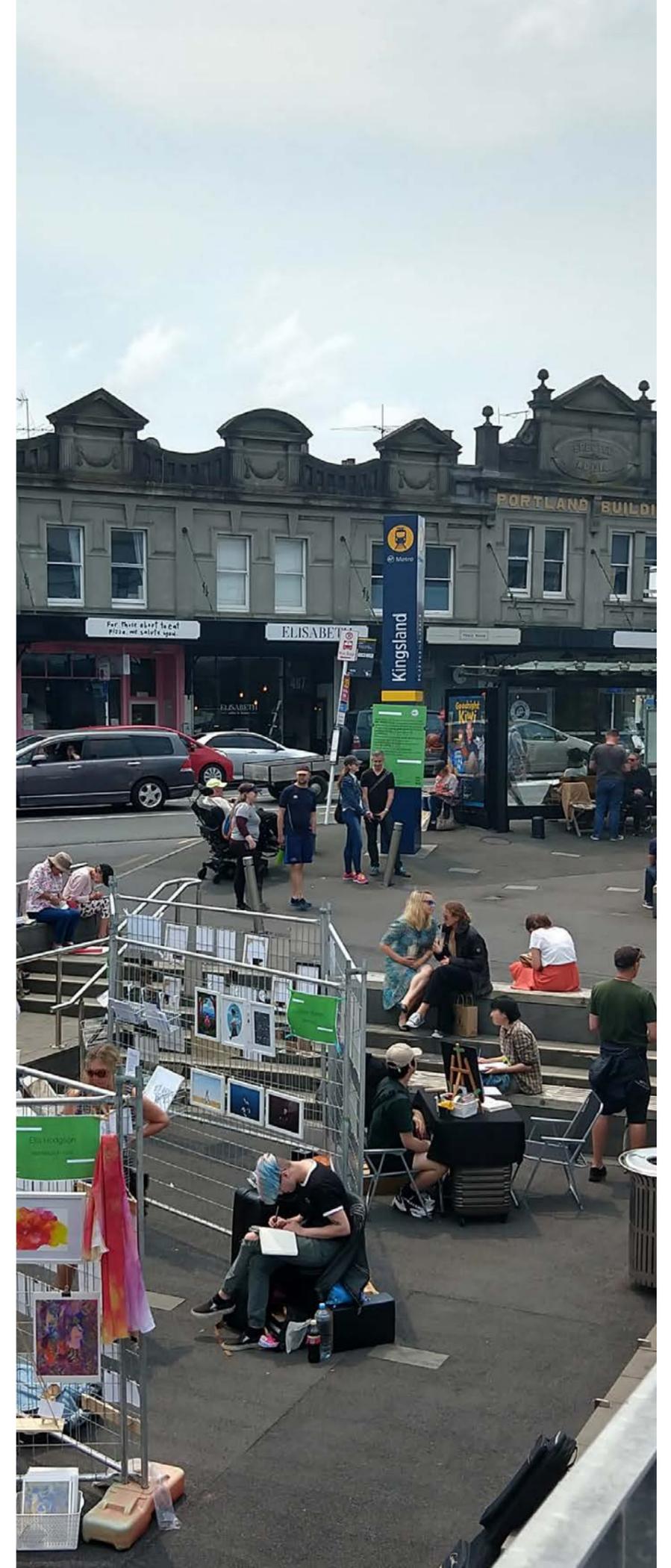
General evidence about transport for LGBTQI+ people

There is a dearth of research into the transport experiences faced by LGBTQI+ groups. However, considering public spaces in general, people who do not identify as cis-gender and heterosexual are more likely than others to report negative experiences such as feeling unsafe, being harassed or attacked (Chen et al., 2019; Porta et al., 2017; Rajadurai & Manickavasagam, 2017).

A report by Lubitow et al. (2020) provides a rich description of the experiences of public transport of transgender and gender non-conforming people in Portland, Oregon. Across 25 interviews, people's experiences accessing and using public transport were explored. This report concluded that:

- The study participants were more likely than others to be unemployed, and to have a lower income than average when employed. They were also more likely to live in transport-deprived areas, with longer walks and wait times, and longer commutes overall. Many worked in jobs outside of the 'nine to five', and could therefore not take advantage of peak transit frequencies.
- The main issues related to transport for the study participants stemmed from increased likelihood of harassment and personal attack, compared to other people. They also had prolonged exposure to harassment risk, because they were more likely to live in places requiring long public transport trips.
- Reduced bus and train frequencies in outlying areas and outside of peak travel times meant that the participants waited longer at and between stops and stations.

- Bus stops with no shelter increased vulnerability. Long or unpredictable wait times increased peoples' fear and risk of verbal abuse and harassment. On buses and trains, the confined space increased peoples' vulnerability.
- Most participants in the research described being glared at, having their photo taken without consent, and verbal abuse. Being stared at increased anxiety even if it is benign because stares sometimes lead to verbal or physical abuse and strangers' intentions are not always clear. Thus, the study participants reported being on-edge often while on a train or bus, because they were trying to anticipate abuse or attack so that they could try to protect themselves.
- Staff on public transport could help or worsen people's experiences. Some research participants reported being verbally abused by public transport staff. Others reported that staff sometimes ignored abuse and failed to intervene. Any awareness training related to dealing with abuse on public transport should include how and when to intervene, and how to respond to passenger complaints.
- Some people reported different experiences traveling on buses and trains in different parts of the city, depending on the ethnic composition of the surrounding community. The combined effects of racism and transphobia were apparent with increased racial and gender-related abuse experienced by people identifying with gender and ethnic minority groups.



LITERATURE REVIEW

Auckland-specific evidence about transport for LGBTQI+ people

LGBTQI+ people in New Zealand as well as in other countries report reduced health and wellbeing compared to other people (Clark et al., 2014). While there is limited research on the experiences of LGBTQI+ Aucklanders regarding transport, findings from the Counting Ourselves report (Veale et al., 2019) of experiences of transgender and non-binary people suggest they are likely to have similar experiences of transport as transgender and non-binary people from overseas.

The Counting Ourselves project was a survey of over 1,000 transgender and non-binary people in New Zealand, of whom 35% of participants were from Auckland (Veale et al., 2019). It covered a wide variety of issues relating to participants' health and wellbeing. Transport was not a specific topic of the survey, but several insights were relevant.

The main insight from Veale et al. (2019) was that the transgender and non-binary people surveyed reported an income approximately half that of the average New Zealander. Given that one third of the respondents were from Auckland, it is likely that transgender and non-binary people in Auckland have a significantly lower income than other Aucklanders, on average. The reasons for low income were varied, but many survey participants felt that being transgender or non-binary affected their employment options because of bias or discrimination from employers. The implications of low income for transgender and non-binary people are the same as for other low-income people, compounded by fears related to using public transport and spending time in public places. Across all survey respondents, 77% of respondents said that they had 'done without, or cut back on, trips to shops or other local places' (Veale et al., 2019, p86).

Insights related to transgender and non-binary peoples' perceptions and fears related to transport included:

- 18% of respondents reported avoiding public transport or taxis due to fear of being mistreated for being transgender or non-binary;
- 9% reported an experience of being treated unfairly while using public transport or taxis;
- 15% reported an experience of being verbally harassed while using public transport or taxis; and
- 2% reported having been physically attacked while using public transport.

Of particular note to the transgender and non-binary community is the interaction of transport barriers and cost. The report states that:

“Over a quarter of participants (26%) had not visited a GP because they had no transport to get there and 15% reported this had happened within the last 12 months. This was five times higher than the general population in the New Zealand Health Survey 2016/17 (3% in the last 12 months). Youth (21%) and disabled participants (32%) were more likely and adults (12%) and older adults (3%) were less likely to have not visited a GP due to transport in the last 12 months.”

Veale et al. (2019), p44

The Counting Ourselves survey analysed specific issues facing transgender and non-binary people who have a disability. It found that within the transgender and non-binary community, those with disability were further disadvantaged. Overall, 52% of participants with a disability reported that they felt unsafe, or very unsafe, using public transport. That figure compares with 40% for all survey respondents.

A comparison to the New Zealand General Social Survey (Statistics NZ, 2016) revealed that across New Zealand's general population, 12% of men and 40% of women generally feel unsafe, or very unsafe, using public transport. Transgender and non-binary people who have a disability or face discrimination for other reasons such as racism, were more likely to suffer poor health and wellbeing outcomes due to the cumulative effects of transport and other barriers to their participation (Veale et al., 2019).

There is a gap in knowledge concerning the specific experiences of LGBTQI+ people accessing Auckland's transport system. It may be that the experiences of transgender and non-binary people are different from others from the LGBTQI+ community, and some are more vulnerable than others. For transgender and non-binary people, the combined impacts of being prone to harassment, feeling unsafe, having poor mental health and having less income than other people make them an important group for further research.

Disabled People

General evidence about transport for disabled people

Disabled people experience limitations in everyday life due to the failed interaction of their personal capabilities and states, and the nature of built environments and activities. This 'social model' of disability ascribes problems to environments and infrastructure, rather than to disabled people themselves (Oliver, 2013).

Disabled people in New Zealand are less likely than other people to work fulltime, and they have lower incomes on average. The median total income for disabled adults in 2019 was 52% of the median income of non-disabled adults (Statistics NZ, 2019).

Transport enables participation in all manner of everyday activities for all people, but can also itself be a barrier. For transport to be accessible to all people, it needs to be:

- Available: a variety of transport choices need to connect people to the destinations they want to get to, including door-to-door options for people who cannot move far beyond their vehicle; and accessible walking routes for people without access to a motor vehicle (Aarhaug & Elvebakk, 2015; Mackett & Thoreau, 2015);
- Safe: people need to be safe from harm, even if someone else using the transport system makes a mistake, and even if they cannot quickly move out of the way of a hazard (Ceccato & Newton, 2015; Xiang et al., 2006);
- Secure: people need to feel safe from attack, harassment or abuse (Ceccato & Newton, 2015);
- Obvious: wayfinding needs to be legible to all people, even if they cannot read; understand the native written and spoken language; hear; or see (i.e. information needs to be both visual, audible, and tactile (Lindqvist & Lundälv, 2012);

- Step-free: many people who find it difficult to move rely on mobility aids, many of which have small wheels. There need to be navigable step-free walking routes, and level or low-gradient access onto and within buses, trains, and ferries (Ferrari et al., 2014; Zajac, 2016);
- Dignified: sometimes accessible routes or transport infrastructure provide an inferior service for disabled people (such as a backwards-facing seat on a bus), which can stigmatise the person using it (Buhalis, Darcy, & Ambrose, 2012; Simões, 2013).

If any of the above factors are absent for a journey, it is likely that a disabled person will not make the trip; indeed, disabled people make fewer trips than others (Mackett & Thoreau, 2015), and often their trips are longer due to the need for an accessible route (Ferrari et al., 2014). The New Zealand Human Rights Commission report "The Accessible Journey" (Human Rights Commission, 2005) confirmed that disabled people face myriad issues making a journey of any kind. They stated that:

"Significant numbers of disabled people in New Zealand have acute and on-going difficulties with using public land transport services: buses, trains, taxis and the related services and infrastructure. This is despite the considerable progress that has been made in improving the accessibility of the public land transport system. An ageing population means the need for accessible public land transport services will increase.

The barriers to the accessible journey for disabled people cover information about services, arranging a service, getting from home to the pick up point, using the service to go to a destination and returning home. Disabled people and their advocates highlighted issues of availability, affordability, accessibility and acceptability in relation to conveyances, service information, premises and infrastructure."

Human Rights Commission (2005), p12

Although the Human Rights Commission (2005) report is now 15 years old, many of its recommendations remain unaddressed. There is no more recent summary report of disabled peoples' travel in New Zealand in general, or in Auckland in particular. As noted earlier, the Household Travel Survey does not provide for analysis of disabled peoples' travel.

LITERATURE REVIEW

Auckland-specific evidence about transport for disabled people

Disabled people comprise approximately twenty percent of Auckland's population (Statistics NZ, 2013). This is a lower proportion than for the rest of New Zealand (24%), largely due to Auckland's relatively young population.

Rates of disability vary considerably by age and ethnicity, which is relevant for Auckland's ethnically diverse population. Disability statistics by age for the most common ethnicities in New Zealand are shown in Appendix Two (table titled *Proportion of ethnic population that has a disability, by age group*). They show that rates of disability increase with age for every ethnic group, but are much higher for Māori and Pacific Peoples than they are for New Zealand Europeans. The differences are most stark for people aged 45-64, with 28% of New Zealand European and 43% of Māori in that age group identifying with disability. For people aged older than 64 years, the rates of disability range from 50% (Asian Peoples) to 74% (Pacific Peoples).

The interactions between ethnicity, age, and disability mean that in Auckland, age alone is not a good proxy for the need for accessible transport. The high proportions of disabled people in younger age groups means that there can be more disabled people in a younger population, depending on the age and ethnic distribution of different places. This is particularly an issue for Māori. As shown in Appendix Two, 15% of Māori aged under 15 years have a disability, compared with 11% of European New Zealanders. Some 23% of Māori aged 15-44 years have a disability, compared with 16% of European New Zealanders.

In 2015, CCS Disability Action commissioned a survey of peoples' travel behaviour and preferences, with a focus on differences between disabled and non-disabled groups (Burdett, 2015). The data included 984 responses from people living in Auckland, of whom 795 (81%) identified with having a disability. While clearly not representative of

Auckland as a whole, the responses enabled a comparison of disabled and non-disabled peoples' transport experiences.

The results showed that disabled people in Auckland travel less than people without disabilities; they find travel more difficult; and are less likely to travel for recreation.

Specifically regarding amount of travel, disabled people in Auckland were less likely than non-disabled people to:

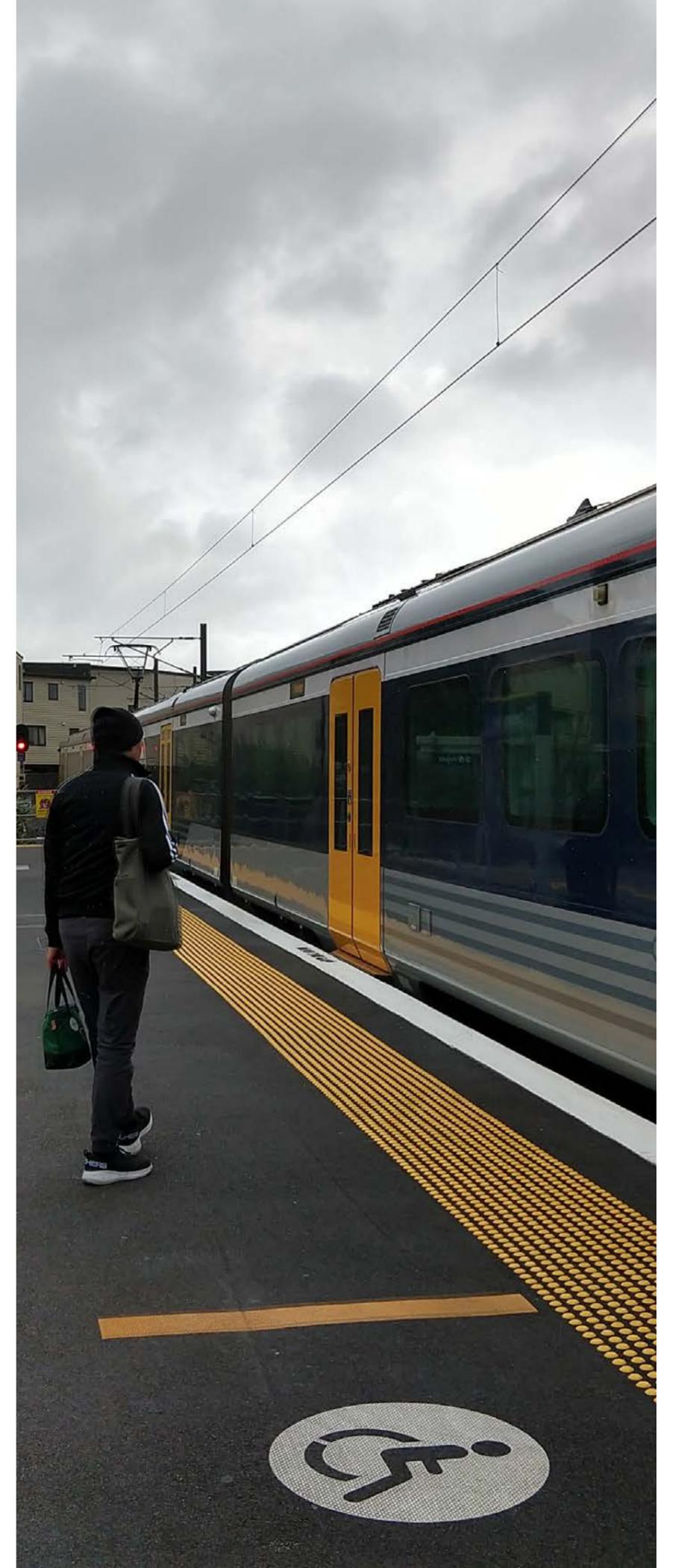
- Travel on five or more days per week (46% of disabled respondents travelled on five or more days per week, compared with 57% of non-disabled respondents); and
- Use public transport at least once per week (12% of disabled respondents, compared with 31% of non-disabled respondents).

Regarding ease of access to different transport modes, disabled people in Auckland found it more difficult than non-disabled people to:

- Travel as a pedestrian (66% of disabled people reported travel on foot with or without mobility aids as difficult, compared with 15% of non-disabled people);
- Travel by car as a driver (32% of disabled respondents reported difficulty traveling by car as a driver, compared with 8% of non-disabled respondents).

Regarding likelihood to travel for recreation, disabled respondents from Auckland were less likely to have visited a café, park, gym, church or library once per week (45% reported less than once per week) than non-disabled respondents (33%).

Overall, results suggest that people with disabilities are themselves a diverse group. There is a gap in evidence concerning how people with different impairments travel around Auckland, and whether some parts of the transport system are easier for them to use than others. Interaction between disability and transport poverty is also a large gap in evidence. It is unclear whether disabled people overcome some of their challenges by purchasing a car or paying for taxi services, and the cost implications of those choices.



LITERATURE REVIEW

Disabled peoples' insights about transport in Auckland

The following quotes are from the 2015 Kiwi Transport Survey (Burdett, 2015). The survey drew responses from all over New Zealand. These quotes are specific to transport in Auckland and are from people who identify with disability.

Some of the comments reflect general difficulties using transport in Auckland, such as long public transport journeys. Those problems are exacerbated for disabled people, who find travel more difficult in the first place. However, the quotes also highlight that improving accessibility in Auckland's transport system has potential to make travel easier for everyone.

"A very common issue in Auckland is clutter on the footpath (cabinets, signs, construction signs, badly placed bus stops). Kerbs are difficult for people using wheelchairs or walking aids as they are often not smooth, inconsistent. Footpaths are also uneven with trip hazards. In areas the footpath can disappear completely or be blocked (even in the CBD)."

"The entry/exit for wheelchairs or walking frames are not very good on most of the central Auckland streets."

"It really depends where you go, in the more populated areas such as the viaduct in Auckland City - most of the footpaths and crossings are great. But go a few streets up and there are sometimes places at crossings with very steep curbs forcing you to go around on the road sometimes just to find a more accessible dip to get back on the footpath after crossing."

"Some private car parks do not comply with regards to the placement, numbers or even refreshing the paintwork for their mobility parks that they had to install at consent stage and these often change 'use' later when Council has gone and owners can get away with it."

"Roads are excessively narrow within the Auckland urban areas. I sometimes need to zig-zag to get through. Not enough yellow road markings to prohibit parking. Bus stops too close to pedestrian road crossing traffic islands."

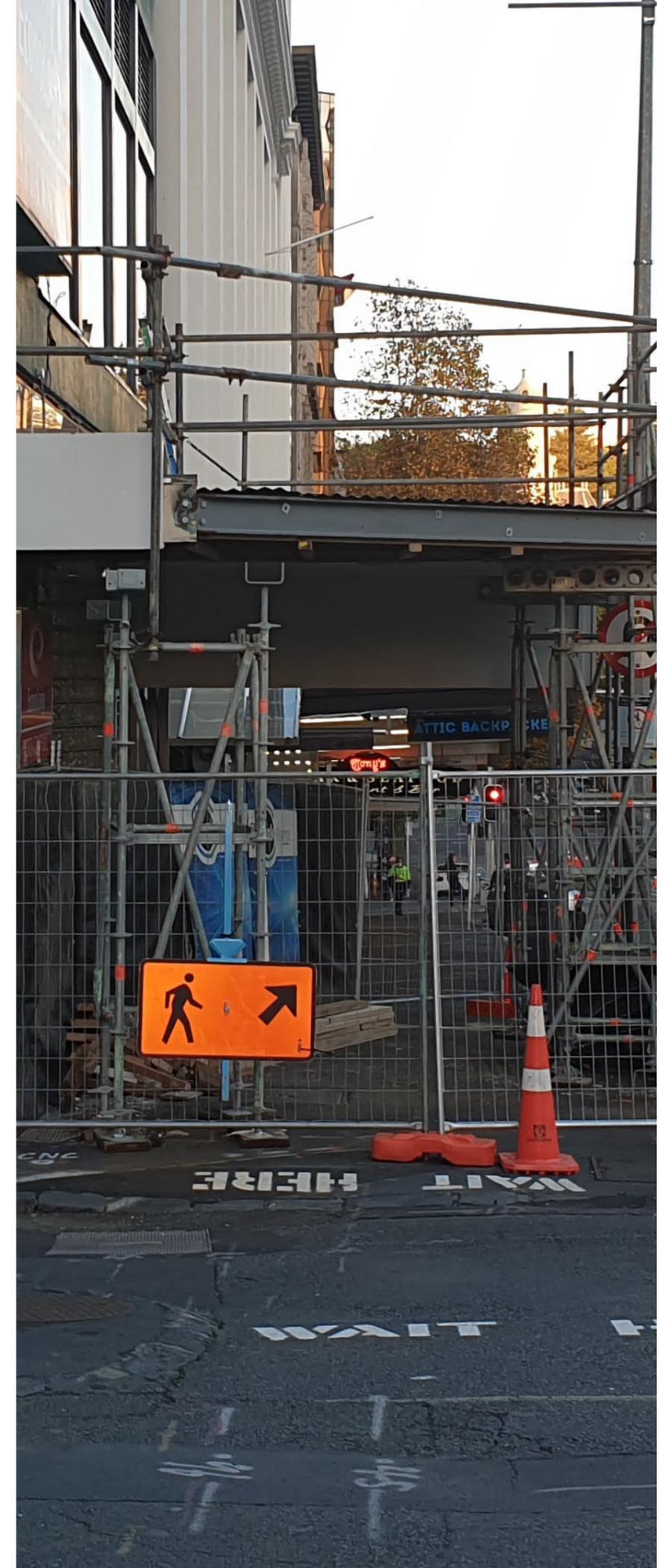
"In Auckland, and other cities in NZ, because of the steep terrain, a few accessible parks dotted around does not provide sufficient accessible parking. For example, Auckland city centre library has parking spaces at the side but they point uphill (it is unsafe to be transferring into a wheelchair downhill) and have a steep camber and a deep drain. As you are not allowed to park against the traffic flow (I have been ticketed, and despite explaining in an appeal, was not let off) it makes these parks unusable for me and others in my situation."

"I'm still afraid of catching buses through fear that the driver may take off before I sit down (which I have heard happens), but trains, especially Auckland's new trains with the accessible carriage, are pretty much perfect."

"Security on trains was an issue for me in Auckland. I stopped travelling on the Southern line from Britomart to Glen Innes as I felt safer catching a bus around Tamaki Drive."

"Drivers who sigh and look skywards when you politely ask the bus to 'kneel' (some are lovely though) - why doesn't it do so automatically without anyone having to ask?"

"The lack of audio description on most Auckland's buses is a disgrace. Those buses that do have audio description indicating bus stops and points of interest are very accessible for blind people and make travelling much easier from point A to point B."



LITERATURE REVIEW

Older People

General evidence about transport for older people

General trends identified in the literature concerning older people and transport are that their trip purposes are different (because they are less likely to work, or to work fulltime); and their transport choices tend to reduce as age-related disability means increasing needs for transport that is accessible. Older people benefit from targeted and accessible transport options, particularly for social outings that can reduce social isolation (Wylie, 2012). Easy access to a variety of accessible transport choices supports older people staying in their homes for longer, reducing costs to society related to aged residential care (van der Pas, 2009).

In areas with good public transport, barriers include lack of access to information about services; difficulties getting on and off the bus; and to and from a seat on the bus (Santos et al., 2017). Many older people make use of technology such as mobile phone applications to find information about public transport, but there is also a segment of the older population for whom technology is not accessible (Hounsell et al., 2016).

Regarding the need for accessible transport, access to different transport choices into older age is particularly important for social outings that can reduce social isolation (Wylie, 2012). While some research suggests that older people become increasingly reliant on a car due to anxiety or an unwillingness to use public transport, other studies point out the increasing reliance on public transport amongst older people because a person's likelihood of maintaining an active driver's licence decreases with age (Spoonley et al., 2016).

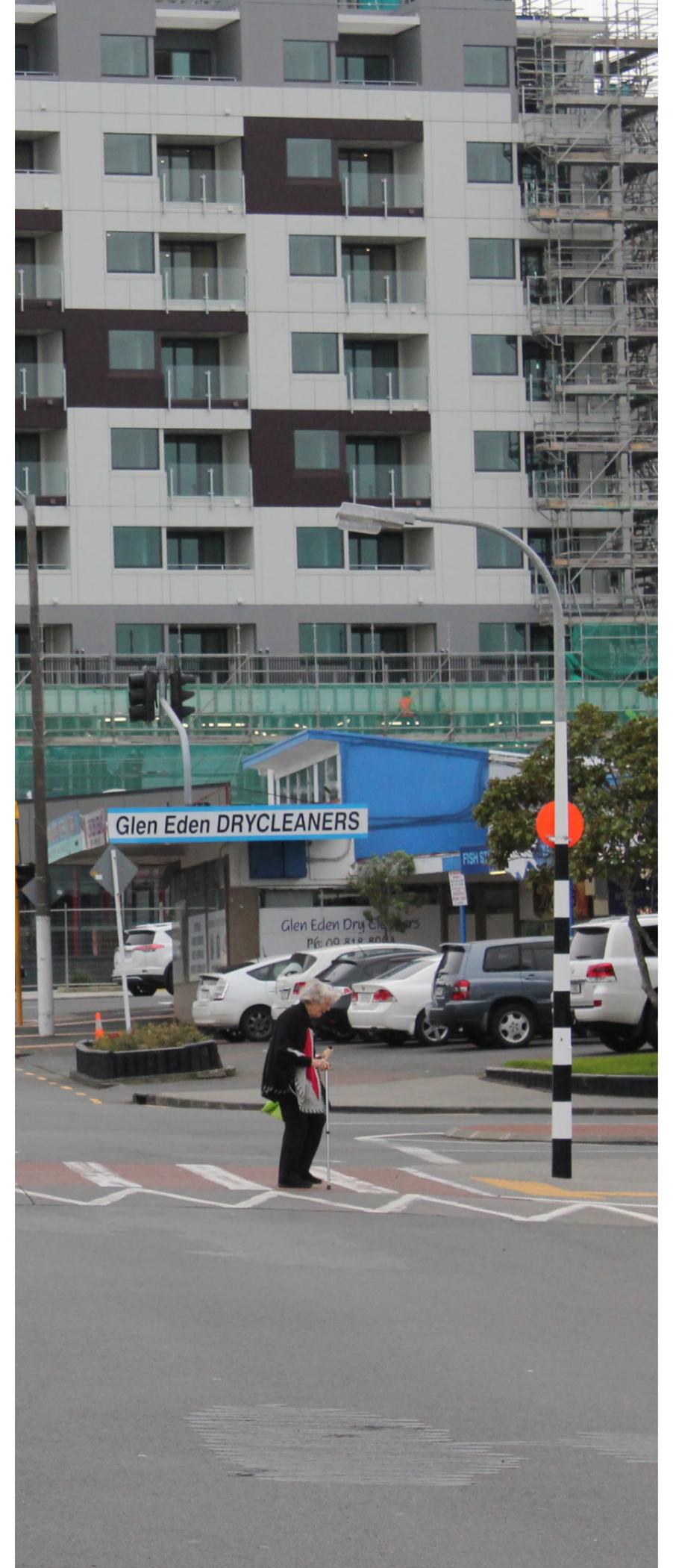
Older people who do not have independent access to a vehicle benefit from targeted and accessible transport options. Volunteer-based transport services, collectively

known as community transport, provide transport for people with no other choices and often support older peoples' mobility (Burdett, 2018). A report from Scotland (Transport Scotland, 2015) found that benefits of community transport are broad, and include social, health, and economic benefits to passengers, drivers, other organisation volunteers, and the communities in which the beneficiaries of the services live. However, community transport in New Zealand is not generally supported financially by local, regional or national government, so its reach is unknown and unvalued. Some community transport services are limited to specific groups associated with a community organisation such as a church or cultural centre.

Auckland-specific evidence about transport for older people

Regarding the issue of changing trip purposes, older people's travel behaviour is different from working aged people largely because they are less likely to travel for work, and more likely to travel for recreation and social reasons. Social engagement and exercise trips make up a far higher proportion of the mean number of journeys for people over 65 compared to younger people. Graphs on the next two pages show travel data for older people in Auckland, compared to working-aged adults.

Missing from these data sets is evidence about older people with the fewest choices, whose mobility is most restricted. That is, the averages do not explain whether most older people have similar travel patterns, or whether the averages hide a wide range of mobility across different groups of older people. As a starting point to address this gap, recent research from the University of Auckland studied mobility of older and disabled people across four case study areas in Auckland: Glen Innes, Te Paea Marae, West Auckland, and Howick (Ameratunga et al., 2019).



LITERATURE REVIEW

The research involved ‘go-along’ interviews with fifteen people from each location who identified as older or disabled. Results highlighted diverse experiences of different ethnic and income groups in different parts of Auckland. While many older people in Howick were highly mobile, either driving or proficient with using buses to travel all over Auckland, the experience in Glen Innes, Te Puea Marae, and West Auckland was markedly different. The main challenges were:

- Costs of running a car;
- Costs of public transport fares for those aged under 65 years, or traveling with those aged under 65 years;
- Lack of access to car travel and public transport, because it was too far to bus stops;
- Poor quality local footpaths that were too difficult to negotiate;
- Difficulty crossing busy roads;
- Difficulties understanding and accessing information about public transport services; and
- Difficulties related to public transport travel, specifically getting on and off the bus/train, and getting to and from the seat.

The implication of these challenges means that older people’s mobility is restricted. They limit their trips, often not going out at all, and staying closer to home when they did travel.

Older people in Auckland are a hugely diverse group, not just because of income inequality but because of the vastly different age structures of different ethnic populations within the region. In Auckland, the interaction of age, ethnicity, and disability means that what is ‘old’ in one population is relatively young for another.

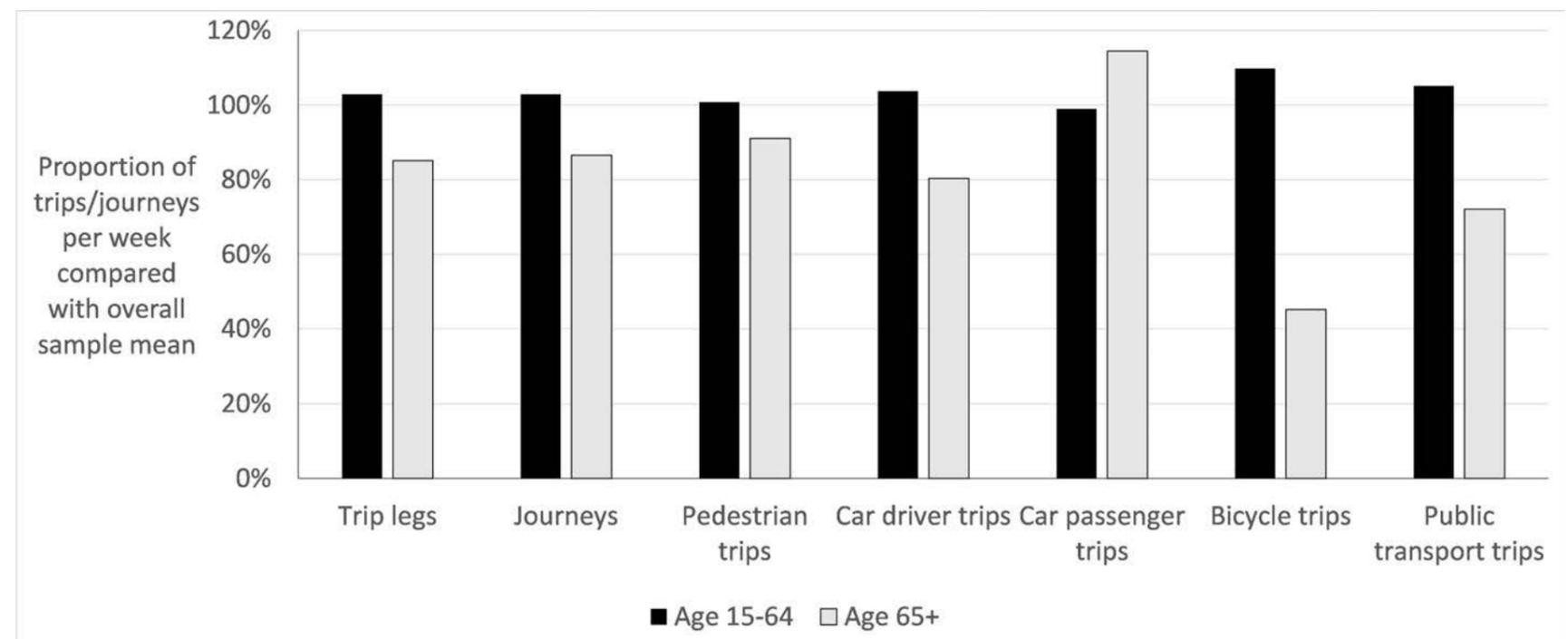
The age structure for Auckland’s most prominent ethnicities are shown in the figures on the following page, highlighting the variation in life expectancy and proportion of people in older age brackets for different ethnic

groups. The data suggest that when considering age as a criterion for policy interventions, ethnic composition of a community should also be considered. They also show that the oldest Aucklanders are far more likely to be of New Zealand European ethnicity than other age groups. Engagement with older groups as a target may therefore introduce an ethnicity bias, with the needs of older people of ethnic minority groups less likely to be as prevalent.

The variation in population age structures for different ethnic groups means that policies targeted as ‘age-friendly’ may not benefit some ethnicities, particularly if community age structure is used as an indicator of need. There are many people of need for ‘age-friendly’ transport and infrastructure in Māori and Pacific communities, even though they may have fewer older people. Policy and interventions to improve transport choices for older people in Auckland should be introduced with care, because they may introduce unintended bias.

Household Travel Survey Data for Auckland: Differences in Trip and Journey Rates per Week, Overall and by Mode, for Working-Aged and Older People

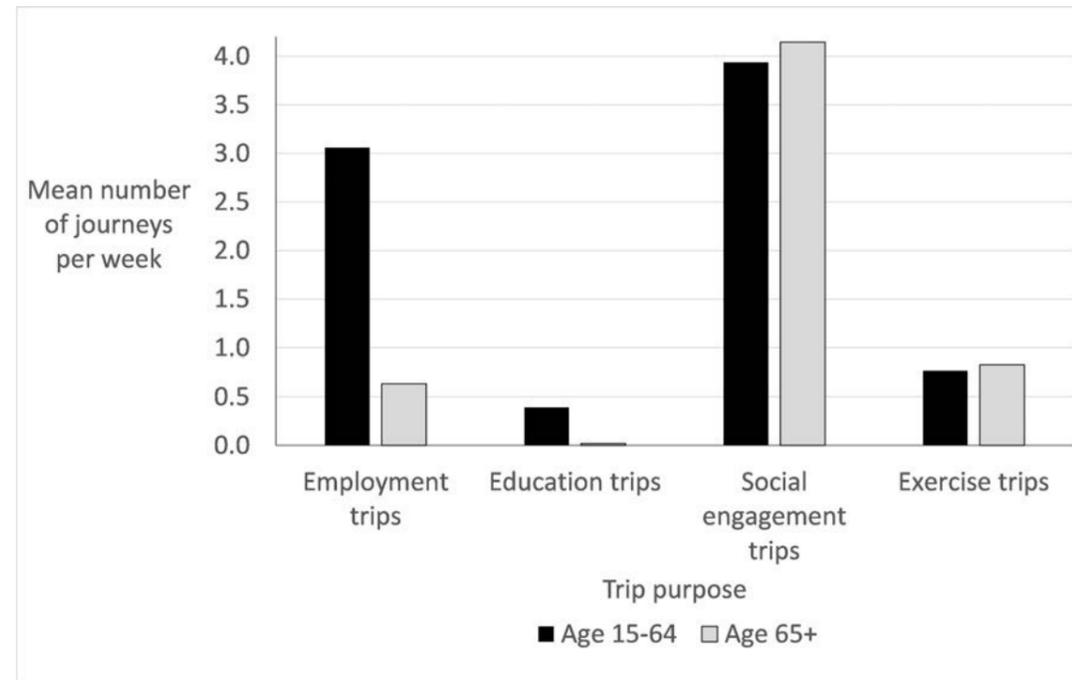
Where trips are greater than 100%, they are occurring more frequently than the mean, and where they are less than 100%, they are occurring less frequently than the mean



Source: Summary of 2015- 2018 Household Travel Survey (2020)

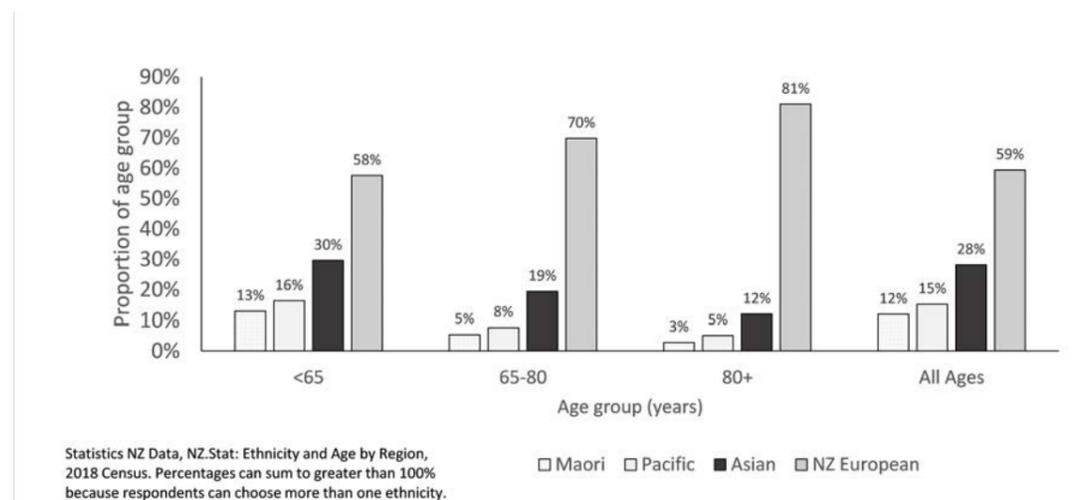
LITERATURE REVIEW

Household Travel Survey Data for Auckland: Differences in Trip Rates by Trip Purpose, for Working-Aged and Older People



Source: Summary of 2015- 2018 Household Travel Survey (2020)

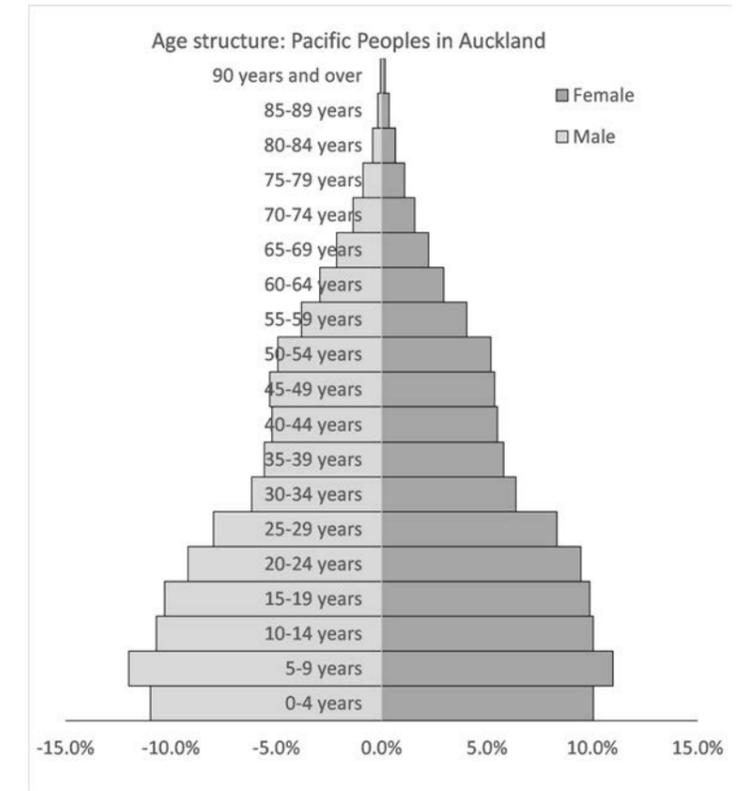
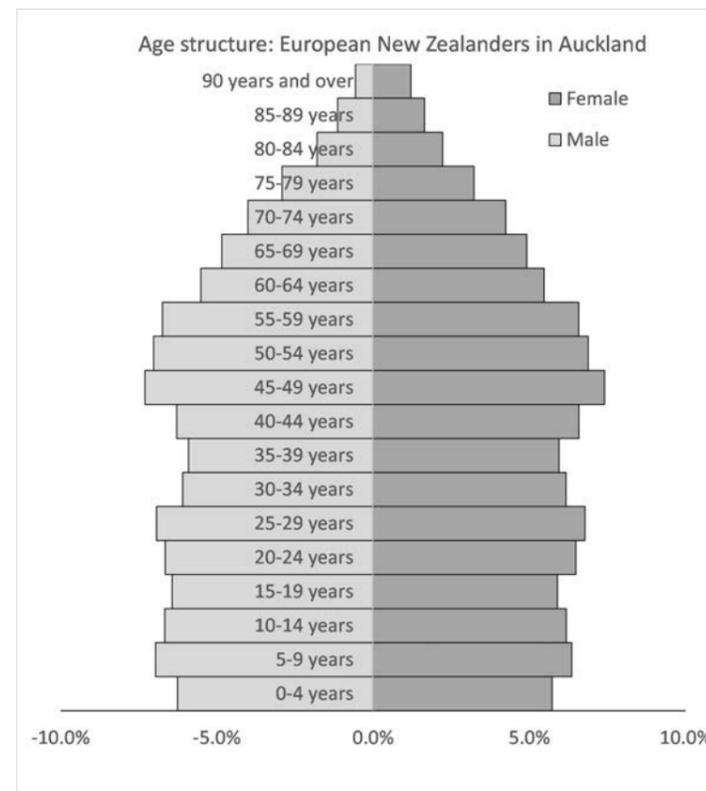
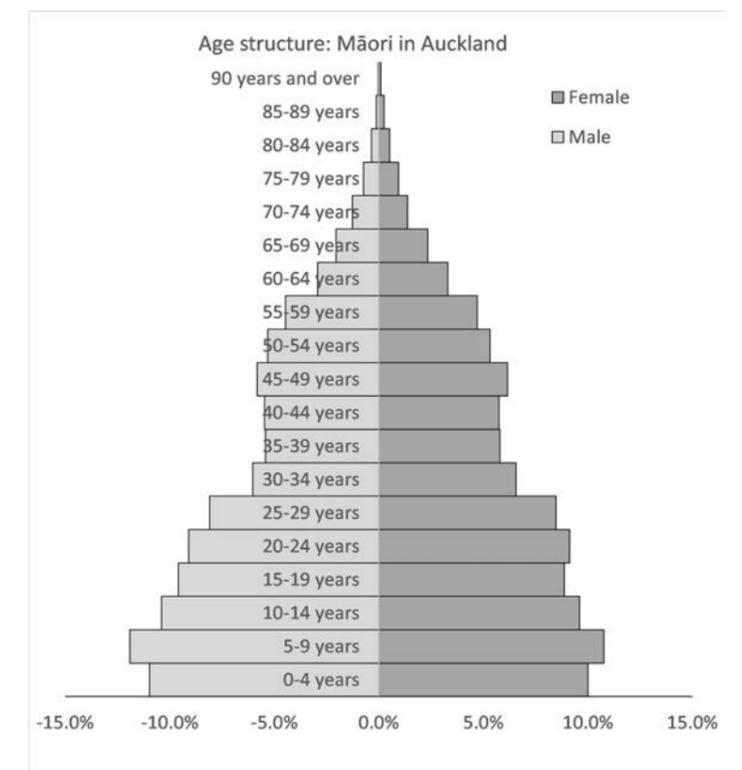
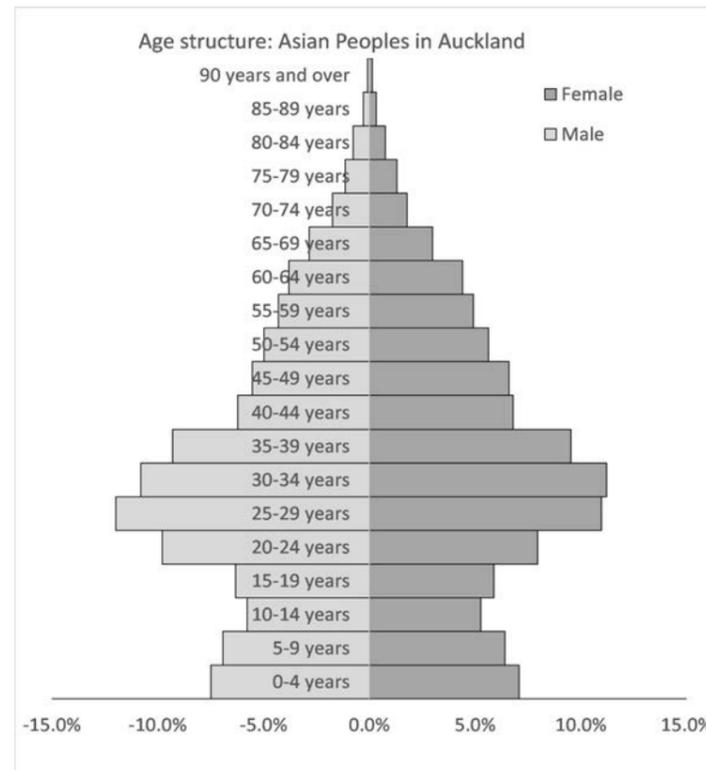
Ethnic Group Composition by Age Group in Auckland



Statistics NZ Data, NZ.Stat: Ethnicity and Age by Region, 2018 Census. Percentages can sum to greater than 100% because respondents can choose more than one ethnicity.

Source: Statistics NZ (2018)

Population Age Structures for Different Ethnicities in Auckland



Source: Statistics NZ (2018)

Ethnic Minority Groups

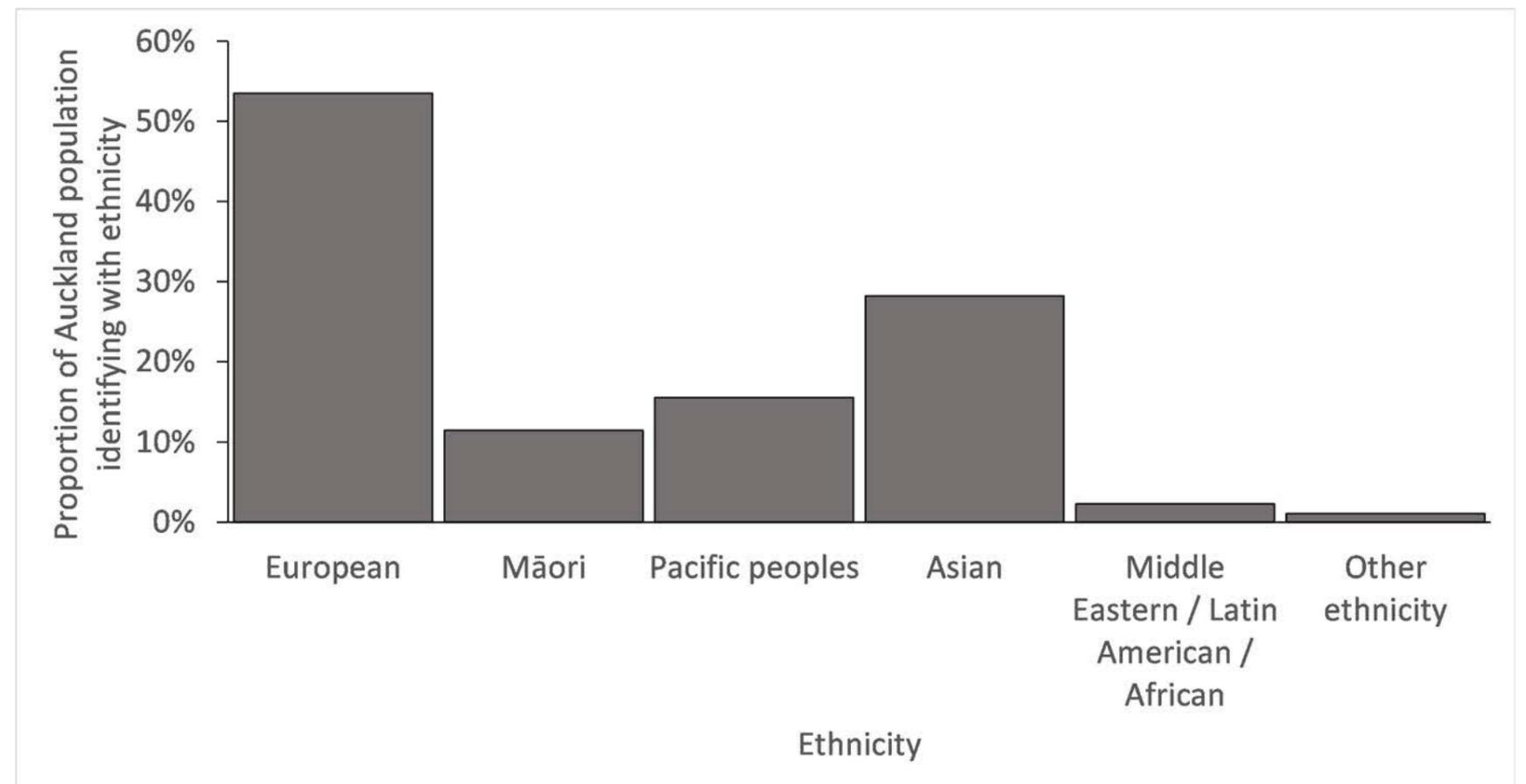
General evidence about transport for ethnic minority groups

International literature suggests that worldwide, ethnic minority groups face transport inequity due to the combined effects of lower than average income; car-centric planning meaning they are more likely to live a long way from places they need to get to, particularly for employment; and that they are more likely than ethnic majority groups to experience transport-induced harms including air pollution, road trauma (crashes) and harassment.

Lower-income ethnic minority groups are less likely to own a car, limiting their choices for employment. When they do own a car, they travel further for lower wages than ethnic majority groups, on average (Gautier & Zenou, 2010; Patacchini & Zenou, 2005). Ethnic minority groups tend to live further away from employment centres, which results in fewer job choices and higher rates of unemployment (Selod & Zenou, 2001).

Transport inequities extend beyond access to employment for ethnic minority groups. Studies from North America revealed that ethnic minority groups perceive that comfort, affordability, and an overall lack of access to transport limit their access to recreation (Xiao et al., 2017) and healthcare (Yuen et al., 2018).

Ethnicities of Aucklanders, 2018



Source: Statistics NZ (2018)

LITERATURE REVIEW

Auckland-specific evidence about transport for ethnic minority groups

The ethnic composition of Auckland is shown in the figure on the previous page. These proportions are changing.

Since 2006, there has been an increase in the proportion of Asian Aucklanders, and those identifying as Middle Eastern, Latin American, or African, and a decrease in those identifying as New Zealand European. That is, Auckland's ethnic diversity continues to increase (See Appendix Two, Table titled *Ethnic groups as proportion of Auckland population, 2006, 2013, and 2018*).

One of the main factors affecting access to transport for ethnic minority groups in Auckland is the interaction of ethnicity and income. The graph on this page shows the relative individual income of Aucklanders of different ethnic identities. In summary, people of Pacific, Asian and other ethnicities are much more likely than European Aucklanders to have a low income (below \$20,000 per year), and less likely to have a high income (greater than \$70,000 per year). Pacific Peoples are over-represented in indicators of poverty in New Zealand and in Auckland specifically (Marriott & Sim, 2014).

A summary of the transport needs and characteristics of an ethnically diverse Auckland population is presented in Spoonley et al. (2016). The thought piece concluded that there is little in-depth understanding of the complex needs for transport of ethnic minority groups. In Auckland there is a relatively high proportion of young ethnic minority migrants enrolled in tertiary education in the central city and elsewhere. Their needs are to access education, and also part-time jobs. They tend to be more likely to move their residence than older people, and some are also parents. Car access in Auckland is slightly higher than average for people of Chinese ethnicity, but is unclear whether the need for a car is based on poor quality of alternatives such as public transport (and may therefore be a reluctant and unaffordable choice) or a preference for

car travel. It is likely that the experience within ethnic minority groups is diverse (Spoonley et al., 2016).

A research paper by Imran et. Al (2016) explored the range of experiences Middle Eastern Aucklanders face. The research described the experiences of six Middle Eastern Aucklanders based on a series of interviews and focus groups. The participants varied in their income and education levels, and the length of time they had lived in Auckland.

Overall, participants expressed a reliance on using a car due to the inconvenience of Auckland's public transport system. Quotes by participants summarised the issues:

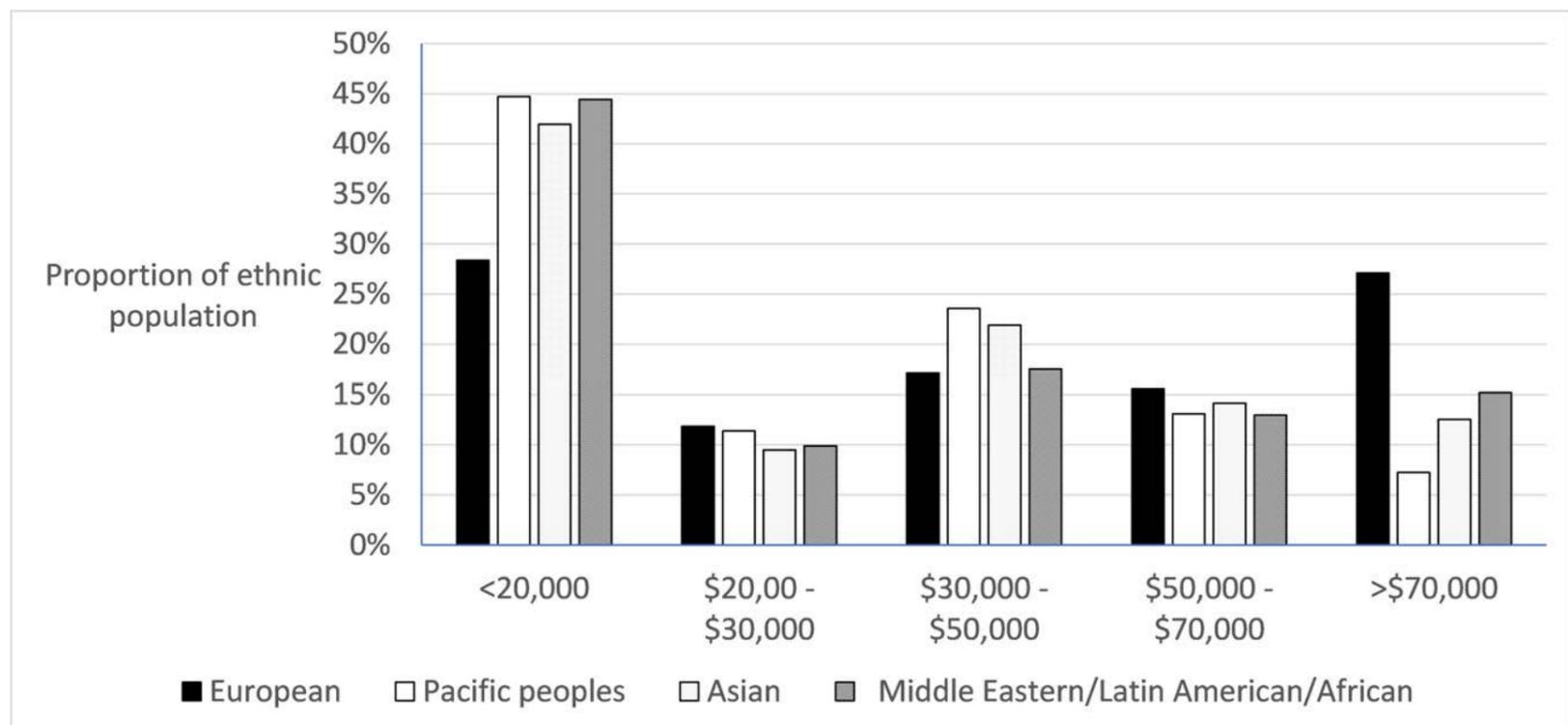
"I've taken buses to visit friends and it was about a 1 hour 45 minute ride. Honestly speaking, it is too much time from point A to B with young children and the unpredictable weather of Auckland."

"Buses in Auckland aren't attractive. I mean what can a bus provide me that a car can't?"

These quotes describe the inconvenience of travel by public transport, which may be exacerbated for ethnic minority groups if they are less likely to have access to a car. However, they are equally relevant for all Aucklanders who use public transport. That is, there may be some people who do not experience inequity related to being from an ethnic minority group.

Overall, there are gaps in understanding how different ethnic minority groups access Auckland's transport network. There is likely to be variation within different ethnic minority groups, and interactions with disability and income that remain unexplored. There is no evidence about how difficulty communicating in English affects ethnic minority groups' transport choices. There is also a lack of evidence about ethnic minority groups' habits and perceptions relating to transport in their country of origin affect their transport choices in Auckland.

Individual income for different ethnic groups in Auckland, 2018



Source: Statistics NZ (2018)

LITERATURE REVIEW

Evidence gaps

All groups

As a whole, data and evidence related to equity in Auckland's transport system is limited. Much of the research is qualitative, with very few transport metrics about how different groups of people travel around, and any difficulties they face. There is no data about equity of participation, in terms of how inequity of transport access affects peoples' likelihood to use public facilities; to access education and employment; to experience cultural and social activities, recreation, and exercise; and whether accessing all of those activities comes with benefits and costs for different people in Auckland. There is no data about diversity of transport use on Auckland's public transport systems, cycleways and footpaths. That is, the travel data provides information about peoples' journeys, but not about the diversity of access to specific routes and places. There is no data about 'trips not made' and the impact of those sacrificed trips that people make because travel is too expensive, too hard, or feels too dangerous. There is no data about the prevalence or impact of high-cost car loans, and the impacts of transport poverty in Auckland.

Biases within the Household Travel Survey make its data difficult to use for analysis of Aucklanders' travel as a whole, and to compare between groups. The data under-represents Māori and Pacific Peoples, making it unreliable in an Auckland context.

Māori:

Further work is needed to fully understand how transport in Auckland is fulfilling Te Tiriti o Waitangi obligations.

Low-income people:

There is a large gap in understanding how forced car ownership affects peoples' wellbeing, including the families of people with low levels of car access. There is little evidence about low-income people's travel patterns in Auckland, making it difficult to recommend policy related to improvements to public transport networks. There is a lack of evidence about driver training and licencing rates amongst low-income groups in Auckland. There is also more work to be done to understand public transport equity in Auckland. It is unclear who is served well by high frequency services that take them where they need to go, and where those options are not practical. Within the communities with a high proportion of low-income people, more evidence is needed to understand specific places and interventions that could best improve transport.

Women:

There is a gap in knowledge concerning the extent of forced car ownership related to women's complex trips and higher likelihood of care responsibilities; and there are gaps related to the interaction of gender, education, and income on women's safety and transport choices.

LGBTQI+ People:

There is no data about where LGBTQI+ people are more likely to live, or where/whether challenges using public transport are worse in some parts of the city than others. There is no Household Travel Survey data related to LGBTQI+ people.

Disabled people:

There is no known usable Household Travel Survey or other survey data related to disabled people's transport choices and behaviour, despite disability now being included as a question in the Household Travel Survey. Difficulties with small sample sizes and the complex definition of 'disability' make data collection difficult. There is no public data about the extent and suitability of accessible parking in Auckland, or how demand for accessible parking may be changing over time in different parts of the city.

Older people:

The differential nature of 'older' in Auckland is a gap worthy of exploring; including how and where people grow old; how those choices affect their mobility; when and why older people transition to not driving; and the interaction of social isolation and age-related decline with transport choices.

Ethnic minority groups:

There is limited reference in literature to experiences of ethnic or racial discrimination or harassment in Auckland's transport system. There is also a lack of evidence about people's habits and behaviours regarding transport, and how migrants and ethnic minority groups perceive Auckland's transport system.

CASE STUDIES

The case studies used in this report comprised four interviews and a focus group, to explore some aspects of equity in Auckland's transport system in more depth. The case studies were selected to highlight issues that are characteristic of Auckland, where evidence from literature may not provide a full picture. The interviews and focus group were all completed in May 2020. The interviews were with representatives from the Citizens Advice Bureau; a budgeting advisory service; the Salvation Army Auckland policy office; and a migrant services provider. The focus group was with four young women who attend an Auckland teen parent unit.

The interviewees were selected through email invitation to a range of government, non-government and advocacy groups. The people who agreed to be interviewed were a mix of senior policy/leadership, and 'on the ground' staff. Interview transcripts were recorded. Themes arising from the transcripts were deduced by the researchers.

The interviews were semi-structured, based on questions about the organisation the individual represented, and their role within it; how transport affects people's interactions with their organisation; and how transport affects the lives and wellbeing of people who access their organisation and its services. Interviewees were also invited to provide any other views they have on equity in Auckland's transport system. The resulting transcripts therefore present a mix of individual and organisational perspectives.

Insights from each interview and focus group are included in Appendix Three of this report.

Summary of case study insights

What are the problems?

Transport poverty

Transport is a challenge for many low-income people and families in Auckland. In the most extreme cases, debt related to forced car ownership affects other aspects of people's lives. It was clear from all of the interviews that non-government organisations see a lot of poverty related to high-cost car loans. Most people in low-income areas are compelled to own a car, because other transport options are not convenient, or even available. It appears that access to loans for many people is not straightforward, so they resort to high-interest 'loan sharks' and other less reputable finance organisations. Often, the cars people purchase with their loans are not reliable, so resulting costs are excessive, including loan repayments and keeping the car in working order.

Transport disadvantage

The quality of public transport services varies around Auckland. Many people who live further than one kilometre from a high-frequency bus or train route cannot realistically travel by public transport for most of their everyday lives. People who commute for a 9-5 job accessible by train or direct bus are much better served by the public transport system in Auckland than people who work shifts or part-time hours, away from frequent and direct services. Many women, migrants, and low-income people work part-time or shift work, which is not easy to access with public transport. Walking and cycling infrastructure is also variable, with most high-quality cycleways concentrated close to the city centre.

Concentration of need in low-income areas

It is clear that challenges related to transport inequity are concentrated in South Auckland, the West, and the Glen Innes/Tamaki area with high proportions of low-income people, as well as large families, household crowding, high rates of disability, and limited high-quality public transport services. However, many of the interviewees emphasised that there are low-income people all over Auckland.



CASE STUDIES

What should be done?

More targeted engagement with non-government organisations by the transport sector

Interviewees suggested that more work between transport and social services sectors would benefit people affected by transport poverty and disadvantage. Non-government organisations have unique and specific insights into the needs and challenges in local communities, which is not typically collated by those investing in transport.

More help for low-income people who need transport

The need for transport information and services to provide a backup for people with no other choices was clear. That is, the transport sector should ensure that information and services are provided to support people on low incomes, or who have other challenges that make accessing transport difficult. More education and awareness about the true costs of car loans would help, as well as support for people to access more affordable loans or vehicles. More financial support for groups providing informal and volunteer transport to access social support groups and other activities would help, so that the organisations do not need to spend their limited budgets on transport.

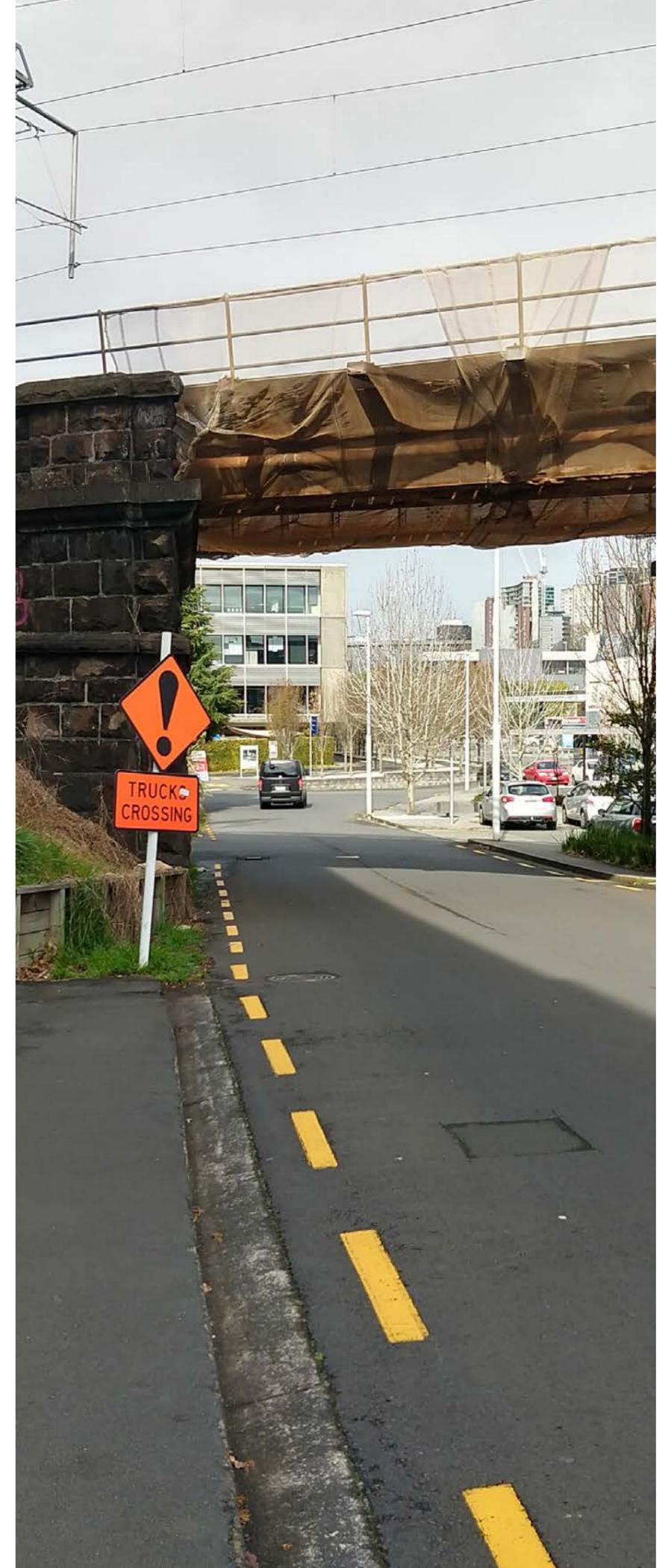
More work to ensure that investment in public transport, walking, and cycling is equitable around the city

Some interviewees felt that infrastructure quality was worse in low-income areas. Indicators of infrastructure quality could be used to prioritise investment, such as the frequency of accessible road crossings, and the distance from peoples' homes to train lines and high-frequency bus services. Research and monitoring is important to link investment with ease of travel around the city for low-income people and other groups who currently do not travel as freely as they would like to.

Quotes

"Sometimes people in central Auckland are asked to attend an appointment, for social housing, for example; and they are sent a letter requesting that they attend a meeting in Henderson. There are issues with explaining how to make a journey from the central city via public transport, which can be very complicated for someone unfamiliar with buses and trains."

"Many people in South Auckland feel compelled to have access to a car, because without it they have no realistic options to get around and live their life. However, the cost implications often mean that they then have significant financial hardship. Often, people base their decision to purchase a car on the complicated journeys that they need to make. If they need to transport their families or collect groceries with a car, then they are unlikely to choose public transport or another mode once the car is available."



POLICY RECOMMENDATIONS

This section outlines recommendations developed specifically in relation to equity in Auckland's transport system. The recommendations are grouped into two sections.

Firstly, four recommendations relate to the overarching issues around how the transport sector in Auckland considers and responds to inequity in transport.

Following this, specific recommendations are provided to address the concerns, challenges and constraints that different groups of people in Auckland face navigating the city's transport system.

Although the recommendations are related to Auckland, some of them require a national response. Where national organisations including the Ministry of Transport and Waka Kotahi are mentioned, the recommendation can be applied nationwide.

Finally, all of the recommendations are summarised in a table to show how they relate to transport equity problems and demonstrate what monitoring methods could be applied to test the recommendations' progress. There are 19 recommendations in total.



Overarching issues for equity in transport

It is recommended that equity is made a more central consideration in transport policy, with measurable outcome indicators. Some outcome measures already used in transport are related to equity (including some of the Ministry of Transport's Transport Indicators), but more are needed so that interventions can be better targeted. Developing indicators is an important recommended next step. Indicators could include, for example, the proportion of Aucklanders reporting a trip not made because it was too difficult or expensive; tracking the numbers of reports of harassment and abuse while using Auckland's transport system; and/or the numbers of Aucklanders in financial hardship related to purchasing a car, as reported by budget advisors.

To make equity a more explicit consideration, shared policy across the Ministries of Transport, Health, and Social Development could articulate links between transport, equity, and wellbeing. This intervention is intended to create shared accountability for equity and to encourage a collaborative cross-sector approach to addressing it. Many factors that affect transport disadvantage and transport poverty are linked to health and social development issues, so new connections across these different ministries are important.

As well as linking equity across ministries, it is also important that equity is a clear component of other transport policy areas where decisions may affect different groups within a community differently. By including equity considerations across all areas of transport policy and investment, the relative benefits and costs for different groups of people can be made clearer. For example, inequity of road safety outcomes is not well articulated in Road to Zero: New Zealand's Road Safety Strategy, but it could be improved. Policy actions could include further work to identify who is likely to benefit most from the interventions, and whether there are differential impacts, particularly with regard to low-income people.

Beyond equity as a factor in policy, there is a need for people to access funding for transport when they have no other choices. Without ready access to a car, some people resort to high-cost loans which exacerbate transport poverty. The concept of a transport 'safety net' as a broader social support system warrants consideration by transport and social development agencies. While New Zealand's social safety net system provides income support and subsidies to help people with accommodation and urgent needs such as food, there is no explicit financial support for people who need help with transport costs. Many of the recommendations in this report that would help low-income people could be considered part of a transport safety net. However, more work is necessary to define the roles and responsibilities within the Ministries of Transport and Social Development to articulate where such services or supports (such as funds for a vehicle, taxis, or public transport) could be offered, who would qualify for them, and how they would be delivered in an Auckland (and potentially nationwide) context.

It is recommended that this report is shared with the Ministry of Social Development, and a working group formed with senior policy leaders from both the Ministries of Transport and Social Development. The working group could then develop a prioritised list of targeted policy interventions that align with both organisations' strategic directions. Many of the interventions may replicate other recommendations from this report, but cross-agency work may highlight other interventions that could help reduce transport inequity in Auckland.

Recommendations

1. The Ministry of Transport to make equity a more central consideration in transport policy, with a greater number of measurable outcome indicators, so that links can be made to desired outcomes for those people who suffer transport inequity most acutely.
2. The Ministry of Transport to work with other ministries, particularly the Ministries of Social Development and Health, to create shared policy and accountability for transport equity and its links with wellbeing.
3. That equity is made an explicit component of transport strategy documents delivered by the Ministry of Transport and other sector partners.
4. The Ministries of Transport and Social Development to investigate financial services and support for people to access for their transport costs, to act as a safety net for people with no other choices.

Specific recommendations to address transport disadvantage and transport poverty

Recommendations 5-6:

Transport poverty and disadvantage need to be measured and monitored from within the transport sector.

When it comes to investing in transport, planners and engineers rely on data and science to develop solutions that will meet the project's objectives to a known degree. Examples provided as part of Recommendation 1 above provide outcome measures for policy overall, such as counting the proportion of Aucklanders reporting a trip not made. That data is of interest to policy-makers but is not enough for decisions related to investment in the quality and prevalence of transport choices. In terms of outcomes, it is unclear whether infrastructure design decisions are as inclusive as they could be, because the diversity of people using streets and transport services is not measured.

To improve equity in transport network planning, more effort to improve the representativeness of the Household Travel Survey is warranted. Some groups (particularly Māori) are under-represented in that survey's Auckland data. LGBTQI+ people are not currently represented in the survey, and data about disabled people is not yet accessible to researchers. More targeted survey methods are required, perhaps by working in partnership with non-government organisations and advocacy groups to develop appropriate survey methods. It is recommended that the Ministry of Transport commission bespoke surveys of groups that disproportionately face inequity of transport choice and affordability in Auckland, to complement the Household Travel Survey. The Ministry should work

with non-government and social service organisations to develop survey methods that are most likely to attract high sample sizes from within the groups of interest.

When it comes to how successful interventions are at delivering inclusive places, unobtrusive observation surveys can be used to estimate the age, gender, and ability/disability representation on streets, public transport, and in public places. That is, surveyors count the number of people using a street, public transport, or place and note the person's likely age group (child/working aged/retired age); gender, and whether or not they are using a mobility aid (as a proxy indicator for disability).

People can also be interviewed, to find out how easy or difficult their journey was to get to that place, and to gain understanding about any specific challenges people have had to overcome to get there. Models such as those created to assess housing affordability could be combined with Census and transport network data to provide more insightful analyses of transport disadvantage. The data could be used to find places to invest, and as a before-and-after test of whether investment intended to improve equity made a difference.

It is recommended that, through the Ministry of Transport's guidance on interpreting 'Inclusive Access' in the Transport Outcomes Framework (Ministry of Transport, 2020), Waka Kotahi and local authorities are encouraged to collect data about the diversity of participation on their road networks and transport services. The 'Inclusive Access' goal is most relevant because it relates to ensuring that transport enables all people to participate in society. Reporting on the diversity can help to highlight to each organisation how well it is delivering on the Inclusive Access outcome in different street and transport contexts.

Recommendations

5. The Ministry of Transport to commission bespoke surveys of those under-represented by the Household Travel Survey in Auckland, including disabled people, Māori, ethnic minority groups, and LGBTQI+ people.
6. Waka Kotahi and local authorities to collect data on diversity of participation on their public streets and transport services, to understand the extent to which inclusive access goals are being met.

POLICY RECOMMENDATIONS

Recommendations 7-8:

The transport sector should engage more thoroughly with social service organisations and groups representing the needs of people experiencing inequity.

Engagement with communities and social service agencies can be used to inform transport investment priorities. It is recommended that the Ministry of Transport leads development of policy about engagement with the social service sector. The purpose of the policy would be to guide Waka Kotahi and Auckland Transport to co-design local responses that will improve equity in Auckland's transport system. Engagement with the social service sector could include a range of government, non-government and community sector organisations. The scope of organisations to involve may vary by place and project, but the policy could include a mechanism to help determine the most appropriate groups for engagement. Measurable indicators of the policy's success could be developed in collaboration with the social service sector, to make the policy measurable and meaningful.

It is recommended that Waka Kotahi and Auckland Transport increase their engagement with social service organisations to inform their programmes of investment and specific projects within their annual plans. This engagement could help to prioritise interventions in public transport and street design by identifying the local people who need that investment the most. As well as informing specific transport investment, local engagement may lead to new roles and resourcing for cross-sector positions that can address the current disconnect between transport and other public and non-government sectors. For example, roles that work across the Ministry for Social Development and local transport authorities could fill the gap in helping people to get to appointments related to finding work or accessing government support.

Recommendations

7. The Ministry of Transport to develop policy for collaboration with social service agency leaders to inform local engagement processes and indicators of successful engagement.
8. Waka Kotahi and Auckland Transport to lead engagement with social service organisations to review their programmes and projects, to refine investment options that will address inequity.

Recommendation 9:

Investigate mobile service provision that takes services to where people live so that transport is not a barrier to affordable goods and services.

Evidence from the case studies suggests that many people in Auckland access high-interest, high-penalty loans from mobile operators who target low-income people. The Salvation Army has started combatting those providers by going into communities to deliver low or no-interest goods and services, including internet provision, and in-person help accessing government support. Waka Kotahi can work with Auckland Transport to investigate whether support for mobile service provision can combat transport inequity. Working with social service agencies, more vans or trucks could travel into low-income communities and provide internet access, links to online shopping and other social supports such as information about accessing social welfare.

Waka Kotahi and Auckland Transport could work with non-government organisations to extend the reach and quantity of mobile service provision. The intended outcome of this intervention is to reduce the need for costly travel for people to access lower cost supermarkets and other services, thereby reducing the amount of transport-induced poverty. Co-designing and supporting existing mobile service provision will build most successfully on the services already offered by the Salvation Army.

Mobile services can also help other groups, such as older people who have difficulties with their mobility. It is recommended that the nature of services is decided in collaboration with the communities that it is intended to benefit. For example, Age Concern and older peoples' groups would be good starting points when it comes to services for older people. Non-government and social services organisations would be a better starting point to help low-income families.

POLICY RECOMMENDATIONS

Recommendation 10

Investigate community transport nationally, including in Auckland.

Volunteer-based transport services already provide transport for many people in Auckland, but their sustainability is threatened by lack of funding and support. Community transport involves volunteer drivers and staff alongside paid or voluntary coordinators.

It is recommended that Waka Kotahi work with non-government organisations and the health sector to establish a national community transport working group. The group could investigate the extent of community transport in Auckland and nationally, with a view to creating a consistent approach to its funding and resourcing. Many health shuttles and other volunteer-based services exist and are funded by different mechanisms around New Zealand including via Auckland Transport (and Regional Councils, outside of Auckland) and District Health Board grants. However, the funding is not consistent between regions, and there is no national repository for community transport information.

A recommended goal for the working group would be to establish a national support organisation for community transport, including consistent funding rules and support mechanisms. Providing human resource to support groups that provide community transport can help them to navigate funding systems; to connect with each other for support with health and safety legislation and other aspects of managing charitable trusts such as volunteer management; and to help extend community transport service provision to people and places where there is a need for it. Transparency and consistency of funding mechanisms would allow groups who offer community transport services apply for annual funding grants to support vehicle purchase, paid administrators to coordinate the transport service, and other associated costs.

Community transport is not mentioned in any known

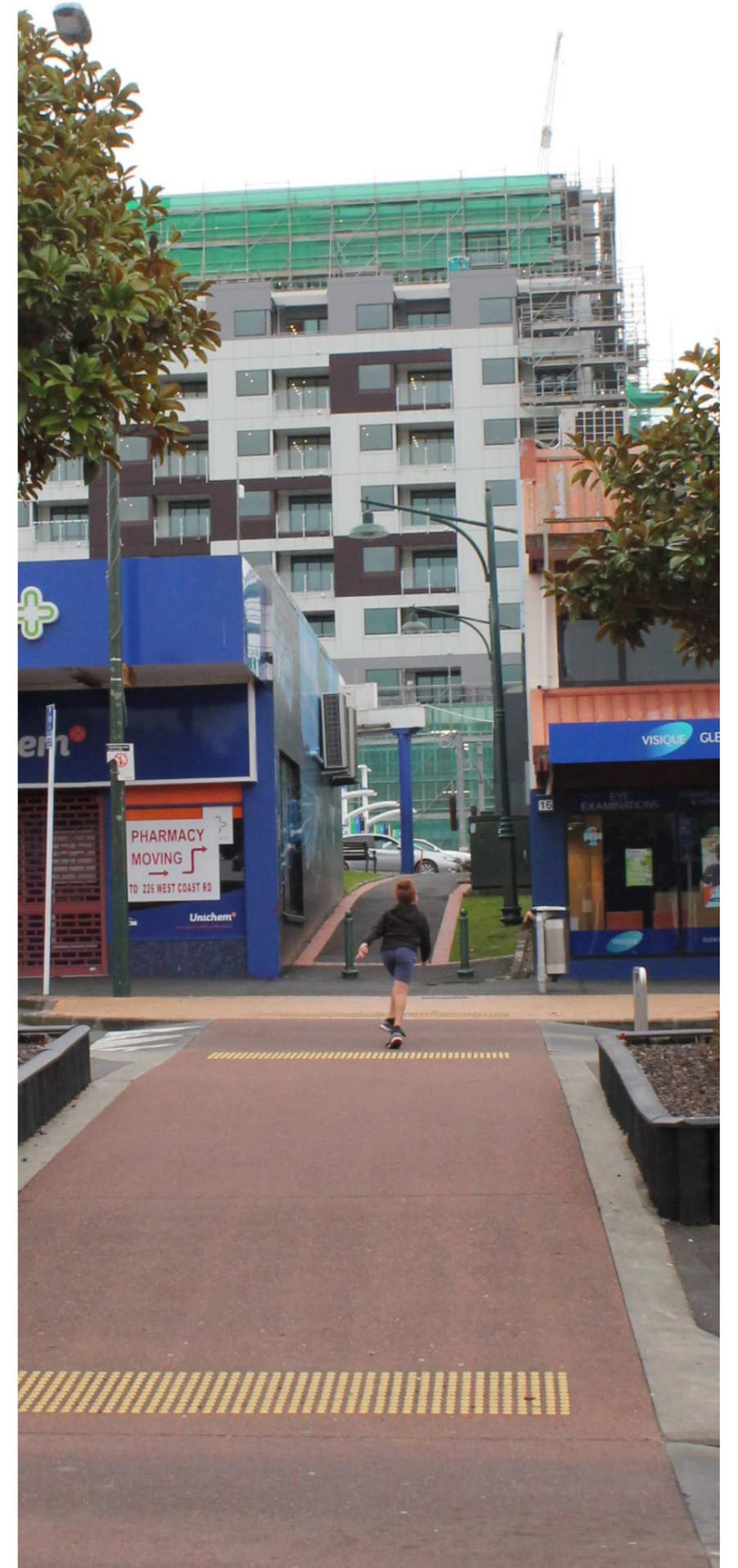
academic literature relating to Auckland. However, the case studies for this report confirmed that many community transport solutions already exist in the city (for example a van run by a migrant services provider as described in one of the case studies, which collects parents and children for a play group). Community transport is a good solution to transport inequity because with government support, the reach of existing services can be broadened to everyone in a community of need, building on existing affiliations with cultural or religious groups.

Recommendation 11:

Investigate the provision of support for access to low-cost finance and car-share options for people who need them.

More widespread support for people to access affordable, safe, and reliable vehicles could significantly address transport poverty, because high-interest loans and unreliable vehicles are the main route into transport poverty for many Aucklanders. It is broadly recognised that Auckland is a car-centric city (Patel, 2018). In the longer term, it may be that more people's transport needs could be well served by high quality public transport, walking, and cycling. However, while transport choices are limited, support for affordable access to a car is a recommended social policy intervention.

It is recommended that the Ministry of Social Development works with non-government organisations to provide advice and support for people to understand how to access an affordable, safe and reliable vehicle if that is their choice, including promoting access to car share schemes. This recommendation relies on Ministry of Social Development staff meeting with a range of non-government organisations in Auckland, to determine what affordable vehicle finance and car share options already exist, and how they could be better promoted within the communities who need them.



Recommendation 12:

Improve public transport in low-income areas.

Providing high-frequency, direct public transport services to all Aucklanders beyond peak hours is an equity response, because it gives people realistic alternatives to owning a car even if they do not travel at peak times. It also improves people's choices by giving them access to activities (including essential services) across Auckland. The provision of high-quality services in the peak hour is based on efficiency for the transport system, but it is not efficient for many Aucklanders who do not travel at peak times.

High quality public transport may be seen as an expensive solution. Particularly in times of austerity, removing or rationalising public transport routes with low patronage may seem attractive. Therefore, a response to improve equity must be presented with a new lens so that its outcomes can be realised, without penalising the public transport operator or the broader funding obligations within Auckland Transport.

The policy response could be started by Auckland Transport with an intervention in a low-income community to improve public transport service frequency outside of the traditional peak hours. Another option would be to partner with Kāinga Ora to pilot high-frequency public transport services that meet the needs of residents. The frequency of one or two bus services that connect people in residential areas with their closest supermarket could be increased, or improvements to routes that connect people with shift work some distance from where they live. Trials that make buses more visible, reliable, and frequent could be monitored to assess their effectiveness before extending public transport to be more direct and frequent, in more places. High quality public transport is also a sound road safety investment; see Recommendation 15 for a discussion.

Recommendation 13:

Build on the Total Mobility scheme, to provide more affordable access to taxis for low-income people without disability.

New Zealand's Total Mobility scheme provides subsidised transport options for people who cannot use buses or trains due to some form of impairment. However, the quality of public transport in Auckland varies to the extent that it is not practical for many trip purposes. People with low incomes sometimes use taxis to meet their transport needs, but those services are not very affordable. It is recommended that the Ministry of Transport work with Waka Kotahi to develop a system similar to the Total Mobility scheme to provide more affordable transport choices for low-income groups. This solution could be trialled in a low-density, low-income area of Auckland. Should the trial prove successful in supporting peoples' transport choices while staying affordable, it could be extended across the city.

Recommendation 14:

Investigate increasing public transport subsidies for low-income people.

For many people, the costs of traveling a long distance on public transport is a barrier to city-wide participation. While some people find access to a car, some people rely on public transport, which is an added cost that low-income people cannot always afford.

Public transport in Auckland is subsidised by Auckland Transport and by Waka Kotahi, but there is no separate subsidy for low-income people. Reducing public transport fares for low-income people who use it will reduce the overall proportion of their income that they spend on transport. Improvements to public transport frequency and directness will improve the attractiveness of public transport, whereas targeted subsidies can reduce overall transport costs for low-income people. National investigations into the 'green card' were underway as part of the previous (2017 - 2020) government's priorities for transport. It is recommended that such subsidies are accelerated in Auckland.

POLICY RECOMMENDATIONS

Recommendation 15:

Promote high quality public transport as a road safety investment, by providing a realistic alternative for people who might otherwise travel in an unsafe vehicle.

Road safety interventions in Auckland focus largely on road infrastructure, education, and initiatives to support school travel. However, many of the groups over-represented in road trauma are also those highlighted in this report as being car-dependent due to a lack of realistic alternatives. When considering the need to own a car, many see the indirect and infrequent bus services as impractical. One of the perverse outcomes of forced car dependence amongst low-income groups is the prevalence of unsafe cars. While some low-cost second-hand cars have high safety ratings, the majority do not. Low-income households cannot generally afford newer, safer cars, so marketing around awareness of car safety ratings (for example) is unlikely to be as effective for them as it may be for higher-income people.

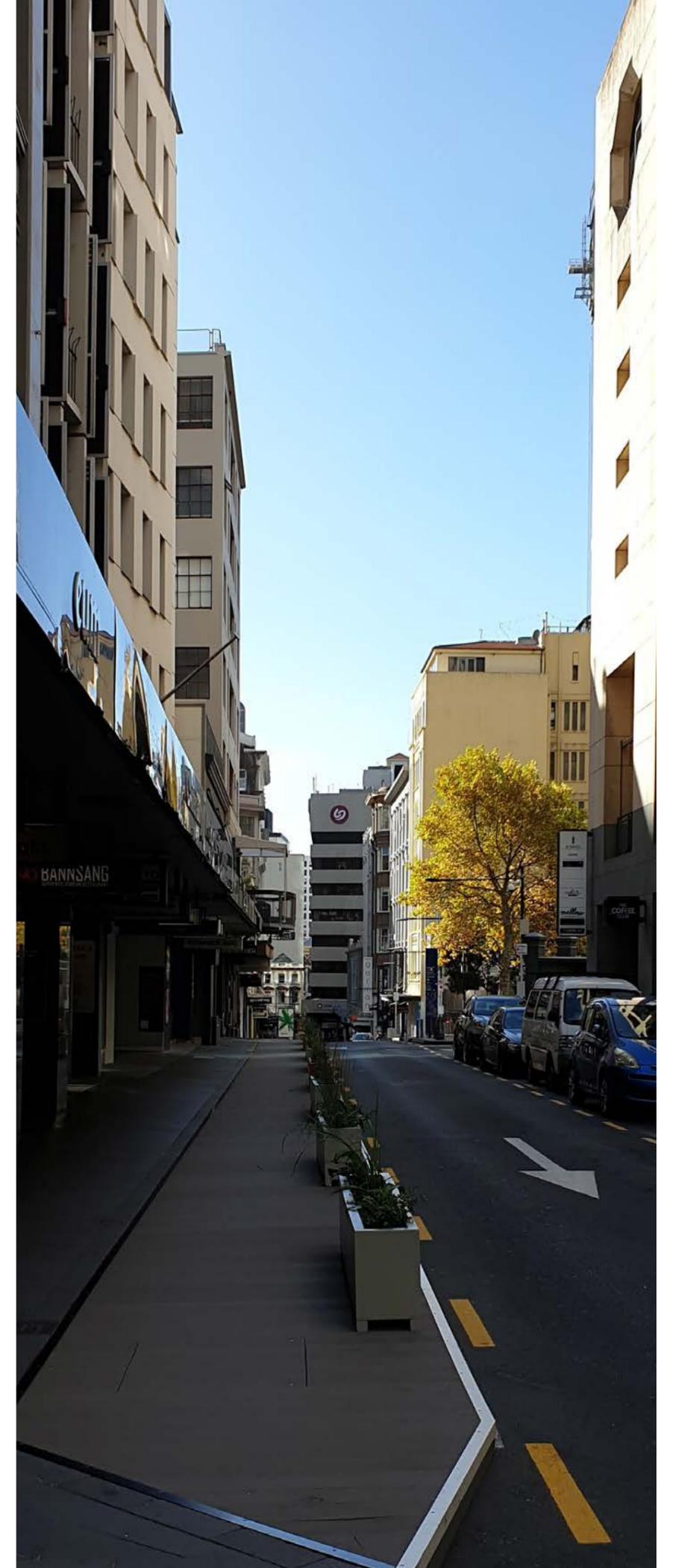
It is recommended that public transport is more strongly promoted within road safety strategy and investment. It is also recommended that high quality public transport is provided as a road safety investment in areas where unsafe vehicles are prevalent, namely low-income areas. This recommendation is related to Recommendations 3 and 12 but extends them with explicit links to road safety strategy at a national level by Waka Kotahi and its road safety partners.

Recommendation 16:

Improve personal security on transport links and services, through co-designing specific solutions at local stops and stations with local communities of greatest need.

People's feelings of personal security affect how much they travel, but also affect how much they pay for transport. Options such as taxis and car ownership, which may feel safer than using public transport, can induce transport poverty. Interventions to improve personal security include improvements to the frequency of public transport services, because the more reliable and direct they are, the less time people are left to feel vulnerable. However, there are other more direct improvements that can be made.

It is recommended that Auckland Transport works with groups representing vulnerable people to prioritise specific interventions and locations to improve feelings of personal security at public transport stops and stations. Improvements to lighting, surveillance and security presence at public transport stops and stations can markedly improve many people's comfort while waiting for a bus or train, or for a friend or family member to arrive. Evidence from literature suggests that women, transgender and non-binary people are most susceptible to personal security concerns and to harm. They are likely to have the most pertinent insights into the places in Auckland where interventions are needed most. Specific groups to collaborate with include Gender Minorities Aotearoa; Agender NZ; OUTLine NZ; RainbowYOUTH; InsideOUT; and Women in Urbanism. Other groups to collaborate with include disability advocacy groups including the New Zealand Disabled Persons' Assembly, which is a pan-disability advocacy group run by and for disabled people.



POLICY RECOMMENDATIONS

Recommendation 17:

Develop ‘easy read’ wayfinding policy, accessible for people who cannot read or write in English, as well as being inclusive to people who have a learning disability, brain injury, or neurodivergence such as autism.

Understanding how to use public transport systems, and how to navigate as a pedestrian or cyclist is not easy in Auckland. It is recommended that Auckland Transport builds on its ongoing wayfinding efforts, as well as work with stakeholders from the disability and migrant sectors to develop an ‘easy-read’ wayfinding strategy. Working with the people who find it most difficult to access simple information, namely those with cognitive and sensory challenges, and those for whom English is not a first language, is recommended as the most direct way to create useful wayfinding.

It is recommended that a pilot project for wayfinding in and around areas where refugees are first settled into New Zealand is developed, linking their residence to local amenities. Limiting the catchment to one residential community will make for a contained but diverse community project, combining walking (and potentially cycling) wayfinding with information on how to get to and use buses and trains for local journeys.

In developing the wayfinding strategy, information should be made available in a variety of formats. Printed and digital information should be consistent with on-street signage and symbols that are accessible for people who cannot read or understand English, as well as people who cannot hear or see.

Recommendation 18:

Provide wireless internet at bus stops and train stations as part of transport information services.

Free wireless internet connections at bus and train stops and on public transport services can remove an information barrier for people who cannot afford to pay for mobile data. Evidence from the literature and case studies suggests that mobile devices themselves are widespread, but people cannot always use those devices to access the internet when travelling away from their homes. Connectivity can also provide additional confidence due to people being remotely connected to their friends and families while travelling, increasing feelings of safety for a range of disadvantaged groups.

While there is some provision for wireless internet access at public transport hubs, it is recommended that a pilot for free internet access is developed in South Auckland through collaboration with Auckland Transport and with low-income young people. Low-income young people are likely to be ready adopters of free internet access. The locations for initial investment should be determined based on the volume of people using different bus stops and train stations.

Recommendation 19:

Develop guidelines for infrastructure accessibility audits.

There is currently no widespread mechanism for transport authorities to assess whether infrastructure is accessible to people with disabilities. It is recommended that Waka Kotahi works with the New Zealand disability community (for example, through the Disabled Persons’ Assembly) to develop inclusive access audit tools, both for current and future walking and public transport routes. Audit processes exist for road safety, as an independent review of how safe current and proposed infrastructure is likely to be. The audit process also works as ongoing training and education for those involved in and receiving audit reports. Improvements to industry training can help to grow awareness amongst transport practitioners of the importance of accessibility.

POLICY RECOMMENDATIONS

Transport Equity Analysis: Transport and Individual Factors and Outcomes

In the following table, the overarching policy recommendations as well as other, more targeted recommendations are listed.

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
<p>Equity is not explicit in transport policy and practice</p>	<ul style="list-style-type: none"> • People with low incomes • Māori • Ethnic minority groups • Women • Older people • LGBTQI+ people • Disabled people • People who have difficulty communicating in English (or for whom English is not a first language). 	<p>Inequity is not considered, so no real gains can be made for Aucklanders as a whole in improving equity in the transport system.</p>	<ol style="list-style-type: none"> 1. The Ministry of Transport to make equity a more central consideration in transport policy, with a greater number of measurable outcome indicators, so that links can be made to desired outcomes for those people who suffer transport inequity most acutely. 2. The Ministry of Transport to work with other ministries, particularly the Ministries of Social Development and Health, to create shared policy and accountability for transport equity and its links with wellbeing. 3. That equity is made an explicit component of other transport strategy documents delivered by the Ministry of Transport and other sector partners. 4. The Ministries of Transport and Social Development to investigate financial services and support for people to access for their transport costs, to act as a safety net for people with no other choices. 	<ul style="list-style-type: none"> • Outcome measures for equity in transport are developed, including measures relating to 'trips not made', harassment while using transport, and measures of transport-related financial hardship • Shared policy across Ministries of Transport, Social Development, and Health is created, to link transport, equity and wellbeing • Increase in the prevalence of equity in transport policy and strategy documents, including the Road to Zero safety strategy • Working group is developed to investigate financial support and services to assist people with their transport costs

POLICY RECOMMENDATIONS

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
Transport poverty and disadvantage are not measured or monitored by the transport industry	<ul style="list-style-type: none"> • People with low incomes • Māori • Women • LGBTQI+ people • Disabled people • Older people • Ethnic minority groups 	Inequity is not measured, so investment is ad-hoc and no improvements can be made to make that investment more effective.	<ol style="list-style-type: none"> 5. The Ministry of Transport to commission bespoke surveys of those under-represented by the Household Travel Survey in Auckland, including disabled people, Māori, ethnic minority groups, and LGBTQI+ people. 6. Waka Kotahi and local authorities to collect data on diversity of participation on their public streets and transport services, to understand the extent to which inclusive access goals are being met. 	<ul style="list-style-type: none"> • More ethnicity, disability and LGBTQI+ travel survey data is collected • Diversity of participation is measured on public streets, places and public transport services, and collated for use by the transport industry
Lack of engagement with groups suffering transport poverty and transport disadvantage, and the agencies that work with them	<ul style="list-style-type: none"> • People with low incomes • Women • LGBTQI+ people • Disabled people • Older people • Ethnic minority groups 	Investment is not informed by the voice of people who could benefit most, so it is unclear whether peoples' needs are being met.	<ol style="list-style-type: none"> 7. The Ministry of Transport to develop policy with social service agency leaders to inform local engagement processes and indicators of successful engagement. 8. Waka Kotahi and Auckland Transport to lead engagement with social service organisations to review their programmes and projects, to refine investment options that will address inequity. 	<ul style="list-style-type: none"> • Policy developed to promote transport sector engagement with social service sector agencies • Waka Kotahi and Auckland Transport report on the outcomes of local engagement with social service sector agencies on their programmes and projects

POLICY RECOMMENDATIONS

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
Lack of access to affordable goods and services	<ul style="list-style-type: none"> • Low-income people • Older people • Disabled people • People living in poorly-equipped suburbs, away from town centres • People across all of Auckland who need to get across the city 	People have fewer choices, or they pay more for their activities: less opportunity to walk or cycle, longer trips, reduced wellbeing.	9. Investigate mobile service provision that takes services to where people live so that transport is not a barrier to affordable goods and services.	<ul style="list-style-type: none"> • Mobile service provision is investigated
Limited availability of convenient transport choices	<ul style="list-style-type: none"> • Low-income people • Larger families • People living far away from frequent and direct public transport services 	People rely more on car trips, resulting in higher costs, more likelihood of foregoing activities, poorer health and wellbeing outcomes.	10. Investigate community transport nationally, including in Auckland. 11. Investigate the provision of support for access to low-cost finance and car-share options for people who need them. 12. Improve public transport in low-income areas	<ul style="list-style-type: none"> • Cross-sector working group for community transport support is established • Community transport trips and benefits are analysed • Education and awareness campaigns are investigated to help people with access to low-cost vehicle finance • Car share options for low-income areas are investigated • Public transport trial is established, with patronage and satisfaction monitored

POLICY RECOMMENDATIONS

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
Affordability of transport choices	<ul style="list-style-type: none"> Low-income people 	Forgoing important activities; transport-induced poverty.	<p>13. Build on the Total Mobility scheme, to provide more affordable access to taxis for low-income people without disability.</p> <p>14. Investigate increasing public transport subsidies for low-income people.</p>	<ul style="list-style-type: none"> Scheme is developed to subsidise taxis for low-income people Targeted public transport subsidies for low-income people are investigated
Safety of transport choices: safety from crashes	<ul style="list-style-type: none"> Low-income people Some ethnic minority groups and age groups are over-represented in road trauma (deaths and injuries) 	Low-income people and people from some ethnicities and age groups disproportionately bear the social costs of road trauma.	15. Promote high quality public transport as a road safety investment, by providing a realistic alternative for people who might otherwise travel in an unsafe vehicle.	<ul style="list-style-type: none"> Public transport is explicit in road safety policy as an equity response for groups over-represented in road trauma

POLICY RECOMMENDATIONS

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
Personal security and dignity using transport: feeling safe from harassment and harm	<ul style="list-style-type: none"> • Women • Trans and non-binary people • Disabled people 	People who feel unsafe face increased anxiety, stress, and psychological trauma using transport; or they forego trips; or they spend more than they can afford on alternatives to unsafe modes.	16. Improve personal security on transport links and services, through co-designing specific solutions at local stops and stations with local communities of greatest need.	<ul style="list-style-type: none"> • Improvement in personal security perceptions of travellers including women, transgender, non-binary and disabled people
Access to information about transport that is easy to understand	<ul style="list-style-type: none"> • People with disabilities including learning disabilities and neurodivergence, such as dyslexia or autism. • People for whom English is not their first language. • People who do not have access to mobile data while travelling. 	People have fewer choices; they are more likely to get lost and feel stressed and anxious using transport; they may forego trips, use more expensive modes that they cannot afford; or put themselves in stressful situations.	17. Develop 'easy read' wayfinding policy, accessible for people who cannot read or write in English, as well as being inclusive to people who have a learning disability, brain injury, or neurodivergence such as autism. 18. Provide wireless internet at bus stops and train stations as part of transport information services.	<ul style="list-style-type: none"> • Improvements in perception of ease of travel, based on perception surveys • Increase in the number of bus stops and train stations that have wireless internet access

POLICY RECOMMENDATIONS

What affects equity in Auckland's transport network?	Who experiences inequity the most?	Consequences of inequity for Aucklanders	Policy recommendations	Recommended monitoring measures
Accessibility of transport choices	<ul style="list-style-type: none"> People with disabilities (including older people with disabilities). Particularly those who have difficulties walking and climbing steps; and difficulties seeing and hearing 	People with disabilities (including older people with disabilities) are limited depending on the accessibility standard of transport infrastructure and services.	19. Develop guidelines for infrastructure accessibility audits.	<ul style="list-style-type: none"> Infrastructure accessibility audit guidelines are developed, training delivered, and audits implemented

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APPENDIX TWO - TABLES

Household Travel Survey Data for Auckland, 2015-2018: Trips and Journeys per Week Overall and by Trip Purpose

Group	Sample size	Trips and Journeys (mean, per person, per week)			Mean number of journeys per week by trip purpose			
		Trip legs	Journeys	Journey length (km)	Employment	Education	Social Engagements	Exercise
All	1688	27.5	26.3	8.1	2.7	0.3	4.0	0.8
Low income (lowest septile)	91	27.3	25.3	7.0	1.7	1.0	4.7	0.9
High income (highest septile)	107	28.6	27.0	12.0	5.0	0.0	4.0	0.8
Ethnicity: NZ European	1181	26.1	24.9	8.1	2.6	0.3	3.9	0.8
Ethnicity: Māori	76	35.0	33.0	7.1	2.4	0.6	4.6	1.1
Ethnicity: Pacific	118	18.7	18.0	6.0	1.7	0.2	2.7	0.3
Ethnicity: Asian	368	26.2	25.0	7.9	2.7	0.6	3.2	0.6
Gender: Female	875	27.8	26.6	6.9	2.3	0.3	4.3	0.8
Gender: Male	813	27.2	26.0	9.3	3.1	0.3	3.6	0.8
Age 15-64	1458	28.3	27.0	8.2	3.1	0.4	3.9	0.8
Age 65+	194	23.4	22.7	7.0	0.6	0.0	4.1	0.8
Age 80+	36	16.7	16.1	5.2	0.0	0.0	3.6	0.6

Source: Summary of 2015-2018 Household Travel Survey (2020)

APPENDIX TWO - TABLES

Household Travel Survey Data for Auckland, 2015-2018: Trip Legs per Person by Travel Mode

Group	Sample size	Mean number of trip legs per person week by travel mode				
		Car driver	Car passenger	Pedestrian	Public transport	Bicycle
All	1688	19.9	3.5	2.8	0.9	0.2
Low income (lowest septile)	91	16.9	4.7	3.7	1.9	0.0
High income (highest septile)	107	21.9	2.1	2.9	0.8	0.1
Ethnicity: NZ European	1181	19.3	2.9	2.7	0.7	0.3
Ethnicity: Māori	76	26.8	4.0	3.3	0.9	0.0
Ethnicity: Pacific	118	12.6	3.0	1.6	1.4	0.0
Ethnicity: Asian	368	18.3	3.7	3.0	1.0	0.1
Gender: Female	875	18.7	4.9	3.1	0.9	0.1
Gender: Male	813	21.2	2.1	2.5	0.8	0.4
Age 15-64	1458	20.7	3.5	2.8	0.9	0.3
Age 65+	194	16.0	4.0	2.6	0.6	0.1
Age 80+	36	10.5	1.9	3.4	0.4	0.0

Source: Summary of 2015-2018 Household Travel Survey (2020)

APPENDIX TWO - TABLES

Proportion of population with a disability by age and ethnicity

	Proportion of ethnic population that has a disability, by age group*			
	0-14	15-44	45-64	65+
European	11	16	28	58
Māori	15	23	43	63
Pacific peoples	9	17	26	74
Asian	4	10	20	50
Other	8	18	38	69

*Statistics NZ Household Disability Survey Number of disabled people By age group, sex, and ethnic group

**Dataset: Ethnic group (grouped total responses) by age group and sex, for the census usually resident population count, 2013

***Subnational ethnic population projections, projection assumptions, 2013(base)-2038 update

APPENDIX TWO - TABLES

Ethnic groups as proportion of Auckland population, 2006, 2013, and 2018.

	2006 (%)	2013 (%)	2018 (%)
European	56.5	59.3	53.5
Māori	11.1	10.7	11.5
Pacific peoples	14.4	14.6	15.5
Asian	18.9	23.1	28.2
Middle Eastern/Latin American/ African	1.5	1.9	2.3
Other ethnicity	8.1	1.2	1.1

Source: Statistics NZ, Ethnic groups for people in Auckland Region, 2006–18 Censuses

APPENDIX THREE - CASE STUDIES

The views of four interviewees and four focus group participants are presented in this Appendix. The material is presented as described by the interviewees. The views expressed by interviewees are a mix of their own personal experiences using transport in Auckland, and their perception based on the experiences of the people they work with and for. Interviewees' thoughts presented here do not necessarily represent the views of the organisations they work for. Statements are not necessarily verified as fact. They are the opinions based on interviewees' years of experience working with the public in Auckland.

APPENDIX THREE - CASE STUDIES

Interviews with Non-Government Organisations

The statements in this section represent the views of the interviewee and are not verified factual accounts.

Citizens' Advice Bureau

The Citizens' Advice Bureau (CAB) is a non-government organisation that accepts questions from the general public. They use email, live chat, and phone as well as in-person queries at around 30 offices across Auckland. CAB has some paid staff and some volunteers. They also provide other free services such as a legal clinic, for people to have a free conversation with a lawyer; budgeting services; and family counselling. A team leader from Auckland CAB was interviewed about how transport comes up in conversations with people seeking advice.

The CAB interacts with hundreds of Aucklanders every week. People who contact CAB in Auckland vary significantly, both within and across office locations. In wealthier areas, enquiries about legal issues and insurance are more common, and financial questions related to high-value assets. In lower-income areas and central Auckland, queries relate to accessing basic services, and more frequently enquiries relate to mental health issues, and social problems like domestic violence and homelessness.

The interviewee works as an advisor in central Auckland and in other offices from time to time. She reported that transport issues come up in people's queries related to needing to get somewhere. She described an example concerning Waiheke Island. Some people who ask for help have been recently released from prison in Auckland and are provided with housing on Waiheke Island. The interviewee said that there do not seem to be many transport options to get around the island for low-income people, particularly those who do not have a car. Getting to appointments in central Auckland or elsewhere in the city can be very difficult for those people. Her perception is that the implications for someone released from prison not being able to get to an appointment for social services

or at the court can be significant. Therefore, transport challenges seem to exacerbate ongoing issues that people have in their lives. The interviewee said that among the general public there seems to be a perception that some parts of Auckland such as Waiheke Island are relatively wealthy places, but she sees pockets of disadvantage all over the city.

From the interviewee's perspective, people find it relatively easy to access CAB services, because they have a range of access options, and the offices themselves are in many local areas. However, she reported that when it comes to accessing services elsewhere in Auckland, Bureau officers are often asked "how am I supposed to get there?". The issue is most acute for people who are homeless. As the interviewee said, homeless people have very few resources. She said that sometimes people in central Auckland are asked to attend an appointment, for social housing, for example; and they are sent a letter requesting that they attend a meeting in Henderson. There are issues with explaining how to make a journey from the central city via public transport, which can be very complicated for someone unfamiliar with buses and trains. The alternative options such as a taxi are too expensive for many people.

According to the interviewee, difficult social situations can be perpetuated due to a lack of realistic transport choices.

Many financial queries that the CAB get from the public are related to servicing a loan, and the interviewee reported that debt related to finance for a car is common. She said that often, low-income people will report having purchased a car privately, through social media or other online platforms. Her sense was that there is a lack of understanding in the less-regulated sales markets, so sometimes people are sold a vehicle that is unreliable, or it has unpaid debts. She said that it seems that often people buy a car because they feel they have no other option, but unfortunately they can not afford its debt payments, or to keep it well maintained. Issues related to poor quality

cars worsen over time because the car tends to have more and more problems and costs, she said. She has heard of, and talked with, people who have become trapped paying large amounts for an unreliable vehicle.

Sometimes CAB officers are asked about how to use transport systems, for example when an older person has received their Gold Card, which subsidises off-peak public transport. CAB officers then rely on the websites of government transport providers to help the public understand how to use the transport subsidy, and what options it might give them personally to improve their mobility.

Some CAB staff, as well as members of the public, report difficulties accessing offices surrounded by long-term roadworks. A recent example of works in Panmure was highlighted, with many members of the public traveling further away to access a CAB office in preference to walking or driving anywhere near the roadworks.

APPENDIX THREE - CASE STUDIES

Budgeting Advisor

A team leader from a budget advisory office in South Auckland was interviewed about how transport issues come up through their dealings with clients. The budgeting service provides free mentoring to anyone who would like advice concerning their personal finances. It operates as a charitable trust. Some clients are referred from other agencies. The budgeting service is well connected with other social agencies and government organisations in Auckland. It has a physical premises in South Auckland. The office is open throughout the week and on weekends.

Most people accessing the office are local to South Auckland but there are no limits on who can seek advice, so some clients come from all over Auckland. There are several budgeting advice services located all over the city. Clients find out about the service through word of mouth, social media, through other government organisations or agencies via referral, and through community education efforts. Some people visit for one-off advice, while others have multiple visits as they work through improving their personal financial situation.

The interviewee reported that many of the issues people have that trigger use of a budget advisory service relate to high-interest or high-penalty loans. There seem to be more organisations targeting low-income people in South Auckland with 'easy' finance, she said, which carries very high long-term costs, often many times more than the amount of the original loan. Interest costs are extreme, and if people miss a payment, there are added penalties in addition to compounding interest.

There are two main transport problems related to debt, according to the interviewee. The first is that trucks offering groceries, clothing, and other goods with small or no deposits but charging high interest often patrol communities. Known as 'truck shops', they are particularly common in South Auckland, where people are at home during the day and cannot necessarily access affordable groceries and other goods. One of the reasons for lack of access is the distance people live from the supermarket, and their lack of transport to get there and get their

groceries home. So, in the interviewee's experience, low-income people are vulnerable to targeting by truck shops offering groceries, clothing, and other goods with little or no deposit. Often it is evident to the interviewee based on conversations with people seeking budget advice that they have not fully understood the cost implications of high-interest purchases from truck shops.

The interviewee described the second transport problem related to debt is that people frequently buy a car with high-interest finance. She said that many people in South Auckland tell her that they need to have access to a car, because without it they have no realistic options to get around and live their life. However, the cost implications often mean that they then have significant financial hardship. Often, people base their decision to purchase a car on the complicated journeys that they need to make. If they need to transport their families or collect groceries with a car, then they are unlikely to choose public transport or another mode once the car is available.

In the interviewee's experience, people who seek budgeting advice rarely complain about transport-related costs such as parking, or petrol. The main factor that results in their financial trouble and the need to seek budgeting advice is the up-front purchase cost of a vehicle, and ongoing costs servicing a loan. In response to clients' financial difficulties related to paying for a car, budgeting advisors, including the interviewee, will not necessarily suggest that they sell the car. People are often adamant that the car is necessary, so sacrifices are made in other areas of their budget to reduce their debt. Many clients have large families, so the vehicle is used for a wide variety of travel.

Regarding public transport, clients of the South Auckland budgeting service typically report that it is too difficult to use buses and trains, rather than trips being too expensive. The interviewee said that her experience, and that of her clients, is that public transport often takes too long to get to the places people want to go. While a bus or train may work well for an individual traveling between home and work on their own, the variety of other trips that many

people need to make are not realistically achievable with an infrequent, indirect public transport system, which is why they need a car.

The initial cost of a public transport card (Auckland Transport HOP card) was not seen as a barrier by the budget advisor. An Auckland Transport trial of free HOP cards was cancelled because so few cards were given away. For people who live and work on convenient bus or train lines, or whose children can get buses or trains to school, the interviewee said that HOP card was seen as an easy and affordable system. The day to day costs of using public transport are not a barrier to people. Rather, she said that the overall inconvenience of public transport often compels people to purchase a vehicle which they can not always afford.

Sometimes transport comes up as an issue related to people getting a job that could help improve their finances. If they cannot get to a job interview, or a potential job is too far away, the interviewee's perception is that they are less likely to get the job. In her experience, there does not seem to be any help from the Ministry of Social Development for people on unemployment benefits to have their travel to a job interview, or to a job, subsidised.

The unanticipated costs of travel to one-off events can present a challenge for people who are already in financial difficulty, according to the interviewee. The urgency of attending a funeral or tangi far from home, for example, can result in people spending money on transport and 'sorting it out later'. She reported that the lack of convenience of long-distance travel, even across Auckland, can result in, or exacerbate financial hardship for people.

APPENDIX THREE - CASE STUDIES

Salvation Army

The Salvation Army operates from its base as a Christian church, and has become widely involved in social services throughout its almost 150-year history in New Zealand. In Auckland, the Salvation Army provides an extensive network of addiction centres, emergency, transitional, and social housing, and a network of community service hubs. The hubs provide services including employment training, budgeting advice, foodbanks, welfare assistance, parenting programmes, and counselling. The Salvation Army also has community-based programmes working with elderly people. A senior member of the Salvation Army involved in social policy was interviewed about how transport impacts Auckland people and communities.

The interviewee has worked in a variety of roles for the Salvation Army in Auckland, most recently in social policy. He said that the majority of the Salvation Army's social services are concentrated in South Auckland, because that is where they see that the need is greatest. As well as policy work with government, the Salvation Army works directly with a wide variety of people affected by a range of issues associated with social deprivation. People find out about the Salvation Army through a variety of ways, including word of mouth, and through other government and social service agencies. Most people who access Salvation Army social services have a low income.

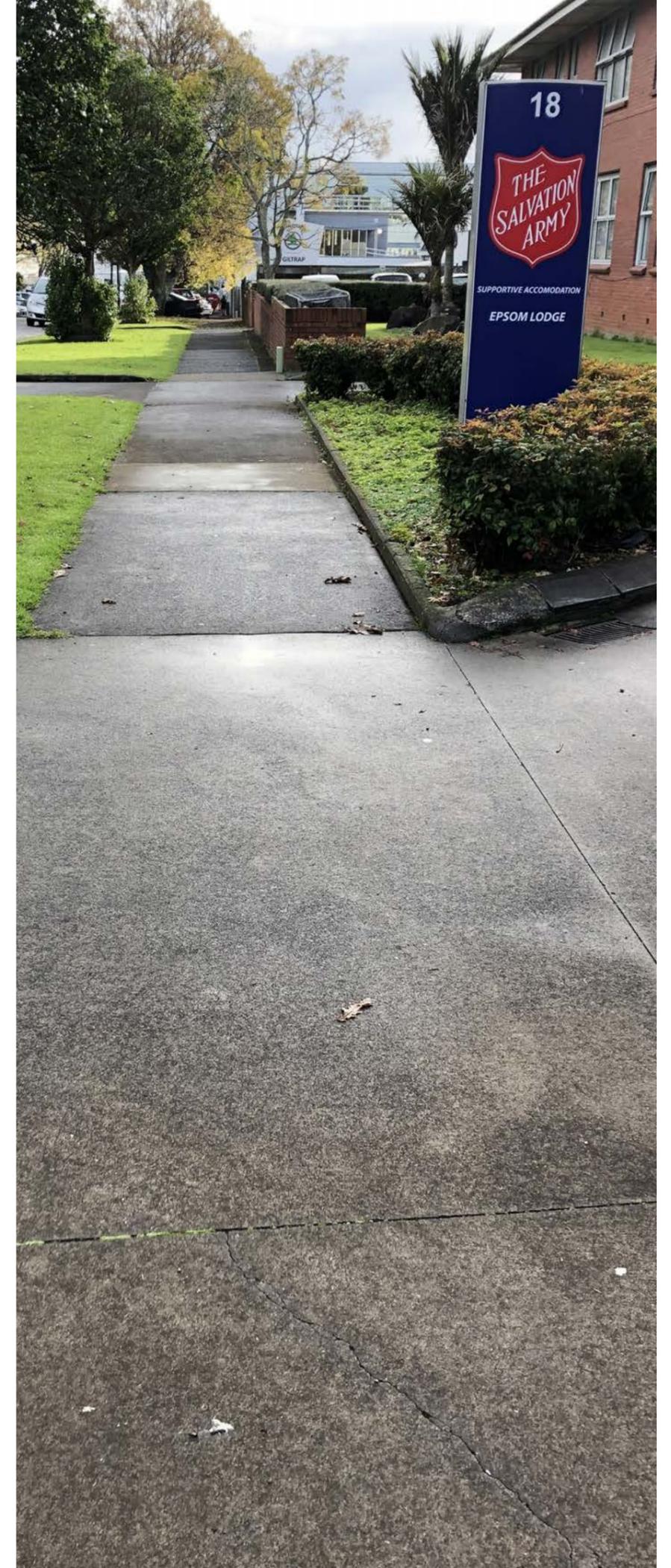
From the interviewee's perspective, one of the main transport issues faced by the people served by the Salvation Army is the lack of good public transport in South Auckland, and other areas where low-income people are concentrated. He said that there is often a bus service of some kind, but it is indirect, infrequent, and does not necessarily connect people easily with where they would like to go. Using a bus is also inconvenient for people who need to travel with small children, or who want to collect a food parcel or groceries. The interviewee senses that there is a stigma associated with taking a food parcel on a bus,

and if the bus service is not convenient in the first place, he does not think that people will not use it.

One of the implications of a lack of transport choices according to the interviewee is that loan companies offer food, clothing and groceries to low-income people at little or no deposit. The Salvation Army is trying to combat that harm by running its own mobile trucks in South Auckland, providing groceries and other services with interest-free loans, or online ordering with free delivery. They also bring social services to where people live, providing internet and other computer-based options for people who do not have those facilities in their own homes.

The interviewee said that he knows some people on low incomes use trains, for example if someone in Papakura has a cleaning job in the city they will use a train to get there and back. They use the train because it is convenient. But he thought that for many people there are simply no convenient options for travel by public transport, so they have fewer choices and more expensive choices. He said that the cost of public transport fares is a problem for some people, because anything that costs money is a problem for people with very little money. However, overall for the communities served by the Salvation Army, his perception is that the cost of fares is not as much of a barrier as the inconvenience of long, indirect journeys.

From his experience working on social policy for the Salvation Army, the interviewee was of the view that there is a lack of a safety net for people who need transport. He said that while some people rely on whanau or neighbours for transport, that transport choice might not be safe or reliable. His experience is that low-income people have vehicles that are expensive to operate; may not have a current Warrant of Fitness or Registration to be on the road; and are not likely to be very safe vehicles. The



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interviewee said that some people use a taxi to get to the supermarket, because they save on the cost of owning a car, as well as costs buying food and other supplies from a local dairy where the prices are higher than at the supermarket.

From the interviewee's experience working with low-income people, the cost of owning a car is clearly a problem. Often the vehicle they purchase is old and inefficient, as well as being more likely than a newer car to break down, requiring costly repairs. Vehicle-related poverty is a common component of debt that people have, when they seek budgeting advice. The Salvation Army can help people with lower-interest or interest-free loans, but sometimes the costs that people have accrued related to irreputable finance companies are well beyond the limits of the more affordable loans.

Working with low-income families has led the interviewee to think that implications of transport access and affordability affect children's prospects from a young age. He said that some families can access an early childhood centre within walking distance of their home, but if the closest option is a few kilometres away, it is a disincentive to enroll their children there. The recent increase in the number of early childhood centres has been a significant factor in the increasing number of children attending services from the interviewee's perspective, because families can walk there. However, he said that transport issues continue through peoples' lives, affecting education and employment, and therefore being a factor in perpetuating poverty.

The interviewee thought that low-income areas may accrue less investment in transport because people who live there are less likely to complain, or to participate in city-level engagement on transport issues. He referred to the Maslow 'hierarchy of needs' (McLeod, 2007) which suggests that if people expend a lot of their energy meeting their every day needs for food and shelter, they are not likely to have energy left to complain about an inconvenient bus route, or a poorly maintained footpath. So, the interviewee felt that higher quality bus services

and other transport infrastructure tend to exist in wealthier areas because the people providing those services, from the bus driver through to the infrastructure investment decision-makers, are aware of where negative feedback is most likely to come from.

Experience working with low-income people has led the interviewee to conclude that poor access to transport affects the choices people have for jobs. He said that often, the jobs that lower-income people have are away from transport hubs, and they are lower paid jobs. Often they require shift work, or timing outside of the usual 'nine to five'. The interviewee's view is that those jobs are extremely difficult or impossible to access by bus or trains because the transport services don't run at the right times, or reach the right destinations. He said that another problem related to being reliant on a poor quality bus system is that it can affect peoples' employment. If someone is consistently late because of a late-running bus, and they don't have any other realistic transport options, they might lose their job.

People working at the Salvation Army see that the cost of transport across the city is one reason why many children from South Auckland have never been to the central city or to a beach. The interviewee thought that discretionary travel for recreation away from the local area is well beyond the reach of many families. He said that travel to regional facilities such as the zoo or the transport museum MOTAT can be very difficult in some parts of Auckland. He also felt that some people do not feel safe on the streets, which affects their likelihood to walk or cycle. His view was that the lack of facilities like cycleways is not as much of a barrier as people feeling unsafe.

Overall, the interviewee feels that there is a lack of transport connecting people to the places that they want and need to go to, such as the supermarket, or the Ministry of Social Development office. He felt that more community-based transport solutions involving volunteer drivers could help to address that, by essentially providing the same level of service as a taxi, without the high cost. When public transport is not at a high quality, the interviewee's view was that people will find other ways to travel.



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Migrant Services Provider

A manager at a provider of migrant support services was interviewed about how transport affects people who use the service. The service works mostly with Auckland people who have a refugee background. They run programs to help migrants get to know each other; playgroups for parents with young children; and programs related to helping people find employment. The migrant services provider has extensive connections with other government and non-government social service providers and agencies. They have a social media presence, and physical offices. Most of the people who access the services come from a low-income background.

The interviewee said that some migrants in Auckland cannot access programmes run by the service provider because of transport barriers. In some cases, service provider staff have voluntarily driven to collect people so that they can attend events. The organisation pays \$45,000 out of its fundraising to provide transport for a play group, enabling many of the 150 families to attend who otherwise could not.

An observation the interviewee made from her experience around Auckland was that higher-income areas tend to have better public transport connections. From her perspective, some places, particularly around the Puketapapa Local Board area, are very difficult to get to, and to travel from, using public transport. She said that many of the people using the migrant services have a negative view of public transport. To them, it is unreliable, expensive, and time-consuming due to indirect routes. The interviewee said that people find traveling on a bus with small children to be a tiring experience.

From her experience working with migrants, the interviewee said that many struggle to understand how to use public transport services, particularly when there are temporary or permanent changes to a service. She relayed that audio announcements and features such as text message updates are only useful if people understand how the public transport system works in the first place, and also understand English. When routes and timetables

change, which seems to be reported often by migrants, access is harder. Many of the people the service provider deals with take out a loan to buy a car because public transport is simply too difficult to use, and she said that they simply need a car to live their lives.

One example of a family situation was explained, whereby a former refugee family secured jobs, and chose a house that was on the public bus route that could take them to work, and their daughter to university in the city. The location of the house was chosen in part so that they did not have to purchase a car. However, within a month of them moving to the house, the bus route changed. They could no longer easily access work and education using public transport. Losing access to the bus had a real impact on their financial stability because they did not have a car.

In the interviewee's opinion, the quality of public transport infrastructure in lower income areas of Auckland is worse than higher income areas. For example, she thought that there are fewer bus shelters in some communities, which puts people off using the bus. She thought that one reason for the difference might be that the majority of people requesting investment are from relatively wealthy parts of Auckland.

The interviewee said that for some people, having access to a bicycle and learning to ride it can be a freeing experience, enabling them to go more places, more easily than walking. The service provider has accessed funding from Auckland Council to provide training for women to learn to ride a bicycle, which has been very useful for the people who benefitted from it. However, there are many people who lack the confidence to learn to ride a bicycle, and there is a lack of safe cycling infrastructure in Auckland which she thought discourages many people from cycling.

In terms of solutions, the interviewee thought that one solution to the issues related to inconvenient public transport would be to support socially-responsive services, meaning that transport should respond to peoples' social situations, and not just be provided for commuters. She

explained that there seems to be a disconnect between the high quality of transport services provided in wealthier areas, compared with much lower quality in poorer areas. She said that accessibility impacts peoples' lives because they are forced to choose between not participating in everyday activities, or potentially taking out a loan to buy a car.

Some people have told the interviewee that they have moved house to be closer to public transport or to their work. Moving house is itself a financial burden. It is clear to the interviewee that income and transport are related, and lack of either is a barrier to people participating in social activities and support services. Alongside socially-responsive transport decision-making, she thought that co-locating services and activities in places where people live would be a way to overcome transport challenges in lower-income areas.

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Teen Parent Focus Group

A focus group was held with four teen mothers, at an Auckland teen parent facility. The facility provides high school education for the young women, as well as childcare for their children.

The women reported that they typically rely on their parents, or support people such as friends or a teen mum home, to transport them. Usually they travel as passengers in a car. The women travel to school at the teen parent facility every day, and bring their children. Some of the women have a driver's licence, and one has her own car.

The women reported several major barriers to using public transport. The main issues to do with buses were the overall journey time and inconvenience, combined with a lack of space for them to travel with their children, as well as everything they needed to take with them when traveling with a baby. Physical (space) issues with public transport included a lack of space on buses for buggies, exacerbated by people not moving out of their way or offering seats. Other passengers would not stand up for them when they were using public transport when pregnant. Cost of tickets was not considered a major barrier to using public transport. The mothers described some of their experiences using public transport:

"I had to go to a doctor's appointment [by bus] and it was the first time I decided to go by myself for a doctor's appointment and it was, like, probably 20 minutes late and so I ended up getting to the appointment like 20 minutes or half an hour late and so I had to rebook the appointment and go away and come back."

Another woman described the difficulty of traveling with a baby on public transport:

"I always have heaps of stuff to bring with me, like books and his (her son's) stuff, and then I'd have to bring a buggy, which is really difficult."

The women described situations where the behaviour of people on the bus made them uncomfortable, including

drivers and other passengers:

"When I used to bus home, I was always the last person on the bus and I'd always get the bus drivers who would take the wrong route and go a different way to the normal route and I'd get scared because I was worried they had forgotten I was on it or were just taking a different route. Normally we would have to tell them where to go, so they would eventually go to the right place but they would take wrong turns."

"I have had some weird experiences with people on the bus where you don't feel safe. But I guess that's public transport, you never know who's going to be on the bus. Also bus drivers who don't stop for you even when you put your hand out."

The women reported noticing differences between public transport provision across Auckland, and noted the value of a system that gave wider access to opportunities.

"I guess it's just more. Because I used to stay out west, and now I stay in Onehunga now so it's like there are two buses out those ways mainly, which is like one from Onehunga Transport Centre to New Lynne and the other one is to the city centre whereas West you can pretty much go anywhere, it's crazy."

Using a car to travel is seen as the most convenient option by the young mothers. Parent parking at shopping malls and supermarkets is appreciated. However, the cost of owning and operating a car was perceived as a barrier to ownership; given that most of the women are driven many of the places they need to go, they had not all considered the broader costs of car ownership. Traffic was perceived as a significant problem for the women.

None of the women reported riding a bicycle for transport, and all agreed they would not feel safe doing so, both for themselves and with their children. One of the group has parents who do ride a bicycle with her son, but they avoid busy streets.

The quality of footpaths was raised as a noticeable issue when walking with a baby in a buggy. Rubbish bins on footpaths was identified as a problem, as there is often

not space to stay on the footpath. As well as poor quality walking infrastructure, the women reported feeling unsafe walking in the dark. Two of the women said that they run down their driveway when it's dark because they are scared. Street lighting was not considered to be adequate where they live. Walking was also considered difficult because of infrequent road crossings. The women reported crossing the road at driveways where formal crossings were not provided.

"They are just really far apart in my area that's for sure. You have to go around a corner when you cross and back around another corner, it's a pain."

Overall, the young mothers tended to agree that traveling by car is their most preferred transport choice because of its convenience. They face a variety of difficulties walking and using public transport, and avoid cycling as they do not feel that it is a safe choice. Costs of driving, car ownership, and public transport are not as important factors in their transport choices, as convenience and feeling safe.

APPENDIX FOUR - MAPS

A series of maps is included in this Appendix, highlighting the spatial dimension of some measures relating to transport equity in Auckland. These maps are all developed using data from the 2018 Census.

Maps included in this research are based on Statistical Area 2 (SA2) geographies, which is a geographic unit comprising approximately 2000 to 4000 people within City Council areas (such as Auckland). The maps included are:

- People in Auckland living in crowded households (defined by Statistics NZ as homes where at least one more bedroom is required for the number of people living in the home)
- Median household income
- Combined: number of households with an annual household income of under \$50,000 and number of people who find walking difficult or cannot walk at all
- Combined: number of households with an annual household income of under \$50,000 and number of people who do not have an educational qualification
- Combined: number of households with an annual household income of under \$50,000 and number of families with four dependent children or more
- Number of households with no access to a vehicle
- Percentage of people who identify as Māori

Mapping methods and assumptions

Each of these maps was made using publicly available data from the 2018 Census, with data taken from the SA2 geographic unit level. SA2 is the second most detailed aggregation of population data in New Zealand and aims “to reflect communities that interact together socially and economically” (Statistics NZ, 2020).

Demographic attributes were classified into five categories based on percentiles taken across all Auckland SA2s for each measure. Percentile brackets used were:

- 90th percentile (and above)
- 75th to 90th percentile
- 50th to 75th percentile
- 20th to 50th percentile
- 0 to 20th percentile

In all cases, the 90th percentile and above represents the greatest incidence of the measure. For example, the 90th percentile and above category within the map showing the number of people living in crowded households will highlight the SA2s with the greatest number of people living in crowded houses, compared to the rest of Auckland.

Variation between population sizes between SA2s will mean that maps showing number of the population with a particular attribute (and not percentage) may have a low, or high, score due to the low, or high, population of that SA2. As these maps are showing general trends, this is not expected to affect the overall message, but should be considered.

Where possible, totals for Census data are taken as a percentage of “total stated” and not “total” for the SA2 population. This means that people who did not answer a particular question (e.g. Religion) are not counted. “No Religion” was an answer given in the Census, so this does not exclude those without a religion.

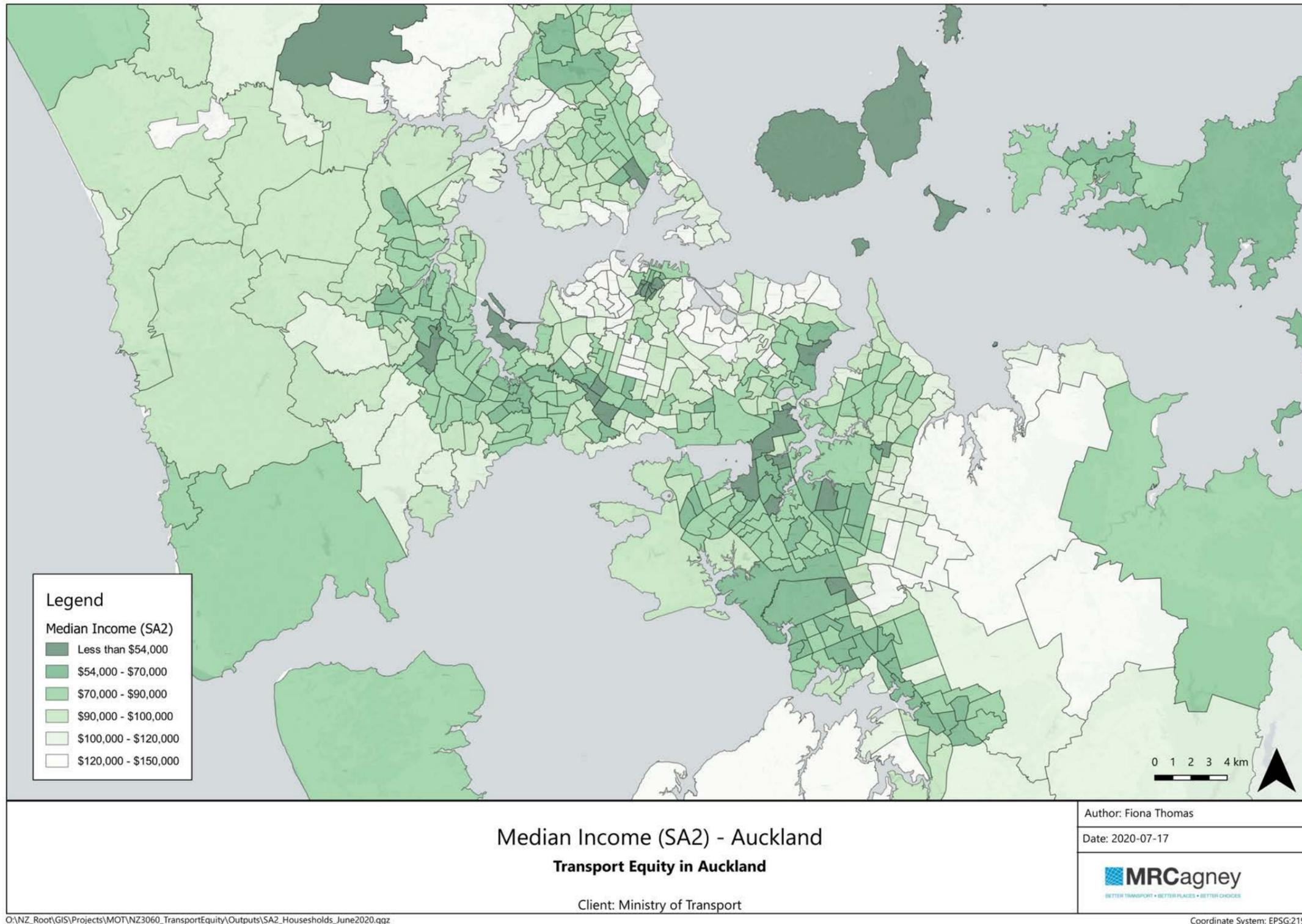
Mapping multiple variables

Some maps represent two variables. In these cases, each variable has been grouped as above and each SA2 assigned a relative score from one to five for each variable. These scores are then summed.

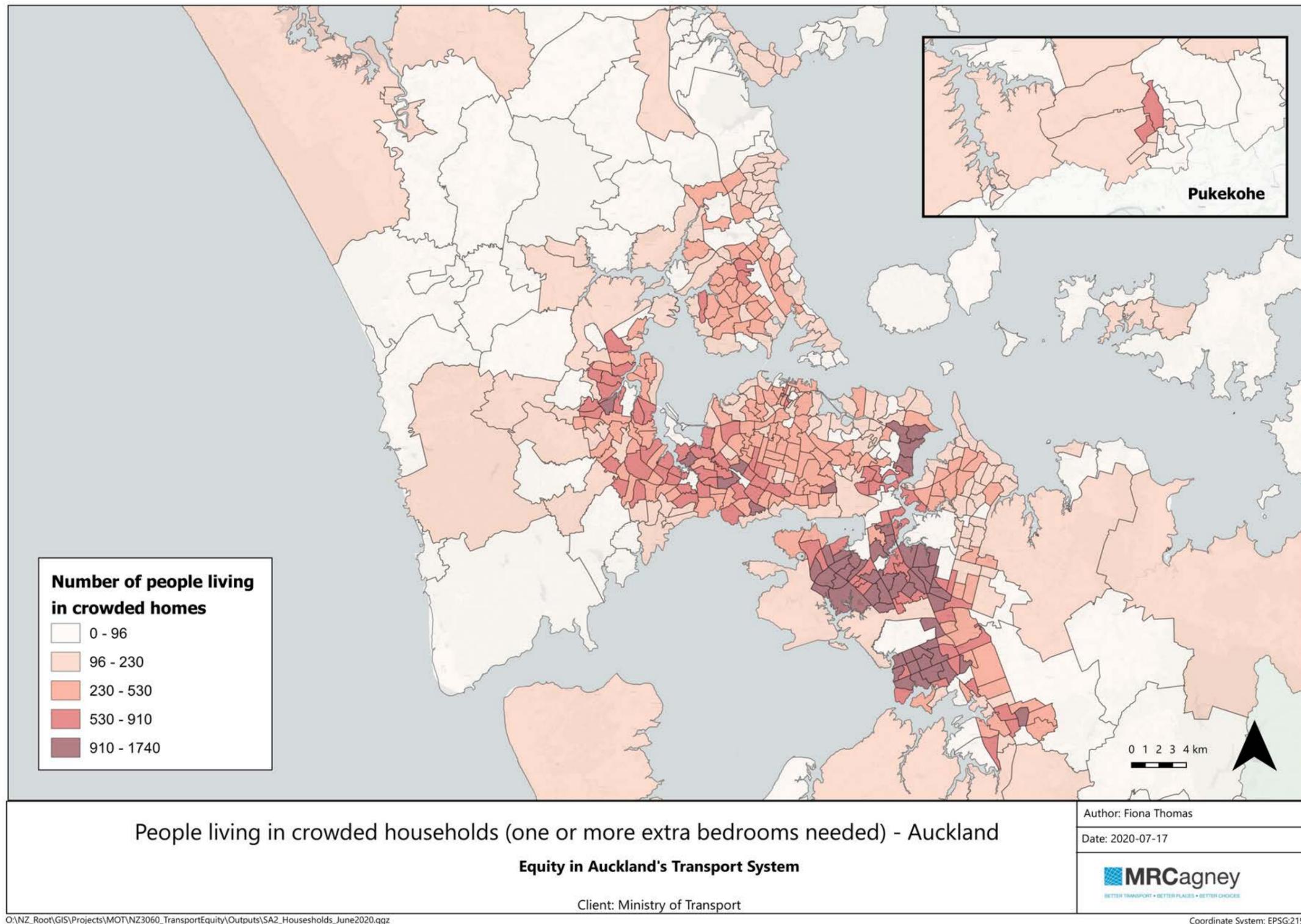
Symbology for areas of greatest need

- If there is one variable, SA2s above the 90th percentile in terms of that variable are shaded most darkly
- If there are two variables, SA2s above 90th percentile in both measures are shaded most darkly (i.e. those with a score of 10)

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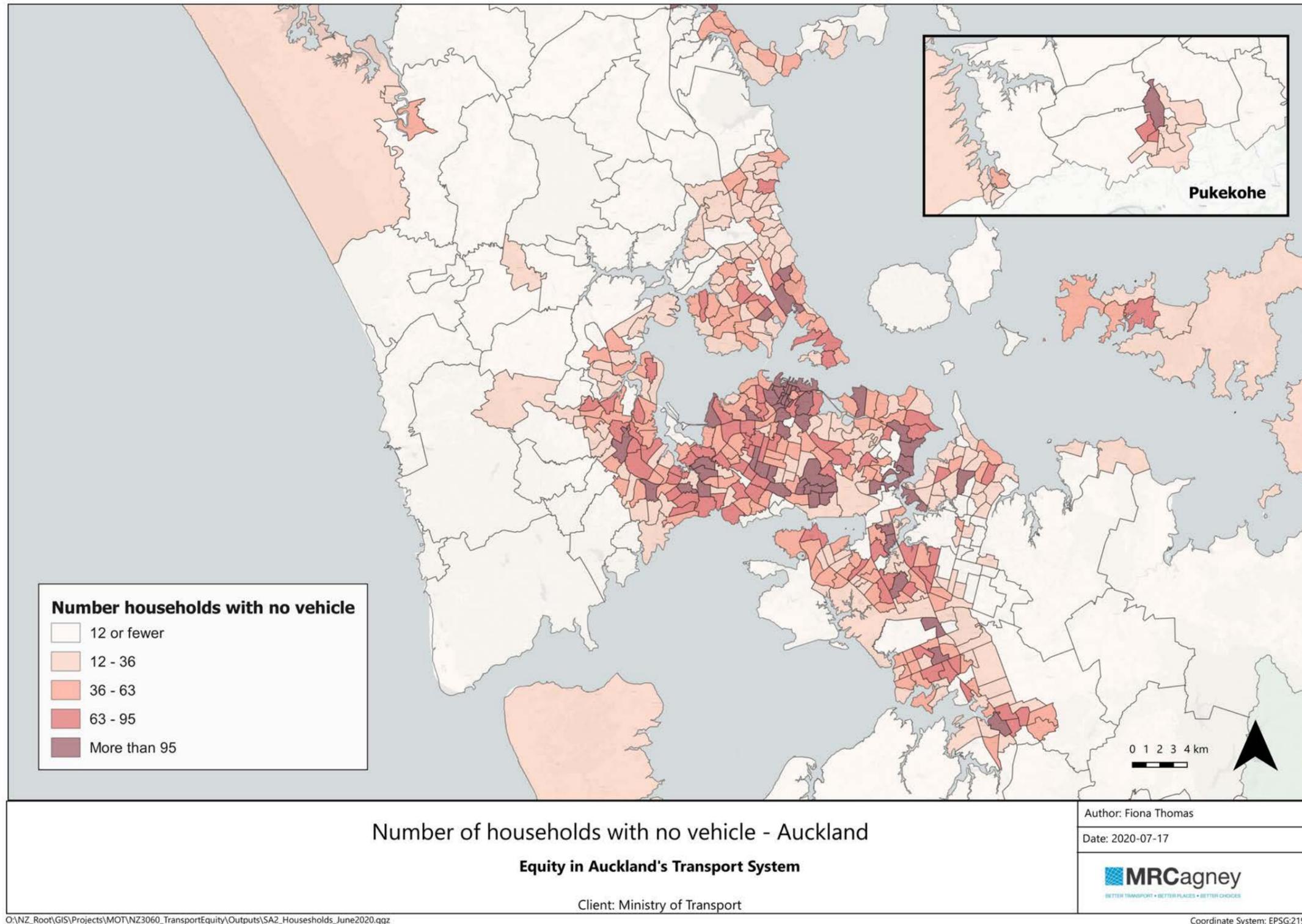


People living in crowded households (one or more extra bedrooms needed) - Auckland

Equity in Auckland's Transport System

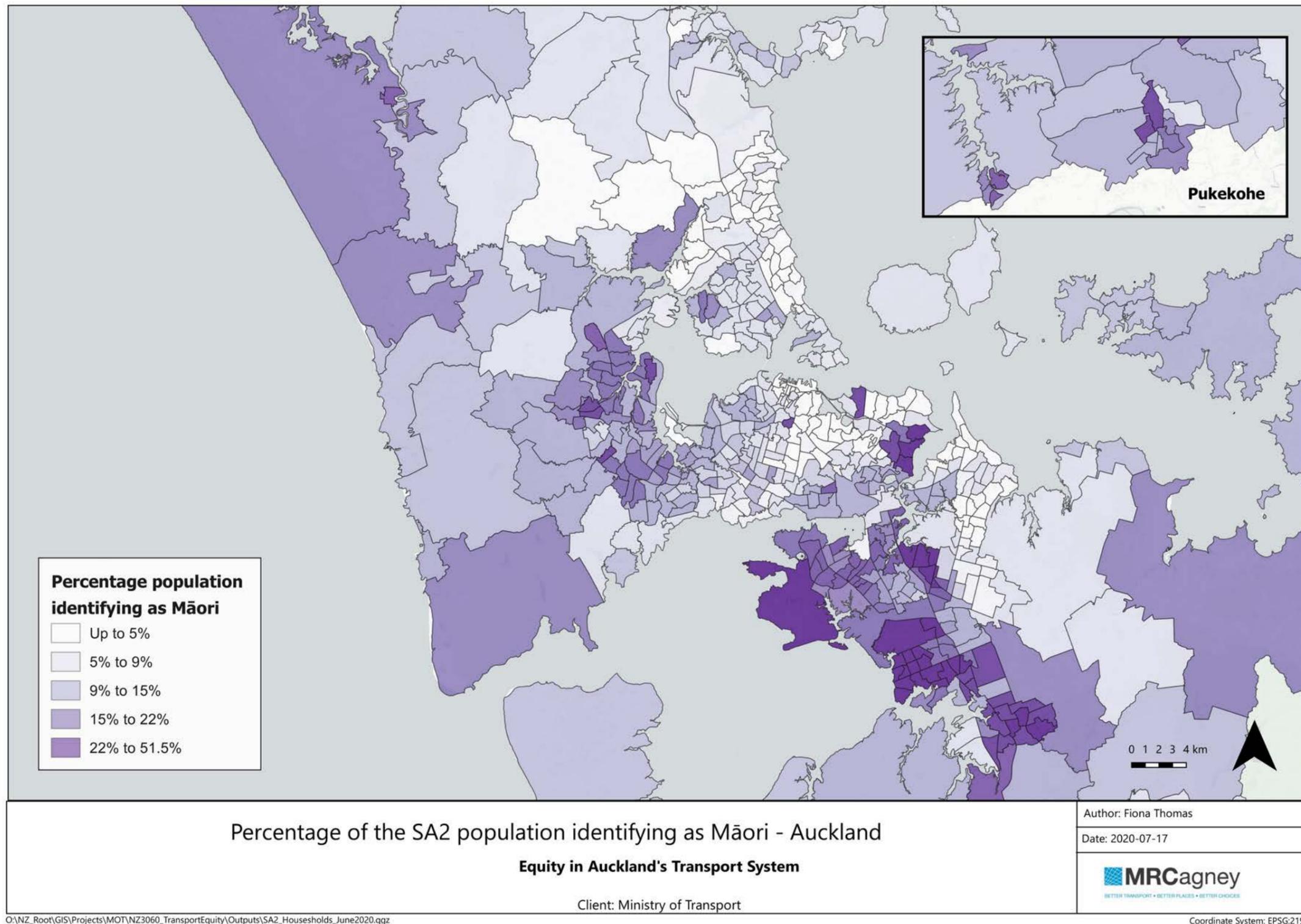
Client: Ministry of Transport

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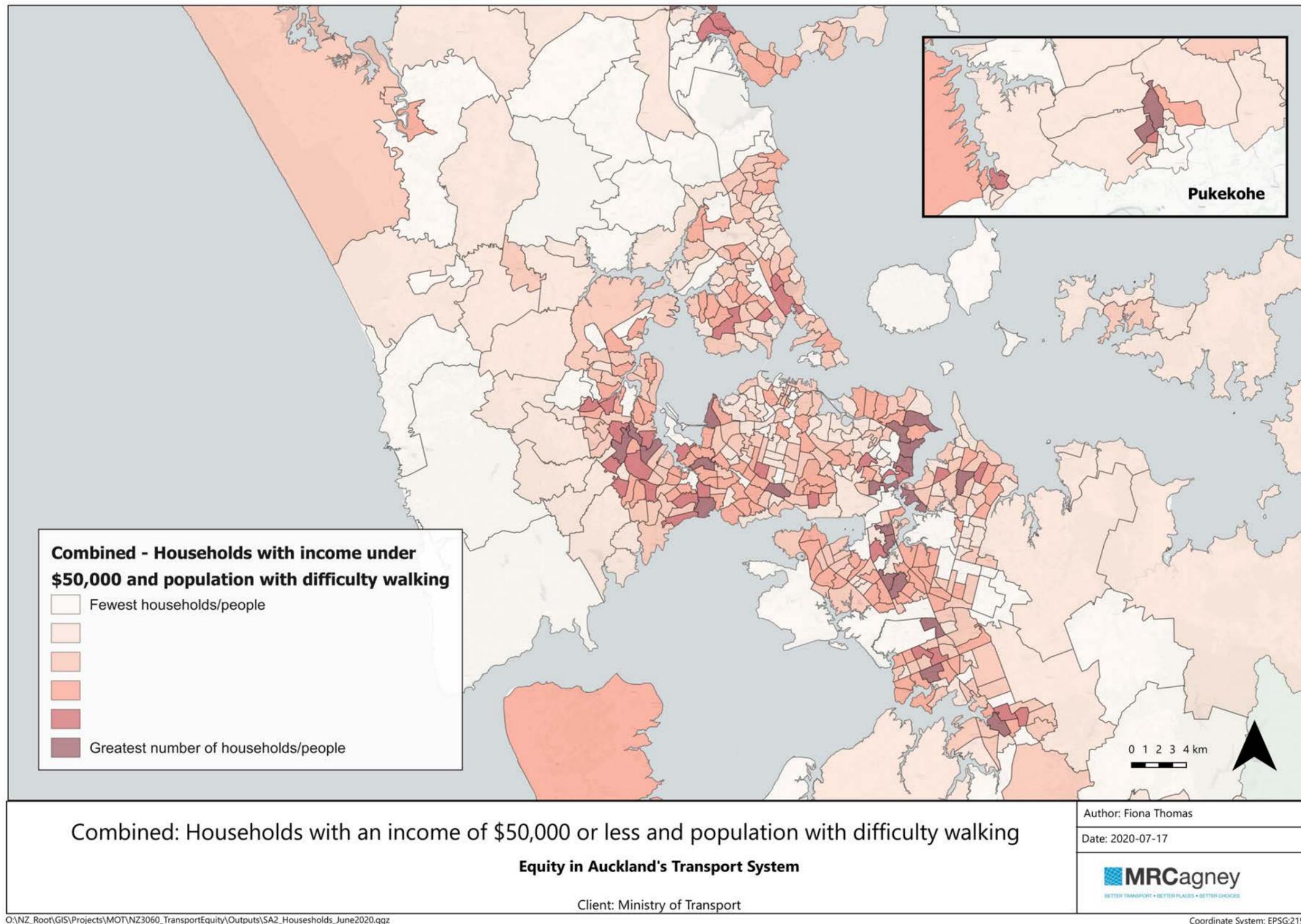


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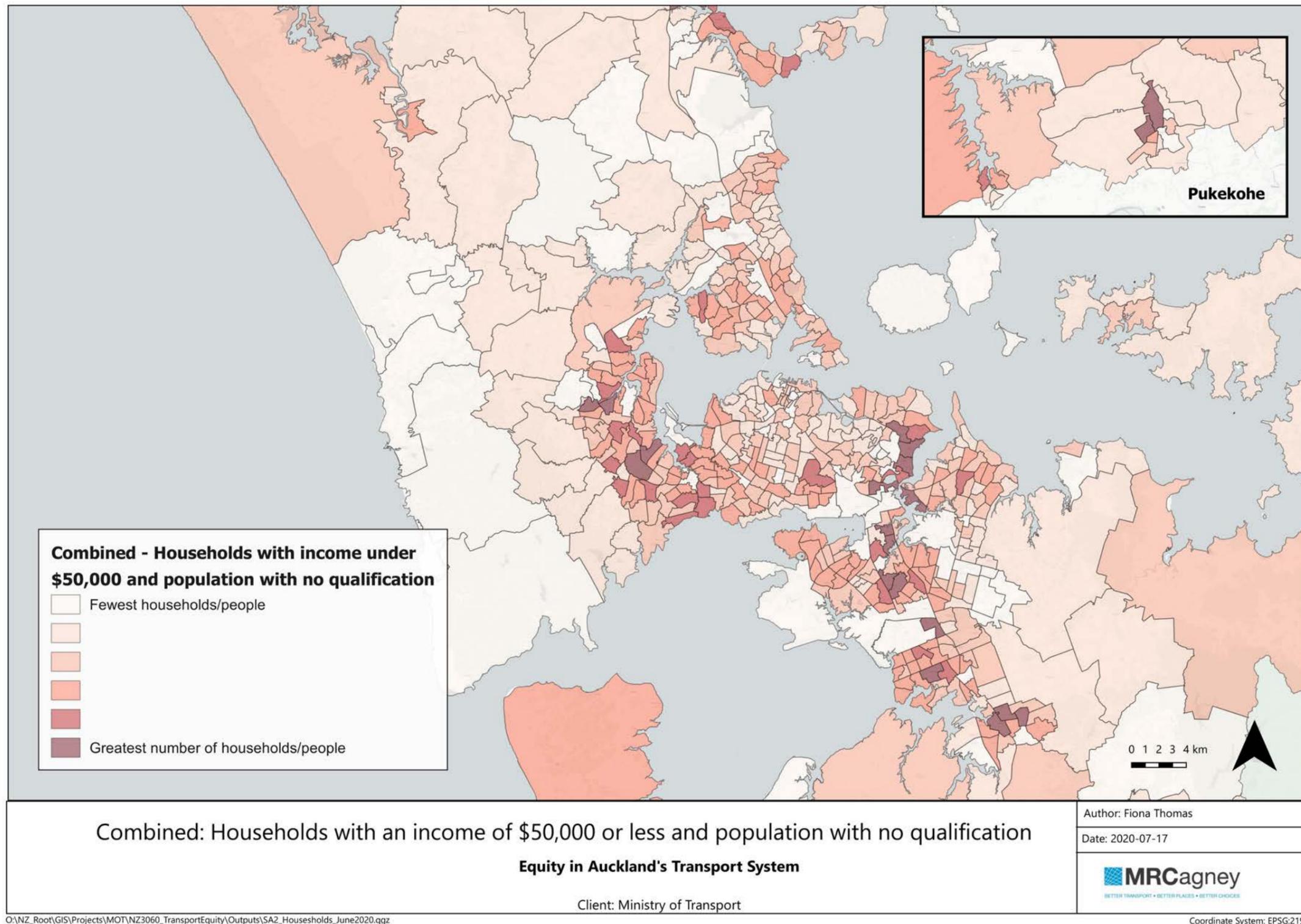
APPENDIX FOUR - MAPS



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