

# WEST COAST STATE HIGHWAY FORECAST

## EXECUTIVE SUMMARY

Transit's forecasts of expenditure in West Coast for the next 10 years are set out in Table WC1. Transit has anticipated an indicative level of regional distribution funding but this will be determined annually.

These forecasts of expenditure are based on a 10-year forecast of maintenance and improvements, including projects for which funding is already 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 West Coast 10-year state highway forecast seeks to protect and preserve the existing asset, improve the security and efficiency of routes into and out of the West Coast, and improve road safety.

Major features of the forecast are:

- › investigations into the replacement of the Arahura Bridge, Gates of Haast Bridge and route improvements between Minga Bluff and Rough Creek (in Canterbury but of significance to the West Coast)
- › development and construction of SH6: Littleman Straight South Curve safety improvement
- › two stock effluent disposal facilities.

## KEY REGIONAL TRANSPORT ISSUES

Through West Coast'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 West Coast include:

- › secure and efficient transport corridors – to the east via SH73 Arthur's Pass and SH7 Lewis Pass, to the north via SH6 Hope Saddle, and to the south via SH6 Haast Pass
- › road safety – a key concern is the potential conflict of heavy and light traffic, particularly at single lane bridges on SH6
- › increasing traffic demands associated with coal mining activity, dairy industry, and tourist industry.

### TRANSIT'S CONTRIBUTION TO TRANSPORT ISSUES

The state highway network forms the essential backbone for land transport on the West Coast. Significant improvements to SH73 over recent years have significantly improved the route security on this strategic link. The latest improvement to be completed is the construction of a new rail bridge at the Otira Underpass where the vertical clearance has been increased for road traffic. Legal dimension vehicles can now use this route to access the West Coast. As a result the number of heavy vehicles using this route has increased.

Traffic volumes on the West Coast are generally quite low and the state highway network is maintained to a high standard for low-volume highways, noting the high proportion of tourists.

Significant improvements proposed over the next 10 years are investigation of options at the Gates of Haast Bridge on SH6 and options for a new bridge at Arahura to ensure the security of this route.

The locations of possible West Coast projects in the 10-year forecast are shown in Figure WC. The expected cost and possible timeframe for the development and construction of these activities is indicated in Table WC2.

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. Indicative construction start dates are based on expected funding levels if 50 percent of regional distribution funding for West Coast was allocated to state highways, spread evenly over 10 years.

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

### Efficient and Safe Transport Corridors

The lack of alternative access to and through the West Coast means that both SH73 and SH6 are strategically of great importance to the West Coast economy.

To the south, the Gates of Haast project will improve the alignment and provide a more secure route between the West Coast and Central Otago.

To the east, the Mingha Bluff to Rough Creek project in Canterbury will look at improvement options for this section of SH73, where the existing narrow width and tight alignment is of concern to many road users.

### Arahura River Bridge

The security of the Arahura River Bridge and its effect on the network is a significant concern, given the age of the bridge. Transit recognises the need to further investigate options for replacing the bridge and has already commenced this work.

### Passing Lanes

No passing lanes are included in this three-year plan due to the relatively low traffic volumes currently recorded on these state highways.

### Road Safety

Transit plans to remove 'out of context' or 'surprise sections' of state highway and roadside hazards, provide a network of stock truck effluent disposal sites, and improve severe constrictions and safety risks associated with walking and cycling.

### Rural Highways

Improvements at Littleman Straight on SH6 have been included.

A number of additional projects are proposed but are dependent on progress with other projects and the availability of regional distribution funding. These include:

- › SH7: Spring Creek Curve Realignment
- › SH73: Goat Creek Bridge Replacement
- › SH7: McKendries Corner Curve Improvements.

### Stock Effluent Disposal Facilities

A stock effluent disposal facility on SH73 at Jacksons is included in the forecast as well as one at Reefton Springs Junction.

### Walking and Cycling

Transit has recently completed construction of pedestrian and cycle facilities on the Bullock Creek Bridge, and the Pororai River Bridge, both on SH6.

In addition, construction of a walkway between Fox Glacier and the township is proposed.

## MAINTENANCE and OPERATIONS

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

- › improve the road condition information to road users at critical points on the network by the use of electronic variable message signposting. This signage is currently being erected on SH7 (Lewis Pass and Rahu Saddle) with other parts of the network expected to follow
- › introduce thermal mapping of the inland network predict where icing will occur
- › introduce more road weather stations to improve emergency responses to ice and snow and continue to trial the use of the de-icer CMA (calcium magnesium acetate)
- › continue to monitor the behaviour of the Waiho River at Franz Josef on SH6 and take appropriate action to ensure the route remains secure
- › continue to work on a risk analysis of rock falls and river erosion and prioritise these works accordingly as threats to safety and route security occur
- › implement risk-reduction works on bridges throughout the network to reduce the vulnerability of bridges in the event of a severe earthquake
- › work with the Department of Conservation to ensure that maintenance works within the national parks represent world best practice
- › strengthen the three suspension bridges (Fox, Cook, and Karangarua) on SH6 in South Westland to remove the current weight restriction, which is a significant impediment to heavy goods movement in this area.

## Table WCI

### Forecasts of Expenditure on Maintenance and Improvements

#### West Coast 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	6.6	6.9	7.4	7.8	8.1	8.5	8.9	9.2	9.7	10.1	83.2
Corridor	3.4	3.5	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.2	42.5
Professional Services	2.4	2.5	2.7	2.8	2.9	3.0	3.2	3.3	3.4	3.6	29.7
Property Management	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
Preventive Maintenance	0.2	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	8.1
Emergency Works	0.2	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.1	8.3
Sub-total	12.8	14.4	15.5	16.2	16.9	17.7	18.4	19.3	20.1	21.0	172.3
<b>Improvements</b>											
Minor Safety Projects	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	12.4
Committed Projects	0.3	0.0	0.0	0.0	-	-	-	-	-	-	0.3
New Projects	1.3	0.7	0.8	1.2	5.1	6.5	0.9	0.9	0.9	0.9	19.0
Property Purchase	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
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	2.7	1.9	2.1	2.5	6.5	7.9	2.4	2.5	2.6	2.7	33.7
<b>Total</b>	<b>15.6</b>	<b>16.3</b>	<b>17.6</b>	<b>18.7</b>	<b>23.4</b>	<b>25.6</b>	<b>20.8</b>	<b>21.7</b>	<b>22.7</b>	<b>23.7</b>	<b>206.0</b>

Note: regional distribution funding for state highways forecast to be \$8M over 10 years