TE MANATŪ WAKA
MINISTRY OF TRANSPORT

Government Policy Statement on Land Transport 2018 Annual Report (Year 3)

Te Tauākī Kaupapa Here a te Kāwanatanga mō ngā waka whenua Ripoata ā-tau 2018 (Tau tuatoru)

TE MANATŪ WAKA
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For more information

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Summary of Findings

This is the third (and final) annual report on the Government Policy Statement on land transport (GPS) 2018. It reports on collective progress across agencies against the overall delivery of GPS objectives, using a series of input, output and outcomes measures.

This report illustrates trends for the measures between 2018/19 and 2020/21. More comprehensive analyses of the effects and impacts of GPS 2018 investments are covered in an outcomes evaluation currently underway. Below is a brief overview of the main findings in this annual report for each priority areas assessed:

Safety:

- Compared with 2018/19, the number of reported road death and serious injuries (DSIs) temporarily decreased by 13 percent in 2019/20. While COVID-19 has had an impact on reducing DSIs, the figures for 2020/21 suggest the impact is fading, with an eight percent increase in DSIs from the previous year.
- The number of road crash and active travel-related hospitalisations had decreased between 2018/19 and 2019/20, but has been followed with a ten percent increase in 2020/21.
- The number of walking and cycling-related ACC entitlement claims has been stable from 2018/19 to 2020/21.

Access:

- The proportion of jobs accessible by transport and the proportion of people who can access to various essential services has remained stable between 2019/20 and 2020/21.
- During the 3-year period of GPS 2018, approximately 253 network kilometres of walking and cycling facilities were completed across the total land transport network.
- Public transport boardings decreased by 13 percent, from 139 million in 2019/20 to 120 million in 2020/21. There has been a six percent decrease in SuperGold boardings from 2019/20 to 2020/21.

Environment:

- The national total of greenhouse gas emissions from land transport have increased by 11 percent, from 10,813 kilo tonnes of CO_2 in 2016 to 12,002 kilo tonnes of CO_2 in 2020.
- The amount of harmful emissions emitted into the atmosphere each year from land transport has remained relatively consistent between 2016 and 2020, with 7.8 kilo tonnes of NO_2, 2.4 kilo tonnes of PM10, and 1.5 kilo tonnes of PM 2.5 emitted from land transport in 2020.

Value for Money

- Some of the 2020/21 value for money measures were unable to be reported on due to changes to the way that data are inputted and extracted from Waka Kotahi's Transport Investment Online System.
- The outcomes evaluation for GPS 2018 will provide more insight into value for money. Going forwards, Waka Kotahi and the Ministry will work together to develop a robust method for reporting the value for money measures for future years.

It must be noted that it is not possible to directly attribute any changes in outcomes to spend. Many alternative explanations must be taken into consideration, including the impacts of COVID-19. Likewise, the benefits from investment may take time to realise fully.

1. Introduction

This is the final annual report on the Government Policy Statement on land transport (GPS) 2018. It reports on collective progress of Waka Kotahi New Zealand Transport Agency, Te Manatū Waka Ministry of Transport, KiwiRail, Police, local governments and regional councils, against the overall delivery of GPS objectives, using a series of input, output and outcomes measures (see Appendix A).

1.1. Purpose

Te Manatū Waka is responsible for the production, monitoring and evaluation of the GPS. This includes assessing 1) how well the allocation of investment expenditure by GPS activity class aligns with the outcomes sought and 2) whether such investment delivered the intended results. Regular and fit-for-purpose reporting of the delivery of the GPS provides an evidence-base for understanding how well the GPS affects various outcomes (both intended and unintended) and making more informed future investment decisions.

1.2. GPS Monitoring & Evaluation Programme

This report falls under Te Manatū Waka's GPS Monitoring and Evaluation programme, which covers evaluations of GPS related investment and related research. The key purposes of the Monitoring and Evaluation programme are to develop a culture that embeds evaluation into its policy life cycle and improves the quality and efficiency of evaluation activities. Te Manatū Waka achieves these by working closely with internal and external stakeholders.

The GPS Monitoring and Evaluation programme has predominately focused on monitoring during the first couple of years, mainly to build a good baseline representation of the transport system. There has, thus far, been minimal analysis and interpretation of any trends or results. More comprehensive analyses of the effects and impacts of GPS investments are being developed and built on through the ongoing, structured monitoring and evaluation programme. This includes an outcomes evaluation of GPS 2018 and a separate evaluation on mode shift currently underway.

Since 2018, we have completed a review of the approach to assess and evaluate value for money and a review on State highway maintenance.

1.3. Structure of the current report

This report is structured around the four strategic priorities within GPS 2018, using measures that were designed to allow for the monitoring and reporting of each of the strategic priorities The measures used in this report are not intended to provide a comprehensive picture of the performance of investment across different parts of the transport system, but rather give a reasonable indication of progress and delivery. It is important to note that all GPS measures can be influenced by a wide range of factors and that the impacts of some measures may be more important or significant than others, depending on the points of reference used and future states desired. This report intends to provide a measured view of what GPS 2018 has delivered against the priorities.

1.4. Caveat

It must be noted that it is not possible to directly attribute any changes in outcomes to spend. Many alternative explanations must be taken into consideration, including the impacts of COVID-19. Likewise, the benefits from investment may take time to realise fully.

2. Results on Safety

Safety objective: A land transport system that is a safe system, free of death and serious injury

New Zealand has committed to improve its road safety performance. Road to Zero – New Zealand's road safety strategy for 2020-2030, outlines a 10-year strategy to guide improvement in road safety. Road to Zero has set a goal of reducing the number of deaths and serious injuries (DSIs) on New Zealand roads by 40 percent by 2030 (from 2018 level).[1]

2.1. Deaths and serious injuries

Since February 2020, temporary but recurring COVID-19 restrictions were in place during various periods, including both nationwide and region-specific lockdowns. These restrictions affected population-wide travel patterns and may have temporarily reduced the exposure to crash risks due to the drops in the number of trips taken, total distance travelled, and the reduced interactions between road traffic.

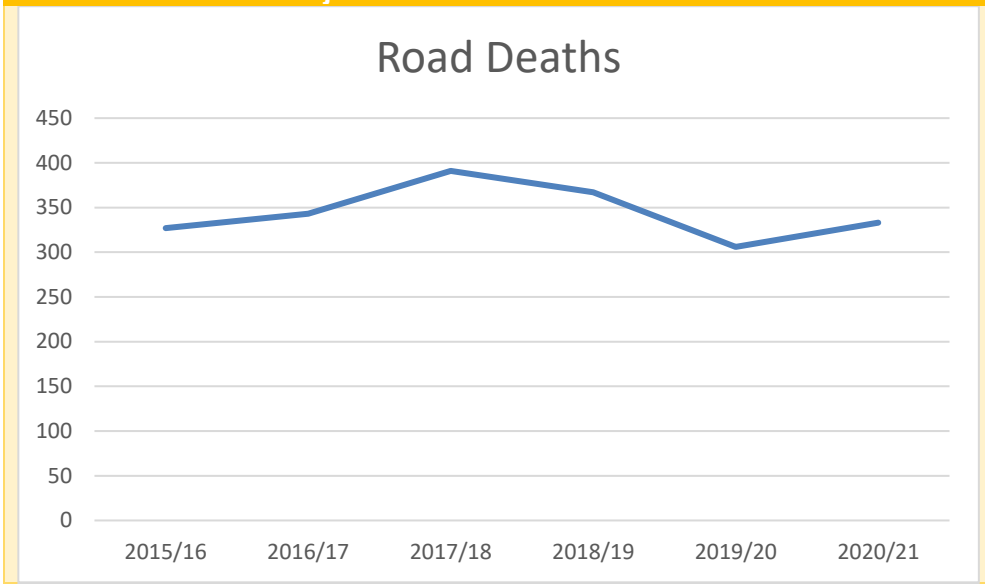
Compared with 2018/19, the number of reported road death and serious injuries (DSIs) temporarily decreased by 13 percent in 2019/20. While COVID-19 has had an impact on reducing DSIs, the figures for 2020/21 suggest the impact is fading, with an eight percent increase in DSIs from the previous year.

Similarly, the number of road crash and active travel-related hospitalisations had also decreased between 2018/19 and 2019/20, but has been followed with a ten percent increase in 2020/21. More specifically, there was a 20 percent increase in the reported number of pedestrian and cyclist DSIs in 2020/21 compared to 2019/20, as recorded in the Crash Analysis System (CAS) (see supplementary spreadsheet).

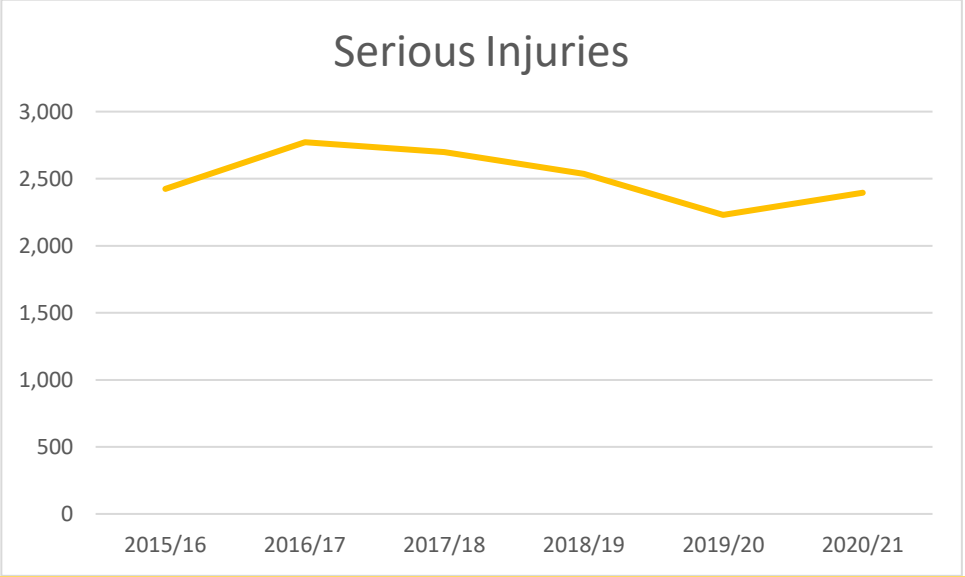
In contrast, the number of walking and cycling-related ACC entitlement claims has been stable over the last three years, although the ACC data also includes incidents where a motor vehicle was not involved.

[1] Ministry of Transport (2019). *Te Ara Ki Te Ora: Road to Zero.* Wellington: Ministry of Transport. Retrieved from: https://www.transport.govt.nz/area-of-interest/safety/road-to-zero/

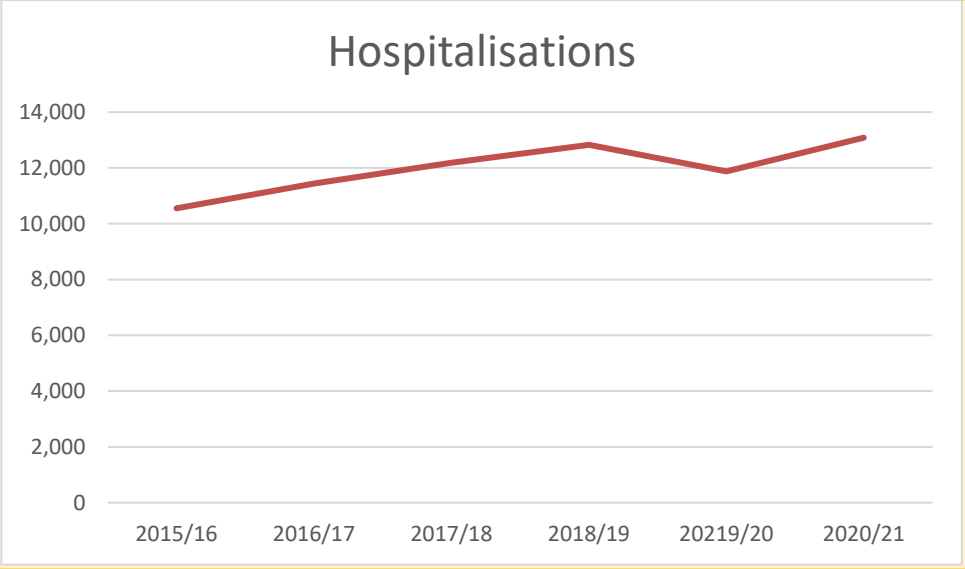
Deaths and serious injuries



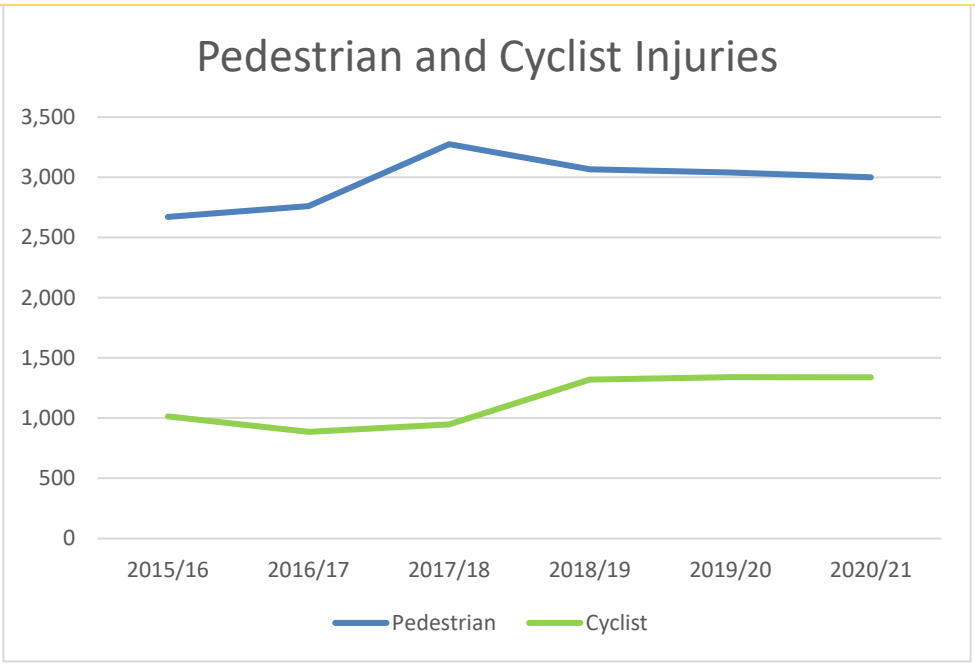
There was a total of 333 reported road deaths in 2020/21 (provisional). This represents a 9% increase from the previous year.



There was a total of 2,395 reported serious injuries in 2020/21 (provisional). This represents a 7% increase from the previous year.



There was a total of 13,083 hospitalisations in 2020/21. This represents a 10% increase from the previous year.



In 2020/21 there were 3,000 pedestrian-related and 1,338 cyclist-related ACC entitlement claims. The numbers were similar to the previous year.

This measure includes pedestrian and cyclist injuries that may or may not include a motor vehicle.

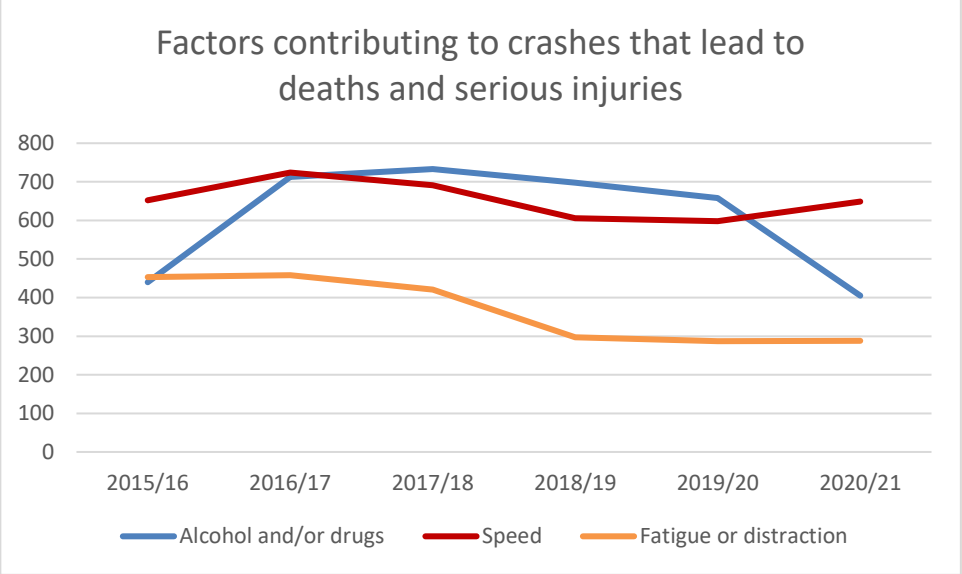
About these indicators

- Data on road deaths and serious injuries are from the Crash Analysis System (CAS), administered by Waka Kotahi. These includes crashes that were recorded by the Police in the form of Traffic Crash Record.
- Road deaths are defined as the instance where an injury or multiple injuries resulted in death within 30 days of when the crash happened. It does not include deaths that did not result from injuries sustained in the crash (e.g. when the coroner determines that a driver died from a heart attack), nor does it include suicide or murder. Only crashes that occurred on public roads are included. Pedestrians are only included where a motor vehicle was involved.
- Road serious injuries include fractures, concussions, internal injuries, crushing's, severe cuts, lacerations, severe general shock necessitating medical treatment, and any other injury requiring hospital detention or admission.
- Data on the number of people hospitalised are from the National Minimum Dataset (NMDS), administered by the Ministry of Health. Only incidents that occurred on public roads are included.
- Data on pedestrian and cyclist injuries are from the ACC injury claim statistics, administered by ACC. This is based on the number of new entitlement claims related to walking and cycling injuries accepted by ACC. It includes on-road incidents but does not include off-road walking and cycling activities such as mountain biking or bush walking. Entitlement claims are considered to cover moderate to serious injuries requiring entitlement beyond medical treatment only.

2.2. Road safety behaviour and attitudes

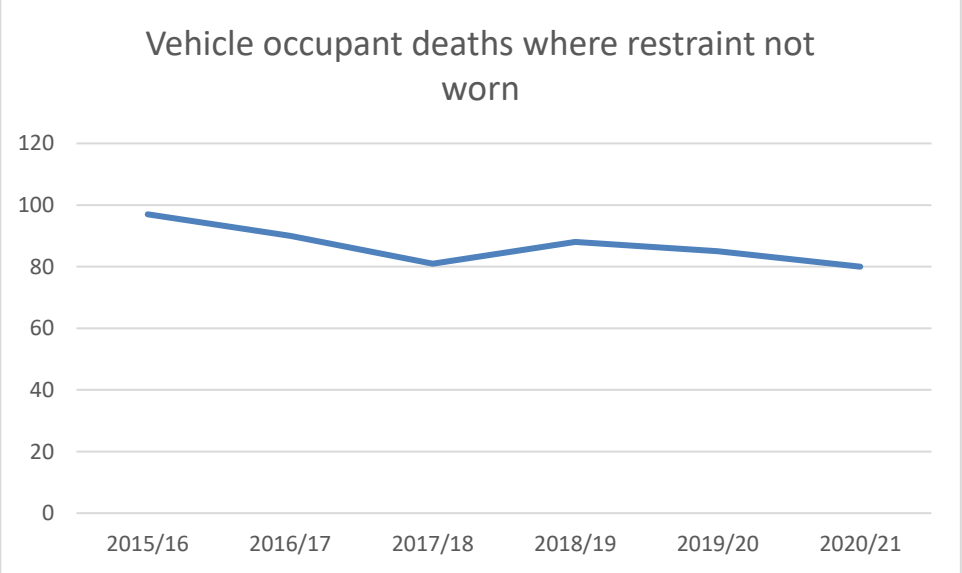
Our progress in this priority area is also tracked using a mix of road safety attitudinal and behavioural measures, based on crash data and self-reported responses collected using surveys. These measures provide more in-depth understanding of the contributing factors to deaths and serious injuries on roads, risk perceptions, and risk-taking behaviours.

Contributing factors to deaths and serious injuries



Speed and alcohol/drugs are both common contributing factors to deaths and serious injuries.

There was a 62% decrease in crashes that lead to DSIs related to alcohol/drugs.

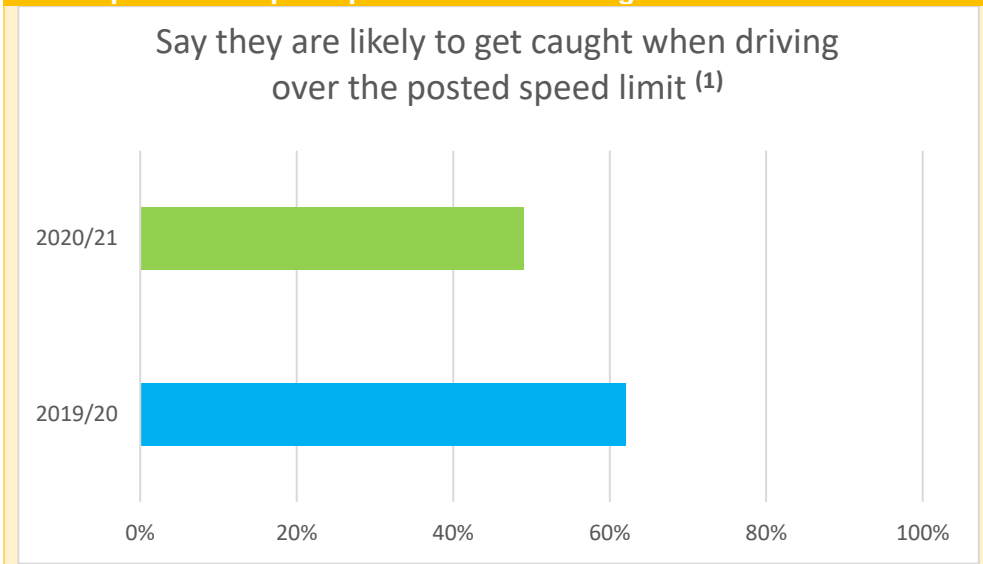


Although there was a 6% decrease in the number of vehicle occupant deaths attributable to lack of safety restraint in 2020/21, "restraint not worn" is still an important safety risk to address.

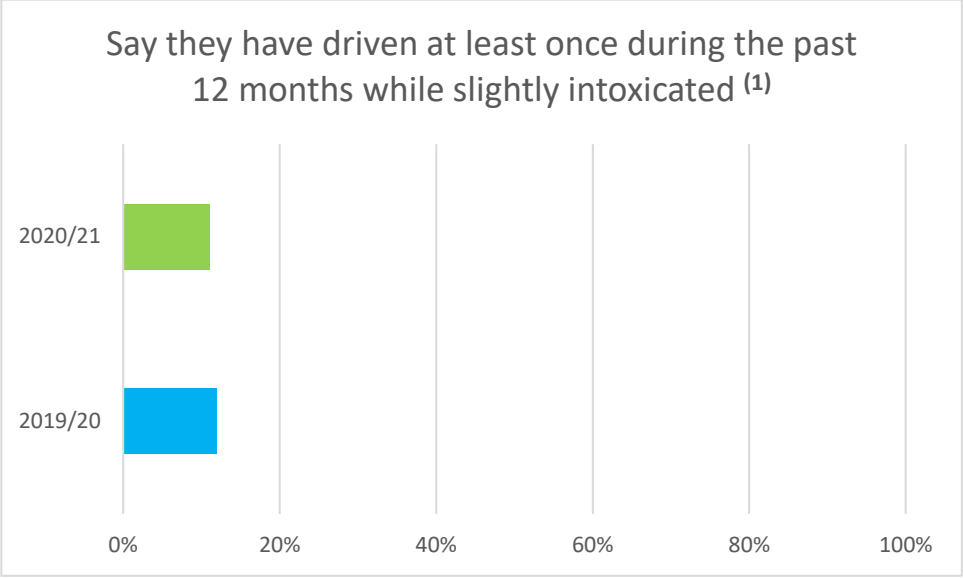
Data source: Crash Analysis System (CAS), extracted by Waka Kotahi.

These contributing factors are not mutually exclusive. On each crash report there may be several factors coded against each vehicle involved in the crash for driver or vehicle faults. In addition, there may be a number of factors coded on each report for faults of other road users, weather or other conditions. Prior to 2016, alcohol/drugs is listed as a factor when a driver's blood or breath alcohol level is above the legal limit, if drugs are proved to be in the driver's blood, or when the attending officer suspects that alcohol/drug consumption contributed to the crash. From 2016 officer suspicion is not included.

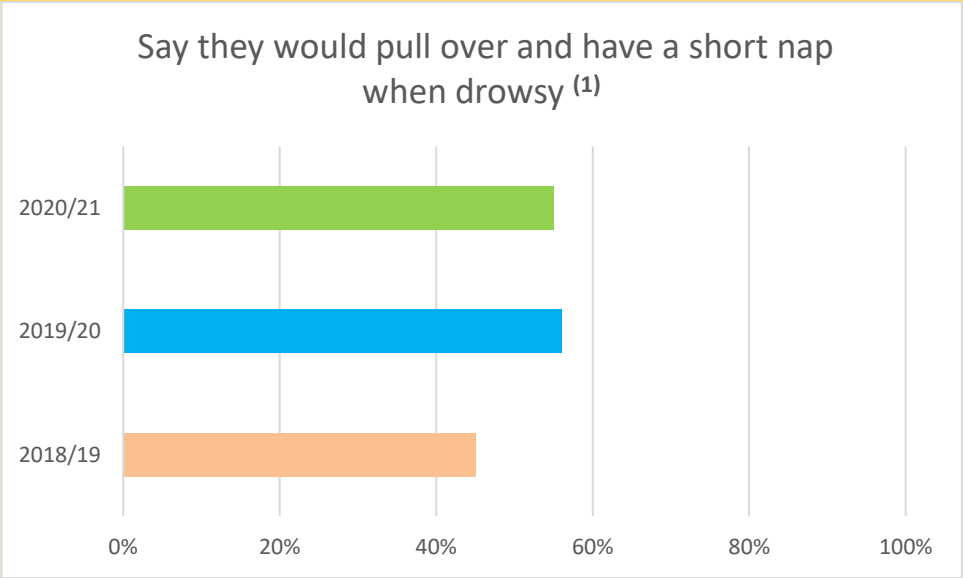
Self-reported risk perception and risk taking behaviours



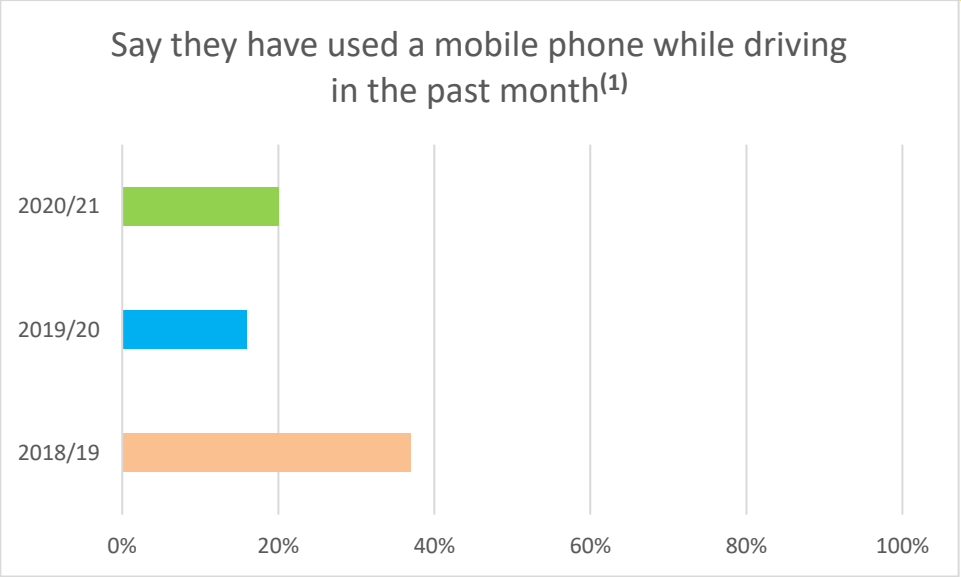
In 2020/21, 49% of people agreed that they were likely to get caught when driving over the posted speed limit. This represents a 13 percentage-point decrease from 2019/20.



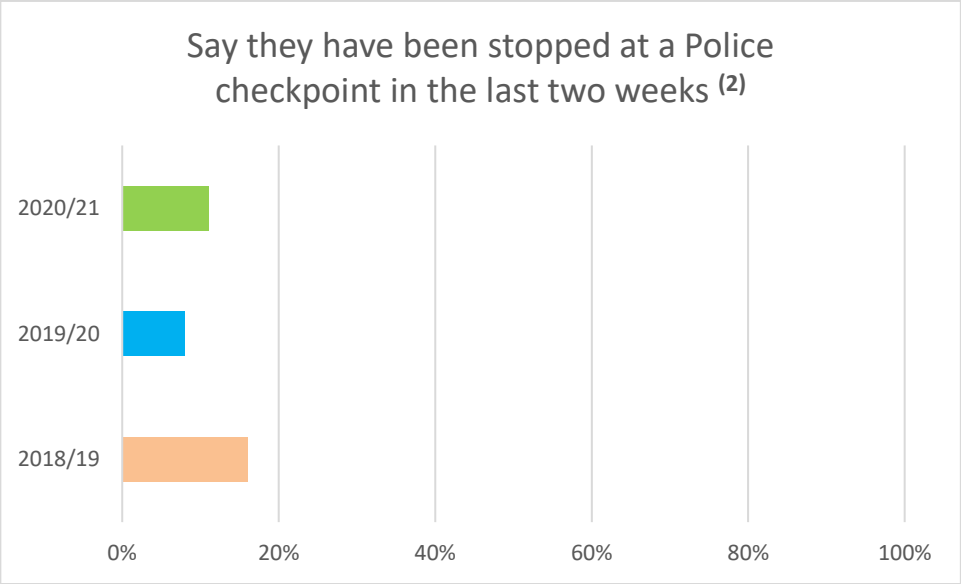
In 2020/21,11% of people said they have driven at least once during the past 12 months while slightly intoxicated. This is similar to the results from the previous year.



In 2020/21, 55% of people said they would pull over and have a short nap when feeling drowsy. This is similar to the results from the previous year.



In 2020/21, 20% of people said they have used a mobile phone while driving in the past month. That is an increase from the previous year (16%) but a considerable drop from 2018/19.



In 2020/21, 11% of people said they had been stopped at a police checkpoint in the last month, compared with 8% in 2019/20.

About these indicators

Data sources: **Waka Kotahi. Data come from:**

(1) the annual Public Attitudes to Road Safety. This survey includes 1,665 computer assisted telephone interviews (CATI), with a minimum of 100 interviews per region and broad target quotas for gender and age. The reported results are weighted to reflect the national population.

(2) Road Safety Advertising Performance and Outcomes. This is an online survey of approximately 6,000 people (1,500 per quarter) who hold a driving licence, with sample quotas to give sufficient numbers for key advertising audiences. The reported results are weighted to reflect the national population.

Note: A wider range of road safety related attitude data are available here: https://www.nzta.govt.nz/resources/public-attitudes-to-road-safety/

2.3. Speed and Infrastructure Programme

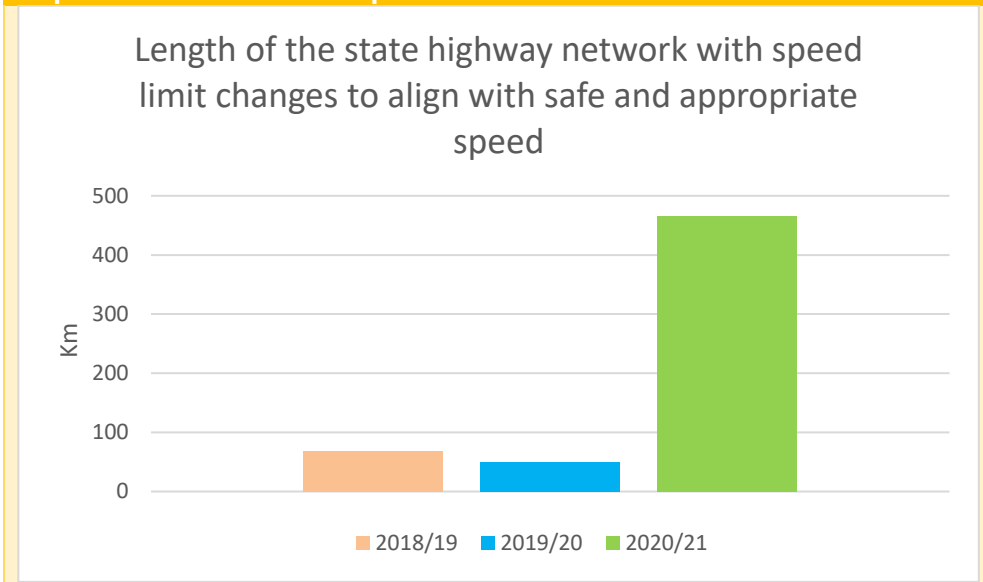
The Speed and Infrastructure Programme (formerly known as the Safe Network Programme) aims to create safer roads across New Zealand and subsequently reduce DSIs. This programme includes installation of median and side barriers, rumble strips, wider centrelines, roundabouts and reviewing speed limits to ensure they are safe and appropriate. These interventions aim to reduce the risk of head-on and run off road crashes, urban and rural intersection crashes, and harm to

vulnerable road users such as pedestrians and cyclists, particularly in urban areas.

Over the three-year period to 2021/22, a total of 584.2km of state highways had the speed limit modified to align with safe and appropriate speeds. A further 3,891km of local road has also experienced changes in the speed limits. The state highway network was upgraded with the following major interventions: 50km of median barrier and 260km of edge barrier, 82 intersection upgrades, 43 new raised safety platforms, and 36 railway level crossings safety improvements.

Considerable effort will be needed in future NLTP periods to accelerate the delivery of transformational[2] road safety interventions under the Speed and Infrastructure Programme to achieve the Road to Zero targets. More details will be reported in the Road to Zero Annual Monitoring Report 2021, to be released in mid-2022. Waka Kotahi, along with Te Manatū Waka, are committed to accelerating the delivery of this programme.

Improvement to the transport network



Over the past three years, approximately 584km of the State highway network has had speed limit changes to align with safe and appropriate speed.

***Data source*:** Waka Kotahi.

This tracks the length of the State highway network that has speed limit reductions completed to ensure travel speeds are safe at current or higher speed limits where appropriate. It does not include engineering interventions on road segments. This means the actual length of the network modified to align with safe and appropriate speed is actually higher. The full qualifying list of improvements is being scoped for inclusion in this measure in the future. Currently, sufficiently robust data remains unavailable to report on the length of local roads aligned with safe and appropriate speeds. Development of the National Speed Limit Register (also known as the Register of Land Transport Records) from which this data will be sourced is ongoing.

2.4. Road Policing

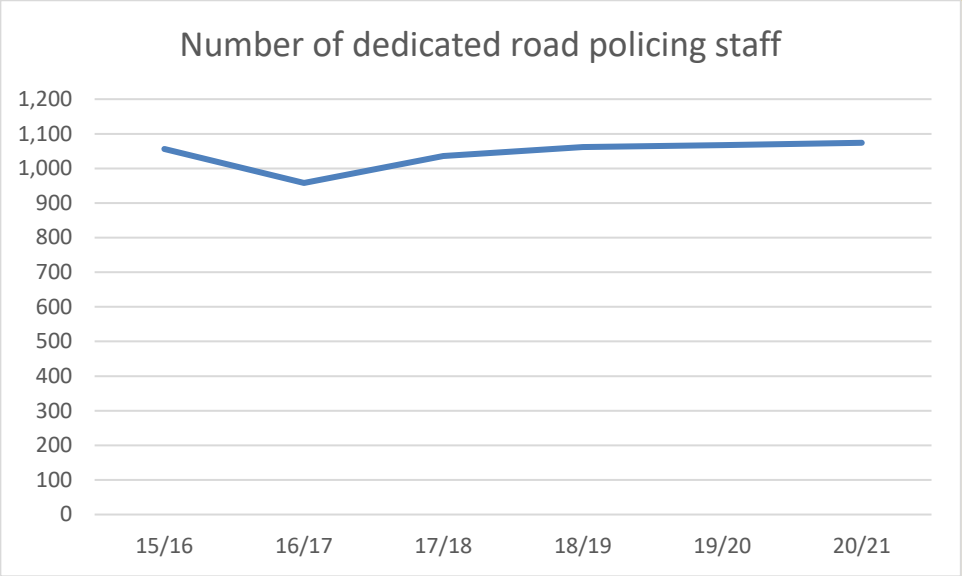
The 2019-21 Road Safety Partnership Programme signalled a greater focus on road policing. The number of dedicated road policing staff has been stable over the past three years. In 2020/21, there were 1,074 dedicated road policing staff, which is just over the target of 1,070. This measure, however, did not accurately reflect the actual enforcement efforts that were dedicated to road safety. A substantial number of frontline staff from across the Police, including road-policing staff, were re-deployed to COVID-19 related activities. These activities included operating regional

[2] Transformational refers to interventions that provide the highest alignment with Safe System outcomes, e.g. median barriers are a Primary intervention that transform the road network by providing physical separation and virtually eliminating the risk of head-on crashes, whereas a wide centreline is a supporting treatment that reduces risk and can be further treated with median barrier but does not provide physical separation or the same level of trauma prevention.

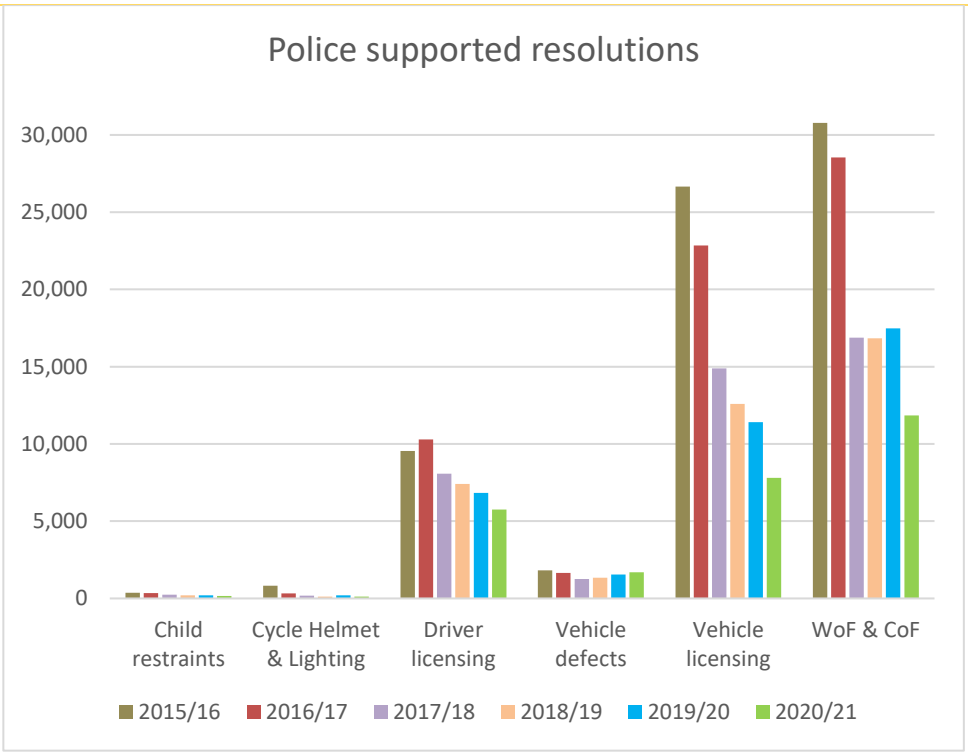
border checkpoints (predominately around the Auckland region), providing security at MIQ facilities, and increased community policing to ensure compliance with health orders. The impact of COVID-19 has put a strain on the Police's ability to deliver on key priorities of restraints, impairment, distraction and speed (RIDS), as outlined in the Road to Zero Action Plan. The Road to Zero Annual Monitoring Report 2021 details the performance of road policing before and during the COVID-19 pandemic.

Warrant of fitness, certificate of fitness and vehicle licensing infringements are the most frequently waived violations compared to other forms of violations. There has been a continuous drop in the number of infringements waived through Police supported resolutions, with the biggest drop between 2016/17 and 2018/19. COVID-19 related response further affected this measure, as a result of the amnesty periods on licensing and vehicle inspection and reduced check-point duties.

Road policing



The number of dedicated road policing staff over the past 6 years has remained steady with exception to 2016/17 which saw an approximate 10% decline compared to other years.



There has been a continuous drop in the number of infringements waived through Police supported resolutions.

***Data source*: NZ Police.**

Dedicated road policing staff refers to the constabulary and authorised officers at Districts and those at Police National Headquarters. The number of dedicated staff can vary over the year as the figures above only reflect the actual full-time equivalent values as of 30 June each year.
Police supported resolutions refers to infringements waived through the Police compliance process. Infringements are only waived if the issue leading to the infringement has been resolved to Police satisfaction. It is included here as a measure of effective Police enforcement as it requires a behavioural change before an infringement is waived.

2.5. Safer road use through appropriate education and promotion activities, and regulatory changes

All New Zealanders have a role to play in achieving the Road to Zero vision. Waka Kotahi is leading the development of an engagement and communications package to improve public understanding and acceptance of Road to Zero principles. The purpose of campaign is to encourage New Zealanders to support the overall Road to Zero strategy and the specific actions that will make roads in their communities safer and increase public understanding of the *Safe System* approach to reducing DSIs on the road. The performance of these activities captured in the Road to Zero outcomes framework.

3. Results on Access

Access objective: A land transport system that provides increased access to economic and social opportunities

Access is defined as people's ability to access essential services, and social and economic opportunities. Access can be achieved through the transport system which enables physical mobility, the land use system which brings people close to opportunities, and technology that allows people to access opportunities virtually.

3.1 Access to social and economic opportunities

In 2020/21, across all modes, the proportion of jobs accessible within a reasonable timeframe during the morning peak was similar to the level at the previous year. Access to jobs in relation to travel mode, is lowest by walking (five percent) and highest by private vehicle (45 percent)**.** Note that the measure refers to the proportion of jobs that are accessible, not the proportion of people who can access a job.

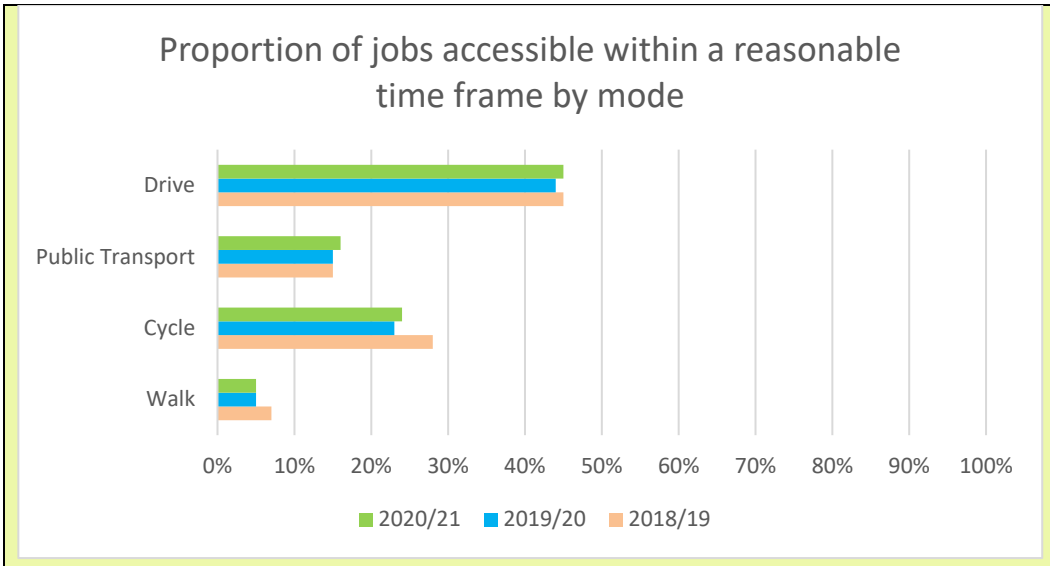
In terms of the proportion of people who can access various essential services (including education, health and grocery shopping), this measure uses the Census population in each Statistical Area 1 for analysis,[3] and the results for 2020/21 are similar to the previous year. In 2020/21, the average percentage of the population using each transport mode across primary schools, secondary schools, general practitioner ("GP") clinics, and supermarkets were:

- 95 percent of the population within 15 minutes drive time
- 53 percent of the population within 15 minutes by public transport
- 81 percent of the population within 15 minutes by cycling
- 44 percent of the population within 15 minutes by walking.

When it comes to the biggest barriers to access services and/or opportunities (i.e. not making a journey), the most commonly cited barriers among a sample of survey respondents were:

- Bad weather (26 percent)
- COVID-19 (23 percent)
- Health conditions/disability (20 percent)
- Family/caring responsibilities got in the way (18 percent)
- Cost (13 percent)
- Would have taken too long (12 percent).

[3] Statistics New Zealand (2021). Statistical Area 1 2021. Statistics NZ. Retrieved from https://datafinder.stats.govt.nz/layer/105162-statistical-area-1-2021-generalised/



In 2020/21, across all modes, the proportion of jobs accessible within a reasonable timeframe was similar to the previous year.

***Data source*:** Waka Kotahi.

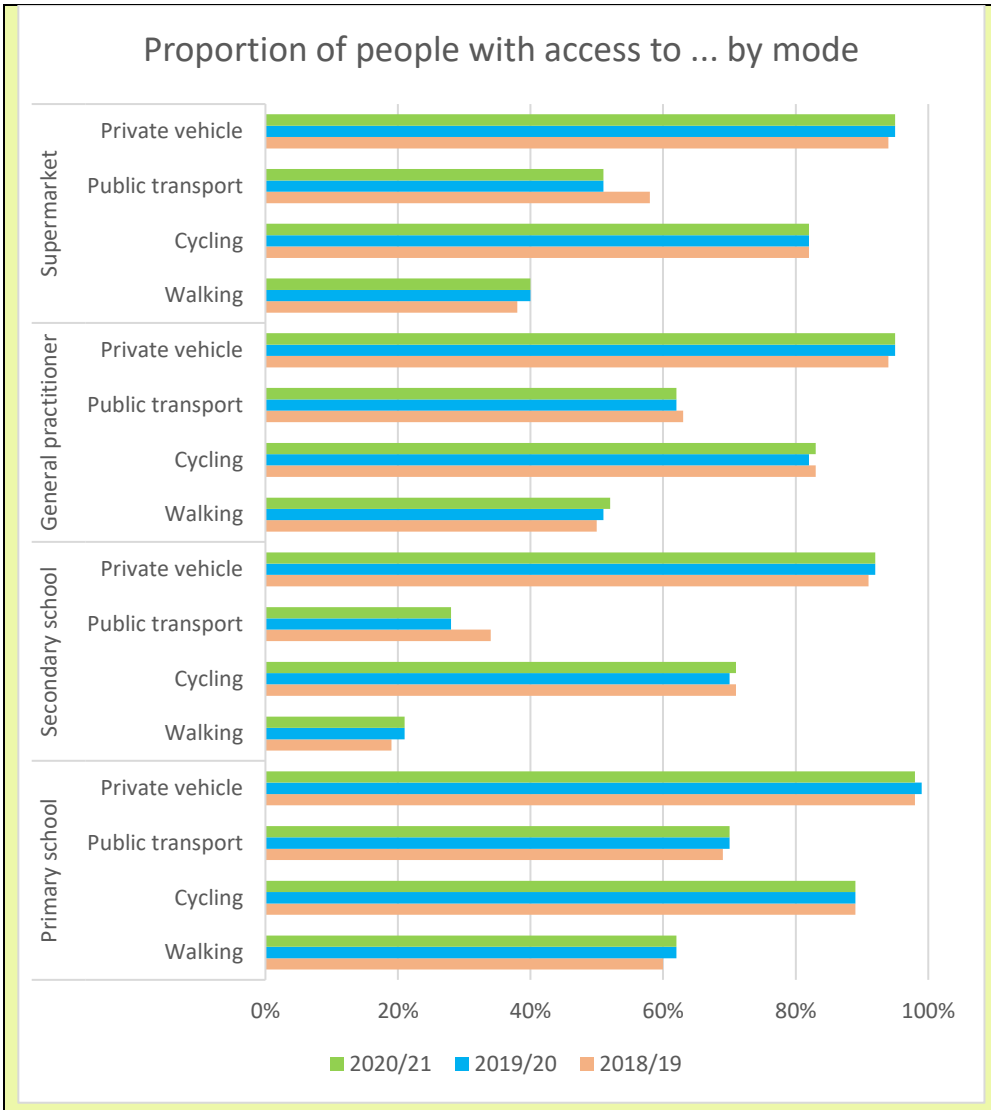
Job accessibility is defined as travel within a reasonable time during weekday morning peak. The figures for the proportion of jobs that can be reached within 45 minutes during morning peak is a snapshot of the land-transport system from 7am to 9am on a non-holiday in early March each year. For walking this is defined as 45 minutes, for cycling this is defined as 45 minutes door-to-door cycle time for a confident cyclist who is willing to cycle on the road, for public transport this is defined as 45 minutes and includes walking to/from the stop and both transfers and transit time, for driving this is defined as a 45-minute drive time including approximately 15 minutes to find a carpark and get to/from parked car to final destination.

	2019/20	2020/21
Proportion of recently built residential dwellings in major urban areas with access to frequent public transport services	9.5%	8.8%

The proportion has decreased to 8.8% in 2020/21.

Data source: Waka Kotahi.

Information comes from the MRCagney analysis of 2021 frequent PT (morning-peak frequent) at the beginning of March 2021 vs. building consents issued between July 2020 to March 2021. This information covers Auckland, Christchurch, Dunedin, Hamilton, Hastings, Napier, Palmerston North, Queenstown, Rotorua, and Tauranga, Wellington and Whangarei.



The proportion of people with access to essential services, by various modes, is similar to the previous year.

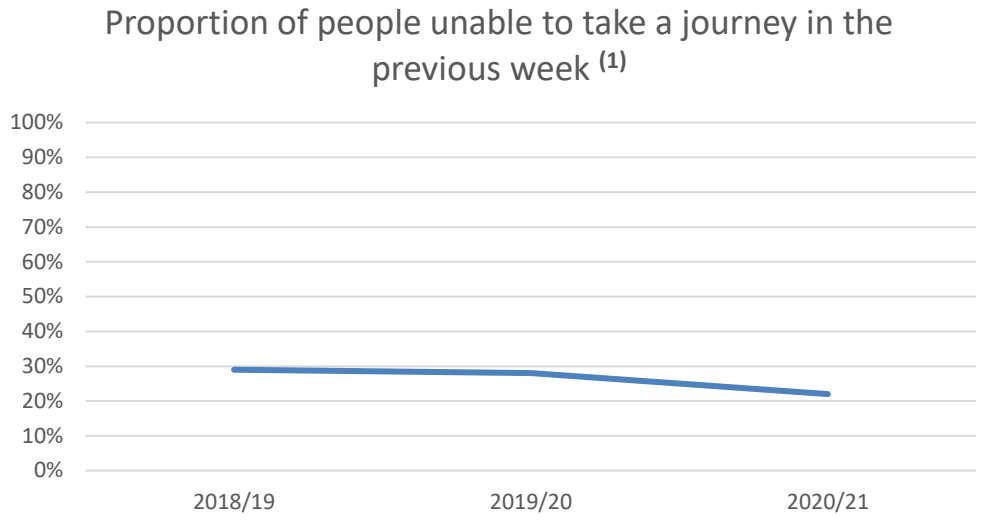
Data source: Waka Kotahi.

The figures for the proportion of population within 15-minute access to the nearest school, health facility and supermarket during morning peak is a snapshot of the land-transport system from 7am to 9am on a non-holiday in early March (before COVID-19 movement restrictions began).

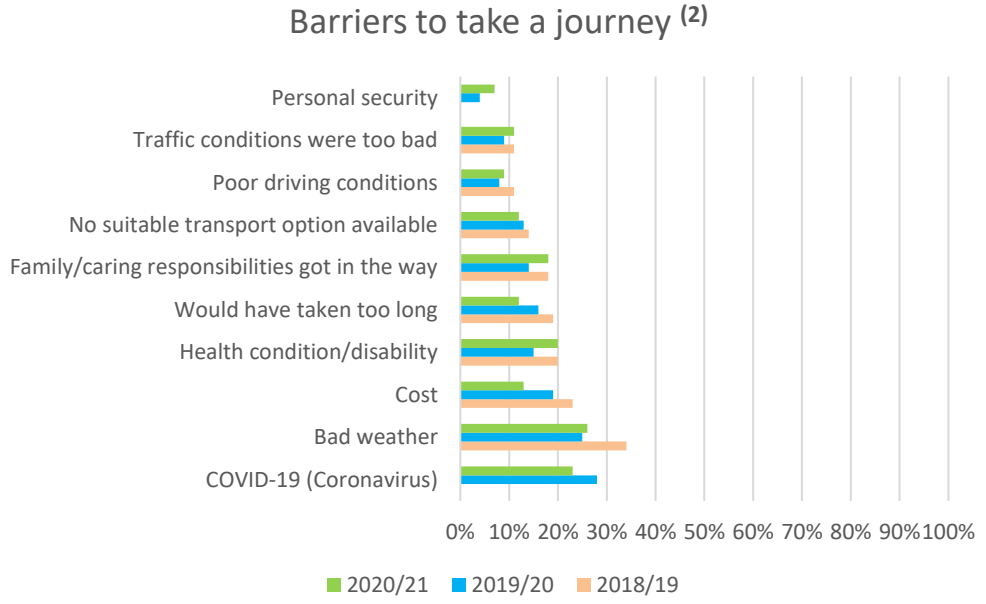
Last year, the method of calculating this measure has been changed from using Google API (via Connected Journey Solutions) to a whole-of-network analysis using freely available sources (General Transit Feed Specification files, Open Street Maps, and the TomTom network that Waka Kotahi owns).

Public Transport analysis only includes cities where electronic schedules could be obtained for 2019 and 2020, these include the following regional transport authorities: Auckland, Wellington, Christchurch, Waikato, Bay of Plenty, Hawke's Bay, Palmerston North, Timaru and Otago.

Data on locations were sourced from: general practitioner - Ministry of Health, supermarket - chain "store map" web pages (New World, Pak'nSave, Fresh Choice, Four Square, Countdown, SuperValue), schools - Education Counts Facilities Dataset (note that this included state schools but excluded private schools and state-integrated schools).

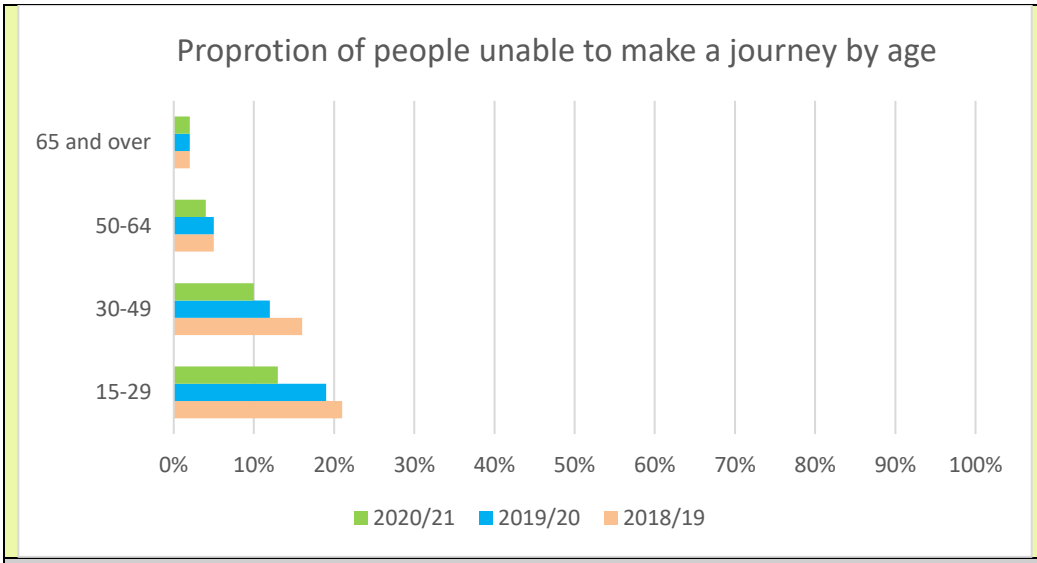


In the past three years, there has been a continuous decrease in the proportion of people who were unable to take a journey in the previous week due to various barriers (from 29% in 2018/19 to 22% in 2020/21).



Whilst COVID-19 continued to be one of the major factors for not making a journey in 2020/21 (down from 28% to 23%), bad weather had the biggest impact, affecting 26% of people.

Among those who indicated they were unable to take a journey in the previous week, the most frequently cited trip purpose was shopping, followed by commuting to work.



In the past three years, there has been an overall decrease in the proportion of people unable to make a journey, with the most pronounced changes among those aged 15-29 and 30-49.

Data source: Waka Kotahi Customer Experience and Behaviour Journey Monitor Survey.

(1) COVID-19 is likely to have had a considerable impact on other (non-Covid) response options. The majority of those who said they didn't travel due to COVID, did so due to the official travel restrictions and concern about catching the virus. This reasoning is likely to render other considerations/barriers (such as costs, mode options etc.) irrelevant.

(2) Respondents could choose multiple barriers. Figures represent the proportion of surveyed respondents who were unable to take a beneficial journey in the previous week because of cost, 'would have taken too long', 'no suitable transport option available' and 'traffic conditions too bad'.

(3) People could have had more than one purpose for their missed journey, for example, people who couldn't undertake a commute to work normally said that they would have 'gone to work' and would have 'gone home'. The drop in figures for trips that would have been undertaken to go home and to go to work would have been affected by changes in work arrangements due to COVID-19.

3.2 Mode Share

Mode share is an important measure to understand people's current travel behaviour, and to track modal shift. Being able to measure mode share is also useful for understanding the safety and environmental impacts as people shifting to safer and greener transport options such as public transport. Results tabulated in this section are those of the respondents of the periodic Household Travel Survey, rather than of New Zealand.

The 3-year average (2017/18 – 2019/20) from the most recent Household Travel Survey showed that, over 80% of trips (measured by trip legs or time spent travelling) are made as a driver or a passenger in a private car or van.

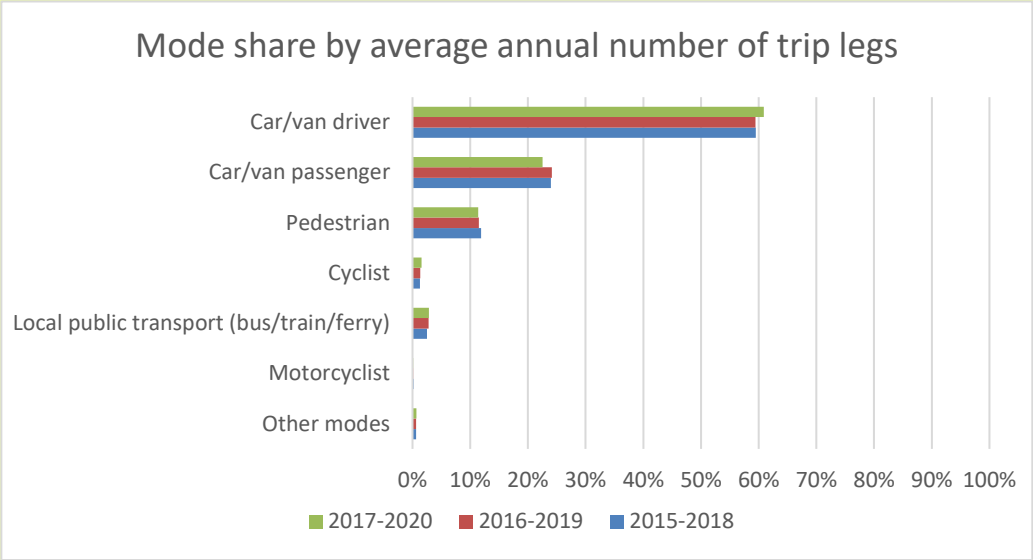
Active travel is more likely to be used for shorter trip legs than for longer trip legs:

- 20% of trip legs under 2km are by walking, and 2% are by cycling
- 3.6% of trip legs between 2-5km are by walking and 2.0% are by cycling
- Of trip legs longer than 5km, less than 1% are completed by walking or cycling.

Mode share

Mode share (%) by average annual number of trip legs:

	Car/van driver	Car/van passenger	Pedestrian	Cyclist	Local public transport	Motorcyclist	Other modes
2017-2020	60.9	22.5	11.4	1.6	2.9	0.1	0,7
2016-2019	59.4	24.1	11.5	1.4	2.8	0.2	0.6
2015-2018	59.5	24.0	11.9	1.3	2.5	0.2	0.6



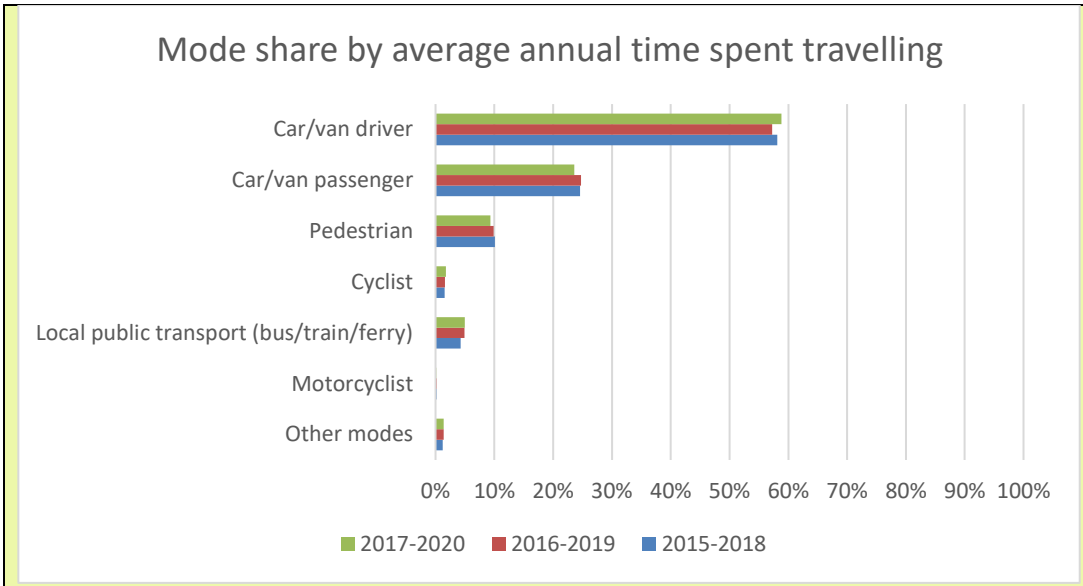
83% of all trip legs[4], are by car (either as a driver or passenger).

Mode share (%) by average annual time spent travelling:

	Car/van driver	Car/van passenger	Pedestrian	Cyclist	Local public transport	Motorcyclist	Other modes
2017-2020	58.8	23.6	9.3	1.8	5.0	0.2	1.4
2016-2019	57.3	24.7	9.9	1.6	4.9	0.2	1.4
2015-2018	58.2	24.6	10.1	1.5	4.3	0.2	1.2

82% of time spent travelling is by car (either as a driver or passenger).

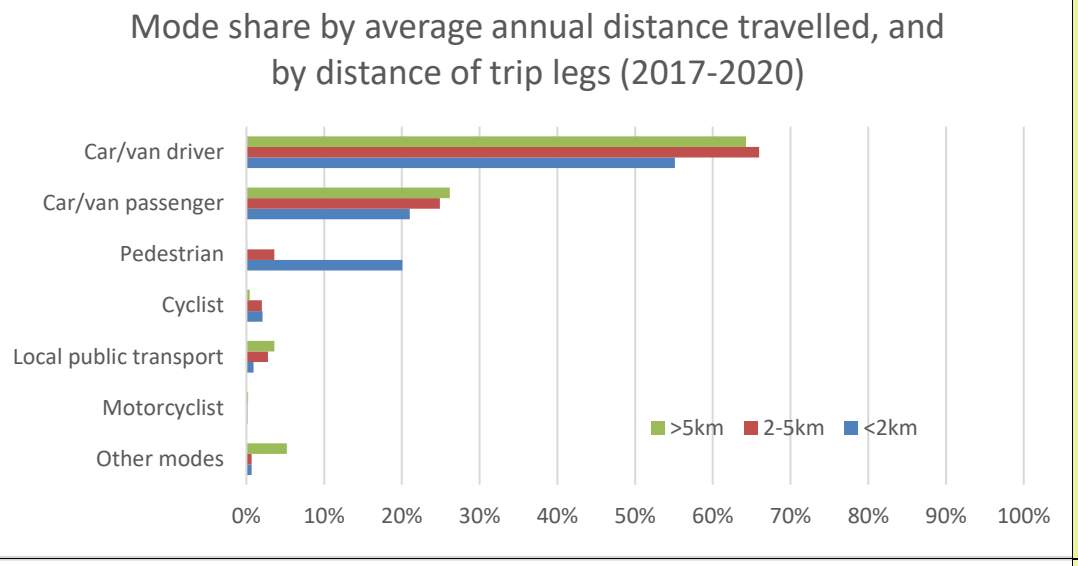
[4] See the Household Travel Survey glossary for a definition of trip legs and other terms.

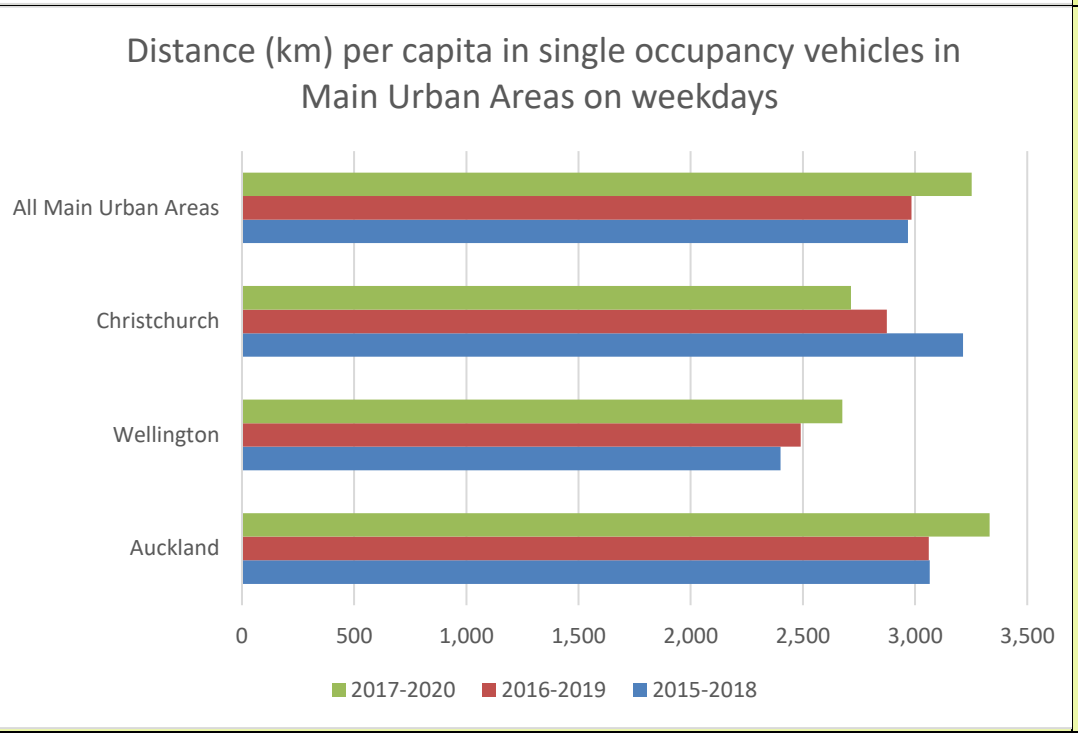


Mode share (%) by average annual distance travelled, and by distance of trip legs:

2017-2020	Car/van driver	Car/van passenger	Pedestrian	Cyclist	Local public transport	Motorcyclist	Other modes
<2km	55.1	21.0	20.1	2.1	0.9	0.1	0.7
2-5km	65.9	24.9	3.6	2.0	2.8	0.1	0.7
>5km	64.3	26.2	0.1	0.4	3.6	0.2	5.2
2016-2019							
<2km	53.7	23.2	19.8	1.9	0.8	0.1	0.6
2-5km	64.7	26.7	3.5	1.6	2.7	0.2	0.6
>5km	63.8	27.6	0.2	0.4	3.7	0.2	4.1
2015-2018							
<2km	54.2	24.0	18.3	1.9	0.9	0.1	0.6
2-5km	65.4	26.4	3.5	1.4	2.6	0.2	0.5
>5km	65.0	26.8	0.2	0.4	3.0	0.2	4.3

Active travel is more likely to be used for shorter trip legs than for longer trip legs.





In 2017-2020, across main urban areas, New Zealanders travel an average of 3,252km on weekdays per year in single occupancy vehicles (i.e. as a driver with no passengers).

About these indicators

Data source: the **Household Travel Survey**, a face-to-face in-home survey with a nationally representative sample. This survey collects information on household travel, including travel to and from work but does not include travel as part of one's work (e.g. taxi driver, delivery drivers, tradespeople driving between jobs, travel to meetings etc.)
Given the low prevalence for some travel modes, mode share data is provided as a three-year average.

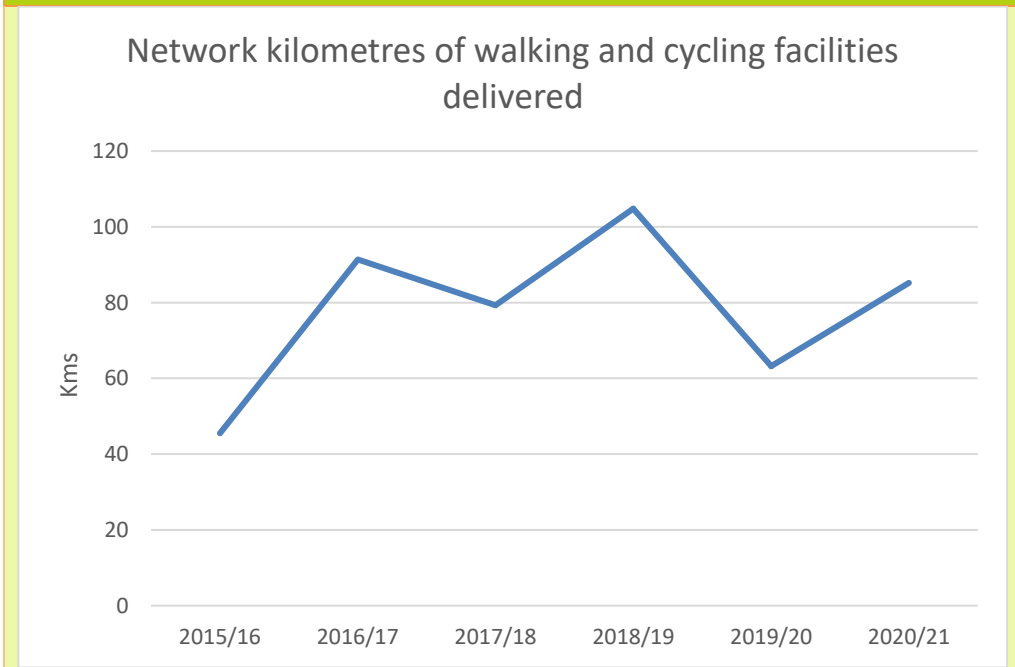
3.3 Active Mode

Network kilometres of walking and cycling facilities delivered, refers to the total length of new walking and cycling facilities added to the total land transport network, including lengths on existing pathways and cycle ways where improvements were made. During the 3-year period of GPS 2018, 253.2 network kilometres of walking and cycling facilities were completed. Other infrastructure developments were also undertaken to support the uptake and safety of active travel.

Investment in walking and cycling and key outputs

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Network kilometres of walking and cycling facilities delivered	45.5km	91.4km	79.3km	104.8km	63.2km	85.2km
Percentage of national cycling tourist routes completed	-	-	-	59%	59%	63%
Kilometres of national cycling tourist routes completed	-	-	-	5,450km	5,882km	6,244km
Percentage of Te Araroa at a roadside without a path	13%	14%	13%	14%	13%	13%

Active mode facilities

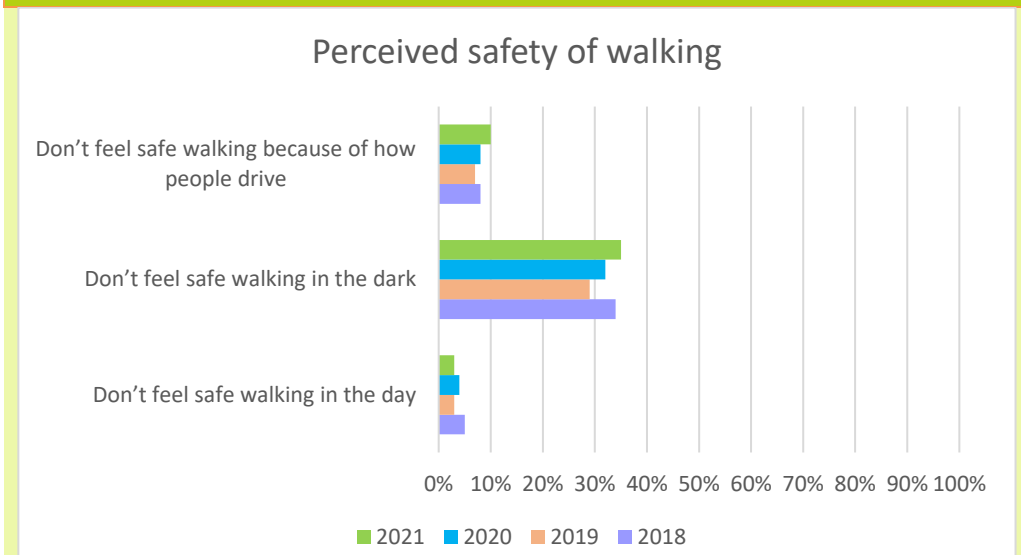


Over the past three years, approximately 253km of walking and cycling facilities have been delivered across the total land transport network.

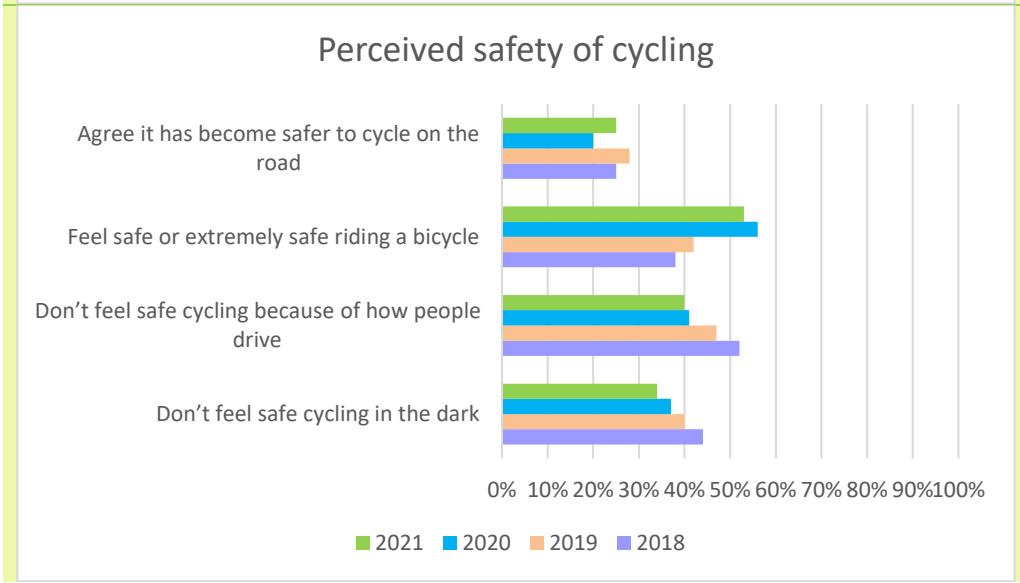
Data source: Waka Kotahi.

Note: Network kilometres of walking and cycling facilities delivered is the total length of new walking and cycling facilities added to the network during the year and includes lengths of existing pathways and cycle ways where improvements were made. This measure only captures those funded under the Walking & Cycling activity class, while walking and cycling facilities could be delivered in other activity classes.

Perceived safety of walking and cycling



In 2020/21, 35% of people said they did not feel safe walking in the dark. This represents a 3 percent-point increase from the previous year.

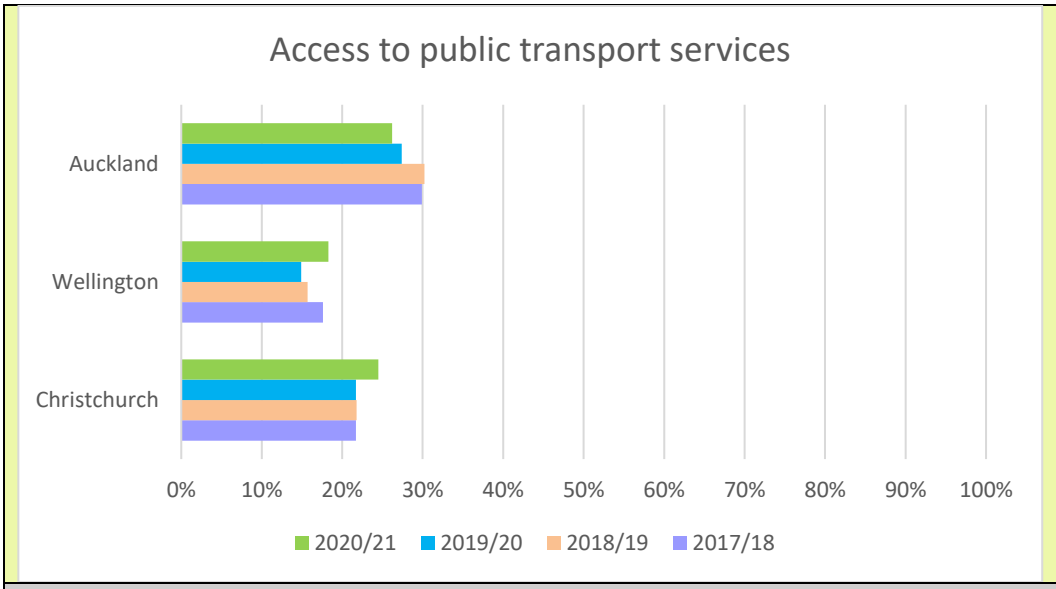


Perceived safety of cycling generally improved from 2020.

3.4 Public transport

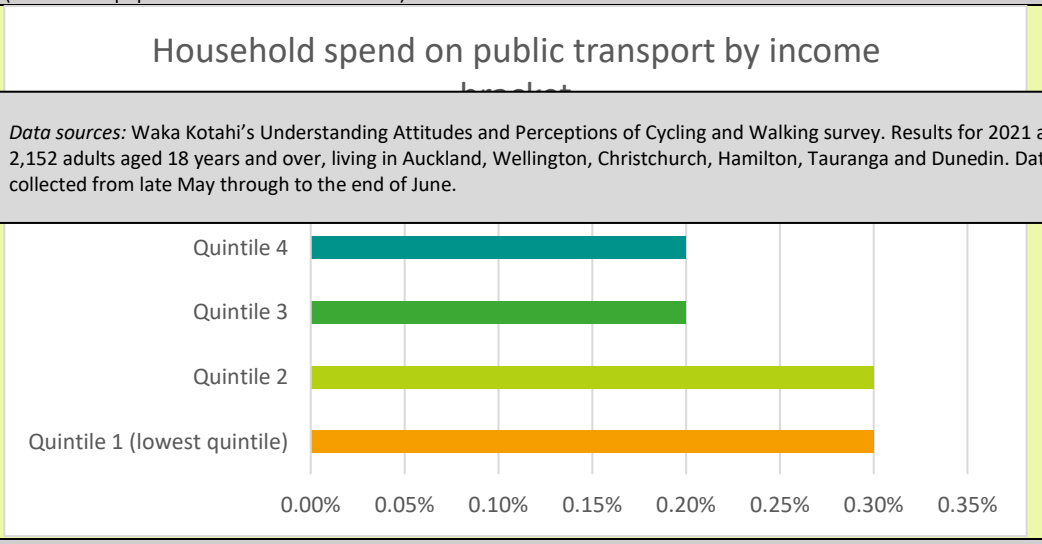
Prior to 2019/20, there had been an upturn in national public transport and Super-Gold Card boardings. However, public transport boardings have declined in the last two years (2019/20 and 2020/21). This trend holds at both national and regional level, and among Super-Gold Card holders. This may be primarily due to COVID-19 travel restrictions, increase in work from home practices, and precaution exercised by some people on possible risk of COVID-19 transmission on public transport.

Access to and usage of public transport



Access to public transport is highest in Auckland (26.2%), followed by Christchurch (24.5%) and then Wellington (18.3%).

Data source: Waka Kotahi. The data are compiled in March each year. The Wellington data is for the whole region whereas Auckland and Christchurch are for predominantly urban areas. The proportion of people with access to frequent public transport services at peak times in Auckland, Wellington and Christchurch reflects the number of people that is within 500m walking distance of a frequent bus-stop or ferry terminal, or within 1km of a frequent rapid transit stop (mainly trains, but also includes grade-separated bus ways). This covers public transport services scheduled every 15 minutes (or 30 minutes for ferry) during the morning peak Monday to Friday (7am–9am). The overall result is the weighted average based on population across the three centres. We use the latest Statistics New Zealand population estimates for each area (rather than population data from the Census).

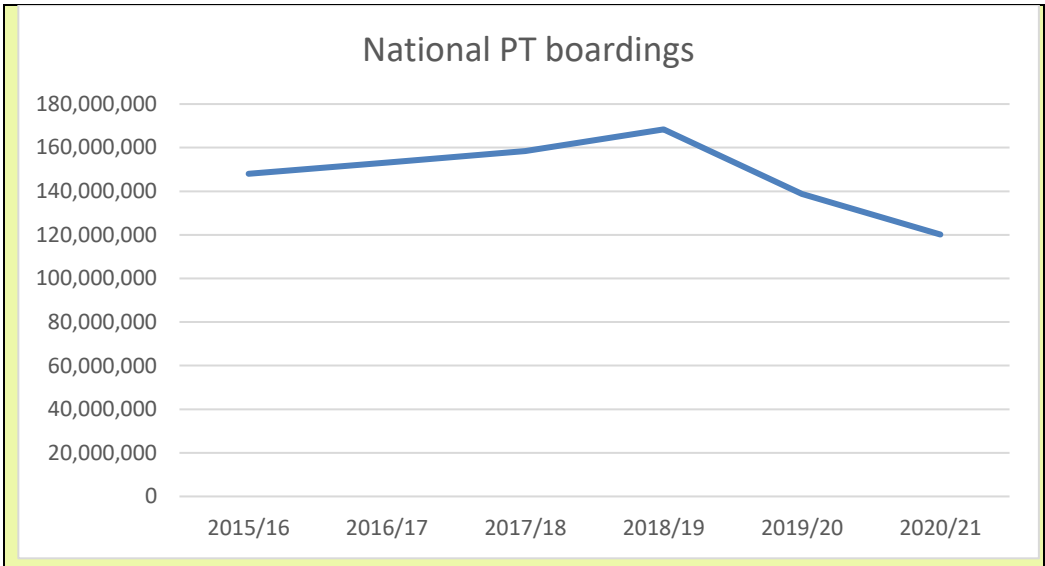


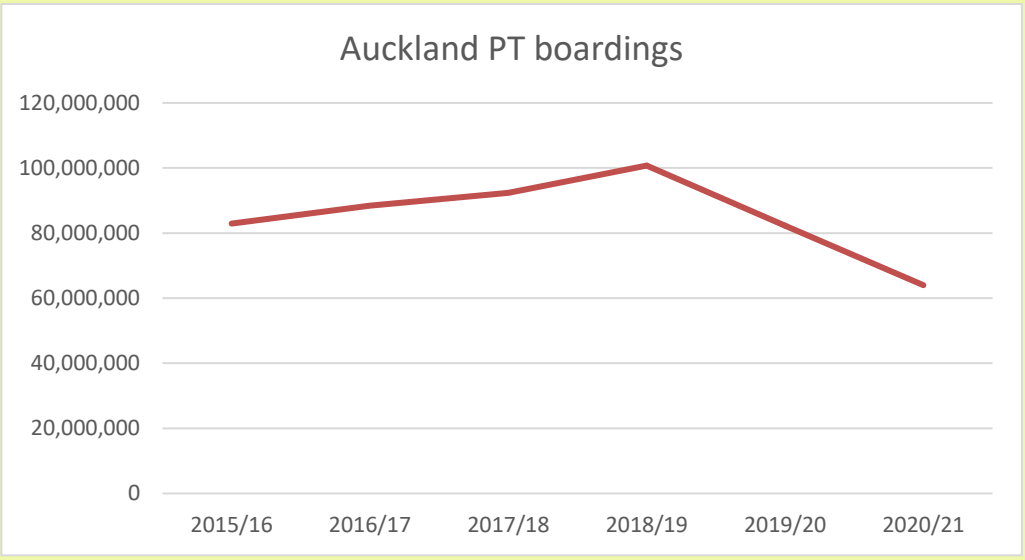
spend on public transport (as a % of income) is highest among the lowest income groups.

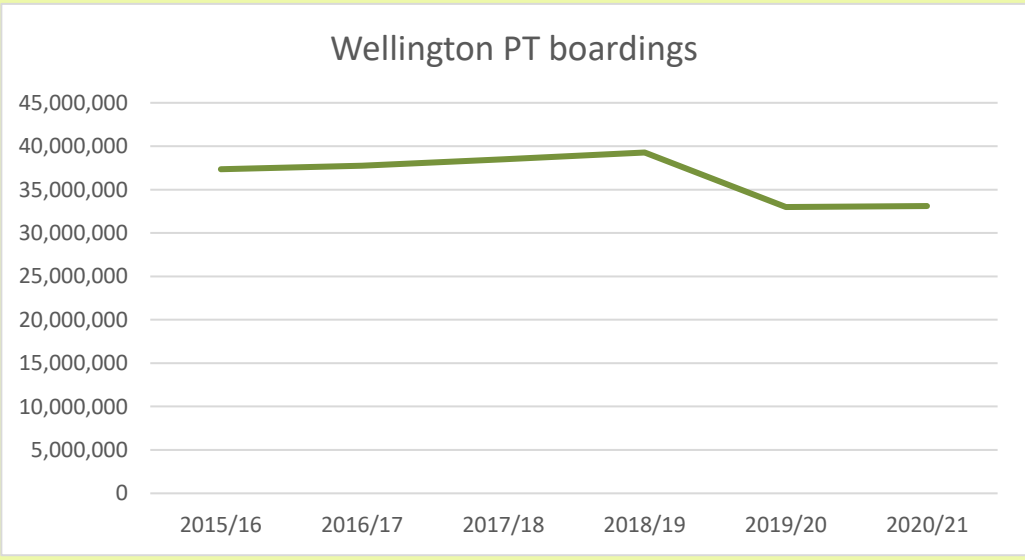
Data sources: Waka Kotahi's Understanding Attitudes and Perceptions of Cycling and Walking survey. Results for 2021 are based on a sample of 2,152 adults aged 18 years and over, living in Auckland, Wellington, Christchurch, Hamilton, Tauranga and Dunedin. Data reported was collected from late May through to the end of June.

Data source: Stats NZ. Data were most recently collected as part of the household economic survey (HES) for the year ended June 2019. The next round of data collection will be in 2022.

Quintiles are formed by dividing the population into five equal groups, from lowest to highest. The bottom quintile (quintile 1) is the lowest 20 percent of the population, while the top quintile (quintile 5) is the highest 20 percent.







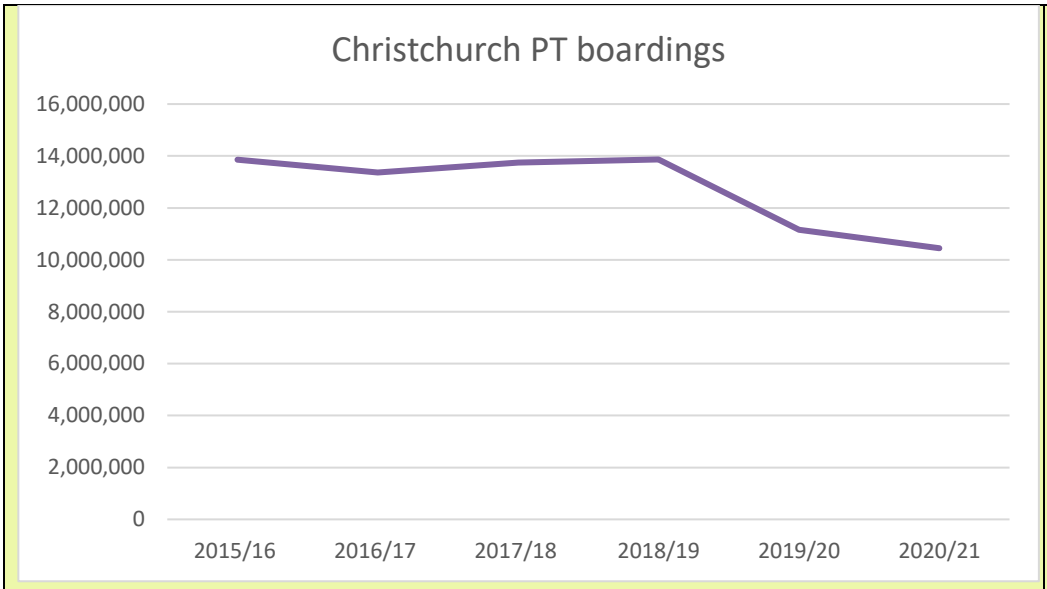
In the year of 2020/21, public transport boardings decreased from 139 million in 2019/20 to 120 million in 2020/21. This represents an 13% decrease.

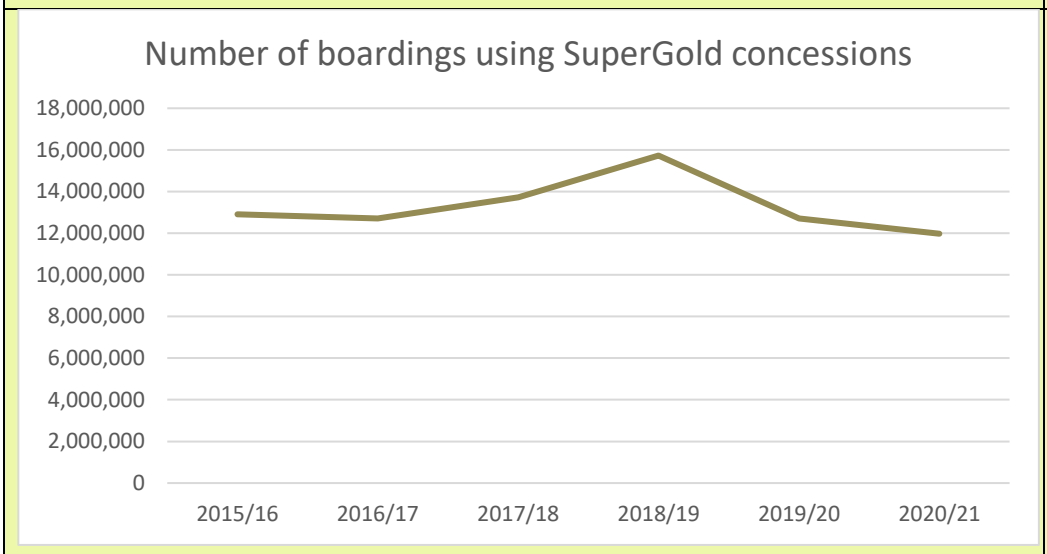
The majority of public transport use in New Zealand is in the three major metropolitan areas of Auckland, Wellington and Christchurch.

Auckland: A decrease from 82.3 million boardings in 2019/20 to 64.0 million in 2020/21.

Wellington: Remained stable at 33 million over the past two years.

Christchurch: A decrease from 11.2 million in 2019/20 to 10.4 million in 2020/21.





There has been a 6% decrease in SuperGold boardings, from 12.6 million in 2019/20 to 12.0 million in 2020/21.

Data source: Reports from local and regional authorities in Transport Investment Online (TIO) which is administered by Waka Kotahi. Number of boardings using SuperGold concessions is the sum of all public transport passenger boardings across all regions where SuperGold card concessions were used. A boarding is a single trip made on public transport, for example from when a person boards a bus to when they get off. This is different from a journey which is the entire travel from origin to destination and may include multiple trips and modes.

3.5 Specialised services

Specialised services such as Total Mobility provide access to the transport system for those not able to or have difficulty with using public transport or a private vehicle. Funded in partnership by local and central government, the Total Mobility scheme assists eligible people with long term disabilities to access appropriate transport. It does this by subsidising door-to-door transport services for those who cannot or have difficulty with independently using regular public transport because of a disability.

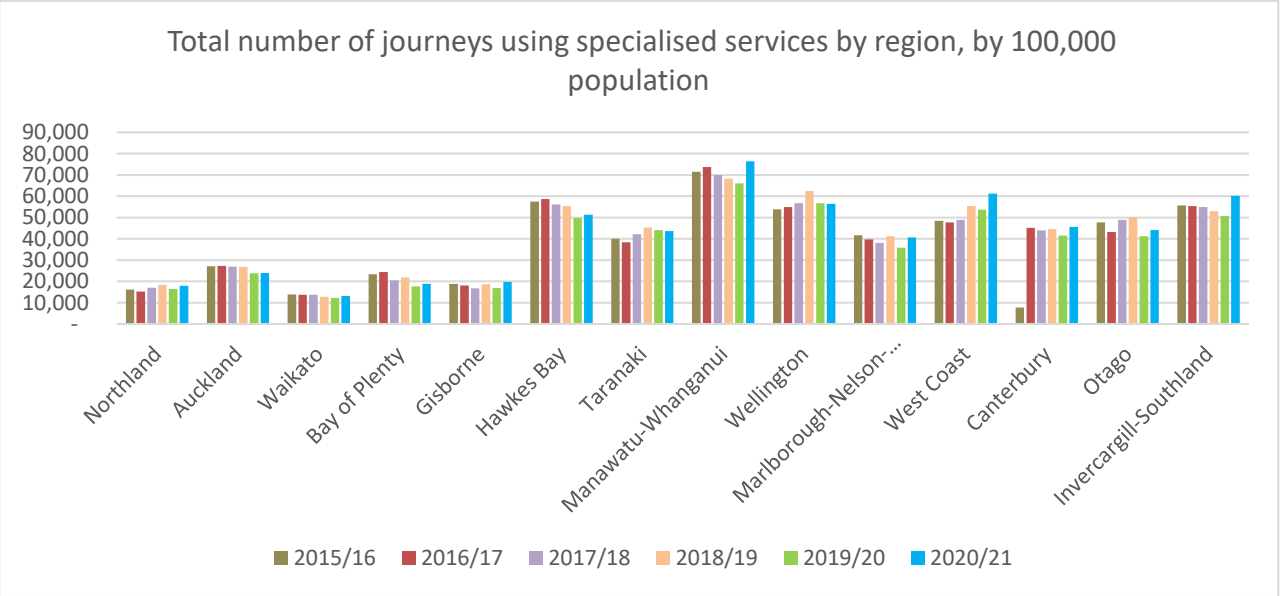
There has been a continuous increase in investment in Total Mobility, with exception to 2020/21 which saw a four percent decrease from the previous year.

The Total Mobility concession was increased temporally from 50 percent to 100 percent during New Zealand's initial lockdown, which took place in early-2020. Although COVID-19 and the associated lockdown dampened Total Mobility patronage over the final quarter of 2019/20, the cost of increasing the concession contributed towards the 11 percent increase in investment in 2019/20 compared with 2018/19.

Despite a decrease in dollars invested in Total Mobility in 2020/21, there has been a six percent increase in patronage of specialised services as a part of the Total Mobility scheme, from 1,685,936 in 2019/20 to 1,793,258 in 2020/21. Specialised services are used more in Auckland (410,464 in 2020/21), Wellington (308,478 in 2020/21) and Christchurch/Canterbury (296,209 in 2020/21) which reflects their high populations.

Investment in Total Mobility and journeys using specialised services

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Investment in Total Mobility	$18,330,939	$18,896,895	$19,776,737	$21,589,196	$23,863,764	$22,809,047
Number of journeys	1,467,780	1,727,360	1,755,027	1,823,705	1,685,936	1,793,258



About this indicator
Data source: Waka Kotahi. Refers to the number of journeys undertaken using specialised services (i.e. as part of the Total Mobility scheme).
Data sources: StatsNZ – Regional population.

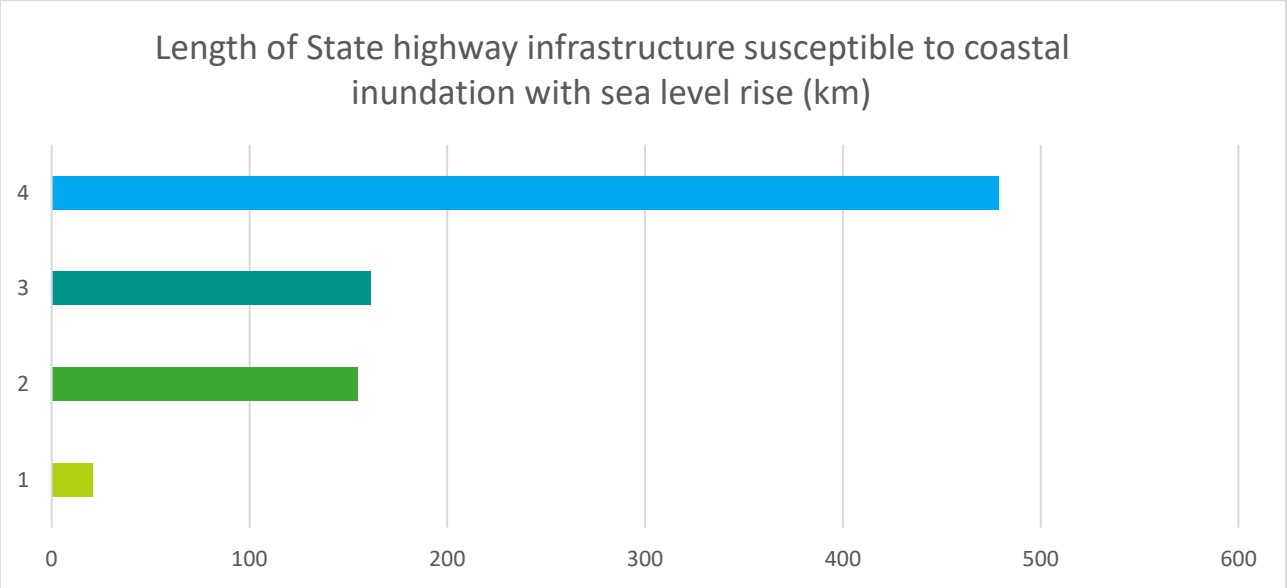
3.6 Network resilience

It is important for sustainable economic development and social wellbeing that the land transport network is resilient, particularly for the most critical connections.

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Investment in: Resilience (proxy for percentage of business cases that include resilience)	$7,840,769	$10,225,681	$8,207,728	$25,538,267	$43,026,534	$31,586,180
Number of projects	31	29	28	19	15	19

Length of state highway infrastructure susceptible to coastal inundation with sea level rise (km)

Based on an analysis undertaken in 2019/20, sea level rise exposure of the state highway network is estimated between zero point two percent and four percent of the total network nationally (equivalent to 20.98km to 478.81km) across four hazard exposure scenarios. Regions with greatest exposure include the Bay of Plenty, Waikato, Canterbury and Auckland regions. NZ Sea-rise[5] covers more detailed information about the sea-level rise and vertical land movement.



Note: This is a proxy measure.

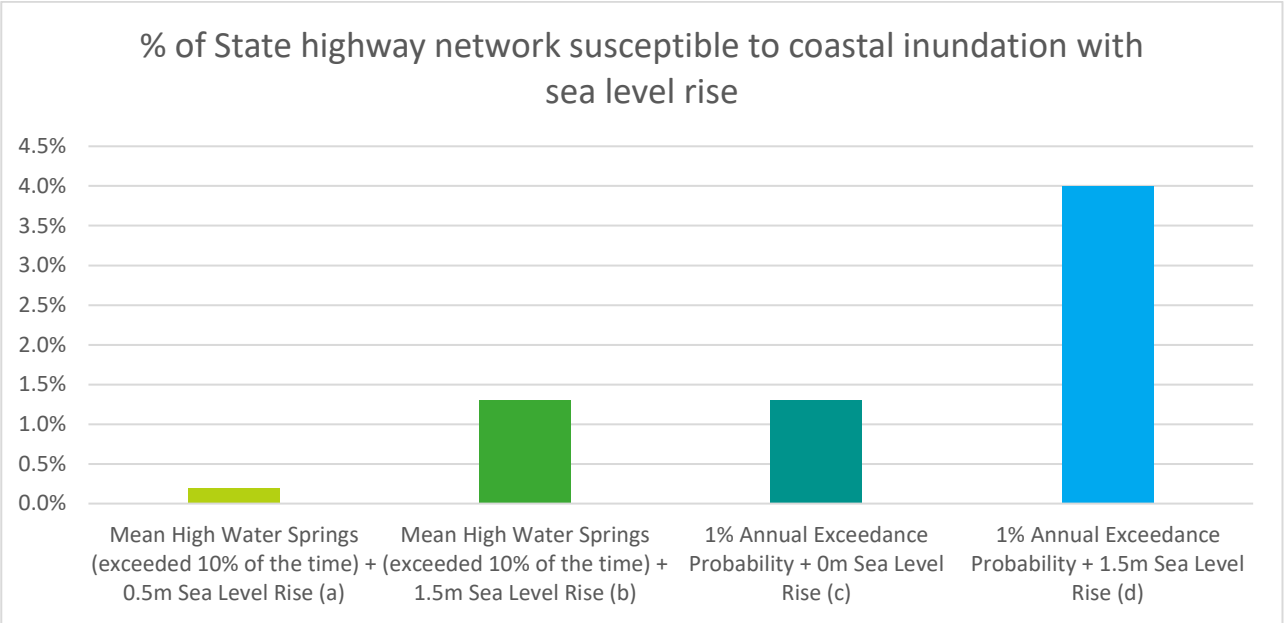
(4) Permanent inundation with 0.5 m sea level rise and representative of present-day typical storm

(3) Permanent inundation with 1.5m sea level rise

(2) Present day 1:100 year storm extent (excludes run-up/overtopping)

(1) Present day 1:100 year storm surge extent (excludes run-up/overtopping) with 1.5m sea level rise

[5] See the sea-level rise and vertical land movement map tool at https://www.searise.nz/



Note: This is a proxy measure.

(4) Permanent inundation with 0.5 m sea level rise and representative of present-day typical storm

(3) Permanent inundation with 1.5m sea level rise

(2) Present day 1:100 year storm extent (excludes run-up/overtopping)

(1) Present day 1:100 year storm surge extent (excludes run-up/overtopping) with 1.5m sea level rise

About this indicator:

Data source: Waka Kotahi. Data was taken from number of sources, compiled into the Tonkin & Taylor Coastal Exposure Assessment – Stage 2 Exposure Assessment to Coastal Hazards report. This report provides the results of the national coastal exposure assessment of Waka Kotahi state highway assets at national and regional levels. Exposure was assessed independently against, firstly, four sea level rise scenarios and, secondly, proximity (50 and 100m) from the coastal edge, before assessing against the combination of the two to understand the compounding exposure on the assets analysed. To analyse the state highway assets, lengths were broken into 10 metre segments. These segments were then overlaid on the hazard extents to gain an understanding of hazard exposure.

There was no update for 2020/21. The above stated findings are not expected that the input data will change significantly over the short term. However, it is expected that over the medium term (5-10 years) a review of input data baseline for this assessment will be required in order to track changes in hazard exposure of the state highway network or implement re-forecasting based on updated impact of emissions scenarios.

3.7 Disruption on the network

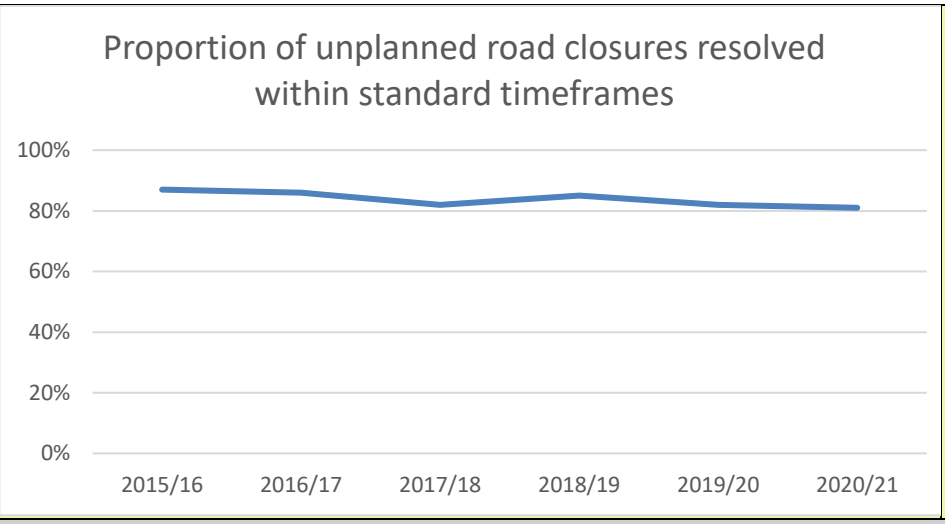
In 2020/21, a total of 2,930 hours of unplanned road closures occurred on key freight and tourism routes, compared with 3,701 hours in 2019/20.

Regarding closures on all state highways, Waka Kotahi managed to resolve 81 percent within standard timeframes (two hours in urban areas and 12 hours in rural areas). This means that 19 percent of road closures were closed for a longer than the typical duration.

There was also a decrease in travel time predictability in key routes within metropolitan and high growth areas, from 78% in 2019/20 to 65% in 2020/21. A State of National Emergency was declared due to COVID-19, in effect between March and May 2020. In this period, traffic volumes on inter-regional routes decreased, and there was relatively free-flow movement, which helped predictability of travel times in 2019/20.

Similarly, the 2019/20 data (baseline) for travel time predictability in priority routes for freight and tourism was affected by the national lockdowns, which had a notable impact on traffic volumes (i.e. a relatively free-flow movement). However, regional lockdowns in 2020/21 may cause travel time predictivity issue due to border checks when crossing regional boarders.

Of the total 3,997.5km key social and economic corridors across the country, 42 percent (1,669.5km) have viable alternative routes should a disruption or disaster occur. Mapped throughout the network, the result is lower in the South Island compared with the North Island.



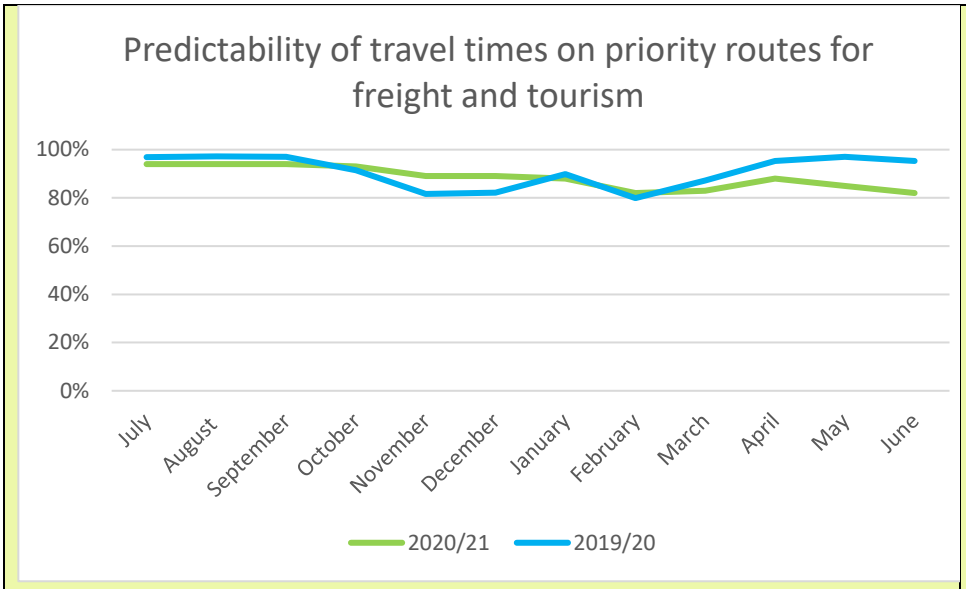
In 2020/21, 81% of unplanned/unscheduled road closures were resolved within Waka Kotahi's standard timeframes (two hours in urban areas and 12 hours in rural areas). It appears to be a general decrease over time.

Data source: Waka Kotahi. The percentage of all unscheduled road closure incidences with significant impact on road users that are addressed within standard protocol and timeframes (that is, urban less than 2 hours and rural less than 12 hours), divided by the total number of road closure incidences. Standard protocol and timeframes mean that road closures are addressed within 2 hours on urban roads and within 12 hours on rural roads. Urban roads are roads within the boundary of either a major or medium urban area (areas with a population of 30,000 people or greater). All other roads outside this definition are rural roads. Performance against this measure is influenced by the frequency and severity of weather events. Reporting is split between road closures caused by weather events and those caused by other events (such as vehicle crashes, fire, obstruction, road works, spillage and public events).

	2019/20	2020/21
Predictability of travel times for road vehicles in key routes within metropolitan and high growth areas	78%	65%

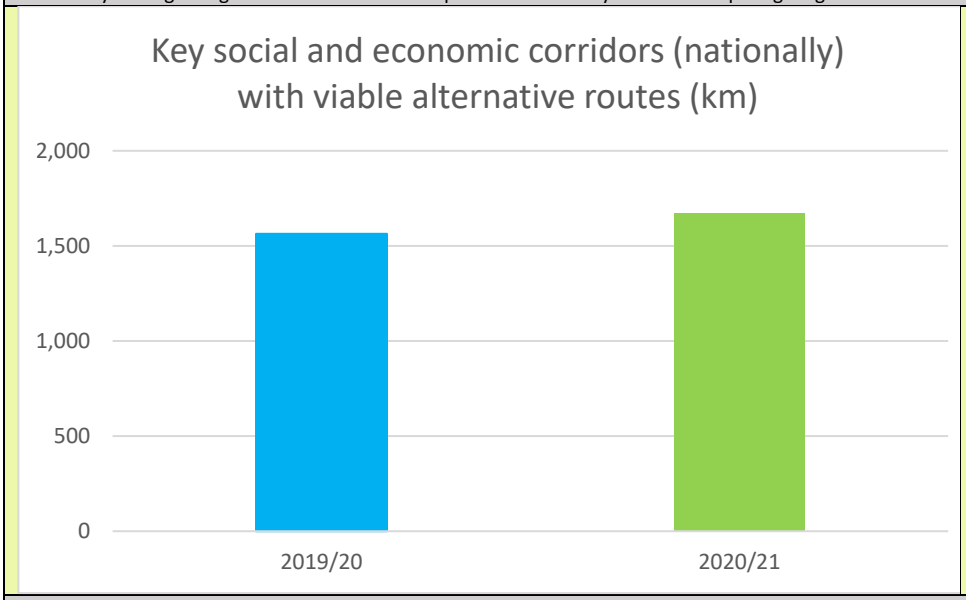
In 2020/21, the predictability of travel times for road vehicles in key routes within metropolitan and high growth areas was 65%, representing a 13 percentage-point decrease from 2019/20.

Data source: Waka Kotahi. Waka Kotahi's predictability analysis of key urban routes (based upon TomTom data on key urban journeys (am peak, interpeak, and pm peak averaged across urban routes in 2020/21).



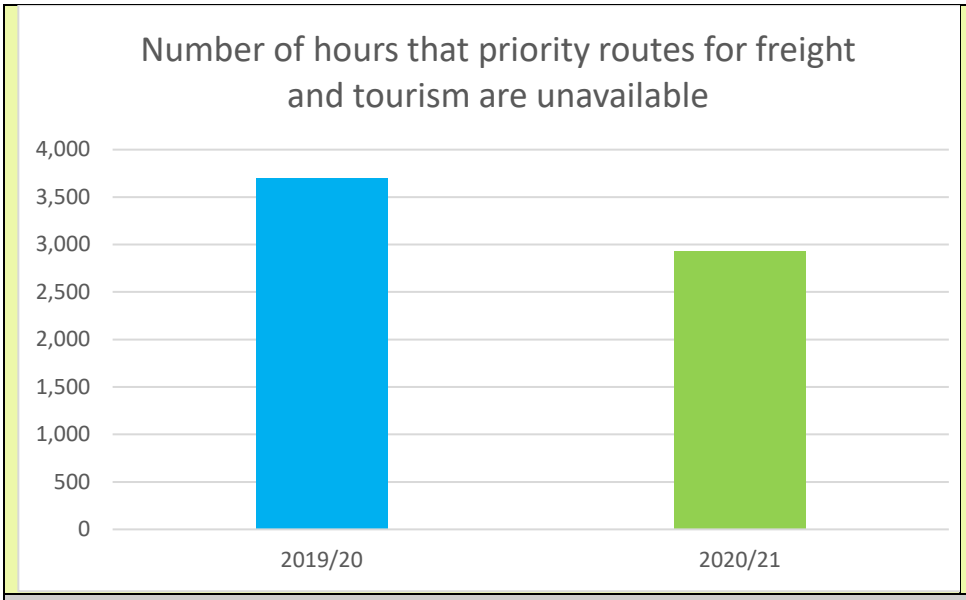
Predictability dipped over summer when construction and maintenance activity and travel demand peak.
Between March and June 2021 predictability scores did not recover much from the summer months. This is due to significant traffic volumes on these inter-regional routes compared with the previous year. The equivalent period in 2019/20 had relatively free-flow movement due to national lockdowns.

Data source: Waka Kotahi. This measure shows the proportion of all journeys made on strategic freight and tourist routes that achieved the predictability target. Predictability is a measure of how consistent the travel time is for customers along a journey. Journey times are extracted from TomTom for a basket of key journeys defined nationally by Waka Kotahi. Travel times are extracted at 15-minute intervals for urban journeys and one-hour intervals for inter-regional journeys. The predictability calculation requires a two-year history of travel time data. It is defined by setting a target travel time based on "previous financial year" and comparing it against the travel time in the "current year".



Out of the total 3,997.5km key social and economic corridors across the country, 42% (1,669.5km) have viable alternative routes in 2020/21. Mapped throughout the network, the result is lower in the South Island compared with the North Island.

Data source: Waka Kotahi. This measure shows the length of key social and economic corridors with viable alternative routes. Key social and economic corridors are routes along the state highway network which, if closed for an extended duration of time, have significant social or economic impacts on communities. Viable alternative routes are those that are suitable for all vehicles (sealed surface, free of one-lane bridges and meet travel time constraints) and approved by their respective road controlling authority as a recognised detour.



In 2020/21, on the key freight and tourist routes there were 2,930 hours of unplanned closure, compared with 3,701 in 2019/20.
In addition to being closed for fewer hours, when compared to last year, the average closure duration on these routes has decreased by over half an hour.

Data source: Waka Kotahi. This measure shows the total number of travel hours that priority routes for freight and tourism are unavailable.

	2019/20	2020/21
Number of trials undertaken on intelligent transport systems and other technologies	2	1
Number of trials implemented on intelligent transport systems and other technologies	1	0

Data source: Waka Kotahi. In response to Covid-19, Waka Kotahi in conjunction with Hutt City Council and HTS Group Ltd trialled the use of contactless push button sensors at the signalised intersection of Hutt Rd and Jackson St in Petone – a locally owned intersection. The purpose was to provide pedestrians with an alternative to placing a demand for the crossing that did not require them to press the push button.

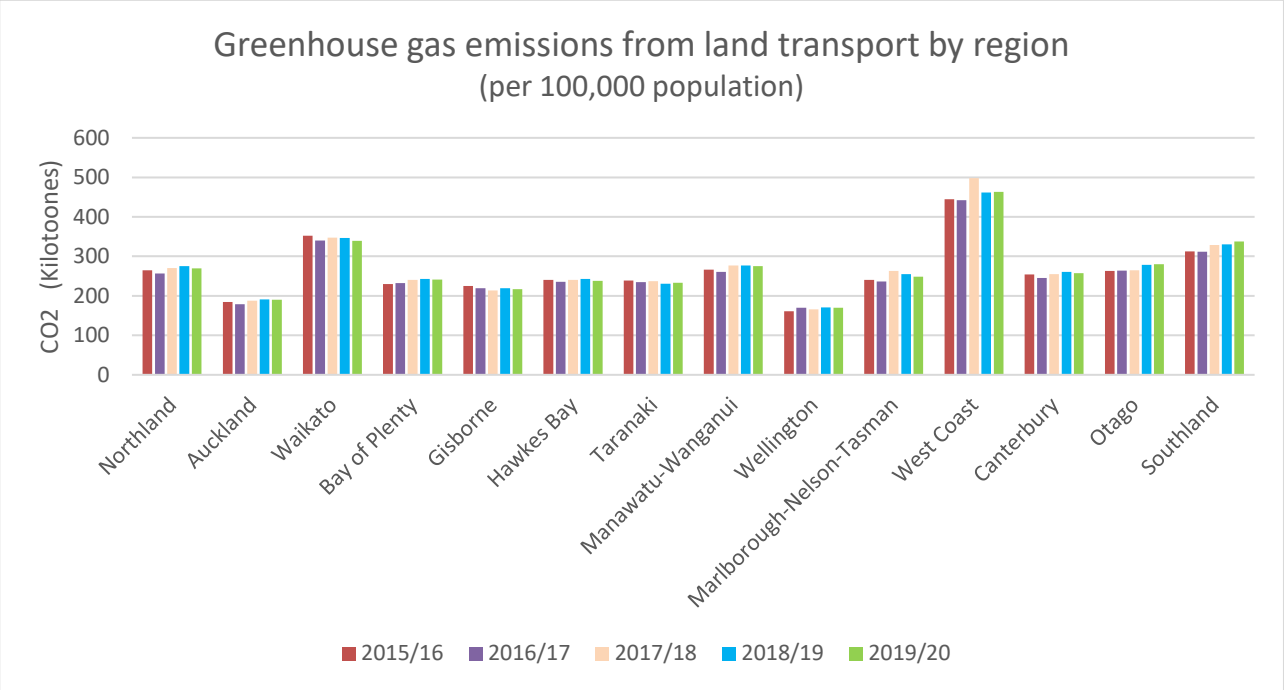
Conclusions of this trial identified majority of pedestrians were not aware of the contactless sensors and continued to press the push button. Pedestrians that were aware of the contactless sensor stated that they had a preference towards using the contactless sensor option. Based on the recommendations of the report and improvements that need to be considered for future use of this facility, Waka Kotahi and HCC have decided to remove this version of the contactless sensor, but will consider other options that deliver the same or similar service for future.

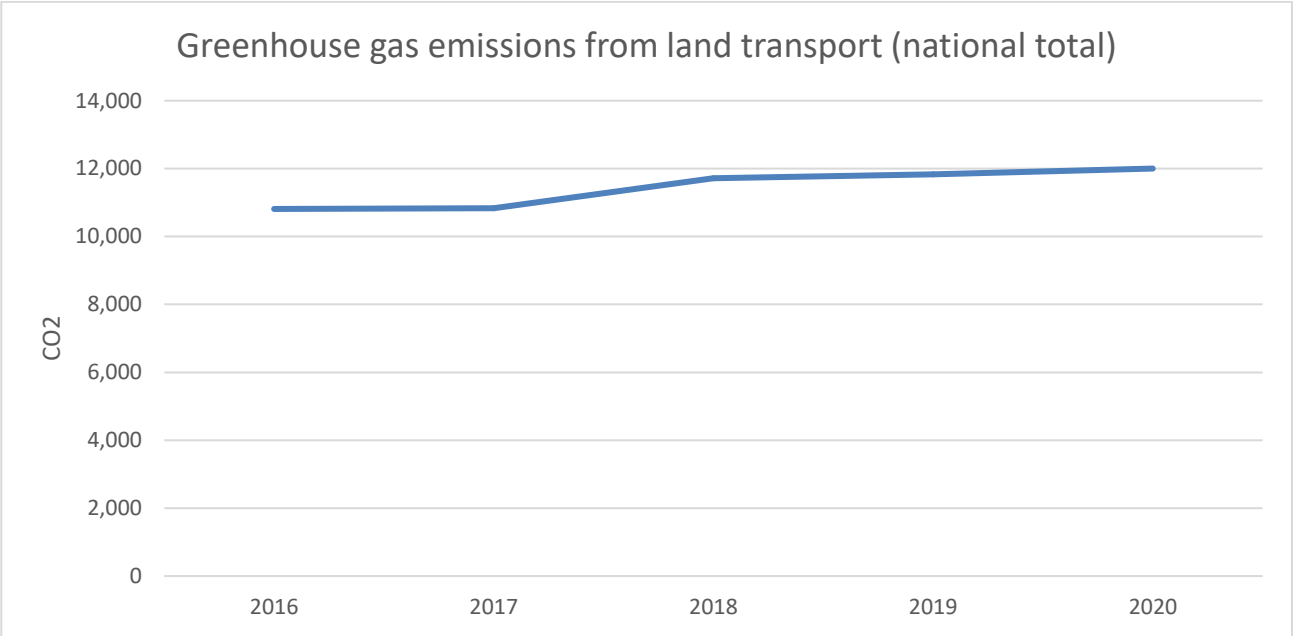
4. Results on Environment

Environment objective: A land transport system that reduces greenhouse gas emissions, as well as adverse effects on the local environment and public health.

4.1 Greenhouse gases

The national total greenhouse gas emissions from land transport have increased by 11 percent between 2016 and 2020, with West Coast having the highest levels of greenhouse gas emissions per population compared to other regions and Wellington the lowest.





Data source: Waka Kotahi. Road transport carbon dioxide emissions were derived from the Waka Kotahi National Vehicle Emission database which takes into account the vehicle fleet profile and travel on all roads in New Zealand. The calculation method we use is different to that which the Ministry for the Environment uses for the national greenhouse gas emissions inventory, so the numbers from the two methods are not directly comparable[6].
Data source: StatsNZ – Regional population.

4.2 Harmful emissions

The amount of harmful emissions emitted into the atmosphere each year from land transport has remained relatively consistent between 2016-2020.

Tonnes of harmful emissions emitted per year from land transport (kilo tonnes/year)

	2016	2017	2018	2019	2020
Nitrogen dioxide NO_2	6.4	7.0	7.3	7.2	7.8
Particulate Matter PM_{10}	2.4	2.6	2.6	2.5	2.4
Particulate Matter $PM_{2.5}$	1.8	1.7	1.7	1.5	1.5

Data Source: Waka Kotahi Vehicle Emissions Mapping Tool. Emissions factors are derived from Waka Kotahi Vehicle Emission Prediction Model.[7]
Note: Particulate matter, is a term that describes extremely small solid particles and liquid droplets suspended in air. Particulate matter can be made up of a variety of components including combustion particles, nitrates, sulphates, organic chemicals, metals, soil or dust particles, and allergens (such as fragments of pollen or mould spores). Particle pollution mainly comes from motor vehicles, wood burning heaters and industry. PM10 refers to particles smaller than 10 µm and PM2.5 refers to particles smaller than 2.5 µm. The smaller PM2.5 particles usually have greater amount of combustion particles. Particles less than 10 micrometres in diameter can get deep into your lungs and some may even get into your bloodstream. Of these, PM2.5 pose the greatest risk to health. Air pollution can also cause environmental harm by polluting waterways and affecting nearby vegetation.

[6] See Waka Kotahi's Vehicle Emissions Mapping Tool https://www.nzta.govt.nz/roads-and- rail/highways-information-portal/technical-disciplines/air-quality-climate/planning-and- assessment/vehicle-emissions-mapping-tool/.
[7] Waka Kotahi Vehicle Emission Prediction Model (VEPM6.1) https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/air-quality-climate/planning-and-assessment/vehicle-emissions-prediction-model/

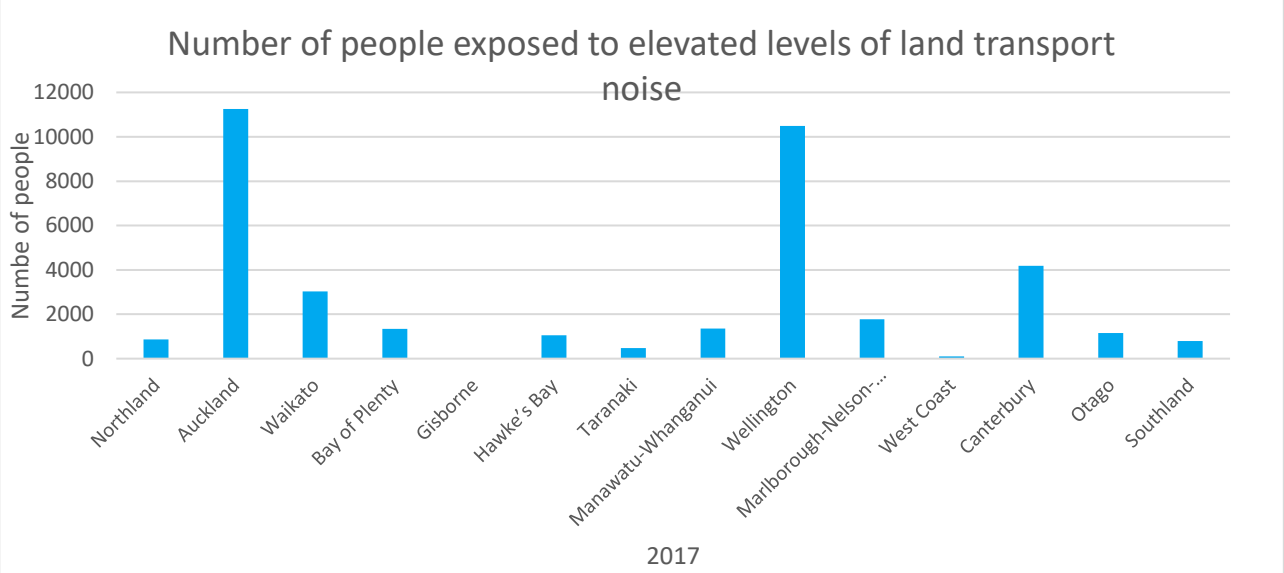
4.3 Noise pollution

The latest data on noise pollution were from 2017, which found that approximately 38,000 people were exposed to land transport noise equal or more than 64 LAeq (A weighted equivalent continuous sound level in decibels) measured over 24 hours.

In 2017, approximately 38,000 people were exposed to land transport noise equal or more than 64 LAeq (A weighted equivalent continuous sound level in decibels) measured over 24 hours.

Regional breakdowns of this data show that the number of people exposed to high levels of land transport noise is highest in Auckland and Wellington. Currently this measure includes only road but in future is expected to also include rail.

Note: As population increases, more people will be near state highway routes and local roads, and therefore, more will be exposed to noise. Vehicle kilometre travelled (VKT) has also been increasing so potentially more traffic noise where there is relevant exposure.



Noise pollution*: Data* were collected in 2017 by Waka Kotahi. The figures are based on exposure to noise ≥64LAeq (A-weighted equivalent continuous sound level in decibels) measured over 24 hours. Data after 2017 are not reportable because the research that this measure is reliant on has been delayed.

5. Results on Value for money

Value for money objective: To maximise the impact of money spent to achieve the Government's outcomes.

5.1 Investment and GPS: Aligning investment with GPS priorities

The National Land Transport Programme (NLTP) is a three-year programme relating to the investment of the National Land Transport Fund (NLTF) to create a safer, more accessible, better connected and more resilient land transport system that keeps New Zealand moving.[8] The NLTP is expected to align with GPS priorities.

Between 2018/19 and 2019/20, the Waka Kotahi Investment Assessment Framework 2018-21 was used to prioritise investment in land transport improvement activities and programmes for the 2018-21 NLTP. Following this prioritisation, primary and secondary benefits were planned for each proposed investment activities and programmes in the NLTP.[9]

To support a system-based, outcome-focused and mode-neutral approach to assess transport interventions, Waka Kotahi and the Ministry reviewed the Waka Kotahi investment decision-making framework for land transport investments over 2018/19 and 2019/20. The review developed an Appraisal Summary Table (AST) which presents the monetised and non-monetised benefits of an investment. A flow from this is that the data stored on Transport Investment Online[10] (TIO) has changed from 31 August 2020, with a greater amount of information of the projected benefits from the investment. As a result, extracting and aggregating the benefit data became difficult.[11]

Given the change in recording and retrieving the benefits data in the TIO, the data for value for money measures for 2020/21 could not be included in this report. To support the assessment of value for money, an outcomes evaluation for GPS 2018 is currently underway and will provide more insights into this.

Waka Kotahi and the Ministry will work together to develop a robust method for reporting and analysing benefits information from NLTP expenditure for future years.

Investment by GPS priority

	2018/19	2019/20	Total
Safety	$1,342,943,969	$1,503,253,833	$2,846,197,802
Environment	$646,917,806	$693,115,985	$1,340,033,791
Access-Resilience	$61,515,225	$187,820,371	$249,335,596
Access-Choice	$327,806,190	$473,483,733	$801,289,923

[8] Waka Kotahi (2022). About the NLTP. Waka Kotahi. Retrieved from: https://www.nzta.govt.nz/planning-and-investment/national-land-transport-programme/about-the-nltp/
[9] Waka Kotahi (2021). NZ Transport Agency annual report. Waka Kotahi. Retrieved from: https://www.nzta.govt.nz/assets/resources/annual-report-nzta/2020-21/nzta-nltf-annual-reports-2021-complete.pdf
[10] Transport investment online (TIO) is Waka Kotahi's key source of project information and a record of investment decisions made in the NLTP. All activities funded through the NLTP are recorded in TIO, including the expected benefits and long-term outcomes from each decision.
[11] Waka Kotahi (2021). NZ Transport Agency annual report. Waka Kotahi. Retrieved from: https://www.nzta.govt.nz/assets/resources/annual-report-nzta/2020-21/nzta-nltf-annual-reports-2021-complete.pdf

Access-Access	$2,481,961,154	$2,417,881,393	$4,899,842,547
Total cost for approval	$4,861,144,344	$5,275,555,316	$10,136,699,660

Investment in safety

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	25	1.9	278	18.5
State highway maintenance	168	12.5	213	14.2
Local road improvements	105	7.8	131	8.7
Local road maintenance	257	19.1	293	19.5
Road safety promotion and demand management	43	3.2	47	3.1
Road policing	339	25.2	363	24.1
Regional improvements	69	5.1	59	3.9
Public transport	56	4.2	67	4.5
Walking and cycling improvements	50	3.7	50	3.3
Rapid transit	1	0.1	1	0.1
Transitional rail	1	0.1	2	0.1
TOTAL	1,343	100.0	1,503	100.0

Investment in access

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	688	24.0	731	23.8
State highway maintenance	509	17.7	463	15.0
Local road improvements	240	8.4	262	8.5
Local road maintenance	694	24.2	582	18.9
Road safety promotion and demand management	12	0.4	12	0.41
Regional improvements	68	2.4	60	1.9
Public transport	590	20.6	842	27.4
Walking and cycling improvements	46	1.6	54	1.8
Rapid transit	8	0.3	8	0.3
Transitional rail	18	0.6	62	2.0
TOTAL	2.871	100.0	3.079	100.0

Investment in environment

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	13	2.0	20	2.9
State highway maintenance	112	17.3	113	16.3
Local road improvements	15	2.3	11	1.5
Local road maintenance	224	34.6	224	32.3
Road safety promotion and demand management	0	0.1	0	0.0
Regional improvements	1	0.1	1	0.1

Public transport	274	42.3	313	45.1
Walking and cycling improvements	6	0.9	11	1.6
Rapid transit	1	0.2	0	0.0
Transitional rail	1	0.1	1	0.1
TOTAL	647	100.0	693	100.0

About these indicators
Data source: Waka Kotahi National Land Transport Fund annual report 2018/19 and 2019/20. The table presents the amount invested in planned benefits through the NLTP expenditure between 2018/19 and 2019/20. The figures show investment levels from the National Land Transport Fund, local share and the Crown, and excludes investment from the Provincial Growth Fund, Super-Gold Card funding and also investment in the Investment management activity class.
Investment in outcomes is calculated using monetised benefits provided in Transport Investment Online. For example, a $1 million improvement project with 60% of monetised benefits relating to safety and 40% of monetised benefits relating to access would generate $600,000 investment towards safety outcomes and $400,000 investment towards access outcomes. For projects with no monetised benefits such as maintenance activities, calculations are dependent on the activity class, work category and primary benefits identified. For example, activities under the sealed pavement maintenance work category generate investment outcomes of 20% for safety, 60% for access-access, 10% for access-choice and 10% environment. This split reflects the purpose of all activities placed under this work category and is the basis for estimating the value of investment outcomes of such activities.
Note: the sum % does not add up to 100% as this table does not include individual activity class investments.

5.2 Assessments used in investment decisions

Waka Kotahi prioritised proposals (from priority order one to priority order six) based on two factors:

1. How closely the proposal's investment results align with the GPS 2018 priorities, and
2. Efficiency, based on cost-benefit appraisal, usually reported as a benefit-cost ratio (BCR)[12].

The table below summarises the priority order for proposals based on the scores achieved for results alignment and cost-benefit appraisal. Priority order 1 means the proposal aligns well with GPS priorities and has a very high BCR whereas priority order 6 means medium alignment with priorities and/or low BCR.

Waka Kotahi's investment prioritisation framework

Results alignment	Cost-benefit appraisal	Priority order
Very high	L/M/H/VH	1
L/M/H	Very high (BCR 10+); PV EoL*	2
High	High (BCR 5-9.9)	3
High	Medium (BCR 3-4.9)	4
Medium	High (BCR 5-9.9)	4
High	Low (BCR 1-2.9)	5
Medium	Medium (BCR 3-4.9)	5
Medium	Low (BCR 1-2.9)	6
Low	High (BCR 5-9.9)	7 Exclude
Low	Medium (BCR 3-4.9)	8 Exclude
Low	Low (BCR 1-2.9)	Exclude

The table below outlines the amount put forward for funding and included in the NLTP on

[12] More detail about how Waka Kotahi prioritises proposals is available at https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/201821-nltp/2018-21-nltp-investment-assessment-framework-iaf/prioritisation-of-activities/

improvement activities (not continuous programmes or low cost, low risk (LCLR) programmes) for the period 2018/19 – 2020/21 by both priority order and activity class.[13] The amount reported on here is based on the expected cost and may vary as the business case is developed. Furthermore, the actual spend may occur in a different financial year.

NLTP investment approvals in 2018/19 – 2020/21

Approved 2018/19 -2020/21 funding by activity class								
	Public transport		Rapid transit		Walking and cycling improvements		Local road improvements	
Priority 1	243,259,955	28.9%	2,000,000	1.7%	204,116,000	41.6%	75,650,819	7.9%
Priority 2	4,872,000	0.6%	0	0.0%	150,000	0.0%	69,821,341	7.3%
Priority 3	108,644,513	12.9%	0	0.0%	21,868,200	4.5%	300,372,322	31.5%
Priority 4	244,083,268	29.0%	58,300,000	48.5%	104,511,761	21.3%	162,125,289	17.0%
Priority 5	236,877,062	28.1%	60,000,000	49.9%	159,804,997	32.6%	341,604,244	35.8%
Priority 6	5,184,068	0.6%	0	0.0%	307,800	0.1%	3,934,622	0.4%
Total	842,920,866	100%	120,300,000	100%	490,758,758	100%	953,508,637	100%

Approved 2018/19 -2020/21 funding by activity class								
	Regional improvements		State highways improvements		Road policing		Promotion of road safety and demand management	
Priority 1	6,750,000	6.3%	48,102,830	6.4%	7,044,000	80.4%	750,000	2.2%
Priority 2	3,705,000	3.5%	107,087,343	14.2%	0	0.0%	14,172,919	42.4%
Priority 3	4,080,000	3.8%	11,769,788	1.6%	0	0.0%	7,324,040	21.9%
Priority 4	4,700,970	4.4%	197,540,443	26.3%	0	0.0%	2,132,002	6.4%
Priority 5	52,975,318	49.8%	358,000,413	47.6%	1,720,000	19.6%	4,279,032	12.8%
Priority 6	34,264,505	32.2%	29,729,475	4.0%	0	0.0%	4,769,235	14.3%
Total	106,475,793	100%	752,230,292	100%	8,764,000	100%	33,427,228	100%

Approved 2018/19 -2020/21 funding by activity class					
	Investment management		Transitional rail		Total across all activity classes
Priority 1	6,967,738	3.6%	277,620,564	53.2%	872,261,906
Priority 2	131,336,500	67.6%	0	0.0%	331,145,103
Priority 3	53,147,376	27.4%	153,064,052	29.3%	660,270,291
Priority 4	2,513,127	1.3%	2,145,484	0.4%	778,052,344
Priority 5	260,332	0.1%	89,083,634	17.1%	1,304,605,032
Priority 6		0.0%	0	0.0%	78,189,705
Total	194,225,073	100%	521,913,734	100%	4,024,524,381

[13] The State highway maintenance and the Local maintenance activity classes are not included here because they follow a different process and are bulk approved by the Waka Kotahi Board. Similarly, emergency works are funded as and when they arise, initially to re-open the road/rail/service and secondly to re-instate the pre-existing level of service. In re-instating or improving the level of service, the project may have to go through the prioritisation process. All of this is treated on a case-by-case basis.

Data source: Waka Kotahi.

The inclusion of an activity in the NLTP is based on a prioritisation and the expected cost provided by the organisation. The priority and expected cost can vary as the business case is developed and a funding decision is made after adoption of the NLTP.

5.3 Projected benefits for implementation activities at time of funding approval

The following table shows the projected monetary benefits at time of approval (undiscounted) by primary benefit type from 2018/19 to 2019/20. The projected benefits are not included in this report due to the change in recording and retrieving the benefits data in the TIO (see Section 5.1).

In the table, only primary benefits, not co-benefits, are captured. Benefits link to the estimated benefits for each project, broken down by benefit type (rather than by activity class). These figures are provided as part of the business case during the funding approvals process. Information is available for improvement activities only and excludes continuous programmes (e.g. public transport, maintenance) and low-cost, low-risk investment.

Primary benefit	Estimated value of benefits at time of approval
Safety	$3,661,800,551.30
Access-Resilience	$912,790,040.25
Access-Choice	$1,720,162,307.25
Access-Access	$2,988,954,251.50
Environment	$1,031,523,016.70
Total	$10,315,230,167.00

Data source: Waka Kotahi. The figures are funding approvals from 2018/19 – 2019/20 (1 July 2018 to 30 June 2020). The figures show the undiscounted projected monetary benefits provided in business cases in Transport Investment Online at the time of funding approval, by primary benefit type. They exclude continuous programmes (e.g., public transport, maintenance) and low-cost, low-risk investment, and cover the current NLTP only.

5.4 Investment in activities with a BCR of less than one

The GPS 2018 (p. 22) states that *"in delivering value for money, investment decisions need to transparently demonstrate the… reason for the decisions, especially where there is a benefit cost ratio lower than would normally be required for inclusion in the National Land Transport Programme (NLTP)"*.

Between 2018/19-2020/21, two projects with a BCR of less than one was approved. Investment in these two activities were approved due to the multiple considerations from the Waka Kotahi Board. The considerations relate to the high results alignment to GPS outcomes and the need to trial these activities to obtain further information before a permanent investment decision is made.

Project name	2018/19-2020/21 $ investment	Reason for BCR<1
Hamilton to Auckland Trial Rail Service, including: • Huntly Station (Start Up Rail Service) • Operational phase of start-up passenger rail service • Capital phase of start-up passenger rail service • Rolling stock refurbishment and maintenance facility • Base Station (Start Up Rail Service)	$73,736,323 †	Waka Kotahi continued to invest in the Hamilton to Auckland Trial Rail Service this year due to high results alignment. A successful trial would give impetus to wider corridor spatial planning "unlocking" significant additional benefits.
Low Emission Bus Programme (Auckland)	$5,225,511	Trial with a BCR of 0.1

Data source: Waka Kotahi. This does not include investment in activities where BCRs are not required such as continuous programmes and low cost - low risk programmes. This also excludes: Crown-funded or partially NLTF funded projects with BCR<1 such as certain projects funded by the PGF; and activities with a BCR<1 that form part of a programme with a BCR>1 (for example, some standard safety interventions such as roundabouts can have a BCR<1 but related to a programme with a BCR>1).
† Total approval in 2018/19 was incorrectly reported in our previous reports and should have been $18,093,406.

5.5 Investment management

The percentage of investment management costs in the total NLTP expenditure has remained stable in the past six years. However, the dollar value has increased over time, in line with the increasing value of the NLTP. A larger and more complex NLTP necessitates the people and systems required to manage it.

Cost of investment management

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Investment in investment management	$61,067,727	$61,999,329	$60,289,380	$58,212,121	$84,963,024	$78,395,256
Total cost of managing the funding allocation system as a percentage of NLTP expenditure	1.1%	1.0%	0.9%	1.03%	1.02%	1.0%

Data source: Waka Kotahi. Investment includes funding from the NLTF and Crown but excludes the local authority funding contribution for investments in local transport activities.
The total cost of managing the funding allocation system as a percentage of NLTP expenditure is the service cost of managing the Investment Funding Allocation System (IFAS). IFAS activities are funded from the NLTF and the Crown. It excludes local authority funding contributions for investments in local transport activities. The percentage of NLTP expenditure is reported quarterly and is cumulative over the financial year.

5.6 Monitoring and reporting

The monitoring and evaluation of the GPS should be planned and deliberate to provide an ongoing mechanism to assess and reflect on the effectiveness and efficiency of GPS investments and related activities. All Waka Kotahi investment decisions (new approvals) and post-implementation (benefit realisation) reviews are published online. In 2020/21, Waka Kotahi published 300 investment decisions on their website. Waka Kotahi also manages the Sector Research Programme, and all of their funded research are aligned to the NZ Transport Research Strategy.

Percentage alignment of funded research to the NZ Transport Research Strategy

	2018/19	2019/20	2020/21
% alignment of funded research to the NZ Transport Research Strategy	100%	100%	100%

Data source: Waka Kotahi. The Transport Evidence Based Strategy (an update of the Transport Research Strategy) is considered in the development and approval of all Sector Research Programme research projects.

5.7 Improved returns from road maintenance

The cost to maintain the State highway network and local roads continue to increase due to a range of factors including cost increases in labour and materials, more significant and frequent natural events, the growth in VKT (light and heavy), growing complexity of the network, increasing focus on safety management and the impact of COVID-19. Recent years have also seen more kilometres of maintenance work are being completed across the sector, which corresponds to total cost and the cost per lane kilometre being higher.

In terms of maintenance of roads, although the State highways represent a significantly smaller network than New Zealand's local roads they are used more intensely, typically carrying 55 percent of all vehicle journeys and 70 percent of all freight journeys which result in comparably higher maintenance expenditure per kilometre to local roads.

The unusual dip on State highway maintenance activities in 2018/19 was mainly driven by the impact of the closure SH1 following the Kaikōura earthquake, as the maintenance of the closed section of state highway 1 and the alternate route were not primarily funded from State highway maintenance activity class.

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Maintenance cost per lane kilometre delivered for State highways	$19,389	$19,284	$24,705	$22,997	$25,352	$26,292
Maintenance cost per local road lane kilometre delivered	$2,919	$2,910	$3,095	$3,455	$3,628	$4,008

About these indicators

- Maintenance cost per lane kilometre for state highways is adjusted for inflation based on the network outcomes index.
- Maintenance cost per lane kilometre for local roads includes maintenance operations and renewals (excluding emergency works) and is adjusted for inflation based on the network outcomes index.

The impact of road maintenance is significant and stretches beyond Value for Money, providing safety, economic, environmental and social well-being benefits.

6. Appendix A – GPS 2018 Reporting Measures

Safety:

Long-term results (10+ years)
• Significant reduction in deaths and serious injuries
Short- to medium-term results (3-6+ years)
• Renewed strategic focus to have the greatest impact on reducing death and serious injury
• State highways and local roads are safer for everyone
• Cycling and walking is safer
• Effective enforcement activity to promote safe behaviour by road users
• Safer road use through appropriate education and promotion activities, and regulatory changes

Access:

Long-term results
• Metropolitan and high growth urban areas are better connected and accessible
• Better access to markets, business areas and supporting tourism
• Sustainable economic development of regional New Zealand is supported by safer and better transport connections
• Increased mode shift from private vehicle trips to walking, cycling and public transport
• More transport choice (including for people will less or limited access to transport)
• Improved network resilience for the most critical connections
Short-term results
• A more accessible and better-integrated transport network including public transport, walking and cycling
• Improved land use and transport planning to create more liveable cities
• Improved throughput of people and goods in metropolitan areas
• Nationally important transport connections are maintained or improved to support areas of growth, changes in population freight and tourism and to improve safety
• Regional networks (including key regional freight routes) are safer, better connected and more resilience
• Improved connections (including local roads, public transport and active modes) on key regional tourist routes to make these routes safer for all
• A reduction in overall single-occupant private vehicle travel in urban areas
• Improved good-quality, fit-for-purpose walking and cycling infrastructure
• Improved real and perceived safety for both pedestrians and cyclists
• Increased proportion of journeys made using public transport and active modes of travel
• Public transport is more accessible and affordable, especially for those reliant on it to reach social and economic opportunities

• Specialised services provide better access to transport for people unable to drive themselves or use scheduled public transport
• Improved resilience on routes where disruptions pose the highest economic and social costs
• When disruption to the network occurs, impacts of disruptions are reduced at the parts of the network that have the most economic and social importance

Environment:

Long-term results
• Reduce greenhouse gas emissions from transport
• Reduce transport's negative effects on the local environment and public health
Short-term results
• Reduced greenhouse gas emissions from land transport using whole-of-system approach
• Reduced significant harmful effects of land transport-related air pollution
• Increased uptake of active travel models such as walking and cycling to support environmental and public health objectives

Value for money:

Long-term results
• Better informed investment decision-making
• Improved Returns
Short-term results
• A more rigorous and transparent investment appraisal system
• Enhanced reporting, monitoring and evaluation of GPS 2018 investment
• Better integrated transport research across government
• More effective and efficient investment from innovation in systems, standards, procurement and technology