



GREAT LAKE TAUPŌ
Taupō District Council

Proposed Private Plan Change 37- Nukuhau Taupō District Plan Submission Form

Office use

RMA Form 5

This form will be copied. Please do not print outside the frame.
If you need more space please attach additional pages to this form.

Submitter:

Name: Loic VAN HILLE

Organisation / On Behalf of:

Address for correspondence: 

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

I am /am not directly affected by an effect of the subject matter of this submission that:

- (a) adversely affects the environment; and
- (b) does not relate to trade competition or the effects of trade competition.

This is a submission on Private Plan Change 37 – Nukuhau

Please use a separate form for each provision of the Plan Change you wish to submit on

The specific provision of Plan Change 37 that my submission relates to is

Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

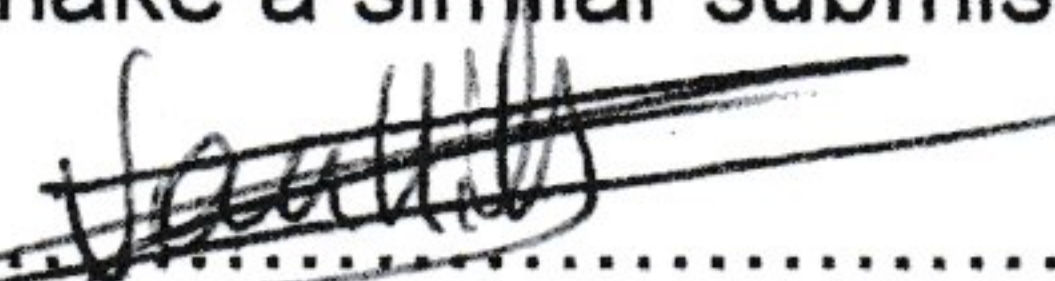
The increased population on this side of Control Gate bridge is too significant for the current infrastructure to support it efficiently. Control Gate bridge is too small to manage an other influx of cars. There is no services (gas station, supermarket, ...) on this side of the bridge to support an increase in the population.

I/We seek the following decision from the Taupō District Council:

Reconsidering the amount of infrastructure and services available for the community on this side of Control Gate bridge before trying to expand even more. Acacia Bay & Killoch recent growth is already putting enough strain on Control Gate bridge as it is. Best Regards, Loic.

I/we wish to be heard in support of my/our submission: Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed:  Date: 4/03/2021
(A signature is not required if you make your submission by electronic means.)

- Please return this form no later than 17:00 5 March 2021 to:
- Taupō District Council, 30 Tongariro Street, Private Bag 2005, Taupō Mail Centre, Taupo 3352; or
 - e-mail NukuhauPlanChange@taupo.govt.nz

Submitters are advised that the information supplied in written submissions may contain personal information within the meaning of the Privacy Act 2020. By taking part in this public submission process, submitters have agreed to any personal information (including names and contact details) which is contained in their submission being made available to the public as part of the consultation and decision making process. All information collected will be held by Taupō District Council. Submitters have the right to access and correct personal information. Following the submission period, a summary of submissions will be available on the Taupō District Council website.

Organisation:

Walnut Lane Limited

First name: Bruce & Martin**Last name:** Bartley & Frohlike

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

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- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

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Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Walnut Lane Limited

Resource Consent Submission

Application Details: Proposed Private Plan Change 37 - Nukuhau

We SUPPORT the application

Name: Bruce Bartley & Martin Frohlke

Organisation: Walnut Lane Limited

Contact: Martin Frohlke, PO Box 818, Taupo email: fritz.frohlke@gmail.com Tel: 021 322 328

Walnut Lane Ltd is a land development company which has purchased a 5 Ha block in the top western corner of the proposed plan change area known as 59 Watene Lane. The directors of Walnut Lane Limited are Bruce Bartley and Martin Frohlke.

Bruce Bartley is an experienced land developer having led the creation of more than 430 residential sections in the Taupo District including Cameron Drive, LochEagles, and Seven Oaks in Kinloch. These developments are recognised as higher quality projects delivering community and environmental benefits.

We are not trade competitors to other lands within the proposed plan change area.

YES we wish to receive further correspondence prior to the decision, via email.

The parts of the application supported are:

We support this plan change as we believe the change in land use will deliver sustainable, significant and positive economic benefits for the Taupo District.

The reasons for making our submission are:

1. Taupo is growing faster than expected with a District Population at 40,100 in 2020, already ahead of the maximum peak population of 39,100 forecasted in the TDC 2050 Plan.
 - a. There are several drivers for this growth:
 - b. Internal relocation within NZ. The growth rate of greater than 2% per annum is not delivered by births minus deaths, it is delivered from internal migration to Taupo from elsewhere in New Zealand.
 - c. Work from home. The Covid lockdowns have accelerated the trend towards working from home. This has enabled a sector of people to disconnect from having to live close to their employment, and able to live elsewhere.
 - d. Lifestyle choices. As our society matures and more people have more choice, there is an increasing number choosing to relocate away from the large urban centres. Taupo offers an active outdoors life in a pristine and safe environment.
 - e. Taupo offers lower cost housing and living than in the larger urban areas.

None of these drivers are likely to cease in the foreseeable future, so neither will the population growth rate slow or decline. As a community Taupo needs to prepare for more growth, and manage the negative impacts while enjoying the positive benefits of growth.

Sufficient land supply underpins this ongoing growth, and this Nukuhau Plan change is a step in the right direction.

2. Taupo's land supply for residential use is constrained by the ETA.
 - a. The natural and logical direction for further expansion is to the west. All services are available or can be built, following the previous developments such as Vauclose up and behind the original Nukuhau settlement.
3. Transport connections will be required and there are good solutions for this.
 - a. Taupo will eventually become in need of a second river crossing. Additional development of Nukuhau will assist in providing resources to enable that crossing. Such resources include:
 - b. Development Contributions from land development.
 - c. Increased rates income for Taupo District Council.
 - d. Increased traffic improving the cost/benefit ratio for external funding support
4. The realignment of Poihipi Road will improve the access to the fast growing Kinloch urban area
 - a. The traffic to and from Kinloch will use the realigned Poihipi Road.
 - b. The Poihipi/Wairakei Drive intersection has always been problematic. Eliminating that intersection with a new roundabout a few hundred meters to the North will be a major improvement.
5. Increasing the supply of land for residential use aligns with Central Government policies to improve housing affordability.
 - a. At present NZ has a shortage of supply of residential housing. Taupo could well find itself in the same situation as the eastern lands are rapidly consumed, if sufficient other land is not zoned for residential use.
6. Increasing land supply closer to the township
 - a. This development is close to Taupo CBD and will allow people to walk and cycle to town. This land becoming residential will deliver a more compact urban form, increasing efficiency for servicing and enabling increased adoption of new transport solutions such as e-bikes and e-scooters.
7. Addition of a commercial area will support the new residential areas and the existing residential areas and reduce the need to cross into the CBD so frequently.

On this basis, we support the application.

Aspects that could be improved

1. The stormwater design seems to take unnecessarily large areas of our land for stormwater gullies. This is a significant financial burden for our land. The gullies will be needed for stormwater but these should be the subject of a specific design at the time of construction. Waikato Regional Council has clear design standards for best practice for stormwater management.

Proposed Remedy

Add wording to state that the proposed stormwater flow paths are "preliminary and indicative only", to be defined by a specific design at the time of construction.

2. Future road alignment

A small part of the proposed future roading runs across our property and this is a significant burden for our land. The road layout seems to allow for long term future growth areas beyond the areas which are the subject of this plan change. As such their use will be at some far distant time and they are thus only indicative on the proposed plan.

Proposed Remedy

The roading hierarchy and future alignments should be defined at the time of construction. This plan change should add wording to state that the future roading paths are "preliminary and indicative only".

YES we wish to attend the hearing

YES we do wish to speak at the hearing

Signed:

Martin Frohlike, Director, Walnut Lane Ltd

Bruce Bartley, Director, Walnut Lane Ltd

Two handwritten signatures in blue ink. The top signature is a stylized, cursive signature, likely belonging to Martin Frohlike. The bottom signature is also cursive and appears to be Bruce Bartley's.

17 February 2021

First name: Laurie

Last name: Burdett

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Laurie Burdett Form5



Proposed Private Plan Change 37- Nukuhau Taupo District Plan

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Submission Form

GREAT LAKE TAUPŌ
Taupo District Council

Office use

RMA Form 5

This form will be copied. Please do not print outside the frame.
If you need more space please attach additional pages to this form.

Submitter:

Name: LAURIE BURDETT

Organisation / On Behalf of:

Add: [Redacted]

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

- I am /am not directly affected by an effect of the subject matter of this submission that:
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This is a submission on Private Plan Change 37 – Nukuhau

Please use a separate form for each provision of the Plan Change you wish to submit on

The specific provision of Plan Change 37 that my submission relates to is TRAFFIC

Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

^{PARTIAL}
I support the Pookipi Road re alignment, a Traffic lights & other associated roading adjustments. However I feel that the effect of the traffic from the sub division on the access across the Control Jctes Bridge will be more than minor.

I/We seek the following decision from the Taupo District Council:

I feel the sub division is appropriate but there needs to be more work on how traffic numbers can be reduced. Especially in relation to Council's deduction on climate change.

I/we wish to be heard in support of my/our submission: Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed: [Signature] Date: 4-03-21
(A signature is not required if you make your submission by electronic means.)

Please return this form no later than 17:00 5 March 2021 to:

- Taupo District Council, 30 Tongariro Street, Private Bag 2005, Taupo Mail Centre, Taupo 3352; or
- e-mail NukuhauPlanChange@taupo.govt.nz

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Organisation:

Waikato Regional Council

First name: Hannah**Last name:** Craven

- I could
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I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
WRC submission- PPPC37 (Nukuhau) to TDC DP

File No: 25 12 00
Document No: **18098079**
Enquiries to: Hannah Craven



5 March 2021

Taupō District Council
Private Bag 2005, Taupō Mail Centre 3352

Email: NukuhauPlanChange@taupo.govt.nz

Private Bag 3038
Waikato Mail Centre
Hamilton 3240, NZ

waikatoregion.govt.nz
0800 800 401

Dear Sir/Madam

Waikato Regional Council Submission to Proposed Private Plan Change 37 (PPPC37) to the Taupō District Plan

Thank you for the opportunity to make a submission on the Proposed Private Plan Change 37 (PPPC37) to the Taupō District Plan. Please find attached the Waikato Regional Council's submission in regarding this document. Please note this submission was signed off under delegated authority, and will be retrospectively presented to our Strategy and Policy Committee at the next available opportunity.

Waikato Regional Council looks forward to being involved in further discussion regarding the development of the documents object of this submission.

Should you have any queries regarding the content of this document please contact Hannah Craven, Student Policy Advisor, Policy Implementation directly on (07) 8592831 or by email Hannah.craven@waikatoregion.govt.nz.

Regards,

A handwritten signature in black ink, appearing to read "Tracey May". The signature is stylized and cursive.

Tracey May
Director, Science and Strategy

Submission from Waikato Regional Council on Proposed Private Plan Change 37 (PPPC37) to the Taupō District Plan

Introduction

1. Waikato Regional Council (WRC) appreciates the opportunity to make a submission to Proposed Private Plan Change 37 (PPPC37). WRC's primary interest is in relation to the Waikato Regional Policy Statement (WRPS). District Plans, including Plan Changes such as this one, are required to give effect to the RPS (RMA s75(3)(c)).
2. In this case, our primary interests relate to gully realignment, stormwater, ecology and public transport. The plan change as it currently stands, is not considered to adequately give effect to the WRPS, due to concerns around gully realignment.

Submitter details

Waikato Regional Council
Contact person: Hannah Craven (Policy Implementation)
Email: Hannah.craven@waikatoregion.govt.nz
Phone: (07) 8592831

Post: Private Bag 3038
Waikato Mail Centre
Hamilton 3240

I could not gain an advantage in trade competition through this submission

I am not directly affected by an effect of the subject matter of the submission that:

- a) does not adversely affect the environment; and
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SUBMISSION ON Proposed Private Plan Change 37 (PPPC37)

Provision	Support/Oppose	Submission	Relief Sought
<i>1. Gully realignment</i>			
Proposed gully realignment	Oppose	<p>WRC opposes the realignment of natural gully systems which is not supported by the Waikato Regional Policy Statement (WRPS). The WRPS states that rural-residential development should 'be recognised as a potential method for protecting sensitive areas such as...gully-systems' (Development principle 6A, h).</p> <p>To recreate the same hydraulic conditions and mitigate all effects is difficult to achieve. The pumice soils in the Taupō area are highly erosive and the realigned gullies will be difficult to maintain on a permanent basis.</p>	Amendments to the proposal to avoid effects to the existing gully system, including the requirement for a Gully Management Plan.
<i>2. Stormwater</i>			
Stormwater management strategy and Appendix F: Stormwater Management Report	Support subject to considerations	<p>WRC recognises the proposed stormwater management strategy incorporates the WRC Stormwater Management Guidelines and is consistent with discussions between the developer and WRC staff in 2019.</p> <p>We wish to reiterate the following points:</p> <ul style="list-style-type: none"> - WRC's submission on Taupo 2050 in 2018 recommended that areas proposed for future growth are not subject to natural hazard risk to maintain consistency with the WRPS. - A <u>conservative</u> approach to stormwater design is required in the structure plan area due to highly erodible pumice soils and the history of flooding in the vicinity. - We strongly support the recommendation to line any pond or wetland to reduce tomo risk. - Any proposal for stormwater discharge will need a resource consent from WRC and will be technically reviewed at the time of the application on its merits using best 	No changes sought, provided a comprehensive approach is taken to stormwater management as detailed in the Plan Change documents.

		management practices detailed in the WRC Stormwater Management Guidelines.	
<i>3. Ecology</i>			
Appendix J: Ecological Assessment	Support	<p>We agree with the recommendations of the Ecological Assessment to mitigate the following potential effects identified:</p> <ul style="list-style-type: none"> - Effects on long-tailed bats (presence of roost trees and flight paths) - Effects on NZ pipits (existence of habitat which could support NZ pipit) - Effects on lizards (existence of lizard habitat) - Effects on watercourses downstream of the plan change area (in relation to sediment discharges). 	No changes sought.
<i>4. Public transport</i>			
Appendix E: Traffic Impact Assessment	Support subject to considerations	Given the location and size of the development, any bus route diversion into the area will create a significant delay which will make existing services less desirable. WRC recommends considering a new bus route servicing the plan change area and nearby suburbs.	Consideration of public transport options to service the structure plan area.

FURTHER INFORMATION AND HEARINGS

WRC **wishes to be heard** at the hearings for Proposed Private Plan Change 37 (PPPC37) in support of this submission and is prepared to consider a joint submission with others making a similar submission.

WRC **could not** gain an advantage in trade competition through this submission.

Organisation:

Bike Taupo Advocacy Group

First name: Rowan**Last name:** Sapsford

- I could
- I could not

Gain an advantage in trade competition through this submission

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I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Bike Taupo Form 5 and submission



Proposed Private Plan Change 37- Nukuhau Taupō District Plan Submission Form

Office use

RMA Form 5

*This form will be copied. Please do not print outside the frame.
If you need more space please attach additional pages to this form.*

Submitter:

Name: Rowan Sapsford

Organisation / On Behalf of: Bike Taupō Incorporated

Address for correspondence: PO BOX 1850 Taupo, 3351

Phone: 021 744 957

E-mail:

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

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Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

Please see attached submission

I/We seek the following decision from the Taupō District Council:

Please see attached submission

I/we wish to be heard in support of my/our submission: Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed: *RS* Date: 04 March 2021

(A signature is not required if you make your submission by electronic means.)

Please return this form no later than 17:00 5 March 2021 to:

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TAUPŌ 3351

bike@bikeTaupō.org.nz
Lynette Braithwaite (Chairperson) +64 (27) 752 9479
Melissa Johnson (Administrator) +64 (27) 280 4005

4 March 2021

BIKE TAUPŌ SUBMISSION TO PRIVATE PLAN CHANGE 37 – NUKUHAU

Please find attached a submission from Bike Taupō private plan change 37.

Please note that we are more than happy to present our comments in person at any hearing.

Yours Sincerely

A handwritten signature in black ink, appearing to read "Lynette Braithwaite", is written over a light grey rectangular background.

Lynette Braithwaite

Bike Taupō Chairperson



PO Box 1850
TAUPŌ 3351

bike@bikeTaupō.org.nz
Lynette Braithwaite (Chairperson) +64 (27) 752 9479
Melissa Johnson (Administrator) +64 (27) 280 4005

Full Name of Party : Bike Taupō Advocacy Group (inc)

Contact Person : Rowan Sapsford

Contact email : rowan@bikeTaupō.org.nz

Full Postal Address : PO Box 1850, Taupō 3351

Phone Number : 021 744 957

Date : March 4, 2021

No. of Pages : Six (including the covering letter)

BIKE TAUPŌ SUBMISSION TO PROPOSED PRIVATE PLAN CHANGE 37 - NUKUHAU

Introduction

Bike Taupō is a cycle advocacy group which provides the Taupō community with a voice for cycling. The organisation was formalised in 2002 and currently has over 3,500 registered members.

To date Bike Taupō has helped create a cycling culture within the district through constructing and maintaining over 200km off road tracks, partaking in continuous dialogue with regulatory authorities; promoting cycling and cycle safety and playing an active part in Taupō's growing cycling community.

Cycling is an important part of the Taupō economy. Bike Taupō alone has an asset base worth approximately \$4 million dollars, making Bike Taupō a significant investor in the local community.

In addition, Bike Taupō is also very concerned about the safety of cyclists in the Taupō District especially those members of our community who currently or could cycle in our urban areas. If Taupō gets a reputation as an unsafe place to ride it could result in significant economic impacts, not to mention the actual physical harm to residents and visitors.

Taupō is now an internationally recognised riding destination. In 2012, Taupō received silver level Ride Centre status from the International Mountain Bike Association. Taupō is one of only five silver level ride centres globally and the only one in the Southern hemisphere.

We believe that biking is a very important part of Taupō. As well as providing health and recreation benefits it is also responsible for numerous jobs (we have five bike shops in Taupō



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and one in Turangi!!!), environmental initiatives and also significant visitor spend. Now more than ever biking is very popular. During and after lockdown, more and more individuals and whanau, young and old are riding bikes. The upgrades to the lakefront pathway in Taupō are testament to the volume of people out and about on bikes. The counters on our trails have also shown a steady increase in people out riding since March this year as are the increased number of bikes in school bike stands. We also see more and more people riding for leisure and also commuting to work and school.

Biking is a strength of our district and should be celebrated and grown.

What is currently missing is a safe urban riding network that enables locals and visitors to traverse our urban areas easily and safely. Bike Taupō believes that the safety of all of our road users is an important matter and has been advocating to TDC for over a decade on this point.

Submission

With the scale of the proposed development, it is important that there is significant consideration and provision for people who ride bikes.

Bike Taupō does not oppose the proposed new development but is concerned that there is a lack of consideration of the effects that the increase in traffic will have on the safety of cyclists in the vicinity of the plan change area.

Bike Taupō does not feel that an appropriate assessment has been made of these effects and is unable to support the plan change progressing until it is shown that there will be no adverse effects on cyclist safety.

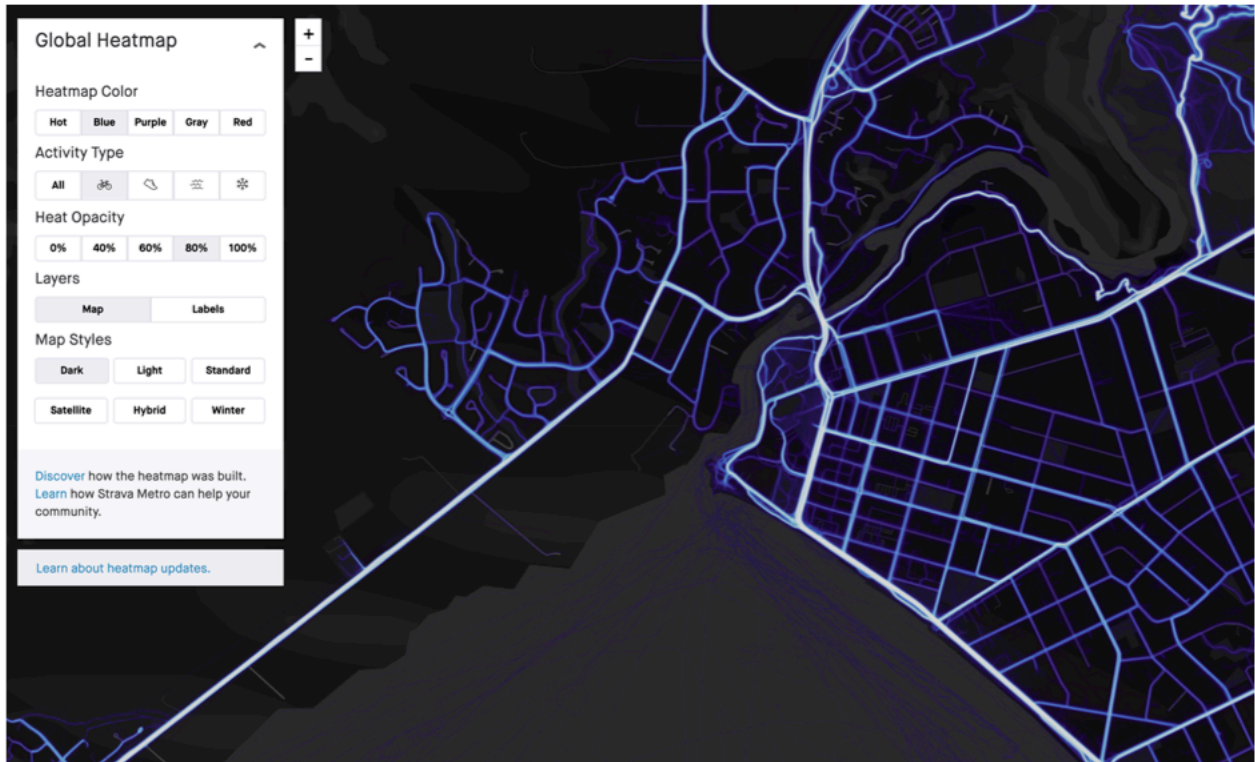
If possible, Bike Taupō would see a positive effect on cycle safety through the provision of appropriate cycling safety infrastructure within and around the area of the proposed development. There has been an increased amount of development in the Nukuhau area over the past ten years. There appears to be a significant growth in the use of Acacia Bay Road and Norman Smith Street as a result. Any additional development will increase the traffic loading on those roads. Within the current urban area there are no specific cycle lanes present. Development such as this proposed are opportunities to address this shortfall.

As can be seen on the attached Strava Heat Map¹ Poihipi Road, Norman Smith Street and Acacia Bay Roads are popular routes by riders who use the fitness App Strava. Note that the brighter and thicker the line the higher its use.

¹ <https://www.strava.com/heatmap#14.92/176.05680/-38.67931/hot/ride>

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 Lynette Braithwaite (Chairperson) +64 (27) 752 9479
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Specifically, within the proposed plan change there does not appear to be any consideration of the impact of the increased levels of traffic on cycle safety especially at the intersection of Norman Smith and Acacia Bay roads. This is not a cycle friendly intersection and the increased traffic load will make it less safe for cyclists. This is especially important at peak times when more people are commuting to work or school by bike.

The impact of additional traffic on the safety of students who ride to Saint Patricks School on Acacia Bay Road has not been considered. Neither is there recognition or provision for those students who currently and will in the future, ride into town to school.

Bike Taupō does support the use of traffic lights at the proposed new Poihipi Road – Wairakei Drive intersection. Traffic lights are generally safer for cyclists than the existing intersection and round-a-bouts etc.

Bike Taupō supports the new cycle access proposed for the new stormwater and recreation reserves.

Plan Change Document

We have reviewed the plan change document as well as the transport assessment. Our specific comments on the plan change document which support or comments above are as follows.

Section 6 Other relevant documents – There is no mention or consideration of the recently adopted Taupo District Transport Strategy 2020, specifically section 3: Walking and cycling friendly to support sustainable choices. Page 16 of this document notes the following:

Increased traffic is creating barriers and safety concerns, especially for pedestrians and cyclists. As part of our intersection and corridor improvement programme [safety action 1.3 refers], we will put priority on improving intersections and road crossings to support safe and easy connections of these paths and networks.

Any decision by Council on the proposed plan change needs to be cognisant of this strategy.

Section 7.2 Transportation Effects – There is no clear consideration of the effects of the proposed development on cycle safety especially at key intersections and around the school.

The proposed pedestrian access and cycleways are supported.

Section 7.2.2 considers the 2010 Walking and Cycling Strategy not the new one. Figure 7.3 which is taken from the 2010 document shows proposed cycle lanes along Acacia Bay Road and Norman Smith Street. Neither of these cycle lanes have been formed and it is submitted that they should be prior to the proposed development proceeding.

It is not clear how the development will ‘encourage’ sustainable transport options and also it is unclear how the development links to Taupō’s cycle and shared path network along Acacia Bay road.

Section 7.2.3 It is unclear whether the traffic generation and intersection modelling considered cyclists and the impact of cyclists (and pedestrians) using and crossing existing roads in the vicinity of the development. The Norman Smith Street and Acacia Bay Road intersection is challenging for cyclists, especially those riding up Norman Smith and wanting to turn right onto Acacia Bay Roads. Cyclists going north straight through Acacia Bay often have to go onto the pavement to be out of the flow of traffic.

The increased distance to Wairakei Drive may now mean that more cars will favour the use of this intersection.

Section 7.4 Landscape and Visual Effects – Bike Taupō supports the proposed shared use stormwater reserves with pedestrian and cyclist access.

Section 8 Engagement – Bike Taupō were not directly notified of the engagement process and were unaware of it. We did not participate as a result. An email was sent to the applicants on 26 November 2020 seeking more information on active transport options in the proposed development, however no response was received.



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bike@bikeTaupo.org.nz
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Section 9.3 Part 2 of the RMA Assessment – there is no consideration of Section 5(2) as it relates to the health and safety of cyclists, nor Section 7i through enabling safe cycling and the associated benefits to climate change of more people riding.

Section 9.5 Waikato Regional Policy Statement – in respect to the assessment of Policy 6A.i.iv – it is not clear how the development will avoid remedy or mitigate effects on the use of the existing roadway's by cyclists, especially students travelling to and from school at peak times.

Section 9.6 Taupo District Plan Objective 3e.2.2 policy v – the proposed plan change does not adequately take into account the safe functioning of surrounding infrastructure as it relates to the safe use of that infrastructure by cyclists.

Section 9.6 Taupo District Plan Objective 3e.2.3 policy iv - the proposed plan change does not adequately consider the safe and efficient functioning of the surrounding roading networks as it relates to the safe use of those networks by cyclists.

Section 10 Other Relevant Documents – There is no mention or consideration of the recently adopted Taupo District Transport Strategy 2020, specifically section 3: Walking and cycling friendly to support sustainable choices.

Section 32 Evaluation – The evaluation of benefits and costs for the preferred option states that there will be no identifiable social costs. This evaluation has not considered that the increased traffic loadings will have effects on the safe use of existing roads and intersections by cyclists – especially those commuting to Taupo town and schools at peak times.

First name: Garrick

Last name: Workman

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Garrick Workman Form5



Proposed Private Plan Change 37- Nukuhau

Taupō District Plan

Submission Form

GREAT LAKE TAUPŌ
Taupō District Council

Office use

RMA Form 5

This form will be copied. Please do not print outside the frame.
If you need more space please attach additional pages to this form.

Submitter:

Name: GARRICK WORKMAN

Organisation / On Behalf of: N/A

Address for correspondence:.....

NUKUHAU
TAUPO

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

I am /am not directly affected by an effect of the subject matter of this submission that:

- (a) adversely affects the environment; and
(b) does not relate to trade competition or the effects of trade competition.

This is a submission on Private Plan Change 37 – Nukuhau

Please use a separate form for each provision of the Plan Change you wish to submit on

The specific provision of Plan Change 37 that my submission relates to is traffic volumes

Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

At peak times new traffic is backed right up to the
LOOK-OUT on the corner of Huka Falls Road and WAIRAKEI
DRIVE. This will get progressively worse as this development
gets underway. Council needs to bring forward its plan
to widen WAIRAKEI Drive and Coastal Gates bridge.

I/We seek the following decision from the Taupō District Council:

That the TDC brings forward its plan to construct
another bridge crossing and road widening works
to cope with the increased traffic volumes this develop-
ment along with the growth in population will bring.

I/we wish to be heard in support of my/our submission: Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed: [Signature] Date: 5th March 2021

(A signature is not required if you make your submission by electronic means.)

Please return this form no later than 17:00 5 March 2021 to:

- Taupō District Council, 30 Tongariro Street, Private Bag 2005, Taupō Mail Centre, Taupo 3352; or
- e-mail NukuhauPlanChange@taupo.govt.nz

Submitters are advised that the information supplied in written submissions may contain personal information within the meaning of the Privacy Act 2020. By taking part in this public submission process, submitters have agreed to any personal information (including names and contact details) which is contained in their submission being made available to the public as part of the consultation and decision making process. All information collected will be held by Taupō District Council. Submitters have the right to access and correct personal information. Following the submission period, a summary of submissions will be available on the Taupō District Council website.

First name: John and Ali

Last name: Wilks

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
John and Ali Wilks Form 5



Proposed Private Plan Change 37- Nukuhau

Taupō District Plan

Submission Form

GREAT LAKE TAUPŌ
Taupō District Council

Office use

RMA Form 5

This form will be copied. Please do not print outside the frame. If you need more space please attach additional pages to this form.

Submitter:

Name: JOHN & ALI WILKS

Organisation / On Behalf of: 

Address for correspondence: NUKUHAU T

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

I am /am not directly affected by an effect of the subject matter of this submission that:

- (a) adversely affects the environment; and
- (b) does not relate to trade competition or the effects of trade competition.

This is a submission on Private Plan Change 37 – Nukuhau

Please use a separate form for each provision of the Plan Change you wish to submit on

The specific provision of Plan Change 37 that my submission relates to is ALL OF IT

Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

DE-VALUATION IN OUR PROPERTY
YEARS OF NOISE POLLUTION
LOSS OF PRIVACY
LOSS OF VIEWS

I/We seek the following decision from the Taupō District Council:

THAT THE PROPOSAL IS REJECTED - TAUPŌ'S
INFRASTRUCTURE CANNOT SUSTAIN ANOTHER LARGE
HOUSING DEVELOPMENT.

I/we wish to be heard in support of my/our submission: Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed:  Date: 5/3/2021

Please return this form no later than 17:00 5 March 2021 to:

- Taupō District Council, 30 Tongariro Street, Private Bag 2005, Taupō Mail Centre, Taupo 3352; or
- e-mail NukuhauPlanChange@taupo.govt.nz

Submitters are advised that the information supplied in written submissions may contain personal information within the meaning of the Privacy Act 2020. By taking part in this public submission process, submitters have agreed to any personal information (including names and contact details) which is contained in their submission being made available to the public as part of the consultation and decision making process. All information collected will be held by Taupō District Council. Submitters have the right to access and correct personal information. Following the submission period, a summary of submissions will be available on the Taupō District Council website.

First name: Phil
Last name: White

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Phil White Form 5



Proposed Private Plan Change 37- Nukuhau

Taupō District Plan

Submission Form

GREAT LAKE TAUPŌ
Taupō District Council

Office use

RMA Form 5

This form will be copied. Please do not print outside the frame. If you need more space please attach additional pages to this form.

Submitter:

Name: Phil White

Organisation / On Behalf of: —

Address for correspondence: 

I could /could not gain an advantage in trade competition through this submission.
If you could gain an advantage in trade competition through this submission please answer the following question:
I am /am not directly affected by an effect of the subject matter of this submission that:
(a) adversely affects the environment; and
(b) does not relate to trade competition or the effects of trade competition.

This is a submission on Private Plan Change 37 – Nukuhau
Please use a separate form for each provision of the Plan Change you wish to submit on
The specific provision of Plan Change 37 that my submission relates to is Section 7.2
Other identification e.g. attachment/appendix/paragraph Transportation Effects

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:
Docherty Drive has been designed as a key collector road able to take high traffic volumes and link into Pohipi Road. But according to this submission it will connect into a relatively quiet section of Acaea Bay Road near a school and proposed new shops. It doesn't make sense.

I/We seek the following decision from the Taupō District Council:
Reuse the proposal so that Docherty Drive feeds into Watene Lane, or continues north to eventually join Pohipi Road.

I/we wish to be heard in support of my/our submission: Yes No
If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No
Signed: Phil White Date: 5/3/2021
(A signature is not required if you make your submission by electronic means.)

Please return this form no later than 17:00 5 March 2021 to:
• Taupō District Council, 30 Tongariro Street, Private Bag 2005, Taupō Mail Centre, Taupo 3352; or
• e-mail NukuhauPlanChange@taupo.govt.nz

Submitters are advised that the information supplied in written submissions may contain personal information within the meaning of the Privacy Act 2020. By taking part in this public submission process, submitters have agreed to any personal information (including names and contact details) which is contained in their submission being made available to the public as part of the consultation and decision making process. All information collected will be held by Taupō District Council. Submitters have the right to access and correct personal information. Following the submission period, a summary of submissions will be available on the Taupō District Council website.

Organisation:

Contact Energy Limited

First name: Todd

Last name: Baldwin

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Contact Energy Ltd- Submission on proposed Plan Change 37



Submission on Proposed Private Plan Change 37 – Nukuhau

To: Taupō District Council

Private Bag 2005

Taupō 3352

Via Email: NukuhauPlanChange@taupo.govt.nz

From: Contact Energy Limited (“**Contact**”)

Private Bag 2001

Taupō 3352

Attention: Todd Baldwin

Email: Todd.Baldwin@contactenergy.co.nz

Phone: 022 5350239

Contact could not gain advantage in trade competition through this submission.

This submission relates to the whole of Proposed Private Plan Change 37 – Nukuhau (“**Plan Change 37**”).

Contact supports in part, and opposes in part, aspects of Plan Change 37 as set out in this submission and seeks amendments to Plan Change 37.

SUBMISSION

Contact Energy Limited

Contact is the second largest electricity generator / retailer in New Zealand with a flexible and largely renewable portfolio of electricity generation assets. Contact owns and operates 11 power stations across the country and produces 80-85% of its electricity from renewable hydro and geothermal resources. Contact is New Zealand's largest producer of renewable electricity from geothermal resources with the operation of its Wairākei A and B, Wairākei Binary Plant, Poihipi Road, Te Mihi, Ohaaki and Te Huka Power Stations.

Contact's Landholdings and Other Property Interests

Figure 1 shows Contact's landholdings and other property interests in the vicinity of the land covered by Plan Change 37.

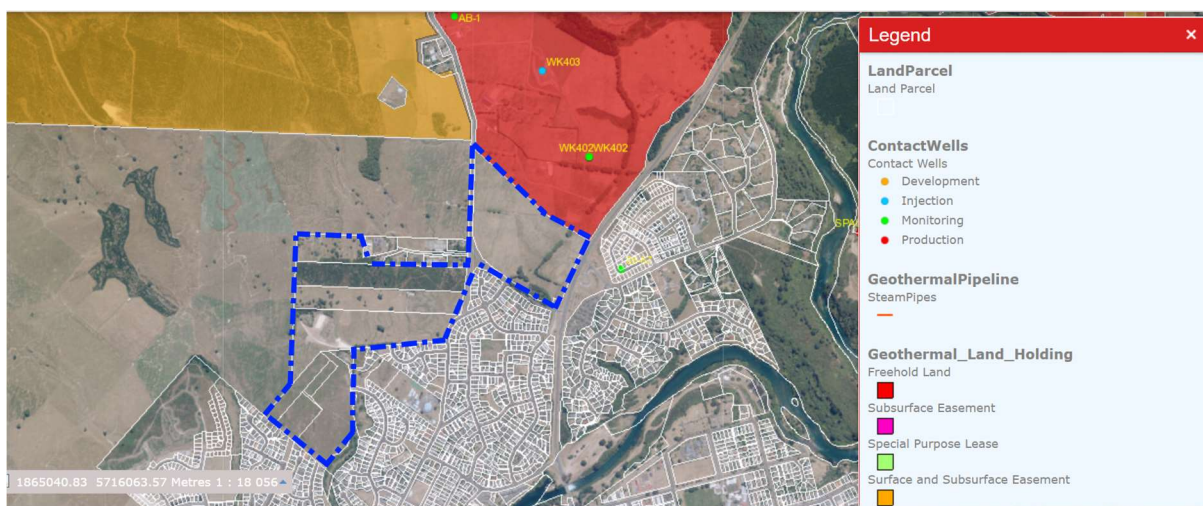


Figure 1 – Contact's Landholdings and Property Interests

Contact is the owner of land immediately north of, and adjoining, part of the land forming part of Plan Change 37 (shown in red on Figure 1). Contact undertakes activities on this land associated with the development and use of the Wairākei-Tauhara Geothermal System for electricity generation purposes. This includes well drilling and testing, the use of geothermal wells (predominantly for the reinjection of Separated Geothermal Water (SGW)) and pipelines.

Contact also holds surface and sub-surface rights in relation to the land owned by Landcorp on the western side of Poihipi Road (shown in brown on Figure 1).

An encumbrance 7482571.4 is held by Contact in relation to the part of the land covered by Plan Change 37 between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060). That encumbrance sets out a range of obligations on the land owner(s) to avoid a range of potential adverse effects. However, it is not sufficient for the purposes of avoiding reverse sensitivity effects, particularly in relation to complaints or objections to applications by Contact on the grounds of concerns about noise, odour, lighting or effects on any other aspects of amenity.

Resource Consents Held by Contact

Contact holds a suite of resource consents issued by the Waikato Regional Council (“**WRC**”) which authorise activities associated with the development and use of the Wairākei-Tauhara Geothermal System for renewable electricity generation purposes. One of those resource consents is Consent 116786 which, subject to various conditions, authorises Contact to:

“discharge up to 95,000 tonnes per day of geothermal water, steam condensate, cooling water blow-down, suspended material, and added chemicals into land and underground water through reinjection wells within those areas of the Wairākei- Tauhara Geothermal System more particularly shown as the area inside the yellow boundary on Plan 124922-RC01 attached as Schedule One, but excluding the yellow hatched areas shown on that plan for a period to expire 35 years after the date of the grant of this consent”

The area to which Consent 116786 relates is shown on Figure 2 below.

Along with various other resource consents for drilling, Contact also holds Resource Consent 115758 to drill exploratory wells below the water table in the Wairakei South area. This enables drilling activities specifically within the land shown in Figure 3 below.

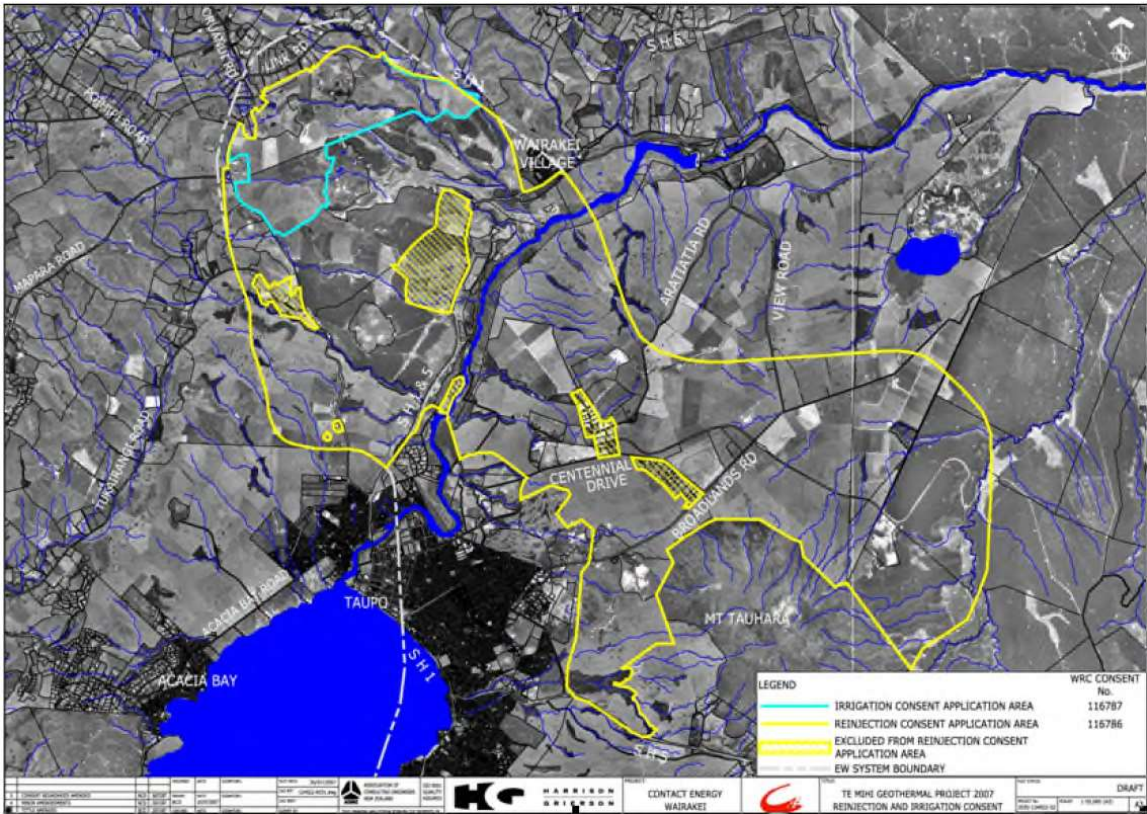


Figure 2 – Plan 124922-RC01

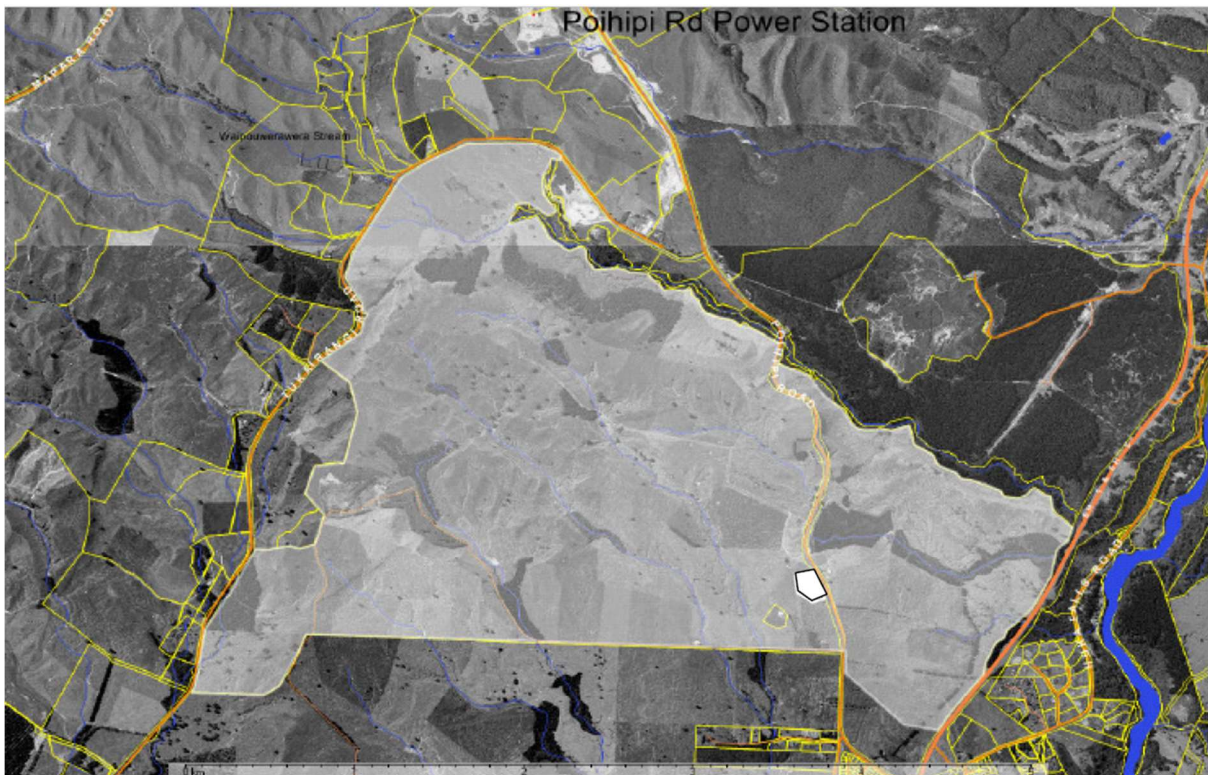


Figure 3 – Plan RC 115758

The consent areas for Consents 116786 and 115758 includes Contact's land immediately north of, and adjoining, the area covered by Plan Change 37 between Poihipi Road and Wairākei Drive. It also includes land owned by Landcorp on the western side of Poihipi Road in close proximity to the area covered by Plan Change 37.

Land Use Status of Contact's Activities

Contact's geothermal related activities on its land in the Rural Environment (including its land to the north of the land covered by Plan Change 37) are provided for as permitted activities under Rule 4b.2.4 in the Taupō District Plan (being the continued operation of a geothermal steamfield and associated structures). These activities (existing and future activities) are part of the existing environment for the purposes of assessing Plan Change 37. Of note, in this regard, is the fact that, apart from minor upgrading (which is subject to noise performance standards), the activities permitted under Rule 4b.2.4 are not subject to any performance standards.

Contact's concerns regarding Plan Change 37

Contact has no objection to the concept of residential development in the area the subject of Plan Change 37 in accordance with the Taupō District Growth Strategy ("TD2050").

Contact's concerns relate to the manner in which the residential development is proposed and the absence of a proper assessment of the effects of the proposal including measures to avoid, remedy or mitigate adverse effects on the environment.

Contact is not concerned about, and therefore supports, the part of Plan Change 37 to the south-west of Poihipi Road. Contact's concerns relate to the part of the land covered by Plan Change 37 between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060).

The nature and extent of Contact's concerns are discussed as follows.

Lack of Consultation

Despite being an adjoining land owner, no consultation has been undertaken by the Applicant with Contact. This has resulted in a range of relevant issues not being identified nor assessed in the documentation supporting Plan Change 37 (discussed in more detail as follows).

Existing Environment

The documentation supporting Plan Change 37 fails to properly recognise the nature of the existing environment in which the new residential development is proposed. For example:

- There is no recognition of the fact that the land the subject of Plan Change 37 is on the edge of the Wairākei-Tauhara Geothermal System which is classified as a Development Geothermal System in the Waikato Regional Plan.
- There is no recognition of Contact's permitted and consented activities on the land to the north of the land the subject of Plan Change 37 (which forms part of the existing environment). This includes the ability to drill and test geothermal wells, construct geothermal pipelines, and take and reinject geothermal water.

As a consequence of the above, there has not been an adequate assessment of the effects on the environment associated with Plan Change 37 (including effects on Contact's permitted and consented activities), nor has there been an adequate assessment of the proposal in relation to the relevant policy and planning documents prepared under the Resource Management Act 1991 ("RMA").

Reverse Sensitivity Effects

Contact's primary concern regarding Plan Change 37 relates to the risk of reverse sensitivity effects arising which may restrict Contact's ability to efficiently use, manage and develop the Wairākei -Tauhara Geothermal System. In particular, Contact is concerned that undertaking permitted activities, the exercise of its resource consents and the development of a nationally significant geothermal resource for electricity generation will be constrained by complaints about noise and other effects arising from well drilling and testing and other geothermal activities, as well as by objections to resource consent applications that Contact may be obliged to make.

It is likely that residents will expect a high level of amenity that is incompatible with Contact's existing and future activities. The greater the density of residential development (and therefore the number of people living in the area), the greater the potential for complaints about geothermal activities on the land to the north. It is also more typical to have a lesser density of development on the margin of an urban area (in order to better manage the urban – rural interface). On that basis, Contact considers that the Medium Density Residential

Zone adjacent to Wairākei Drive should be deleted from the proposal (it should be General Residential Zone).

As noted above, the continued operation of a geothermal steamfield and associated structures (being the activities undertaken by Contact on its land to the north of the land covered by Plan Change 37) are permitted activities under Rule 4b.2.4 in the Taupō District Plan. Despite the absence of performance standards for most of the activities permitted under Rule 4b.2.4, including noise limits, Contact's activities need to be undertaken in a manner that is consistent with section 16 of the RMA (i.e. the duty to avoid unreasonable noise). That outcome will become increasingly difficult (or unachievable) with sensitive noise receptors (i.e. residential activities) being developed closer to Contact's activities in the Rural Environment.

Contact also has an expectation that the next version of the Taupō District Plan will include noise limits for geothermal steamfield activities whereby the boundary of a Residential Environment will be a point of compliance. Contact may not be able to comply with the Plan requirements with regard to noise and therefore may be prevented from undertaking existing consented activities. Figure 4 below is a plot of predicted noise levels associated with drilling activities at Well WK402 which was prepared in relation to the proposed subdivision and development of Taupo Heights on the opposite side of Wairākei Drive. It shows that drilling activities would be unable to comply with the night time noise limit of 40dBA L_{eq} in an adjoining Residential Environment required by Rule 4b.1.9 in the Taupō District Plan.

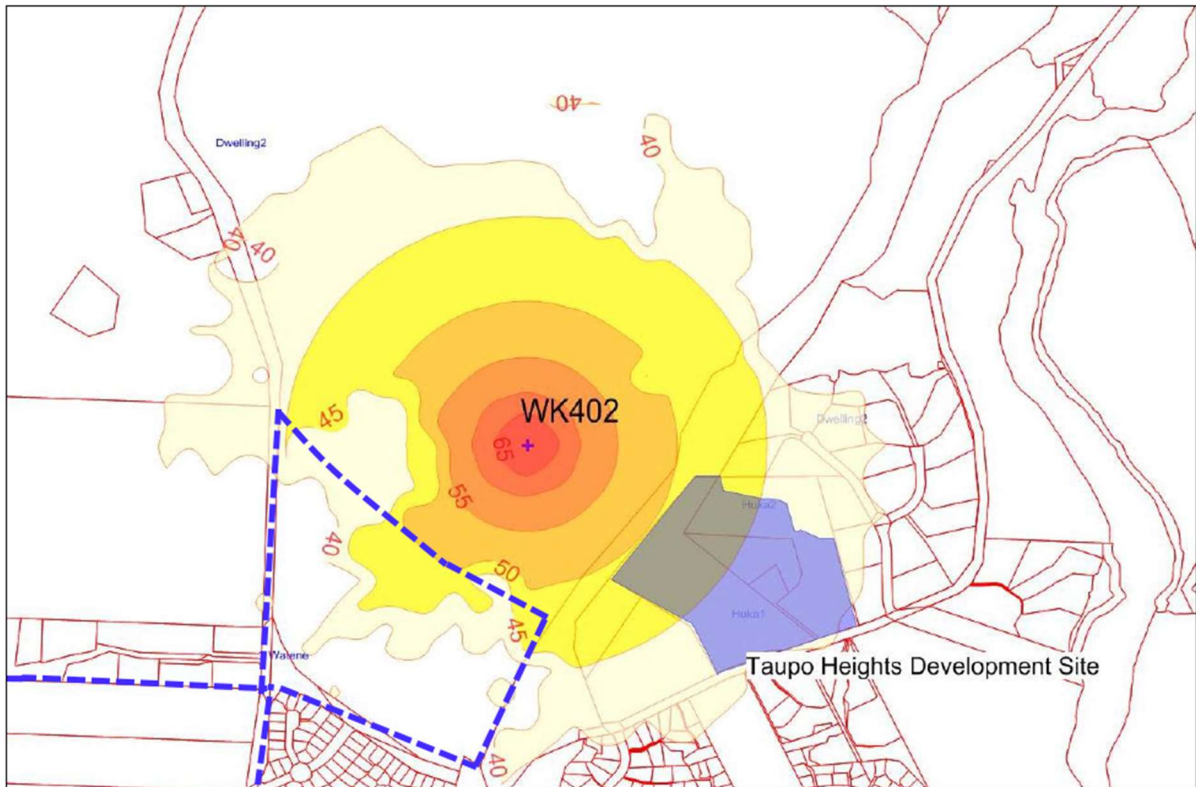


Figure 4 – Noise Contours associated with Drilling Activities at Well WK402

The same situation applies in relation to the risk of complaints or objections about other aspects of geothermal development such as odour, lighting or effects on any other aspects of amenity.

To address concerns about reverse sensitivity, Contact seeks that residential development only be able to proceed if a covenant / encumbrance is provided on all the titles created from Lot 2 DP 384060 similar to those placed on the titles within the Taupo Heights subdivision on the opposite side of Wairākei Drive preventing complaints or objections in relation to the effects of geothermal activities undertaken by Contact including noise from well drilling and testing, odour, lighting and effects on any other aspects of amenity.

Wairākei Drive – Poihipi Road Intersection

Plan Change 37 includes a proposal to close the existing intersection of Poihipi Road and Wairākei Drive. The documentation supporting Plan Change 37 (including the Traffic Impact Assessment) is silent in relation to the fact that Contact upgraded this intersection (installing a slip lane for left hand turns into Poihipi Road) as a condition of its Land Use Consent granted by a Board of Inquiry authorising the construction of the Te Mihi Power Station.

Stage 1 of the Te Mihi Power Station was constructed and then commissioned in 2014. Stage 2 of the Te Mihi Power Station is expected to be constructed in the coming years, and will do so in reliance on the ability to use the upgraded intersection of Poihipi Road and Wairākei Drive.

Plan Change 37 creates a number of issues in relation to this matter which have not been addressed in the Traffic Impact Assessment. Specifically:

- Given that the documentation is silent on the matter, it is unclear as to whether the proposed design of the new intersection of the realigned section of Poihipi Road and Wairākei Drive is adequate to accommodate the construction traffic associated with Stage 2 of the Te Mihi Power Station.
- If the existing intersection of Poihipi Road and Wairākei Drive is closed (or otherwise unavailable for Contact to utilise as part of the construction of Stage 2 of the Te Mihi Power Station), Contact is likely to be in an unavoidable breach of the conditions on its Land Use Consent for the Te Mihi Power Station. Furthermore, Contact should not have to undertake any duplication to roading upgrades at its expense as a consequence of Plan Change 37.
- What is the extent of any increased effects on amenity values if construction traffic associated with Stage 2 of the Te Mihi Power Station is having to pass through the middle of a residential area (as opposed to skirting around the edge of it at present), i.e. if Stage 2 of the Te Mihi Power Station is constructed before the new intersection of Poihipi Road and Wairākei Drive and residential development has commenced north of Poihipi Road?

Roads within the Subdivision of Lot 2 DP 384060

As per the situation in relation to Taupō Heights on the opposite side of Wairākei Drive, Contact proposes that all roads within the subdivision of Lot 2 DP 384060 be created in separate titles, rather than by the usual vesting process, and for those titles to be subject to the same covenant / encumbrance discussed above. In the alternative, Contact proposes that roads be gazetted subject to the same terms.

Policy and Planning Documents

The documentation supporting Plan Change 37 makes no reference to the National Policy Statement for Renewable Electricity Generation 2011 (“**NPSREG**”), and therefore does not present any analysis of Plan Change 37 in relation to the NPSREG. Policy D of the NPSREG states:

“Decision-makers shall, to the extent reasonably possible, manage activities to avoid reverse sensitivity effects on consented and on existing renewable electricity generation activities.”

Plan Change 37, in the manner proposed, is highly likely to result in significant reverse sensitivity effects on Contact’s permitted and consented renewable electricity generation activities on the land immediately north of the land covered by Plan Change 37. No measures have been proposed by the Applicant to avoid reverse sensitivity effects.

The documentation supporting Plan Change 37 does not address all relevant aspects of the Waikato Regional Policy Statement (“**RPS**”), including the aspects that relate to avoiding reverse sensitivity effects. For example, in relation to the built environment, Section 6.1.2 of the RPS states:

“Local authorities should have particular regard to the potential for reverse sensitivity when assessing resource consent applications, preparing, reviewing or changing district or regional plans and development planning mechanisms such as structure plans and growth strategies. In particular, consideration should be given to discouraging new sensitive activities, locating near existing and planned land uses or activities that could be subject to effects including the discharge of substances, odour, smoke, noise, light spill, or dust which could affect the health of people and / or lower the amenity values of the surrounding area.”

No measures have been proposed by the Applicant to address reverse sensitivity effects in a manner that is consistent with Section 6.1.2 of the RPS.

The Taupō District Plan includes a range of provisions that recognise and provide for the development and use of geothermal resources for renewable electricity generation purposes. This includes the ability to drill and test wells and construct geothermal pipelines as a permitted activity. The Taupō District Plan also includes provisions seeking to ensure

that activities are compatible and reverse sensitivity effects are avoided, remedied or mitigated.

RELIEF SOUGHT

Contact seeks the following relief:

1. Plan Change 37 not be approved unless and until the Applicant recognises the nature of the existing environment and undertakes an assessment of actual and potential effects on the Wairākei-Tauhara Geothermal System and Contact's activities to identify measures required in Plan Change 37 to avoid, remedy or mitigate adverse effects. This includes, in particular, measures to avoid reverse sensitivity effects.
2. To the extent that it is not covered by the existing encumbrance 7482571.4 held by Contact, appropriately worded reverse sensitivity covenant / encumbrance should be required, prior to any residential development occurring, on all resulting titles on the land between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060), similar to those placed on the titles within the Taupo Heights Subdivision on the opposite side of Wairākei Drive.
3. Plan Change 37 not be approved unless and until an assessment is undertaken of the effects of Plan Change 37, including the proposed closure of the existing intersection of Poihipi Road and Wairākei Drive, in relation to the construction traffic associated with Stage 2 of the Te Mihi Power Station (which forms part of the existing environment) and appropriate measures put in place to manage those effects.
4. Delete the proposed Medium Density Residential Zone adjacent to Wairākei Drive (it should be General Residential Zone).
5. The realigned section of Poihipi Road is to be the northern extent of any residential development (i.e. the land to the north of the new alignment of Poihipi Road is to remain as Rural Zone) to provide a buffer between the proposed residential areas and the nationally important renewable electricity generation activities to the north of them.

6. The realigned section of Poihipi Road is to be a wide landscaped corridor (similar to Wairākei Drive) so as to help create an effective buffer between residential activities and Contact's geothermal activities to the north.
7. All roads within the subdivision of Lot 2 DP 384060 shall be created in separate titles, rather than by the usual vesting process, and for those titles to be subject to the same covenant / encumbrance discussed above. In the alternative, Contact proposes that roads be gazetted subject to the same terms.
8. If the issues raised in this submission are not adequately resolved, desirably in consultation with Contact and including the specific relief set out above, Contact seeks that Plan Change 37 be declined insofar as it relates to the land between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060).
9. Contact has no objection to the approval of Plan Change 37 insofar as it relates to the land the south-west of Poihipi Road (i.e. the land covered by Plan Change 37 apart from Lot 2 DP 384060).

Contact wishes to be heard in support of this submission.

Contact will not be presenting a joint case with other submitters at a hearing.

Signed:



Todd Baldwin

Contact Energy Limited

Date: 5th March 2021

Organisation:

C/- Stratum Consultants Ltd

First name: Brett

Last name: Farquhar

On behalf of:

Rangatira E Trust

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Rangatira E submission



233477-R-P-C003

5th March 2021

Taupō District Council
Private Bag 2005
Taupō Mail Centre
Taupo 3352

Email: NukuhauPlanChange@taupo.govt.nz

Dear Sir/Madam

**Submission to Proposed Taupo DC Private Plan Change 37 (PC37) – Nukuhau
RMA Form 5**

Submitter

Rangatira E Trust

C/- Stratum Consultants Ltd
PO Box 878
Rotorua 3040

Attention: Brett Farquhar
Email: brett.farquhar@stratum.nz
Phone: 0275 605 755

The Rangatira E Trust could not gain an advantage in trade competition through this submission.

Background

Rangatira E Trust is a significant landholder in the wider Acacia Bay and western Taupo area, with landholdings in excess of 994ha. They have land that is directly adjacent to the west and north of the land within proposed PC37.

The strategic plan, Taupo 2050, recognizes Rangatira E Trust as a significant land owner with an interest in the development of city and region. No meaningful links between the plan change area and that of the Rangatira E Trust appear to be shown in the application documents. Neither have the Rangatira E Trust been specifically consulted with by the applicant or council on the rezoning of the PC37 land. There is a duty to consult under the RMA. The Rangatira E Trust considers itself to be directly affected by this private plan change. The manner in which the Rangatira E Trust may seek to utilise its land resource in this location is directly impacted by the proposals in PC37.

Rangatira E Trust requests to be heard in relation to its submission. This submission is a summary only and the Rangatira E Trust may produce further evidence at the hearing.

Submission

The specific provisions of Plan Change 37 that this submission relates to are:

Submission	Stance	Reasons	Decision Sought
1. The entire proposed PC37 proposal	Oppose	<p>A holistic district wide feasibility study is required to determine the requirements of the entire district and one that enables future development by land owners such as the submitter. This will include research into the location and the size of future development areas and subsequent land zoning.</p> <p>PC37 proposes to utilise all current and planned infrastructure (roading/state highway access and wastewater disposal specifically) taking all available capacity in western Taupo. This will result in landowners, like Rangatira E, not being able to pursue development opportunities unless they self-fund infrastructure costs. The Taupo District Plan Review is also scheduled for later in 2021, and therefore it is not unreasonable to wait for this upcoming process. PC37 is considered premature by getting in ahead of the wider planning process.</p>	Oppose PC37 in its entirety until such a time as a district-wide analysis is completed through the upcoming District Plan review process.
2. The inclusion of medium density residential zones. (Appendix 9.7 Structure Plan in the proposed Plan Change document).	Oppose	<p>The Medium Density Residential zoning is a new zoning to Taupo. Given that this is a new planning “tool”, we suggest that this is better fleshed out as part of the wider District Plan review scheduled for later in 2021. This will allow for a more comprehensive and holistic approach to the locations and hectarage of medium density land, if that’s what the Taupo community wants. PC37 should not be the instigator of this, rather follow the planning approach through the wider District Plan review consultation process.</p> <p>Furthermore, the Medium Density Residential zone actually allows for a higher density than the High Density Residential zone currently in the Taupo District Plan. As an example, if a retirement village is proposed in the Medium Density Residential zone, retirement units are permitted if it meets the zone rules - which is 55% coverage, 100% total floor area ratio and 80% impermeable. This proposed Medium Density Residential zone in PC37 covers approximately 10 hectares of land. There is no minimum lot size in the subdivision rules, therefore you just have to show a</p>	To remove the Medium Density Residential zones from PC37.

			house size complies with the land size required. If a landowner in PC37 wanted to do 60sqm single storey unit for a retirement village, they could do 100m ² lots in the Medium Density Residential area. That could easily accommodate 1,000 retirement units which in turn uses valuable infrastructure capacity.	
3.	Neighborhood shopping centre zone. (Appendix 9.7 Structure Plan in the proposed Plan Change document).	Oppose/ seek amendment	An existing convenience shopping centre is already located in this catchment on the corner of Acacia Bay and Mansell Roads. This local shopping area has room for further expansion to its west. The consolidation of local shops should be encouraged before the creation of new local shopping areas when located in the same catchment.	To remove the Neighborhood shopping centre zone from PC37, or provide for a future zoning following certain retail thresholds being met.
4.	Staging of the development areas. (Appendix 9.6 plan in the proposed Plan Change document).	Oppose/ Seek amendment	<p>The Rangatira 8A17 and 8A1T blocks (and Rangatira E) have had ongoing discussions with Council staff over a number of years (at least 15 years) about developing their land. As Maori landowners they are frustrated at being continually pushed to the side, and this is happening again with PC37.</p> <p>There is only limited infrastructure capacity currently available for the development of land in this area, and therefore if PC37 is proceeded with, or approved, the first rights of development should be afforded to the Rangatira 8A17 and 8A1T blocks as Stage 1. The balance of the PC37 should be subsequent stages of development, where that development can only occur where at least 80% of lots of a previous stage has been developed and infrastructure capacity is available.</p>	If PC37 is approved, then the PC37 land should be staged with the southern landholdings as Stage 1 (rather than as Stage 3), Stage 2 remain the same and the northern landholdings as Stage 3 (rather than Stage 1).

The unique position relating to Māori-owned land

Proposed Plan Change 37 provides a limited pathway for developing multiple-owned land and limits the development opportunities of Māori land in this locality. This Plan Change proposal fails to incorporate any matters from Treaty Settlements in relation to land in this locality. The potential adverse effects from the development on the mauri of the locality along with the total disregard to the interests of Rangatira E means the proposal is not a sustainable use of land. Partly, this arises because the process is not Council led, instead led by the private sector, and is outside of the plan change review process. No meaningful consultation with the Rangatira E Trust has been held given they are directly affected by PC37.

It is noted that Māori land has historically suffered impediments to development, and these challenges have not diminished through the notification of this plan change.

Because Māori land is often undeveloped or is under-developed, it has not contributed significantly to the economy. It has also meant that the vacant land is somehow seen as capable of mitigating the environmental effects arising from other developments. For example, PC37 takes Maori land (a gully through Rangatira 8A17A6) for the benefit of other private landowners. This issue has not been addressed in the Section 32 report supplied by the applicant. The Section 32 also fails to address a number of issues relevant to Rangatira E. Had it not for legal advice received, the Trust would not have insisted on the necessity to be involved in this process. The applicant and council have failed in their duty to involve Rangatira E in this plan change process, and as such the council has failed to satisfy the requirements of the RMA before accepting the plan change for notification and public submission.

The contribution of Māori land, in offsetting the discharge of contaminants from other developed land, should be recognised and accounted for at some stage in the future. Further, the investment made by landowners, particularly the owners of Māori land, to reduce contaminants discharged from land use should also be recognised and protected due to the nature of land use.

Monitoring

It will be important to give confidence to the regional community that we are on target to achieving the short-term objectives and tracking positively towards achieving the goal of sustainable land use. However, the proposed plan currently proposes no methodology to monitor the outcomes promises, and does not link to the future growth strategy of the district. There is a failure to comply with the Schedule 1 requirements of the RMA in methods to implement the plan.

Furthermore, the health of the lake and the discharge of contaminants is a matter of great concern to the submitter. There is little analysis on this issue by the applicant.

Closure

Rangatira E Trust wish to be heard in support of their submission. We request a 90min timeslot at the hearing to present our evidence on the above matters.

If others make a similar submission, the Rangatira E Trust will consider presenting a joint case with them at a hearing.

Please contact the writer if you have any queries with regard to this submission.

Yours faithfully
Stratum Consultants Ltd



Brett Farquhar
Principal Planner

Cc. Alex Wilson
John Lenihan
Setareh Stienstra

alexwilson@deloitte.co.nz
johnle@rcg.co.nz
setareh@publiclawchambers.com

Organisation:

Rankilor Consultants

First name: Andrew**Last name:** Kusaba**On behalf of:**

Representing the owners of Rangatira 8A17A5 and Rangatira 8A17A6 and the owners of Rangatira 8AJT2X and 8A1T2Y and Part Rangatira 8A1T2.

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Andrew Kusabs Form 5 and Submission



GREAT LAKE TAUPŌ
Taupō District Council
RMA Form 5

Proposed Private Plan Change 37- Nukuhau

Taupō District Plan

Submission Form



Office use

This form will be copied. Please do not print outside the frame. If you need more space please attach additional pages to this form.

Submitter:

Name: ANDREW KUSABS

Organisation / On Behalf of: Representing the owners of Rangatira 8A17A5 and Rangatira 8A17A6 and the owners of Rangatira 8A1T2X and 8A1T2Y and Part Rangatira 8A1T2

Address for correspondence:

Rankilor Consultants, PO Box 313, Taupo Phone: 027 476 9450

Attention: David Rankilor E-mail: rankilor@xtra.co.nz

I could /could not gain an advantage in trade competition through this submission.

If you could gain an advantage in trade competition through this submission please answer the following question:

I am /am not directly affected by an effect of the subject matter of this submission that:

- (a) adversely affects the environment; and
- (b) does not relate to trade competition or the effects of trade competition.

This is a submission on Private Plan Change 37 – Nukuhau

Please use a separate form for each provision of the Plan Change you wish to submit on

The specific provision of Plan Change 37 that my submission relates to is see attachments

Other identification e.g. attachment/appendix/paragraph

I/We support oppose seek amendment to the provision named above (please tick one).

Reason for my/our views are:

/.....
.....
.....
.....
.....

I/We seek the following decision from the Taupō District Council:

See attachments.....
.....
.....
.....

I/we wish to be heard in support of my/our submission: **See attachments** Yes No

If others make a similar submission, I will consider presenting a joint case with them at a hearing: Yes No

Signed: D Rankilor on behalf of Andrew Kusabs Date: **5 March 2021**
(A signature is not required if you make your submission by electronic means.)

Please return this form no later than 17:00 5 March 2021 to:

- Taupō District Council, 30 Tongariro Street, Private Bag 2005, Taupō Mail Centre, Taupo 3352; or

- e-mail NukuhauPlanChange@taupo.govt.nz

Submitters are advised that the information supplied in written submissions may contain personal information within the meaning of the Privacy Act 2020. By taking part in this public submission process, submitters have agreed to any personal information (including names and contact details) which is contained in their submission being made available to the public as part of the consultation and decision making process. All information collected will be held by Taupō District Council. Submitters have the right to access and correct personal information. Following the submission period, a summary of submissions will be available on the Taupō District Council website.

SCHEDULE OF DOCUMENTS

The Submission – 5 pages

Annexure 1 – 39 pages

Submission on

NUKUHAU PRIVATE PLAN CHANGE 37 (“PPC 37”)

BY

Mr Andrew Kusabs

representing the owners of

Rangatira Blocks 8A17A5 and 8A17A6

AND

Rangatira 8A1T2X and 8A1T2Y and Pt. Rangatira 8A1T2

(“the Rangatira 8A17 Trusts”)

1.0 INTRODUCTION

- 1.01 Although the lands owned by the Rangatira 8A17 Trusts have been included in PPC 37, the Rangatira 8A17 Trusts are not an applicant. In the initial stages of the consultation process, the Trustees of the Rangatira 8A17 Trusts were invited by the applicants to join them but after due consideration declined the invitation.
- 1.02 Notwithstanding point 1.01 above the Rangatira 8A17 Trusts supports PPC 37 subject to amendments in so far as PPC 37 affects the lands owned by the Rangatira 8A17 Trusts.
- 1.03 The appended Nukuhau Structure Plan 9.7 ("the amended Nukuhau Structure Plan 9.7") and the amended Sections of the Taupo District Plan (2007), Section 3 – Objectives and Policies, Section 4 – Rules and Regulations are to replace the Notified Section and 9.7 Nukuhau Structure Plan (Append 9) which is attached as Annexure 1. This will replace Appendix C of PPC 37 as lodged.

2.0 BACKGROUND

- 2.01 The current Trustees and earlier Trustees of the Rangatira 8A17 Trusts have contributed since 1982 to the growth of Taupo by having their lands gain the status of freehold land. This enabled growth to the north of the CBD and working in concert with the then Taupo Borough Council and subsequently with the Taupo District Council allowed for forward planning for growth and development.

2.02 The current Trustees of the Rangatira 8A17 Trusts are Andrew Kusabs, Dianne Stockman, Rev. Joseph Pene, Gloria McLaughlan and Craig Kusabs with Andrew Kusabs as Chairman. The Trustees represent many owners.

2.03 Owners on Shareholders Registers

8A17A5	1,619 shareholders
8A17 A6	1,623 shareholders
8A1T2X	213 shareholders
8A1T2Y	500 shareholders
8A1T2	Roadway (N/A)

2.04 In 1982 the owners of these lands which are between the land owned by 8A17 and Mansell Road, with the guidance of the Trustees, saw this land as being left as vacant land and went about ways to have the status changed from Māori Land to General Land and reinvest money from land sales in entities that would serve future generations. Changing the status required perseverance and the Māori Land Court have particular regard to the principle of the retention of Māori Land. The Trustees have from the proceeds of sale of some of their lands built the local shopping centre at Nukuhau, pensioner flats for their elderly and invested in a productive dairy farm in Reporoa.

2.05 The majority of Portion 6, as identified in the PPC 37 application, was planted in a pine forest in 1994 and following discussions with Council in 2004 a decision was made to leave it until 2011 at a time when (probably eight years before maturity) the trees were removed. At this age the root bowl was immature and easy to remove and the surface redeveloped into pasture as a stepping stone to being ready for residential subdivision.

3.0 PORTION 6

- 3.01 The Trustees of the Rangatira 8A17 Trusts have been in discussion with the Taupo District Council to develop Portion 6 since 2004 with more detailed discussions since 2011.
- 3.02 The amended Nukuhau Structure Plan 9.7 (Annexure 1 to this submission) proposes Portion 6A as shown on Sheet 2 of 2 (Portion 6A Overlay). Portion 6A is the proposed first stage of the development and is provisionally designed to accommodate approximately twenty-two (22) residential building sites of approximately 450m² - 500m² in size. It is proposed that Portion 6A is developed immediately.
- 3.03 In respect of infrastructure requirements the Trustees of the Rangatira 8A17 Trusts believe that the dwellings proposed for Portion 6A can be currently accommodated without the need for upgrading infrastructure.

4.0 OTHER AMENDMENTS

- 4.01 The other amendments to the notified Nukuhau Structure 9.7 are;
- 4.01.1 the exclusion of the block known as Rangatira 8A17A6 (link of private land in the middle of Brentwood Gully). This land is privately owned by the Trustees of the Rangatira 8A17A6 and is General Land. There is a gentleman's agreement between the Taupo District Council and the Trustees of the Rangatira 8A17A6 that the public would have access to this land in exchange for the Taupo District Council maintaining the land. This land is used by the general public for recreation purposes; and

- 4.01.2 the removal of the proposed overlay entitled “Proposed Stormwater Reserve with Pedestrian Access. Cycleway and Planting” in respect of the strip of land identified as A, B and C on the amended Nukuhau Structure Plan and replacing it with the requirement “A, B & C Private Landscaping Buffer 3m Wide Covenants with Height Restrictions”; and
- 4.01.3 the insertion of the word “significant” in Rule 4a.7.2h is to ensure that the smaller watercourses, drainage gullies and overland flow paths will not become subject to the requirements indicated in the Proposed Overlays on the Nukuhau Structure Plan as notified and worded “Proposed Stormwater Reserve with Pedestrian Access. Cycleway and Planting”

5.0 SUMMARY

- 5.01 The Trustees of the Rangatira 8A17 Trusts wish to proceed with the development of Portion 6A ahead of the other lands which are contained in PPC 37. It is proposed the Portion 6A be developed immediately for housing.
- 5.02 To achieve the submission in paragraph 5.01 the Trustees of the Rangatira 8A17 Trusts support PPC 37 subject to the amendments reflected in the amended Nukuhau Structure Plan 9.7 attached at Annexure 1.
- 5.03 Mr Andrew Kusabs and Mr David Rankilor wish to be heard and Rev. Joseph Pene may provide a karakia before they speak. The Trustees of the Rangatira 8A17 Trusts request 45 minutes to address the Commissioners in support of this submission.

1.0 INTRODUCTION

- 1.01 Although the lands owned by the Rangatira 8A17 Trusts have been included in PPC 37, the Rangatira 8A17 Trusts are not an applicant. In the initial stages of the consultation process, the Trustees of the Rangatira 8A17 Trusts were invited by the applicants to join them but after due consideration declined the invitation.
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2.05 The majority of Portion 6, as identified in the PPC 37 application, was planted in a pine forest in 1994 and following discussions with Council in 2004 a decision was made to leave it until 2011 at a time when (probably eight years before maturity) the trees were removed. At this age the root bowl was immature and easy to remove and the surface redeveloped into pasture as a stepping stone to being ready for residential subdivision.

3.0 PORTION 6

- 3.01 The Trustees of the Rangatira 8A17 Trusts have been in discussion with the Taupo District Council to develop Portion 6 since 2004 with more detailed discussions since 2011.
- 3.02 The amended Nukuhau Structure Plan 9.7 (Annexure 1 to this submission) proposes Portion 6A as shown on Sheet 2 of 2 (Portion 6A Overlay). Portion 6A is the proposed first stage of the development and is provisionally designed to accommodate twenty (20) residential building sites of approximately 450m² - 500m² in size. It is proposed that Portion 6A is developed immediately.
- 3.03 In respect of infrastructure requirements the Trustees of the Rangatira 8A17 Trusts believe that the dwellings proposed for Portion 6A can be currently accommodated without the need for upgrading infrastructure.

4.0 OTHER AMENDMENTS

- 4.01 The other amendments to the notified Nukuhau Structure 9.7 are;
- 4.01.1 the exclusion of the block known as Rangatira 8A17A6 (link of private land in the middle of Brentwood Gully). This land is privately owned by the Trustees of the Rangatira 8A17A6 and is General Land. There is a gentleman's agreement between the Taupo District Council and the Trustees of the Rangatira 8A17A6 that the public would have access to this land in exchange for the Taupo District Council maintaining the land. This land is used by the general public for recreation purposes; and

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- 4.01.3 the insertion of the word "significant" in Rule 4a.7.2h is to ensure that the smaller watercourses, drainage gullies and overland flow paths will not become subject to the requirements indicated in the Proposed Overlays on the Nukuhau Structure Plan as notified and worded "Proposed Stormwater Reserve with Pedestrian Access. Cycleway and Planting"

5.0 SUMMARY

- 5.01 The Trustees of the Rangatira 8A17 Trusts wish to proceed with the development of Portion 6A ahead of the other lands which are contained in PPC 37. It is proposed the Portion 6A be developed immediately for housing.
- 5.02 To achieve the submission in paragraph 5.01 the Trustees of the Rangatira 8A17 Trusts support PPC 37 subject to the amendments reflected in the amended Nukuhau Structure Plan 9.7 attached at Annexure 1.
- 5.03 Mr Andrew Kusabs and Mr David Rankilor wish to be heard and Rev. Joseph Pene may provide a karakia before they speak. The Trustees of the Rangatira 8A17 Trusts request 45 minutes to address the Commissioners in support of this submission.

ANNEXURE 1

3a RESIDENTIAL ENVIRONMENT

3a.1 Introduction

The District contains a variety of residential areas, referred to in the Plan as the Residential Environment. These include the major communities of Taupō, Turangi, and Mangakino, as well as smaller lakeshore and rural settlements. While each community has a distinct character, determined primarily by its size and setting, the basic elements of each are the same. The predominant activity within the Environment is residential, with the character of the existing activities established through conformity with past planning controls, resulting in the establishment of a shared and recognisable amenity. Maintenance of this established character and amenity is important to those who reside within the Residential Environment, with the expectation that these 'residential' levels will be retained.

Elements of the character of the Residential Environment which the majority of residents value include an attractive streetscape; a reasonable ratio of private to public open space; a degree of consistency in the size, scale, density, and style of buildings; a need for privacy; shared access to outlook, sunlight or views; low levels of environmental effects such as traffic movements to and from sites, noise, vibration, odour, and dust; and a safe and functionally effective environment for traffic and pedestrians.

However, the Residential Environment can accommodate a range of 'non-residential' activities without a loss of amenity, just as these areas can suffer from a 'residential' activity of an inappropriate scale or intensity. Therefore all activities are required to meet the identified minimum standards, protecting the amenity and character of the Residential Environment, while also allowing a wide range of appropriate activities to occur.

The Residential Environment has been identified in the Plan and on the Planning Maps in a number of different forms. To provide clarity the following mapped or planned areas are considered to be part of the Residential Environment and all appropriate rules and performance standards (note that those that relate specifically to that type of Residential Environment should be considered first):

- Residential
- High Density Residential
- Low Density Residential
- Kinloch Rural Residential Area
- Kinloch Low Density Residential Area
- Kinloch Residential Area
- New Residential Environment
- Unserviced Residential Environment
- Mapara Residential Environment
- [Nukuhau Residential and Medium Density Areas](#)
- Development Area (as consented under Rules [4f.1.7](#) or [4f.1.8](#))

3a.2 Objectives and Policies

OBJECTIVE

3a.2.1 The maintenance and enhancement of the character and amenity of the Residential Environment.

POLICIES

- i. Maintain and enhance the character and amenity of the Residential Environment by controlling the bulk, location and nature of activities, to ensure activities are consistent with a residential scale of development, including an appropriate density and level of environmental effects.
- ii. To enable a range of small scale home based employment opportunities, and local community facilities and services to establish in Residential Environments, subject to:
 - a. compatibility with Residential Environment amenity and character;
 - b. avoidance of adverse effects on the function and amenity of the Taupō Town Centre, and the adjoining road network; and
 - c. a consistent scale of non residential buildings and activities that maintain residential coherence and amenity.
- iii. To provide for a number of small scale convenience based retail, commercial and community facilities as identified as a "Shop" on the Planning Maps where these:
 - a. provide a high standard of urban amenity; and
 - b. remain compatible with the scale of the surrounding residential environment.
- iv. To have regard to the physical resource and investment of existing business activities within the KTHD area when considering their on-site development
- v. Any relevant Structure Plans, strategies or guidelines should be taken into account in the design of any development within the residential environment.
- vi. Encourage a wide range of appropriate activities and development within the Residential Environment while ensuring any adverse effects are avoided, remedied or mitigated.
- vii. Maintain Specific Requirement Areas through protecting the established character of these areas in locations where the resulting amenity is valued.
- viii. Protect the character of the District's lake and river margins from buildings which are visually obtrusive and/or result in the loss of amenity of the foreshore area, by controlling the scale and location of structures.
- ix. Avoid, remedy or mitigate adverse effects of subdivision, use and development in the residential areas on cultural, historic, landscape and natural values, as identified through the provision of this Plan.

- x. Recognise the important role of reserves and their existing infrastructure and services (including those provided by commercial operators) in providing recreational opportunities for the community.

EXPLANATION

A typical scale and character of development and level of environmental effects has been established over time, creating a valued level of amenity within the Residential Environment.

To ensure the amenity and character of the Residential Environment is maintained and enhanced, minimum performance standards have been identified. These standards reflect past practice and the normal range of activities which occur within the Residential Environment. The standards allow for an appropriate amount of change and development to occur within the Environment. Therefore any effect of an activity meeting these minimum standards is likely to be no more than minor.

Accordingly, any activity which does not meet one or more of the minimum standards can be expected to have a higher probability of generating an effect which may be more than minor, with the potential to detract from the amenity and character of the Residential Environment. As such, the activity will be subject to a full and comprehensive assessment of environmental effects through the resource consent process.

Threats to the character and amenity of the Residential Environment include structures and activities of an inappropriate or 'non-residential' scale, location or density. Provision for sufficient daylight and privacy, outlooks not dominated by bulky buildings, the maintenance of a residential streetscape and open space, as well as provisions addressing vehicle safety including access, movements and manoeuvrability, are required to maintain the character of the areas and ensure the amenity values of the Residential Environment are not adversely affected.

Other documents prepared under the Local Government Act 2002 and other relevant legislation can also be appropriate to be utilised in the assessment of resource consents as other relevant documents through section 104(1)(c) of the Resource Management Act 1991. Whilst these documents do not have any statutory weight they are prepared via a process of community consultation and contain information and guidance pertinent to development in the District.

Provision is made for small scale home based employment opportunities, and local community facilities and services which could appropriately be located in Residential Environments in terms of compatible effects. Such effects can relate to matters such as traffic generation, visual detraction, hours and scale of operation, noise and outdoor advertising. However, providing Residential amenity values are preserved, allowing small scale home-based employment opportunities to locate in living areas will contribute to the economic development of the District. The provision of local community facilities and services can also assist in providing for the social wellbeing, and health and safety needs of nearby residents, enriching such communities.

A limited number of identified local convenience centres, notated as 'Shops' on the Planning Maps, are also provided for within the Residential Environment in recognition of the important role such centres have in meeting local convenience needs for goods, services and community activities. These centres have been established for many years, and are conveniently located generally within walking distance of

the areas they serve. Local shop areas will be required to operate in a manner compatible with the surrounding Residential Environment so as not to cause a nuisance or adversely affect amenity.

Limitations to the scale and extent of such non-residential activities are necessary to ensure that residential amenity, character and coherence can be maintained. It is also important that there is not a significant dispersal of such activities from those Environments which are better suited or more appropriate to accommodate such activities.

The location of retail and office activities in the Residential Environment has the potential to undermine the continued agglomeration of retail and office activities within the Taupō Town Centre Environment with a reduction in the associated economic and social benefits. Those benefits are supported through the objectives and policies of Section 3r*Buisness Distribution*. Small scale retail and office activities are provided for in the Residential Environment, however as these activities increase in scale their impacts on the function and viability of the Taupō Town Centre Environment and the character and amenity of the surrounding Residential Environment need to be assessed. Provision has been made for slightly larger office activities within the KTHD area to the east of the Taupō Town Centre Environment. This recognizes the close proximity of this area to the Taupō Town Centre Environment and its appropriateness for accommodating emerging office activities that are commonly larger than a home occupation.

Some Residential areas of the District have been established through special provisions or consent conditions. These areas have been designed to protect significant values or to maintain a preferred character or amenity. In the Plan, they have been recognised through the formation of specifically identified High Density, [Medium Density](#), Low Density and Specific Requirement Areas. Performance standards individual to the standard of development existing within the particular area will protect the area's valued character and amenity.

High Density Areas are predominately residential in character and amenity, but can contain a greater variety of activities. The resulting development is often undertaken at a higher scale and intensity than within other areas of the Residential Environment, and includes intensive residential units, and commercial accommodation activities. As such, the performance standards for these areas have been identified at a higher level of density to reflect the difference in the character of the areas.

[Medium Density Areas are residential in character and amenity but at a higher intensity than general residential development, while still being of a lesser scale and intensity than High Density Areas; such as semi-detached and terraced housing, low rise apartments, detached housing on smaller sites, and other compatible activities. Performance standards for these areas have been identified to reflect a higher level of development intensity that is still strongly residential in character.](#)

Low Density Areas of the Residential Environments have often been referred to as the "rural residential" areas of the District. These areas provide for a special form of residential lifestyle with a semi-rural outlook. The predominant activity is still 'residential' in nature, resulting in the residential amenity and character of the area. As such, these areas have been identified within the Residential Environment, with performance standards which reflect the lower level of density than in the other parts of this Environment.

Specific Requirements Areas and lakeside settlements exist in various locations within the District and include such areas as Rangatira Point, Kinloch and Motuoapa Hill. These areas have been established to a particular character, often through conditions of resource consent, to establish a desired level of amenity, unique in comparison with the general amenity provisions of the District. This form of planning for communities will continue, with the Plan encouraging the retention of existing areas and the development of new areas with appropriate requirements recognising special features and amenity of a particular locality.

In some cases, such as Kinloch, and Nukuhau structure plans have been undertaken, and contain useful and relevant information in respect to what is an appropriate density, scale or form of development for that particular area.

Additionally, Height Restrictions and Foreshore Protection Areas have also been established through past planning provisions. These areas will be maintained, and other appropriate areas included, where there is the potential for structures to adversely affect valued foreshore areas. These areas will protect the views, both from and to the shore, from excessively bulky or visually obtrusive development and protecting the interface between land and water, to preserve the natural character of the District's lakes and rivers and their margins, and the maintenance and enhancement of public access, in accordance with Section 6 of the Act.

Nuisance factors can cause an adverse effect, changing the character and causing a loss of amenity within the Residential Environment. These nuisances can come in various forms including inappropriate levels of vehicle movements, car parking demand, noise and artificial light levels and signage.

Accordingly, activities will be managed to ensure the protection of the amenity values of the Residential Environment as well as the safe and efficient operation of the roading network. Excessive vehicle movements, including associated noise and vibration nuisances and insufficient onsite parking all have minimum standards which are required to be met. Noise and artificial light levels will also be managed, with their effects minimised to avoid adverse effects on the amenity of the Residential Environment. The provision of signage will be balanced between the public information role, traffic safety and the protection of the amenity values of an area.

Sediment and dust levels are included for control within the Plan but only at nuisance level. Although these effects are predominantly Regional Council concerns, they have been included due to their potential impact on the character and amenity of the Residential Environment. Compliance with the standards does not preclude activities from compliance with the relevant Regional Council provisions also covering these issues.

OBJECTIVE

3a.2.2 To ensure that development in the Residential Environment takes into account the capacity of the supporting infrastructure.

POLICIES

- i. Subdivision and development in the Unserviced Residential Environment should be able to be effectively serviced without creating adverse effects on the supporting infrastructure.

EXPLANATION

Subdivision and development can result in increased pressure on the supporting infrastructure and services. For the purposes of Objective 3a.2.2 and associated policy, supporting infrastructure is considered to be for drinking water, wastewater, roading (including the local and state roading networks) and stormwater. For those areas of the Residential Environment which are identified on the District Planning Maps as unserved, development must ensure that the increased loading on services will be able to be effectively managed whilst avoiding remedying or mitigating any associated adverse effects.

OBJECTIVE

3a.2.2A A range of housing types and densities is available to meet the needs of all communities and the growth of Taupō.

POLICIES

- i. Enable a variety of housing types in the Residential and Medium Density Zone, including integrated residential development such as low-rise apartments, semi-detached or terraced housing, and multi-unit development; and retirement villages.

EXPLANATION

There is a need to provide a range of housing typologies to accommodate the diverse needs that exist in the community, including families, single or two person households, options for extended families and housemate arrangements. In order to meet the needs of an ageing population there is also a need to provide a range of housing options with an appropriate range of facilities. The location of some housing typologies, in particular those at a higher intensity of development such as Medium Density should also consider convenient accessibility to open space.

OBJECTIVE

3a.2.3 To maintain and enhance the existing amenity and character of the Kinloch residential area and provide for appropriate residential development in the Kinloch Community Structure Plan Area.

POLICIES

KINLOCH COMMUNITY STRUCTURE PLAN AREA

- i. Encourage development within the Kinloch Residential Area to be carried out in a manner consistent with the amenity and character of the existing settlement and reflects the intent of the Kinloch Community Structure Plan.
- ii. Enable and Encourage development in the Kinloch Low Density Residential and Rural Residential Areas to be carried out in a manner which reflects the intent of the Kinloch Community Structure Plan.
- iii. Subdivision, and resulting development, that creates lots which are smaller than the minimum lot size than specified in Table 4.1 of this plan, should be designed so that the resulting development is clustered and is integrated into the landscape, coupled with a strong framework of tree and vegetation planting.

- iv. Subdivision in the Kinloch Community Structure Plan Area should only occur where the resulting lots will be connected to community wastewater network infrastructure.

KINLOCH LANDSCAPE POLICY AREA

- v. Subdivision design should make use of existing landform and landscape features to ensure that the built form complements the character of the area and does not detract from it.
- vi. Buildings should be located to minimise earthworks that may adversely affect the character of the area.
- vii. Buildings should be integrated into the site so that the built form is not dominant.

KINLOCH COMMUNITY STRUCTURE PLAN AREA

The Kinloch Community Structure Plan Area is identified on the Planning maps and in [Appendix 1](#) of this Plan. Through the structure planning exercise it has been identified that the Kinloch Residential Area has a character and amenity that is unique to this area and new subdivision and development should be consistent with this. The intent of the Kinloch Community Structure Plan is reflected in the Structure plan map contained in [Appendix 1](#) of this plan. [Appendix 1](#) provides guidance in to what density and form of subdivision and development is appropriate within parts of the structure plan area.

There will be situations where it may be appropriate for subdivision to occur to densities which are characterised by smaller lot sizes than those identified in [table 4.1](#) of the Plan. Such development need be designed in a way where any effects to the amenity or character of the area are suitably avoided remedied or mitigated. These more intensive areas for development should be offset by expansive areas of open space and/or planting to retain the lower density character of the Kinloch Community Structure Plan Area. A strong framework of tree and vegetation planting should also be carried so that the development is not out of character with the wider structure plan area.

As mentioned above nuisance factors can cause an adverse effect in the residential environment. On site waste water systems can potentially create such nuisance effects and are therefore inappropriate in the residential environment. Although parts of the Kinloch Community Structure Plan Area are characterised by larger lots, the risk is intensified by there being a high concentration of such lots. Like dust and sediment they have been included due to their potential impact on the character and amenity of the Residential Environment, but unlike dust and sediment they can potentially cause wider issues, such as in relation to health. Connection to the community waste water system will also improve the effective and efficient use of the infrastructure resources in the structure plan area.

Policies relating to the Kinloch Landscape Policy Area provide for the consideration of an appropriate style of development within this area. The ridgeline area has been identified as providing a green backdrop to the Kinloch residential area and development needs to consider this.

OBJECTIVE

- 3a.2.4** To enable the New Residential Environment to be developed in a manner which reflects the characteristics of the land and minimises offsite effects.

POLICIES

- i. Subdivision and development in the New Residential Environment should be in a form and layout that includes a range of built densities that are appropriately suited to the physical, landscape and amenity characteristics, natural values and constraints of the land.
- ii. Subdivision and development in the New Residential Environment should not adversely affect the amenity of the wider Residential Environment.

EXPLANATION

Whilst the New Residential Environment has been identified as suitable for residential development, the physical and landscape characteristics of the site require that the form and built densities of that development would have to be more sensitive to such factors. This is especially pertinent for the New Residential Environment in Kuratau with parts of that Environment affected by landscape values, natural values and flooding. Such matters would need to be considered and assessed as part of any consents lodged.

LAKE OHAKURI DEVELOPMENT ZONE

Lake Ohakuri Development Zone (LODZ) is a holiday destination based around the amenity of the lake and surrounding hill country. The Lake Ohakuri Site is a unique site within the Taupō District with a history of resort style holiday accommodation. It has been envisaged as a 'bach-like' low intensity zone controlled by open space, block pattern and building standards. There is great stock taken in creating and maintaining a forest environment with clear and accessible open space network, walkways and cycleways.

The waterfront is defined by an extensive public waterfront reserve interspersed with the development opening up with arms of parkland connecting the ridge to the lake – a large central domain at the promontory being the focal point. This is reinforced by pathways that follow the gully systems up at either end of the site and connect with the surrounding hill country and forest.

The centre is defined by grouping of buildings and houses that create a sense of centre. More intensive housing and commercial facilities create a vibrant and active heart focused on an enhanced lakefront wharf and square.

The remainder of the site is occupied by lower density residential housing arranged along a loop pattern made up of blocks with internal courts. This network of blocks is interlaced with both public and private open space. Cars are largely contained to the internal loop road and development block parking courts.

OBJECTIVE

3a.2.5 Enabling the Lake Ohakuri Development Zone as a holiday resort.

POLICIES

- i. Ensure a pattern of development in the Lake Ohakuri Development Zone that:
 - a. is in general accordance with the block pattern and structure in [Appendix 4](#) and on map D4, and
 - b. is consistent with the key principles of development as described in Section 1 of [Appendix 4](#), and

- c. exhibits the Essential Qualities identified in Section 2 of [Appendix 4](#), and
 - d. is in general accordance with the Aims and Objectives of quality places in section 3 of [Appendix 4](#), and
 - e. is in general accordance with the indicative typology plan in Section 4 [Appendix 4](#).
- ii. A variety of open spaces should be provided, passive and natural, private and public, suitably located and connected to enhance and mitigate the effects of built development in the zone.

EXPLANATION

The Lake Ohakuri Development Zone is a unique site with a history of resort style holiday accommodation, to be developed in a manner that results in a high quality resort environment characterised by well designed spaces and places. Map D4 and [Appendix 4](#) identify and describe the resulting use of the site. The guidance contained in the map and Appendix needs to be considered as the primary guide to achieving the anticipated development in the zone. Building typologies and mixes have been identified that best suit the zone; these are described in performance standards and in Section 4 of [Appendix 4](#).

[NUKUHAU STRUCTURE PLAN AREA](#)

[The Nukuhau Structure Plan Area is identified on the Planning maps and in Appendix 9. The intent of the Nukuhau Structure Plan is reflected in the Structure plan map contained in Appendix 9 of this plan which provides guidance as to what density and form of subdivision and development is appropriate within parts of the structure plan area.](#)

[As at November 2020, the existing wastewater network does not have capacity to service all of the development of this land. Therefore most development can only occur when the wastewater infrastructure has been upgraded to the satisfaction of Council.](#)

[The Nukuhau Structure Plan area is characterised by gully systems and natural flow paths, as such development of the land should protect and enhance these features. The future development of the land should respect and take advantage of the amenity, legibility and identity opportunities offered by existing topography and long-view opportunities. Key amongst these opportunities are the relationships between residential properties and the gully-open space network, and the long views towards the Lake and volcanic cones, views of the Punatekahi hills and the gully network within the western area of the Structure Plan area. Through the structure planning exercise it has been identified that given the proximity of the land to the CBD and ability to provide convenient access to open space, this location is suitable for areas of general and medium density residential zoning to enable development of a variety of housing in Taupō.](#)

[OBJECTIVE](#)

[3a.2.3 To enable residential development of the Nukuhau Structure Plan Area as envisaged by the Plan while maintaining and enhancing the local network of gullies and stormwater flow paths in a manner that contributes positively to residential amenity and character and minimises offsite](#)

effects.

POLICIES

- i. Encourage development in the Nukuhau Structure Plan area to be carried out in a manner which reflects the intent of the Nukuhau Structure Plan.
- ii. Achieve an appropriate level of residential amenity and character.
- iii. Enable the development of a range of housing types, to provide a choice of living environments.
- iv. Achieve a connected open space and walking-cycling network centered on stormwater reserves, gullies and street corridors with a high amenity interface with the residential uses.
- ~~iv.~~ v. Subdivision in the Nukuhau Structure Plan Area should only occur where the resulting lots will be connected to Council's wastewater network infrastructure.

3a.3 Methods

- i. **Performance standards** for permitted activities which protect the character, amenity and functioning of the Residential Environment and take into account the density of development.
- ii. **Environmental assessment** of activities which do not comply with performance standards through the resource consent process.
- iii. **Conditions** on resource consents such as consent notices and covenants on titles.
- iv. **Education** and information on the existing environmental levels, values, and amenity associated with the Residential Environment.
- v. Payment of **Financial Contributions** for reserves and roading. Refer to Section 5 of the Plan.
- vi. **Council Policy** such as through Structure Plans to guide the growth of the District.
- vii. Compliance with Council's **Development Guidelines** to ensure a suitable standard of infrastructure.
- viii. Allocation of funds through the **Strategic and Annual Plan** processes.
- ix. Rules and policies within any relevant **Regional Plan or Policy Statement**.
- x. **Other legislation** and Council **Bylaws**.
- xi. The implementation of any Joint Management Agreement between Council and Iwi.
- ~~xi.~~xii. Subdivision design guidance for the development of the Nukuhau Structure Plan area to enhance character and amenity and access to open space for a mixture of general and medium density residential development.

3a.4 Principal Reasons for Adoption

A typical scale and character of development and level of environmental effects has been established over time within the Residential Environment. This has resulted in a particular character

and amenity within the Residential Environment, which is valued by residents of the area.

Threats to the character and amenity of the Residential Environment have been identified in the District wide issues, policies, rules and performance standards and are further discussed within the explanation for this Environment.

This section of the Plan recognises the changes to the Residential Environment, which occur over time and the desire of the community for minimum controls over activities, while also retaining the valued amenity and character of the Environment.

Accordingly the approach within this section is to place emphasis on assessing the potential environmental impacts through a series of standards which must be met in order for any activity to be permitted. Failure to meet one or more of these standards requires that an activity obtain resource consent, at which time a full and comprehensive assessment of environmental effects would be undertaken.

This approach will protect the character and amenity of the Residential Environment while allowing for a range of activities to occur.

The Residential Environment has different types of character that have established over time. This has resulted in different levels of amenity, which are accordingly provided for through the recognition of the different character types. Specific policies are needed to recognise and protect these areas.

3a.5 Anticipated Environmental Outcomes

- i. Whilst predominantly consisting of Residential activities, a variety of activities and development compatible in scale, amenity and character with development within the Residential Environment.
- ii. New development does not create adverse impacts in terms of overshadowing, excessive building scale, vehicle movements or lack of privacy.
- iii. Protection of the wider environment and community from nuisances such as excessive dust, noise, glare, odour and stormwater.
- iv. The recognition and protection of the different types of character and levels of development within the Residential Environment.
- iv.v. A range of choice in housing types and densities in appropriate locations able to be adequately serviced by utilities and open space infrastructure.
- vi. The development of the Lake Ohakuri Development Zone occurs in a manner consistent with Appendix 4.
- vii. The development of the Nukuhau Structure Plan area occurs in a manner consistent with Appendix 9.

4a RESIDENTIAL ENVIRONMENT

Section Index:

4a.1 Performance Standards and Development Controls

4a.2 General Rules

4a.3 Subdivision Rules

4a.4 Kinloch Structure Plan Area Rules

4a.5 Lake Ohakuri Development Zone Rules

4a.6 Pukawa C Development Zone

4a.7 Nukuhau Structure Plan Area Rules

4a.7-4a.8 Assessment Criteria

4a.1 Performance Standards and Development Controls

Please note: Where land has been identified as a Specific Requirement Area this means that there are additional Performance Standards affecting the properties as a result of earlier subdivision and land use consents.

PERFORMANCE STANDARDS - DEVELOPMENT CONTROLS - For Each Residential Area

		i	ii	iii	iv	v	vi	vii	viii
		Residential	High Density Residential	Low Density Residential (incl Kinloch Low Density)	Kinloch Residential Area	Kinloch Rural Residential Area	Neighbourhood Shops	<u>Nukuhau General Residential</u>	<u>Nukuhau Medium Density Residential</u>
4a.1.1	Maximum Building Coverage	30%	50%	5%	a. 25% b. 30% within a Height Restricted Area	2.5%	50%	30%	55%
4a.1.2	Maximum Ratio Plot	40%	100%	7.5%	a. 30% b. 40% within a Height Restricted Area	N/A	N/A	40%	100%
4a.1.3	Maximum Total Coverage	50%	a. 75% b. 3m landscape strip along front boundary	N/A	50%	N/A	100%	50%	80%
4a.1.4	Minimum Building Setback – Front Boundary	5m	a. 5m b. 10m if property fronts Lake Tce between Rifle Range and Taharepa Roads	10m Unless otherwise provided for within an existing subdivision consent	a. 5m b. 7.5m if boundary adjacent to Whanga-mata, Okaia, Otaketake scenic reserves and Lake shore reserves and Kinloch Residential Area	a. 10m b. 20m if boundary adjacent to Whanga-mata, Okaia, Otaketake scenic reserves and Lake shore reserves	Nil setback	5m	5m
4a.1.5	Minimum Building Setback - all other boundaries	a. 1.5m b. 5m Foreshore Protection Area	1.5m	10m Unless otherwise provided for within an existing subdivision	a. 1.5m b. 7.5m if boundary adjacent to Whangamata, Okaia, Otaketake scenic reserves and Lake shore reserves	a. 10m b. 20m if boundary adjacent to Whangamata, Okaia, Otaketake scenic reserves and Lake shore reserves	1.5m	a. 1.5m	a. 1.5m
4a.1.6	Minimum Building Setback – common wall boundaries (for the physical extent of the common wall only)	0m						0m	0m
4a.1.7	Maximum Building Height			a. 8m b. 5m within Height Restricted Areas unless otherwise indicated on planning map D2	a. 7.5m b. 4.5m within Kinloch Height Restricted Area and for Dwellings within 50m of the Whangamata, Okaia, Otaketake scenic reserves and Lake shore reserves		8m	8m	8m

4a.1.8	Maximum Height to Boundary	2.5m Height at the boundary with a 45° recession plane except for common wall boundaries	<u>2.5m</u> <u>Height at the boundary with a 45° recession plane, except;</u> <u>b. 3.5m height at the boundary with a 45° recession plane where a common wall boundaries in place provided for by 4a.1.5</u>
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PERFORMANCE STANDARDS - For Each Residential Area

PERFORMANCE STANDARDS – For each residential area											
		i	ii	iii	iv	v	vi	vii	viii	viiii	
		Residential	High Density Residential	Low Density Residential	Kinloch Residential	Kinloch Low Density	Kinloch Rural Residential	Neighbourhood Shops	Nukuhau General Residential	Nukuhau Medium Density Residential	
4a.1.9	Maximum Equivalent Vehicle Movements See definitions	24	100	24	24	24	24	100	24	100	
4a.1.10	Maximum Signage - Total Face Area in one sign per allotment	0.25m ²	4m ²	0.25m ²	0.25m ²	0.25m ²	0.25m ²	Multiple signs up to 4m ² total face area per site	0.25m ²	0.25m ²	
4a.1.11	Maximum Signage - Style	a. Signage must relate to the activity undertaken on the allotment b. No flashing, reflectorized or illuminated signs One temporary sign per allotment, 1.08m ² total face area, 4m maximum height for the sale of land or buildings									
4a.1.12	Maximum Earthworks Disturbance of the allotment at any one time while redeveloping	50%	No maximum	50%	50%	10%	5%	50%	50%	No maximum	
4a.1.13	Maximum Earthworks Outside Building Setback	1.5m Vertical ground alteration outside the minimum building setback in a new face or cut and / or fill.									
4a.1.14	Maximum Earthworks Inside Building Setback	0.5m Vertical ground alteration within the minimum building setback requirement.									
4a.1.15	Maximum Earthworks Dust or Silt Nuisance	No dust or silt nuisance beyond the boundary of the allotment.									

PERFORMANCE STANDARDS –General for All Residential Areas

PERFORMANCE STANDARDS – General for all Residential Areas		
4a.1.16	Parking, Loading and Access	In accordance with <u>Section 6: Parking, Loading and Access.</u>
4a.1.17	Maximum Artificial Light Levels	8 LUX (lumens per square metre at the boundary)
4a.1.18	Maximum Noise – Limits	The noise level arising from any activity measured within the boundary of any residential environment site or the notional boundary of any rural environment site, other than from the site where the noise is generated, shall not exceed the following limits: i. 7.00am – 7.00pm 50dBA Leq ii. 7.00pm – 10.00pm 45dBA Leq iii. 10.00pm – 7.00am 40dBA Leq and 70dBA Lmax
4a.1.19	Maximum Noise - Measurement	The noise levels shall be measured in accordance with the requirements of NZS 6801:1999 Acoustics – Measurement of Environmental Sound and assessed in accordance with the requirements of NZS 6802:1991 Assessment of Environmental Sound.
4a.1.20	Maximum Noise – Construction Noise	All construction noise shall meet the requirements of New Zealand Standard NZS 6803:1999 Acoustics Construction Noise.
4a.1.21	Maximum Noise – Telecommunication and electricity equipment	Noise from telecommunication equipment and electricity substations and transformers located in the road reserve permitted by the plan shall comply with the noise limits specified in 4a.1.18 above as measured at a point 1m from the closest façade of the nearest dwelling.
4a.1.22	Maximum Odour	There shall be no discharge of offensive or objectionable odour at or beyond the boundary of a site. Notes: i. In determining whether an odour is offensive or objectionable, the Council shall have regard to the assessment guide contained in <u>schedule 7.7.</u> ii. The Regional Council may also require that resource consent be obtained for discharges to air (including odour discharges).
4a.1.23	Stormwater	i. All stormwater from buildings and impermeable surfaces is to be disposed of on-site to meet a 10 year return period of 1 hour duration (45mm).

		<ul style="list-style-type: none"> ii. The function of existing secondary flow paths across the allotment shall be retained and the existing discharge point off the site shall remain unaltered as to position. iii. EXCEPTION: Stormwater from impermeable surfaces can be disposed of via a primary or secondary stormwater drainage system within an area identified on the Planning Maps as a Stormwater Disposal Area, provided Council authorisation has been given. iv. EXCEPTION: Omori, Kuratau, Pukawa and Whareroa Stormwater Disposal Systems (shown on Planning Maps) - Roof water may be disposed of to the street system.
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Refer also to Subsection E – DISTRICT WIDE RULES

4a.2 General Rules 4a.2.1 Any activity that:

- i. complies with all of the performance standards for the Residential Environment; and
- ii. complies with all the District Wide Performance Standards; and
- iii. is not identified as a controlled, restricted discretionary, discretionary or non complying activity within the Residential Environment; and
- iv. is not identified as a controlled, restricted discretionary or discretionary activity within the

District Wide Rules, is a **permitted activity**.

4a.2.2 Any temporary activity, being an activity of up to a total of three operational days in any one calendar year, which exceeds any performance standard(s), is a **permitted activity**, provided that:

- i. There are no new permanent structures constructed; and
- ii. Once the activity has ceased, the site (including vegetation and the surface of the ground of the site) is retained or re-instated to its condition prior to the activity commencing; and
- iii. An allowance of five non-operational days associated with the activity is not exceeded, during which time any breach of any performance standard(s) shall only be to the extent reasonably necessary to undertake any relevant aspect of the activity.

4a.2.3 Any education, spiritual or health facility is a **permitted activity**, provided that:

- i. It complies with Rule 4a.2.1; and
- ii. The maximum gross floor area of buildings shall not exceed 550m².
- iii. The number of vehicle trips per site shall not exceed 100 maximum equivalent vehicle movements.
- iv. The hours of operation are limited to between the following hours 0700 - 2200 Monday to Friday, and 0800 - 2200 Saturday, Sunday and public holidays
Where the maximum total number of hours the facility is open to visitors, clients or deliveries for any activity other than a residential activity shall not exceed 50 hours per week.
- v. Landscaping shall be established and maintained to provide an average of one specimen tree per 7 metres of road boundary (as a minimum), excluding the vehicle access point or points. Where more than one tree is required they shall be planted no closer than 5 metres apart and no further than 7 metres apart. Specimen trees required shall be planted along the road frontage. Specimen trees must be a minimum of 1.8 metres tall at the time of planting.

- vi. The facility is located on a front site, and:
 - a. any residential activity on an adjoining front site or front site separated by an access with frontage to the same road, is left with at least one residential neighbor; and
 - b. the residential block is not left with more than two non-residential activities in that block.

Any activity which does not comply with any one part, or more, of this standard for permitted education, spiritual or health facility activities, is a restricted discretionary activity, with Council's discretion being restricted to only the matter(s) of non-compliance.

4a.2.4 Any education, spiritual or health facility located within the **KTHD area**, is a **permitted activity**, provided that:

- i. It complies with Rule 4a.2.1; and
- ii. The maximum gross floor area of buildings shall not exceed 550m².
- iii. The number of vehicle trips per site shall not exceed 100 maximum equivalent vehicle movements.
- iv. The hours of operation are limited to between the following hours 0700 - 2200 Monday to Friday, and 0700 - 2200 Monday to Friday, and 0800 - 2200 Saturday, Sunday and public holidays
Where the maximum total number of hours the facility is open to visitors, clients or deliveries for any activity other than a residential activity shall not exceed 50 hours per week.
- v. Landscaping shall be established and maintained to provide an average of one specimen tree per 7 metres of road boundary (as a minimum), excluding the vehicle access point or points.
Where more than one tree is required they shall be planted no closer than 5 metres apart and no further than 7 metres apart. Specimen trees required shall be planted along the road frontage. Specimen trees must be a minimum of 1.8 metres tall at the time of planting.
- vi. The facility is located on a front site

Any activity which does not comply with any one part, or more, of this standard for permitted education, spiritual or health facility activities, is a restricted discretionary activity, with Council's discretion being restricted to only the matter(s) of non-compliance.

4a.2.5 Any office activity located within the **KTHD area** is a **permitted activity** where:

- i. The office activity is located on a front site; and
- ii. Total on-site office space is less than 50m² gross floor area per site;
Or
- iii. The office activity is on a property identified on Planning Maps C10 and C15 and Schedule 7.9, where the floor space does not exceed the gross floor area listed in Column 3 of the Schedule.

4a.2.6 Any office activity located within the **KTHD area** is a **controlled activity** where:

- i. The office activity is located on a front site;
- ii. Total on-site office space exceeds 50m² but does not exceed 100m² gross floor area per site;
- iii. Opening hours of the office are restricted to 8am to 6pm Monday to Friday;
- iv. Otherwise the performance standards and development controls contained in Rule 4a.1 shall apply as for residential high density.

The matters over which the council reserves control for the purposes of assessments are:

- a. The manner in which the activity meets the standards for controlled activities and in particular the gross floor area limit
- b. The extent to which the activity contributes to retaining a residential amenity and character consistent with the surrounding area The extent to which the design and location of car parking area minimises the commercial appearance of the office activity
- c. The extent to which landscape treatment minimises the commercial appearance of the office activity
- d. The extent to which the design and location of any signs minimises the commercial appearance of the office activity

4a.2.7 Any office activity which does not comply with 4a.2.5 or any one of the criteria in 4a.2.6 is a discretionary activity.

4a.2.8 Any activity which does not comply with any one part of performance standards 4a.1.12, 4a.1.13, 4a.1.14, and 4a.1.15 and/or one of the development control performance standards for permitted activities, including (where a standard contains more than one control) one part thereof, is a **restricted discretionary activity**, with Council's discretion being restricted to only the matters on non-compliance specified in that standard.

4a.2.9 Any activity which does not comply with two or three development control performance standards for permitted activities including (where a standard contains more than one control) two or three parts thereof, or is not a permitted, controlled activity or restricted discretionary activity is a **discretionary activity**.

4a.2.10 Any retail activity within the **KTHD** area that exceeds 50m² of gross floor area per site is a **discretionary activity**.

4a.2.11 Except where identified as a "Shop" on the Planning Maps [30 – 162;163;164;166;167;168], any retail or office activity within the Residential Areas that exceeds two full time equivalent persons who permanently reside elsewhere than on the site, or 50m² of gross floor area per site (whichever is the lesser), is a **discretionary activity**.

4a.2.12 Any activity within the **KTHD** area listed in Column 4 of Schedule 7.9 is a permitted activity on the property specified in Columns 1 and 2 of that Schedule, provided that the floor space for that activity does not exceed the gross floor area listed in Column 3 of Schedule 7.9.

4a.2.13 Any activity which does not comply with four or more development control performance standards for permitted activities including (where a standard contains more than one control)

four or more parts thereof, is a **non-complying activity**.

4a.3 Subdivision Rules

4a.3.1 Provided that the activity has not been identified as a Restricted Discretionary, Discretionary or Non Complying activity by another rule in the plan, any subdivision in the Residential Environment which demonstrates compliance with all of the performance standards for the proposed future land use, or for which a land use resource consent has already been granted, is a **controlled activity**.

4a.3.2 Any subdivision of land for the sole purpose of providing for infrastructure, access lots, or legal protection in perpetuity of Significant Natural Areas, is a **controlled activity**.

NOTE: 4a.3.2 does not relate to the creation of Bonus Lots, but subdivision of all or part of a Significant Natural Area for reasons of covenanting etc., that Area. For the purposes of Rules 4a.3.1 and 4a.3.2 the matters over which the Council reserves control for the purpose of assessment are:

- a. The design and layout of the subdivision to ensure safe and efficient access onto existing and/or proposed roads, suitable building platforms to accommodate future complying buildings, and adequate management of stormwater.
- b. The identification of any natural hazards or contaminated sites and how these may affect the stability of the land and suitability of any future building sites, including any information provided by a suitably qualified person whose investigations are supplied with the subdivision application.
- c. Whether the desired environmental outcome with a consistent and appropriate standard of infrastructure is achieved such as through compliance with the Council's Development Guidelines and Structure Plans.
- d. The extent to which earthworks and vegetation removal is required to create vehicle tracks and building platforms.
- e. Any actual or potential effects on areas or features of cultural, historic, landscape or natural value as identified in the plan.
- f. The imposition of conditions in accordance with Sections 108 and 220 of the Resource Management Act 1991.
- g. Any potential adverse effects from Natural Hazards, including flood inundation or erosion from the District's waterways and Lakes.

4a.3.3 Any subdivision within unserviced areas of the Residential Environment or any activity which results in a new public road or extension of existing public roads, water, stormwater or wastewater utility services is a **restricted discretionary activity**.

The matters over which the Council reserves discretion for the purposes of assessment are:

- a. Those matters of control identified in Section 4a.3 above;
- b. The impact of the resulting development on the ability of the wastewater, storm water and

drinking water infrastructure to service the new development;

- c. The impact of the resulting development on the ability of the roading networks to safely and sustainably operate and service the new development;
- d. Whether or not the lots will be adequately serviced for drinking water;
- e. The effect that the development will have on the storm water catchment.

4a.3.4 Any subdivision in the New Residential Environment, and any other subdivision which is not identified as a controlled, restricted discretionary, or non complying activity, is a **discretionary activity**.

4a.3.5 Any subdivision of land where more than nine (9) allotments share a single common access in the Residential Environment is a **discretionary activity**.

4a.4 Kinloch Structure Plan Area Rules

Also refer to the General and Subdivision Rules for the Residential Environment.

Subdivision Rules for the Kinloch Structure Plan Area

4a.4.1 Minimum and average lot sizes for Density Areas in the Kinloch Structure Plan Area

		a.	b.	c.
		Kinloch Residential	Kinloch Low Density	Kinloch Rural Residential
i.	Minimum Lot Size	800m ²	1 hectare	2 hectares
ii.	Average Lot Size	1,000m ²	1.5 hectares	2.5 hectares

4a.4.2 Any subdivision within the Kinloch Structure Plan which creates allotments that meet the minimum and average lot sizes identified in 4a.4.1 is a **controlled activity**.

For the purposes of Rule 4a.4.2 the matters over which the Council reserves control for the purpose of assessment are:

- a. The design and layout of the subdivision to ensure safe and efficient access onto existing and/or proposed roads, suitable building platforms to accommodate future complying buildings, and adequate management of stormwater.
- b. The identification of any natural hazards or contaminated sites and how these may affect the stability of the land and suitability of any future building sites, including any information provided by a suitably qualified person whose investigations are supplied with the subdivision application.
- c. Whether the desired environmental outcome with a consistent and appropriate standard of infrastructure is achieved such as through compliance with the Council's Development Guidelines and Structure Plans.
- d. The extent to which earthworks and vegetation removal is required to create vehicle tracks and

building platforms.

- e. Any actual or potential effects on areas or features of cultural, historic, landscape or natural value as identified in the plan.
- f. The imposition of conditions in accordance with Sections 108 and 220 of the Resource Management Act 1991.
- g. Any potential adverse effects from Natural Hazards, including flood inundation or erosion from the District's waterways and Lakes
- h. The need for the creation of walking and cycle ways that provide or improve linkages to reserves and the roading network.
- i. Any natural, ephemeral water course, drainage gullies and overland flow path through the subdivision, and the effect that development may have on them and of the effects of any changes in the catchment flow characteristics on the downstream catchment and landowners.
- j. Whether or not the new allotments are to be connected to a centralised waste water treatment plant.

4a.4.3 Any subdivision within the Kinloch Structure Plan Area which creates allotments that are less than the minimum lot size, but not less than the average lot sizes identified in 4a.4.1 is a **discretionary activity**.

4a.4.4 The creation of more than one dwelling per allotment in the Kinloch Community Structure Plan Area is a **discretionary activity**.

4a.4.5 Any subdivision within the Kinloch Structure Plan Area, which is not identified as a controlled or discretionary activity is a **non complying activity**.

4a.4.6 Any subdivision within the Kinloch Structure Plan Area, where by the newly created lots are unable to be connected to community wastewater network infrastructure is a **non complying activity**.The

following matters will be considered in respect to rules 4a.4.3, 4a.4.5 and

4a.4.6:

- a. The need for the creation of walking and cycle ways that provide or improve linkages to reserves and the roading network. Any natural, ephemeral water course, drainage gullies and overland flow path through the subdivision, and the effect that development may have on them and of the effects of any changes in the catchment flow characteristics on the downstream catchment and landowners.
- b. Whether or not the new allotments are to be connected to a centralised waste water treatment plant.

Note: Where activities such as earthworks and on-site sewage treatment involve discharges to land, air and water, a resource consent may be required from the Regional Council.

4a.5 Lake Ohakuri Development Zone Rules

Also refer to the General and Subdivision Rules for the Residential Environment.

4a.5.1 Subdivision in the Lake Ohakuri Development Zone that is consistent with 4a.5.2 will be a **controlled activity**.

For the purposes of rule 4a.5.3 the matters which the Council reserves control for the purposes of assessment are:

- a. The design and layout of the subdivision to ensure safe and efficient access onto existing and/or proposed roads and adequate management of storm water.
- b. The identification of any natural hazards or contaminated sites and how these may affect the stability of the land and suitability of any future building sites, including any information provided by a suitably qualified person whose investigations are supplied with the subdivision application.
- c. Whether the desired environmental outcome with a consistent and appropriate standard of infrastructure is achieved.
- d. The extent to which earthworks and vegetation removal is required to create vehicle tracks and building platforms.
- e. The provision of maintenance of open space.
- f. Maintenance of forested areas, including long term revegetation.
- g. The imposition of conditions in accordance with Sections 108 and 220 of the Resource

Management Act 1991. Note: Each lot will identify on the title what typology from Table 4a.5.2 that lot is to be developed for.

4a.5.2 Distribution and lot sizes for typologies in the Lake Ohakuri Development Zone

		a.	b.	c.	d.	e.	f.	g.	h.
		Village Core	Rowhouse	Main Street Cottage	Village Cottage	Village House	Bush Villa	Lake Forest Cluster	Maximum zone yield
i.	Max. % of Total Village Yield	8%	11%	21%	48%	7%		8%	150-190 units
ii.	Average Lot Size (m ²)	400	320	520	650	1000		2180	
iii.	Lot Range m ²	350-500	250-400	400-600	600-800	800-1500	1000-2500	<4000	
iv.	Min. Lot Frontage to public realm (m)	10m	7m	10m	12m	14m	16m	20m	
v.	Max. % Coverage	40%	40%	35%	30%	30%	25%	20%	
vi.	Location (as shown on Map D4)	The Square	The Square, Lake Resort	The Square, Lake Resort, The Green	The Green, Gully Resort, Village Resort	Bush Resort	Bush Resort	Lake Forest Environment	

4a.5.3 Subdivision and development in the Lake Forest Environment that:

- i. minimum Site Size (including Balance Land) is 10ha, and
- ii. maximum intensity of development (ha of total area/dwelling) of 1 per 2ha, and
- iii. no less than 10% of public open space vested or covenanted
- iv. a balance allotment of 70% of the site to be held in common ownership
- v. have a balance lot which must be contiguous and provide connection to publicly accessible areas

outside the Site, and

- vi. revegetation and landscape in the balance land is subject to a management plan, and
- vii. individual lots have a defined area for the house site as well as defined yards for private

regeneration areas, will be considered a **controlled activity**

4a.5.4 Providing development can meet rule 4a.5.6, subdivision and development in the Lake Ohakuri Development Zone that does not meet rule 4a.5.3 or 4a.5.4 will be considered a **restricted discretionary activity** with discretion being restricted to the following:

- i. Those points of deviation from the rule in question
- ii. Policies 3a.2 i – iv

4a.5.5 Subdivision that results in the creation of more than 190 lots within the Ohakuri Development Zone will be considered as a **non-complying activity**.

The following rules apply to development within the Lake Ohakuri Development Zone.

4a.5.6 Any activity that:

- i. complies with all of the performance standards in 4a.5.8; and
- ii. complies with all performance standards 4a.1.9, 4a.1.10, 4a.1.11, 4a.1.12, 4a.1.13, 4a.1.14, 4a.1.15, 4a.1.17, 4a.1.18, 4a.1.19, 4a.1.20, 4a.1.21, 4a.1.22 and 4a.1.23; and
- iii. complies with all the District Wide Performance Standards; and
- iv. is not identified as a controlled, restricted discretionary or discretionary activity; and
- v. is not identified as a controlled, restricted discretionary or discretionary activity within the District Wide Rules, is a **permitted activity**.

4a.5.7 Any activity which does not comply with:

- i. any one of the standards for that typology in 4a.5.8
- ii. performance standards 4a.1.9, 4a.1.10, 4a.1.11, 4a.1.12, 4a.1.13, 4a.1.14, 4a.1.15, 4a.1.17, 4a.1.18, 4a.1.19, 4a.1.20, 4a.1.21, 4a.1.22 and 4a.1.23;

is a **discretionary activity**, with Council's discretion being restricted to only the matters on non-compliance specified in the table or standard, and policies 3a.2.5 i and ii.

4a.5.8 Building Typologies: Performance Standards

		a.	b.	c.	d.	e.	f.	g.
		Village Core	Rowhouse	Main Street Cottage	Village Cottage	Village House	Bush Villa	Lake Forest Cluster
i.	Maximum Height (Storeys)	10-12m (2.5)	7-8m (2)	7-8m (1.5)	3-4m (1.5)	6-7m (1)	3-4m (1)	3-4m (1)
ii.	Street Set Back	0-2m	0-4m	0-4m	2-6m	2-8m	10m+	10m+
iii.	Minimum Side Yard	0 or 1.5m [2]	0 or 1.5m [2]	1.5m [2]	2m	4m	6m	10m
iv.	Maximum % Coverage	40%	40%	35%	30%	30%	25%	20%
v.	Location	The Square	The Square, Lake Resort	The Square, Lake Resort, The Green	The Green, Gully Resort, Village Resort	Bush Resort	Bush Resort	Lake Forest Environment

4a.6 Pukawa C Development Zone

4a.6.1 Any activity in the Pukawa C Development Zone is subject to the rules contained in Appendix 2.

4a.7 Nukuhau Structure Plan Area Rules

Also refer to the General and Subdivision Rules for the Residential Environment.

4a.7.1 The development of land within the Nukuhau Structure Plan area shall not be complete* until either:

- i. the existing Council wastewater network has been upgraded to accommodate the anticipated wastewater flows from the Nukuhau Structure Plan, or
- ii. Council is satisfied that there is a solution to suitably dispose of the anticipated wastewater flows.

*Advisory note: 'Complete' in this instance refers to the signing of the Council Completion section 224(c) Certificate.

4a.7.2 Any subdivision within the Nukuhau Structure Plan that complies with Rule 4a.7.1 and is in accordance with the Structure Plan in Appendix 9 is a **controlled activity**.

For the purposes of Rule 4a.7.2 the matters over which the Council reserves control for the purpose of assessment are:

- a. The design and layout of the subdivision to ensure safe and efficient access onto existing and/or proposed roads, suitable building platforms to accommodate future complying buildings, and adequate management of stormwater.
- b. The identification of any natural hazards or contaminated sites and how these may affect the stability of the land and suitability of any future building sites, including any information provided by a suitably qualified person whose investigations are supplied with the subdivision application.
- c. Whether the desired environmental outcome with a consistent and appropriate standard of infrastructure is achieved such as through compliance with the Council's Development Guidelines and Structure Plans.
- d. Any actual or potential effects on areas or features of cultural, ecological, historic, landscape or natural value.
- e. The imposition of conditions in accordance with Sections 108 and 220 of the Resource Management Act 1991.
- f. A Landscape Planting Plan for the stormwater gully reserve network and areas of open space along Wairakei Drive and Poihipi Road
- g. The creation of a safe network of walking and cycle pathways that provide or improve linkages to and through reserves and the roading network.
- h. Any natural, **significant** ephemeral water course, **significant** drainage gullies and

significant overland flow path through the subdivision, and the effect that development may have on them, their character and value for amenity, and of the effects of any changes in the catchment flow or water quality characteristics on the downstream catchment and landowners.

- i. Any requirements of Rule 4a.7.4, Rule 4a.7.5 and 4a.7.6 and/or the ability for such requirements to be achieved by subsequent development.

4a.7.3 Any subdivision within the Nukuhau Structure Plan that complies with Rule 4a.7.1 and is not in accordance with the Structure Plan in Appendix 9 is a **discretionary activity**.

4a.7.4 Any subdivision within the Nukuhau Structure Plan Area, where by the newly created lots are unable to be connected to Council wastewater network is a **non-complying activity**.

The following rules apply to development within the Nukuhau Structure Plan Area.

4a.7.5 Landscaping

- (i) Any lot boundary fronting a Stormwater Reserve with Pedestrian Access, Cycleway and Planting, shall have a 10m wide Stormwater Reserve and a 10 m wide Landscape Strip with a shared path as illustrated on Figures 9-A and 9-B and in accordance with Standards 9.1a to 9.1c in Appendix 9. Any lot boundary fronting a 10m wide Landscape Strip as shown on the Structure Plan map, shall provide a Landscape Strip as illustrated on Figures 9-C and 9-D and in accordance with Standard 9.1d in Appendix 9

4a.7.6 Fencing, Walls and Hedges

Front boundary fences, walls and/or hedge plantings between buildings on the site and any Stormwater or Recreation Reserve shall be no higher than 1.2m in height. Fence design and materials shall retain a level of transparency(visually permeable) so as not to provide a blank façade adjacent to the public walkway or reserve. To be deemed transparent any fence must meet the following requirements:

- i. Uses materials with continuous vertical gaps of at least 50mm width to create 50% or more see through visibility; or
- ii. Uses any materials for the lower half of the fence, wall or hedge, and materials with continuous vertical or horizontal gaps of at least 50mm width to create 75% or more see through visibility on the upper half.

In addition all fences on boundaries between residential zoned sites and any Stormwater or Recreation Reserve, or any road, cycleway or pathway must contain a gate of not less than 1m in width, not less than 50% visual permeability and not greater than 1.5m in height.

4a.7.7 Streetscape, Walking and Cycling Access

- (i) The design and layout of the subdivision shall provide a connected network of roads, streets and walking and cycling pathways in accordance with the Nukuhau Structure Plan in Appendix 9 and Crime Prevention through Environmental Design.
- (ii) The design and layout of the subdivision shall provide a shared walkway and cycleway along at least 75% of the full length and on at least one side the length of the stormwater gully

[network as shown in Appendix 9.](#)

[4a.7.8 Any activity that does not comply with Rules 4a.7.5, 4a.7.6 and 4a.7.7 is a **non-complying activity**.](#)

4a.87 Assessment Criteria

Please note: The assessment criteria used when assessing Restricted Discretionary Activities will be those criteria pertaining to the failed performance standard(s). When assessing Discretionary Activities the list of assessment criteria is not exclusive as other effects can be considered during assessment.

4a.87.1 GENERAL CRITERIA

- a. Impact of the activity on the amenity and character of the Residential Environment, surrounding allotments and other Environments.
- b. Potential for conflict between the activity and other existing activities within the Residential Environment.
- c. Consideration of any relevant Structure Plan, Growth Management Strategy, Management Plan,

Design Guidelines or Strategy as guidance during the resource consent process.4a.78.2 DEVELOPMENT

- a. Whether the desired environmental outcome, with a consistent and appropriate standard of infrastructure, is achieved such as through compliance with the Council's Development Guidelines, Growth Management Strategy and relevant Structure Plans.

4a.78.3 NON RESIDENTIAL ACTIVITIES

- a. The extent to which the form and scale of commercial activity (including office and retail activity) may disperse commercial activity to the detriment of the efficient operation, function, viability and sustainability of the Taupō Town Centre and in such a way that any office gives clear effect to the Taupō Town Centre and Business Distribution objectives and policies.
- b. The extent to which the activity is likely to be incompatible with existing and permitted future residential activities, and the potential for reverse sensitivity effects.
- c. The extent to which the activity, either alone or in association with other nearby activities, is likely to have an adverse effect upon the safety and efficiency of the road network.
- d. The extent to which the activity (having regard to its proposed size, composition and characteristics) is likely to have an adverse effect upon the amenity values and vitality of the Taupō Town Centre Environment and its ongoing ability to provide for the future needs of their communities.
- e. The extent to which the convenient access of communities to community facilities may be positively or adversely affected by the proposed activities.
- f. The extent to which the site is self-contained in respect of appropriate off-street parking for customers and employees and as to goods delivery service arrangements.

- g. Any cumulative effect of the loss of residential activity in conjunction with other non-residential activities in the vicinity
- h. The extent to which the surrounding area retains a residential amenity and character, rather

than being dominated by non-residential activity.4a.87.4 BUILDING HEIGHT

- a. The extent to which the extra height will:
 - i. adversely affect the character and visual amenity of the area and the Residential Environment by enabling development which is not consistent with the scale of development in the surrounding environment
 - ii. reduce the privacy of adjacent allotments by comparison with the effects of a complying activity
 - iii. result in large scale buildings which will intrude into the outlook from nearby allotments by comparison with the effects of a complying activity
 - iv. have an overbearing effect on sites within the Residential Environment.
- b. Proposed methods for avoiding, remedying or mitigating any potential adverse effects, and the degree to which they would be successful including:

- i. the extent to which topography, alternative design, planting, or setbacks can mitigate the adverse effects of the extra height.4a.87.5 HEIGHT TO BOUNDARY

- a. The extent of additional shading from the projection, including the amount of shadow cast and the period of time the adjacent allotments are affected.
- b. The nature of the activities undertaken on any affected portion of adjoining allotments, noting in particular any adverse effect on outdoor living areas.
- c. The extent to which the projection is necessary due to the shape or nature and physical features of the allotment.
- d. The extent to which the projection leads to a loss of privacy and/or outlook for nearby allotments, by comparison with the effects of a complying activity.
- e. Proposed methods for avoiding, remedying or mitigating any potential adverse effects, and the degree to which they would be successful including:

- i. the ability to mitigate the adverse effects through the use of screening, planting or alternative design.4a.87.6 COVERAGE, TOTAL COVERAGE AND PLOT RATIO

- a. The extent to which the increased coverage, total coverage, and/or plot ratio will:
 - i. adversely affect the character and visual amenity of the area and the Residential Environment by enabling development which is not consistent with the scale of development in the surrounding environment
 - ii. reduce the privacy and outlook of adjoining allotments by comparison with the effects of a complying activity

- iii. result in large scale buildings which will intrude into the outlook from nearby allotments by comparison with the effect of a complying activity
 - iv. result in a building or building(s) that is inconsistent with the character of the area due to long unbroken building facades along one or more boundaries
 - v. significantly shade useable outdoor living space on an adjacent allotment.
- b. Proposed methods for avoiding, remedying or mitigation of potential adverse effects, and the degree to which they would be successful including:
- i. The design and location of the building(s) to avoid long unbroken building facades along one or more boundaries
 - ii. Design of buildings or groups of buildings which reflect the scale of the surrounding environment
- iii. The ability to mitigate adverse effects through the imposition of conditions such as landscaping.
- 4a. 87.7 BUILDING SETBACK

- a. The extent to which the reduced setback will:
- i. adversely affect the amenity of the area including the effect on reserves and foreshore Protection Area, including the ability to maintain and enhance the openness and existing character and avoid the visual dominance of buildings in relation to those areas
 - ii. significantly reduce the privacy of adjacent allotments by comparison to the effect of a complying activity
 - iii. limit the safe and visible access of vehicles using the allotments.
- b. The extent to which the reduction in the setback is necessary due to the shape or nature and physical feature of the allotment.
- c. Proposed methods for avoiding, remedying or mitigating any potential adverse effects, and the degree to which they would be successful including:
- i. the ability of existing topography or vegetation to mitigate any adverse visual effects on the streetscape
 - ii. the ability to mitigate adverse effects of the reduced setback through screening, landscaping, planting and alternative design.

4a. 87.8 NOISE

- a. Ambient sound levels and the impact of any cumulative increase.
- b. The degree to which the sound is intrusive and contrasts with the level, character, duration and timing of the existing sound environment.
- c. The length of time and the level by which the noise limits will be exceeded, particularly at night.
- d. The nature and location of nearby activities and the effects they may experience resulting from the increase in sound levels.

- e. Whether the noise levels are likely to detract from the amenity or general environmental quality of the immediate area.
- f. The topography of the allotment and any influence this may have on sound propagation.
- g. Proposed methods for the avoidance, remedying or mitigation of potential adverse effects and the degree to which they would be successful including:
 - i. Insulation, barriers and isolation of the source of the noise.4a.87.9 PARKING, LOADING

AND ACCESS

- a. Extent to which the safety and efficiency of the roading network, road hierarchy or users of the road would be adversely affected.
- b. Whether there will be any adverse effects on the safety of pedestrians using the allotment, road, footpath or vehicle crossing.
- c. The type of vehicles using the site, their intensity, the time of day the allotment is frequented and the likely anticipated vehicle generation.
- d. Any adverse visual or nuisance effects on the amenity and character of the surrounding area and the Residential Environment.
- e. Effect of factors in the surrounding roading network including the position and function of the road within the road hierarchy, the actual speed environment of the road, volume of traffic using the road and any other factorsthat will prevent congestion and confusion between vehicles.
- f. Adequacy of parking to be supplied on site for the needs of the activity and whether it can be demonstrated that a less than normal demand is anticipated.
- g. Proposed methods for avoiding, remedying or mitigating any potential adverse effects, and the degree to which they would be successful including:
 - i. measures to improve visibility to and from the vehicle crossing point and alternative construction, location or design
 - ii. alternative options for the supply of the required parks.4a.87.10 VEHICLE MOVEMENTS
- a. Effect on the safe and efficient operation of the roading network within the area, including any cumulative effect and the degree to which the existing flow and type of traffic will be affected by the potential traffic generated.
- b. Detraction from the amenity of adjoining allotments and the Residential Environment, in terms of such matters as frequency and timing of vehicle movements, headlight wash, noise, odour, dust and glare, occurring as a resultof the increase in vehicle movements.
- c. Necessity to upgrade road to accommodate the increased traffic.
- d. Factors in the surrounding area, including the location of the unformed part of the legal road and the position of the formed carriage way.
- e. Proposed methods for the avoidance, remedying or mitigation of potential adverse effects, and

the degree to which they would be successful.4a.87.11 ARTIFICIAL LIGHT

- a. Extent to which the light source will adversely impact on the amenity of the Residential Environment, including adverse effects on adjoining allotments.
- b. Impact of light direction on the safe and efficient operation of the roading network within the area.
- c. Necessity for the light for reasons of safety or security, enhanced amenity or public enjoyment.
- d. Duration and operating hours of activity and associated lighting.
- e. Proposed methods for the avoidance, remedying or mitigation of potential adverse effects and the degree to which they would be successful including:

- i. height, direction, angle and shielding of the light source.4a.87.12 SIGNAGE

- a. Location (off or on the allotment), design and appearance of the sign.
- b. Compatibility with the scale and character of the allotment and of the surrounding Residential Environment, including the nature and proximity of other signage within the area.
- c. Any adverse effects on the visual amenity of the locality and whether the proposed sign would be visibly obtrusive, particularly from roads or public open spaces in the vicinity.
- d. Effect on the openness and attractiveness of the streetscape.
- e. Effect on the amenity of adjoining allotment in terms of such matters as noise, artificial light and glare occurring as a result of the sign.
- f. Necessity of the sign to direct people to the activity.
- g. Effect on the safe and efficient operation of the roading network within the area including the

possible distraction or confusion of motorists.4a.87.13 EARTHWORKS

- a. The extent to which the earthworks will change the ground level of the site, including the relationship of the site to adjacent reserves, and foreshore protection areas, and adjacent sites.
- b. The degree to which the finished ground levels reflect the contour of adjoining the sites, and any potential impacts on stability of neighbouring properties and existing stormwater flow patterns.
- c. The degree to which the earthworks will enable building facades to be extended below natural ground level and result in buildings that are more visually dominant off-site and inconsistent with the character of the Environment.
- d. Detraction from the amenity of adjoining allotments in terms of such matters as noise and dust occurring as a result of the earthworks, and the resulting impact on the use of these allotments.
- e. Potential for the creation of a nuisance effect for residents within the area, including vehicle movements, hours of operation, dust and vibration.
- f. The degree to which an Earthworks Management Plan prevents adverse effects arising, in particular sediment discharges and dust nuisance.
- g. The extent of any vegetation removal and the time period for which soil will be exposed.

- h. Proposed methods and timing for the avoidance, remedying or mitigation of potential adverse effects and the degree to which they would be successful including:
 - i. planned rehabilitation, re-contouring and re-vegetation or the retention of existing vegetation
- i. Whether there are any Archaeological sites, and the potential effect of the earthworks on these sites.
- j. The location and scope of earthworks, including its movement to, from and on the site.4a.87.14

ODOUR

- a. Detraction from the amenity of other allotments, including the potential for the creation of nuisance effects for residents within the area, and the resulting impact on the use of these allotments.
- b. Proposed methods for the avoidance, remedying or mitigation of potential adverse effects, and

the degree to which they would be successful.4a.87.15 STORMWATER

- a. Whether there will be any actual, potential or cumulative adverse effects of additional private connections on the stormwater reticulation system.
- b. Whether there will be a requirement to upgrade the stormwater reticulation system if additional private connections are made.
- c. Whether there will be any adverse effects on the environment of not providing for the onsite disposal of stormwater and/or adequate secondary flowpaths.
- d. Proposed methods for the avoidance, remedying or mitigating of the adverse effects, of climatic conditions on stormwater management during development, construction and rehabilitation phases.
- e. The assessment of any existing or potential adverse effects if the unauthorized disposal

of waste and pollutants to the stormwater system, and the methods for monitoring, and

methods used to reduce adverse effects.4a.87.16 TWO OR MORE DWELLINGS PER ALLOTMENT

(KINLOCH COMMUNITY STRUCTURE PLAN AREA)

- a. Whether infrastructure can sustainably service the actual or potential cumulative increase in the density of dwellings above that which is anticipated through the Permitted and Controlled activity status in the District Plan.
- b. The extent to which the additional dwellings will, singularly or cumulatively, have an adverse effect on the amenity and character of the existing or proposed built environment, as identified in the District Plan and any relevant structure plans.

4a.87.17 SUBDIVISION

- a. Any immediate adverse or potentially adverse cumulative effects of the subdivision or subsequent land use on the quality of Taupō District's lakes, waterways and aquifers, and the methods by which such effects can be avoided, remedied or mitigated.

- b. Whether the design and layout of the subdivision avoids, remedies or mitigates any adverse effects resulting from identified natural hazards or land contamination, including an assessment of any information provided by a suitably qualified person whose investigations are supplied with the subdivision application.
- c. The clearance or planting of vegetation, including its location, species and maintenance.
- d. The potential for financial contributions to avoid, remedy or mitigate any adverse effects on the environment.
- e. The imposition of conditions in accordance with Sections 108 and 220 of the Resource Management Act 1991.
- f. Any actual or potential effects on areas or features of cultural, historical, landscape or ecological value as identified in the plan.
- g. In respect to the New Residential Environment the appropriateness of the design, layout and density of the subdivision, having particular regard to any:
 - i. flood risk (Kuratau New Residential Environment only),
 - ii. setback from any water body or river appropriate to mitigate any risk from erosion (Kuratau New Residential Environment only).
 - iii. relevant stormwater catchment management plan,
 - iv. geotechnical and topographical considerations, (including potential liquefaction effects for subdivision within the Kuratau New Residential Environment),
 - v. landscape issues (particularly as they relate to any Amenity Landscape Area),
 - vi. natural values and any infrastructural servicing issues.
- h. The densities and proposed landuses shown in the Kinloch Community Structure Plan (refer [appendix 1](#))
- i. Whether infrastructure can sustainably service the actual or cumulative increase in the density of dwellings above that which is anticipated through the Permitted and Controlled activity status in the District Plan.
- j. The effect of the proposed subdivision on the utilisation of geothermal energy resources of Development and Limited Development Geothermal Systems.
- k. Whether there is suitable and appropriate physical and legal access to allotments based on the number of new allotments created and any necessary title security of ownership and maintenance.
- l. [Landscape planting, stormwater infrastructure and walking and cycling pathways network, including \(but not restricted to\) the integrated use and provision of the stormwater gully network to address all three matters as indicated in the Nukuhau Structure Plan \(Appendix 9\).](#)
- m. [Provision for a new urban gateway at Wairakei Drive \(Nukuhau Structure Plan only\)](#)

Note: Where activities such as earthworks and on-site sewage treatment involve discharges to land, air and water, a resource consent may be required from the relevant Regional Council.

Refer also to Subsection E – DISTRICT WIDE RULES

APPENDIX 9 OUTLINE DEVELOPMENT PLAN

9.1 Any lot boundary fronting a Stormwater Reserve with Pedestrian Access, Cycleway and Planting - refer Rule 4a.7.5(i)

Requires a 10m wide Stormwater Reserve and a 10 m wide Landscape Strip with a shared path as shown in Figures 9-A (for Wairakei Drive frontage) and 9-B below and in accordance with the requirements of standards 9.1a to 9.1c

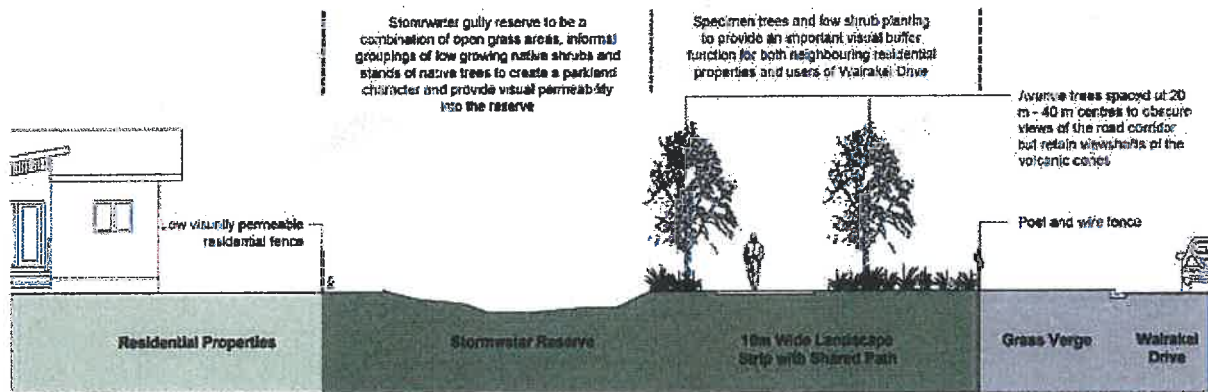


Figure 9-A: Cross section illustrating the Wairakei Drive road frontage design

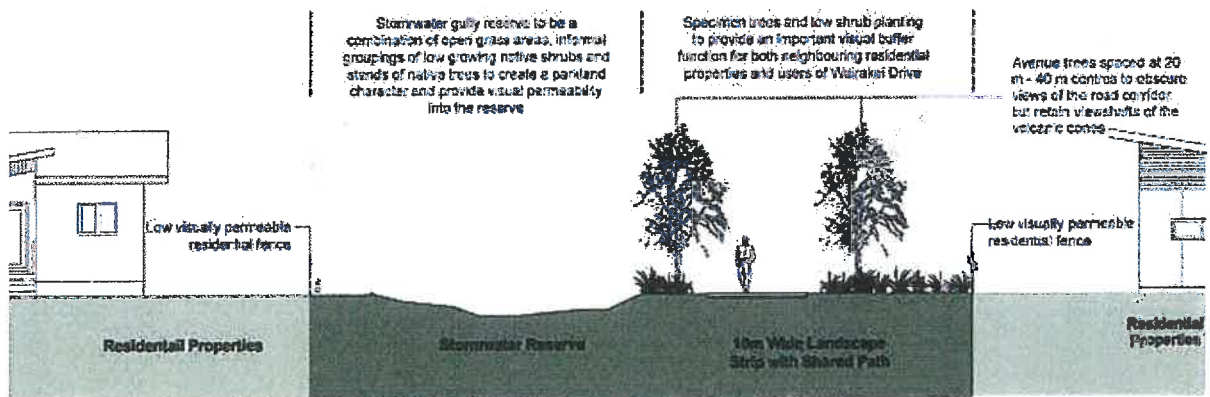


Figure 9-B: Cross section illustrating the Stormwater Reserve frontage

Standard 9.1a Planting Requirements 10 m wide Landscape Strip

The 10m wide Landscape Strip illustrated in Figure 9-A is proposed to protect viewshafts from dwellings towards the volcanic cones. In terms of tree planting, an avenue of specimen trees is suggested, with a height requirement of 10 – 20 metres at maturity. Trees should be spaced at 20 metre intervals and lower native shrubs with a maximum height of 1 metre. This softens the interface between proposed residential development and the Wairakei Drive corridor and retains the existing sense of openness, avoiding the 'wall' effect that would occur from more dense planting.

Standard 9.1b Planting requirements for the Shared Path within the 10 m wide Landscape Strip

A pedestrian and cycle path will extend down the centre of the 10 m wide Landscape Strip illustrated in Figures 9-A and 9-B, with a clear planting envelope around the path for safety. Either grass or low planting to 400 mm is acceptable within this envelope. Plant selection is important as it will create a sense of arrival, provides the first impressions and create a positive visual environment for the community, travelling public and tourists.

Standard 9.1c Planting Requirements for the 10m wide Stormwater Reserve

Within the 10m wide Stormwater Reserve grass areas are combined with informal groups of clear stem specimen trees (native and exotic) to provide a parkland-aesthetic for residential properties backing onto this Stormwater Reserve. This will encourage dwellings to have internal or external living spaces that overlook the Stormwater Reserve.

9.2 Any lot boundary fronting a 10m wide Landscape Strip - refer Rule 4a.7.5(ii)

Requires a 10m Landscape Buffer Strip with a Shared Path as shown in Figures 9-C (for Wairakei Drive frontage) and 9-D below and in accordance with the requirements of standard 9.1d.

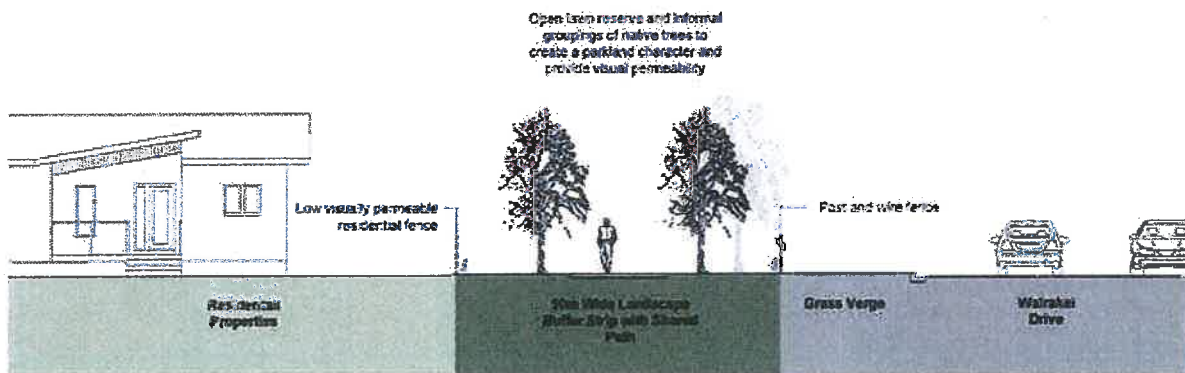


Figure 9-C: Cross section illustrating the 10m wide Landscape Buffer Strip with Shared Path to the Wairakei Drive road frontage design

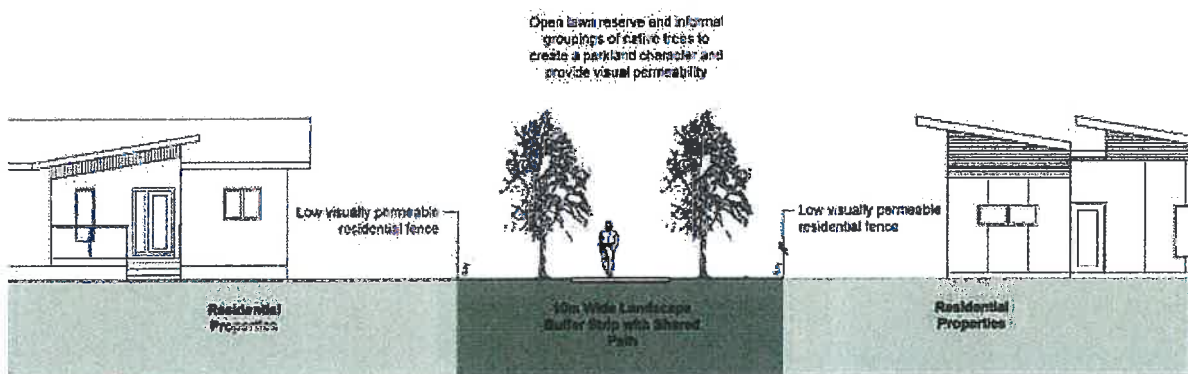


Figure 9-D: Cross section illustrating the 10m wide Landscape Buffer Strip with Shared Path

Standard 9.1d Planting Requirements for the 10m wide Landscape Strip

A 10-metre-wide native and exotic Landscape Strip is to screen and buffer views from the road corridor towards the Structure Plan area. A mixture of native shrubs and trees are recommended, with a height requirement of 10 – 20 metres at maturity. Where a shared path is used, a clear planting envelope should be achieved. Either grass or low planting to 400 mm is acceptable within this envelope.

9.3 Arterial Roads

Arterial Roads as shown on the Structure Plan Map are illustrated in the typical cross section in Figure 9-E below with a road reserve width of 22m are generally fixed in their location. These corridors are to comprise grass berms, pedestrian footpaths and shrub planting on both sides of the corridor. It is intended that a 2.5 metre shared path be set between two rows of trees on one side of the road and a standard footpath on the other side of the road. A 2-metre-wide planting strip will extend along the length of the corridor on both sides of the road to give character and definition to the arterial. Shrub planting should be a combination of low growing (400 mm), low maintenance native shrubs. An avenue of clear stem native specimen trees has been included within the planting strip to provide visual continuity with surrounding residential developments and to provide safety benefits through increased passive surveillance.

Ultimately, tree selection for Arterial Roads should ensure the Structure Plan Area is well connected physically and visually to the open space framework and streetscape network and surrounding residential developments.

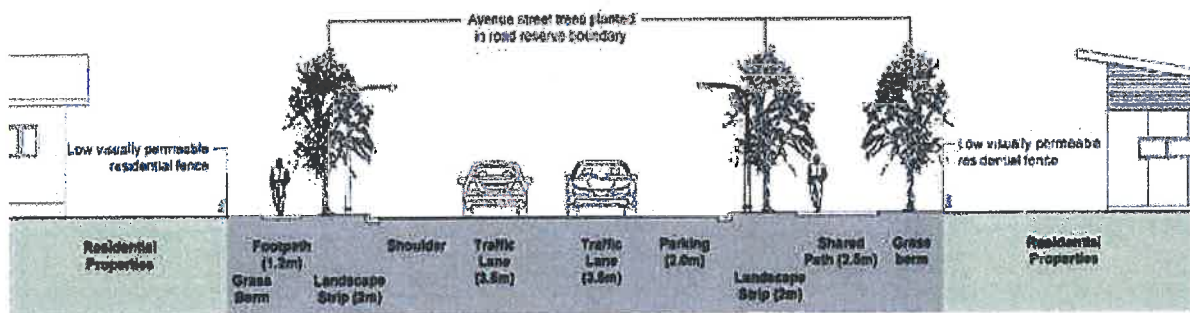


Figure 9-E: Cross section of an Arterial Road

9.4 Collector and Secondary Collector Roads- General Residential Zone

Collector and Secondary Collector Roads in the General Residential Zone as shown on the Structure Plan Map are illustrated in the typical cross section in Figure 9-F below with a road reserve width of 22m. They are to comprise grass berms, pedestrian footpaths and on street carparks on both sides of the corridor. To provide visual continuity with surrounding residential developments and soften the streetscape an avenue of clear stem specimen trees has been included in the grass berms. Trees should be well spaced so as not to obstruct viewshafts to the volcanic cones.

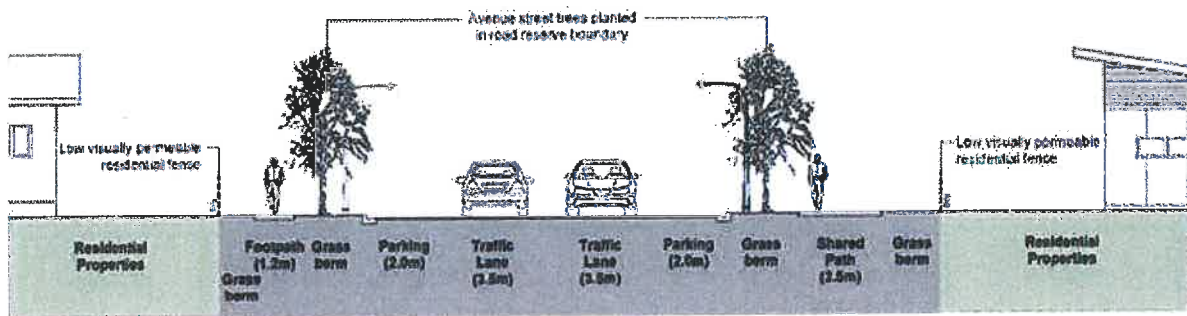


Figure 9-F: Cross section of Collector and Secondary Collector Roads in the General Residential Zone

9.5 Collector and Secondary Collector Roads- Medium Density Residential Zone

Collector and Secondary Collector Roads in the Medium Density Residential Zone as shown on the Structure Plan Map are illustrated in the typical cross section in Figure 9-G below with a road reserve width of 22m. They are to comprise grass berms, pedestrian footpaths and on street carparks on both sides of the corridor. To provide visual continuity with surrounding residential developments and soften the streetscape an avenue of clear stem specimen trees has been included in the grass berms. Trees should be well spaced so as not to obstruct viewshafts to the volcanic cones.

The harder edge of medium density development and likelihood of greater use given its location is softened by repeating the twin rows of trees used on the Arterial Roads. This also recognises that great development density and proximity to gully reserves areas and the commercial node is likely to result in this corridor having the potential to be more significant for cyclists and pedestrians than other Collector or Secondary Collector Roads.

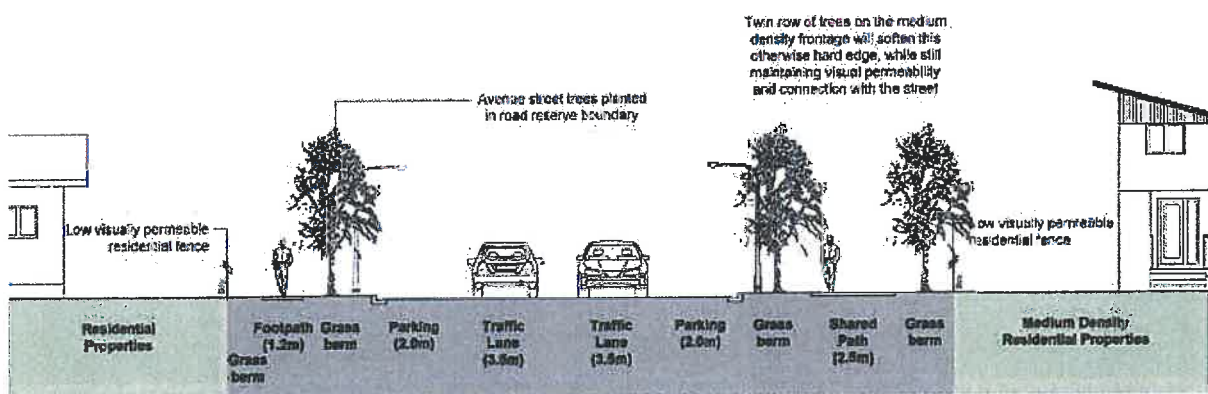


Figure 9-G: Cross section of Collector and Secondary Collector Roads in the General Residential Zone

9.6 Principal Walkway and Cycleway Pathway Connections

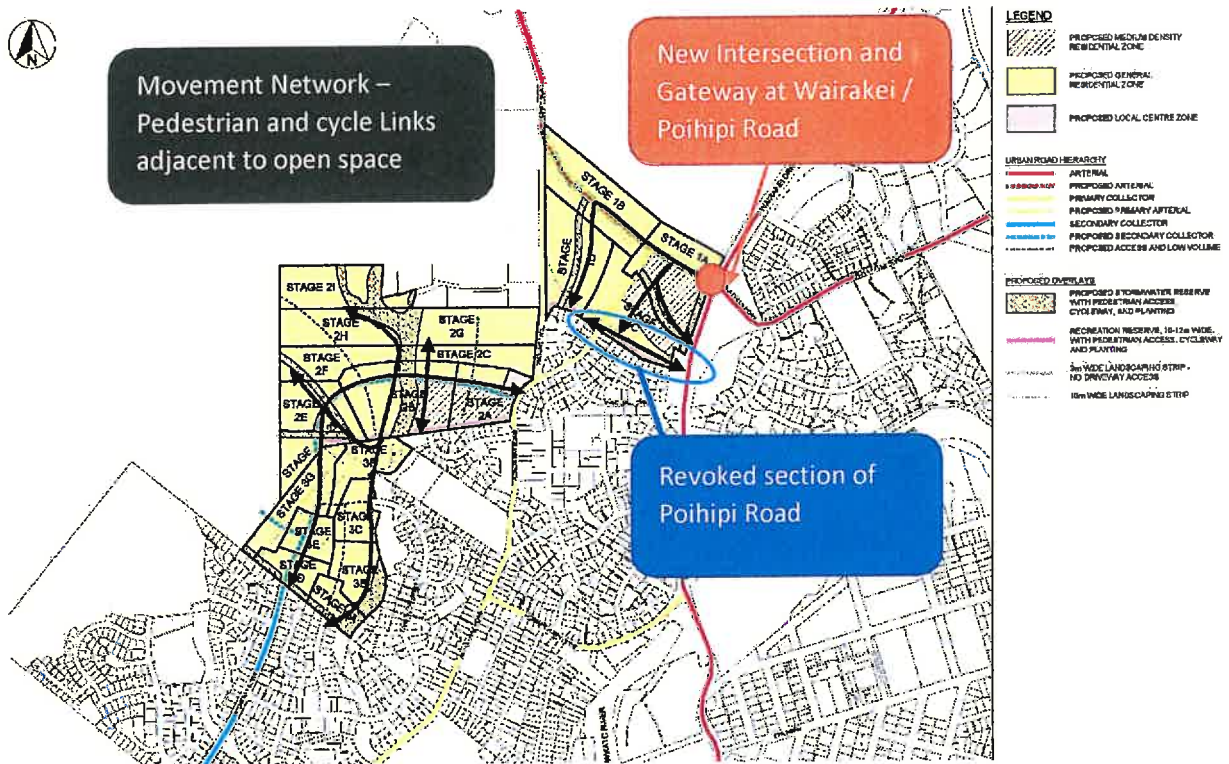
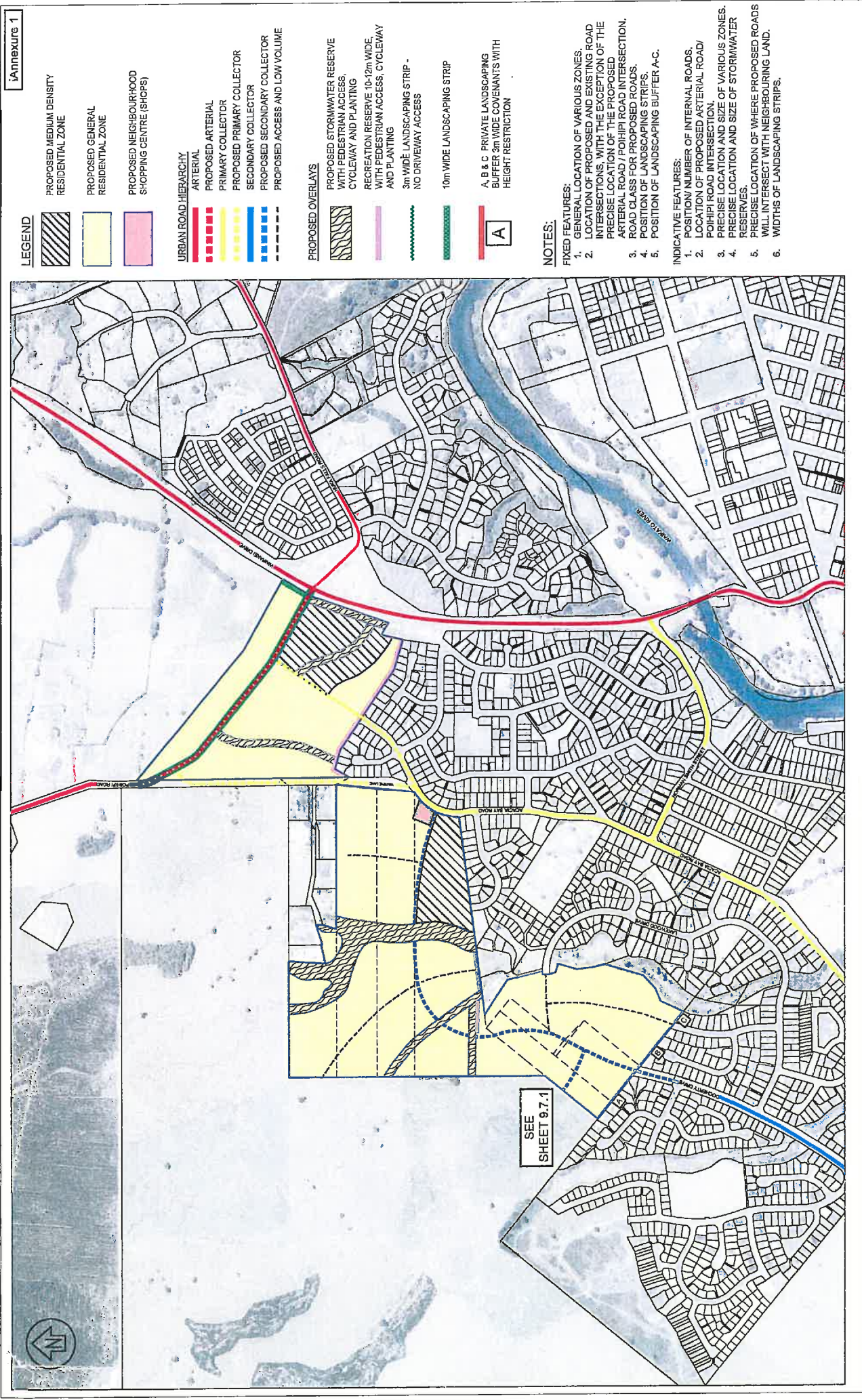


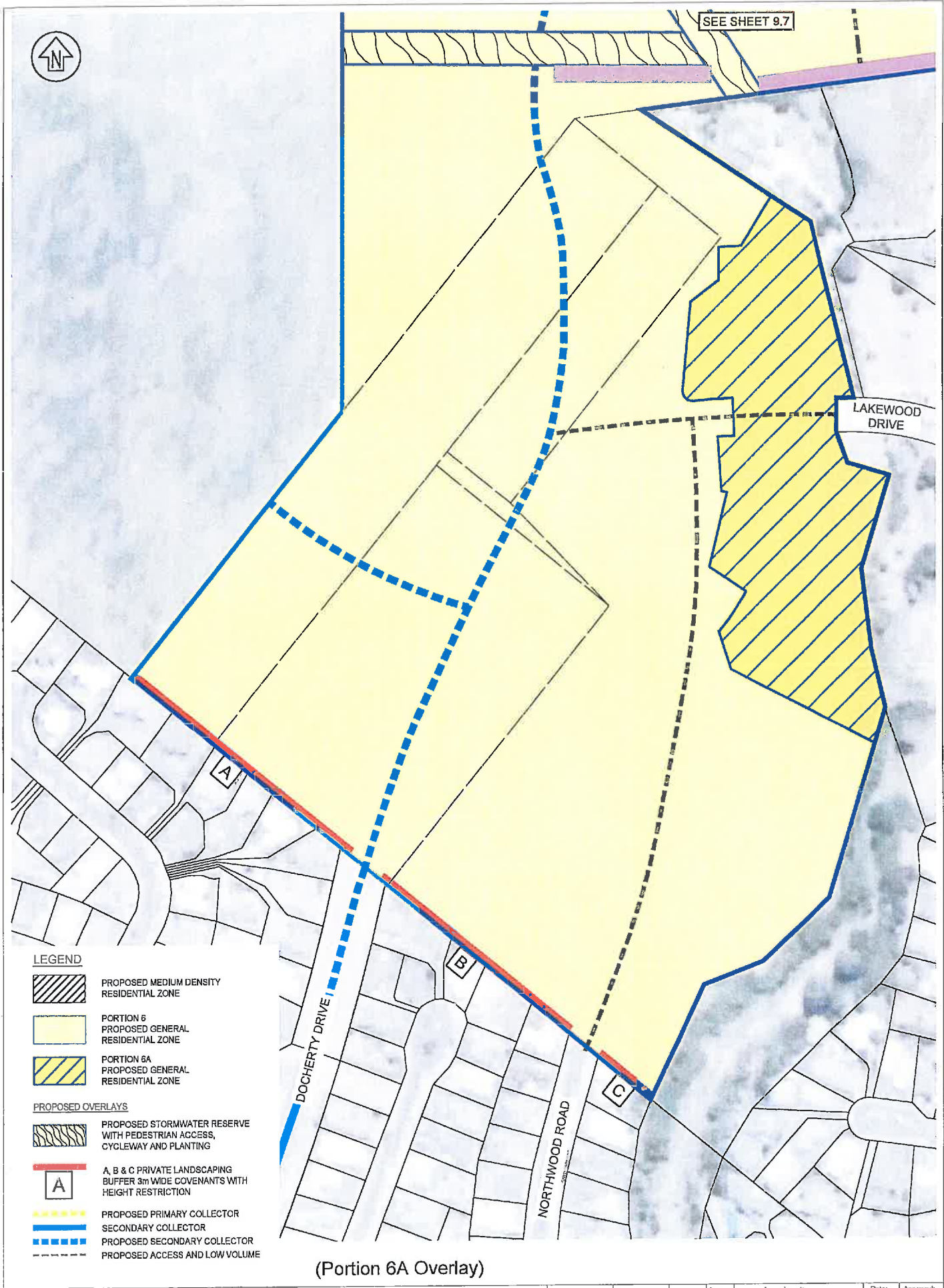
Figure 9-H: Proposed Walk-Cycle Links adjacent to or crossing open space as part of the Movement Network (all modes)



9.7 Nukuhau Structure Plan		Sheet No.: 9.7	Issue: 1	Amendment: 3	Date: 3/03/21	Approved: DVR
Private Plan Change 37		Sheet 1 of 2	1	First Issue		
Taupo District Plan		Scale of AS: 1: 10000	Date: 5/03/21			
		Drawn: DGC				

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9.7.1 Nukuhau Structure Plan
Private Plan Change 37
Taupo District Plan

Sheet No.: Sheet 2 of 2	Drawing No.: 9.7.1	Issue: 1	Issue: 1	Amendment: First Issue	Date: 5/03/21	Approved: DVR
Scale at A3: 1: 2000	Drawn: DGC	Date: 5/03/21				

Organisation:

Spark New Zealand Trading Limited

First name: Fiona**Last name:** Matthews

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Spark submission

Form 5
Submission on publicly notified Plan Change (Private) 37 Nukuhau.
Clause 6 of Schedule 1, Resource Management Act 1991

To: Taupō District Council
Private Bag 2005
Taupō Mail Centre
Taupō 3352

Email: nukuhauplanchange@taupo.govt.nz

Name of submitter: Spark New Zealand Trading Limited
Private Bag 92028
Auckland 1010

This is a submission on the following proposed private plan change 37: **Nukuhau**

Spark New Zealand Trading Limited could not gain an advantage in trade competition through this submission.

The specific provisions of the proposal that the submission relates to, the submission points, reasons and decisions sought are detailed in the attached submission. Spark seeks the specific relief sought in the submission, or relief of like effect, including any consequential changes to the Proposed Private Plan Change that may be required.

Spark New Zealand Trading Limited wishes to be heard in support of its submission. If others make a similar submission, Spark New Zealand Trading Limited will consider presenting a joint case with them at a hearing.



Signed:

On behalf of Spark New Zealand Trading Limited

Dated at Auckland this 5 day of March 2021.

Address for Service:

Spark New Zealand Trading Limited
L6 Mayoral Drive Building
31 Airedale Street
Auckland

Contact Details:

Attention: Fiona Matthews
Telephone: 021772005
E-mail: fiona.matthews@spark.co.nz

Alternate contact details

Graeme McCarrison
027 4811 816
graeme.mccarrison@spark.co.nz



Introduction

Spark is New Zealand's largest telecommunications and digital services company. Through the products and services we provide, we connect, empower and support our customers to adapt, grow and become more sustainable through technology.

The New Zealand mobile market is growing, with consumers using significantly more data than previous years whilst also demanding greater speeds. In 2019, New Zealand mobile data average usage increased 35% compared to 2018¹. Success in wireless-based products and services is underpinned by our investment in the mobile network.

In November 2019, Spark started its 5G rollout and we have now launched 5G in Palmerston North and an additional 6 South Island towns. The deployment of 5G is crucial for NZ's future growth and is a big driver of innovation, faster speeds, mass connectivity and network reliability. Spark has also rolled out 4.5G to 315 locations across the country, bringing customers faster speeds and adding capacity to the network. 98% of customers are reached by our 4G network and we currently provide 2.519 million mobile connections and 709,000 broadband connections around the country.

Telecommunications networks are essential and critical national infrastructure that underpin urban development by ensuring New Zealanders are digitally connected to each other and the world. The economic and social benefits of this connectivity have been widely acknowledged. The applications and services that these networks enable are rapidly becoming indispensable for businesses and residential users who expect high speed and reliability wherever they are and whatever they are doing. New developments are likely to make use of internet of things (IoT) technology, using smart devices and remote probes which communicate in real time over telecoms networks for a range of applications including road management and environmental monitoring.

Telecommunications is a regulated industry partly to ensure that customers have access to a choice of service providers, competitive pricing and fixed and wireless service options. Within an urban development, customers have an expectation there will be choice of service.

The *Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2016* (NESTF) came into force on 1 January 2017. These replaced the 2008 regulations and broadened their scope to enable network operators as determined under the Telecommunications Act to ensure networks can be upgraded with new technology. The 2008 regulations provided permitted activity rules for upgrading/replacement of existing poles in road reserve to enable attachment of antennas, telecommunications cabinets in road reserve, and radio frequency exposures inside and outside of roads. In summary the 2016 regulations now provide for the following as permitted activities in all district plans subject to standards:

¹ Commerce Commission Annual Telecommunications Monitoring Report 2019

- Telecommunications cabinets in all locations;
- Antennas on existing poles in road reserve (including pole replacement eg a streetlight integrated to include antennas);
- Antennas on new poles in road reserve;
- Antennas on existing poles outside of road reserve, including pole replacements if required (i.e. upgrades to existing telecommunication facilities outside of roads);
- New poles and attached antennas in rural zones;
- Antennas on buildings (this excludes any residential zones unless the point of attachment to the building is at least 15m above ground level);
- Small cell units (integrated radio equipment and antennas not exceeding 0.11m³);
- Customer connection lines (excluding new support poles);
- Underground telecommunications lines; and
- Radio frequency exposures in all locations.

The limitations of the NESTF are that the range of permitted activities as described above do not extend to include new facilities/cell tower outside the road reserve in urban areas which means that Spark relies on provisions from both the NESTF and the Taupō District Plan to build new facilities to service urban growth. Accordingly, it is preferable to deal with infrastructure requirements at the time of land development rather than rely on retrofitting it later where this may potentially involve consenting constraints.

Development Planning

Engagement with telecommunication operators at the early planning stages of development is essential to ensure future generations of property owners can obtain the telecommunication services they reasonably expect. It is also critical for the deployment of affordable infrastructure solutions that take into account the telecommunications market, technological developments, and the ongoing requirements for managing telecommunications infrastructure.

A key consideration for developments is recognising where existing infrastructure is in situ, as moving it is often extremely expensive and if there is no alternative this needs to be factored into the developer's costs. The location of telecommunications infrastructure does not necessarily influence development, but sufficient capacity will support growth by facilitating connectivity (with associated economic and social benefits). For urban areas – telecommunication reticulation should be implicit in development plans.

The location of development relative to other supporting and enabling telecommunications infrastructure can significantly influence the cost of providing telecommunications services. It is important that these costs are considered at the early stages of development and not left to be borne by individual property owners. Where connection is deferred there are additional costs and disturbances where ducting is required to be laid in newly formed road reserve/ footpaths.

Plan Change 37

The Plan Change seeks to change the zoning of almost 80ha of Rural Environment zoned land to a mix of General Residential and Medium Density Residential, as well as providing a Neighbourhood Shopping Centre overlay within an area zoned General Residential (see Figure 1 below).

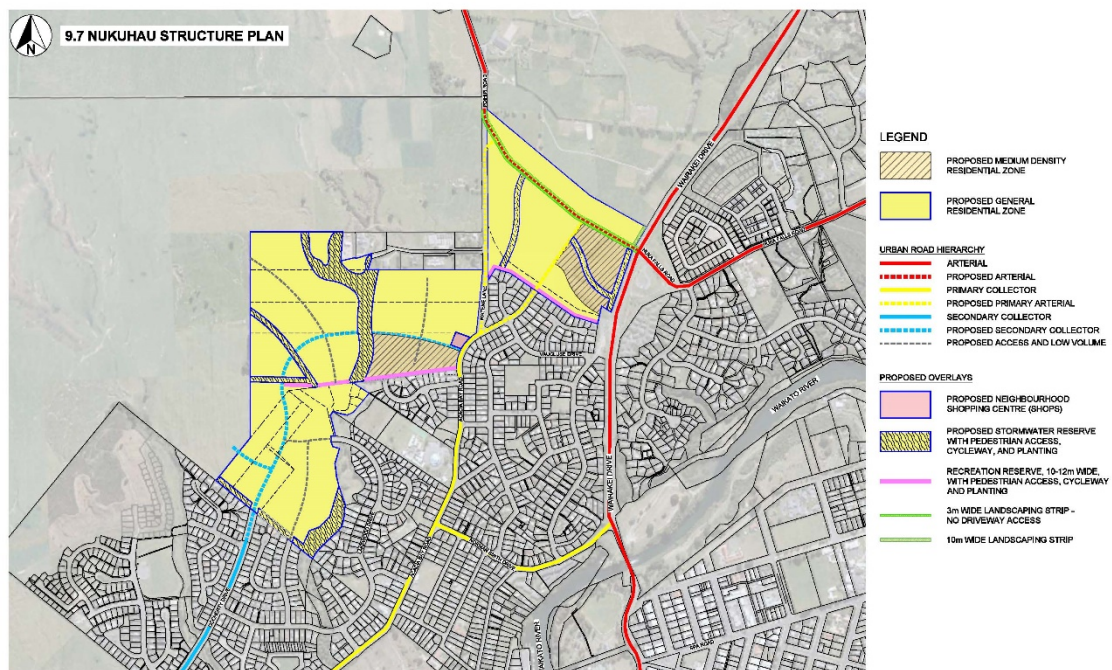


Figure 1. Plan Change Request Map

The Plan Change Request Document (Version 4, dated 26 January 2021), reports on infrastructure constraints and opportunities in the 3-waters and roading network. Analysis prepared to support this Plan Change demonstrates that the area can be serviced with targeted transport infrastructure upgrades in place. The Plan Change area can also be serviced with

targeted upgrades to the water supply, wastewater and stormwater networks. No provision has been allocated to telecommunication infrastructure.

In addition, no evidence of engagement with telecommunication providers to determine what services are currently available or in future planning, and if the existing networks have capacity to meet the demand created by the development. Overall telecommunications facilities need to be incorporated at the early stages of development, to ensure staging of infrastructure and network capacity is appropriate and delivered within the development.

National Policy Statement – Urban Development

The statutory framework (section 4) of the report discusses the plan change request places the “*most weight on the NPS-UD*”. However, the Statutory assessment (section 9) fails to fully analyse the objectives and ensure they are provided for as assessed below.

The National Policy Statement on Urban Development 2020 (NPSUD) which came into effect on 20 August 2020 replaces the National Policy Statement on Urban Development Capacity 2016 (NPS UDC) which was in effect from 1 December 2016. The NPS UDC recognised the national significance of urban environments and provides direction to decision-makers on planning for urban environments. The NPSUD and NPS UDC focus similarly to ensure there is sufficient development capacity for housing and business with a suite of objectives and policies to guide decision making in urban areas. There is an emphasis on integrated planning of land use, development, and infrastructure provision.

NPSUD Objective 1 seeks to ensure:

“well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.”

NPSUD Objective 6 seeks to deliver local authority decisions on urban development integrate with infrastructure planning and funding decisions. Policy 10 requires the local authorities to engage with providers of infrastructure (telecommunications is included as “*additional infrastructure*” provides to achieve integrated land use and infrastructure planning.

NPSUD 3.11(1) provides direction when making plans or changing plans to ensure that development achieves well-functioning urban environments. In particular, reference to additional infrastructure NPS UD 3.5 “*Availability of additional infrastructure*” requires that local authorities must be satisfied that the additional infrastructure to service the development capacity is likely to be available. This means that providers of additional infrastructure, in our case telecommunications are required to be engaged with.

The council’s Taupō District Urban Structure Plan 2004 highlights the constraints on urban growth and points out that if it is not effectively addressed has the potential to result in unsustainable growth management outcomes for the Council and the community. Whilst published prior to the NPS-UD or predecessor NPS-UDC, its objective (Objective 2) seeks to “*Maintain urban amenity and compact urban form ... and coordinate urban growth with infrastructure*”. The sequencing of the release of land for urban development with the delivery of the required infrastructure. The sequencing of the release of land for urban development with the delivery of the required infrastructure needs to be incorporated into the Plan Change through the inclusion of rules that trigger the staged release of development capacity with the delivery of supporting infrastructure. Telecommunications infrastructure should be included within triggers for the staged release of development.

A Development Strategy that appropriately recognises and facilitates investment in infrastructure, while responding to the demands and complexities facing urban areas, will in turn encourage further investment by the telecommunications industry. This will assist the industry deliver to the Government’s goal of 95 percent of New Zealanders having access to broadband with speeds greater than 50 Mbps by 2025, an objective which will support positive social, economic, environmental and cultural outcomes for New Zealand.

Current Spark Assets

There is currently only 1 mobile site provided for in the wider Taupō area (as shown in Figure 1). Spark undertakes regional planning throughout the year but requires developers to work with our engineers to ensure sufficient coverage and capacity demands can be met within new developments.

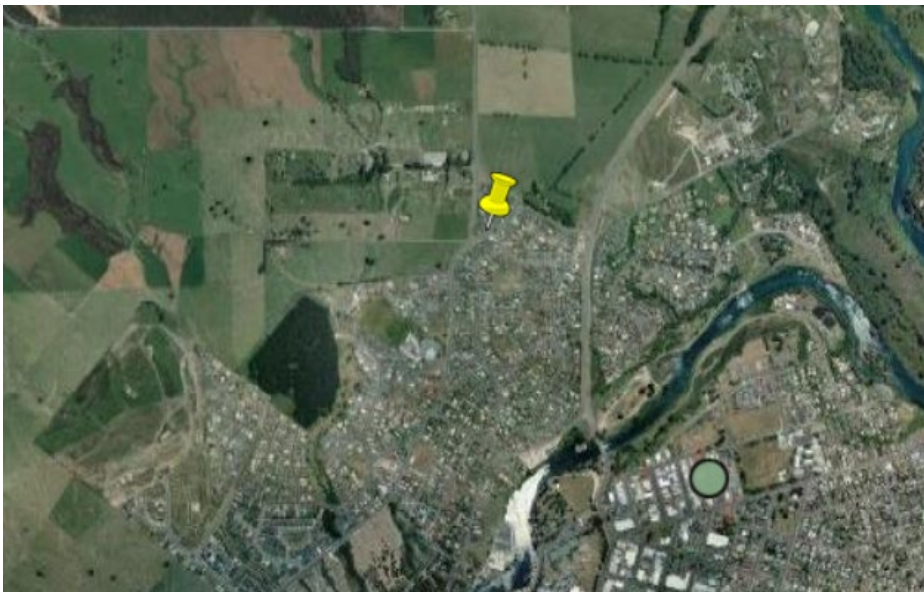


Figure 1. Nukuhau current mobile sites (Spark) (Source: Ventura GIS Mapping)

Adding mobile sites to residential areas as is proposed to cater for residents and businesses can be established using the provisions of the NESTF and District Plan as described above. However, it becomes complex and difficult within those areas that are zoned for residential uses such as the medium density residential zone, and residential with a neighbourhood shopping overlay. These could permit taller development, yet not allow for infrastructure to be established to a similar or taller height. In addition, even permitted infrastructure in these areas, may not be amenable to the community and residents, thereby adding complexity in developing mobile sites, in areas in which customers expect quality mobile coverage. The proposed plan change thus does not adequately cater for telecommunications infrastructure.

Funding

The 'co-operating landowners' (Applicants) have not identified any infrastructure funding agreements between themselves, the Council and other relevant parties addressing required for infrastructure upgrades. Ensuring telecommunications facilities are included in a funding agreement between the developer and Spark will ensure infrastructure can be incorporated in an efficient and sustainable manner.

Conclusion

Overall, the Plan Change areas allow for a total of approximately 80 hectares of land to be developed and rezoned to allow for a mixture of residential, commercial activities. The NESTF whilst allowing for telecommunications infrastructure to be lawfully established in roads and other areas becomes complex and difficult in areas that are zoned for residential uses such as the medium density, which permits taller housing developments and adds complexity to develop mobile sites. The plan change as proposed, does not adequately cater for telecommunications infrastructure. As proposed in the Plan Changes there is risk that the developments will not have adequate access to a range of telecommunication services that customers expect. We consider that it is in the interest of the developments to fund and integrate telecommunications into the layout and potentially buildings to ensure customers have access to the services to achieve a well-functioning community. It is our experience that future customers expect to know what telecommunications are or will be available and where they are located when purchase or lease a property. The NESTF and District Plan provide reasonable opportunity to build new infrastructure, especially in the road reserve, however new owners of properties are unlikely to be accepting of such facilities even if permitted, hence identifying where infrastructure will be located in development planning is crucial.

Engagement with Spark and other telecommunications providers at the early planning stages of development is vital to ensure new growth areas receive the level of telecommunications services that a property or business owner purchasing within new development would expect.

This submission offers general feedback consistent with Sparks' view that:

Generally supports the purpose and objectives of the plan changes however submits that telecommunications should be recognised essential infrastructure that forms part of an integrated approach to growth management and development planning. Early engagement with telecommunications providers is necessary to ensure that investment in telecommunications infrastructure can be made efficiently and with as much certainty as possible.

Submission

1. Spark is consulted with throughout the Plan Change Process to ensure that telecommunications is recognised as essential infrastructure and additional infrastructure under the NPS-UD.
2. Spark is consulted to ensure that there is adequate infrastructure to support the demand for telecommunication services generated by the development.
3. Spark is consulted with throughout the infrastructure funding agreements.
4. Spark is consulted with to ensure staging of infrastructure is appropriate and underground ducting, above ground mobile sites/facilities are provided for.

Yours sincerely,



Fiona Matthews
Senior Environmental Planner

The address for service and contact details are:

Fiona Matthews
Spark New Zealand Trading Limited
Private Bag 92028
Auckland 1010

Fiona.matthews@spark.co.nz
021772005

Organisation:

Todd Land Development Consultancy Ltd (TLDC) -
Director & Senior Engineer

First name: Chris

Last name: Todd

On behalf of:

Owners of 179 Acacia Bay Road

I could

I could not

Gain an advantage in trade competition through this submission

I am

I am not

directly affected by an effect of the subject matter of the submission that :

a. adversely affects the environment, and

b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
TLDC submission

Our Ref NZ17011

Contact C K Todd

5th March 2021.

Taupo District Council
Private Bag 2005
Taupo

Attention: Hillary Samuel

Dear Hillary,

Nukuhau Resorts Ltd – Nukuhau Private Plan Change.

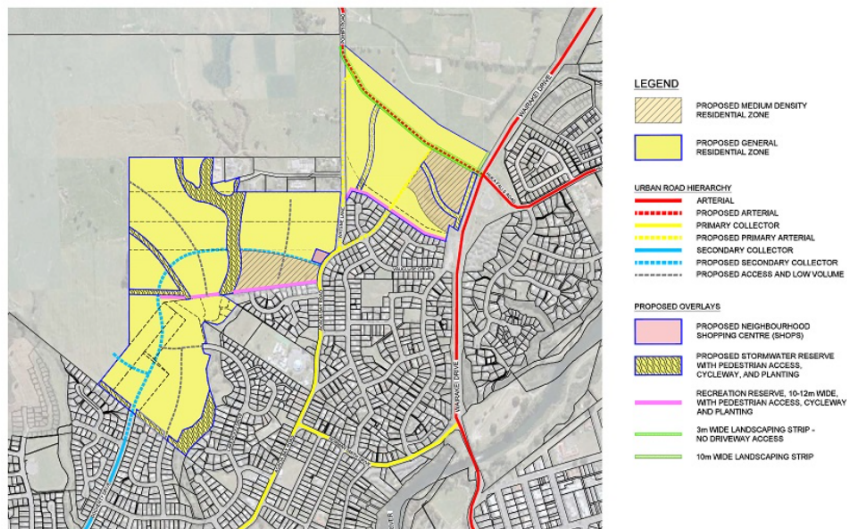
We wish to confirm on behalf of the owners of 179 Acacia Bay Road, their opposition to the intended Private Plan Change on the basis of the following;

Stormwater

We believe the applicants analysis is lacking in the following areas;

1. The catchment and its characteristics has not been extended to the bottom of the catchment, as outlined below.

We note that the council plan shown on the internet page seeking public submissions does not show the proximity to Lake Taupo of the applicants site nor does it indicate our clients land thru which the stormwater gully reserves noted on the plan change dispose to



We also note the conclusion transcribed below indicates that ‘*that there are no major issues with the proposed development in regards to stormwater...*’, however it goes on to say that *further design work is required to ensure the recommended strategy will **work**.....*. We emphasise the term ‘will work.’ We concur from that statement it would appear that the developers consultants are uncertain as to whether the recommended strategy will work.

8.3 Conclusion

The modelling undertaken shows that maximising the use of infiltration, within Councils risk appetite in terms of pumice sand (Tomos), can provide a solution that aligns with WRC guidelines and provides good community outcomes. The modelling has shown that there are no major issues with the proposed development in regards to stormwater (meeting the pre-development flows). Further design work is required to ensure the recommended strategy will work within the developer’s parameters for the proposed development (i.e. space and layout).

2. The flood analysis falsely shows NRL land as being floodable, as outlined below, this is incorrect.

We note the applicant’s consultant has prepared the plan below showing flooding to our client’s property on Acacia Bay Rd, shown with a black arrow. Yet our clients property has never suffered any flooding previously, our client is concerned about this prediction and concerned that not all this property is shown to the lake edge. In fact there are no plans in the stormwater report that show the proximity of Lake Taupo to the proposed development zone.



Figure 7-1 1% AEP Flood Extent (2090) - Existing Scenario

3. The method for mitigation of pollutants in stormwater flows is not clear, we seek clarification.

We note the diagram below indicates a possible road swale, yet there are no details of how this configuration would fit to a normal road reserve, can a detailed and dimensioned cross section be provided to show the swale within the proposed road reserves and typical x sections.

8.1 Road Swale (conveyance, treatment, detention and disposal)

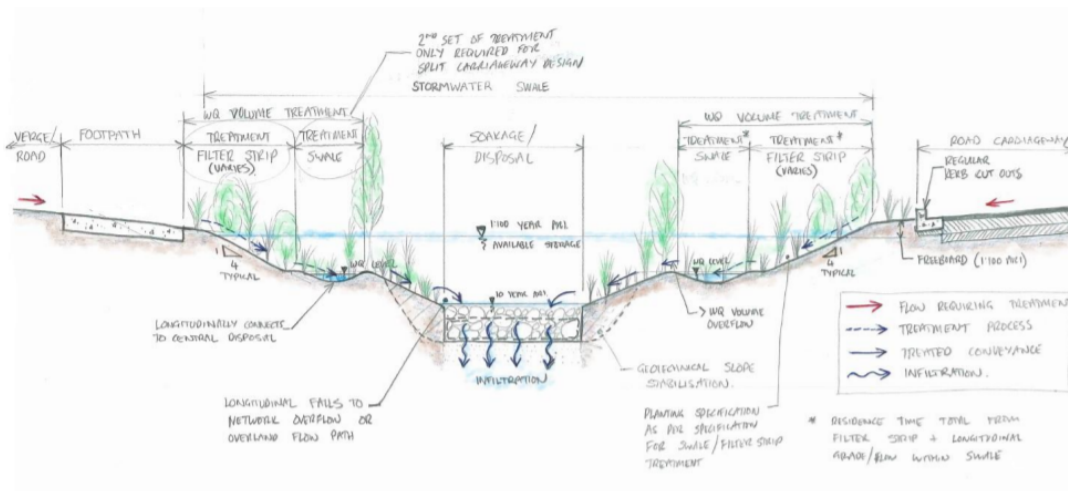


Figure 8-1 : Road stormwater management swale

4. We also note the recommended strategy's setout below which mostly seem acceptable, however the last strategy appears as if the applicant is not intending to infiltrate stormwater up to the 10% AEP event. We seek clarification of the design flood event and what flows are likely to be discharged to the gully from the Plan change areas.

The recommended strategy also includes the following concepts:

- Compliance with the WRC Stormwater Management Guidelines
- Infiltration avoids significant concentrated (single lot or equivalent only)
- Oversized infiltration pits on each lot (or multiple pits) to ensure maintenance and performance contingencies
- Stormwater infrastructure is integrated into the development and landscaping design
- Plants are suitable for purpose (localised planting specification)
- Combination swales are used within the road reserve for Conveyance, Treatment, Detention and Disposal.
- The use of infiltration for up to and greater than the 10 year ARI to offset storage is considered further in the development of the design

Our client has raised concerns recently with Taupo District Council over their intention to apply for resource consent to install a culvert under Acacia Bay Road which we note the same consultant WSP were engaged to provide advise to council.

The queries raised below are in relation to this proposed culvert and the WSP report that supports the application for the Private Plan Change. We therefore wish to raise the following issues with the applicant for this plan change

1. How does the applicate in conjunction with council propose to manage the upper catchment above Acacia Bay to mitigate the effect of peak rainfall events?
2. Is the applicant intending to work with council to create detention and infiltration systems to the gully discharges from the residential areas between Acacia Bay Rd and subject site, if so, please confirm details? We believe these should be undertaken prior to considering the need for the culvert under Acacia Bay Road.
3. What has been provided for in terms of the balance of the catchment above the applicants site contributing to the catchment? Our clients land is at the bottom of the catchment and they have raised concerns about the effects of intensification on flow characteristics.
4. What provision has been made for peer reviewing the flow calculations undertaken by WSP for the applicant and what level of benchmarking has been undertaken against WSP's findings that ratifies the projected flows?
5. In relation to item 4 above, what monitoring of flow has occurred in recent years, say 5-10 and 10-20 years to measure the flows against actual rainfall?

Our client believes that between council and the applicant an Overall Catchment Plan that considers the whole catchment and waterflows throughout, particularly looking at potential Land Use changes and the impact on the primary downstream channel should be undertaken. The Catchment plan should identify the opportunities for managing flows and point source discharges. The Catchment Plan should also consider stormwater quality improvement opportunities that can be created within the catchment.

Roading

We confirm we have reviewed the WSP Traffic Assessment report and raise the following matters.

5. We seek clarification on the applicant's assessment of growth/demand as outlined below. Which suggests the projection of 100 lots/year, but has not been substantiated against the current demand for housing in the area, particularly given the reported exodus from the larger city areas of New Zealand, not with standing the expected increase of overseas returning NZ residents.

The Taupō District Long Term Plan 2018-28 (2018) indicates that the district population is projected to increase from 34,800 in March 2013 to a peak of 39,100 in 2038 before declining. It is projected that approximately 3000 lots are required to meet residential land demand over the next 30 years.

6. We seek clarification on why the applicant having reported that the existing Control Gates Bridge is already at capacity are not making provision to accelerate the 2nd bridge crossing?

The report and table below indicates the bridges maximum capacity is 1450vph with out queuing, yet the projection for 2021 is already at that mark. We would suggest there are times when it probably exceeds these number, hence the queuing already occurring.

8.1.4 Control Gate Bridge Capacity

The Taupō Investigation (TDG 2018) noted the capacity of the bridge is about 1450 vph in either direction, as this is the maximum level of traffic that can be accommodated over the bridge before queues develop. The 2041 Future Model without the Nukuhau Development indicates that, for instance, there will be a southbound peak of 1627 vph going past the bridge in the AM peak, which is over the derived capacity. The 2041 Future Model shows that the bridge will be operating with Level of Service (LOS) F with extensive queues developed north of the bridge. Table 8-1 summarises the Control Gate Bridge performance under different scenarios.

Therefore, it is evident that by 2041, another bridge crossing will be required to cope with the traffic demand in Taupō with or without the Nukuhau Development.

We understand that Mighty River Power is carrying out an assessment of the existing Control Gate Bridge structure and that TDC is planning to carry out a feasibility study in 2019/2020 to analyse different options for the location and design of a second bridge crossing.

Table 8-1 Control Gate Bridge Performance

SCENARIO	LANES INTO TOWN		LANES OUT FROM TOWN	
2021 Model AM Peak No Development	1441 vph / LOS E		624 / LOS D or better	
2021 Model PM Peak No Development	957 / LOS D or better		1390 / LOS E	
	1 Bridge 1-lane per direction	2 Bridges 2-lane per direction	1 Bridge 1-lane per direction	2 Bridges 2-lane per direction
2041 Model AM Peak No Development	1627 / LOS F	1634 / LOS D or better	643 / LOS D or better	644 / LOS D or better
2041 Model PM Peak No Development	1023 / LOS D or better	1027 / LOS D or better	1511 / LOS F	1512 / LOS D or better
2041 Model AM Peak with Development	1836 / LOS F	1853 / LOS D or better	669 / LOS D or better	684 / LOS D or better
2041 Model PM Peak with Development	1141 / LOS D or better	1115 / LOS D or better	1783 / LOS F	1766 / LOS D or better

It would appear from above the applicant has reported on the present situation now and on the projected situation in 2041, however this is 20 years on. We suggest this is an inordinately large gap, and that investigation into the intervening years should be carried out and reported. IE what happens after year 3, year 5 etc etc. How long are the que's.?

In summary and on behalf of Nukuhau Resorts Ltd, we seek clarification on various matters to Stormwater Management and Traffic Impacts.

Yours faithfully,



Chris Todd
Director & Senior Engineer
For TLDC

CC: Jarden Corporation Ltd via email

Organisation:

Lakes & Waterways Action Group (LWAG)

First name: Jane

Last name: Penton

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
LWAG Submission

RE: Proposed Plan Change 37 to the Taupō District Plan – Request to rezone Rural Land to Residential and medium density Residential at Nukuhau

Lakes & Waterways Action Group Trust (LWAG) submission to TDC

Lakes and Waterways
 Phone: Jane Penton (Secretary) 378 2043
 e.mail: penton@nettel.net.nz
 P.O. Box 407
 Taupo

In regards of the Nukuhau Structure Plan Development stormwater (WSP 2020a).

LWAG note that 1.3. Methodology states; *“WRC’s recently released guidelines are also considered and discussed further in this report. This forms the basis of the recommended strategy. As well as outlining the recommended strategy this report also discusses safety in design, risks and further options.”* The applicants have also utilised the WRC Guidelines scoring matrix (WSP 2020a)

Comments

- 1) LWAG commend the use of WRC’s guidelines in regard to the applicant’s stormwater management strategy. However, regarding the options in the scoring matrix we believe that the proposal underreaches. They score the minimum of 15 points when we feel that it is essential that developers and their consultants should work towards a higher level of environmental standards. For instance, we recommend they include water retention and reuse i.e. from roof runoff on individual sites in their strategy as per following three options: *“Water re-use 0-4 depending on % of runoff capture Flow detention only is 1 point. Site use for garden watering is 2 points. Site use for garden watering and for non-potable inside waters uses including laundry and toilets is 3 points”* (WSP 2020a, pg 33). In alignment with Greening Taupo objectives, the matrix option for ‘Riparian corridors’ should also be included in the strategy.
- 2) LWAG oppose the proposed realignment of existing gullies. Moreover, the applicant claims to score 2 points in the WRC matrix: *“Existing streams and gullies located on site (including ephemeral) are protected and enhanced. The entire stream other than possible crossings shall be protected to qualify for points 0 or 3. Preservation and protection of natural streams and gullies is 3 points.”* (WSP 2020a, pg 33). LWAG recommend that the gullies not be modified as pumice soils are prone to erosion and are valuable stormwater management assets in their natural form.

Ref also: 3.2.2 Gully Realignment proposal. *“The potential realignment of some of the small to medium gullies were discussed with WRC. WSP proposed an option of re-aligning some of these (exact scenarios to be confirmed) to align to the larger gullies. This would allow the developer to maximise land use as the distance between the existing gullies would not enable significant development. The design strategy for this is as follows: No significant change in the hydraulics of either gully.”*

LWAG contend that the proposed realignment and merging of channels is ‘significant’ ref; Fig 3.1 and agree with WRC’s informal advice “to not modify natural gully systems.”

Further concerns re: Stormwater management

In general, LWAG appreciate the intentions of the proposed stormwater management strategy but are concerned that a successful outcome partly depends on alignment with District Plan regulations, as Structure Plans are not statutory documents. For instance, in section ‘3.2 WRC Consultation’ reference is made to retention of driveway runoff *“Using a grass grid type driveway system could reduce the on-lot infrastructure and maintenance requirements.”*

However, there is no further explanation or details given on how individual lot owners would be encouraged to take this up via their individual consents, or maintain or retain impervious driveways into the future.

LWAG have long advocated for integrated policy by relevant territorial authorities in relation to stormwater management and, although we understand there has been some considerable alignment and improvement in policy regarding good environmental outcomes, we look forward to a strengthening of District Plan regulations via the current plan review process ensuring all new developments in the district both retain and reuse as much rainwater as possible. As stated in previous submissions this saves on the use of potable water and is proactive in reducing the ever-increasing effects of drier seasons and water shortages due to climate change.

In regards of the Nukuhau Structure Plan Development wastewater (WSP 2020b).

Comments

- 1) Lake and Waterways (LWAG) supports the proposed water and wastewater plan (WSP 2020b). We agree with the authors that 'TDC will need take in account' (WSP 2020b, Section 6.2) the wastewater needs of the Nukuhau development when designing the planned upgrade of the wastewater pipeline including the Waikato River crossing.
- 2) For many years, LWAG has advocated for the removal of Acacia Bay wastewater to the Taupo treatment plant. Therefore, we whole-heartedly supported the TDC's planned upgrade that effects this removal.
- 3) We also support the inclusion of the needs of the Nukuhau development in this upgrade. Clearly, the upgrade presents TDC with a golden opportunity to deal with foreseeable wastewater loadings (i.e., from Acacia Bay and from the new town development to the west) in one infrastructure upgrade. In addition, it makes sense for TDC to consider, in the upgrade, future urban development in the west beyond foreseeable wastewater loadings.

References

WSP 2020a. Nukuhau Structure Plan Development Desktop Study – Stormwater Management. 25 pages plus appendices.

WSP 2020b. Nukuhau Structure Plan Development Desktop Study - Water and Wastewater. 15 pages plus appendices.

We wish to be heard.

Paul White
Chairman
Lakes & Waterways Action Group Trust

Organisation:

Think Taupo

First name: Paul**Last name:** Henson

- I could
- I could not

Gain an advantage in trade competition through this submission

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I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Paul Henson submission
Paul Henson supporting document

Submission regarding the Proposed Private Plan Change 37 – Nukuhau

Ref: Appendix E – Traffic Impact Assessment (TIA).

The writer is seeking amendments to the proposed plan.

**SUMMARY,
BACKGROUND,
ATTACHMENTS** Henson Report, TRG Report.

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SUMMARY

1. The Traffic Impact Report does not include a reasonable range of options for intersection management.
2. The Stantec recommendations are biased and limited, rely on external projects that may not happen (a new bridge crossing), rely on a faulty model and do not address safety concerns.
2. NZTA and the Road to Zero recommendations of roundabouts and my research, have been ignored.
3. My request is that roundabouts be recommended for all new intersections.

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BACKGROUND

1. Poor basis for consulting.

- 1.1 The consultants (WPS) for the RMA application, as contracted by the developers, have used a company called Stantec to provide them with an analysis of the Traffic Impact Assessment (TIA) options for the proposed intersection.

Stantec recently took over another traffic consultant company called Traffic Design Group (TDG). TDG were initially set up as a traffic lights sales company and have been used extensively by Taupo District Council and are referenced by WPS (page 8, 1.3)...

“WSP engaged Stantec, an independent professional services company, to model the residential component of the proposed Nukuhau Development using the Taupō Traffic Model.” (page 29 of the document).

TDG originally developed the Taupo Traffic Model (TTM).

TDG were the sole consultants (in 2018) for the now-completed intersection changes (with traffic lights installed) at Taupo’s Norman Smith / Wairakei Drive (NSWD) intersection, which is a few hundred metres south of the proposed Poihipi / Huka Falls intersection.

This installation (only Taupo’s second set at a cost of around \$300,000), has provided benefits for morning traffic for around an hour, but has caused significant delays at the other 95% of the 24 hour day, along with other detrimental effects associated with traffic lights, including reduced safety.

- 1.2 Please find attached my analysis - the Henson Report - of the TRG Report (both as attachments).

There were 20 fundamental mistakes in the TDG report and an overwhelming bias toward traffic lights compared to other options, particularly roundabouts.

For example, TDG stated that an urban roundabout would cost around \$1.2m (this appears to be based on a highway sized roundabout), when a roundabout of suitable size could cost substantially less, according to a local traffic engineer. Details in the Henson Report.

See page 35 of the TDG report – item 8.5 option A5 (“four times the cost”).

TDG has only suggested traffic lights, give way or stop signs in their short, medium and long term recommendations (page 52 of the TDG report). This report was biased in favour of signals, but the writer notes that in the last year or so, 2 new roundabouts have been installed or are planned in the Taupo area (an undisclosed (by TDC) ‘engineer’).

- 1.3 Other beneficial factors for roundabouts such as better traffic flow, improved safety, higher driver acceptance, lower pollution, less visual impact and reduced maintenance (as per 33 international studies noted in the Henson Report) appear to have been ignored in the TDG report. I make no apologies for my scathing review of this very poor consulting report.
- 1.4 For this to be the basis of an analysis of options for the Nukuhau development makes, in my opinion, a biased report and a failure to meet RMA standards.

2. WPS report.



Figure 5-2 Proposed Access and Network Connection

- 2.1 It appears that the current report from Stantec for the WPS report is of a similar perspective to the sub-optimal TDG report – they have used the same basis, being the flawed TTM (Taupo Traffic Model) developed by TDG.

The tender document for the NSW project that TDG consulted on, states that the approved consultant should have “The ability to identify a range of pragmatic cost effective options “.

This was not evident in the TDG report, and is not in the Stantec / WPS report. The tender document for the WPS / Nukuhau developers has not been viewed by the writer, but one could make the reasonable assumption that the same criteria applies.

My submission is that the same faulty model has been applied to the Nukuhau development, and I would suggest (the model and reliance on it) is not accurate nor comprehensive in it’s scope of solutions for intersection management, therefore not acceptable for an RMA application.

2.2 Options

Stantec, in regard to the new Poihipi / Huka Falls intersection or other intersections, does not suggest any roundabouts in their recommendations...

...contrary to...

- 2.3 NZTA recommend roundabouts as the first option.

www.nzta.govt.nz

Roundabouts | Waka Kotahi NZ Transport Agency - Intersections

“Roundabouts are the safest form of intersection control for motor vehicle occupants. Numerous studies have shown that, in general, fewer casualty crashes involving only motor vehicles occur at roundabouts than at intersections controlled by traffic signals, stop, or give-way signs”.

...and...

<https://www.nzta.govt.nz/resources/research/reports/476/>

“This research, undertaken 2008–10, investigated the comparative safety of multi-lane roundabouts versus signalised intersections, pedestrian facilities, vertical deflection devices and visibility to the right. Guidance for practical application of the relevant measures to enhance roundabout safety has been developed and is included in this document. The Dutch turbo-roundabout was reviewed and considered to be feasible for application in New Zealand.

For intersections with four arms or more, a well-designed multi-lane roundabout should be significantly safer for vehicle users than traffic signals. Several means of adequately catering for pedestrians and cyclists at multi-lane roundabouts are feasible to implement in many cases. In the interest of road safety, a 'Roundabouts First' policy is recommended for adoption by the NZ Transport Agency. The legal use of flashing signal displays and part-time signal operation are also recommended for consideration, which would potentially allow for 'Pelican' type pedestrian crossing installations, and also for signalised roundabouts to operate with less vehicle delay during off-peak periods.“

- 2.4 <https://www.transport.govt.nz/area-of-interest/safety/road-to-zero/>

The Road to Zero document – a substantial review of road safety in NZ produced by NZTA.

“Roundabouts can help reduce the number of casualties at intersections.”

NZTA adopted Vision Zero in which roundabouts are strongly endorsed.

2.5 Henson Report

The 33 international studies (reference the research list - Henson Report pages 4,5) show overwhelming evidence that roundabouts are better in many criteria.

None of the 3 above recommendations or research have been considered in this application,.

I submit that a review of the Traffic Impact Assessment should be undertaken.

I have no other issues with the relocation proposal of this major intersection in general terms, but question the assumption that ‘crashes will reduce’. There is no evidence provided of how this would be achieved.

Their suggestion of traffic lights goes against NZTA research (my point 2.3 above) that shows roundabouts are a significantly safer option and that TDC place safety as one of their main priorities for traffic management.

Stantec have not included the benefits of roundabouts (as recommended by NZTA and Road to Zero) in their assessment, therefore have not met their obligation to provide a fair assessment of all practical options.

5.3.1 Options

“A signalised intersection at the Poihipi Road/Huka Falls Road/Wairakei Drive intersection was suggested by the Taupō Investigation (TDG 2018). Whereas a signal intersection is preferred, a roundabout could be an alternative option. Further investigation is required by TDC to determine the form of the intersection to be constructed. “

The comment that a ‘roundabout could be an option’, is the only reference to new roundabouts in the whole WPS document.

This (signalised intersection) was in the flawed TDG report - I’d suggest that the option to install traffic lights (major intersections) or give way / stop signs (minor intersections) only, is biased, not preferred and not fully representing all options.

5.4 Pedestrian and Cycling Network / figure 5.3.

The proposed pedestrian and cycle network does not reach the proposed intersection, and there are no issues with the compatibility of a roundabout with pedestrian and cycling networks. NZTA state (above paragraph 2.3) that options are available for pedestrian and cycle inclusion in designing a roundabout.

The exclusion of the option of a roundabout is therefore not a fair representation of options.

5.5 Public Transportation (particularly buses).

There are many existing examples of buses and other large vehicles being able to negotiate a roundabout and there is (or could easily be planned for) sufficient space or suitable design for this to be achieved.

The exclusion of the option of a roundabout is therefore not a fair representation.

6 Access Assessment

I note that only ‘t’ intersection signalised or give way / stop sign diagrams have been provided for the proposed development intersections (not roundabouts).

This is not a fair representation of all options.

8 Future Traffic Performance (page 35 onwards).

“8.1.3 (pages 36, 37)

a) Future Traffic volumes. The future traffic volumes used in this TIA are obtained from the [flawed – my comment] Taupō Traffic Model. The Taupō Traffic Model is demand driven and the modeled traffic volumes will not be restricted by road or bridge capacity. Therefore, the traffic volumes obtained from the 2041 Future Models with or without a second bridge are very similar.“

b) “The Taupō Traffic Model has been run for the years 2021 and 2041. Year 2021 has been used as the base year scenario with 2041 being the scenario with full development of the Nukuhau site. “

c) “The 2041 Future Model shows that the bridge will be operating with Level of Service (LOS) F with extensive queues developed north of the bridge.”

My comments:

a) The above quote states that the flows “are very similar”, but then say that numbers will change (e.g. from 1441 to 1836 vph (a 27% increase) or 957 to 1141 (a 19% increase). This contradictory advice is misleading and doesn’t represent a fair balanced view of their own estimates.

b) Are the developers planning on taking 20 years to complete the project? They have based their traffic management plan on the final completion date of 2041, 20 years into the future. They have not taken into account the increased traffic volumes during staged construction from the start date, on a yearly basis. This is not a fair representation.

c) An LOS of ‘F’ for the bridge in 2041, is very poor, but there appears to be little in the way of mitigating this, apart from relying on a second bridge that may or may not be built.

They suggest a second bridge crossing (over the Waikato river) will be needed but this is not currently planned by council, so is not cannot be a reliable factor in assessing increased vehicle flows and congestion.

I’d suggest that the report is flawed in that there is little assessment of the traffic flow without the new bridge crossing and that the traffic flows from 1,584 vehicles has not been properly assessed, on a year by year basis. This is not a reliable assessment of options.

[Stats Dept: 3.35 million light passenger vehicles in NZ / 1.65m households = 2.03 average. 780 sections proposed, so an estimate of 1,584 new vehicles – a significant number]

8.2.1 SIDRA Model Layouts (page 37 onwards)

None of these new proposed layouts include roundabouts. This is not a fair representation of options.

9 Conclusions and Recommendations (page 41)

“The proposed realignment of Poihipi Road and the Taupō Speed Limit Bylaw dated December 2018 are likely to reduce the injury crash risk at the section of Wairakei Drive and the existing road network in the vicinity of the Nukuhau Development area.”

The report neither states any reasons for the ‘reduction in crashes’, nor assesses safer (as per NZTA recommendation) roundabouts as an alternative.

This lack of information is not an accurate assessment of options.

8.2.2 (page 39)

“Norman Smith St / Acacia Bay Rd Intersection (Scenario 5 2041 with Development PM Peak).

The Acacia Bay Road northern approach (southbound traffic) at the Norman Smith Street / Acacia Bay Road Intersection is the only movement that operates at LOS E (PM peak hour) with the additional traffic generated from the Nukuhau Development in 2041. The volume of the southbound traffic on Acacia Bay Road is around 200 vph during the PM peak, the modeling results indicate an average delay time of 39 seconds. Based on the low level of traffic and the relatively short delay time, the LOS E is acceptable for a stop-controlled movement.”

The report admits that traffic lights are at a level or service of E (the writer assumes that this is poor but no relative scale is given), with average delays of 39 seconds, but omits to compare this with their own figures or the existing roundabout (see below).

This is not a fair or accurate comparison of options.

Consider this data, from WPS / Stantec's own report, for various intersections and turns:
(pages 50 onwards)

For:	Roundabout (existing)	Signal controlled intersections
Average delay(seconds)	7	14
	7	40
	11	35
	6	36
	7	24
	6	13
	8	21
LOS (level of service where applicable)	A	B
	A	D
	B	C
	A	D
	A	D
	A	B
	A	C
Queue distance (m)	35	109
	45	189
	82	93
	44	110
	22	154
	93	82
	37	91

Roundabouts perform substantially better in delays, level of service and queue distance reduction and yet Stantec do not include roundabouts as an option for new intersections.

Note that the 2 anomalies for roundabouts of an 82m or 93m queue distance (page 87) could be explained by the new traffic lights installed close by at NSW, which have caused significant additional queues on Spa and Tongariro streets.

This is a glaring anomaly in their analysis and is therefore not a fair representation of options.

9.1 Summary (page 41)

“Safety assessment of surrounding road network “

I cannot find any safety assessment in this report.

This is misleading and not acceptable as a fair analysis of the effects of the proposed development.

9.2 (page 41)

“Design Standards and Requirements. Although cross sections and designs for the internal road network have not been assessed as part of this TIA, it is recommended that the internal road network within the Nukuhau Development area be designed and constructed to conform with its intended network hierarchy and adhere with the relevant requirements of the Taupō District Council.”

“Appropriate infrastructure standards such as the Taupō District Council Code of Practice (2009) for Development of Land is recommended to be used for planning and design purposes for the internal road and transport infrastructure.”

I'd suggest that limiting specifications to TDC's standards – and omitting NZTA – is very limiting and not a fair representation of the options available, for designing and implementation.

--

I submit that the WPS / Stantec - Traffic Impact Assessment is biased, and does not fairly represent all options available and that a re-assessment of the traffic management strategy is required.

My wish is to use the NZTA and Road to Zero recommendations (and mine based on 33 international studies), so roundabouts are specified as the preferred option for all new intersections, as part of the 'ongoing design development' and in final implementation.

In particular, I submit that a roundabout be the preferred option for the proposed new major Poihipi / Huka Falls / Wairakei Drive intersection.

I'm open to discussion / negotiation.

--

3 Mar 21

Paul Henson
Thermahomes Ltd
73 Ross Rise,
RD 5
Taupo 3385

027 2633 818
pdhkiwi@gmail.com

[end of submission]

ATTACHMENTS

Henson Report into Taupo Traffic Management, Long Term Plan proposals

May 2018

For TDC, TDG and general publication

Section 1 Demolition of TDG report

Section 2 Summary

Section 3 Implementation proposal

[References to the TDG report early 2018, the Council meeting with TDG presentation 15May18 in Taupo]

Section 1 Demolition of TDG report

There are 20 fundamental flaws in the Traffic Design Group report (TDG Christchurch - Grant Smith author), as commissioned by Taupo District Council (TDC).

1. Not Arterial.

In regard to the Norman Smith intersection: TDG assume that they need to put in an "arterial-sized" roundabout on the misunderstanding that Wairakei drive will remain an arterial road. Arterial roads, according to NZTA are high speed roads (80 to 100 kph). The Speed Limit Bylaw changes suggested by the council, is that this road changes to a 50 kph limit, which makes it an urban road. They have not taken into account this Long Term Plan suggestion.

2. Costings inaccurate.

Their report states that roundabouts are 4 times the cost of traffic lights (\$2m vs \$500,000) - possibly using a costing from an ETA roundabout. This is an irrelevant comparison as an 'urban sized' roundabout can be placed at this intersection. They also therefore dismiss roundabouts for all 7 locations, despite the larger size being irrelevant, and also supply no costings for CBD sized roundabouts (my estimate \$4,000).

3. Sizing wrong.

In their presentation, they continue the incorrect assumption that roundabouts in town need to be either 38m or 30m diameter. Any council can decide what size roundabout they want to suit the location, as advised in the LTSA recommendations (which are not regulations). There are no strict rules.

4. Small roundabouts do fit.

Smaller roundabouts can fit the 7 intersections proposed, which vary from 26m to 21m in diameter. They will work as single lane structures, as they currently do around town.

Norman Smith intersection has room for 2 circulating lanes, with a 26m constraint, which also gives more flow from Wairakei Drive (a possible left lane priority going south down Wairakei Drive, merging before the bridge). This gives future proofing when the second bridge goes in - 2 lanes for all traffic.

5. Incorrect basis.

TDG also states that they must design for 19m trucks. This is not true of the CBD and Norman Smith roundabouts, but of ETA sized roundabouts located on arterial or highway designated roads. There are very few such trucks in urban areas and they can easily negotiate a smaller roundabout if required (driving over it if very constrained). This would be a very rare occurrence but still feasible.

6. Narrow focus.

The option of signals at Norman Smith means that during the other 23 hours of non-peak traffic, vehicles will inevitably stop and wait at lights while they change phase. This will wear very thin, very quickly, with drivers' patience. Ditto for the other 6 proposed CBD proposed signals.

7. Video flawed.

The TDG roundabout computer simulation video is flawed.

It has 11 cars going north up Wairakei Drive from town which would give 11 cars the opportunity to go south from Wairakei Drive to town. The video shows only 5 cars taking up this option. This fault in the program (or programming) fails to include 415 extra cars per 30 minutes going south. It therefore seriously skews the blockages and cannot be relied on.

8. Simulations ignored.

The video of roundabouts up Spa road and around town, shows that they work as well as signals (assuming programming is correct), so these options can be put forward as a cost effective solution that most of the community would accept.

Anecdotal information (discussions / social media) on both options and studying international driver acceptance information shows no-one wants signals.

Note that comments are blocked on the TDG YouTube video and that the TDC website include this misleading video.

9. Driver behaviour ignored.

The basis for the flows in the video is inaccurate.

As Rosie Harvey pointed out in the council meeting, drivers choose either the top of Wairakei Drive or Norman Smith, depending on previous experiences. TDG have failed to take into account local driver behaviour.

10. Costings vague.

The costings for roundabouts vs signals given by TDG have varied considerably from "4 times" (in the report) to "2 to 3 times" to "2 times" to "5 times" (during the meeting as above). They appear to be guessing.

11. Contradiction.

Grant Smith of TDG states re roundabouts: "They are very good for...suburban areas". Again during the meeting: "On the other ones [CBD locations] there's not a lot of difference between roundabouts and signals." He still advocates signals despite this statement.

12. Failure to advance idea.

Re my [the writer Paul Henson] second bridge and separate lane to Waikato St submission, Grant Smith says: "...his concept of trying to get a lane away from Wairakei Drive and up the hill... to Nukuhau... was actually right...he was actually thinking along the right lines...".

He does no further analysis of this idea despite approving of it. It is by far the better option than putting in a very expensive 4 lanes to town which he suggests, which would involve significant road works / retaining walls / land and access issues, and therefore high costs.

His suggestion also adds to traffic volume going to Spa Rd / Tongariro St, so he also doesn't address traffic distribution issues.

13. Ignorance of local classification.

Unknown speaker at the meeting: "...second crossing...same category as local road..." contradicting the designation of Wairakei Drive as "arterial".

14. Avoidance.

Grant Smith's answer when asked about the refuge island next to Countdown: "Can it be used as a pedestrian crossing?":

"Conventional wisdom among the designers is that you don't mix roundabouts and signals...you don't have one intersection signalized, the next one a roundabout, the next one signalized...try and keep the treatment along a corridor consistent." He avoids answering the question about a crossing (not intersections).

A signalised pedestrian and cycle crossing can be added where the refuge island is located as a "mid-block" crossing as per LTSA pedestrian guidelines.

The refuge island is 40m from the roundabout and 50m from Nukuhau St. It is not at an intersection.

15. Contradiction.

TDG confidence in their own modelling is questioned by themselves during the meeting and yet they rely on it. The modelling shows little difference between signals and roundabouts up Spa Rd and others in town.

16. Lack of evidence.

Grant Smith again re Norman Smith: "If we put in a roundabout that fits, it doesn't work and never will." No further explanation or evidence given.

Local experience with existing roundabouts and international studies overwhelmingly show they do work, and are better than signals in many criteria, particularly cost (1/100th the cost of signals).

17. Contradiction.

Then he states: " A 2 lane roundabout works."

18. Incorrect statement.

TDG comment: "Roundabouts certainly don't cater for pedestrians or cyclists".

Not true. At Norman Smith cyclists can go across the road to the existing (south side) path on Control Gates bridge (as per Mark Gibson's ad for electric bikes in the local paper) or down the footpath by the park (north side) using the other bridge path; or use a pedestrian / cycle crossing.

Pedestrians and cyclists can be catered for with a crossing 10m from the roundabout as per successful international experience.

19. Limited focus.

TDG don't take into account summer and event traffic situations where the priority would be Wairakei Drive traffic. A roundabout will naturally cope with these variations in volume and allow easier 'on-the-day' traffic management solutions (such as Ironman or Cycle Challenge measures).

20. Limited overall view.

TDG also fail to take into account all the criteria that international intersection management is judged on - flow, safety, cost, pollution, fuel consumption, driver acceptance, environmental effects and visual impact. They also fail to provide other solutions (as per their brief) such as extending the bus service to Acacia Bay (20 cars removed per bus load).

Research list:

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<https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/>

<http://pugetsoundblogs.com/roadwarrior/2012/09/25/comparing-costs-of-roundabouts-and-traffic-signals/>

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<http://www.gtcmppo.org/23>

<http://www.k-state.edu/roundabouts/>

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https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=4752&context=gradschool_theses

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<http://www.carmel.in.gov/department-services/engineering/roundabouts>

<https://www.quora.com/When-are-roundabouts-rotaries-traffic-circles-better-than-junctions-that-have-timed-traffic-lights>

<http://www.iihs.org/iihs/topics/t/roundabouts/qanda#roundabouts>

<https://www.fhwa.dot.gov/publications/research/safety/00067/000675.pdf>

<http://mdot.ms.gov/documents/research/Reports/Interim%20and%20Final%20Reports/State%20Study%20No.%20213%20Performance%20Evaluation%20of%20Roundabouts%20for%20Traffic%20Delay%20and%20Crash%20Reductions%20in%20Oxford.pdf>

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<https://www.inc.com/minda-zetlin/a-world-without-stoplights-mit-says-its-possible-with-todays-technology.html>

Section 2 Summary

A. The lack of options and absence of depth in the report and the presentation, make the TDG a poor reference for making an informed decision about the choices for intersection and traffic volume management.

B. The TDG report and presentation are inaccurate and misleading in fundamental areas (arterial road basis incorrect / only one option put forward for most intersections / video simulation inaccurate / sizing of roundabouts wrong / costings vague or missing completely / Norman Smith option only for local peak traffic / lack of research into smaller roundabouts / vague answers to council questions).

C. The TDG consultation work is unprofessional and inadequate in answering the council's brief requiring them to "...identify a range of pragmatic cost effective options to ensure a successful outcome on time and within budget...".

D. They went 41.5% over budget (spending an extra \$41,500 over the TDC budget of \$100,000).

E. They offer no innovative, practical or cost effective solutions. They have not listened to local drivers' dislike of signals. They totally focus on signals despite the inappropriateness of these for local conditions. They ignore international experience where roundabouts are the preferred option.

F. The council have spent \$141,500 on the TDG report and \$127,000 upgrading the lights, with little result or benefit.

Total spend to date: \$272,000 for a couple of arrows at the lights and a sub-standard report.

There was a TDC proposal to spend another \$100,000 to further investigate traffic management issues. This must not happen. Better to finish now with TDG and spend money on sensible, practical solutions.

I agree with several councillors who are responding to public anger in a lack of progress, money wasted and continued report writing with no action taken.

Now is the time to act, not to waste more money on reports.

Section 3 Implementation proposal

[Redacted]

--

TDG are not the people for this job.

I would approach local professional consulting engineers and local contractors to do the work.

Paul Henson

Taupo.

pdhkiwi@gmail.com

027 2633 818

[end of Henson Report]



Taupō Northern Outlet and CBD Investigation

Final Report

January 2018

Taupō Northern Outlet and CBD Investigation

Final Report

Quality Assurance Statement

Prepared by:

Grant Smith

Principal Consultant



Reviewed by:

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Senior Principal Transport Engineer



Approved for Issue by:

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Status: Final report

Date: 25 January 2018



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1. Introduction

The Northern Outlet and CBD Investigation project continues previous Taupō District Council (TDC) and community-led plans developed for Taupō, culminating in the 2011 Council adoption of the Taupō Urban Commercial and Industrial Structure Plan (CISP) for the Taupō CBD. The Eastern Taupō Arterial (ETA) was opened in 2010 and while there has been a reduction in the amount of traffic (particularly heavy traffic) passing through the CBD as a result of the ETA, a general improvement in the economy and increased local development has recently resulted in an increase in traffic both along the ETA, and into and through the CBD.

This investigation assesses the case for investment in options that improve traffic flow in the study area, which covers the corridor from Huka Falls Road to and including the CBD (see **Figure 1**). The section between the Norman Smith Street intersection and the Spa Road roundabout has been of particular focus.



Figure 1: Study Area

The investigation has applied the principles of the NZ Treasury Better Business Case process, which is designed to systematically assess whether an investment proposal:

- Is supported by a compelling case for change - the 'strategic case';
- Optimises value for money - the 'economic case';

- Is commercially viable - the 'commercial case';
- Is financially affordable - the 'financial case'; and
- Is achievable - the 'management case'.

The investigation focused on the identification and assessment of a range of short, medium and long-term options that respond to the investment objectives. It is therefore centred on the strategic and economic case components of the Better Business Case process, and will consequently:

- Confirm the strategic context and the fit of the investigation within that context;
- Confirm the need to invest and the case for change;
- Identify a wide range of potential options; and
- Determine the preferred option(s) that optimises value for money by undertaking a detailed analysis of the costs, benefits and risks of the short-listed options.

The investigation will also provide sufficient assessment of the financial and management cases to enable TDC decision-makers to determine an appropriate path forward. This will include high-level assessment of affordability and funding, and the management arrangements that will support implementation of the preferred option. It will not provide an assessment of the implementation-focused commercial case, which tends to be the final procurement-related step in transport projects.

The remainder of this document consists of the following sections:

- Section 2 provides strategic context;
- Section 3 describes the process and the identified stakeholders;
- Section 4 outlines the issues identified through stakeholder engagement;
- Section 5 discusses background research and modelling considerations;
- Section 6 presents the case for change, contrasting the perceived issues identified with the analytical data to determine the critical issues;
- Section 7 contains a long list of potential options/solutions to address the issues identified;
- Options are shortlisted in Sections 8 and 9, and discussed in Section 10;
- Shortlisted options are programmed in Section 11, and;
- Recommendations are provided in Section 12.

2. Strategic Context

The strategic context for the investigation is provided by three key strategic planning documents, the:

- Taupō Urban Commercial and Industrial Structure Plan (2011);
- Taupō District 2050 District Growth Management Strategy (2006); and
- Taupō District Long Term Plan 2015-25 (2015).

Each is described in the following sections, with supporting context.

2.1 Background

The Northern Outlet to Taupō essentially begins at Wairakei, where State Highway 1 and the ETA intersects with Wairakei Drive and State Highway 5 (the Thermal Explorer Highway). The ETA was primarily built to address the issue of heavy traffic passing through the Taupō CBD and along the concentration of tourist accommodation on Lake Terrace. It was also intended to provide an alternative to the Control Gates Bridge, which was approaching capacity during most peak periods and for extended parts of the day during holidays.

A second crossing of the river in the vicinity of the Control Gates Bridge was seen as an alternative to the ETA, but it did not meet the objective of minimising (or removing) heavy vehicles from the CBD and Lake Terrace. Even so it took almost 35 years from the time that the ETA was suggested until it was opened in 2010. At that time the design of a second bridge joining Wairakei Drive to Opepe Street, and then along Titiraupenga had been designed in some detail and was close to being ready for construction drawings to be begun.

That bridge design was put on hold after the decision to build the ETA was made, but the concept formed the basis of the transport component of the Taupō Urban Commercial and Industrial Structure Plan (CISP) adopted by Council in February 2011 (although it is clear from the text that it was written prior to the opening of the ETA).

2.2 Taupō Urban Commercial and Industrial Structure Plan (CISP)

The 2011 CISP provides a 20-year future vision for the town centre and new industrial areas. It remains the guiding planning document for the immediate study area. Its goals are shown in **Table 1**.

Goal	Description
Character	To reinforce the distinct character of Taupō by embracing and integrating the natural and cultural qualities that define the town and district.
Land Use	To consolidate future commercial and industrial growth in a way that enhances the quality of life for the Taupō community and protects or improves environmental values.
Built Form	To achieve a sustainable and compact urban form that projects a distinct

Goal	Description
	image, promotes an active and vibrant street edge and improves architectural quality.
Circulation	To reconnect the town centre with the lakefront, the Waikato River and surrounding residential areas. To refocus towards pedestrians, cyclists and public transport. Connect existing & future commercial/industrial areas with sound transport links.
Public Space	To realise the untapped potential of Taupō's open space network and provide a diverse range of safe and functional public spaces from sheltered arcades through to squares and open-air events facilities.
Heritage and Culture	To protect and draw attention to Taupō's unique heritage and culture and provide an increased focus on events and the creative arts.
Economic Growth	To develop an economy with multiple opportunities for employment and economic investment that is able to leverage off Taupō's lifestyle and image to retain and attract a diversity of people and business interests.
Sustainability	To ensure that future growth is delivered in a sustainable manner, both in terms of delivering affordable, efficient infrastructural solutions and embracing Environmentally Sustainable Design principles in the landscape and built environment.

Table 1: CISP Goals

All of the CISP goals have some bearing on this investigation. However, the circulation and growth goals are most pertinent, suggesting a focus on initiatives that provide transport links that can accommodate future growth in a sustainable manner, accommodate other modes, and reconnect the town centre with the lakefront and river.

The CISP assumed that an alternative route would be constructed in order to enable changes to the function of Tongariro Street. However, the Opepe Street option was designed to cope with two functions – high flow on the existing bridge and a high number of heavy vehicles – and was expected to be part of State Highway 1 when constructed. The opening of the ETA has altered these requirements. If the current design is no longer appropriate, either in form or function then some designs and concepts in the CISP will therefore need to be revisited, although the overarching strategy is likely to remain.

2.3 Taupō District 2050 District Growth Management Strategy (TD2050)

The 2006 TD2050 describes the Taupō District's aspirations for growth. It contains twelve strategic directions, four of which are relevant to the investigation:

- 1. District Character
- 3. Settlement Patterns and Urban Form
- 8. Integrating Land Use, Infrastructure and Funding
- 9. Transport Modes and Connections

Each of the strategic directions are supported by a set of policies. Those that are most applicable to this investigation are:

- Strengthen Taupō Town's functions and its role as the primary business, retail, recreational, and entertainment hub for the District (Policy 1.2);
- Set clear limits to the outward development of all urban areas (Policy 3.1);
- Identify, enhance and protect gateways to urban areas (Policy 3.2);
- Ensure strategic transportation and network utility corridors are identified in the initial planning stages and protected from encroachment by incompatible land uses. (Policy 3.3);
- Coordinate and integrate planned infrastructure which supports the preferred settlement pattern and provides greater certainty for development. (Policy 8.2);
- Use best practice standards for the planning, design and operation of sewage and wastewater collection, transport, treatment, disposal and reuse (Policy 8.4);
- Maintain and enhance the District's strategic transport networks to link industries to markets, and move goods and people efficiently (Policy 9.1);
- Provide for a comprehensive and integrated range of present and future public and private transport options within the District (Policy 9.2);
- Manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure (Policy 9.3);
- Facilitate the development and implementation of a corridor approach to transportation and integration with the pattern of land use (Policy 9.4);
- Consider a range of funding alternatives in respect of transportation provision in the District (Policy 9.5).

For this investigation, the key practical part of TD2050 is the future land use distribution that it identifies for the Northern Growth Area, which covers the area from Waitahanui to Kinloch. The Northern Growth Area is expected to account for 80% of Taupō's future growth. **Figure 2** shows the areas that are earmarked for development, including the focus areas north of the river that will contribute to future traffic growth within the study area.

It should be noted that the growth model has recently been reviewed, but the timing was such that the data could not be incorporated into the analysis used for this report.

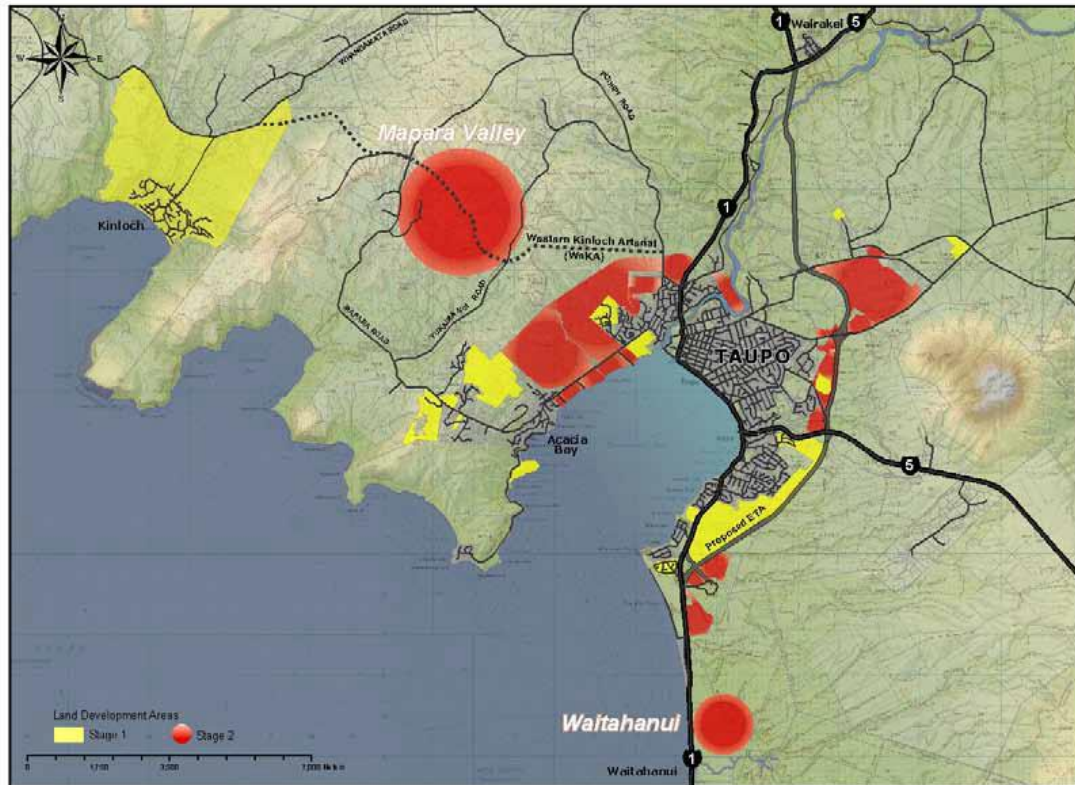


Figure 2: Northern Growth Area (Source: TD2050 Figure 2)

2.4 Taupō District Long Term Plan 2015-25 (LTP)

The 2015 LTP is TDC's guiding document for the 10-year period to 2025. While the LTP does not make specific mention of this investigation nor the issues surrounding it, it does provide a long-term district strategy, which notes the following as goals:

- Ensure that the Taupō District remains a great place to live;
- Promote economic development;
- Protect our water resources and use them wisely;
- Maintain the quality infrastructure that we have; and
- Keep rates and debt affordable.

Each stage of the investigation will need to be cognisant of these goals.

The recommendations of the investigation will be incorporated into the next LTP, which covers the period from 2018 to 2028.

3. Process

3.1 Steps

The study has followed the Better Business Case procedure for Single Stage Light Business Case published by the New Zealand Treasury in 'Better Business Cases – Guide to developing the single Stage Business Case' February 2014.

Table 2 shows the steps to be taken in developing the Business Case abstracted from the guide.

PROCESS STAGES BY CASE AND BETTER BUSINESS CASE DELIVERABLE		
The Five Cases	Strategic Assessment	Single Stage Business Case
Strategic	Step 1: Outline strategic fit and the need to invest	Step 2: Make the case for change
Economic	-	Steps 3 and 4: Determine potential value for money
Commercial	-	Step 5: Prepare for the potential deal ¹
Financial	-	Step 6: Ascertain affordability and funding
Management	-	Step 7: Plan for successful delivery

Table 2: Key Process Steps

Figure 3 summarises the project process, showing the steps within the context of the business case process.

¹ Step 5 will not apply in the study as it is not moving into the delivery/implementation phase.

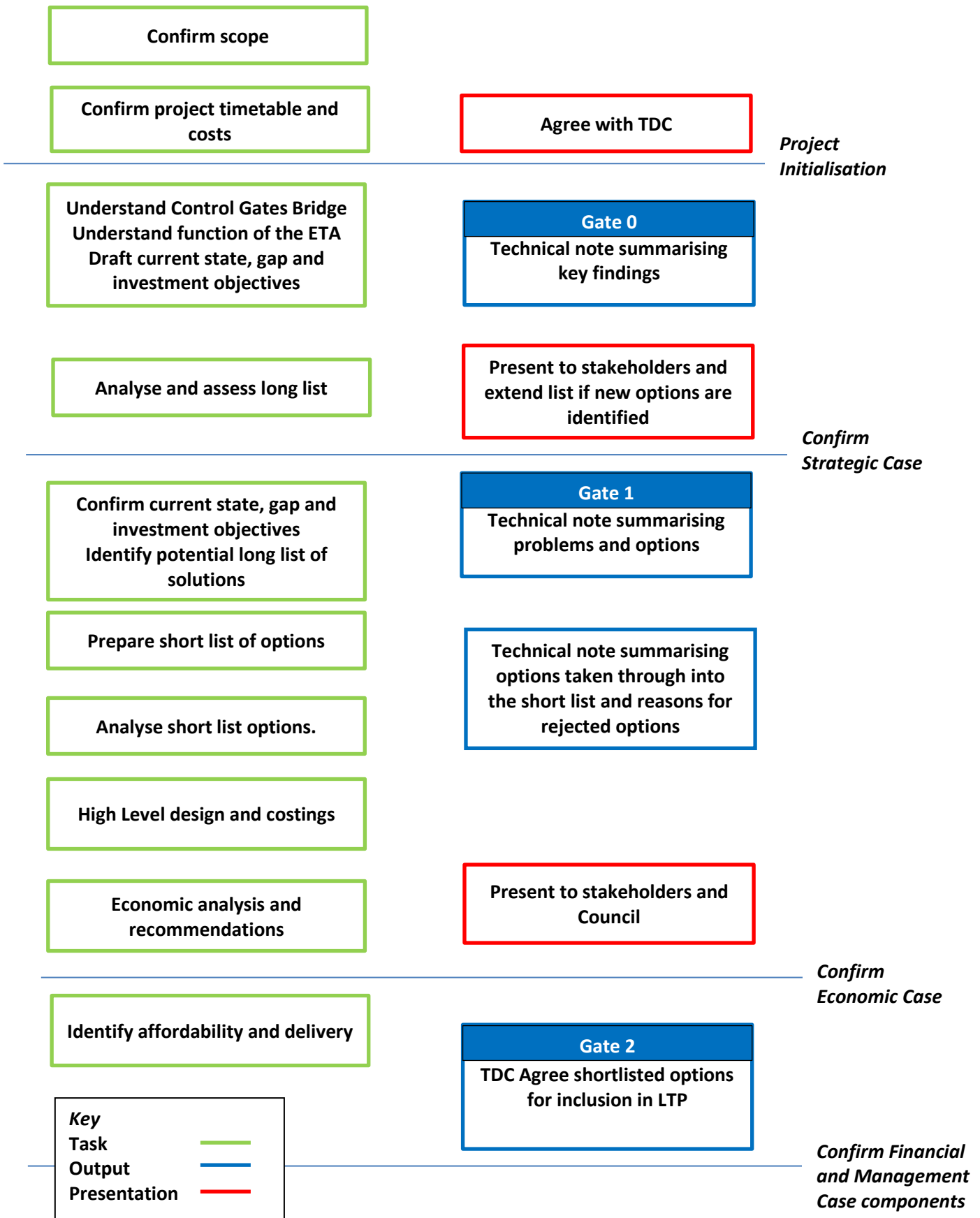


Figure 3: Schematic Process Diagram

3.2 Investment Objectives

The investment objectives specify the outcomes that are desired from any initiatives that emerge from the investigation. Options are assessed against these objectives and other criteria to determine those that are likely to be most effective.

The investment objectives respond to the issues and opportunities that will be identified through this investigation but are framed within the wider context of the CISP goals and TD2050 policies. They are to:

- Improve the connectivity of the transport network within the study area, so that it supports the preferred land use pattern, accommodates other modes, and reconnects the town centre with the lakefront and river; and
- Improve the efficiency of the transport network within the study area, so that it functions more efficiently and can accommodate future growth.

The investment objectives will be tested, changed if required, and confirmed as a first step.

3.3 The Taupō Traffic Models

One of the key analytical tools that will be used is the Taupō Traffic Model. This model, built on the Tracks software platform, was updated in 2016 and predicts changes in travel patterns based on different input land use and infrastructure options. The extent of the model is shown in **Figure 4**.

One of the initial tasks was to check the model is appropriately reflecting traffic counts in the study area shown in Figure 1 – commonly referred to as ‘local area validation.

In most cases the traffic model was sufficient to provide the data for confirmation of the strategic case and analysis of the economic case.

However, there were instances where more detailed modelling was required. In the simplest form, individual intersections were analysed using Sidra – as standalone intersection analysis model that is now incorporated into Tracks.

For more complex detailed analysis a Paramics microsimulation models was built. Examples of this were the operation Norman Smith Street/Wairakei Drive intersection and the interaction with the Tongariro Street/ Spa Road intersection and the difficulty of the right turns onto Spa Road.

Microsimulation is the representation of individual vehicles trips through the network. The vehicles interact with the road network, intersection controls and geometry, and other vehicles as they travel through the network in real-time.

The core purpose of microsimulation models is typically to measure the performance of the road network; the delays and queues at intersections and the travel times through the wider network, and to display these graphically as moving vehicles.

The part of the network covered by the microsimulation model is shown as **Figure 5**.



Figure 4: Extent of the Taupō Traffic Model



Figure 5: Extent of the Microsimulation Model

3.4 Stakeholders

Taupō District Council is the main stakeholder in this process. Other key stakeholders include:

- Town Centre Taupō;
- Taupō Chamber of Commerce;
- Tuwharetoa Maori Trust Board;
- Bike Taupō;
- Taupō Ratepayers Group;
- Acacia Bay Residents Association;
- Kinloch Community; and
- Mercury Energy.

4. Identification of Issues

4.1 Issue Identification Process

In developing the case for change, the first stage was identifying current transport issues. To achieve this, stakeholder workshops were held with invitations sent to:

- Taupō Town Centre and Chamber of Commerce, Wednesday 27 September 2017;
- Acacia Bay, Kinloch, and Taupō Residents Groups, and Taupō Rate Payers Association, Tuesday 17 October 2017.

The forum of these workshops was a brief presentation to establish context, an outline of a few potential issues to stimulate conversation, followed by an open floor discussion where attendees were asked to contribute transport issues within the study area and potential solutions. Solutions are discussed later in this report.

The first workshop was attended by approximately 40 people. Six people attended the second workshop in total, representing the Acacia Bay and Taupō Residents Group.

In addition to the workshops, individual meetings were held with Bike Taupō, and Access Taupō.

This section summarises the issues raised through the consultation process as well as those observed by the traffic consultant.

4.2 Issues Identified

The issues identified through the stakeholder engagement/workshop process and from observations by the traffic consultant are summarised in the table below, followed by commentary. The issues presented are as raised, and it has not been determined at this stage if the problems are real or perceived.

Issue Number	Mode	Issue
1	Vehicles	St Patrick's school on Acacia Bay Rd generating double crossings of the Control Gates Bridge and exacerbating traffic delays
2	Vehicles	Significant delays for eastbound traffic on Norman Smith St in morning peak
3	Vehicles	High speeds northbound on Wairakei Dr, limiting ability to turn out of Norman Smith St
4	Vehicles	Northbound traffic on Wairakei Dr move into left turn slip lane late and often do not indicate, limiting ability to turn out of Norman Smith St
5	Vehicles	Significant traffic volumes southbound on Wairakei Dr resulting in "flow breakdown" from vehicles braking
6	Vehicles	Industrial area traffic inappropriately using Control Gates Bridge
7	Vehicles	Significant queuing for southbound traffic on Spa Rd generated from

Issue Number	Mode	Issue
		the Tongariro Street roundabout
8	Vehicles	Southbound vehicles on Spa Rd turning right into Nukuhau St, through Countdown car park, left onto Tongariro St, then U-turning at roundabout with Spa Rd due to long delays for southbound traffic on Spa Rd towards Tongariro
9	Vehicles	U-turning traffic at the Spa Rd/Tongariro St roundabout generating additional delay due to low speeds of the manoeuvre
10	Vehicles	Southbound vehicles on Spa Rd U-turning at roundabout with Tongariro as cannot turn right from side roads onto Spa Road
11	Vehicles	Poor lane usage southbound on Tongariro St towards Spa Rd roundabout
12	Vehicles	Poor visibility southbound on Tongariro St towards Spa Rd roundabout from planting and signage
13	Vehicles	Need for clearer identification of car parking locations
14	Vehicles	Sufficient space for car parking on west bank if pedestrian bridge constructed across Boat Harbour
15	Pedestrians	Difficult/unsafe to cross Wairakei Dr at the Control Gates Bridge
16	Pedestrians	Safety issues for school children crossing Titirapenga St from Taupō Primary School on west to playing fields on east
17	Pedestrians/Cyclists	General concern over pedestrian and cycle safety
18	Cyclists	Difficulty crossing Wairakei Dr/Tongariro Street
19	Cyclists	Cycleway on east side of Wairakei Dr, then steep uphill off-road link through to Nukuhau St. Gradient steep for cyclists but used to avoid Tongariro St (high vehicle flows, difficulty crossing).
20	Cyclists	Safety concerned raised biking on Norman Smith Street and then turning right into Wairakei Dr and needing to change lanes in heavy traffic
21	Cyclists	Safety concerned raised biking southbound on Spa Rd and then turning right onto Tongariro St
22	Cyclists	Safer cycling infrastructure
23	All	Impact of autonomous vehicles (AVs) and electric vehicles (EVs)
24	All	Increased development in the north increasing traffic on Control Gates Bridge and exacerbating delays

Table 3: List of Issues Identified

These issues are expanded upon below, moving north to south through the network.

4.3 Issues in the Nukuhau Area

St Patrick's school is located on Acacia Bay Road in the north-west between Poihipi Street and Norman Smith Street. The issue of parents dropping their children at school and then returning home was raised. This was considered to produce additional traffic using the Control Gates Bridge, and worsening congestion.

The performance of the Norman Smith Street/Wairakei Drive intersection was raised, with delays for traffic turning out of Norman Smith Street in the morning peak anecdotally reaching 20 minutes. Local residents indicated the delays regularly occurred and were focused on the 8:30-9:00am period. If these delays are confirmed through data collection and analysis, they are excessive, and intervention would be warranted.

Rat-running to avoid or jump the queue on Norman Smith Street was raised as an issue. Some traffic from Acacia Bay continue north on Acacia Bay Road past Norman Smith Street, and then double back via Woodward Street to bypass two-thirds of the queued vehicles. The issue is increased traffic flows on residential streets in order to reduce the time spent queuing on Norman Smith Street.

Pedestrians, particularly children, are crossing from the residential areas on the west side of Tongariro Street to the east side. They cross just south of the Control Gates Bridge using the central island (which is not a pedestrian refuge), where they wait for gaps in the traffic. With significant traffic volumes, combined with vulnerable road users, the ability to safely cross Tongariro Street south of the Control Gates Bridge represents a potential safety issue.

Similar issues were raised for cyclists, and the steep gradient on the link to Nukuhau Street being inappropriate.

High speeds for northbound traffic on Wairakei Drive were raised. This restricted the opportunities for right turning traffic out of Norman Smith Drive, which experiences high delays in the morning peak.

Poor driver behaviour for northbound traffic on Wairakei Drive, with vehicles moving into the left turn slip lane late and not indicating was raised. This behaviour increased the delay for vehicles turning right out of Norman Smith Street as gaps in the traffic flow could not be utilised.

The volume of traffic on Wairakei Road, particularly southbound in the morning peak, is significant and any unexpected behaviour (such as braking suddenly) can cause a shock-wave and flow breakdown resulting in queues and delays. This represents potential safety issues.

In the second workshop, the question was asked whether traffic destined for the industrial area inappropriately use the Control Gates Bridge. If this was found to be the case, then the associated issue raised was congestion on Wairakei Drive from industrial traffic that should be using the ETA.

4.4 Issues Associated with Tongariro Street/Spa Road

Significant queuing on Spa Road for vehicles travelling southbound in the evening peak was raised. Anecdotally, queues are reported to regularly extend back as far as Taupō-nui-a-Tia College at Opepe Street. This problem then generates a raft of additional issues.

The first associated additional problem is that to avoid the queue, vehicles drive on the median road markings to turn right into Nukuhau Street, through the Countdown car park to the access way to the northern section of Tongariro Street. From here, they turn left onto Tongariro Street then make a U-turn at the roundabout. This manoeuvre represents several issues – reduced capacity of the Spa Road/Tongariro Street roundabout associated

with slow moving vehicles undertaking U-turns, safety concerns associated with driving on the median, increased traffic flows driving through a supermarket car park where vehicles and pedestrians regularly are in conflict.

Building on this rat-run, it has also been indicated that vehicles turn right into Opepe Street and along Waikato Street to undertake the same trip through the supermarket car park followed by U-turning at the roundabout. This generally happens between 5:30-6:00pm.

This reinforces the issue that southbound vehicles queuing on Spa Road results in rat-runs to avoid the queue, effectively exacerbating the problem and generating additional problems (such as increased traffic through a car park, increased usage of residential roads not designed for through traffic).

A separate issue raised is that it is extremely difficult to turn right onto Spa Road from any of the side roads in the CBD because of the volume of traffic and the lack of gaps in the traffic flow. From side roads to the south, instead of turning right onto Spa Road, vehicles will turn left and then U-turn at the roundabout. Again, this will reduce capacity of the roundabout and indicates a potential safety issue for right turning vehicles from side roads along Spa Road.

Poor lane utilisation of southbound traffic on Tongariro Street heading towards the roundabout with Spa Road was also raised in the first workshop and visibility issues (to the right) for the same movement was raised in the second. Visibility issues are particularly pertinent as this movement is uphill and curves to the left on approach to the roundabout with Spa Road. Local residents said that they were aware they might encounter vehicles exiting the access way from Countdown, and probably slowed in anticipation. The poor visibility was attributed to signage and planting. The issue was increased delays and queuing due to poor lane utilisation and restricted visibility.

4.5 Titiraupenga Street Issues

Taupō Primary School is located on the west side of Titiraupenga Street. There are play grounds on the east side and a concern was raised regarding the safety of children crossing Titiraupenga Street to and from the school and the playgrounds particularly at lunch time.

4.6 Boat Harbour

To encourage discussion, the possibility of a pedestrian and cycle bridge across the Boat Harbour was mooted. In response, the question was asked if there was sufficient space for car parking on the west bank if this linkage was constructed, since it could encourage park-and-walk. The issue therefore was there sufficient car parking space in the west bank area.

4.7 General Issues

The impact of electric vehicles and autonomous vehicles was raised as a concern.

General safety concerns for the more vulnerable road users, such as pedestrians and cyclists, were raised.

The need for more provisions for cyclists, such as cycle lanes was raised. However, this was more of a “wish list” than a specific issue.

4.8 Issue Summary

In a Business Case framework, the significance of the issues raised and the ramifications of not resolving them requires consideration. Whether the issues identified are real or perceived was confirmed following assembly and analysis of background data. The significance of issues is addressed in Section 6.

5. Background Research and Modelling Considerations

The issues and options discussed above need to be substantiated first and then analysed prior to the case for change being made. This was done by collation, collection and analysis of data on the existing situation using traffic counts and the Taupō Traffic model.

The surveys undertaken are described in section 5.1 below, and the results and findings from the data are described in subsequent sections.

5.1 Data and Surveys

5.1.1 Automatic Traffic Counts

While the model is a good source of traffic information there is no substitute for good quality count data.

There were a number of traffic counts already available, collected by TDC, with some 61 counts taken in 2016. The locations and dates are summarised in the appendix, both as a list and with the locations plotted.

However, TDC have not counted at the Control Gates Bridge, and the NZTA counts run only to 2015, and then only for about four weeks in the year. The historic counts have been accessed. The bridge is a critical issue, not only in terms of the final strategy, but also in terms of when it is going to be required. Obtaining an accurate picture of bridge flows now will assist with that and on-going monitoring will assist in determining when the second two lanes will be required.

The traffic survey firm, Matrix was commissioned to collect counts at specific locations to supplement the TDC counts.

Additional automatic traffic counts collected at:

- Wairakei Drive just north of the Control Gates Bridge;
- Taupō ETA South of Wairakei.

5.1.2 Intersection Counts

Turning movement counts at a number of intersections were also required, namely:

- Huka Falls Road / Wairakei Drive;
- Poihipi Road / Wairakei Drive;
- Tongariro Street / Redoubt Road;
- Tongariro Street / Spa Road;
- Spa Road / Ruapehu Street;
- Spa Road / Titiraupenga Street;
- Spa Road / Kaimanawa Street;
- Lake Terrace / Ruapehu Street;

- Lake Terrace / Titiraupenga Street;
- Lake Terrace / Kaimanawa Street; and
- ETA/Wairakei Drive.

The first three of these intersections were counted in June 2016, but the Tongariro Street/Spa Road count did not capture all movements and counts were repeated as it was better to have September counts rather than a set taken in mid-winter.

5.1.3 Video Recordings

There were four intersections where video capture of number plates was taken on 27th September for the morning peak period.

- Norman Smith Street/ Wairakei Drive capturing vehicles entering and leaving Norman Smith Street;
- Control gates bridge capturing vehicles in both directions;
- Spa Road/Titiraupenga Street capturing all movements;
- Lake Terrace/Titiraupenga Street capturing all movements.

With video, the paths of vehicles can be tracked using number plate recognition. This provided O/D information on vehicles that pass through the CBD, or which enter and leave the CBD within a short period, indicating a trip to drop off a passenger.

5.1.4 Drone Video

Drone video of the operation of Norman Smith Street and the Spa Road roundabout during the morning and evening peak periods was also obtained. Three half hour surveys sessions of filming were completed:

- Wednesday 20 September beginning at 8:15 am focussing on the Tongariro/Spa Road roundabout



In the morning peak during the 20 minutes of filming, there were no obvious queues on any leg of the intersection. Notable points were the lane utilisation of the northern approach to the roundabout. The traffic counts show that the left turn to Spa road and the through

movement to Tongariro Street are about equal, but the majority of traffic was using the left lane. Secondly there is a significant volume of traffic that leaves the Supermarket car park and performs a 'U' turn at the roundabout. The small central island means that manoeuvre is low speed and those vehicles disproportionately affect the capacity of the roundabout.

- Friday 22 December beginning at 8:23am focussing on the Norman Smith Street /Wairakei Drive intersection



This footage showed queues building on both Norman Smith Street, and on Wairakei Drive, with the Wairakei Drive queue, although always moving, often stretching back to Poihipi Road. The length of the queue on Norman Smith Street was not visible on the footage.

- Monday 25 September at 4:55pm concentrating on the Tongariro/Spa Road roundabout



As with the other footage of the roundabout, there were only minimal queues and delays showing on the video during the evening

5.1.5 Queues and Delays

The queues and delays at Norman Smith Street and the Spa road roundabout were also surveyed during the morning and evening peak periods. However, the effects seen in the drone video were not apparent on the survey day, raising questions as to the frequency that queues were forming. In order to check this, traffic counters that measured speeds were set up in November 2017 on Wairakei Drive, and Norman Smith Street, and recordings taken on Spa Road in July 2017 were also analysed.

The counter on Norman Smith Street was located between Mareti Street and Pitiroi Street, 575 m from the Intersection with Wairakei Drive. **Figure 6** shows the speeds of all vehicle passing over the counter between 8am and 9am on the weekdays from 6 November to 10 November 2017.

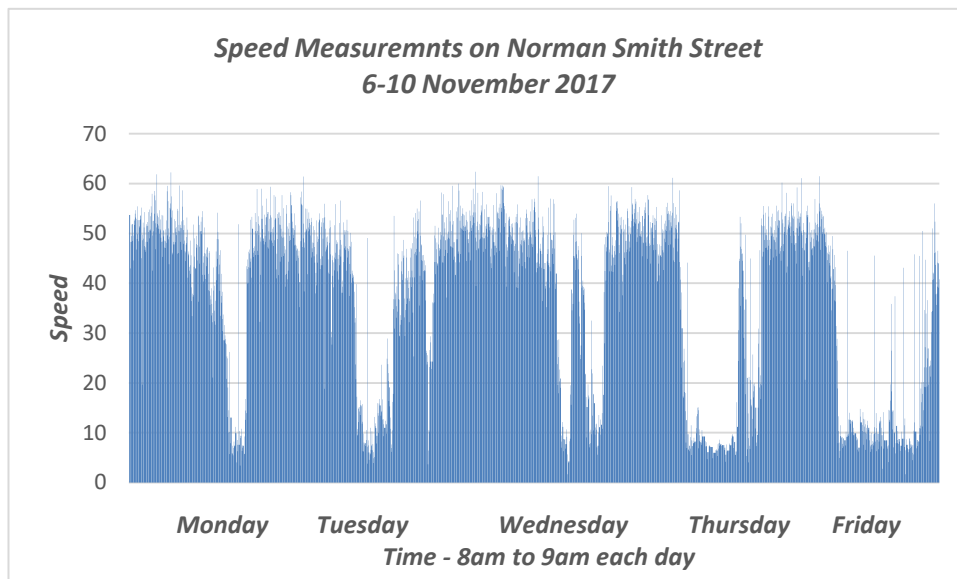


Figure 6: Speeds on Norman Smith Street – 8am-9am Each Day

As can be seen, the speed over the counter dropped to below 10km/hr for a period of time every day of that week. The duration was short on Monday and Tuesday but extended from 8:13am to 8:44am on Thursday 9 and from 8:13am to after 9:00am on Friday 10 November 2017.

The counter on Wairakei Drive was set about 320 m north of the Norman Smith Intersection for the same week. There were no queues on the Monday or Tuesday, on Wednesday the queue extended to the counter for about 10 minutes, and on Friday the queue existed for about 40 minutes from 8:21 to 9:00am – a little later than occurred on Norman Smith Street.

The counter on Spa Road was sited between Titiraupenga Street and Taniwha Street. The speed recordings show that the queue stretched back to that location for a period of about 10 minutes on the Thursday and Friday 27 and 28 July. A casual observation in September confirmed that. The queue does not appear to be stationary – just slow moving.

5.2 Wairakei Drive

The build-up of flows southbound in the morning peak on Wairakei Drive are interesting and instructive. At the SH1/SH5 roundabout at Wairakei, the peak hour south bound flow is just under 300 vehicles per hour (vph), but that drops to 200vph just north of Huka Falls Road. The flow then doubles as the Huka Falls Road traffic joins, and the doubles again as the right turn from Poihipi Road joins so that the flow just north of Norman Smith Street is 775vph. The right turn traffic from Norman Smith Street is about 740vph and these two merge to make the 1450vph on the bridge. That traffic then splits fairly evenly at the Spa Road roundabout, with 750vph turning left into Spa Road and 670vph travelling along Tongaririo Street.

The merge of Norman Smith right turning traffic with the southbound traffic on Wairakei Drive does not work as a true merge. From observations using the drone footage, and on site it is working more like a give way for the turning vehicles. The road markings do not help. The lane that the turning vehicles go into is marked with a dotted white line across the exit where that and the downhill lane merge. This give the impression that the through lane has priority.

5.3 The Control Gates Bridge

Traffic on the Control Gates bridge over the past 10 years has changed significantly. Between 2007 and 2009, flows were reasonably constant at 29,000-30,000 vehicles per day (vpd). In 2010 the ETA opened, and the flow dropped to just under 24,800vpd. There were no counts on the ETA at that time, but in 2013, the bridge flow was 25,700vpd and the ETA was 5,700vpd. Since then, both have been steadily increasing with the bridge flows averaging a 1% increase per year and the ETA averaging almost 9% per year. In September 2017 the average weekday flow at the bridge was 26,150vpd. No heavy vehicles were counted on the bridge but 5% of the traffic was classified as medium goods vehicles. On the ETA, 13% of the 7,700vpd weekday flow were classified as heavy goods vehicles, and a further 7% classified as medium goods vehicles. About half of the goods vehicles were B Trains.

The analysis and pre-ETA traffic counts showed the bridge running above capacity during extended holiday periods and often during peak non-holiday periods. In terms of daily traffic, the bridge will reach those numbers again in about 10 years using current growth rates. It should be noted however that the rate of residential development north of the river will have a significant bearing on this time frame.

However, the hourly flows are more indicative. In **Figures 7 and 8**, the hourly flows for a week in September 2017 are plotted for each week day. In that week, Thursday and Friday were days when schools were open, and the Monday, Tuesday and Wednesday were during the first week of the holiday.

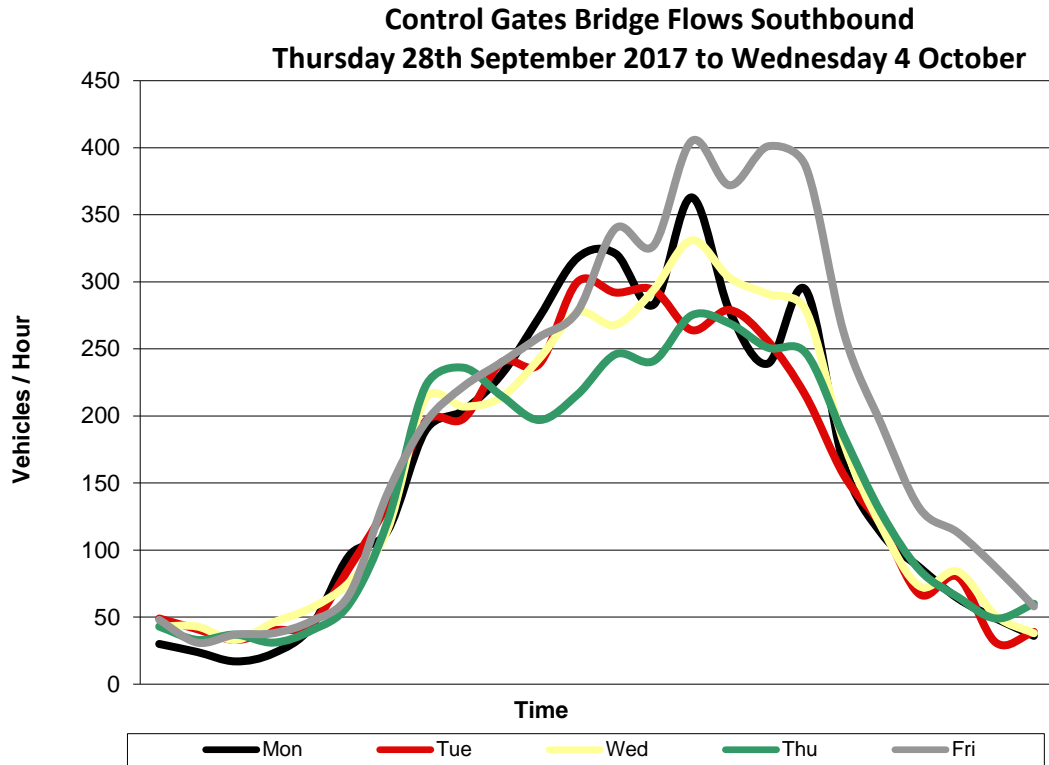


Figure 7: Weekday Flow on the Bridge - Southbound

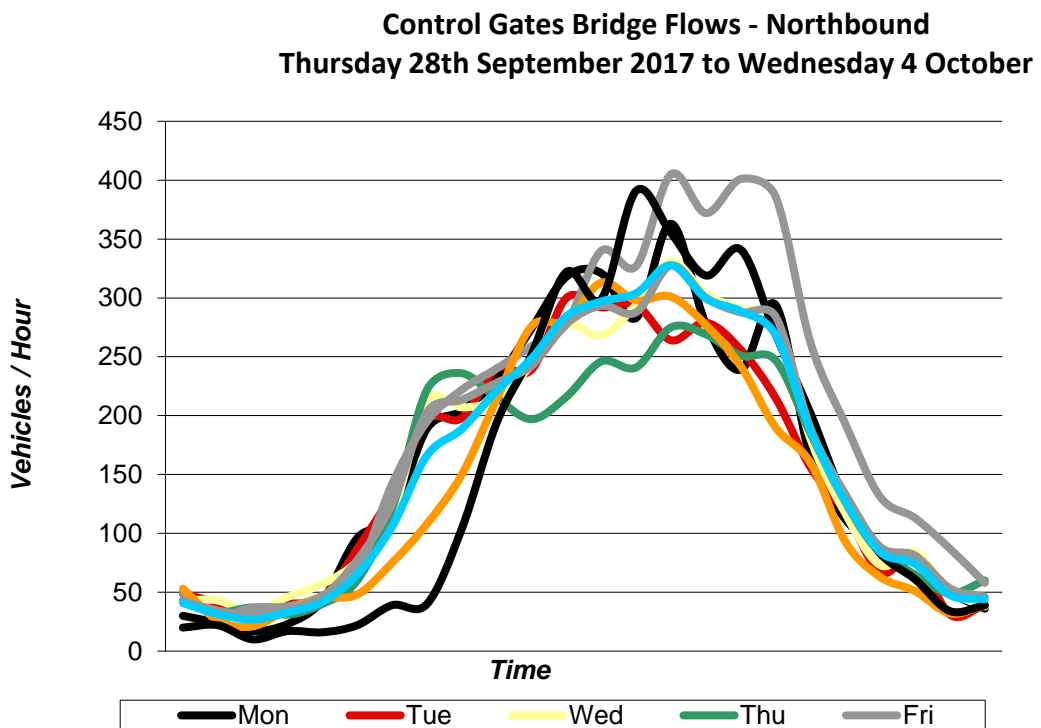


Figure 8: Weekday Flow on the Bridge - Northbound

There is a peak southbound flow of 1441vph that occurs between 8:00am and 9:00am in the morning when schools are in. In the following week these peak flows drop by about 20%. There is little difference in the pattern and flow over the other days, with all hours sitting between 850 and 1000vph.

The northbound direction shows little difference in flow between school and non-school days, but again the highest flow is 1460 per hour.

From this, it is apparent that the capacity of the bridge is about 1450 vph in either direction as this is the maximum that goes over the bridge before queues develop. At present, that level of flow occurs for an hour per day in each direction.

A final observation is that there is little variation in the total daily flow over the day, whether school is in or out. Combining both directions, the Friday flow is the highest at 27,700vpd, while the Monday flow is the lowest at 24,900vpd. These are $\pm 5\%$ from the average of 26,150vpd. The three mid-week days are only about $\pm 1.5\%$ from that figure.

5.4 Land Use

The future land use currently in the model is based on the TD 2050 land use, which estimates that the District will grow by some 28% by 2031. The estimate for growth north of the river is for the existing 2,639 households to grow by 33%, or slightly quicker than the district as a whole.

This translates to a modelled morning peak southbound flow on the bridge of 1620vph, and a northbound evening peak flow of 1,650vph. Both of these are almost 14% higher than the estimated maximum flows that the bridge can manage. (The model will put the flow on the bridge, even though it physically can't cope).

It may be prudent to limit development north of the river until such time as there are definite plans in place to build a second bridge.

The more recent growth model may shed a different light on the future flows, but the data used was the best information available at the time of the analysis.

6. Case for Change

In this section, the issues raised through the stakeholder engagement workshops and those identified by Council staff and the traffic consultant are reviewed in the context of the data collected to quantify issues that are genuine and enable perceived issues to be discarded.

In the following table, the issues are reported in conjunction with the outcome of the data analysis and observational surveys.

Options to address the issues are given in the next section of the report.

Issue Number	Mode	Issue	Supporting Data Analysis	Status
1	Vehicles	St Patrick's school on Acacia Bay Rd generating double crossings of the Control Gates Bridge and exacerbating traffic delays.	Number plate matching of vehicles on the bridge show that in the one-hour period between 0800 and 0900 643 vehicles travelled north over the bridge. Of these 104 or about 16% travelled back southbound over the bridge later in the hour. While this is not a large number, given the bridge is at or close to capacity southbound it is 104 vehicles that may be able to be shifted (7% of the hourly southbound flow).	Confirmed issue
2	Vehicles	Significant delays for eastbound traffic on Norman Smith St in morning peak.	Reported 20 min delay - measured to be 30 seconds which is generally acceptable. The maximum observed queue was 15 vehicles. However, traffic conditions on the day that the traffic was counted did not match the conditions seen on the drone footage. Measurements from that suggest an average delay in excess of 90 seconds which is not considered acceptable. The recent counts show that the queue on Norman Smith Street occurs every day. Observations confirm that "merge like a zip" for southbound Wairakei Dr traffic and Norman Smith St is not operating as a "zip" but with Norman Smith St traffic giving way from the dedicated lane.	Confirmed issue
3	Vehicles	High speeds northbound on Wairakei Dr, limiting ability to turn out of Norman Smith St.	Speeds from tube count confirmed that almost 80% of the vehicles between 7am and 9am were Vehicle to be in excess of the 50kph speed limit, with about 2% in excess of 70 kph. The 85 th Percentile speeds were just over 60kph. In the evening peak, speeds were a little slower.	Confirmed issue
4	Vehicles	Northbound traffic on Wairakei Dr move into left turn slip lane late and often do not indicate, limiting ability to turn out of Norman Smith St.	Video footage from Drone survey confirms this behaviour.	Confirmed issue
5	Vehicles	Significant traffic volumes southbound on Wairakei Dr resulting in "flow breakdown" from vehicles braking.	The traffic counts confirm that the bridge is operating at hourly flows that are close to or at capacity. Even a slight perturbation in flow at that level will cause breakdown. Observation confirms southbound vehicles slowing likely associated with visibility approaching the Spa Rd roundabout (uphill and around a curve).	Confirmed issue

Issue Number	Mode	Issue	Supporting Data Analysis	Status
6	Vehicles	Industrial area traffic inappropriately using Control Gates Bridge.	It is probably not an issue of inappropriate use of the bridge. It is more to do with vehicles leaving the Countdown car park and making a 'U' turn at the roundabout, with consequent reduction in capacity. There is anecdotal evidence that some traffic from Spa Road uses the carpark as a 'rat run' to avoid delays at the roundabout.	Confirmed issue
7	Vehicles	Significant queuing for southbound traffic on Spa Rd generated from the Tongariro Street roundabout.	The queueing and delay surveys did not show queues on the southbound approach to the roundabout but having said that the survey cameras were not set up to catch the full length of the queue. However, speed measurements taken just south of Titiraupenga street do confirm that a significant proportion of vehicles are travelling westbound at speeds less than 40kph, while the majority in the eastbound direction are around the 60kph mark, suggesting that a moving queue could be stretching that far back from the intersection. This was confirmed by other observations on different days.	Confirmed issue
8	Vehicles	Southbound vehicles on Spa Rd turning right into Nukuhau St, through Countdown car park, left onto Tongariro St, then U-turning at roundabout with Spa Rd due to long delays for southbound traffic on Spa Rd towards Tongariro.	Rat-run on Nukuhau St/Countdown/U-turn at Spa Rd roundabout confirmed visually from video footage from Drone survey.	Confirmed issue
9	Vehicles	U-turning traffic at the Spa Rd/Tongariro St roundabout generating additional delay due to low speeds of the manoeuvre.	Confirmed visually from video footage from Drone survey.	Confirmed issue
10	Vehicles	Southbound vehicles on Spa Rd U-turning at roundabout with Tongariro as cannot turn right from side roads onto Spa Road.	U-turns confirmed visually from video footage from Drone survey. Traffic counts confirm few right turning vehicles, but not possible to confirm inability. Flows on Spa Rd are significant which will reduce gaps and result in difficulty turning right across two traffic streams.	Confirmed issue
11	Vehicles	Poor lane usage southbound on Tongariro St towards Spa Rd roundabout.	Confirmed visually from video footage from Drone survey.	Confirmed issue

Issue Number	Mode	Issue	Supporting Data Analysis	Status
12	Vehicles	Poor visibility southbound on Tongariro St towards Spa Rd roundabout from planting and signage.	Visibility confirmed as limited based on uphill gradient and road curvature, but limitations from planting and signage does not seem to be an issue	Confirmed issue
13	Vehicles	Need for clearer identification of car parking locations.	Likely a peak season issue. Data collection and observation currently focused on typical period.	Unable to confirm
14	Vehicles	Sufficient space for car parking on west bank if pedestrian bridge constructed across Boat Harbour.	This was not so much an issue but a question. The need for parking would be monitored on an ongoing basis if the bridge is established.	Unable to confirm
15	Pedestrians	Difficult/unsafe to cross Wairakei Dr at the Control Gates Bridge.	Confirmed that pedestrians are crossing at this location and that this represents safety concerns.	Confirmed issue
16	Pedestrians	Safety issues for school children crossing Titiraupenga St from Taupō Primary School on west to playing fields on east.	Council staff confirm this occurs. Not confirmed if there are current safety issues but need to consider vulnerable road users in option development.	Confirmed consideration
17	Pedestrians/Cyclists	General concern over pedestrian and cycle safety.	Focus will be on specific issues raised, and in ensuring option development considers all modes of transport.	n/a
18	Cyclists	Difficulty crossing Wairakei Dr/Tongariro Street.	High traffic flows indicate this will be problematic. Observations of children crossing by foot a safety concern.	Confirmed issue
19	Cyclists	Cycleway on east side of Wairakei Dr, then steep uphill off-road link through to Nukuhau St. Gradient steep for cyclists but used to avoid Tongariro St (high vehicle flows, difficulty crossing).	As above.	Confirmed issue
20	Cyclists	Safety concerned raised biking on Norman Smith Street and then turning right into Wairakei Dr and needing to change lanes in heavy traffic.	High traffic flows indicate this is likely problematic at peak times.	Likely issue
21	Cyclists	Safety concerned raised biking southbound on Spa Rd and then turning right onto Tongariro St.	High traffic flows indicate this is likely problematic at peak times.	Likely issue

Issue Number	Mode	Issue	Supporting Data Analysis	Status
22	Cyclists	Safer cycling infrastructure.	Focus will be on specific issues raised, and in ensuring option development considers all modes of transport.	n/a
23	All	Impact of autonomous vehicles (AVs) and electric vehicles (EVs).	Professional judgement that EVs will not impact travel patterns or flows. International views on AVs are that these could lead to more trips (e.g. AVs returning home after dropping you at work) or less trips (e.g. no individual ownership but shared use business model). Likely to be very long term effects, out-of-scope for current investigation.	n/a
24	All	Increased development in the north increasing traffic on Control Gates Bridge and exacerbating delays.	Traffic volumes on Control Gates Bridge already almost reached capacity, particularly southbound.	Likely issue

Table 4: Confirmation of Transport Issues

7. Option Identification

In this section, options/solutions that may address the confirmed issues are tabulated including options put forward during the stakeholder engagement workshops. At this stage, the viability and performance of the options has not been taken into account.

The issues that each option may address are also tabulated by referring to the “Issue Number” from Table 4.

Options are grouped geographically using the following letters:

- A: Vicinity of Norman Smith Street and Wairakei Drive;
- B: Vicinity of Tongariro St and Spa Road;
- C: From Spa Road through to Lake Terrace;
- D: Non-infrastructure solutions.

Option Code	Option	Expected Benefits	Issue Numbers Addressed
A1	Change road markings on Wairakei Dr immediately south of Norman Smith St to promote “merge like a zip”. Slow Wairakei Dr SB traffic by shifting transition to 50kph further north. Add road markings to visually narrow carriageway and rumble strips (for example) to further encourage speed reduction. The northbound passing lane could also be removed.	Manage bottleneck at Norman Smith St/Wairakei Dr, increasing capacity and reducing queues/delays.	2
A2	Close Norman Smith St at Wairakei Dr and reroute traffic via Acacia Bay Rd and Poihipi Rd. May require roundabout or traffic signals at Poihipi Rd/Wairakei Dr.	Manage bottleneck at Norman Smith St/Wairakei Dr, increasing capacity and reducing queues/delays. A disbenefit of this option is that it will put more traffic on Acacia Bay Road and passed St Patrick’s School.	2
A3	Ramp-metering style signalisation of Norman Smith St/Wairakei Dr.	Manage bottleneck at Norman Smith St/Wairakei Dr while minimising delays.	2
A4	Full signalisation of Norman Smith St/Wairakei Dr.	Ability to control queuing at peak times. Provides safer pedestrian crossing.	2
A5	Roundabout at Norman Smith St/Wairakei Dr with southbound slip lane on Wairakei Dr.	Manage bottleneck at Norman Smith St/Wairakei Dr, increasing capacity and reducing queues/delays.	2
A6	Temporary Tongariro St pedestrian/cycle bridge south of Control Gates Bridge.	Safer crossing for pedestrians and cyclists.	18
A7	At grade pedestrian crossing of Tongariro St between Spa Rd and Norman Smith St (signals or zebra crossing).	Safer crossing for pedestrians and cyclists.	18
B1	Change roads markings on Tongariro St SB approach to Spa Rd roundabout to dedicated lanes for the left and right/ahead movements.	Improving lane utilisation at roundabout will increase capacity and reduce queues and delays.	11
B2	Ban right turn into Redoubt St to extend length of 2 lane approach to roundabout.	Banning turn into Redoubt frees up road space.	11
B3	Close access way from supermarket to Tongariro St.	Eliminate rat-run through supermarket car park Eliminate safety issues of for southbound vehicles on Tongariro St having a vehicle turn out of the access way in front of them.	8

Option Code	Option	Expected Benefits	Issue Numbers Addressed
		<p>Eliminate U-turns by northbound vehicles on Tongariro turning through the gaps in the tubular delineators to access the supermarket.</p> <p>Eliminate U-turns at roundabout by southbound vehicles exiting the supermarket.</p> <p>Increases roundabout capacity and improves safety.</p>	
B4	Second crossing of Control Gates Bridge Including four laning of Wairakei Dr/Tongariro St from Norman Smith St to Spa Rd.	Additional capacity will reduce queuing and delays. Will facilitate better management of traffic using Norman Smith St, resulting in largest reduction in delays.	1,2,3,4,5,8,9,10 ,11,12,
B5	Extra deck above existing Control Gates Bridge Including four laning of Wairakei Dr/Tongariro St from Norman Smith St to Spa Rd.	Caters for long term growth in traffic flows into Taupō, providing long term capacity solution. Enables further residential development north on the Waikato River.	
B6	Remove Spa Rd roundabout and realign intersection with Tongariro St north connecting through parking area to Paora Hapi St. Left turn only onto Spa Rd, with Spa Rd SB traffic rerouting via Gascoigne St, or Ruapehu Street. Requires modified intersection control at Gascoigne St/Paora Hapi St (signals or roundabout), or at Ruapehu Street. Tee Tongariro St south onto realigned intersection with Give Way control. Tee Lake Terrace onto Titiraupenga St.	Reduce PM peak southbound queues and delays on Spa Rd. Increase southbound capacity on Tongariro St north. Reinforce Tongariro St south/Lake Terrace as minor road adjacent to Lake, enabling subsequent changes in urban form.	Consequent on B3, and to implement the CISP
C1	Signalise Spa Rd/Ruapehu St and Spa Rd/Titiraupenga St.	Introduce safe pedestrian crossing opportunities. Create gaps in traffic flow to enable vehicles to turn right out of side roads onto Spa Rd.	10
C2	Reverse priorities of intersections with Titiraupenga St between Spa Rd and Lake Terrace so that Titiraupenga St has priority.	Create alternative route to Tongariro St (south) and Lake Terrace to reduce traffic flows through the CBD, improving the amenity.	Consequent on B5 and to implement the CISP

Option Code	Option	Expected Benefits	Issue Numbers Addressed
C3	Signalise Titiraupenga St/Tamamutu St and Titiraupenga St/Heuheu St.	Promote Titiraupenga St as alternative to Tongariro St (south) and Lake Terrace while safely enabling east-west traffic flows. Safe opportunities for pedestrians to cross Titiraupenga St.	Consequent on B5 and to implement the CISP
C4	Signalise Paora Hapi St/ Ruapehu St and Paora Hapi St /Gascoigne St.	Facilitate access into the CBD when the function of Paora Hapi is changed.	Consequent on B3 and B5
D1	Parking signage – further develop the existing parking map and investigate electronic signs.	Reduce number of vehicles circulating to look for a car park, particularly during peak tourist season.	13
D2	VMS sign on SH1 north of ETA/Thermal Explorer Highway/SH5 roundabout with travel times to Taupō CBD via ETA and Wairakei Dr.	Encourage use of ETA instead of Wairakei Dr reducing flows and delays on Wairakei Dr during peak times. Will only be successful at times when it is faster to use the ETA.	2
D3	Pedestrian/ Cycle crossing of the river in the boat harbour area.	Provide an alternative to the Control gates bridge for pedestrians and cyclists.	18
D4	Education campaign on good driving practice. For example, how to use the SB merge at Norman Smith St/Wairakei Dr and use of the left turn indicator for NB traffic on Wairakei Dr turning into Norman Smith St.	Increase opportunities to turn out of Norman Smith St, reducing delays. Reduce conflict for southbound merging traffic at Norman Smith St/Wairakei Dr.	2
D5	Investigate Private-Public Partnership for crossing additional to existing Control Gates Bridge.	Desired benefit of fast-tracking ability to fund construction of an additional crossing to the Control Gate Bridge.	
D6	Accommodation to provide access instructions by email using ETA for visitors.	Encourage use of ETA and reduce traffic flows on Wairakei Dr, reducing delays.	
D7	Signals at Huka Falls Road.	Create gaps in Wairakei Drive traffic.	

Table 5: Long List of Options

8. Option Shortlisting

8.1 Option A1. Wairakei Drive Lane Marking

This option has two components. The road marking where the right turn out of Norman Smith street merges with Wairakei Drive is such that it appears that the through movement has priority. Marking so that each lane has equal priority would encourage a more formal merge.

As observations have shown, the right turn works better when the traffic flow on Wairakei is high enough that speeds are slowed such that the turning traffic is permitted to enter the stream. At higher speeds, the turning traffic has to wait for a gap.

As a supplementary treatment there is an option to slow Wairakei Drive. One way to do this would be to shift the 50kph limit north of Huka Falls Road and establish a threshold there to 'tell' drivers that this is the entrance to the urban part of Taupō. There would probably be a need to mark the road with painted shoulders to give the impression that the lanes were narrow. Speed limits on Huka Falls Road would also need to be reviewed as part of this option

The option has been carried forward to the short list.

8.2 Option A2. Close Norman Smith Street

This option would require all traffic to the West of Wairakei Drive to drive up to Poihipi Road to access Wairakei. The diverted flows at Poihipi Road would result in about 1100vph attempting the right turn out from Poihipi as opposed to the existing 300vph with Norman Smith open. The queues on Poihipi Street would be longer than those currently on Norman Smith.

A roundabout was suggested at that intersection, but that simply transfers the queues and delays onto southbound vehicles on Wairakei Drive.

The option was rejected.

8.3 Option A3. Ramp-metering Style Signalisation of Norman Smith St/Wairakei Dr

While this option was suggested using the ramp metering system in Auckland as an example, it would require signals on both Wairakei Drive and Norman Smith Street as the volumes on each in the morning peak are similar.

It is, in effect, the same as following Option A4 and has been rejected.

8.4 Option A4. Full Signalisation of Norman Smith St/Wairakei Dr

The option of signalising the intersection is an obvious way to equalise the delays at the intersection, and potentially make the merge more efficient as turning traffic will not be conflicting with the southbound through traffic. One issue with incorporating any controls at the intersection is the speed of the downhill traffic. Over the day, the 95-percentile speed is between 67 kph and 73 kph – well within the 80 kph speed limit. However, speeds over 95kph have been recorded for many hours. A pre-requisite to including signals would be changing the speed limit to 50 kph as noted in Option A1.

The option has been carried forward to the short list.

8.5 Option A5. Roundabout at Norman Smith St/Wairakei Dr with Southbound Slip Lane on Wairakei Dr

An alternative to signals would be to incorporate a roundabout with a southbound slip lane, similar to that near Cambridge as shown alongside. Although obscured by trees, the through lane past the roundabout can be seen in the photo.

The option has some appeal, but indicative costing showed it to be some four times the cost of signals and does not assist with pedestrians crossing from Norman Smith Street to the east side of Wairakei Drive.

The option has not been taken through to the short list.



8.6 Option A6. Temporary Tongariro St Pedestrian/Cycle Bridge South of Control Gates Bridge



There are issues with pedestrians and cyclists crossing Tongariro Street or Wairakei between Norman Smith Street and Spa Road. There is a central refuge island just south of the Control Gates bridge but that is barely satisfactory. The option proposed was to construct a permanent bridge for cyclists and pedestrians in approximately the same location as the temporary bridge set up for the Cycle Race.

This option is not amenable to quantitative analysis but is a good option to enable cyclists and pedestrians to safely cross Tongariro street, particularly if Tongariro Street is 4-laned as discussed in following Option B3.

Having said that, if Tongariro Street is 4-laned, the Spa Road roundabout is removed and the section south of Spa road is made more 'pedestrian friendly' as envisaged by the CISP, then Tongariro Street would 'Tee' onto the through route. In this scenario, it may be better to bring cyclists and pedestrians to a crossing just south of the intersection.

The option has been included in the short list but needs to be considered in the light of a more comprehensive study of a Taupō walking and cycling network once decisions on other recommendations in this report are made.

8.7 Option A7. At Grade Pedestrian Crossing of Tongariro St Between Spa Rd and Norman Smith St (Signals or Zebra Crossing)

This option was designed to address the same issues as Option A6. The only safe possibility is to include pedestrian crossings at signals at Norman Smith Street on the northern and western legs as part of Option A4.

As such, this is not an option to be taken further in its own right.

8.8 Option B1. Change Roads Markings on Tongariro St SB Approach to Spa Rd Roundabout

Southbound traffic on Tongariro Street on the approach to the Spa road roundabout is approximately 50% turning left into Spa Road, and 50% travelling south along Tongariro Street in the morning peak, but most traffic uses the left-hand lane. An option to improve this would be to mark the left lane as a left turn only rather than the current left and through marking in an attempt to achieve better lane utilisation.

The option has been carried forward to the short list.

8.9 Option B2. Change Redoubt Street to Left-in, Left-out

Part of the reason for poor lane utilisation at Spa road discussed in Section 8.8 is that there is a right turn bay for traffic turning into Redoubt Street from Tongariro Street. Even though the second lane begins to develop 120m back from the Spa Road intersection 50 m of it can be taken up by the right turn into Redoubt Street. Banning that turn will allow the full 120 m to be used.

However, at present southbound Intercity buses make the right turn into Redoubt Street in order to be able to stop outside the i-site building. They then travel north and make a u-turn at the roundabout to continue south on Tongariro Street. There are 7 movements per day (all outside peak hours) and these buses would need to make a u-turn at the roundabout and a left turn into Redoubt Street.

The option has been carried forward to the short list.

8.10 Option B3. Close the Access from the Countdown Supermarket Car-park

There are a significant number of vehicles that exit from the Countdown access, turn left and then make a U turn at the roundabout to access the bridge. Some of these are Countdown customers, but some are vehicles that were travelling west on Spa Road but make a detour through the carpark in order to avoid the queue at the roundabout.

This has two detrimental effects. Firstly, the vehicles have to weave across a lane to make the turn, and secondly, the roundabout island has a small diameter (approximately 7.5m) which means that the U-turn speed is slow and produces about twice the delay effect of a simple turn.

One complication with this option is that the access services a drive to a house west of Morrell Motors. An alternative legal access to that house will need to be established. Also, clearly Countdown will have an interest in this option.

The option has been carried forward to the short list.

8.11 Option B4. Establish a Second Crossing of the River, Just Downstream from the Control Gates Bridge

Prior to the decision that the ETA was to be built, a second river crossing was a serious alternative. This bridge involved a new road from Norman Smith Street to Opepe Street, and a re-routing of the State Highway along Titiraupenga Street to Lake Terrace. That concept has formed the basis of long term planning in Taupō since then, but as noted in Section 2.1, it is no longer a design appropriate to the function of the road.

The CISP identified two locations for a second river crossing, with the one being the Opepe Street option. The other was a bridge alongside the existing Control gates bridge but linking with Nukuhau Street. It was rejected as a highway option because of grades when the ETA was being considered. The CISP saw this as a local road and a viable option as grades are not so much of an issue, but it would probably still involve cutting into Nukuhau Street with consequent access issues for adjoining properties.

Proposed development pattern for the town centre



A more obvious option is to build a new bridge downstream from the existing bridge. That would enable 4 lanes to be established from Norman Smith Street to the Tongariro Spa intersection. At the northern end, there would be one southbound lane for traffic travelling down the hill and the second lane would be for the right turn traffic out of Norman Smith Street. There would be no need for a merge – instead the whole length from Norma Smith Street to Spa Road would be available for a weave movement so that traffic is in the correct lane at Spa Road.

There are issues of land acquisition to be considered, and (as with the supermarket access issue – Option B3) alternative access to the house west of Morrell Motors would need to be established.

The option has been carried forward to the short list.

8.12 Option B5. Add a Deck Above the Existing Bridge

This is a variation on Option B4. It suffers from several shortfalls. Firstly, it is difficult to see how the road at either end would work, and secondly, it would need to be constructed in such a way as to be completely independent of the existing bridge. Finally, it is unlikely to be aesthetically acceptable.

The option was rejected.

8.13 Option B6. Redesign of the Spa Road/Tongariro Street Intersection and Establishment of an Alternative Through Route

The CISP envisaged an alternative route for through traffic that essentially diverted that traffic away from Tongariro Street to Titiraupenga Street. In that case, Tongariro Street would revert to be a local street, and could 'Tee' onto the existing Tongariro / Spa Road intersection. Assuming that Option B4 is chosen, then either Spa Road, (in conjunction with Option C3) or Paora Hapi Road (in conjunction with Option C4) could be used as the link from the intersection to Titiraupenga Street. Either would need to be combined with Option C3.

The option has been carried forward to the short list.

8.14 Option C1. Signalise Spa Rd/Ruapehu St and Spa Rd/Titiraupenga St

As discussed in the issues section, there are long queues on Spa Road, and at many times during the day, it is almost impossible to turn right into Spa Road. There are few options available to address this issue, other than installation of signals to facilitate the turns at the signalised intersection and create gaps for turning vehicles at other intersections. The intersections chosen for signalisation were Spa Road/Ruapehu Street and Spa Road/Titiraupenga Street. Ruapehu Street is and will continue to be a key access route into the CBD, while Titiraupenga Street forms part of the alternative route from the Control gates to Lake Terrace, as well as providing access to the southern parts of the CBD.

The option has been carried forward to the short list.

8.15 Option C2. Reverse Priorities on Titiraupenga St

The CISP plan to create an alternative through route relies on Titiraupenga Street having Priority. At present Tamamutu Street and Heuheu Street have priority and that would need to be changed. If that were to happen, there would be no clear east west route into and out of town.

The option has been rejected in favour of Option C3.

8.16 Option C3. Signalise Titiraupenga St/Tamamutu St and Titiraupenga St/Heuheu St

Tamamutu Street and Heuheu Street are the main arterial east/west routes, and as envisaged by the CISP, Titiraupenga Street will become the north/south arterial. Signals or roundabouts are the only means of ensuring the both roads at each intersection get a fair share of the available capacity. The morning and evening peaks exhibit a degree of tidal flow meaning the roundabouts will not function efficiently and will be more expensive than signals.

The option has been carried forward to the short list.

8.17 Option C4. Signalise Paora Hapi St/Ruapehu St and Paora Hapi/Gascoigne Street

If Paora Hapi Street is chosen as the primary east/ west street linking the bridge and Titiraupenga, then signals or roundabouts will be needed at Gascoigne Street and Ruapehu Street to facilitate access into the core area of the CBD. As with Titiraupenga Street, the roundabout option will not work efficiently in the peaks and will be about twice the cost of signals.

A variation on this might be to close the section of Gascoigne from Paora Hapi to Spa Road, and at face value this looks attractive and achievable as there is no property access over that section of the road.

The option has been carried forward to the short list.

9. Other Measures

There are several other measures that were put forward during the consultation process that are not directly related to issues, but which are useful to consider.

9.1 Option D1. Parking Signage

Electronic signs strategically placed around the CBD to indicate where parking is available, particularly during peak holiday periods would help reduce vehicles circulating and searching for parks. This will involve a specialist study to identify which parking areas should be included, and where the signage should be placed. It is beyond the scope of the present Study.

9.2 Option D2. VMS Signage on the Approaches to Wairakei Drive

During peak holiday periods, every opportunity should be taken to reduce the number of vehicles on Wairakei Drive and the bridge. One way of doing this is to have a VMS sign on the north (SH5) and west (SH1) approaches to the Wairakei roundabout suggesting that the ETA should be used as the way to access the CBD. This is an inexpensive but probably effective way of diverting traffic from Wairakei Drive.

9.3 Option D3. Pedestrian/Cycle Bridge in the Vicinity of the Boat Harbour

A bridge or ferry service in the vicinity of the boat harbour would provide a useful alternative to the control gates bridge for pedestrians and cyclists. A bridge would need to be able to be opened to enable high masted boats to pass through such as the Te Wero bridge in Viaduct harbour. There are issues that would need to be resolved in the event that an uncontrolled boat was drifting downstream while the bridge was down.

A ferry service is also an option, but it is questionable as to whether it could be commercially viable.

The option should be considered further but is beyond the scope of this present study.



9.4 Option D4. Education Campaign on Good Driving Practice

Two examples of poor driving practice came out during the consultation process. The first is that the merge of the Norman Smith right turn with Wairakei Drive southbound traffic does not work as a merge. The remarking of the lanes will help, but the signage on both legs

should use the 'merge like a zip' concept. The present sign on Norman Smith Street is a little misleading in that it appears that the Wairakei Drive traffic has right of way.

The second example is at the same intersection where northbound left turning vehicles often do not indicate that they are turning, which means right turn vehicles out of Norman Smith Street often have to wait unnecessarily.



A public education campaign would help.

9.5 Option D5. Investigate a Public-Private Partnership to Build the New Bridge

While at first glance this idea has merit, it is difficult to see where the return for the private part of the partnership would be. Generally, PPPs work in situations where tolls can be introduced, but in this case, that would not be appropriate, nor would it likely get Government approval. It is not considered worth pursuing.

9.6 Option D6. Hospitality Managers to Provide Access Instructions

This is an idea that would be relatively simple to implement. The managers and owners of hotels and motels should be encouraged to show access directions in their advertising material and websites that show the ETA as the route by which their premises should be accessed from the north and advise if and when large events are on at the time of their stay.

9.7 Option D7. Signals at Huka Falls Road

This option would only be valid if the eastern end of the West Kinloch Arterial (WEKA) were constructed, from Poihipi Road to Wairakei Drive through to a four-leg intersection with Huka Falls Road. It is unlikely that the full WEKA will now be built, but the eastern end could be built as part of a development. The Poihipi Road intersection with Wairakei Drive would be closed in this option.

Although this option does not address an issue, signals at that intersection would create gaps in Wairakei traffic that would assist the right turn out of Norman Smith Street, if Option A4 is not adopted.

The option is worth further investigation if either of those two conditions exist but has not been included in the short list at present.

10. Option Analysis

10.1 Option A1. Wairakei Drive Lane Marking

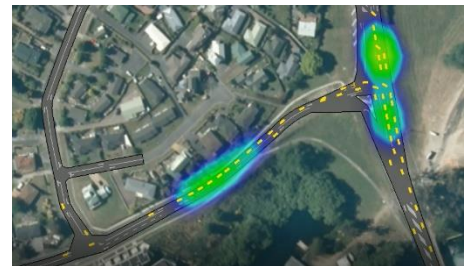
The remarking of the merge lane and addition of the merge signs is a low-cost option that can be implemented immediately. It is not readily amenable to quantitative analysis, but microsimulation modelling shows that there is a small benefit to Norman Smith traffic, and a small disbenefit to Wairakei Drive traffic.

10.2 Option A4. Full Signalisation of Norman Smith St/ Wairakei Drive

The option works well as demonstrated by the microsimulation modelling and demonstrated in the two snapshots. The figure alongside shows the queues in the bases – that is the situation that exists today.



There are still queues when the signals are installed, but nowhere near to the same extent, as shown in the second snapshot. The operation of the network is considerably improved with vehicle minutes in the morning peak decreasing by 4%.



In economic terms, the benefit in the Morning and Evening peaks is in the order of \$0.8m per year for a cost of \$0.435m, meaning that the signals would pay for themselves within the first year.

10.3 Option A6. Temporary Tongariro St Pedestrian/Cycle Bridge South of Control Gates Bridge

As noted above, this option is not amenable to quantitative analysis, but needs to be addressed in a more detailed study of cycling and walking facilities in Taupō, to be implemented as part of the changes envisioned by the CISP.

10.4 Option B1. Change Roads Markings on Tongariro St SB Approach to Spa Rd Roundabout; Option B2, Redoubt Street as Left-in Left-outs and Option B3 Closure of the Countdown Access

These re-markings are low cost easily implemented changes that will enable better lane utilisation at the roundabout and eliminate several conflict areas. Indications from the microsimulation model are that they will save about 11% of the total vehicle minutes in the system during the morning peak and about 16% in the evening peak.

10.5 Option B4. Establish a Second Crossing of the River, Just Downstream from the Control Gates Bridge

The option of building a new bridge and four laning from Norman Smith Street to Spa Road is obviously a longer-term proposal and need significant investigation before it can be confidently adopted. However, it has been provisionally costed to confirm that it is a serious alternative to the Opepe Street alignment. The current estimate is \$12.3m, but more work needs to be done in respect of geotechnical investigations, and bridge abutments.

Clearly, the bridge will need to be designed in conjunction with the requirements of Mercury Energy, and the status of the existing bridge will need to be established. There are also multiple services that are carried by the current bridge that may need to be transferred to a new bridge.

As noted above, there are potential land acquisition issues that need to be worked through once there is a provisional design, and there is the access issue for the house west of Morrell Motors.

Nevertheless, the current estimate is considerably less than the \$40m estimate for the Opepe Street bridge and is certainly worth exploring further. It will take time to prepare concept designs, confirm constructability, deal with the requirements of Mercury Energy, obtain any necessary consents and prepare detailed designs and costings. It may also be some years before the necessary funds could be made available.

The timing of the bridge also needs to be investigated in more detail, with particular reference to the extent of growth to the north of the bridge.

10.6 Option B6. Redesign of the Spa Road/Tongariro Street Intersection and Establishment of an Alternative Through Route

While this option would need to be implemented by the time that Option B4 is built, there is no reason why it could not be established earlier. Essentially, it involves removing the roundabout, 'teeing' Tongariro Street onto it and establishing a good link to Titiraupenga Street.

Although initially the option was conceived with the link being along Paora Hapi Street, there is also the option of using Spa Road to perform that function once signals have been installed on Spa Road (Option C1) and Titiraupenga Street (Option C3). Once that is done then the status of Tongariro Street can be downgraded, and the roundabout removed.

The option of using Paora Hapi Street as the link to Titiraupenga Street (Option C4) can be explored at a later time either in advance of the new bridge and four laning, or contemporaneously with them.

The additional cost of removing the roundabout and realigning the intersection has been estimated at \$150,000. The costs of the signals are included in the following sections.

10.7 Option C1. Signalise Spa Rd/Ruapehu St and Spa Rd/Titiraupenga St

Signals on Spa Road are designed to deal with the issue of traffic not being able to turn right into Spa Road. While the models can replicate this to some extent, no model can truly reflect the tortuous routes the drivers take to get onto Spa Road. The micro-simulation model does better than the traffic model, as can be seen from the queuing that occurs in the evening peak.



Figure 9. Existing Evening Peak Queues

When the signals are introduced the side road queues diminish significantly as do the vehicle minutes in the network.



Figure 10. Signals at Ruapehu and Titiraupenga Streets

The estimated cost for these signals is \$375,000 for the set at Ruapehu Street, and \$565,000 for the set at Titiraupenga Street.

10.8 Option C3. Signalise Titiraupenga St/Tamamutu St and Titiraupenga St/Heuheu St

There is little value in a quantitative analysis of these intersections as the signals are required to ensure that the north/south and east/west traffic get an adequate share of the available capacity. The intersections have been run through Sidra (a standalone intersection analysis model) and that confirms that they operate satisfactorily.

These signals have been costed at \$470,000 for Titiraupenga/Tamamutu, and \$451,000 for Titiraupenga/Heuheu.

10.9 Option C4. Signalise Paora Hapi St/Ruapehu St and Paora Hapi/Gascoigne Street and Paora Hapi

Although the combination of Options C1 and C4 will establish Titiraupenga as an alternative to Tongariro Street, it is rather less attractive for motorists than the alternative of using Paora Hapi as the link between Tongariro and Titiraupenga. However, the option is expensive at \$560,000 to reinstate Paora Hapi between Tongariro and Gascoigne, and installation of

signals at Gascoigne, Ruapehu and Titiraupenga – a total of some \$2.25m. It is likely to be a long-term option.

There are some 37 car parks that would be affected by this change, but some of those could be re-instated on the westbound lane of Spa Road which would be closed. If that section of Gascoigne Street were also closed additional spaces could be made available. This will become clearer at the time a design is undertaken.

11. Programming

11.1 Provisions in The Long-Term Plan

Taupō District Council is in the process of updating the Long-Term Plan (LTP) for the ten years from 2018 to 2028. Line items currently in that plan for works covered in this study total \$4.147m over the 10 years. At this stage, these are, to some extent, placeholders, but they will need to be confirmed. The items are shown in **Table 6**.

LINE ITEMS IN THE LTP				
Year	Northern Access Upgrade Project	Priority Changes on Titiraupenga	Second Bridge Crossing	Running Total
Year 1 (2018/19)	300,000			300,000
Year 2 (2019/20)	281,000	102,000		683,000
Year 3 (2020/21)		418,000		1,101,000
Year 4 (2021/22)		535,000		1,636,000
Year 5 (2022/23)	53,000			1,689,000
Year 6 (2023/24)	547,000			2,236,000
Year 7 (2024/25)	560,000			2,796,000
Year 8 (2025/26)				2,796,000
Year 9 (2026/27)	605,000			3,401,000
Year 10 (2027/28)	622,000		124,000	4,147,000

Table 6: Long Term Plan Budget Items

The options discussed in Section 10 fall naturally into one of four groups, given the budget items currently included in the LTP and they have been grouped to match as closely as possible to those items. The annual totals have been matched as closely as possible, but not necessarily to the individual projects.

The groups are:

- Immediate – options which can be implemented almost immediately;
- Short term – options which can be implemented within one to three years (2018-2021) that is before the end of Year 3;
- Medium term – options which could be implemented in three to six years (2021 to 2024);
- Long term – options which are unlikely to be implemented in under ten years.

The works included in the Section 10 sum to \$17.683m so clearly some will need to be deferred beyond the 10-year life of the plan. The suggested programme of works is discussed in the following sections.

11.2 Immediate Options

The **immediate** options are:

- Change the lane marking at the merge and install new 'merge like a zip' signs on Wairakei Drive;
- Change the lane disciplines at the northern approach to the Tongariro /Spa roundabout;
- Change Redoubt Road to left in, left out;
- Close the Countdown access to Tongariro Street, provided that this can be successfully negotiated with Countdown, and the alternative access to the house can be established;
- Change the speed limit to 50kph just north of Huka Falls Road including painted islands and shoulders. This could be done as part of the speed by-law review to be undertaken later in 2018;
- Design and install threshold treatment at the start of the 50kph zone to form a gateway into Taupō from the north.

Most of these are low cost and could be accommodated within the 2017/18 operational budgets. The threshold treatment north of Huka Falls Road is difficult to estimate as it will depend on the architectural and/or landscape designs that might be adopted, and that might need to fall into the 2018/19 financial year. Cost estimates for these items total \$127,000 with \$75,000 of that assumed for the Gateway.

11.3 Short Term Options

The **short-term** options are:

- Install signals at the Norman Smith/Wairakei Drive intersection;
- Install signals at the Spa Road/ Ruapehu Street intersection.

These two items total \$810,000, and with the gateway treatment, will take virtually the whole budget to the end of Year 3, or the 2020/21 financial year.

11.4 Medium Term Options

The three set of signals proposed for Titiraupenga Street comprise the medium-term options, including:

- Install signals at Titiraupenga Street and Spa Road;
- Install signals at Titiraupenga Street and Tamamutu Street;
- Install signals at Titiraupenga Street and Heuheu Street;
- Realign the Tongariro St /Spa Road intersection.

The three set of signals will cost \$1.486m and will take most of the budget from Years 4 to 6. However, once these signals are in operation, then the Tongariro St/Spa Road intersection can be re-aligned at an estimated cost of \$150,000

11.5 Long Term Options

The **long-term** options are:

- Four-lane from Norman Smith Street to the river;
- Construct a new bridge downstream from the Control Gates Bridge;
- Four-lane from the River to Spa Road;
- Create a through road from Tongariro Street to Titiraupenga Street using Paora Hapi Road, including signals at Gascoigne St, Ruapehu Street and Titiraupenga Street;
- Install signals at Huka Falls road in conjunction with developer led construction of the eastern end of the WEKA.

In total these options will cost over \$15m with the bridge and four laning taking up about \$13m of that. While the construction of these options is necessarily long-term, the initial design and feasibility work should proceed as soon as possible to give some certainty to the longer-term direction of the access, particularly as at current growth rates, indications are that the bridge will be beyond capacity within the next 10 years. This timing issue should form part of the feasibility studies.

The option of using Paora Hapi Street as the route between Tongariro Street and Titiraupenga Street may not be necessary if the Spa Road route operates well, but the model is indicating that Paora Hapi would be preferred. However, the reinstatement of the east end of Paora Hapi Street is expensive at just under \$1m.

11.6 Alignment with the LTP

Table 7 shows the LTP budgets and the sequence of option implementation.

LINE ITEMS IN THE LTP				
Year	Option	Cost	Option Running Total	LTP Running Total
Year 0 (2017/18)	Wairakei Drive Merge Lane marking Spa Road northern approach lane marking Redoubt Street left in and left out	\$52,000		
Year 1 (2018/19)	Shift \$50kph sign, design and build Gateway Second bridge feasibility study	\$75,000 \$100,000	\$175,000	\$300,000
Year 2 (2019/20)	Norman Smith/Wairakei signals	\$480,000	\$655,000	\$683,000
Year 3 (2020/21)	Spa/Ruapehu signals	\$415,000	\$1,070,000	\$1,101,000
Year 4 (2021/22)	Spa/Titiraupenga signals	\$565,000	\$1,635,000	\$1,636,000
Year 5 (2022/23)				\$1,689,000
Year 6 (2023/24)	Titiraupenga/Tamamutu signals Titiraupenga/Heuheu signals	\$470,000 \$451,000	\$2,556,000	\$2,236,000
Year 7 (2024/25)	Remove the Spa Road Roundabout and realign Tongariro Street	\$150,000	\$2,706,000	\$2,796,000

Table 7: Programming Options

This table is based on the existing LTP. If projects are to be brought forward – for example bringing the Norman Smith/Wairakei, and the Spa/Ruapehu signals into years 1 and 2, then the LTP would need to be altered accordingly.

12. Recommendations

The recommendations that emerge from the study include:

- (i) That the options identified as 'immediate' be implemented as soon as possible, including the use of VMS signs at the Wairakei roundabout to encourage holiday traffic to use the ETA;
- (ii) That the 50kph speed limit be transferred to north of Huka Falls Road, and a threshold design commissioned to form a Gateway to the urban area of Taupō;
- (iii) That initial design for the Norman Smith Street/Wairakei Drive signals be commissioned as soon as possible, with a view to having detailed designs and specifications completed for construction in the 2018/19 financial year;
- (iv) That consideration be given to altering the LTP allocations in years 2 and 3 to bring the Norman Smith Street/Wairakei Road and the Spa Road/Ruapehu Street signals into years 1 and 2;
- (v) That a feasibility study into a second bridge just downstream from the Control Gates and four laning of Wairakei Drive and Tongariro Street between Norman Smith Street and Spa road be commissioned early in 2018. This study should also consider the likely life of the existing bridge, with consideration being given to structural integrity, network resilience, and capacity;
- (vi) That an off-road pedestrian and cycle route between Norman Smith Street and Spa Road be investigated, a route which would take into account eventual four laning;
- (vii) That the feasibility of a bridge or ferry across the boat harbour be investigated.

13. Glossary of Terms

13.1 Acronyms

CBD: Central business District. The are generally bounded by Tongaririo Street, Lake Terrace, Titiraupenga Street and Spa Road.

ETA: Taupō Eastern Arterial – now State Highway 1

CISP: Taupō Urban Commercial and Industrial Structure Plan

TD2050: The Council's 2006 Growth Plan to 2050.

TDC: Taupō District Council

WEKA: West Kinloch Arterial

VMS: variable message sign

13.2 Other terms

Rat Run: A circuitous route chosen by a driver to avoid congestion on the main route

U-Turn: A 180 degree turn usually at an intersection or Roundabout

Drone video: Video taken by a camera mounted on a radio-controlled helicopter

Merge: the joining of two lanes of traffic into one lane.

B-Train: A B-train consists of two trailers linked together by a fifth wheel

Vpd: Vehicles per day

Vph: Vehicles per hour

Bottleneck: Where two lanes join into one causing queuing

Ramp metering: Signal controlled entry to a roundabout or on a motorway ramp to limit the number of vehicles entering.

First name: Garry

Last name: McCarthy

- I could
- I could not

Gain an advantage in trade competition through this submission

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directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

Note to person making submission:

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991

Would you like to present your submission in person at a hearing? *

I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Garry McCarthy - Incomplete submission

Carrie Robinson

From: Nukuhau Plan Change
Subject: FW: Concern over the proposed Zone Change and infrastructure.

From: nz>
Sent: Friday, 5 February 2021 4:41 PM
To: Nukuhau Plan Change <NukuhauPlanChange@taupo.govt.nz>
Subject: Concern over the proposed Zone Change and infrastructure.

CAUTION: This email originated from outside of the organisation. Do not click links, open attachments, or respond unless you recognise the sender and know the content is safe

I would like to express my concern over this proposal of an extra 780 properties and all that goes with it.

1. Storm water management. I live at 34 Woodward Street and I have seen at time of heavy rain, the man hole covers being lifted up and even come completely off with the storm water back pressure. How is the additional catchment of 77 hectare going to be managed? As the system seems to be approaching its maximum now without additional catchment.
2. Sewerage, what is the plan to manage that I hope new lines are going to be installed, and what about the extra load on the existing sewerage system processing plant? There has been a massive increase in residential development around Taupo and the connection of outer areas is making things worse. Now another 780 properties to be added to that system ! Are we building a new treatment plane (not by the Waikato river) that can handle this.
3. Power supply, I hope the supply is upgraded, I don't want my lights flicking and dimming and appliance suffering because of Voltage drop and switching spikes.!
4. Fresh water supply system, how is that managing? Currently there seems to be a runaway policy like who cares as long as we have more people in Taupo. Just look at the roading congestion we are FULL !!

Why do we need more ppl in Taupo? Just overloading everything and don't say Growth is important I call it the Human plague.

Garry McCarthy

First name: Francis

Last name: Pou Maroroa

On behalf of:

Manuel Pou family whanau trust

I could

I could not

Gain an advantage in trade competition through this submission

I am

I am not

directly affected by an effect of the subject matter of the submission that :

a. adversely affects the environment, and

b. does not relate to the trade competition or the effects of trade competitions.

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Attached Documents

File
Francis Pou Maroroa - Incomplete Submission

Organisation:

Manuel Pou family whanau trust

First name: Francis

Last name: Pou maroroa

Prefered method of contact

Email

Postal address:

Suburb: Par

City: Auckla

Country: Ne

Postcode:

Email: liamp

Daytime Ph



Let us know if you have any changes you would like to see to the District Plan during the review:

Under class actions 13 we feel u r

1- failing to comply too the families care an protections acts mandates were everything natural is endanger

2- failing to comply too the maori affair acts mandates 1953

3- failing to comply too Te tiriti o waitangi the contra profrentem principles 1840

U need to ashere abide instantly.

Let us know by selecting the topics below if you would like to be involved during the review of any particular sections:

All sections

YES

Introduction and general Provisions

YES

Tangata whenua

YES

Natural environmental values

YES

Environmental values

YES

Community values (heritage, sites of significance to Maori, trees)

YES

Infrastructure and energy

YES

Subdivision

YES

General district wide matters (signs, earthworks, noise etc)

YES

Residential zones

YES

Rural zones

YES

Commercial zones

YES

Industrial zones

YES

Open spaces and recreation zones

YES

Special purpose zones

YES

Precincts

YES

Development areas

YES

Designations

YES

First name: Carolyn

Last name: George

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

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- b. does not relate to the trade competition or the effects of trade competitions.

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Attached Documents

File
Carolyn George - Incomplete submission

First name: Carolyn

Last name: George

Preferred method of contact

Email:

Postal address:

Suburb:

City: Taupō

Country:

Postcode:

Email: carolyn@george.co.nz

Daytime phone:



Let us know if you have any changes you would like to see to the District Plan during the review:

I would not like to see this proposal proceed until we have a second bridge into town. There are new developments at Pennyville and Chateau Cres creating ever increasing housing and cars north of the one bridge. Unless the services can keep up with new developments this is a complete folly. Until a second bridge is built and a supermarket north of the bridges to service Acacia Bay Nukuhau and Rangatira Park it would be negligent to the current rate payers in my opinion. Not anti progress- plan for it.

Infrastructure and energy

YES

First name: Jan
Last name: Smith

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
b. does not relate to the trade competition or the effects of trade competitions.

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I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Attached Documents

File
Jan Smith - Incomplete Submission

First name: Jan

Last name: Smith

Preferred method of contact

Email:

Postal:

Suburb:

City:

Count:

Postcode:

Email:

Daytime:



Feedback

Let us know if you have any changes you would like to see to the District Plan during the review:

Feel you need to Put in another Bridge before putting that many sections on the Market across the River. You seem happy to get Rates but you also need to do the Infrastructure properly 1ST.

Let us know by selecting the topics below if you would like to be involved during the review of any particular sections:

All sections

YES

Natural environmental values

YES

Environmental values

YES

Subdivision

YES

Residential zones

YES

Development areas

YES

First name: Marina

Last name: Wineera

- I could
- I could not

Gain an advantage in trade competition through this submission

- I am
- I am not

directly affected by an effect of the subject matter of the submission that :

- a. adversely affects the environment, and
- b. does not relate to the trade competition or the effects of trade competitions.

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Attached Documents

File
59 Marina Wineera

First name: Marina

Last name: Wineera

Preferred method of contact

Email

Posta

Subur

City:

Coun

Postc

Email

Daytir



Feedback

Let us know if you have any changes you would like to see to the District Plan during the review:

I say No to Residential housing in Nukuhau suggested areas

Let us know by selecting the topics below if you would like to be involved during the review of any particular sections:

All sections

YES

Tangata whenua

YES

Natural environmental values

YES

Environmental values

YES

Community values (heritage, sites of significance to Maori, trees)

YES