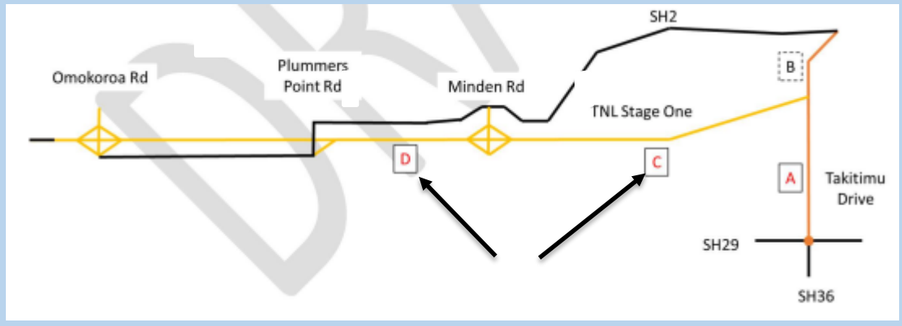
Attachment One: Takitimu North Link Tolling Assessment Summary

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**
Takitimu North Link project will connect Tauranga and Ōmokoroa with a new 14 kilometre four-lane corridor between State Highway 29 Takitimu Drive and the State Highway 2 Ōmokoroa intersection. Takitimu North Link has been divided into two stages: • Stage 1 is a 6.8km four lane off-line expressway and shared path that intersect with SH29 (Takitimu Drive) to the south and that ties into the existing SH2 alignment in the vicinity of the Loop Road (north of Te Puna). This stage of the project has been funded through Crown funding (as an NZUpgrade Programme Project) and the construction phase of the project was awarded in December 2021. section 9(2)(j) • Stage 2 (a Road of National Significance) extends the expressway a further 7.6km to the SH2 / Ōmokoroa Road Intersection. The preferred alignment has been identified and the next phase is route protection followed by property acquisition, design and implementation. Stage 1 and Stage 2 combined can be considered as a single scheme for the purposes of tolling. Tolling revenue could be used to to contribute towards project planning, design, supervision, construction, maintenance, or operational costs.	<u>Stage 1 Loop Road to Cameron Road (Stage 2)</u> If tolled, the existing route through Te Puna and Bethlehem will become the 'free, alternative route'. <u>Stage 2 Omokoroa Road to Loop Road (Stage 2)</u> The proposed Takitimu North Link Stage 2 alignment, is a combination of using the existing SH2 alignment and being offline. Takitimu North Link Stage 2 project also consists of a parallel local road (that provides property access), using a combination of the existing SH2 road and new local road infrastructure. The proposed cross section for this local road is 9m including 2 x 3.5 lanes and 1 metre shoulders. Intersections are all give-way T-Intersection apart from the Snodgrass/Te Puna Quarry Road that are proposed to be a single lane roundabout. This parallel road could provide a feasible free alternative route were Takitimu North Link tolled.  It is considered the existing SH2 and parallel route meets the test of 'feasible' as SH2 has been the primary route for many years and the parallel road can be designed to provide an appropriate level of service.	Traffic modelling shows that Takitimu North Link will carry in excess of 10,000 vehicles per day. **Forecast Annual Average Daily Traffic** | | Modelled Forecast Year | | | | 2031 | 2048 | | **Takitimu North Link Stage 1** | 28,800 | 36,000 | | **Takitimu North Link Stage 2** | 27,800* | 33,500 | section 9(2)(j)	Takitimu North Link section 9(2)(j). If tolled, this timeframe enables time to: • Deliver the Order in Council prior to road opening; • Establish operational tolling on the road; • Configure the supporting back office system; • Embed appropriate support for customers and staff. Tolling implementation can be added to the existing contract as a variation. Although Takitimu North Link Stage 1 is being delivered via Government Grant funding as part of the NZUP package, it is recommended tolling implementation is funded via the NLTF, which can then be repaid from toll revenue. It is not considered appropriate to utilise NZUP funding for the purpose of tolling implementation. Two toll points are required for tolling of Takitimu North Link to be delivered, identified below as mainline gantries at C and D. A toll gantry on the Stage 1 section of Takitimu North Link between Takitimu Drive and the Minden Interchange (Gantry C) would need to be delivered ahead of Takitimu North Link Stage 1 opening. Construction of the second toll gantry (Gantry D - south of the Plummers Point ramp) can be integrated with Stage 2 construction. 
This is a legislative requirement under Section 46 of the *Land Transport Management Act, 2003.*	This is a legislative requirement under Section 46 of the *Land Transport Management Act, 2003.*	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.	This is a test to ensure that tolling can physically be installed on the road in way that is: • cost effective • not unreasonably onerous to the project in terms of delivery and time • within the time constraints of the requirements of the *Land Transport Management Act, 2003.*

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
There will be diversion impacts but local road flows remain below acceptable capacity thresholds	**Meets test**	**Meets test**	**Meets test**

The Stage 1 and 2 preferred toll strategy comprises:

- A gantry on Takitimu North Link between Minden Interchange and Takitimu Drive (Stage 1)
- A gantry on Takitimu North Link between Minden Interchange and Plummers Point Road (Stage 2)
- A differential toll charge based on time of day as outlined below.

PEAK CHARGE	Light Vehicle	Heavy Vehicle
Stage 1 or Stage 2	$3.10	$6.20
Stage 1 AND Stage 2	$4.10	$8.20

OFF - PEAK CHARGE	Light Vehicle	Heavy Vehicle
Stage 1 or Stage 2	$2.10	$4.20
Stage 1 AND Stage 2	$3.10	$6.20

Network impacts

AADT in 2031, with and without tolling, on Takitimu North Link and the free alternative route is shown below. AADT on the existing local road was 23,800 across the Wairoa Bridge in 2022 and is forecast to be more than 30,000 by 2031 without Takitimu North Link.

	Stage 1	
	Takitimu North Link	**Local Road**
	2031	
Untolled	34,900	9,700
Tolled	21,000	18,100

	Stage 2	
	Takitimu North Link	**Local Road**
	2031	
Untolled	34,900	4,100
Tolled	19,300	10,700

Tolling Takitimu North link will divert approximately 8,000 vpd and 6,000 vpd back to the existing SH2 alignment on Stage 1 and Stage 2 respectively. In addition to rerouting, the impact of tolling is for some traffic to chose alternate modes or not travel at all.

The Wairoa Bridge is a risk item on the local network. With tolling, flow levels remain below the maximum desired flow threshold across the bridge of 20,000 vehicles per day.

section 9(2)(j)

Cost of Infrastructure	Estimated Revenue (NPV)	Total %	Payback period (Years)
section 9(2)(j)			

The draft GPS 2024 places an expectation that the potential for alternative funding and financing options (to supplement and support the National Land Transport (NLTF)), including by beneficiaries and users of investments, should be explored. The Minister expects that NZTA should consider tolling to construct and maintain all new roads.

If tolled, revenue could to contribute towards project planning, design, supervision, construction, maintenance, or operational costs of Takitimu North Link.

Total Revenue	Average Per Annum
55-Years NPV	Section 9(2)(j) 2 Gantries

Stage 2 of Takitimu North Link has a current cost estimate of between $900m and $1.2bn ($2023).

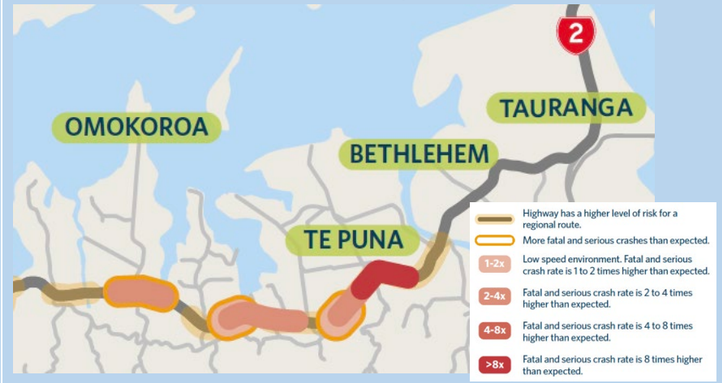
Tolling Takitimu North Link would make a meaningful contribution towards the construction costs of Stage 2.

Application of toll revenue

At the recommended toll rates, it is estimated that Takitimu North Link toll revenue, net of the costs of the tolling scheme itself, will make a positive contribution to the costs of the project.

Social cost shift

Stage 2 bypasses a section of SH2 which has a high collective risk and medium personal risk. Between March 2018 and March 2023 there were a total of 91 crashes of which 12 were death and serious injury (DSI) crashes.



TNL Stage 2 is anticipated to reduce DSI's by 16 per 5 years.

Modelling suggests a tolled Takitimu North Link versus untolled is anticipated to marginally increase crash costs in 2031 with reduced crash costs (relative to an untolled road) by 2048.

Emissions opportunity

Traffic modelling suggests that, on completion of Takitimu North Link Stage 1, without tolling, carbon dioxide equivalent (CO_2-eq) emissions will be 1.29m kg/day across the model area.

A tolled Takitimu North Link scheme including Stage 2 is forecast to have lower emissions than an untolled scheme saving around 40,000 kg/day in 2032 and 13,300 kg/day in 2048.

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.	This is a test to ensure the investment of tolling infrastructure is proportional to the anticipated revenue.	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.	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

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 supports or has minimal to no impact project outcomes

The overarching objectives of Takitimu North Link[1] are:

- Improve safety and reduce deaths and serious injuries.
- Improve travel time reliability and reduce travel time, including for freight transport to the Port of Tauranga.
- Support subregional growth and development in the Western Bay of Plenty, particularly at Omokoroa and the Minden lifestyle areas, in accordance with the SmartGrowth strategy and the Urban Form and Transport Initiative (UFTI).
- Increase transport mode shigt by providing an opportunity for public transport prioritisation and improving safety and accessibility for walking and cycling.

A tolled versus untolled Takitimu North Link has little impact on these overall objectives. Overall capacity and potential throughput remains unchanged and tolling reduces VKT slightly which further enhances travel time reliability in the corridor.

The modelling suggests small travel time benefits of a tolled Takitimu North Link versus an untolled Takitimu North Link as presented below.

Travel times in 2031 (in Minutes)

	TNL Inbound			SH2 Inbound		
	S1 Only Untolled	S1 +S2 Untolled	S1 +S2 tolled	S1 Only Untolled	S1 +S2 Untolled	S1 +S2 tolled
AM	21.6	14.8	14.6	24.5	19.1	20.3
IP	16.3	14.5	14.4	19.2	18.8	19.1
PM	16.3	14.9	14.7	19.3	19.4	19.7
	TNL Outbound			SH2 Outbound		
	S1 Only Untolled	S1 +S2 Untolled	S1 +S2 tolled	S1 Only Untolled	S1 +S2 Untolled	S1 +S2 tolled
AM	16.1	14.9	14.9	19.3	19.1	19.9
IP	17.0	15.4	15.3	20.1	19.7	19.7
PM	27.4	17.6	17.2	30.6	22.1	23.8

Whilst modelling suggests there is a marginal increase in crash costs in 2031 with a tolled road versus an untolled road this is forecast to become an overall benefit at some point between 2031 and 2048.

Overall therefore, a tolled versus un-tolled Takitimu North Link is considered to not significantly reduce project outcomes.

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

Tolling is not contrary to the GPS priorities

Tolling supports or has minimal to no impact against GPS priorities

The draft GPS identifies four key strategic priorities. Tolling directly supports two of these objectives, has a minimal impact against one and is neutral against the forth as outlined below.

Economic Growth and Prosperity

Tolling directly provides additional minor travel time reliability benefits due to trip suppression linked to the introduction of tolls.

There is a risk that placing a toll on heavy vehicles may result in diversion to local roads. The toll scheme is structured to encourage freight utilising the Takitimu North Link corridor. Irrespectively, freight will experience less congestion, and therefore an improved experience due to the added capacity provided by the Takitimu North Link.

Value for Money

The draft GPS 2024 places an expectation that the potential for alternative funding and financing options (to supplement and support the National Land Transport (NLTF)), including by beneficiaries and users of investments, should be explored. The Minister expects that NZTA should consider tolling to construct and maintain all new roads. At the recommended toll rates, it is estimated that Takitimu North Link toll revenue, net of the costs of the tolling scheme itself, will make a positive contribution to the costs of the project.

Safety

Modelling suggests that placing a toll on Takitimu North Link marginally increases the social cost of crashes in 2031 but delivers a positive return at some point between 2031 and 2048. This increased cost can be mitigated, in part, by reducing diversion to the old SH2 through implementing revocation activities (such as speed reduction) which would making the existing route less attractive for longer journeys whose destination is not on the existing SH2.

Increased Maintenance and Resilience

Tolling will have a neutral impact other than the additional requirements for tolling equipment maintenance for which funding is included within the toll charge.

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

[1] https://www.nzta.govt.nz/assets/projects/Takitimu North Link/docs/sh2-waihi-to-tauranga-corridor-business-case.pdf