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Committee Regional Transport Committee
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Proposed Petone to Grenada Link Road Options

1. Purpose

This report outlines the key issues considered and the conclusions reached by the Chief Executives Forum on the investigations of options for the proposed Petone to Grenada Link Road (P2G). This is to assist the Regional Transport Committee to provide advice to the NZ Transport Agency (NZTA) on the region's preferences.

2. Conclusions

The Chief Executives Forum has considered and discussed the matters set out in this report. Our conclusions are as follows:

- That the P2G link road is a vitally important project for the future of the region acknowledging that it improves east-west connectivity, resilience, land use integration, freight efficiency, relieves severe congestion and delivers substantial economic benefits.
- The wider economic development and urban development benefits of the P2G link road are substantial and will strengthen significantly the regional economy.
- There are opportunities for the surplus fill from the P2G Link Road to be used to support the proposed Wellington to Hutt Valley walking and cycling link. This would enable a wider (20m) reclamation to be pursued which would have additional benefits to resilience, walking and cycling, and future-proof for any later improvements to SH2 or the Hutt rail line.
- It is essential that the P2G Link Road be delivered as part of an integrated package of transport improvements, including a new Wellington to Hutt Valley walking and cycling link, a significant safety upgrade of SH58, SH2 corridor improvements and a new Cross Valley Link between SH2 and Seaview.
- There are opportunities to bring forward sections of the project to provide benefits to the wider strategic road network. The early construction of the grade separated Petone intersection is recommended as this would provide travel time benefits to existing SH2 users and the Petone Esplanade as well as enable an early start on the widening of the Petone to Ngauranga corridor.

- The impacts of the P2G Link Road on public transport patronage are considered minor. Improvements for public transport to mitigate these are possible.
- The P2G Link Road has the best benefit cost assessment of all New Zealand major roading projects.

North of Tawa

- The assessment of the options north of Tawa shows that there will be negative impacts on levels of service and travel times by 2031. All five territorial authorities have a preference for the Takapu Valley connection to Transmission Gully for the following reasons:
 - *It provides congestion relief and maintains an acceptable level of service;*
 - *It is less disruptive to the community than the alternative motorway widening;*
 - *It opens up additional land for development opportunities;*
 - *It is a logical extension to the Transmission Gully route;*
 - *It provides resiliency benefits in the event of network disruption on the motorway;*
 - *It provides environmental benefits through lower fuel usage for freight movement as it maintains elevation;*
 - *Funding is available now and may not be in the future.*
 - *Of the options considered it has the largest contribution to overall project benefit cost.*

3. Background

The proposed P2G link road forms part of an integrated package of proposed transport improvements to significantly improve connectivity and accessibility within the region and to support and drive economic growth.

Additional modelling and analysis has been undertaken over the last few months, which is summarised in **Appendix 1**.

3.1 Package of improvements

The draft RLTP 2015 identifies that a new east-west link road should be considered as part of a package of measures to improve connectivity and address capacity, environmental and safety issues.

This package of improvements should include:

- Interim improvements to the Petone Esplanade followed by construction of a new Cross Valley Link between SH2 and Seaview to provide improved access to this key industrial area for freight.
- Use surplus fill from P2G to widen the Petone/Ngauranga corridor providing opportunities for improved public transport travel times (Hutt

Valley rail connections), enhanced resiliency and other corridor improvements.

- A new Wellington to Hutt Valley walking and cycling link, to span the gap in this strategic network (part of the Great Harbour Way).
- Significant upgrades for State Highway 58 to improve safety.
- State Highway 2 corridor improvements to address sub-standard intersections, safety and capacity issues.

This package is strongly supported, and it is noted that NZTA have now committed to a significant safety upgrade of SH58 and that RTC is also considering a variation to the current Programme to bring forward funding for the grade-separation of SH58/SH2 intersection.

3.2 The expected benefits of P2G

In no particular order the benefits of P2G are:

Strategic Fit: - At a local and regional level an additional east/west transport connection is recognised as an integral part of the Wellington regional transport landscape (*the benefits are articulated below*). It also assists in the delivery of a wider range of regional transport initiatives, plans and strategies. Additionally it aligns with the priorities and objectives in the Government Policy Statement (GPS). This gives it priority across a broad range of decision-makers and funders. (*Wellington has been waiting 40 years since the original P2G route was proposed.*) It will improve regional connectedness, coordination and collaboration. It is a vital part of an integrated package of regional transport and economic interventions. At a national level this project has the best benefit cost ratio of any of the major transport projects.

Economic: - The transport economic benefits alone are estimated to contribute \$700m to the local economy. This will result in significant stimulus to the economies of the Hutt and Porirua through providing better access to jobs and markets. It is also expected to be a significant driver in terms of land use both along the route and beyond. These benefits have not been evaluated but the agglomeration outcomes observed elsewhere suggest these will be significant.

Transport: - The transport benefits include congestion relief on SH1 (Ngauranga Gorge) and SH2 (Petone to Ngauranga). There are significantly improved journey times between the urban areas of Hutt Valley and Porirua, Tawa and north Wellington as well as trips to and from Wellington City. More efficient freight journeys and improved accessibility between the Hutt Valley and Porirua, Tawa and north Wellington will also provide enhanced employment and market opportunities.

Resilience: - Significant improvement to the overall resilience of the regional transport network in the event of network disruption (storms, slips, congestion, crashes) or natural disasters by providing an alternative route of a higher design standard. There is also economic benefit associated with how quickly the transport network can rebound from disruption.

Environmental: - Notwithstanding that there are adverse ecological impacts during the building of P2G (*and it is expected that conditions in resource consents will mitigate these*) there are key environmental benefits resulting

from significantly reduced travel time leading to lower overall vehicle emissions. (*With Option 3 an additional environmental and economic benefit is that trucks have a flatter journey.*)

Public Transport: - There are opportunities to improve the public transport offering between the Hutt Valley and Porirua, Tawa and north Wellington. Direct and timely services along P2G could provide an opportunity to grow public transport patronage. In addition the widening of the Petone to Ngauranga corridor provides the opportunity to realign the rail track and thereby improve travel times for the Hutt Valley services.

3.3 Council views

A series of workshops have been held with the relevant councils around the region. All councils expressed clear support for the P2G Road, with a range of views expressed about the linkages north of Tawa.

All territorial local authorities expressed a clear preference for including an upgrade to the northern linkages as part of the project. In regards to the options for north of Tawa, Wellington City Council (within whose district the majority of the proposed project lies) expressed a strong preference for construction of the Takapu Link Road option, as did Kapiti Coast District Council. Porirua City Council has not formally confirmed a preference, but indications are that the Takapu Link Road is also likely to be their preferred option.

Both Upper Hutt City Council and Hutt City Council thought the northern link option would be best decided by those councils within whose districts the affected properties reside. This was because those councils could assess the local effects best and the technical detail presented was limited in this regard.

The Chief Executives think it is probable that all five territorial local authorities will support the Takapu Link option in preference to an upgrade of SH1, even though this is not a formally adopted position.

Greater Wellington Regional Council expressed a strong preference for a “wait and see” approach and did not support any of the options for additional capacity north of Tawa. This view was based on the forecast congestion not being significant, the uncertain timing of any forecast increase in traffic volumes and the environmental impacts of Options 2 and 3.

4. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report and the conclusions of the Chief Executives Forum set out in section 2.
3. **Notes** that the P2G link road is an important project for the future of the region acknowledging that it improves east-west connectivity, resilience, land use integration, freight efficiency, relieves severe congestion and delivers substantial economic benefits.
4. **Notes** the opportunity to use surplus fill from the P2G Link Road to support a seaward side 20m reclamation option for the Wellington to Hutt

Valley walking and cycling link that is future-proofed for potential additional transport improvements (including public transport rail services) along this corridor.

5. ***Supports*** an integrated package of transport improvements, including a new Wellington to Hutt Valley walking and cycling link, a significant safety upgrade of SH58, SH2 corridor improvements and a new Cross Valley Link between SH2 and Seaview.
6. ***Encourages*** the NZ Transport Agency to bring forward sections of the project to provide early benefits to the wider strategic road network, including a new grade separated intersection at Petone. This will facilitate an early start on the package of improvements.
7. ***Supports*** the addition of Option 3: Takapu Link Road to the P2G Link Road project.

Report approved by:

Chris Upton

Chief Executive Upper Hutt City Council
Chair, Wellington Chief Executives Forum

Petone to Grenada Link Road

Appendix 1

1. Option assessment

A number of options were considered including:

- the impact of P2G overall on public transport patronage
- demand management measures including tolling and CBD parking charges
- the need to address forecast congestion north of Tawa.

The key findings and conclusions from this further work are set out in the sections below.

1.1 The options north of Tawa

There are four key options north of Tawa for consideration:

Option 1: “Do nothing”. No increase in north-south capacity.

Option 2: Widen SH1 between Tawa and Transmission Gully to six lanes.

Option 3: Construct a new Takapu Link through Takapu Valley joining to Transmission Gully Motorway.

Option 4: Wait and see.

1.2 Impact of P2G on public transport

An overall 3% reduction is forecast for rail patronage as a result of P2G over the period to 2031. This is higher on the Kapiti line than the Hutt Line.

There is a forecast increase in bus patronage, especially from Hutt Valley to Wellington City as well as through potential new services running on P2G itself. (*note these are currently not programmed or funded*).

The options to increase capacity north of Tawa, either through widening SH1 or a new Takapu Link have no additional impact on public transport patronage.

1.3 Impact of potential PT enhancements and demand management measures

Further tests were undertaken on whether it was possible to mitigate the forecast reduction in rail patronage through additional public transport improvements. These improvements are not currently programmed or funded. They included rail travel frequency improvements (essentially a 12 minute frequency at peak periods), additional park and ride spaces and enhancements to journey speeds through track works.

Modelling found that the forecast reduction in public transport patronage from P2G could be reversed and potentially additional patronage gained from PT improvements and other demand management options.

1.4 Capacity north of Tawa

P2G is forecast to reduce traffic volumes and congestion on key sections of the road network which are currently affected by severe congestion. However P2G is also forecast to increase traffic volumes on the section of SH1 between Tawa and the Transmission Gully Motorway intersection by 19% through to 2031. This section of SH1 only has 4 lanes, compared with 8 lanes to the north and south (when adding TG and P2G to the existing SH1).

The detailed analysis examined the forecast level of service (LoS) and travel times and found that without any north-south capacity improvements the level of service would reduce from C to D (moderate to significant delays) during the AM peak period (southbound) and from LoS D (moderate to significant delays) to LoS E (significant delays) during the PM peak (northbound) over the period to 2051.

(Modelling has also shown that P2G itself results in a significant improvement in travel times at peak periods. From Petone to Tawa this provides a travel time saving of over 10 minutes (48%).)

Looking specifically at the options north of Tawa, it is forecast that the difference in travel time between no capacity improvements north of Tawa and either SH1 widening or the Takapu Link is an additional 10-30 seconds in the AM peak period (southbound) and an additional 90-170 seconds in the PM peak period (northbound).

Overall it is clear that P2G does have an adverse impact on congestion north of Tawa, shown through the LoS and travel times.

These forecast impacts were regarded as being significant enough to justify both the cost and impacts of either of the options for capacity improvements at this time. Again this is consistent with the GPS object of address “current and future” demand.

The pros and cons of each of the options north of Tawa are considered below:

	<i>Pros</i>	<i>Cons</i>
Option 1 <i>"Do Nothing"</i> Option 4 <i>"Wait and see"</i>	<ul style="list-style-type: none"> • Cost savings of \$25-\$60M • No additional ecological, property and social impacts 	<ul style="list-style-type: none"> • Forecast impacts on congestion and travel times at peak times • Uncertainty for property owners (unless a future designation is pursued) • Loss of available NLTF funding
Option 2 Widen SH1	<ul style="list-style-type: none"> • Alleviates forecast congestion on SH1 between Tawa and Transmission Gully at peak times • Some resilience benefits for minor events (ie road accidents) from a wider carriageway • Regional benefit from available NLTF funding 	<ul style="list-style-type: none"> • Additional cost of \$25-50M • Property impacts - 6 houses and 30 land parcels • Social impacts - construction and noise impacts on properties alongside SH1 • Limited ecological impacts (to be addressed as part of consenting) • Construction impacts/delays on SH1 traffic
Option 3 Takapu Link	<ul style="list-style-type: none"> • Alleviates forecast congestion on SH1 between Tawa and Transmission Gully at peak times • Resilience benefits from an alternative route in an emergency event • Regional benefit from available NLTF funding • Freight efficiency benefits 	<ul style="list-style-type: none"> • Additional cost of \$30-60M • Property impacts - 1 house and 21 land parcels • Social impacts - construction impacts on Takapu Valley residents and significant change in the landscape and character of an existing rural environment • Significant ecological impacts (to be addressed as part of consenting)

A preliminary economic assessment was undertaken on the three options north of Tawa to produce the following Benefit Cost Ratios (BCRs):

	Overall BCR (including P2G)	Incremental BCR
Option 1 & Option 4	2.2	----
Option 2	2.0	1.0
Option 3	2.1	1.4

When the wider economic benefits of the project are factored in the BCR is over 4.0 for the P2G project as a whole with Option 3 clearly the best option.