

BEFORE HEARINGS COMMISSIONERS, TAUPŌ

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF Proposed Plan Change 42 Rural Chapter - General
Rural Environment and Rural Lifestyle Environment

AND

IN THE MATTER OF a submission seeking the rezoning of the site at 287
Whakaroa Road to Rural Lifestyle Environment.

STATEMENT OF EVIDENCE OF DON MCKENZIE

(TRANSPORTATION)

11 AUGUST 2023

STATEMENT OF EVIDENCE OF DON MCKENZIE

1. SUMMARY OF EVIDENCE

- 1.1 I have been asked by Steve Hawkins (“**the submitter**”) to provide a transportation peer review of a Transport Impact Assessment prepared by Urban Connection Ltd in support of the Te Tuhi Estate development, and to provide expert transport assessment in support of his submission to Plan Change 42.
- 1.2 I understand that the submitter is advancing his submission and interests generally through Te Tuhi Estate Ltd. My detailed evaluation of the anticipated transportation effects on the wider roading and transport network associated with the Te Tuhi Estate development has been informed by both my consideration of the Urban Connection assessment as well as my extensive and detailed experience spanning some 30 years in preparing transport assessments and evaluating the transport impacts of land-use activities across New Zealand.
- 1.3 I have reviewed the request by Te Tuhi Estate for inclusion within Plan Change 42’s Rural Lifestyle Environment zone alongside the detailed transport assessment prepared by Urban Connection, and can conclude that the range of transport issues identified in their report can and will be readily incorporated into the future Discretionary Activity subdivision and resource consent applications that will be required under Plan Change 42, as amended by the preferred relief sought by the submitter.
- 1.4 I understand that the preferred relief includes a Precinct Plan setting out in some detail the proposed layout and development detail for the Te Tuhi Estate site. Any application for subdivision or land-use resource consent that is in accordance with the Precinct Plan will require a Discretionary Activity consent with Council’s discretion fully extending over all consent matters, including traffic and transportation issues. Any development not in accordance with the Precinct Plan will be assessed as a Non-Complying Activity with its heightened assessment threshold.

- 1.5 Accordingly, I can support the preferred relief from a transportation point of view and conclude that there are no major concerns or fundamental impediments in respect of both internal and external transportation effects associated with the rezoning to Rural Lifestyle Environment zone and Precinct Plan as sought by Te Tuhi Estate Ltd.

2. INTRODUCTION

- 2.1 My full name is Donald John McKenzie.
- 2.2 I am the Director and co-owner of Don McKenzie Consulting Ltd – a sole practice, traffic engineering and transportation services consultancy.
- 2.3 I was awarded a Bachelors Degree in Civil Engineering with Honours from the University of Canterbury in 1991. I am a Chartered Professional Engineer in New Zealand, an International Professional Engineer, Fellow and Chartered Member of Engineering New Zealand, and a Fellow and Professional Member of the Institute of Transportation Engineers ("ITE"), USA. I also served as the Global District Director on the International Board of Direction for ITE between 2015 and 2020.
- 2.4 Throughout over 30 years of professional experience across New Zealand, I have practiced as a traffic engineering and transportation planning specialist providing transportation consulting and expert witness services to a wide variety of clients across the country within the private sector, local government and central government agencies.
- 2.5 I have been involved in the assessment of, and expert evidence presentations associated with, numerous residential and commercial land-use applications throughout New Zealand including supermarkets, retail developments, residential subdivisions and mixed-use developments, Plan Changes and designations/Notices of Requirement throughout metropolitan, urban and rural parts of the country. Some of the most relevant recent developments with which I have been involved include:

- (a) Provision of specialist technical expert services to Woolworths New Zealand in respect of a proposed upgrading and extension of the Countdown supermarket at the corner of Tongariro Street and Spa Road, Taupo;
- (b) Transportation assessment and expert evidence in Support of Plan Change 81 to the Kaipara District Plan facilitating the required residential rezoning of the former Dargaville Racing Club site adjacent to State Highway 14;
- (c) Specialist transportation engineering/planning inputs on numerous residential rezoning and development activities including Peninsula Bay, Hillend Station and Jacks Point, in Queenstown, Waiata Shores residential development on the former Manukau Golf Course in South Auckland, a mixed use residential and commercial rezoning Plan Change 20 in Warkworth;
- (d) Review of PC59 Albany 10 Precinct on behalf of Auckland Council in respect of a proposed medium density residential development (and associated rezoning) of former Massey University student accommodation adjacent to the Albany Highway.

2.6 On the basis of this (and other) extensive experience with both residential development and rezoning/Plan Change processes throughout New Zealand, I can provide both specific and general knowledge in relation to the preferred relief in respect of the Te Tuhi Estate.

Code of Conduct

2.7 I have read the Code of Conduct for Expert Witnesses in section 9 of the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this statement of evidence and confirm that I will do so in presenting my evidence to the Court. Unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

3. SCOPE OF EVIDENCE

- 3.1 In this matter, I have been commissioned by Te Tuhi Estates Ltd (which I understand is advancing matters on behalf of the submitter) to undertake a peer review of the transportation impact assessment report prepared by Urban Connection Ltd (“**Urban Connection TIA**”)¹ related to a proposed future, resource consent application that is soon to be lodged with Taupo District Council (“**TDC**”) in relation to the Te Tuhi Estate development. The Urban Connection TIA is attached to this statement as **Appendix 1**. I understand that the resource consent application will be pursued in parallel to this submission to the Plan Change and both processes may end up running concurrently, although one may ultimately overtake the other and they will then become sequential.
- 3.2 I have reviewed the Urban Connection TIA and have considered its conclusions reached in respect of the consent application in terms of Plan Change 42. My statement which follows discusses the overall suitability of the requested Rural Lifestyle Environment (and additional provisions) within the TDC District Plan, and the recommendations made in the Urban Connection TIA for a range of supporting transportation mitigations to accompany the preferred relief for the Te Tuhi Estate site.
- 3.3 On the basis of the assessments undertaken and my appreciation of the expected form and function of the Te Tuhi Estate site, I consider that the Rural Lifestyle Environment zoning (and additional Precinct Plan provisions) sought through Plan Change 42 can be readily supported by the surrounding transport environment in a manner that will ensure the safety, efficiency and effectiveness of transport activity of both future residents and visitors to Te Tuhi Estate, as well as other road users.
- 3.4 Overall, I consider that the preferred relief, including the Precinct Plan and Discretionary Activity application controls sought by the

¹ Urban Connection, 287 Whakaroad Road, Taupo – Residential Development, Transport Impact Assessment Prepared for Te Tuhi Estate Limited, August 2023

submitter, is acceptable and appropriate from a transportation point of view, and will ensure that all transportation effects of future development within the Te Tuhi Estate site can be appropriately mitigated. The proposed rezoning of the site to Rural Lifestyle Environment and associated Precinct Plan, will in my opinion achieve an effective and efficient transport outcome. Put another way, there is no traffic or transportation matter that presents an impediment to the preferred relief.

4. OUTLINE OF EVIDENCE

4.1 This statement of evidence will:

- (a) outline my assessment and peer review methodology;
- (b) summarise the key transport aspects of the Plan Change rezoning and development proposal for the site;
- (c) provide a commentary on the transport effects of the development and rezoning, identifying the recommended external mitigation required to support the development; and
- (d) a brief summary of my assessment of other transportation matters (particularly internal to the site).

5. PEER REVIEW

5.1 I have been provided with and undertaken a peer review of the Urban Connections TIA report prepared in August 2023 for the Te Tuhi Estate development. Based on the information provided including that report and associated material prepared by the Te Tuhi design and advisory team as part of the resource consent application, I consider that the key transportation issues associated with the Te Tuhi Estate site and its inclusion within the Rural Lifestyle Environment zone of the TDC District Plan centre on:

- (a) I understand that the Te Tuhi Estate site will be subject to a detailed Precinct Plan proposed to be incorporated into Plan Change 42, and that subdivision and development in

accordance with that Precinct Plan would progress via a Discretionary Activity application (and supported by the necessary discretionary assessment over transport and other matters). Any activity within the Te Tuhi Estate site that is not in accordance with the Precinct Plan would follow a Non-Complying consent pathway.

- (b) In this regard, the assessment of transportation matters contained within my statement addresses the range of transportation effects likely to arise from the Te Tuhi Estate development and concludes that there are no fundamental issues from the physical transport environment that would impeded supporting the Te Tuhi Estate site for development as proposed. Matters relating to the identified mitigation measures from the Urban Connections TIA report will, in my opinion, be readily incorporated into both the future consent application itself and the associated discretionary assessment undertaken by TDC.
- (c) The proposed Te Tuhi Estate development concept is located some 15-20 minutes' drive from the main urban area of Taupo where major employment, retail and service functions are located. Without any realistic alternative public or active mode transport options available between Te Tuhi Estate and Taupo, the majority of resident and visitor movement to and from the site will be undertaken by private vehicle. The exception to this would be for major functions associated with the proposed lodge venue. I would expect any resource consent to provide for, if not require, such events to be subject to a transportation management plan – with a requirement for bus transport to and from the site for any significant event.
- (d) The relationship between the site and the relatively large distance to the urban areas of the District including Taupo, Acacia Bay and Kinloch, means that residents and visitors will not make as many nor as frequent vehicle trips to and from the site, compared to equivalent activities (such as residential dwellings) if they were to be located closer to

those urban areas, where shared trip making would be more common. In this respect, the overall traffic movements expected to be generated by the proposed Te Tuhi Estate activities is comparatively lower at this site.

- (e) The proposed scale and nature of activities at Te Tuhi Estate will in my opinion be at a relatively modest level of traffic movement especially considering the proportion of absentee landowners estimated by Mr Colegrave in his statement to this hearing leading to only around an approximate 50% permanent residential occupation and average visitor accommodation occupancy. The Te Tuhi Estate development concept and site layout will in my opinion lead to a generally slow-speed, local scale rural community that will be readily served by a modest roading infrastructure response (i.e. limited width, private roads).

- (f) The transport environment surrounding and supporting the Te Tuhi Estate site is largely low-scale, rural activity in nature with only limited rural residential sites within and close to the site. The introduction of the Rural Lifestyle Environment zoning will create additional traffic and transport demands and specific consideration of the ability of the surrounding road network should be made from both a traffic-carrying capacity and road user safety perspective. My peer review assessment of the Urban Connection TIA supporting the consent application confirms the general nature and scale of the mitigation measures proposed – focussing on road carriageway widths (in support of safe passing along roads) and intersection widening to facilitate safe turning movements through the intersection). Such mitigation can and should in my opinion be included in the future resource consent applications (and Council's discretionary activity assessment) for development within the Te Tuhi Estate site should the preferred relief be confirmed.

5.2 Other elements of my review have assessed and identified:

- (a) Areas of constrained topography and planting covenants within an approximate 700m length of the proposed main internal spine road will necessitate a reduced 5.5m (minimum) road carriageway width that will need to be supported by a speed management strategy and shared traffic environment warning signage;
- (b) Proposed adoption of a graduated internal road width strategy including 4m local access lanes and 6m secondary access roads in specific locations where traffic demands are lowest and the need for a “public road” design standard would create both additional physical infrastructure serving a limited purpose, as well as facilitating higher average travel speeds along wider than necessary roads which would be undesirable from the design and operation concept being advanced for Te Tuhi Estate;
- (c) A section of steeper road grade (up to 1:7 or 14% longitudinal grade) is required within one of the proposed internal access (private) roads to adapt to the existing site topography and minimise earthworks that would otherwise be required to satisfy the TDC’s design standards.

5.3 In the context of Plan Change 42 preferred relief and its anticipated discretionary activity resource and subdivision consent pathways for activity consistent with the proposed Te Tuhi Estate Precinct Plan, there are in my view no specific or general constraints within either the wider public roading network near the site, or within the Te Tuhi Estate property itself that would prevent the Rural Lifestyle Environment from being effectively and efficiently applied to the Te Tuhi Estate site.

6. KEY TRANSPORTATION ISSUES FOR THE PLAN CHANGE

Te Tuhi Estate Proposal

6.1 Te Tuhi Estate is proposed as a new bespoke rural residential lifestyle community based on a “design with nature” philosophy that respects, restores, and sustainably manages the site’s

landscape and amenity values. It is intended to provide for up to 115 clustered dwellings on sites generally ranging from 2,000 to 5,000 sqm, together with:

- (a) an equestrian facility incorporating grazing, dressage and show-jumping facilities, areas for parking, stables and staff accommodation, and
- (b) a luxury lodge/wellness centre providing 20 guest rooms, an on-site restaurant and café, wellness centre, wedding chapel plus nine visitor accommodation chalets.

6.2 The details of the location of the property and the intended layout of the Te Tuhi Estate development are included in the evidence of others.

Strategic Transport Context

6.3 As set out in the Urban Connection TIA, the Te Tuhi Estate site is located at 287 Whakaroa Road northwest of Taupō – situated approximately 15-20 minute drive from the central area of Taupō. Vehicular access to the property connects to the western end of Whakaroa Road and approximately 3km to the southwest of the intersection with Mapara Road. Vehicle access to Taupō is then available via both the Poihipi Road route connecting to Wairakei Drive to the north of the Waikato River Control Gates bridge, and also via the Mapara Road - Acacia Bay Road – Norman Smith Street route which connects to Wairakei Drive just north of the Control Gates bridge.

6.4 Within the Te Tuhi Estate site itself, a new access spine road will extend into the site generally representing an upgrade of an existing farm track formation, commencing from the western end of the sealed carriageway of Whakaroa Road.

6.5 Details of the roading environment surrounding the Te Tuhi Estate site and general carriageway and intersection layouts are provided in Section 2.2 of the TIA. I have reviewed each of these and confirm that they are generally representative of a rural environment serving both production activities (e.g. farming), as

well as enabling access to and from rural residential sites including the current Te Tuhi Estate. In respect of the active mode provisions (i.e. walking, cycling and equestrian) within the Whakaroa and Mapara Road route sections, I can confirm that there are no formal or specific provisions made within the roading (or roadside) infrastructure. I consider however, as with other rural environments, that such modes are generally and appropriately catered for by the existing road and roadside facilities already in place. In broad terms, the available forward visibility along these routes enables such movements to be undertaken safely and effectively.

- 6.6 As I will discuss in greater detail shortly, I consider that there is some further modification and mitigation required to address the effects of a narrow (effectively single lane) section of Whakaroa Road approximately 1km from the southern end of the Whakaroa Road sealed carriageway. The ability to deliver these mitigation works generally within the current public legal road reserve is not in my opinion in question and would not in my opinion restrict or prevent the preferred relief from being confirmed from a transportation point of view. The fully discretionary activity status of future development within Te Tuhi Precinct allows (and in fact requires) these matters to be considered and effects addressed as part of future consent and subdivision applications.

Traffic Generation

- 6.7 The Urban Connection TIA provided what in my opinion is a robust and conservative assessment of the expected trip generation associated with the completed Te Tuhi Estate development including consideration of dwellings, visitor accommodation and equestrian centre/wellness centre. I am professionally familiar with the sources of trip generation rate estimates that the authors of the Urban Connections' TIA adopted and agree with their conclusions that this will provide a robust, upper estimate of predicted traffic volumes generated by the completed Te Tuhi Estate development.

- 6.8 With the benefit of Mr Colegrave's assessment of the economic assessment, I am further assured that the Urban Connection assessments are suitably robust given that they have not taken into account the levels of both permanent residential and visitor accommodation occupancy included in Mr Colegrave's statement², and therefore have in my opinion, over-estimated the trip generation associated with the site.
- 6.9 In my opinion the actual trip generation of the completed Te Tuhi Estate will be less than that described in the Urban Connection TIA, and that the external effects of the development will be no more than (and potentially somewhat less than) what was set out in that report. Nonetheless, the conclusions reached in the Urban Connection TIA with respect to external traffic impacts and mitigation are relevant, addressing largely the safety and convenience aspects of generated traffic moving through the surrounding road network, rather than generating the requirement for additional capacity at intersections or mid-block sections of roads used by residents of and visitors to the site.

Impacts on Road Network

- 6.10 At the intersection of Whakaroa and Mapara Roads, the TIA assessed both the available sight distances and the expected operational performance of the intersection considering the additional generated trips from the Te Tuhi development (a matter than I will refer to again later in my statement). I agree with Urban Connection's approach and conclusions reached within the TIA that there is readily sufficient traffic-carrying capacity at the existing intersection of these two roads, and that from an operational safety perspective, the Te Tuhi Estate development (and Plan Change 42 preferred relief) should be supported by widening of the intersection (generally the eastern shoulder of Mapara Road) to provide for a vehicles to wait clear of through

² Evidence of Fraser Colegrave, para's 47 and 58

traffic along Mapara Road prior to turning into or out of Whakaroa Road.

- 6.11 The TIA recommended inclusion of a Diagram E form of widening as recommended by the Waka Kotahi | NZ Transport Agency Planning Policy Manual (Appendix 5B) and further recommended that on safety grounds the widening delivered should be modified to deliver a formal right turn bay adjacent to the centreline of Mapara Road rather than the Diagram E form of shoulder widening along the eastern edge of Mapara Road. Irrespective of the specific preference of intersection upgrading, I conclude that such a mitigation measure is both appropriate and readily able of being incorporated into a future Discretionary Activity subdivision or resource consent application. Council's discretion to address external traffic effects such as this and this or other form of mitigation is generally unconstrained and is appropriate in the context of Plan Change 42.
- 6.12 Section 8.2 of the Urban Connection TIA assesses the available seal width on Whakaroa Road between the Te Tuhi Estate entrance and Mapara Road to accommodate the generated traffic volumes they assess as being generated by the completed development. The TIA authors identify some localised sections of the current Whakaroa Road carriageway (especially through the section approximately 1km from the suite entrance) where the current seal width is only around 4.5 – 5.5m in width.
- 6.13 The TIA recommended that the road width along Whakaroa Road should be increased (where feasible) to comply with the TDC Engineering Code of Practice which calls for 6.7m for public roads. Where full compliance with the Code of Practice is not possible, it was recommended, following consultation with Council, that further mitigation to these “narrower-than-standard” sections should be applied including forming additional passing areas, reduced speed limits and additional or alternative road marking, delineation and signage. I agree that there should be further consideration of these matters of detailed roading design, as well as consideration of sight distance and specific road widening that

can be achieved once detailed surveys are undertaken of the current carriageway and road reserve widths.

- 6.14 As with my commentary around the intersection widening at the Whakaroa/Mapara junction, these matters should and will form part of the Discretionary Activity process for future applications made with respect to the Te Tuhu development and the Precinct Plan that forms part of the preferred relief.

Pedestrian Provisions

- 6.15 I expect that the proposed Te Tuhu Estate community will generate a modest scale of internal pedestrian movements between the residential dwellings and other parts of the site (e.g. the wedding/function venue) that will be catered for by a combination of both the road carriageways and the bridle paths proposed throughout the site.
- 6.16 The low speed, low volume of traffic predicted to use the internal roading network is in my opinion appropriate to cater for the resident and visitor pedestrian movements, in a manner that is both safe and consistent with the overall intention of the Te Tuhu Estate development philosophy involving private rural road layouts and design profiles with no (or very limited) sections of kerbs and no streetlighting. This approach is also consistent with the project objective of seeking to minimise the overall carriageway widths to limit impacts on the existing, rural environment within the site. In my experience with other clustered rural residential developments elsewhere around the country, catering for pedestrian movement via a combination of low-speed, low-volume road carriageways and informal/bridal paths has resulted in a safe and effective transport outcome.

7. SUMMARY OF RECOMMENDED TRANSPORTATION MITIGATION

- 7.1 In summary, I have considered in detail the transportation assessment of the external traffic impacts associated with the Te Tuhu Estate development as set out in the Urban Connection TIA report prepared in support of the development, and conclude that each of these matters can be readily incorporated into both the

development concept being advanced by Te Tuhi Estate Ltd as well as in the Discretionary Activity subdivision and resource consent applications required to be lodged with TDC. There is in my opinion no fundamental impediment to any of the mitigation measures (or equivalent measures achieving the same outcome) identified in the Urban Connection TIA from being delivered.

7.2 In my opinion, the following matters are relevant in terms of future mitigation required to facilitate the transportation outcomes of the Te Tuhi development via the preferred relief sought through Plan Change 42:

- (a) Whakaroa/Mapara intersection – widening/upgrading to a standard equivalent to the Diagram E form included in Appendix 5B of the Waka Kotahi / NZTA Planning Policy Manual; and
- (b) Whakaroa Road Carriageway – widening of the sealed carriageway of Whakaroa Road between the site and Mapara Road to an ideal width of 6.7m however where this is a minimum of 5.5m seal width should be delivered supported by appropriate speed management, signage and possible passing/waiting bays in advance of the narrowing.

7.3 These mitigation measures can be accommodated if necessary. Alternative or other refined measures might also be available with the detailed design accompanying any specific application for resource consent.

8. OTHER MATTERS

School Bus Pick-up/Drop-off

8.1 I have considered the issue of a dedicated school bus pick-up location identified by the Urban Connection TIA, and recommend that while it is not certain that there will be a specific need for a school bus to visit the Te Tuhi Estate site, provision could be made for a school bus to manoeuvre at the existing sealed turning head at the western end of Whakaroa Road just outside the Te Tuhi

Estate site. I do not consider that school buses would need to enter the Te Tuhi Estate site itself and that a manoeuvre either at the existing sealed turning head, or use of the adjoining driveways together with the existing turning head to provide for execution of a three point turn (supported by an appropriate safety plan for when the reverse manoeuvres are taking place). It is not uncommon in rural areas for school pick-ups to be on or just off the main roads, rather than buses having to traverse up minor roads (whether private or not).

- 8.2 As with the above issues these matters can and should be assessed in greater detail at the time of consent, and can in any event be handled if and when the demand for school pick-ups and drop-offs is generated.

Special Event Management Plans

- 8.3 While not specifically identified within the Urban Connection TIA, there is a prospect of equestrian and other large, temporary events being held at the equestrian centre and generating elevated traffic and parking demands within the site and on the surrounding roads. This is in addition to events that might be expected at the lodge (eg, weddings).
- 8.4 It is my expectation that depending on the scale of events specific traffic management plans may be needed to ensure the effects of these activities are mitigated especially along the travel routes to and from the site. I consider that such event management plans are a common-place requirement for temporary events and within the Taupō context provided for within other parts of the District Plan and Council's permitting regime. These are all capable of being addressed at the discretionary consent stage or by TDC in its role as road controlling authority, as appropriate.

9. CONCLUSION

- 9.1 I have been asked by the submitter Steve Hawkins to provide a transportation peer review of a Transport Impact Assessment prepared by Urban Connection Ltd in support of his submission to Plan Change 42. I understand that Mr Hawkins is advancing his

submission and interests generally through Te Tuhi Estate Ltd. My detailed evaluation of the anticipated transportation effects on the wider roading and transport network associated with the Te Tuhi Estate development has been informed by my consideration of the Urban Connection traffic assessment as well as my own professional traffic engineering and transport planning experience.

- 9.2 My detailed review of the transportation matters associated with the Te Tuhi Estate development and the associated inclusion within Plan Change 42's Rural Lifestyle Environment zone concludes that the range of transport issues identified can be readily incorporated into the future Discretionary Activity subdivision and resource consent applications that will be required under Plan Change 42, and that there are no fundamental transportation issues that would be generated if the preferred relief is incorporated into the Plan Change.
- 9.3 I understand that the preferred relief includes a Precinct Plan and provisions requiring any application for subdivision or land-use resource consent to be subject to a Discretionary Activity consent process, allowing for all matters including all traffic and transport matters to be considered by the Council consent processing team. Any development not in accordance with the Precinct Plan will be assessed as a Non-Complying Activity with its heightened assessment threshold.
- 9.4 Overall, from a transportation perspective, I support the preferred relief sought by Steve Hawkins. There are in my opinion, no major concerns or fundamental impediments in respect of either internal and external transportation effects associated with the preferred relief sought.

Don McKenzie
11 August 2023



287 Whakaroa Road, Taupō

Residential Development

Transport Impact Assessment

Prepared for Te Tuhi Estate Limited

August 2023

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Introduction

1.1. Background

This Transport Impact Assessment (TIA) has been prepared for Te Tuhi Estate Limited in relation to a residential development containing 115 lots and a tourism lodge at 287 Whakaroa Road, Taupō.

The proposed development site is approximately 344 Ha and is zoned Taupō Rural Environment under the Taupō District Plan. The proposal includes adding the proposed site into Plan Change 42 which involves creating a new Rural Lifestyle Environment from the General Rural Environment.

A new private road and road intersection with Whakaroa Road will be provided to serve the proposed site. Currently, the site is accessed by one existing accessway off the western end of Whakaroa Road.

Based on the scale of the proposed development and the immediate surrounding environment, the primary transport considerations are as follows:

- the level of traffic that is likely to be generated by the proposed 115 sites and tourism lodge;
- the likely effect traffic generation will have on the surrounding transport network;
- the ability of the site and its surroundings to meet the access demands created by development;
- address any road safety issues created by the proposed development.

These and other matters are addressed in the body of the report.

2. Existing Transport Infrastructure

2.1. Site Location

The site is located at 287 Whakaroa Road in Taupō. As such, it requires compliance with Taupō’s District Plan and adopted standards and guidelines of the Road Controlling Authority (RCA).

The site is in the Northwest region of Taupō City, approximately a 15-minute drive from the central area.

The existing access to the site is located at the end of Whakaroa Road, approximately 2.9km to the southwest of the intersection with Mapara Road (see Figure 1). It is proposed that the existing access remains as the access to the site and will include a new site access spine road that serves the entire site.

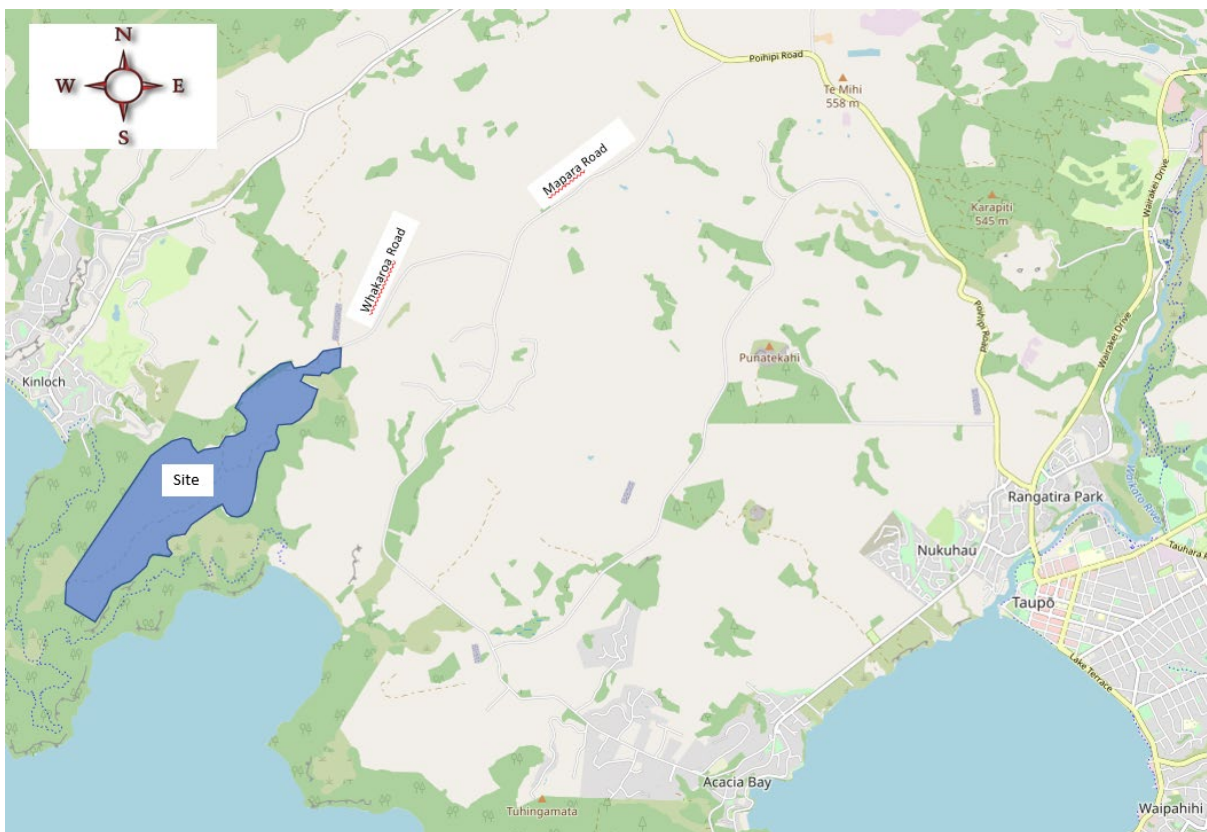


Figure 1: Site Location

2.2. Existing Road Layout

2.2.1. Whakaroa Road

Whakaroa Road is classified as a Low Volume Road under the One Network Road Classification (ONRC). It is 2.9 km long with a posted speed limit of 100 km/h along its length. It serves approximately 20 rural residential properties including a few farms and some accommodation services. It is not a through route and the traffic experienced on this road is solely generated by the immediate surrounding land uses.

The sealed carriageway ranges in width from 6.4 m at its southern end, to 6.9 m wide near the

intersection of Whakaroa Road and Mapara Road. However, there are three isolated locations where the width narrows to between 4.3 m to 5.7 m, through cuttings. There is no pedestrian or cycling facilities.

There is a narrow grass berm and large banks on both the northern and southern side of the road.

White centerline markings are provided throughout Whakaroa Road. The cross-section of the road through a narrow section is shown in Figure 2.

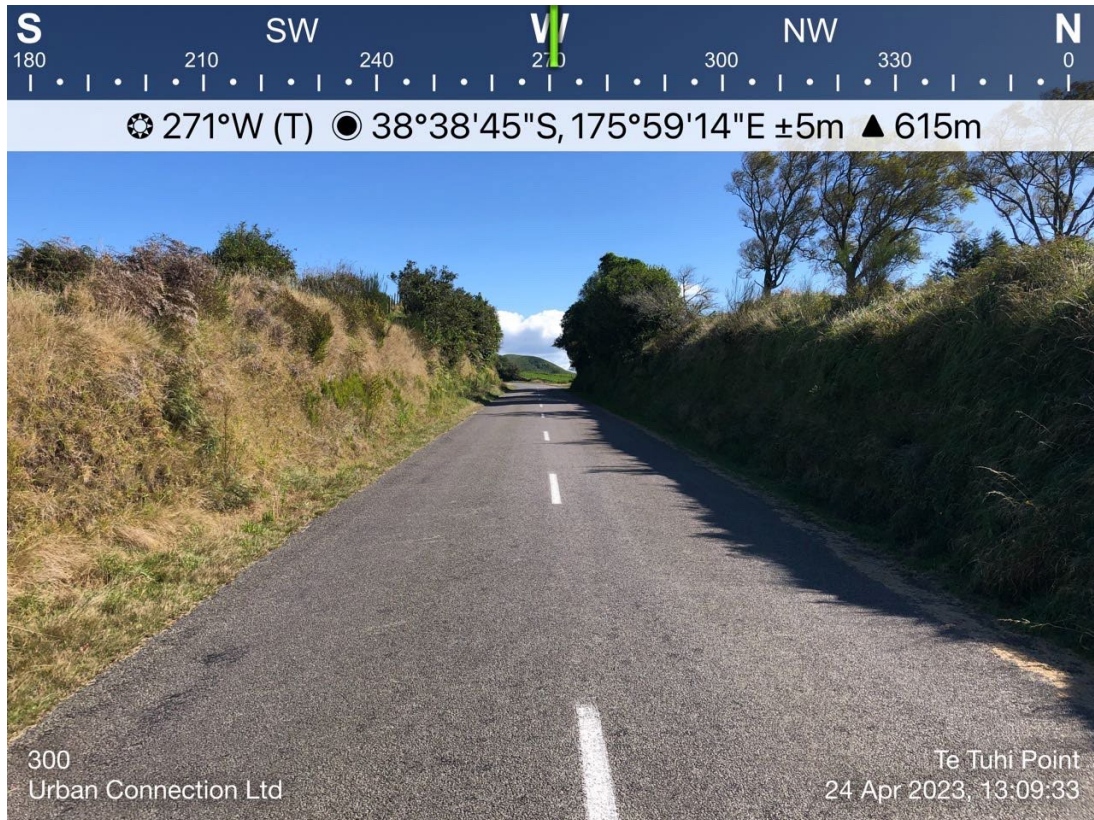


Figure 2: Whakaroa Road cross section layout

2.2.2. Mapara Road

Mapara Road is classified as a Secondary Collector Road under the One Network Road Classification (ONRC). It connects Acacia Bay via Acacia Bay Road to the east and heads out towards Poihipi Road and leads ultimately to Wairakei Drive and into central Taupo.

Mapara Road has a posted speed limit of 100 km/h and has a sealed width of approximately 6.4 to 6.9 m with narrow grass berms on both sides. There is no pedestrian or cycling facilities. The cross section of Mapara Road is shown in Figure 3.



Figure 3: Mapara Road cross section layout

2.2.3. Whakaroa Road / Mapara Road intersection

The intersection of Mapara Road and Whakaroa Road is an uncontrolled “T” intersection. The available intersection sight lines are over 270m to the north and 160m to the south (see Figure 4 and Figure 5). There is also a steep bank opposite the intersection (see Figure 6).



Figure 4: Whakaroa Road and Mapara Road intersection, looking northbound



Figure 5: Whakaroa Road intersection with Mapara Road, looking southbound



Figure 6: Steep bank opposite Whakaroa Road and Mapara Road intersection

2.2.4. Proposed Speed Limits

TDC have adopted an interim speed management plan (September 2022). This included a reduction in speed limits at almost all schools within the district, with a combination of static and variable school signs. TDC also included a reduction to 80 km/h for Mapara Road and Whakaroa Road, however the council decided on no change at this time due to limited support from the public. The safe and appropriate speeds taken from MegaMaps indicate 60 km/h for Whakaroa Road and 80 km/h for Mapara Road.

2.3. Existing Accessways

2.3.1. Main Access

The existing main access to the site is located at the western end of Whakaroa Road. It is approximately 4 m wide, unsealed and serves the existing land use (see Figure 7).



Figure 7: Unsealed entranceway with fence

2.4. Public Transport

2.4.1. School Bus

A school bus was observed stopping at the intersection of Whakaroa Road and Mapara Road intersection to take the local children to school. Parents drove to the intersection to drop their children off to the school bus. One child cycled to the bus.

There are warning signs on Mapara Road warning of a school bus route, and to watch out for horses. This is located south of the Whakaroa Road/Mapara Road intersection. See Figure 8.



Figure 8: Permanent Warning Sign on Mapara Road

It is expected that the new residential development will attract families with school age children. Discussions with Ministry of Education in regard to school bus pick up and drop off will be required to ensure the pick-up/drop off point is safe and suitable for any increased usage, or whether a new location is required perhaps within or closer to the residential development.

2.4.2. Bus Routes

There are no official bus routes within the vicinity of the site along Whakaroa Road and Mapara Road.

2.5. Walking and Cycling Facilities

As mentioned in previous sections, there are no walking or cycling facilities on Whakaroa Road or Mapara Road. There is a mountain biking trail that skirts the outside of the proposed site and is part of the “Great Lake Trail” within the nearby DoC reserves. See Figure 9. This is the “Day 2 or 3” W2K route (Whakaipo to Kinloch). It is proposed to provide a link from Whakaroa Road and the proposed site through to this “Great Trail”. However, it is not expected to generate additional traffic volumes or cyclists along Whakaroa Road.



Figure 9: Whakaipo to Kinloch Great Lake Trail

3. Travel Patterns

3.1. Peak Hour Traffic Volumes

A peak period traffic count survey has been undertaken to observe traffic volumes, flow conditions and split of trips at the Whakaroa Road/Mapara Road intersection. The survey was carried out manually in the network AM peak hour, undertaken from 7:45 to 9:00 AM, on Tuesday, 28 February 2023. The AM peak flows at the intersection during this period have been confirmed to be from 7:45 to 8:45 AM. The existing flows in the AM peak hour are further detailed in Table 1 and Figure 9.

Table 1: Peak Hour Traffic Volumes

Road Name	Total	% of HCVs
Whakaroa Road	9	0.0%
Mapara Road (Southbound approach to Whakaroa Road)	63	5.4%
Mapara Road (Northbound approach to Whakaroa Road)	58	5.4%

The AM peak survey shows an approximate 30/70 split between southbound and northbound vehicles. However, turning movements out of the Whakaroa Road are approximately 75% towards the north (noting that the actual turning volumes are low). Turning movements into Whakaroa Road from Mapara Road are approximately 80% from the north. The heavy vehicle percentages collected are lower than the Mobile Road estimate (presented in Table 2).

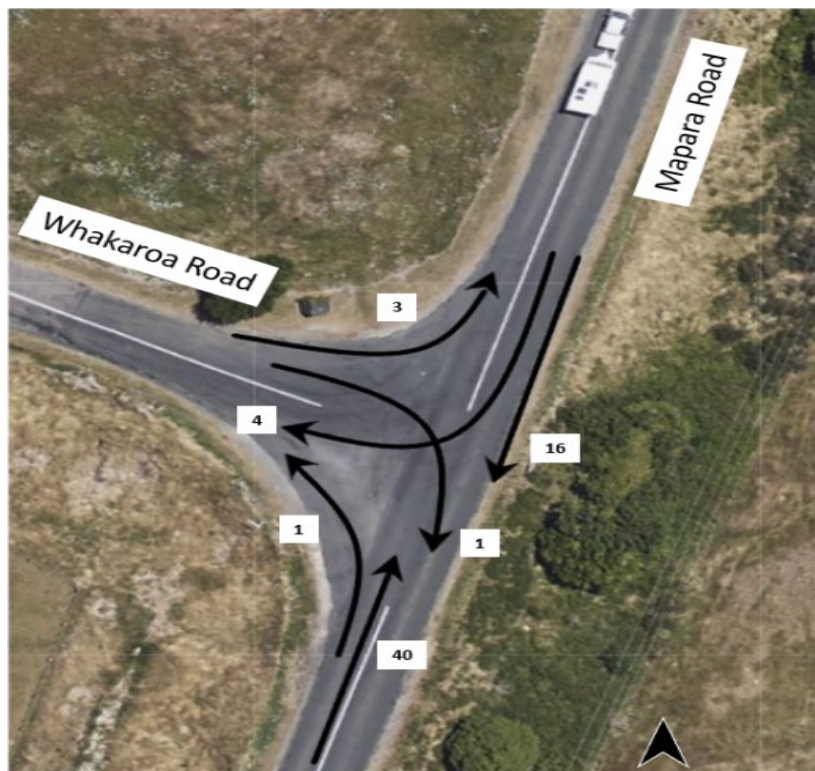


Figure 10: AM Peak Hour flows

3.2. Daily Traffic Volumes

The estimated Annual Average Daily Traffic (AADT) on Whakaroa Road and Mapara Road has been obtained from Mobile Roads. The daily traffic data is provided in Table 2.

Table 2: Daily Traffic Volumes

Road Name	Two-way daily flows (vpd)	% of HCVs	Traffic Count Year
Whakaroa Road	40*	10.0%	2000
Mapara Road (North of Whakaroa Road)	697*	26.6%	2022
Mapara Road (South of Whakaroa Road)	200*	10.0%	2000

*Estimated

As noted earlier, Whakaroa Road serves approximately 20 rural residential properties. To obtain a more likely daily traffic flow along this road, the on-site survey (refer to Section 3.1) carried out during the peak hour is the best moderator to understand daily traffic volumes. On the basis that 10% of daily trips occur in the peak, then a surveyed peak flow of 9 vehicles per hour equals 90 vehicles per day. This gives a daily rate of 4.5 trips per dwelling in the Whakaroa Road environment, recognising these are working farms and large rural lifestyle properties.

3.3. Existing Site Traffic

Presently, the intersection is utilised by the existing residential dwellings along Whakaroa Road (approximately 20 dwellings). Existing trips generated by the development site in its current form are considered minimal (one farm). This dwelling is expected to generate approximately 4.5 vpd and 0.45 vph in the peak hour using trip generation rates obtained from the traffic survey undertaken in March 2023.

The proposed development will generate a significant amount of extra traffic along Whakaroa Road. Most of the existing traffic is traveling to/from the north and this is expected to continue, however some traffic is expected to travel south toward Acacia Bay.

3.4. Plan Change 42

Plan Change 42 is a full review of the existing Rural Chapters within the Taupo District Plan. A key change is creating a new Rural Lifestyle Environment from the General Rural Environment, which this proposal is proposing to be part of. Parts of this will include a new set of objectives, policies and rules including relaxation of subdivision rules, allowance for minor dwellings and removal of the Mapara Valley Structure Plan. Figure 10 shows the new rural lifestyle zones near to the proposed Te Tuhi Point development and along Whakaroa Road.

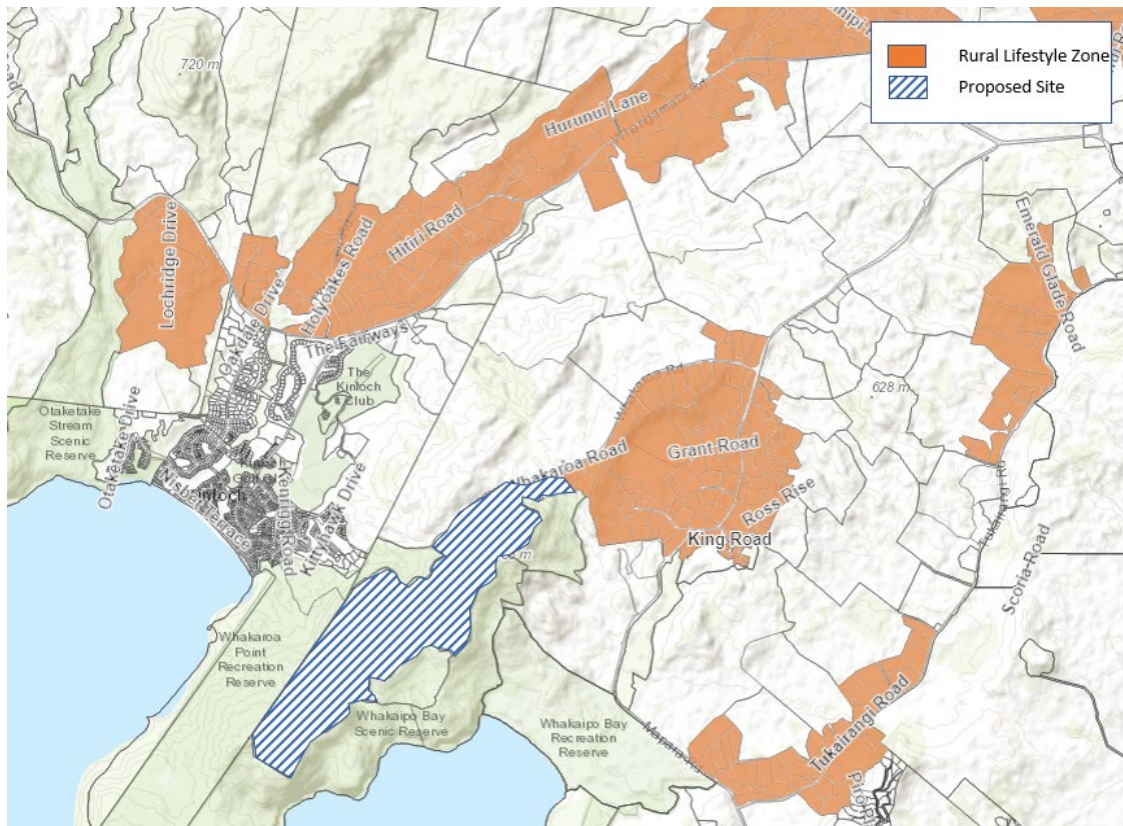


Figure 11: Plan Change 42 – Rural Lifestyle Zones

As shown in Figure 10, the Rural Lifestyle Zone includes all of the properties on the southern side of Whakaroa Road, and the first 4 or 5 properties on the northern side. Therefore, there are a total of approximately 15 lots on Whakaroa Road that are subject to the Plan Change 32 zone changes.

As part of the plan change, TDC engaged a consultant to undertake a high-level transport assessment of the proposed plan change to increase the supply of Lifestyle blocks in the vicinity of Taupo Township. The Rural Lifestyle zone will allow creation of sites down to 2 ha in area and allow for one minor residential unit per site. With this in mind, the traffic generation rate used in the report was 1.2 trips per peak hour and 12 trips per day, per Rural Lifestyle site.

4. Road Safety

A review of the current safety performance has been undertaken to determine the nature of crash types and severity along Whakaroa Road and at the Mapara Road intersection (200m either side of Whakaroa Road). Crash information has been extracted from Waka Kotahi's Crash Analysis System (CAS) database for the last ten-year period (2013 to 2023 to date). The extent of the assessment is shown in Figure 10.

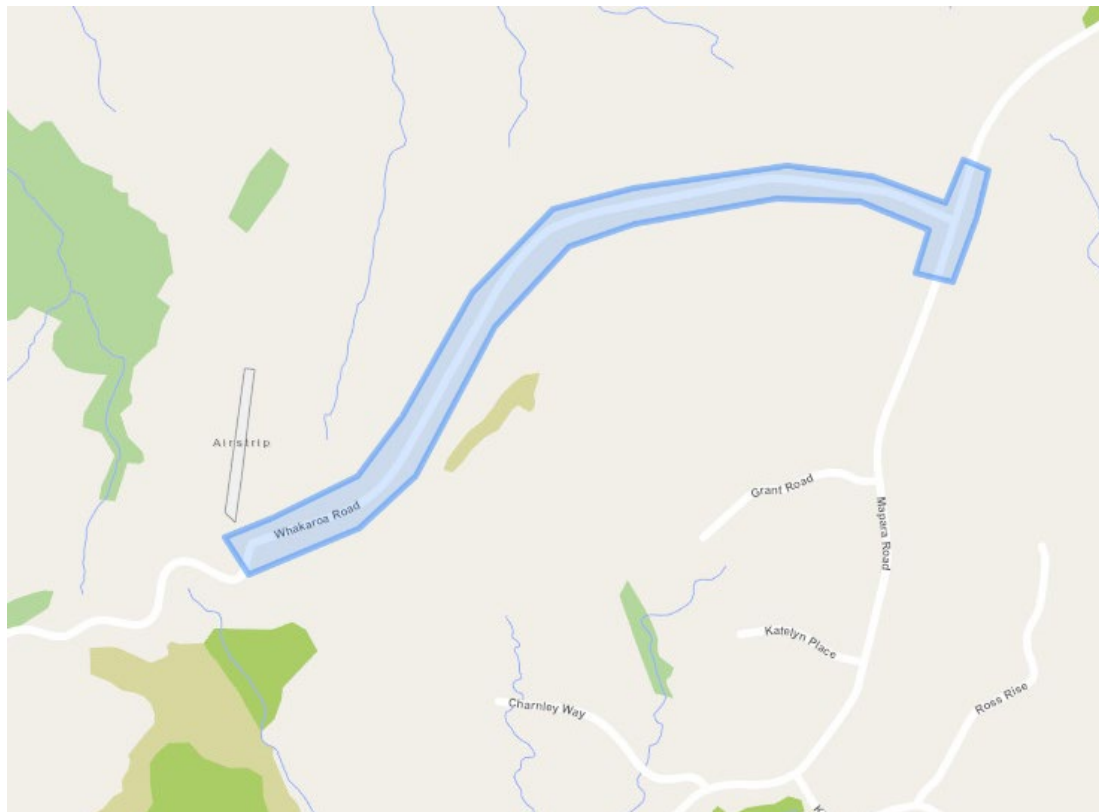


Figure 12: Extent of safety assessment

There has been no reported crashes through the extents of the assessment.

5. The Proposal

The proposed development encompasses approximately 344.56 Ha of land, known as Te Tuhi Point, and will accommodate 115 rural residential lots ranging in size from 3000m² to 5000m². Also included is a tourism lodge with 20 one-bedroom suites and 10 standalone chalets. The lodge includes a wellness centre, a restaurant and a chapel for wedding ceremonies. The proposal also includes a small high performance equestrian stable.

The proposal includes adding the proposed site into Plan Change 42 which involves creating a new Rural Lifestyle Environment from the General Rural Environment.

This assessment considers the expected traffic to be generated by the development. The concept plan for the proposed development is shown in Figure 12.

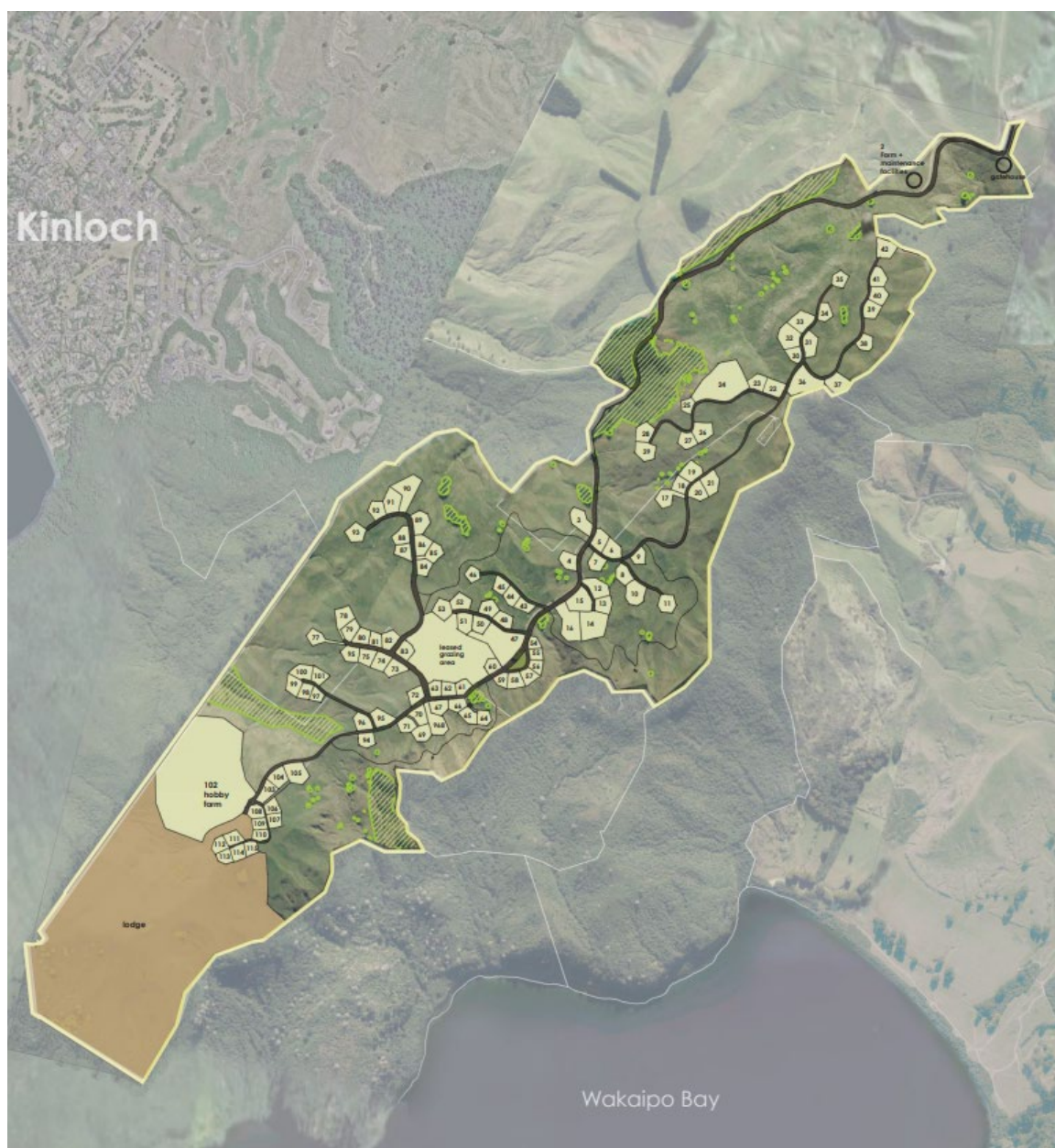


Figure 13: Site plan

The site proposes to have one access point onto Whakaroa Road at its western end. Internally, the site will be served by a network of private roads designed to TDC standards.

6. Traffic Generation and Distribution

6.1. Traffic Generation Assessment

The proposed site is expected to generate approximately 738 vpd and 98 vph in the peak hour.

With reference to Plan Change 42 (see section 3.4), the traffic generation rates used for that assessment was 1.2 trips per site per peak hour, and 12 trips per site per day (0.8 per peak hour and 8 per day for main residential dwellings, and 0.4 per hour and 4 per day for the secondary dwelling). These do seem high for this rural environment. It is worth noting that Plan change 42 enables intensification of the rural zone, however the degree of uptake is unknown at this stage. All affected landowners will not automatically upgrade or intensify their sites as a result of the change. Therefore, given the uniqueness of this land development proposal, standard trip generation rates¹ are unlikely to reflect the true nature of vehicle movements associated within the development. Therefore, we have based the rural-residential lots trip generation rates on the recent traffic survey undertaken at the intersection of Whakaroa Road/Mapara Road (refer to Section 3.2). This is the best moderator of traffic generation in this rural environment as all of the dwellings along Whakaroa Road are rural-residential, and similar in lot size to that proposed in the new development. The traffic generation rates for the 115 lots are therefore 0.45 trips per dwelling per peak hour, and 4.5 trips per dwelling per day. The rates used in the Plan Change assessment of 0.4 per hour and 4 per day will be applied to the additional 15 lots that can be developed on Whakaroa Road as Rural Lifestyle in accordance with Plan Change 42.

For the tourism lodge, the hotel rates contained in Waka Kotahi Research Report 453 (RR453) have been considered. These are 6.4 trips per room per day, and 1.2 trips per room per peak hour. These rates are considered conservative for this rural environment and are probably heavily weighted by urban hotels. Therefore, we have used a lower trip rate of 4 vehicles per room per day to better reflect the rural environment use and will use the 1.2 trips per room for peak hour trips. In regard to the restaurant and wedding chapel, it is understood that these are mutually inclusive with the accommodation and would not generate any additional traffic. i.e., it is expected that the accommodation/restaurant would be booked out for a wedding, as well as the chapel. Outside of weddings, the restaurant is expected to cater for accommodation guests and the public, and some wedding guests would stay in Taupo and drive to/from the venue. There is also some limited traffic generation from the high-performance equestrian centre. For these, an allowance of 100 daily trips and 10 peak hour trips have been allowed for in the assessment.

The generation rates are typically based on the development's gross floor area (GFA). Trip rates derived for the development and the expected site's trip generation are detailed in Table 3.

¹ Waka Kotahi Research Report 453 (RR453), Trips and parking related to land

Table 3: Site's trip generation

Development Type	Design units	Daily Rate (vpd/100m ² GFA)	Peak Hour Rate (vph/100m ² GFA)	Total Daily Trips (vpd)	Peak Hour Trips (vph)
Rural residential lots	115	4.5	0.45	518	52
Tourism Lodge (30 rooms)	30	4	1.2	120	36
Restaurant / equestrian / external wedding guests	N/A	N/A	N/A	100	10
Sub-total				738	98
Rural Lifestyle lots on Whakaroa Road*	15	4.5	0.45	68	7
Total				806	105

6.1. Traffic Distribution

Due to the development's location in the rural area north-west of Taupo, the directional split from Whakaroa Road of 70:30 to the north:south is predicted, as per the existing traffic counts. The northern route along Mapara Road to Poihipi Road and into Taupo would be the preferred route as it is shorter and quicker for vehicles, rather than heading south and through Acacia Bay and Nukuhau area of Taupo (both have 50 km/h speed limits). However, there are services to the south such as a 4-Square, restaurant/cafes and some schools/kindergartens/early childhood centres. Therefore, it is more likely that a larger proportion would head south than that indicated above. Based on these available services, a further adjustment to the directional split has been made. For the purpose of the assessment, a directional split of 60:40 north:south has been used.

The traffic flows obtained during the AM peak hour have been updated to represent a future condition (10-year flows), i.e., 2032. A standard growth rate of 2% per annum has been applied to through movements on Mapara Road.

The in:out split from the site is expected to be 15:85 in the AM peak period and the reverse in the PM peak, as is typical for residential areas.

Furthermore, the traffic flows obtained in the AM peak period have been assumed to be the reverse in the PM peak period. The distribution of trips to be generated by the proposed development in the peak periods is illustrated in the traffic diagrams (shown in Figure 13 and Figure 14).

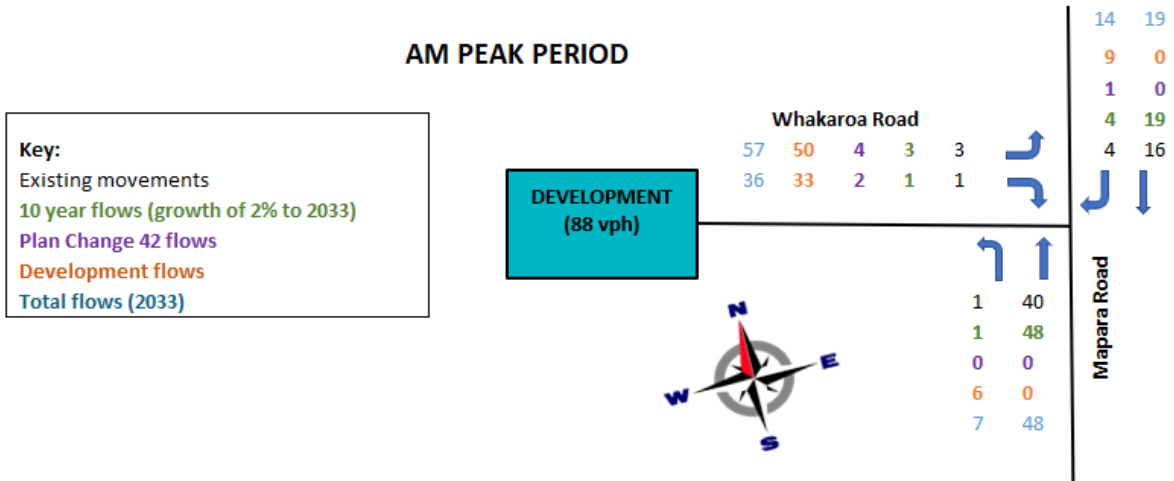


Figure 14: AM peak hour traffic flows

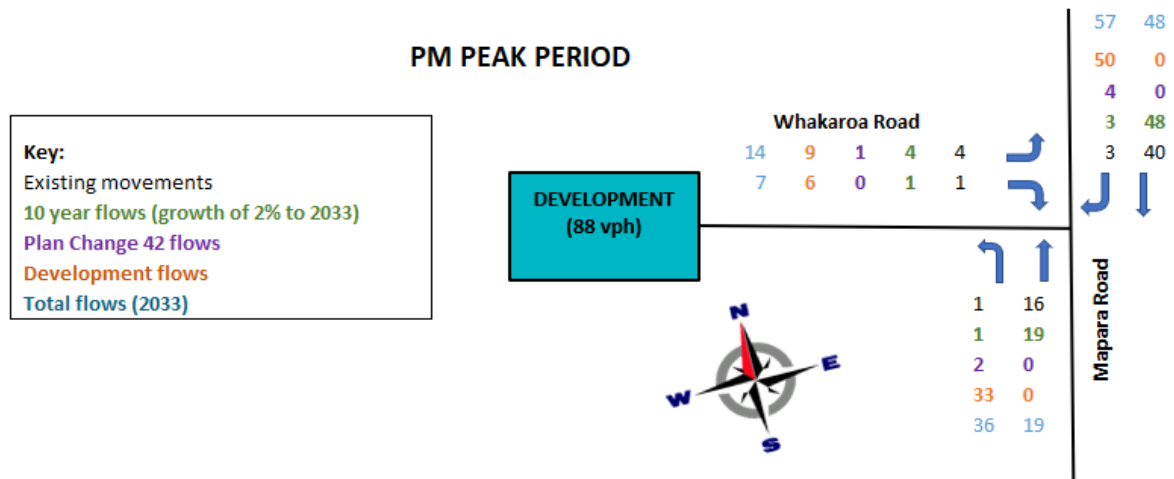


Figure 15: PM peak hour traffic flows

7. Traffic Effects

7.1. Intersection Performance

The impact of the expected traffic generated by the developed site applied to the volumes of the existing roading network (including a future 10-year assessment and the addition of the Plan Change 42 generated traffic volumes) has been assessed to determine the Practical Absorption Capacity of the Whakaroa Road / Mapara Road intersection. This has the purpose of assessing the ability of the intersection to absorb the traffic generated by the proposed development in peak hours. The results are shown in Table 4.

Table 4: Practical Absorption during Peak Hours

Intersection	Scenario	Peak period	Total volume (vph)	Practical Absorption Capacity of Minor Approach (vph)	Remaining Available Capacity (vph)	Degree of saturation
Whakaroa Road/Mapara Road	2023 Existing	AM	8	1107	1099	0.21
Whakaroa Road/Mapara Road	2033 Existing (including Plan Change 42)	AM	15	1035	1020	0.21
Whakaroa Road/Mapara Road	2033 (w/ development)	AM	107	947	840	0.29
	2023 Existing	PM	8	1074	1066	0.21
Whakaroa Road/Mapara Road	2033 Existing (including Plan Change 42)	PM	13	1147	1134	0.21
Whakaroa Road/Mapara Road	2033 (w/ development)	PM	78	1209	1131	0.25

* Based on critical acceptance gaps and follow-up headways from Austroads GRD Part 4A, Table 3.5

It is assessed that the required capacity is significantly less than the practical absorption capacity of the intersections in the vicinity of the site, indicating that the surrounding network can absorb the traffic to be generated by the developed site.

For the Whakaroa Road/Mapara Road intersection, degrees of saturation range from 0.21 in the existing situation to 0.29 in the AM peak for the developed situation. This indicates that the intersection would operate at a maximum of 29% of the available capacity in the future condition, suggesting that vehicles would be unlikely to experience poor levels of service. Delays and queueing would likely be minimal.

Therefore, it is concluded that the traffic flows are expected to be appropriately accommodated in the adjacent roading network with no significant adverse impacts.

8. Layout and Design

8.1. Internal Road Design

The proposed roading parameters comply with or exceed the requirements of the Taupō District Plan. Furthermore, the roading infrastructure is recommended to be constructed following the requirements for residential land use given in Figure 3.1R of the Taupō DC Engineering Code of Practice (ECOP) for Development of Land and section 6.5.10 of the District Plan, shown in Table 5.

Table 5: Roading infrastructure parameters

Lots served	Annual Daily Traffic	Target operating speed	Min. legal road width	Max. grade	Traffic / Carriageway	Parking	Min. Verge	Edging
≤ 100	< 1,500	100 km/h	20 m	10%	6.7 m	-	3.5 m	1.2 m grass

All the roads within the development site will be private. However, they will be designed in accordance with the TDC requirements. The target operating speed will be 50 km/h, and the main access road, from Whakaroa Road, will be 6.7 m wide. Turning heads will be provided at the end of all access roads.

8.2. Whakaroa Road & Mapara Road

The proposed development is expected to generate an additional 738 vpd on Whakaroa Road and Mapara Road (442 vpd to the north and 295 vpd to the south, of Mapara Road). In the future scenario (10-year flows, i.e., 2033), considering a fully developed site, the total volume on Whakaroa Road is expected to increase to around 900 vehicles per day (existing; 90, plus PC 42; 68, plus proposed; 738). Mapara Road will increase to approximately 1,150 vehicles per day.

Whakaroa Road is 6m to 7m wide typically, with three isolated locations where the width further narrows, through cuttings. The ECOP for a road carrying up to 1,500 vpd is required to be 6.7m wide (as per Table 5 above). The road is therefore under width in some sections to accommodate the level of expected traffic to be generated by this proposal and Plan Change 42 in accordance with the ECOP.

In general, it is expected that the road would need to be widened by up to 1m to achieve this standard, noting that some isolated sections (as discussed in Section 2.2.1) will be challenging to achieve.

It is recommended that widening is undertaken where feasible.

Areas that are constrained would require further cuttings and potentially impact on private land ownership along the corridor. There is no ability to confirm that access over private land is obtainable at this stage. It is therefore recommended that the applicant agree with Council appropriate mitigations if desirable widening is unobtainable. Suitable mitigations may include;

- Formation of passing areas;
- Reduced speed limits;
- Improved delineation and signage.

Mapara Road is approximately 6.9m wide and therefore no widening is required or expected.

8.3. Intersection design

8.3.1. Whakaroa Road / Mapara Road

The intersection is currently uncontrolled and features very limited delineation or guidance. This is due to the level of traffic currently using the intersection.

Given the increased level of traffic associated with this development, an assessment has been undertaken to ascertain if a right turn lane is required for safety and or capacity reasons.

Austrroads GTTM 2017 Part 6:2020 Figure 3.25 (provided in Figure 15) indicates that turning lanes are not required from a capacity perspective. This assessment used traffic flows from Figure 13 and Figure 14.

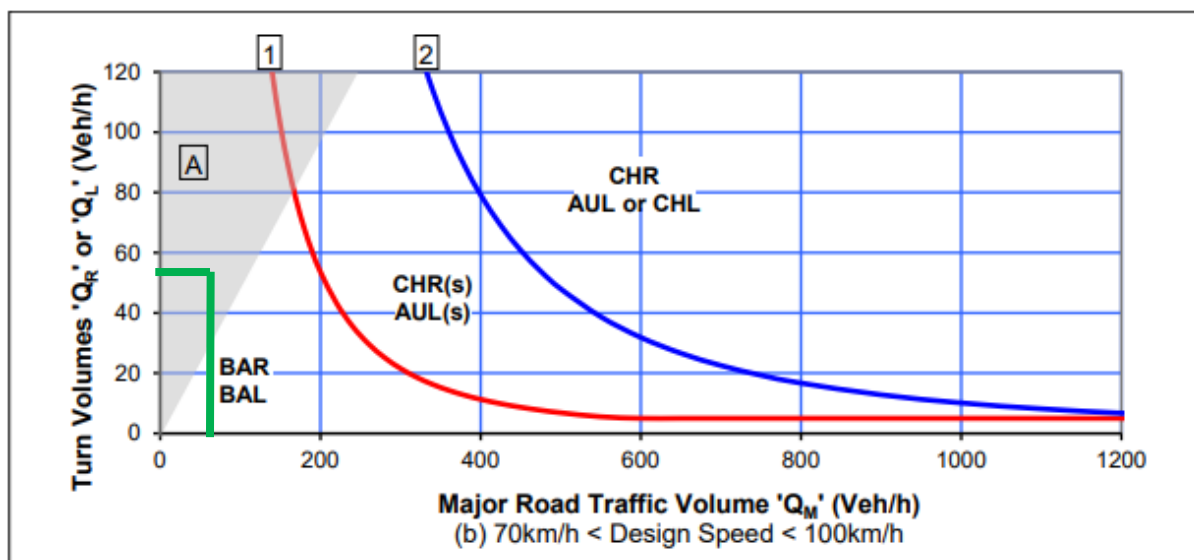


Figure 16: Turning warrants at Whakaroa Road/Mapara Road intersection (Figure 3.25(a) Austrroads GTM Part 6)

The Waka Kotahi planning policy manual Appendix 5B has guidance on accessway standards which also provide relevant guidance in this instance. For a road/accessway that has between 31 and 100 car movements per day, and heavy or slow-moving traffic, a Diagram E widening is required. See Figure 16.

This means the existing intersection, with the existing traffic volumes, warrants a Diagram E widening (an extra 2.5 m of seal width for right turn traffic either side of the intersection). This provision is currently not provided.

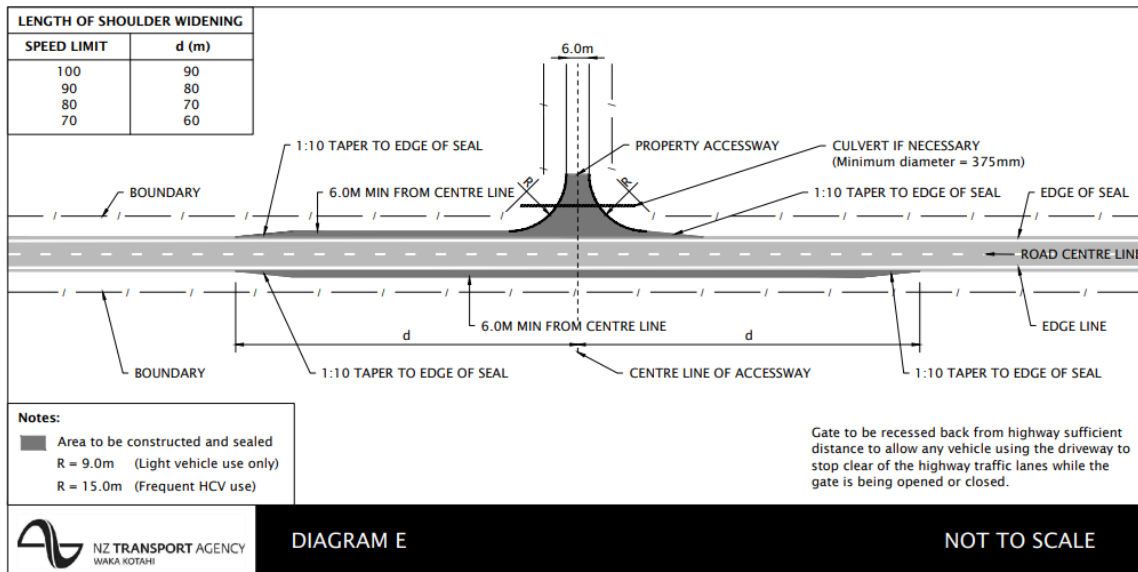


Figure 17: Waka Kotahi Diagram E widening

Although reasonable turning movements are proposed, with an additional 54 right turn movements into Whakaroa Road in the PM peak hour (proposed development plus Plan Change 42), the low northbound through movements on Mapara Road (19 vph) means there will be plenty of available gaps for right turning traffic with very few vehicles having to wait to turn. As stated earlier, there are no capacity constraints, and no vehicle queuing is predicted.

However, given the increase in traffic, and the safety considerations of this high-speed rural environment, it is recommended that the intersection includes the following upgrades to improve the level of safety at the intersection.

- Widen Mapara Road to provide for a right turn lane (although not required for capacity reasons, this is recommended for safety reasons)
- Install give way markings and signage;
- Install intersection Flag lighting;
- Replace black/white intersection chevron board with a yellow/black one;
- Install advance warning signs of the intersection ahead.

8.4. Parking Requirements

The minimum parking requirements have been removed from the district plan as per guidelines from the National Policy Statement for Urban Developments (NPSUD). New developments are required to provide sufficient parking to meet the anticipated demand. This is expected to be up to two parking spaces per lot in the rural residential environment. The design of the parking areas is to be in accordance with Section 6.3 of the Taupō District Plan.

8.5. Visibility Assessment

The minimum sight distance of 160 m for posted speeds of 100 km/h (on a district collector road) is

required at the crossing points (Section 6.5.3 of the Taupō District Plan). The achieved visibility at the crossing to/from the site is presented below.

Table 6: Visibility from Whakaroa Road onto Mapara Road

Required Sight Distance	Achieved visibility		
	North	South	Comply/Not Comply
160 m	270 m +	160 m	✓



Figure 18: Sight distance from the Whakaroa Road and Mapara Road intersection to the North



Figure 19: Sight distance from the Whakaroa Road and Mapara Road intersection to the South

This is for the existing intersection of Whakaroa Road and Mapara Road. Furthermore, the new accesses within the site are also expected to meet the sight distance requirements of 50 m on collector roads with a posted speed limit of 50 km/h.

8.6. Intersection Separation Distance

The Taupō District Plan requires a minimum separation distance of 60 m between vehicle crossings and intersections on a 100 km/h posted speed zone on a local road. The nearest vehicle crossing to the existing intersection is located approximately 72 m to the south, and on the true left side.

Separation distances are important to provide space between turning vehicles to avoid direct conflicts and reduced observation time between turning vehicles. The spacings listed above allow for clear intervisibility between vehicles and, therefore, are expected not to generate adverse effects.

Table 7: Intersection Separation Distances

Required Separation Distance	Achieved separation		
	North	South	Comply/Not Comply
60 m	76 m	72 m	✓

9. Conclusion

Based on the assessment detailed above, it is concluded that the proposed 115 sites and tourism lodge development can be appropriately accommodated within the local traffic and transportation environment, noting that the proposed site is intended to be included with the Rural Lifestyle Environment as part of Plan Change 42.

The traffic generation of the proposed 115 rural residential sites and tourism lodge with 30 accommodation units' development is expected to be approximately 738 vpd, and 98 vph in the peak hour. It is assessed that the local road of Whakaroa Road and the collector road of Mapara Road can accommodate the additional traffic flows (plus those from Plan Change 42) with some additional widening and supporting mitigation measures on Whakaroa Road.

While the peak hour traffic flows at the site are likely to coincide with the surrounding network peak, the development's traffic flows are expected to be absorbed by adjacent intersections and the existing roading network.

The internal roading layout, including the proposed development, complies with the requirements of the Taupō District Plan.

The minimum visibility is achieved on both approaches to existing Whakaroa Road and Mapara Road intersection.

Therefore, it is concluded that the traffic associated with the proposed development can be accommodated on the adjacent road network and that there are no traffic planning reasons to preclude the approval of the proposed development provided that the recommendations given in this report are followed.

10. Recommendations

Based on the findings of this report and the associated conclusions, it is recommended that the following be provided:

- The roading infrastructure is designed and constructed in accordance with the Taupō District Plan and Code of Practice for Development of Land;
- Turning heads with a minimum turning radius of 15 m are designed and constructed at the end of the new site access road;
- Upgrade the intersection of Whakaroa Road and Mapara Road to include a right turn lane with a Give Way controlled intersection, with appropriate signs, markings and a flag light;
- Widening of Whakaroa Road to a minimum width of 6.7 m along its entire 2.9 km length (noting isolated sections are currently only 4.5m to 5.5m wide and other supporting measures may be more appropriate);
- Discussions with Ministry of Education are required in regard to school bus pick up and drop off to ensure the existing pick-up/drop off point is safe and suitable for any increased usage.

11. Disclaimer

This report has been prepared by Urban Connection Limited for Te Tuhi Estate Limited and may only be used and relied on by Te Tuhi Estate Limited for the purpose agreed between Urban Connection Limited and Te Tuhi Estate Limited as set out in this report. By default, this means that Te Tuhi Estate Limited can use and rely on this report for the purposes of supporting the consent application.


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