greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Regional Freight Plan

June 2011

The movement of freight both contributes to, and is determined by, economic growth as well as a changing economy.

The efficient and timely movement of freight contributes to economic and regional development by moving goods and providing services to the people living and businesses operating within the Wellington region. Improvements in efficient and timely freight movements will benefit the region by reducing the costs of doing business and contributing to a more business-friendly regional environment which can be a strong attraction to new businesses. These new businesses can also change the amount and nature of the freight task in the region.

Freight movements also impact communities along freight routes by contributing to congestion during peak times, as well as noise and vibration effects. Like other vehicles, freight movements are also contributors to greenhouse gas emissions. Freight trucks are involved in relatively few crashes in the region. There were 11 crashes in the region during 2009 involving trucks, out of a total of 1,015 crashes.

Strategic context

The Wellington Regional Land Transport Strategy 2010 – 2040 (RLTS) defines the appropriate role for land transport freight traffic as the safe and efficient movement of goods within, to, from and through the region.

The RLTS objectives of 'assisting economic and regional development' and 'improve access, mobility and reliability' have become more prominent in the Strategy as a response to Government's focus on economic growth in the Government Policy Statement on land transport funding 2009. The Regional Freight Plan will be an important step in implementing those RLTS objectives.

Following on from these objectives, there are a number of RLTS outcomes and targets of particular relevance to the Freight Plan, including:

RLTS outcomes	2020 RLTS targets
7.1 Improved regional freight efficiency	Improved road journey times for freight traffic between key destinations
7.2 Improved inter-regional freight efficiency	Infrastructure constraints to rail freight movements are removed
8.1 Improved safety, efficiency and reliability of road, public transport and freight links to the north of the region	Progress measured using information collected for congestion (4.1), reliability (4.3), safety (5.1) and inter-regional freight (7.2)
4.1 Reduced severe road congestion	Average congestion on selected roads will remain below year 2003 levels despite traffic growth (20 seconds delay/km in 2003; 23.4 seconds delay/km in 2010)
4.2 Maintained vehicle travel times between communities and regional destinations	Average vehicle journey 'speeds' shown in travel time surveys for selected key routes will remain at or above year 2003 levels (55 km/h in 2003; 52 km/h in 2010)
4.3 Improved reliability of the strategic roading network	Continual reduction in total incident hours
6.3 Sustainable economic development supported	Continued reduction in vehicle kilometres travelled per GDP

The role of freight

Freight includes anything transported as part of a commercial arrangement – from a small couriered document carried by cycle messenger to the movement of logs, containers and heavy machinery.

The region's freight network consists of road, rail and sea freight. Air freight plays a fairly minor role at this time, but may increase due to planned investment by Wellington International Airport. The two primary freight modes in the Wellington region are road and rail.

Road freight is particularly used for the movement of goods between many origins and many destinations. Rail freight primarily handles the movement of bulk commodities, containerised goods to and from ports, long distance containerised goods between major cities and short distance freight shuttles between inland ports and wharves.

Domestic sea freight is broadly split into three different categories: ferry, coastal, and trans-shipments. Ferries connect two ports (here they are Wellington and Picton) with services that run throughout the day. Coastal shipping carries domestic freight on routes between multiple New Zealand ports. Trans-shipments carry international-bound freight from a New Zealand port to an intermediate New Zealand port before being loaded onto an international container vessel.

How freight moves in the region

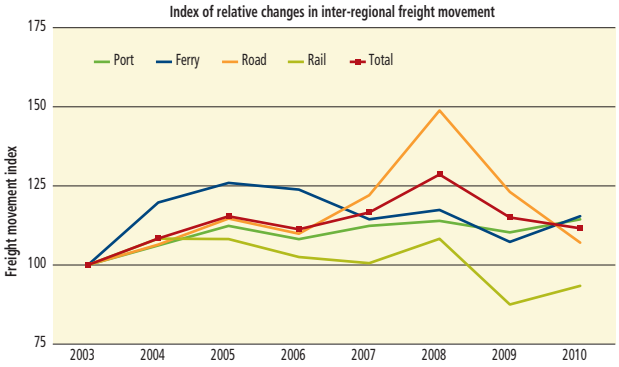
The Wellington region receives about 2.5 million tonnes more freight than it generates based on 2006/07 figures (the latest available) – making the region a net importer of freight. More up-to-date information will become available over time through the Ministry of Transport's Freight Information Gathering System.

Total freight movement increased until 2008 but since then there has been a steady decrease, which may reflect the global economic recession. However, total freight movement still remains higher now than at the beginning of the decade. Freight movement at CentrePort and by ferry have recovered to their relative 2008 levels and continue to increase.

The 2006/07 mode share of freight originating in and destined for the Wellington region is given below. While more current data on freight mode share is not yet available, indications are that the overall mode share remains roughly similar. Freight trips on the road comprise the vast majority of freight movements in, out and through the Wellington region.

Mode	Originating	Destined
Road	91.9%	74.1%
Rail	7.6%	6.3%
Maritime	0.5%	19.6%

Since freight is measured in a range of non-comparable units, the following chart provides a more recent perspective as an index of relative changes in inter-regional freight movements through the Wellington region compared against 2003 figures for each mode.



Sources: CentrePort; Strait Shipping; New Zealand Transport Agency; KiwiRail

The annual average daily traffic volumes of freight movement on State Highway 1 and 2 vary across the network as trucks turn on and off. SH1 between Paremata and the Terrace Tunnel, SH2 between SH58 and the Ngauranga Merge as well as Petone Esplanade to and from Seaview are fairly consistently above 2,000 heavy vehicles – the exception being SH1 at Ngauranga which is lower. SH1 carries a large majority of inter-regional freight trips both to the North and South. SH2 merges with SH1 and provides access to the industrial, warehousing and distribution areas in the Hutt Valley.

Domestic freight movement by coastal shipping is significantly less in volume than road and rail nationally, but accounts for about 15% of total freight tonne kilometres. CentrePort's infrastructure enables the movement of approximately 11 million tonnes of freight per annum – making it one of the busiest ports in New Zealand.

Wellington acts as a freight hub, transiting road and rail freight movements between the two islands on ferry services across the Cook Strait or with other vessels between Wellington and Nelson. CentrePort is also a hub for carrying bulk or container freight from other New Zealand ports and rail destinations for domestic coastal shipping purposes or as part of international shipping services.

The amount of freight moving through the region from the north is significantly more than that moving through from the south. This reflects the North Island's economic dominance and Ports of Auckland as the primary international import/export port.

Key changes in the freight sector

There are a number of trends affecting the freight sector, the most significant include:

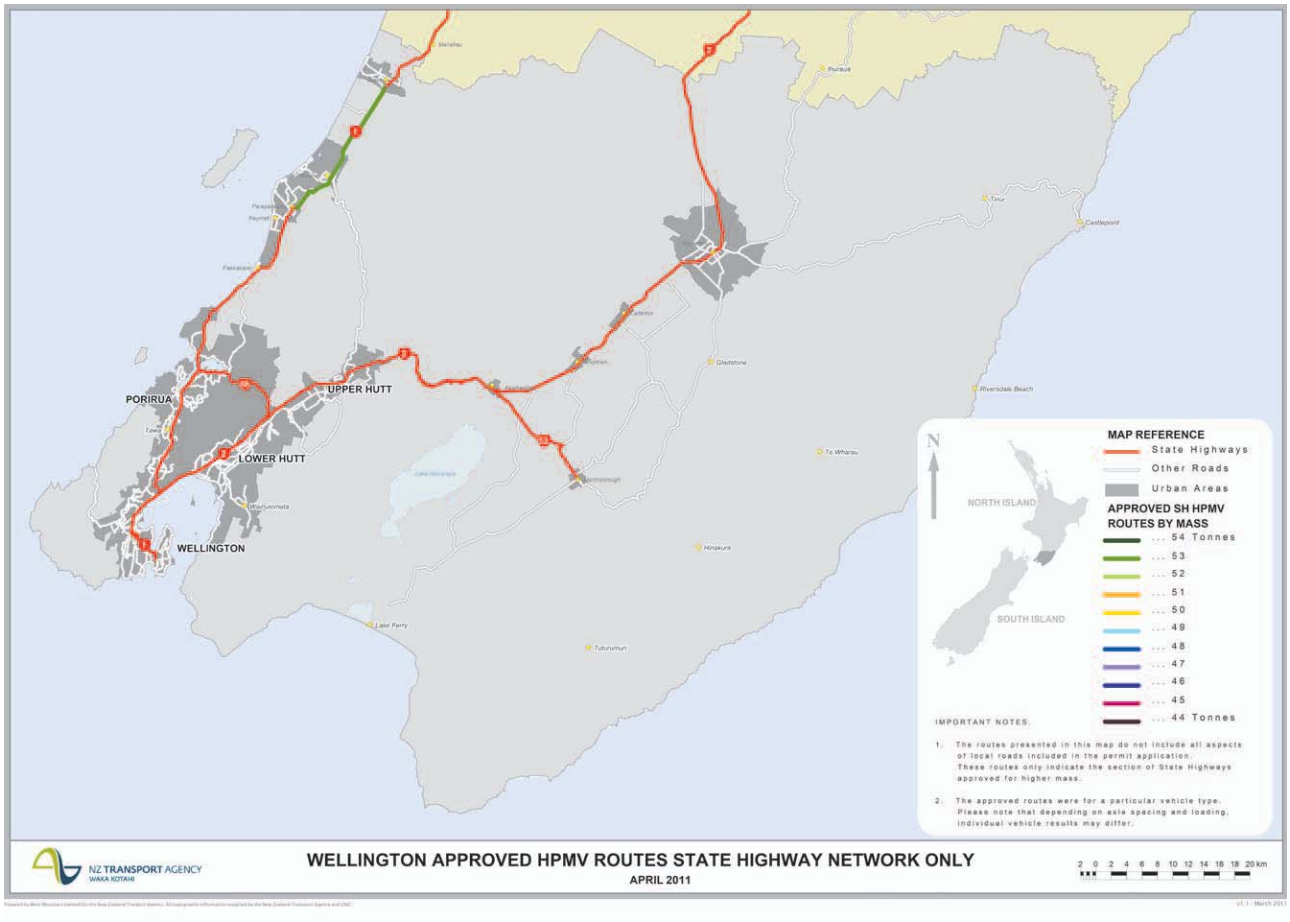
- Growth in centralised distribution centres and how these impact just-in-time delivery services
- Possible introduction of bigger ships making calls at select New Zealand ports
- Introduction of the Emissions Trading Scheme, changes to Road User Charges and the rising cost of fuel
- Introduction of high productivity motor vehicles (HPMV) changing the composition of the New Zealand truck fleet.

Horizons Regional Council's RLTS contains provisions to promote Palmerston North as a freight hub and distribution centre for the lower North Island. Hutt City Council also has a vision for the Seaview/Gracefield area that includes freight storage. The Wairarapa Corridor Plan contains actions supporting a log transfer and storage site at Waingawa.

The Ministry of Transport's 2020 Safer Journeys strategy contains actions to consider mandating electronic stability control systems on all heavy vehicles imported to New Zealand from 2015 as well as to publish operator safety ratings in order to incentivise heavy vehicle operators to be safety conscious.

HPMVs are combinations of truck configurations which exceed the standard 44 tonne gross vehicle mass and 20 (or sometimes 22) metres total length. Over-length vehicles have as-of-right access while over-weight ones require permits to operate on routes approved by the NZ Transport Agency for state highways and road controlling authorities for other roads.

The state highways in the region have been cleared for the use of HPMVs and some local roads may or may not need to be improved or require more maintenance to accommodate HPMVs on a case by case basis. A map of the currently approved routes in the Wellington region is below.



Freight issues and opportunities

Identified issues and opportunities for freight in the Wellington region include:

Growth in freight movement – the amount of freight moving through the Wellington region is expected to double by 2031. The Wellington region's economy and population is expected to continue to grow at a modest rate, driving an increasing demand for travel and freight movement. Several opportunities exist to cater for this freight growth and these are outlined below.

Freight efficiency – freight movement is affected by similar issues to those identified for commuter vehicles. These issues include congestion, reliability and travel time variability, rail constraints, peak oil as well as environmental and affordability issues. For example, congestion on SH1 at Aotea and SH2 at Ngauranga and Petone as well as the Petone Esplanade are areas of particular relevance to freight during peak times. Several infrastructure improvement projects (some of which are outlined in the 'Freight projects' table) can alleviate these issues.

Empty running – refers to a truck or train trip that is not carrying freight (for example, a truck delivering goods and returning without a load) and represents inefficiency in the logistics chain. Since the Wellington region has more freight coming in than going out, a certain amount of empty running is currently unavoidable. Growing outbound inter-regional domestic freight and international exports are major focus areas of the Wellington Regional Strategy. This is a key opportunity to limiting empty running and improving the efficiency of freight movement.

Access to CentrePort and the ferry terminal – is a key future issue due to predicted freight increases. Access is currently constrained and convoluted. There is also conflict with commuter traffic along Aotea and Waterloo Quay. Greater Wellington commissioned the Wellington Port Access Concept Plan to identify a long-term solution for road and rail access to and from CentrePort and the Interislander Ferry Terminal. This study is expected to feed into the NZTA's Ngauranga to Aotea Quay project – which is part of the Wellington Road of National Significance.

Ferry capacity – the main route for domestic rail-based containerised freight is between Auckland and Christchurch. All rail freight on this route transits through the Interislander Ferry Terminal and is expected to grow considerably. The Interislander and Strait Shipping ferries also handle road freight. The Interislander terminal has 23 slots for trucks to park, however 80 truck exchanges occur with each ferry voyage. Greater capacity at the ferry terminals will be needed to support the growing freight business.

Port capacity – growing freight demand is likely to eventually require more efficient use of existing CentrePort land and possible development of offsite freight storage points or inland hubs. Palmerston North is already emerging as one such hub for the lower North Island. CentrePort currently has a 7 hectare log storage area at Seaview.

Airport capacity – Wellington International Airport currently handles a low volume of freight and, while expected to grow, will continue to be relatively low. The 2030 Master Plan identifies a series of infrastructure improvements at the airport to increase airfreight capacity – including a possible future extension of the runway. These improvements should be coordinated with improvements to the state highway around the airport, part of the Wellington Road of National Significance project. The introduction of regular domestic flights to Paraparaumu Airport provides an opportunity for freight throughput at this airport as well.

Freight initiatives

Several projects identified in the Corridor Plans respond to the issues identified above and are likely to have significant freight benefits. These projects are identified in the following table. Refer to the relevant Corridor Plans for the details on these projects.

Freight projects	Ngauranga to Wellington Airport Corridor Plan 2008	Western Corridor Plan 2006	Hutt Corridor Plan 2003	Wairarapa Corridor Plan 2010
Levin to Wellington Airport Road of National Significance				
Western Link Road (now replaced by MacKays to Peka Peka Expressway)		✔		
Transmission Gully		✔		
Basin Reserve improvements	✔			
Peak period lanes on SH1 between Ngauranga to Aotea Quay	✔			
Four laning of Wellington Road and Ruahine Street	✔			
Duplication of Mt Victoria Tunnel	✔			
Duplication of Terrace Tunnel and Waterfront lane reduction	✔			
Rail projects				
Improve rail alignment between Pukerua Bay and Paekakariki		✔		
Advocate to central government to encourage investment in the rail network that supports the use of rail as a safe, sustainable, and efficient solution for the movement of freight to/from and through the Wairarapa corridor				✔
Work with KiwiRail, CentrePort, NZTA and forestry companies to investigate removal of identified infrastructure and rolling stock constraints affecting rail freight movement between the Wairarapa corridor and key freight hubs, such as CentrePort				✔
Travel Demand Management				
Develop and implement ATMS and HOV proposals		✔		
Construct a reversible HOT lane between Petone and Ngauranga			✔	
Reallocate existing general traffic lanes on Hutt Road between Ngauranga and Thorndon for bus lanes and possibly high occupancy vehicles	✔			
Review District Plan land use controls to align with the outcomes of the Wellington Regional Strategy		✔		
Upgrade SH58 between TGM and SH2		✔	✔	
Design and construct SH2/SH58 grade separation			✔	
Grenada – Gracefield Stage 1: SH1 to SH2		✔	✔	
Grenada – Gracefield Stage 2: Cross Valley Link		✔	✔	
Upgrade Rimutaka Hill Road to 55km/h design standards				✔
Intersection improvements at Norfolk Road/State Highway 2 and Buchanan Place/State Highway 2				✔
Advocate for improvements to the Pahiatua Track and key connecting links				✔
Heavy vehicle bypass east of Masterton				✔
Investigate the potential for other heavy vehicle traffic only bypasses				✔
Ensure provisions to the Wairarapa Combined District Plan that facilitate the development of a log transfer and storage site at Waingawa are retained				✔
Support commercial development of a log transfer and storage site at Waingawa				✔
Review the potential impacts of a significant increase in freight volumes (and likely increases in heavy vehicle dimensions) on the state highway network within the Wairarapa Corridor and identify any new projects or initiatives needed to accommodate this demand in a safe and efficient manner				✔

A number of new initiatives have also been identified which are not covered under existing plans. The new initiatives for freight are detailed in the following action programme.

Actions	Responsibility	Cost	Timing	Target/measure
Integrate planning processes Support the implementation of projects in the Corridor Plans identified as having significant freight benefits	All involved parties	Administrative	Ongoing	Projects implemented
Improve road freight reliability Ensure the design of the state highway and local road (when deemed necessary by the parties involved) projects facilitate the efficient movement of freight, including provision for over-dimension and over-weight vehicles	NZTA (lead) TAs	Infrastructural	Ongoing	State highways and relevant local roads are designed to accommodate HPMVs
Increase road freight efficiency Permit High Performance Motor Vehicles (HPMV) • Work with industry to develop pro-forma vehicles • Identify barriers in each TA that limit potential HPMV routes • Coordinate work programmes to strengthen potential HPMV routes on the State Highway and on local roads • Inform industry of new opportunities to carry additional loads	NZTA (lead) TAs	Administrative and Infrastructural	Ongoing	Approved O/L and HPMV permits
Facilitate introduction of HPMVs Complete studies of potential HPMV routes that include the Wellington region to identify which pro-forma vehicle types can use which roads	NZTA (lead) TAs	Administrative	2012	Routes published
Improve Port access Complete the Wellington Port Access Concept Plan to improve access to and from CentrePort from the State Highway and rail network and determine how it will be implemented, including through integration with the Ngauranga to Aotea RoNS project in the Ngauranga to Wellington Airport Corridor Plan	GWRC NZTA Interislander CentrePort WCC	Administrative	2011	Key Project recommendations are carried forward in the RLTP and/or as part of the RoNS project, including investigations for: • an Aotea Quay roundabout • Signage options (including dynamic ITS) along SH1 to the Port • Hutt Road overbridge upgrade for HPMVs
Retain rail options Investigate and implement any resulting options to retain the North Wairarapa Rail line as: • A long term option for freight movement • An alternate emergency route for the North Island Main Trunk rail line	GWRC (lead) KiwiRail Horizons Tararua DC MDC CDC SWDC	Administrative	2012	North Wairarapa Rail line remains operational

Actions	Responsibility	Cost	Timing	Target/measure
Provide for expected Port freight growth Investigate options for: • Inland port facilities • Appropriate transport connections • Providing more efficient use of port land to provide a basis for projects to continue provision for freight growth when necessary	CentrePort	Administrative	Ongoing	Options are investigated
Improve knowledge of freight supply chains and requirements Investigate local road usage by Heavy Commercial Vehicles and Light Commercial Vehicles to improve knowledge of freight supply chains and requirements, including: • Origins and destinations • Timing of deliveries • Improvements necessary to local roads • Regulations on loading zones	GWRC (lead) TAs	Administrative	2015	Report published
Improve freight transport modelling Conduct a survey and update the LCV and HCV freight matrix of the Wellington Transport Strategic Model.	GWRC	$128,000	2015	Updated freight matrix included in WTSM
Advocate to Central Government to investigate how the fuel efficiencies of the New Zealand HCV fleet will change over the next 30 years in order to adequately measure HCV fuel usage and contribution to New Zealand's greenhouse gas emissions profile.	GWRC	Administrative	Ongoing	Data published
Facilitate information sharing Advocate for the 'Freight Information Gathering System' to include data on the tonnage, commodities, and modes share of freight travelling through the Wellington region	GWRC TAs	Administrative	Ongoing	Data included in 'Freight Information Gathering System'
Improve freight facilities Investigate the need for and potential location of overnight truck parking facilities	TAs	Administrative	2015	Investigation report published
Protect short haul rail freight Advocate to KiwiRail and HCC for the protection of the Gracefield / Seaview rail corridor	GWRC	Administrative	Ongoing	Corridor protected