Tolling Assessment Summary - Belfast to Pegasus Motorway and Woodend Bypass

GATE ONE – LEGISLATIVE REQUIREMENTS AND PRACTICALITY TEST

The road is new or a significant upgrade

Yes

The full project is an extension of the current Christchurch Northern Motorway from Lineside Road (SH71) with approximately 3.4km of widening to 4 lanes, then a new greenfield "Woodend Bypass" for a further 6 km to finish at Pegasus.

The northern section being the Woodend Bypass is most conducive to tolling.

A feasible free alternative route is available

Yes

If the Woodend Bypass is tolled, the existing SH1 route through the Woodend township will become the free alternative route. This route currently carries over 18,000 vehicles per day that creates congestion, safety and severance issues that have led to the recommendation for a Bypass to reduce traffic through the township.

At the northern end, the existing SH1 (Main North Road) will be realigned and connected to Garlick Street which then joins the Bob Roberton Drive / Pegasus Boulevard interchange. This requires several stops and turns via signalised intersections, and then traversing the current urban environment through Woodend township.

At the southern end the Bypass has south facing ramps at Pineacres (the SH1/ Williams Street half interchange), which provides opportunities for drivers to divert to/from the existing SH1 route as the free alternative.

Note: the green route represents the new road considered for tolling; The yellow route represents the free alternative route if the green route is tolled.

Not less than 10,000 vehicles are likely to travel the road per day

Yes

Traffic modelling for the Scheme Assessment Report (being updated) shows that the Woodend Bypass could carry more than 10,000 vehicles per day (VPD)

AADT	Modelled Forecast 2041	
Road	No Bypass	With Bypass
Woodend Bypass		18,400
Main North Road	21,500	4,400

Under the untolled condition, approximately 18,400 vpd are predicted to use the proposed bypass in 2041. Equivalent values for 2026 and 2016 are 16,000 vpd and 14,000 vpd respectively.

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

The bypass is not anticipated to be completed until around 2030. If tolled, this is ample 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 physical work with the procurement expecting to start from the third quarter of 2026. Due to the simplicity of the contractual arrangements, the timelines, and associated forward planning, it is anticipated financial impact to the Project resulting from Tolling will be minimal.

A single toll point is assumed to be established on the bypass at north of Pineacres, [redacted] s 9(2)(j) The toll point results in all communities having access to a free alternative route, recognises vehicles travelling along the proposed bypass, and is considered equitable and effective.

However, there is a risk that the gantry and foundations may not fit within the current designation. If it doesn't there will need to be an Alteration to Designation with additional land acquisition. This space constrains are being reviewed through the current Scheme Design Review.

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

Yes

Toll rates

Two toll gantries are recommended to be placed at both north and south of Pineacres (Pacres).

The toll prices recommended for consultation are $1.25 for light vehicles and $2.50 for heavy vehicles under **each toll point** and would be the same rates across 24 hours a day.

Network Impacts

Compared to the untolled scenario, the proposed tolling strategy diverts a proportion of traffic from the proposed bypass to the existing SH1.

With the proposed changes to reduce speed limit to 30km/h though Woodend, the forecast traffic volumes (average weekday flows) are summarised below for both untolled and the recommended tolled scenarios.

Year 2048 volumes	Do Minimum	Untolled	Tolled
SH1 North of Pineacres	29,500	16,200	14,500
Bypass North of Pineacres	N/A	20,500	11,300
Williams Road	6,700	6,500	9,400
SH1 South of Pineacres	23,100	30,500	16,200

The proposed toll prices were identified by comparing a range of gantry options and toll prices to find the tolling scheme that optimises the trade-offs between revenue and acceptable levels of diversion.

The introduction of the proposed toll scheme is not predicted to unduly impact the wider network. The economic assessment indicates the project with the proposed toll arrangement is estimated to generate $330M travel time benefits over a 40-year period with a 4% discount rate.

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.

Tolling infrastructure costs no more than 20% of anticipated revenue

Yes

s 9(2)(j) [redacted]

The revenue calculation was based on a 35-year tolling period. It is anticipated to take 3 years to pay off the tolling infrastructure costs using the payback method of calculation.

Revenue Scenario	Estimated Net revenue (NPV)	% infrastructure costs
P50 – NPV @ 6% discount rate	$125M	s 9(2)(j) [redacted]

This is a test to ensure the investment of tolling infrastructure is proportional to the anticipated revenue. ***(this criterion is not directly linked to the requirements specified in LTMA that the proposed tolling scheme is efficient and effective).***

Estimated tolling revenue will result in a meaningful contribution

Yes

The cost estimate for construction and associated activities is approximately between $729M and $876M which is within the budget envelope ($0.55 - $1B) but is higher than the NLTP allocation of $623.5M.

The estimated tolling revenue could make a meaningful contribution of 14%-17% to the expected construction costs.

Total estimated Net revenue (35 years)	NPV (P50 @6% discount rate)
$514M	$125M

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.

Tolling delivers value for money and public good to New Zealanders and the Transport Agency

Yes

Application of toll revenue

The net revenue would make a meaningful contribution towards the costs of ongoing maintenance and operations as well as pre-implementation and construction costs.

Social cost shift

Compared to the DM scenario:

- The project with untolled condition is predicted to deliver $32.5M crash cost savings.
- The introduction of tolling is anticipated to deliver $27.5M crash cost savings.

The calculations are based on a 40-year period with a 4% discount rate.

Value for money

The table below summarises the trip charges and revenue collection per trip, under **each toll point**, at the proposed toll prices, in 2024 dollars.

Vehicle class	Trip Toll rate	GST	Transaction cost	Trip toll revenue
Light	$1.25	$0.16	$0.80	$0.29
Heavy	$2.50	$0.33	$0.80	$1.37

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