

PURPOSE

This paper sets out the main issues and opportunities that drive the strategic context and direction of Taupō District Council's transport Strategy: *Connecting Taupō 2020 – 2050*. These were identified in consultation with the community, transport operators, other experts, and from the commissioning of expert traffic and parking assessments.

This paper is provided to support discussion and consultation on the draft Transport Strategy. Other supporting documents include:

- Taupō District Council – Car parking survey 2018/19
- Abley (traffic consultants) – CAB location and high-level parking assessment
- Abley (traffic consultants) – Taupō parking management options
- Abley (traffic consultants) – Key performance indicator framework
- Abley (traffic consultants) – Bus hub analysis
- Abley (traffic consultants) – Taupō future road network assessment
- Abley (traffic consultants) – Factsheet 1 – Movement & place
- Abley (traffic consultants) – Factsheet 2 – Cross sections
- Abley (traffic consultants) – Factsheet 3 – Active modes infrastructure
- Abley (traffic consultants) – Factsheet 4 – Pedestrian crossing options
- Abley (traffic consultants) – Factsheet 5 – Traffic signals
- Abley (traffic consultants) – Factsheet 6 – Roundabouts
- Abley (traffic consultants) – Factsheet 7 – Priority intersections

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EXECUTIVE SUMMARY

Transport is our means of connecting to people and places. It connects us to job opportunities, education, health services, shops and essentials – like groceries and medicine. It connects us to our friends, families and communities. It connects us to social and cultural places – like marae or church. It connects us to recreational and social activities. It connects our goods to our customers, supporting our jobs and livelihoods.

Given its importance, Taupō District Council (the Council) must get the planning right. And with that comes a need to address some significant transport challenges.¹

- Increased traffic is creating barriers and safety concerns, especially for pedestrians
- Safety remains a top priority
- We will have to transition to low emission transport.
- We have an aging population who will require more user-friendly and forgiving intersections, pedestrian crossings, and footpaths.
- Car centric transport networks have delivered poor horizontal walking and cycling connections that traverse hills, and low walking and cycling rates
- We need to fully realise the outcomes of the Taupō Commercial Industrial Structure Plan, which identifies opportunities to improve economic and social interactions.
- Population growth in some areas along with continued growth in visitors and tourism, plus seasonal influxes, are combining to place pressure on a few concentrated roads and intersections.
- We will face more severe and frequent weather events which will impact transport routes.
- Continued growth in national freight, which travels through and often stops in the district.
- Increased potential for new rural industrial activities which will increase the number of trucks on rural roads.
- Financial constraints and the need to be mindful of ongoing costs for areas with low populations and growth.

IDENTIFIED ISSUES AND OPPORTUNITIES

1. Safety remains the top priority

Appendix 1 provides a map of serious and fatal crashes in the district

1.1 We need to reduce the number of deaths and injuries on roads in our district

- Taupo Taupō district has had a high number of deaths on council roads in the last 5 years, marked by a few crashes with multiple fatalities.
- Taupō has a moderately high number of serious injury crashes on state highways.

1.2 Most of the deaths and injuries in Taupō District occur on State highways.

- Taupō district has had a very high number of State highway deaths, and a high proportion of serious crashes have fatalities, along with our neighbours South Waikato.
- Taupō has an average number of serious injury crashes on council roads.

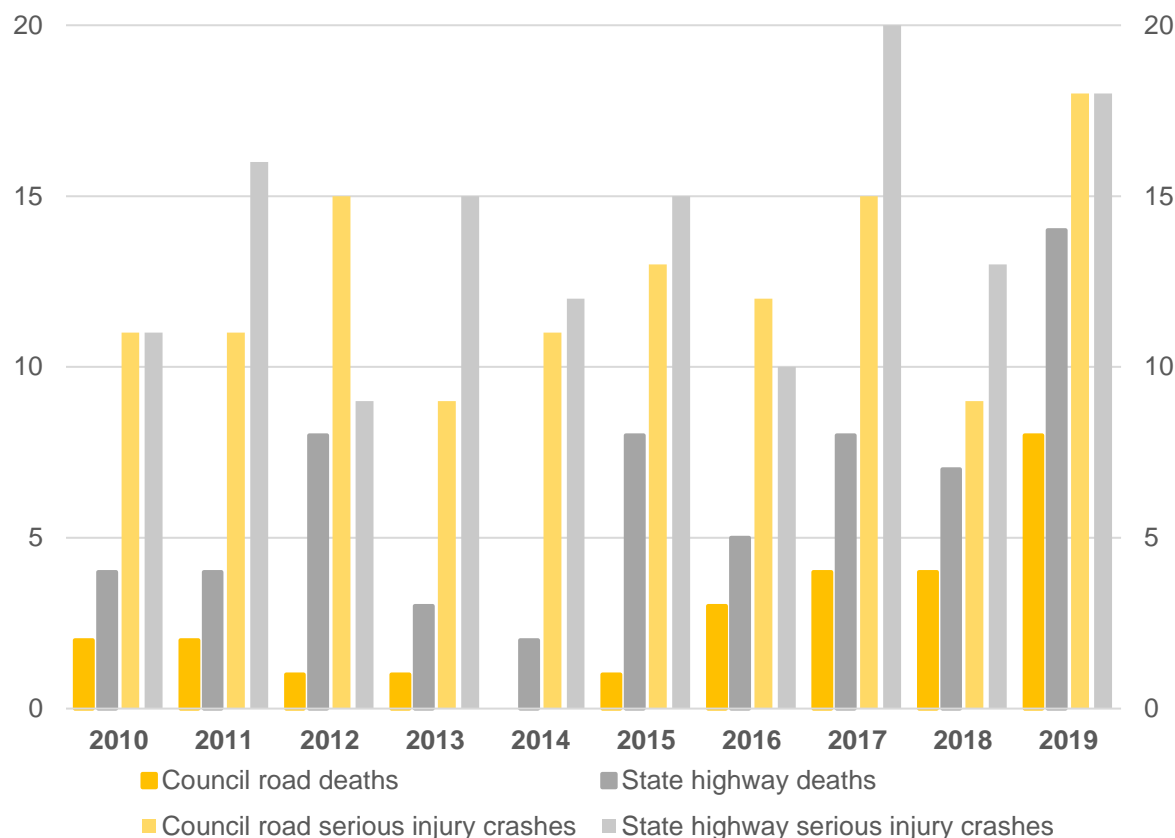
1.3 State highway 1, especially between Turangi and Taupō needs safety improvement.

- It is a critical road for local traffic within Taupō District.
- It faces significant truck and visitor traffic (including campervans), both of which have increased in recent years and are expected to continue increasing.
- The road needs to be fit for these purposes. It is currently substandard with safety issues in a number of places.

Figure 1 – Annual road deaths and serious injuries in Taupō District

Taupō district has 12 deaths and 29 serious injury crashes on its roads each year (5-year average).

8 of these deaths (two thirds) and over half of serious injury crashes (53%) occur on State highways, which are managed by Waka Kotahi (the NZ Transport Agency).



Data Source: [NZTA open crash analysis system](#), 2020

Figure 2 – Annual deaths on council roads and state highways

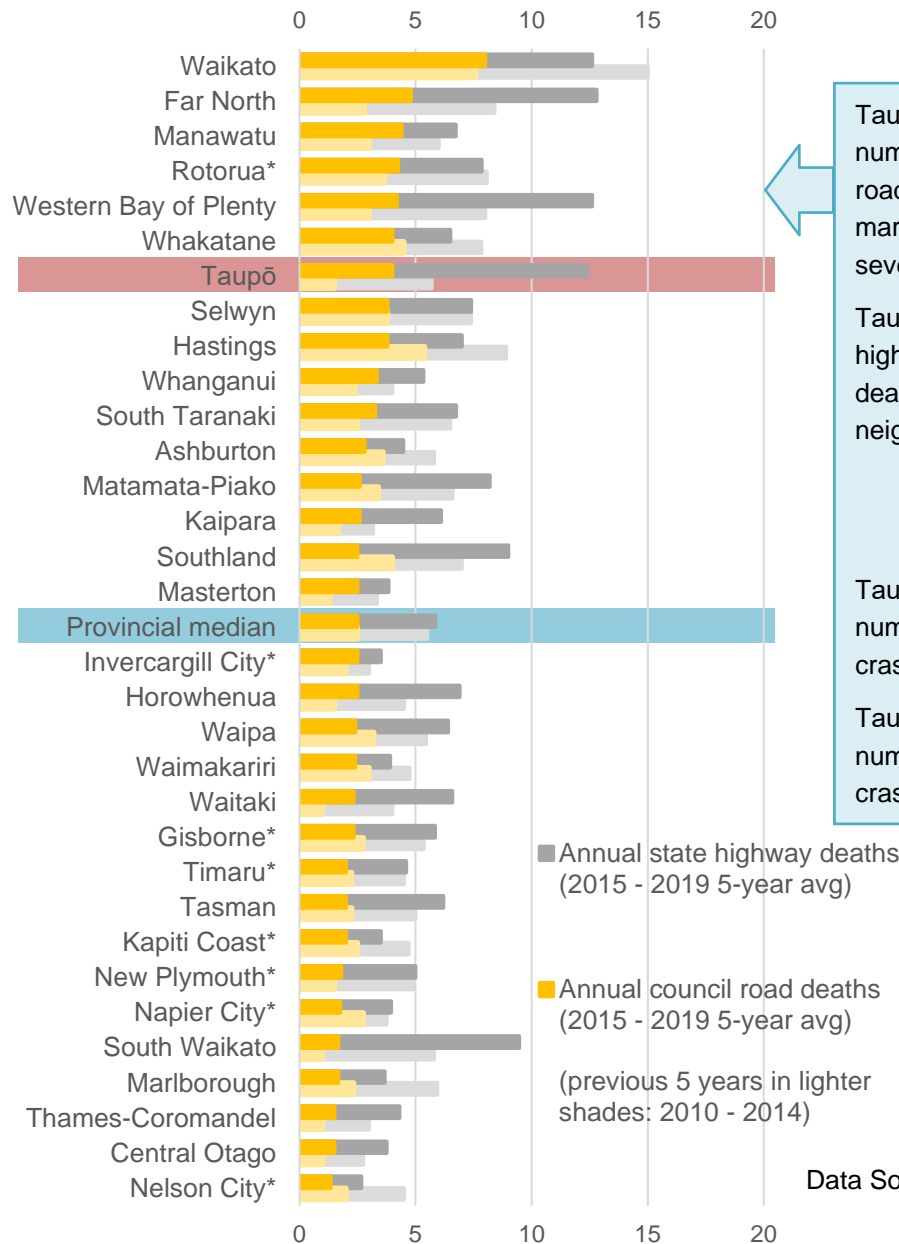


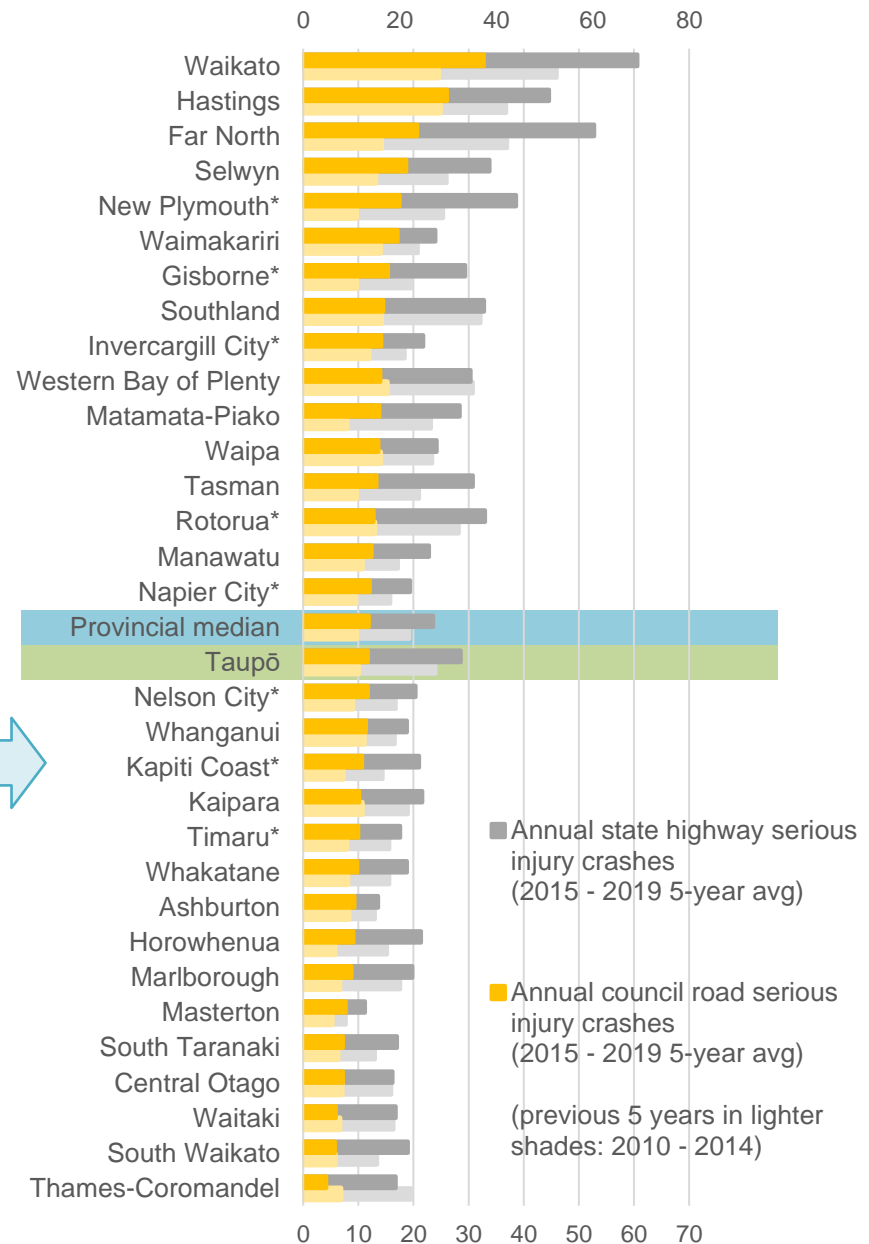
Figure 3 – Annual serious injury crashes on council roads and state highways

Taupō district has had a high number of deaths on council roads in the last 5 years, marked by a few crashes with several fatalities.

Taupō district has had a very high number of State highway deaths, along with our neighbours South Waikato.

Taupō has an average number of serious injury crashes on council roads.

Taupō has a moderately high number of serious injury crashes on state highways.



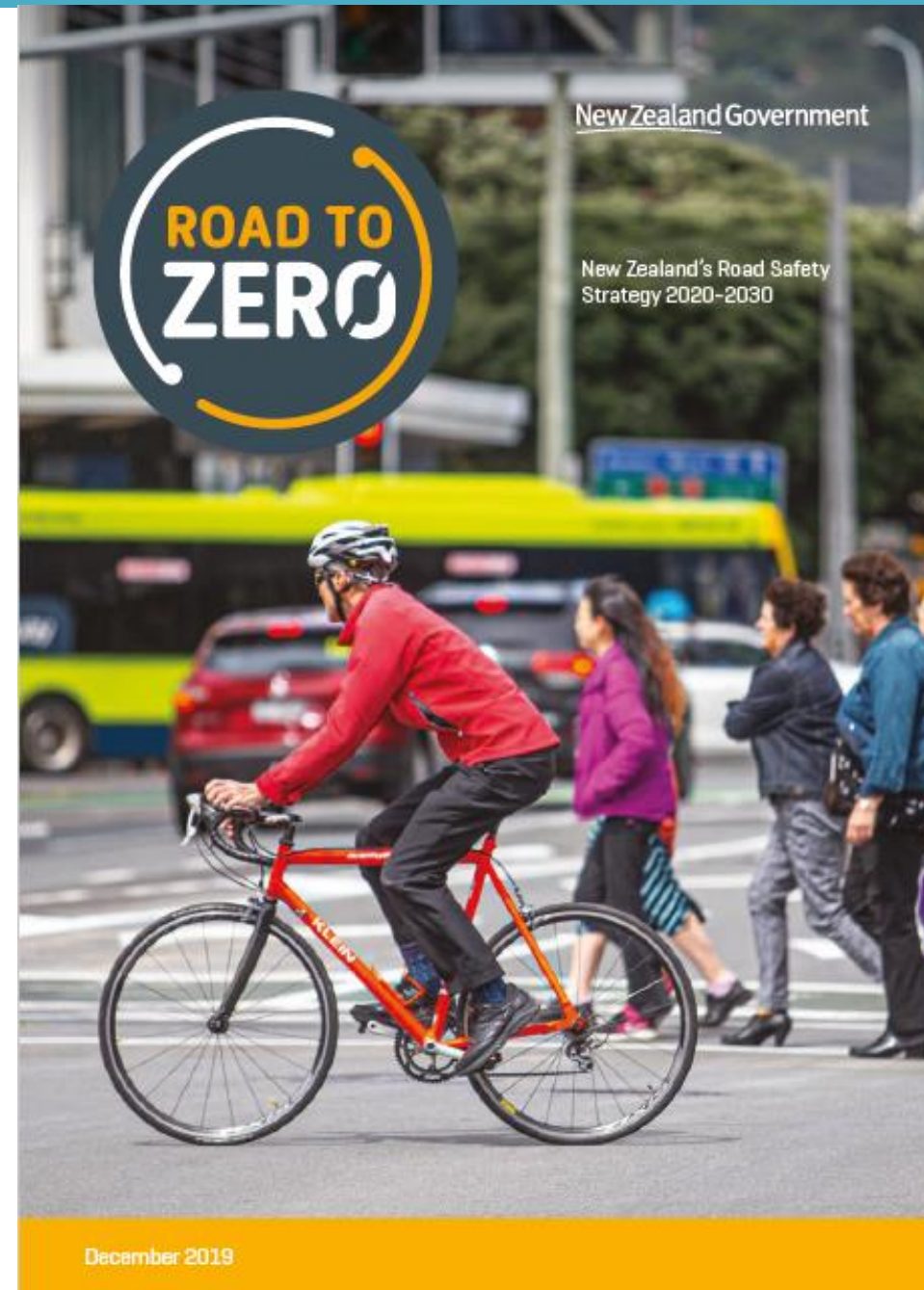
Data Source: NZTA, crash analysis system (CAS), 2020

1.4 Road to Zero: NZ's road safety strategy 2020-2030 (Dec 2019)

- Vision: “A New Zealand where no one is killed or seriously injured in road crashes.”
- Intermediate target: Reducing deaths and serious injuries by 40% by 2030.
- Focus area of “Infrastructure improvements and speed management”
- [Action plan \(2020-2022\)](#) has the actions:
 - “Invest more in safety treatments and infrastructure improvements
 - Introduce a new approach to tackling unsafe speeds
 - Enhance safety and accessibility of footpaths, bike lanes and cycleways”
- Principles based on a safe system approach, which acknowledges that people make mistakes and uses road engineering to make our roads as forgiving as possible:
 - We promote good choices but plan for mistakes
 - We design for human vulnerability
 - We strengthen all parts of the road transport system
 - We have a shared responsibility for improving road safety
 - Our actions are grounded in evidence and evaluated
 - Our road safety actions support health, wellbeing and liveable places
 - We make safety a critical decision-making priority.

1.5 The Waikato Regional Road Safety Strategy (2017) direct us to:

- increase speed management
- address higher-risk rural roads
- address higher-risk urban intersections
 - because higher speeds, and head or side-on impacts are the deadliest.
 - even if not the cause of a crash, reducing the speed of vehicles reduces the impact in a crash.



1.6 **Increased traffic is creating barriers and safety concerns, especially for pedestrians**

1.7 **Most safety issues are due to driver behaviour:**

- Poor observation
- Speed
- Alcohol.

1.8 **On state highway in Taupō District there is a very high number of crashes involving;**

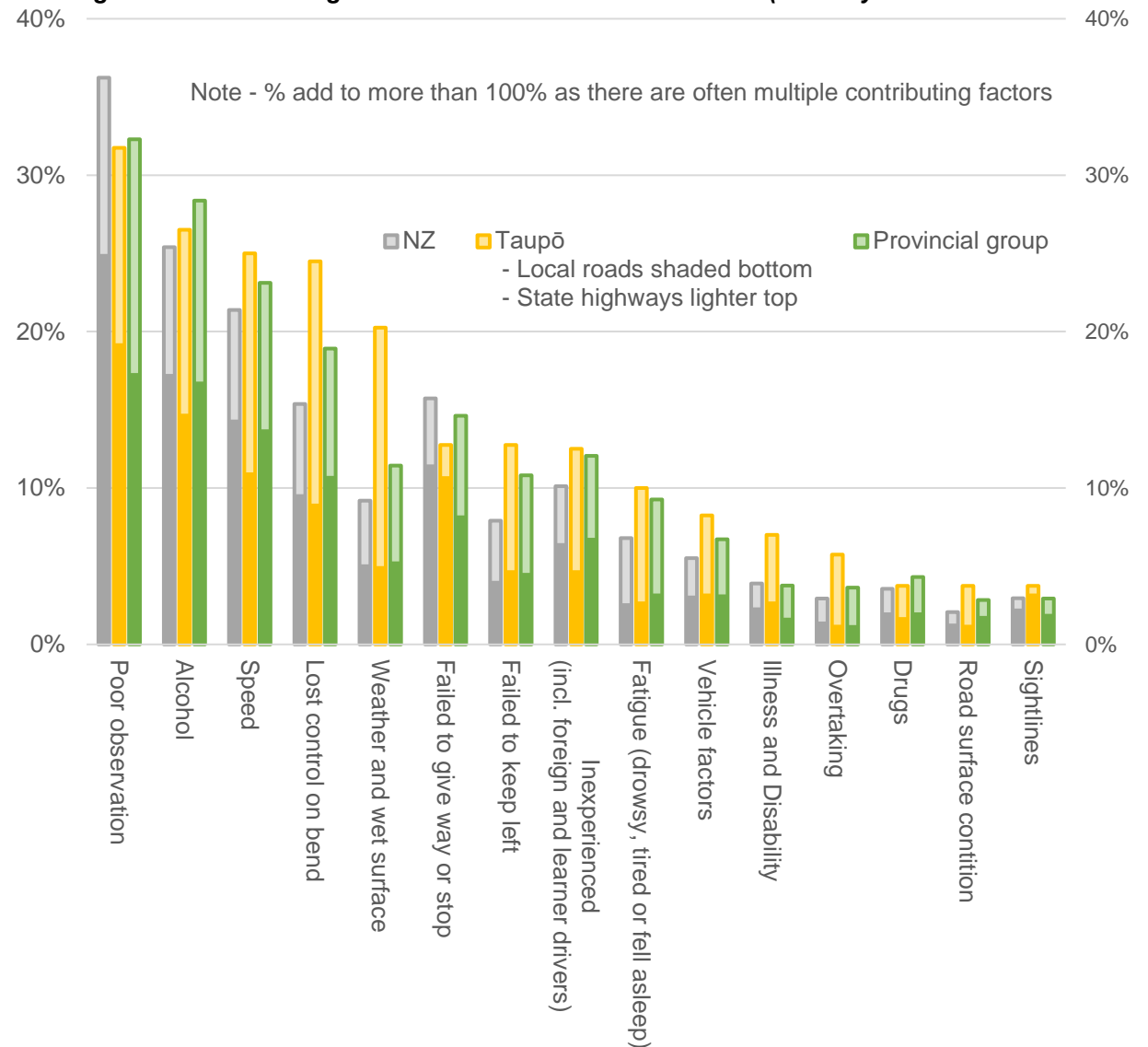
- Speed
- lost control on bends
- weather and wet surface crashes
- failing to keep left.

This suggests, paired with the high number of state highway deaths, the need for engineering improvements like wire barriers to reinforce a lower speed environment and protect against head-on crashes when people make mistakes.

1.9 **Failure to give way or stop also stands out as a significant contributing factor for Taupō District Council roads**

- contributing to 11% of fatal and serious crashes compared to 8% for other provincial areas.
- Illness and disability, and sightlines are also high compared to other areas, however they contribute to relatively few crashes.

Figure 4 – Contributing factors to fatal and serious crashes (last 10 years)



Data Source: NZ Crash Analysis System (CAS), 2019

Specific Safety concerns and areas raised through consultation

Rural roads

1.10 Mapara Rd needs widening, especially the Acacia Bay end in the 70km/h zone (1)

- New houses in the last 10 years would have doubled the number of people using it.

1.11 Whangamata Road (as far as Kinloch) is dangerous at present and is in urgent need of upgrading to match Poihipi Road. This should be a priority for TDC before there is a fatality on this overloaded and narrow road. (2)

- Improved safety of Whangamata Rd is the number 1 Safety priority for Kinloch – over 85% of those surveyed by KCA rated this as Extremely or Highly Important.
- The roading link between Taupo and Kinloch needs to be understood as an arterial route.
- Kinloch is growing at a very high rate. It is shown on the TD2050 as the third largest urban area after Taupo and Turangi. The population will exceed 5,000 pax within 15 years meaning that it is larger than Turangi.
- At present, Whangamata road is a rural access road but it is carrying > 3,000 vehicle movements per day. This will grow to > 5,000 vehicles per day as Kinloch increased the number of dwellings and as the dwellings used as batches change to fulltime occupancy.

1.12 More effort and emphasis needs to be put into rural roads. (2)

- Over the last 5 years we have had a number of deaths on the arterial roads in the district and there are safety improvements which may help in the future.

- Rural lighting is a concern as the population has increased - we would like to see more lighting on busy intersections partially onto Poihipi Road.
- There are a lot of cyclists around and we need more of a side for them to get off the road.
- Cyclists take their life into their own hands everytime they head out on the rural roads
- The number of trucks around supporting out rural sector in huge and the roads are just not up on it.
- Trees need to be removed so trucks don't hit them and to reduce black ice in winter.
- Some stop signs need to be changed to giveaway and vice versa.
- Potholes needs to be fixed in a timely fashion.
- Somehow the events / people that use these roads and profit from the events need to pay for them. Not just hammering the rural people with more rates as we get the same services and I pay approx. 15 times more than the average house in town.
- Just make them safer for all people that use them.
- Concerns on some road intersections that need turning bays or lanes (Forest Road, Tirohanga for example), and the lack of streetlights at a number of very busy intersections or intersections that are affected by climatic conditions (fog for example).
- Rural rate payers are only number a few, but our rates are a very significant amount for Council's coffers.

1.13 Wairakei - access into the new Hub cycling parking area off the main road needs a dedicated turning lane on the main highway. (1)

1.14 Ensuring roads are wide enough to support increased traffic volumes, in particular roads that link to Miraka which have significantly increased

heavy usage, and roads that have become popular for bike usage – Poihipi, Waipapa and Scott Roads. (1)

1.15 **Install solar streetlights at busy rural intersections is essential. (Including Pokuru, Paerata, Okama and Tram roads where they connect to Tirohanga Road.) (1)**

1.16 **Some rural road intersections need turning bays or lanes. (eg. Forest Road, Tirohanga intersection.) (1)**

1.17 **Reduce speed and have flashing signs outside of rural schools, including Marotiri, Tirohanga, Whakamaru. (1)**

1.18 **Put safety measures in place along State Highway 30 in bush where there is a sharp bend (GPS -38.435573, 175.654364). There are frequent crashes on this corner most not registered with the police or emergency services. (Including a solar flashing sign - 38.437731,175.651873). This has been minuted several times in our MPRG meetings as a known hazard. (1)**

1.19 **Review tree belts along rural roadsides for safety. (e.g. Kaahu road – trees branches are strewn across road in strong winds, trees cause areas to remain particularly icy for longer periods in Winter.) (1)**

1.20 **Bus turning signs on the intersection of Poihipi Road / Tihoi Road this has also been minuted several times in our MPRG meetings as a known hazard. (1)**

1.21 **An upgrade to the Tirohanga - Mokai corner would provide safety improvement with a turning bay coming from the southern direction. (1)**

- This is a very busy corner with the Miraka dairy factory, Country Kids and other Tuaropaki businesses

Urban intersections

1.22 **Need a roundabout at the junction of Pihanga Street and SH1 (Turangi) (3)**

- it is Russian roulette trying to get across, worse so since the centre median has been changed.
- This is a very dangerous intersection
- I believe that Transit NZ owns around 16 metre either side of major State Highways. This would allow a roundabout of the recommended size to be installed for the vast majority of trucks and would be a much safer option.
- Another must despite all protestations and reasons why not is a roundabout at Turangi entrance. Just this week there was another potentially fatal accident at this very unsafe intersection. This would not only make the intersection much safer for a divided community but enhance and encourage entry to Turangi.

1.23 **Need to fix the dangerous intersection Poihipi / Wairakei (2)**

- should be a double lane roundabout
- Intersection at the top of Control Gates hill is dangerous – a small roundabout would be the answer

1.24 **Whangamata road - Kinloch road intersection safety would benefit from a decent size roundabout. The intersection seems outdated and it makes it worse being on a blind corner. A large roundabout with good lighting would future proof it. (1)**

1.25 **The roundabout on Rifle Range and Tamamutu streets has become increasingly busy and dangerous. (1)**

- Speed and failure to stop is a huge issue.
- We have been witnessing accidents here on a weekly basis for years now, in the last month there have been at least 3 involving cyclists. We have witnessed hit and runs, children knocked off bikes, cars being T-boned (regularly), vans flipping over after being hit at high speed, and in the evenings people drifting around the roundabout (one such car landed on

our berm outside our house on the opposite side of the road in which it was travelling).

- I think this is to do with the way in which the roundabout is positioned and people just drive on through. We really need to slow people down at the 4 entry and exit points to this roundabout to stop them going straight over. Putting in something like the S bends they have on some of the streets in Rotorua would help this and is urgently needed, these will force people to slow down and stop.

1.26 Spa Road is becoming a 'nightmare' for both crossing pedestrians and turning motorists. (1)

1.27 The intersection at Taharepa Road and AC Baths Ave. needs to have lane markings added, to help divide vehicles turning left and traveling straight or turning right. (1)

- We recommend that two lanes be marked out on the road. This will help minimize the congestion at this intersection.
- There may also be other intersections where two lanes would help direct traffic in an orderly manner. All for the cost of some white paint.
- The alternative is a cost effective, recycled rubber roundabout for a budget cost of some \$5,500.

1.28 Free Left Turn Lane heading north on SH1 from Pihanga Road, Turangi. (1)

- Many drivers do not observe the 'STOP' sign now, and know it is safer to roll through it and accelerate safely away than stop, risk being tail ended.
- By widening and allowing a free turn and merge lane, the intersection would clear traffic through it and prevent the infringement that is currently occurring.

1.29 Improve the crossroad intersection of Grace Road, Hautu Road and State Hwy1. (1)

- The 80 km/h sign about 400 metres the south of the intersection should be moved to at least 400 metres north of the intersection.
- Turning off State Hwy 1 from Taupo into Grace Road is hazardous as there is no slip lane for the traffic turning right.
- Also, turning south from Grace Road onto State Hwy 1 is quite hazardous as cars are still traveling at 100 km/h, and there is no indication that an 80 km/h sign is up ahead.

Speed management

1.30 Need to address speed around Schools, especially around Hilltop school because of the steep hills. I regularly see speeds I estimate at around 70kmh around school drop-off and pick up times. (1)

1.31 Some of the lower speeds introduced are unrealistically long in extent. (1)

- e.g. Crown Rd, Kiddle Dr, Control Gate Hill.

1.32 Concerns about the speed of vehicles on Arrowsmith avenue. (2)

- speed of trucks is a particular concern
- Safety concern for children and people not in cars.
- In particular Arrowsmith / Chesham intersection. The cars literally "fly" down the road and get tyres off the road with the speeds they are doing.
- There are a lot of children and older people in the neighbourhood and that type of driving is not acceptable.
- Maybe if something were done like the Tamatea Road / Gillies Avenue intersection with the speed bumps, this would slow the traffic down.
- It may also lessen the truck/heavy vehicle traffic that seems to travel frequently through the neighbourhood.

1.33 Waitahanui needs the speed limit lowered to 50ks. (1)

- It absolutely baffles me how Poihipi can be lowered to 80 and yet Waitahanui is still 70.
 - What other school in Taupo can you drive past at 70ks?
 - It is extremely dangerous.
- 1.34 **Concerns about the speed of vehicles on Tamamutu Street (between Gillies and Rifle Range). (1)**
- This road is now a very busy through fair and people treat it like a speed way. We often see people speeding down here doing at least 70.
 - It's so scary living on this busy and fast street with young children, slowing people down before and after the roundabout would help both the roundabout issues [safe / intersections refers] and the speed of this through fare, perhaps speed humps like the ones in Tamatea Rd together with the s bends like they have on some of the streets in Rotorua. This needs to be a priority in the district as the town centre (Tamamutu street is a main road into and out of town) is only growing and there are more and more cars in town.
- 1.35 **The 50 km/h speed limit in town should be policed. (1)**
- Speeding is the norm on the through roads especially Mere Rd, Spa Rd and Rifle Range Rd.
- 1.36 **The new low speed limits on Wairakei Drive and Acacia Bay are ridiculous. (1)**
- These are not dangerous roads.
 - Pyes Pa has 100km speed limit with numerous driveways and exits onto it and yet here in Taupo the speed limits are slow.
 - This is not a safety concern at all
 - Previous submissions were ignored again by Council.
- 1.37 **Speed limits on Wairakei Drive: This is an 'open road' that most drivers accept and are well able to drive on it at 100 kph, without undue cause for accidents. The road environment does not match the speed limits of 80 and 50 kph. (1)**
- Repeater signs at 2.7 km centres are not appropriate and more signs are required to remind and inform drivers of the current speed limits.
 - The alternative is to put the speed limit back to 100 kph, a speed that suits the layout and design of the road. It is not an 80 kph road. The local police are regularly seen using this section of local road for their gain and the issue of speeding tickets and revenue for the Government
 - Please add a clause to the Transport Strategy that provides for the speeds on this section of road to be reviewed. In line with the recent AA submission. Plus consider the option of adding more repeater signs.
- 1.38 **Grace Road from State Hwy 1 is designated as a 100 km/h road. The speed limit needs to be reduced. I think it should be restricted to 80 km/h.**
- This road is tar sealed for 1.7 k's and very narrow, then continues on as a gravel road.
 - Te Herekieke Street leads off Grace Road and is designated 50 km/h.
- 1.39 **Painted speed calmers work**
- 1.40 **Speed bumps down Kinloch road after roundabout going towards lake.**
- 1.41 **Rather than reducing the speed limit within the village use speed bumps to slow the trades people down. They are the only ones that speed around the village.**
- 1.42 **Could we have a painted speed hump (like what is in front of the shops) just before the roundabout (around Tuhoehoe/7th green) to slow traffic. Just painting without putting in the hump slows traffic without causing issues for trailers/bikes etc.**

- 1.43 **Speed bumps along Lisland Drive and Kenrigg**
- 1.44 **Slower speed as you approach Kinloch and Oakdale roads - eh reduce speed from the landscape place to 70, and increase again after Oakdale road to ensure safe transition off the main road.**
- 1.45 **More signs for school bus route, cars drive to fast when children are waiting for buses.**
- 1.46 **Temporary signs by high risk areas in Kinloch – like playgrounds – at peak times (1)**

Other issues raised

- 1.47 **Potholes on Wairakei Drive are very unsafe, someone is going to crash (1)**
- 1.50 **Need a giveaway sign coming from the Kinloch transfer station.**
- 1.51 **Stop sign at end of Kenrigg road, Kinloch**
- 1.52 **Review street lighting for all intersections**

- 1.48 **The ETA really needs lights. (1)**
- 1.49 **Parking around Hilltop school has become a safety hazard. Angle parks are needed to stop children exiting cars directly onto such a busy road (as well as keeping the area tidy). (1)**
- There isn't much parking, however the number of students has increased a lot.
 - It has become more dangerous with parents parking up on the grass where children are often walking down the hill.
 - There are also houses that put in permanent bollards (is this allowed?), which causes parents to park slightly out from the kerb so children can get out. This makes the road very narrow. And young school children have to get out in the middle of the road as they cannot get out on the berm side. This issue is especially bad due to the speed in which parents are driving to and from the school.

3. Supporting economic and social inclusion

3.1 Public transport provides an important role in supporting access to essentials (like food and medicine), and economic and social connections for those who cannot drive.

- Public transport needs to be affordable, easy and reliable, so that important journeys can be scheduled and are not put off.

3.2 There is no public transport provision between Turangi and Taupo

- This can be a barrier for social and economic inclusion
- It can be a barrier for students in Turangi wishing to undertake training at Toi Ohomai Institute of Technology
- It can also be a barrier to the accessibility of other important services that support welfare and quality of life.
- Services need to be clearly scheduled, predictable and reliable, so that they can be planned around, for example booking a doctor's appointment for the day when you know a bus is available to take you to and from.

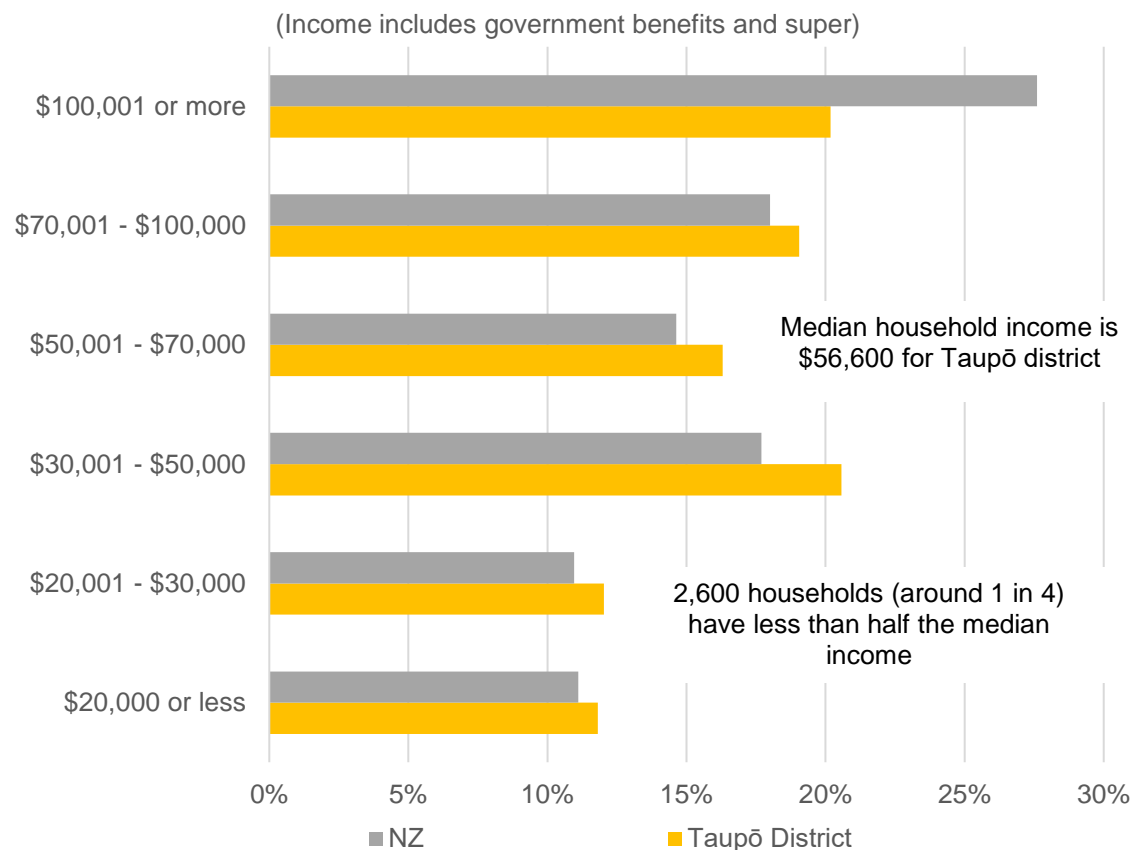
3.3 Taupō district has a high proportion of low-income households

- Maori are over-represented in this group, making Maori more prone to transport disadvantage.
- Vehicles may be historically cheap, but maintaining and running them is not, so they are not an option, or are a limited option, for many people. A car dominated transport system disadvantages those who can't drive or can't afford to drive and is inequitable.

3.4 Other transport services are vital to the health and wellbeing of the community. These services need to be well run, and the public aware of their availability.

- The [Total Mobility Scheme](#) provided by central government and regional councils, which subsidises taxis or the purchase of wheelchair accessible vehicles for those with long term impairments,
- The Ministry of Education, which provides bus services for school children
- [Lakes District Health Board Transport Services](#), which provides health transport services for those in need to specialist medical appointments.
- [St John Ambulance Services](#), which provides emergency medical transport, and hospital transfers

Figure 5 – Household incomes in Taupō



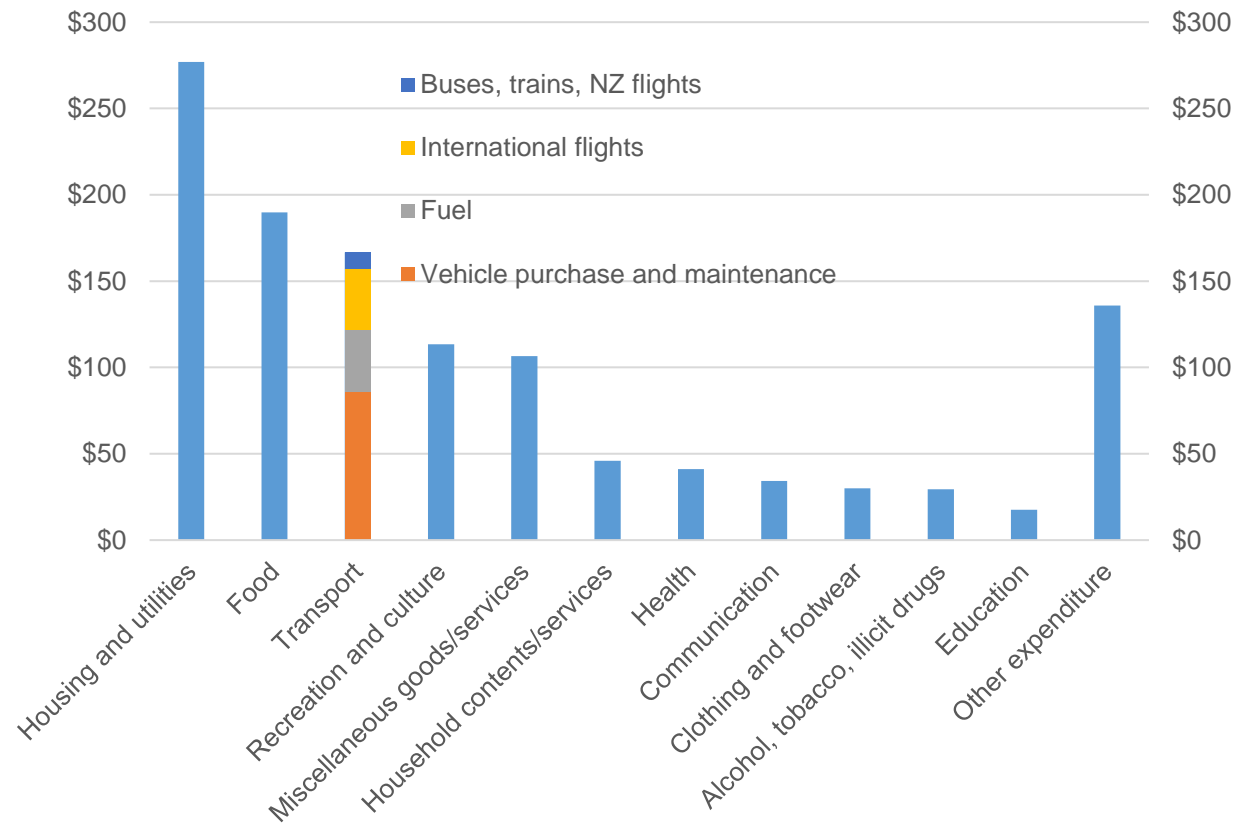
Data source: Statistics New Zealand, Census 2013

3.5 Taupō has a high number of small and rural settlements at a distance from core services

- The cost of car transport, and limited alternatives can be a barrier
- Households spend on average \$167 on transport per week (in 2016). It is their third largest area of expenditure after housing (and utilities) and food.
- The largest component of transport expenditure is vehicle purchase and maintenance (52%) followed up fuel costs (22%).

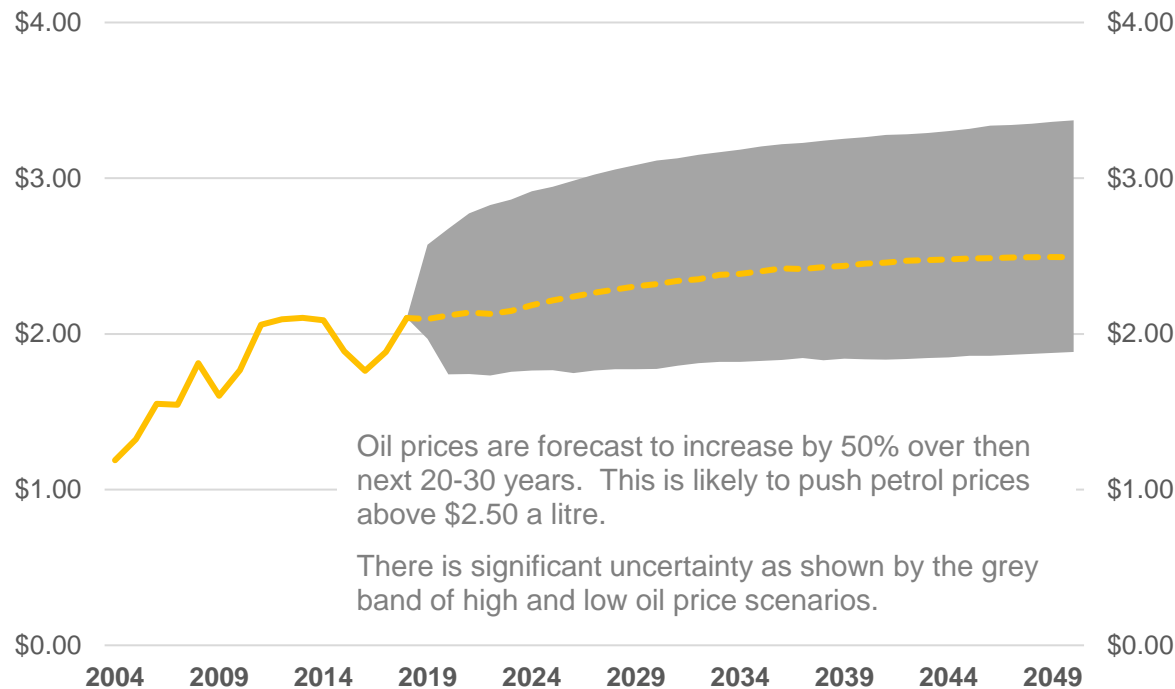
3.6 Vehicles are historically cheap but may become more expensive if there are increased safety and environmental regulations (e.g. on emissions to reduce the impact of climate change).

Figure 6 - Average weekly household expenditure in the North Island (excluding Auckland and Wellington)



Data source: Statistics NZ, [Household Expenditure Statistics: Year ended June 2016](#)

Figure 7 – Forecast oil prices, reflected in petrol pump prices (real - \$2018 per litre)



Data source: [US Energy information Administration: Annual Energy Outlook 2019, reference case, January 2019](#) for oil price forecasts and scenarios; [MBIE, Weekly fuel price monitoring](#) for historic petrol price data and projection assumptions.

Assumes no change in exchange rates from 2018, that oil prices reflect 40% of the cost of petrol pump price (as per 2018 MBIE data), and that tax rates, transport costs and other costs remain unchanged in real terms.

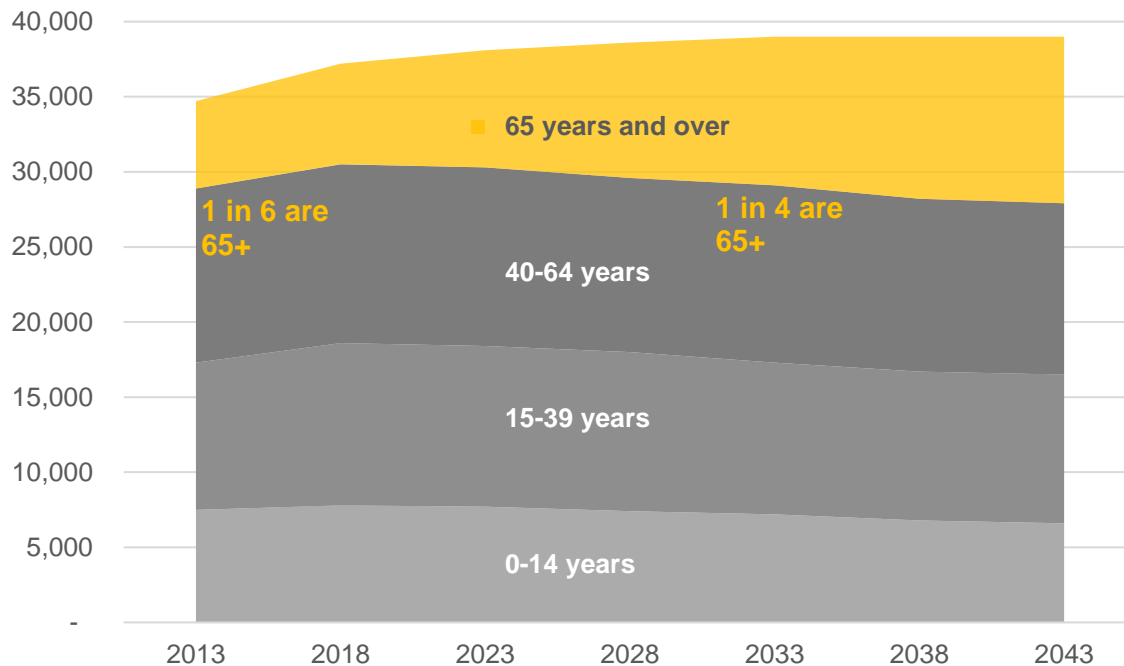
3.7 Fuel prices are volatile and have the potential to increase sharply and/or significantly over time.

- Fuel prices are expected to increase significantly over time, but there is significant uncertainty with potential for large cost increases.
- Increases to carbon taxes to reduce greenhouse gas emissions would increase fuel costs
- Fuel-efficient and electric cars can reduce this impact, however, lower income households will benefit less as they typically have older vehicles and hold on to them for longer.

3.8 Taupō faces an aging population and increased need for age-friendly transport

- In just 15 years’ time, one in four people will be 65 or older.
- Taupō district may experience more older visitors in future.
- Main issues are (Appendix 2 provide more details):
 - Maintaining clear and even footpaths
 - Providing accessible crossing opportunities
 - Supporting older drivers, with low speed areas, simple traffic systems, and signalised intersections are preferred.
 - Mobility parking is in high demand.

Figure 8 – Taupō District’s aging population



Data source: Statistics New Zealand

3.9 Increased traffic is creating barriers and safety concerns, especially for pedestrians and those with low mobility

3.10 Improving accessibility of important areas:

- town areas
- health/medical service areas
- access to recreational and community facilities.
- Main issues are:
 - seating
 - safety and security
 - public toilets
 - easy transition from footpaths to roads to cross the road
 - smooth path surfaces
 - wide paths
 - removing impediments, obstacles and hazards
- An accessibility audit was completed for Taupo Town in 2016, and for Turangi and Mangakino in 2019.
- Difficult crossing areas include:
 - Spa Rd
 - Heuheu St / Titiraupenga St – between the health / medical services are and Taupō town.
 - Ruapehu St
 - Lake Tce to the Great Lake Pathway
 - SH1 in Turangi

Feedback from consultation

Local bus facilities

3.11 Mangakino doesn't have a bus shelter (1)

3.12 Consideration should be given to a bus depot for all the local Taupo buses (central, north and west) so that they depart and arrive at the same depot. (1)

- At present its very confusing.

Accessibility issues

3.13 Safety when crossing roads is a concern for the aged, young, crippled, deaf or blind as New Zealand law gives priority to vehicles over pedestrians with the exception of designated 'Shared Zones' where a pedestrian has right of way over a vehicle. There are many threats to pedestrians in Taupo. The most dangerous spots identified by the Taupo Access Reference Group as of July 2020 are:

- 1) The river bridge 'refuge island' courtesy crossing, with its attendant paving, is dangerous to users. We consider that here should be push button 'traffic-stop-on-request' lights phased into the Norman Street / Wairakei Drive intersection lights. These to be operated by push button at the current 'courtesy crossing' point that is immediately south of the bridge.
- 2) The lower Spa Road 'refuge island' courtesy crossing should be removed and replaced by 'traffic-stop-on-request' signals incorporated into the program of new traffic lights at the Gascoigne Street / Nukuhau Street intersection with Spa Road.
- 3) The footpath-to-road 'let downs' also known as 'curb cuts' are seriously needing of correction in many places. The 'let downs' in front of the i-Site premises are examples of difficult curbs to negotiate with a wheelchair and are not making it easier to get to the people

and places we want, safely and sustainably" as imagined in the TDC's Transport Vision.

3.14 To be inclusive we must cater to the needs of the most severely affected persons among us. What is needed for the user of a push frame is needed for a mother with a pram. A visitor-oriented town would apply infrastructure standards that welcome all.

- 1) There is no wheelchair accessed bathing area. This is not 'inclusive'
- 2) There is no wheelchair user boat loading facility. This is not 'inclusive'
- 3) There is no disability vehicle Parking hub. A ten space 'accessible parking hub' close to quality public toilets would service the needs of transient persons and local wheelchair users alike. To not provide this is not 'inclusive. (The redesign of the Tongariro Street and Storey Place streetscapes could incorporate an area dedicated to the accommodation of disability vehicles - perhaps freeing up some existing disability parks for general parking).
- 4) There still are some 'step up curbs' which is not inclusive. We appreciate that Taupo's natural sloping topography will always hinder a wheelchair user, a fact which places extra obligation on planners in "making it easier to get to the people and places we want, safely and sustainably"
- 5) Streetscape furniture does not always accommodate the needs of wheelchair users. Low table height is a common example which can be not inclusive.
- 6) Little thought appears to have been given to a more electrified transport future. Facilities to recharge the batteries of cars, bikes and wheelchairs would be considered by visitors and locals to be very inclusive. (To say nothing of the likely needs of Self Driving vehicles).

3.15 Spa Park accessibility needs to be reviewed and improved. Pedestrian paths with uphill inclinations that are difficult /unsafe for some users like prams, wheelchair and mobility scooters users [pictures of poor areas provided]. (1)

- 3.16 **Link the Lake Road footpath to the Mangakino lakefront and have a pathway to the playground. (1)**
- 3.17 **Install let-downs/paths in Whakamaru Village to enable access to the playground. (1)**
- 3.18 **Have a footpath along causeway to connect Whakamaru Hydro Village to the footpath on the State Highway. (1)**
- 3.19 **Have paved disability parking at Mangakino Lakefront (perhaps look to do this in town centre too in the future if town becomes busier in holiday periods). (1)**

4. Supporting walking and cycling and other sustainable choices

4.1 Car centric transport networks have delivered poor horizontal walking and cycling connections that traverse hills, and low walking and cycling rates

- Poor, and low-key walking and cycling connections reinforces car travel by default
- Lack of well-defined connections that traverse hills means people are put off by thinking they must go up hills
- Increased traffic is creating barriers and safety concerns, especially for pedestrians and cyclists

4.2 Quality walking and cycling links support recreational and lifestyle options that support Taupō district as a great place to live and visit, with associated economic opportunities.

4.3 Taupo and Turangi are missing out on economic opportunities by not being linked into national walking and biking routes.

New Zealand Cycle Trails

— Great Ride

— Heartland Ride

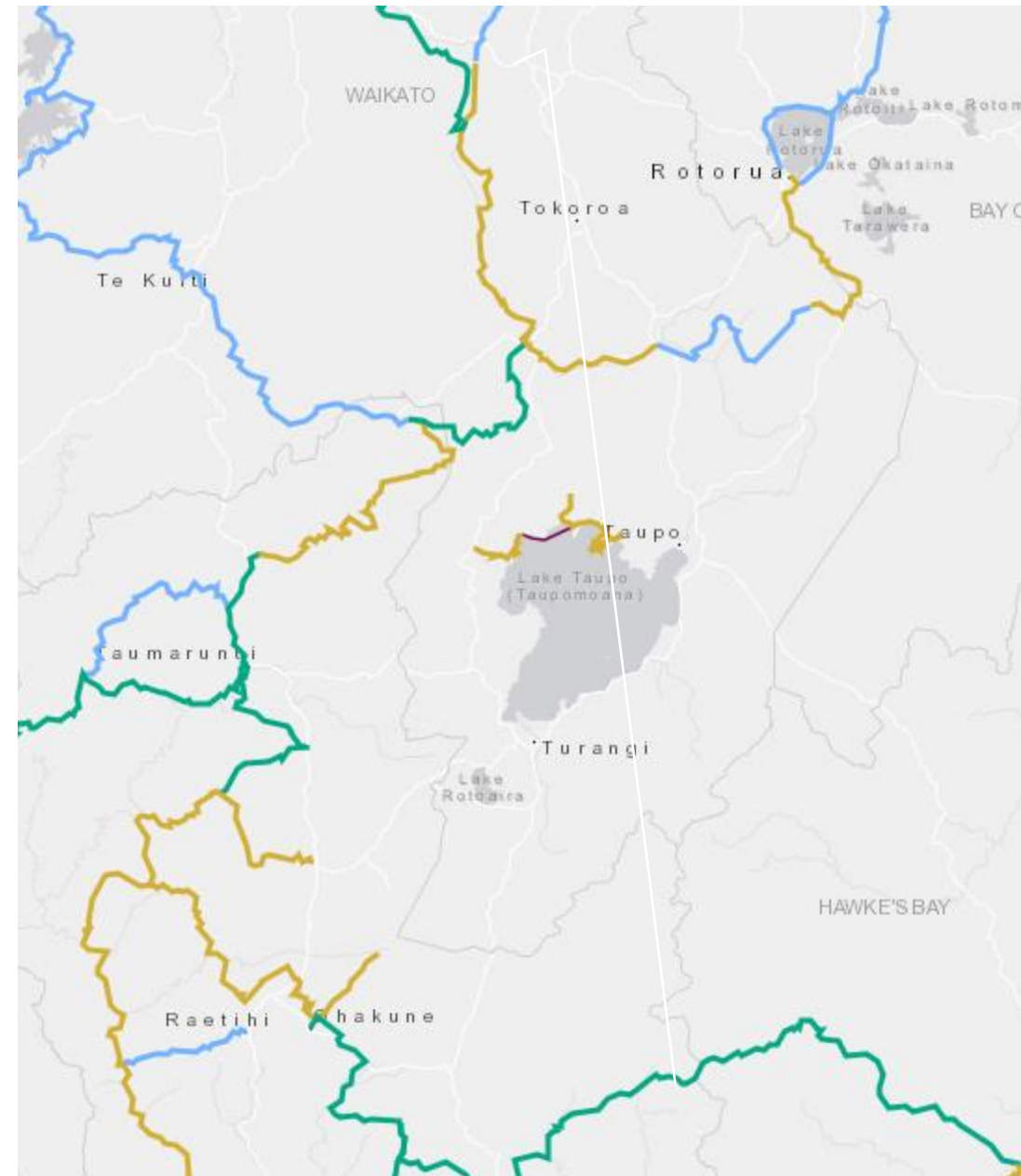
Other Routes

— Cycle Touring/Bikepacking Route

Public Transport Links

—

New Zealand Cycling Network, Waka Kotahi



4.4 **Car transport is a major contributor to emissions causing climate change**

- Transport is the leading contributor of carbon emissions and the second largest contributor to greenhouse gas emissions (after agriculture)
- Most of this comes from cars (75%), rather than trucks (25%).¹

4.5 **We will have to transition to low emission transport.**

- Central government has legislated for net zero emissions by 2050 ([Climate Change Response \(Zero Carbon\) Amendment Bill](#) refers)
- New Zealand’s target under the Paris Agreement is to reduce greenhouse gas emissions by 30 per cent below gross emissions for the period 2021-2030.²

4.6 **Achieving these targets will require a combination of shifts in behaviour and technological improvements.**

- Carbon emissions are a direct product of burning petrol and diesel. The options for reducing carbon emissions are to reduce fuel use by:
 - Reducing traffic (more walking, cycling, car-pooling, electronic communication, deliveries and working from home)
 - Improved fuel efficiency (newer, lighter, and improved technologies - including hybrid electric vehicles)
 - Replacing petrol and diesel vehicles with electric vehicles.
- High petrol prices (emissions taxes) are likely to be the catalyst for change

Figure 9 – NZ’s greenhouse gas emissions by source

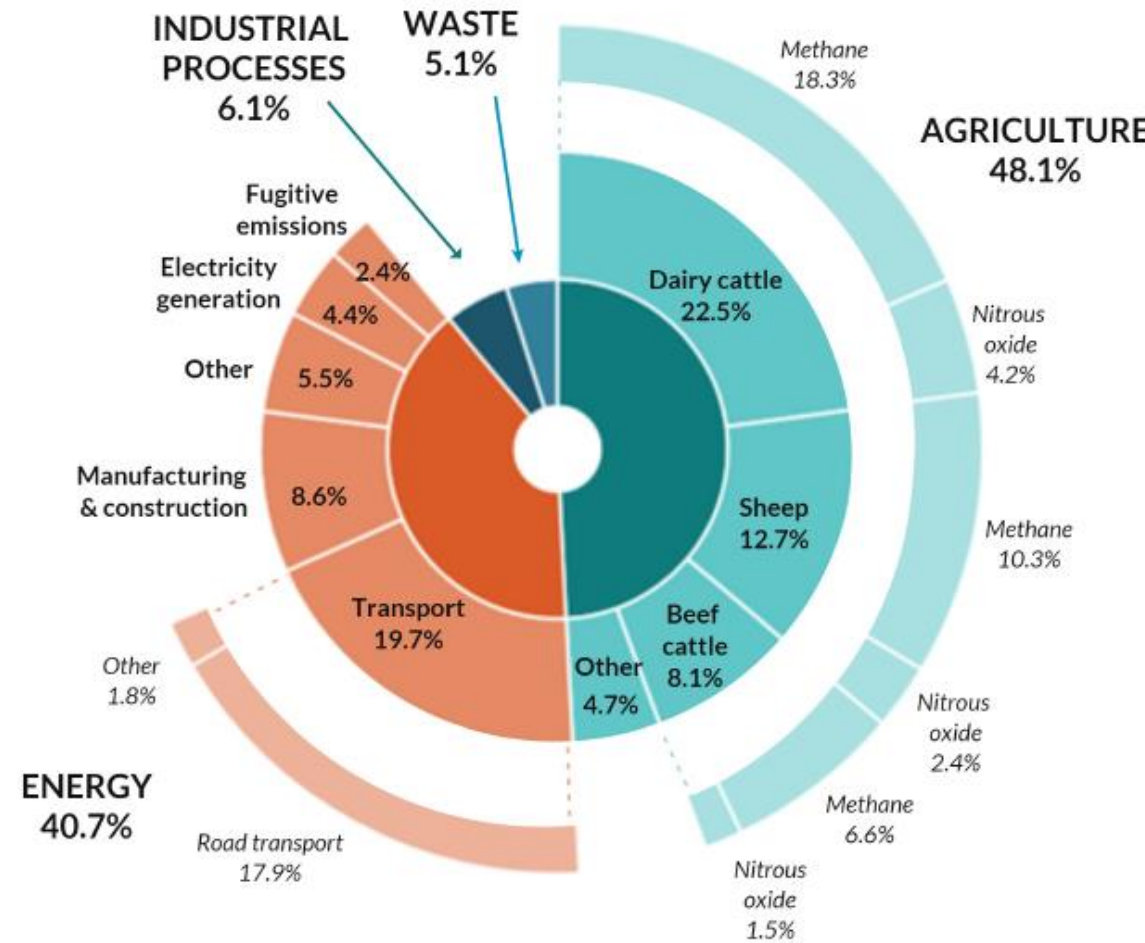


Diagram source: New Zealand’s Greenhouse Gas Inventory 1990-2017, published April 2019

¹ New Zealand Productivity Commission. (2018). Low-emissions economy: Final report. Available from www.productivity.govt.nz/low-emissions

² <https://www.mfe.govt.nz/climate-change/climate-change-and-government/emissions-reduction-targets/about-our-emissions>

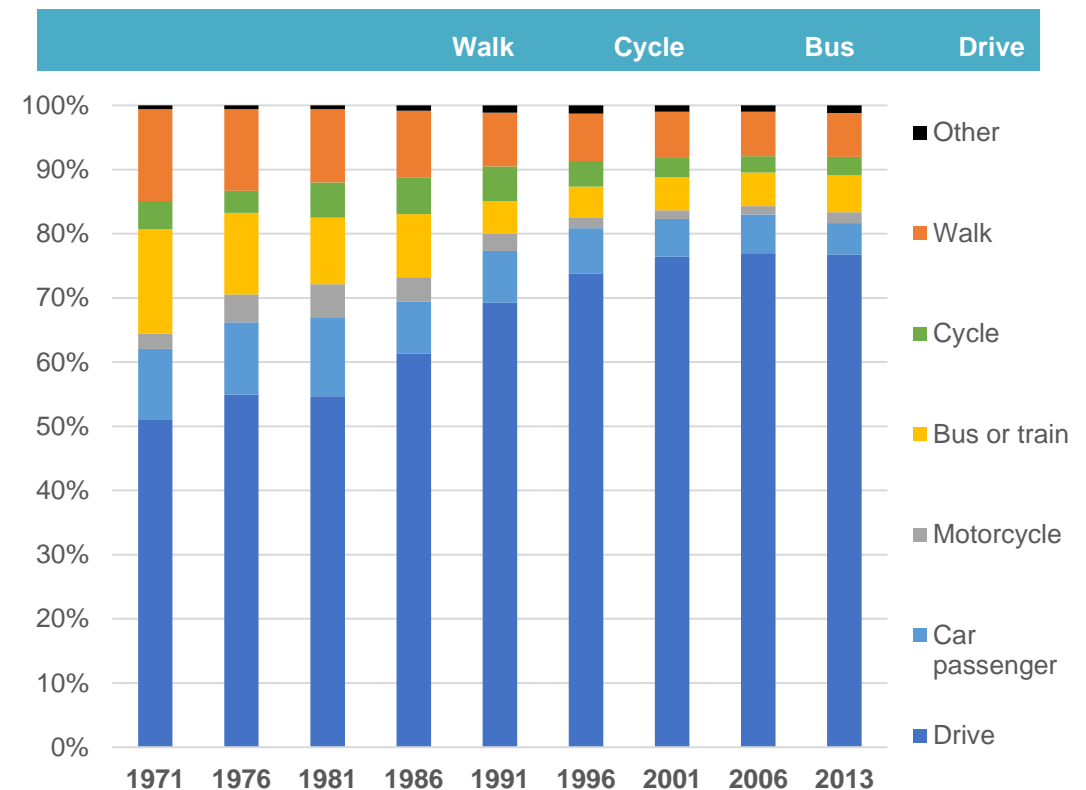
4.7 Council may be able to work with larger employers and fleet owners in the district to support low emission travel, including car-pooling for staff, supporting walking and cycling, for example with shower facilities, and uptake of new vehicle technologies for fleets.

4.8 Taupō could benefit from becoming an electric car and electric bike and scooter friendly destination.

4.9 There is scope to increase walking and cycling, especially for school students and regular commuters.

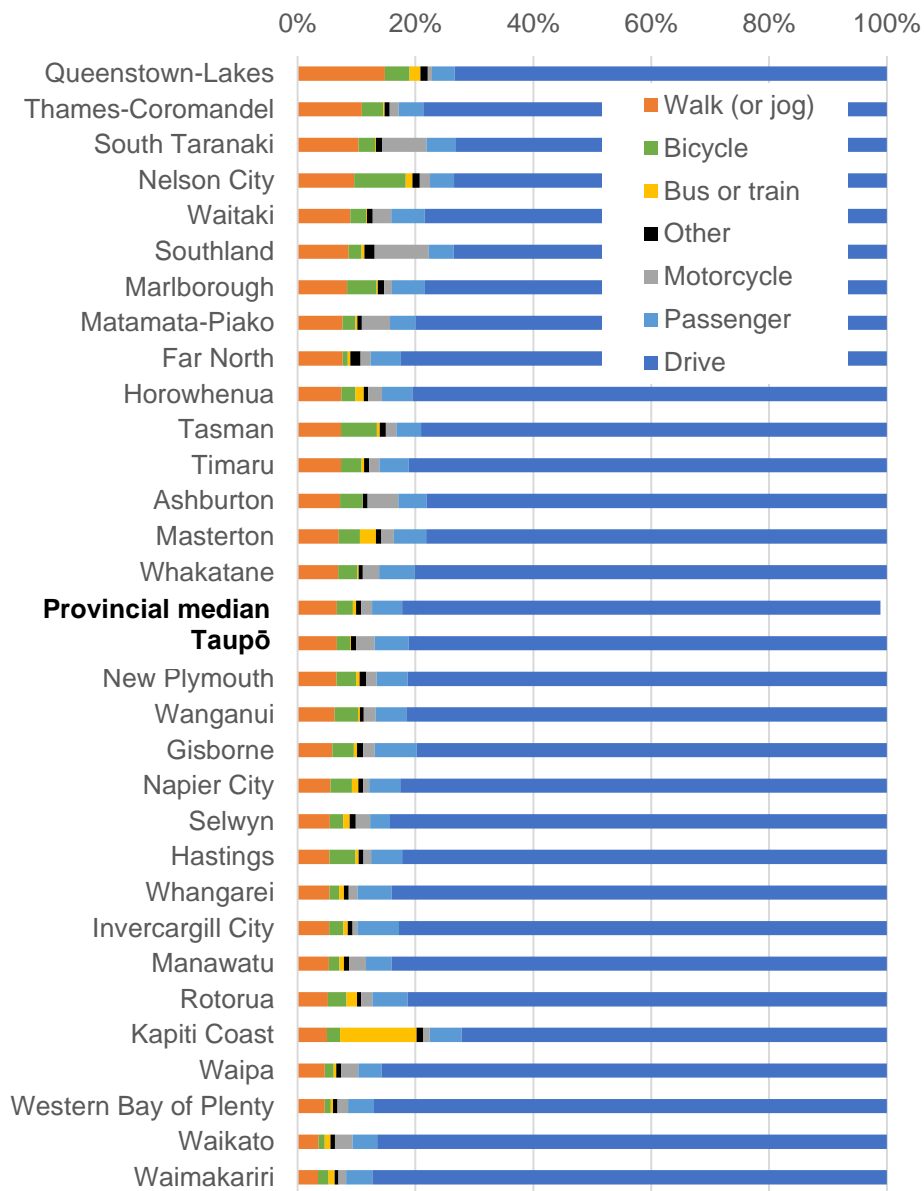
- Walking rates are low historically. Walking has fallen significantly with the increase in popularity of cars and driving, since the 70s.
- Commuter cycling rates are relatively low in Taupō district and low historically – Nationally, commuter cycling rates peaked in 1986 at 5.7%, and has since halved to 2.9%.
- Few children walk or cycle to school, compared to historic rates. Safety, including traffic volumes and speeds are frequently cited by parents as reasons not to allow their children to travel independently – although in reality, safety risks are usually low.
- There is a lack of quality, safe and secure bike and e-bike parking.
- There are substantial benefits to improving child active transport rates, ranging from child independent mobility, improved physical activity levels and mental wellbeing, improved family time management and reducing congestion associated with school traffic. Focusing on children can also grow a generation of sustainable transport users, where getting about on foot or bike is normalised. Whether safety is perceived or real, young walkers and cyclists need safe, convenient, separated infrastructure and priority crossings that are forgiving of human error and beginner decision-making.

Figure 10 – How we travel to work compared to other provincial areas



Data source: Statistics NZ, yearbook and census data, transport to work

Figure 12 – How we travel to work compared to other provincial areas



4.10 Safety is the main concern in relation to cycling

- Safe and easy cycling routes will support people wishing to take up cycling. Wide, separated, low-speed paths will be more inviting to those (including kids and parents) who may otherwise be intimidated by sharing the road with cars at high speeds.
- For more advanced, commuting and sport cyclists (high speed and on-road) – safety risks include:
 - Awareness and visibility of cyclists at intersections
 - Reversing angle-parked cars and opening parallel-parked car doors.
 - Road space and separation from vehicles in high speed environments.
- Bike storage, lockers, changing and shower facilities are also necessary to support commuter cycling.

4.11 Our rural roads are not designed to cater to cyclists and can be unsafe

- They were designed and built for much lower traffic volumes, smaller trucks and not with bikes in mind. T
- This is not easily or cheaply fixed. Cyclists are likely to use these roads whether Council provides for them to or not.
- options should be explored where possible alongside other road improvements, but focus will be on identifying the safest routes and measures aimed at promoting driver awareness and courtesy.

4.12 Mountain biking is a great, healthy, recreational activity

- Recreational and mountain biking tracks provide recreational and lifestyle options that support Taupō district as a great place to live and visit.
- Taupo District's free-draining pumice soils support mountain biking all year round.
- Recognised high quality, beautiful, and popular biking tracks attract visitors, which provides economic opportunities for the district.
 - There are regional and national strategies aimed at connecting biking trails to create increased tourism opportunities.
 - It's important that Taupō district be part of these connected networks.
- Increases in recreational off-road biking, are likely to translate into increased comfort with cycling, and increased school and commuter cycling – with associated traffic reduction and environmental benefits.
- Cycling connections should be improved between our towns and mountain biking tracks, include connections to and between sections of the Waikato River Trail and Great Lake Trail.

4.13 Shared paths are popular, vibrant and inviting but require management of conflicting uses

- Walking is a popular recreational activity for of all ages and abilities. It is also a tourist and visitor activity and attraction.
- Recreational cycling is also popular, including for children on bikes and scooters. E-bikes and E-scooters (and similar) are also growing in popularity.
- Shared paths also make the most use of limited space and budget, including more efficient sharing of supporting accessories like signage, rubbish bins, seating, drinking fountains, art work, etc.
- However, the conflict between walkers and faster and/or larger vehicles needs to be managed, otherwise these areas become unattractive for walkers, barriers for the mobility impaired, or even safety hazards.
- Clear rules are needed to support conscientious behaviour including:
 - mobility impaired users being given priority
 - and cyclists and other users slowing down to walking speed when passing pedestrians and others.
- Children on scooters, cyclists, and E-vehicles should all give way to walkers, travel at low speed in busy areas, and very low speed when overtaking or approaching blind corners.

4.14 With recent traffic growth, it has become difficult to cross some of our main roads

- In important pedestrian areas, and walking routes we need safe and easy crossing opportunities, including:
 - Spa Rd
 - Lake Tce
 - Heuheu St



Figure 13 - Refrigerated meat truck falls into lake Taupō (2009)



Photo Source: Stuff / Youthtown Trust Rescue Helicopter

Other environmental concerns

4.15 There is a risk of noxious or hazardous cargo crashing into our lakes and waterways

- Many trucks travel on the state highways in our district. They carry a range of cargos, some of which may be noxious to our lakes and waterways if spilled.
- Stretches of our State highways travel right on the edge of our waters and over bridges. These areas contain crash spots that pose a risk for trucks and their cargo entering our waterways in a crash.

Figure 14 - Refrigerated meat truck at Bulli Point (2017)



Photo Source: Stuff / ROBERT STEVEN/FAIRFAX NZ

Feedback from consultation

4.16 The Tongariro Bridge needs urgent work or be replaced. (1)

- The footpath on the bridge is just a metre from the passing traffic on State highway 1. This is very frightening for people crossing over as there is absolutely no protection from the passing traffic.
- Guard rails should be installed to protect the pedestrians
- A reduction from 65 km/h to 35 km/h should be implemented
- For example, the Tauranga Taupo Road Bridge has a 35 km/h restriction and a protected footpath.

4.17 Provide Pedestrian Clip-On on the SH 1 Tongariro River Bridge. (1)

- Tongariro River Bridge pedestrian- cycleway route provides access from Turangi Town Waipapa Reserve Millennium Milestone Walkway to Herekieke St- Gosling Grove, and also to the Tongariro River circuit track.
- It is a major pedestrian route and should be included in the strategy for major safety upgrade.
- I would propose that the District and NZTA joint resources be targeted to complete a clip- on walkway to make it safe. If this was achieved an additional benefit such as a wider vehicle carriage over the SH 1 Tongariro River Bridge would also result

4.18 Parking in yellow lines outside schools (Hilltop mentioned) making it difficult for children to see to cross the road. (1)

4.19 Road shoulders need improvement for safety of cyclists, condition of road. (1)

4.20 When rebuilding the Broadlands Rd it may be possible to get a Government subsidy to extend the cycle lanes the full length of the Road (1)

4.21 Pedestrians walking from Kiddle Drive to the Hilton Hotel and Taupo Holiday Park need to be safe and need a safe footpath. Add a clause to the Strategy that provides a new footpath on the Napier Rd. (1)

- There is none there now.
- We see there is space to move the existing road markings to the south, at the corner. This would then provide for some space on the north side of Napier Road for a new footpath.
- If safety is a concern, then why was this not been addressed when the stop signs were installed?
- The current situation is not safe and we have previously provided evidence of pedestrians walking on the road verge – but this has been ignored. It now needs to be addressed through this strategy.
- The current situation fails to comply with the key points of your stated Vision. “Making it easier to get to the people and places we want, safely and sustainably.”

4.22 Most areas of Turangi are very cycle safe. The only danger has been created by TDC Transportation section placing of pedestrian islands along Puataata Road. These are a hazard to cycling and cars, have tried to address an imaginary pedestrian hazard and in doing so have reduced safety for all concerned. These need removing as they are also a hazard. (1)

4.23 The Tongariro area is blessed with good road and mountain biking areas. Accidents have occurred on Tauranga-Taupo Bridge and Tongariro River Bridge. (1)

- SH 41 is a popular route, but the roads lack sufficient width to safely stay out of the traffic stream. SH 41 Puataata Rd – SH 47 is a busy road in ski season and there is insufficient berm on the carriage way.
 - SH41 up the Waihi Hill could be widened slightly by sealing the berms and the route would be significantly safer with little work.
- 4.24 **Consideration should be given to moving the pedestrian crossing at the bottom of Spa Rd further up the road. (1)**
- It is currently too close to the roundabout, making it very difficult for drivers to see people at the crossing. Perhaps a crossing closer to the bakery would be safer.
 - We do understand that road changes at the roundabout may alleviate this issue.
- 4.25 **An important crossing at the intersection of Titiraupenga and Spa Rds that would allow safe pedestrian access across Spa Rd and across Titiraupenga St. We realise this may be provided for by a traffic light, but we did expect to see it noted on Figure 5. (1)**
- 4.26 **Safe pedestrian crossing across Lake Tce to the lake (3)**
- for the Lake Terrace beach access area (Rifle Range to Taharepa Rd area).
 - It's very difficult for families and children at busy times due to steady streams of traffic.
 - Some prefer to drive to the lake rather than try and walk.
 - explore the options of signalised crossings or permanent over/under pass options for walkers and cyclists.
 - Especially between Matuku St and Napier Rd, and between Rifle range and Mere Rd.
- 4.27 **Hard to get across Tongariro St – A pedestrian/cycle overhead bridge would be ideal - much like what is installed during cycle / major events in town. (1)**
- 4.28 **An actual crossing outside Hilltop school would be safer as it is not a managed crossing before school. (1)**
- 4.29 **Pedestrian crossing to the #lovetaupo sign (1)**
- 4.30 **Pedestrian crossing installed along Arrowsmith Ave - and ideally along Ingle Ave, between Richmond and Arrowsmith. (1)**
- Along Arrowsmith, bumps in the road and the tight corner to/ from Ingle Ave make it hard to cross the road safely, esp. near Weka St and Titoki Ave.
 - As there is no footpath on the southern side of Ingle Ave, school aged children coming from the Eastern side of Waipahihi area and heading towards Waipahihi School, are forced to cross Arrowsmith Ave during busy school drop off times, and then cross Ingle Ave just around the corner to get back on to the original side of the road.
 - While walking along Ingle Ave is possible on either side, the southern side is not bike, scooter or pram friendly which currently discourages parents to either let their children ride their bikes or walk them to school if they also have younger children (in prams) to take along.
 - Setting up a crossing along Arrowsmith would make a part of their daily journey to school and back safer and might encourage more parents to let their children walk or ride their bikes/scooters to school and back. This could, in return, ease traffic along Arrowsmith and Richmond Ave in the morning and afternoon. It may also reduce the tight parking situation along Frederick St during school pickup, which currently has the potential to create risky situations for both drivers and pedestrians.
- 4.31 **We really seriously need to improve road safety around our schools. The first priority around this needs to be crossings. (1)**

- We need to put proper pedestrian crossings in by our schools (zebra crossings) preferably with the sleeping policeman design so when people are travelling across, they have to stop AND slow down.
 - This is especially true of the crossing on Taharepa Road by the hilltop shopping centre and school.
 - There are two big schools close by.
 - Traffic travels very fast
 - Drivers hardly ever stop
 - It can be hard and dangerous for young children.
 - It only has a school patrol in the afternoons (which is not there for long enough
 - We seriously need to lower the speed limits around these busy areas of schools.
 - We often see people mounting the footpath so that they can turn left down Taharepa road off of Ngamoutu.
 - The location of the crossing on this road is also very poor next to the intersection as children need to check a busy road in 4 different directions, a big ask for many primary school children. It would also be better in the middle so that children exiting the senior area of hilltop are encouraged to use it, most do not and cross at the busy intersection by the shops. Although I am not sure what is to be done here as the location of driveways makes it difficult.
- 4.32 **The crossing on Taharepa road close to Hilltop school should have a dedicated pedestrian crossing that requires traffic to stop to allow pedestrians to cross. (1)**
- A Kea crossing is in place. These crossings work when manned but at all other times seem to be a cause for confusion to drivers and pedestrians alike. The crossing is not even manned in the morning, leaving small children to judge when to cross and having to account for traffic coming from four directions on a very busy junction adjacent.
 - This is a difficult place to cross for an adult. Children even more so considering the slope of the road here potentially exacerbating the propensity for excess speed of traffic moving downhill toward the lake on a straight road.
 - Perhaps some kind of traffic calming measure along with a revision of the crossing could be a solution. For example a zebra crossing on a raised section forming a speed hump.
- 4.33 **Some Taupo Primary students walk from areas east of Kaimanawa Street and south of Heuheu Street. Therefore safe crossing of the streets east of the Titirapunga Street and side streets south of Heuheu street need to be considered where increased traffic volume occurs as traffic flows alter. (1)**
- 4.34 **There is a very dangerous area in upper Spa Road, around the shops (near Pihanga street), where there is no safe crossing area for pedestrians to go from one side to the other. (2)**
- Busy road with cars and trucks, crossing the road is not safe for pedestrians, which include children, elderly and disable people living nearby, as well as, shop customers who often park across the road.
 - Crossing at rush hours is very difficult and dangerous
 - I would strongly suggest the urgent need for an assessment for this area in order to provide a zebra crossing or island so that there are no pedestrian deaths or serious injuries in the future.
 - At the moment, pedestrians are risking their lives each time they have to cross, often having to wait in the median strip just waiting for a break in the traffic flow on either side.

- I have informally surveyed shop-owners in the area and all agree that there needs to be some action taken here as soon as possible.

4.35 **Developing additional cycling infrastructure along key routes including:**

- 1. An underpass under Wairakei Drive between Control Gates Bridge and Norman Smith Street to provide a safe connection across this busy road for commuters and school children,
- 2. Further consideration of an overpass connecting the amphitheatre and the Countdown Site (Option A6).
 - Opus International undertook some preliminary work on this option for Bike Taupo, including costing preliminary investigations
 - this would provide a safe connection for people to cross this busy road
 - it would also be beneficial for events
 - It has the potential to create a gateway for the town.
- 3. Develop a shared use path on the eastern side of Control Gates Bridge leading above the road to the Countdown site.
 - This would be a better grade than the existing one, making it easier for cyclists and walkers to access town.
 - Could be developed cheaply and easily (Bike Taupo has already scoped a route)
- 4. Widen the walking and cycling path on the upstream side of Control gates bridge to a similar width of that on the downstream side.
- 5. Identify and mark cycling friendly routes in and out of town to enhance and promote the safe cycling network in town.
- 6. Identify and mark safe cycling routes to schools to try and get more school kids on bikes and reduce the volume of the 'school run'.

- 7. Slow down traffic at key intersections and areas (i.e. around schools) using speed humps etc., to reduce the risk to cyclists (this will be especially effective where roundabouts are being developed).
- 8. Develop safe access points into town for cyclists including crossing points at busy roads and safe alternatives to busy intersections (i.e. spa road / Tongariro Street).

4.36 **In addition to these capital works TDC should look at other soft options including:**

- 1. Benefits such as free showers at the SuperLoo, access to bike storage in the Town Centre, potential financial rewards for those who bike to work
- 2. Provide more information about the benefits of commuting.
- 3. Consider subsidising commuter style E-Bikes (we do it for composting facilities) to rate payers as these are the ultimate foil to Taupō's hills and are a huge growth area that provide a realistic alternative to cars.
- 4. Work with schools to incentivise students biking to schools.
- 5. Reducing traffic speeds in key locations and at key times to make the roads safer for bikes.

4.37 **An improved cycle track from Acacia Bay to Nukuhau. (1)**

- The present track is badly patched and maintained at present, forcing serious cyclists to ride on the road where there are no shoulder areas for safe riding.
- Serious cyclists have narrow tyres that cannot cope with gravel, glass or badly patched bitumen.
- An extension to this cycleway at both ends would be beneficial to anyone wanting to ride to school or to work.
- Many people run, walk and push prams along the present track and more would do so if improvements could be made.

- 4.38 **Need a Bike Lane south of Kiddle on the Napier-Taupo Rd. (1)**
- There is less than 1 metre to the left of the white continuous line.
- 4.39 **Supports shared pathways to schools/ECES – a footpath to Rangiamokura TKR, Whakamaru School, Kiwi Steps Preschool. (1)**
- 4.40 **Extend footpath from Rangiamokura Te Kohanga Reo to Mangakino RSA/Club. (1)**
- 4.41 **In Figure 4b – the High Accessibility Area should also connect to the lakefront via Lake Road. (1)**
- 4.42 **Improve roadway/footpath access to Mangakino Sports Fields/Changing Rooms. (1)**
- 4.43 **Improve roadway to Matekuri Island/River Trails link. (1)**
- 4.44 **Assess building a footpath to the Mangakino Cemetery. (1)**
- 4.45 **Safer pedestrian access to cross road between Whakamaru Shops and the Garage/Hairdresser/Vets. (And from the Whakamaru causeway Bus Stop to other side of road to access Whakamaru Dam stairs or pathway to River trails – it is where everyone crosses – not sure if an accessway is considered to be safe there.) (1)**
- 4.46 **Almost 69% of those surveyed by KCA felt 'provision for walkways in all residential development to enable everyone to reach the lake safely' was Extremely or Highly Important.**
- 4.47 **Over 66% of those surveyed by KCA considered a cycle/walking path along the Whangamata Rd from Oakdale to Kinloch Rd was Extremely or Highly Important.**
- 4.48 **Over 50% of those surveyed by KCA felt a safe cycle way along the Whangamata route for commuters to Taupo was Extremely or Highly Important.**
- 4.49 **Have an electric car charge station in Mangakino and Whakamaru. (1)**
- 4.50 **We should be investing in more E infrastructure such as E-Bike charging stations at key locations in the district (2)**
- Sailing Centre
 - Taupō Lakefront
 - I Site
 - The Hub
 - Kinloch.
- 4.51 **the footpath needs extending from Kinloch Rd/ Whangamata Rd intersection to Oakdale drive. In this zone, the Whangamata Rd speed limit needs to be reduced from 100km/hr down to either 50 or 60km/hr (or 80km/h) to improve pedestrian safety. (3)**
- If the footpath is going to be close to the road, as it is on Kinloch Road, then a speed reduction may need to be seriously considered. Children can act quite impulsively at times, without regard to a high speed road right next to them. A reduction in road speed would improve pedestrian safety.
- 4.52 **Holyoakes road could be of benefit to the community so as to further the Whangamata stream reserve walkway and provide parking access on muirs reef land beside Holyoakes road for more walkways/cycle ways which could lead through to sna193 and further through seven oaks forest to meet up with Forest road in the north. (2)**
- This would afford good views from the skyline and add another dimension to the amenity value of Kinloch.
- 4.53 **Safe walking path in Kinloch from trailer park area to road so drivers returning to marina don't have to dodge vehicles and trailers**

5. Promote vibrant towns that foster social and economic interactions

- 5.1 The design and function of our town streets impacts on vibrancy and social and economic activity
- 5.2 Increased traffic is creating barriers and safety concerns, especially for pedestrians
- 5.3 The [Taupo Urban Commercial and Industrial Structure Plan \(CISP\)](#) provides a vision of creating multi-use, vibrant central streets that seamlessly link public leisure areas and hospitality and retail offerings.

Figure 15 - Wellington waterfront, where a bar alfresco area merges with public reserve. Beanbags and lawn games provided for patrons



Photo Source: Trip adviser, [Summer on the Wellington Waterfront](#)

Figure 16 – New arterial routes in the Taupō Urban Commercial and Industrial Structure Plan (CISP) to create more vibrant and town friendly streets



5.4 A large portion of Taupo District’s economy (income and jobs) comes from long and short-stay visitors

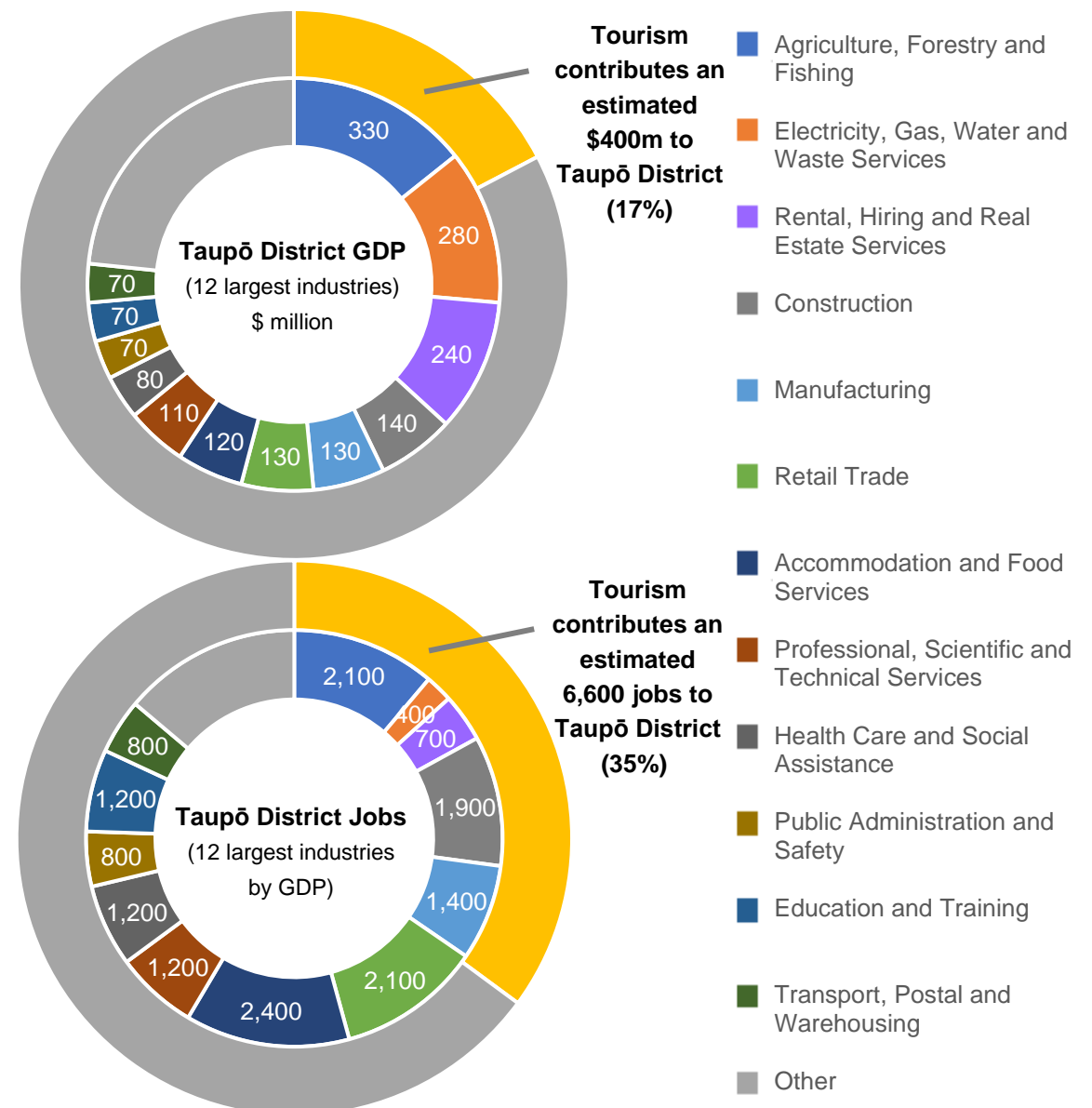
5.5 We need to support visitors to come, stay and interact to support economic opportunities

- Intuitive routes that naturally take new visitors to the right locations.
- Easy and intuitive medium-stay parking areas.
- Leave them with a positive experience that may bring them back, or that they may pass on to others.
 - beautiful or scenic areas
 - toilet facilities
 - visitor information
 - rest areas and parks
 - hospitality, retail, tourist attractions and activities.
 - great walking spaces that connect to our towns
 - wider walks and cycling connections to key tourist attractions, encouraging people to spend some time and look around.

5.6 Turangi’s town centre does not draw in visitors

- Most of the visitor activity and spending in Turangi occurs on the fringe of the State highway at the Z petrol station / Burger King.
- Parking areas and town centre shops are not visible or intuitive – with a fork road decision required and parking appearing to be at the rear of shops, which introduces doubt and is off-putting

Figure 17 – Tourism’s contribution to district income (GDP) and jobs



Data Source: Informetrics, Taupō District Economic Profile 2019

6.3 A parking building is not a great option

- A three-story parking building can provide 350 additional carparks (500 in total) a short distance from town on the Heuheu St carpark. It would cost around \$12-15 million (\$2019).³
- They are expensive (around \$30,000 – \$40,000 per additional park)¹
- They take time to negotiate up levels and park, and time to exit either by stairs or lift.
 - It is often faster to park a block away and walk
- Modern car parking buildings can have facades to look like large office buildings. However, they are generally large, square and imposing. Expensive facades are often limited to one side.
- Inside they are uninviting spaces, which are prone to:
 - tyre noise
 - minor accidents
 - security concerns
 - antisocial behaviour.
- They can be combined with retail areas, or cycling facilities including bike storage, showers, etc However, with Taupō's 3 story height restriction, this reduces the space available for carparks.

³ 2007 estimates were \$10.2m (\$20,300 per space) – adjusted for building inflation this is around \$13m (\$26,000 per space). A Sylvia Park parking building in Auckland built in Apr – Nov 2018 provided 600 spaces at cost of \$36 million (~\$60,000 per park). Source [Stuff](#),

- Introducing paid parking to support the upfront financial, maintenance and operating costs and ensure that users pay a fair share is fraught:
 - Imposing a cost is likely to reduce its use
 - Instead, paid parking would have to be applied across the town centre
 - Both of these options are likely to undermining the need for the building.

Figure 19 – Artist's impression of new carparking building planned for Auckland



Photo source: [Auckland Council](#), March 2019

[Sylvia Park will open a new 600-car parking building tomorrow ahead of the Christmas rush, 29 Nov 2018](#). A Lichfield parking building in Christchurch opened in Nov 2011, providing 805 spaces at a cost of \$31 million (\$39,000 per park). Source: [Stuff](#). [New 805-space Lichfield St car park building opens in Central Christchurch, 10 Nov 2017](#)

An alternative view

1. Parking is a necessary part of the Taupo transport system but given its effect on inducing traffic, it is important that retailers and drivers aren't trained to expect "a park right outside". This level of service would be at the expense of other types of transport users.
2. A parking building is expensive, but it is a better use of land than many street level and off street car-parks which present barriers for pedestrians and cyclists and reduce street appeal. Drivers also expect to pay for parking at a parking building, and it is fair to pay for parking across the entire parking town centre, as walking, cycling and public transport become safe and attractive alternatives

7. Providing reasonable inter-regional bus facilities

7.1 Operators and users appear unwilling to pay for new or improved facilities. It is unclear if there are wider benefits to Taupō or the district from an improved bus hub that justify a large investment.

7.2 Current bus hub facilities are basic, but not out of step with other districts and towns

- Inter-regional bus stop facilities are typically basic:
 - often paired with an i-Site
 - usually open, roadside, small glass shelters
 - usually paired with or close to public toilets
 - often using the verandas of nearby shops or cafes to provide additional weather protection
- The current bus shelter facilities on Tongariro St for inter-regional bus services provide:
 - a small degree of rain shelter, but still exposed to cold winds
 - nearby public toilets
 - nearby i-Site, which provides some customer support
- There are also numerous bus stops marked around Taupō town centre that cater to tour buses, either dropping off and picking up from motels and backpackers, or stopping for passengers to visit the town

Wanaka: inter-regional bus stops next to public toilets



Photo source: Google Maps

Queenstown inter-regional bus stop next to carpark and public toilets



Photo source: Google Maps

Rotorua inter-regional bus stops next to i-Site with covered courtyard

Photo source: Google Maps

Napier offstreet bushub, with bus angle parks, public toilets and glass shelters

Photo source: Google Maps

7.3 Regional buses should be located in the Town centre

Priorities are:

- Safe and efficient bus movements
- Quality shelter and protection from the weather
- Safe location, lighting, security (CCTV)
- Nearby toilets
- Nearby food and coffee
- Nearby shops to support economic opportunities
- Nearby parking and taxi services

Nice to have include:

- A veranda / rain protection over buses
- Locker facilities (to support exploring of town for short layovers / bus-transfers)
- Nearby picnic, recreation and playground areas
- Ticketing facilities
- WiFi
- PA system and customer support (alternatively electronic signage, with updates or alerts)

7.4 Co-locating buses, (tour and inter-regional, north- and south-bound) makes the best use of space

- There may be an opportunity to consolidate bus parking into one area. This may allow the provision of more targeted facilities, and free up carparking in other areas.

8. Well connected to the rest of New Zealand

8.1 Bus connections provide an important, affordable, carless option

- There is potential for growth due to:
 - Aging population
 - Increased environmental conscientiousness
 - Increased fuel costs
 - Increased road congestion and improved public transport in Auckland

8.2 Strong tourist connections that bring people and economic opportunities to Taupō district

As shown in Figure 18 previously, Tourism is a major contributor to Taupō's districts economy – providing district jobs and income. We must ensure that Taupō is supported by quality and improving tourism connections that:

- are safe
- provide attractions, activities and stops
- promote tourist activity and travel to Taupō district

Important connections are:

- between Taupō and Turangi
- to the mountains
- to Rotorua
- biking trail connections

8.3 Air services, especially for:

- tourist links to Australia, which requires improved timing of flight connections at Auckland, to avoid the current long layover and provide a viable long-weekend / ski weekend offering
- economic / business links to Auckland to support remote businesses and working but still having connections when necessary
- affordable social links to the rest of the country to support visiting family and friends, for example if grandparents retire in Taupō.

8.4 Freight connections, especially to:

- Auckland (NZ's largest import hub and distribution centre) for goods into Taupō district
- Port of Tauranga (NZ's largest export port)

Freight and logistics

8.5 Taupo district is reliant on trucks to move freight

8.6 Taupō district does not face a ‘wall of wood’

- Our forests are reasonably mature and in a relatively steady state of production.

8.7 With low freight volumes, and short distances to port a railway line is unlikely to be an economic prospect for Taupō (the cost will outweigh the benefits)

- Rail is only economic for large bulk freight and/or long distances. Trucking dominates the freight market, carrying 93% of New Zealand freight task by weight, and 75% by weight-distance (Tonne-kms).⁴
 - providing faster, door to door services
 - strong operator competition
 - shares road network costs with a high volume of cars.
- KiwiRail, the only rail freight provider in New Zealand, requires around \$300 million a year in government funding to maintain its operations. Train operations are unable to recover the maintenance costs of the rail network outside of the golden triangle of Auckland, Hamilton Tauranga.⁵
 - The focus of government investment is a renewals and maintenance programme for existing network, and the reinstatement of the line near Kaikoura⁶
- In addition, “the Provincial Growth Fund (PGF) is investing in building the connectivity and economic productivity of regions, and ensuring that regions get their fair share of the opportunities that rail can provide.”
 - However, focus appears to be on opportunities from improving existing rail connections (rather than building new lines).

⁴ [Richard Paling Consulting, National Freight Demand Study 2017/18, September 2019](#)

⁵ Treasury, Budget 2015 information release. <https://treasury.govt.nz/sites/default/files/2017-11/b15-3127034.pdf>

- Future investment is signalled to focus on the North Auckland Line, connecting to Northland.⁶

Figure 20 – The closest rail connections to Taupō District are Taumarunui, Kinleith and a closed line to Rotorua



Diagram Source:
[Ministry of Transport](#)

⁶ [The Draft NZ Rail Plan 2019](#)

8.8 Taupō and Turangi are popular rest and driver swap locations for long distance trucks – but trucks cause noise and vibration problems in residential areas

- The popularity of Taupō and Turangi is driven by:
 - supply chain logistics
 - accommodation and food offerings
 - strict driver hour restrictions aimed at reducing safety risks associated with driver fatigue.
- The benefits for the district are:
 - economic opportunities for the hospitality sector, most valuably in the off-season
 - transport and logistics opportunities for local producers, e.g. cheaply back-filling and filling partially empty trucks.
 - Truck driving provides employment opportunities.
- Problems cause by trucks on residential roads are:
 - blocking views in Taupo
 - truck noise disturbing residents, especially at nights and early morning when trucks leave.
 - Strong vibrations due to our soft ash and pumice soils disturbing residents and creating extra noise.
- There may be an opportunity in partnership with businesses and NZTA, to improve truck areas near State highways and away from residential areas, like Stag park, to reduce the volume of unnecessary truck travel in urban areas.

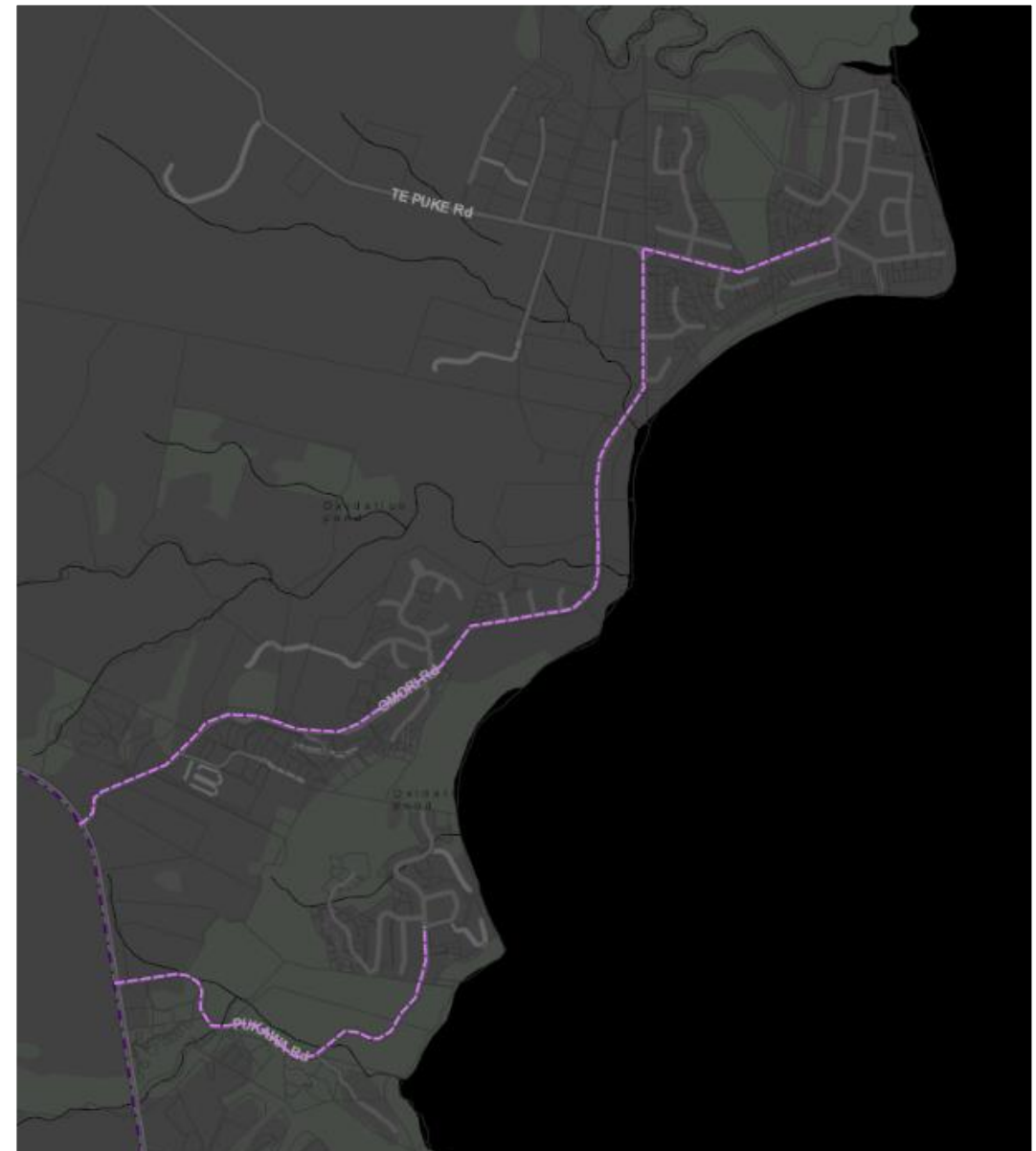
8.9 New industrial activities in rural areas may create problems on rural roads.

- Taupo has permissive district plan rules that allow industrial activities in rural areas, for example milk processing plants that use secondary geothermal heat.
- Some of our rural roads may not be built to withstand high volumes of truck traffic. There may be safety risks and/or remediation work required to accommodate large truck volumes.

9. Resilient and reliable

- 9.1 [Government Policy Statement on Land Transport \(2018\)](#) put a greater emphasis on improving resilience
- [Waka Kotahi \(the NZ Transport Agency\) Resilience Framework \(2018\)](#)
- 9.2 The Waihi slip poses a risk to state highway 41 connecting Turangi and western towns and settlements.
- 9.3 Snowfall is a risk for the desert road (State Highway 1) and State Highway 5 between Taupō and Napier
- 9.4 There are resilience concerns for State Highway 1 between Taupō and Turangi
- This route is susceptible to closure from crashes, landslides, and flooding
 - The alternative route (on the western side of Lake Taupō) is significantly longer and creates a significant connection loss and impact
 - A 40 minute trip connecting Taupō and Turangi becomes a 1 hour 20 minute trip, impacting on the connection to employment, customers, medical facilities, and other goods and services.
- 9.5 Taupō district has a large number of bridges and culverts which may be at risk in major events
- 9.6 Western bays settlements of Omori/Kuratau and Pukawa have only one entrance road, and these are susceptible to landslide and washouts.

Figure 21 – Omori / Kuratau and Pukawa have a single point of entry/exit



Feedback from consultation on specific risk areas

9.7 The study needs to investigate the resilience of the District network. I have observed the following events. (1)

- SH1 Taupo to Turangi closed by slips Halletts Bay - Motutere
- SH1 Taupo to Turangi closed by inundation at Tauranga-Taupo.
- SH1 Taupo to Turangi closed by inundation at Motuoapa – Turangi by inundation from the Waimarino River and Waiotaka Rivers
- SH1 Turangi Tongariro River Bridge closed flood damage risk
- SH 1 closed by snow; Rangipo to Waiouru
- SH 41 Waihi Hill Omaha Stm culvert washout [Christmas – Feb]
- SH 41 Waihi Hill closed by landslide- earthquake hazard risk
- SH 41 Waihi Hill closed by slips
- SH 41 Waihi Hill closed by accidents
- SH 47 closed by culvert washout Te Ponanga Saddle
- SH 32 closed by culvert washout.

9.8 If SH 41 Waihi Hill is closed, Omori-Kuratau- Pukawa and the Western Bays area have no alternative route to Turangi. These areas are significant population areas particularly at holiday periods. Access at times has been reduced for a number of weeks. (1)

- SH 41 and SH 47 once were both blocked concurrently each with a culvert washout caused by the same storm event.
- SH 1 and SH41 once were both inaccessible within a day of each other. Had they both been out on the same day, which could be possible in a storm event, and if that had been a Civil Defence emergency such as in the 2002 flooding event, there would be no access from Taupo to Turangi to bring down resources and equipment held in store by TDC for use in such events.
- If a route from SH41 Kuratua to SH 47 (Lake Rotoaira) was available this would increase the resilience of the roading network in the whole of the District Western area. Two alternatives exist:
 - Constructed a new road (approx. 20km) to link SH41 to SH 4. This would allow SH 41 Waihi Hill to be by-passed.
 - There exists a private forestry road through the Waihi=Pukawa Farm and Lake Rotoaira Forest. Access via it in Civil Defence or other emergencies has never been permitted by the owners because of issues over liability, risk and safety. However if it were upgraded to a safe traffic ready state and risk in the event of it being used by the public carried by TDC or NZTA, it would be of great benefit to the resilience of the network for all concerned.

9.9 The Waiotaka River for should be upgraded with a bridge. (1)

- This would ensure a resilient alternative route for the Rihia and Waiotaka Road residents and two Marae in that area.

10. Land use chapters – drivers of travel demand

Residential

Growth in North West Taupō (including Kinloch, Mapara, Nukuhau, Rangatira Park) will put pressure on the northern entrance to Taupō and the Control Gates Bridge, especially in morning and evening commuter peaks. Any increases in lifestyle rural areas, will likely also be in these zones to the North West of Taupō.

Growth in Southern Taupō suburbs (Wharewaka, East Urban Lands - like Nga Roto estate, and 5 Mile bay) will put greater pressure on the southern entrance to Taupō and Lake Tce, especially in morning and evening commuter peaks.

Main employment areas are the Town Centre, and Industrial areas

The Town centre also provides the main primary school for students from the north-west suburbs, and the main high school for Taupō. Hilltop provides another school hub, with the second high school, the intermediate, and several primary schools all in close proximity.

Commercial and Industrial

Increased commercial and industrial activity will result in creased traffic on Spa Rd and Tauhara as the main connection spine to Taupō's industrial areas.

Short-stay visitors (and state highway traffic)

Taupō remains a popular stopping destination for State highway traffic. With strong lunch time and seasonal peaks.

Holidayers and long-stay visitors

Taupō is a popular holiday destination for new visitors, and has a large number of holiday homes. Approximately one third of the housing is holiday homes (TD2050, 2018). In summer and holiday peaks, a heightened town population places greater pressure on main links to recreational areas of the lake and the Town for large periods of the day.

Combined impact

A strong centralised and vibrant town centre, reinforced by District Plan Rules that require most activities to occur within the town centre, means that Taupo Town remains the primary destination for workers (as well as industrial areas), shoppers, short stay visitors, and long stay visitors seeking leisure and hospitality.

Alternative entrances to Taupō from State highway from Centennial Rd, Broadlands Rd, and Napier Rd are not popular, as the do not provide easy, intuitive, or scenic entrance to Taupō town, the primary destination, for short stay visitors. Regular users are more likely to use these routes to get to their destination, if that destination is not in the Town Centre.

Growth in all these areas will exacerbate pinch points:

- on Control gates bridge
- right turns and severance on Spa Rd
- right turns and severance on Lake Tce.

Improved walking and cycling links to provide options for regular commuters and school trips provides an opportunity to reduce vehicle traffic generated by these activities.

Improved walking and cycling links to the town centre provide an opportunity to reduce holiday and peak traffic, generated by heightened Taupō summer and holiday population for those seeking leisure activities and hospitality.

Park and ride opportunities close to the town centre, may provide an option for some short stay visitors, to park on the outskirts of town and walk or cycle into town to the leisure and hospitality areas.

Northern growth areas

(from TD2050, 2018)



11. Maintain predictable and reasonable travel times in the face of growth

11.1 Roads should have a clear function that determines the balance required between the free movement of vehicles and allowing stopping, parking and pedestrian crossing opportunities.

- Roads serve two primary roles, to facilitate the movement of people and goods and to act as places for people.
- It's important that our main roads flow well, and people can get around easily. Having dedicated main roads that prioritise traffic flow support this.
- In other areas, a balance needs to be struck. Feeder and side roads need to also support house and business access, street parking, cycleways and safe and easy pedestrian crossing opportunities. Town and village areas need to support social and economic interactions.
- Waka Kotahi's (the NZ Transport Agency) One Network Road Classification (ONRC) is an example of a framework that considers movement and place when determining the road classification.

11.2 It is important to strategically control where traffic growth is accommodated to avoid negative impacts of increased traffic in high 'place function' areas.

Letting traffic growth occur organically may result in high volumes of traffic in unwanted sensitive or high-conflict areas, such as:

- town pedestrian and eating areas
- alongside popular, beach, recreation and tourist areas

- alongside schools, creating safety concerns and congestion at drop-off and pick up times.

The [Taupo Urban Commercial and Industrial Structure Plan \(CISP\)](#), as discussed earlier, sets out a vision for future growth and development of Taupō. It includes a strategic plan for accommodating traffic outside of high value town areas of Taupō. In particular, shifting through-traffic away from:

- Tongariro St, which links the town to green spaces and parking areas
- Lake Tce, to create more seamless links between hospitality areas and lakefront reserve areas.

11.3 Planning should be undertaken so that capacity is put in place and issues overcome as (or before) they arise.

- It takes time to plan, design and consent interventions
- Interventions which are reasonably likely, but the timing is uncertainty should be sensibly planned and ready to go within the window of possible need, including:
 - Route protection
 - Resolving land issues
 - Preliminary design
 - Consenting, where sensible.
- Having projects ready to go creates the opportunity for funders committing to them, for example:
 - National politicians and political parties looking to make election commitments
 - government funds looking to deliver projects
 - economic stimulus or job creation funding in difficult economic times.

11.4 Population growth in some areas along with continued growth in visitors and tourism, plus seasonal influxes, are combining to place pressure on a few concentrated roads and intersections.

- Taupō town has experienced significant growth in recent years (2016 – 2019):
 - Taupō population has grown, leading to increased local traffic and commuter peak traffic
 - The number of tourists / holidaying visitors continues to grow
 - State highway traffic has grown, including the number of short-stay visitors coming for lunch or a break.
- All this growth culminates on the Northern and southern entrances to Taupō
- Local growth will be located in northern and southern parts of Taupō, putting more strain on current congestion points.
- There is potential for continued sustained growth in State highway traffic, and lunchtime visitors to Taupō.
- There is potential for continued sustained growth in tourism.
- Recent growth in traffic has created:
 - Noticeable increase in congestion on Control gates hill and Spa Rd
 - Streets that are difficult to cross
 - Streets that are difficult to right-turn into
- Forecast areas where traffic growth will impact on services levels are:
 - Control gates bridge (where traffic in each direction must reduce to one lane from two)
 - Spa Rd (between Titiraupenga St and Tongariro St), and especially right hand turns on Spa Rd.
 - Right hand turns onto Lake Tce

Figure 22 – Areas of strong cyclic traffic growth in recent years

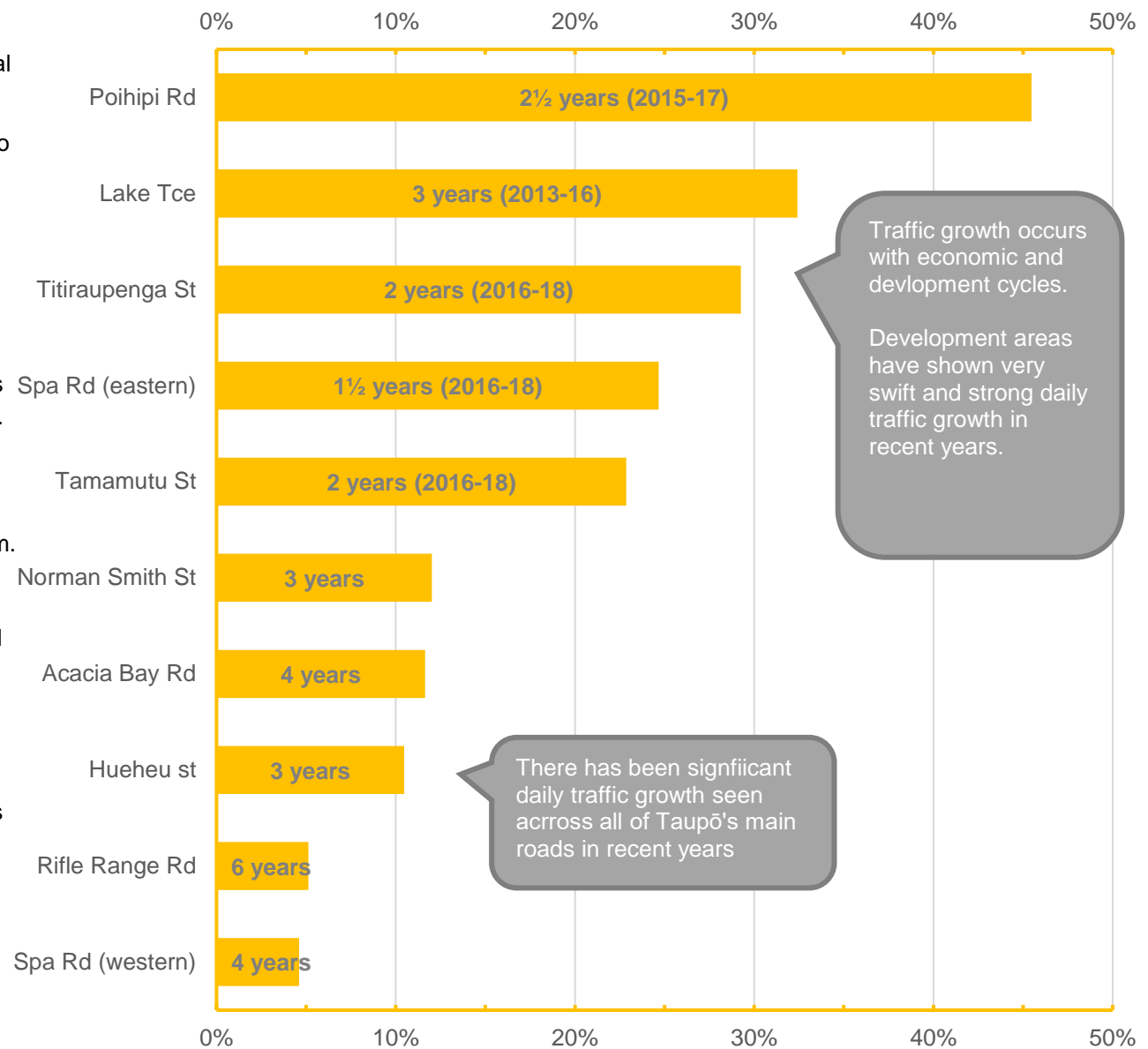
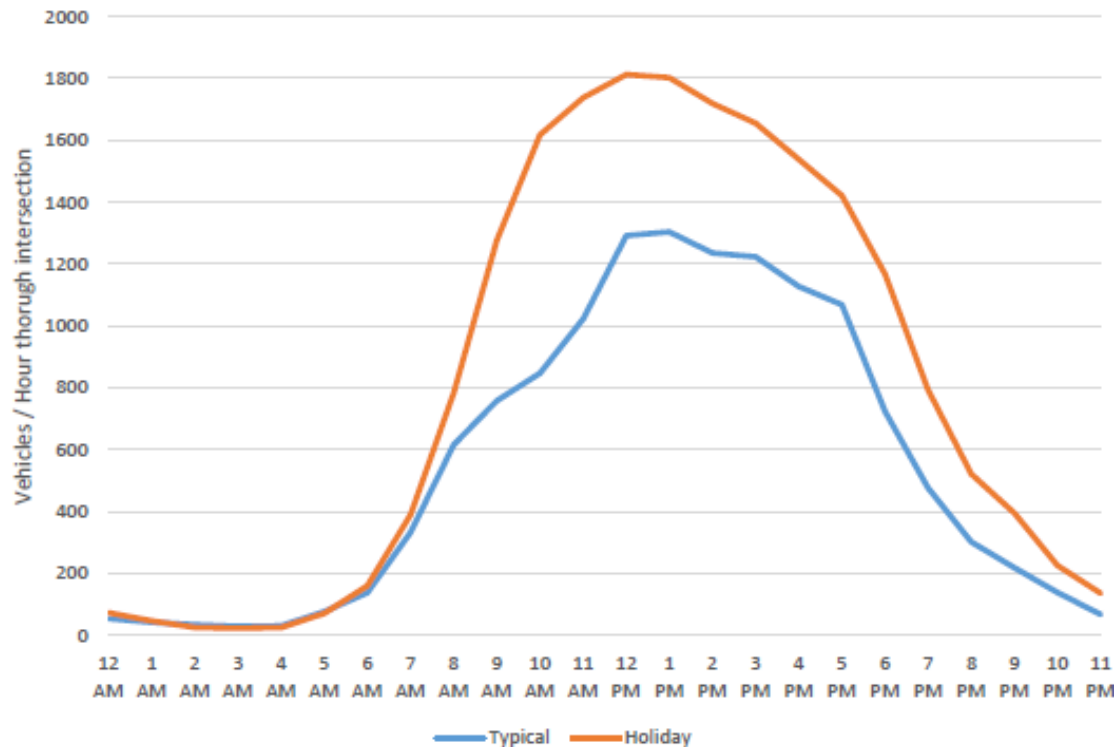


Figure 23 -Forecast (2041) Morning Peak (left) and Evening Peak (right) Level of Service



**Figure 24 – Holiday traffic compared to typical day
(Tongariro / Heuheu traffic light intersection)**



11.5 Taupo has (tidal) commuter peaks into town in the morning, and out of town in the evening. It also has a lunchtime peak, in particular with State highway and visitor traffic – which becomes longer and more prominent in summer and holiday periods.

- It is not reasonable to try and eliminate traffic congestion and travel delays.
 - Congestion often only occurs for a short portion of the day or year.
 - Eliminating congestion would require large and expensive roads expansion, which would be excessive and empty for most of the day/year.
 - In addition, as traffic tends to head to the same places – parking areas, shops, schools – other bottlenecks, for example at parking entrances, are likely to emerge. Removing traffic bottlenecks may simply increase congestion and delays at destinations.
- Instead it is important to manage traffic congestion so that it is acceptable.
 - At commuter times this means that travel times are reliable, and minimised where the costs do not outweigh the benefits.
 - For holiday and visitor peaks, so that travel times do not unreasonably restrict and put-off potential visitors and associated economic opportunities for the district.
- The challenges of how much to invest to manage peak demands are not limited to transport. Taupo's (and others') tourism strategies have for some time recognised the need to focus on spreading visitors throughout the year, and increase the value from visitors, rather than attracting more in the peak periods, when the costs and impacts of servicing them can outweigh the economic benefits.
- Small amounts of congestion and delays at peak times are tolerable if:
 - the costs of addressing the capacity constraint are very large
 - delays are only for a short period of day or year
 - the delay time is not too severe.

11.6 Drivers prefer roundabouts

- We have several roundabouts that work well in the District.
- Roundabouts often do not require stopping traffic flows.
- Roundabouts can work well both at busy peak times and for the large portions of the day when there is not a lot of traffic.
- Roundabouts are often a safe solution for drivers:
 - low levels of death and serious injury
 - naturally slow traffic
 - reduce the angle of crashes
 - drivers only have to look in one direction.

11.7 However, roundabouts are not always a good solution

- Roundabouts work well when traffic flows are balanced, but in other circumstances they may obstruct major traffic flows in favour of minor side roads.
 - Roundabouts do not control which roads have the right-of-way.
 - Priority is simply given to the traffic coming from the right – as determined by the give way rules.
- Multi-lane roundabouts can be intimidating for older, visiting, or less-confident drivers.
- Large and busy roundabouts can be difficult for pedestrians to cross, especially the mobility impaired, young, or old.
- Busy or large roundabouts can be unsafe for cyclists.
 - Best practice is to provide an off-road alternative for cyclists.

11.8 Traffic lights provide easy and safe pedestrian crossing opportunities

- Especially the mobility impaired, young, or old

Figure 25 – Roundabouts give priority to the traffic from the right, which may not be the main traffic flow.

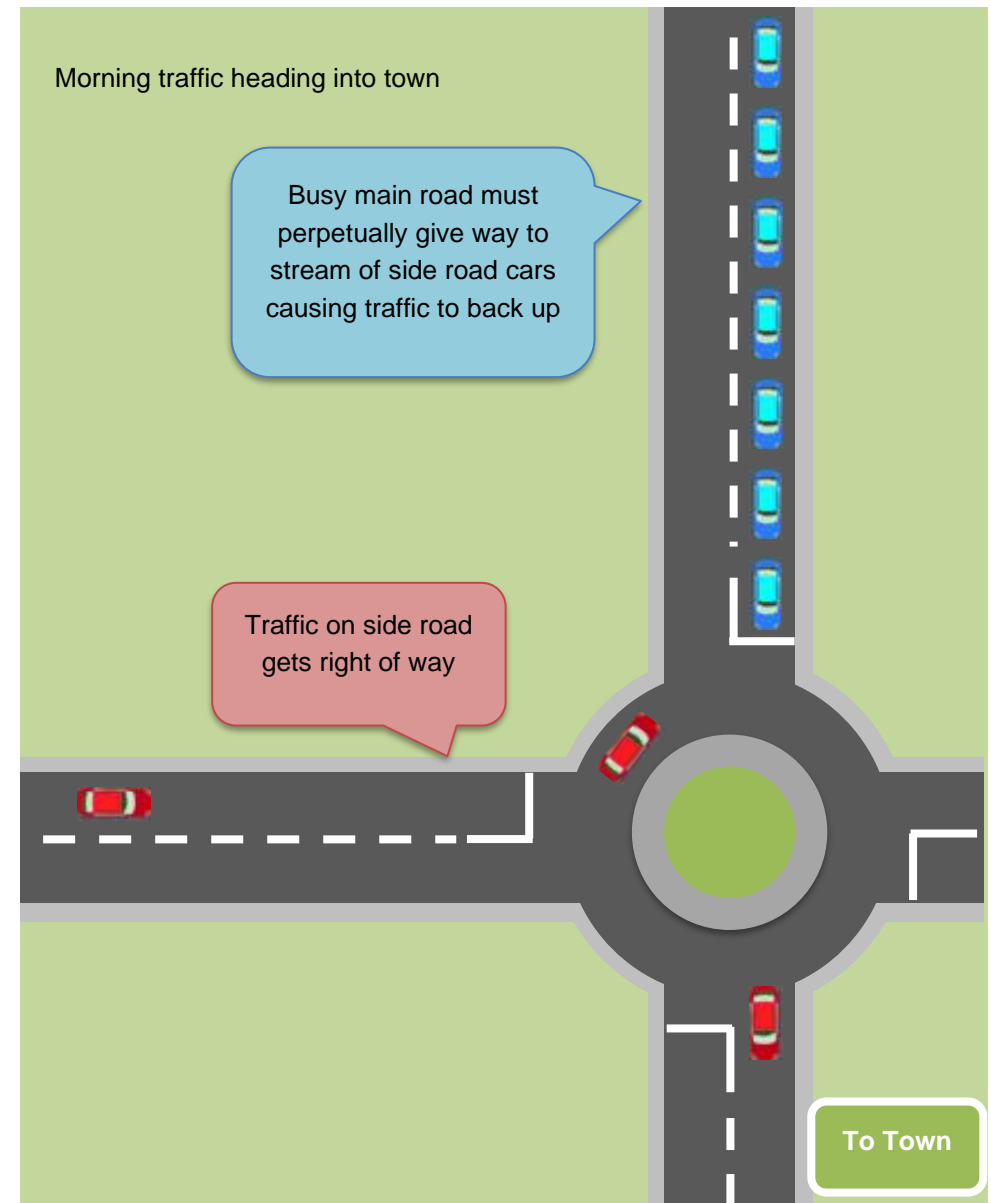
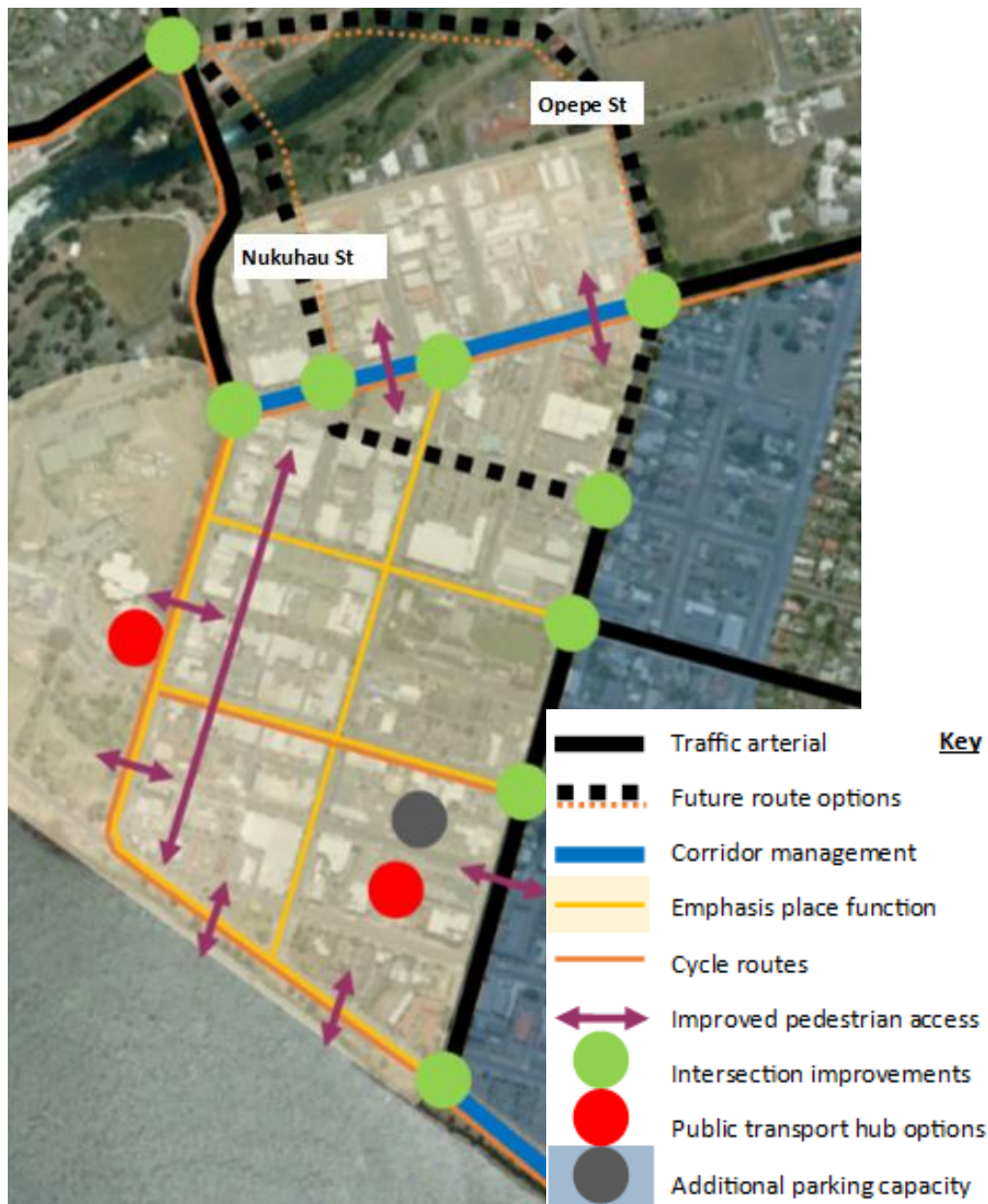


Figure 26 – Abley's proposed Taupō network plan



Abley's recommendations (Taupō Future road Assessment 2019)

11.9 Control Gate Bridge

- The existing Control Bridge is operating at capacity at peak times and the need for additional capacity across the Waikato River is required in the next five years

11.10 Lake Terrace east of Titiraupenga Street

- Improved cycle provision
- Corridor Management Plan – managing intersections, consolidating access along the corridor, traffic management during events
- Intersection improvements at Titiraupenga Street as part of the new arterial

11.11 Lake Terrace west of Titiraupenga Street

- Reduced traffic priority (may be through narrowing of corridor, reduced speed limit)
- Greater pedestrian connectivity to the lakefront
- Improved cycle provision

Key 11.12 Tongariro Street

- Reduced traffic capacity – two lanes down to one
- Reallocation of space to cycle lanes and enhanced pedestrian connectivity
- Enhanced bus hub (if location retained, or space reallocated to other modes and/or parking if new bus hub location selected)

11.13 Spa Road

- Corridor Management Plan – managing intersections, improving and consolidating access along the corridor
- Greater pedestrian connectivity

- Improved cycle provision
- Intersection upgrades (subject to preferred new bridge location) at Titiraupenga Street, Ruapehu Street, Nukuhau Street/Gascoigne Street, Tongariro Street/Spa Road

11.14 Titiraupenga Street

- Intersection upgrades as part of the new arterial route (for example changing priority to north/south)
- May require parking management review
- Improved pedestrian connectivity to areas where additional berm parking is provided east of Titiraupenga

11.15 Paora Hapi Street – dependent on arterial route and bridge location

- Improved connectivity and intersection upgrades on arterial route

11.16 Central business area

- Potential reduce speed limit
- Improved pedestrian connectivity – particularly for the laneways, to the lakefront and the Domain
- Potential new bus hub on Tuwharetoa Street (as part of the Council Office Building development)
- Potential parking building on Heuheu Street (long term)
- Additional berm parking east of Titiraupenga Street

Feedback from consultation on specific issues and areas

Intersection issues

11.17 **Intersection of Tauhara and Ngamoutu is very hard to drive across during school hours. (1)**

11.18 **Lights at Control gate would work better if there were two lanes going up the hill to allow side by side queuing. (1)**

- Would stop traffic backing up across the bridge and let left turning traffic get past
- left lane would be for turning onto Poihipi at the top.

11.19 **Get rid of the lights at Norman Smith and put in a roundabout (1)**

- You wasted our money in doing this and are not listening to the public

11.20 **Upgrade intersections on Spa Road - roundabouts not traffic lights (1)**

11.21 **There is no mention of the proposed round-about at the Wharewaka East intersection, that was planned when the Lakeside development was completed. Nor for the entrance to the new subdivision to the west. (1)**

- The current situation will be a problem at summer and peak times when traffic flow will prevent viable access on and off Lake Terrace at the intersection.
- We recommend that provision be retained for the roundabout in the Strategy. Plus safe pedestrian road crossings that have been noted nearby, on Figure 4, page 16 of the draft Plan.

Maintenance issues

11.22 **The rapidly deterioration of the Broadlands road is adding costs to forestry, farming and local access. (1)**

11.23 **Add a clause to the Strategy that ensures that standard maintenance work must be scheduled and completed in an orderly and timely manner. We believe that regular maintenance is a given yet TDC are failing, particular with respect to the following issues. (1)**

- Standard works must include the raising of all low service covers, cast iron covers (manhole lids) to be flush with the current road surfaces. For example, on Spa Road and Lake Terrace opposite Emanuals.
- Standard works must include repairs to poor road surfaces such as at the Control Gate Bridge.

11.24 **Repair the Kinloch road to an acceptable state.**

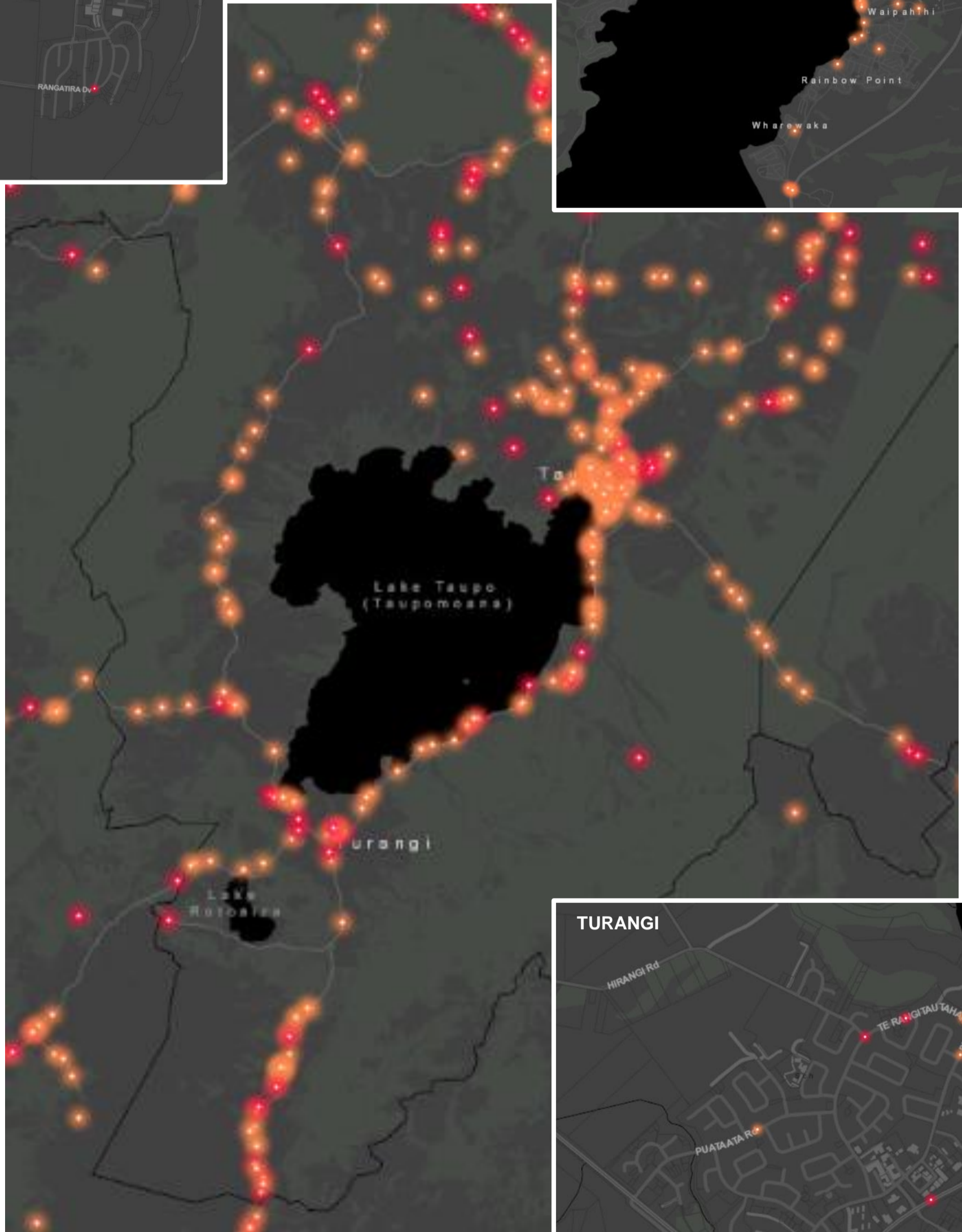
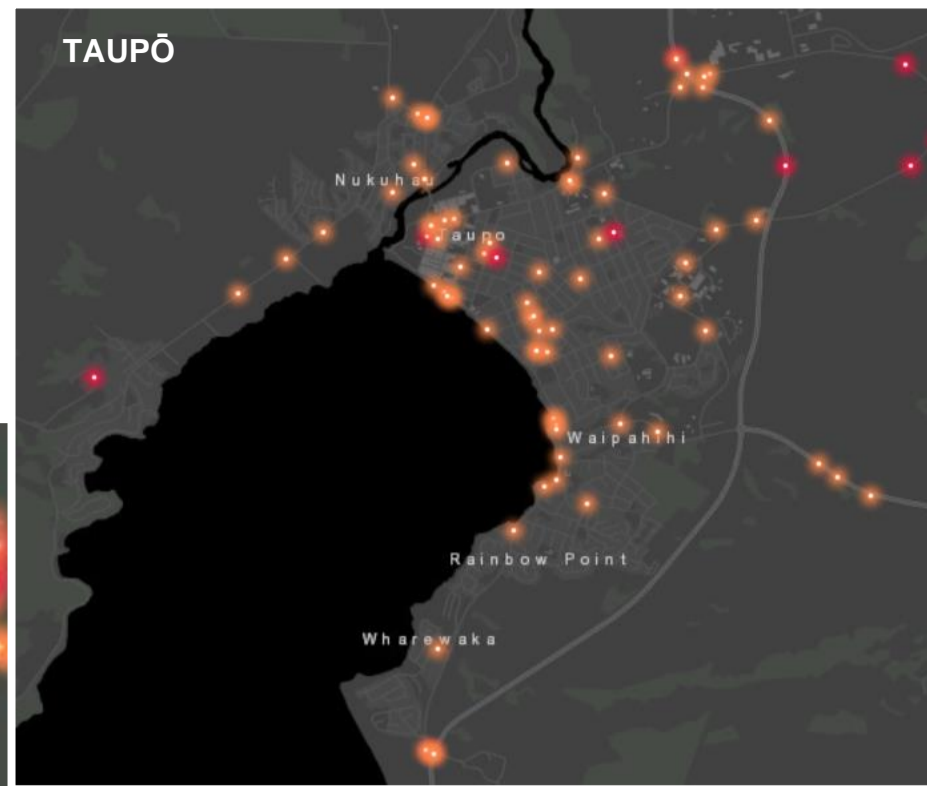
- Fix Kinloch road drainage and failed pavement. One of the roughest roads in district. Not good enough to say less traffic now due to Oakdale link
- Upgrade of Kinloch Road and the drainage along Kinloch Road
- Upgrade of Kinloch road alongside the poplars.
- Kinloch Road to be upgraded with proper storm water drains and levelled out to remove potholes bumps etc.
- The resurfacing (possibly raising the height of the road to protect tree roots) of Kinloch Road between Whangamata Road and the Poplars to avoid water pooling, repair the uneven narrow surface of the road and the breaking away of the road at the edges

Appendix 1 – Serious and fatal crashes in the last 10 years



Crash Analysis System (CAS) Data

- Orange dot: Serious Crash
- Red dot: Fatal Crash



Appendix 2 – What age-friendly means

Age-friendly Outdoor spaces and buildings		Age-friendly transportation checklist	
Environment	<ul style="list-style-type: none"> The city is clean, with enforced regulations limiting noise levels and unpleasant or harmful odours in public places. 	Affordability	<ul style="list-style-type: none"> Public transportation is affordable to all older people. Consistent and well-displayed transportation rates are charged.
Green spaces and walkways	<ul style="list-style-type: none"> There are well-maintained and safe green spaces, with adequate shelter, toilet facilities and seating that can be easily accessed. Pedestrian-friendly walkways are free from obstructions, have a smooth surface, have public toilets and can be easily accessed. 	Reliability and frequency	<ul style="list-style-type: none"> Public transport is reliable and frequent (including services at night and at weekends).
Outdoor seating	<ul style="list-style-type: none"> Outdoor seating is available, particularly in parks, transport stops and public spaces, and spaced at regular intervals; the seating is well-maintained and patrolled to ensure safe access by all. 	Travel destinations	<ul style="list-style-type: none"> Public transport is available for older people to reach key destinations such as hospitals, health centres, public parks, shopping centres, banks and seniors' centres. All areas are well-served with adequate, well-connected transport routes within the city (including the outer areas) and between neighbouring cities. Transport routes are well-connected between the various transport options.
Pavements	<ul style="list-style-type: none"> Pavements are well-maintained, smooth, level, non-slip and wide enough to accommodate wheelchairs with low curbs that taper off to the road. Pavements are clear of any obstructions (e.g. street vendors, parked cars, trees, dog droppings, snow) and pedestrians have priority of use. 	Age-friendly vehicles	<ul style="list-style-type: none"> Vehicles are accessible, with floors that lower, low steps, and wide and high seats. Vehicles are clean and well-maintained. Vehicles have clear signage indicating the vehicle number and destination.
Roads	<ul style="list-style-type: none"> Roads have adequate non-slip, regularly spaced pedestrian crossings ensuring that it is safe for pedestrians to cross the road. Roads have well-designed and appropriately placed physical structures, such as traffic islands, overpasses or underpasses, to assist pedestrians to cross busy roads. Pedestrian crossing lights allow sufficient time for older people to cross the road and have visual and audio signals. 	Specialized services	<ul style="list-style-type: none"> Sufficient specialized transport services are available for people with disabilities.
Traffic	<ul style="list-style-type: none"> There is strict enforcement of traffic rules and regulations, with drivers giving way to pedestrians 	Priority seating	<ul style="list-style-type: none"> Priority seating for older people is provided, and is respected by other passengers.
Cycle paths	<ul style="list-style-type: none"> There are separate cycle paths for cyclists. 	Transport drivers	<ul style="list-style-type: none"> Drivers are courteous, obey traffic rules, stop at designated transport stops, wait for passengers to be seated before driving off, and park alongside the curb so that it is easier for older people to step off the vehicle.
Safety	<ul style="list-style-type: none"> Public safety in all open spaces and buildings is a priority and is promoted by, for example, measures to reduce the risk from natural disasters, good street lighting, police patrols, enforcement of by-laws, and support for community and personal safety initiatives. 	Safety and comfort	<ul style="list-style-type: none"> Public transport is safe from crime and is not overcrowded. Transport stops and stations Designated transport stops are located in close proximity to where older people live, are provided with seating and with shelter from the weather, are clean and safe, and are adequately lit. Stations are accessible, with ramps, escalators, elevators, appropriate platforms, public toilets, and legible and well-placed signage. Transport stops and stations are easy to access and are located conveniently. Station staff are courteous and helpful
Services	<ul style="list-style-type: none"> Services are clustered, located in close proximity to where older people live and can be easily accessed (e.g. are located on the ground floor of buildings). There are special customer service arrangements for older people, such as separate queues or service counters for older people. 	Information	<ul style="list-style-type: none"> Information is provided to older people on how to use public transport and about the range of transport options available. Timetables are legible and easy to access. Timetables clearly indicate the routes of buses accessible to disabled people
Buildings	<ul style="list-style-type: none"> Buildings are accessible and have the following features: <ul style="list-style-type: none"> elevators ramps adequate signage railings on stairs stairs that are not too high or steep non-slip flooring rest areas with comfortable chairs sufficient numbers of public toilets. 	Community transport	<ul style="list-style-type: none"> Community transport services, including volunteer drivers and shuttle services, are available to take older people to specific events and places.
Public toilets	<ul style="list-style-type: none"> Public toilets are clean, well-maintained, easily accessible for people with varying abilities, well-signed and placed in convenient locations. 	Taxis	<ul style="list-style-type: none"> Taxis are affordable, with discounts or subsidized taxi fares provided for older people with low incomes. Taxis are comfortable and accessible, with room for wheelchairs and/or walking frames. Taxi drivers are courteous and helpful
Source: World Health Organisation – Global Age Friendly cities: a guide (2007)		Roads	<ul style="list-style-type: none"> Roads are well-maintained, wide and well-lit, have appropriately designed and placed traffic calming devices, have traffic signals and lights at intersections, have intersections that are clearly marked, have covered drains, and have consistent, clearly visible and well-placed signage. The traffic flow is well-regulated. Roads are free of obstructions that might block a driver's vision. The rules of the road are strictly enforced, and drivers are educated to follow the rules.
		Driving competence	<ul style="list-style-type: none"> Refresher driving courses are provided and promoted.
		Parking	<ul style="list-style-type: none"> Affordable parking is available. Priority parking bays are provided for older people close to buildings and transport stops. Priority parking bays for disabled people are provided close to buildings and transport stops, the use of which are monitored. Drop-off and pick-up bays close to buildings and transport stops are provided for handicapped and older people