

# Te Ahu a Turanga Tolling Assessment

## 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, reasonable and within required time periods                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes                                                                                                                                                                                                                                                                                                                                           | Yes                                                                                                                                                                                                                                                                                                                                                            | Yes                                                                                                                                                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Te Ahu a Turanga is considered a new road until the time it is opened for general use.</p> <p>State Highway 3 through the Manawātū Gorge has been closed indefinitely since slips caused major damage to the road in April 2017. In 2011 a slip closed the Gorge for 14 months.</p> <p>Te Ahu a Turanga replaces SH3 in this location.</p> | <p>There are two feasible free alternative routes available:</p> <ul style="list-style-type: none"> <li>Saddle Road (via Ashhurst), which is largely used as the replacement for the Gorge; and</li> <li>Pahiatua Track (for southern origins or destinations).</li> </ul>  | <p>Modelling indicates the forecast 2025 traffic volume on Te Ahu a Turanga is 10,902<sup>1</sup> per day, increasing to 14,250 per day in 2048.</p> | <p>It is likely that tolling would start when the road opens.</p> <p>An Alliance contract has been awarded for designing and constructing Te Ahu a Turanga. If tolling is approved, the infrastructure could be delivered under this contract or by a third party.</p> <p>The costs for purchase and installation cost of tolling infrastructure are <a href="#">section 9(2)(j)</a><sup>2</sup>.</p> |
| <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"> <li>cost effective</li> <li>not unreasonably onerous to the project in terms of delivery and time</li> <li>within the time constraints of the requirements of the <i>Land Transport Management Act, 2003</i>.</li> </ul>                                      |

<sup>1</sup> The traffic volume is estimated based on traffic volumes before the Gorge was closed.

<sup>2</sup> Infrastructure includes roadside technology, integration, civils based on two roadside poles or small gantry spanning four lanes.

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

| The toll tariff is reasonable and does not result in a traffic volume change that unduly impacts 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 |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Yes                                                                                                                | Yes                                                                  | Yes                                                                | Yes                                                                                         |

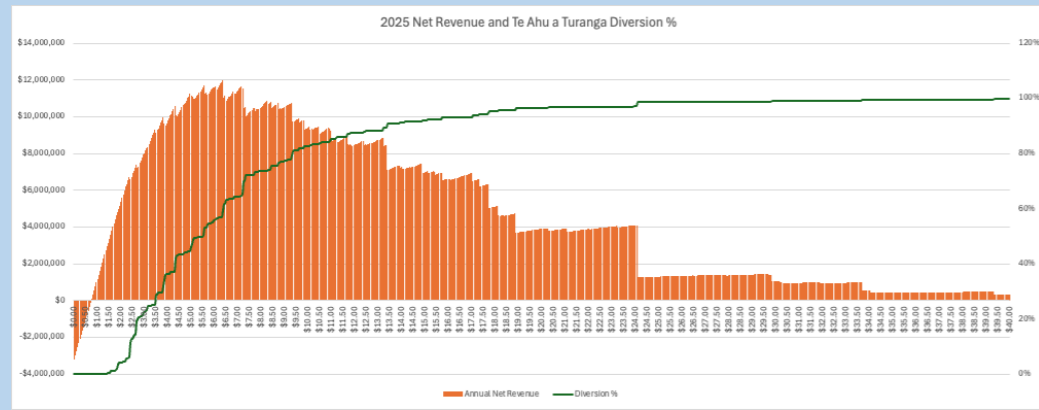
**Toll rates assessed**

A range of toll rates have been considered ranging from \$2.80 to \$6.35 (light vehicles). The proposed toll rates are \$4.30 per trip for light vehicles and \$8.60 per trip for heavy vehicles. The rates remain the same both on and off peak.

The wider network includes the alternative routes of Saddle Road and Paihiatua Track, however, almost all diverted traffic would use Saddle Road and the detour through Ashhurst (which was upgraded temporarily to cope with the Manawatu Gorge traffic).

In 2025, the light and heavy traffic diversion at a range of toll rates are:

Figure 1 - Diversion vs toll rate



**Diversion/network considerations**

In 2025, the amount of traffic on Te Ahu a Turanga and Saddle Rd for the proposed toll rate is:

|            | Te Ahu a Turanga | Saddle Rd |
|------------|------------------|-----------|
| Not tolled | 10,902           | 0         |
| Proposed   | 6,856            | 3,088     |

Table 1 - network impact

About 3,000 vehicles per day are expected on Saddle Rd once Te Ahu a Turanga opens.

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.

**Capital investment versus revenue**

The tolling infrastructure costs are **section 9(2)(i)**

|          |                                                |                                                         |
|----------|------------------------------------------------|---------------------------------------------------------|
| Proposed | PV Net Revenue (\$ millions 2024) <sup>3</sup> | Tolling infrastructure costs as a proportion of revenue |
|          | <b>section 9(2)(j)</b>                         |                                                         |

Table 2 - Tolling infrastructure

**Revenue per scenario**

The estimated net revenue collected is **section 9(2)(j)** over 35-years.

This is a meaningful contribution to the costs of the road with net revenue covering about 28 percent of the project's construction costs.

**Construction application**

Toll revenue could reduce the cost of construction by **section 9(2)(j)**. This revenue would make a meaningful contribution towards easing pressure on the National Land Transport Fund, which is spent on the land transport system.

**Social cost shift**

The safety dis-benefits associated with traffic diverted to the existing alternative routes are about \$1.6m and \$0.1m for every dollar in light vehicle toll tariff, and heavy vehicle toll tariff respectively<sup>4</sup>.

|            | Safety benefits (\$ millions NPV 2017\$) | % decrease in safety benefits |
|------------|------------------------------------------|-------------------------------|
| Not tolled | \$24.2                                   | -                             |
| Proposed   | \$16.3                                   | 33%                           |

Table 3 - Safety disbenefits

**Revenue vs Operational cost**

Toll tariff of \$4.30 for light vehicles would result in toll revenue collected by the Transport Agency of \$2.94 per vehicle (GST of \$0.56, and transaction cost of \$0.80); A toll tariff of \$8.60 for heavy vehicles, which would result in toll revenue of \$6.68 per vehicle (GST \$1.12, and a transaction cost of \$0.80).

This is a test to ensure that the public and the Transport Agency will be receiving value for money in terms of:

- 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

<sup>3</sup> 35-year tolling period, 6% discount rate

<sup>4</sup> The economic evaluation in Te Ahu a Turanga's Detailed Business Case (Appendix F) identifies safety benefits of \$24.2 m (PV 2017\$). The changes in safety were derived by interpolating between the full safety benefits of \$24.2 m for a tariffs of \$0, and zero safety benefits at a tariff at which zero vehicles are forecast to use Te Ahu a Turanga.

## 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, and has alignment with, the GPS priorities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Tolling is not contrary to the GPS 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><u>Social</u></p> <ul style="list-style-type: none"> <li>Te Ahu a Turanga’s Detailed Business Case identifies significant positive effects for the Ashhurst community, as the alignment will remove traffic from Salisbury St;</li> <li>The proposed scheme will result more traffic in Ashhurst than before the Gorge was closed but less than current.</li> </ul> <p><u>Safety</u></p> <ul style="list-style-type: none"> <li>Tolling may moderately reduce the safety benefits of Te Ahu a Turanga. Te Ahu a Turanga untolled identified project safety benefits of \$24.2m. These benefits are estimated to decrease to \$16.3m;</li> </ul> <p><u>Improved travel times</u></p> <ul style="list-style-type: none"> <li>Tolling is not expected to impact the improved travel time benefits of Te Ahu a Turanga;</li> <li>Travel times on both Te Ahu a Turanga and the alternative routes are not expected to change.</li> </ul> <p><u>Resilience</u></p> <ul style="list-style-type: none"> <li>It is considered tolling will not impact the resilience of Te Ahu a Turanga;</li> <li>The operating conditions of Te Ahu a Turanga and tolling can react to changing demands, for example, if a severe weather event prevents the use of the alternative route the toll level can be reduced to \$0.</li> </ul> | <p><u>Economic Growth and Productivity</u></p> <ul style="list-style-type: none"> <li>Tolling is not expected to impact the improved travel time benefits of Te Ahu a Turanga;</li> <li>Travel times on both Te Ahu a Turanga and the alternative routes are not expected to change.</li> </ul> <p><u>Increased Maintenance and Resilience</u></p> <ul style="list-style-type: none"> <li>It is considered tolling will not impact the resilience of Te Ahu a Turanga;</li> <li>The operating conditions of Te Ahu a Turanga and tolling can react to changing demands, for example, if a severe weather event prevents the use of the alternative route the toll level can be reduced to \$0.</li> </ul> <p><u>Safety</u></p> <ul style="list-style-type: none"> <li>Tolling may moderately reduce the safety benefits of Te Ahu a Turanga. Te Ahu a Turanga untolled identified project safety benefits of \$24.2m. These benefits are estimated to decrease to \$16.3m;</li> </ul> <p><u>Value for money</u></p> <ul style="list-style-type: none"> <li>The Government Policy Statement for land transport 2024 (GPS 2024) includes the expectation for NZTA to consider tolling of all new roads</li> <li>The proposed scheme will deliver value for money as the proportion of infrastructure costs to revenue is considered reasonable, and it performs well in all tests;</li> </ul> |
| <p>This is a test to identify any impact tolling may have on the original intent of the road project.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>This is a test to identify any impact or alignment tolling may have with the current <i>Government Policy Statement for Land Transport</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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