

TRANSPORT MEMO – 31 NGONGOTAHA ROAD, NGONGOTAHA

FAST TRACK REFERRAL APPLICATION

1 INTRODUCTION

Watchman Capital Limited (“the applicant”) proposes to lodge an application for a referred project under the Covid-19 Recovery (Fast-track Consenting) Act 2020 (the “Act”) to utilise the fast-track consenting process via an expert consenting panel. This application relates to the Stage 1 development of 31 Ngongotaha Road, Ngongotaha (“the Site”) to construct a comprehensive residential housing development of circa 196 dwellings (“proposal”).

To support the application for a referred project, this memorandum provides a high-level review of the transport aspects of the proposal, including:

- Summary of the proposal and site description;
- High level analysis of traffic and roading impacts;
- Conclusion.

2 SITE DESCRIPTION AND PROPOSAL

2.1 SITE DESCRIPTION

The site is located at 31 Ngongotaha Road, Ngongotaha, located to the north of Ngongotaha township. Figure 1 shows the location of the site in relation to the surrounding road network.

Figure 1: Site Location



Ngongotaha Road (SH36) runs in a general north-south alignment, providing a connection to Tauranga to the north and transitioning into SH5 to the south.

Ngongotaha Road provides for a single traffic lane in each direction near the site, with no on-street parking permitted along the frontage of the site. Pedestrian footpaths are only provided on the eastern side of Ngongotaha Road near the site.

With reference to the Rotorua Lakes Council District Plan Maps, the site is zoned 'Rural 2 (RR2)'. Ngongotaha Road (between SH36 / Waiteti intersection and SH36 / SH5 intersection) is classified as an 'Urban Primary Arterial' in the Rotorua District Roading Hierarchy.

The posted speed limit of Ngongotaha Road along the site frontage and to the north of the site is 70 km/hr. However, the posted speed limit reduces to 50 km/hr immediately south of the site.

2.2 ROAD SAFETY ASSESSMENT

An assessment of the surrounding area's safety record has been carried out using the NZTA's CAS database, for all reported crashes around the proposed site over the period 2017-2021 including all available data for 2022. The study area includes the length of Ngongotaha Road within a 100m radius around the proposed access intersection with Ngongotaha Road, which includes the Ngongotaha Road / Wikaraka Street intersection.

One non-injury crash was identified at the Ngongotaha Road / Wikaraka Street intersection, when the vehicle lost control turning right, went off road to the left and hit a power pole.

From a review of the crash history, it can be concluded that no specific traffic safety concerns are apparent on Ngongotaha Road. Accordingly, the proposed development is not expected to exacerbate the road safety record in the area.

2.3 PROPOSAL

As noted, the proposal is for the Stage 1 residential development at 31 Ngongotaha Road in Rotorua. The proposed development would include:

- Circa 196 residential dwellings;
- A mixture single and double story terraced dwellings; and
- Six new roads proposed (including a new roading connection onto Ngongotaha Road).

Stage 1 of the proposed development will gain access onto Ngongotaha Road (also known as SH36) via a new priority-controlled intersection.

The residential units will gain direct access off the new roads or the JOALs proposed as part of the development and will each be supported by at least one car park.

It is understood that following Stage 1, a Masterplan will be developed together with a private Plan Change application (including a full Integrated Transportation Assessment Report (ITA) for the wider subdivision area.

The site is currently vacant and a greenfield area.

Figure 2 shows the proposed development and the internal roading configuration.

Figure 2: Proposed Development



3 HIGH LEVEL ANALYSIS OF TRAFFIC IMPACTS

3.1 TRAFFIC GENERATION

The RTA Guide¹ is commonly used by traffic engineering practitioners in Australasia to assess the traffic generating potential of various land uses. In New Zealand, the RTA Guide is frequently used for assessing residential developments such as 31 Ngongotaha Road.

The dwellings proposed are considered to exhibit the characteristics of a “dwelling house”. For dwelling houses, the RTA predicts 0.85 trips / dwelling in the peak hour and 9 trips / dwelling per day.

Based on the above rates, the 196 dwellings proposed are estimated to each generate a total of approximately 167 peak hour trips and 1,764 daily trips are anticipated to be generated from the site.

Given the volume of traffic currently catered for by Ngongotaha Road and the surrounding area, the increase in the traffic will likely have a minimal impact on the operation of the surrounding road network.

3.2 TRAFFIC EFFECTS

The proposed intersection onto Ngongotaha Road will cater for all traffic accessing the Site. A preliminary analysis of the intersection has been undertaken to assess the traffic generation effects of the proposed development. The analysis considered both the morning and evening commuter peak hours, using the latest available Waka Kotahi traffic data² on Ngongotaha Road (SH36) and SIDRA intersection analysis.

The SIDRA outputs indicate that the proposed give-way controlled intersection onto Ngongotaha Road will operate with minimal delay for all approaches, with a Level of Service (LOS) A-B and a maximum 95%ile queue length of 6.6m for both morning and evening peak periods. In particular, for right turn movements into the site, the modelling results indicate that the average delay is estimated to be 9.9 seconds and the 95%ile queue length will be some 4.1m (less than one vehicle) during the evening peak hour (worst-case).

Overall, this intersection is expected to perform acceptably and well within capacity.

3.3 ROADING

In the local context a new intersection will be constructed on Ngongotaha Road (SH36). In this regard:

- Ngongotaha Road (SH36) is straight and flat in this location and thus sight distance will be able to comply with appropriate Waka Kotahi standards
- The speed limit past the site is 70km/hr which reduces to 50km/hr to the south. **It is thus recommended that the 50km/hr zone is extended to the north to the northern edge of the site.**
- The exact form of the give-way controlled intersection will need to be determined however given majority of vehicles will be left in and right out given the proximity to Ngongotaha Township and Rotorua Central.

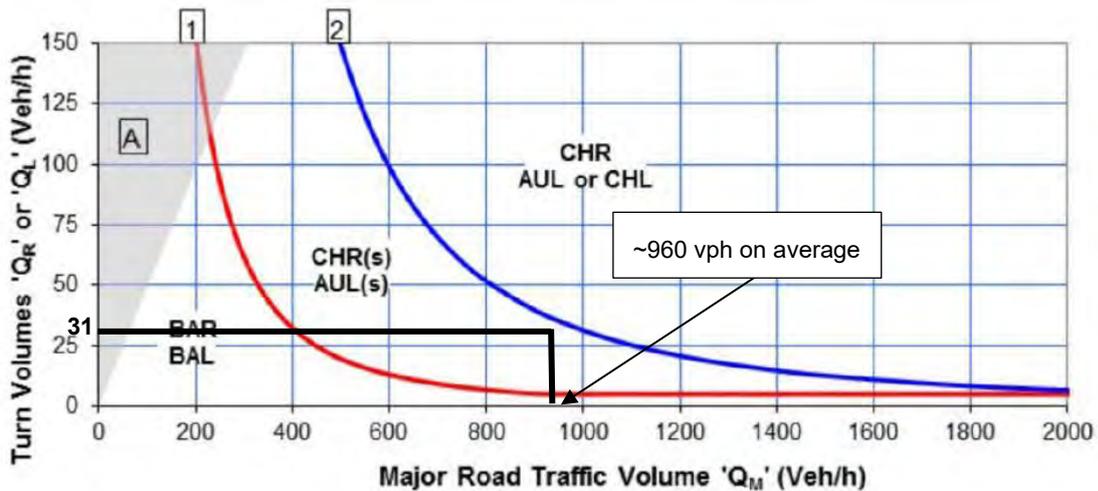
¹ The Roads and Traffic Authority of New South Wales – Guide to Traffic Generating Developments (RTA), Version 2.2, October 2002

² Waka Kotahi TMS database (traffic data dated November 2022)

The Austroads Guide to Traffic Management Part 6, Section 2.3.6 has been reviewed to inform the recommended treatment for turning vehicles. Through volumes have been sourced from the Waka Kotahi database.

Figure 3 below details the turning warrant assessment based on design speed (assuming a 50km/hr speed limit change as discussed above).

Figure 3: Turning Warrant Assessment – less than 70 km/hr design speed



(c) Design Speed ≤ 70 km/h

Based on the Waka Kotahi database, Ngongotaha Road (major road) near the site carries 934 vph (both directions) in the AM peak and 987 vph (both directions) in the PM peak.

Of the 164 peak hour trips generated by the site, it is typically assumed that 75% of these trips will be inbound trips during the PM peak hour (123 inbound trips which is worst-case). Of the 123 inbound trips, it has been assumed that 25% of these trips are from the north (i.e. southbound), thus resulting in some 31 right turn in movements at the intersection. Given that Ngongotaha Township and Rotorua Central are located to the south of the site and no major townships or employment centres are located north (Hamurana is the closest township centre located some 5km north of the site), it is considered acceptable to assume that approximately 25% of trips travel to / from the north and 75% of trips travel to / from the southern areas.

As shown on Figure 3, the graph indicates that the intersection will require a CHR (channelised right turn treatment) and a AUL (auxiliary left turn treatment). In this regard, it is considered acceptable that the proposed intersection be designed similarly to the existing intersection to the north (Ngongotaha Road / Wikaraka Street) or the Ngongotaha Road / Hood Street intersection to the south, whereby No Stopping At All Times (NSAAT) markings are provided on either side of Ngongotaha Road at the intersection. The provision of NSAAT markings is considered adequate given the existing carriageway width is approximately 11.5m at the location of the intersection, therefore can allow a through vehicle to pass with a vehicle waiting to turn right.

Figure 4 shows the existing layout of the Ngongotaha Road / Wikaraka Street intersection.

Figure 4: Existing Ngongotaha Road / Wikaraka Street intersection layout



3.4 WIDER NETWORK ACCESSIBILITY

The site is well located with regards to road connectivity to the wider network, with direct connections via SH36 and SH5. It is located approximately 1.0km north from the Ngongotaha township and some 9.0km north from Rotorua Central.

The SH36 / SH5 roundabout is located approximately 1.7km south of the site, which provides a connection to Hamilton via SH5. This roundabout was recently upgraded (completed late 2021) to provide additional capacity (i.e. additional approach lanes / slip lanes).

The old and new intersection is shown in Figure 5 below.

Figure 5: old (left) vs new (right): Sh36 / SH5



It is considered this upgraded intersection has spare capacity to cater for the additional traffic expected.

3.5 WALKING, CYCLING, & PUBLIC TRANSPORT

As part of development of the Site, the proposed internal roads will provide pedestrian footpaths on both sides ensuring adequate connectivity to Ngongotaha Road.

With regards to pedestrian accessibility to the wider area, as there is no footpath of the western (subject) side of Ngongotaha Road, **it is recommended that a new footpath should be constructed along the site frontage and link to the existing footpath to the south**, as shown in Figure 6.

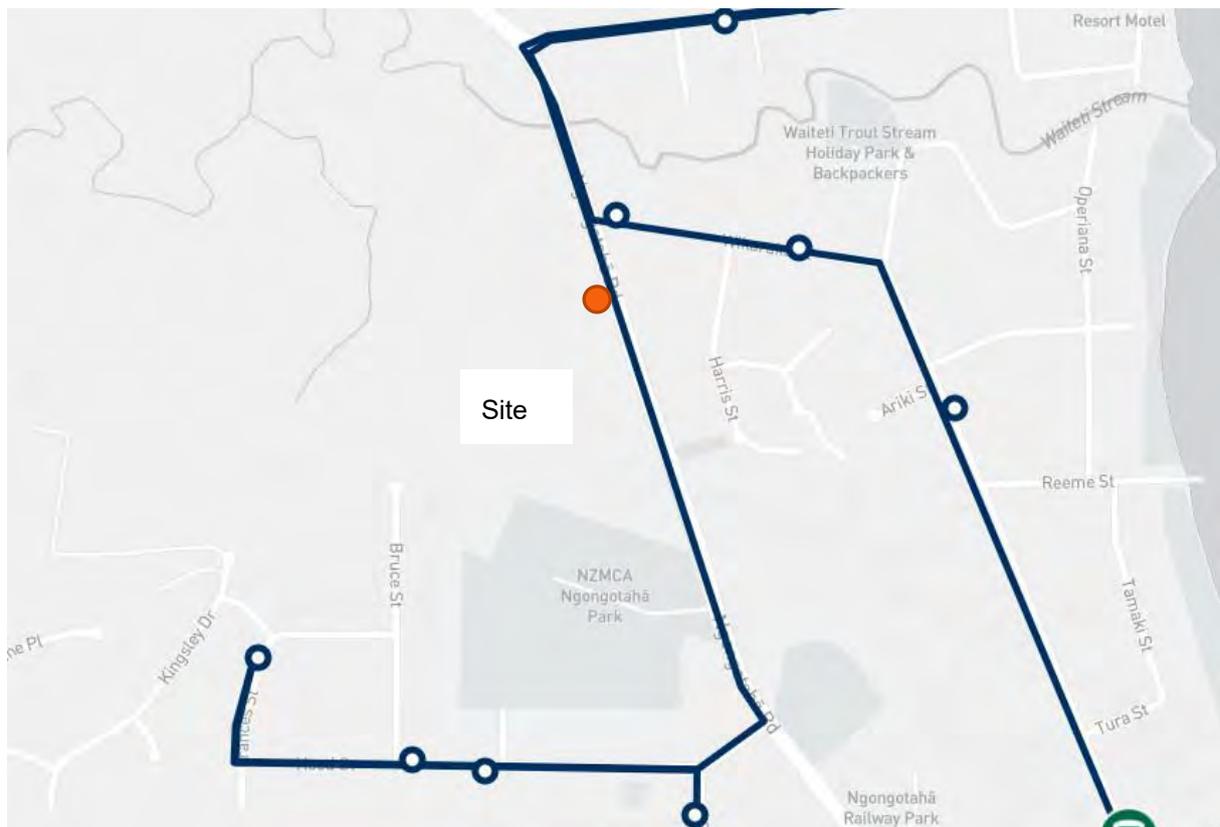
Figure 6: Recommended New Footpath



There is an existing bus stop located 50m (1 minute walking distance) on Wikaraka Street near the site. This bus stop provides services to Route 1, which is a loop route connecting Rotorua CBD (Arawa Street) to Rainbow Springs / Skyline, Ngongotaha (Agrodome), Ngongotaha (Cnr Landscapes / Camelia), Ngongotaha (Wikaraka Street) and Rotorua Central Mall.

It is noted that the site would benefit by adding an additional bus stop outside the site on Ngongotaha Road (especially for residents returning from Rotorua). The recommended location is indicatively shown on Figure 7 (with the Route 1 bus route shown).

Figure 7: Recommended new bus stop location



4 WAKA KOTAHI CONSULTATION

Waka Kotahi (NZTA) have been consulted prior to lodgement to seek feedback on the proposed site layout and in particular connection onto Ngongotaha Road (SH36). We are currently awaiting comments from Waka Kotahi. While different to the current proposal (especially in scale), we note that NZTA have previously approved an access in a similar location as the public road now proposed (see Attachment A).

5 CONCLUSION

From a review of the proposal to develop a residential development 31 Ngongotaha Road, the following can be concluded:

- The traffic expected to be generated by the proposed development can be accommodated within the existing surrounding road network (with the recent upgrades);

- The modelling analysis of the proposed intersection onto Ngongotaha Road revealed that this connection will operate acceptably in the future with the additional traffic from the proposed development;
- Following an assessment against Austroads requirements for turning treatments, it is recommended that the proposed intersection be designed similarly to the existing intersection to the north (Ngongotaha Road / Wikaraka Street) or the Ngongotaha Road / Hood Street intersection to the south, whereby No Stopping At All Times (NSAAT) markings are provided on either side of Ngongotaha Road at the intersection;
- A small number of upgrades are required in the local area to accommodate the additional dwellings including:
 - Reducing the posted speed along the site frontage to 50km/hr;
 - New footpath along the site frontage connecting with the existing footpath network
 - New bus stop outside the subject site

Overall (subject to the above), we see there to be no traffic or transport planning reasons the preclude the subject Sites from being considered for the fast-track consenting process.

Yours sincerely

Commute Transportation Consultants

Ana Lee



Transport Consultant

s 9(2)(a) -

22 December 2022

Leo Hills



Director

s 9(2)(a)

ATTACHMENT A: PREVIOUS APPROVAL

3rd June 2020

Brett Farquhar
Stratum Consultants
Via Email: s 9(2)(a)

Dear Brett,

APPLICATION FOR EIGHT LOT SUBDIVISION- 31 NGONGOTAHA ROAD (STATE HIGHWAY 36), ROTORUA.

Thank you for providing the NZ Transport Agency (Transport Agency) with details of the proposal to undertake an eight-lot subdivision at 31 Ngongotaha Road (State Highway 36), Rotorua. Each lot will be utilised as rural-residential.

Our primary concern is to ensure that State Highway 36, in the vicinity of the proposal operates in an integrated, safe and sustainable manner. Accordingly, an evaluation of the proposal has been conducted to determine the likely adverse effects on the State Highway and the following comments are made in light of that evaluation.

State Highway 36 in this location is declared a limited access road under the Government Rounding Powers Act 1989 (GRPA). Section 91 of the GRPA enables the Transport Agency to authorise the use of a crossing place on a limited access road, impose conditions on its usage, specify the location of a crossing place or cancel the right to use any crossing place if legal access is available from another road. In accordance with Section 92 of the GRPA, no person may drive or move any vehicle or animal, or permit any vehicle or animal to be driven or moved, on to or from any limited access road except at any crossing place authorised by the Transport Agency.

The site has one existing vehicle entrance off State Highway 36 (CP R257) which is currently utilised as a farm track. The Transport Agency understands that a new vehicle entrance will be constructed off State Highway 36 in order to provide access to each lot. The new access will be located approximately 90m north of the existing access.

On the basis of the information provided, the Transport Agency provides approval in principle subject to the following conditions and advice notes.

Conditions:

1. The new vehicle entrance shall be constructed and maintained in accordance with the NZ Transport Agency's Planning Policy Manual Diagram D standard. Preliminary designs must be submitted to the NZ Transport Agency showing a complying access can be built that includes mitigation measures for the disposal of storm water.

Advisory Note:

1. Works within the State Highway boundaries will require the approval of the Transport Agency pursuant to Section 52 of the Government Roading Powers Act 1989. Design and then construction details will need to be submitted by your contractor to the Transport Agency for approval as part of this approval. Please contact our consultants to discuss such approval. Our consultant is:

Higgins Contractors Limited

PO Box 10167

Rotorua Mail Centre

Rotorua 3046

Attn: Lilian Tulloch T: s 9(2)(a)

Email: s 9(2)(a)

2. Section 91 of the GRPA enables the Transport Agency to authorise the use of a crossing place on a limited access road, impose conditions on its usage, specify the location of a crossing place or cancel the right to use any crossing place if legal access is available from another road. In accordance with Section 92 of the GRPA, no person may drive or move any vehicle or animal, or permit any vehicle or animal to be driven or moved, on to or from any limited access road except at any crossing place authorised by the Transport Agency.

Please note that this in principle approval letter does not constitute authorisation under Section 91 of the GRPA. Once the above works have been undertaken and the new crossing's completion inspection has been undertaken by our network consultants, please contact NZTA to arrange a new section 91 crossing authorisation for the vehicle crossing.

3. This response is the Transport Agency's current view of the proposal. Please note that if this proposal is put on hold for an extended period of time or any additional lots are created, the Transport Agency will need to review its comments in light of any traffic, safety or policy change.

This letter serves notice, in terms of S93 of the Government Roading Powers Act 1989, that this section of State Highway is a road for the purpose of the proposed subdivision.

Please call me on (07) 958 9614 or email TaurangaPlanning@nzta.govt.nz if you wish to discuss any aspect of this letter in more detail.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jones', written over a vertical line that extends above and below the text.

Claudia Jones

Consultant Planning Advisor- NZ Transport Agency

