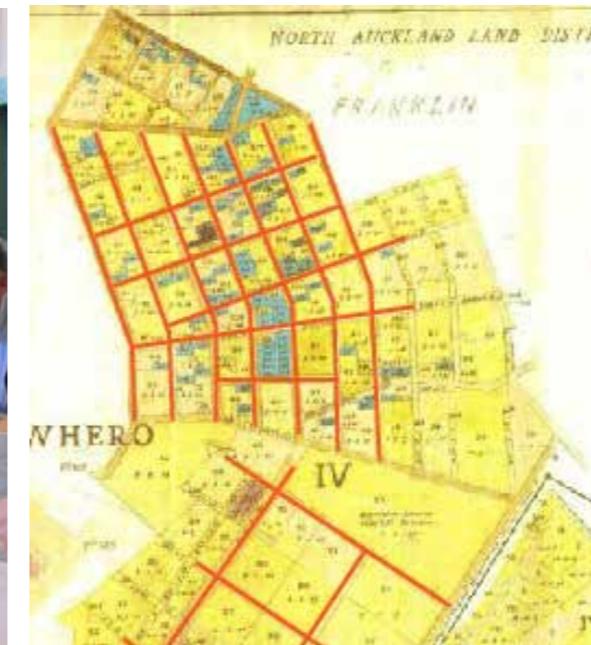


Tuakau & Ngaruawahia Structure Plans

Preliminary Urban Design Assessment

Draft at 30 May 2014



Revision History

Revision Number	Prepared By	Description	Date
A	Carl Lucca / Will Green / Kate McBurney	Draft	30 May 2014
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Document Acceptance

Action	Name	Signed	Date
Prepared by	Carl Lucca / Will Green / Kate McBurney		5 June 2014
Reviewed by	Annette Jones		
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On behalf of	Beca Limited		

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Appendix A

Growth areas for further investigation - Ngaruawahia, Taupiri, Horotiu and Te Kowhai

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Introduction

This report has been prepared to assist Waikato District Council in the preparation of structure plans for the following two study areas:

- Tuakau township
- Ngaruawahia and environs, including Taupiri, Hopuhopu, Horotiu, Te Kowhai and Glen Massey

In the main, this report provides urban design direction on the following matters (acknowledging that further input will be required from a range of disciplines to further refine the direction given):

Growth areas: For Tuakau, this report provides a concise review of the draft structure plan prepared by Council to date, noting areas for further investigation. For Ngaruawahia and environs, the report provides direction in relation to key growth areas for further investigation, along with strategic direction in relation to connectivity and movement, town gateways and key areas for community amenities and commercial development.

Town centre concept plans: For Tuakau and Ngaruawahia, high level town centre concept plans have been prepared, outlining key moves to be responded to as growth occurs. The town centre concept plans are high level and are intended to assist in engaging with the community and key stakeholders to gain buy-in (or otherwise), before moving to more detailed concept design and project identification.

Residential guidelines: Responding to key issues identified in relation to residential growth in Tuakau and Ngaruawahia, the guidelines are intended to provide principles for residential development that can be applied at multiple scales, i.e. structure planning, subdivision and individual lot development. In this manner, the guidelines can be applied (used as a check list) at the time of non-statutory structure planning for neighbourhoods and/or through the development of subdivision and land use provisions within the district plan.

This report does not provide a structure plan for the study areas, but rather should be seen as a layer in the structure plan preparation process. In particular, growth areas and town centre concept plans will need to be tested and refined with input from transport and infrastructure experts, as well as the community and key landowners; while the residential guidelines can be used to inform and review Council's statutory and non-statutory policy framework for future development.



Photo 1. Cyclists in Ngaruawahia



Photo 2. Turangawaewae Marae on the Waikato River



Photo 3. State Highway 1 bypass passing through Taupiri

2.1 Strategic Overview

Tuakau is located in the Waikato Region, approximately 60km south of Auckland CBD and 12 minutes' drive from Pukekohe township (which currently acts a local service centre for Tuakau).

Tuakau was founded in 1840 and is a servicing and distributing centre for intensive farming activities. The township has a population of approximately 4260 people and is the residence of a significant number of employees of New Zealand Steel at Glenbrook, as well as local agricultural industries.

The population of Tuakau largely identifies with European ethnicity but also includes a significant Maori component – approximately 33%. Approximately 63% of the population are of 'working age' (between 15 and 64 years), and there is also a significant youthful population – approximately 28% are 14 years of age or younger. Only a small proportion (approximately 9%) of the population are 65 years of age or older. Of note, is the higher than average growth rates that Tuakau has experienced during the last decade and it is expected that the population will grow to approximately 7,755 people by 2031. This in turn is placing on-going pressure on residential development and the need for managed growth.

The town centre of Tuakau is identified as 'Business Zone', while the balance of the township is predominantly zoned 'Residential' or 'Rural-Residential'. There is also a large area of the eastern periphery of the township which is zoned 'Industrial' which provides for important agriculture related industries supporting the local population.

Photos 4 to 12 portray the township and some of the key issues identified during analysis.

Tuakau Structure Plan

A structure plan is currently being prepared for Tuakau with the input and support of local residents, Iwi and key stakeholders. This plan will set out the layout of land uses, key infrastructure and transport links, and provide a thirty year planning framework for the future growth of Tuakau.

At the time of writing Waikato District Council has undertaken a number of workshops with the Tuakau community and have prepared a draft 'Concept Plan' for Tuakau which was presented to the community for comment at an open day on 27 March 2014 at the Tuakau Town Hall.

Key Outcomes of the Tuakau Community Workshops

- Opportunity for cycleway/walkway to Pukekohe along railway designation
- Opportunity for cycleway/walkway from town to redoubt and river
- Use of river for tourism
- Use of river as transport route
- Possibility of rural-residential development on the broken country in the south overlooking river
- Town square/hub/piazza - possibility to use park next to town hall
- Relocation of sale yards a possibility but do not want this business to relocate out of the area
- Allocate and secure land for a supermarket near the town centre
- Diversion of heavy traffic from main street
- Provision of good parking facilities
- Development of a central hub as a focal point – a place where people can linger and also a good place to locate public facilities (public amenities, library, plunked rooms etc)
- Potential for the town to grow southward so that the town hall becomes the centre of town
- Entranceway/gateway to town either end of George Street
- Walkway along railway line
- Lack of community facilities in town.



Figure 1. Tuakau community consultation (Source: Waikato District Council)



Figure 2. Walking distances from key amenities (400m walking circles from key activity nodes). Darker shaded areas identify those areas potentially well suited to residential development and/or intensification.



Photo 4. Tuakau Town Centre - George Street



Photo 5. Saint Stephens Street lacks pedestrian amenities



Photo 6. The Palms shopping centre, disconnected from the town centre



Photo 7. The rail line acts as a barrier between north and south



Photo 8. Industry is an important economic land use within Tuakau



Photo 9. Live stock sale yards are a key commercial node in the centre



Photo 10. The town benefits from large recreation space



Photo 11. Typical arterial street view



Photo 12. Recent residential development to the west

2.2 Tuakau Draft Structure Plan Review

The following is a summary review of the Tuakau Structure Plan Concept Plan (refer figure 3). The review is based around general best practice urban design principles in relation to the specific Tuakau context. (It does not include assessment in relation to transport, stormwater, water and waste water, or other infrastructure, which will form part of the wider consultant brief to the project).

Overall the concept plan proposes a logical approach which is consistent with good practice planning and urban design. However, the quality of development outcomes will be dictated by the detailed design and, as such, needs to be considered at multiple scales as growth occurs, i.e. along the lines of the following hierarchy:

- a. Concept Plan / Structure Plan for the wider Tuakau area (as drafted)
- b. Structure plans for individual growth areas
- c. Guidelines for subdivision and residential development (all densities).

Land use

The proposed future growth areas generally respond positively to the existing infrastructure and amenities (i.e. roads, schools, open space, local amenities, town centre, rail, Waikato River).

The approach to minimising future development (over and above that already zoned) north of the rail line is considered appropriate. It is considered appropriate to indicate the preferred location of the above amenities (in the form of a neighbourhood centre) at the concept plan level, particularly within future growth areas. Ideally, the above amenities will be in 400-800m walking distance of all residents.

A requirement for structure planning of growth areas in advance of development will also assist to manage provision of infrastructure and amenities alongside growth. Two phases of growth have been indicated. With each of these, a staged approach to structure planning is encouraged. Timing should be managed in liaison with key landowners and infrastructure (cost) efficiency.

We understand that a key issue with development to date has been in relation to the quality of residential development, particularly in relation to infill development and layout of activities on site. We recommend that this will need to be addressed through subdivision and land use design guidelines (managed through a resource consent process), assisted by appropriate structure planning.

As part of the above approach, we consider that areas for “compact residential” should be provided close to the town centre, neighbourhood centres and amenities such as active open space. We understand that generally, residential lots sizes are likely to average 500-700m². The provision of some compact residential (i.e. single or semi-detached dwellings on 300m² sites) will respond to demand for smaller housing types, reducing likelihood of ad hoc infill development, and potentially responding to affordability issues.

Issues associated with countryside living in the longer term relate to the possibility for this to be intensified if and when appropriate. Subdivision lot size and pattern should provide for possibility for further subdivision in the future with particular emphasis on enhancing connectivity with local amenities. Accordingly, appropriate subdivision design guidelines for country living are recommended. The proposed green buffer between industry and residential is a proactive approach to managing effects between the two land use areas.

Retention of the sales yards within the town centre is considered appropriate – recognising the rural working relationship of the town, which brings a positive energy to the centre. It may however be appropriate to consider some further business use around this area, and or open space to mitigate any potential (reverse sensitivity) adverse effects.

Local Centres

The provision of local and neighbourhood centres assists in reinforcing communities and discouraging the use of motor vehicles. Within Tuakau it is considered that each community should contain a centre that provides for the day to day needs of its residents and also provides for a common meeting place that has the potential to enhance social and cultural wellbeing. Ideally, a person should be able to walk or ride a bike to their local centre in less than 5 to 10 minutes and to their neighbourhood centre in 10 to 15 minutes.

It is also important to recognise the significance of the town centre as the commercial hub of the town, and that it is beneficial to provide for retail, office and other such commercial activities in a centralised area. Neighbourhood centres would generally be 3000m² to 4000m² and include a local supermarket and may include a mix of 3 to 5 small format shops, including a dairy, butcher, cafe, takeaways, bakery or similar.

As a rule, a local centre should also include one of the following: a community hall; local community square / open space; playground; or crèche / Pre-school

Connectivity

The concept plan promotes logical road networks and possible walkways, with emphasis on connectivity.

Notwithstanding, this remains at a high level and further detailed guidance is considered appropriate to guide future land use and subdivision, particularly in relation to road layout. For flat topography, a formal grid pattern is recommended in most cases, with minimal use of cul-de-sacs; for steeper topography, an informal grid is recommended. The grid layout to roads should be provided regardless of densities proposed.

To establish safe walking routes and open space around the town periphery, peripheral roads should be provided alongside proposed open space areas.

Further detail in relation to connections between key locations / attractions could be articulated.

Landscape

As alluded to above, a closer relationship between open space (particularly around existing water ways) and movement networks could be promoted. Open space will benefit from adjacent activity, in the form of roads, complementing and providing passive surveillance to walkways.

Interestingly, the concept plan provides somewhat of a ‘townbelt’ approach over the longer term (i.e. in the long term, the town is encircled by a green park to the west). This is positive and if managed well, could provide a significant public benefit over the longer period. A mix of passive and active recreation uses would be possible within the townbelt depending on the open space characteristics (e.g. flat areas for sports fields, walkways along riparian areas).

Moving forward, it is important that local open space is provided throughout existing and future communities. The landscape approach to open space around existing waterways will assist to provide for this; however, more formalised open space (ie. pocket parks, playgrounds and neighbourhood parks) alongside neighbourhood centres and within communities should also be provided (designed as part of structure planning for growth areas).

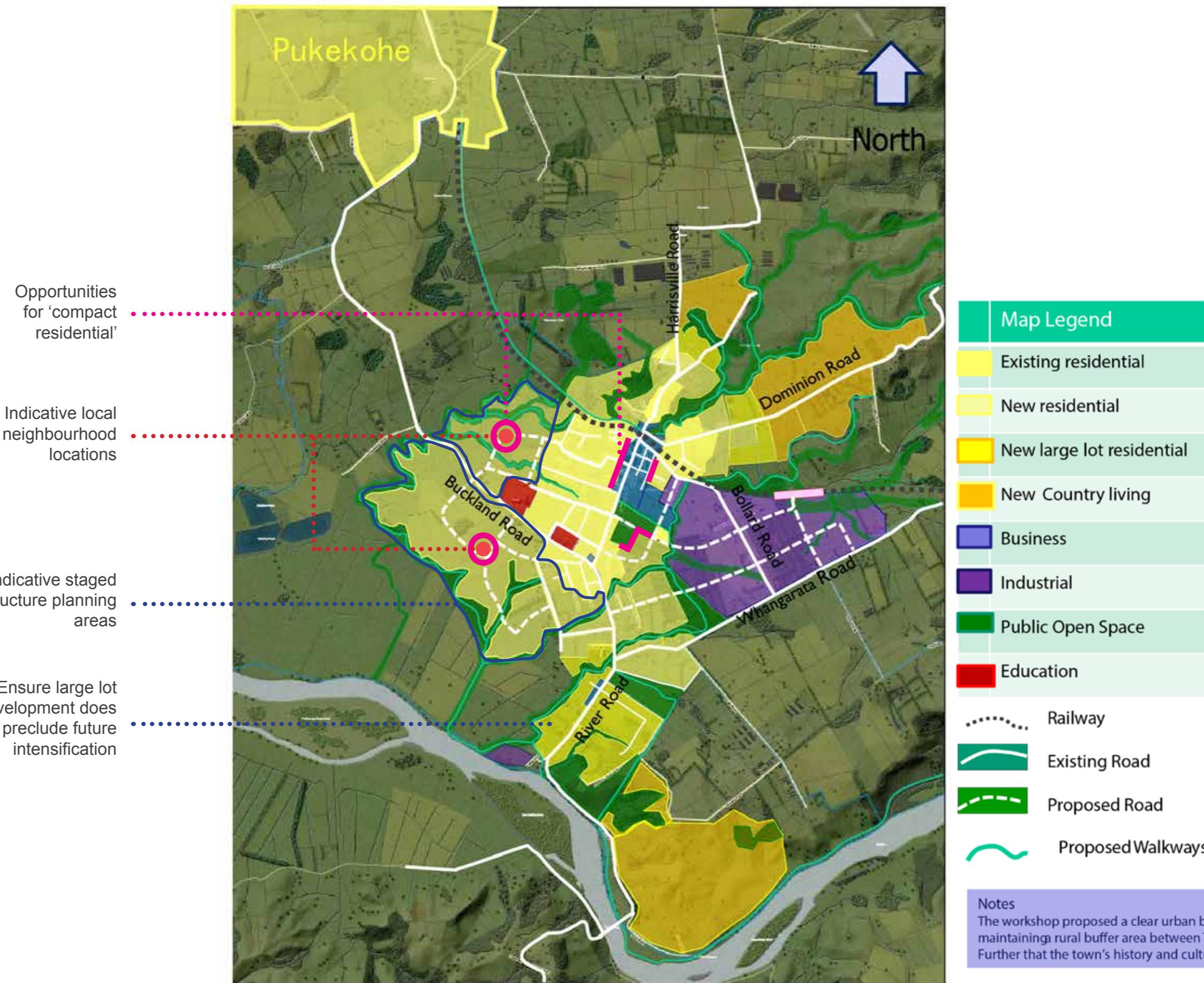


Figure 3. Draft Tuakau Structure Plan, 2014, illustrating indicative structure plan areas, neighbourhood centres and compact residential

2.3 Tuakau Town Centre

This section provides an overview of the ‘key moves’ suggested for Tuakau town centre. The approach is based around a number of key structuring elements to assist in promoting growth of a compact centre that remains the heart of the surrounding community. Further more detailed planning and design will be appropriate as known development opportunities come to the fore (e.g. supermarket development; train station development; other significant development within the town centre).

Figures 4, 5 and 9 illustrate the key moves / key outcomes sought within the town centre.

Key assumptions

In considering the town centre, an analysis (including key issues) of the area and surrounding context has been undertaken.

Subsequently, key considerations and assumptions that have informed the key moves include:

- Consolidating growth within the existing zone commercial area
- Reopening of the train station for passenger transport in the medium to long term
- Recognising residential growth will occur primarily to the west and south of Tuakau in the medium to long term, and providing appropriate land use and connections accordingly
- Enhancing the overall pedestrian experience within the town centre, particularly along West Street and St Stephens Ave, to attract locals and visitors to the area, as well as commercial investment
- Identification of appropriate land uses to catalyse growth and co-location of other uses
- Over the next 25 years, Tuakau is likely to see a doubling in demand for total retail to approximately 16,000m².
- There is a significant shortfall in supermarket retail provision in the form of a medium sized supermarket. This will become more pronounced over the next 25 years.
- There is an oversupply of convenience retail, which will balance out over the next 25 years.
- Based on the above, the primary retail focus remains on the town centre, within the existing ‘Business Zone’ area, with some limited, non competing, convenience retail provided through neighbourhood centres.

Town Centre: Key Outcomes Sought

The majority of the prime development land is located along West Street and St Stephens Ave. It is important to create perimeter blocks within the town centre as a whole, and to encourage continuous active frontages (encouraging greater pedestrian movement around secondary streets). It is vital that development of the secondary streets (i.e. West Street and St Stephens Ave) does not draw existing activity away from the main street (i.e. George Street), but rather have their own focus, e.g. a community focus for West Street, and a commercial focus for St Stephens Street. A focus on more legible and safer pedestrian routes that respond to existing and future destinations will encourage further pedestrians (locals and visitors) to frequent the area in the future.

Importantly, the vision for development needs to be long term. When considering one off development, this needs to be in the context of the vision for the town centre in 20 years, not only the next 5 years. George Street is a successful space with many active frontages, on street car parking, pedestrian crossings, and good quality streetscape design. This should set a precedent for any development within the town centre.

Based on the above, and with reference to Figure 5, district plan provisions should seek to:

- Require the continuation of the two storey ‘street wall height’ along George Street.
- Require active frontages and awning cover at the ground floor along George Street.
- Require Active frontages along Liverpool Street, West Street, St Stephens Ave, Jellicoe Ave and Madill Road, and overlooking public open spaces (e.g. Central Park).
- Provide for a consistent building setback along Liverpool Street, West Street, St Stephens Ave, Jellicoe Ave and Madill Road, and overlooking public open spaces (e.g. Central Park), with parking to the side or, preferably, rear of buildings.

The need for location of a supermarket within the Town Centre

As a supplier of everyday needs to the community, supermarkets are a key catalyst activity that should be provided for within the town centre. As the population of Tuakau grows, demand for a supermarket will increase. A key challenge to providing a supermarket within the town centre is land supply. However, if provided for outside of the centre, this will have a dramatic negative impact on the centres growth and the sustainability of the town.

Having regard to the above, a key role for the Council moving forward will be working with key stakeholders (including supermarket suppliers) to identify and enable the development of a supermarket within the existing ‘Business Zone’ boundaries. A number of preferred locations have been identified within figure 17.

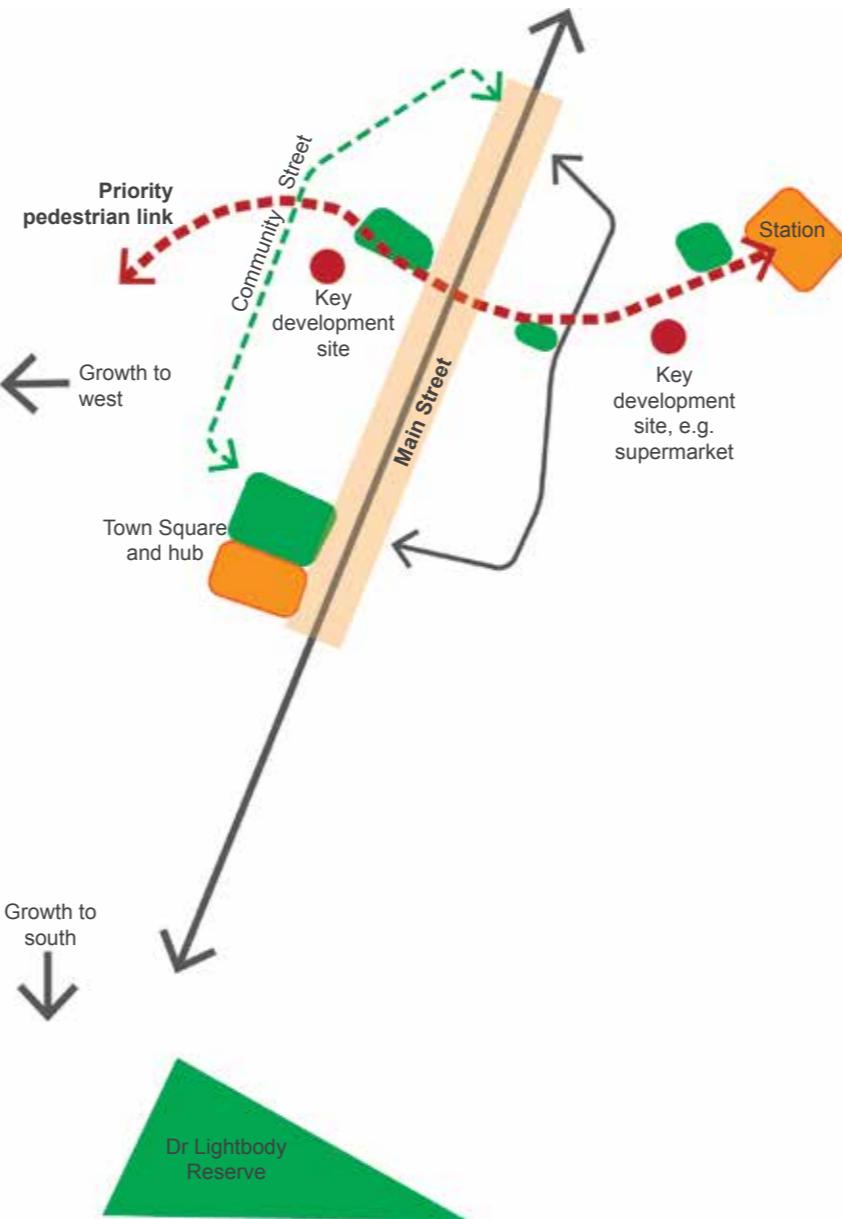


Figure 4. Tuakau town centre sketch concept

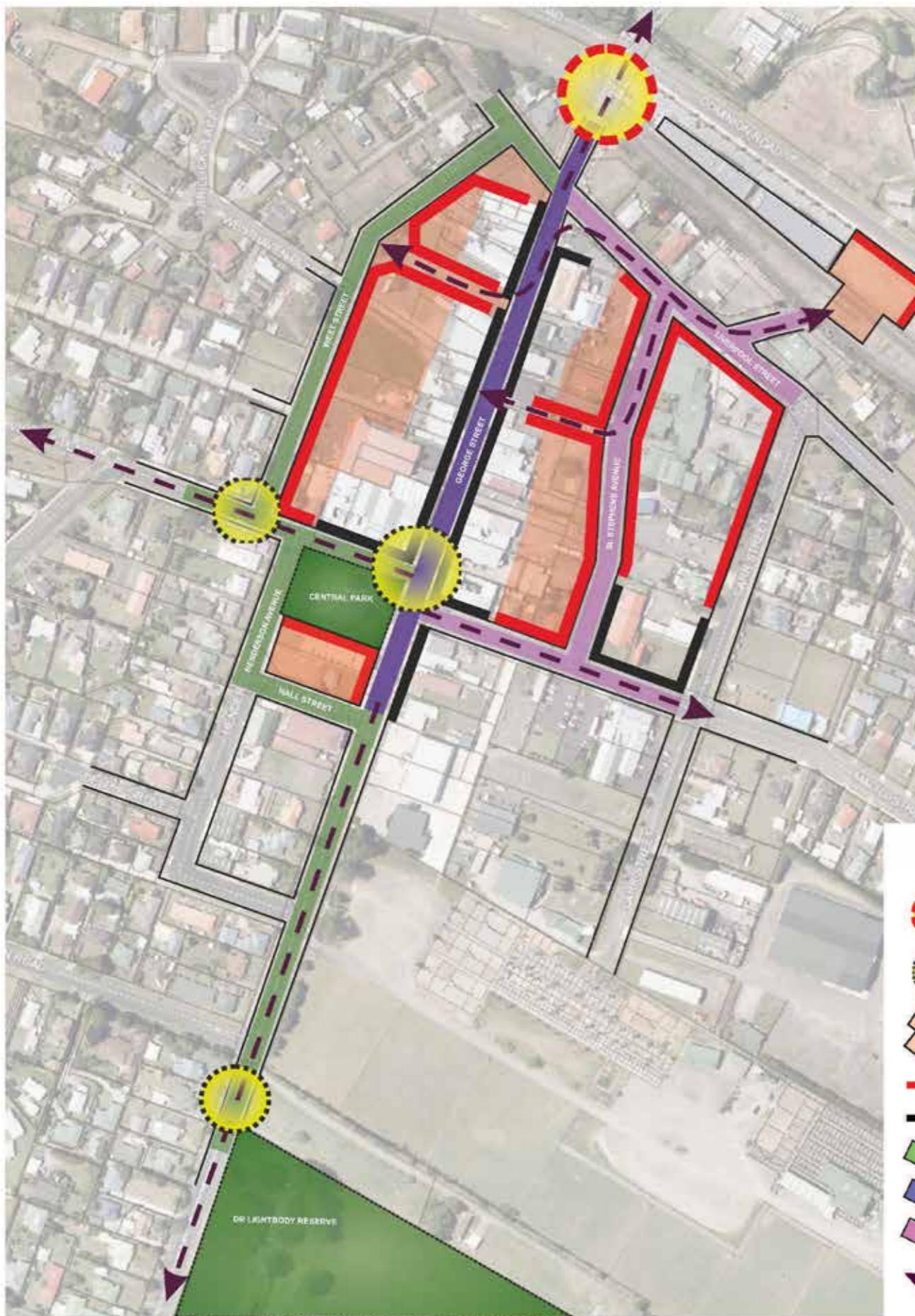


Figure 5. Tuakau Town Centre Key Moves Plan - Movement and Connectivity

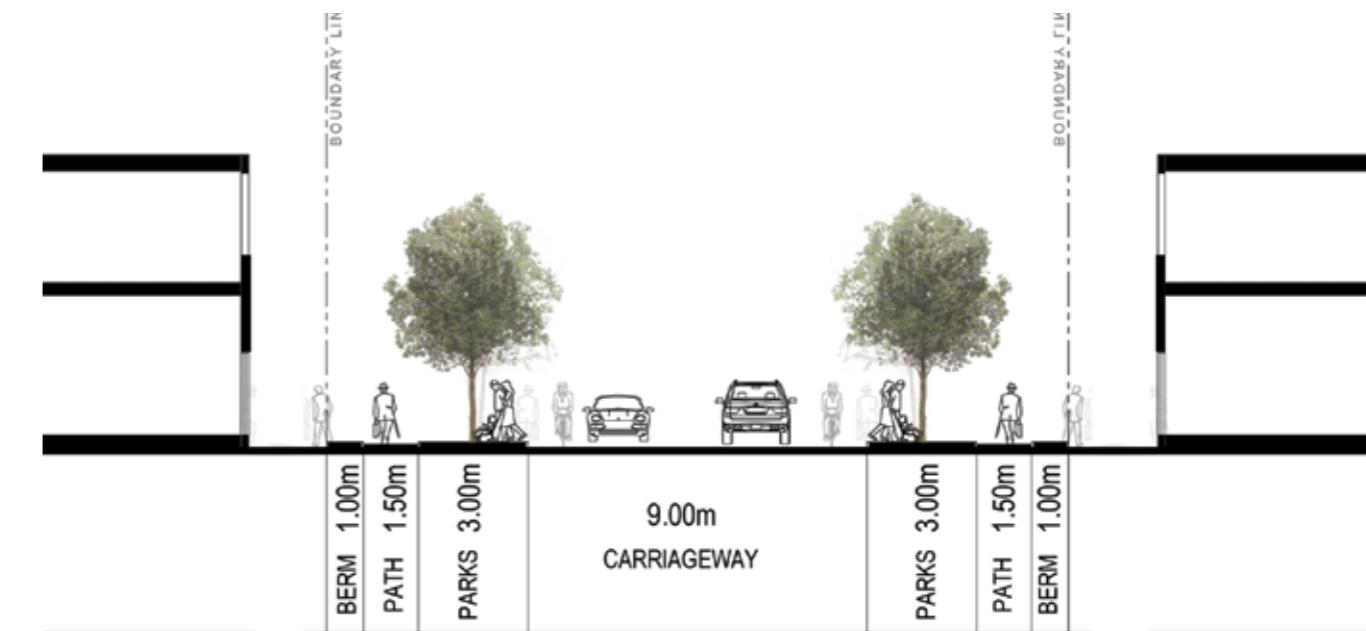


Figure 6. Indicative cross section for Liverpool Street, West Street, St Stephens Ave, Jellicoe Ave and Madill Road - showing development with active frontages to street; tree lined streets, on street car parking, and footpaths (1.5m-3.0m)



Figure 7. George Street: retain the existing street frontage and building height

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Figure 9. Tuakau Town Centre Key Moves Plan - Land Use and Landscape

Town Centre: Key Outcomes Sought (continued, refer Figure 9)

1. Key Gateways and Arrival Points into the Town Centre - these may include signage and landscaping upgrades, and should be combined with pedestrian crossing enhancements (signalling to drivers the need to slow down and be more aware of non-vehicle users).
2. Potential Location for a Transport Hub - it is considered that any future bus hub should be located in close vicinity to both the train station and the town centre. Provision of open space in the vicinity will assist to provide space for people waiting for buses or trains.
3. Potential Supermarket locations - supermarket location will be reliant on the ability of the supermarket suppliers to obtain land with adequate parking and access. Ideally, the supermarket will be centrally located, in close vicinity to public transport and key movement routes. Approximately 2,000-3,000m² will likely be required. Car parking should be located to the rear of the building, away from the street, allowing a clear retail frontage facing the street and public realm.
4. Opportunity exists to establish Central Park as a focal point within the town centre, overlooked by key community amenities. The adjoining site to the south offers opportunity for a community/public focused building, such as may include relocated Council offices and/or library, combined with other community focused amenities. Central Park should be designed as a multi use space that reflects the culture and demographic of the town.
5. Potential Site for a mixed-Use Development with Public Spaces - currently West Street and St Stephens Street remain under developed. Future development should be encouraged over these areas, subject to development achieving a strong relationship with the public realm (e.g. achieved through active frontages and consistent bulk and location that addresses the street).
6. Proposed Passenger Train Station Location - the historic station location provides an opportunity to integrate with both the town centre and Palms Shopping Centre, and will encourage east west pedestrian flows through the town. Potential exists for a park and ride to the north. If provided in a different location, it should be closer to the centre as opposed to further away.
7. Potential redevelopment site for ambulance station, fire station training facilities and residential housing.

3.1 Ngaruawahia and Environs

This section focuses on the townships included within the Ngaruawahia and environs structure plan, namely:

- Ngaruawahia
- Taupiri
- Hopuhopu
- Horotiu
- Te Kowhai
- Glen Massey

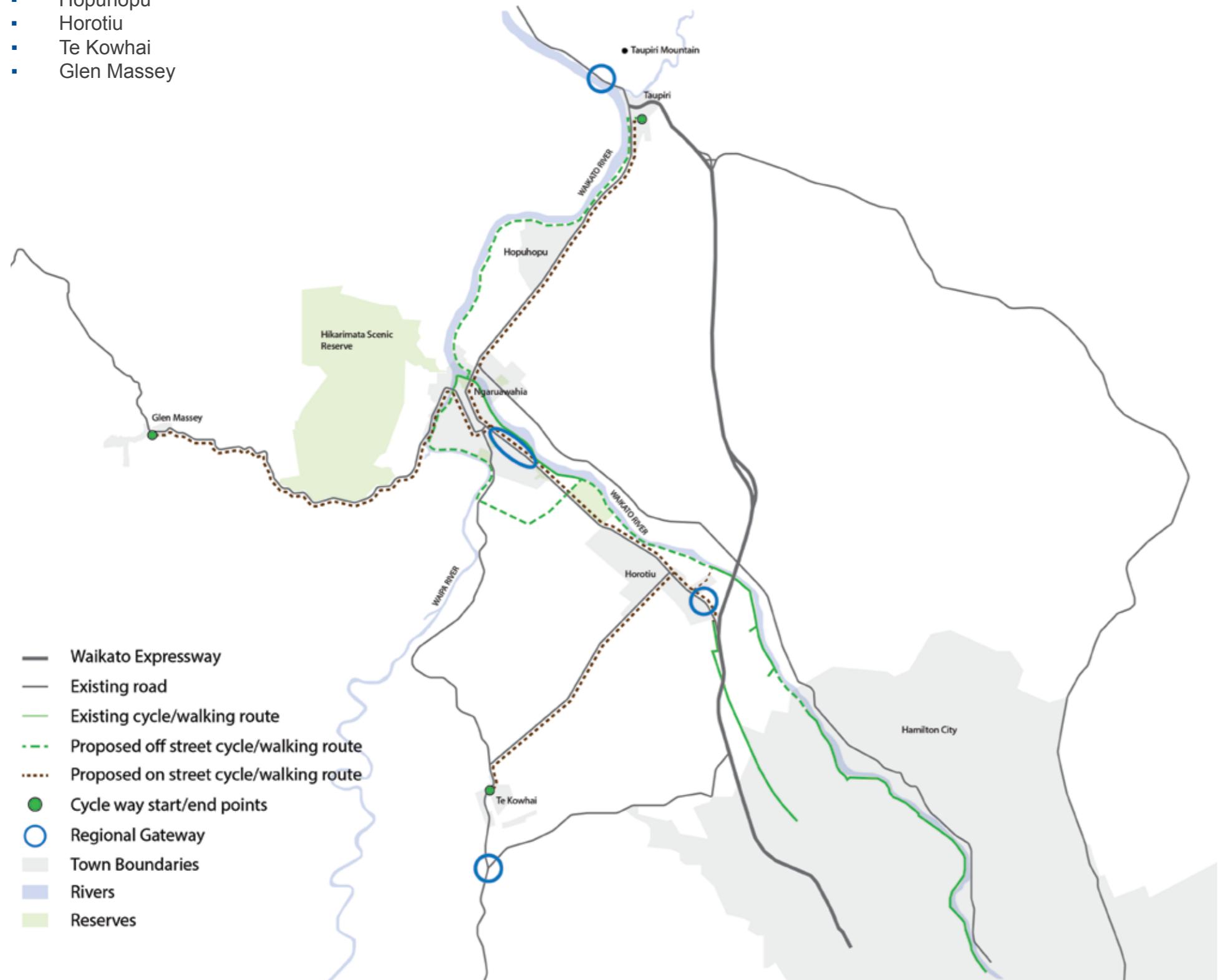


Figure 10. Ngaruawahia and environs - Gateways and Connections Plan

Ngaruawahia and the surrounding environment is rich in cultural (particularly Maori) and natural heritage, offering opportunities for both locals and visitors. Figure 10 illustrates a starting point for enhancing access to the natural and cultural environment, responding to the opportunity provided by the relocation of State Highway 1 and the subsequent reduction in vehicle traffic through the area.

A key action is to make visitors aware of the attractions that lie within the area and encourage them to travel through the area as opposed to bypass it. Accordingly, the provision of regional gateways, designed in conjunction with local iwi (Waikato-Tainui), that reflect the culture and inform of potential activities, is suggested within the vicinity of Taupiri Mountain, before reaching the State Highway bypass route. Two similar opportunities are also identified to the south (exact locations to be determined). In addition, it is considered there is an opportunity to provide a significant intervention within Ngaruawahia itself (over the previous land fill area to the west of Great South Road), again, designed in conjunction with local iwi and showcasing local culture.

Providing opportunity for people to slow down and enjoy the area, a series of cycle and walking routes are proposed between Taupiri, Ngaruawahia, Hamilton (connecting with existing cycle links) and Te Kowhai. Acknowledging the flat terrain, on road cycle routes are provided for experienced cyclists, and off road for less experienced and families. For both on and off road, marked cycle specific lanes are recommended. There may be opportunities for safer and/or alternative routes to those shown, identified as part of further detailed design.

The key to making the cycle and walking routes attractive, will be providing activities along the route. This includes existing destinations, such as town centres and cultural destinations, but should also include new interventions and rest stops (with views of the Waikato River and other amenities). The cycle routes also have the potential to catalyse economic growth, such as cafés and visitor accommodation.

Building on the above, a high level analysis of land use patterns, connectivity and movement, and landscape (including open space) has been undertaken for each of the towns within the structure plan area, to assist in informing key elements for future growth from an urban design perspective. These generally relate to the following structuring elements (to be read in conjunction with the “Overarching key moves for future growth - landuse, connectivity and landscape” plans hereafter):

Future residential growth areas

These areas have been identified as logical future growth areas taking into account existing urban form, connectivity and amenities. Future residential growth has been directed to those areas that have potential to be well serviced by existing amenities. In some cases, further amenities / neighbourhood centres are suggested. All growth areas remain subject to infrastructure and transport testing and planning, and consultation with key stakeholders and the community. It is also noted that the growth areas are likely to be over and above anticipated growth projections; accordingly, a staged approach to release (i.e. zoning) of any growth areas is suggested.

Potential future road connections

These indicative routes illustrate key arterial routes to be investigated as part of future growth areas. It is expected that a further refined and detailed movement hierarchy (for pedestrians, cyclist and vehicles) will be developed through the course of structure planning and subdivision.

Existing/potential walk and cycle trail

These indicative routes identify the key movement routes for Council to focus on at township scale. The purpose of these routes is two-fold: to enhance recreation and visitor opportunities associated with local attractions; and/or to enhance connectivity between key amenities. The identification of trails indicates the development of dedicated pedestrian and/or cycle trails, to be further investigated by Council.

Community amenities focus

These areas relate to the provision of community amenities such as sport fields, playgrounds, open space, local shops, schools and so forth. Within areas of community focus, emphasis should be given to pedestrian movement and safety, amenity and opportunity to provide further amenities in the community’s favour.

Existing and future employment

These areas have been identified as appropriate for commercial development. In most cases, they relate to land already zoned and used for commercial or industrial purposes. Economic analysis indicates that none of the townships is likely to experience significant commercial growth and therefore consolidation of existing activities within town centres and commercial areas is generally promoted (as opposed to allowing for dispersed development patterns).

Ecological enhancement

Ecological areas have the potential to result in environmental and cultural benefits and, to a lesser extent social and economic benefits. Incorporated into local walking or cultural trails, areas of ecological interest can be both part of a journey and a destination for both local residents and visitors to the area.

Landmark feature / Views and vistas

Land mark features, such as mountains, form an important backdrop to many of the townships, and should be celebrated by recognising and opening up views to them from public places.

Gateway treatment

Gateway treatments relate to physical interventions to celebrate the gateway to region, town or centre. The gateway treatment should be relative to the place it is celebrating, both through scale and interpretation of local heritage and culture.

Regional gateway

In the context of Ngaruawahia and environs, the regional gateway to the area is considered to be at the base of Taupiri Mountain. Ngaruawahia and environs has a rich Maori heritage that should be portrayed in the gateway, enticing visitors to visit the area. Design of the gateway needs to be undertaken in collaboration with local Iwi, particularly Waikato Tainui.

Township gateway

These gateways should be physical markers on the side of the road, indicating that a town is being entered. They may include or be a combination of signage, change in speed zone, planting / landscaping, murals or paving treatment.

Town centre gateway

These gateways should be physical markers on the side of the road, indicating that a town centre is being entered. They may include or be a combination of pedestrian crossing points, signage, change in speed zone, planting / landscaping, murals or paving treatment. The emphasis should be on promoting a pedestrian orientated town centre zone, and a feeling of slowing of vehicle traffic.

Culturally significant area

Culturally significant areas include Maori and non-Maori sites of significance, such as urupa / cemeteries, pa / fort sites and so forth.

3.2 Ngaruawahia

Ngaruawahia is located approximately 22 minutes' drive north of Hamilton at the confluence of the Waipa and Waikato Rivers and is one of the oldest settlements in the Waikato Region. The township is home to the Maori Kiingitanga and the first Maori King was crowned there in 1857. Ngaruawahia is well-known for its local regatta – an event held each year on the Waikato River; it is considered a traditional perseverance of New Zealand history and Maori culture. The first regatta took place in 1896 and is now one of the largest aquatic festivals in New Zealand.

The population of Ngaruawahia is approximately 5300 people, with a significant proportion of these being of Maori ethnicity – approximately 54%. The township has a 'working age' population of approximately 63% and also has a significant youthful population (approximately 29%). It is noted that development in the town has been relatively static over the last decade and residents are largely reliant on either Hamilton or Huntly for meeting higher order needs.

Within the wider Ngaruawahia and environs area (including Taupiri, Glen Massey, Horotiu, Hopuhopu and Te Kowhai), relatively low growth is anticipated over the coming 25 years:

Ngaruawahia Catchment	2014	2016	2021	2026	2031	2036	2041
Population	9,712	9,853	10,182	10,449	10,646	10,819	10,972
Households	3,412	3,492	3,706	3,893	4,051	4,117	4,175
Household Size	2.85	2.82	2.75	2.68	2.63	2.63	2.63
Population Growth (p.a.)	0.72%	0.66%	0.52%	0.37%	0.32%	0.28%	
Household Growth (p.a.)	1.17%	1.20%	0.99%	0.80%	0.32%	0.28%	

Source: Property Economics

Photos 13 to 21 portray the township and some of the key issues identified during analysis.

Key strategic directions for the town include:

- New residential growth in response to development of an employment hub at Horotiu will comprise of expansion areas to the north and south, and quality intensification alongside the rivers and around the town centre (Summary of Waikato District Growth Strategy 2009)
- A wider range of goods, services and activities to be provided for in the town centre (Summary of Waikato District Growth Strategy 2009)
- Promote Ngaruawahia as the cultural capital of the Waikato by seeking opportunities in collaboration with Tangata Whenua, including tourism, education and business development opportunities (Summary of Waikato District Growth Strategy 2009)
- Potential key passenger rail hub (Summary of Waikato District Growth Strategy 2009).

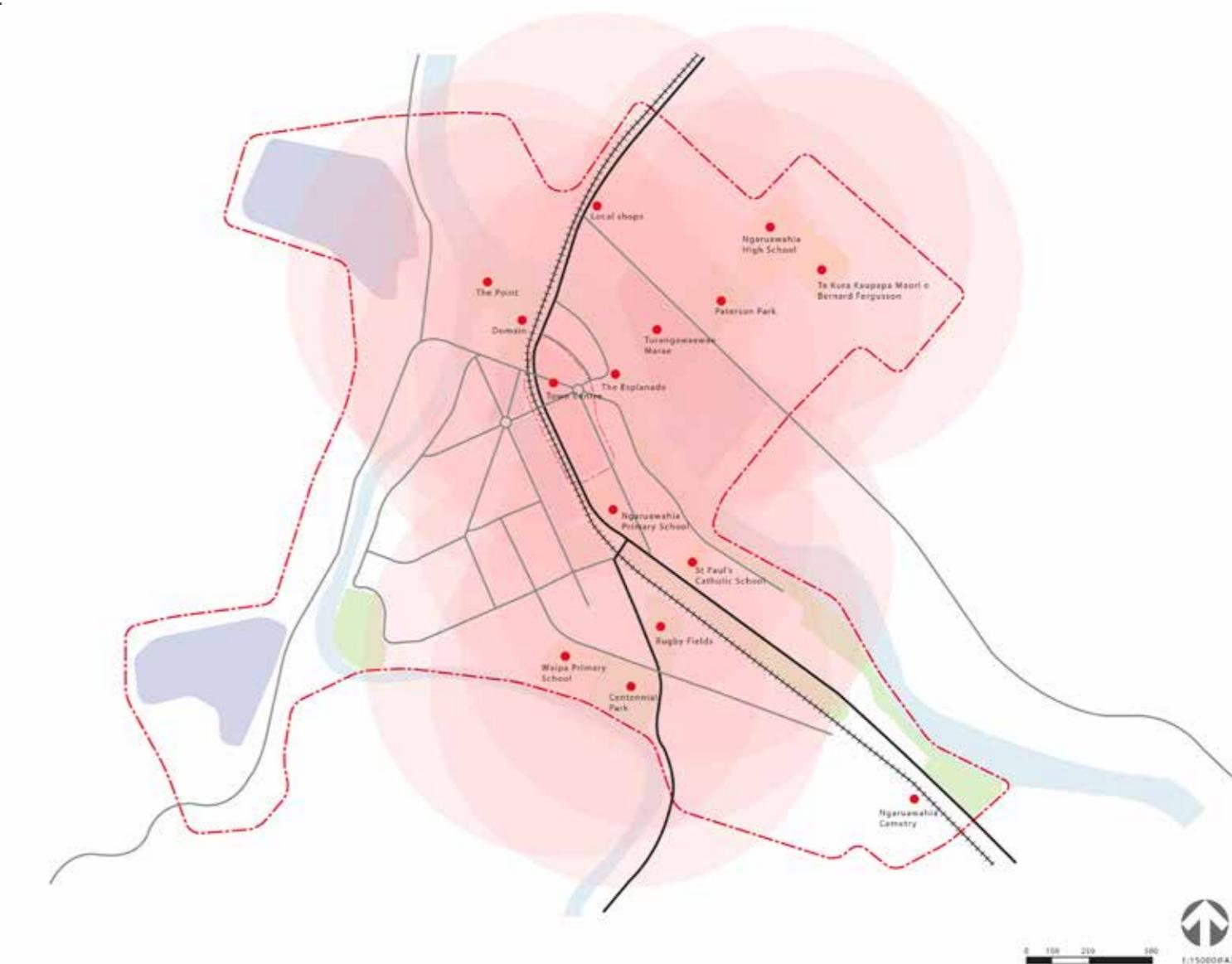




Photo 13. Conflicts between trucks travelling to the quarry and cyclists



Photo 15. Marae sits on a prominent site on the edge of the river



Photo 17. Kiingitanga Walkway celebrates Māori heritage in the area



Photo 14. Tired light industry is isolated from the town centre



Photo 16. Town centre concentrated in one area due to the railway



Photo 18. The outdoor pool is one of the few public sport amenities



Photo 19. Flowers soften the aesthetic of the town centre



Photo 20. Typical suburban residential development in Ngaruawahia



Photo 21. Paterson Park is an important public open space

3.0 Ngaruawahia

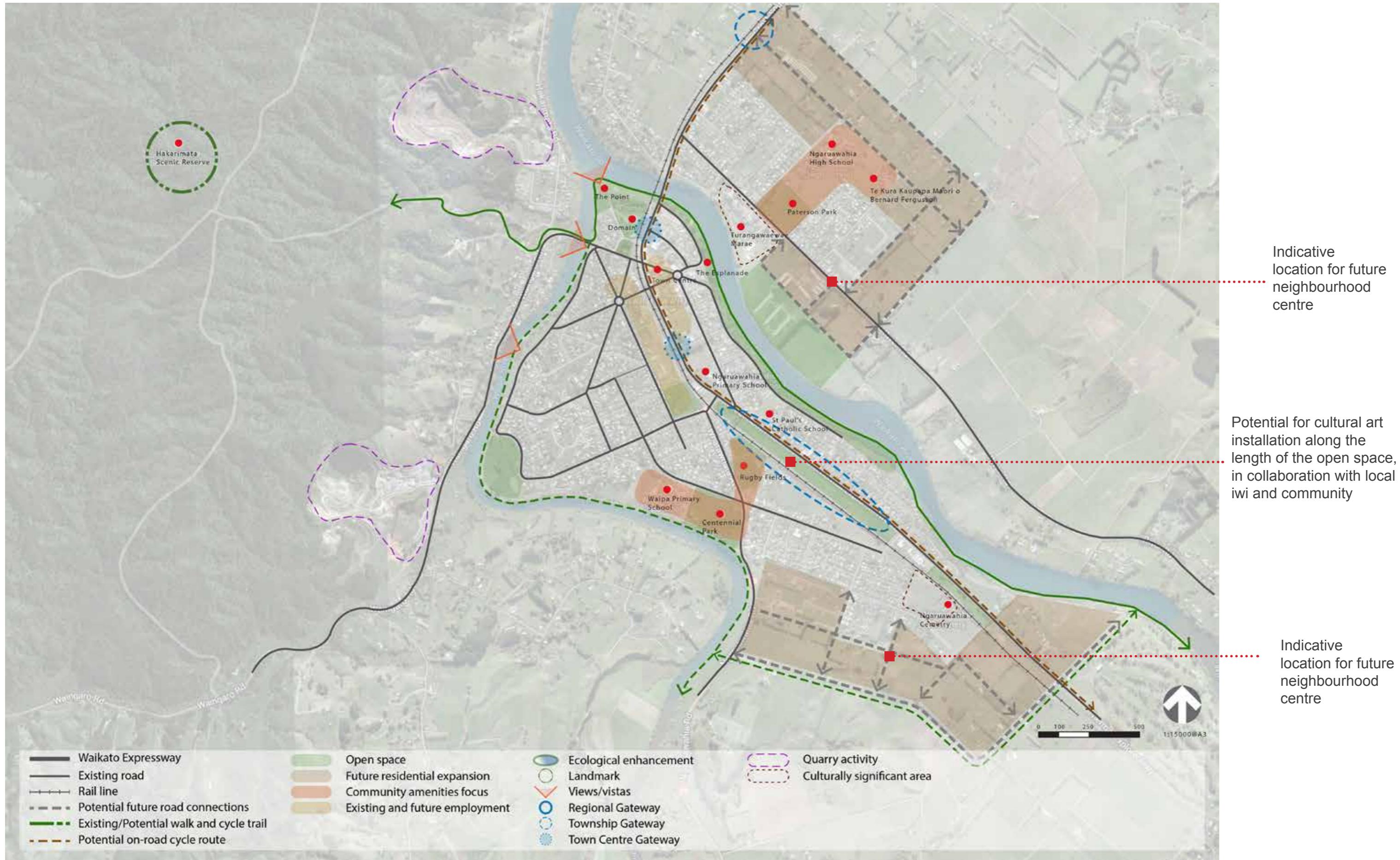


Figure 11. Overarching key moves for future growth - landuse, connectivity and landscape

3.3 Ngaruawahia Town Centre

This section provides an overview of the ‘key moves’ / key outcomes sought, suggested in considering the future growth of the Ngaruawahia town centre. The approach is based around a number of key structuring elements to assist in promoting growth of a compact centre that are at the heart of the surrounding community. Further, more detailed planning and design will be appropriate as known development opportunities come to the fore (e.g. supermarket development; train station development; other significant development within the town centre).

Figures 12 and 13 illustrate the key moves / key outcomes sought within the town centre.

Key assumptions

In considering the town centre, an analysis (including key issues) of the area and surrounding context has been undertaken. Subsequently, key considerations and assumptions that have informed the key moves include:

- Currently visitors to Ngaruawahia are unaware of the social and cultural activities that the town has to offer. Appropriate gateway and streetscape responses are required to respond to this issue.
- Transport infrastructure dominates the town centre. Enhancing the overall pedestrian experience within the town centre, particularly across Great South Road, to enhance east-west connections, will encourage more locals and visitors into the town centre.
- Strengthening connections with the Waikato and Waipa Rivers, including the Kiingitanga heritage trail, will also attract more local and visitors to the centre of the town.
- Jesmond Street has a good quality streetscape and a number of notable buildings (particularly corner buildings); however, the street remains vehicle dominated and is lacking in quality outdoor space (particularly facing north) suitable for community events, dining or children’s play
- Limited growth is anticipated; accordingly, it is suggested that future growth be limited to existing commercial areas, assisting to intensify activities.
- Identifying and encouraging development over those sites that are currently under developed, particularly along Great South Road, will assist to consolidate the town centre.
- There is a significant shortfall in supermarket retail provision in the form of a medium sized supermarket. This will become more pronounced over the next 25 years.
- There is an oversupply of convenience retail, which will balance out over the next 25 years.

Town Centre: Key Outcomes Sought

In response to the issues and assumptions identified, the approach to the Ngaruawahia town centre is premised on 6 key moves (refer figure 12):

1. Enhance connectivity with the Waikato and Waipa Rivers and Domain area by enhancing the legibility, connectivity and safety of the existing Kiingitanga heritage trail.
2. Upgrade Great South Road in favour of pedestrians, slowing traffic and enhancing legibility of the town centre
3. Enhance safety and legibility of the crossing point between Jesmond Street and the public open space to the west, making the connection as direct and convenient as possible
4. Redevelop the library site as a mixed use community destination including public open space
5. Enhance the eastern roundabout in favour of pedestrians
6. Retain the supermarket in the general vicinity, encouraging it to front Great South Road (with parking to the rear) if and when redevelopment occurs. Enhance pedestrian connections to the supermarket.



Figure 12. Ngaruawahia town centre - key moves diagram

Detailed concept plan overview

Building on the key moves, the following concepts have been identified for further investigation (refer figure 13):

1. Gateways into the town centre are proposed at two key points along Great South Road. The purpose of this is to change the driving behaviour of people when they subconsciously process that they are travelling through a built-up area. This reduces speeds and makes drivers more aware of their surroundings. It is possible to achieve these results through specific traffic management and urban design interventions, more specifically through simple signage, landscaping treatments and build outs within the road corridor.
2. For large sections of Great South road, slip roads and separate turning-lanes are used to help increase traffic flow. But as a consequence, the width of the road corridor can reach up to 20 metres at points, further emphasising the barrier created by the rail and road. The current locations of the two pedestrian crossings are not very convenient for access from the main shopping street to the public open space, residential areas and domain to the west. By reducing the road width (removing the slip-lanes and central reservation areas) this will subsequently create a completely different street character, slowing traffic speeds and allowing more opportunities for safe pedestrian crossings.
3. A major concept put forward for consideration is to remove the access from Jesmond Street onto Great South Road, therefore making it a one-way intersection. The purpose of this key move is to enhance pedestrians connectivity both north-south and east-west, and to create opportunity for a visually attractive open space, attracting people to stop in the town centre. Vehicles would only have access to Jesmond Street from Great North Road but to exit the street they would have to leave via the roundabout to the east. By tightening the intersection and reducing the road width, this allows for more public space which makes crossing the road a lot easier and safer therefore encouraging more activity. It represents a great opportunity to introduce a pedestrian crossing which directly links the main shopping street to the Park and Lower Esplanade loop to the west.
4. The proposed redevelopment of the library building will play a key role in enhancing the character of the area. It should be seen as a landmark building which has a positive relationship with the existing streetscape. The building should front onto Jesmond Street with public open space to the side. Opportunity exists to combine the library with other uses, such as community based activities, cafés and local information.



Figure 13. Detailed town centre key moves for further investigation - landuse, connectivity and landscape

5. There are several brownfield sites within the town centre area which have a negative effect on the peoples 'experience' of the street. By encouraging buildings to populate these spaces, this will produce a continuous built-form with active frontage throughout the central areas therefore giving it more identity and creating a better experience for pedestrians.
6. The existing supermarket has a poor relationship with the public realm and is likely to be too small to respond to demand in the medium to long term. Opportunity exists to face the supermarket on to Great South Road, providing car parking to the rear, facilitated through land swaps with Council land in the same vicinity. Subject to feasibility, a further option may be available through land swap of Council owned kindergarten, providing for a direct east west through site link.
7. Although land to the east of the town centre is predominantly residential, the road infrastructure still dominates the space making it difficult for pedestrians to cross certain intersections. The best example of this is the roundabout to the east of Jesmond Street which links with 4 other secondary roads. Pedestrian movements should have priorities within these residential areas. This can be achieved by refining and constraining the junction corners and introducing a pedestrian crossing at each of the link roads. This will allow for a safer and more permeable junction. This will also assist to establish a more usable heritage circuit around the town centre and along the river.
8. Reconfiguring the eastern roundabout at the start of Waikato Esplanade has the potential to enhance pedestrian connections and establish a formal entrance to the esplanade, which should be celebrated as a walking destination within the town.
9. The Octagon is an underutilised cultural and social amenity. It has strong ties with the Kiingitanga House and heritage trail. Removal of the Durham Street and extending the park to the rail line (with appropriate safety fencing) is suggested. Upgrades to seating and a temporary (summer) kiosk should be considered, particularly as pedestrian connectivity is improved.



Photo 22. A direct connection with Jesmond Street will attract greater use of surrounding open space



Photo 23. Better access to the octagon will enhance the cultural and social experience of the town

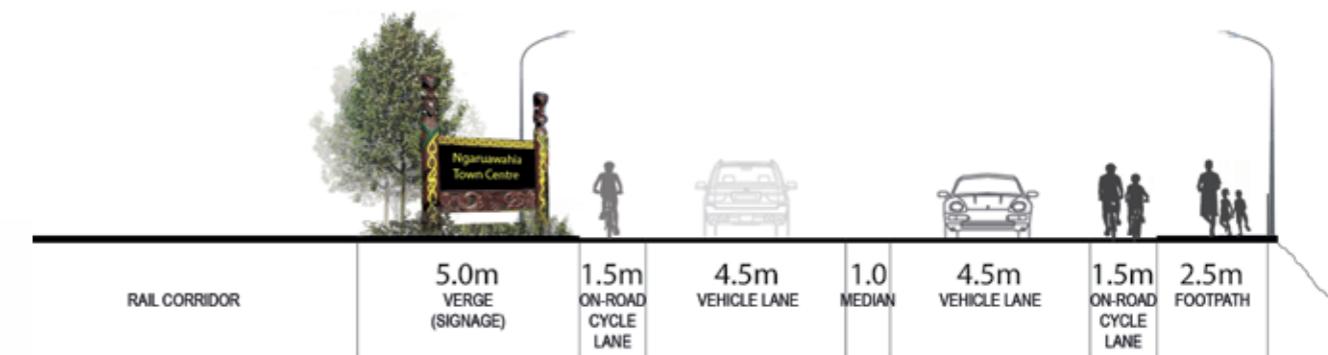


Figure 14. Indicative cross section - Great South Road gateway to Ngaruawahia town centre

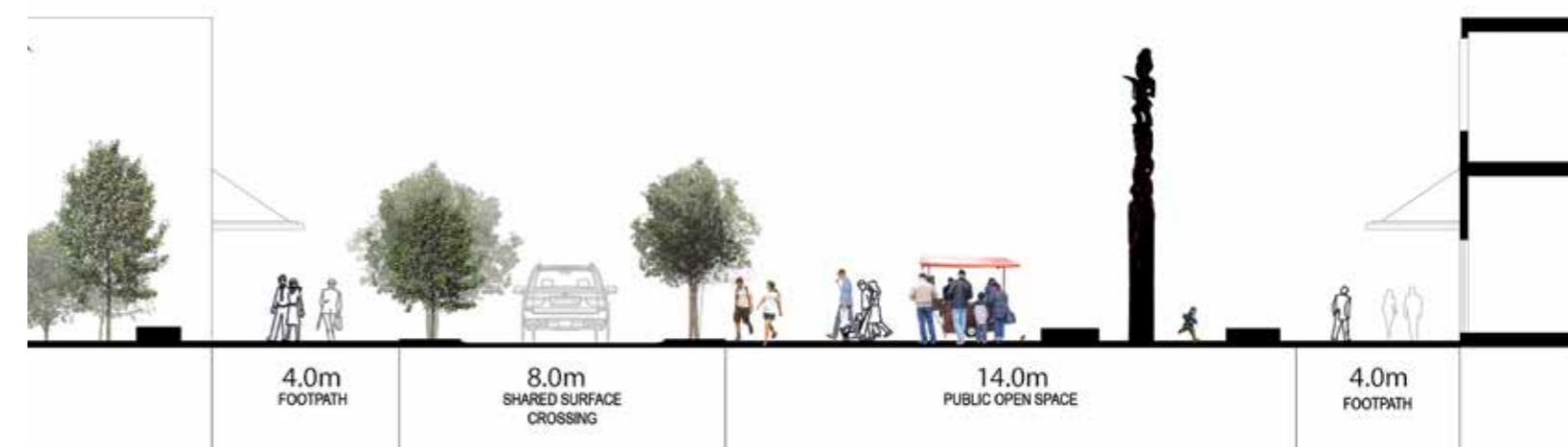


Figure 15. Indicative cross section - corner Jesmond Street and Great South Road - narrowing to one lane and provision of outdoor open space outside the library and southern side of the street

3.4 Taupiri

Taupiri is located on the eastern bank of the Waikato River approximately 7 minutes north-east of Ngaruawahia and is overlooked by Taupiri Mountain – the sacred burial ground for Maori of the Waikato Iwi. The township was settled by Pakeha in the 1870s and has become a farming centre with flax mills, a sawmill and a dairy factory.

The population of Taupiri is approximately 440 people. The township has a significant Maori population (approximately 38%), while approximately 58% of the population identify as European ethnicity. Taupiri also has a significant youthful population, with approximately 25% aged 14 years of age or younger. Approximately 62% of the population is of 'working age' (between 15 years and 64 years of age).

The landscape surrounding Taupiri is dominated by the presence of Taupiri Mountain, which has significant cultural value to Maori (particularly local Iwi, Waikato Tainui) as a burial ground.

The existing Taupiri Town Centre is small with a mix of retail and service uses. The Church sits on a prominent site on the corner of the State Highway at the entrance to the Town Centre. There is a collection of education services to the north of the Town Centre that consists of a Primary School and a Daycare Centre. To the east of the Town Centre is an area of light industry that sits adjacent to the rail line.

The Taupiri Rugby Club and Tennis Courts are well respected within the wider Ngaruawahia Region. Many teams from all over the region come to Taupiri especially to play there.

The new Ngaruawahia by-pass and the railway line cut through the town making movement through the area difficult. To the west is the old State Highway running along side the Waikato River and effectively isolating it from the rest of the town. Due to the opening of the new by-pass, vehicle traffic has reduced but overall the town is still traffic dominated.

The town centre is located off the main road and provides a more pedestrian friendly environment compared to the main road. The school, Rugby Club and Church can all be accessed from side roads away from the State Highway creating a safer environment for parents and children.

Photos 24 to 32 portray the township and some of the key issues identified during analysis.

Taupiri is zoned predominately for residential activities and the majority of the township is zoned 'Living' and 'Country Living'. There are also a number of sites identified as the 'Business Zone' and a small proportion of land is allocated to the 'Recreational Zone' and the 'Pa Zone'. Taupiri township is surrounded by land zoned 'Rural'.

Key strategic directions for the town include:

- Limited growth to the south and east of Taupiri is envisaged (Summary of Waikato District Growth Strategy 2009)
- There will be increased pressure on the town for potential logistics and industrial sites with the completion of the Ngaruawahia Section of the Waikato Expressway. Completion of the Ngaruawahia bypass will place pressure on town for potential logistics and industrial sites (Summary of Waikato District Growth Strategy 2009)
- Future urban growth possible on undeveloped countryside living areas (Summary of Waikato District Growth Strategy 2009)

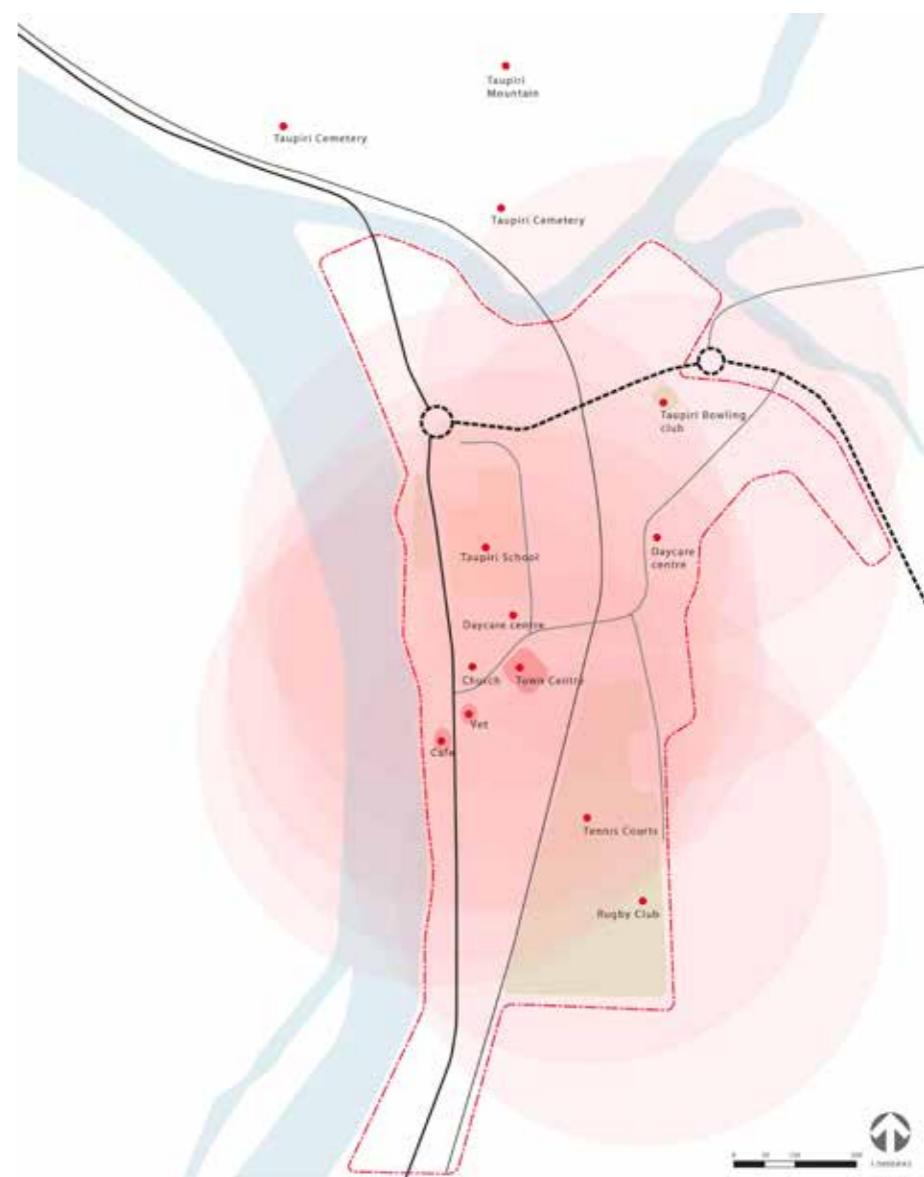


Figure 16. Walking distances from key amenities (400m walking circles from key activity nodes). Darker shaded areas identify those areas potentially well suited to residential development and/or intensification.



Photo 24. Dominant presence of Taupiri Mountain



Photo 27. The Taupiri Rugby Club is well known in the Ngaruawahia area



Photo 30. Good outdoor amenities sit adjacent to the Rugby Club



Photo 25. The Church sits on a prominent site within the Town Centre



Photo 28. The location of the cafe provides opportunities for advertising



Photo 31. Small group of local amenities located off the highway



Photo 26. Pedestrian and cyclist routes are affected by the by-pass



Photo 29. Typical suburban housing



Photo 32. Pedestrian facilities are limited throughout the town

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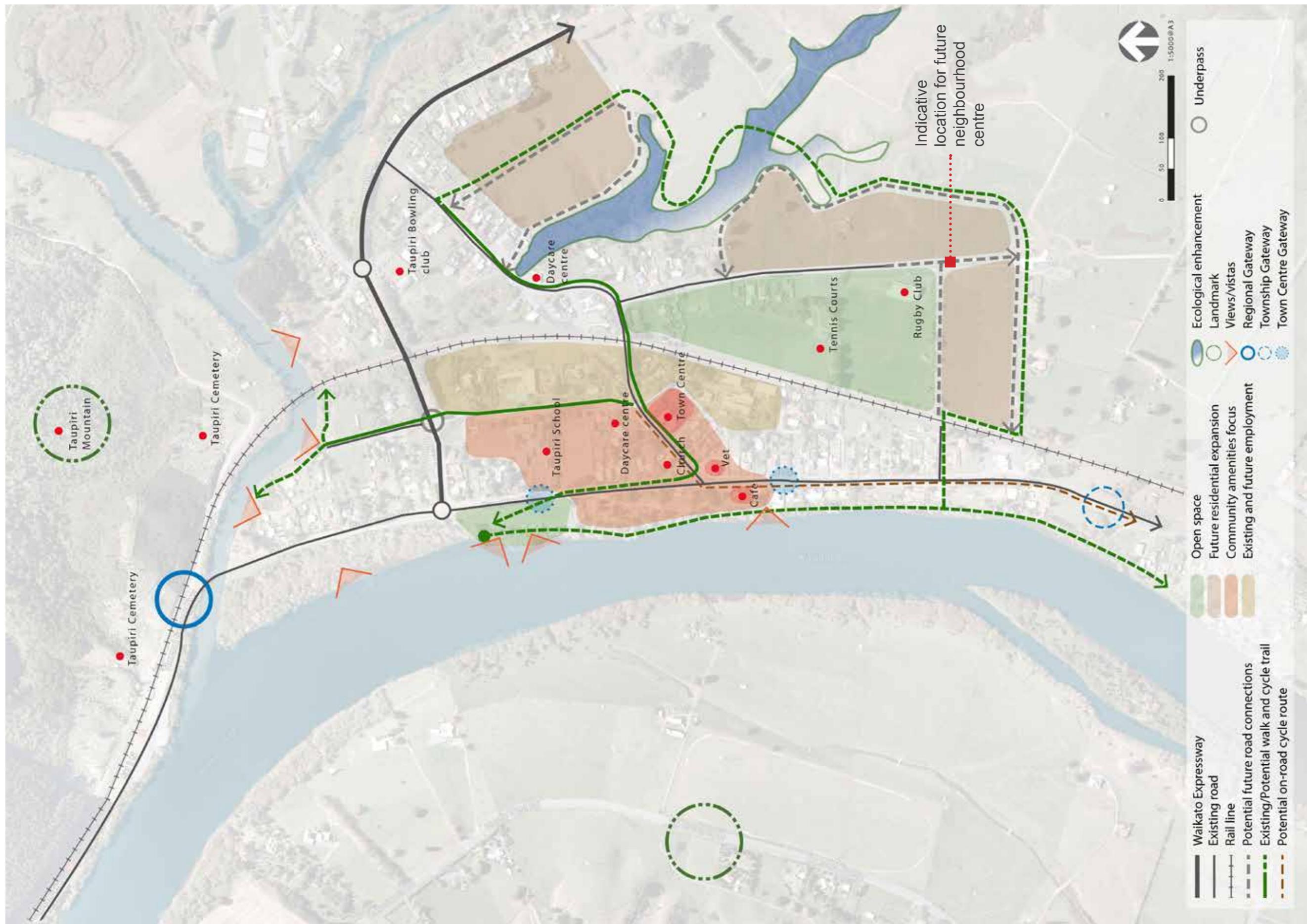


Figure 17. Overarching key moves for future growth - landuse, connectivity and landscape

3.5 Hopuhopu

Hopuhopu is located approximately 6 minutes north-east of Ngaruawahia. The township was formerly the site of an army camp from 1920 until 1993 when the land was returned to Waikato-Tainui, who established a complex including the Waikato-Tainui Endowed College and tribal administrative centre.

The village is located off the main road and provides a pedestrian friendly environment compared to the main road. The school, Rugby Club and Church can all be accessed from side roads away from the State Highway creating a safer environment for parents and children.

Hopuhopu is predominately zoned 'Living', 'Business' and 'Pa' and is surrounded by land zoned for 'Rural' activities.

Any future planning for Hopuhopu should be undertaken in collaboration with Waikato Tainui. Potential exists to support Tainui in the development of a significant cultural and visitor destination that reflects the Maori heritage of the area.

Photos 33 to 38 portray the township and some of the key issues identified during analysis.



Photo 33. Hotel sits on a raised area to take advantage of the views



Photo 34. Limited pedestrian and cyclist amenities

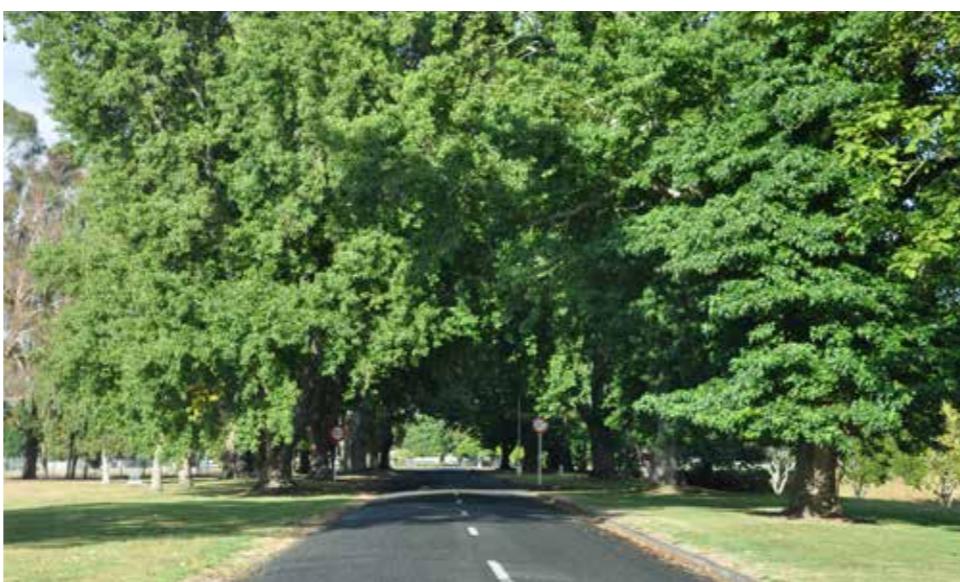


Photo 35. Large trees line the road as you enter the Hopuhopu area



Photo 36. Large public open space that opens out to the Waikato River



Photo 37. The historical air base is an important landmark



Photo 38. Tainui has a strong presence in the Hopuhopu area

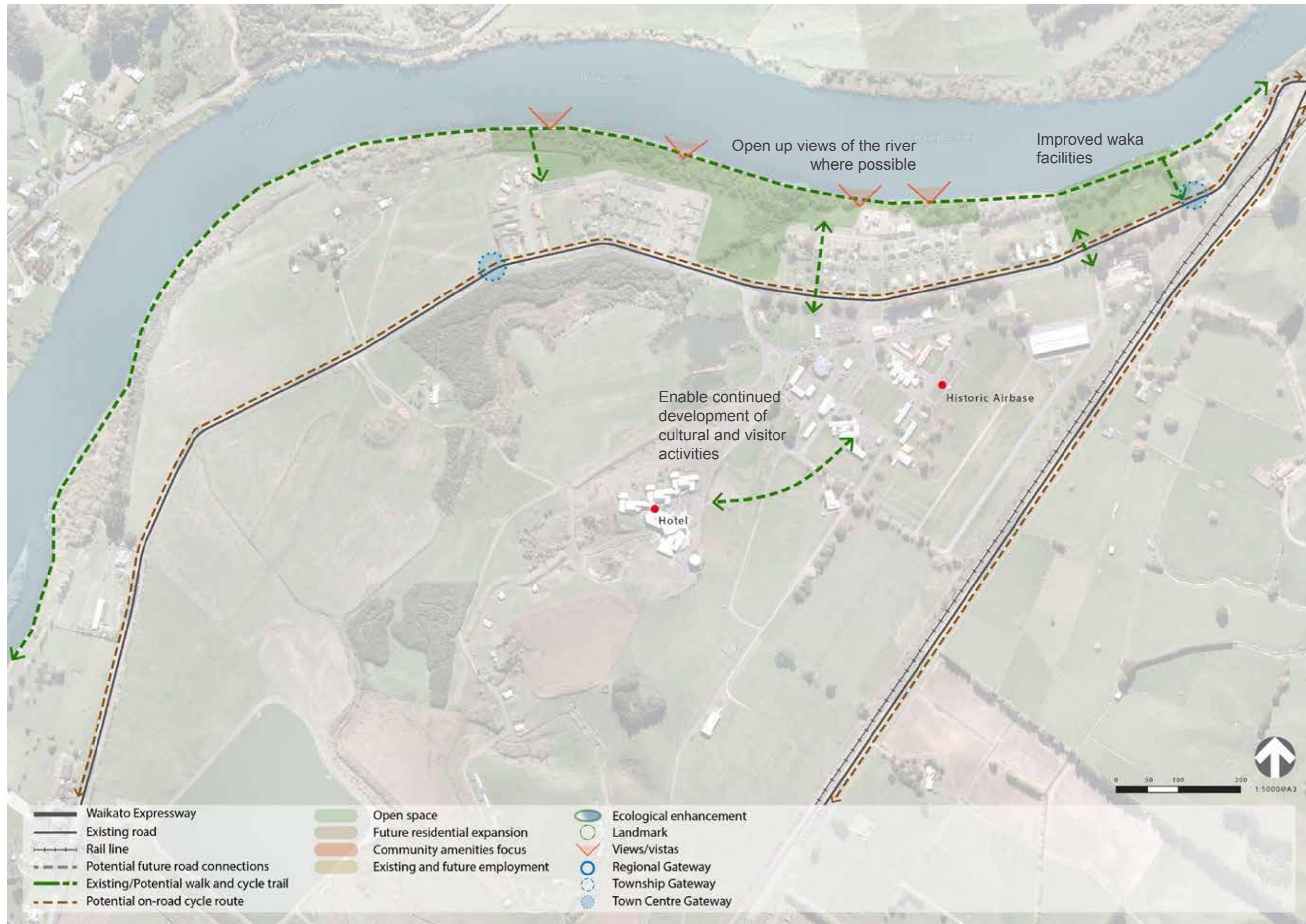


Figure 18. Overarching key moves for future growth - landuse, connectivity and landscape

3.6 Horotiu

Horotiu is located approximately 15 minutes' drive north of Hamilton and has a population of approximately 870 people. The population is largely of European ethnicity (approximately 64%) but there is also a significant component that identifies as Maori (approximately 27%). Horotiu has a notable dependent population – approximately 26% of people are younger than 14 years of age and 13% are 65 years of age or older.

Horotiu is predominately zoned for industrial activities with the majority of land either the 'Heavy Industrial Zone' or 'Industrial Park Zone'. There are also pockets of land which are dedicated to residential activities, including an area of land zoned 'Living' to the west of the industrial area and an area of land zoned 'Country Living' to the east of the industrial area.

Key strategic directions for the town include:

- Industrial growth at Horotiu with appropriately scaled development in existing settlements, in order to capture economic investment (Summary of Waikato District Growth Strategy 2009)
- Strategic transport interchange (Te Rapa Bypass, Ngaruawahia Bypass) with development of substantial employment hub, sensitive to community and natural environment (Summary of Waikato District Growth Strategy 2009)
- Residential developments close to river around Horotiu Bridge and around the existing village (Summary of Waikato District Growth Strategy 2009).

Photos 39 to 43 portray the township and some of the key issues identified during analysis.



Figure 19. Walking distances from key amenities



Photo 39. Local dairy is the only store within the town



Photo 40. Suburban property backing onto an industrial site



Photo 41. One of the few public amenities in the town



Photo 42. Horotiu Primary School



Photo 43. Local industry



Figure 20. Overarching key moves for future growth - landuse, connectivity and landscape

3.7 Te Kowhai

Te Kowhai is located approximately 17 minutes' drive north-west of Hamilton City and is a small rural town consisting predominately of dairy and cattle farms. The town is popular for new subdivisions and also comprises a primary/intermediate school, fruit and vegetable store, dairy and takeaways, mechanic, and a large park with a skatepark and playground. Te Kowhai Airfield is situated on the southern periphery of the town.

Given that these statistics are derived from the New Zealand Census, the possibility that a proportion of the population who identified as 'other' may in fact have provided 'New Zealander' as their ethnicity in explanation is noted. Approximately 62% of the population are aged between 15 and 64 years of age and approximately 16% are 65 years of age or older. It is noted that this 'old dependent' proportion of the population is the highest of all towns within the wider study area.

Te Kowhai is predominately zoned for residential activities and rural activities. The township includes both the 'Country Living Zone' and 'Living Zone', and has a small number of lots zoned 'Business'. The township is surrounded by a large expanse of land zoned 'Rural' on all sides.

Key strategic directions for the town include:

- Compact growth to the north of Te Kowhai Airfield and to the east of the stream (Summary of Waikato District Growth Strategy 2009)
- Promote more local services and activities but retain the rural aspect and village feel of Te Kowhai (Summary of Waikato District Growth Strategy 2009)
- Protect and enhance Te Kowhai Airfield operations (Summary of Waikato District Growth Strategy 2009).

Photos 44 to 47 portray the township and some of the key issues identified during analysis.

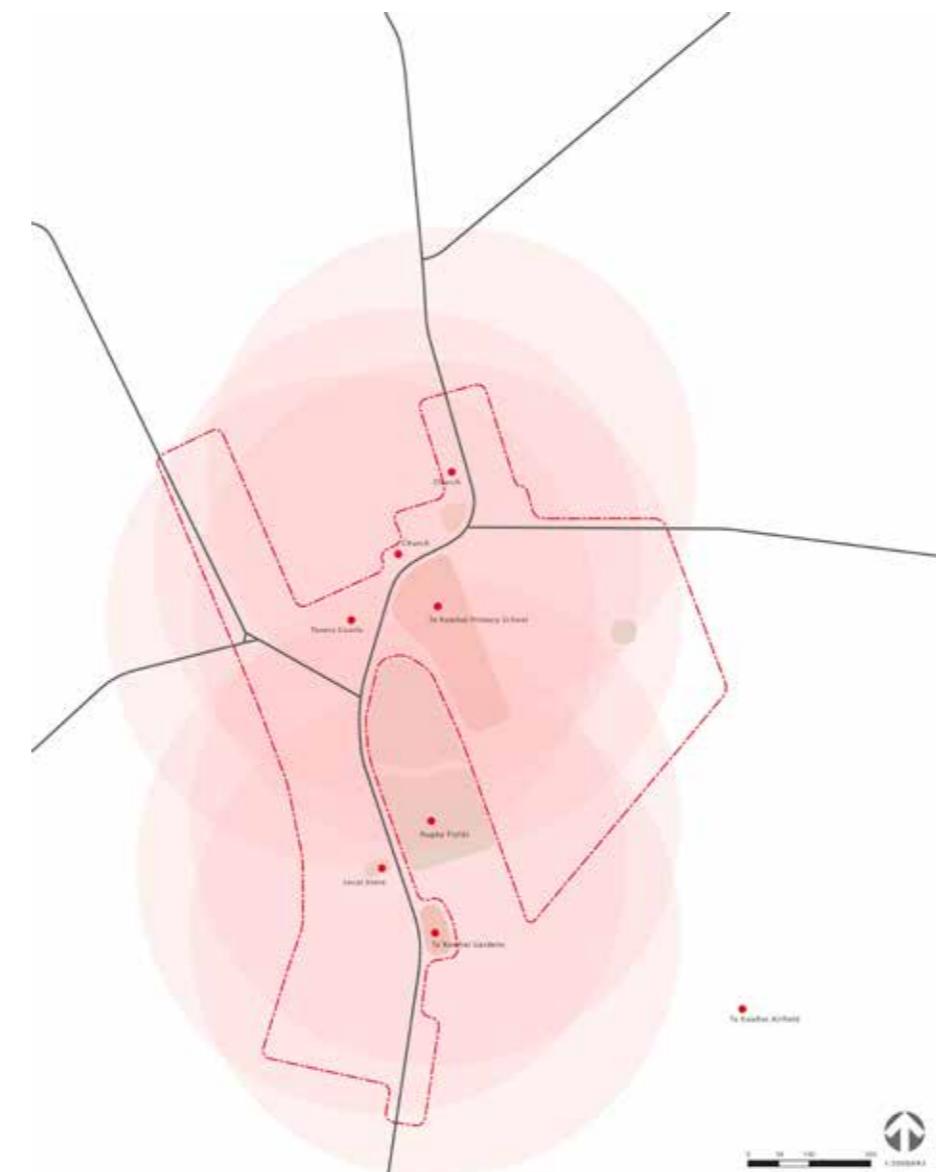


Figure 21. Walking distances from key amenities



Photo 44. Local dairy is isolated from the town centre



Photo 45. Open space and street layout respond to views and vistas

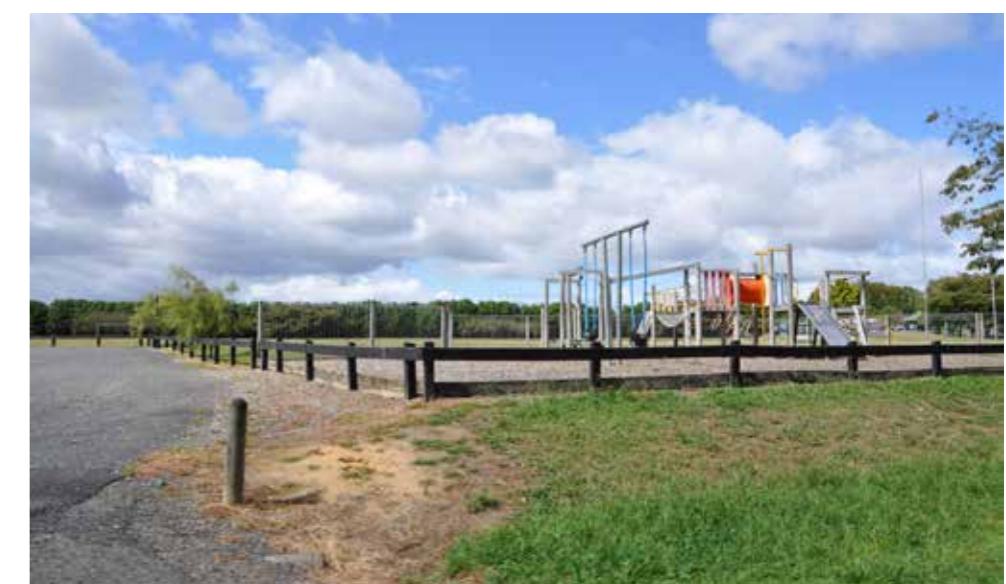


Photo 46. Large public park at the entry of the suburban development



Photo 47. Te Kowhai Automotive is the only light industry in the area

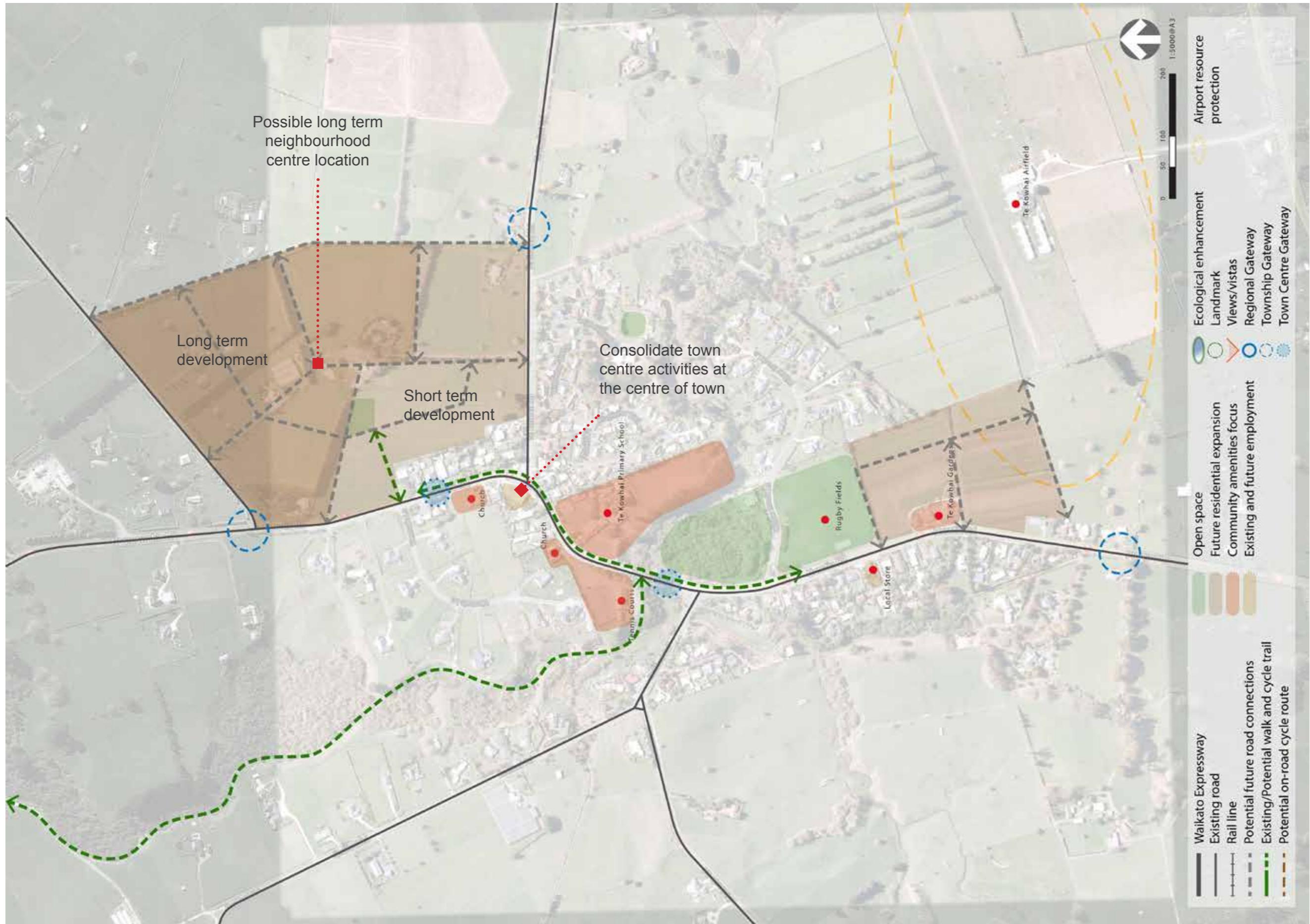


Figure 22. Overarching key moves for future growth - landuse, connectivity and landscape

3.8 Glen Massey

Glen Massey is an old mining village located approximately 12 minutes' drive west of Ngaruawahia

Glen Massey is zoned predominantly for residential and rural activities. The village itself comprises of land zoned for both 'Living' and 'Country Living' and is surrounded by land that has been identified for the 'Rural Zone'.

Photos 448 to 54 portray the township and some of the key issues identified during analysis.

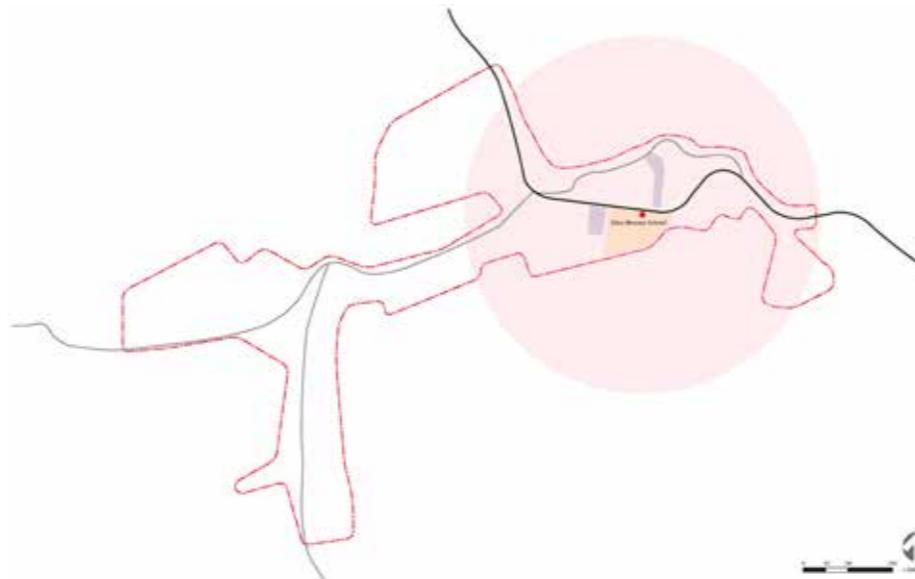


Figure 23. Walking distances from key amenities



Photo 48. The Glen Massey township is nestled within the mountains



Photo 49. Only recreational space in the town is within school grounds



Photo 50. Well respected school within the Ngaruawahia area



Photo 51. Typical residential street within the Glen Massey area

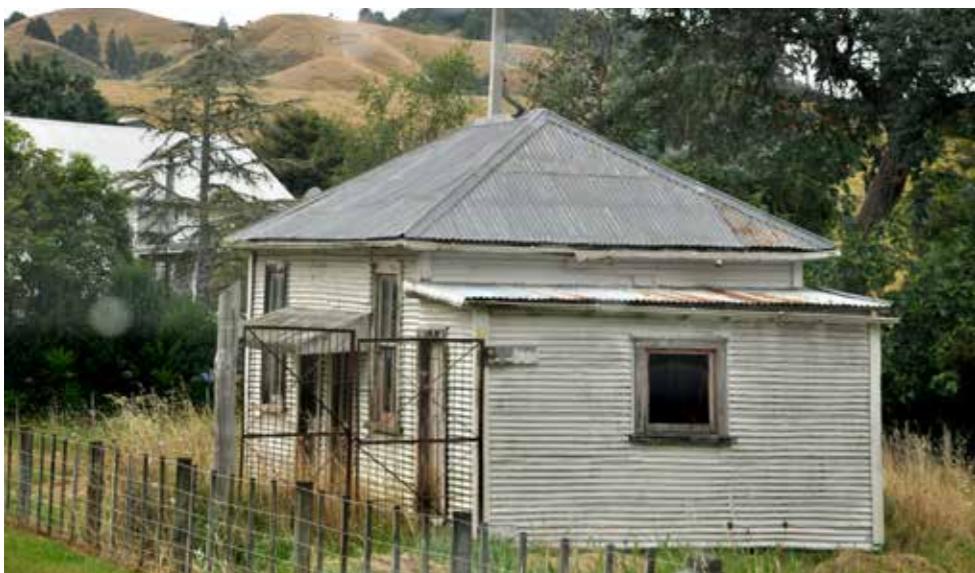


Photo 52. Tired and abandoned looking dwellings



Photo 53. Limited amenities for pedestrians and cyclists



Photo 54. Open space and street layout respond to views and vistas

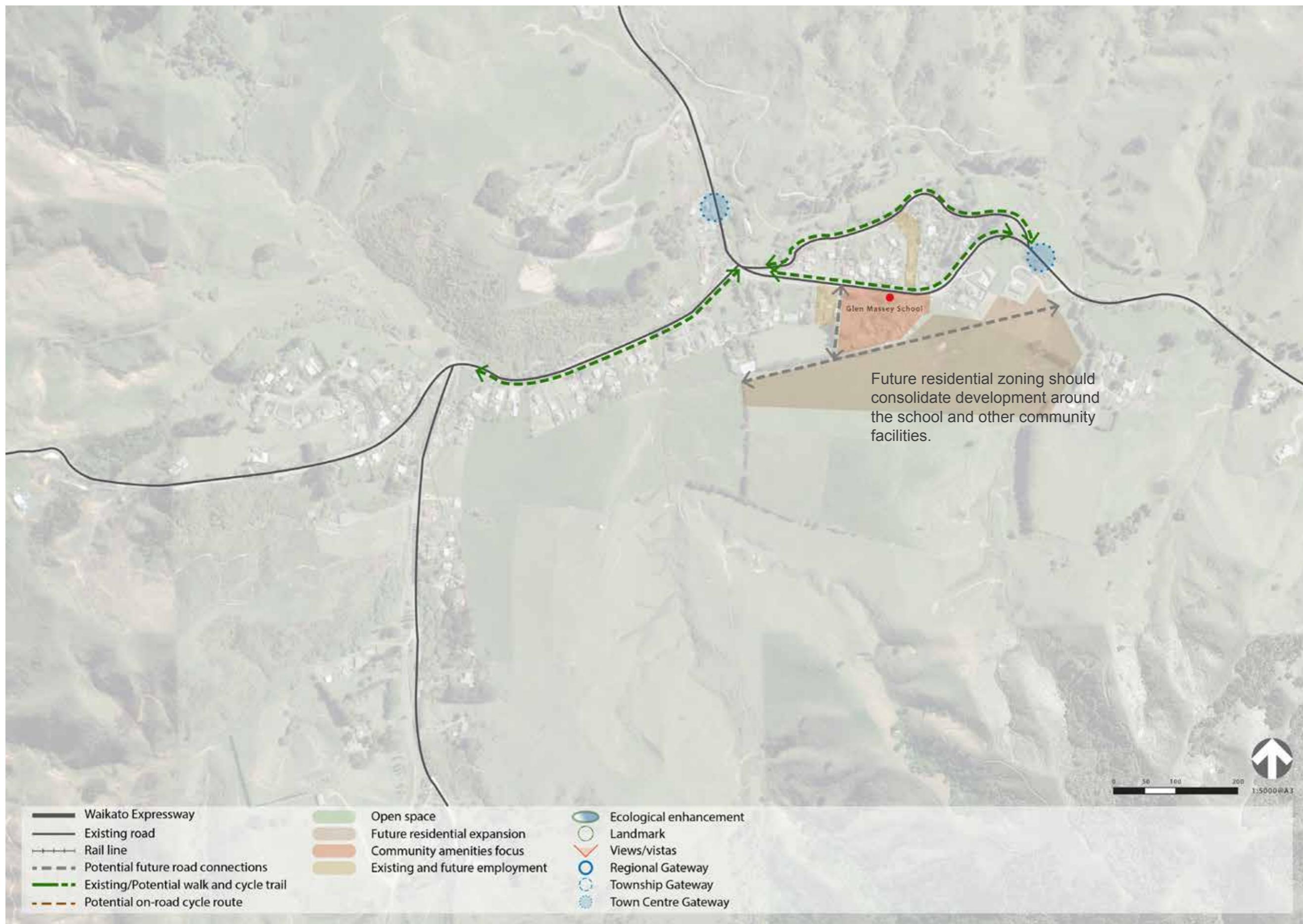


Figure 24. Overarching key moves for future growth - landuse, connectivity and landscape

4.1 Residential Design Guidelines

The following guidelines for residential development have been prepared in response to issues facing Tuakau and Ngaruawahia in relation to residential development, but are also relevant to smaller townships within the Waikato District as they experience development pressure. The guidelines can be applied at multiple scales of design, including:

- Structure planning for the wider township areas
- Structure planning for neighbourhood growth areas
- Subdivision design (through subdivision standards)
- Dwelling design (through bulk and location standards within the district plan).

Prior to undertaking structure planning and/or subdivision design, an assessment (including mapping) of the following site qualities (as a minimum) should be carried out to gain a thorough understanding of the opportunities offered by the site:

- Topography and landform
- Flora and fauna
- Soil conditions
- Open spaces, green networks and waterways
- Accessibility to river areas and other significant amenities
- Features of heritage and cultural significance
- Potential flood areas and other natural hazards
- Movement networks, including walkways, cycle routes and streets
- Surrounding land use and built character

Building on and responding to the site assessment, the following key matters should be considered as part of the design process going forward:

- Subdivision and site layout
- Movement and connectivity
- Public open space and streetscape
- Cultural values - in particular, Maori urban design principles

Each of the above matters is further outlined hereafter.

4.2 Subdivision and site layout

Overview

Traditional settlement patterns throughout New Zealand have often incorporated grid patterns, the defining feature a series of crossroad junctions which enable easy access to the town centre and other amenities. These patterns enable excellent permeability and potential for residential lots to have road frontage. Often the grid layout also assists in establishing long views which contribute to a sense of place and local identity. The flow-on effects result in safer, more accessible neighbourhoods, with high amenity and character value. Use of a grid layout in the Tuakau and Ngaruawahia areas has the potential to increase connectivity with the town centres and open space, particularly where walkways and streets join up with the existing street pattern.

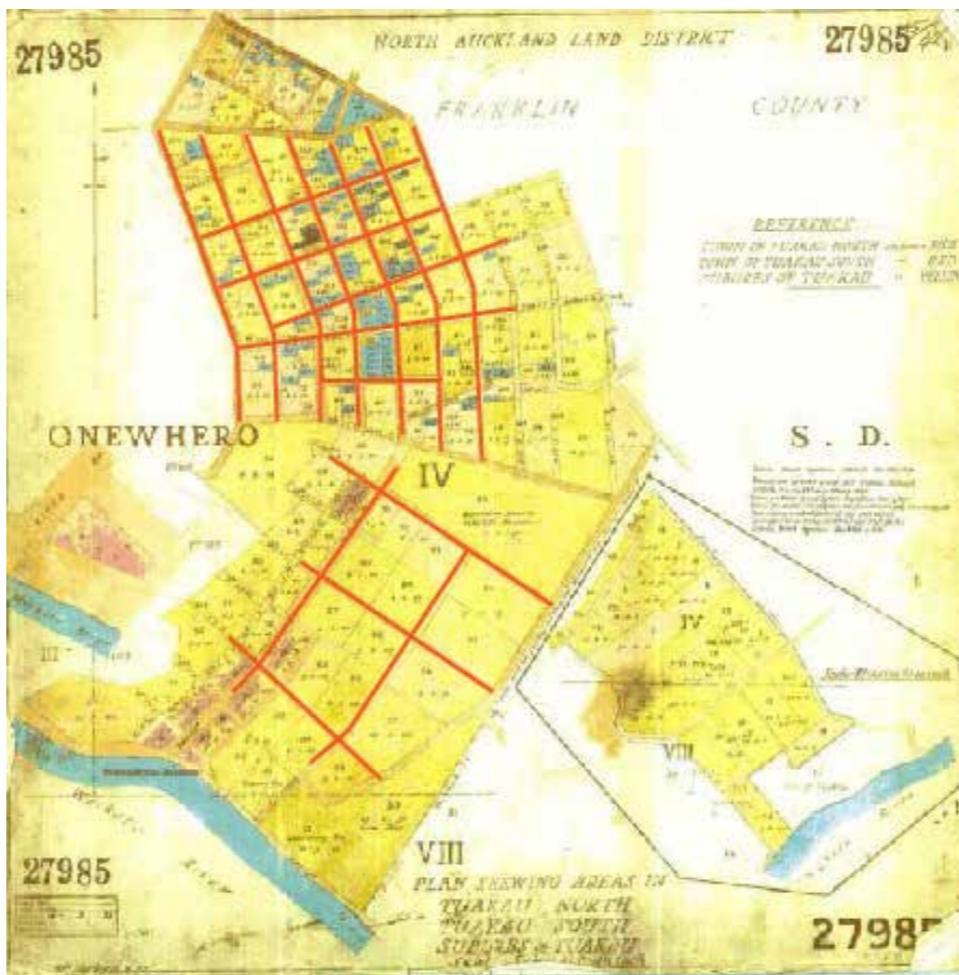


Figure 25. North Auckland Land District map, dated 14 March 1935, showing original planned grid pattern of township.

The orientation of roads and blocks should maximise on-site amenity for residents. In particular, site orientation should ensure that lots have usable outdoor living space, receive adequate sunlight and provide a public 'front' to the road and a private 'back' for amenity. The layout of lots should also provide for a mix of housing types, lot sizes and densities, with smaller lots located in close proximity to open space and other amenities. This promotes housing choice and diverse neighbourhoods. Within the context of Tuakau and Ngaruawahia and environs, the typical lot size is likely to be in the range of 500-700m², with compact residential living up to 300m².

Key issues identified in the Tuakau and Ngaruawahia context

- Poor relationship between private and public realm, particularly where infill / rear housing is occurring.
- Lack of street / local character, particularly in some recent development areas (increased by lack of dwelling orientation to street, and inconsistencies in built form relationship with street).
- Lack of quality on-site amenity – particularly usable open space.

Objectives

- Provide neighbourhoods that reduce safety issues through appropriate subdivision layout and make a positive contribution to the amenity and visual character of the street.
- Provide reasonable privacy both for both existing and new dwellings.
- Ensure all lots / dwellings are able to receive adequate sunlight to living areas during the day.
- Ensure lots maintain adequate privacy
- Encourage the integration of compact residential living opportunities housing close to town centres, open spaces and other amenities.

Design Principles

- Much of the Tuakau and Ngaruawahia environs consist of relatively flat topography. Subdivision design over flat sites should, at least in part, seek to establish a regular (or near-regular) grid pattern that provides strong connections to existing movement networks (including walkways, cycle routes and streets). Where streets are unable to form continuous routes, walkways should be used to complete the grid patterns and retain permeability.
- Within residential areas grid patterns should establish blocks of between 100 – 200 metres in depth and width, facilitating walkable, permeable neighbourhoods and avoiding internal lots. The use of cul-de-sacs should be avoided wherever possible.
- Subdivision design should avoid the use of ‘rear lots’. Such lots add little value to the wider community and can result in safety issues, particularly where access ways are narrow and have little visual connection with the street.
- Wherever a regular grid pattern is unachievable or not appropriate, an informal grid pattern needs to be established. The pattern should provide strong connections to existing movement networks and include walkways and cycle routes.
- Design urban blocks for lots to have ‘fronts facing fronts’ and ‘backs facing backs’. Avoid developing rear lots within a block. These reduce the privacy of adjacent sites and increase the depth and size of the block.
- Provide lots with sufficient area and dimensions to meet user needs. Ideally lots should be rectangular in shape, with dwellings located at the front by the road to allow the development of private back yards.
- Design lots so that future dwellings can locate their front door towards the street – assisting to improve the character and safety of the neighbourhood.
- Specify dwelling setbacks for streets, and locate garages a specified distance back from the dwelling’s front façade.

- Within any neighbourhood, provide a variety of different sized lots, creating a diverse community, rather than catering for only one residential market. This may include (refer figure 28):
 1. Compact residential type units in close vicinity to town centres and multifunctional open space. These dwellings will be particularly appropriate for singles, couples without children and elderly.
 2. Mixed use commercial/residential sites within town centres (subject to appropriate development controls to ensure a good standard of living is achieved). These dwellings will be particularly appropriate for young people and professionals looking for a live/work lifestyle.
 3. Low density residential
 4. Rural residential, offering potential for horticulture / country living lifestyles.
- Provide for minimum dwelling unit sizes (excluding parking and outdoor living space). The following areas are recommended:
 - 1 bedroom / studio units: $45m^2$
 - 2 bedrooms: $70m^2$
 - 3 bedrooms: $90m^2$.
- Orient lots to ensure sheltered microclimates can be delivered, receiving adequate winter sunlight in outdoor and indoor living spaces. For any standalone, semidetached or duplex dwellings, provide a single, usable outdoor living space:
 - Minimum $35m^2$ in area, with a minimum dimension of 4m
 - Orientated to the north, east or west (preferably north or west to capture the afternoon sun)
 - Attached to habitable indoor space (e.g. living room).
- Locate outdoor living spaces to the side or rear to avoid the need for tall solid fencing.
- Design driveway crossings and vehicle access to less than 40% of any site frontage with the road.
- Incorporate principles of Crime Prevention Through Environmental Design (CPTED) in the design of subdivisions (including regular safety-in-design reviews during the design process).

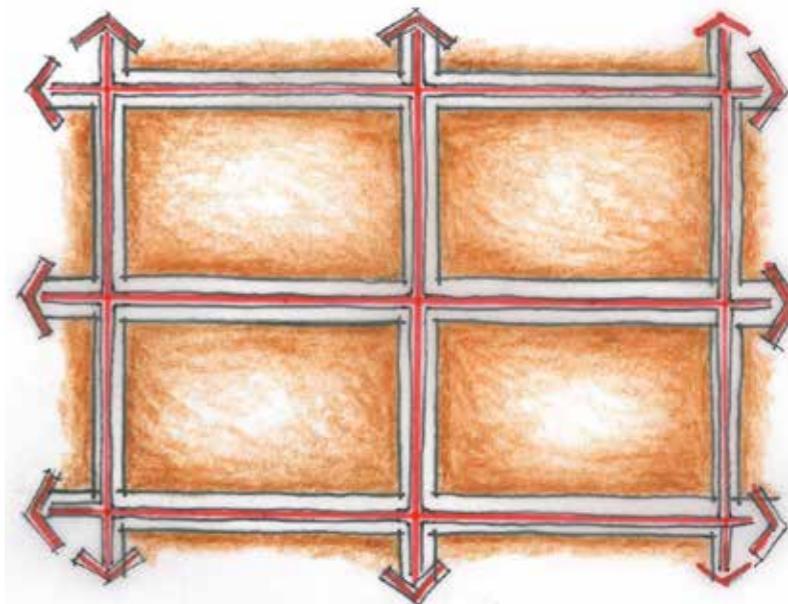


Figure 26. Grid pattern blocks promote connectivity and permeability, and subsequently enhance personal wellbeing and reduce vehicle kilometres travelled.

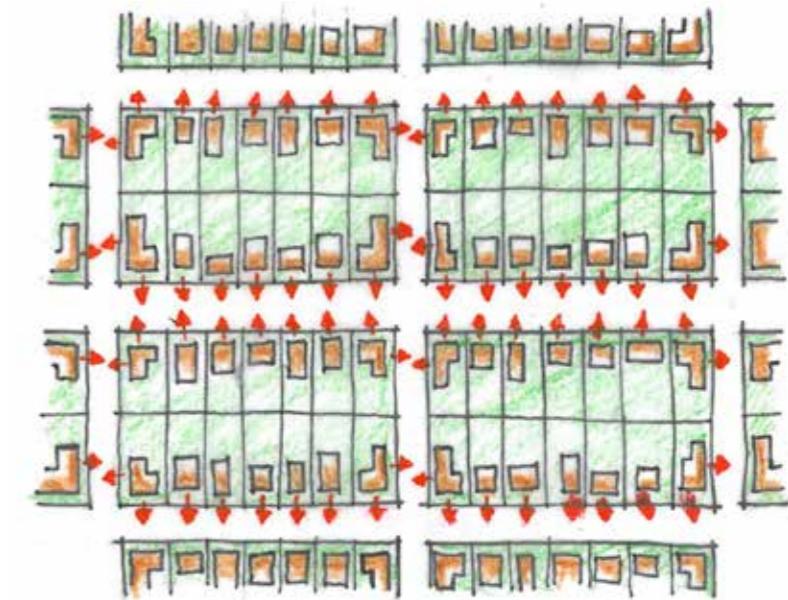
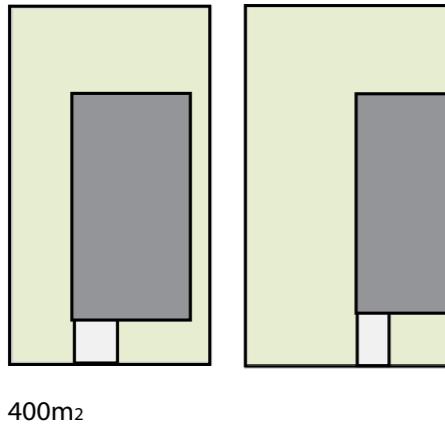
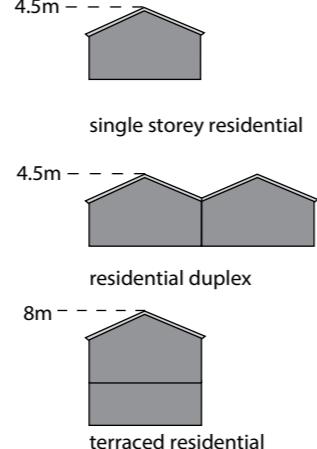
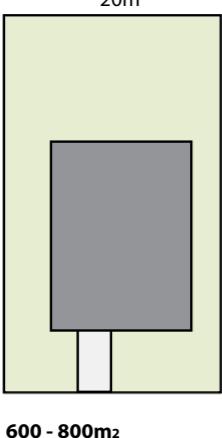
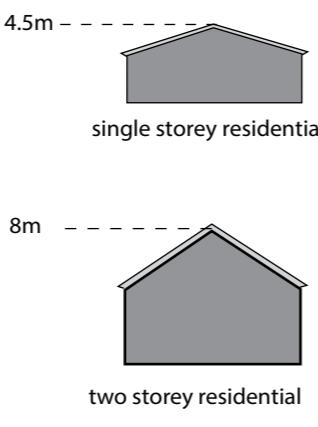
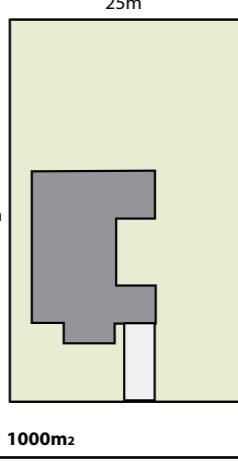
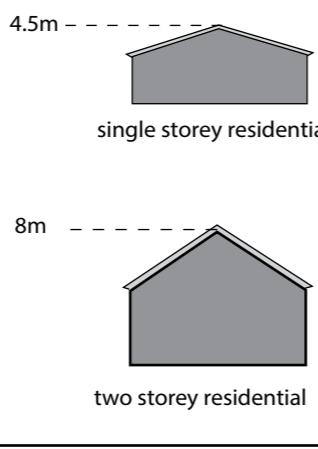
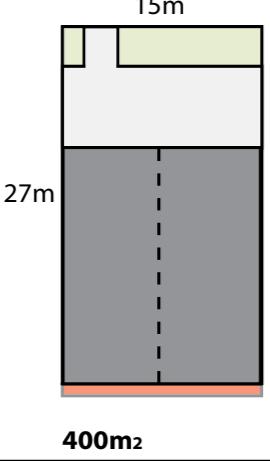
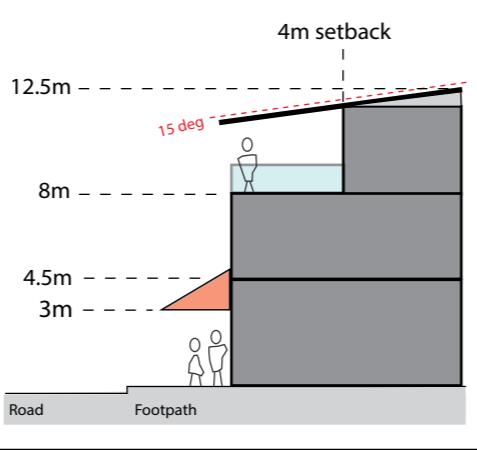


Figure 27. Grid pattern blocks, designed to that all residents have a ‘street address’ facilitate safer streets and social interaction, while providing potential for good on site amenity.

4.0 Design Guidelines

PLAN	SECTION	DESCRIPTION	EXAMPLE	
COMPACT RESIDENTIAL	 <p>15m 27m 400m²</p>	 <p>4.5m - - - single storey residential 4.5m - - - residential duplex 8m - - - terraced residential</p>	<p>Compact residential lots between 150-300m² are encouraged to maximise density close to the Ngaruawahia and Tuakau town centres and adjacent to multifunctional public open space providing active and passive recreation opportunities (e.g. Dr Lightbody Reserve).</p> <p>With dedicated outdoor living space located to maximise sun, the built form on these compact lots could consist of:</p> <ul style="list-style-type: none"> - a one or two storey single dwelling - a one or two storey duplex - a terraced dwelling 	 
RESIDENTIAL	 <p>20m 35m 600 - 800m²</p>	 <p>4.5m - - - single storey residential 8m - - - two storey residential</p>	<p>Low density residential lots with an average area of 600m-800m² are encouraged to respond to existing market demand and maintain consistency with existing character. The built form on these lots will generally consist of a one or two storey single dwelling, with dedicated outdoor living space located to maximise sun.</p>	
RURAL RESIDENTIAL 1000m² or greater	 <p>25m 40m 1000m²</p>	 <p>4.5m - - - single storey residential 8m - - - two storey residential</p>	<p>Rural residential lots are provided for in a number of areas surrounding Ngaruawahia and Tuakau. Generally, the overarching principles of public realm relationship for all residential should also apply to rural residential. Further, subdivision and site layout should not preclude future intensification should this be deemed appropriate (i.e. as the growth occurs).</p>	 
MIXED USE RESIDENTIAL	 <p>15m 27m 400m²</p>	 <p>4m setback 12.5m - - - 15 deg 8m - - - 4.5m - - - 3m - - - Road Footpath</p>	<p>Good quality, mixed use buildings are encouraged within Ngaruawahia and Tuakau town centres, with retail space below and residential above. This will assist to create greater vibrancy within the town centres over time. This layout will also help to maintain a level of safety on commercial streets through passive surveillance during both the day and night. Good quality, high amenity indoor and outdoor (i.e. verandah) living space, and acoustic insulation, is essential to creating liveable town centre environments.</p>	

4.3 Movement and connectivity

Overview

The way in which movement networks are laid out is one of the most influential ‘drivers’ of urban form and how successful a place will be. This is because, unlike land uses and allotments, roads and networks can’t be easily moved, changed, or removed. The nature of street use requires careful consideration at the time of structure planning and subdivision, and must provide for a hierarchy that continues to recognise the importance of a pedestrian and cycle friendly environment. Building a hierarchy of street types over a grid network will provide pedestrians, cyclists and drivers with options as to the safest routes available to avoid conflict with one another. Subdivision design should provide for alternative routes (e.g. pedestrian routes, shared surface roads and local collector roads) while remaining sympathetic to an overall notion of a pedestrian and cycle friendly environment.

Blocks that are too deep or too long limit the number of connected routes within a neighbourhood and increase the distances residents need to travel to services and amenities. This lowers the feasibility of pedestrian movement, and can add unnecessary vehicle kilometres travelled. Over a period of 10 or more years, this can add up to thousands of kilometres (and thousands of petrol litres) saved.

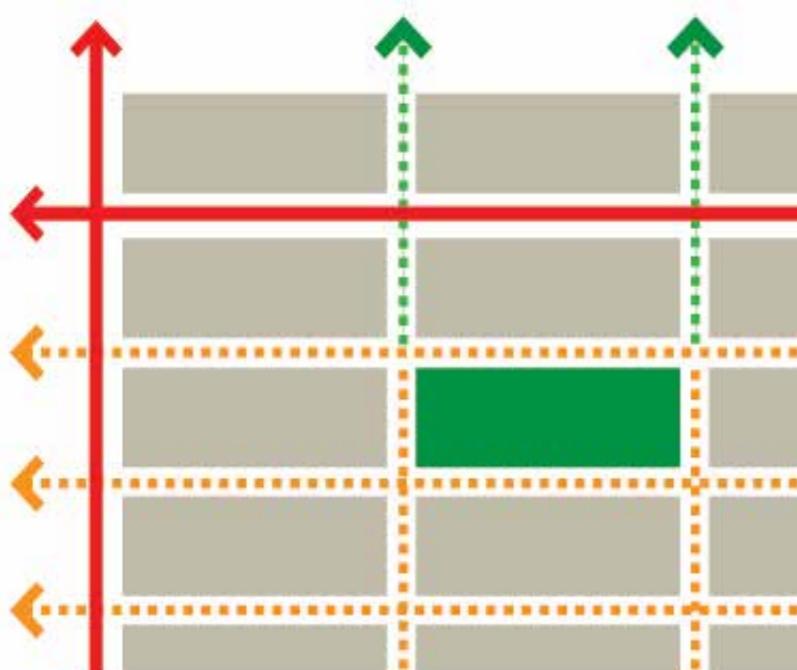


Figure 29. Formal grid patterns can also maximise the relationship between open space and adjoining land uses.

Figure 28. (Page 36) Example of residential typologies (Adapted from Waipa District Council Town Concept Plans)

The movement networks will also determine the way in which developments provide better or worse opportunity for safety, community, and social contact, privacy, and areas of intensity that will support local shops and amenities.

A connected network of roads, lanes, and paths as opposed to a series of unconnected cul-de-sacs, increases accessibility for residents, allows for safer and more efficient movement of vehicular and non-vehicular traffic, and enables more efficient infrastructure provision. Over the longer term, it also delays the need for substantial arterial route widening to manage poorly distributed peak traffic flows.

While subdivision applications are submitted on a site by site basis, there needs to be consideration of future connections, to ensure the neighbourhood and future developments are integrated and accessible. This includes the provision of roads, footpaths, cycleways, open space linkages and community facilities.

Key issues identified in the Tuakau and Ngaruawahia context

- Cul-de-sacs and dead-end roads, particularly in recent development, are reducing connectivity and permeability
- Lack of sustainable transport opportunities, e.g. walking and cycle routes
- Limited/poor pedestrian crossings
- Lack of a transport hub within the town centre

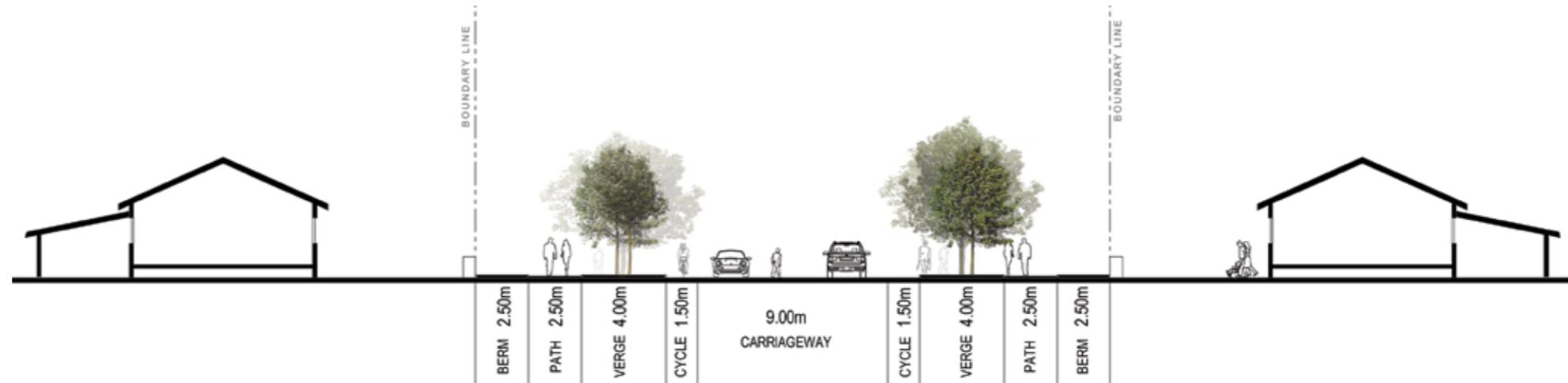


Figure 30. Indicative street layout, showing preferred uses within a 20m carriageway, with dwellings overlooking street.

Objectives

- Increase pedestrian and cycle activity, and reduce vehicle dependence for local trips, through appropriate subdivision design.
- Ensure subdivision is integrated with the surrounding context, including existing residential and open space.
- Provide possibility for social, health and environmental improvements (e.g. less energy consumption, less emissions).
- Provide a variety of routes and choice particularly for vulnerable groups such as children, young women and the elderly.

Design Principles

- Wherever possible, walkways, cycle routes and streets should form part of a wider movement network, facilitating strong connections to the rivers, local amenities and other attractions. The Tuakau and Ngaruawahia environs have an abundance of existing amenities that have the potential to provide for the needs of future residents. Subdivision design should anticipate future development beyond its own boundaries and provide walkways, cycle routes and streets that can be connected to in the future. Cul-de-sacs should generally be avoided within subdivision design.
- Subdivision that makes strong connections with existing routes and anticipates future routes and connections is highly encouraged. In particular, new routes should be established to enhance existing walkways and cycle routes that connect with local neighbourhood and town centres.
- All roads should be designed to cater for cyclists and pedestrians, including children, the elderly, the disabled, and parents with prams.

4.0 Design Guidelines

- Intersections should provide pedestrian crossing points, including safe curb crossings and tactile paving.
- Separate cycle and pedestrian paths may be appropriate where an attractive longer route can be achieved without intersections - e.g. along esplanade reserves, as identified within the draft Tuakau structure plan.
- Consider where schools, sports uses, and other facilities are located, and the desire lines between these and other attractors (e.g. Tuakau and Ngaruawahia town centres; future train stations), to determine where walkway and cycleway connections are optimally suited.
- Design roads according to the anticipated traffic volume and desired vehicle speed. Determine the role of each route based on the wider environmental movement context, either as a local road or collector/ arterial road, and ensure the design is appropriate for that purpose.
- Footpaths should take precedence over vehicle crossings – the gradient and material of the footpath should be uninterrupted.
- Design tight intersections to slow and control traffic.
- Intersections need to be designed for the safety of pedestrians, cyclists, and mobility scooters.
- Roundabouts can be unsafe for pedestrians and cyclists and should only be used after other intersection designs have been explored
- The width and positioning of walking and cycle routes should not adhere to a rigid standard, but rather should respond to their particular location and function. Notwithstanding this, the following principles should be adhered to during the design process:
 - Passive surveillance should be facilitated through subdivision design that provides for dwellings overlooking streets, pedestrian and cycle networks
 - Low and/or see through fences should be provided for along property boundaries
 - All walkways and cycling routes should be attractively designed so as to attract users
 - Routes along high fences or to the rear of buildings should be avoided
 - Provide for clear signs along the length of all routes.

4.4 Public open space and streetscape

Overview

Parks, open spaces and the streetscape are important elements of a town centre and residential neighbourhoods. They provide opportunities for recreation and social interaction, and their spaciousness contrasts with the built form of the urban areas. The manner in which a subdivision relates to or provides public spaces (such as roads, parks, and streams) is very important for visual amenity and safety. Too often parks are inconveniently located, inappropriately sized or poorly overlooked, being comprised of left-over land from the lot design process. The standard and appearance of street trees, plantings, paving, walls, fences, seats and other structures play an important role in establishing the identity, quality, amenity, visual interest and character of a subdivision.

Key issues identified in the Tuakau and Ngaruawahia context

- Limited public open space within existing and proposed residential areas.
- Lack of relationship between open space and surrounding land uses.
- Limited amenity landscaping within new neighbourhoods.
- No obvious links between open spaces / parks.

Objectives

- Enable environmentally cost effective and responsive design.
- Enable opportunities for contact between residents and social interaction.
- Identify and accommodate natural and cultural elements in and around the site, creating a unique identity.
- Maintain and enhance ecological values.
- Create unique identity that responds to the existing characteristics of the area.
- Maintain natural storm-water paths.



Figure 31. Roads can be constructed to connect with future development.



Figure 32. Playgrounds and other amenities should form a central focus for local neighbourhoods.

Design Principles

- Provide open spaces based on what type of space would add the greatest value to the neighbourhood. In some instances, high quality ecological corridors or pedestrian linkages are more desirable than neighbourhood reserves if there are existing ones close by.
- The number of parks and open spaces in a neighbourhood and their amenities need to be based on:
 - The needs of the community reflected by population density and demographics
 - The types of users and their requirements
 - The participation rates for selected activities
 - Use and access to existing facilities, and gaps in amenity provision
 - Opportunities for dual purpose functions (active and passive recreation).
- Locate open spaces where they are highly prominent and accessible within the local area. Open spaces should be located within walking distance of all allotments, positively contributing to residential amenity; typically aim for no more than 400m of actual walking route distance, but 200m wherever possible.
- Use open spaces as a design feature, adding value to the lots by strategic location of dwellings in relation to open spaces. Parks should not be made of 'left-over' land. The location and design should be informed by the neighbourhood context and site analysis.

- Open space design should always seek to offer the following qualities:
 - Be usable and functional, allowing for a variety of passive and/or active recreational activity, including children's play, sports, and social gatherings
 - Provide for seating and, where appropriate, toilet and changing facilities
 - Be of ecological value, by connecting to and extending adjoining habitat areas and green spaces; preserving habitat areas on site (e.g. mature trees, wetlands and water courses) and incorporating ecological planting of native species
 - Where appropriate, assist in the implementation of sustainable drainage strategies
 - Be centrally located, as opposed to peripheral
 - Be integrated with existing walkways and cycle routes
 - Be overlooked and positively addressed by adjacent streets and/or walkways
 - Be designed so as to be physically accessible to all residents
 - Be visible from adjoining streets and residential development, so as to enhance safety
- Locate and design parks to take advantage of existing trees and features of interest (natural and cultural), adding identity to the neighbourhood.
- Any significant areas of vegetation on site should be retained and enhanced. Such retention may be incorporated into boundary treatment or site features and should, wherever possible, form part of a wider green network.
- Provide open spaces overlooked by streets and dwellings, to improve safety and encourage use of open spaces (refer figure 33). Evidence shows that open space overlooked by streets and dwellings benefits from greater use over longer periods of the day. In particular, the movement of vehicles past open space, along with the coming and going of residents and overlooking dwellings, increases passive surveillance, reducing the likelihood for crime. In this regard, it is recommended that at least 50% of open space edges should front public streets (with residential land use on the opposite side).

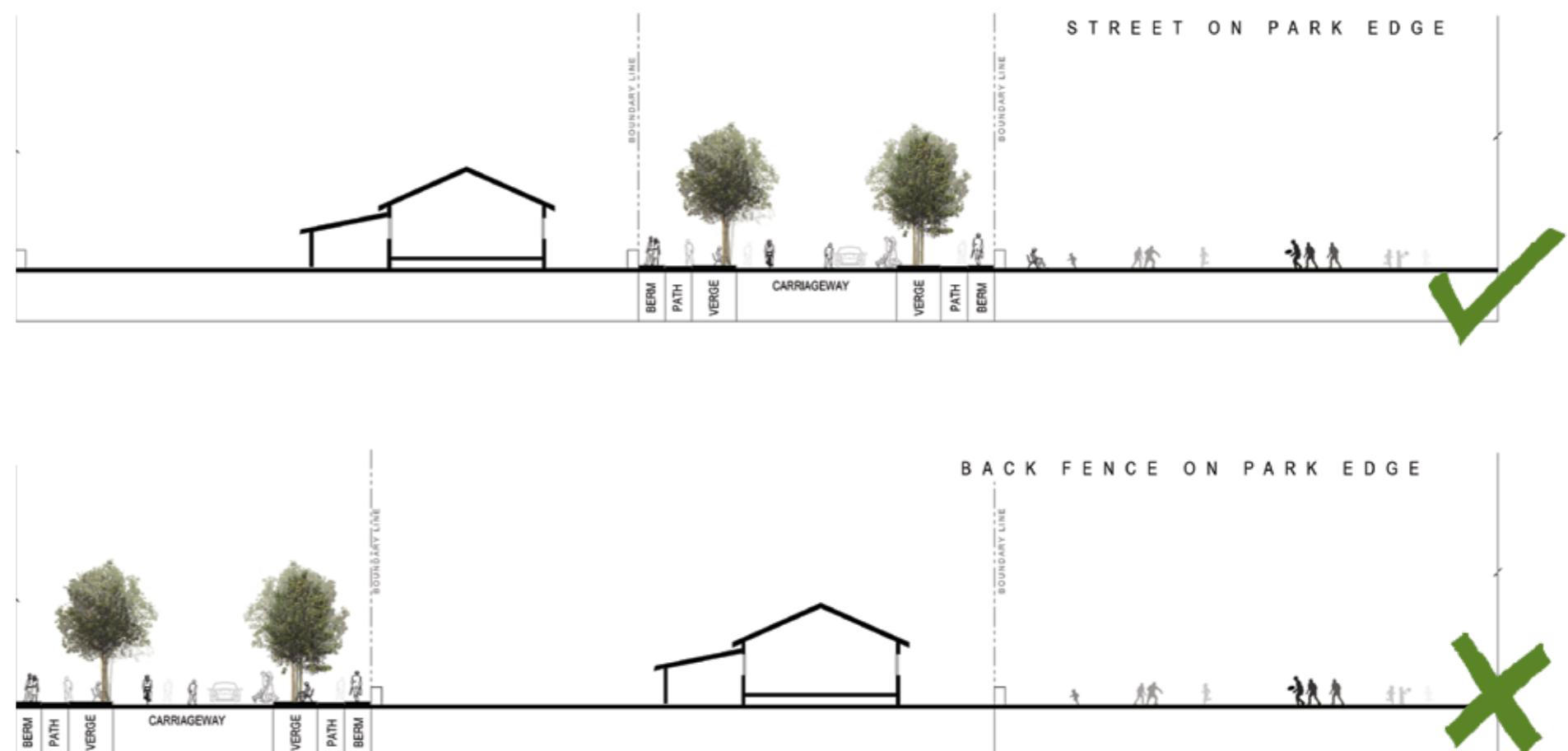


Figure 33. Open space should be located so as to be visible from the street, and not located to the rear of dwellings.

4.5 Maori Urban Design Principles

Given the significant Maori cultural values and population that exists through Tuakau and Ngaruawahia and environs, it is appropriate that structure planning, subdivision and detailed design give regard to Maori urban design principles, to further enhance the social, cultural, economic and environmental wellbeing of both Maori and no-Maori. The following principles (adapted from the Auckland Council Urban Design Manual) have been tested in various design projects throughout New Zealand and provide a concise response to the key issues often found in projects. These principles should provide a guiding hand to design professionals, the Waikato District Council and stakeholders moving forward, but also be applied through the design process with the assistance of local Iwi as key stakeholders.

Whakapapa - Names & Naming

- Recognise and celebrate the significance of mana whenua ancestral names
- Recognise ancestral names as entry points for exploring and honouring tūpuna, historical narratives and customary practises associated with development sites and their ability to enhance sense of place connections

Tohu - The wider cultural landscape

- Acknowledge a Māori world view of the wider significance of tohu / landmarks and their ability to inform the design of specific development sites
- Support a process whereby significant sites can be identified, managed, protected and enhanced
- Celebrate local and wider unique cultural heritage and community characteristics that reinforce sense of place and identity

Taiao - The natural environment

- Sustain and enhance the natural environment
- Local flora and fauna which are familiar and significant to mana whenua are key natural landscape elements within urban and / or modified areas
- Natural environments are protected, restored or enhanced to levels where sustainable mana whenua harvesting is possible

Mauri Tu - Environmental Health

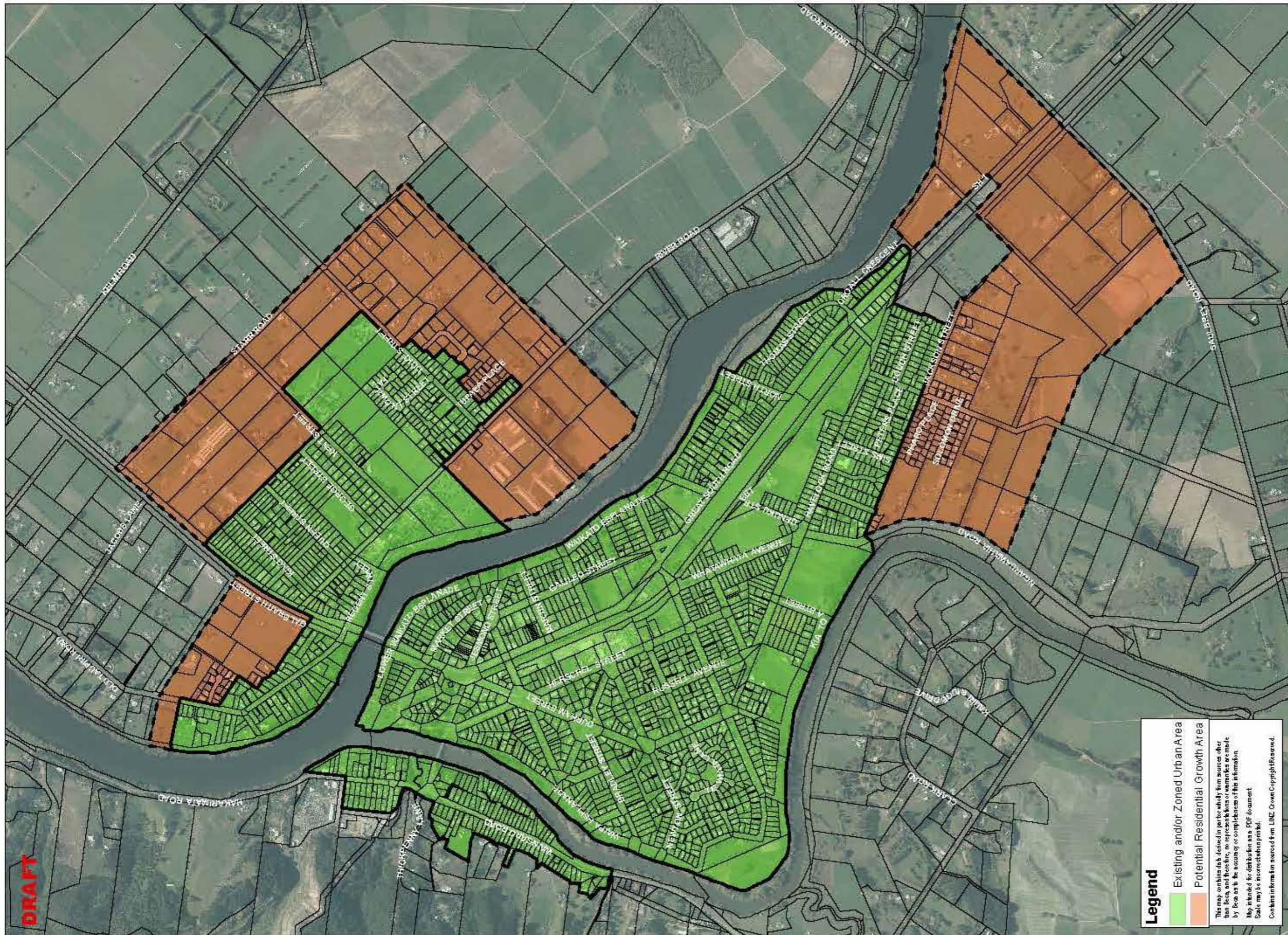
- The wider development area and all elements and developments within the site are considered on the basis of protecting, maintaining or enhancing mauri
- The quality of wai, whenua, ngāhere and air are actively monitored
- Water, energy and material resources are conserved
- Community wellbeing is enhanced

Mahi Toi - Creative Expression

- Ancestral names, local tohu and iwi narratives are creatively reinscribed into the design environment including: landscape; architecture; interior design and public art
- Iwi / hapū mandated design professionals and artists are appropriately engaged in such processes

Ahi Kā - The Living Presence

- Mana whenua live, work and play within their own rohe
- Acknowledge the post Treaty of Waitangi settlement environment where iwi living presences can include customary, cultural and commercial dimensions
- Living iwi/hapū presences and associated kaitiaki roles are resumed within urban areas



Client:	Whakato District Council	Scale:	1:12,500
Project:	HDC Structures	Drawing No.:	GS-3411173-003
	W.Beca	Date:	GS

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Ngaruawahia
Potential Growth Areas
YET TO BE VERIFIED.

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