



How the NZ Transport Agency keeps you moving



NZ TRANSPORT AGENCY
WAKA KOTAHI

New Zealand Government



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EXPECT DELAYS



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How the NZ Transport Agency keeps you moving March 2011

NZ Transport Agency
March 2011

ISBN 978-047837-1758 (print)
ISBN 978-047837-1765 (online)
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INTRODUCTION

This booklet provides information about the NZ Transport Agency's (NZTA) services that help road users have a safe and enjoyable journey while at the same time helping them make smarter travel choices before or during their journeys.

Our services can vary from providing road and traffic information to everyday road users via an online site all the way to managing traffic via traffic signals and variable message signs.

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NEW ZEALAND ROADS

The NZTA builds, manages and operates New Zealand's state highway network that is of national strategic importance in keeping people and goods moving nationwide.

Local roads are ones that form a regionally strategic purpose in moving people and goods within regions. These roads are managed by local government.

Some interesting facts about state highways:

- The state highway network has almost 11,000km of road, with nearly 6000km in the North Island and 5000km in the South Island.
- New Zealand's state highway network has about 199km of motorways, with most of them in Auckland. The Auckland state highway network carries 10 percent of New Zealand's total traffic, which includes state highways and local roads.
- The state highway network is one of New Zealand's most valuable assets, worth \$23 billion.

HOW WE KEEP ROAD USERS INFORMED

There are different tools that the NZTA uses to help people travelling on state highways with up-to-date road and traffic information.

Freephone: 0800 4 HIGHWAYS

The NZTA has a free phone service (0800 44 44 49) that road users can call to find out if there are road closures or major delays that may affect their travel plans. The service also allows road users to communicate with the NZTA directly about something they may have noticed on their travels that they think the NZTA should know about.

Website

Highway Info (www.highwayinfo.govt.nz) is NZTA's website with real-time travel information on state highways. The site allows road users to access information about any road closures and significant delays (generally 20 minutes or more) they may experience while travelling on state highways.

General safety warnings for unplanned events, such as heavy rain and wind warnings that drivers need to be aware of, are also published on Highway Info.

Example of a planned roadwork event on State Highway 77

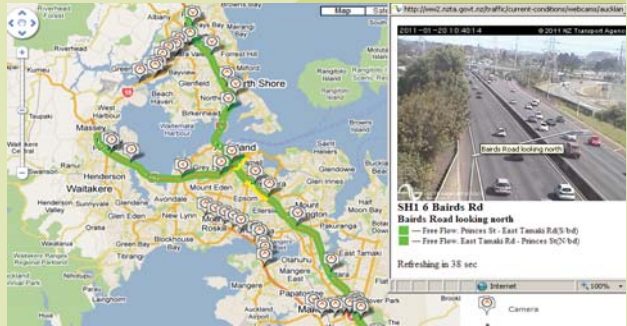


Webcams

The NZTA has a number of webcams road users can access to find out what the current driving conditions are like and choose when they want to travel. Images are refreshed every 60 seconds to provide up-to-date information.

The webcams are located in various cities, towns and other locations throughout New Zealand.

Example of information from a web camera in Auckland



Really simple syndication (RSS)

Road users can also receive road and traffic information directly via RSS, which is a family of web feed formats used to publish frequently updated works.

Radio

The NZTA has agreements with the key radio network providers for providing real-time traffic updates during morning and afternoon peak travel periods and during major incidents.

Auckland road and traffic information

Due to the high volumes of traffic in and around Auckland, ensuring real-time information is provided to Aucklanders is paramount in order to allow the road user to pre-plan and change their intended journey based on timely and accurate information provided in a variety of channels.

AUCKLAND TRAVEL TIME SIGNS

Auckland travel time signs are positioned at key locations on the Auckland state highway network. These times are an estimate of travel time on the motorways and automatically update every 60 seconds.

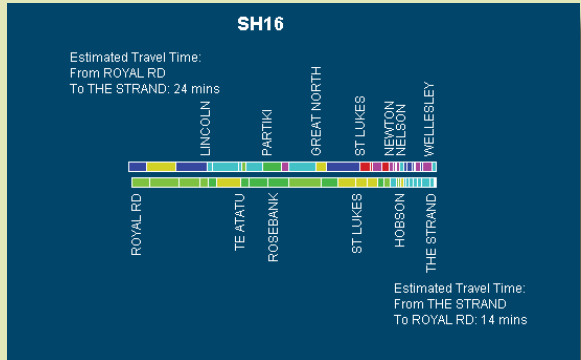
This screen shot shows the time to travel from Grafton Link in Auckland to each of the three destination displayed



AUCKLAND LIVE TRAFFIC SPEED CONSOLE

The Auckland live traffic speed console provides an overview of speed estimates from vehicle sensors on the Auckland urban motorway system. The purpose of this is to provide a simplified and highly granular view of near real-time traffic information as it becomes available from the NZTA motorway sensors.

Each motorway diagram has two lines to show the speed estimates for each direction on the motorway. For example, the SH16 diagram above shows the eastbound traffic on the top and the westbound traffic on the bottom side of the diagram.



AUCKLAND TRAFFIC FLOW

People in Auckland can view live traffic flow at key locations on the state highway network. The information is updated every minute.



Example of Auckland traffic flow

NZTA traffic operation centres

The NZTA operates two traffic operation centres (TOC), which play a vital role in people's day-to-day travel experience by managing traffic and incidents.

The two TOCs are located at Smales Farm on Auckland's North Shore and at Johnsonville in Wellington. Auckland's centre is operational 24 hours a day, seven days per week, while Wellington's TOC will be operational at all hours by mid-2011.

AUCKLAND TOC

Auckland Traffic Operation Centre is in a partnership with Auckland Transport, which was formed to reduce Auckland's congestion issues on motorways and arterials by integrating region wide traffic management.

WELLINGTON TOC

The Wellington Traffic Operation Centre covers the state highway network in the lower half of the North Island of New Zealand. Its principal aim is to provide timely and accurate traveller information using NZTA's network of advanced traffic management systems (ATMS) and intelligent transport systems (ITS) of message signs across the lower North Island.

To provide timely and accurate road and traffic information, traffic operations centres gather data from different sources, such as road sensors, close circuit television cameras, police incidents and feedback from contractors and the public via the NZTA 0800 number. The road and traffic information is also used to manage traffic flows, with tools such as coordinating traffic signals and variable message signs.



Operators at Auckland Traffic Operation Centre



Gantry lane signals in operation along the Wellington Motorway

TOC'S INCIDENT MANAGEMENT

Traffic operation centre operators are both reactive and proactive in their response to incidents. Crashes on the network require operators to notifying emergency and repair services, contacting radio stations and updating the traffic website, along with putting up signs and implementing detours when required. Events such as concerts and big sporting events involve a lot of preparatory work, such as displaying signs and venue and project liaison, which ensures safe and congestion-free movement of spectators to and from the venue.

When there is a major incident which severely affects the driving public, a debrief is organised to allow all parties involved, such as police and TOCs, to assess where things went well and where they can be improved. Civil defence exercises also take place regularly to ensure all emergency processes are up-to-date.

COORDINATION OF TRAFFIC SIGNALS

Traffic signals on major routes are coordinated to allow traffic to have more efficient journeys.

NZTA's traffic operation centres operate a computer based, area wide, traffic signal coordination system called SCATS (Sydney coordinated adaptive traffic system) 24 hours a day, seven days a week. Sensors in the road detect vehicles at intersections, sending a signal back to the SCATS system, which automatically phases lights depending on traffic flows. Some traffic signals are equipped with 'emergency vehicle' sensors, allowing for rapid changes to phases when an emergency vehicle is approaching intersections. This helps reduce response times.

All signals can be changed manually from the traffic control centres to help ease traffic flows.

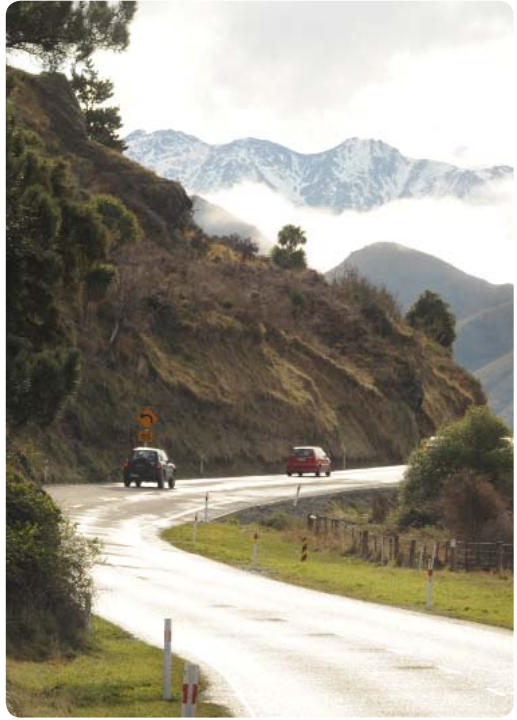


CLOSE CIRCUIT TELEVISION CAMERAS

CCTV cameras strategically located along state highways and at intersections throughout the Auckland and Wellington regions send images back to operators at the traffic operation centres. Operators are able to move and zoom cameras, call up intersection on a colour graphics monitor, display traffic flow and congestion data. This is really useful when, for example, an incident happens on the network and operators are able to call the New Zealand Police or NZTA maintenance personnel and direct them to the scene quickly and efficiently.

TUNNEL MANAGEMENT

Traffic operations centre's staff also manage and monitor the incident detection, fire and ventilation systems in numerous tunnels around the country.



The Terrace Tunnel on SH1 in Wellington

VARIABLE MESSAGE SIGNS

A large number of permanent and temporary variable message signs are strategically located throughout the country, to provide real-time information for drivers while they are driving. These signs are set and monitored from within the traffic operation centres.

Traffic road event information system

Traffic road event information system (TREIS) is a system that the NZTA uses to manage road and traffic information on the state highway network. Information is entered in TREIS and automatically communicated directly to NZTA staff. Information is also communicated to road users via the Highway Info website and to other businesses via InfoConnect.

TREIS contains information on a range of roading events, such as planned roadworks, unplanned incidents (eg road crashes and slips), area warnings, such as flooding and general warnings like high winds and heavy rain. Planned events such as Christmas parades or sporting events like the 'Round Lake Taupo cycle ride' or the 'Coast to Coast' are also included.

InfoConnect

The NZTA initiative provides traffic and road information to web developers and businesses who have the expertise and resources to build specialised applications and devices which make information available to road users in a variety of ways. Current examples include applications for iPhones, iPads, satellite navigation systems and websites. A great example of a business using this service is the Automobile Association (AA).

To find out more about InfoConnect and other initiatives that the NZTA has undertaken to keep New Zealand moving, go to www.nzta.govt.nz/traffic.







Our contact details

For general enquiries and contact information for the NZ Transport Agency, please check our website www.nzta.govt.nz or email us at info@nzta.govt.nz

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