

# **Hutt Corridor Plan**

## **Consideration of Options**

# Scope

Ngauranga – Te Marua

+ connections to SH1/Porirua/Transmission Gully

Road    - highway  
          - local arterial

Passenger transport    - rail  
                                  - bus  
                                  - ferry

Walking

Cycling

# Objectives

## (from RLTS)

- (1) Accessibility and economic development
- (2) Economic efficiency
- (3) Affordability
- (4) Safety
- (5) Sustainability

Importance of network balance

Options evaluated against these objectives

# Identified Needs and Issues

## (RLTS p 57)

- Low population growth in Hutt Valley
- Continued employment in Wellington CBD for people living outside of Wellington city
- Slow down in manufacturing regionally
- Peak period road congestion
- Inadequate peak frequency levels of passenger rail in the Hutt
- Increase in freight movements across the Hutt Valley, particularly near or in residential areas
- Increase in journeys for recreation and shopping
- Poor local access in and out of the Hutt Valley
- Lack of direct passenger rail access to the Lower Hutt central area
- Growing need for improved roads to meet increases in tourism

Note the importance of economic issues

# What We Looked At Before

## 1. State Highway Improvements

- junction efficiency improvements
- grade separation of intersections
- Silverstream bridge capacity improvements
- tidal flow/HOT lane Petone-Ngauranga

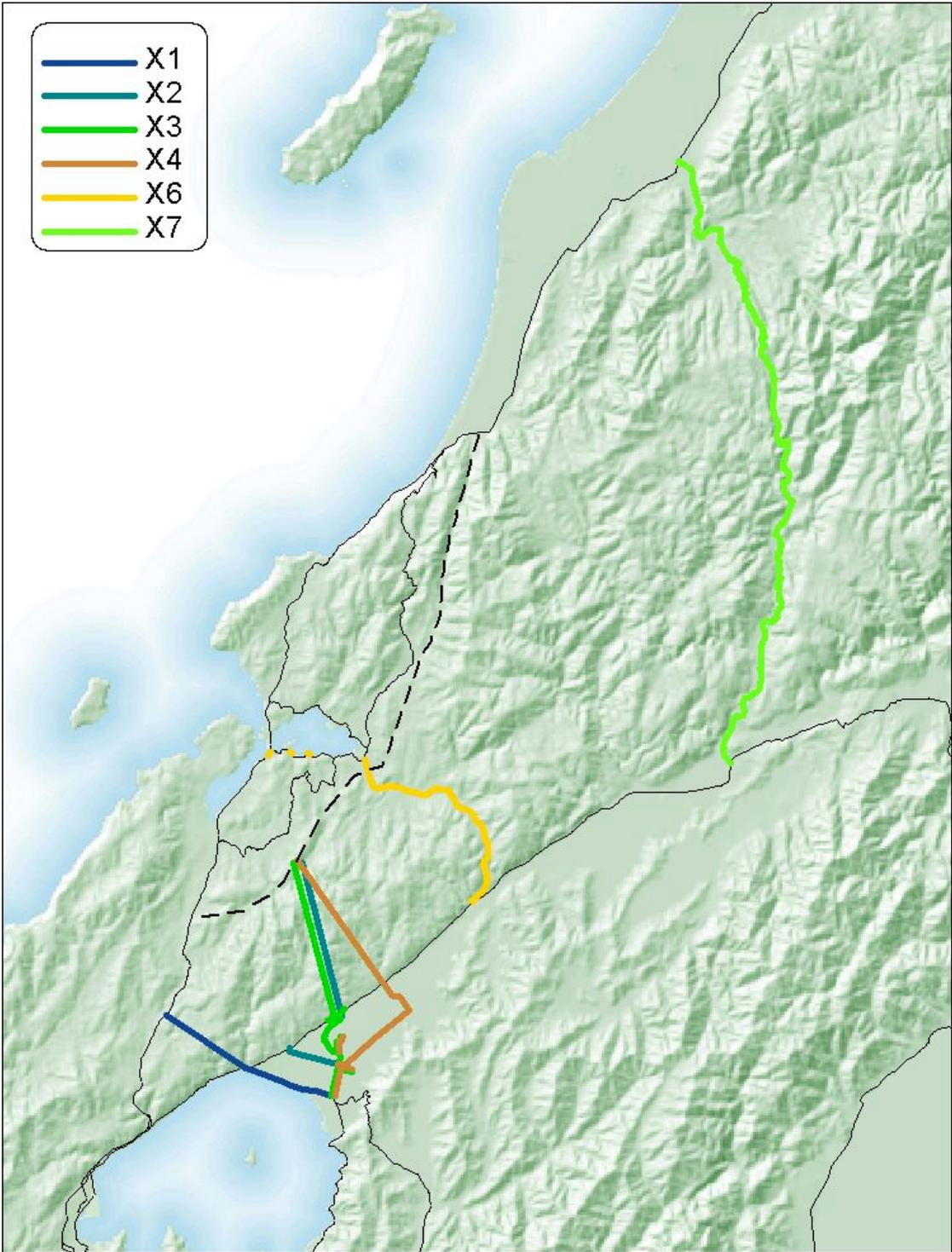
## 2. Public Transport Improvements

- bus lane Petone-Ngauranga
- new ferry services
- new bus services
- Hutt-Porirua bus services
- increased speed and frequency of rail services
- new stations at Timberlea and Cruickshank Road
- Melling loop LRT
- Stokes Valley LRT

## 3. Hutt-Porirua Road Links

- Petone-Grenada link plus Esplanade upgrade
- Melling-Porirua East link plus 4 lane Whites Line to Dowse
- Melling-Porirua East link plus Randwick-Melling link
- Belmont-Porirua East link plus Randwick-Cambridge-Belmont
- SH58 4 laning to Transmission Gully alignment
- Akatarawa Road upgrade

1, 2, and 3 were looked at independently of one another



- X1
- X2
- X3
- X4
- X6
- X7

**Hutt Corridor Options**

2000 0 2000 4000 Meters



1:200000

Map printed March 4 2002



Copyright: Wellington Regional Council  
Topographic and Cadastral Information is copyright LINZ

# Note

Stage 1 analysis showed

- SH58 upgrade to TG
- Akatarawa Road upgrade

Independent and could proceed on own merits

Note SH58 upgrade tied to TG

# What Were the Key Issues?

## 1. State Highway 2 Petone-Ngauranga

- Car v bus v rail
- Can we provide for bus and car and not compromise rail: HOV, HOT
- Downstream network Ngauranga-Aotea, Terrace Tunnel, Wellington City network
- Cyclists

## 2. Public Transport

- Bus v car
  - bus services remote from rail
  - penetration into Wellington CBD
- Higher rail frequency and service extensions
  - rolling stock
  - timetable slots
  - park and ride – easy options gone

## 3. Hutt Porirua Link Roads

- SH1-SH2 link
  - complete change in structure of region?
  - focus on Wellington v focus on Porirua
  - Petone option relief Petone-Ngauranga and Johnsonville-Ngauranga
  - environmental/community impacts

## ***What Were the Key Issues?...***

- Valley floor
  - future of Petone Esplanade, foreshore etc
  - freight movements Seaview/Gracefield
  - viability of Hutt CBD
  - connection to Dowse

Petone option gets benefits from congestion relief

Other options get benefits from directness and speed

# Composite Options

## S1

- Petone-Ngauranga HOT lane
- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed
- New rail stations at Timberlea and Cruickshank Road
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington

## **S2 = S1-HOT lane + bus lane**

- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed
- New rail stations at Timberlea and Cruickshank Road
- Petone-Ngauranga bus lane
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington

### ***Composite Options...***

#### **S3 = S1-HOT lane + tidal flow lane – direct bus services**

- Petone-Ngauranga 3-2 tidal flow lane
- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Improved peak and off peak rail service frequency and speed
- New rail stations at Timberlea and Cruickshank Road
- Haywards bus services

#### **S4 = S1 + Petone Grenada + Petone Esplanade upgrade**

- Petone-Ngauranga HOT lane
- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed
- New rail stations at Timberlea and Cruickshank Road
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington
- Petone-Grenada link
- Petone Esplanade upgrade

### *Composite Options...*

#### **S5 = S1 + Melling/Belmont Porirua Link and Valley east-west connector**

- Petone-Ngauranga HOT lane
- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed
- New rail stations at Timberlea and Cruickshank Road
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington
- Melling/Belmont Porirua link
- Valley east-west connector to Dowse

#### **S6 = S1 + Petone-Grenada link + Valley east-west connector + Melling line extension to Hutt CBD**

- Petone-Ngauranga HOT lane
- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed

### ***Composite Options...***

- New rail stations at Timberlea and Cruickshank Road
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington
- Petone-Grenada link
- Valley east-west connector to Dowse
- Extend Melling line over river to Hutt CBD

### **Notes**

- Important that Melling line have frequency improvement and services outside peak time. Modelled as a rail improvement but could have been bus in own corridor.
- If east-west connector is to be effective it needs a direct connection into Dowse Interchange.
- Belmont and Melling to Porirua road links have greater impacts on communities and Regional Park compared to Petone to Grenada link.

# AM Peak Statistics Compared to Do Minimum Percent Change

	<b>S1</b>	<b>S2</b>	<b>S3</b>	<b>S4</b>	<b>S5</b>	<b>S6</b>
Motor vehicle travel time	-2.8	-2.7	-1.5	-2.5	-2.8	-2.9
Time Upper Hutt to Airport	-14.9	-5.6	-18.9	-12.7	-13.8	-11.7
Total vehicle trips	-0.4	-0.9	-0.1	0.0	0.2	-0.1
Total passenger transport trips	2.7	4.3	0.8	2.0	1.4	2.4
Cost of congestion	-11.1	-7.7	-8.5	-12.2	-13.5	-13.2
SH2 vehicles Pet-Nga (HOT lane vehicles)	13.0	-1.8	29.5	0.0	9.4	0.2
Veh passengers Pet-Nga	-9.5	-2.6	22.0	3.3	11.3	3.4
Bus passengers Pet-Nga	921	1300	170	285	410	304
Train passengers Pet-Nga	-7.8	-3.7	-5.1	-8.8	-11.4	-5.9
Total people Pet-Nga	12.8	7.9	17.5	5.4	11.3	6.7
Petone-Grenada/Pet-Nga(%)				32.8		33.0
Melling-Porirua/Pet-Nga (%)					35.0	

# Performance Against Objectives – Planning Balance Sheet

## Planning Balance Sheet Scores for Stage 2 Options

Indicators	Options						
	Base	S1	S2	S3	S4	S5	S6
<b>1. Accessibility</b>							
Motor vehicle statistics	0	+	+	+	+	+	+
Public transport statistics	0	++	++	0	++	+	++
Vehicle travel times from Upper Hutt to Airport	0	++	+	++	++	++	++
Vehicle travel times from Hutt to Porirua	0	++	0	+	++	++	++
<b>2. Affordability</b>							
5 year cost	0	+	++	+	-	--	--
<b>3. Economic Efficiency</b>							
Benefit Cost Ratio (BCR)	0	+	+	0	0	0	0
<b>4. Sustainability</b>							
Environment	0	+	+	0	0	-	0
Fuel	0	0	+	-	0	0	0
Safety	0	0	+	0	0	-	0
V/C ratios	0	+	0	+	+	+	+

++ excellent  
0 neutral  
= very poor

Promising Options    S1                    S2                    S4                    S6

# Possible Packages

## Core improvements

- Grade separation Melling Interchange
- Silverstream bridge capacity improvements
- Haywards bus services
- Improved peak and off peak rail service frequency and speed
- New rail station's Timberlea and Cruickshank Road
- Direct bus services Upper Hutt, Stokes Valley, Wainuiomata to Wellington

S1 = core + Petone-Ngauranga HOT lane

S2 = core + Petone-Ngauranga bus lane

S4 = core + Petone-Ngauranga HOT lane + Petone-Grenada + Petone Esplanade upgrade

S6 = core + Petone-Ngauranga HOT lane + Petone-Grenada + east-west connector + Melling line extension to Hutt CBD

# Some Other Thoughts

Bus v rail issue remains

- feasible to have Melling line as buses
- extensions into Wellington or Hutt CBD pushes balance to favour rail

Bus v HOT lane

- possible to run buses in HOT lane
- HOT lane raises revenue to fund other components

Petone-Grenada

- Future of Petone Esplanade
  - capacity
  - amenity / environment
- Alternatives available
  - east-west connector at Dowse
  - Melling/Belmont Porirua link

Note: Petone-Grenada + east-west connector at Dowse creates capacity issues on SH2 Petone to Dowse which are solved with Melling line extension to Hutt CBD.

Major disadvantage of S6 is cost but could be addressed by HOT lane revenue if revenue-funding link established.

# Possible Timeframes

- Short to medium
  - core
  - Petone-Ngauranga HOT or bus lane
- Medium to longer
  - Petone to Grenada (or alternative)
  - Petone Esplanade or east-west connector
  - Melling line extension into Hutt CBD

# Sensitivity Tests

Need to Check Robustness in Growth Sensitivity Tests

- One off developments, eg CIT etc
- Growth in Wairarapa and impact on River Road