Feedback on Options

The closing date for your feedback on this Information Document is Monday 5 December 2005. Your feedback is vital in determining a future integrated, sustainable solution for the Corridor.

Additional copies are available from the Transit website www.transit.govt.nz (search phrase = nelson brightwater corridor), from the Nelson City Council or Tasman District Council.

All responses will be acknowledged and a summary of your feedback will be prepared and made available on the Transit New Zealand website and emailed to you.

Please send your feedback to:
Rhys Palmer
Email: rhys.j.palmer@mwhglobal.com
Post: Transport Feedback
C/- MWH New Zealand
PO Box 3455
Richmond

Question 1

Overall, which of the following Packages best represents your Preferred Approach to Corridor Management? (please circle one)

In making your choice, please first consider the Study Objectives in Section 5.

A. Public Transport with Traffic Restraint (page 8)
B. Maximise Efficiency of Existing Network (page 10)
C. Basic Roading Improvements (page 12)
D. Enhanced Roading Improvements (page 14)

If you chose Package A, please skip Question 2 and continue with Question 3.

Question 2

If you indicated Package B, C or D as your preferred package – which of the individual sub-options within that package best achieves your desired outcome? (Please circle one)

<table>
<thead>
<tr>
<th>Package</th>
<th>Sub Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>B (page 10)</td>
<td>B13 B14</td>
</tr>
<tr>
<td>C (page 12)</td>
<td>C2 C3 C5</td>
</tr>
<tr>
<td>D (page 14)</td>
<td>D2 D3 D4 D18</td>
</tr>
</tbody>
</table>

Question 3

Which projects, if any, need to be added to your Preferred Package to achieve the outcome you desire? Refer to the tables of projects listed for each Package (pages 8-15).

Note: List here individual projects from any of the other Packages. Please use the reference labels (Ref) shown in the tables alongside each project, for example, “B1” to indicate cycle facilities.

(continues overleaf...)

Question 4

List any projects from your Preferred Package (pages 8-15) which you believe are not needed. Please use the reference labels (Ref) shown in the tables alongside each project, for example, “B1” to indicate cycle facilities.

(continues overleaf...)

Question 5

Given that funding is likely to be limited, which projects do you think provide the greatest benefit to the region and are fundamental for inclusion within a preferred strategy? (pages 8-15) Please use the reference labels (Ref) shown in the tables alongside each project, for example, “B1” to indicate cycle facilities.

(continues overleaf...)

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Please send your feedback to:
Rhys Palmer
Email: rhys.j.palmer@mwhglobal.com
Post: Transport Feedback
C/- MWH New Zealand
PO Box 3455
Richmond
Additional Comments

Do you have any additional comments which you would like to raise in connection with the packages proposed or in support of alternative transport solutions not mentioned in the discussion document?

(Please attach additional sheet/s if needed.)

Contact Details

Please provide your details so we can acknowledge receipt of your feedback and contact you if we need to clarify any aspect of your comments with you:

Name
Address
Telephone
Email

Are you commenting as a representative of an organisation? (please circle)  YES  NO

Name of organisation

Your position in the organisation

Approximate number of people in your group

Do you wish to be added to our mailing list to receive further information as it becomes available?

YES  NO
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Package A: Public transport with traffic restraint .........................8
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This is Your Future - Have Your Say

Consultation closes Monday 5 December 2005.

Meeting land transport needs safely, efficiently, and in sustainable ways is the basis of our regional transportation policy – sustainable for our environment, our city’s residents and visitors, our budget and our future. With vehicle use on the rise – and increasing environmental concerns as a result of regional growth – we need to make plans now about how we’re going to meet these needs in the years ahead.

Transit New Zealand, in partnership with the Nelson City and Tasman District Councils, have started planning, and we need your help in deciding what direction to take. Do we need more roads? More cycleways? Footpaths? A better bus system? Or should we spend less money on construction and big budget projects, concentrating more on changing people’s behaviours to reduce traffic growth and travel demand?

Most likely, a combination of methods will be needed.

The options and alternatives paper

We’ve written this paper – for the North Nelson to Brightwater Corridor Study – to explain the various methods that are possible, and how they might be combined to keep our transport system working efficiently for decades to come.

It contains a wide variety of practical methods, from new roads to subsidised bus services, from carpooling to building a new tunnel.

Such methods (they’re called ‘options’ in the study document) are combined into four different ‘packages’ – combinations which each have strengths and weaknesses. Some cost more, but may work better. Some are less expensive, but do they do enough?

To help answer these questions, we’ve also analysed the packages to see just what effects they might have on future traffic, so you can compare them.

Here’s what we’d like you to do:

• First, have a look at the fold-out questionnaire inside the front cover to get an idea what we’re asking you.
• Keep it handy while you read about the four proposed ‘packages’. You may want to make notes as you read.
• If you’d like more information before completing the questionnaire, come along to one of the public meetings (see page 5).
• Once you’re ready, fill out the questionnaire and let us know:
  • Your preferred ‘package’ and options (questions 1 and 2)
  • Projects from the other packages that you want included in your preferred package (question 3)
  • Projects from your preferred package that you think are not needed. (question 4)
  • Which projects you feel are of the greatest benefit to the region that must be included (question 5)
What happens next?
You’ll find the dates and venues for public meetings to be held in November 2005 on page 5. Stakeholders and interested parties are invited to attend these meetings, and you are also encouraged to fill in the feedback form and send it to us. Once we have received and studied your feedback, we will prepare a preferred strategy paper, which will then be issued for public consultation early in 2006.

We welcome your feedback which we regard vital in determining future transport options for the Corridor.

Background

Project Managers
Transit New Zealand, in conjunction with Nelson City Council and Tasman District Council, are the proponents of this Study. The overall aim is to provide the basis for an integrated transportation strategy for the Corridor. The Corridor includes state highways and key arterials and important collectors which facilitate local and regional traffic movements between Nelson and Richmond and beyond. The work is being undertaken by a project team led by MWH New Zealand Limited.

Corridor Study Area
The Corridor Study Area is the area along State Highway 6, between Hira and Brightwater. It also includes part of the State Highway 60 Corridor from Richmond (Three Brothers Corner) to Pea Viner Corner in Appleby.

Consultation Stage 1
Consultation with the community and key stakeholders is a vital part of the Study being specified within the New Zealand Transport Strategy and the Land Transport Management Act. Stage 1 of the Consultation was held in November and December 2004. This enabled the project team to gain views from stakeholders on the key transportation issues for the study area. A report on the findings of Stage 1 Consultation is available from MWH New Zealand, 281 Queen Street, Richmond, or it can be downloaded from the Transit New Zealand website www.transit.govt.nz (search phrase = nelson brightwater corridor).

By way of brief summary, examination of the feedback found that generally 24% favoured Roading Infrastructure options, 30% favoured Traffic Management options, 21% favoured Public Transport and 25% favoured Travel Demand Management as the basis for improvements to the study area.

Given the breadth of options and alternatives, most of the feedback touched on some aspect of the four headings noted above. However it is fair to say that some people and organisations favoured a greater response to public transport options as opposed to roading infrastructure.

Given the nature of the business of some organisations, for example the Road Transport Association and Port Nelson,
clearly one of their main objectives in terms of an option was that roading infrastructure should facilitate the efficient movement of heavy vehicles along the Corridor. In contrast, the cycle representatives favour a mix of roading infrastructure such as improved cycleways and traffic management measures supporting better public transport services.

**Consultation Stage 2**

The project team has now developed some proposed transportation packages, and these are included in this Issues, Options and Alternatives Paper. They form the basis of Stage 2 of the Consultation, and further meetings have been scheduled with stakeholders and the public, to obtain feedback on the various packages of options.

**Purpose**

The purpose of this consultation is:

- To provide information to interested parties on the alternative scenarios and the evaluation process, and
- To provide an opportunity for the community to express its views and preferences on the scenarios being considered.

This should be viewed against an existing road network which is currently experiencing extreme pressure along key arterials and intersections and which, by 2031, will be operating at capacity with widespread congestion.

This is illustrated in Figures 1 and 2 which show levels of service (i.e., a measure of quality of performance) for two parts of the road network (Central Nelson and Richmond) for both 2001 and 2031 during the morning peak hour. The figures clearly show deteriorating levels of service over time with many of the key arterials operating at or above capacity.

Another way of assessing the capability of the network to cater for future demand can be achieved by examining travel times between principal locations. Table 1 indicates travel times between Richmond and Nelson CBD over two alternative routes obtained from the strategic transport model specifically developed for the study.

<table>
<thead>
<tr>
<th>Route</th>
<th>Travel Time (mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richmond Deviation/Whakatu Drive/Tahunanui Drive/Rocks Road</td>
<td>15.4</td>
</tr>
<tr>
<td>Salisbury Road/Main Road Stoke/Waimea Road</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>103.7</td>
</tr>
<tr>
<td></td>
<td>103.5</td>
</tr>
</tbody>
</table>

**Table 1: Car Travel Times during morning peak hour - 2001 and 2031**

The travel times in 2031 equate to a speed of approximately 7.5-8km/h, which is only double average walking speed. This may seem surprising at first, but in 2031, there are 65% more trips being undertaken than in 2001 – and all are trying to use
the same highway network. Hence the need to look for alternative means of managing demand, with the emphasis being on providing an integrated sustainable transport solution. Clearly doing nothing does not constitute an answer.

Figure 1: Level of Service – Central Nelson Morning Peak

Central Nelson 2001

Central Nelson 2031

Figure 2: Level of Service – Richmond Morning Peak

Richmond 2001

Richmond 2031

Key

- Level of Service (D) – approaching capacity
- Level of Service (E) – road/intersection at capacity
- Level of Service (F) – congestion, traffic flow breakdown
Consultation Meetings
The project team will hold meetings at the venues and dates set out below. A presentation will be given on the Issues and Options, to be followed by focussed discussion groups. This will assist people in completing the Feedback forms at the end of this paper. All stakeholders and interested parties are welcome to attend these meetings.

<table>
<thead>
<tr>
<th>Locality</th>
<th>Nelson (two meetings)</th>
<th>Richmond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When</strong></td>
<td>Monday 28 November 1 – 3pm and 7 – 9 pm.</td>
<td>Tuesday 29 November 10 am – 12 noon</td>
</tr>
<tr>
<td><strong>Where</strong></td>
<td>Council Chambers Civic House 110 Trafalgar St Nelson</td>
<td>Richmond Town Hall 9 Cambridge Street Richmond</td>
</tr>
</tbody>
</table>

*Table 2: Dates and Venues for Public Meetings*

Study Purpose
The purpose of the study is to identify the present and future transport needs within the study area. This includes use of all roads from state highways to local collector roads, use of different modes of transport including public transport, walking and cycling together with means of influencing travel behaviour.

Many of the present needs surfaced during Stage 1 of the consultation process. Stage 2 focuses on possible means of dealing with anticipated future population and resulting demand.

Principles and Objectives
The New Zealand Transport Strategy (NZTS), clearly focuses on achieving an integrated, safe, responsive and sustainable land transport system. Under the Land Transport Management Act 2003 five objectives must be taken into account when future transport options are considered. We have added a sixth which assesses if individual projects within a package are affordable and what effect they have on network efficiency. To achieve the principles of these documents, the Corridor Management Strategy should:

- assist economic development;
- assist safety and personal security;
- improve access and mobility;
- protect and promote public health;
- ensure environmental sustainability;
- provide for network and economic efficiency

These objectives have been used as a “measure” for determining the potential options for the Corridor Management Strategy. They will also be used to further assess the options following the Stage 2 Consultation process as the Project Team works towards a desired strategy.
Study Outcomes

The outcome of the Study will be a North Nelson to Brightwater Corridor Strategy. The study will also provide valuable input into the new combined Nelson and Tasman Regional Land Transport Strategy, and will explore access options to Port Nelson.

These combined strategies will include an integrated package of recommended improvements to passenger transport, road, as well as travel demand measures.

The aim is to ensure that transport has a positive long-term effect on the region’s economic development, safety and personal security, access and mobility, public health, and environmental sustainability. The study is multi-modal and considers the best methods to manage travel demand with the objective of producing a balanced, integrated and sustainable transport system within the region.

Options

From the initial consultation, modelling, and planning evaluations, four scenarios have been developed representing ‘packages’ with different transportation elements for the Nelson–Brightwater Corridor. Each package has a particular transport emphasis, ranging from essentially public transport to major roading infrastructure provisions. Each of the packages do however have some common elements, for example they all have public transport, travel demand management and traffic management components. These packages all include a common set of ‘immediate priority’ items.

The packages have been compiled on the basis of the:

- feedback from the Stage 1 consultation
- need to be able to model and evaluate definite options within packages and to understand how they address existing and future demand
- requirement under LTMA to work towards an integrated, sustainable transport solution.

The packages have been carefully developed from individual projects to represent consistent and logical scenarios, which are all capable of implementation. The estimated costs have been assessed and are stated in the Packages below.

Individual projects are proposed for introduction as soon as is practically possible, implementation within the short-term (before 2011), medium-term (between 2011 and 2021) and long-term (2021 to 2031).

Following the Stage 2 Consultation, and a full evaluation of these packages, a preferred strategy will be determined from the various components (i.e. individual projects) of the particular packages.

Immediate Priority Projects (in all packages)

The Immediate Priority Projects are set out below. They represent a set of small/medium scale roading projects, which
will take place irrespectively of whatever package is developed as the preferred outcome, subject to the necessary funding being available. The cost of each individual improvement is generally less than $0.5M, except for the Tahunanui improvements, and are listed below in no particular order of priority. They are all deemed to be introduced within the immediate to short-term period (ie prior to 2011).

Details of Immediate Priority Projects

Tahunanui Dr/Rocks Rd
Rationalisation of Beach Rd/Bisley Ave/SH6 and access to Recreation Ground car parks.

Annesbrook Dr / Whakatu Dr
Traffic signals installed on approaches to existing roundabout

Waimea Rd / Whakatu Dr
Traffic signals to replace roundabout

Waimea Rd / Annesbrook Dr (Hays Corner)
Proposed upgrade to traffic signals

Richmond Deviation / Queen St / Gladstone Rd
Provision of additional through lane in each direction on SH6

McGlashan Ave/ Croucher St/ Talbot St
Realignment of existing intersection

Salisbury Rd / Talbot St
Proposed roundabout

The Ridgeway
Development of final section of The Ridgeway to provide continuous through access

Nayland Rd/Quarantine Rd
Additional circulatory lane to be provided to the existing roundabout

Quarantine Rd – between Nayland Rd and Whakatu Drive
Four lanes between the two adjacent intersections.
Package A: Public Transport Focus with Traffic Restraint (Cost $50-55 Million)

This package has an emphasis on encouraging ‘modal shift’ (i.e. less use of cars) and restraining overall travel demand. No new road construction is proposed, other than widening of some existing roads. This option does include four-laning of Waimea Road to provide exclusive with-flow bus lanes. This is the reason why the cost of this Package is higher than Package B.

It includes enhancements to the public transport network, combined with measures to manage travel demand, including the possibility of congestion pricing in the longer term on some arterial routes.

This is shown below:

A detailed breakdown of the projects within Package A is set out on following page:

Key
Road Roading infrastructure, including cycleways
TM Traffic management
PT Public Transport
TDM Travel demand management
## Package A: Public Transport Focus with Traffic Restraint

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Project Type</th>
<th>Ref</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term</strong></td>
<td>Road</td>
<td>A1</td>
<td>• Cycle facilities (as per NCC/Tasman cycle strategies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2</td>
<td>• Waimea Rd peak-hour clearways (additional with-flow bus lanes, with signal control at intersections)</td>
</tr>
<tr>
<td></td>
<td>TM</td>
<td>A3</td>
<td>• Intersection priority for buses</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>A4</td>
<td>• peak hour bus services 5 min headway Nelson-Richmond comprising:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Salisbury / Whakatu / Annesbrook / Tahunanui / Wakefield / Port / Nelson CBD (10min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Salisbury / Main Road Stoke / Waimea / Hosp and College / Nelson CBD (10min)</td>
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<td></td>
<td></td>
<td>• limited stop express / local stopping services to alternate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• bus service quality upgrade (bus stop facilities, vehicle quality/comfort, etc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• improvements to off-peak/shopper service frequencies, fare concessions / promotions, low floor buses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A5</td>
<td>• Airport / Nelson CBD and Airport / Richmond CBD services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A6</td>
<td>• Intensification of development around transport hubs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A7</td>
<td>• Parking strategy to increase price / control supply in Nelson and Richmond CBDs</td>
</tr>
<tr>
<td></td>
<td>TDM</td>
<td>A8</td>
<td>• Promote teleworking, flexible working hours to reduce peak intensities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A9</td>
<td>• School and workplace travel plans, car-pooling promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A10</td>
<td>• Traveller information, travel option promotion / awareness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A11</td>
<td>• Subsidies for non-commercial bus services; reduce costs to users</td>
</tr>
<tr>
<td><strong>Medium-term</strong></td>
<td>PT</td>
<td>A12</td>
<td>• Park and Ride with parking facilities in Richmond and Stoke</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A13</td>
<td>• Servicing by increased bus service frequencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ferry service Mapua – Nelson (peak periods)</td>
</tr>
<tr>
<td><strong>Long-term</strong></td>
<td>PT</td>
<td>A14</td>
<td>• Bus services for new residential areas (timing appropriate to development)</td>
</tr>
<tr>
<td></td>
<td>TDM</td>
<td>A15</td>
<td>• Congestion pricing (apply to arterial network)</td>
</tr>
</tbody>
</table>
Package B: Maximise Efficiency of Existing Network (Cost $25-30 Million)

This includes selective measures to maximise the capacity of the roading network, without the construction of new roading. The package aims to improve efficiency of the network through the introduction of specific traffic management measures. This will require the reconfiguration of some existing roads.

These are combined with measures to encourage modal shift by enhancements to the public transport network and the management of travel demand.

This is shown below:

A detailed breakdown of the projects within Package B is set out on following page:

**Key**

- **Road**: Roading infrastructure, including cycleways
- **TM**: Traffic management
- **PT**: Public Transport
- **TDM**: Travel demand management
- **HOV**: High occupancy vehicle lanes assumes that all vehicles with an occupancy of two or more will be able to use a specific lane provided for their use. This includes public transport vehicles.
## Package B: Maximise Efficiency of Existing Network

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Proj. Type</th>
<th>Proj.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term (by 2011)</strong></td>
<td></td>
<td>Road</td>
<td>B1 • Cycle facilities (as per NCC/Tasman cycle strategies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B2 • Intersection priority for buses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TM</td>
<td>B3 • High occupancy vehicle lanes;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• SH6 (Annesbrook, Tahunanui, Rocks, Wakefield Quay) (northbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Waimea Rd (southbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT</td>
<td>B4 • peak hour bus services 5 min headway Nelson-Richmond comprising:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Salisbury / Whakatu / Annesbrook / Tahunanui / Wakefield / Port / Nelson CBD (10min)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Salisbury / Main Road Stoke / Waimea / Hosp and College / Nelson CBD (10min)</td>
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<td></td>
<td>• limited stop express / local stopping services to alternate</td>
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<tr>
<td></td>
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<td></td>
<td>• bus service quality upgrade (bus stop facilities, vehicle quality/comfort, etc)</td>
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<td></td>
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<td></td>
<td>• improvements to off-peak/shopper service frequencies, fare concessions / promotions, low floor buses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B5 • Airport / Nelson CBD and Airport / Richmond CBD services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDM</td>
<td>B6 • Intensification of development around transport hubs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B7 • Promote teleworking, flexible working hours to reduce peak intensities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B8 • School and workplace travel plans, car-pooling promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B9 • Traveller information, travel option promotion / awareness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B10 • Subsidies for non-commercial bus services; reduce costs to users</td>
</tr>
<tr>
<td><strong>Medium-term (2011-2021)</strong></td>
<td></td>
<td>PT</td>
<td>B11 • Park and Ride with parking facilities in Richmond and Stoke</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B12 • Ferry service Mapua – Nelson (peak periods)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TM</td>
<td>B13 • Tidal flow – Fixed lane allocation avoids requirements for gantries/signage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Waimea Rd (Beatson – Bronte) (1 lane northbound / 2 lanes southbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• SH6 (Annesbrook – W’field Quay) (2 lanes northbound / 1 lane southbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TDM</td>
<td>B14 • Tidal flow – Fixed lane allocation avoids requirements for gantries/signage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Waimea Rd (Beatson – Bronte) (2 lanes northbound/1 southbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• SH6 (Annesbrook/W’field Quay (1 lane northbound/2 lanes southbound)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B15 • Parking strategy to increase price / control supply in Nelson and Richmond CBDs</td>
</tr>
<tr>
<td><strong>Long-term (after 2021)</strong></td>
<td></td>
<td>PT</td>
<td>B16 • Bus services for new residential areas (timing appropriate to development)</td>
</tr>
</tbody>
</table>
Package C: Basic roading improvements to reduce congestion

Features:
- Additional lanes along Waimea Road, or Rocks Road, or tidal flow (4/2 basis)
- Extensive network of peak hour clearways
- Intermediate provision of public transport
- Longer-term, additional lanes Richmond Deviation, SH60 (short section)
- Hope bypass (Queen Street to SH60)
- Four-lane SH60 & Richmond Deviation

Also includes:
- Airport to Nelson, Richmond bus service
- Cycle facilities
- Travel Demand Management measures

This is shown below:

A detailed breakdown of the projects within Package C is set out on following page:
## Package C: Basic road improvements to reduce congestion

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Proj. Type</th>
<th>Ref</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-term (by 2011)</strong></td>
<td>Road</td>
<td>C1</td>
<td>Cycle facilities (as per NCC/Tasman cycle strategies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C2</td>
<td>Four-laning Waimea Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C3</td>
<td>Four-laning Rocks Road</td>
</tr>
<tr>
<td></td>
<td>Traffic management</td>
<td>C4</td>
<td>Peak Hour Clearways (Main Road Stoke / Salisbury Rd / Gladstone Rd)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C5</td>
<td>Waimea Rd and Rocks Rd Tidal Flow (4 lanes n/bound and 2 lanes s/bound in AM Pk, reversed in PM peak, controlled with gantries and overhead electronic signs)</td>
</tr>
<tr>
<td></td>
<td>Public Transport</td>
<td>C6</td>
<td>peak hour bus services 10 min headway Nelson-Richmond comprising:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Salisbury / Whakatu / Annesbrook / Tahunanui / Wakefield / Port / Nelson CBD (20min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Salisbury / Main Road Stoke / Waimea / Hosp and College / Nelson CBD (20min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C7</td>
<td>Airport / Nelson CBD and Airport / Richmond CBD services</td>
</tr>
<tr>
<td></td>
<td>Travel demand management</td>
<td>C8</td>
<td>Intensification of development around transport hubs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C9</td>
<td>Parking strategy to Increase price / control supply in Nelson and Richmond CBDs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C10</td>
<td>Promote teleworking, flexible working hours to reduce peak intensities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C11</td>
<td>School and workplace travel plans, car-pooling promotion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C12</td>
<td>Traveller information, travel option promotion / awareness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C13</td>
<td>Subsidies for non-commercial bus services; reduce costs to users</td>
</tr>
<tr>
<td><strong>Medium-term (2011-2021)</strong></td>
<td>Road</td>
<td>C14</td>
<td>SH60 four-laning McShanes – Three Brothers Corner</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SH6 Annesbrook Dr intersection grade-separation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Richmond Deviation four-laning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hope Bypass (two lanes to SH60)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SH6/Queen St grade-separation</td>
</tr>
<tr>
<td></td>
<td>Public Transport</td>
<td>C15</td>
<td>Park and Ride with parking facilities in Richmond and Stoke</td>
</tr>
<tr>
<td><strong>Long-term (after 2021)</strong></td>
<td>Road</td>
<td>C16</td>
<td>SH6 Nelson – Atawhai passing lanes</td>
</tr>
<tr>
<td></td>
<td>Public Transport</td>
<td>C17</td>
<td>Bus services for new residential areas (timing appropriate to development)</td>
</tr>
</tbody>
</table>

**Key**

Road: Roading infrastructure, including cycleways
TM: Traffic management
PT: Public Transport
TDM: Travel demand management
Package D: Enhanced Roading Improvements
(Cost $250-600 Million)

This package has a higher level of investment in roading upgrades to secure an improved level of service during all time periods, combined with public transport improvements and travel demand management.

It includes the provision of new highway links or widening in addition to significant intersection upgrades.

In the short term, Waimea Road could be widened to provide two traffic lanes and two full bus lanes, combined with a further two traffic lanes, either by means of four-laning Rocks Rd, or construction on a new alignment (Beatson-St Vincent or a tunnel). Also included is four-laning of the Richmond Deviation and the provision of two lanes between Queens Street and SH60 in the medium term, with grade separation of the SH6 intersections at Main Road (south of Stoke), Quarantine Road and Annesbrook. Passing lanes would be added to SH6 to the north of Nelson in the medium term, and these would be upgraded to full four-laning in the longer term. In the long term, consideration could be given to a local collector road between Brook Street and Marsden Valley Rd whilst in the far distant future, some thought should be given to a state highway bypass of South Nelson which would aim to remove through traffic from Nelson. The higher cost indicated above is associated with the construction of the bypass which accounts for $364m out of a total of $600m for the entire package.

This is shown below:

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**Package D: Enhanced Roading Improvements**

(for improved level of service)

**Features:**
- Possible introduction of an alternative corridor
- Upgrade of key intersections
- Basic level of public transport
- Additional lanes provided on key routes
- Future provision of South Nelson bypass

**Also includes:**
- Airport to Nelson, Richmond bus service
- Cycle facilities
- Travel Demand Management measures

**Key** *(table next page)*

- Road Roading infrastructure, including cycleways
- TM Traffic management
- PT Public Transport
- TDM Travel demand management

---

![Diagram of the Corridor Management Study - Nelson to Brightwater](image-url)
A detailed breakdown of the projects within Package D is set out below:

### Package D: Enhanced roading improvements (for improved level of service)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Proj. Type</th>
<th>Proj. Ref</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D1</td>
<td>• Cycle facilities (as per NCC/Tasman cycle strategies)</td>
</tr>
</tbody>
</table>
|                      |            | D2        | • Waimea Road 2 traffic lanes + 2 bus lanes, combined with EITHER:  
|                      |            |           |   • Rocks Rd 2 lanes + 2 lanes on new alignment (Beatson-St Vincent)  
|                      |            |           |   • Rocks Rd 2 lanes + Tunnel (Tahananui Dr to Toi Toi St)  
|                      |            | D4        | • Rocks Rd 4 lanes  
|                      |            |           | • Grade separate Annesbrook Dr intersection (for all schemes)  
| Short-term (by 2011) | PT         | D5        | • Peak-hour bus services 10 min headway Nelson-Richmond:  
|                      |            |           |   • Salisbury / Whakatu / Annesbrook / Tahunanui / Wakefield / Port / Nelson CBD (20min)  
|                      |            |           |   • Salisbury / Main Road Stoke / Waimea / Hosp and College / Nelson CBD (20min)  
|                      |            |           | • limited stop express / local stopping services to alternate  
|                      |            |           | • Bus service quality upgrade (bus stop facilities, vehicle quality/ comfort, etc)  
|                      |            |           | • Improvements to off-peak/shopper service frequencies, fare concessions / promotions, low floor buses  
|                      |            | D6        | • Airport / Nelson CBD and Airport / Richmond CBD services  
|                      |            | D7        | • Peak-hour Clearways (Main Road Stoke / Salisbury Rd / Gladstone Rd)  
|                      |            | D8        | • Intensification of development around transport hubs – set policy context  
|                      |            | D9        | • Parking strategy to Increase price / control supply in Nelson and Richmond CBDs  
|                      |            | D10       | • Promote teleworking, flexible work hours to reduce peak intensities  
|                      |            | D11       | • School and workplace travel plans, car-pooling promotion  
|                      |            | D12       | • Traveller information, travel option promotion / awareness  
|                      |            | D13       | • Subsidies for non-commercial bus services; reduce costs to users  
| Medium-term (2011-2021) | Road       | D14       | • Richmond Deviation four-laning  
|                      |            |           | • Hope Bypass (two lanes Queen St – SH60)  
|                      |            |           | • SH60 four-laning McShanes – Three Brothers Corner  
|                      |            |           | • Grade-separate SH6 / Quarantine Rd, SH6 / Main Road intersection  
|                      |            |           | • SH6/Queen St grade-separation  
|                      |            | D15       | • SH6 Nelson – Atawhai passing lanes  
| Long-term (after 2021) | Road       | D16       | • SH6 Nelson – Atawhai four-laning  
|                      |            | D17       | • Brook Street - Marsden Valley Rd connection  
|                      |            | D18       | • South Nelson State Highway Bypass from Waimea Rd via Enner Glynn to south of Atawhai (beyond 2031). This option includes Waimea Road 2 traffic lanes and 2 bus lanes together with ALL other ‘D’ projects EXCEPT for D2, D3 and D4.  
|                      | PT         | D19       | • Bus services for new residential areas (timing appropriate to development)  

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*Stage Two: Issues, Options and Alternatives paper*
Results of the Modelling of Packages

The four packages described in Section 6 have been evaluated with the aid of the Strategic Transport Model (STM), specifically built for this study.

The STM is a land-use, multi-modal model which predicts demand for movement based on household numbers and size and employment opportunities. The model has been validated to year 2001 (to match census statistics) and models developed covering the morning, inter-peak and evening peaks for years 2011 (short-term), 2021 (medium-term) and 2031 (long-term). The modelled area includes the whole of Nelson and the majority of Tasman.

For each package, additional components have been introduced at years 2011, 2021 and 2031 to deal with gradual increase in demand and to reinforce the specific objective of the package.

To enable comparisons to be made between the various packages, values of key performance indicators are presented in Figures 3-8 covering the morning (am) peak at year 2031. It should be noted that the figures show results from the STM which relate to either the entire model area or the study area. However, as changes are only made within the study area through the introduction of the alternative packages, the difference in values of key performance indicators as given for the entire model area can be deemed to be a consequence of the transport changes affected within the study area.

A summary of the main points from the figures are given below:

• Package A promotes public transport, maximising total person trips and public transport mode share. However, patronage figures are only slightly above Packages C and D which have buses operating at half the frequency of that in Package A.

• Whilst Package A has buses operating at 5 minute headways between Nelson and Richmond, the use of this mode only accounts for 2% of all trips within the study area during morning peak. Despite its apparent attractiveness in terms of frequency of operation, it fails to bring about a significant reduction in motor vehicle demand.

• Package B builds on a theme of traffic management measures and introduces fixed three-lane tidal flow schemes supported by a high level of public transport. The three lanes on Rocks Road (B13) with two lanes northbound on Rocks Road and one on Waimea Road has a higher travel speed and maximises travel distance than the comparable B14 option.

• Package C has the highest amount of travel, highest mean network travel speed, and highest speed between Richmond and Nelson CBD. Of the three options proposed, the variable lane Tidal Flow Option (C5) appears to perform best.
• Package D fails to improve over Package C despite the provision of greater capacity and intersection upgrades. The removal of “Park n’ Ride” appears to one of the influential reasons for this result. Another is the fact that Waimea Road (under Package D) has two bus plus two traffic lanes, whereas in Package C, one of the options includes four lanes of general traffic on Waimea Road, offering more capacity.

Packages B, C and D have sub-options (ie B13, B14, C2, C3, C5, D2, D3, D4 and D18) and the results presented in Figures 3 to 8 reflect the effects of the principal package component supported by all the other projects listed within a specific package. Of the four-laning options, Waimea Road four-laning (C2) appears to offer more favourable results than a similar treatment of Rocks Road (C3).

Table 4 provides an intuitive estimate of how the individual packages support the five objectives of the New Zealand Transport Strategy, together with the additional objective of “Providing for Network and Economic Efficiency”.

Planning Evaluation of Options

The various Packages have been developed for consultation purposes from a preliminary planning evaluation. This has involved the use of a ‘Planning Balance Sheet’ for various Packages, using principally the Objectives from the LTMA and NZ Transport Strategy as assessment criteria (as set out in Sections 5 and 7 of this paper).

As a result of that process, some potential options were removed from the Study as being impractical or not viable. For example Light Rail Transit and Conventional Rail were dismissed on the basis of high cost and low projected passenger patronage. Typical costs for Light Rail Transport and Conventional Rail are between $15-150M per kilometre respectively, whilst patronage should be between 2,500-20,000 passengers per hour, per peak direction to justify the expense. The future demand for rail transport is unlikely to exceed 500 passengers per hour per peak direction by 2031.

Next Stages

Transit New Zealand and the Nelson and Tasman Councils are informing and listening to the community as we further develop and review the transport programmes for the region. This Issues, Options and Alternatives Paper is a further step along that journey by:

• Informing you of the study’s aims and objectives
• Presenting the results of modelling and evaluation that has taken place
• Presenting detailed packages of options for transport solutions
• Asking for your comments on these options and seeking your preferred strategy.
A brief timetable is listed below:

**September 2005**
- Develop an Issues, Options and Alternatives Paper

**November 2005**
- Stage 2 Consultation with key stakeholders and the wider community

**February 2006**

**May 2006**

Your feedback will be used to assist the project team in recommending a preferred strategy for transportation in Nelson and Tasman. This is likely to come from various components of all the packages. You will have a further chance to comment when the preferred strategy is released as Stage 3 of the public consultation strategy during March 2006.
Package Option Evaluation Charts

**Figure 3: Number of Car Trips in AM Peak (for the entire model area)**

- Do Minimum: 67,000
- Package A: 66,500
- Package B: 66,000
- Package C: 65,500
- Package D: 65,000

**Figure 4: Total Vehicle Travel Distance in AM Peak (within the study area)**

- Do Minimum: 162,000
- Package A: 162,500
- Package B13: 163,000
- Package B14: 163,500
- Package C2: 164,000
- Package C3: 164,500
- Package C5: 165,000
- Package D2: 165,500
- Package D3: 166,000
- Package D4: 166,500
- Package D18: 167,000

**Figure 5: Average Vehicle Travel Speed in AM Peak (within the study area)**

- Do Minimum: 30
- Package A: 25
- Package B13: 25
- Package B14: 25
- Package C2: 30
- Package C3: 35
- Package C5: 35
- Package D2: 25
- Package D3: 25
- Package D4: 25
- Package D18: 25
Figure 6: Vehicle Travel Speed from Richmond to Nelson CBD in AM Peak

Figure 7: Number of Trips by Public Transport in AM Peak (within study area - over 2 hour period)

Figure 8: Trips by Non-Car Modes in AM Peak (for the entire model area - over a 2 hour period)
<table>
<thead>
<tr>
<th>Package</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>C</th>
<th>C</th>
<th>D</th>
<th>D</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub Option</td>
<td>B13</td>
<td>B14</td>
<td>C2</td>
<td>C3</td>
<td>C5</td>
<td>D2</td>
<td>D3</td>
<td>D4</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist Economic Development</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
</tr>
<tr>
<td>Assist Safety and Personal Security</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Improve Access and Mobility</td>
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<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Protect and Promote Public Health</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>o</td>
<td>o</td>
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<tr>
<td>Ensure Environmental Sustainability</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>o</td>
<td>x</td>
</tr>
<tr>
<td>Provide for Network and Economic Efficiency</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>x</td>
<td>x</td>
<td>o</td>
<td>x</td>
</tr>
</tbody>
</table>

*Table 4 – Ability of Packages to support Study Objectives*

**Key**
- **xx** Significant Deterioration
- **x** Small Deterioration
- **o** Neutral
- **◆** Small Improvement
- **◆◆** Significant Improvement

The above table shows how the various sub-options within a particular package support the principal objectives of the study. It should be understood that the assessment is for a future year 2031 and assumes that ALL individual components of a particular package have been introduced.

- Which of these broad packages is nearest to your preferred strategy?
- What additional projects, from other packages, need to be included?

Please provide your comment on the feedback form.
Glossary

Arterial Roads
The main routes for through traffic to move around the road network, as defined in the Council’s road hierarchy.

Collector Roads
Provide connections between arterial road network and local access streets, as defined in the Council’s road hierarchy.

Congestion Pricing
Applying tolls to vehicles that travel along congested routes during peak periods to encourage people to travel at a different time, by a different transport mode or to not travel at all. Congestion pricing is one of a number of possible TDM measures.

Grade Separation
Replacing existing intersections with multi-level interchanges that provide uninterrupted travel for through traffic, with on and off-ramps for turning traffic.

High Occupancy Vehicle (HOV) Lanes
Lanes for use only by vehicles with two or more passengers, including driver. This also includes public transport vehicles.

Infrastructure
Roads and other facilities such as covered bus stands provided for use by the travelling public.

Long-term
For the purposes of this study, between the years 2021 and 2031.

LTMA
Land Transport Management Act 2003.

Medium-term
For the purposes of this study, between the years 2011 and 2021.

Modal shift
People changing what kind of transport they use to travel around the network (e.g., using public transport instead of a private car).

Multi-modal
Considering all transport modes, viz private cars, buses and other public transport, walking and cycling.

Network
The system of connecting roads that allows for the movement of people and freight around the Nelson / Tasman region.
Option
An individual transport related improvement project.

Package
A complementary set of options introduced over a varying timescale to achieve a desired transport objective.

Public Transport (PT) Measures
Measures to increase the frequency, quality, or routes serviced by buses, ferries, etc that provide transport for passengers.

Short-term
For the purposes of this study, before the year 2011.

Traffic Management (TM) Measures
Measures to modify the operation of the existing road network to reduce traffic congestion by improving capacity and/or reducing delay.

Traffic Restraint
Measures aimed at reducing the amount of traffic on the road network by restraining people’s desire and/or ability to travel.

Travel Demand Management (TDM) Measures
Measures to modify people’s travel behaviour to travel at a different time, by a different transport mode or to not travel at all in order to reduce traffic congestion by reducing the number of vehicles during peak periods.