



# National Land Transport Programme 2015-18

The National Land Transport Programme contains the land transport activities that the NZ Transport Agency anticipates funding over the next three years. This publication covers some of the highlights.

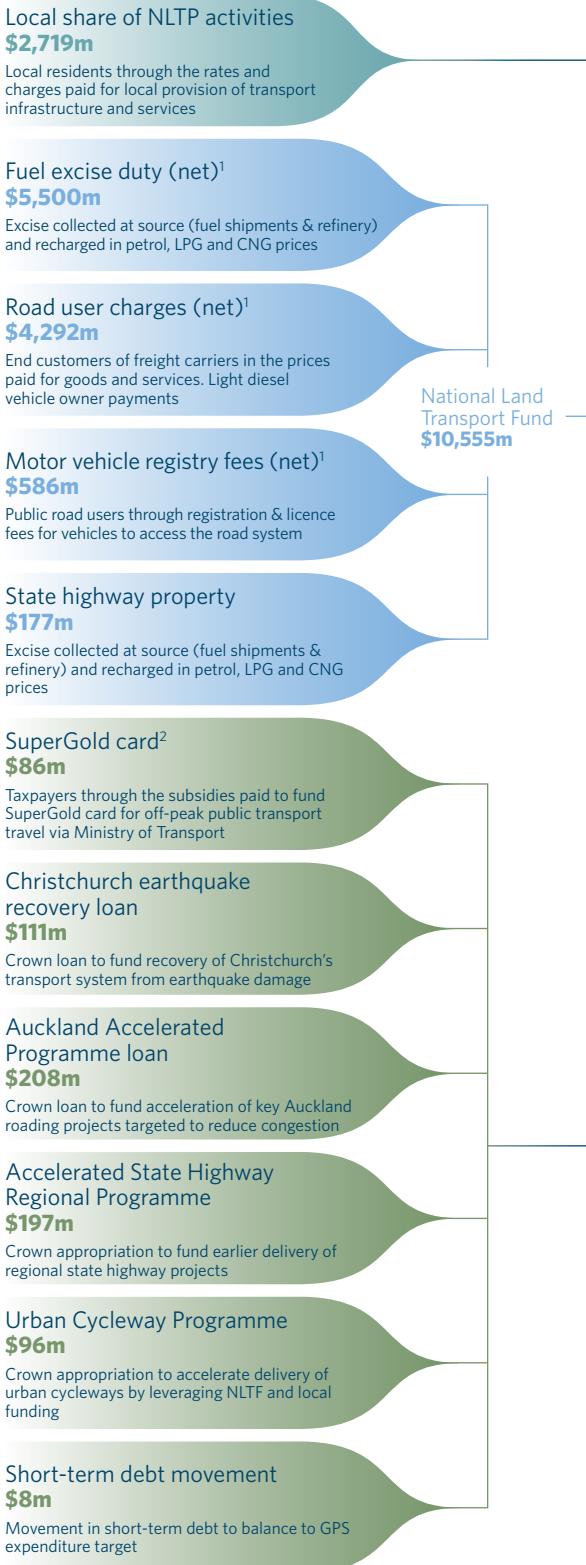
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**Over the next three years  
this NLTP will deliver  
transport solutions that  
will help communities  
across New Zealand thrive**



# 2015-18 NLTP REVENUE AND INVESTMENT FLOWS

## Funding will come from...



## and will be invested in...



## to target...



TOTAL FUNDS  
**\$13,980 million**

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**\$13,980 million**

1. Net of refunds and administration costs  
2. SuperGold card amount is an estimate only  
3. Covers costs for bad debts, search & rescue, recreational boating safety awareness and revenue system management

# REGIONALLY RESPONSIVE – NATIONALLY CONSISTENT

The planning and investment partnership that builds and underpins the National Land Transport Programme (NLTP) will see the NZ Transport Agency continue to work closely with local councils across all regions to deliver transport solutions that will help New Zealand communities thrive.

The next three years will see the National Land Transport Fund's investment aimed squarely at improving economic growth and productivity, safety, and value for money. This reflects the strategic direction set by the 2015 Government Policy Statement on land transport.

The Transport Agency Board has approved this NLTP and endorsed it as giving effect to the Government Policy Statement and driving improved performance from the land transport system.

With this in mind, this three-year programme supports the development of the transport system across New Zealand's regions and the linkages across our major cities.

The \$13.9 billion forecast expenditure in the period to 2018 marks a 15% increase compared to the previous NLTP and includes more than \$10bn from the National Land Transport Fund.

This NLTP incorporates two key developments that lay the foundations for better transport investment and decision making.

Firstly, the Funding Assistance Rates (FAR) for local government transport activities have been reviewed to target higher rates for rural and provincial areas with most need and to make the system fairer between the different types of transport activity. The 2015-18 NLTP marks the formal start of these new rates and a clear transition path for future local share contributions to the development of our land transport system.

Secondly, we have worked with local government to establish consistent, fit-for-purpose levels of service for all roads in every part of the country. This system is called the One Network Road Classification and enables consistent and fair investment decision-making in partnership with local councils. The strong level of investment in local road and highway maintenance and renewals in this NLTP ensures that the road network continues to meet the needs of users.

The 2015-18 programme also includes the implementation of the new Regional Improvements programme. A number of road improvement projects outside the major metropolitan areas are being developed, alongside the Government-funded Accelerated Regional State Highway Programme that was announced last year.

State highways continue to play a key role in the economic wellbeing of New Zealand through freight movement and predictable journey times. More than \$4bn is earmarked for improvements to our trunk and regional road network and in our major cities.

At \$2bn, the investment in public transport is 21% higher than the forecast spend under the previous NLTP. This reflects the increasing demand for public transport services. Auckland, Wellington and Christchurch account for 90% of expenditure.

Cycling and walking provide significant transport benefits in main urban areas, as well as health and social benefits. Direct expenditure will rise to more than \$250 million – a 205% increase compared to the 2012-15 period.

The NLTP is, by its nature, a forecast of activities and expenditure. It serves to provide a snapshot, including activities' various stages of development.

Some can be confidently included for investment, with others regarded as proposed, pending further information to confirm their priority and value for money. The final set will reflect the Transport Agency's collaboration in planning and delivering activities to address key transport priorities and maximise the available revenue.

The role of the Transport Agency is to work with our partners and co-investors to provide a regionally responsive and nationally consistent planning and investment system – one that ensures resources are provided to areas where they will deliver outcomes and benefits.



*Chris Moller*

**Chris Moller**  
BOARD CHAIR



*Geoff Dangerfield*

**Geoff Dangerfield**  
CHIEF EXECUTIVE

# THE 2015-18 NLTP BY THE NUMBERS

**\$13.92**  
BILLION

Total investment in land transport under this NLTP, up 15% on 2012-15 forecast spend. Includes NZ Transport Agency spend of \$10.5 billion.

**\$6.37**  
BILLION

Total investment in NZ's state highway network over the next three years - 20% more than the forecast spend for the previous three years.

**\$4.02**  
BILLION

Total investment in local roads over the next three years - a 6% increase on 2012-15 forecast spend.

**\$1.99**  
BILLION

Investment in public transport - 21% increase on 2012-15 forecast spend.

**30%**

Increase in Auckland public transport patronage over the past 10 years.

**\$251**  
MILLION

Total direct investment in walking and cycling networks over next three years - an increase of 205% over 2012-15.

**4,800**  
KILOMETRES

Length of road network that will be available for full HPMV access by the end of this NLTP period.

**18%**

Reduction in road deaths over the last three years, and 10% reduction in serious injuries.

**\$647**  
MILLION

For emergency works, including Christchurch recovery.

# ENCOURAGING ECONOMIC GROWTH AND PRODUCTIVITY

Encouraging economic growth and productivity is a major government priority for its land transport investment.

Land transport solutions support this priority by:

- providing a safe and predictable journey, enabling the timely movement of people and goods
- increasing the number of people and volume of goods that can be moved on the network
- improving connections between different transport modes to enable seamless end-to-end journeys
- reducing travel times between key strategic centres and freight hubs and ports
- supporting efficient land-use patterns (that enable transport choice and reduce the need to travel to access jobs and services) and enabling the development of new sites.

## INTER-REGIONAL JOURNEYS

Inter-regional journeys are critical to support exports, general freight and journeys made by tourists. The focus is on delivering safe and predictable journeys to provide people with confidence that they will be able to reach their destination within a reliable timeframe.

In rural areas, transport enables the movement of raw materials needed to support rural production, as well as the movement of produce to processing centres and onto local markets and export hubs.

Predictability is particularly important for time-sensitive products such as fresh milk, livestock and perishable produce.

For 2015-18, the Regional Improvements activity class's anticipated expenditure is \$225 million, of which almost half are aimed at reducing the number and impact of crashes. Fewer crashes on the network mean fewer delays.

State Highway 3 runs east to west between Taranaki and Hawke's Bay. Freight movement between ports and production facilities makes it one of the country's key journeys. To minimise delays caused by severe weather and increase resilience, investment in this key route will help improve the Manawatu Gorge and also support the upgrade of the alternative Saddle Road route.

## HOW ARE WE IMPROVING PRODUCTIVITY?

### URBAN CENTRES

In larger metropolitan areas, especially Auckland, Wellington and Christchurch, economic activity is concentrated in and around key employment centres. Improving the ability to get people in, out and around these cities will have the largest impact on economic productivity. To achieve value for money it is important to make best use of existing network capacity. Traffic operation centres based in Auckland, Wellington and Christchurch enable real-time management of network capacity to maximise traffic flows and improve customer service.

To supplement the existing network, improvements in capacity will be sought across all modes including private cars, public transport, and cycling and walking.

Improved public transport networks with priority lanes will provide an opportunity to avoid or reduce congestion, leading to more productive use of commuters' time and more predictable journeys.

Within urban areas, increasing the capacity of the network to move more freight, particularly to ports, airports, freight hubs and new development sites, will improve productivity.

In Auckland, for example, the proposed investment in the East-West link will provide more efficient, predictable and safer freight journeys to and from the Onehunga-Penrose area in south Auckland.

Enabling economic growth and productivity is more than just moving freight. New Zealand households spend around 17% of their income on transport. This amounts to around \$25 billion per year. If this can be reduced by as little as 5% through more efficient movement of people on the land transport network, it will free up over \$1bn to be used elsewhere.

### SUPPORTING URBAN CENTRES AND MAJOR ROUTES

The 2015-18 NLTP estimates \$3.5bn for improvement works in the three main urban areas Auckland, Wellington and Christchurch, of which \$2.9bn is state highway improvement and \$558m for local roads.

North of Wellington, State Highway 1 is the key route in and out of the capital. It also serves the northern terminus of the Cook Strait ferry services that provide a key link between the North and South islands.

Also, in Wellington, the Northern Corridor Road of National Significance (RONS) will support economic growth by delivering significant travel time, network resilience and safety benefits for journeys in and out of Wellington, through the delivery of a four-lane expressway from Porirua to Otaki. The improvements will deliver improved travel time reliability and reduce peak time journeys from Levin to Wellington Airport by approximately 40 minutes when completed.

The total projected cost of the Wellington Northern Corridor project is approximately \$5.5bn, of which \$430m is included in the 2015-18 NLTP.

## UPPER NORTH ISLAND AND THE STRATEGIC FREIGHT NETWORK

The upper North Island is home to more than half of New Zealand's population and generates more than 50% of the national GDP. More than half of New Zealand's freight moves through the Northland, Auckland, Waikato and/or Bay of Plenty regions, and 64% of goods by value within New Zealand move through the Ports of Auckland, Tauranga, Northport and Auckland Airport. The safe and efficient movement of goods is vital to the nation's social and economic success.

The Waikato Expressway RONS will improve economic growth and productivity for Auckland, Waikato and the Bay of Plenty through more efficient movement of people and freight between the country's two largest ports (Auckland and Tauranga), the largest international airport (Auckland) and major freight hubs in the Waikato and south Auckland.

Increased capacity will make the route safer and will move through-traffic away from smaller communities like Huntly, Ngaruawahia and Cambridge. The overall cost for the expressway is projected to be \$2.1bn-\$2.5bn, with \$1bn recommended for investment in the 2015-18 NLTP.

The 7.3km Te Rapa section of the expressway was opened in late 2012. Monitoring of over 200,000 journeys on this relatively small section indicates savings of up to five minutes per trip in peak periods.

The reduction in travel times between Tauranga and Auckland has also enabled wider economic benefits such as development of the Ruakura freight hub and the Te Rapa/Horotiu North industrial area.

ENCOURAGING  
ECONOMIC GROWTH  
AND PRODUCTIVITY IS  
A MAJOR GOVERNMENT  
PRIORITY FOR ITS  
LAND TRANSPORT  
INVESTMENT



## **FREIGHT**

A key objective for the National Land transport Programme is to deliver a safer and more efficient freight system.

Discussions with local government, freight owners and transport operators have identified a number of opportunities for improving the safety and efficiency of freight movements. These include continuing to improve network access for high productivity motor vehicles (HPMVs), upgrading some of the key constraints on significant high volume routes (such as the East-West link in Auckland), providing greater travel time predictability for urban journeys, and safety upgrades of roads and roadsides on sections of our high-volume freight routes.

### **MOVING MORE FREIGHT ON FEWER TRUCKS**

A priority for the Transport Agency has been to allow the movement of more freight on fewer trucks to improve productivity and road safety. With freight volumes forecast to grow from 236 million tonnes to over 373 million tonnes over the next 30 years, this will help reduce the cost of doing business and improve the safety of the heavy vehicle fleet. The Transport Agency's focus has been to allow for industry to make greater use of HPMVs, including 50MAX. These newer vehicle configurations can safely move more freight than older truck combinations operating on New Zealand roads. Depending on the type of vehicle used, these more advanced truck designs are 14% to 20% more productive than standard heavy trucks. They are also safer, cleaner and more fuel efficient.

This NLTP will continue the work started in the last three-year period by investing in expanding network access for HPMVs.

### **WEIGH/RIGHT FOR SMARTER COMPLIANCE AND PRODUCTIVITY**

The 2015-18 NLTP includes smarter compliance initiatives, called Weigh/Right, which improve confidence around vehicle operating weights. Around 10% of heavy vehicles have been found operating above legal weight limits. The Transport Agency has been working with the Commercial Vehicles Investigation Unit (CVIU) of the NZ Police and local authorities on opportunities to introduce smarter compliance tools into the road system.

### **BETTER CONNECTING NORTHLAND AND OPENING MARKETS**

The Transport Agency's investment in Ara Tūhono Puhoi to Wellsford will significantly improve the primary highway link between Auckland and Northland. Building a safer, more reliable state highway for motorists, freight vehicles and tourists will better connect Northland to Auckland and the upper North Island. The investment will also take traffic, including trucks, away from Warkworth, providing amenity benefits for the local community and travel time improvements.

### **SAFER AND MORE EFFICIENT FREIGHT FLOW TO AND FROM NEW ZEALAND'S PRODUCTIVE HEARTLAND**

The Waikato Expressway is a strategic freight route that carries a high volume of vehicles to and from some of New Zealand's most significant areas of production, distribution and export. The expressway will provide a more efficient and safer route through an area that accounts for 56% of New Zealand's freight movements.

The expressway will also reduce congestion and provide journey time savings of up to 35 minutes for freight moving to or from the rest of New Zealand.

### **RESILIENT, SAFE AND EFFICIENT FREIGHT CONNECTIONS THROUGH THE LOWER NORTH AND SOUTH ISLANDS**

In the lower North Island, continued investment in the Wellington Northern Corridor will provide safer, more efficient, predictable and resilient travel for road freight from Horowhenua to Wellington and improve onward access to the South Island. Improved access for 2,600 heavy vehicles a day that travel on this strategic freight corridor will improve the delivery and pickup of freight in the lower North Island, and also provide better connectivity to the two inter-island ferry terminals in Wellington.

### **FUTURE-PROOFED ACCESS THROUGH AND AROUND CHRISTCHURCH AND TO INTERNATIONAL FREIGHT GATEWAYS**

The 2015-18 NLTP will continue the roll-out of the Christchurch motorways that will provide a more direct, reliable link between the Canterbury hinterland and the growing international port at Lyttelton. The motorways will also provide better access to Christchurch International Airport.

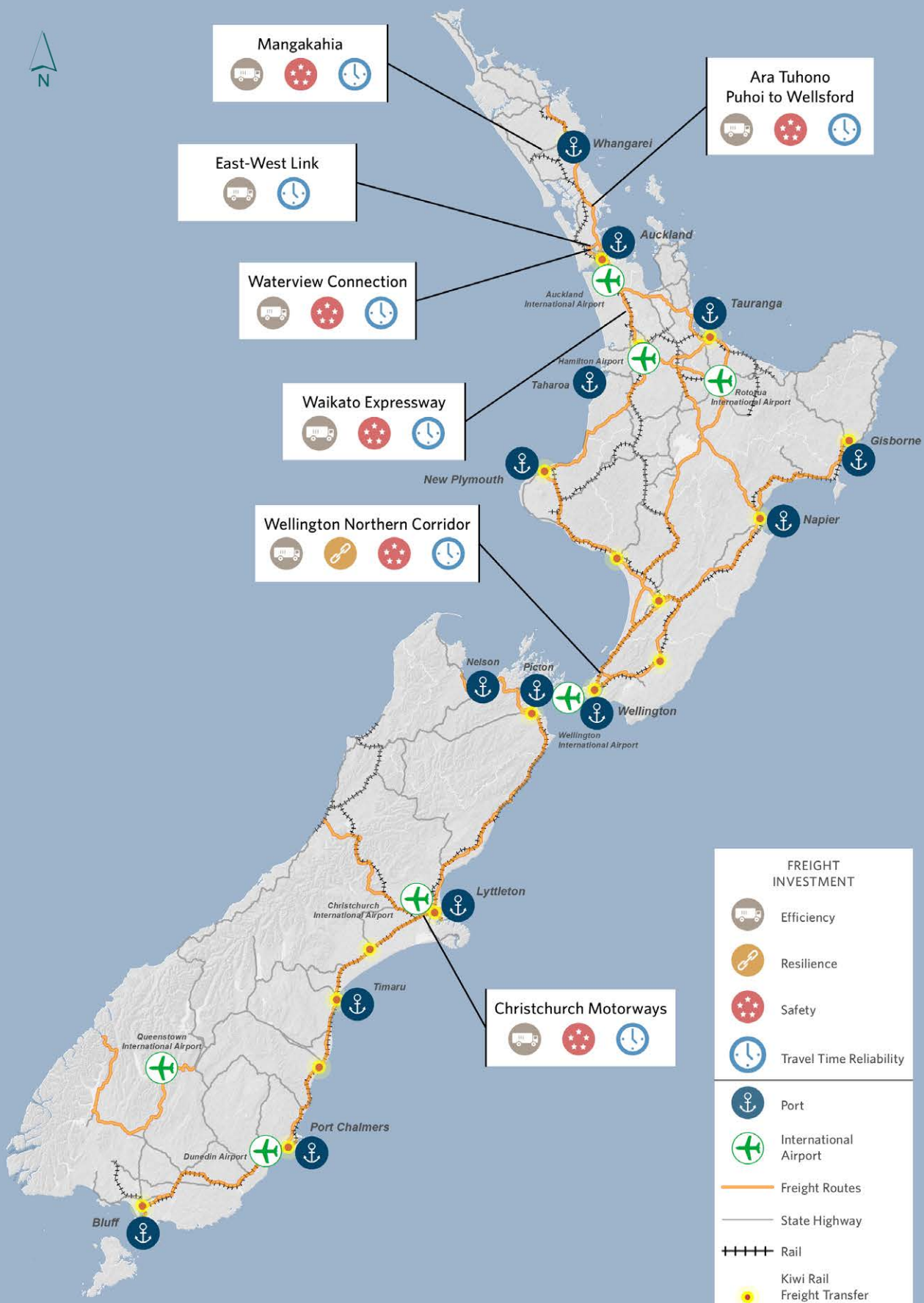
### **INTEGRATING ROAD AND RAIL TO IMPROVE NETWORK EFFICIENCY**

The 2015-18 NLTP will also see a new emphasis on improving the integration of road and rail networks. Rail moves over 16 million tonnes of New Zealand's freight volumes, usually over long distances. This represents around 16% of New Zealand's total freight task and equates to around 1.4 million truck combination trips a year.

### **MORE PREDICTABLE URBAN FREIGHT JOURNEYS**

The 2015-18 NLTP includes a greater emphasis on providing greater journey time predictability for urban customers. This is particularly important for businesses, with delays hampering the efficient movement of freight.





# INVESTING IN RURAL AND PROVINCIAL NEW ZEALAND

New Zealand's rural sector and provincial towns and cities are crucial to the country's economic and social well-being. Rural industries are often referred to as the backbone of New Zealand's economy because they generate more than one-third of the national GDP.

Rural areas are home to over 600,000 people, with over one million in provincial towns and cities. Given the often long distances and challenging terrain, the efficient, reliable and safe use of the transport system that connects these areas is vital. This is especially true for conveying perishable products and goods, such as milk and fruit, and for tourists seeking access to scenic locations.

Investment in rural and provincial transport is primarily focused on maintenance, safety and resilience.

## MAINTAINING NETWORKS

Maintaining extensive rural networks with appropriate levels of service is an ongoing challenge for communities, with many rural areas having small rating bases and ageing populations. Furthermore, Statistics New Zealand's population projections indicate that 15 rural territorial local authorities will experience a population decrease over the 2013-2031 period, mainly in the central and lower North Island. This could place additional pressure on the ability of these councils to generate the local funding share to maintain local networks and services.

The recent review of Funding Assistance Rates recognised the challenges facing some rural areas and the need to set rates according to local circumstances. Higher rates are being applied for districts that would otherwise find it difficult to raise the revenue to provide a fit-for-purpose local transport network.

To ensure the needs of different transport users are met, the Transport Agency and local government have developed consistent levels of customer service across all parts of the road network in New Zealand. This enables consistent and fair investment decision making across the country.

Known as the One Network Road Classification (ONRC), this system has enabled councils to identify opportunities for efficiency gains, thereby delivering better value for money to ratepayers. An example is Queenstown Lakes District Council, which reviewed its maintenance programme and identified savings of approximately 25% in the 2015-18 NLTP programme.

The Transport Agency is continuing to work collaboratively with KiwiRail and other transport operators to deliver a transport system that is fit-for-purpose and connects all parts of the country. Overall, the recommended total investment in maintenance on the state highway and local road networks in the 2015-18 NLTP is around \$4.8bn (including emergency works). This represents a 6% increase in the forecast from the 2012-15 NLTP, reflecting in part changes in demand on rural networks.

## TARGETED IMPROVEMENTS

Given its size, terrain and population, New Zealand's transport networks are, for the most part, fit for purpose and delivering effective levels of service. However, there are pinch points on the network and the Transport Agency is looking to prioritise improvements in these areas. An example is Northland, which is recommended to receive an increase of around \$35m (22%) for local roads in the 2015-18 NLTP, to help manage the detrimental impact that increasing numbers of logging trucks are having on the region's main freight routes. This up-front investment to provide appropriate levels of service on the Northland network will deliver long-term savings and avoid the risk of high expenditure on extensive road renewals.

## SAFER JOURNEYS

While councils and the Transport Agency have been successful in reducing deaths and serious injuries on rural roads during the past 20 years, the improvements have levelled off in the last few years. Deaths and serious injuries continue to have a high social cost.

Rural areas tend to have a higher proportion of crashes for each kilometre travelled. The narrow nature of many rural roads and the undifferentiated speed limits that apply are less forgiving to driver error. Because rural networks are extensive, it is not cost-effective in most cases to try and improve safety through physical works. Instead, the focus is on working with the NZ Police and councils to target enforcement and safety promotions, and to initiate discussions about speed management in high risk areas.

To deliver further reductions of deaths and serious injuries in rural areas, some of the issues the Transport Agency is proposing to address include:

- improvements at high-risk rural intersections and on rural roads that have a high personal risk of a severe crash due to road geometry and roadside hazards
- providing for the needs of visitor and tourist drivers
- improvement to areas with increasing numbers of logging trucks and tourist drivers, such as Northland and the East Coast
- working with communities, such as eastern Bay of Plenty, on the issue of younger, at-risk drivers. Lessons learned will be applied to other communities around the country.

# INVESTMENT IN RURAL AND PROVINCIAL NEW ZEALAND

## INVESTMENT IN RURAL AND PROVINCIAL NEW ZEALAND

### POTENTIAL NLTP INVESTMENT LEVEL

Local road maintenance  
(excluding emergency works)

State highway improvements

State highway maintenance  
(excluding emergency works)

Regional improvements & accelerated  
regional state highway programme

Local road improvements

Public transport

Walking and cycling improvements  
(including Urban Cycleways Fund)

Investment management  
(transport planning)

Road safety promotion

0 500 1,000 1,500 2,000  
\$ MILLIONS

NLTP investment in the regions, outside Auckland, Wellington and Christchurch, is being delivered through most activity classes and is shown in the table left. Some of this investment can be readily identified as targeted to these regions, being in the Regional Improvements activity class and Accelerated Regional State Highways Programme. Other investments for programmed activities, such as state highway maintenance, have been estimated.

The Regional Improvements activity class in the NLTP is targeting expenditure of \$225m. All investment in this new activity class is planned to be in the state highway network, based on our expectation of local funding constraints.

Of the bids received for Regional Improvements, 45% are targeting safety outcomes, 37% economic growth and productivity outcomes, and 18% are focused on improved resilience outcomes.

About \$310m is expected to be spent on local road improvements in rural and provincial areas. Of these investments, about 49% are targeting economic growth and productivity outcomes, 29% resilience and improved transport choice outcomes and 22% safety outcomes.

**RURAL AREAS ARE HOME TO MORE THAN 600,000 PEOPLE, WITH MORE THAN ONE MILLION IN PROVINCIAL TOWNS AND CITIES**



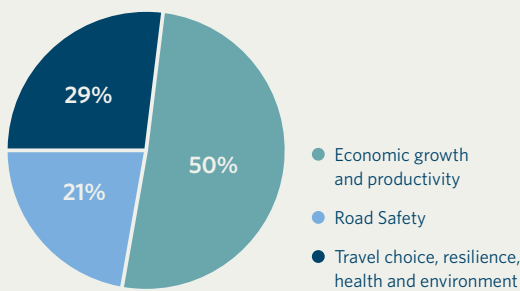
# ROAD MAINTENANCE

A reliable network supports a thriving New Zealand, enabling the travel required for work, business, recreation and community well-being. Road maintenance keeps assets functioning and fit for purpose.

Local and central government will spend approximately \$4.2bn over the next three years on maintaining the road network, comprising 10,900km of state highways and 84,000km of local roads.

## MAINTENANCE OUTCOMES

### 2015-18 NLTP OUTCOMES % EXPENDITURE



#### Outcomes and benefits

Road maintenance to fit-for-purpose levels of service is critical to the current performance of the networks and the outcomes it provides.

The majority of the outcomes are in economic productivity (supply chain links and enabling people to travel to markets, employment and business areas).

Safety is an important outcome, eg from skid resistance reseals.

Resilience is also a key outcome, eg from good drainage maintenance, which also contributes to environmental mitigation.

This activity class to a large extent holds, rather than improves, the current network performance.

## LOCAL GOVERNMENT

For local government, investment in the maintenance programme, including emergency works, will increase 7.5% from \$2.98bn in 2012-15 to \$3.15bn in 2015-18. This is 98% of the maximum provided for under the Government Policy Statement for local road maintenance. This is further enhanced by changes to the Funding Assistance Rate system which, following a review in 2014/15, increased the subsidies to local government by about \$100 million.

There have been some significant increases in maintenance investment in a number of areas. Christchurch is shifting emphasis from earthquake recovery to re-establishing its maintenance programme, needing an additional \$37m of funding to achieve this. Northland gets an additional \$35m, primarily to repair damage caused by logging trucks and keep the area network reliable.

Some councils have managed to reduce expenditure while still maintaining reliable networks, reflecting the call for greater efficiency and guidance on better practices provided by the Road Efficiency Group. These savings mean lower costs to ratepayers and enable the Transport Agency to invest in other priority areas.

## STATE HIGHWAYS

Investment in maintaining state highways will increase to \$1.68bn over three years, including an estimated \$150m for emergency works. The state highway network is vital for the efficient movement of people and freight. While it represents only 12% of the total road network, it accounts for 50% of the vehicle kilometres driven every year and around two-thirds of the distance travelled by heavy freight vehicles.

The Transport Agency, in managing the state highway network, has contained costs and is increasing efficiency by closely monitoring items such as pavement treatments, to ensure all works are cost effective. The Transport Agency is also part of a sector-wide initiative to increase the efficiency of road maintenance activities.

On the East Coast, the Transport Agency and Gisborne District Council have been working towards a collaborative approach for delivering maintenance programmes over the combined state highway and local road network. The goal is to deliver these services more efficiently and cost-effectively and provide a better experience for customers. The outcome of this work is an innovative joint venture called Tairawhiti Roads.

Management of the Transport Agency network was handed over to Tairawhiti Roads in March 2015 as this provides for smarter asset management, better decision making and cost savings through regional efficiencies.

## ROAD EFFICIENCY GROUP

Organisations involved in the management of roads have been working together to develop consistently better practices through the Road Efficiency Group (REG). Its goal is to maximise value for money by improving performance in road maintenance, operations and renewals throughout the country. Since its inception in 2012, REG has made considerable progress on a number of projects.

REG has developed the One Network Road Classification (ONRC) system that covers all roads in New Zealand. The ONRC categorises all roads and sets out consistent levels of service for safety, accessibility, travel time predictability, amenity and value for money for each road category.

All road controlling authorities have applied the ONRC classifications and are expected to fully embed it into their planning by the end of 2017. They are currently assessing how well they are meeting the expected road standards and developing plans for addressing any variance.

# NETWORK RESILIENCE

A resilient transport network helps the Transport Agency to be responsive to unforeseen events and provides customers with confidence that they will be able to undertake their journeys in a timely manner. Managing resilience involves targeting the risk of anticipated disruption on the network.

Investment varies widely across the programme. Examples include:

- joint traffic operating centres that help maintain traffic flows, especially during floods and similar events
- ensuring critical items such as bridges and road surfaces can recover quickly from setbacks
- enforcement of heavy vehicle axle weights that protect pavement and structural integrity
- measures, such as riverbank protection works, that lessen the impact of flooding and similar events
- improvements that target alternative routes such as the Saddle Road in the Manawatu and the Western Ring Route in Auckland.

Research is also underway to better quantify the benefits of improving network resilience, enabling more consistent prioritisation of investments.

New Zealand's topography, climate and exposure to seismic events mean that there will always be a risk of network disruption. A range of work is already underway to help increase resilience. This includes physical works, such as bridge strengthening and slope stabilisation, and using traffic operation centres to keep people and vehicles moving. Resilience is also about minimising the impact of disruption. Emergency response planning helps ensure that networks "bounce back" as soon as possible following a disruptive event.

Resilience in rural and urban areas tends to take different forms. Disruptive events in towns and cities tend to be caused by technical events such as breakdowns or crashes. While they are often resolved quickly, the impacts can be significant due to the number of users, the lack of spare capacity on congested networks and the inability of alternative routes to cope with additional traffic.

In rural and provincial areas network disruption is more commonly caused by environmental or weather events, such as landslips, flooding, snow and ice. While traffic volumes tend to be lower than in urban areas, a lack of viable alternative routes can cause significant disruption.

The 2015 GPS focuses effort on "improving the system's resistance to disruptions that pose the highest economic and social cost". While the economic cost of disruption is closely tied to the volume of people and goods using a section of the network, work to improve understanding of the social cost of network disruption continues. This work will inform the development of the 2018-21 NLTP.

Resilience improvements can underpin many different types of investment. More than half of improvements activities include some resilience benefits for the network. This is despite only 2% of new improvement activities being primarily targeted at resilience.

## CASE STUDY

### DIANA FALLS

In September 2013 a large landslip closed State Highway 6 on the West Coast between Haast and Makarora.



The slip left over 40,000 cubic metres of rock and debris on the highway, initially closing the highway for 11 days. The road was re-opened, from 8.30am to 4pm each day but only a single lane was available at the slip site. The road was closed outside these hours due to a risk of slips. Some 14 months of remedial work was required to stabilise the site and reinstate two lanes.

The most complex rock fall protection system in Australasia was installed at the slip site to enable restoration of full access through Haast Pass. Each of the three rock fall protection fences built on the slip face is capable of stopping a boulder weighing up to 16 tonnes (the size of a small car) travelling down the hillside at a speed in excess of 90km/h.

The total cost of managing access and remediating the Diana Falls through the installation of rock fall protection measures was \$8m.

State Highway 6 is the only route linking the West Coast to the regions further south and as a result of the closure, journeys required a detour through Arthurs Pass. The journey from Haast to Wanaka, normally 142km, became a 950km journey as a result of the closure. This has created significant inconvenience and additional costs for residents and businesses on the West Coast.

The West Coast regional economy is heavily dependent on tourism, contributing approximately 10% of regional GDP (the second highest in the country). Because of the lack of alternatives and long detours, any closure on State Highway 6 is likely to have a disproportionately high impact on the local economy as tourists choose to take alternative routes between Queenstown and Christchurch.

Because events on this route can have significant social and economic impacts, mitigations have been put in place through improvements or enhancements to build in a higher level of resilience into the network.

This case study demonstrates the difficulty of managing the network during extreme events in remote areas with limited communication networks and few users on the roads. In these situations it can take a long time to confirm the location and scale of network closures, and to pass that information on to network users.

# PROVIDING TRANSPORT CHOICES

Providing people with a range of effective travel choices and information is both essential and complex. The Transport Agency aims to ensure that people have access to public transport options and supports peoples choices by providing a range of information on topics such as weather, road conditions, and travel times.

Alongside investment in building and shaping the network, the Transport Agency monitors and manages how the network operates, coordinating a wide range of services aimed at providing more predictable travel times and ensuring people have the information they need to make appropriate travel choices for their needs.

There is sometimes a misconception that transport investment is all about cars and roads. In fact, effective transport choices such as cycling, walking and public transport are integral to any modern transport network – especially in urban settings.

A total of about \$2bn (a 21% increase from 2012-15) will be used to invest in New Zealand's public transport system during the 2015-18 NLTP period. This includes \$1.8bn for operating public transport services and \$200 million for improvements such as new infrastructure and services. A total investment of \$251m, which includes Urban Cycleways funding of \$96m in 2015-18, has also been confirmed for improvements to cycling and walking.

Combined with wider investments in cycle facilities as part of improvement to state highways and local roads, total investment will be around \$350m over three years.

## THE ROLE OF PUBLIC TRANSPORT AND CYCLING

As a country, our travel habits place increasing pressure on our existing road network, especially in our cities. Simply adding more lanes and more kilometres of road is not a sustainable solution to those challenges. The Transport Agency needs to look at a much broader set of options and invest in and encourage smarter transport choices. This is where cycling, walking and public transport come in.

Walking is also a growing transport mode. In Wellington city, for example, more than 18,000 people walk to work, which accounts for 21% of morning peak trips in the CBD.

Public transport plays a critical role in supporting the economy and our daily lives – giving people greater choice of access to a range of social and economic activities, and continuing to move people through urban areas where roads are congested. For every bus or train carriage carrying 40 passengers on their way to work, there are up to 40 fewer vehicles on our roads fighting for space in peak traffic.

Cycling is a key part of New Zealand's land transport system and plays an important role in the overall land transport network. It is now a fast-growing mode of transport in several cities and towns across New Zealand.

## SUPPORTING ECONOMIC GROWTH AND PRODUCTIVITY THROUGH PUBLIC TRANSPORT

In our major urban areas an effective public transport system is critical to relieve congestion and connect large numbers of students to their education institutions and commuters to their places of employment. The effectiveness of public transport networks has a direct impact on our economic growth and productivity. In fact, faster access to key employment and education hubs using public transport has been shown to increase productivity for individuals and business by between 3%-23%.

This is especially true for our major metropolitan regions: Auckland, Wellington, and Christchurch. Some 90% of National Land Transport Fund investment into public transport services goes into these cities. This NLTP builds on our previous investment, particularly in rail networks where we are seeing increasing numbers of commuters and further improvements.

People using public transport on high-quality public transport services with a dedicated right of way, like the Auckland Northern Busway or metropolitan rail networks, can now enjoy fast, efficient journeys on comfortable modern buses and electric trains, while freeing up road space for other people and freight.

The 2015-18 NLTP also considers the needs of those with less or no access to their own independent transport. This includes improved route design and timetables, the Total Mobility transport services for those with disabilities and modern public transport vehicles with improved access and ease of use.

## INCREASED INVESTMENT IN CYCLING

Cycling is a strategic priority for the Transport Agency, with the aim of making cycling a safer and more attractive transport choice. By 2019 the total annual cycling trips in urban areas are expected to increase by 10 million.

Recognising the contribution cycling makes to the overall network, the Transport Agency has increased the funding available for cycling and walking activities. The recently announced Urban Cycleways Fund provides a further \$100m in new funding for cycling, which will speed up the completion of connected urban cycle networks over the next three years.

It is anticipated that the total cycling investment over the next three years, including indirect investment from other infrastructure activities, will be about \$350m, delivering over 250km of new urban cycleways and greater connection between routes, making cycling a safer and more attractive transport choice.

We are also working to improve safety, and perceptions of safety, for cyclists. This includes investing in safer networks in all main urban centres, helping cyclists to be more aware and safe. It also includes building mutual respect between cyclists and other road users.

## TRANSFORMING OUR PUBLIC TRANSPORT NETWORKS

The past few years have seen the beginning of a transformation of public transport in New Zealand, with a stronger focus on well-designed networks and other improvements aimed at delivering better services in a cost-effective way.

The role of technology as an enabler to unlocking the potential of public transport is also growing. Building on the successful implementation of the HOP integrated ticketing and fares system in Auckland, the Transport Agency is working with other regions to implement similar integrated systems.

Technology also improves customers' public transport experience because it helps in journey planning. Providing real time information on bus or train location and arrival times helps people plan their trips more easily and effectively.

Local government, public transport operators and bus builders are working with the Transport Agency to introduce double-decker buses on key city routes.

High-value public transport services that enable more people to travel between more destinations with simple, seamless transfers between different transport types is becoming more commonplace. Through these smarter transport choices, New Zealanders can be connected to work, recreation and educational opportunities, and make better use of the capacity of routes - all the time taking pressure off our road networks at peak times.

A photograph of a cyclist wearing a bright yellow-green safety vest and a helmet, riding a bicycle on a city street. The cyclist is in the foreground, moving away from the camera. The background shows a city street with buildings, a white car, and a traffic light. The scene is captured in a circular frame that overlaps with a dark blue circular graphic containing text.

**EFFECTIVE  
TRANSPORT CHOICES  
ARE INTEGRAL TO ANY  
MODERN TRANSPORT  
NETWORK**

# SAFER JOURNEYS

Road safety is a focus area of the 2015-18 National Land Transport Programme. It supports a sector-wide focus on creating a transport system increasingly free from death and serious injury.

Over the next three years, \$3.2bn is being invested in road safety, which is around 23% of the total programme. This equates to an increased investment in safety of \$550m compared to 2012-15.

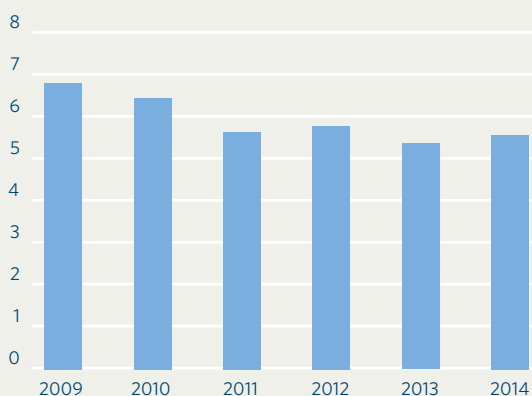
The investment gives effect to the Government Policy Statement to improve road safety, embed the Safe System approach, and reduce deaths and serious injuries.

Improving safety across all four parts of the system – roads and roadsides, speeds, road use, and vehicles – is at the heart of the NZ Transport Agency's commitment to reducing road trauma. The focus is on creating a more forgiving road system, where making a mistake on the road should not cost a life or cause serious injury.

Since 2009, the number of people killed or seriously injured, measured in terms of per kilometre travelled, has reduced significantly, albeit with some annual variations. This means there is a lower average personal risk of being killed, or seriously injured, while using our land transport networks.

To maintain the rate of progress, investment in the 2015-18 NLTP continues across all four parts of the Safe System targeted at risk. Many investment proposals work across multiple aspects.

## PERSONS KILLED OR SERIOUSLY INJURED PER 100 MILLION VEHICLE KILOMETRES



## SAFER SPEEDS THAT ARE RIGHT FOR THE ROAD

Managing speed on the network continues to be a priority for the Transport Agency for 2015-18. The speeds people travel at are not always appropriate for the design, purpose and safety level of many of our roads.

Small reductions in speed can make a big difference. By 2019, the Transport Agency aims to reduce the number of serious injuries and deaths on high-risk roads by 135 (10%) and reduce social costs by \$130m.

## ENCOURAGING SAFER ROAD USE

### ROAD SAFETY PROMOTION

Road safety promotion programmes complement investment in infrastructure, regulatory change and road policing. They target road user behaviour through a range of approaches – incorporating education, promotion and advertising.

During the 2015-18 NLTP, \$132m will be invested in road safety promotion activities, \$67m in national activities by the Transport Agency and the balance, \$65m, in local activities delivered by councils throughout the country.

### NZ POLICE

The recommended allocation for road policing has increased by 6% to \$960m in 2015-18. The programme is intended to give NZ Police greater flexibility to target resources to road safety risk.

The NZ Police programme gives priority to speed, alcohol and drug-impaired driving, restraints, high-risk drivers and dangerous driving, in line with the Safe System approach.



## BUILDING AND MAINTAINING SAFER ROADS AND ROADSIDES

The Transport Agency is continuing to implement road and roadside improvements initiated in the previous Safer Journeys action plans, including high-risk intersections and rural roads.

### STATE HIGHWAYS

A total of \$1.3bn will be invested in improvements and maintenance.

Targeted investment is needed to make tangible safety gains. One example is the South Auckland to Tauranga via Waihi journey, which will have 67% of its investment targeting a reduction of 60 serious injuries and deaths within the next decade. The Whangarei to North Auckland journey will have 52% of its investment directed at safety benefits.

The regional improvements activity class invests in important roads outside the major urban areas to deliver better access to markets, improved resilience and a significant range of safety work. Of the \$225m planned investment, 46% is targeted towards the delivery of safety benefits translating to 92 fewer serious injuries and deaths over 10 years.

### LOCAL ROADS

Local authorities will be co-investing in around \$4bn of local road maintenance and improvements with the Transport Agency.

## SAFER JOURNEYS FOR CYCLISTS

The 2015-18 NLTP will see around \$251m invested in cycling and walking, including funding from the Urban Cycleways Programme. It is estimated that between \$350m and \$400m will be invested in cycling in the three years to 2018. This also includes investment in cycling and walking facilities incorporated in state highway and local road projects, as well as projects outside the NLTP, such as the New Zealand Cycle Trail. This is aimed at improving walking and cycling infrastructure (both urban and rural) and support programmes such as cycle skills training, national guidelines for cycling infrastructure design and public education campaigns to promote sharing the road safely. The key recommendations of the Cycling Safety Panel Report from 2014 are embedded in this work.

## ENCOURAGING SAFER VEHICLES

The 2015-18 NLTP will continue to fund two national road safety promotion campaigns related to safer vehicles.

Rightcar - [www.rightcar.govt.nz](http://www.rightcar.govt.nz) - encourages buyers to choose safer and more economical cars. A car with better safety features can reduce the risk of being in a crash and improve the chance of surviving one.

The 'Check your car' campaign encourages people to check their vehicles on a regular basis and seek expert advice if they are concerned about anything. The campaign focuses on simple steps vehicle owners can take to ensure their car is as safe as it can be.

NZ Police will continue with Warrant of Fitness and Certificate of Fitness enforcement as part of other activities.

IMPROVING SAFETY  
ACROSS ALL FOUR  
PARTS OF THE SYSTEM  
IS AT THE HEART OF  
THE NZ TRANSPORT  
AGENCY'S COMMITMENT  
TO REDUCING ROAD  
TRAUMA



# OPTIMISING THE NETWORK

New Zealand's population and economic activity is increasingly located in urban areas. As the amount of activity in the urban areas increases, so does the demand for transport. This has resulted in much of the transport network capacity in our large cities, particularly Auckland, being under significant and increasing pressure. This is most acute during morning and evening peak periods, which means that even small changes in demand or minor incidents can result in significant and unexpected delays to travellers.

While we need to build new transport infrastructure in our growing cities, we also need to make the most of the transport infrastructure in place. This means increasing the Transport Agency's focus on improving the efficiency and reliability of travel during peak periods.

There is a range of work underway across urban networks to improve journey time predictability and people's ability to make the best choice for their travel needs. This includes initiatives such as maximising the efficiency of traffic signals and corridors, active use of transport operation centres to minimise the impact of disruptions, improving travel choices (such as cycling, walking and public transport), and providing timely and accurate information to travellers.

Further work will be undertaken for Auckland, Wellington and Christchurch to identify priority areas where journey time predictability can be improved and where additional responses are needed. This will help inform the development of the 2018-21 NLTP.

## TRANSPORT OPERATIONS CENTRES

The transport operations centres in Auckland, Wellington and Christchurch were originally set up to manage the response to incidents and events on the network. A research project is underway to measure these benefits. This includes providing real time travel information for customers and informing them of any impact on their journeys as a result of incidents and planned events, such as roadworks or community events. The transport operations centres have been able to use various tools, including CCTV cameras and variable message signs, to improve how networks operate, ease congestion and ensure customers are well informed. Close collaboration with partner agencies, the police and other emergency services has been a key feature of current operations.

The Transport Agency is also focusing on more proactive management of the network. This means developing and improving our systems to get a better understanding of how the whole network is currently performing - this includes multiple means of transport (bus, road, train and freight) as well as key routes and how these are used across different times of the day, month or year. Improving understanding will enable us to identify where there are opportunities to optimise the use of different methods, routes and times for travel. Customers can then be given more options to make smarter choices, both before they leave home and during their journey.



## CASE STUDY

### TRANSPORT OPERATIONS CENTRES

The Christchurch Transport Operations Centre (TOC) was the single point of contact for transport operations for the ICC Cricket World Cup 2015 matches in the city. Staff coordinated transport, from buses through to traffic signals, so that spectators could make it to Hagley Park for the official opening. The event was important for Christchurch, given its ongoing recovery from the 2011 earthquake, and for New Zealand. Avoiding transport issues was a top priority and the TOC used its signals, cameras and travel information teams to ensure a smooth journey experience for the cricket fans.

In response to the Wellington flood event in May 2015, the Wellington Transport Operations Centre coordinated the transport response. Road closures caused by slips and flooding meant that many of the 60,000 people who had travelled into the CBD were unable to get home. Working from 7am on the Thursday morning until 7pm the following day, the team coordinated clean-up efforts, passenger transport response and provided advice about how to get home that night. The Transport Agency had over 100,000 contacts on its social media channels and advice to avoid travel the next day helped reduce the number of vehicles on the roads.

# WORKING WITH THE ENVIRONMENT

One of the national objectives for land transport, set out in the Government Policy Statement is “a land transport system that mitigates the effects of land transport on the environment”.

Land transport can have significant local and national effects on the environment – including on people’s health. Transport is responsible for 18% of New Zealand’s total greenhouse gas emissions. It is important to ensure that transport networks are built, maintained and used in ways that minimise harmful effects on people, other species, habitats and ecosystems. Transport infrastructure is built for the long term and needs to meet the changing needs of current and future generations.

Improvements to our land transport networks can have positive, as well as negative, effects on the environment. The way transport infrastructure is designed and built can significantly reduce use of fossil fuels (which is directly correlated to climate change), improve the amenity of rural and urban landscapes, and bring people closer to each other and the natural environment.

Investments that form part of the 2015-18 NLTP can help minimise environmental harm and deliver positive environmental impacts in a number of ways.

## MINIMISING ENVIRONMENTAL HARM

The Transport Agency minimises environmental harm by:

- making robust, evidence-based decisions that take account of environmental costs and benefits: for example, as part of the business case approach and by using assessment methods and practices that are internationally recognised
- considering alternative options that might have a reduced net impact on the environment
- working with experts in conservation, habitat and species management to identify ways to minimise and offset the environmental impacts of specific projects
- carrying out research, for example, about a specific species that will be impacted by a proposed new road, and the best way to ensure it can thrive into the future.

## IMPROVING OUTCOMES

Investments under the NLTP can improve the environment and the way we interact with our cities, rural areas and natural environments by:

- investing in public transport – moving more people more efficiently to where they need to be
- investing in freight – more freight on fewer trucks means fewer trips and less fuel used
- easing congestion and improving journey time predictability – so vehicles spend less time on the road and use less fuel to get where they are going
- making cycling a safer, more attractive choice of transport
- investing in transport projects that make our cities more accessible, safe and easy to live in
- providing smart transport links to new housing developments so that, in alleviating housing pressures costs are not transferred to the environment.

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**INVESTMENTS CAN HELP MINIMISE ENVIRONMENTAL HARM AND DELIVER POSITIVE IMPACTS**



## CASE STUDIES

### SEALS

Fur seals sometimes find the road a pleasant place to lie to soak up the sun, but this can be particularly hazardous for both the mammals and road users. Around Kaikoura, where there is a large New Zealand fur seal population, the Transport Agency, its contractors and the Department of Conservation (DOC) are working together to make the highways safer for seals and road users. Road contractors, funded through the NLTP, who are responsible for maintaining the safe and efficient operation of the state highways have been specially trained and certified by DOC in the safe and quick removal of the fur seals from the road and back to their natural habitat in situations where they pose a hazard.

The growing tourist attraction of viewing fur seal pups playing around the Ohau stream and waterfall north of Kaikoura is another focus of collaboration by the Transport Agency and DOC. Both organisations are examining the safety and parking issues caused by motorists stopping to view the site, while at the same time ensuring the protection and maintenance of the natural environment for these mammals.

The Transport Agency has signed a new memorandum of understanding with DOC to work collaboratively across a wide range of issues including tourist signage and management of the department's roads.

PHOTO CREDIT: JODY WEIR



### MACKAYS TO PEKA PEKA

Ecology is a major consideration on the \$630 million Kapiti Expressway MacKays to Peka Peka project north of Wellington. An ecologist is overseeing the project to protect precious resources, working closely with construction staff in sensitive areas. The project includes:

- planting 140 hectares of new, locally sourced and mainly native plants. This is one of the largest planting projects the lower North Island has ever seen
- increasing wetland areas by five times their current footprint. With every hectare of wetland that is lost or moved due to construction, the MacKays to Peka Peka Alliance will regenerate it five times over
- catching native species of fish and relocating them. When working in waterways such as streams, rivers and culverts, it is important to make sure any native fish are safely removed and re-homed. Bridges and crossings are also designed so that fish and other water species can move freely up and down stream
- catching and relocating indigenous skinks and geckos to new, natural habitats before any construction takes place.

The goal is to create a long-term corridor that will improve ecological connections with other forest and wetland areas on the Kapiti Coast. The local bird, lizard and native fish populations are expected to grow.







 For more information on the NLTP go to [www.nzta.govt.nz/nltp](http://www.nzta.govt.nz/nltp)

