

Attachment One: Pūhoi to Warkworth Tolling Assessment Summary

GATE ONE – LEGISLATIVE REQUIREMENTS AND PRACTICALITY TEST

The road is new or a significant upgrade	A feasible free alternative route is available	Not less than 10,000 vehicles are likely to travel the road per day	Tolling infrastructure can be installed in a manner that is cost-effective to the project and reasonable; And within time periods required by the LTMA, 2003
Yes	Yes	Yes	Yes
<p>Pūhoi to Warkworth is considered a new road until the time it is opened for general use (currently scheduled for October 2021).</p>	<p>There is a feasible free alternative route available both Northbound and Southbound.</p> <p>Northbound:</p> <ul style="list-style-type: none"> Exiting State Highway 1 (SH1) North at Pūhoi; Join existing SH1; Re-join P2W traffic as it re-joins the existing SH1 south of Kaipara Flats Road. <p>Southbound:</p> <ul style="list-style-type: none"> Continue from south of Kaipara Flats Road on the existing SH1. 	<p>Modelling indicates the forecast 2022 traffic volume on Pūhoi to Warkworth if tolled is between 15,577 and 21,211¹ per day.</p> <p>By 2048 the traffic volume is expected to increase to between 27,456 and 43,307 per day.</p>	<p>The PPP contract does not preclude tolling, and it is possible to deliver tolling either within the contract, or outside of it. However, the issue is complex, and care needs to be taken to ensure that the decision to toll does not result in delays to the project, and/or unintended costs, arising from penalties linked to the 28 October 2021 opening date or changes to the current road design.</p> <p>Under the LTMA, 2003 tolling must occur on a new road, where a road is considered new until it is opened for use. However, although the Order in Council (i.e. – the lawful ability to toll) must be established before the road is opened, the installation of the tolling infrastructure can be delayed to a degree. It is the balance of these requirements that needs to be considered.</p> <p>There are options for delivery, although each come with their own complications:</p> <p>a. Section 9(2)(b)(ii)</p> <p>b. Section 9(2)(g)(i)</p> <p>Section 9(2)(b)(ii)</p>

¹ Range of traffic volume is the 5th–95th percentile

			Section 9(2)(g)(i)
<p>This is a legislative requirement under Section 46 of the <i>Land Transport Management Act, 2003</i>.</p>	<p>This is a legislative requirement under Section 46 of the <i>Land Transport Management Act, 2003</i>.</p>	<p>This is a test that may be indicative of the likely viability of the toll road, but may be taken into consideration with other criteria.</p>	<p>This is a test to ensure that tolling can physically be installed on the road in way that is:</p> <ul style="list-style-type: none"> • cost effective • not unreasonably onerous to the project in terms of delivery and time • within the time constraints of the requirements of the <i>Land Transport Management Act, 2003</i>.

² Infrastructure includes pre-implementation and implementation of a new mainline gantry and roadside equipment similar to TEL. A tubular gantry structure would reduce this cost, as would use of the Northern Gateway tolling infrastructure to toll P2W

GATE TWO – A: VALUE FOR MONEY TESTS AND INVESTMENT RATIONALE TESTS

The toll rate is reasonable and does not result in a traffic volume change that unduly impact the wider network	Tolling infrastructure costs no more than 20% of anticipated revenue	Estimated tolling revenue will result in a meaningful contribution	Tolling delivers value for money and public good to New Zealanders and the Transport Agency
\$2.40 toll with minimum impact	Section 9(2)(g)(i)	68% internal rate of return	Low social cost shift vs public good
<p>A \$2.40 toll results in a 65/35 split of traffic volume between P2W and the existing SH1 (in 2038).</p> <p>A 65/35 split is not anticipated to unduly impact the wider network as:</p> <ul style="list-style-type: none"> • There are only very minor changes in travel time on the alternative route in any period during the day; • There are no significant increases in traffic at key locations on the network (i.e. – Grand Drive and Hibiscus Coast Highway in Orewa; and Hill St intersection in Warkworth). <p>This assessment does not consider any possible treatments that may be applied to the alternative route, should it be subject to revocation as a State Highway.</p>	<p>Section 9(2)(g)(i)</p> <p>The forecast expected net revenue is \$132.4m NPV (2020\$) for a 25-year tolling period.</p> <p>The expected revenue from the first 2 years exceeds the tolling infrastructure costs.</p>	<p>The net revenue is between \$360.5–\$547.2m for a 25-year tolling period. This is the range from the 5th to the 95th percentile. The expected (50th percentile) net revenue is \$446.9m. For a 35-year period (nominally the same period as the existing toll roads) these figures are \$673.4–1,043.7m, with an expected net revenue of \$844.4m.</p> <p>In todays dollars (2020\$) the net revenue is between \$108.1–\$160.6m for a 25-year tolling period. The expected net revenue is \$132.4m. For a 35-year period these figures are \$133.6–201.1m, with an expected net revenue of \$164.9m.</p> <p>Tolling revenue provides an 68% return on the investment to set up tolling. The costs included within this calculation are the capital, operating, maintaining and replacement costs for the tolling gantry and roadside equipment.</p> <p>The estimated revenue is considered to make a 16–25% contribution to project costs³, which is in line with New Zealand’s current toll roads:</p> <ul style="list-style-type: none"> • Northern Gateway Toll Road: 38% • Tauranga Eastern Link Toll Road: 22% • Takitimu Drive Toll Road: 100% 	<p>Toll revenue would reduce the unitary payments by about 20% overall.</p> <p>Section 9(2)(g)(i)</p> <p>The annual safety dis-benefits associated with traffic diverted to the existing SH1 are estimated at \$1.9m⁴ (an increase of 3% on the un-tolled annual crash cost)</p> <p>Section 9(2)(g)(i)</p>
<p>This is a test to identify any potential negative impacts caused by the diversion rate associated with charging a toll. There are mitigations that may reduce the diversion rate, however these are not considered within this test.</p>	<p>This is a test to ensure the investment of tolling infrastructure is proportional to the anticipated revenue.</p>	<p>This is a test to ensure that the investment into tolling infrastructure will result in a positive return, and that this return will result in a contribution towards the road costs that is considered ‘meaningful’: where ‘meaningful’ is considered to be in-line with other toll roads in New Zealand.</p>	<p>This is a test to ensure that the public and the Transport Agency will be receiving value for money in terms of:</p> <ul style="list-style-type: none"> • Social costs shift in terms of safety; • Clarifying how the money will be applied (and how much money would be available for re-allocation); • The proportion of toll revenue collected in comparison to operating costs

³ This is the proportion of revenue to cost of P2W (both in NPV 2020\$) at 8% discount rate for 35-year tolling period. Low revenue is 5th percentile; high revenue is 95th percentile.

⁴ This estimate is for 2038

GATE TWO – B: POLICY AND PROJECT ALIGNMENT TESTS

Tolling does not significantly or unduly reduce project outcomes or result in new or additional dis-benefits.

Tolling is not contrary to the GPS priorities

Project outcomes are marginally affected

Tolling is not contrary to the GPS 2018

Safety

- It is considered that tolling may marginally reduce the safety benefits of P2W;
- P2W untolled identified a reduction of the annual number of injury crashes of 5 (from 22 injury crashes to 17), reflecting a 23% increase in safety benefits;
- If tolled, it is estimated that these benefits will be minorly impacted, with the annual number of injury crashes rising to 17.7, reflecting a 3% decrease in safety benefits to 20%.

Improved travel times

- It is not considered tolling will impact the improved travel time benefits of P2W;
- Travel times on both P2W and the alternative route do not significantly change at tolls below \$5, therefore the project would continue to deliver improved travel times.

Economic

- It is not considered tolling will impact the economic benefits of P2W. However, a small percentage of people (about 6%) may choose to travel less, reflective of their lower value of time.

Reduce CO2 emissions

- It is considered tolling will marginally reduce CO2 levels;
- At the \$2.40 level, travel marginally reduces in the corridor (including all modes and all routes), which results in a minor reduction (<1%) in CO2 emissions.

Resilience

- It is not considered tolling will impact the resilience of P2W;
- The operating conditions of P2W and tolling can react to changing demands, for example, if a severe weather event prevents the use of the alternative route the P2W toll level can be reduced to \$0.

This is a test to identify any impact tolling may have on the original intent of the road project.

Safety

- It is considered that tolling may marginally reduce the safety benefits of P2W;
- P2W untolled identified a reduction of the annual number of injury crashes of 5 (from 22 injury crashes to 17), reflecting a 23% increase in safety benefits;
- If tolled, it is estimated that these benefits will be minorly impacted, with the annual number of injury crashes rising to 17.7, reflecting a 3% decrease in safety benefits to 20%.

Access

- It is not considered that tolling will result in any significant change to access.

Value for money

- Tolling is considered to meet Value for Money requirements;
- The expected revenue from tolling significantly outweighs the set-up cost, and provides a contribution to ongoing costs associated with the road to the value of \$360.5–547.2m (net revenues Section 9(2)(b)(ii) [REDACTED]).

Environment

- It is considered tolling will marginally reduce CO2 levels;
- At the \$2.40 level, travel marginally reduces in the corridor (including all modes and all routes), which results in a minor reduction (<1%) in CO2 emissions.

This is a test to identify any impact or alignment tolling may have with the current *Government Policy Statement for Land Transport*.