

# WELLINGTON STATE HIGHWAY FORECAST

## EXECUTIVE SUMMARY

Transit's forecasts of expenditure in Wellington for the next 10 years are set out in Table W1. For forecast purposes only, Transit has anticipated an indicative level of regional distribution funding. Final allocations of regional distribution funding will be determined annually.

These forecasts of expenditure are based on a 10-year forecast of maintenance and improvements, including projects for which funding has already been committed. The timeframe for the development and construction of the improvements proposed in the 10-year forecast is indicative only and is likely to change depending on the project's importance within the context of the regional land transport strategy, its national priority, the resolution of any local concerns and property issues.

The Wellington 10-year state highway forecast seeks to protect and preserve the existing asset, relieve congestion in conjunction with passenger transport and travel demand management initiatives, improve security and efficiency of the roads into, and out of, the Wellington region and improve road safety.

Major features of the forecast are:

- › Dowse to Petone Upgrade on SH2, including a new interchange at Dowse Drive and overbridge at Korokoro, for a construction start in 2006/2007
- › Kapiti Western Link Road (Stage 1), for a construction start in 2007/2008, as a joint project with the Kapiti Coast District Council
- › a new interchange at Whitford Brown/Porirua on SH1, new interchange at Melling on SH2 and curve easing at Muldoon's Corner on the Rimutaka Hill Road on SH2, for construction starts later in the 10-year forecast
- › Centennial Highway Median Barrier, for a construction start of 2007/2008.

Other projects in the 10-year plan for construction in the next three years are:

- › Otaki Roundabout
- › Waiohine Bridge Replacement on SH2, north of Greytown
- › Waikanae Weigh Station
- › Carterton Roundabouts
- › Old Hautere Road Safety Improvement
- › improvements to the Kent Terrace/Ellice Street intersection at the Basin Reserve
- › street lighting between Petone and Ngauranga and between Maoribank and Owen Street on SH2
- › cycling and walking facilities in Hutt City and Petone to Horokiwi on SH2, for construction in the next three years.

## KEY REGIONAL TRANSPORT ISSUES

Through Wellington's regional land transport strategy, long term council community plans and Transit's state highway forecast, local and central government is aiming for a sustainable land transport system that meets the objectives of the New Zealand Transport Strategy (NZTS) and the Land Transport Management Act (LTMA), i.e. assisting economic development, assisting safety and personal security, improving access and mobility, protecting and promoting public health and ensuring environmental sustainability.

To achieve a sustainable land transport system we need to consider both land use and transport trends and behaviour. In this respect regional and local growth strategies (or emerging views where strategies have not been written) and planning documents are critical to supporting regional land transport strategies.

In meeting the objectives of the NZTS and LTMA the key regional transport issues for the Wellington include:

- › severe traffic congestion
  - › the region is promoting public transport/rail
  - › traffic growth on the main routes into and out of Wellington City is continuing at around two to four percent per year, driven in part by a population growth of one to two percent per year on the Kapiti Coast and Upper Hutt
  - › key 'hot points' are on the highway and motorway system – Plimmerton to Paremata and the Ngauranga interchange on SH1, Melling to Petone on SH2 and around the Terrace and Mt Victoria Tunnels. Trips from the Kapiti Coast and Upper Hutt into Wellington City in the peak periods are regularly taking 30-50 minutes longer than off-peak periods.
- › road safety
- › route security and efficiency
  - › Western Corridor
  - › Hutt Corridor
- › access to the regional hospital at Newtown and airport
- › the need for stronger links between Lower Hutt and Porirua.

## TRANSIT'S CONTRIBUTION TO TRANSPORT ISSUES

The two major state highway arterial routes in the Wellington region are SH1 in the western corridor connecting to Kapiti and Horowhenua districts and SH2 through the Hutt Valley connecting to the Wairarapa via the Rimutaka Ranges. Both of these corridors have been identified in the Regional Land Transport Strategy as requiring substantial upgrading to relieve congestion, cope with traffic growth despite travel demand measures and improve safety.

In addition to the major road projects, which have been provided for the 10-year Forecast, significant attention will be given to improved management of traffic on existing roads. This focus on traffic operations is essential to maximise the efficiency of the existing network and ensure that alternative modes, including public passenger transport, can operate effectively.

The locations of possible Wellington projects in the 10-year forecast are shown in Figure W. The expected cost and possible timeframe for the development and construction of these projects is indicated in Table W2.

The timeframe for the development and construction of the improvements proposed in the 10-year forecast is indicative only and is likely to change, depending on the use of additional funding from central government (known as 'regional distribution funding') to advance activities. While Transit anticipates it will have further expenditure from regional distribution funding this is yet to be fully determined. For the purpose of giving indicative construction start dates a figure of 50 percent of regional distribution funding for Wellington state highways, spread evenly over 10 years, has been used.

Large improvement activities (with construction costs more than \$3M) have been scheduled over 10 years and small and medium-sized projects (with construction costs of less than \$3M) have been scheduled for three years.

## Congestion Relief

### Travel Demand Management

The highest priority in the Wellington Region is the investigation and implementation of travel demand management initiatives. The Land Transport Management Act 2003 signals the need for travel demand management as an integral component of a sustainable approach to land transport. Transit endorses this principle and proposes to actively participate in an investigation of opportunities for travel demand management in Wellington.

### SH1: Wellington Central Business Area (Wellington Airport to Ngauranga)

With the Inner City Bypass now under construction the focus in this corridor is on investigating schemes to improve traffic flow between Ngauranga and Aotea Quay and further minor upgrading around the Basin Reserve. The traffic flow improvement between Ngauranga and Aotea Quay will consider travel demand management options and the possibility of four lanes in each direction to avoid the need for traffic to merge from four to three lanes at each end. These proposals require further discussion with the Wellington City Council to consider the effects of additional traffic or TDM implementation on the local road network and the future development of railway land adjoining Aotea Quay. At this stage, this project has not been prioritised for implementation in the 10-year forecast.

### SH1: Western Corridor (Ngauranga to Otaki)

A number of major improvements are required to SH1 between Ngauranga and Otaki. The MacKays Crossing Overbridge and the Plimmerton to Paremata project are under construction. In addition the Kapiti Western Link Road (Stage 1) is prioritised for construction in the 10-year forecast.

The proposed Kapiti Western Link Road is a joint project with Kapiti Coast District Council to build a parallel route to SH1 between Peka Peka, north of Waikanae, and Poplar Avenue, at Raumati. This parallel route will ease congestion on both the state highway and local roads. The project is now free of appeals on the designation and the first stage of this project is included in the 10-year forecast for design

from 2005 and construction in 2007/08. The second stage is not currently included in the 10-year forecast.

A number of projects has been included in the Western Corridor study, a joint study with Greater Wellington Regional Council. This is considering all viable options including passenger transport, travel demand management and new road capacity. Any additional activities and prioritisation for implementation will be considered in future state highway forecasts.

### SH2: Hutt Corridor

Large projects proposed to reduce delays on SH2 in the Hutt corridor are the Dowse to Petone Upgrade and the Melling Upgrade. The proposed improvements include building an overbridge at the Korokoro Intersection (connecting the Western Hills with Hutt Road) and an interchange at the Dowse Drive intersection (connecting Dowse Drive and Hutt Road via a roundabout raised over the highway as well as connections to the state highway). These improvements also include altering the Petone Park and Ride facility and minor safety improvements to the highway between the existing intersections. The expected construction start of Dowse to Petone is 2006/07, which reflects the likely timelines for completing project development including property purchase.

Following completion of the Dowse to Petone Upgrade changes in traffic flows at the Melling intersection will be reassessed. This is currently a major access point to the Hutt City centre and a substantial part of this traffic is expected to divert to the new Dowse Interchange. It is envisaged that eventually a grade-separated interchange will be required at Melling.

A reversible additional lane on SH2 between Petone and Ngauranga has been proposed by Greater Wellington Regional Council in its Hutt Corridor Plan. This is intended to operate as a tolled lane. The proposal is still in the early stages of development and therefore no timing has been determined for this project in the 10-year plan.

The need for the upgrading of SH2 along River Road has also been investigated but any large activities are currently outside of the 10-year plan.

## Road Safety

Transit plans to continue removing ‘out of context’ sections of state highways, roadside hazards, providing a network of stock truck effluent disposal sites and improving walking and cycling facilities.

Continuation of a median barrier on Centennial Highway between Pukerua Bay and Paekakariki is currently under investigation. Grade separated intersections at Whitford Brown Avenue and Beach Road are included in the Western Corridor Study.

There is also a number of small and medium-sized safety projects (with construction costs less than \$3M) included in the three-year plan primarily relating to urban and rural intersection improvements and street lighting. A number of other safety improvements may be possible depending on regional distribution funding.

In addition to the above, Transit is currently investigating the optimal location of a southbound weighstation on the western corridor now that the existing facility at Plimmerton will not be available for southbound heavy vehicle enforcement.

The first stage of the Advanced Traffic Management System (ATMS), that has been installed in the Ngauranga Gorge has been very effective in smoothing traffic flows and ensuring a faster response to incidents. Subject to funding it is proposed to extend the system incrementally to other high traffic volume sections of SH1 and SH2.

## Stock Effluent Disposal Facilities

A stock effluent disposal facility has been completed by the Wellington City Council as part of the North Island stock effluent disposal strategy.

## Efficient and Safe Transport Corridors

### SH2: Wairarapa Corridor (Masterton to Upper Hutt)

Construction of the SH2: Waiohine Bridge Replacement north of Greytown is to be re-tendered. The most significant activity proposed for SH2 in the Wairarapa corridor is:

- › SH2: Rimutaka Corner Easing (Muldoon’s Corner)

The Rimutaka Corner Easing project will straighten some tight curves at ‘Muldoon’s Corner’, about 500 metres south of Rimutaka summit, where the current alignment requires some heavy vehicles to regularly cross the centre line.

### Passing Lanes

Passing lanes are proposed on:

- › SH1: between Otaki and Waikanae
- › SH2: between Greytown and Featherston
- › SH2: between Masterton and Carterton
- › SH58: at Judgeford.

### Stronger Links Between Lower Hutt and Porirua

This is seen as a potential project to be investigated in partnership with Wellington City Council. This would potentially consider linking SH1 at Grenada with SH2 at Petone and the upgrade of SH58.

## Walking and Cycling

The following walking and cycling projects are included in the three-year plan:

- › SH2: Hutt Valley cycle facilities
- › SH1: Teihana Road Pedestrian Overbridge.

These projects will involve a number of minor improvements to make the respective routes safer for cyclists and pedestrians.

It is also proposed to investigate options for completing the cycleway between Petone and Ngauranga.

## MAINTENANCE and OPERATIONS

In addition to undertaking maintenance and improvements to meet future levels of service and to preserve the asset, Transit proposes to:

- › resurface 35 kilometres of highway, including 16 kilometres of low-noise surfacing
- › continue to maintain and improve the Pauatahanui Inlet seawall
- › implement flood mitigation works at Paekakariki
- › introduce a Wellington Traffic Management Unit to optimise traffic operations on both local arterial roads and state highways
- › improve coordination of signalised intersections through Wellington City during peak weekend travel times
- › improve coordination with NZ Police and emergency services in the management of incidents that affect the operation of the network
- › continue to work with Civil Defence and Emergency Management to refine emergency response plans in and around Wellington
- › monitor traffic and the level of congestion
- › implement improvements to manage tunnels to meet European standards
- › deploy a weather monitoring station on the summit of Rimutaka Hill (SH2) to forecast adverse weather conditions
- › continue to remove hazardous trees from the road corridor.

## Table W1

### Forecasts of Expenditure on Maintenance and Improvements

#### Wellington Region

	05/06 (\$M)	06/07 (\$M)	07/08 (\$M)	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)	13/14 (\$M)	14/15 (\$M)	Total (\$M)
<b>Maintenance</b>											
Structural	6.2	6.5	7.0	7.3	7.7	8.0	8.4	8.7	9.1	9.5	78.5
Corridor	6.0	6.3	6.8	7.1	7.4	7.7	8.1	8.4	8.8	9.2	75.7
Professional Services	3.3	3.4	3.7	3.9	4.0	4.2	4.4	4.6	4.8	5.0	41.4
Property Management	4.8	4.8	5.2	5.4	5.7	5.9	6.2	6.5	6.7	7.0	58.3
Preventive Maintenance	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Emergency Works	0.2	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	10.4
Sub-total	20.7	22.0	23.8	24.8	26.0	27.1	28.3	29.6	30.9	32.2	265.4
<b>Improvements</b>											
Minor Safety Projects	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	15.7
Committed Projects	39.9	18.5	0.9	0.0	-	-	-	-	-	-	59.2
New Projects	3.4	4.5	56.0	60.9	64.3	26.2	5.5	5.7	36.0	76.4	338.9
Property Purchase	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	26.6
Walking & Cycling	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Sub-total	46.9	26.7	60.8	65.0	68.5	30.6	10.1	10.4	41.0	81.5	441.4
<b>Total</b>	<b>67.6</b>	<b>48.7</b>	<b>84.6</b>	<b>89.8</b>	<b>94.5</b>	<b>57.7</b>	<b>38.4</b>	<b>40.0</b>	<b>71.8</b>	<b>113.7</b>	<b>706.7</b>

Note: regional distribution funding for state highways forecast to be \$110M over 10 years