

vehicle dimensions & mass

Moving more freight on fewer trucks - the NZTA's new priority



Over the last few months, the NZ Transport Agency (NZTA) in conjunction with the RCA Forum, councils and the road transport industry, has been developing the 50MAX high productivity motor vehicles (50MAX HPMVs) concept as part of our strategy to improve the efficiency of freight movements by moving more freight with fewer trucks.

Formerly known as lower bound HPMV, 50MAX HPMVs are trucks that are slightly longer than standard 44 tonne vehicles and have an additional axle (9 in total) in order to operate at 50 tonnes maximum total weight - hence 50MAX. The modified design means these trucks can carry more, but they have the same loading effect as a standard 44 tonne truck.

Our Freight Portfolio Director, Harry Wilson, says that the neutral impact on roads will allow greater network access, particularly on the extensive local road network and the more remote state highways where pavement strength is insufficient to allow heavier axle loads.

'Introducing 50MAX HPMVs will mean more flexibility for freight operators and greater efficiencies for their fleets. This will in turn translate to reduced costs for freight customers and end consumers.

'Until now the weight restrictions on some bridges and roads has kept bigger trucks off many important freight routes, with freight operators having to dispatch smaller trucks, and more of them, to pick up and deliver freight on 95% of New Zealand's total road network. These routes are important for the country's freight task. However, they are not built

with the same carrying strength as the 4500 kilometres of high volume freight routes that are currently being upgraded for full HPMVs.'

Many of the country's older and smaller bridges have shorter spans. Spreading the axles and slightly increasing the length of the vehicle allows the truck and trailer to spread the weight over more of the bridge, therefore allowing the heavier vehicles to traverse a greater number of the country's road structures. Because of the costs of upgrading these roads and the relatively lower volumes of freight moving on them, it would not be in the best economic interests of the country to upgrade them. The minimal infrastructure impact means that 50MAX HPMVs will have greater access across the road network than full HPMVs.

'There's also the benefit in having newer, not to mention fewer and safer trucks and trailers on the road. The cost to an operator of converting their existing rigs or buying new is relatively low, but the freight efficiency and safety gains for our communities from carrying more freight with fewer trucks are huge, Mr Wilson said.

'We are working closely with the Ministry of Transport, the Road Controlling Authority Forum, local councils (who are responsible for local roads) and the road transport industry to introduce and enable 50MAX HPMVs.

'50MAX HPMVs will not require upgrades of roads and bridges or carry additional maintenance costs for local councils and highways on approved routes. We will be carefully monitoring the effect of the introduction of these trucks on bridges and roads, but initial reports demonstrate that there should

not be any additional wear and tear,' Mr Wilson said.

The concept is being welcomed by industry and indications are that 50MAX HPMVs will be built once road access is assured. It's expected that industry will find the greater network access benefits attractive. With up to a 5 tonne improvement in productivity per trip, 50MAX HPMVs will help those that move the freight, cut costs for the producers and will mean there will be fewer vehicles on the road carrying the same amount of freight. A business case, which was undertaken to study the economic benefits of the introduction of 50MAX HPMVs, shows \$100 million net reduction in annual transport costs by year four.

In the short term, operational cost savings would be expected to flow to road transport operators, which would offset the cost of vehicle modifications.

Over time competition among transport operators will transfer benefits to the community that produces the goods.

Operators will need to apply to the NZTA for a permit to operate a 50MAX HPMV on specific routes, just as all HPMVs currently are. Heavy vehicle operators pay road user charges (RUC), which are charged according to the carrying weight of the vehicle and distance it travels.

Mr Wilson says the new 50MAX HPMV concept will bring the greatest efficiencies to truck operators providing long haul and point to point freight contracts. As the concept develops, the aim is to look at opening up access progressively across the road network.

For more information on 50MAX HPMVs visit the NZTA website: www.nzta.govt.nz/hpmv.

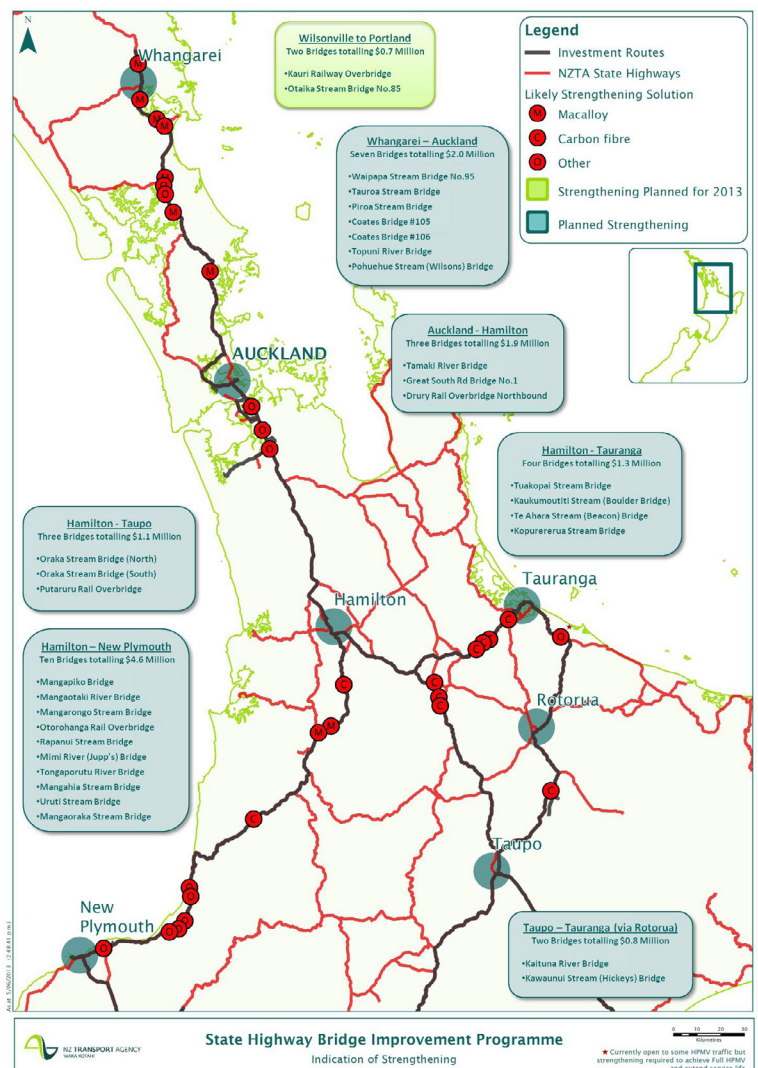
Bridge improvement programme for HPMV routes

The NZTA is well on the way to opening up new high productivity motor vehicle (HPMV) routes for up to 62 tonne vehicles. 'We've reached a milestone point with HPMV routes to more accurately understand how much investment is required to strengthen state highway structures for the Upper North Island,' says Harry Wilson, our Freight Portfolio Director.

The Bridge Improvement Programme comes after the initial investigation and studies conducted by regions for end-to-end HPMV routes providing the greatest economic returns. After three years, we can now tell a story about how these routes will be done. End-to-end routes have been confirmed with local authorities across the upper North Island. The map on the right shows the works for the State Highway Bridge Improvement Programme.

Over 30 state highway bridges will be strengthened over the next two years totalling \$12.5 million across the upper North Island and down to New Plymouth. Extensive structural analysis using modern techniques has halved the number of bridges that were initially identified for strengthening. The latest analysis on these bridges also means that some bridges previously off-limits to HPMVs are now likely to be available immediately. A new series of maps indicating where operators can and cannot travel will be available in July.

'Already underway is the Portland to Wilsonville route which will enable better use of the existing infrastructure by achieving efficiency gains where greater tonnage of materials can be transported in fewer loads', says Mr Wilson. This is one of Northland's key routes where a \$700,000 strengthening investment of two bridges will provide high



returns to that region. Winstone Aggregates will significantly reduce the number of loads transported along the route to the nearby Portland cement site, in addition to enhancing the efficiency for transporting logs and wood products to and from the Marasumi chip mill near Portland. Construction is expected to begin this August and take approximately three months.

Strengthening designs for the remainder of the upper North Island are now underway and funding applications have begun. The priority for strengthening remains on State Highway 1 from Auckland to Waikato and State Highway 29 across to the Bay of Plenty. These routes are expected to carry upwards of 550,000 tonnes of freight and 450,000 tonnes of forestry and agriculture products and strengthening works will begin later this year.

At this point, the Auckland Harbour Bridge remains off limits for HPMVs over 44 tonnes. A costing exercise is being carried out to determine what strengthening might be needed for the main truss of the bridge for 50MAX HPMVs (see 50MAX story in this newsletter on page 1).



Draft policy for route-specific permitting of 23-25 metre HPMVs

Since the Vehicle Dimension and Mass Rule Amendment came into effect on 1 May 2010, the NZTA has received applications for HPMVs at lengths greater than 23 metres. To date, we have processed and approved a limited number of applications to operate on the network above 23 metres on a trial basis. An AustRoads report specifically identified heightened risk for vehicles above 23 metres if the route isn't carefully assessed and problems mitigated.

We have pulled together specialist advice from subject experts together with research and input from the Road Transport Forum and the CVIU.

Longer vehicles on our highways and roads require additional levels of safety, not only for the operator of the vehicle, but also for other road users. The durability of the road infrastructure must also be protected. This is a new and challenging area for the NZTA, local authorities and the road transport industry. This means that the NZTA as the safety regulator must put in place the appropriate policy and guidance for vehicles between 23–25 metres.

The draft policy aims to clarify our requirements for approving permit applications for 23–25 metre HPMVs. No doubt the policy will be improved over time as permits are processed and lessons are learnt.

We will now receive applications based on the draft policy, which represents the minimum requirements to satisfy road safety. Operators with existing permits in excess of pro-forma lengths who are part of the trial will be expected to comply with this new policy. Our Access and Use group will contact these permit holders separately to advise how to renew their permits on expiry.

The draft policy is available on our website at www.nzta.govt.nz/hpmv.

'Maps, maps and more maps'

Over the last eight months, the NZTA's Geospatial team has been teaming up with the Highways and Network Operations team to support our new priority for moving more freight with fewer trucks. Initially the support was a mix of data analysis, help with key performance indicators, and simple map production for investment routes and O-Permit data.

Over time, this has grown to include the 50MAX HPMV bridge project, over-mass and over-length HPMV analysis and the Bridge Improvement Programme mapping.

Most recently we've developed a dynamic web map that's able to include all of this project data into one intuitive map. This is a new tool for us and allows different data layers to be shown in one map. Now we can create a more in-depth spatial story, where we can see and understand how different projects or investments are interacting.

Over the next month, the Geospatial team will be working to better understand the data and geographic needs for better illustrating HPMV route availability, depending on the carrying capacity of the route and the type of vehicle that this applies to. Our focus is to make this new interactive mapping tool something that supports people in their everyday work and decision making. The maps produced will include both state highway and local road components of HPMV routes. This will help speed up the permitting process, allow better business decisions and of course, to help move more freight with fewer truck trips.

MONITORING EVALUATION AND REVIEW

The NZTA and the MoT are carrying out a second monitoring evaluation and review to gauge the effectiveness of the implementation of the 2010 VDM Rule, three years after the rule came into effect.

In August 2012, new RUC categories were added which helped us better estimate what operators could save. The independent review will look at progress since 2010 with a key focus on these changes.

Our consultant, who started in May, is surveying a sample of operators, manufacturers, road controlling authorities, NZTA staff and other central government staff including the police. These discussions aim to identify what's working and the issues that need to be addressed. While the consultant will be selecting people to survey, we welcome involvement from anyone who is interested in contributing.

Please contact david@stimpson.co.nz if you want to have your views heard.



For more information

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