

## 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.<sup>1</sup>

- 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.

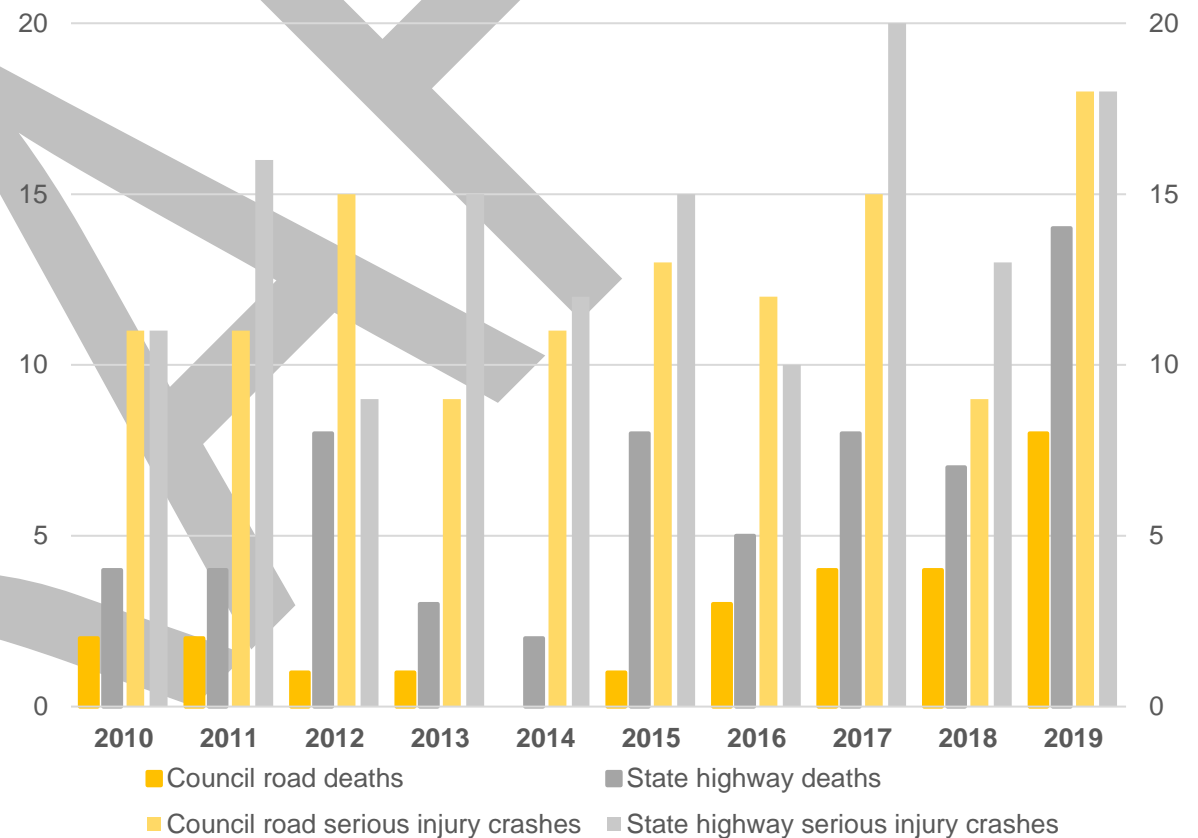
#### 1.3 State highway 1, especially between Turangi and Taupō needs safety improvement.

- 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

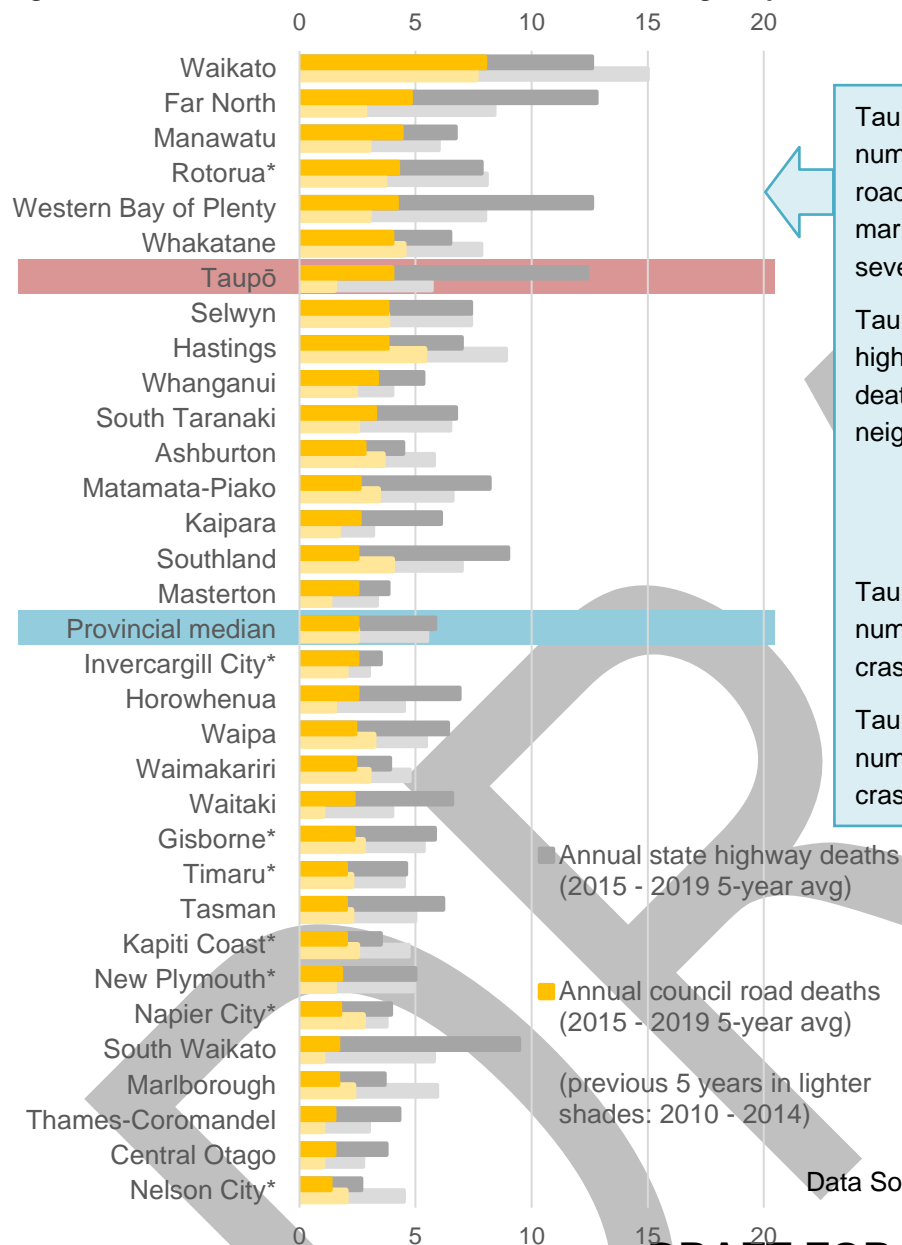


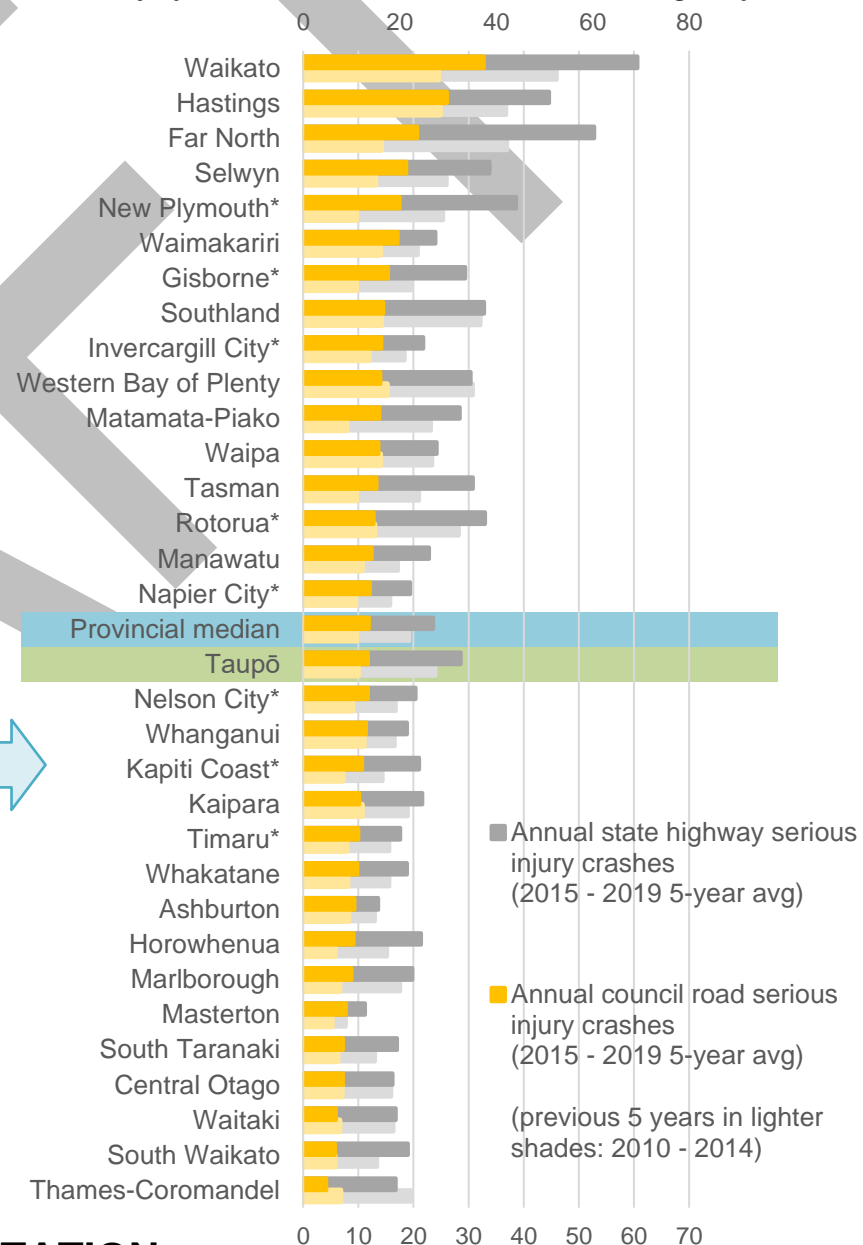
Figure 3 – Annual serious injury crashes on council roads and state highways

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.



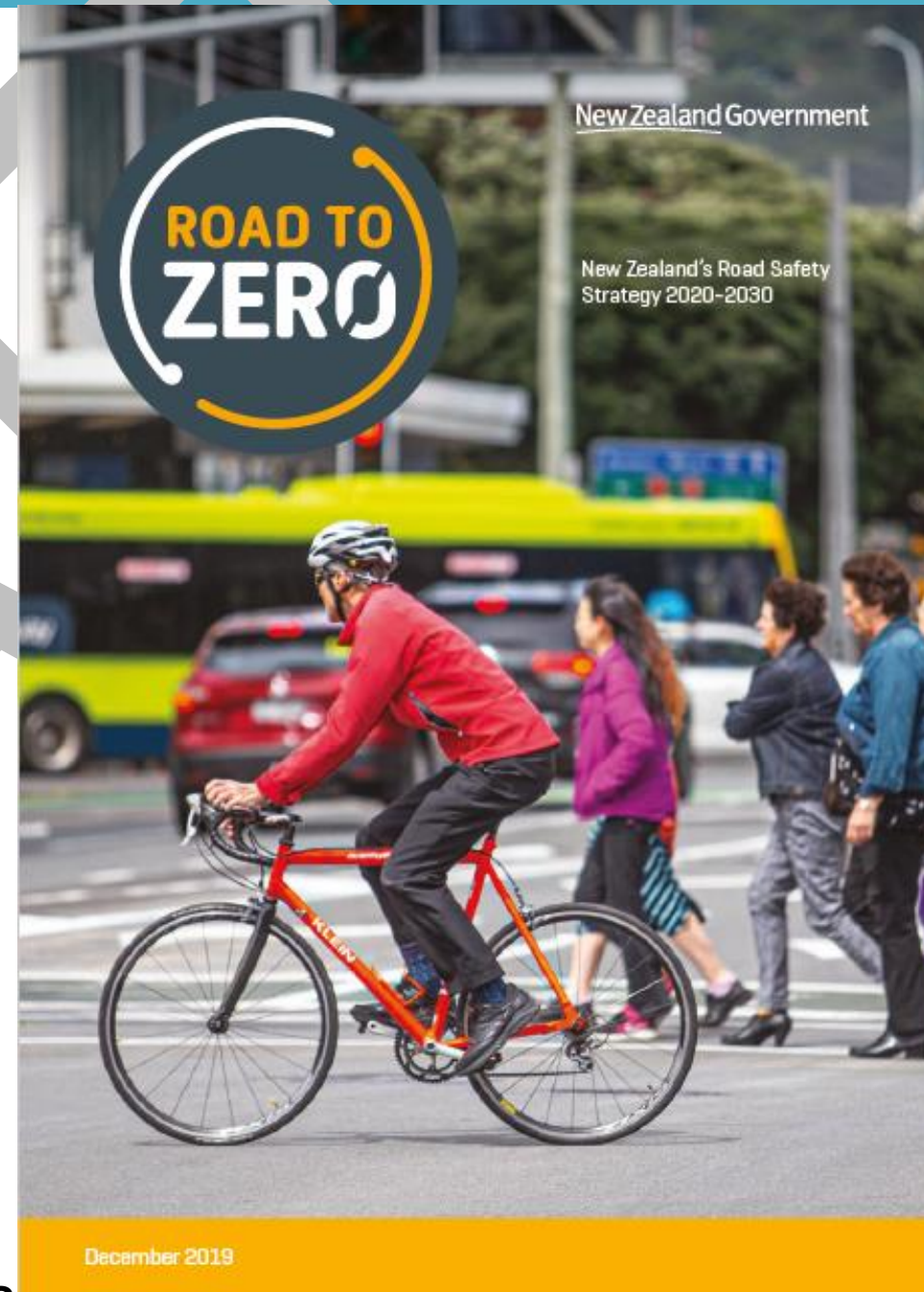
Data Source: NZTA, crash analysis system (CAS), 2020

#### 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;**

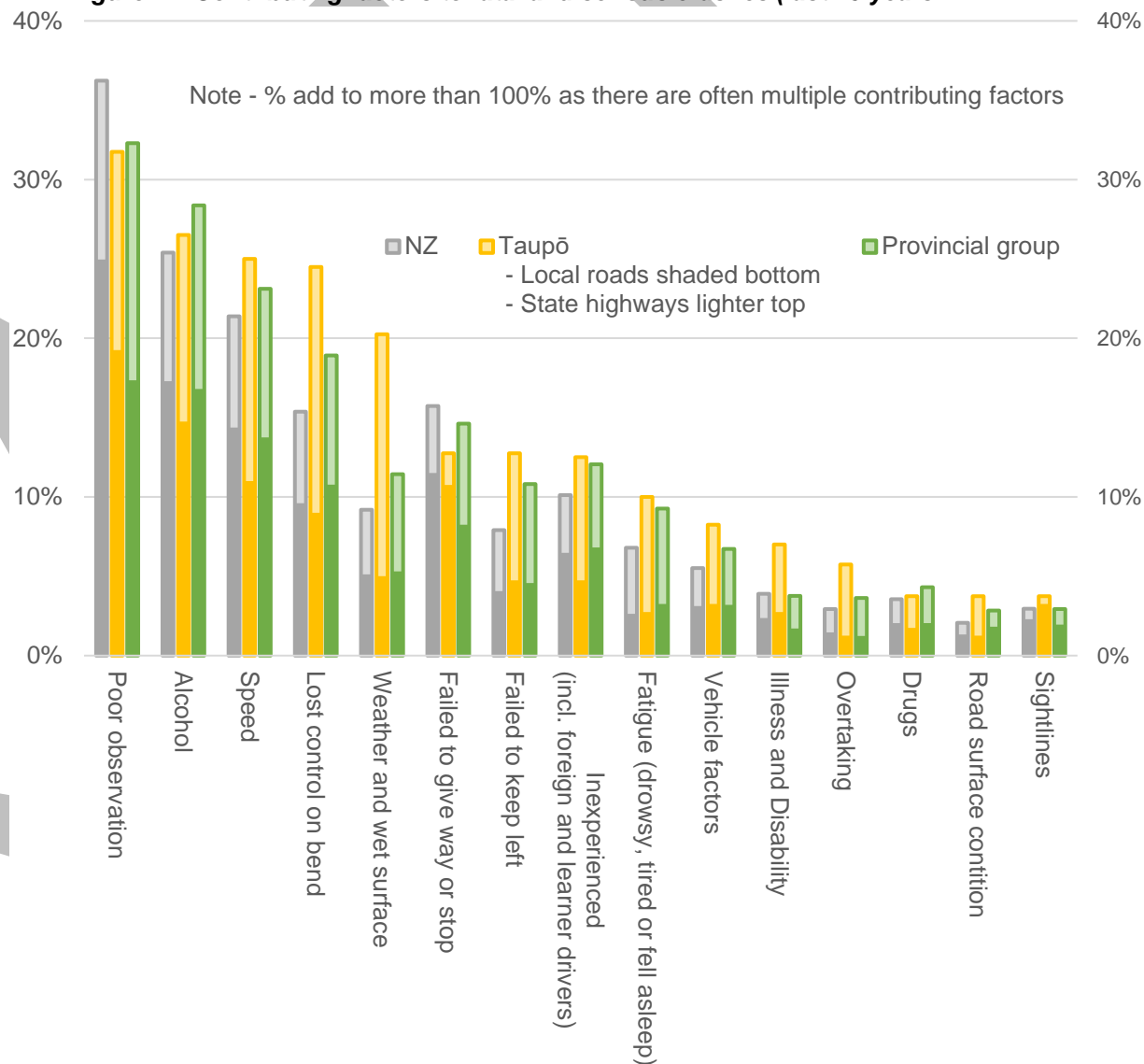
- Speed
- lost control on bends
- weather and wet surface crashes
- failing to keep left.

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

## 2. Supporting economic and social inclusion

### 2.1 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.

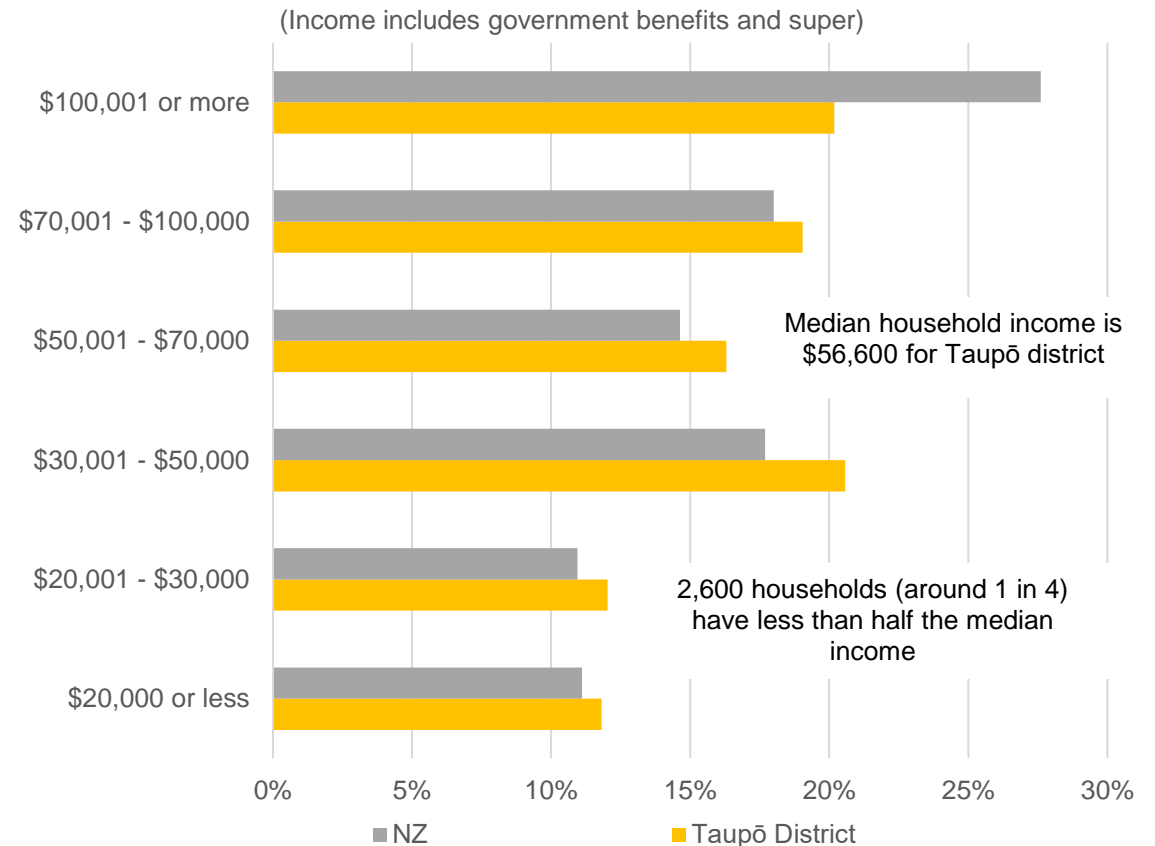
- Public transport needs to be affordable, easy and reliable, so that important journeys can be scheduled and are not put off.

### 2.2 Taupō district has a high proportion of low-income households

### 2.3 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



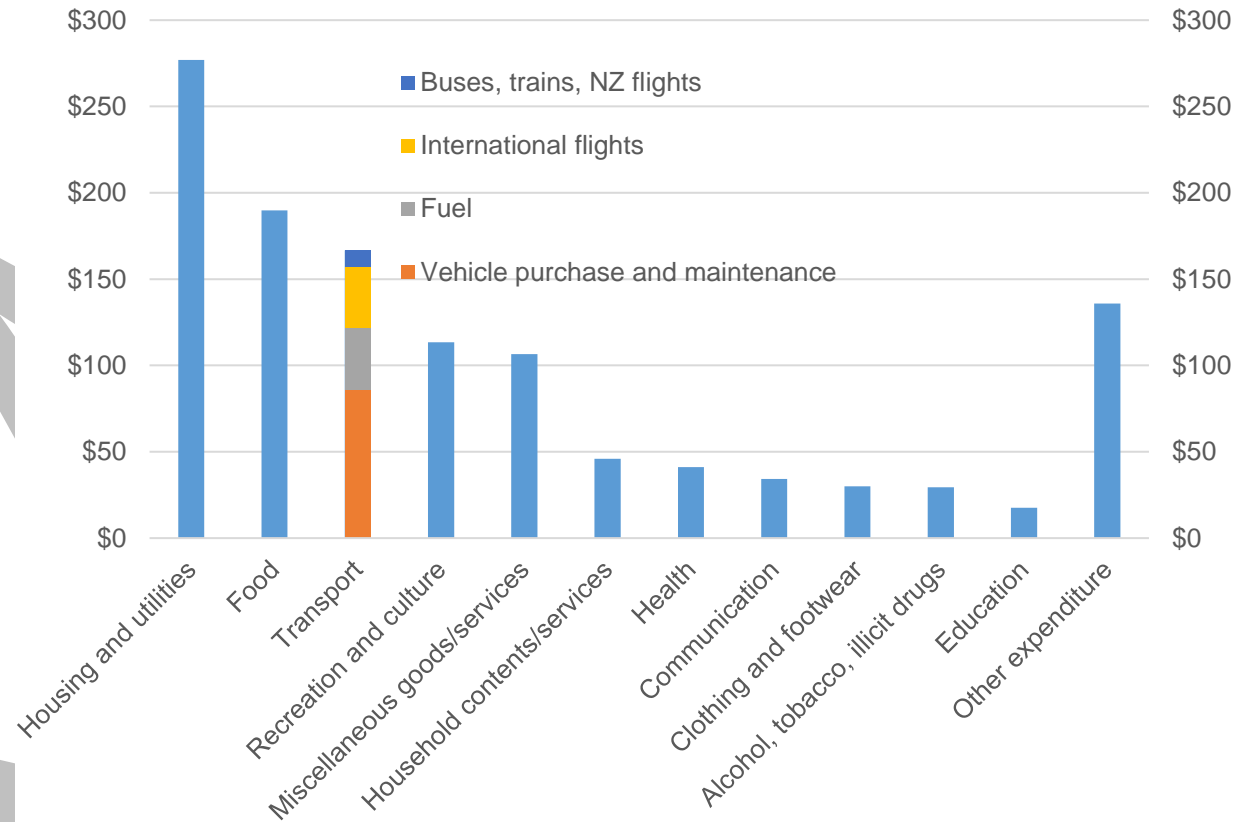
Data source: Statistics New Zealand, Census 2013

2.4 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%).

2.5 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).

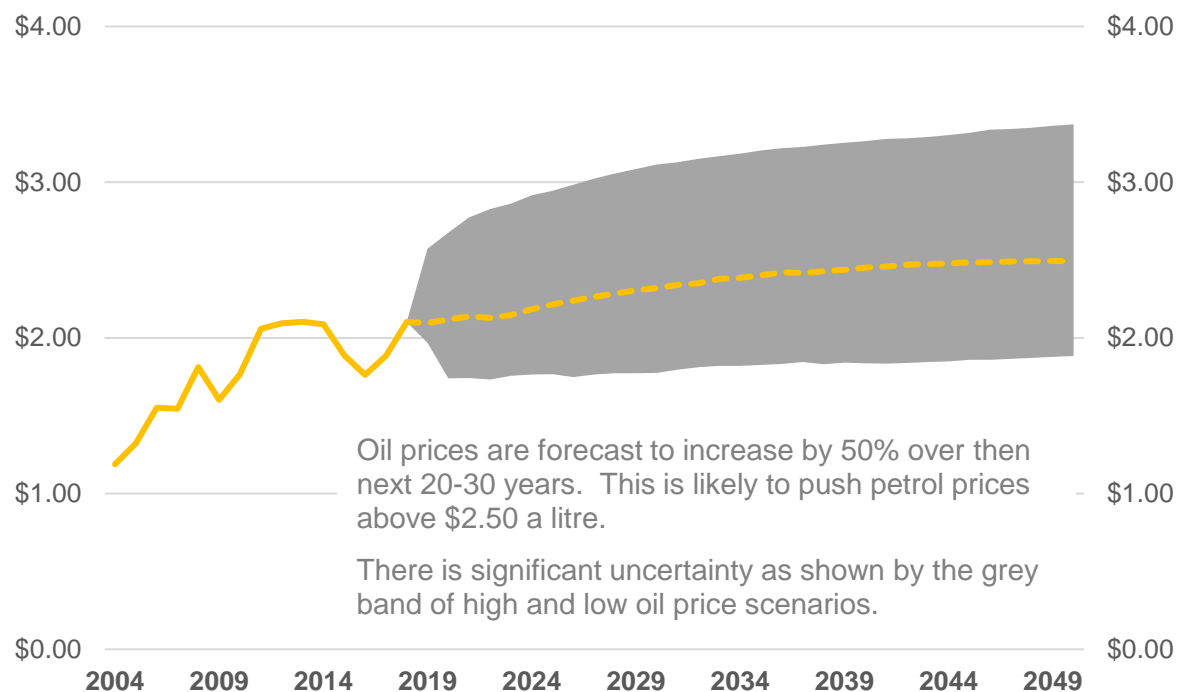
Figure 6 - Average weekly household expenditure in the North Island (excluding Auckland and Wellington)



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)



2.6 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.

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.

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

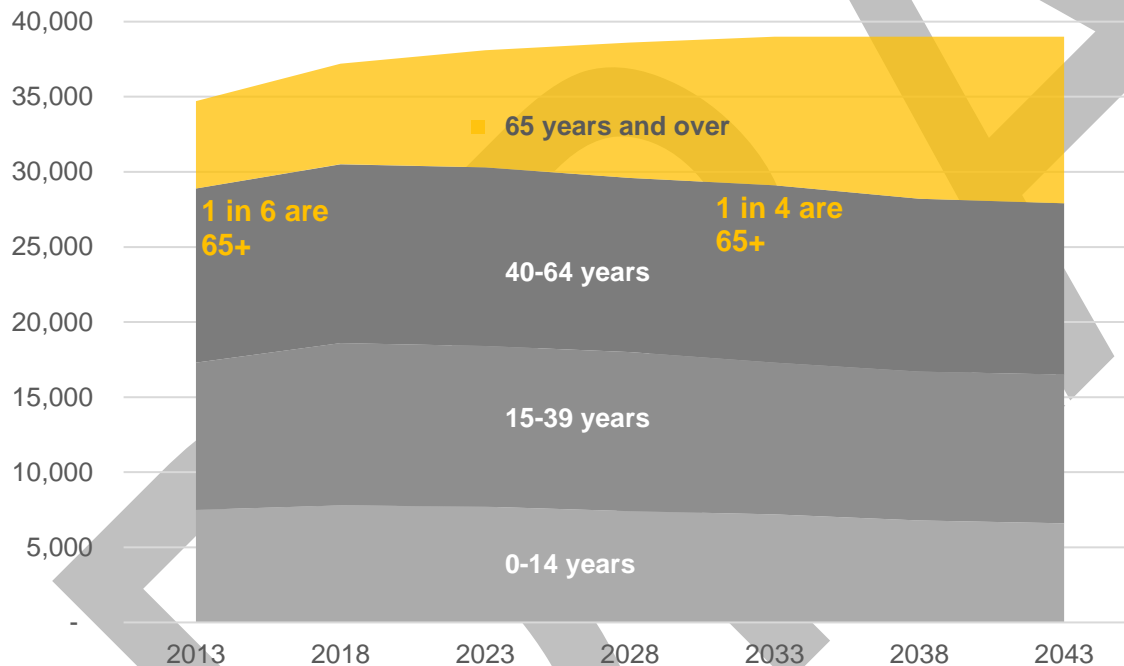
- In just 15 years' time, one in four people will be 65 or older.
- Taupō district may experience more older visitors in future.
- Main issues are (Appendix 2 provide more details):
  - Maintaining clear and even footpaths
  - Providing accessible crossing opportunities
  - Supporting older drivers,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

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

**2.9 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. These audits identified required areas for improvement.
- 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

**Figure 8 – Taupō District's aging population**



Data source: Statistics New Zealand

### 3. Supporting walking and cycling and other sustainable choices

#### 3.1 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

#### 3.2 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%).<sup>1</sup>

#### 3.3 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.<sup>2</sup>

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

#### 3.4 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

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

Figure 9 – NZ's greenhouse gas emissions by source

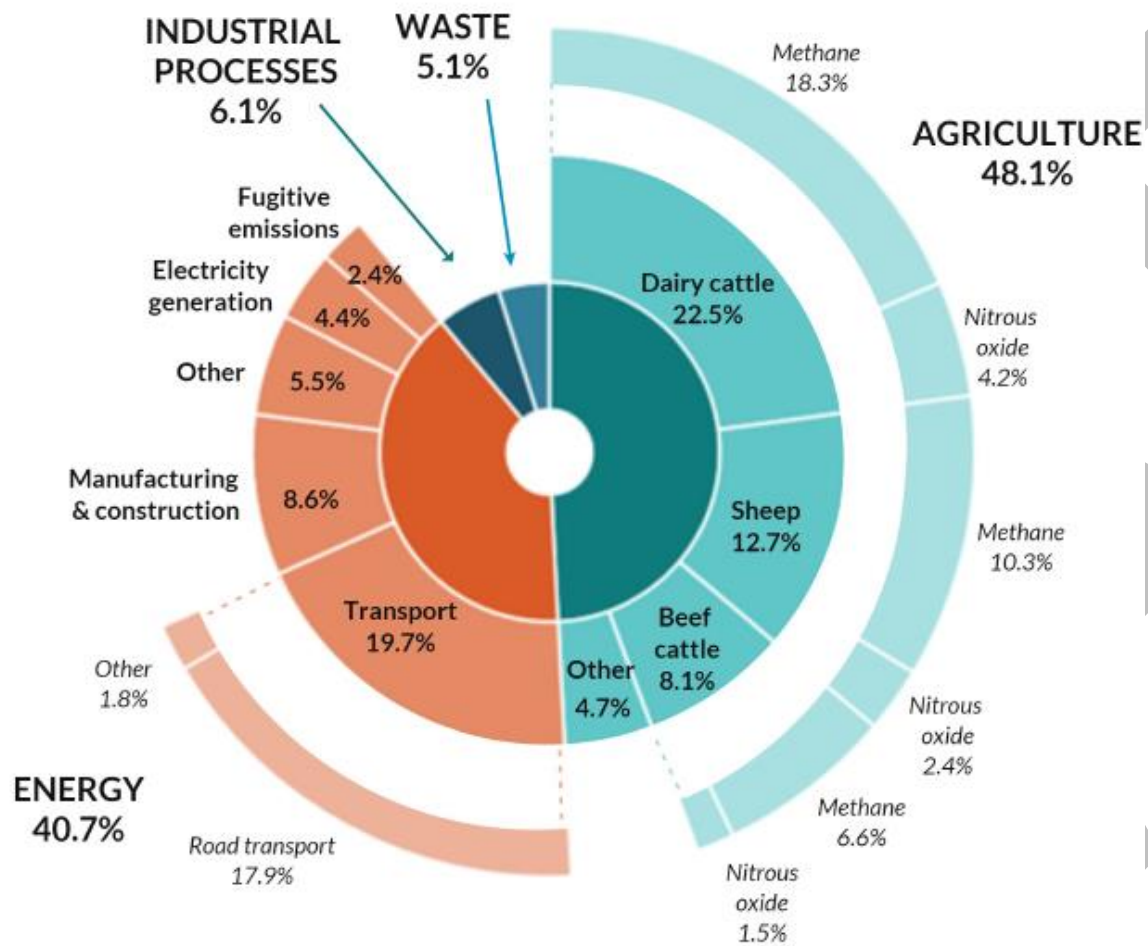


Diagram source: New Zealand's Greenhouse Gas Inventory 1990-2017, published April 2019

3.5 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.

3.6 Taupō could benefit from becoming an electric car friendly destination.

3.7 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 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.

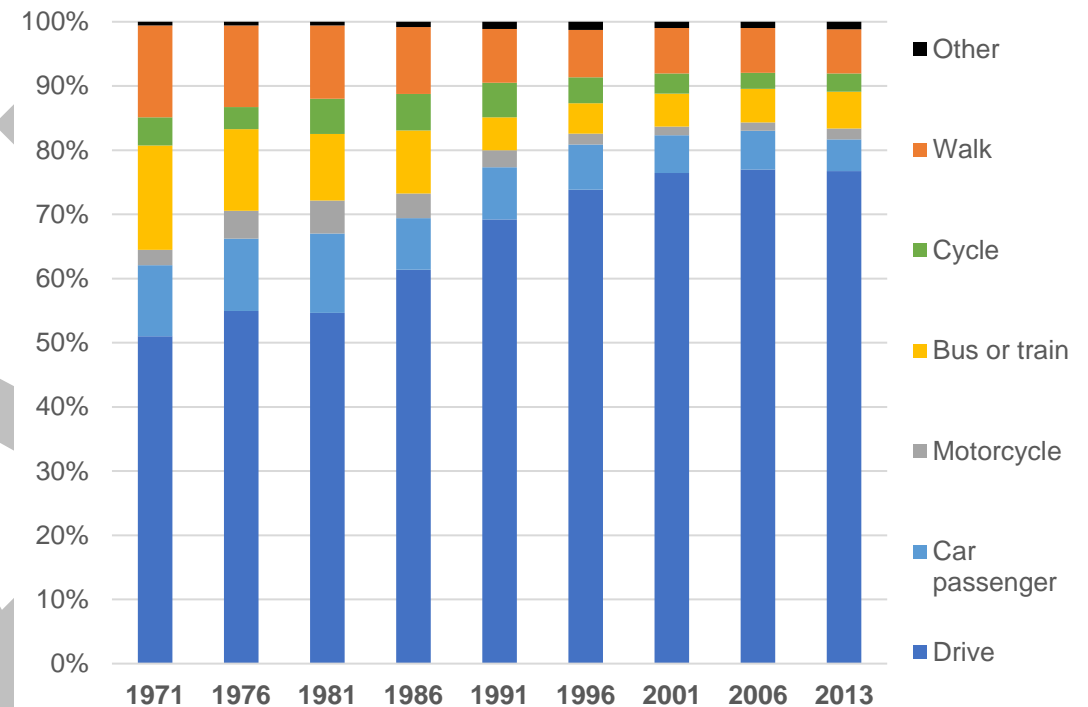
Figure 10 – How we travel to work compared to other provincial areas

	Walk	Cycle	Bus	Drive
Provincial median*	6.7%	2.7%	0.5%	81.2%
Taupō district	6.7%	2.2%	0.2%	81.2%

\* provincial areas from Local Government NZ's 'Provincial Group', see Figure 12 for complete list

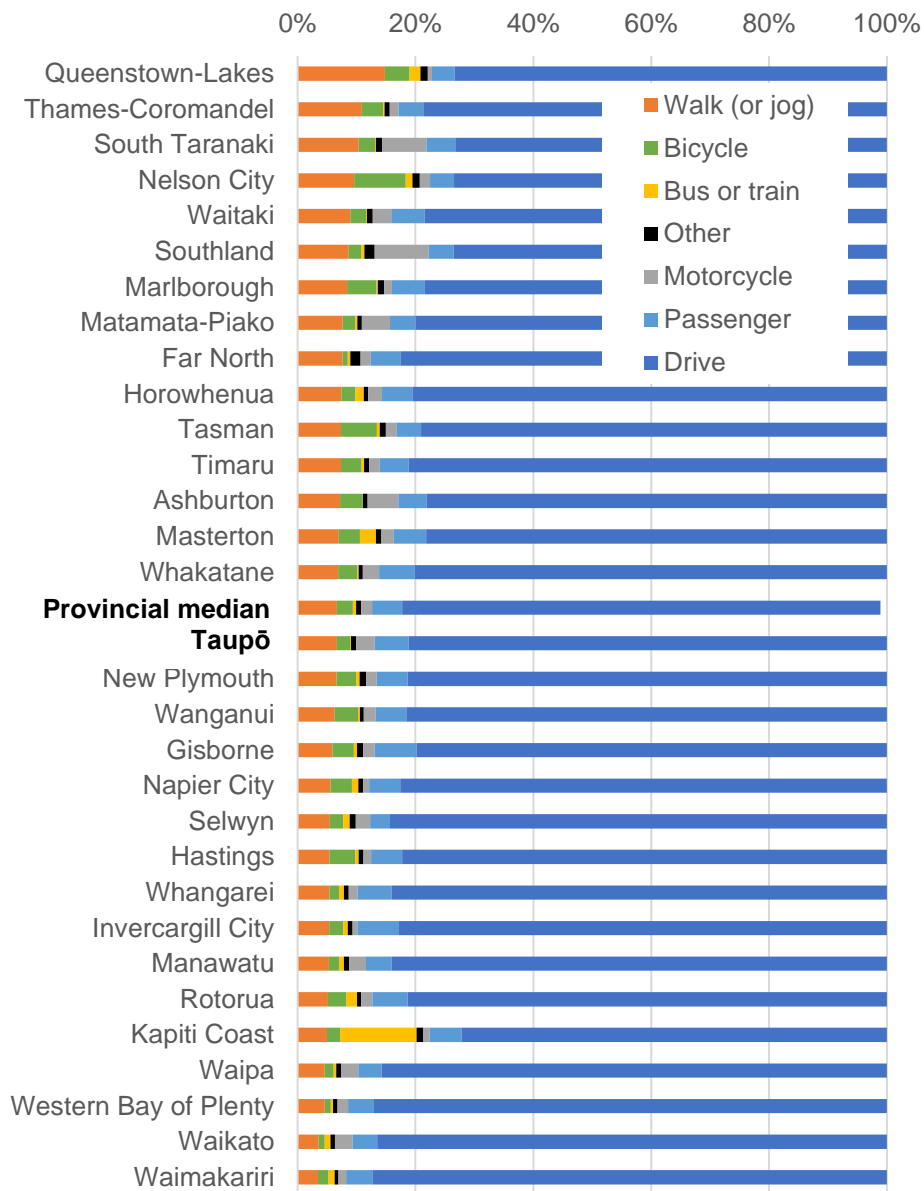
Data source: Statistics NZ, Census 2013, Main means of travel to work, for the employed, usually resident population, aged 15 and over

Figure 11 – NZ - How we travel has shifted from walking and busing to driving



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

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



3.8 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.

3.9 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.

### 3.10 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.
- Priority should be given to walkers.
- 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.

### 3.11 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



## Other environmental concerns

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



Photo Source: Stuff / Youthtown Trust Rescue Helicopter

### 3.12 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



**4. Promote vibrant towns that foster social and economic interactions**

- 4.1 The design and function of our town streets impacts on vibrancy and social and economic activity
- 4.2 Increased traffic is creating barriers and safety concerns, especially for pedestrians
- 4.3 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



Proposed roading network through the town centre

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

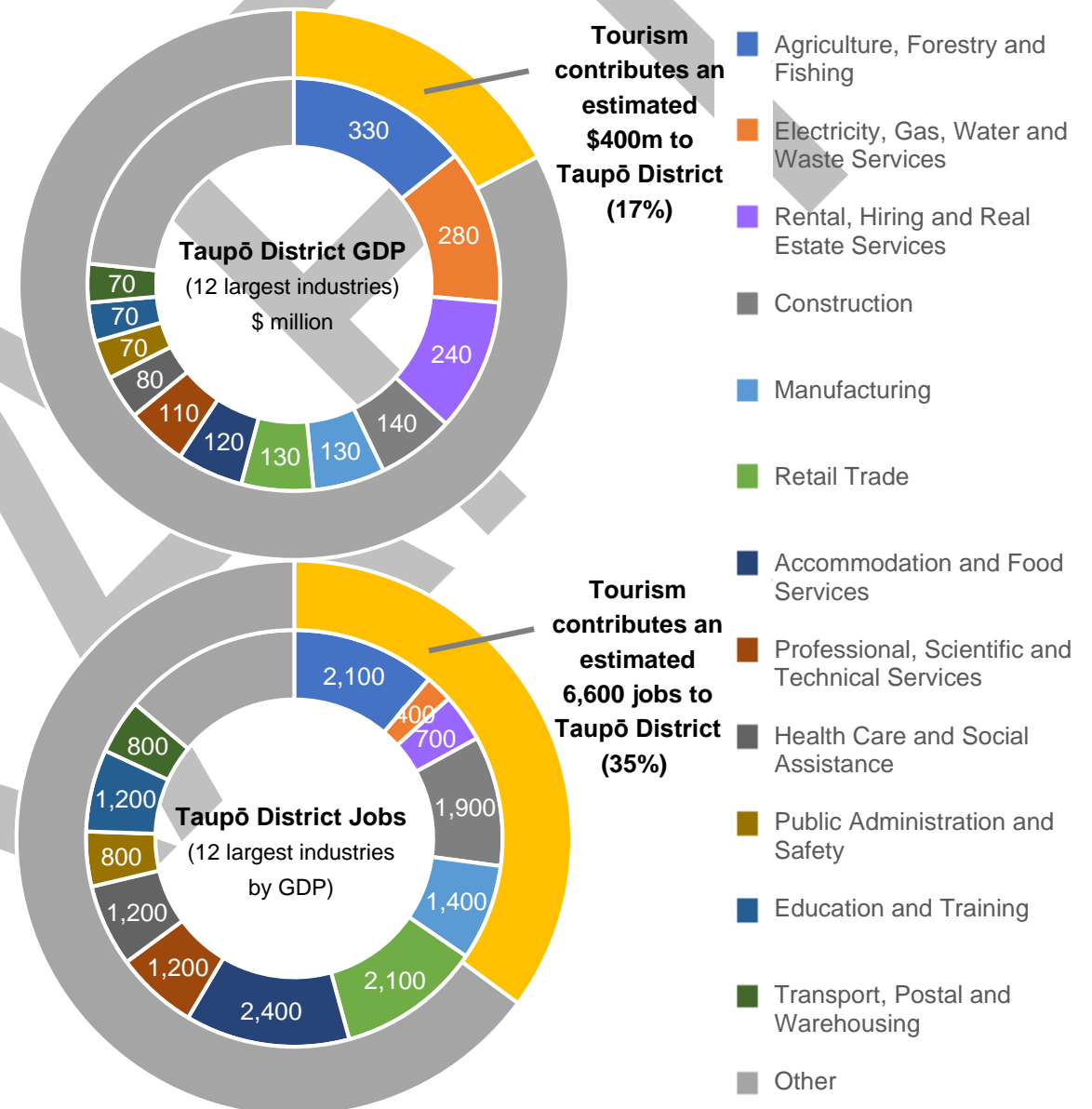
4.5 We need to support visitors to come, stay and interact to support economic opportunities

- 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 connections to key tourist attractions, encouraging people to spend some time and look around.

4.6 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

## 5. Taupō parking

### 5.1 Currently it is difficult to find a park in Taupō Town centre – and not just during the summer peak.

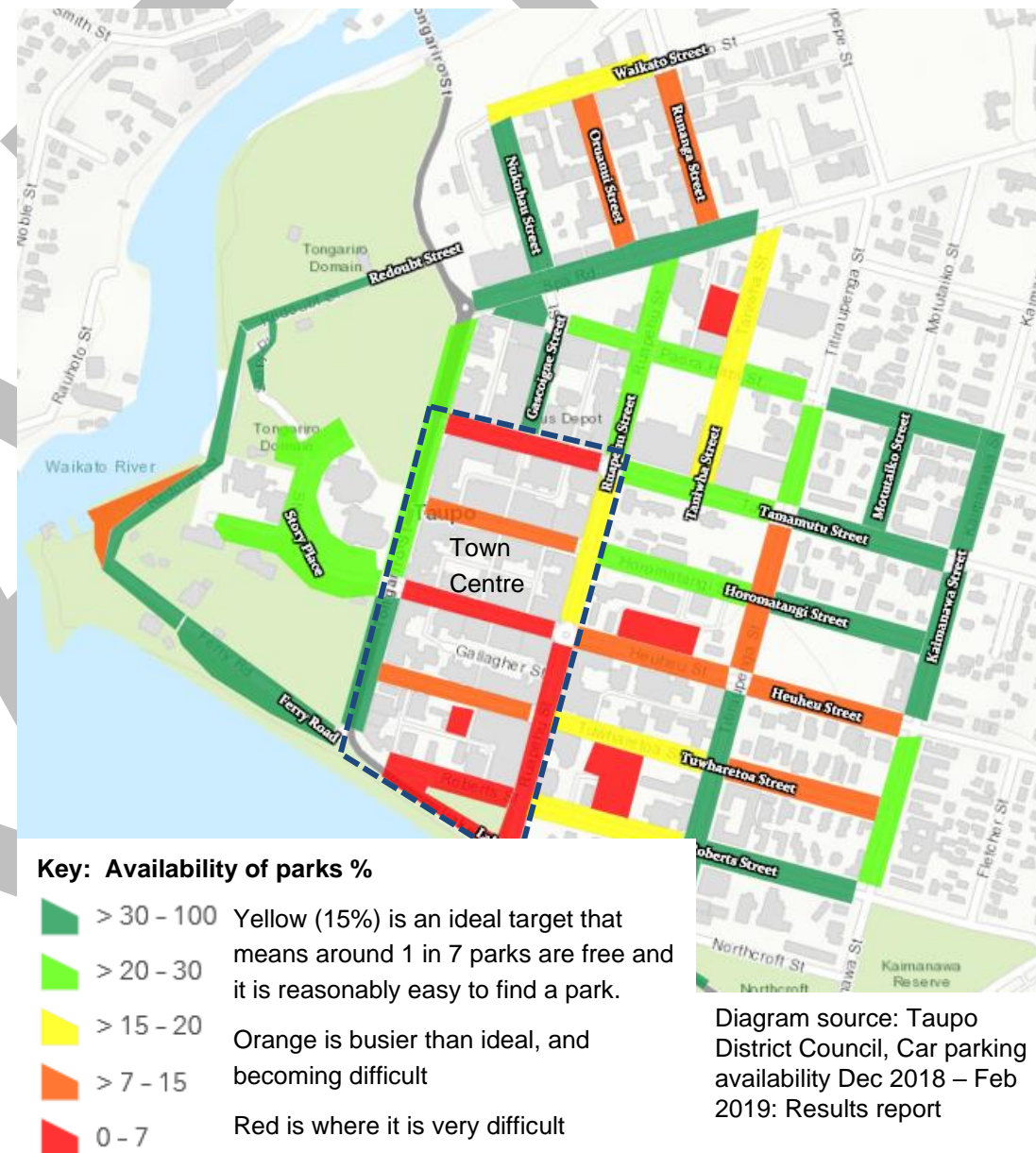
- Difficulty finding a park can be miserable – particularly if you don't know where to try next, or you are running late and are stressed.
- 60-minute parking in the town centre ensures turnover of parking, but at busy times it is not sufficient to make parks freely available.
- Parking starts to free up one block from town – towards Titiraupenga St, or the back of Story Pl. These are typically 120 minutes parks.
- Our all-day, off-street carparks are often full.
- There are a couple of hotspots slightly further away from town, where parking can be difficult at times. These are around the medical centres on Heuheu St, and in the commercial area north of Spa Rd.
- For visitors wishing to stay in town for a short period or day, there is reasonable parking on Ferry Rd, and in the domain (Story Place)
- Taupō faces peak demands for parking in the middle of the day (over lunch time), in the weekends, and in holiday periods. In the summer season, demand is especially high.

### 5.2 60 min time limits are often too short. E.g.

- tourist visit
- professional meeting or specialist appointment
- restaurant lunch
- general shopping

And a shopper who wants to continue shopping, but instead heads back to the car because they don't want to get a ticket represents missed economic opportunities.

Figure 18 – Parking Availability in Taupō town centre



### 5.3 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).<sup>3</sup>
- They are expensive (around \$30,000 – \$40,000 per additional park)<sup>1</sup>
- 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.

<sup>3</sup> 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](#)

## 6. Providing reasonable inter-regional bus facilities

6.1 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.

6.2 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

**6.3 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)

**6.4 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.

## 7. Well connected to the rest of New Zealand

### 7.1 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

### 7.2 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

### 7.3 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.

### 7.4 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

### 7.5 Taupo district is reliant on trucks to move freight

### 7.6 Taupō district does not face a ‘wall of wood’

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

### 7.7 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).<sup>4</sup>
  - 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.<sup>5</sup>
  - The focus of government investment is a renewals and maintenance programme for existing network, and the reinstatement of the line near Kaikoura<sup>6</sup>
- 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).

<sup>4</sup> Richard Paling Consulting, *National Freight Demand Study 2017/18*, September 2019

<sup>5</sup> 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.<sup>6</sup>

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



Diagram Source:  
[Ministry of Transport](#)

<sup>6</sup> [The Draft NZ Rail Plan 2019](#)



**7.8 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.

**7.9 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.

## 8. Resilient and reliable

8.1 [Government Policy Statement on Land Transport \(2018\)](#) put a greater emphasis on improving resilience

- [Waka Kotahi \(the NZ Transport Agency\) Resilience Framework \(2018\)](#)

8.2 The Waihi slip poses a risk to state highway 41 connecting Turangi and western towns and settlements.

8.3 Snowfall is a risk for the desert road (State Highway 1) and State Highway 5 between Taupō and Napier

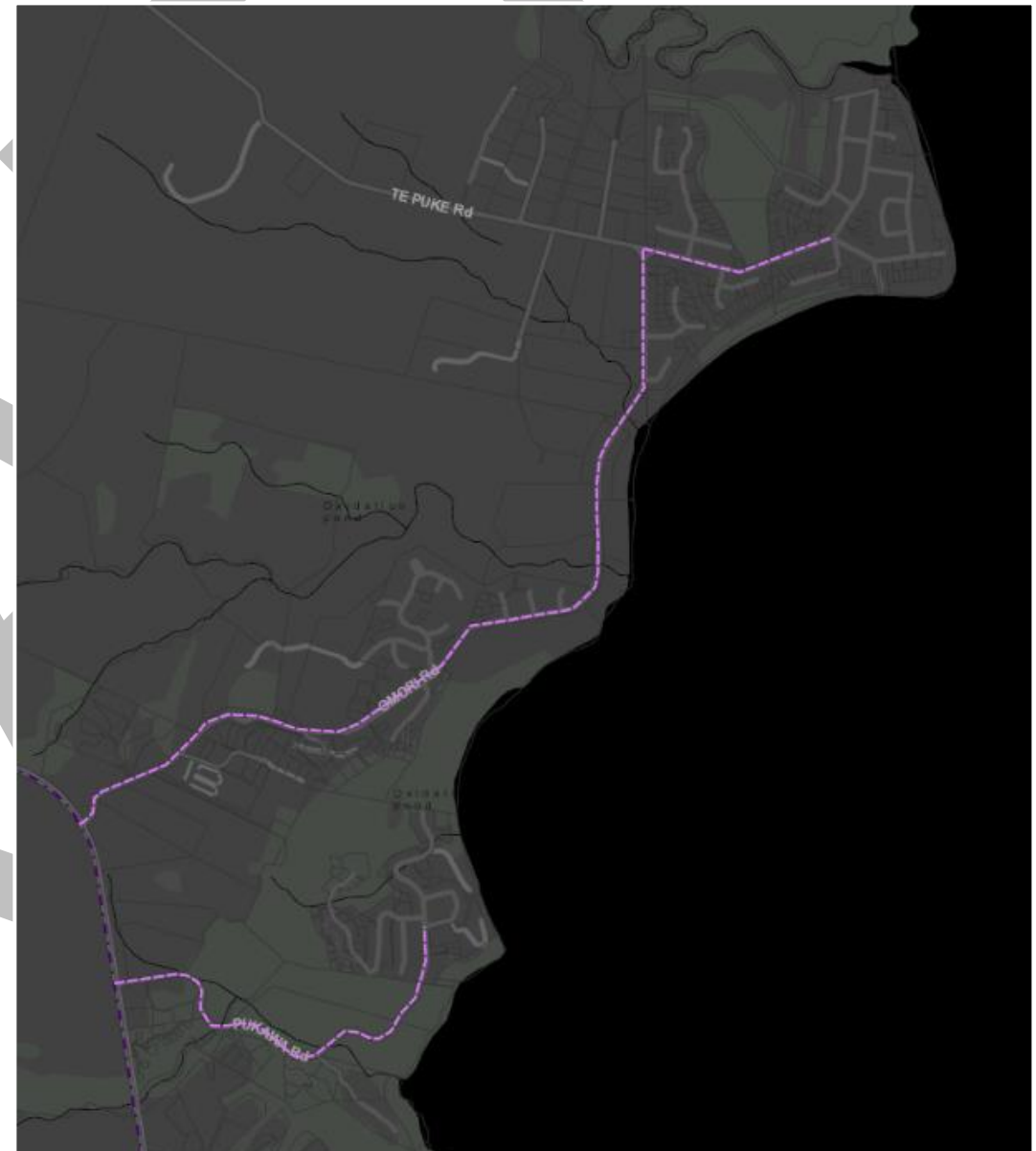
8.4 There are resilience concerns for State Highway 1 between Taupō and Turangi

- 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.

8.5 Taupō district has a large number of bridges and culverts which may be at risk in major events

8.6 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



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

### 9.1 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.

### 9.2 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:

- Tongaririo 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.

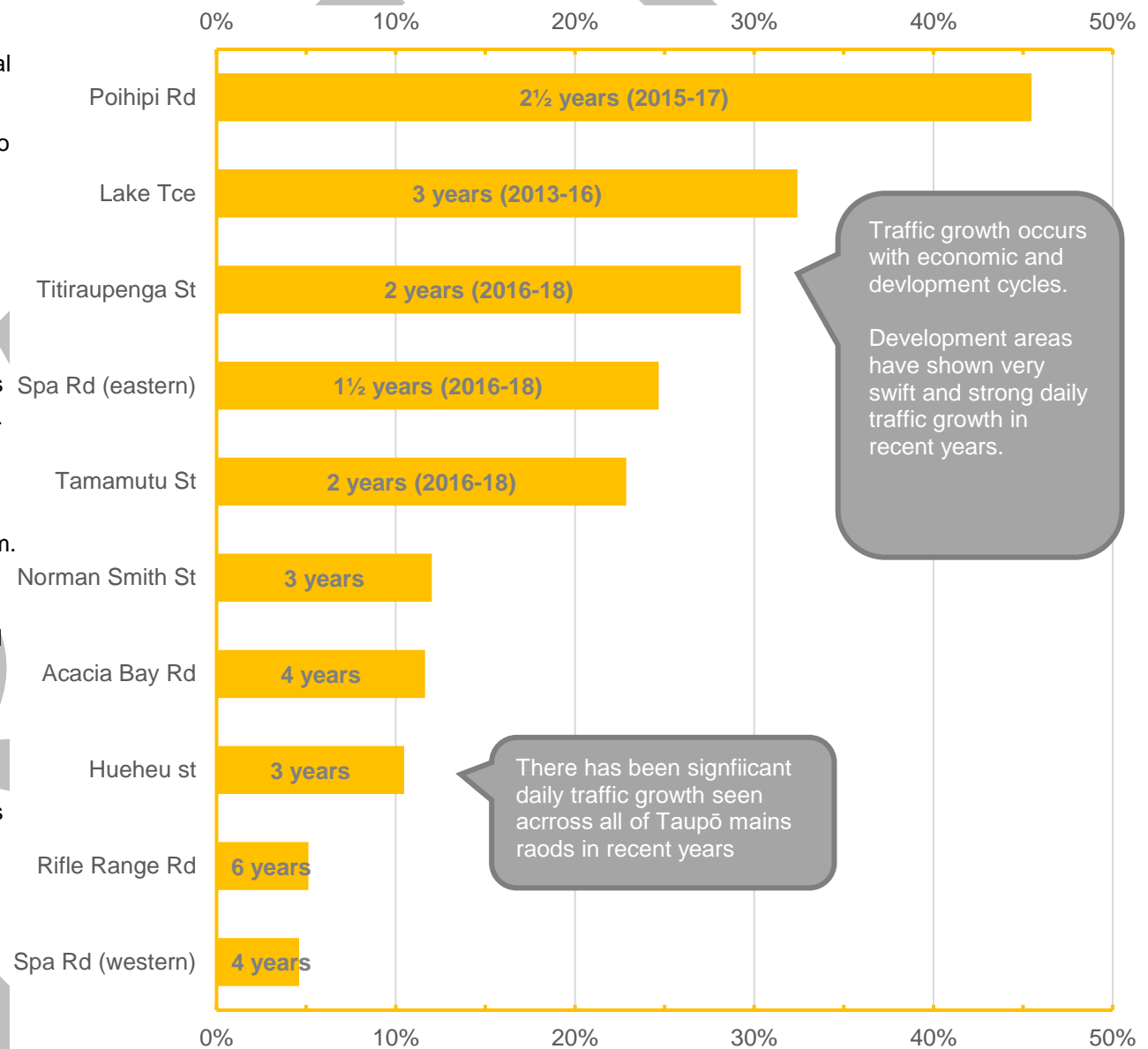
### 9.3 Planning should be undertaken so that capacity is put in place and issues overcome as (or before) they arise.

- 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.

### 9.4 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**



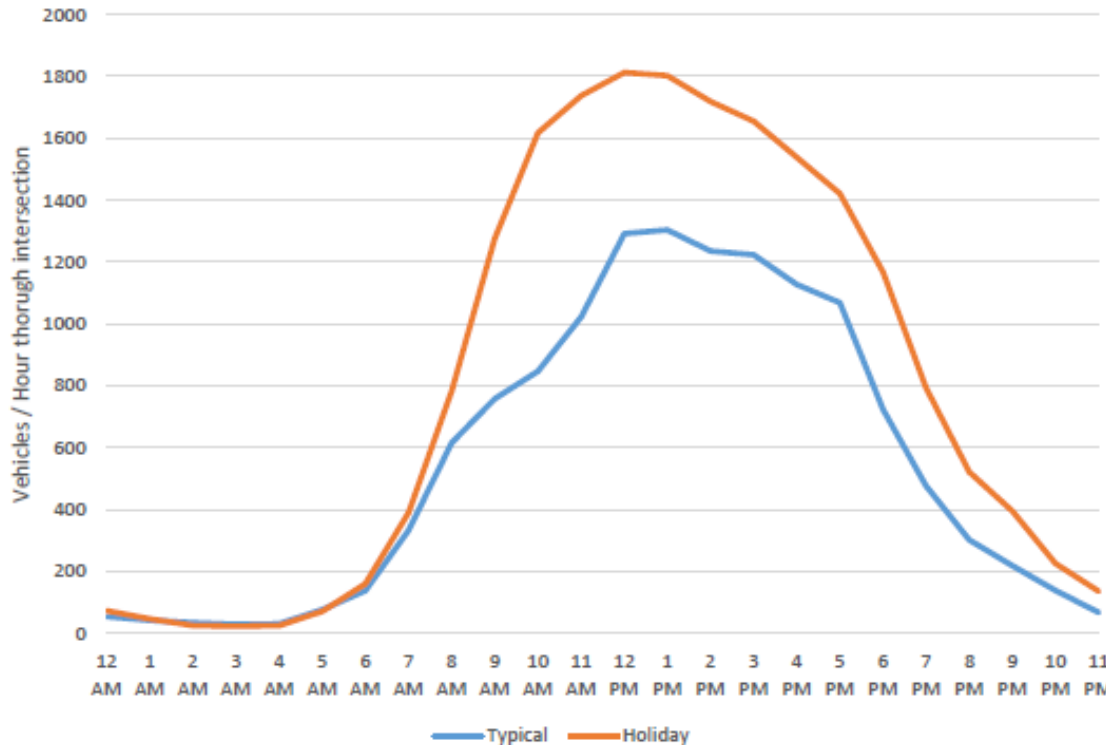
Traffic growth occurs with economic and development cycles. Development areas have shown very swift and strong daily traffic growth in recent years.

There has been significant daily traffic growth seen across all of Taupō main roads 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)



9.5 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.

### 9.6 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.

### 9.7 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.

### 9.8 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.**

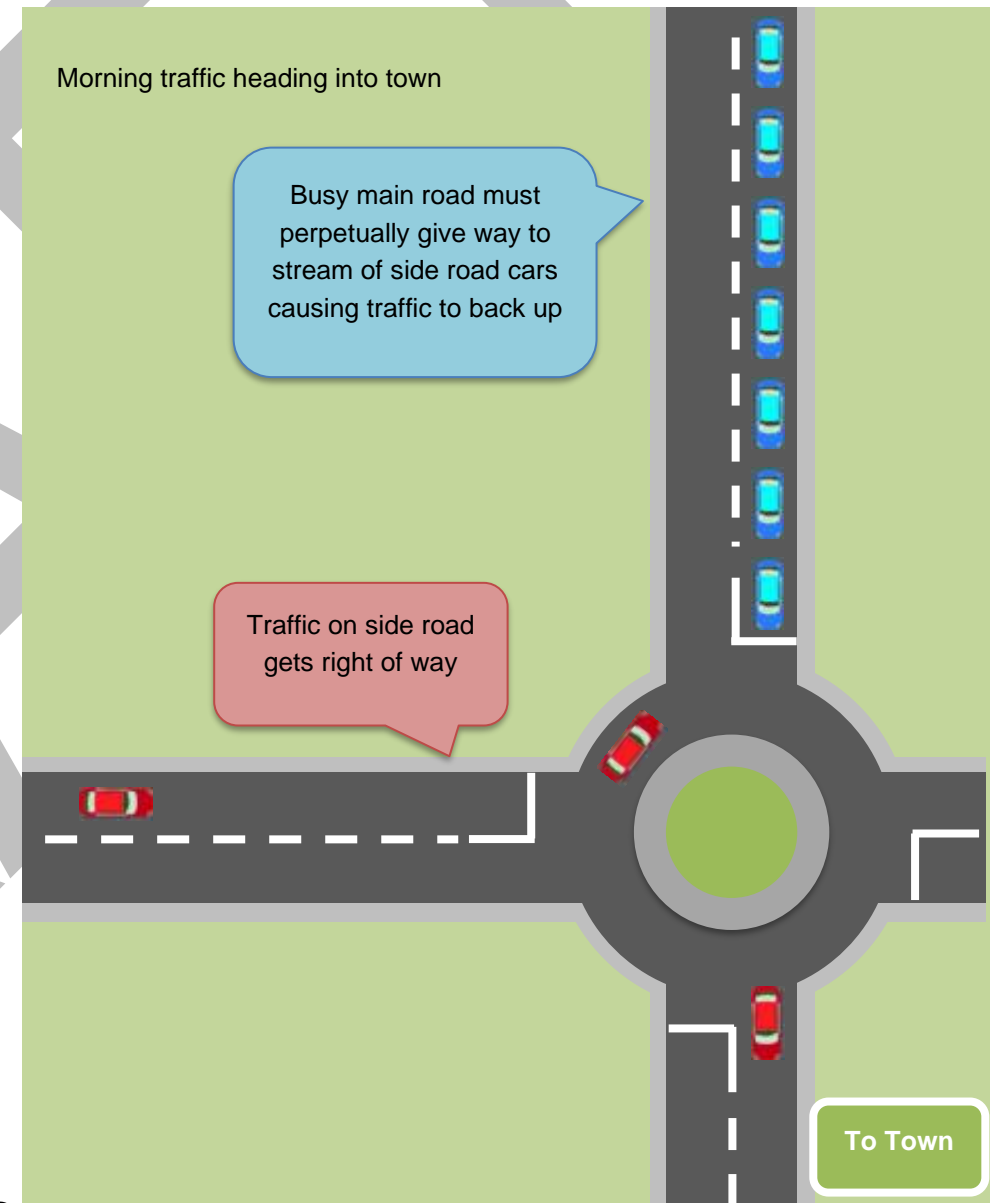
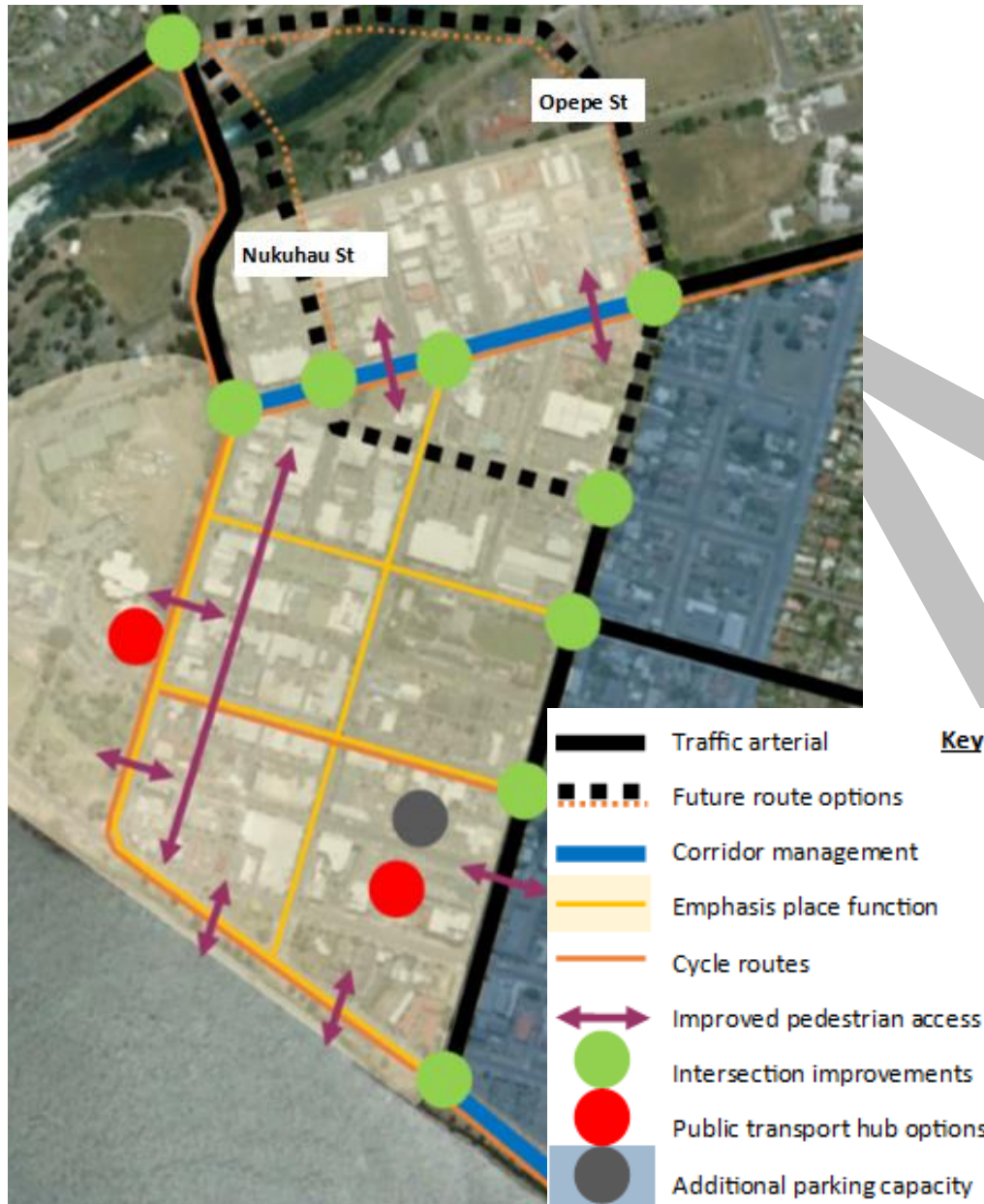


Figure 26 – Abley's proposed Taupō network plan



**Abley's recommendations  
(Taupō Future road Assessment 2019)**

**9.9 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

**9.10 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

**9.11 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 9.12 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)

**9.13 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

#### 9.14 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

#### 9.15 Paora Hapi Street – dependent on arterial route and bridge location

- Improved connectivity and intersection upgrades on arterial route

#### 9.16 Central business area

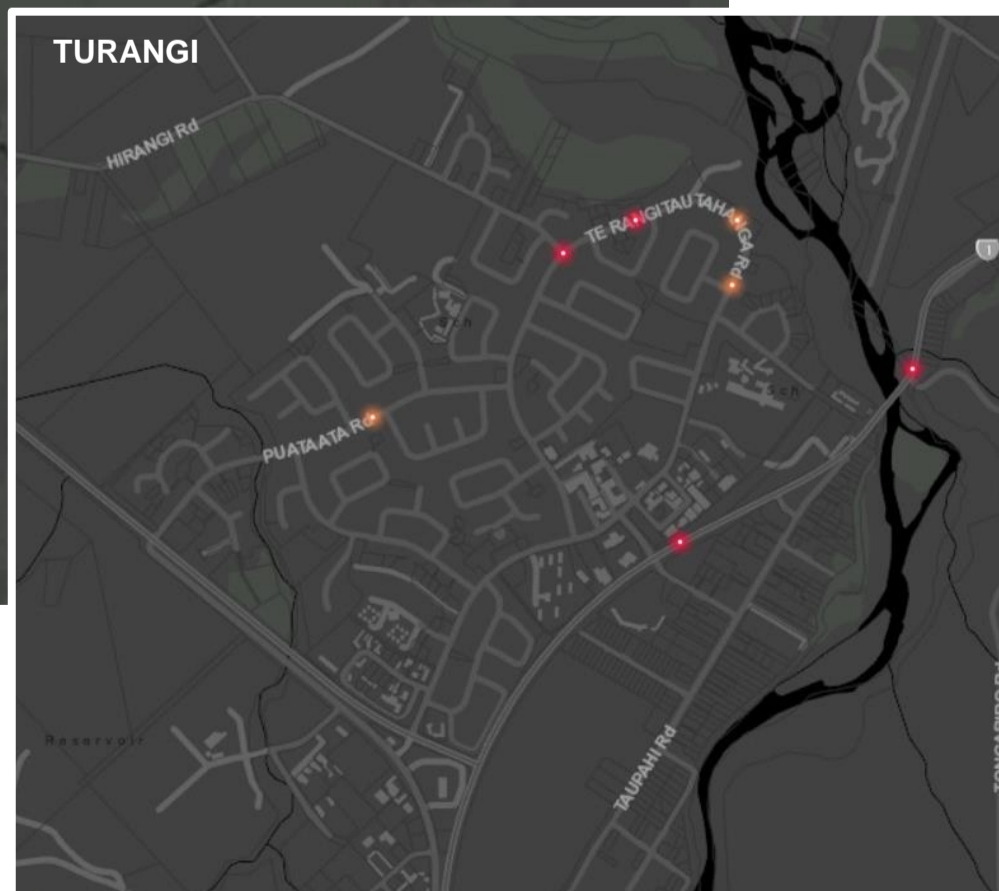
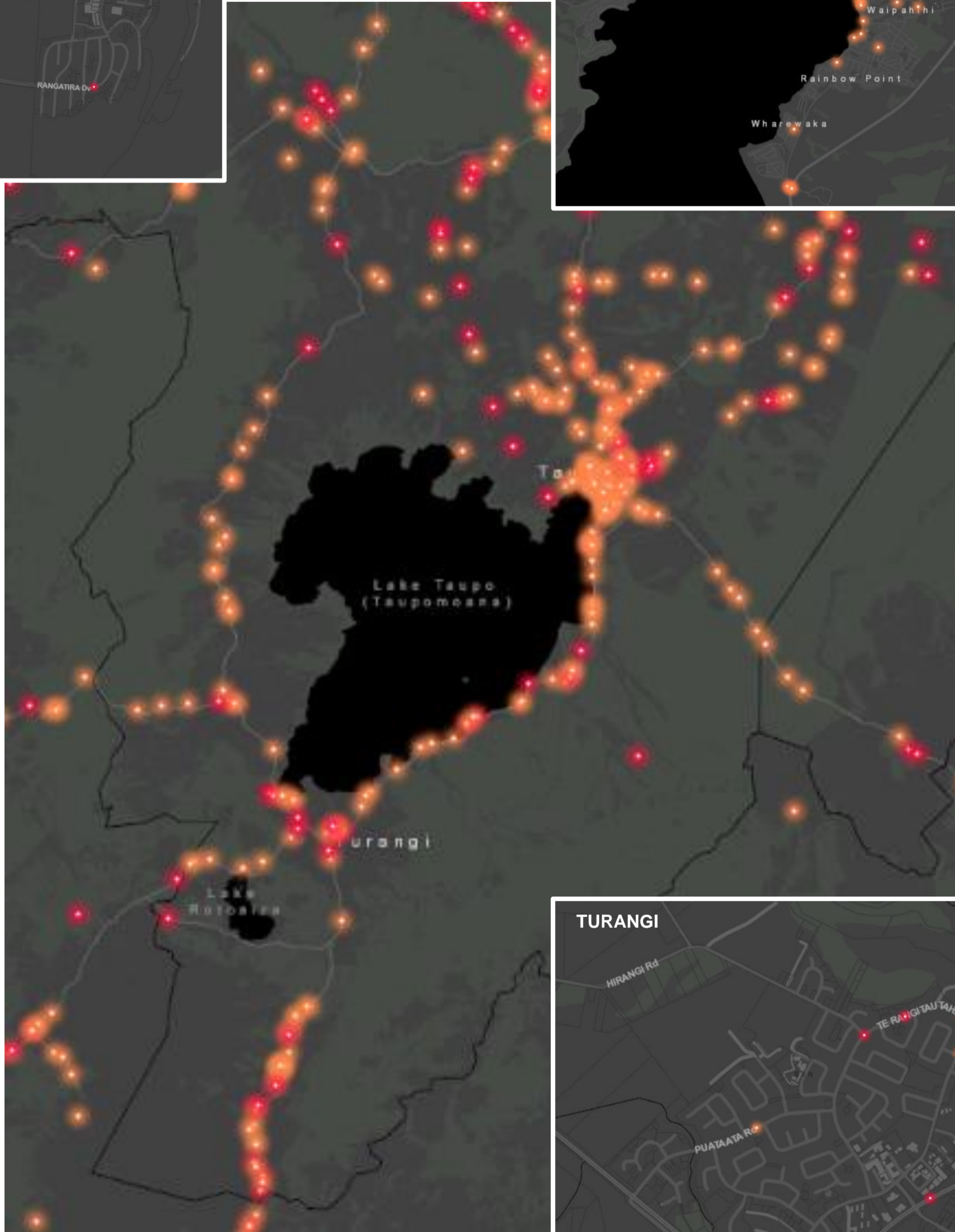
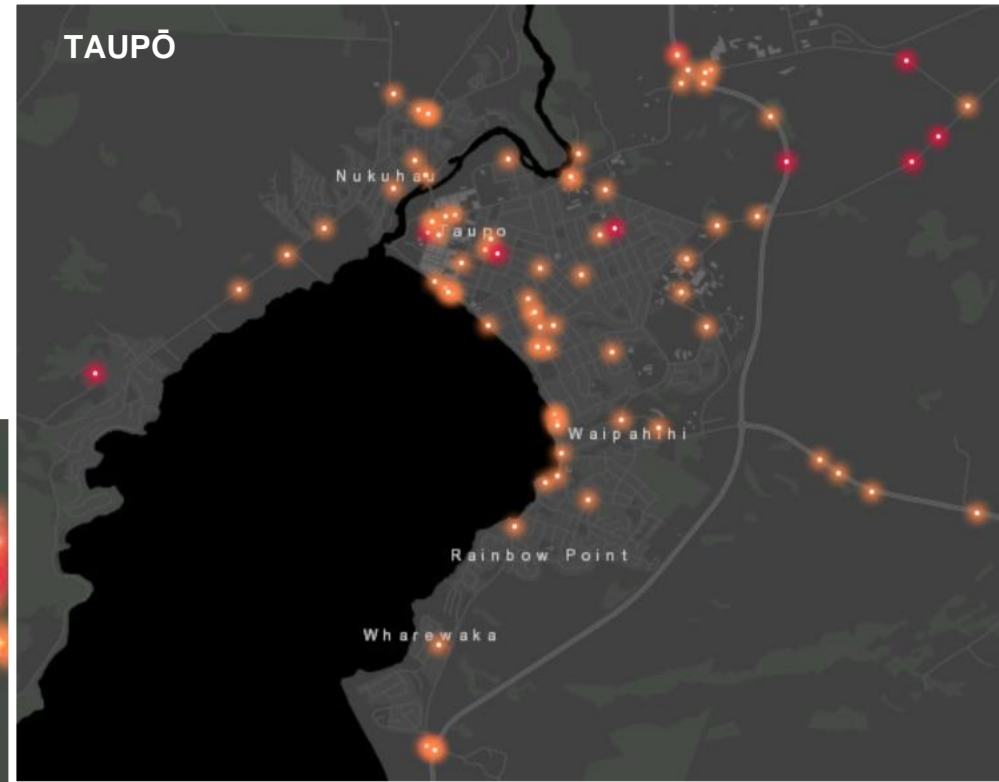
- Potential reduce speed limit
- Improved pedestrian connectivity – particularly for the laneways, to the lakefront and the Domain
- Potential new bus hub on Tuwharetoa Street (as part of the Council Office Building development)
- Potential parking building on Heuheu Street (long term)
- Additional berm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

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



Crash Analysis System (CAS) Data

- Serious Crash
- Fatal Crash



## Appendix 2 – What age-friendly means

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

**AREA SUMMARY**

**(INCLUDE ANY PARTICULAR COMMUNITY ISSUES AND MAPS RAISED THROUGH CONSULTATION)**

