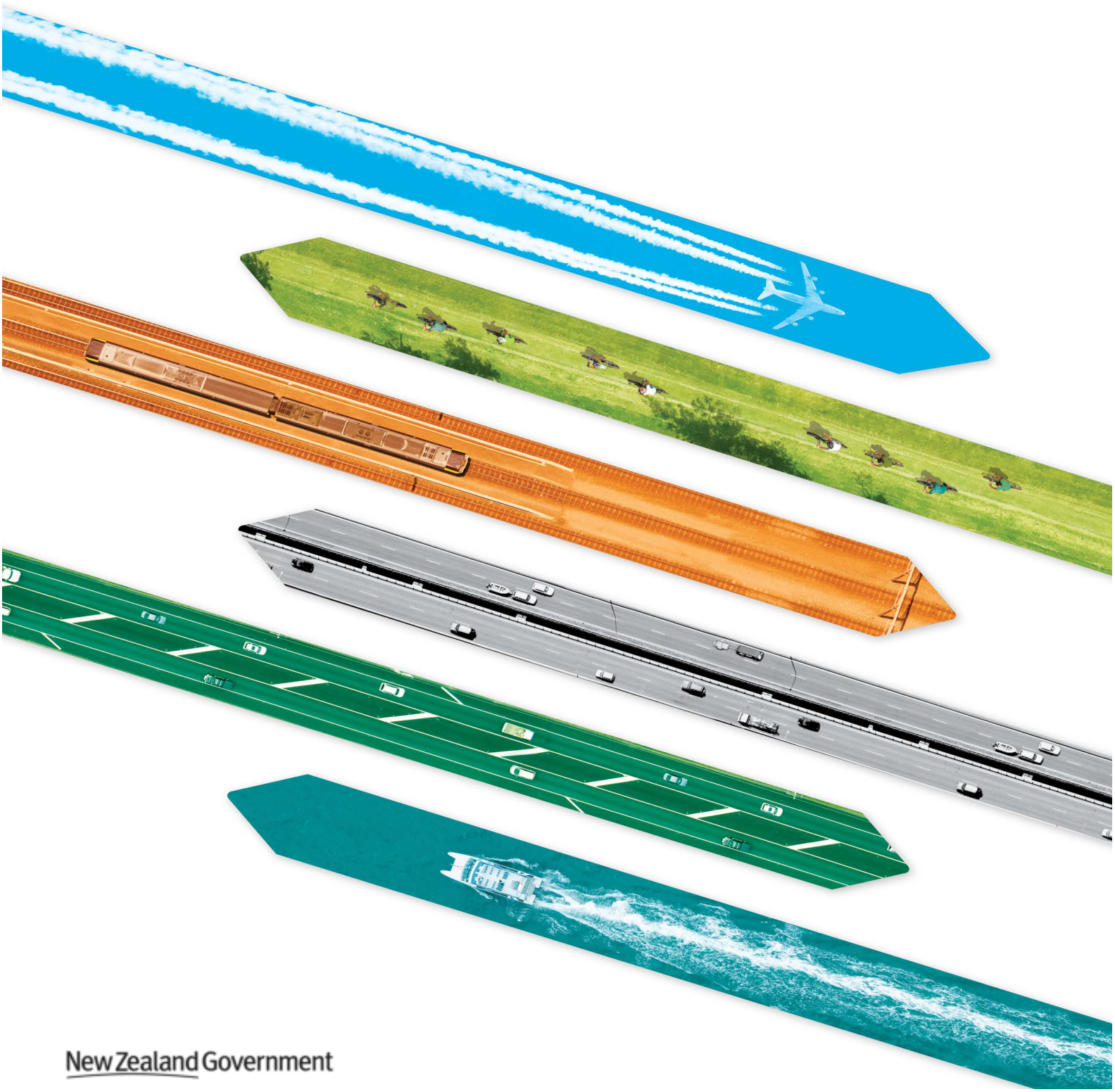
Government Policy Statement on Land Transport 2018

Annual Report (Year 2)

Ministry of Transport
TE MANATŪ WAKA

Enabling New Zealanders to flourish



New Zealand Government

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Content: This is the second annual report on the Government Policy Statement on land transport (GPS) 2018. It reports on collective progress of Waka Kotahi, Ministry of Transport, Maritime NZ, KiwiRail, CAA and Police, against the overall delivery of GPS objectives for the second year (2019/20), using a series of measures presented (here: Government Policy Statement on land transport 2018 | Ministry of Transport) and in Appendix ***B.***

Purpose: The Ministry is responsible for the production, monitoring and evaluation of the GPS. This includes assessing 1) the results achieved through GPS investment 2) the expenditure under each activity class. Through regular and comprehensive reporting of the GPS, we can build an evidence-base that can allow us to understand how well the GPS affects various outcomes (both intended and unintended). With this information, we can make more informed decisions on how we invest our money and develop future iterations of the GPS.

GPS M&E Programme: This GPS annual reporting falls under our Monitoring and Evaluation programme. The Monitoring and Evaluation programme aims to develop a culture that embeds evaluation into its policy life cycle and improves the quality and efficiency of evaluation activities by working closely with internal and external stakeholders.

Although the first couple of years predominately focuses on monitoring, this is an important practice for building the necessary foundation of baseline data. For this reason, to date, minimal analysis and interpretation are provided for why we see the trends we do. More comprehensive analyses of the effects and impacts of GPS investments will be developed and built on in future years through the structured monitoring and evaluation programme. This will include doing a 3-year impact evaluation of GPS 2018.

Our Monitoring and Evaluation programme also covers reviews and evaluations of specific areas of GPS investment.

Structure: Due to data availability, not all of the measures proposed for the GPS 2019/20 reporting are available to report this year. Where data is provided for the most recent year, historical data of previous years is also presented to provide a baseline. As data sets become available, we will incorporate additional measures into reporting in future years. For measures that are reported against, not all breakdowns (e.g. geographic) are available for each of these measures. As a result, rather than reflecting the order of the measures in the GPS itself, the report is structured to use the available data this year to tell a narrative around the four priorities. This also avoids repetition since many of the measures are used to report against more than one result.

The measures are not intended to be a 'scorecard' of investment in the transport system. Some measures will be more significant than others in terms of their impact, and all the measures are influenced by a wide range of factors. The intention is that people will use the measures to draw their conclusions about where the investment is performing well against the GPS priorities and where we need to focus more of our efforts.

Caveat: We cannot directly attribute any changes in outcomes to spend. Many alternative explanations must be taken into consideration, including the impacts of COVID-19 and level-4 lockdown. Likewise, the benefits from investment may take time to realise fully.

Safety

On average, one person is killed every day on New Zealand roads, and another seven are seriously injured.[1] Road deaths are the second largest cause of death from injury (after suicide) in New Zealand[2] and more than half of major trauma injuries treated in our hospitals relate to road crashes.[3] The total social cost of fatal and injury crashes in 2018 was $4.9 billion (at June 2019 prices).[4] New Zealand performs poorly compared with many OECD nations based on road deaths by population, by vehicle number and by kilometres travelled.[5]

To address this problem, *Road to Zero* – New Zealand's road safety strategy for 2020-2030 was published in December 2019.

Road to Zero outlines a 10-year strategy to guide improvement in road safety in New Zealand from 2020.

Road to Zero sets out an overarching vision of a New Zealand where no one is killed or seriously injured in road crashes, with a target of 40% reduction in deaths and serious injuries by 2030.

Road to Zero is supported by an initial Action Plan for 2020-2022. Progress on each of the initial 15 actions in the first Action Plan is key to laying the foundations for Road to Zero's 10-year change programme, with the delivery of some actions continuing over the term of the strategy.

Further information on progress made in 2020 on Road to Zero can be found in the Road to Zero Annual Monitoring Report 2020.

Summary of results

2019/20 has seen a decline in the total number of road deaths (293 down from 372 in 2018/19) and serious injuries (2,224 down from 2,536 in 2018/19).

The temporary but recurring COVID-19 alert level travel restrictions imposed from March 2020 is likely to be one of the biggest contributing factors for the reduction in DSIs.

[1] Ministry of Transport (2021). Road deaths and injuries: Times series of casualty and crash categories. Wellington: Ministry of Transport. Retrieved from: https://www.transport.govt.nz/statistics-and-insights/safety-annual-statistics/sheet/road-deaths-and-injuries#element-926

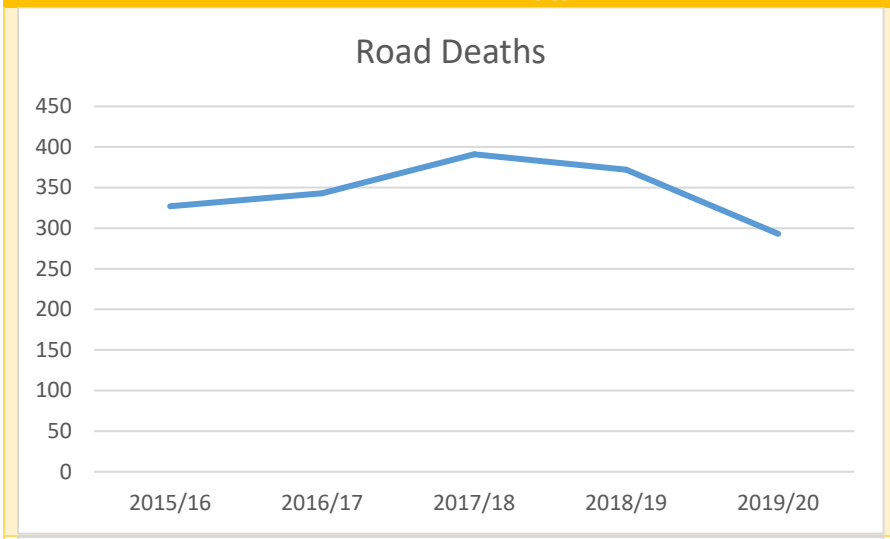
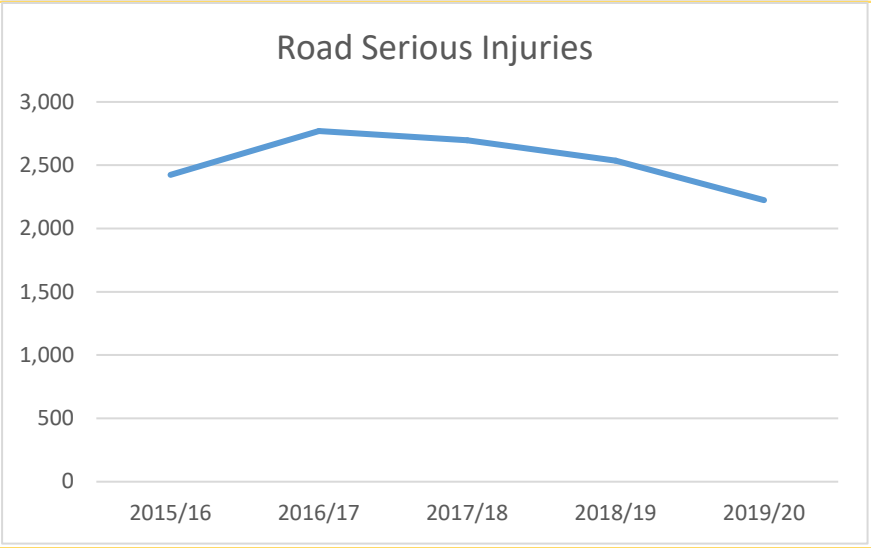
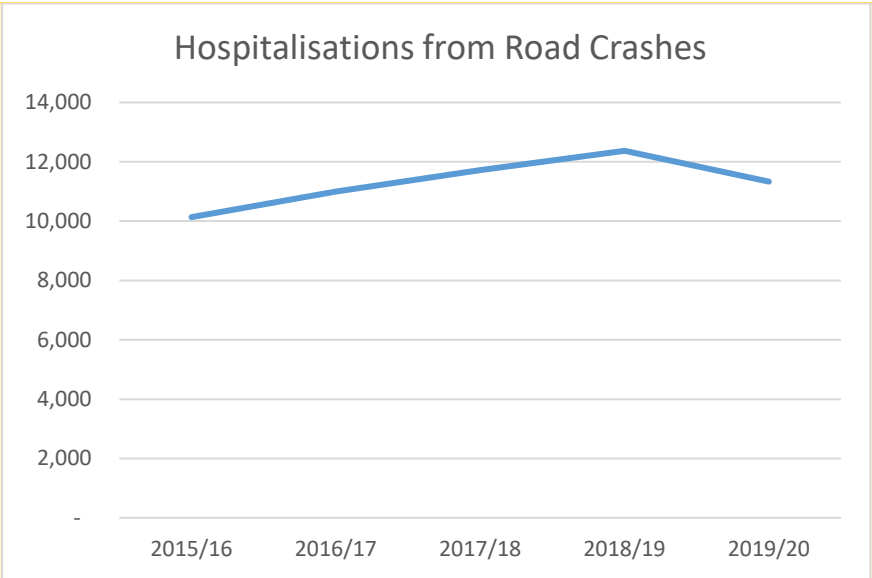
[2] IPRU. (2012). Factsheet 42 – Causes of injury by age. Injury Prevention Research Unit. University of Otago. Retrieved from: https://psm-dm.otago.ac.nz/ipru/FactSheets/FactSheet42.pdf

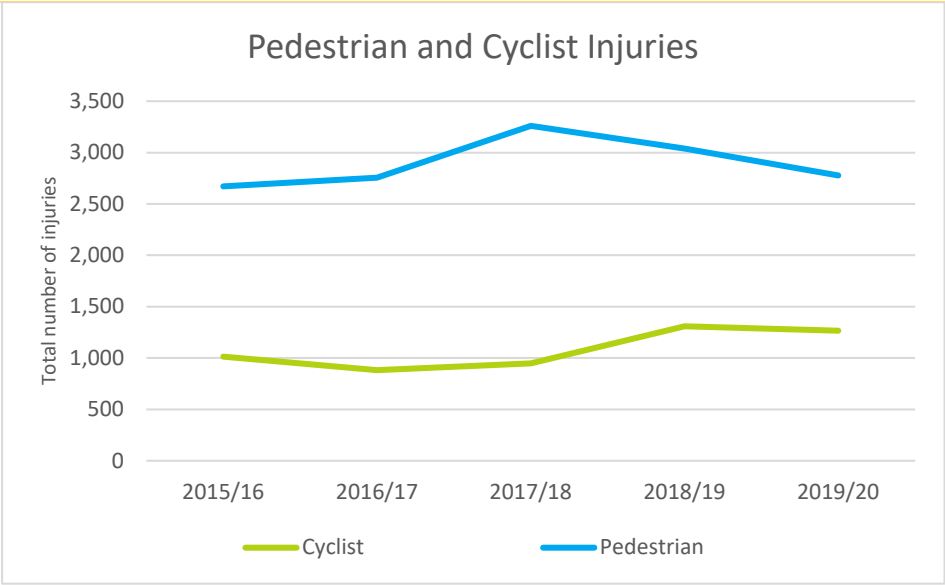
[3] Major Trauma National Clinical Network (2018). Annual Report 2017-2018. Wellington: Major Trauma National Clinical Network. Retrieved from: https://www.majortrauma.nz/assets/Publication-Resources/Annual-reports/Annual-Report-2017-18.pdf

[4] Ministry of Transport (2020). Social cost of road crashes and injuries - June 2019 update. Wellington: Ministry of Transport. Retrieved from: https://www.transport.govt.nz//assets/Uploads/Report/SocialCostof-RoadCrashesandInjuries2019.pdf

[5] International Transport Forum (2020). Road safety annual report 2020. Paris: ITF OECD. Retrieved from: https://www.itf-oecd.org/sites/default/files/docs/irtad-road-safety-annual-report-2020_0.pdf

Deaths and injuries

Data	Findings
	There was a total of 293 deaths in 2019/20. This represents a 21% decrease from the previous year (2018/19).
	There was a total of 2,224 serious road injuries in 2019/20. This represents a 12% decrease from the previous year (2018/19).
	There was a total of 11,328 road-crash-related hospitalisations in 2019/20. This represents an 8.4% decrease from the previous year (2018/19).



In 2019/20 there were 2,777 pedestrian-related ACC entitlement claims. This compares to 1,265 cyclist-related entitlement claims.

This measure includes pedestrian and cyclist injuries that may or may not include a motor vehicle, and therefore, provides a more complete picture on pedestrian and cyclist injuries.

About these indicators

- Data on road deaths and road serious injuries are from the Crash Analysis System (CAS), administered by Waka Kotahi.
  - 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 because of road crashes are from the National Minimum Dataset (NMDS), administered by the Ministry of Health. Only crashes that occurred on public roads are included. Pedestrians are only included where a motor vehicle was involved.
- Pedestrian and cyclist injury data source: ACC entitlement claim data.
  - This is based on the number of entitlement claims related to walking and cycling injuries. It includes on-road accidents but does not include off-road walking and cycling activities such as mountain biking or bush walking. Entitlement claims are defined by ACC and are considered to cover moderate to serious injuries requiring entitlement beyond medical treatment only.

Please note: Data is provided by financial year where available and as otherwise provided by calendar year.

Investment in safety

In 2019/20, a total of $1.503 billion of the investment across various activity classes contributed to the GPS priority on Safety.

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	25	1.90	278	18.50
State highway maintenance	168	12.50	213	14.20
Local road improvements	105	7.80	131	8.70
Local road maintenance	257	19.10	293	19.50
Road safety promotion and demand management	43	3.20	47	3.10
Road policing	339	25.20	363	24.10
Regional improvements	69	5.10	59	3.90
Public transport	56	4.20	67	4.50
Walking and cycling improvements	50	3.70	50	3.30
Rapid transit	1	0.10	1	0.07
Transitional rail	1	0.10	2	0.13
TOTAL	1.343	100.00	1.503	100.00

About these indicators

Data source: Waka Kotahi National Land Transport Fund annual report 2018 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, SuperGold 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.

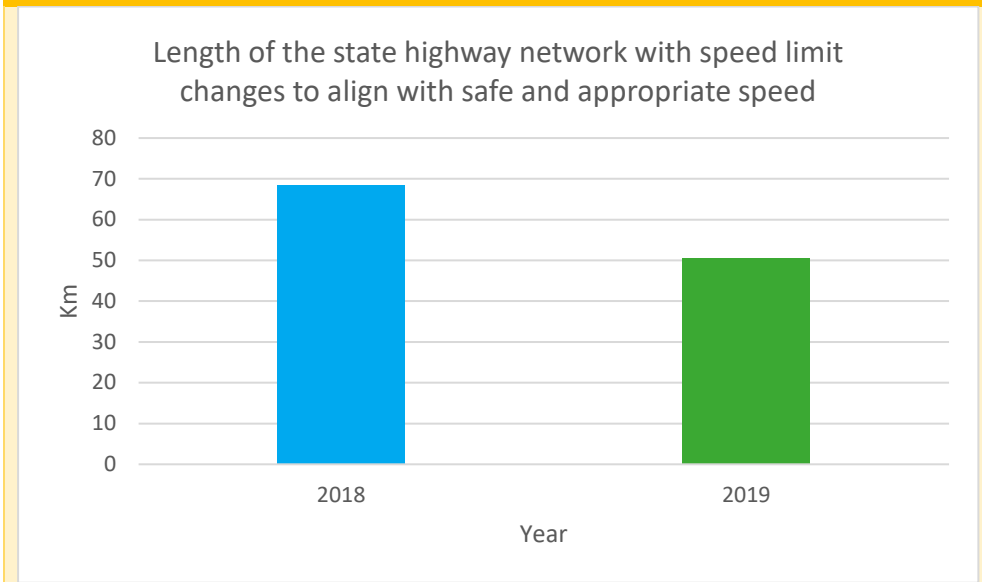
Speed and Infrastructure Programme

The Speed and Infrastructure Programme (formerly known as the Safe Network Programme) is a $1.4 billion investment which improves roads across New Zealand through the installation of median and side barriers, rumble strips, wider centrelines, roundabouts and reviewing speed limits to ensure they are safe and appropriate. The programme also focuses on safety improvements at level rail crossings.

In the current 2018-2021 National Land Transport Programme period to 30 June 2020, $640 million was invested in safety across the country on state highways and local roads, and it is expected to reach approximately $1 billion by the end of the period. Twelve large projects and 13 level crossings were completed. A total of 119km of state highways had speed limit modifications to align with safe and appropriate speeds. These are critical for improving our roads' safety and subsequently reducing deaths and serious injuries.

There will be increased investment in safety infrastructure and speed management to at least $5 billion over the 10-year period. This investment is targeted to those roads and roadsides, which offer the greatest potential for reducing DSIs. These improvements will create safer roads at the current speed limit and reduce the risk of head-on and run off-road crashes, urban and rural intersection crashes and harm to vulnerable road users.

Improvement to the transport network



Over the past two years, 119km 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 (in kilometres) 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. The new Setting of Speed Limits Rule, which is currently being drafted, will ensure alignment of the Register with the setting of speed limits. The Register is scheduled to be operational in December 2021 when the new rule is expected to be signed by the Minister. Road controlling authorities will have until March 2022 to migrate their speed limit bylaw information into the Register. This means we will not be able to set a baseline for reporting until early 2022.

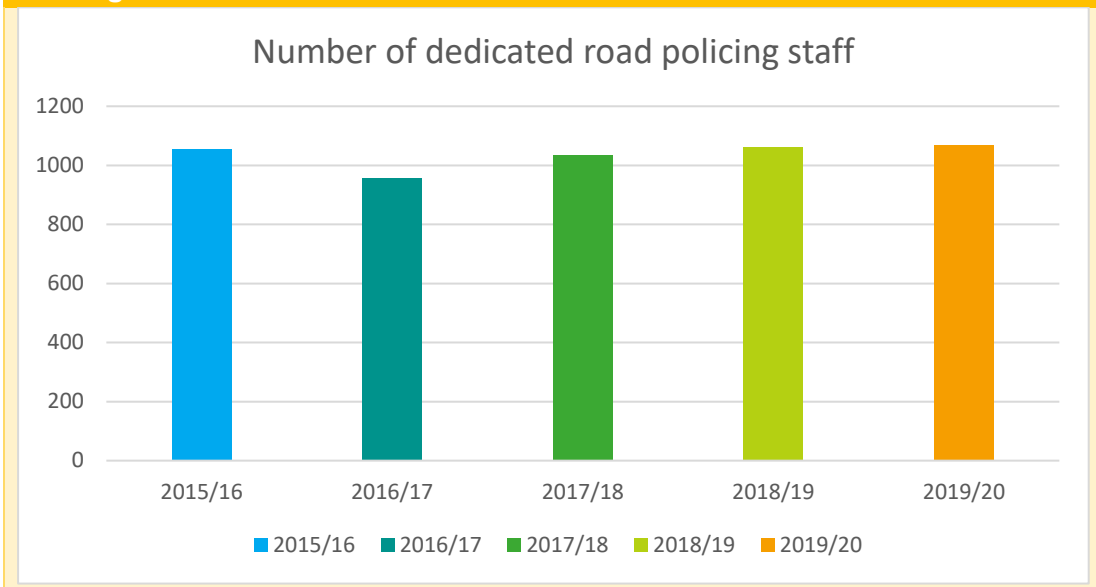
ROAD POLICING

Summary of results

The recent approval of the 2019-21 Road Safety Partnership Programme provides greater investment in road policing. The number of dedicated road policing staff steadily increased over the past 5 years. In 2019/20, there were 1067 dedicated road policing staff, which is just 3 short of the target.

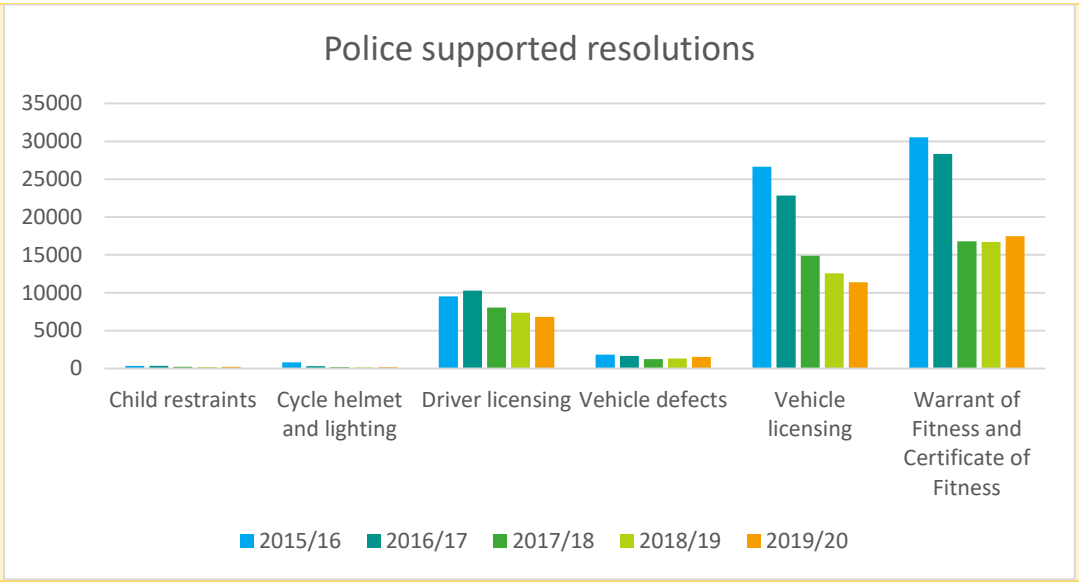
Although investment and the number of dedicated road policing staff have increased, the impact of COVID-19 has put a strain on the Police's ability to deliver on key priorities of restraints, impairment, distraction and speed, as outlined in the Road to Zero Action Plan. For more about this, refer to the Road to Zero Annual Monitoring Report 2020.

Findings



The number of dedicated road policing staff over the past 5 years has remained relatively steady with exception to 2016/17 which saw a 10% decline compared to other years.

Dedicated road policing staff refers to the constabulary and authorised officers at Districts and those at Police National Headquarters. Number of dedicated staff reflects the actual full-time equivalent values as of 30 June each year.



Warrant of Fitness and Certificate of Fitness and Vehicle Licensing infringements are most frequently waived compared to other forms of violations.

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.

About these indicators

- Data on dedicated road policing staff and police supported resolutions were provided by NZ Police.

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

Summary of results

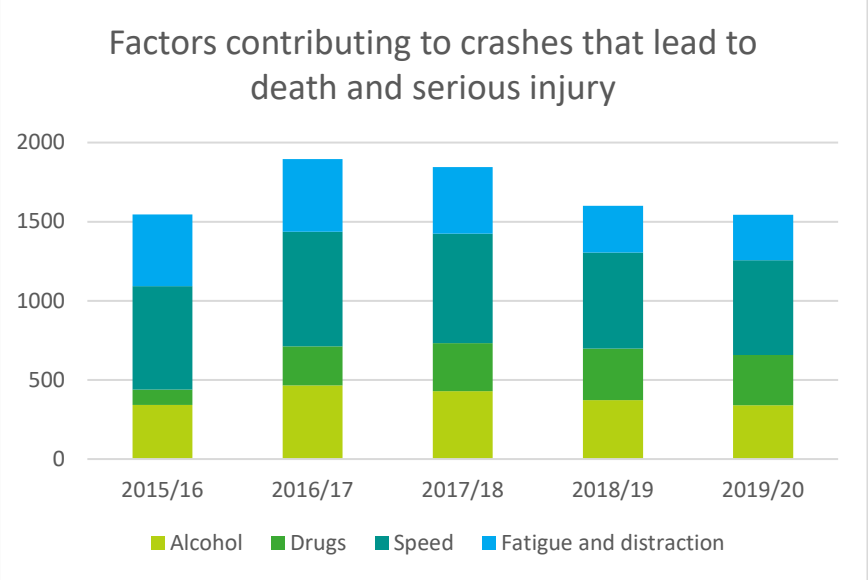
To encourage people to get behind the Road to Zero strategy and support actions making roads in their communities safer, Waka Kotahi is leading the development of an engagement and communications package to improve public understand and acceptance of Road to Zero principles. This will include

increasing public understanding of the safe system approach to reducing deaths and serious injuries on the road, building on and supporting existing advertising and behavioural change programmes.

Several regulatory interventions were also made over this same period, with Cabinet agreeing to the Tackling Unsafe Speeds package and the passing of the Land Transport (NZTA) Legislation Amendment Bill. This Bill contains enabling provisions for the Setting of Speed Limits Rule (currently under development), which together will bring the new speed management framework into effect. Rule changes mandating anti-lock braking systems for motorcycles were also implemented.

Driver behaviour

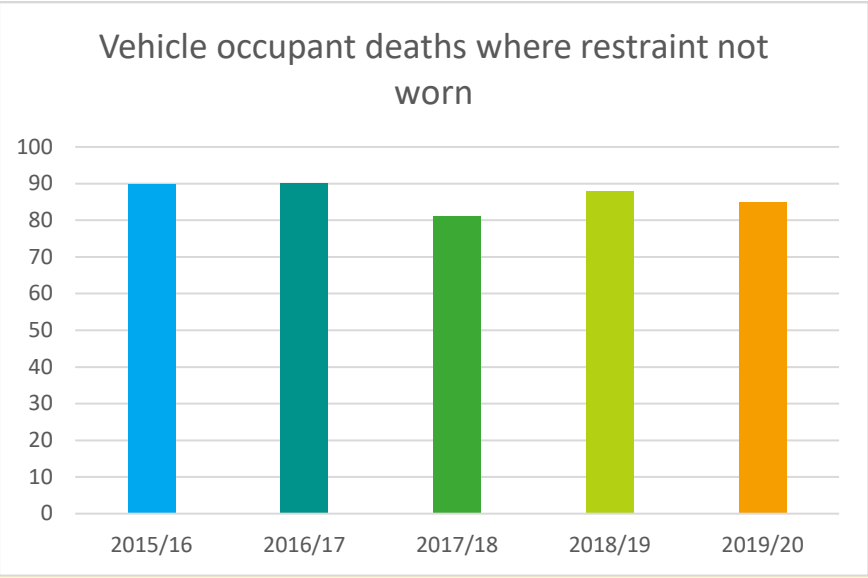
Findings



Speed is consistently cited as the most likely contributor of deaths and serious injuries

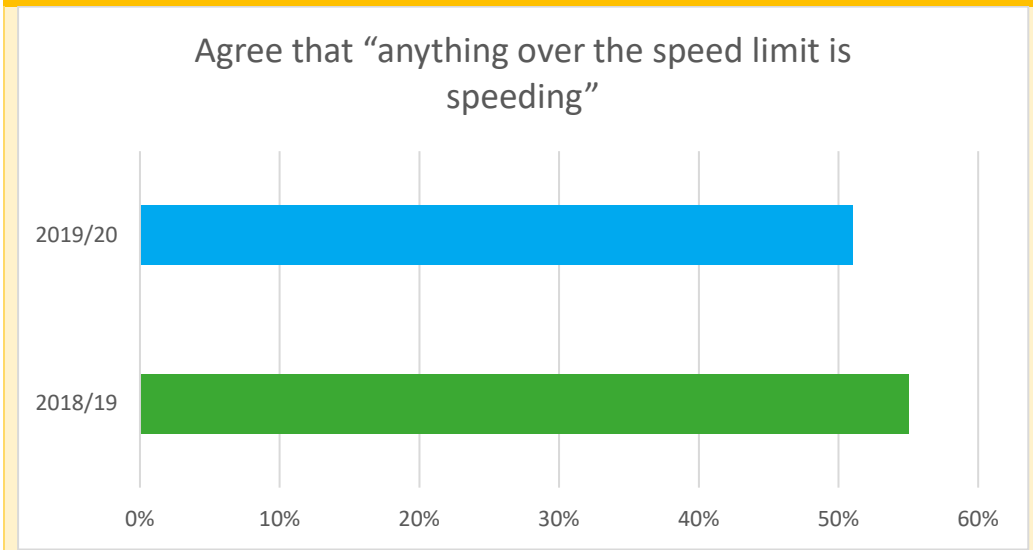
Data on 1) contributing factors to deaths and serious injuries crashes and 2) vehicle occupants deaths where restraint not worn, were extracted from the Crash Analysis System (CAS). Waka Kotahi is responsible for the administration of the CAS.

Note that 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.

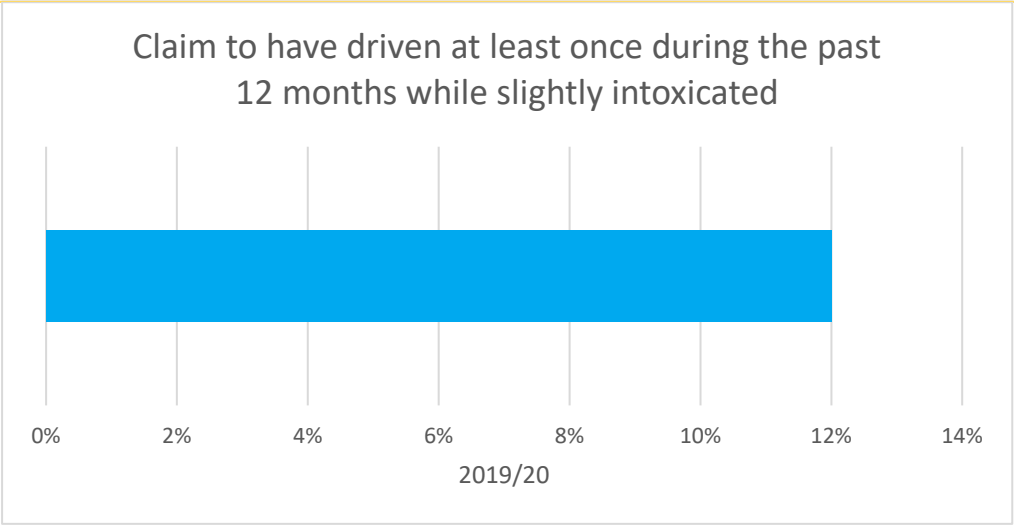


In 2019/20 85 deaths were attributable to lack of safety restraint. This is a 3% decrease from the previous year (2018/19)

Public attitudes towards road safety

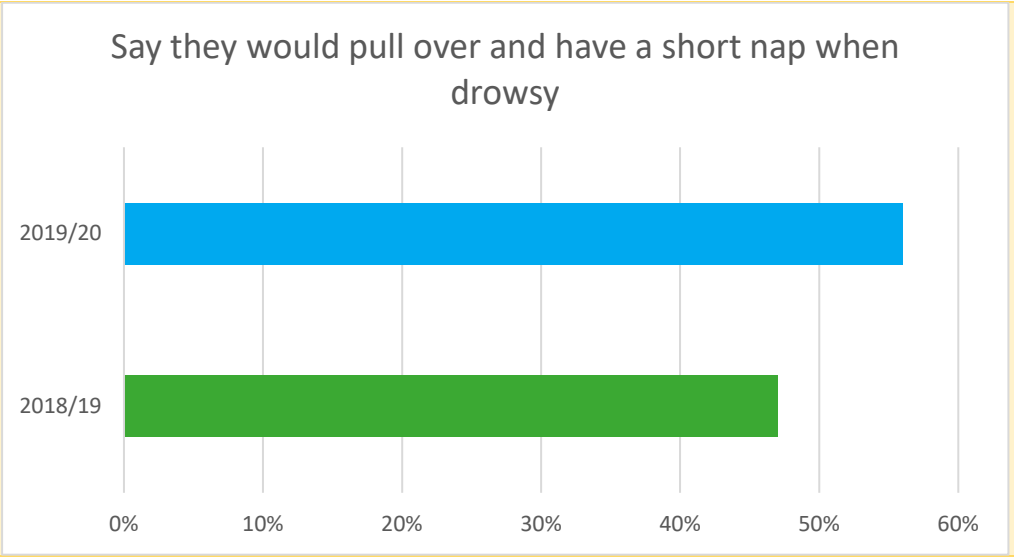


Speeding – In 2018/19 55% of people agreed that anything over the speed limit is speeding. In 2019/20 this decreased to 51%.

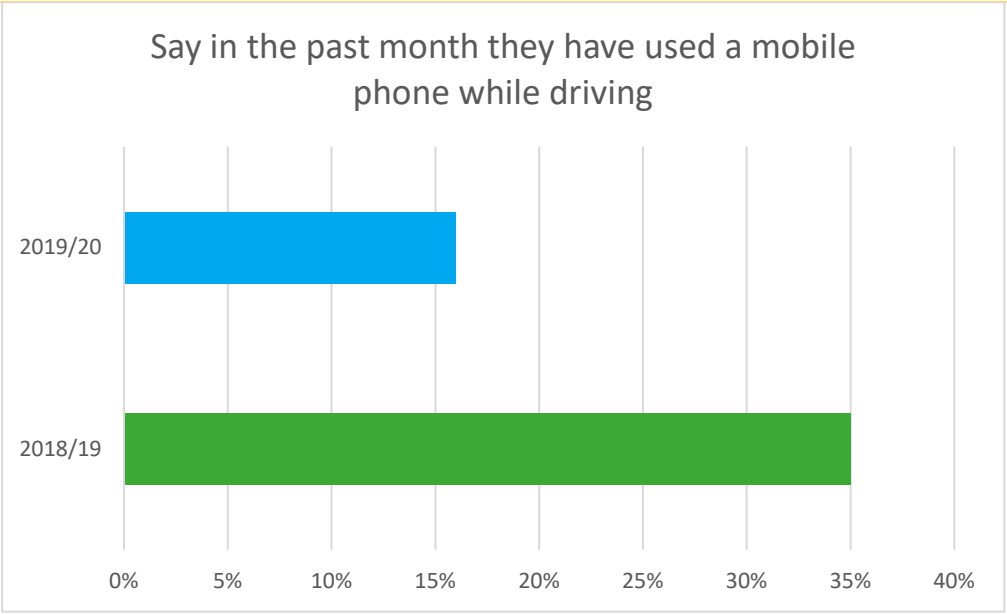


Drink driving – 12% of people claim to have driven at least once during the past 12 months while slightly intoxicated.

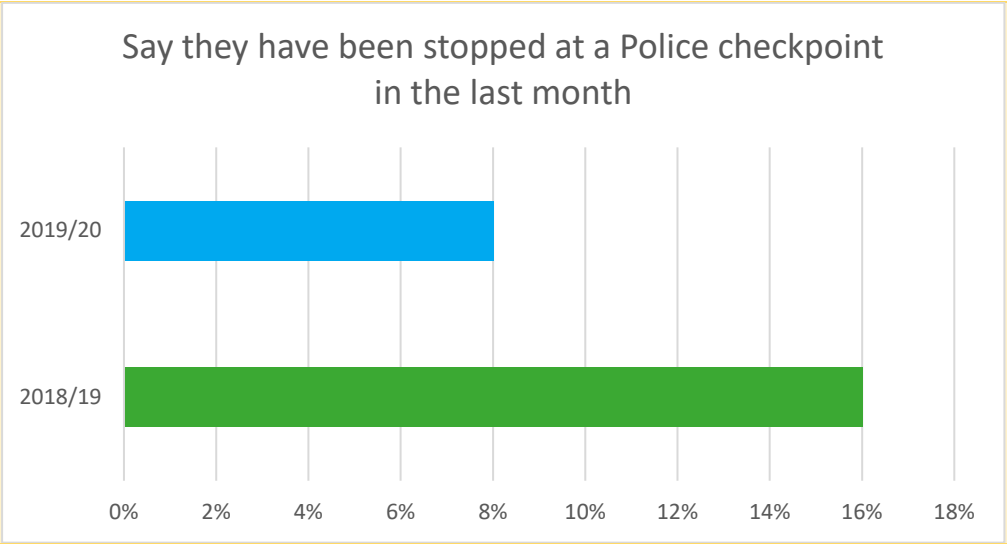
This question is a new measure, so trends are not yet available.



Fatigue - In 2018/19 47% of people said they would pull over and have a short nap when drowsy. In 2019/20 this increased to 56%.



Driving while distracted (including cell phone use) – in 2018/19 35% of people said in the past month they have used a mobile phone while driving. This decreased to 16% in 2019/20.



Police interaction - Compared to 2018/19 where 16% of people said they had been stopped at a police checkpoint in the last month, this was only 8% (2019/20).

About these indicators

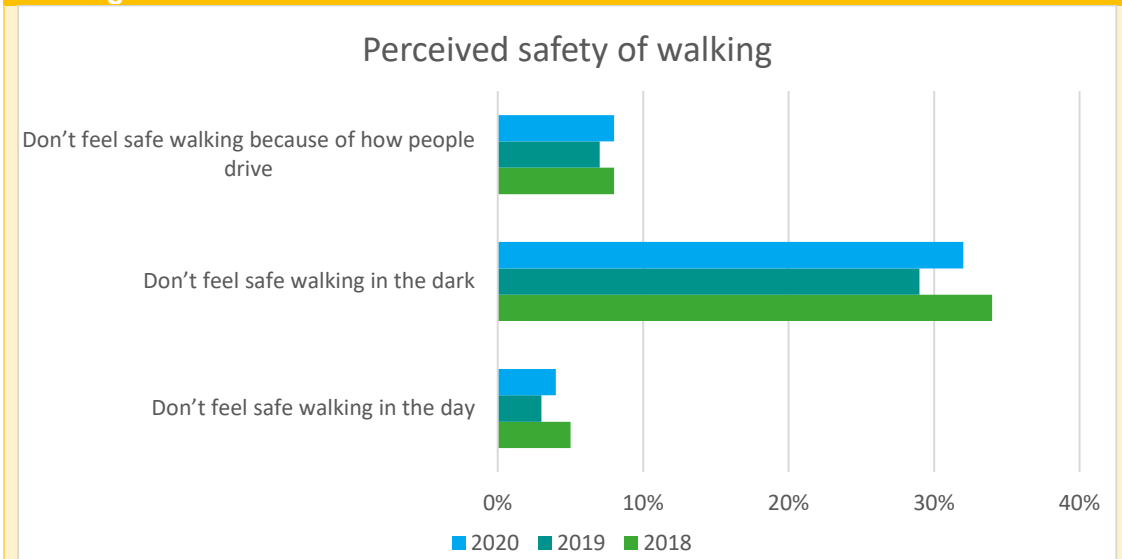
Data source: Waka Kotahi. Data comes from an online survey (Road Safety Advertising Survey) of approximately 1,500 people per quarter who hold a driving licence, with sample quotas to give sufficient numbers for key advertising audiences. The survey was conducted as part of the monitoring of the road safety advertising programme. The reported results are weighted to reflect the national population.

There was a change in methodology/scope this year. Some questions were discontinued while new ones were added.

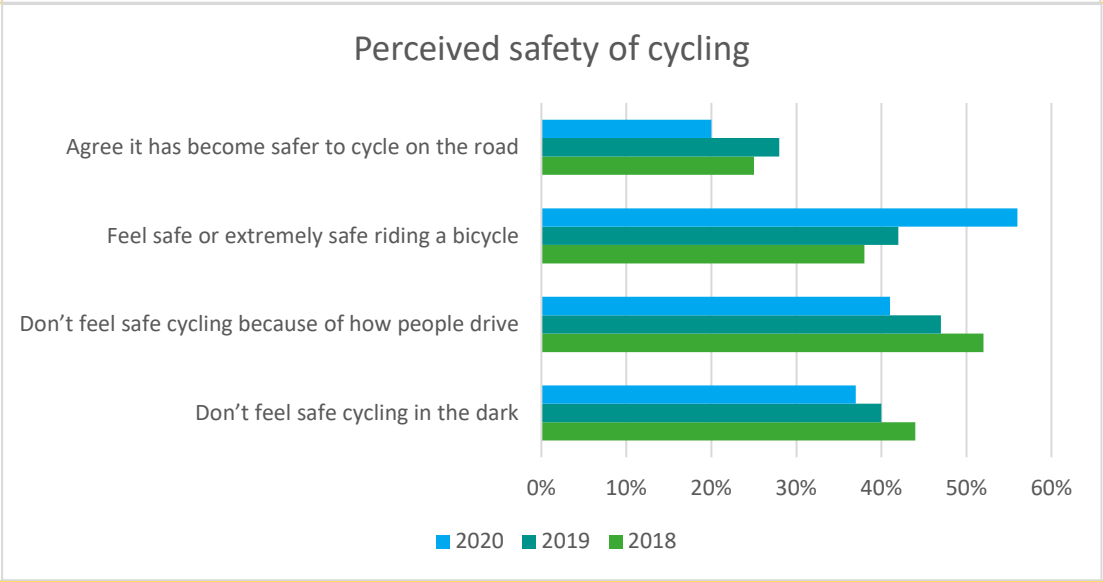
Note: You can find an alternative source of information (The Public Attitudes to Road Safety Survey) for a wider range of road safety related attitude data here: https://www.nzta.govt.nz/resources/public-attitudes-to-road-safety/

Perceived safety of walking and cycling

Findings



People feel less safe walking in the dark in 2020 than they did in 2019.



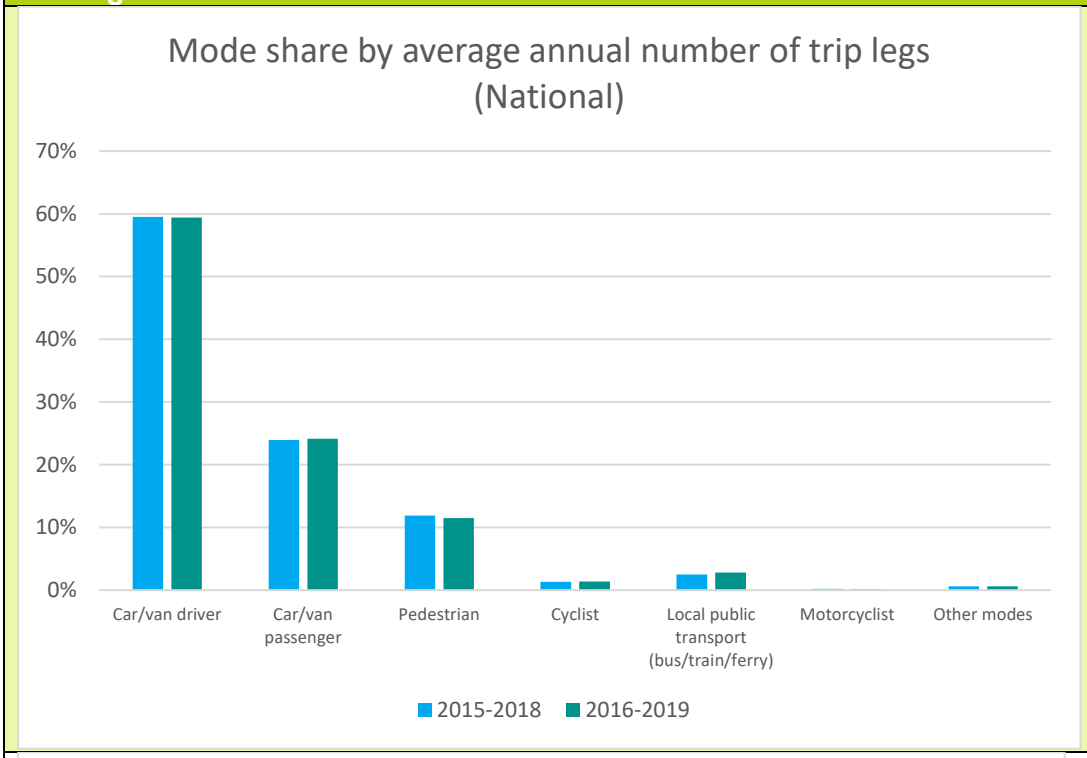
Perceptions of safety of cycling continue to improve this year in a clear trend over that past three years.

Data source: Waka Kotahi Understanding Attitudes and Perceptions of Cycling and Walking survey. Numbers are based on a sample of 2,256 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 collection started when the country was a COVID-19 Level 2, transitioning to COVID-19 Level 1 by the end of May and remaining at Level 1 throughout the rest of the data collection. People's experiences of active modes during lockdown may have influenced their answers to some of these questions.

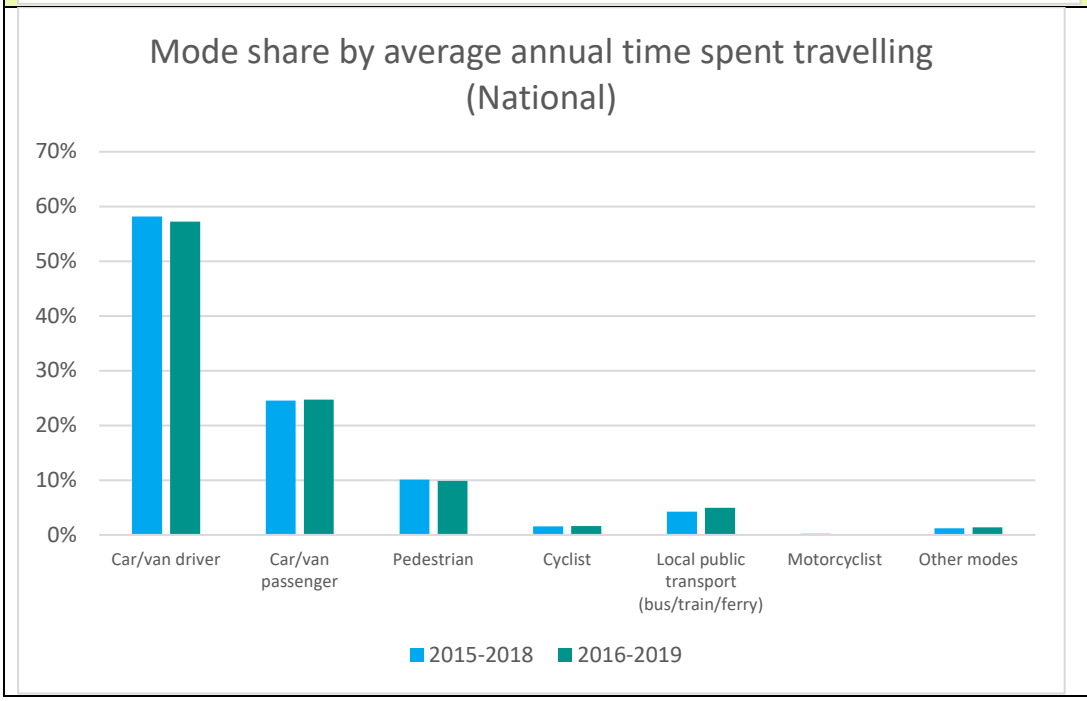
Access

Mode share

Findings

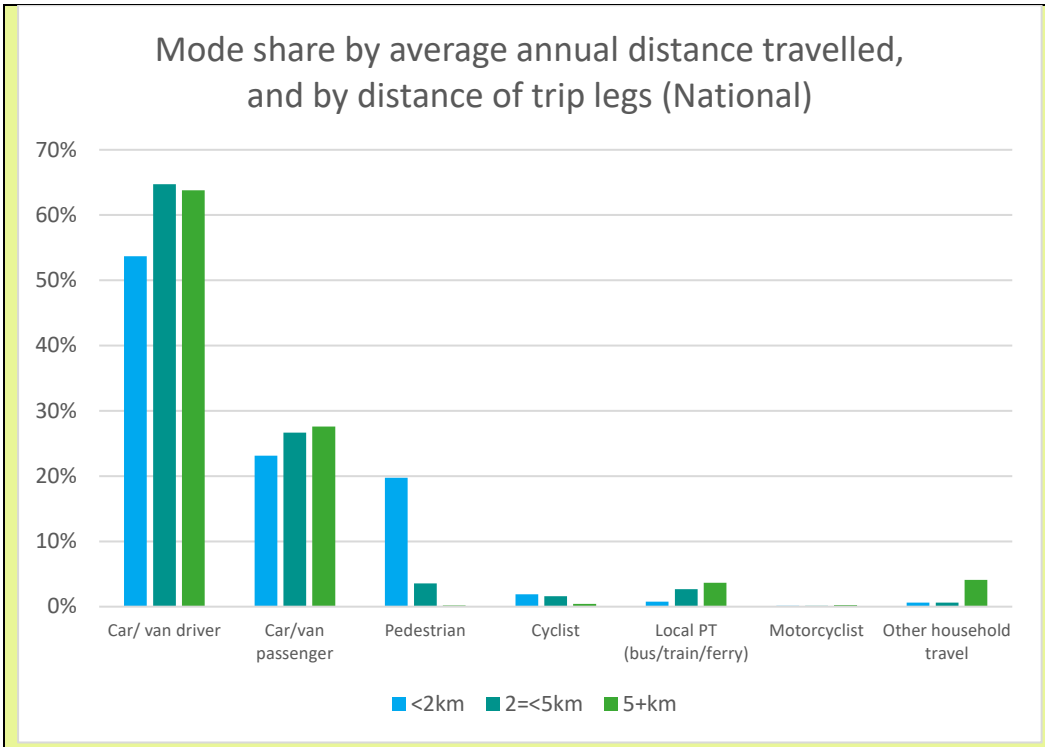


83% of all trip legs[6], are by car (either as a driver or passenger).



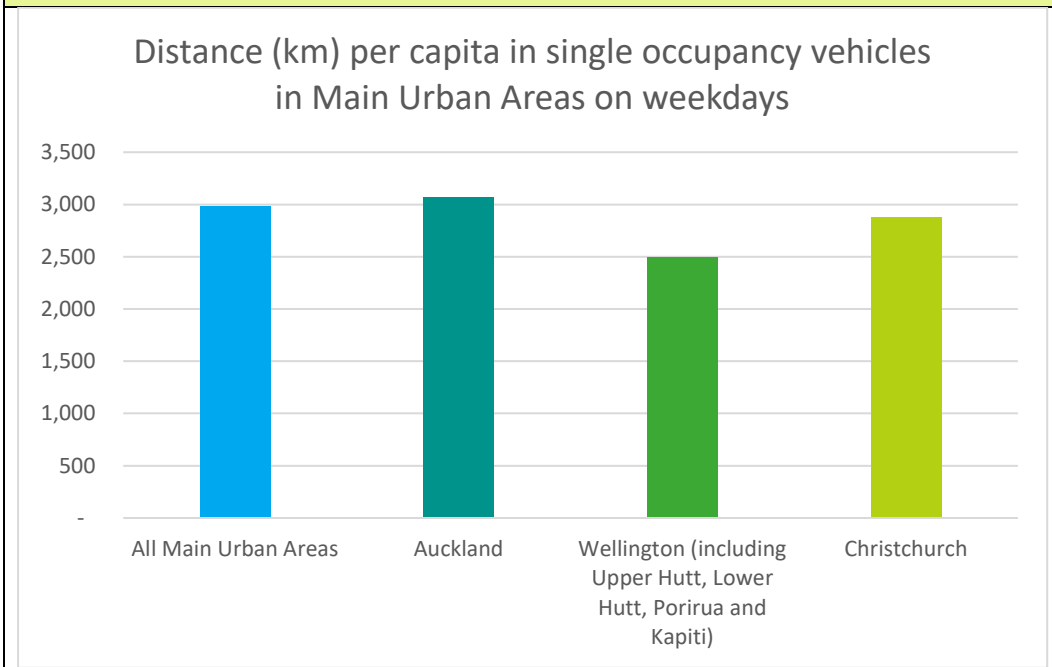
82% of time spent travelling is by car (either as a driver of passenger)

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



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
- 4% of trip legs between 2-5km are by walking and 1.4% are by cycling
- Of trip legs longer than 5km, less than 1% are completed by walking or cycling



Across main urban areas, New Zealanders travel an average of 2,985km on weekdays per year in single occupancy vehicles (i.e. as a driver with no passengers). This includes travel to and from work but does not include travel as part of one's work (e.g. taxi drivers, delivery drivers, tradespeople driving between jobs, travel to meetings etc).

About these indicators

- Mode share data presented in this report comes from 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. Recent changes to data collection methodologies and the delay in the release of 2018 Census results, mean that analysis required to link Household Travel Survey time series data into a meaningful trend analysis is currently not possible.

Investment in access

In 2019/20, a total of $3.079 billion of the investment across various activity classes contributed to the GPS priority on Access.

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	688	24.00	731	23.80
State highway maintenance	509	17.70	463	15.00
Local road improvements	240	8.40	262	8.50
Local road maintenance	694	24.20	582	18.90
Road safety promotion and demand management	12	0.40	12	0.41
Regional improvements	68	2.40	60	1.90
Public transport	590	20.60	842	27.40
Walking and cycling improvements	46	1.60	54	1.80
Rapid transit	8	0.30	8	0.30
Transitional rail	18	0.60	62	2.00
TOTAL	2.871	100.00	3.079	100.00

Data source: Waka Kotahi National Land Transport Fund annual report 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, SuperGold 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.

Active Mode Investment

Summary of results

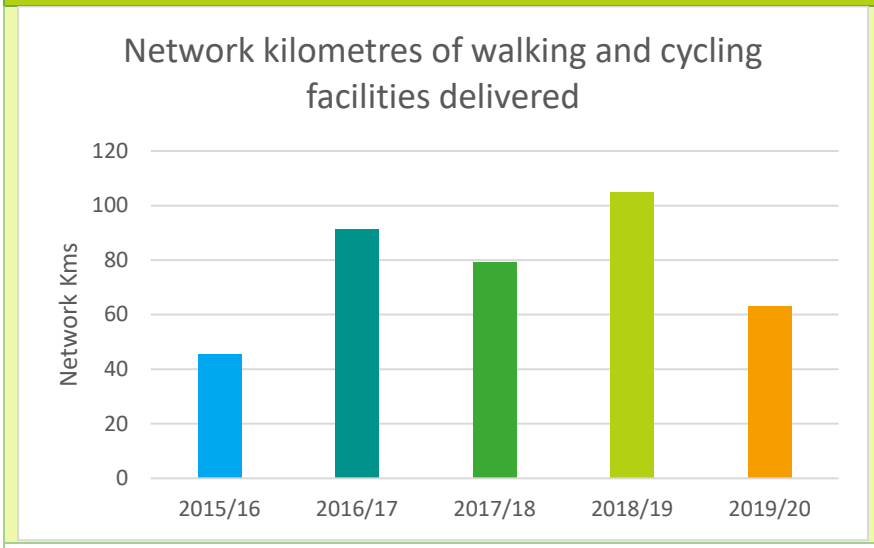
Network kilometres of walking and cycling facilities delivered refers to the total length of new walking and cycling facilities added to the network, including lengths on existing pathways and cycle ways where improvements were made.

Investment in walking and cycling and key outputs

	2015/16	2016/17	2017/18	2018/19	2019/20
Network kilometres of walking and cycling facilities delivered	45.5km	91.4km	79.3km	104.8km	63.2km
Percentage of national cycling tourist routes completed	-	-	-	59%	59%
Km's of national cycling tourist routes completed	-	-	-	5,450km	5,882km

Percentage of Te Araroa at a roadside without a path	13%	14%	13%	14%	13%

Active Mode Facilities



Data source: Waka Kotahi.

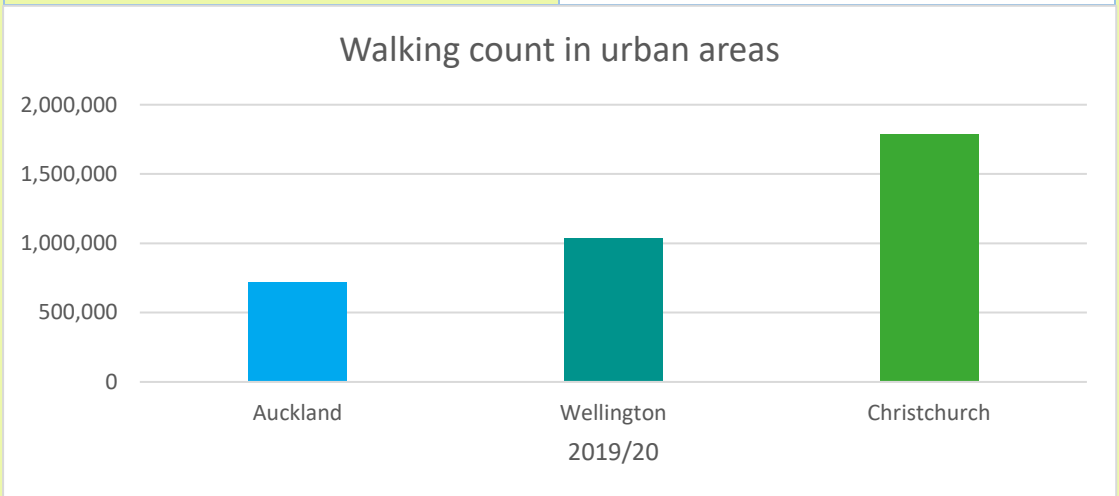
Note: Network kilometres of walking and cycling facilities delivered is the total length of new walking and cycling facilities added to the network during the year and includes lengths of existing pathways and cycle ways where improvements were made.

Data source: Waka Kotahi. Investment includes funding from the NLTF, Crown funding, and, where applicable, local share. 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 cycleway where improvements were made.

Count Data

Findings

Walking Count	2019/20
Total:	3,539,247

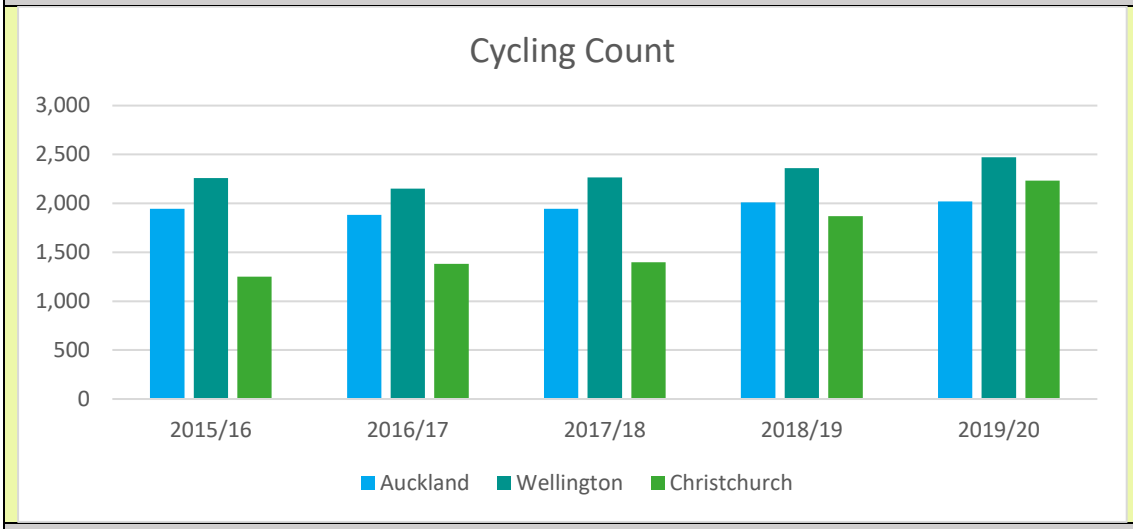


This is a new indicator, so trend data is not yet available.

Wellington and Christchurch see significantly more walking trips than Auckland.

Data source: Waka Kotahi National Bicycle and Pedestrian Count Database. Counts represent a pedestrian detected by an automated continuous counter. Five permanent count sites were selected for each city and data was aggregated to derive the total counts. Information from other count sites where data

anomalies exist were not included in this report.



Across all three major metropolitan areas there has been a 23% increase in cycle trips, from 5,455 in 2015/16 to 6,728 in 2019/20.

Data source: Reports of regional authorities provided to Waka Kotahi. Cycling count reflects the number of cyclists counted in the annual cycling cordon count in each centre. The count for Auckland was done on 11 and 12 March 2020 and is the average of the two days. Wellington count was taken on 10 March 2020 and Christchurch count was taken on 19 March 2020.

Use of cycling tourist routes	2019/20
	515,443

There are over 100 trial counters on the 22 New Zealand Cycle Trail Great Rides, of which 11 perform as cycle touring routes.

This is a new indicator so trends are not yet available. In 2019/20 there were more than 500,000 counts made on these tourist routes.

Data source: Waka Kotahi. The Ministry of Business, Innovation and Employment (MBIE) collects data on Great Rides as part of their work on tourism. Data includes Great Rides only because Heartland Rides have no counters as these are predominantly on road. Data covers the period 1 March 2019 to 28 February 2020. 'Cyclists' refers to mountain bikers, bike packers, cycle tourers and any other person on a bicycle.

Note: A count is measured every time a cyclist pasts the counter (in either direction). This is not necessarily 515,443 different cyclists.

Public transport

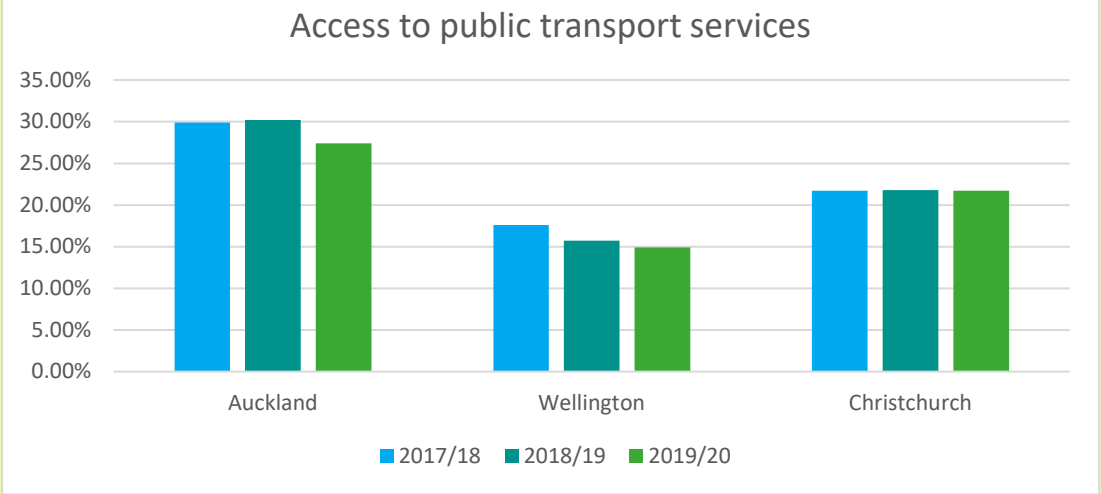
Summary of results

Investment has increased across all public transport modes (including public transport, rapid transit and rail). Investment into Total Mobility has also increased from previous years (10.5% increase in 2019/20 compared to 2018/19 numbers). Despite an increase in investment, public transport boardings have declined in the most recent year (2019/20). This trend holds at both national and regional level and among Super Gold card users. This is primarily due to COVID-19 travel restrictions, particularly in quarter 4 of 2019/20. It must be noted, however, that prior to 2019/20, there had been a gradual upturn in public transport and SuperGold boardings.

Investment public transport

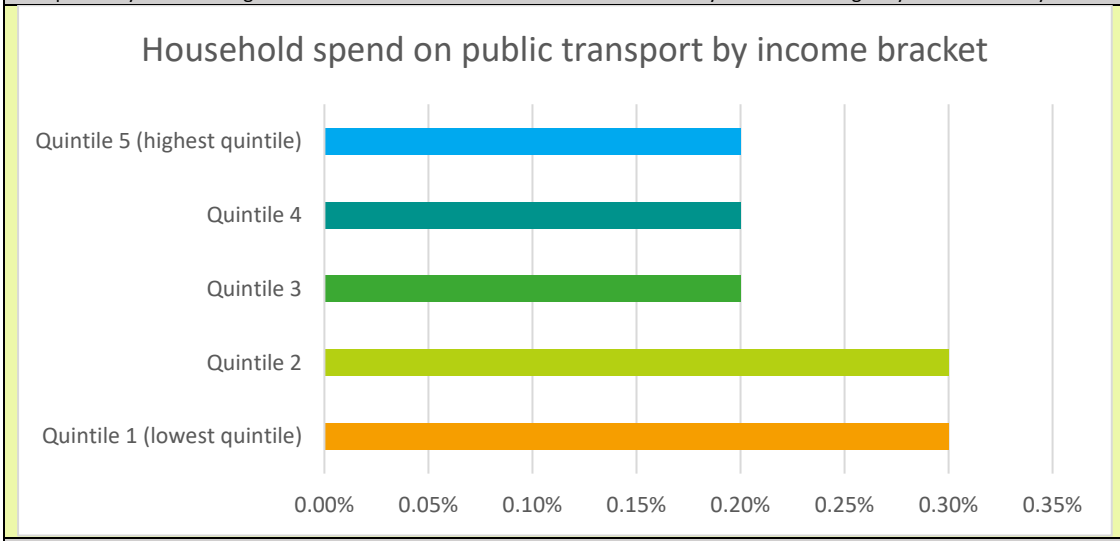
	2015/16	2016/17	2017/18	2018/19	2019/20
Investment in Total Mobility	$18,330,939	$18,896,895	$19,776,737	$21,589,196	$23,863,764

Public transport data



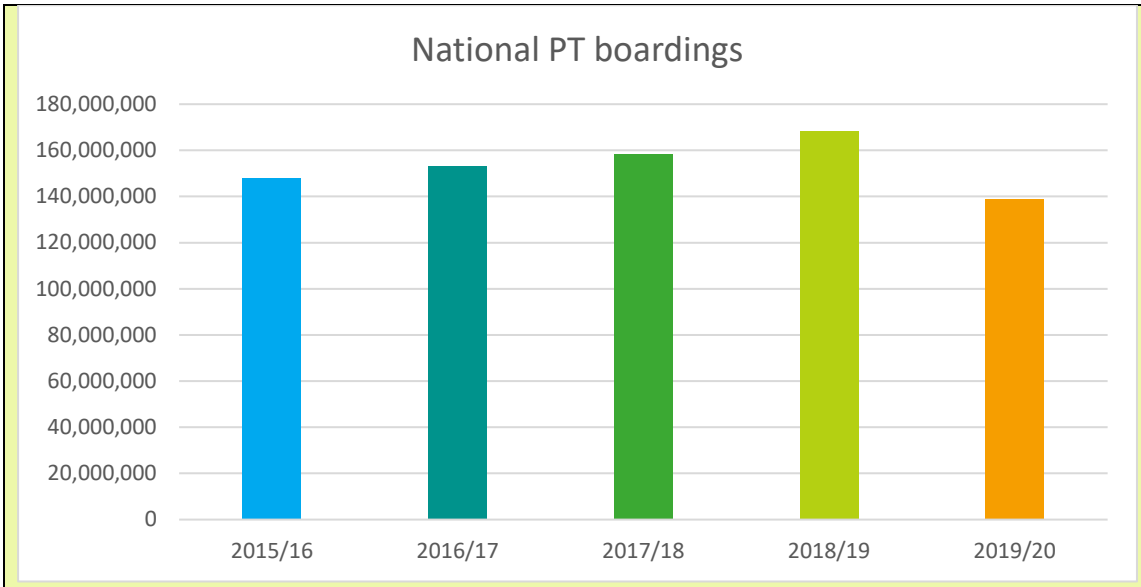
Access to public transport is highest in Auckland (27.4%), followed by Christchurch (21.7%) and then Wellington (14.9%).

Data source: Waka Kotahi. 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 busways). 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. This year, we used Statistics New Zealand population estimates rather than population data from the census. We back cast the 2013 census-based results reported last year for comparability. Back casting creates a new back series for each series so that they are methodologically and structurally consistent.

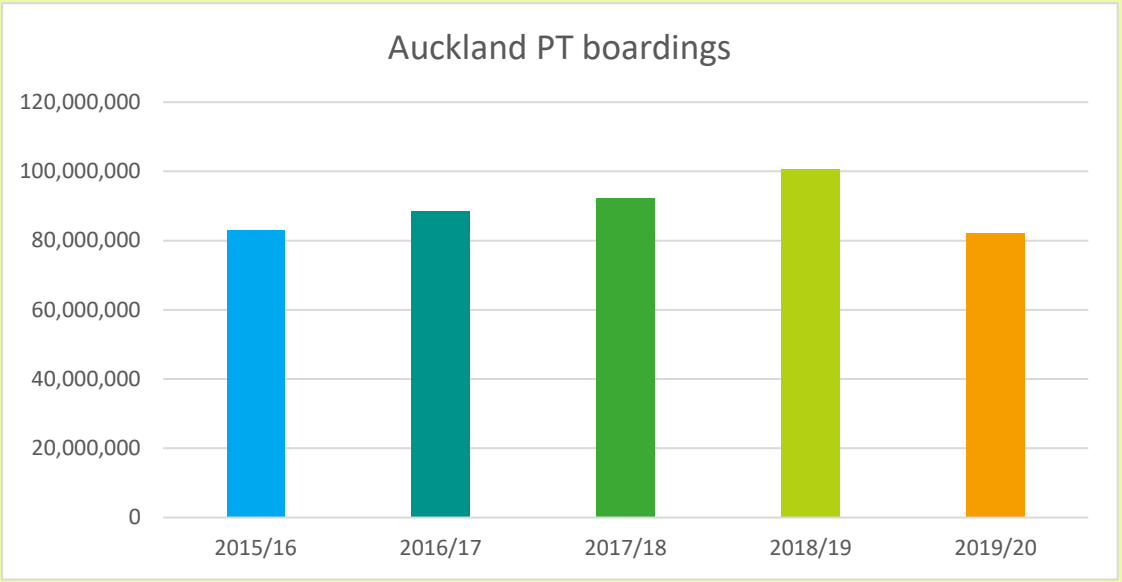


Household spend on public transport (as a % of income) is highest among the lowest income groups.

Data source: Stats NZ



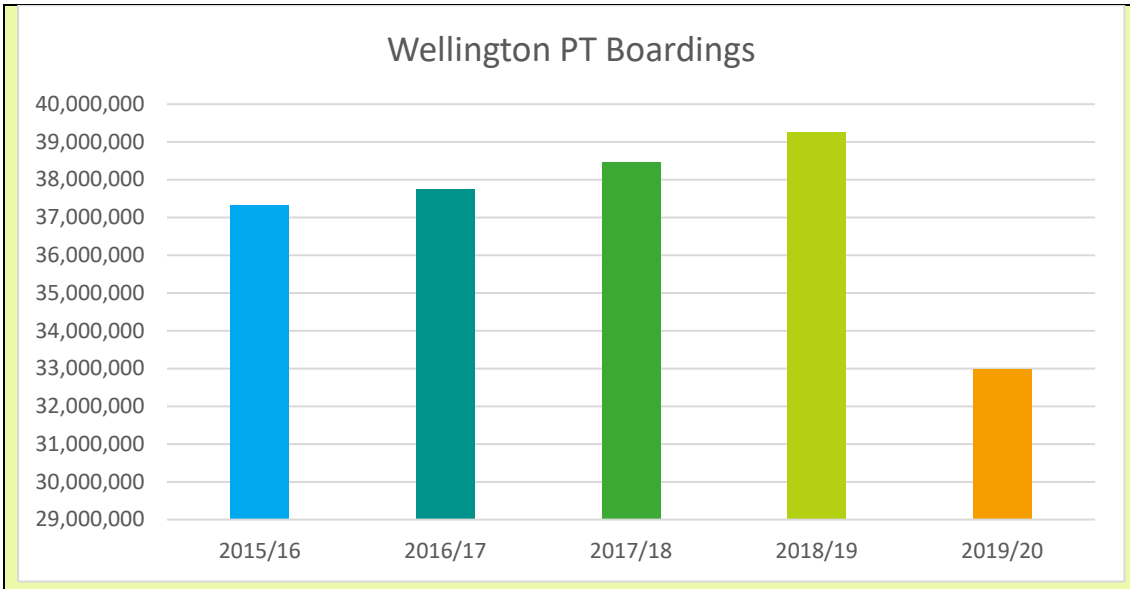
The majority of public transport use in New Zealand is in the three major metropolitan areas of Auckland, Wellington and Christchurch



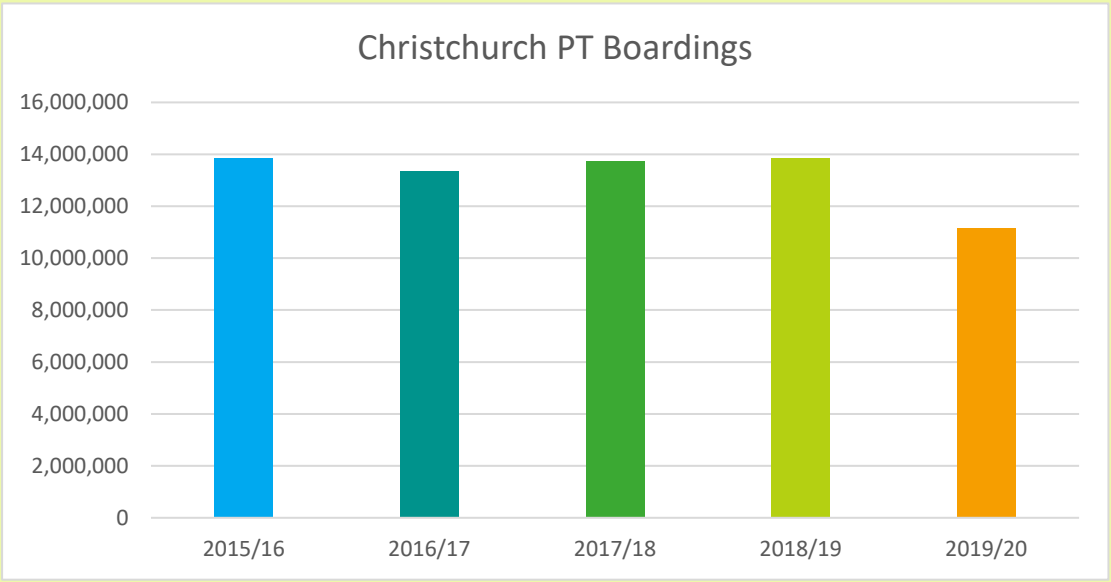
Auckland: Have decreased from 100.7 million boardings in 2018/19 to 82,290,181 in 2019/20.

In the year of 2019/20 public transport boardings decreased from a total of 168,330,200 in 2018/19 to 138,803,111 in 2019/20. This represents an 18% decrease.

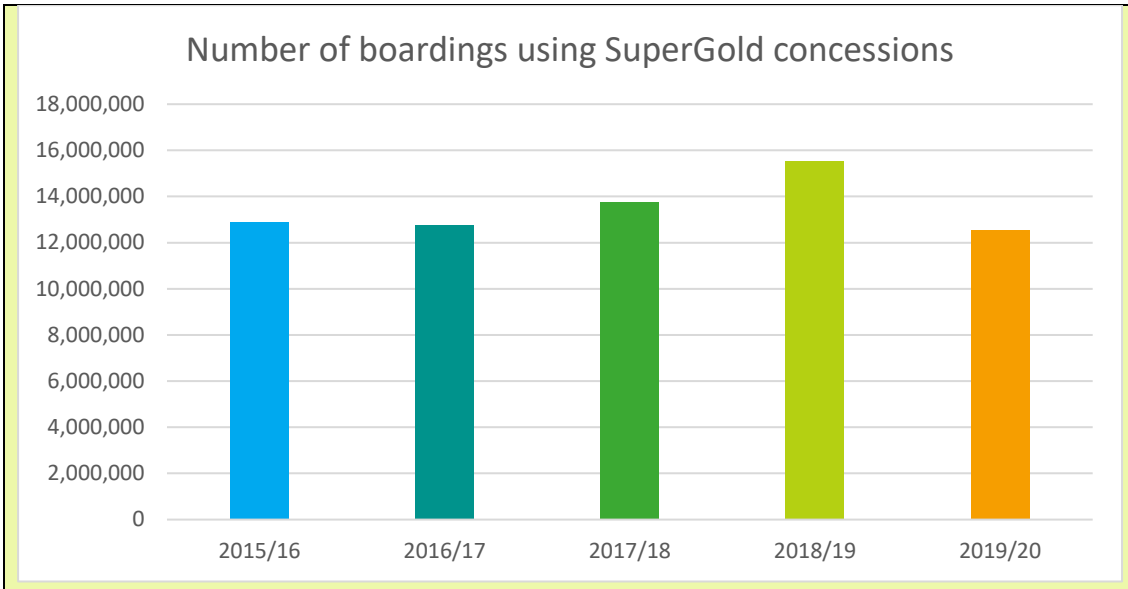
The decline in boarding's is due to COVID-19 travel restrictions after a period of growth.



Wellington: Have decreased from 39.3 million in 2018/19 to 32,989,812 in 2019/20.



Christchurch: Have decreased from 13.9 million in 2018/19 to 11,162,229 in 2019/20.



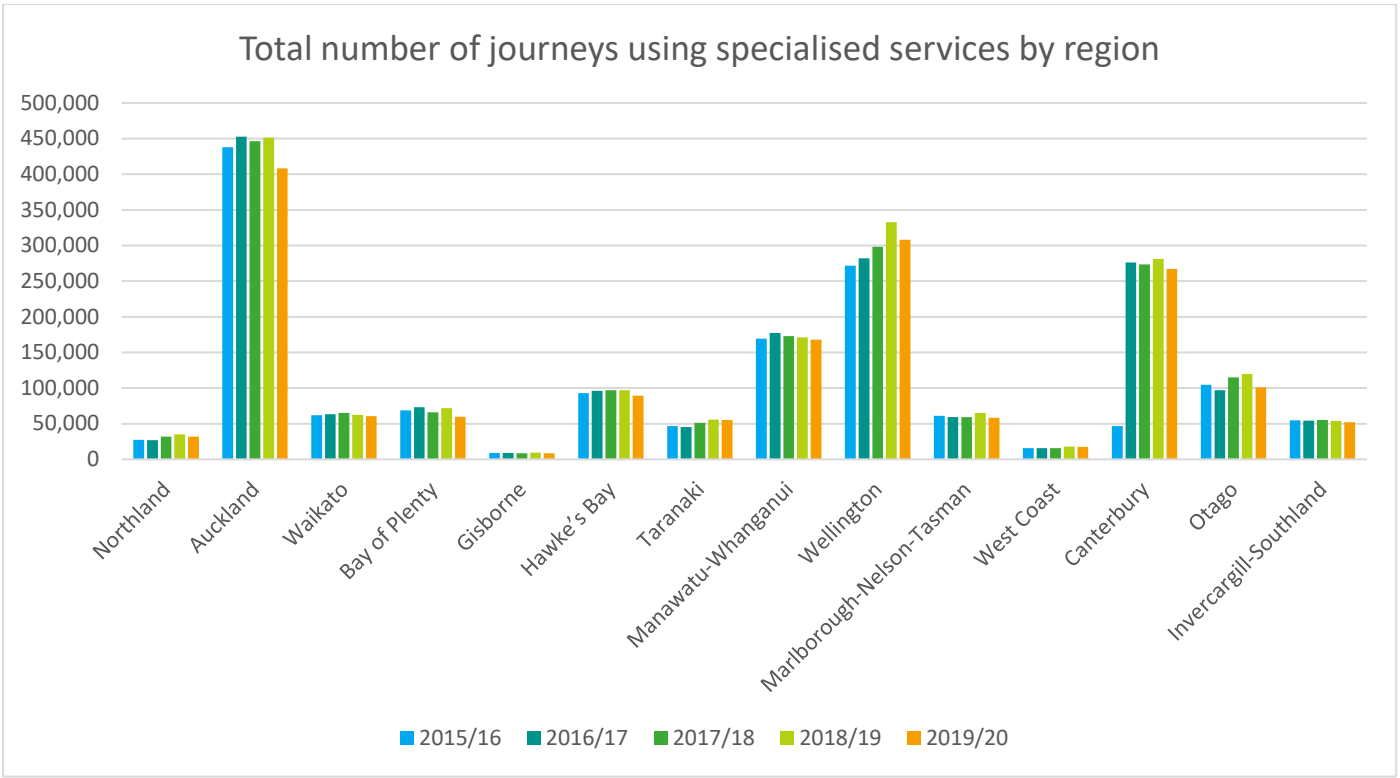
There has been a 19% decrease in SuperGold boardings from 15,522,075 in 2018/19 to 12,558,809 in 2019/20.

Data source: Reports from local and regional authorities in Transport Investment Online (TIO) which is administered by Waka Kotahi. Number of boardings on urban public transport services (bus, train and ferry) is the sum of all public transport passenger boardings by bus, train and ferry across all regions. It includes boarding's using SuperGold card concessions. 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.

Specialised services

Funded in partnership by local and central government, the **Total Mobility** scheme assists eligible people with long term impairments to access appropriate transport through subsidising door-to-door transport services for those who cannot independently use regular public transport.

Specialised services (e.g. the **Total Mobility** scheme) provide access to the transport system for those not able to use public transport or a private vehicle. Specialised services are used more in Auckland (408,329 in 2019/20), Wellington (307,910 in 2019/20) and Christchurch/Canterbury (267,114 in 2019/20) which reflects their high populations.



About this indicator

Use of specialised services by region 2015/16 - 2019/20.

Data source: Waka Kotahi. Refers to the number of journeys undertaken using specialised services (i.e. as part of the Total Mobility scheme).

Access to social and economic opportunities

Summary of results

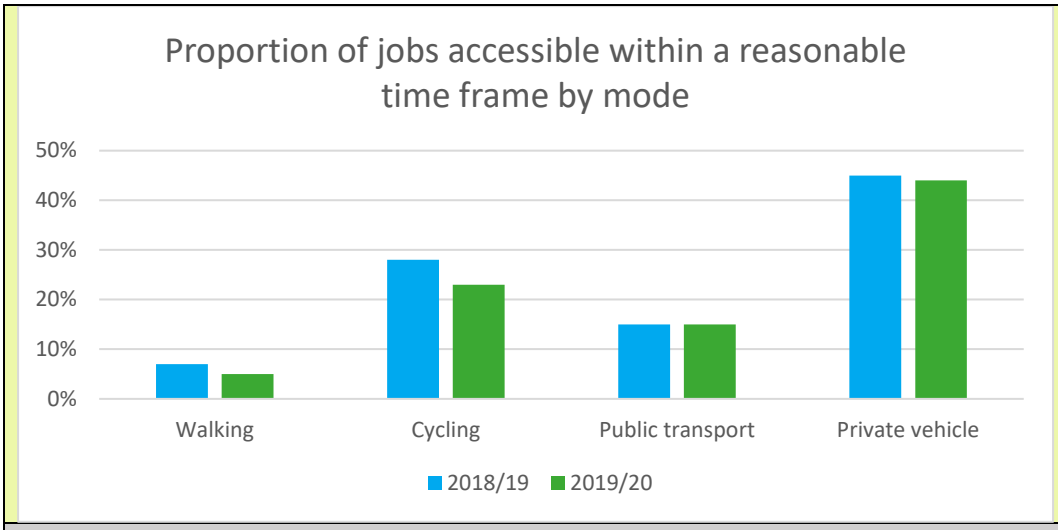
Across all modes, with the exception to public transport, there has been a minor decrease in the proportion of jobs accessible within a reasonable timeframe[7] during the morning peak. Access to jobs is lowest by walking (5%) and highest by private vehicle (44%) for this measure**.** Note that the measure 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 meshblock and found the following trends: primary schools, secondary schools, General Practitioner ("GP") clinics, and supermarkets are all accessible to…

- 95% of the population within 15 minutes drive time;
- 53% of the population within 15 minutes by public transport;
- 81% of the population within 15 minutes by cycling; and
- 44% of the population within 15 minutes by walking in 2019/20.

When it comes to the biggest barriers to access, the most commonly cited barriers in a survey conducted in 2019/20 were:

- COVID-19 (28%)
- Bad weather (25%)
- Cost (19%)
- Would have taken too long (16%)
- Health conditions/disability (15%)
- Family/caring responsibilities got in the way (14%).



In 2019/20, across all modes, with exception to public transport, there has been a minor decrease in the proportion of jobs accessible within a reasonable timeframe.

Data source: Waka Kotahi. Job accessibility is defined as travel within a reasonable time during weekday morning peak. 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

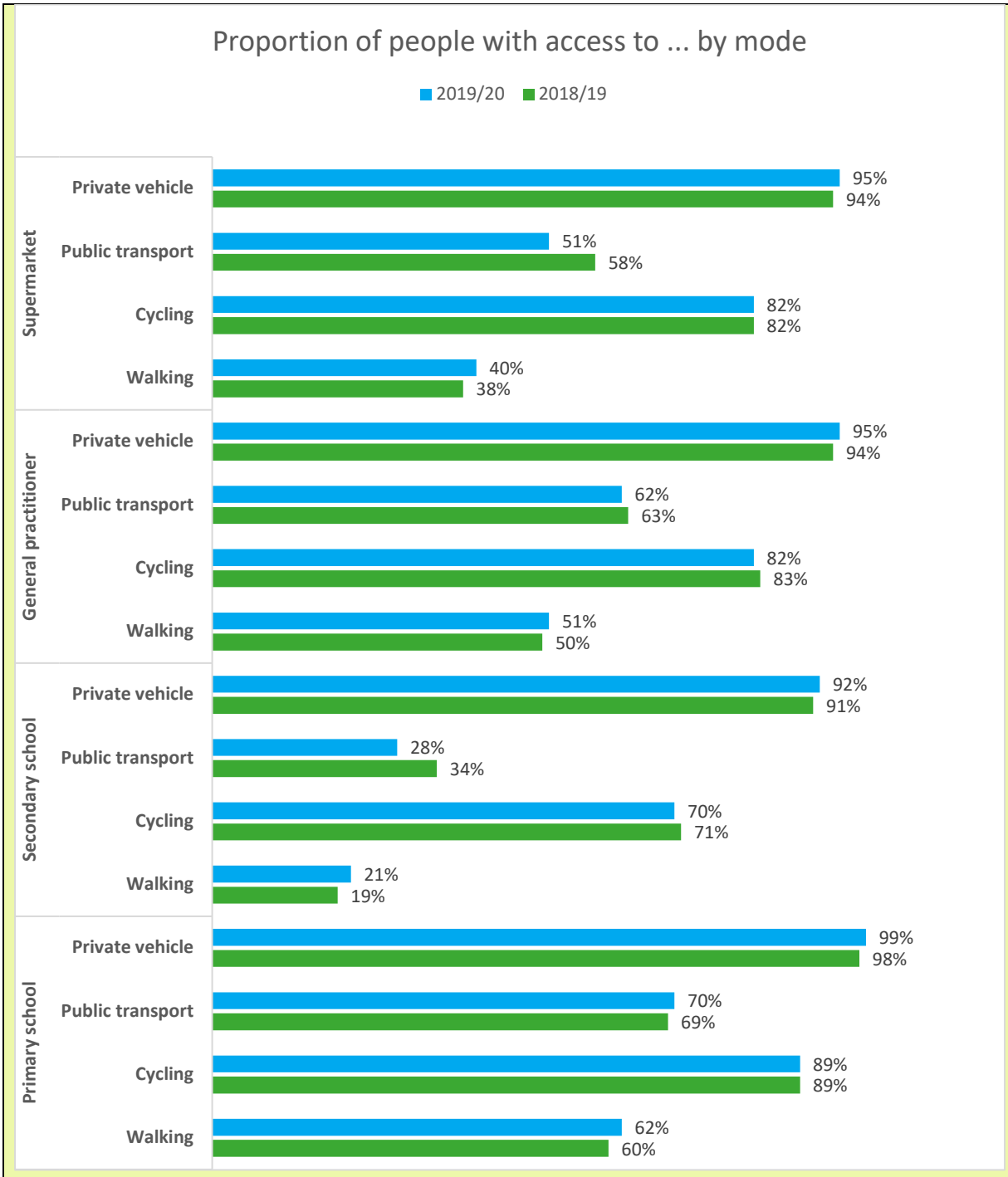
[7] For walking this is defined as 45 minutes, for cycling this is defined as 45 minutes door-to-door cycle time for a confident cyclist who is willing to cycle on the road, for public transport this is defined as 45 minutes and includes walking to/from the stop and both transfers and transit time, for 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.

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.

Note: 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 (before COVID-19 movement restrictions began).

	2019/20	
Proportion of recently built residential dwellings in major urban areas with access to frequent public transport services	9.5%	This is a new proxy measure

Data source: Waka Kotahi. Information comes from an MR Cagney analysis of 2020 morning peak frequent public transport in March 2020 and building consents issued between July 2019 and February 2020. Data covers Auckland, Christchurch, Dunedin, Hamilton, Hastings, Napier, Palmerston North, Queenstown, Rotorua, Tauranga, Wellington and Whangarei.

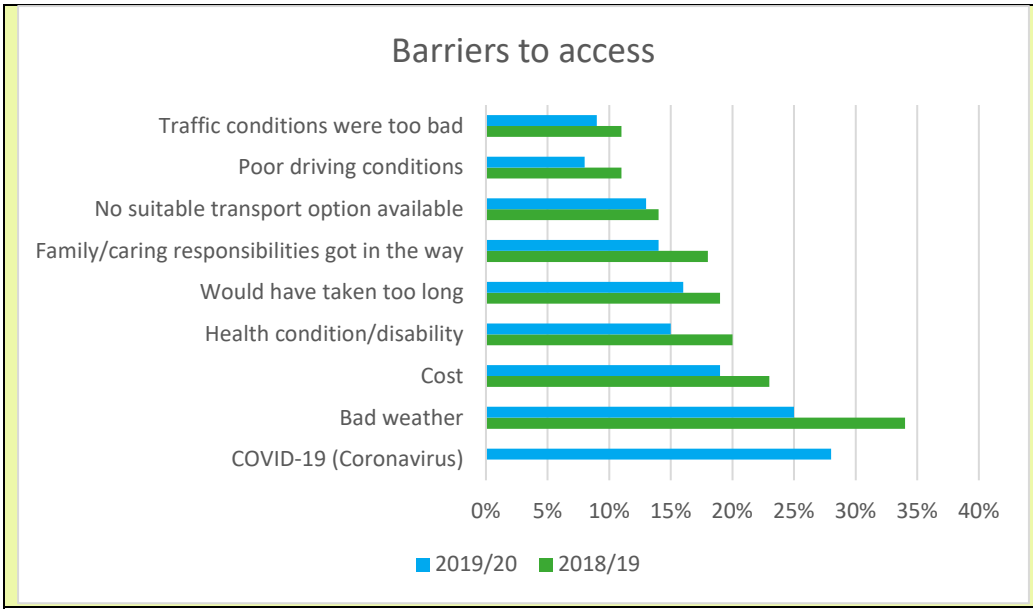


Data source: Waka Kotahi. The figures for the proportion of population within 15-minute access to the nearest school, health facility and supermarket during morning peak is a snapshot of the land-transport system from 7am to 9am on a non-holiday in early March (before COVID-19 movement restrictions began).

This 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).

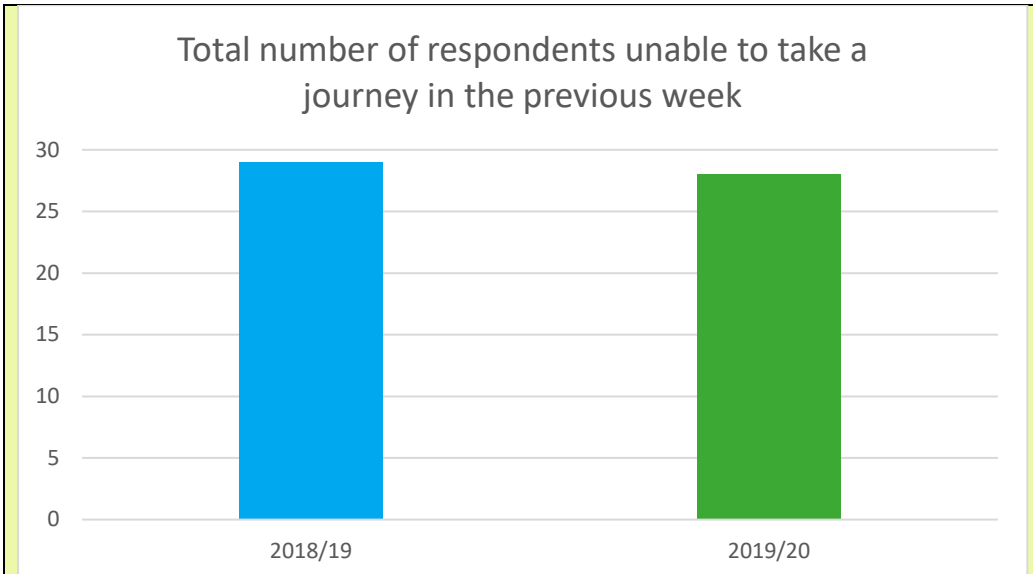
Public Transport analysis only includes cities where electronic schedules could be obtained for 2019 and 2020, these include the following regional transport authorities: Auckland, Wellington, Christchurch, Waikato, Bay of Plenty, Hawke's Bay, Palmerston North, Timaru and Otago.

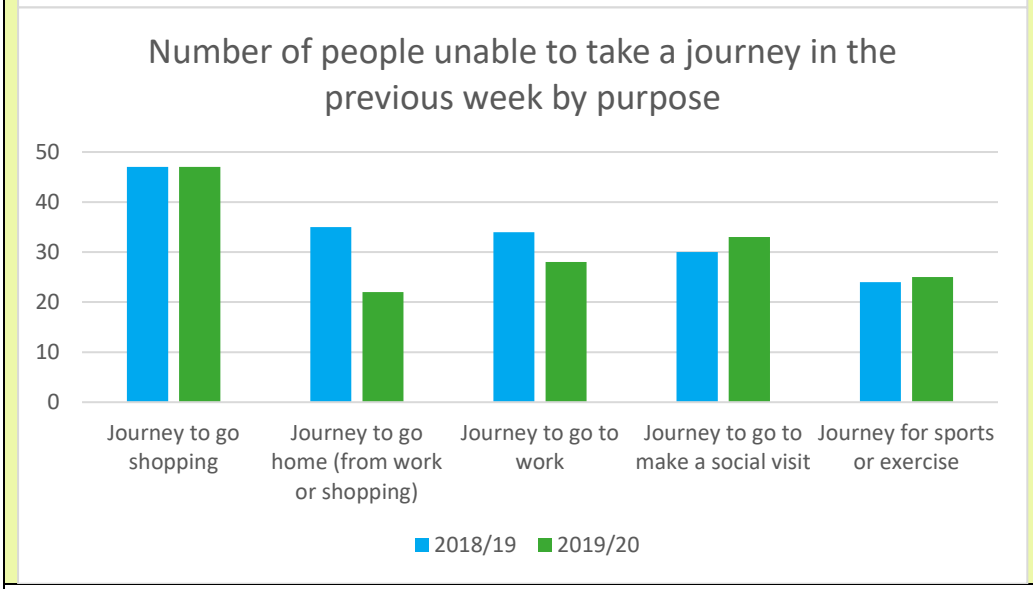
Data on locations were sourced from: general practitioner - Ministry of Health, supermarket - chain "store map" web pages (New World, Pak'nSave, Fresh Choice, Four Square, Countdown, SuperValue), schools - Education Counts Facilities Dataset (note that this included state schools but excluded private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



One of the most commonly cited barriers to access in 2018/19 was bad weather (34%). Whilst this continued to be one of the biggest contributing factors in 2019/20 (down to 25%), COVID-19 had the biggest impact, affecting 28%.

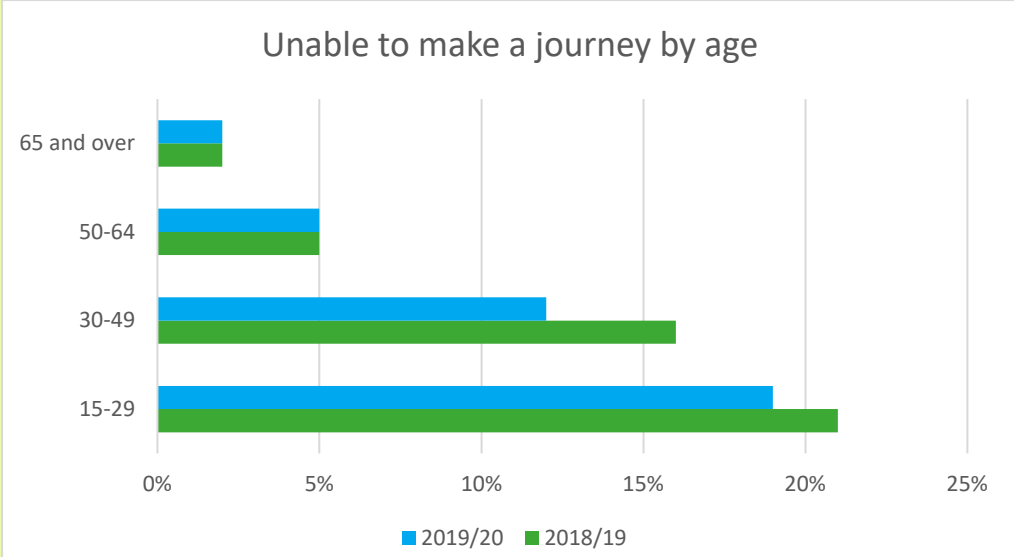
Note that, compared with the previous year, COVID-19 is likely to have had a considerable impact on other (non-COVID) response options. The majority of those who said they didn't travel due to COVID-19, did so due to the official travel restrictions and concern about catching the virus. This reasoning is likely to render other considerations/barriers (such as costs, mode options etc.) irrelevant and so figures may be underrepresented of barriers in normal times.





47% of people were unable to take a journey to go shopping in 2019/20. This is on par with the previous year (2018/19).

Note that 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.



Those in the 15-29 age range (19%), followed by 30-49 (12%) are unable to make a trip they would otherwise make because of cost, 'would have taken too long', 'no suitable transport option available' and 'traffic conditions too bad'.

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

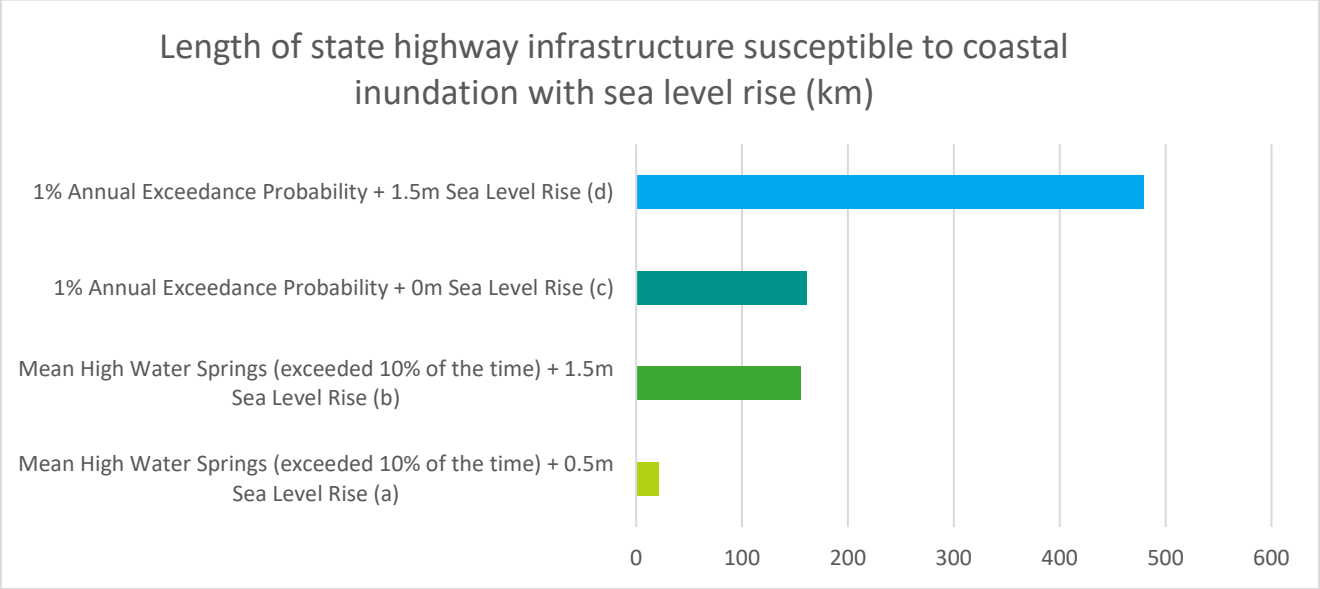
Network resilience

	2015/16	2016/17	2017/18	2018/19	2019/20
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
Number of projects	31	29	28	19	15

Data source: Waka Kotahi. This includes NLTP activities for Resilience Improvements and Preventive Maintenance that funds non-routine work to protect roads, road structures, eligible walking and cycling facilities from damage, and to minimise the threat of road closure from natural phenomena. Investment includes funding from the NLTF, Crown funding (Regional Investment Opportunities) and, where applicable, local share [as mentioned earlier – what is our position on whether reporting should include non-NLTF too, considering Crown investments aren't always influenced by GPS?]

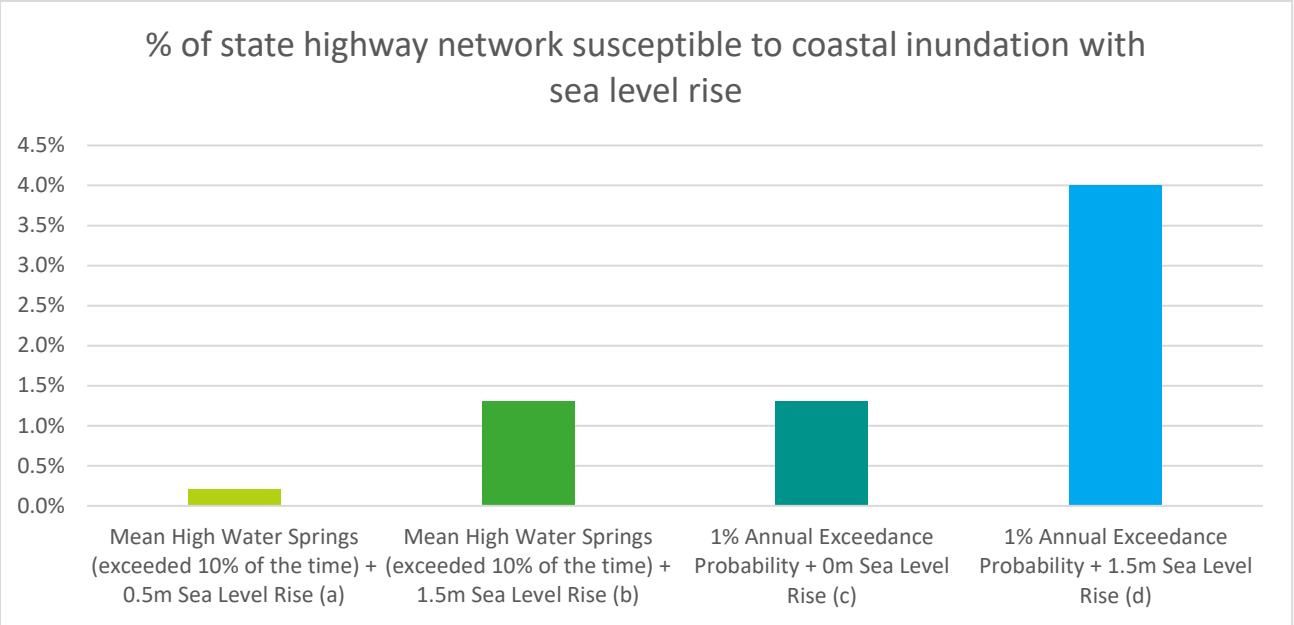
Length of state highway infrastructure susceptible to coastal inundation with sea level rise (km)

Sea level rise exposure of the state highway network is estimated between 0.2% and 4% 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.



Note: This is a proxy measure.

a. Permanent inundation with 0.5 m sea level rise and representative of present-day typical storm
b. Permanent inundation with 1.5m sea level rise
c. Present day 1:100 year storm extent (excludes run-up/overtopping)
d. Present day 1:100 year storm surge extent (excludes run-up/overtopping) with 1.5m sea level rise



Note: This is a proxy measure.

e. Permanent inundation with 0.5 m sea level rise and representative of present-day typical storm

f. Permanent inundation with 1.5m sea level rise

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

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

About this indicator: This is a new measure

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.

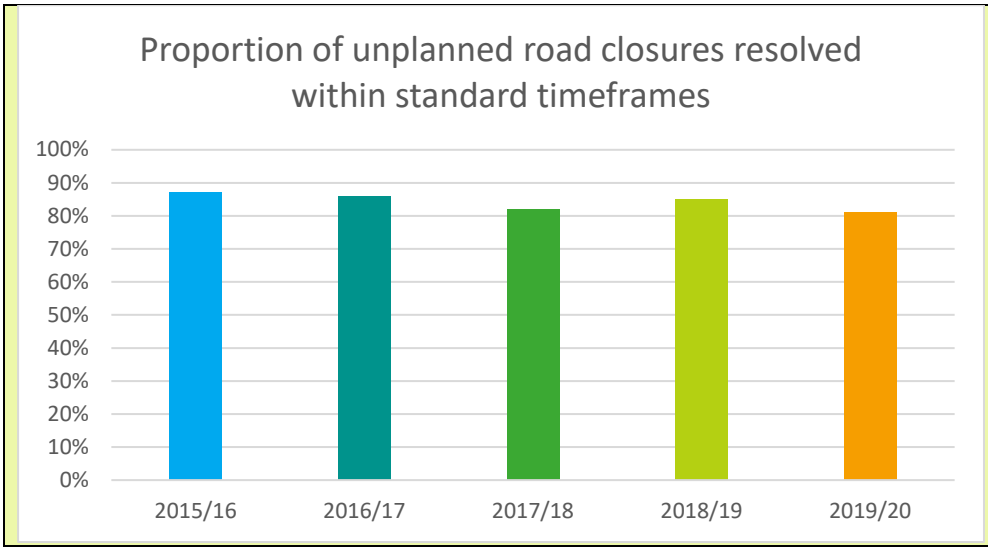
It is not expected that the input data will change significantly over the short term. However, it is expected that over the medium term (5-10 years) a review of input data baseline for this assessment will be required in order to track changes in hazard exposure of the state highway network or implement re-forecasting based on updated impact of emissions scenarios.

Disruption on the network:

Summary of results

In 2019/20, a total of 3,701 hours of unplanned road closures occurred on key freight and tourism routes, with an average closure duration of 7 hours per route. Among these unplanned/unscheduled road closures, Waka Kotahi managed to resolve 81% within standard timeframes (two hours in urban areas and 12 hours in rural areas). This means that 19% of road closures were closed for a longer than typical duration. This number has remained relatively stable over the past four years**.**

Of the total 3,995.1km key social and economic corridors across the country, 39% (1,563.7km) 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.



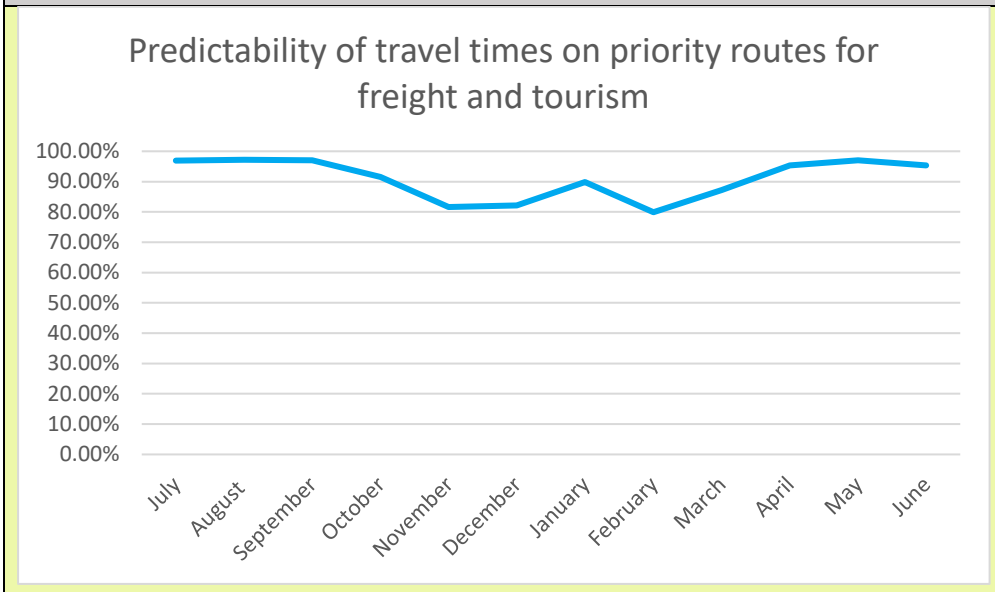
In 2019/20, 81% of unplanned/unscheduled road closures were resolved within Waka Kotahi's standard timeframes (two hours in urban areas and 12 hours in rural areas). This proportion has changed little over the last four years.

Data source: Waka Kotahi. This is the sum of all unscheduled road closure incidences during the year (both urban and rural) that have a significant impact on road users 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 incidents. Performance against this measure is influenced by the frequency and severity of weather events.

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

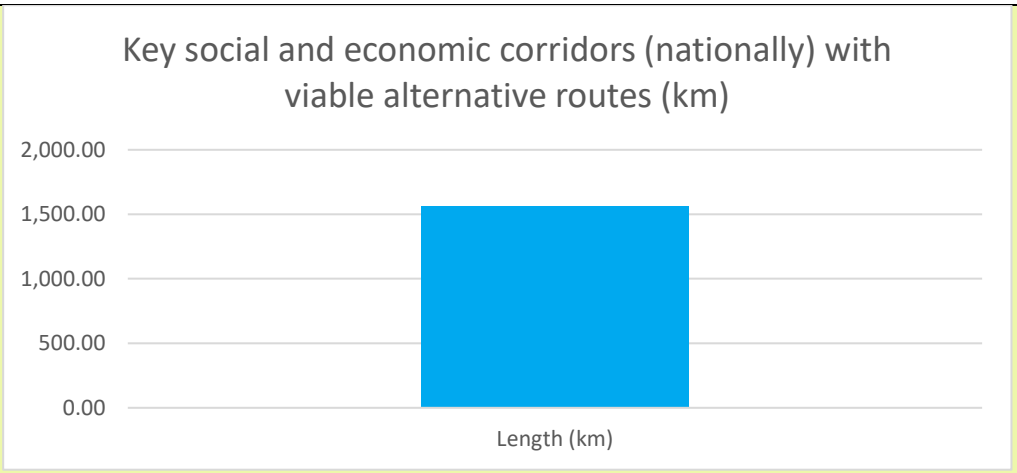
This is a new indicator.

Data source: Waka Kotahi. This was sourced from a predictability analysis of key urban routes based on TomTom data on key urban journeys (am peak, interpeak, and pm peak averaged across urban routes in 2019/20).



Over the course of this year, predictability has remained high during the winter months but dipped over summer when construction and maintenance activity and travel demand peak. Due to reduced travel during the COVID-19 lockdown (March, April and May) predictability was higher than would typically occur, climbing to around 97 percent.

Data source: Waka Kotahi. This was a new measure in 2019/20 and 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".



This is a new measure.

Out of the total 3,995.1km key social and economic corridors across the country, 39% (1,563.7km) have viable alternative routes. Mapped throughout the network, the result is lower in the South Island compared with the North Island.

Data source: Waka Kotahi. This was a new measure in 2019/20 and 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.

	2019/20
Number of hours that priority routes for freight and tourism are unavailable	3,701 hours

A total of 3,701 hours of unplanned road closures on these routes occurred this financial year across 530 events, with an average closure duration of 7 hours. This compares with an average closure duration of 11.9 hours across the whole state highway network.

Data source: Waka Kotahi. This was a new measure in 2019/20 and shows the total number of travel hours that priority routes for freight and tourism are unavailable.

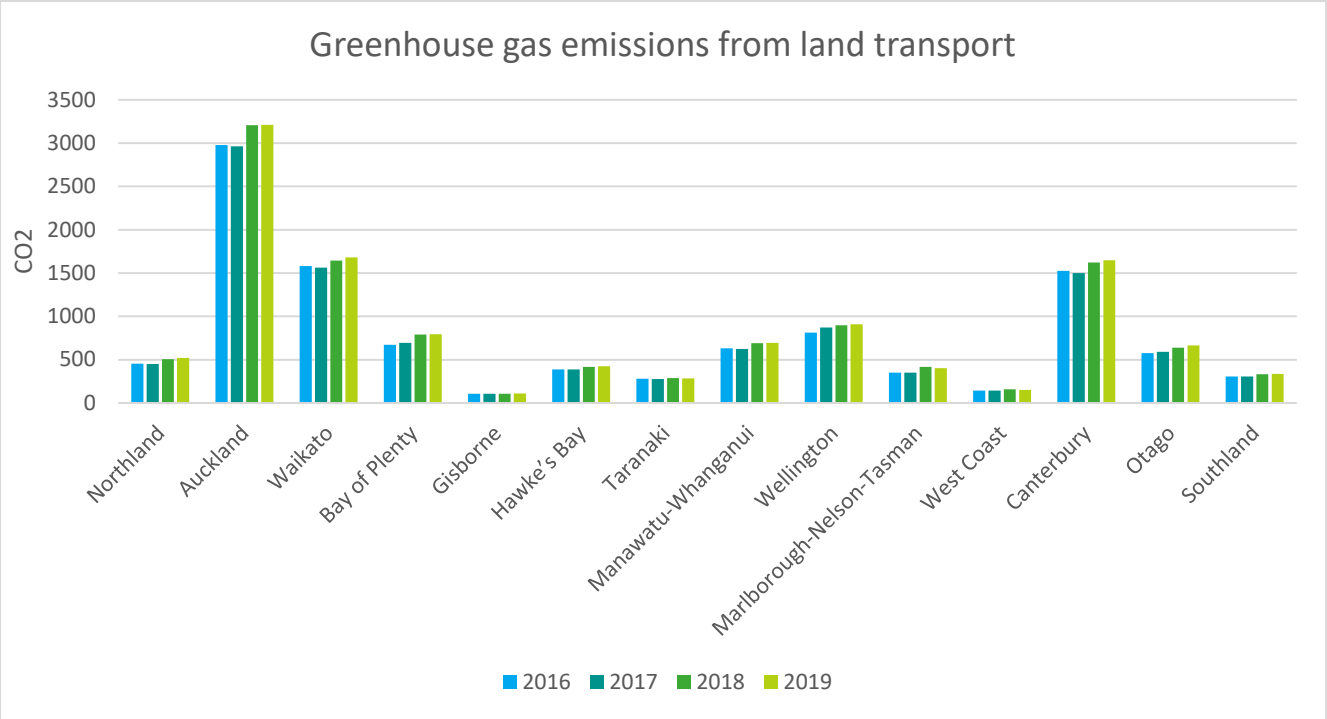
	2019/20
Number of trials undertaken on intelligent transport systems and other technologies	2
Number of trials implemented on intelligent transport systems and other technologies	1

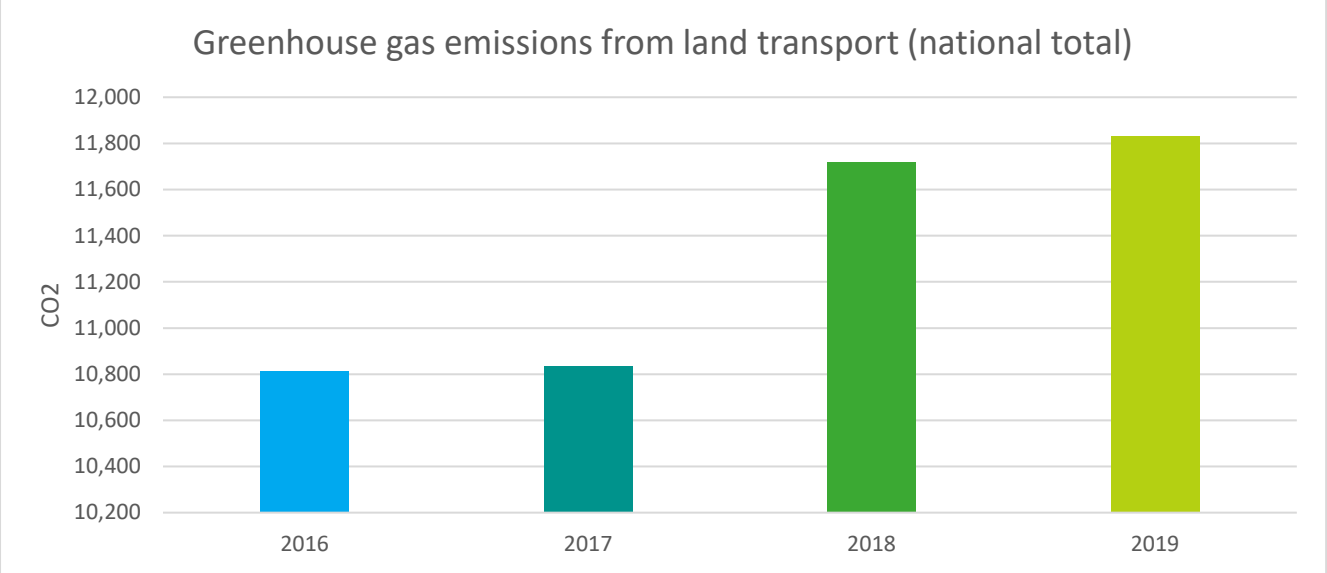
Data source: Waka Kotahi. A trial for new CCTV camera in Wellington was undertaken. No changes were implemented because the existing cameras that were due for renewal were still fit for purpose. The trial for the Paremata roundabout involving the installation of a two-aspect (red and amber) roundabout metering system on the SH1 northbound approach resulted in the implementation of changes based on recommendations from the trial. Subsequently, benefits include improved travel times for southbound traffic through the roundabout, with approximately 1,860 vehicles during the 4-6pm peak experiencing an average five-minute reduction in journey times. Drivers from other directions, including approximately 2,330 vehicles travelling northbound on SH1 and 1,360 vehicles travelling east onto SH58 between 4-6pm, have not been significantly affected, with a negligible increase in journey times.

Environment

Greenhouse gases

Greenhouse gas emissions have slightly increased across all regions in the past four years, with Auckland having the highest levels of greenhouse gas emissions compared to other regions and Nelson the lowest.





Harmful emissions

The amount of harmful emissions emitted into the atmosphere each year from land transport has remained relatively consistent between 2016-2019.

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

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

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. PM_{10} refers to particles smaller than 10 µm and $PM_{2.5}$ refers to particles smaller than 2.5 µm. The smaller $PM_{2.5}$ 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, $PM_{2.5}$ pose the greatest risk to health. Air pollution can also cause environmental harm by polluting waterways and affecting nearby vegetation.

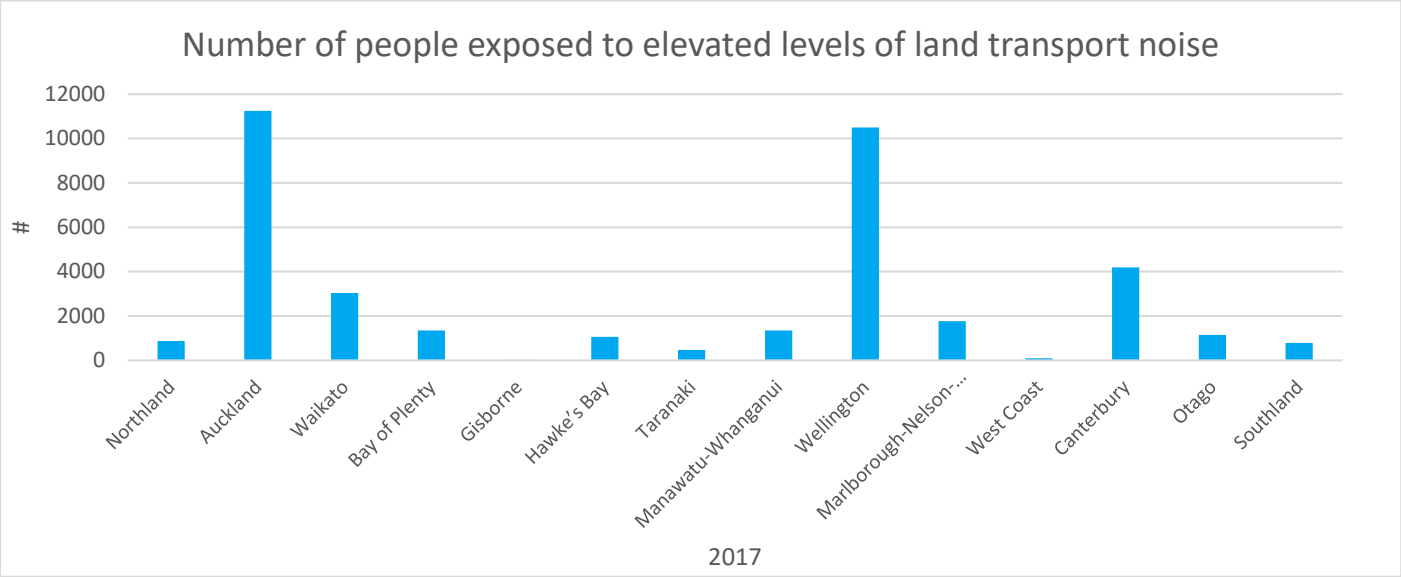
Noise pollution

Updated data from 2018 on will not be available until later in the year, therefore, we can only report on 2017 data.

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. Also vehicle kilometre travelled (VKT) has been increasing so potentially more traffic noise where there is relevant exposure.



About these indicators

Greenhouse gas emissions:

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, based on emissions factors from the New Zealand Vehicle Emission Prediction Model, 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. This method has the advantage of providing both national and regional estimates.

2016, 2017 and 2018 results were adjusted as Waka Kotahi updated the vehicle emissions prediction model in 2019 to better reflect the real-world situation.

Noise pollution:

Data source: Waka Kotahi. The figures are based on exposure to noise ≥64LAeq (A-weighted equivalent continuous sound level in decibels) measured over 24 hours.

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

Data Source: Waka Kotahi. Road transport harmful 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 is based on emissions factors from the New Zealand Vehicle Emission Prediction Model,

Investment in environment

In 2019/20, a total of $693 million of the investment across various activity classes contributed to the GPS priority on Environment.

Activity class	2018/19		2019/20	
	$ million	%	$ million	%
State highway improvements	13	2.00	20	2.90
State highway maintenance	112	17.30	113	16.30
Local road improvements	15	2.30	11	1.50
Local road maintenance	224	34.60	224	32.30
Road safety promotion and demand management	0.30	0.10	0.20	0.03
Regional improvements	0.5	0.10	1	0.14
Public transport	274	42.30	313	45.10
Walking and cycling improvements	6	0.90	11	1.60
Rapid transit	1	0.20	0.05	0.01
Transitional rail	0.5	0.10	0.80	0.12
TOTAL	647.0	100.00	693.0	100.00

Data source: Waka Kotahi National Land Transport Fund annual report 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, SuperGold 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.

Value for money

Investment and GPS: Aligning investment with GPS priorities

The National Land Transport Programme (NLTP) is expected to align with the GPS priorities. From 2018/19 to 2019/20, close to $6.5 billion, or 64% of investment, was spent on the Access priority (including Access, Choice and Resilience).

	2018/19		2019/20	Total
Safety	1,342,943,968.95	$	1,503,253,833	$2,846,197,802
Environment	646,917,805.92	$	693,115,985	$1,340,033,791
Access-Resilience	61,515,225.25	$	187,820,371	$249,335,596
Access-Choice	327,806,190.12	$	473,483,733	$801,289,923
Access-Access	2,481,961,153.76	$	2,417,881,393	$4,899,842,547
Total cost for approval	4,861,144,344.00	$	5,275,555,316	$10,136,699,660

Data source: Waka Kotahi. The figures show investment levels from the National Land Transport Fund, local share and the Crown, and excludes investment from the Provincial Growth Fund, SuperGold 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

Assessments used in investment decisions

Waka Kotahi assesses and prioritises proposals (from priority order one to priority order eight) 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)[8].

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 8 means low alignment with priorities and/or low BCR.

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
Low	Medium (BCR 3-4.9)	8
Low	Low (BCR 1-2.9)	Exclude

The table below outlines the amount of approved funding (and number of proposals/assessments contributing to this) for 2019/20 by both priority order and activity class[9].

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

[9] The State highway maintenance and Local road maintenance activity classes are not included here because they follow a different approval process. The three-year programme is approved by the Waka Kotahi Board at the start of the NLTP period. 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. The Road policing activity class is also not included because it is generally funded as continuous programmes at the beginning of the NLTP period (similar to the maintenance activity classes).

Approved 2018/19 -2019/20 funding by activity class				
	Public transport	**Rapid transit**	**Walking and cycling improvements**	**Local road improvements**
Priority 1	241,759,955	2,000,000	23,616,000	75,650,819
Priority 2	4,872,000	0	0	62,208,410
Priority 3	108,644,513	0	21,868,200	300,372,322
Priority 4	244,083,268	58,300,000	104,511,761	162,125,289
Priority 5	171,115,332	0	159,804,997	341,604,244
Priority 6	5,184,068	0	307,800	3,934,622
Priority 7	0	0	0	0
Priority 8	0	0	0	0
Total	775,659,136	60,300,000	310,108,758	945,895,706

Approved 2018/19 -2019/20 funding by activity class			
	Regional improvements	**State highways improvements**	**Promotion of road safety and demand management**
Priority 1	6,750,000	48,102,830	750,000
Priority 2	3,705,000	107,087,343	14,172,919
Priority 3	4,080,000	11,769,788	7,324,040
Priority 4	4,700,970	197,540,443	2,132,002
Priority 5	52,975,318	358,000,413	4,279,032
Priority 6	34,264,455	29,729,475	4,769,235
Priority 7	0	0	0
Priority 8	0	0	0
Total	106,475,743	752,230,292	33,427,228

Approved 2018/19 -2019/20 funding by activity class			
	Investment management	**Transitional rail**	**Total across all activity classes**
Priority 1	6,967,738	193,500,000	599,097,342
Priority 2	131,336,500	0	323,382,172
Priority 3	53,147,376	0	507,206,239
Priority 4	2,513,127	2,145,484	778,052,344
Priority 5	0	36,928,949	1,124,708,285
Priority 6	0	0	78,189,655
Priority 7	260,332	0	260,332
Priority 8	0	0	0
Total	194,225,073	232,574,433	3,410,896,369

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)"*.

In 2019/20, one project with a BCR of less than one was approved. Investment in this activity was approved due to high results alignment to GPS outcomes.

Project name	$ 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)	$23,909,019†	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.

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 and should have been $18,093,406.

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. 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 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.

Investment management

Cost of investment management

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

Monitoring and reporting

All Waka Kotahi investment decisions (new approvals) and post-implementation (benefit realisation) reviews are published online. In 2019/20, Waka Kotahi published 522 investment decisions and one post-implementation review on their website.

% alignment of funded research to the NZ Transport Research Strategy

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

Improved returns from road maintenance

The cost to maintain the state highway network and local roads continue to increase in part due to the cost increases in labour and materials, the condition of the network and the impact of COVID-19 (the need to set up roadblocks).

The unusual dip on state highway maintenance activities last year 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 funded from state highway maintenance activity class.

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

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.

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

Appendix A

New Measures

2E: Investment in safety improvement activities
5B: Success of road safety education programmes
7A: Proportion of recently built residential dwellings in major urban areas with access to frequent public transport services
8B: Predictability o travel times for road vehicles in key routes within metropolitan high growth areas
10A: Predictability of travel times on priority routes for freight and tourism
11A: Trials undertaken and implemented on intelligent transport systems and other technologies to make the best use of existing networks
12B: Key social and economic corridors with viable alternative routes
13B: Use of cycling tourist routes
15B: Walking count in urban areas
21A: Length of state highway infrastructure susceptible to coastal inundation with sea level rise (kms)
22A & 22B: Investment in resilience
23A: Availability of priority routes for freight and tourism
26A: Tonnes of harmful emissions emitted per year from land transport (kilo tonnes/year)
31A: % alignment of funded research to the NZ transport research strategy

Proxy Measures

7A: Proportion of recently built residential dwellings in major urban areas with access to frequent public transport services
8B: Predictability o travel times for road vehicles in key routes within metropolitan high growth areas
21A: Length of state highway infrastructure susceptible to coastal inundation with sea level rise (kms)
22A & 22B: Investment in resilience

Measures no longer reported on

4B: Mean free speed and proportion of driving over a safe and appropriate speed

- This measure is not available. We expect to provide information on safe speeds in the future as Road to Zero work progresses.

7C: % of urban network with speed limit of 40 km/h or below

- This is not available. We will be able to report on this next year when data from the National Speed Limit Register becomes available.

8A: Utilisation of key movement corridors for people and freight

- This is not available.

9A: Investment in providing public transport for new housing in metropolitan and high growth urban areas

- This is not available. Information is not readily available, and results may not be robust.

10B: Proportion of key national and regional networks that meet One Network Road Classification (ONRC) customer levels of service for safety, resilience and access, and travel time reliability
11B: Investment in technology

- Intelligent transport systems and other technologies
- Research and evaluations related to intelligent transport systems and other technologies
  - There were no ITS specific research projects funded in 2019/20. We do note that ITS might be an element/consideration of some research projects.

13D: Use of Te Araroa trails

- This is not available

13E: Investment in tourist routes for walking and cycling

- This is not available. Investments in tourist routes are delivered across programmes so information is not readily available, and results may not be robust.

19C: Investment in improving access to public transport for people with disabilities

- This is not available. Information is not readily available, and results may not be robust.

25A: Number of people exposed to elevated levels of land transport noise

- 2018 and 2019 are not available. We expect to provide this in the next report.

26B: Number of people exposed to elevated concentrations of land transport-related air pollution
26C: Population harm from land transport-related air pollution

- This is not available. We expect to provide this in the next report.

24B, 25B and 27B: Investments for the environment (GHG reduction, noise management, storm water quality management and biodiversity management)

- This is not available.

27A: Tonnes of selected contaminants discharged from the land transport network into sensitive water bodies

- This is not available.

29E: Projected versus realised benefits and costs of funded activities

- This is not available. Benefits realisation processes are under development as part of the new benefits framework and management approach that was released in August 2020.

32A: Realised benefits relating to innovation for internal and external projects (size and scope appropriate)

- This is not available. Benefits realisation processes are under development as part of the new benefits framework and management approach that was released in August 2020.

Appendix B – GPS2018 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
• Improved transport access to new and existing housing including provision of public transport services
• 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
• Reduced significant negative effects on water quality and biodiversity from construction and ongoing use of transport infrastructure
• 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