

Your ref: Teitei Drive
Our ref: 12509359

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Attn: Vini Dutra
Ruapehu District Council
Private Bag 1001
59-63 Huia Street
Taumarunui 3920

Teitei Drive Summary of Option Costs

Dear Vini

Proposed Teitei Development

The development proposes a staged subdivision for an initial 46 lot, 44 residential home subdivision in Stage 1, with further extension possible if later stages proceed. Entrance to Stage 1 is approximately 25m beyond the existing Teitei Drive terminus (see Figure 1).



Figure 1 Proposed Teitei Subdivision with 46 lot Stage 1 highlighted

As part of the subdivision Resource Consent, an Integrated Transport Assessment has been produced. In part, this considered the Road Safety Effects of the proposed access via SH49 and existing Teitei Drive. This found that the proposed development would operate within recognised safety parameters.

GHD Limited was subsequently asked to undertake a high level examination and compare the costs of providing an access road into the development from the existing Teitei Drive, or forming a new road and intersection from Raetihi Ohakune Road. Both options would be constructed within the existing road reserve.

The two options can be simplified to:

- **Option A:** Utilising and extending the existing Teitei Drive by 25m, designed to incorporate development such as the subdivision. This option will cost approximately \$55,000 to join to the subdivision; or
- **Option B:** Constructing a new road from the development, extending approximately 455m to intersect with Raetihi Ohakune Road. This option will cost over \$1M, without contingency. This option has slight safety disbenefit due to higher speeds and predicted predominant turning movements.

Teitei Drive and Carrot Park Facility

Teitei Drive was designed in 2017 and constructed in 2018, specifically:

- To provide access to, and provide parking for the Carrot Park;
- To provide a slow shared zone in the Carrot Park car park, with a mix of vehicular traffic and pedestrians, including a mix of more vulnerable pedestrians of a wide age range profile;
- To include toilet and camper waste facilities; and
- To enable and provide for future development of the land beyond the facility. At the time this future use was still being considered, but included potential for a large hotel facility or as a residential development.

The road was terminated at its present location to specifically allow and cater for this future development, with the curved entry and road width designed to slow vehicles on entry to the facility.

Teitei Development

The development proposes an initial 46 lot, 44 residential home subdivision in Stage 1, with further extension possible if later stages proceed. Entrance to Stage 1 is approximately 25m beyond the existing Teitei Drive terminus (see Figure 1).

There are effectively two options for entry into Stage 1 of the development: Option A - Extension from Current Teitei terminus; or Option B - create new road from Raetihi Ohakune Road. Option B would encroach slightly on the rugby grounds, particularly the area currently used for parking. It would also require intersection design, intersection lighting improvements, redesign of the entrances to St John and the

grounds, construction of road through bush swamp land and reduction of the current speed limit on Raetihi Ohakune Road (see Figure 2).



Figure 2 *Teitei Drive extension will require consideration of St John and Rugby Ground entrance*



Figure 3 *Option B would involve the creation of a 455m new road to access the development*

Option	A: Extend from current Teitei Drive terminus into proposed development	B: Form a new road off Raetihi Ohakune Road into the proposed development
Additional length	25m	455m (see Figure 3)
		It is presumed the purpose of this option is not to connect to the existing Teitei Drive and provide sole entry/exit via Raetihi Ohakune Road - although it would be relatively simple to do so at a later date.
Intersection Safety	Teitei Drive intersection with SH49/Rangataua Road was specifically designed for future development including hotel complex and/or residential development.	Raetihi Ohakune Road intersection is complex, with St John Ambulance entry, Rugby grounds entry, and a curved alignment on Raetihi Ohakune Road.
Intersection speed	Current speed limit is 70km/h on SH49. It is suggested this is reviewed by Waka Kotahi under either option and whether or not this development proceeds - to consider use from pedestrians exiting Turoa Drive to town or the college using the wider pedestrian network- potentially incorporating the Tainui St intersection.	Current speed limit is 100 km/h on Raetihi Ohakune Road. Reducing the speed limit to 50km/h through this potential intersection would provide safety benefits if this option is chosen.
Intersects with	SH49, ADT traffic volumes approximately 2,470 veh/day. Predominant turning movement from Teitei Drive is expected to be to the left (the main attractors of supermarket and commercial centre) - the predominant turning movement will not require crossing a lane of traffic when departing facility.	Raetihi Ohakune Road, ADT traffic volumes just over 2170 vehicles/day. Predominant turning movement from Teitei Drive is expected to be to the right (towards the main attractors of supermarket and commercial centre) - the predominant turning movement will require crossing a lane of traffic, increasing exposure to side collisions.
Site complexities	Teitei Drive was designed to extend into the proposed development area, including appropriate stacking of vehicles at the intersection, confirmed by the Integrated Transport Assessment.	Design of the intersection adds some complexity - currently shared with Rugby grounds entrance and St John's entrance. The intersection with Raetihi Ohakune Road will require modification and redesign, as well as extensive lighting improvements.
Associated impact	Addition of a raised pedestrian platform near the current terminus would separate and differentiate the environment of the proposed development, slow vehicles entering or leaving the development while giving additional safety benefits to	Will require some encroachment into rugby fields, area currently used for parking (this area is on Teitei Drive road reserve). Will also require use of wetland area for road construction.

Option	A: Extend from current Teitei Drive terminus into proposed development	B: Form a new road off Raetihi Ohakune Road into the proposed development
	development pedestrians and those utilising the network from Turoa Village.	
Cost	Lighting \$12,500 Kerb and channel \$7,200 Footpath \$6,480 Drainage \$3,000 Earthworks \$8,500 Road formation \$14,060 Sealing \$3,600 Total \$55,340 Additional safety could be provided to pedestrians by incorporating a raised pedestrian platform in the vicinity of the current drive terminus. This would add approximately \$65,000 to this option, including pedestrian lighting.	Lighting \$100,000 Kerb and channel \$112,800 Footpath \$122,120 Drainage \$48,000 Earthworks \$127,300 Road formation \$225,000 Sealing \$56,400 Intersection Improvements and improvements to St John's entry \$185,000 Improvements to Rugby grounds entry \$62,500 Total \$1,039,120 (Note this does not include contingency for issues related to work in wetlands)

Either or both options are achievable, but Option A is overall the safer option for Stage 1, with significant cost savings, safety and environmental benefits.

Regards



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