Te Mahere Hanganga mō Warkworth

Warkworth Structure Plan 2019







Whakapuakitanga

Foreword



We are pleased to present the Warkworth Structure Plan. The structure plan has been prepared in collaboration with the Warkworth community and sets out the land use pattern for Warkworth's expansion over the next 30 years. The plan also identifies the supporting infrastructure required to service growth.

Warkworth is growing rapidly and is identified for significant future growth as Auckland's northern satellite town. The structure plan delivers the community's request for a plan to address the infrastructure needs of 1,000ha of Future Urban zoned land around Warkworth.

We now have a high level direction for Warkworth's growth so we can plan for the coming decades. The structure plan also sets out the sequencing for Warkworth's expansion to ensure that infrastructure provision keeps pace with growth.

While the plan will never wholly satisfy everyone, the council has been diligent in ensuring a robust process. The structure plan process involved the community through a number of consultation stages including a hands-on workshop where participants could draw up their own ideas. It is pleasing to see that many of these ideas have made their way through to the final structure plan.

Thank you to everyone who has contributed, particularly the community groups that spent many hours on this project. With all your inputs this vision for the future has been made much clearer.

Beth Houlbrooke

Rodney Local Board Chair

Te Mahere Hanganga mō Warkworth The Warkworth Structure Plan

Te moemoeā | Vision

Warkworth is a satellite town that retains its rural, natural, and cultural character. It is centred around the Mahurangi River and has easy walking and cycling access around the town. There are a variety of high-quality residential neighbourhoods. Warkworth is largely self-sufficient with plenty of employment, education, shopping, and recreation opportunities. Transport and other infrastructure are sequenced to support Warkworth's planned growth.

Ngā mātāpono whakarite mahere | Planning principles

The Warkworth Structure Plan planning principles were developed using previous consultation exercises in Warkworth as well as consultation on the Warkworth Structure Plan. They were used to guide and assess the development of the structure plan. The planning principles are grouped under seven headings:

- · the Mahurangi River is Warkworth's taonga
- character and identity
- a place to live and work
- · sustainability and natural heritage
- · a well-connected town
- · quality built urban environment
- · infrastructure.

Te tirohanga whānui o te mahere

Overview of the plan

Tāmaki Makaurau / Auckland is growing rapidly and to accommodate a portion of the region's growth Warkworth has been identified as a satellite town and earmarked to support significant future business and residential development. Around 1,000ha of land immediately surrounding Warkworth has been zoned Future Urban. Before any urban development of the Future Urban zone can occur, the land must be structure planned.

The Warkworth Structure Plan sets out a pattern of land uses and the supporting infrastructure network for the Future Urban zoned land around Warkworth. The plan has been prepared in the context of the existing town of Warkworth and seeks to weave the new development areas back into the fabric of the existing urban area.

The structure plan builds on the opportunities and constraints in and around the Future Urban zone. It has also taken into account feedback from a number of engagement stages including community workshops, public feedback on a draft version of the plan, and hui with relevant iwi.

Some of the key high-level features of the Warkworth Structure Plan are:

- Ecological and stormwater areas are set aside from any built urban development.
- The new residential areas across the Future Urban zone enable around 7,500 dwellings and offer a range of living types. From spacious sections around the fringe to more intensive dwellings such as town houses and apartments around the new small centres and along public transport routes.
- Warkworth's local and rural character is protected through various measures including provisions
 to protect the bush-clad town centre backdrop along the Mahurangi River, and retaining the
 Morrison's Heritage Orchard as a rural feature of the town.
- New employment areas are identified, comprising land for new industry (e.g. warehousing, manufacturing, wholesalers, repair services) and land for small centres (e.g. convenience retail, local offices, restaurants/cafés). The existing Warkworth town centre by the Mahurangi River will remain the focal point of the town.

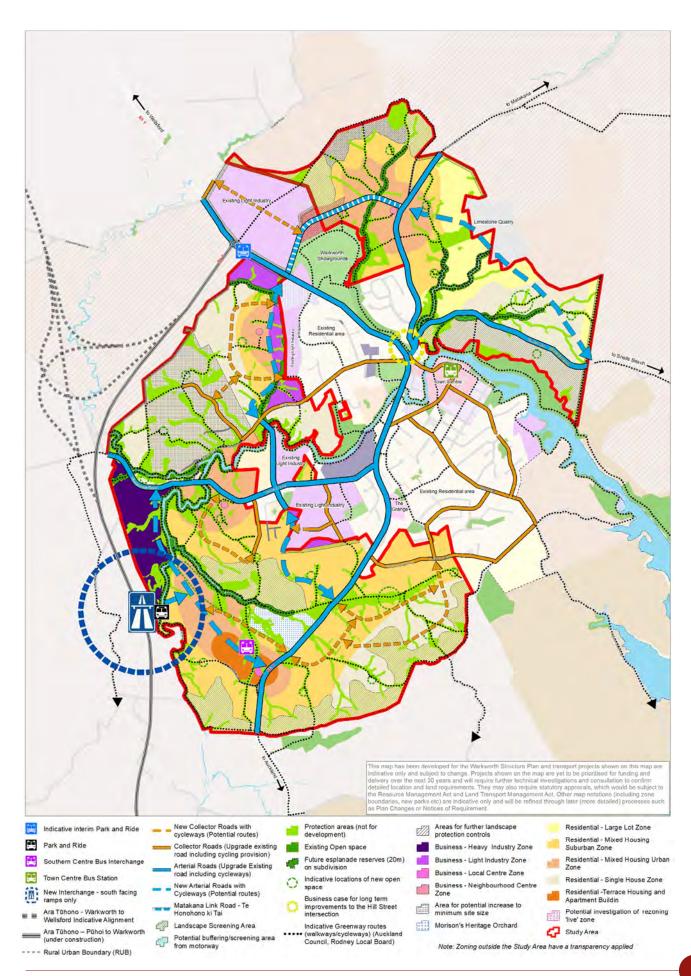
The land uses are supported by infrastructure including:

- Prioritising active transport in Warkworth through a separated walking and cycling network providing connectivity to new and existing centres, employment areas, schools and public transport stations.
- A roading network including a potential southern interchange on Ara Tūhono Pūhoi to Warkworth (south facing ramps only).
- A public transport network built upon the recently introduced 'New Network for Warkworth' which in the long term has a bus station/interchange in Warkworth's southern local centre and a park and ride near the potential Ara Tūhono Pūhoi to Warkworth southern interchange.
- Other infrastructure providers for utilities such as wastewater, water, power supply, telephone, broadband, community facilities, schools, and healthcare have plans underway to service the planned growth of Warkworth.

The development of Warkworth's Future Urban zone will occur over the long term and is sequenced in stages over the next 20 years as bulk infrastructure capacity allows.

This structure plan will be implemented through a series of plan changes to rezone the Future Urban zone in accordance with land uses indicated in the Warkworth Structure Plan.

Warkworth Structure Plan



He aha ngā whakataki o te tupuranga? What is the growth challenge?

Around 1.66 million people currently live in Tāmaki Makaurau / Auckland. Over the next 30 years this number is forecast to grow by another 720,000 people to reach 2.4 million.

Approximately 313,000 new dwellings and 263,000 additional jobs will be needed to accommodate the growing Tāmaki Makaurau / Auckland population over the next 30 years.

Warkworth is identified as a satellite town in the Auckland Plan and will act as a rural node. It will service the surrounding rural communities within a large rural catchment, is connected to urban Tāmaki Makaurau / Auckland through State Highway 1, and will support significant business and residential growth.

The Auckland Unitary Plan has zoned around 1,000ha of currently rural land around Warkworth as Future Urban. This land will cater for greenfield growth around the town over the next 30 years.

He aha te mahere hanganga? What is a structure plan?

A structure plan guides future urban development of an area. It is a high-level plan that shows how an area of land can be urbanised taking into account constraints and opportunities. It shows the arrangement of various land uses and infrastructure. It also shows how the area connects to existing urban areas, and wider infrastructure networks.

The Warkworth Structure Plan sets out a pattern of land use and a network of transport and other infrastructure for the Future Urban zoned land around the town. This structure plan is the foundation to inform future plan changes to rezone the land.

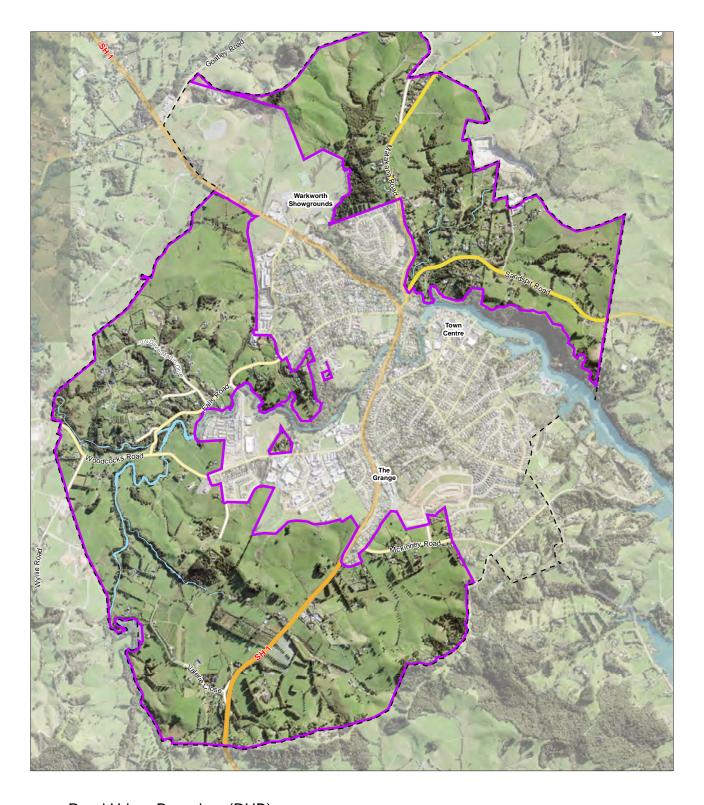
The Warkworth Structure Plan does not undertake a detailed review of the location of the Rural Urban Boundary, existing 'live' zoned land, or the already urbanised area of Warkworth.

This structure plan has been prepared under the relevant provisions of the Local Government Act 2002, including those relating to consultation, and in accordance with the structure plan guidelines as set out in Appendix 1 of the Auckland Unitary Plan.

Kei hea te wāhi mahere hanganga e mātaihia ana? What is the structure plan study area?

The structure plan study area is the land zoned Future Urban in the Auckland Unitary Plan. It comprises around 1,000ha of land around the edge of Warkworth.

Warkworth Structure Plan study area - the Future Urban zone



- - Rural Urban Boundary (RUB)

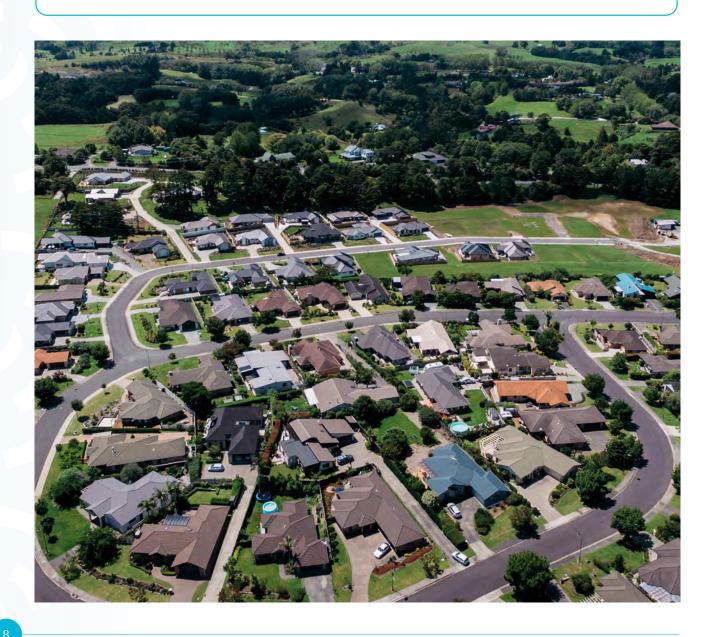
Study area

He pēhea te tūhonohono a te mahere ki te rohe tāone whānui o Warkworth?

How does the plan relate to the existing urban area of Warkworth?

While the existing town area of Warkworth has an urban built form, the Future Urban zone around the town is currently of a rural nature, being mostly a mix of lifestyle blocks and larger blocks for rural production activities.

Although the structure plan project focusses specifically on the Future Urban zone, the plan has been prepared recognising and acknowledging the existing town of Warkworth. The infrastructure networks required to service the growth have been planned to accommodate not just the Future Urban zone, but also the existing town. The new residents and businesses that settle in the Future Urban zone will be a part of Warkworth. The Future Urban zone builds on Warkworth, expanding the town rather than creating a separate and distinct area. This is particularly the case with the Warkworth town centre which will remain the primary centre for the town even with the growth in the Future Urban zone.



He aha te tukanga o te Mahere Hanganga mō Warkworth? What is the Warkworth Structure Plan process?





Te kōtuituinga wāhi tupu kākāriki **The green network**

The Warkworth Structure Plan is built on the foundation of setting aside areas that are important for ecology, stormwater, heritage, and cultural values from any built urban development.

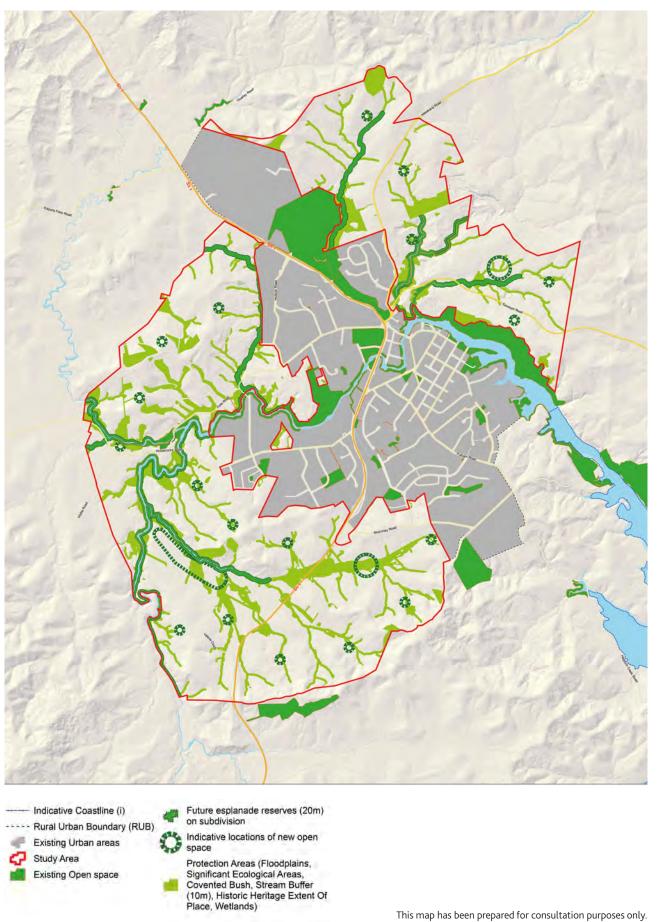
Tāmaki Makaurau / Auckland's natural environment is our primary infrastructure. The ability for it to function well and be of high quality is important in supporting biodiversity, improving water quality, reducing air pollution, and protecting against severe weather and flooding.

The green network allows the creation of continuous 'green corridors' across the growth area which can be restored with riverside planting, creating ecological corridors.

Given the significant population growth expected in the structure plan area, there is a need for the provision of parks and open space to provide adequate informal recreational opportunities and experiences for the anticipated population.

Potentially suitable land for suburb, sports, and neighbourhood parks has been identified in the structure plan resulting in an indicative parks and open space network. This network has 18 small neighbourhood parks, two larger suburb parks, and one large sports park, with off-road walking/cycleways connecting them.

Warkworth Structure Plan Green Network



The information is indicative and may change as a result of further research.

Parks



Neighbourhood parks

around 0.3 – 0.5ha

each



- play space
- flat kick-around space for informal games
- areas for socialising and relaxation
- landscaping, greenery, and specimen trees
- accessible by most residents within 400m walk.

Suburb parks



around **3ha**

each



- walking circuits or trails
- greenery and trees
- multiple kick-around spaces
- socialising spaces (including picnic and BBQ facilities)
- larger and more specialised informal recreation attractions (such as large playgrounds, skate parks, hard courts)
- organised sport facilities
- community event space.

Sports parks

around

10ha

each

- many of the same features as the suburb parks
- a focus on organised sport fields and facilities.



Ngā rohenga tūtohu Indicative zonings

The structure plan shows the zone boundaries in a generalised way. The structure plan zonings are indicative only and will be refined through a later (more detailed) plan change process.

Ngā wāhi kāinga noho | Residential areas

In locating the different residential areas for Warkworth's growth, the general approach has been to provide for higher residential intensity in areas closest to centres, the public transport network, large social facilities, education facilities, and open space. Medium intensity areas have been provided within a moderate walking distance to these amenities.

Lower intensity residential areas are in places that are not close to centres and public transport, are subject to high environmental constraints, or natural and physical constraints, or where there is an existing suburban area with an existing neighbourhood character (recently consented and/or built developments). In the steeper areas around Warkworth, a lower density residential zone is used to minimise the scale of earthworks required (and therefore associated sediment generation). The different residential zones in the Warkworth Sturcture Plan are explained below.

Large Lot zone





The Large Lot zone in the Auckland Unitary Plan provides for large lot residential development on the periphery of urban areas. The zone is generally characterised by one to two storey high buildings on spacious lots with large open space areas between dwellings. The zone can be used where there are landscape qualities limiting the suitability of more intensive development. The minimum site size in the zone is 4,000m².

The Large Lot zone is used across three separate areas in the structure plan; the northern and eastern edge, the southern edge, and the knoll in the south.

Overall, the Large Lot zone comprises 192ha of the Future Urban zone and will enable around 350 dwellings.

Single House zone





The Single House zone in the Auckland Unitary Plan is applied in greenfield areas to provide housing choice for future residents. The zone is generally characterised by one to two storey high buildings consistent with a suburban built character. The minimum average site size in the zone is 600m². The Warkworth Structure Plan applies the Single House zone in areas that are not close to public transport routes or centres, and in areas with natural and physical constraints.

The Single House zone is used across five main areas in the structure plan; south east Warkworth, Viv Davie-Martin Drive area including some land to the north east of Viv Davie-Martin Drive, north east Warkworth, the northern edge of Warkworth, and on already consented developments.

Overall, the Single House zone comprises 296ha of the Future Urban zone and will enable around 1,700 dwellings.

Mixed Housing Suburban zone





The Mixed Housing Suburban zone in the Auckland Unitary Plan enables intensive residential development while retaining a suburban built character. Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice. The Mixed Housing Suburban zone is applied in the Warkworth Structure Plan where it is relatively close to a centre or public transport route, and there are no significant natural or physical constraints.

The Mixed Housing Suburban zone applies to areas in the wider catchment of the existing Grange retail development, the new local centre in the south, and the three new neighbourhood centres in the north, north west, and west. The land on which the Mixed Housing Suburban zone is applied does not have any significant physical constraints to development.

Overall, the Mixed Housing Suburban zone comprises 268ha of the Future Urban zone and will enable around 3,200 dwellings.

Mixed Housing Urban zone





The Mixed Housing Urban zone in the Auckland Unitary Plan enables intensive development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. The zone supports increasing the capacity and choice of housing within neighbourhoods as well as promoting walkable neighbourhoods, fostering a sense of community, and increasing the vitality of centres.

The Mixed Housing Urban zone is applied in the Warkworth Structure Plan within close proximity to the new small centres in the north, west, north west, and south, and on planned public transport routes.

The largest area of Mixed Housing Urban zone applies in the south of Warkworth in the vicinity of the new local centre and indicative sports park. The land here is largely flat and lends itself to higher density residential development.

Overall, the Mixed Housing Urban zone comprises 144ha of the Future Urban zone and will enable around 1,900 dwellings.

Terrace Housing and Apartment Buildings zone





The Terrace Housing and Apartment Buildings zone in the Auckland Unitary Plan is a high-intensity zone enabling urban residential living in the form of terrace housing and apartments. The purpose of the zone is to make efficient use of land and infrastructure, increase the capacity of housing, and ensure that residents have convenient access to services, employment, education facilities, retail and entertainment opportunities, public open space, and public transport. This will promote walkable neighbourhoods and increase the vitality of centres. The zone provides for the greatest density, height, and scale of development of all the residential zones.

This zone also provides for a range of non-residential activities so that residents have convenient access to these activities and services, while maintaining the urban residential character of these areas.

The Terrace Housing and Apartment Buildings zone is applied in the Warkworth Structure Plan in the area immediately around the new local centre in the south of Warkworth, near a planned public transport interchange. The land here is largely flat as well as some gentle, north-facing slopes. This makes this area suitable for higher density housing.

Overall, the Terrace Housing and Apartment Buildings zone comprises 15ha of the study area and will enable around 400 dwellings.

Ngā pokapū | Centres

The existing Warkworth town centre by the Mahurangi River will remain the focal point for retail, office, community, and civic space for Warkworth, even with the development of the Future Urban zone. There is capacity for the existing town centre to expand significantly in the future, notably through the Mixed Use zone around the edge of the centre.

The recently established Grange retail area (SH1) is another significant centre, that will service the existing and planned residential areas in the south east. There are also planned large format retail developments (either consented or zoned) at Woodcocks Road and Hudson Road.

Considering the existing and planned supply of land for centre uses, the Future Urban zone areas around Warkworth require only small centres for the local convenience needs of surrounding residential areas.

In locating the new small centres across the Future Urban zone, attention has been paid to the locations of existing centres to attempt to bring as many people within walking distance of a centre as possible.

Business - Neighbourhood Centre





A Neighbourhood Centre provides residents and passers-by with frequent retail and commercial service needs, and will usually consist of activities such as a dairy, chemist, bakery, takeaways, small offices etc. Buildings can be up to three storeys, enabling residential or office use at upper floors. Three Neighbourhood Centres are proposed in the draft plan; in the north, one in the northwest and one in the west.

Business - Local Centre





A Local Centre primarily provides for the local convenience needs of surrounding residential areas, including local retail, commercial services, offices, food and beverage, and appropriately scaled supermarkets. Buildings can be up to four storeys high, enabling residential or office use at upper floors. One Local Centre is proposed in the south of Warkworth.

Ngā wāhi ahumah | Industrial areas

As a satellite town Warkworth is anticipated to have significant future employment growth alongside the residential growth.

Over the 30-year planning period, Warkworth's Future Urban zone and the existing town area are anticipated to have a total of around 10,600 dwellings and 12,600 jobs (a ratio of 1.2 jobs per dwelling). This level of employment is consistent with the Auckland Plan's desire for significant future employment growth. This would result in Warkworth continuing to play a very similar role, as it does today, as a sub-regional economic and employment hub.

To enable Warkworth to have more local employment options (in addition to the office and retail of the centres), the structure plan identifies three new areas for industrial land. Two of these areas are in fact additions to existing industrial areas rather than completely new industrial areas.

The additional industrial areas are all located on arterial roads and mostly adjacent to motorway interchanges for good freight transport access. They are on the public transport network and the cycleway network for employee access, are on mostly flat land (but also include some areas of sloping land) and contain relatively little green network areas. The additional industrial areas are separated from potentially sensitive uses (e.g. residential) by arterial road corridors or esplanade reserve areas (on both sides of streams).

Business - Light Industry zone





This zone anticipates industrial activities that do not generate objectionable odour, dust, or noise. This includes manufacturing, production, logistics, storage, and transport and distribution activities. The Warkworth Structure Plan uses this zone to expand the existing light industrial areas around Morrison Drive and Hudson Road.

Business - Heavy Industry zone





This zone provides for industrial activities that may produce objectionable odour, dust, or noise emissions. A key attribute of the zone is that it contains sites large enough to accommodate large-scale industrial activities. The Warkworth Structure Plan uses this zone in the southwest of Warkworth, adjacent to the new Ara Tūhono Puhoi to Warkworth connection. This is to take advantage of flat land and the interface with the motorway (currently under construction). Any reverse sensitivity effects on adjacent residential land are mitigated by a 40m esplanade reserve separation and existing mature trees screening the area.

Te Uru Huarākau Tuku Iho o Morrison | Morrison's Heritage Orchard

Public feedback showed that the Warkworth community sees itself as a rural town. There was a strong desire to retain the local and rural character as the population grows from around 5,000 to 25,000-30,000. One method to help achieve this is to enable the Morrison's Heritage Orchard to continue to operate as a working rural activity (fruit orchard), as requested by the owners.

This will provide a direct connection to Warkworth's rural production and its history. It also provides a significant area of greenery and trees within the urban area. It could also be a unique attraction bringing in tourists and spin-off business for the rest of Warkworth. The Morrison's orcharding legacy has heritage value for the Warkworth area.

The Morrison's Orchard legacy

In the early days of European settlement, boat access put the Mahurangi within easy reach of the growing Tāmaki Makaurau / Auckland market for fruit. Edward Morrison pioneered commercial orcharding in the Mahurangi district, developing the Red Bluff Orchards and Nurseries near Hepburn Creek during the 1870s. By 1914 this was the largest orchard and nursery in New Zealand, covering 57 hectares and containing 250,000 trees. Morrison grew and developed new varieties of plums, pears and apples, offering both fruit and trees for sale. The nursery shipped out 40,000 young apple trees a year.

A tramway ran along Hepburn Creek Road to the packing sheds. It continued along the foreshore to the deep-water wharf built in 1894, which was also used by other orchards nearby. Red Bluff was a regular stop for coastal steamers serving Warkworth. The ships Kotoite and Kapanui had specially-ventilated holds for carrying fruit, and at the height of the fruit season special trips were made to pick up fruit. When the fungal disease fireblight appeared in 1914, the great pear orchard at Red Bluff had to be cut down. When it reappeared, this time in the nursery, all susceptible stock had to be destroyed. By this time dairy farming was providing better returns for landowners, and the enterprise closed in 1919.

Edward's son, John, continued the family tradition of experimental development at the Glen Kōwhai orchard property across the river, until that property was sold in 1969. The current Morrison family orchard (Kenilworth orchard) on State Highway 1 was planted in 1935 as a continuation of the Morrison legacy. It specialises in growing a range of early 'heirloom' varieties of plums, apples and other fruit.





Ngā kōtuinga kawekawenga

Transport networks

Te kotuinga hikoi/kake paihikara | Walking/cycling network

The structure plan seeks to prioritise active transport in Warkworth through a separated walking and cycling network. The proposed walking and cycling network utilises the arterial road network and greenway routes along the Mahurangi River/riparian margins of streams to provide connectivity throughout Warkworth. In addition, a collector road network with separated cycle lanes is proposed to provide further permeability through the town.

Currently Warkworth has a large number of walking trips. However, cycling trips are very low. In order to increase cycling mode share, significant improvements to the cycle network are proposed.

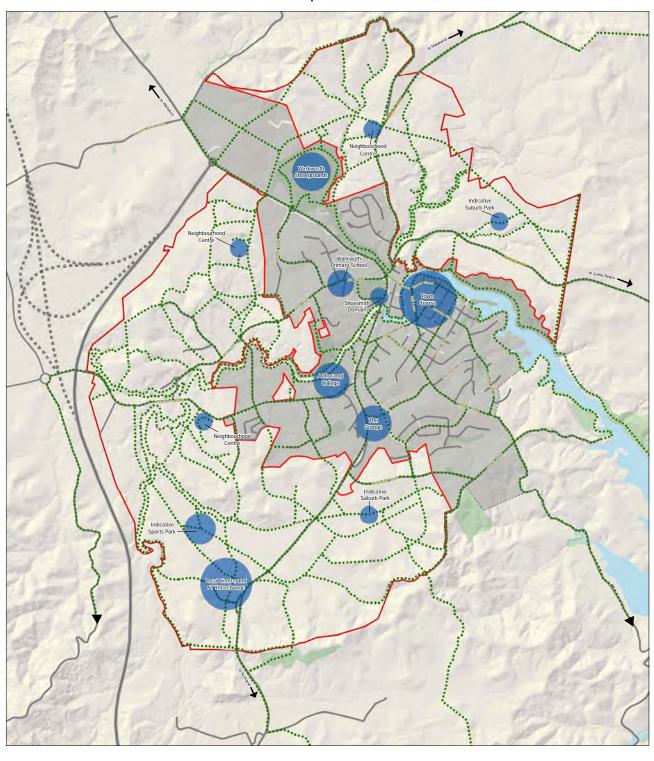
In order for walking and cycling to be encouraged, walking and cycling routes must be direct, safe, and connected to key destinations. Safety is an important consideration in whether people choose to cycle, and therefore on arterial roads and key collector roads, walking and cycling movements are proposed to be separated from higher speed vehicle movements.

With an appropriate road network catering for walking and cycling modes, in conjunction with off-road facilities, there is the opportunity to significantly increase walking and cycling mode share. In combination with improving e-bike and e-scooter technologies, there is the opportunity to travel greater distances by personal transport modes other than the private car.

In Warkworth the distances between residential areas, centres, and key attractors, such as employment areas and schools, are all less than 5km, meaning walking and cycling trips within the urban area are a feasible transport option for many people.



Warkworth Structure Plan – Active Transport Network



- Ara Tūhono Pūhoi to Warkworth (under construction)
- Ara Tūhono Warkworth to Wellsford Indicative Alignment
- Indicative walkway/cycleway routes

 ••• (Greenways and arterial/collector road routes)
- Key destinations
- --- Rural Urban Boundary (RUB)
- Study Area
- Existing Urban areas

This map has been prepared for consultation purposes only. The information is indicative and may change as a result of further research.

Te kōtuinga huarahi | Roading network

The proposed roading network includes:

- Ara Tūhono Pūhoi to Warkworth
- Matakana Link Road (Te Honohono ki Tai)
- Western Link Road between SH1 (north) and SH1 (south) including Mansel Drive
- Sandspit Link Road
- Wider Western Link Road
- Potential Ara Tühono Pühoi to Warkworth southern interchange (with south facing ramps only).

In additional to these, indicative collector roads are also shown but there is flexibility to potentially change these routes through further analysis.

The proposed road network provides both north-south and east-west arterial roads to carry the majority of traffic movements generated by the proposed land use activities within the structure plan area.

Due to topographical and watercourse constraints, there is limited opportunity to establish a grid network ideally sought for greenfields development.

Te kotuinga kawekawe iwi tumatanui | Public transport network

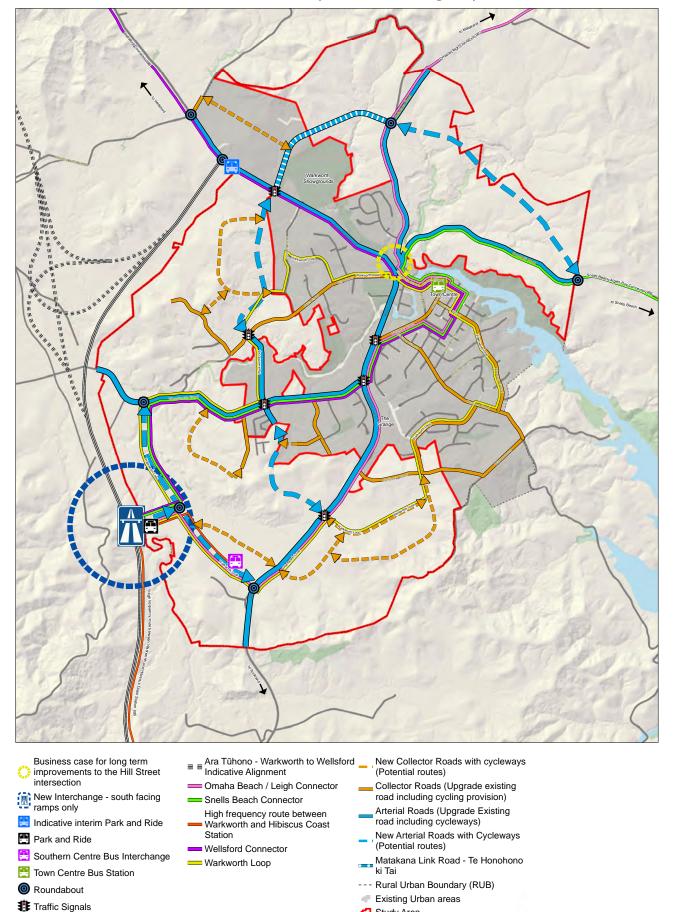
In the short term, it is proposed to build upon the recently introduced 'New Network for Warkworth' with four key routes:

- Snells Beach / Algies Bay Connector (996)
- Omaha / Leigh Connector (997)
- Wellsford Connector (998)
- a higher frequency bus service between Warkworth and Hibiscus Coast Station in Silverdale (995).

Initially, a main station/bus interchange is proposed in the Warkworth town centre supplemented by an interim 'northern station' adjacent to SH1 north of the town. The interim northern station will also provide a park and ride facility to enable convenient access to the 995 route.

In the long term, the preference is to retain a town centre station but also have a larger bus station/interchange in the southern local centre, and a park and ride near the potential Ara Tūhono – Pūhoi to Warkworth southern interchange.

Warkworth Structure Plan – Public transport and roading map



This map has been prepared for consultation purposes only. The information is indicative and may change as a result of further research.

Study Area

Ara Tūhono – Pūhoi to Warkworth (under construction)

Ētahi atu kaupapa whakahaere

Other infrastructure

Ngā kura | Schools

Over the medium to long term, two new primary schools and additional secondary provision (junior college) are likely to be required.

Any new school sites will need to be acquired and designated by the Ministry of Education. School sites will ideally be located near planned centres and other social infrastructure.

The Ministry of Education are actively pursuing the purchase of sites in the Future Urban zone and until this process is complete the structure plan cannot show on a map where the new schools will be located. However, it is noted that the Warkworth Structure Plan has been prepared with an awareness of the areas within which the ministry wishes to locate the new schools.



Wai para | Wastewater

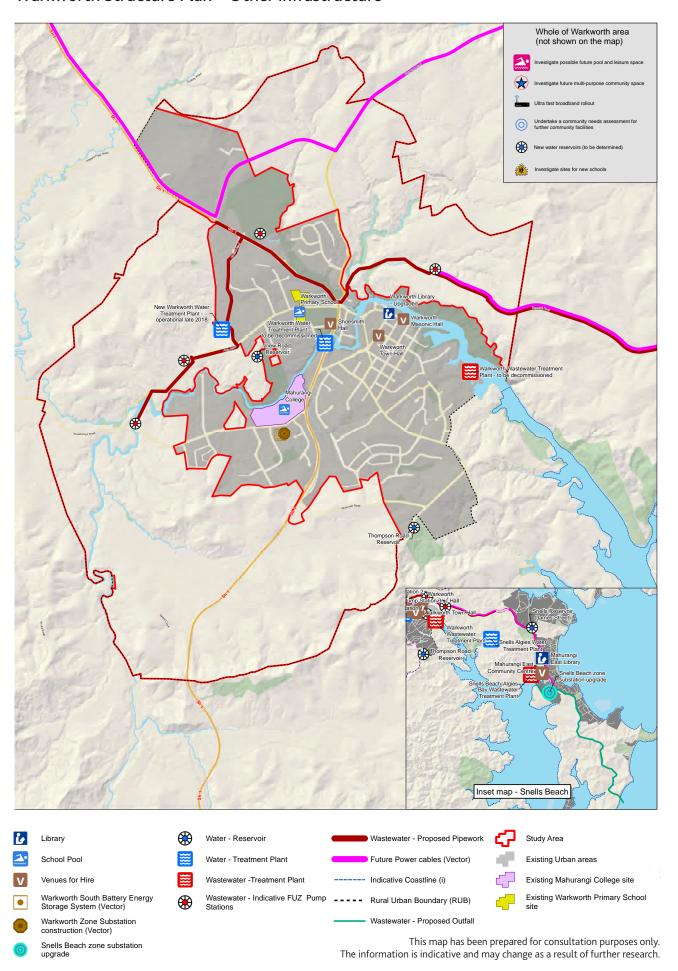
The Warkworth wastewater treatment plant will continue to service the existing township until the end of 2021, at which time the wastewater will be redirected to a new system for treatment at an upgraded Snells Beach wastewater treatment plant. This new system has room for population growth.

Wai | Water

Warkworth's current water supply is from ground water abstracted by two bores on Hudson Road. It is then treated at the water treatment plant facility on Sanderson Road. The plant caters for approximately 16,000 people and pumps water to two reservoirs that service the existing township.

A future water source will need to be found to provide water beyond the current abstraction consent limit and Watercare is confident that such a source will be found prior to this population trigger being reached (2028 onwards).

Warkworth Structure Plan – Other infrastructure



Te tiaki i ngā āhuatanga motuhake ake o Warkworth **Protecting Warkworth's special characteristics**

Te taiao | Environment

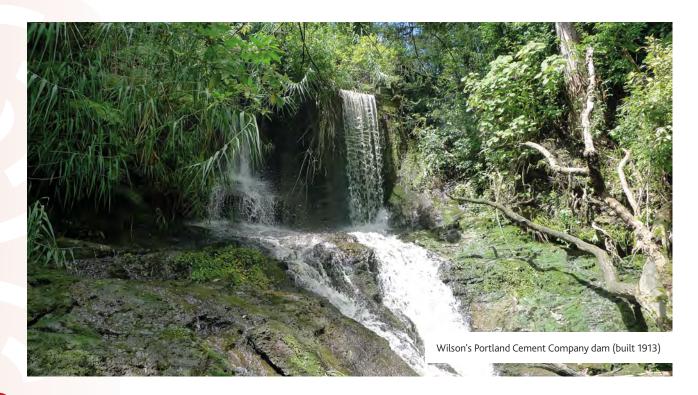
The Warkworth Structure Plan area is a highly modified landscape with predominantly farming and rural lifestyle activities surrounding the existing Warkworth urban area. Small patches of native vegetation remain across the landscape and freshwater habitats are of moderate condition. Warkworth's growth is an opportunity to improve ecological values in the area.

The Warkworth Structure Plan aligns with environmental principles due to structuring the plan around the green network. In realising this, the plan proposes to create a continuous 'green corridor' across the study area that connects terrestrial and freshwater habitats with the Mahurangi River and Mahurangi Harbour.

With appropriate restoration (e.g. riparian planting) and statutory protection, the green network will afford protection of existing freshwater ecological values. This will also improve the long-term life supporting capacity of the freshwater systems in the area, which currently contains degraded sections and is lacking suitable riparian cover.

Ngā taonga tuku iho me te mātai whaipara tāngata Heritage and archaeology

A number of places of actual or potential historic heritage significance are known to exist within the structure plan area. There could have been adverse effects (actual or potential) on historic heritage arising from the Warkworth Structure Plan land use plan. The structure plan addresses this by avoiding potential adverse effects on the two identified places of historic heritage significance – the Coombes and Daldy lime works site and the Wilson's Portland Cement Company dam. These places have been identified as 'protection areas'. Part of the lime works site has been identified as future esplanade reserve, while the dam is currently within an esplanade reserve.



Places of historic heritage significance

- The site of Coombes and Daldy's lime works and related features (c. 1862-1870s). The lime
 and cement industry contributed significantly to the development of Warkworth. This was
 the first lime works in the Warkworth area to successfully produce lime from limestone for
 construction purposes. It potentially contains the earliest surviving evidence of lime burning
 in the district.
- An early (1913) reinforced concrete dam built for Wilson's Portland Cement Company (pictured on p26).

Te āhua takoto o te whenua | Landscape

The Warkworth Structure Plan has considered the landscape through sensitive zonings for limited development around the elevated ridges that define the outer edge of the catchment, as well as other focal points of hills and knolls.

The plan concentrates development in general within the lower lying areas of the catchment, while utilising the more elevated landforms around the margins of the structure plan for low density zoning to help retain some of the open space, 'green' values that are fundamental to the town's character and identity.

The plan also prioritises the protection of the bush clad backdrop to the town centre on the Mahurangi River through 'protection areas' and the potential use of a precinct to control the heights of buildings on the higher ground to the north of the river (e.g. restricting their height so they are not visible from the town centre).

The green network also retains the broad network of rivers, streams, stands of bush, and significant landforms so that these features continue to permeate the entire catchment and remain a visual hallmark of Warkworth into the future.

Hoahoa ā-tāone | **Urban design**

Warkworth's Future Urban zoned land comprises several areas with local distinctiveness. Each area is distinct from the next based on key attributes including contours, existing vegetation, streams and watercourses, proximity to existing development, and views and vistas afforded by the topography and orientation. These areas will help inform future neighbourhood development that supports place-based neighbourhood character and identity.

Tikanga ā-iwi | Cultural

Mana whenua have a special cultural and spiritual relationship with the environment which is a matter of national importance under the Resource Management Act 1991. The council has sought an ongoing dialogue with mana whenua as part of the development of the Warkworth Structure Plan. Key mana whenua feedback in relation to the development of the structure plan has included:

- protecting the environmental integrity of air, land, and in particular the rivers as Warkworth urbanises
- seeking proactive environmental monitoring and sedimentation control to restore and protect the Mahurangi River
- providing opportunities to revegetate the area with native vegetation
- protecting wāhi tapu and taonga with new development
- supporting buffer planting next to streams for protection and to encourage biodiversity
- reducing car dependence and supporting the provision of cycling and walking networks.

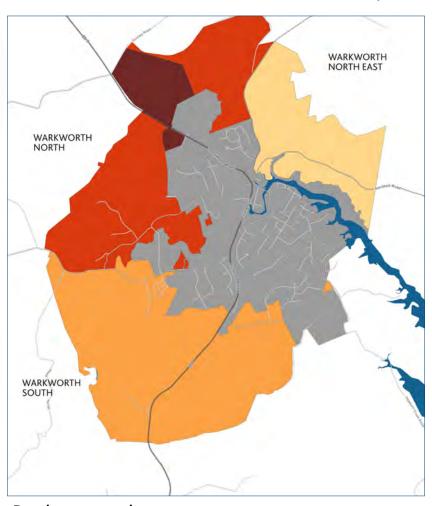
Te whakatinanatanga o te mahere hanganga Implementation of the structure plan

The future land uses identified in the structure plan will be implemented through plan changes to the Auckland Unitary Plan. These plan changes will occur as the land becomes 'development ready'. That is, it has appropriate infrastructure in place to support new residences and businesses. Plan changes to the Auckland Unitary Plan will be staged to align with Auckland Council's Future Urban Land Supply Strategy.

Supporting infrastructure identified in the Warkworth Structure Plan will be implemented through the inclusion of the relevant projects in the forward budgets and plans of the various infrastructure agencies.

The Future Urban Land Supply Strategy sequences development readiness of the future urban areas across Tāmaki Makaurau / Auckland. This sequencing ensures the provision of bulk infrastructure (such as water, transport, and wastewater) is in place so that homes and business can be built. The Future Urban Land Supply Strategy has sequenced development as outlined below.

Warkworth Structure Plan – Future Urban areas sequencing



Development ready

- Actuals contracted or planned, 2012–2017
- 1st Half, Decade One, 2018 2022
- 1st Half, Decade Two, 2028 2032
- 2nd Half, Decade Two, 2033 2037
- Existing Urban Area
- Rural Area



Area	Development ready date	Warkworth Structure Plan (2019)
Warkworth North	From 2022	25ha industrial land Approx. 2200 dwellings
Warkworth South	2028-2032	Approx. 4100 dwellings 1 Local Centre 40ha industrial land
Warkworth Northeast	2033-2037	Approx. 1200 dwellings

During the structure plan process, the staging of development was reviewed. In particular, consideration was given to whether some areas might be brought forward. However, the Warkworth Structure Plan does not propose to change the sequencing identified in the Future Urban Land Supply Strategy. No areas are identified to be brought forward due to the significant infrastructure funding issues and the wider Tāmaki Makaurau / Auckland compact city focus on redevelopment of brownfield areas. It is also noted that there are higher priority greenfield areas in Tāmaki Makaurau / Auckland that would qualify for any additional infrastructure funding before Warkworth.

Pūtea kaupapa whakahaere | Infrastructure funding

The critical council infrastructure that provides essential bulk services which enable land development include:

- parks and open spaces
- transport networks
- stormwater networks
- water and waste water networks
- community assets.

The infrastructure projects needed to increase capacity require substantial public and private investment and have long lead times for planning and construction. It is critical that this investment is coordinated and aligned with growth, in order to get the best outcome for the ratepayer.

The council funds and delivers public growth infrastructure projects primarily through the collection of development contributions, Watercare's infrastructure growth charges, and rates. Additional funding options are being investigated and may include targeted rates or special purpose vehicle private financing.

Council infrastructure providers have identified those critical projects to enable land and housing development to support the Warkworth Structure Plan. This includes an estimate of the development timeframe in which the asset is expected to be delivered. Not all projects have funding allocated. Cost estimates to deliver this infrastructure are currently (in 2019) between \$950 million and \$1.4 billion. It is also important to acknowledge that although these projects will facilitate the provision of new housing in Warkworth, these projects also provide a dual purpose in meeting the growing needs of the existing community.

Council endeavors to ensure efficient coordination between public and private infrastructure providers. Apart from council, other utilities and service providers will deliver other key infrastructure such as power, fibre, and schools. State Highways are delivered by the New Zealand Transport Agency.



