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1 Introduction

The Far North Queensland Principal Cycle Network Plan (FNQPCNP or plan) provides a vision for the principal cycle network in Far North Queensland to support, guide and inform practitioners involved in the planning, design and construction of the transport network.

The principal routes shown represent cycling desire lines. They indicate the most important routes and known missing links for cycling within the region. In most instances, further planning and design will be required to determine the precise route and design of cycle facility.

The plan should not be used for navigational purposes. The maps provided do not distinguish between existing and future cycle facilities and do not designate the form or timing of infrastructure delivery. The maps flag the demand for location and function of cycle routes to inform planning, design and construction of cycle facilities.

1.1 What has changed since 2009?

The plan updates the 2009 FNQPCNP to respond to changing demand, current planning and emerging opportunities. Key changes include:

- Some routes have been altered for better suited alignments; an ongoing process informed by related plans, studies, and projects.
- Geographic scope has been expanded to include the local government areas shown in Figure 1.
- Minor amendments to the planning principles and the types of routes, including the addition of rail trails.



Figure 1. Local governments within Far North Queensland.

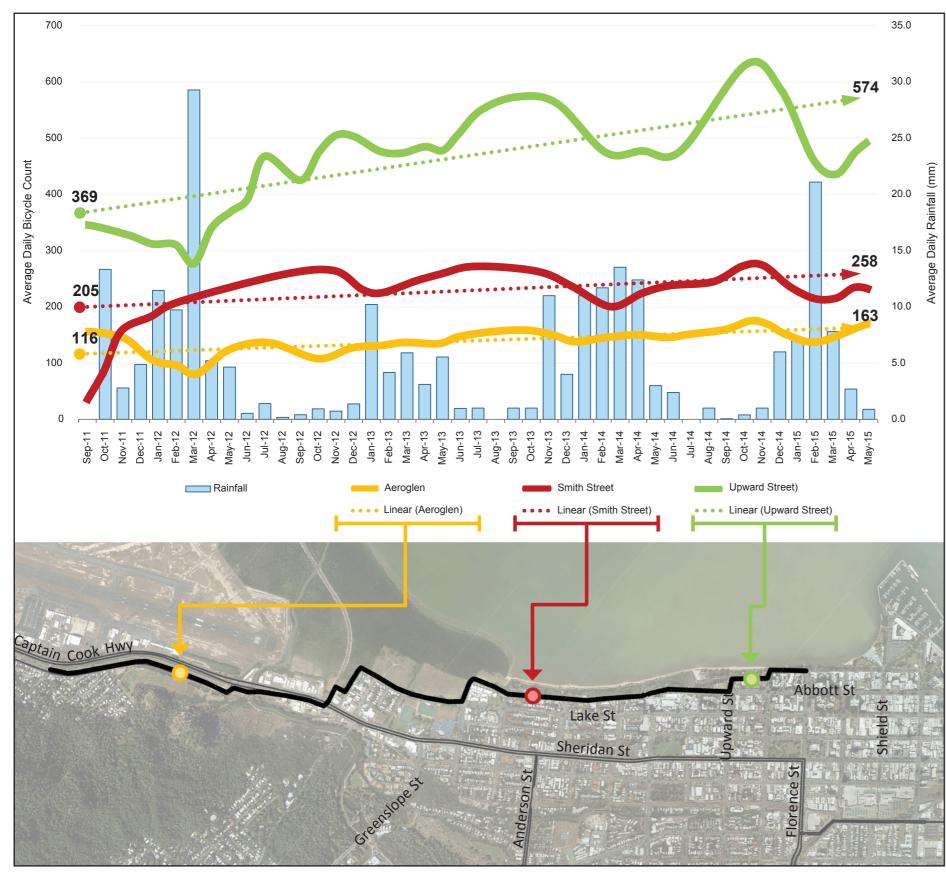


Figure 2. Average daily bicycle volume by month per count site - September 2011 to May 2015.

1.2 Implementation and achievements

The 2009 FNQPCNP has assisted in the delivery of significant cycle infrastructure by state and local governments. The jointly funded \$6.1 million Aeroglen Cycleway was the first major investment in cycling infrastructure for the region.

Completed in late 2011, the dedicated 6.5 km bikeway connecting Aeroglen to the Cairns CBD links a number of major destinations, services and facilities, including schools, hospitals, shops and employment nodes.

Bicycle count data for the Aeroglen Cycleway is presented on a monthly basis at three locations as shown in Figure 2. This data has been correlated with rainfall data and on average, there is a 30% reduction in bicycle volumes on wet days (over 5 mm of rainfall).

The Aeroglen Cycleway bicycle count data highlights the positive influence a separated cycle facility has in attracting more people to cycle. For instance, bicycle usage at:

- Upward Street has increased 56%
- Smith Street has increased 26%
- Aeroglen Drive has increased 41%.

Planned transport projects also present an ideal opportunity to improve cycle infrastructure. For example, in Yarrabah a key component of the replacement of Reeves Creek Bridge involved the delivery of a new pedestrian facility. Identified along a principal route in the 2009 FNQPCNP, the pedestrian bridge provides a much needed safe and secure link connecting residential areas to the Yarrabah township area.

Cairns is one of three centres in Queensland to pilot the Active Towns program, which has seen the delivery of major regional cycle infrastructure in recent years. The Active Towns program was an outcome of the Queensland Government's *Queensland Cycle Strategy* 2011–2021 and has enabled the construction of cycle links identified by the 2009 FNQPCNP.

The three year, \$10 million program commenced in 2013 and in Cairns the program has focused on achieving better cycling connections between outer suburbs, the CBD, and schools. The program has successfully delivered over 12 km of new cycle infrastructure to Cairns.

Projects identified by the 2009 FNQPCNP and funded by the Active Towns program include:

- The 5 km Cairns Southern Cycleway was completed in July 2014 and is a dedicated commuter link that provides a safer, more direct cycling connection between the growing southern suburbs and the CBD. In the 11 months of being open, bicycle count data on the cycleway has shown a steady increase.
- The 3.5 km Redlynch to Brinsmead Connection links Brinsmead and Redlynch Valley Estate by an off-road facility. It provides a safer, healthier travel option for school children accessing Redlynch State College and St Andrews Catholic College. With 73% of primary school students living within 3 km of their school and a bike bus recently being established, this path has the potential to boost cycling trips to school. As one of Cairns' most scenic areas, the path also forms a popular route for recreational cyclists.
- The extension of the Aeroglen Cycleway to form the Cairns Northern Cycleway improves connectivity between the suburbs of Stratford, Freshwater and Redlynch to the CBD.

2 What is a principal cycle network?

A principal cycle network is comprised of core routes designed to make it easy to use the bicycle as an everyday form of transport.

2.1 Types of journeys

The FNQPCNP identifies routes primarily for cyclists within urban areas, with a particular focus on the 5 km radius around trip destinations. Most of the urban areas are within a 5 km radius of an activity centre. At these distances, cycling becomes a viable mode of travel for many trip types. The plan also includes iconic recreational routes, highlighting both coastal and tableland scenic opportunities to support cycle tourism.

The plan focuses on journey to work, school, social/utility and tourism trips. The principal cycle network connects residential areas with employment nodes such as town centres, industrial precincts, ports, education facilities, and shopping and entertainment destinations. The iconic recreation routes enable both long and short distance cycle opportunities to explore the attractions of the region.

2.2 Types of routes

The FNQPCNP identifies the following types of cycle network routes:

Principal routes form the spines in the overall cycle network, functioning like highways for cyclists. Principal routes connect residential areas to major trip attractors such as public transport nodes, universities, schools, shopping and commercial centres, industrial areas, and regional recreational facilities. At the regional scale, they provide key connections between activity centres or towns.

Future principal routes identify expansion opportunities for the principal cycle network in areas where significant urban growth has been identified but land use planning has not yet been undertaken or finalised.

Iconic recreation routes support tourism by identifying cycle routes of regional significance in scenic coastal and tableland locations.

Future iconic recreation routes support opportunities to expand tourism. In some locations the position of these routes will be dependent on the finalisation of land use planning and more detailed design work.

Rail trails include the disused railway lines identified by the *Atherton Tablelands Rail Trails Feasibility Study.* Where rail trails are located adjacent to principal routes or iconic recreation routes, they may be considered in the design stage of achieving the cycle link.

2.3 What is the purpose of the plan?

The purpose of the FNQPCNP is to present agreed desire lines for principal cycle routes in the region identified using the planning principles outlined in Section 3.1. The routes shown are indicative and exist to guide further planning that will determine the precise route and design of cycle facilities.

The plan draws from existing cycle planning, data on key origins, destinations, and cycling demand, as well as knowledge from local government. The plan provides for a principal cycle network that will connect residential areas to major trip attractors.

The plan represents the core routes needed to achieve more cycling, more often, which is the vision of the *Queensland Cycle Strategy 2011–2021*. As the network is delivered, Queenslanders will have increasing opportunities to cycle to work, school, shopping precincts, and other major destinations via safe, direct, and attractive facilities.

Increasing levels of cycling will help contribute to Queenslanders' fitness and health, protect the environment, manage traffic congestion and contribute to Far North Queensland's tourism industry. Encouraging people to replace some car trips with cycling can also extend the life of existing transport assets and reduce the need for road capacity upgrades.

3 How was the network updated?

3.1 Planning principles

The update of the FNQPCNP was guided by the following planning principles:

Principle 1

Connect key existing and future origin and destination points, such as residential areas, town centres, major shopping and commercial facilities, employment nodes and educational institutions.

Principle 2

Focus on commuter, utility and education related trips, with a supplementary focus on recreational cycling where routes may strengthen regional tourism.

Principle 3

Establish a mesh width of no more than 1000 metres between principal routes in urban areas. The mesh width is the distance between parallel routes in a network and is only applicable within built up areas.

Principle 4

Identify a network that is connected, direct, coherent, legible and planned with safety in mind.

Principle 5

Ensure that the network is easily accessible from residential areas.

Principle 6

Identify the network predominantly within transport corridors, state controlled roads, higher order local government roads, and through open space areas.

Principle 7

Adopt a 'one network' approach and consider all transport corridors as potential cycling corridors, regardless of whether they are owned by state or local government.

The planning principles are consistent with the principles of the 2009 FNQPCNP, with two key differences:

- A focus of the 2009 FNQPCNP was to provide loop routes, enabling round trips which are interesting and more attractive to some cyclists. The 2009 principle of loop routes is acceptable for iconic recreation routes, however the focus for commuter, utility and education related trips should be connecting origins and destinations by an efficient route. Therefore, the term 'loop' has been removed from the principles.
- Principle 3 relating to mesh width is a new principle and was not included in the principles that guided the 2009 FNQPCNP. The concept of including a maximum mesh width within the FNQPCNP is a recommendation of the Queensland Cycle Strategy 2011–2021.

The plan identifies principal routes at a strategic network level that will deliver good cycling outcomes, recognising that to achieve this, further planning and design will be required. Although planned with a realistic level of feasibility in mind, the aim of the plan is not to exclude routes from the principal cycle network based entirely on their current level of feasibility.

A principal route may be identified within a corridor that is currently considered not conducive for cycling such as a priority freight route or a highway. Further planning and design will consider the feasibility of cycling within the corridor and design of cycle facilities. In some instances, this may result in a separated cycle facility within the corridor and in others, a cycle facility on an alternative alignment within the vicinity.

3.2 Geographic scope

The 2009 FNQPCNP was developed in response to the *Far North Queensland Regional Plan 2009–2031* and adopted the same geographic scope including the following local governments:

- Cairns Regional Council
- Cassowary Coast Regional Council
- · Tablelands Regional Council
- · Wujal Wujal Aboriginal Shire Council
- · Yarrabah Aboriginal Shire Council.

The plan's geographic scope has been expanded and now also incorporates:

- Cook Shire Council
- · Northern Peninsula Area Regional Council
- Torres Shire Council
- Weipa Town Authority
- · Napranum Aboriginal Shire Council.

These local government areas were selected based on a demographic review. Demographic characteristics such as age, vehicle ownership, education and employment are considered good indicators for identifying areas with high cycling opportunities.

A review of these characteristics identified Cooktown, Weipa, Napranum, Thursday Island and the communities of the Northern Peninsula as areas having the best potential to increase cycling trips. Other characteristics taken into account include journey to work data, growth rates and tourism potential.

3.3 Consultation and site visits

The update of the FNQPCNP was informed by meetings and site visits with the local governments in the region. Meetings were structured around the following project objectives:

- Review development growth areas, recent transport investigations, and new infrastructure priorities and links to ensure the plan supports projected development and transport demands.
- Re-align routes in locations where cycle planning has evolved or where a better alternative exists.
- · Add links to satisfy identified gaps and to meet growing demand.
- Remove or consolidate routes that no longer hold strategic value.

The placement of principal routes considered hazards, constraints, land tenure, topography, the seven planning principles, existing cycle planning and local knowledge of current and desired cycle routes.

4 Implementation

The FNQPCNP reflects a 'one network' approach, meaning the principal cycle network contains routes on state-controlled roads, local government roads, and in open space corridors. While the department has direct control of cycle infrastructure delivered on state-controlled roads, its influence over local government roads and land is less direct.

4.1 Timing of delivery

The FNQPCNP does not dictate specific time frames for delivery of the principal cycle network. Transport and Main Roads will collaborate with local governments to complete a rigorous prioritisation process that will result in maps of priority routes that will be published as an addendum to the plan and will be reviewed regularly to ensure they remain an up-to-date representation of investment priorities. The maps of priority routes will guide state planning and investment decisions as well as the assessment of state grants to local governments for cycle infrastructure.

4.2 Principal cycle network infrastructure

The FNQPCNP does not identify specific infrastructure solutions as this would require consideration of a range of factors beyond the scope of the plan such as available space, likely mix and volumes of users, surrounding land uses and trip attractors, traffic and crash data, physical constraints and hazards. Rather, the plan identifies the function of each route in general terms and leaves the detailed planning and design to those with a greater understanding of the local issues.

4.3 Planning and protection of cycling corridors

Further planning and design is needed to determine the precise routes and design of cycle facilities. On the state transport network, this planning will be undertaken as part of Transport and Main Road's Transport System Planning Program. Once completed, the future cycling corridors can be mapped and protected, and will be considered as part of the application process for any proposed developments on nearby land.

4.4 Delivery mechanisms

As shown in Figure 3, the FNQPCNP may be implemented through a variety of delivery mechanisms.

4.4.1 Queensland Government delivery

Transport and Main Roads' Cycling Infrastructure Policy (CIP) is a key delivery mechanism for the principal cycle network, requiring the department to consider the needs of cyclists in state-controlled transport projects. When on a principal route or a future principal route, Transport and Main Roads is to include explicit cycle provisions such as marked bicycle lanes, separated cycleways or signage in state-controlled transport projects.

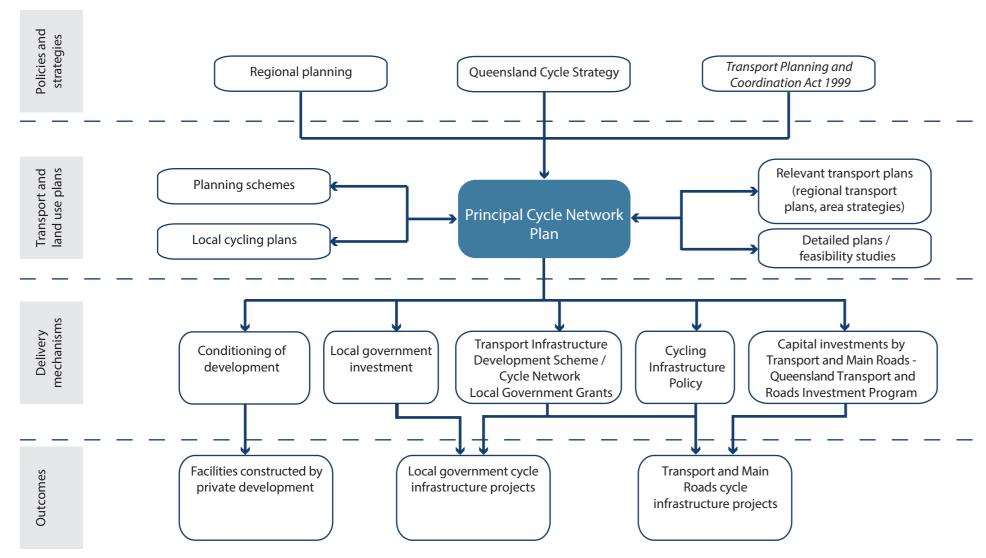


Figure 3. Policies and strategies influencing the principal cycle network.

When not on a principal route or future principal route, the department is to include implicit cycle provision such as the widening of shoulders or elimination of squeeze points in state-controlled transport projects. Iconic recreation routes and rail trails are not principal cycle routes for the purposes of the department's CIP. Iconic recreation routes and rail trails may be eligible for funding through other sources such as the Transport Infrastructure Development Scheme (TIDS) or tourism and recreation programs.

The demand for new cycle infrastructure will not always align with the delivery of other transport projects. In cases where benefits and priorities can be identified, stand-alone cycle infrastructure projects may be planned, designed, constructed, and funded through Transport and Main Roads' Queensland Transport and Roads Investment

Program (QTRIP). Only the highest priority projects will be put forward as stand-alone projects.

4.4.2 Local government delivery

Local governments can apply for funding to deliver principal cycle network infrastructure through the Cycle Network Local Government Grant (CNLGG) program. Funding is matched by local governments (50/50). Grants are awarded to projects that contribute to transport network outcomes that improve access to major attractors including activity centres, employment nodes, schools, universities, and public transport facilities.

Regional Roads and Transport Groups (RRTGs) receive an annual allocation of TIDS funding which can be used to fund cycling

infrastructure. RRTGs are responsible for allocating TIDS funding received to the highest priority transport projects in their regions, including cycle infrastructure. Local governments can champion cycling within their respective RRTGs and prioritise investment into cycle infrastructure. Local governments can also allocate funding for cycle infrastructure in their own budgets to deliver projects independently.

5 Network maps

This section presents principal cycle network maps for Far North Queensland by local government area. It contains an analysis of each local government area, with an explanation of the rationale for most routes. The mapping scales vary across the region to better identify geographic features within the smaller urban areas.

Torres Shire Council

Torres Shire Council is the northernmost Queensland local authority. It includes the northernmost part of Cape York Peninsula, together with the islands of Torres Strait.

In 2014, the region was home to an estimated 3,651 residents and this is expected to increase to 3,875 in 2036 at an average annual growth rate of 0.4%.

The plan focuses on Thursday Island and Horn Island, Torres Shire's main urban centres. The islands' consolidated urban form and low rate of vehicle ownership make an ideal cycling environment.

A principal route has been provided around Thursday Island. It connects the residential areas with the main street (Douglas Street), the three jetties along Victoria Parade and the boat ramp on Waiben Esplanade. This enables an integrated transport system as long distance travel on the island often relies on a combination of transport modes including active, marine and air transport.

Thursday Island contains a network of iconic recreation routes to connect the attractions of Green Hill Fort and the scenic coastal values of Sadies Beach Access and Victoria Parade. Council has indicated that there are future plans for the development of a cultural centre and marine facilities along Cook Esplanade. An iconic recreation route has been identified along Cook Esplanade that connects with Aplin Road and Stephen Street.

The geography of Torres Shire and its proximity to the Northern Peninsula Area provides further opportunity to deliver cycling infrastructure that contributes to the tourism values of the region by linking into the *Tip of Australia Way Cycling and Walking Track*.

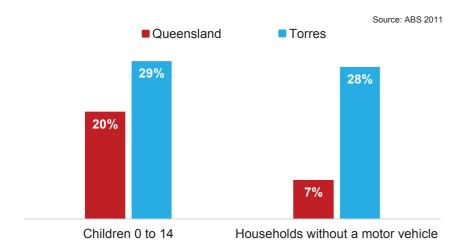


Figure 4. Demographic indicators reflecting high cycling opportunities.

Horn Island contains a state significant airport and is the main gateway into the region. A principal route has been identified along Airport Road to provide a cycle connection between the airport, jetty and residential areas.

The urban growth areas in Torres Shire are predominantly on Horn Island, and a future principal route has been included along Wees Street to provide a connection to these future residential areas.

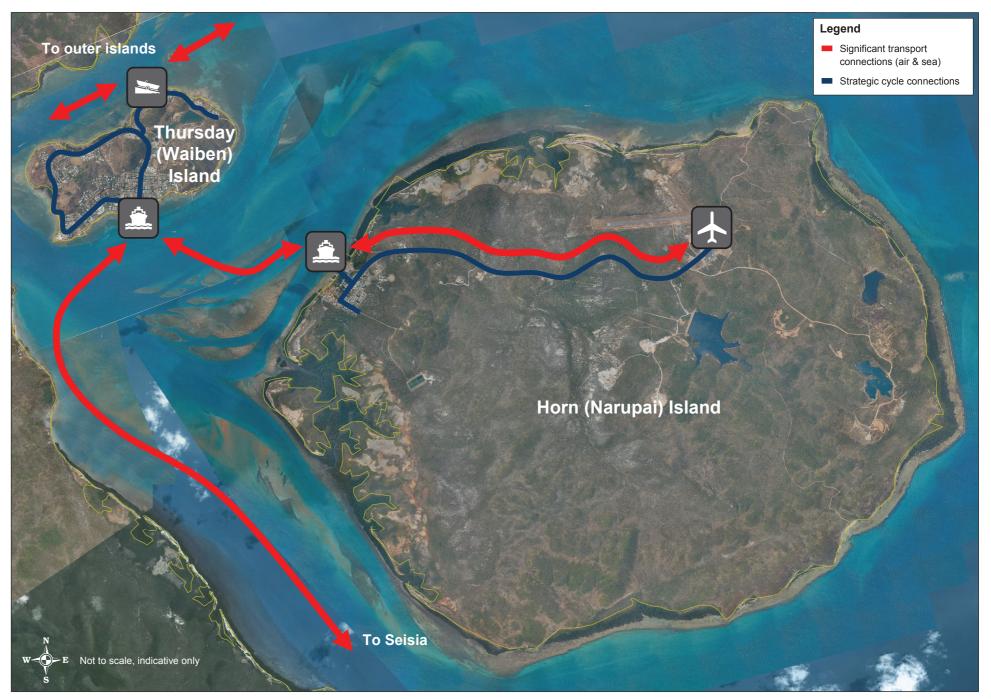
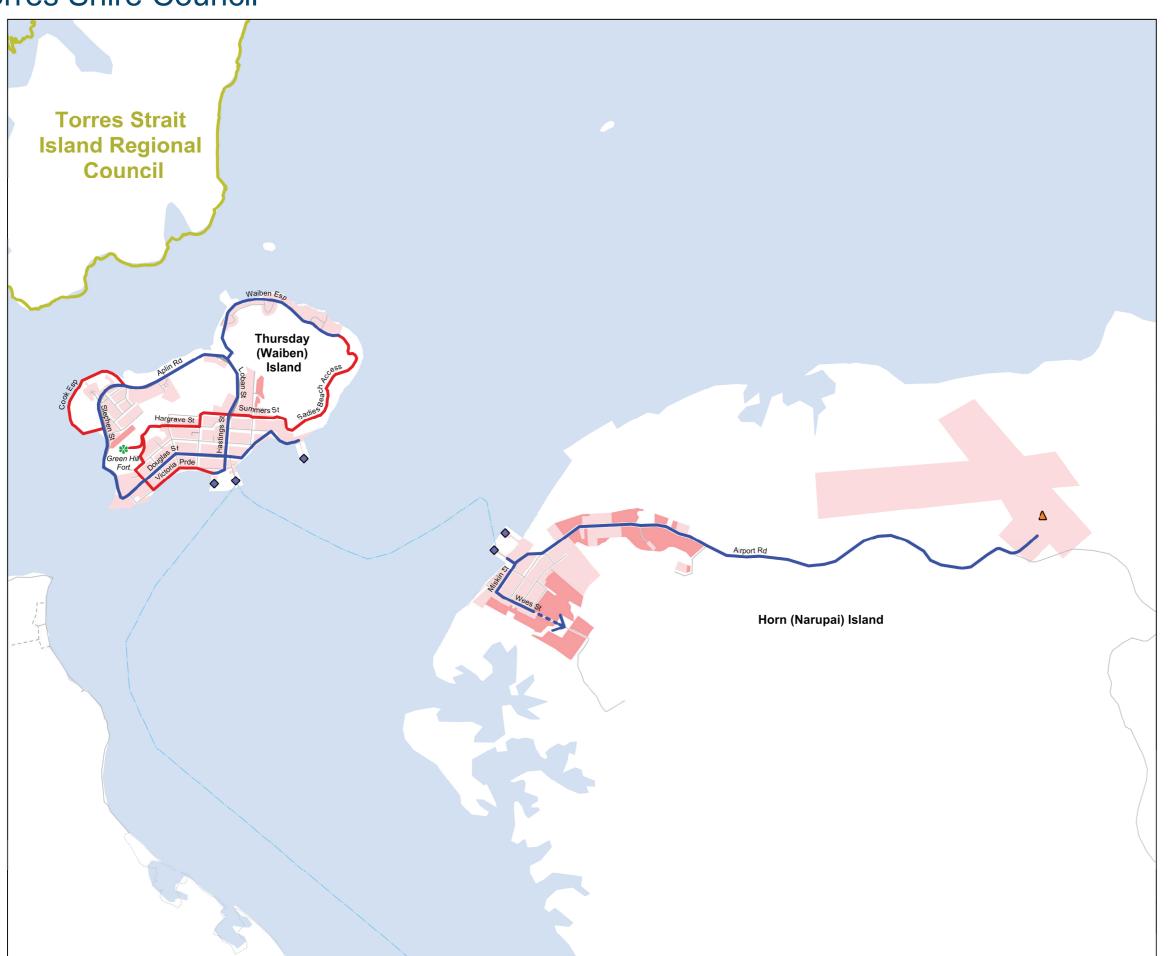


Figure 5. Strategic transport connections for Torres Shire.

Torres Shire Council



Map 1

Far North Queensland Principal Cycle Network

The routes shown are indicative and exist to guide further planning that will determine the precise routes and design of cycle facilities.

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LEGEND

Principal route
Future principal route
Iconic recreation route
Future iconic recreation route

Rail trail

Map Items

Railway
Local gov

Local government boundary

Waterway/waterbody Urban area

Growth area

Passenger railway station

Airport Jettv

Regional attraction





Queensland Government



0 0.75 1.5

Kilometres
Scale 1:33,000 at A3

Northern Peninsula Area Regional Council

The Northern Peninsula Area Regional Council is located 40 km south of the tip of Australia. It encompasses the communities of Injinoo, Umagico, Bamaga, New Mapoon and Seisia.

The Northern Peninsula Area was home to 2,663 people in 2014. This is expected to increase to 3,110 in 2036 at an average annual growth rate of 0.9%.

With 33% of Northern Peninsula Area residents between 0 and 14, improving accessibility to schools has the potential to boost the number of students cycling. This can have a positive contribution in attendance rates and overall community health.

As a remote Indigenous region, the Northern Peninsula Area faces challenges in securing increased levels of cycling. Investing in safe and secure cycling storage facilities and cost effective access to bicycles is important in supporting more people cycling, more often.

The vision for the Northern Peninsula Area principal cycle network is a highly connected network between the region's five communities. This vision reflects the aims of the *Tip of Australia Way Cycling and Walking Track*.

In supporting this vision, a principal route has been identified predominantly along Injinoo and Seisia Roads. The network provides a link between the three school campuses at Injinoo (primary school) and Bamaga (high school and primary school). The current road network between the communities are high speed environments which discourage walking and cycling.

The cycle network is constrained by the current bridge over Mosby Creek. The existing separated pedestrian facility on the bridge is narrow. It is difficult to safely manoeuvre a bike across the pedestrian link and impossible for two passing cyclists or pedestrians.

The Northern Peninsula Area has potential to continue developing its tourism industry due to its cultural heritage values, scenic coastline and close proximity to the tip of Australia. The plan reflects these tourism values by identifying a network of iconic recreation routes that connect to the tip of Australia. Access to Thursday Island and Horn Island is via boat from Seisia jetty, thereby providing potential to develop this remote area as a cycling destination.



Figure 6. Mosby Creek Bridge, Bamaga.

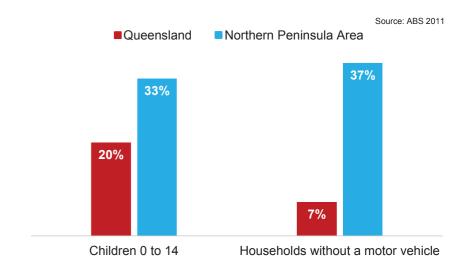


Figure 7. Demographic indicators reflecting high cycling opportunities.

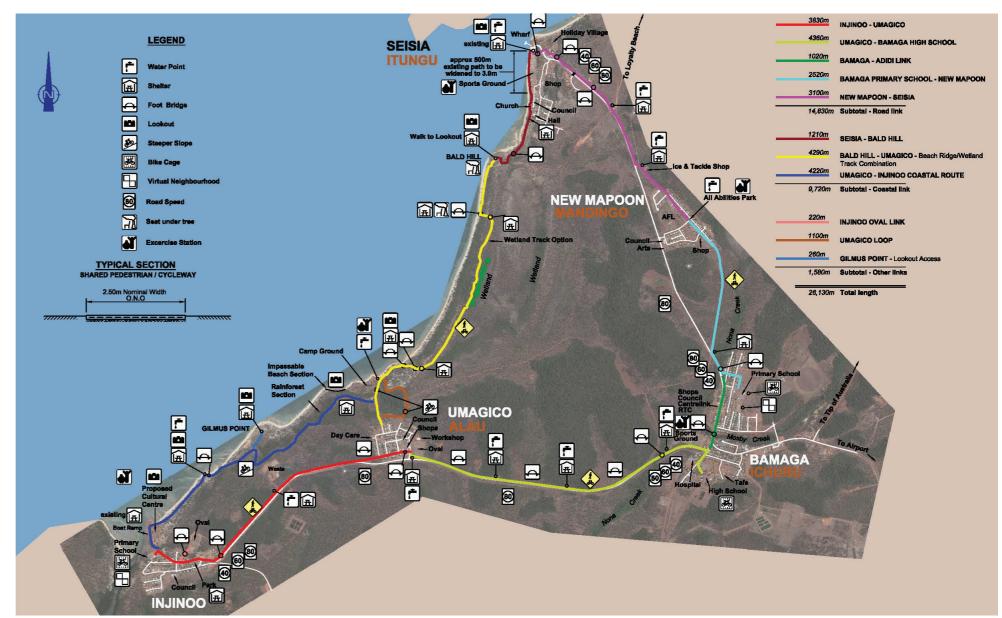
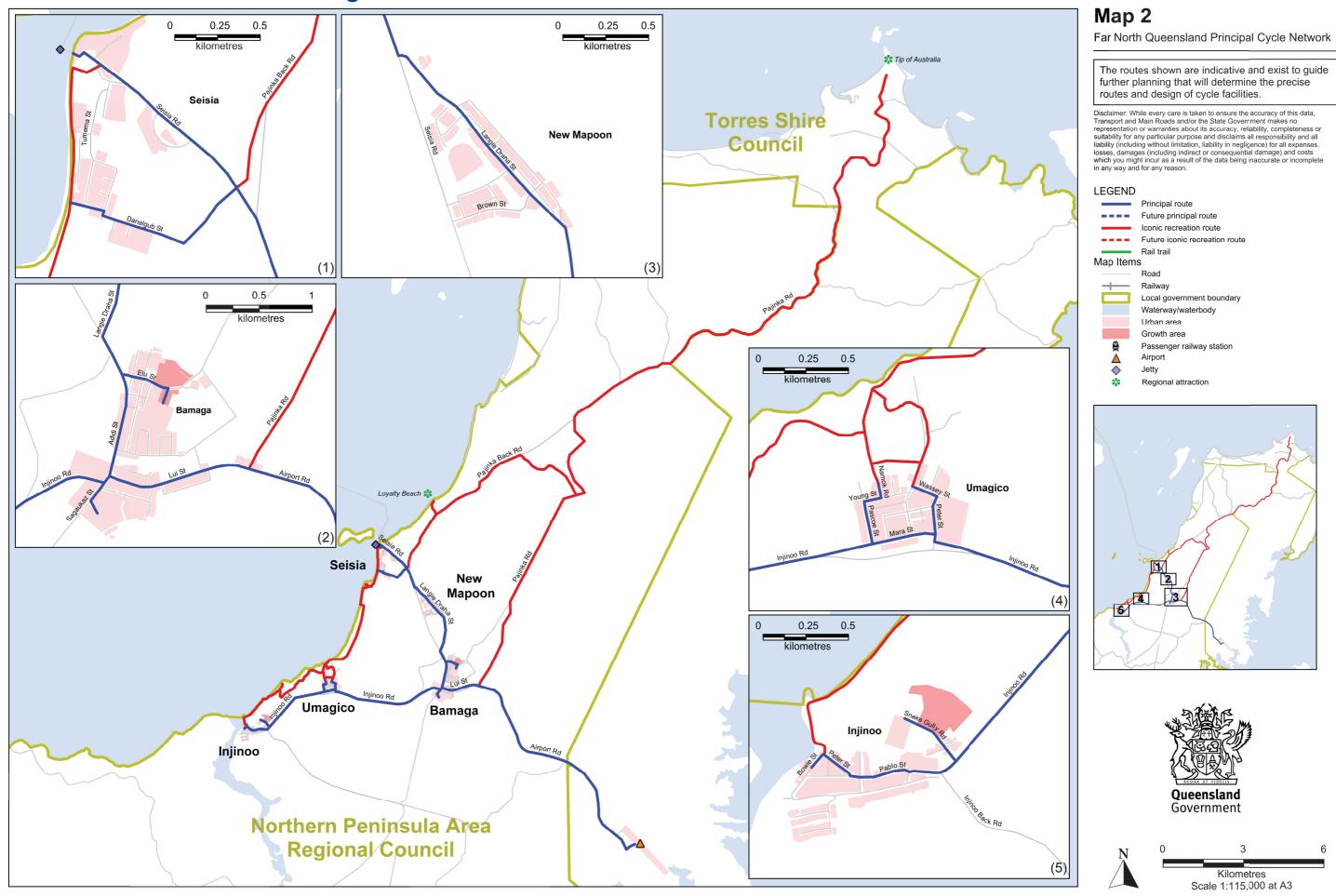


Figure 8. Tip of Australia Cycling and Walking Track concept plan.

Northern Peninsula Area Regional Council



Cook Shire Council

Cook Shire Council is the largest local government (by land area) in Far North Queensland. In 2014, the council's estimated resident population was 4,260. This is expected to increase to 5,754 in 2036 at an average annual growth rate of 1.1%.

Cook Shire's main urban centre is Cooktown and is the focus of the principal cycle network. Cooktown currently has a high cycling mode share of 2.1%, almost double the Queensland average.

The wide road reserves, compact urban form, grid pattern road network and flat topography makes the town cycle friendly. These features make it easy for cyclists to access destinations by a well-spaced and direct network.

The key focus for the Cooktown cycle network is to provide safe connections to the main street (Charlotte Street), the education facilities located near Charles Street and any future residential areas that are developed near Quarantine Bay.

The link between Marton and Charlotte Street via Endeavour Valley Road and the link between Racecourse Road and Annan Road have relatively high volumes of traffic and limited cycling infrastructure. These links are important for journey to work and journey to school trips.

Cooktown has a vibrant heritage within a stunning natural environment, making it a key tourist destination. The plan identifies three iconic recreation routes that provide access to:

- Grassy Hill
- the Botanic Gardens and Finch Bay
- · Mount Cook.

In addition to these local iconic recreation routes, the principal cycle network provides a long distance tourist route that links Cooktown to Cairns via a coastal route and inland route (Mulligan Highway). Cooktown is the end point for these long distance routes and this has potential to provide tourism benefits for Cooktown.

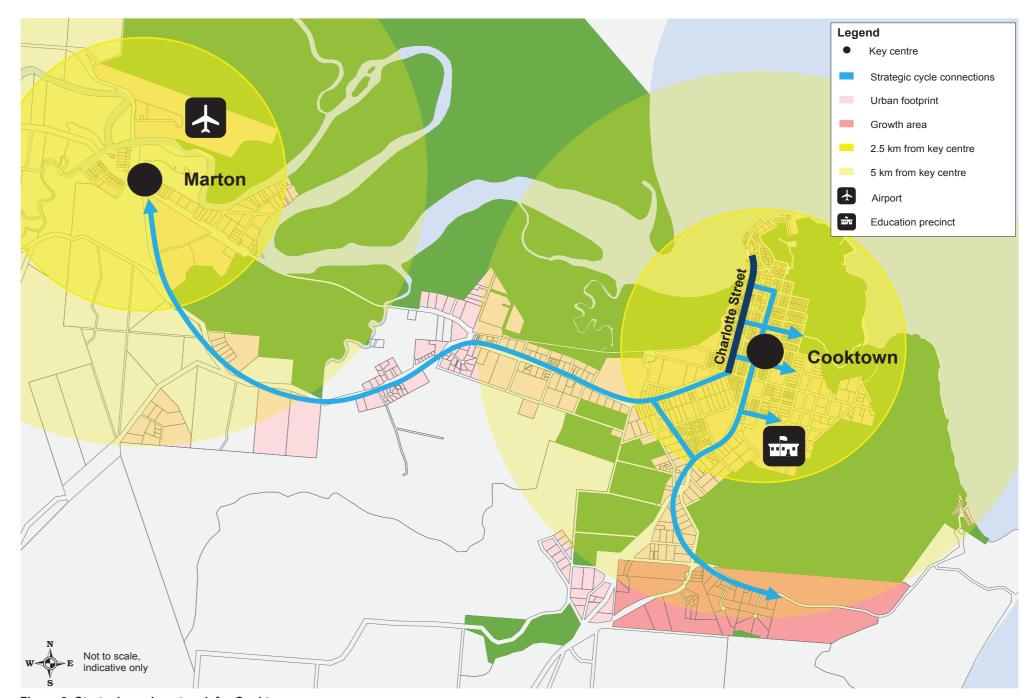
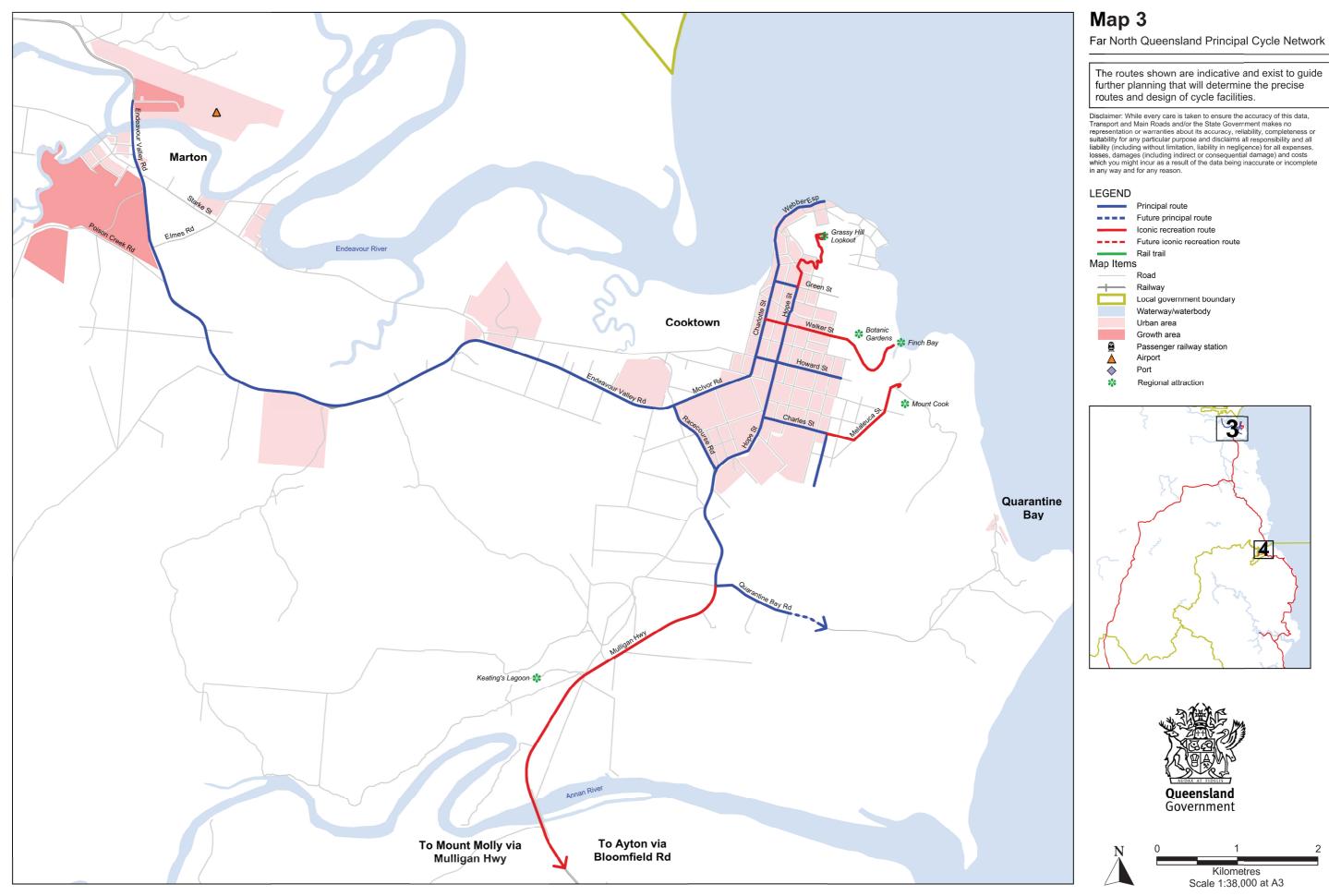


Figure 9. Strategic cycle network for Cooktown.



Figure 10. Cooktown's grid style street network.

Cook Shire Council



Wujal Wujal Aboriginal Shire Council

Wujal Wujal Aboriginal Shire Council is situated in the Bloomfield Valley on the northern side of the Bloomfield River. In 2014, Wujal Wujal was estimated to be home to 291 people and this is expected to remain over time.

Wujal Wujal has a high potential for cycling with 44% of households without a motor vehicle and 27% of the population between 0 and 14. Supporting cycling as part of everyday travel can make an important contribution to the overall accessibility of the community.

To ensure the full potential of cycling is realised in the region, the principal cycle network seeks to provide a safe connection between the residential areas of Ayton and Wujal Wujal. Bloomfield River State School is located on Rossville-Bloomfield Road approximately half way between Ayton and Wujal Wujal.

The importance of connecting the residential areas and sporting fields to the south of Wujal Wujal is also recognised. The new bridge over the Bloomfield River has recently been completed and includes a separated pedestrian/cycle connection. The network through Wujal Wujal is part of the long distance iconic recreation coastal route that connects Cairns to Cooktown.

Bloomfield Falls is located on the southern side of the Wujal Wujal township and is a popular tourist destination. The principal network includes an iconic recreation route that provides access to the Bloomfield Falls.

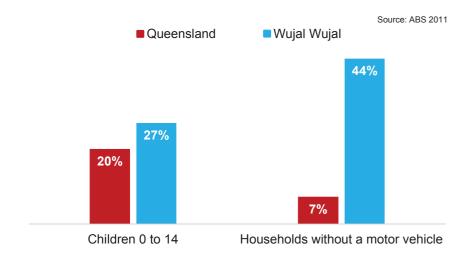


Figure 11. Demographic indicators reflecting high cycling opportunities.



Figure 12. Bloomfield River Bridge pedestrian facility, Wujal Wujal.

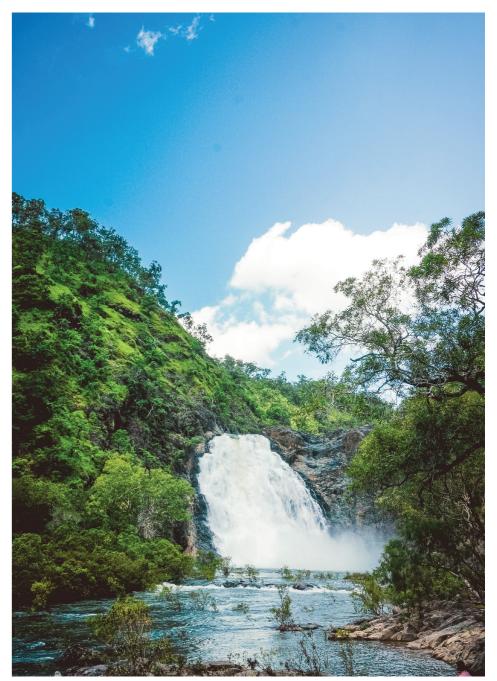
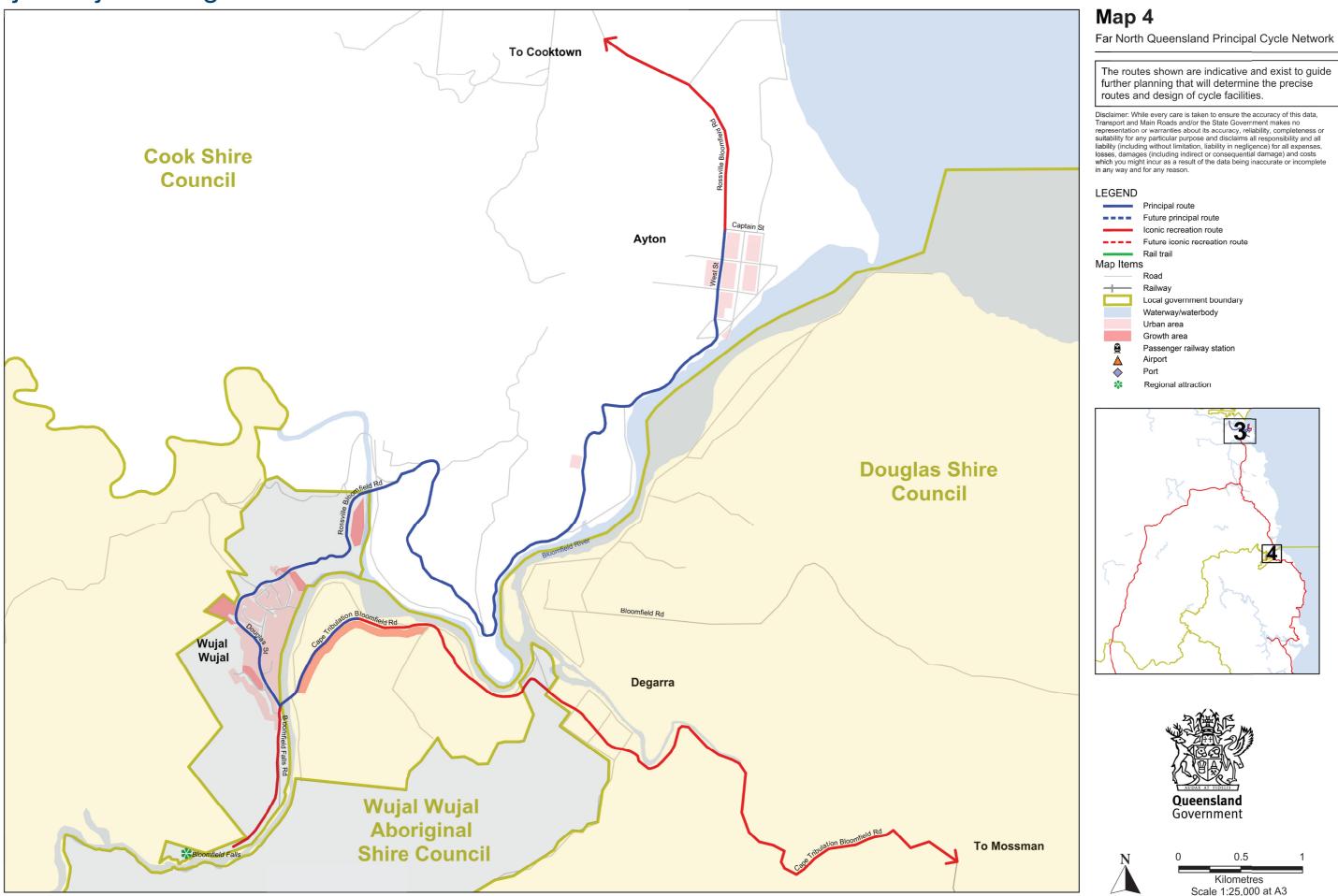


Figure 13. Bloomfield Falls, Wujal Wujal.

Wujal Wujal Aboriginal Shire Council



Douglas Shire Council

Douglas Shire can anticipate moderate population growth over the next 20 years, increasing from 11,607 in 2014 to 15,717 in 2036 at an average annual growth rate of 1.4%.

The Shire has a high level of cycling with 6.3% of journey to work trips being made by bike. This is the highest in Far North Queensland and over five times the Queensland average (1.1%).

Douglas Shire's main urban centres are Mossman and Port Douglas. These two centres are in close proximity but have different roles and functions. Mossman is the main administrative, service, agricultural and industrial centre in the north, whereas Port Douglas has a stronger tourism focus.

The urban footprint of Port Douglas is linear, extending from the Captain Cook Highway to Macrossan Street. This allows the residential areas to be serviced by a single principal spine.

Mossman is also serviced by a single spine along Alchera Drive with connections to Newell and Cooya Beach as these coastal settlements are within comfortable cycling distance to Mossman.

Future growth areas have been identified to the west of Mossman and have the potential to be provided with well-designed cycle infrastructure.

A key priority of the cycle network is safely connecting Mossman and Port Douglas. This is an important journey to work connection as well as catering for tourists and recreational users. There are currently no cycle facilities on the Captain Cook Highway, except within the urban area of Mossman CBD and cyclists currently have to mix with traffic.

The plan identifies various iconic recreation routes, these include:

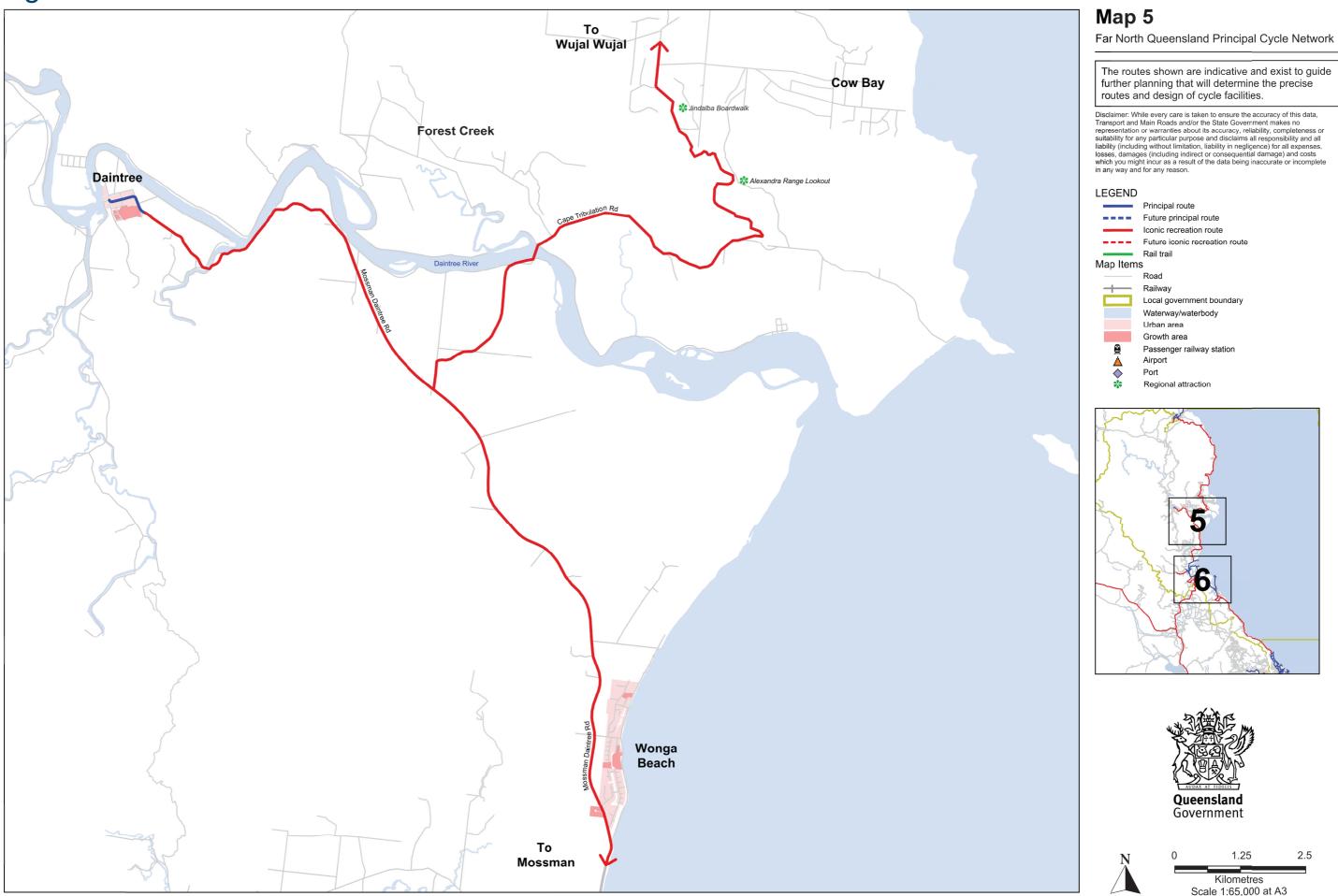
- The Mowbray Loop This is a scenic route that extends from the Captain Cook Highway and provides access to Mowbray National Park.
- Shannonvale Road Loop Extends from Mossman–Mount Molloy Road to the Captain Cook Highway and crosses the Mossman River.
- Mossman Gorge Road Provides access to Mossman Gorge and the interpretive centre.

 Long Distance Coastal Route – This is a long distance cycle route that connects the Douglas Shire with the Daintree, Cape Tribulation, Wujal Wujal and Cooktown. This route also extends south to connect the Douglas Shire with Cairns Regional Council.

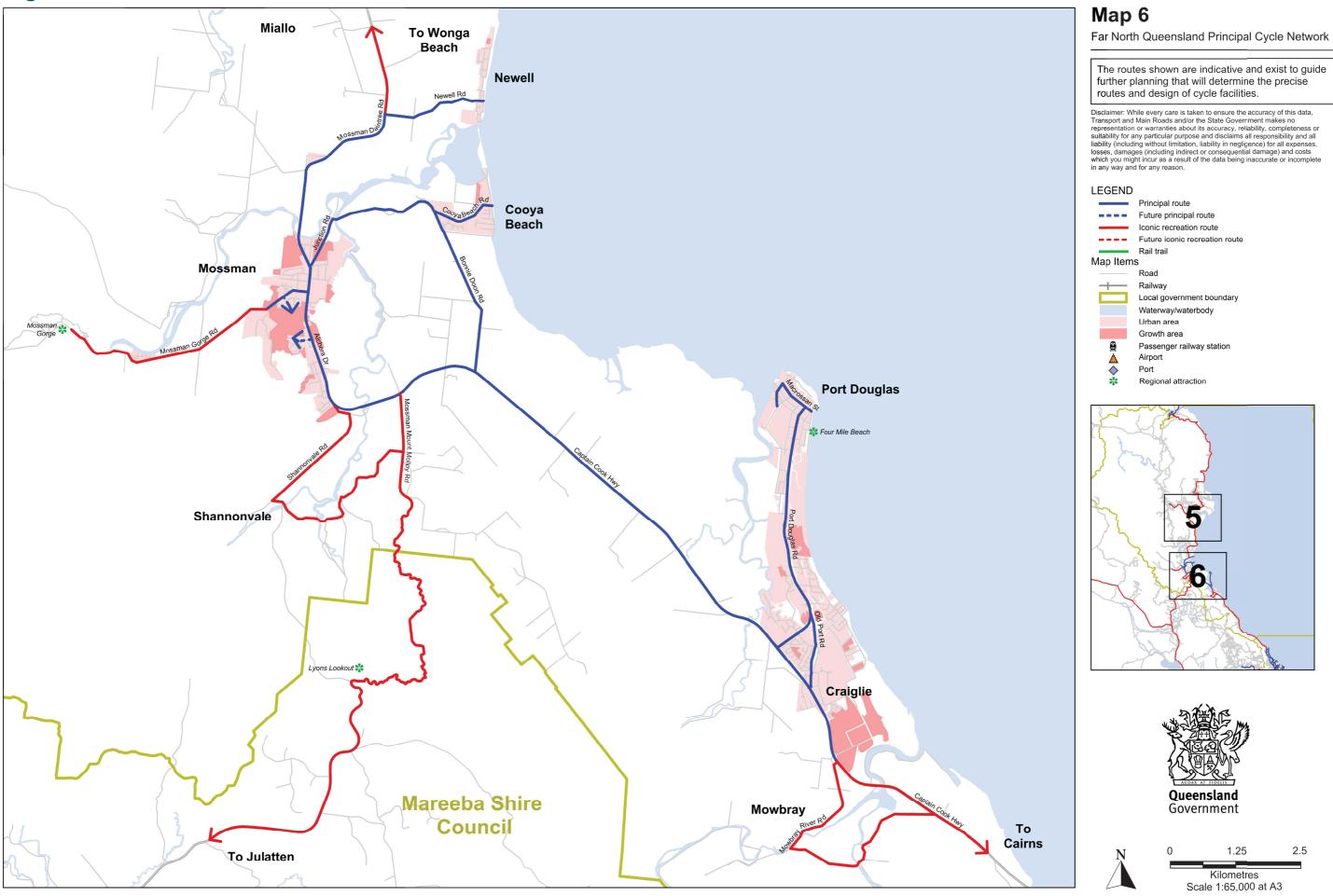


Figure 14. Four Mile Beach, Port Douglas.

Douglas Shire Council



Douglas Shire Council



Cairns is the largest city by population in Far North Queensland and serves as the district's major commercial centre. The region's population is forecast to grow from 158,985 in 2014 to 244,083 in 2036.

Cairns has some excellent cycle infrastructure in place. Building on the existing network and providing high-quality links between origins and destinations will support more cycling, more often. Some key cycle infrastructure includes:

- Aeroglen Cycleway
- Cairns Southern Cycleway
- Redlynch Valley to Brinsmead Connection
- Cairns Northern Cycleway.

Recent data obtained from the 2014 Household Travel Survey demonstrates that where significant investment in cycle infrastructure has been made in Cairns, a higher proportion of people choose cycling as a mode of transport (Figure 16). Both the Aeroglen Cycleway and Cairns Southern Cycleway have a high percentage of bike users and similar results can be expected for the recently constructed Redlynch-Brinsmead Connection and Northern Cycleway.

The principal network focuses on providing safe cycle connections between the CBD and Cairns' northern, southern and western residential suburbs. This includes links to activity centres, major attractors and key public transport stations and stops. The 'grid style' road network supports high accessibility around the inner suburbs.

As Cairns continues to grow and develop, the principal cycle network will help provide a viable and sustainable travel alternative through the city, supported by the passenger transport network.

The southern growth corridor including the Mount Peter Master Plan Area is proposed to accommodate much of this growth. This provides the opportunity to ensure new housing and commercial developments are designed to support cycling. The exact location and design of these future networks will be determined as part of future master planning.

The Bruce Highway connects various small townships south of Cairns and has been included as part of the cycle network. The Bruce Highway functions as a major scenic route capturing long distance tourism travel. It is noted that the Bruce Highway may not require separate cycle facilities, but rather more cost effective measures given the large distance of road included within the cycle network.

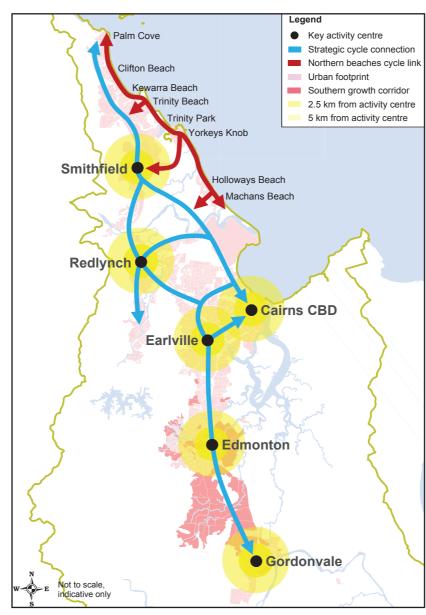


Figure 15. Strategic cycle network for Cairns.

The Cairns cycle network includes an extensive network of iconic recreation routes that are located to support tourism. These routes generally have a high scenic value and provide a connection to significant tourism attractions including:

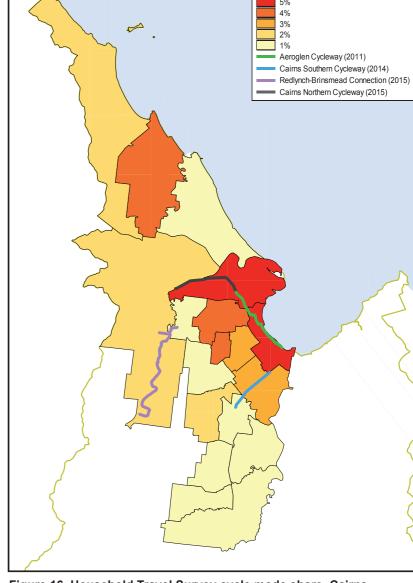
- Cairns Esplanade
- · Lake Placid
- Crystal Cascades
- · The Cairns northern beaches.

Lake Morris

Other iconic recreation routes located to the south of Cairns predominantly provide cycle access to national parks and other natural attractions including:

- · Walsh's Pyramid
- · Bramston Beach.

- the Boulders
- Joesphine Falls
- Golden Hole



Cycle Mode Share 2014

Figure 16. Household Travel Survey cycle mode share, Cairns.



Figure 17. Aeroglen Cycleway.



Figure 18. Shared facilities along Cairns Esplanade.



Map 7

Far North Queensland Principal Cycle Network

The routes shown are indicative and exist to guide further planning that will determine the precise routes and design of cycle facilities.

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LEGEND

Principal route
Future principal route
Iconic recreation route

--- Future iconic recreation route

Rail trail Map Items

Road Railway

Railway

Local government boundary

Waterway/waterbody

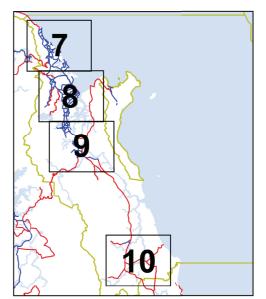
Growth area

Passenger railway station

Airport Port

Port

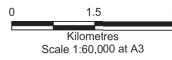
Regional attraction

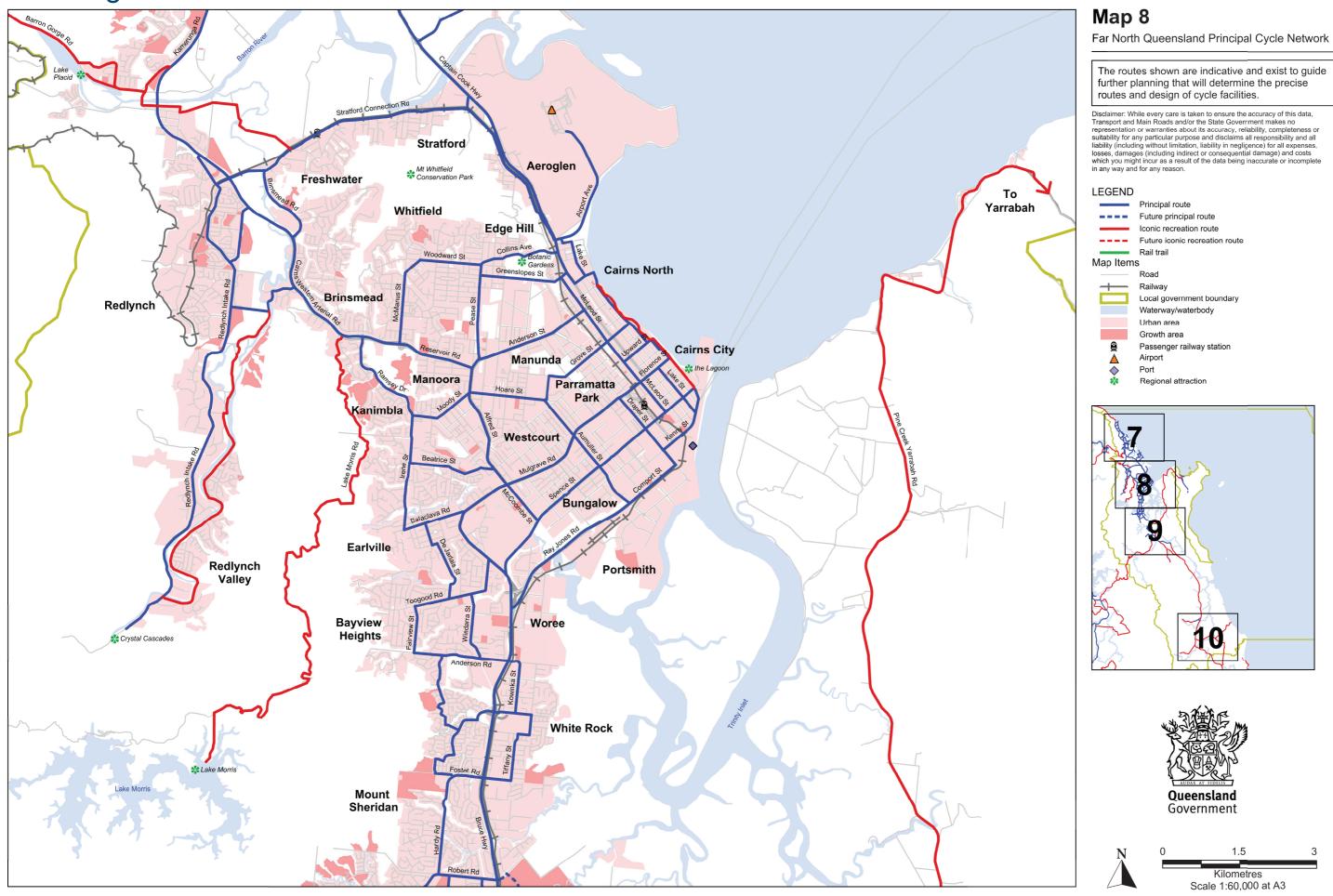


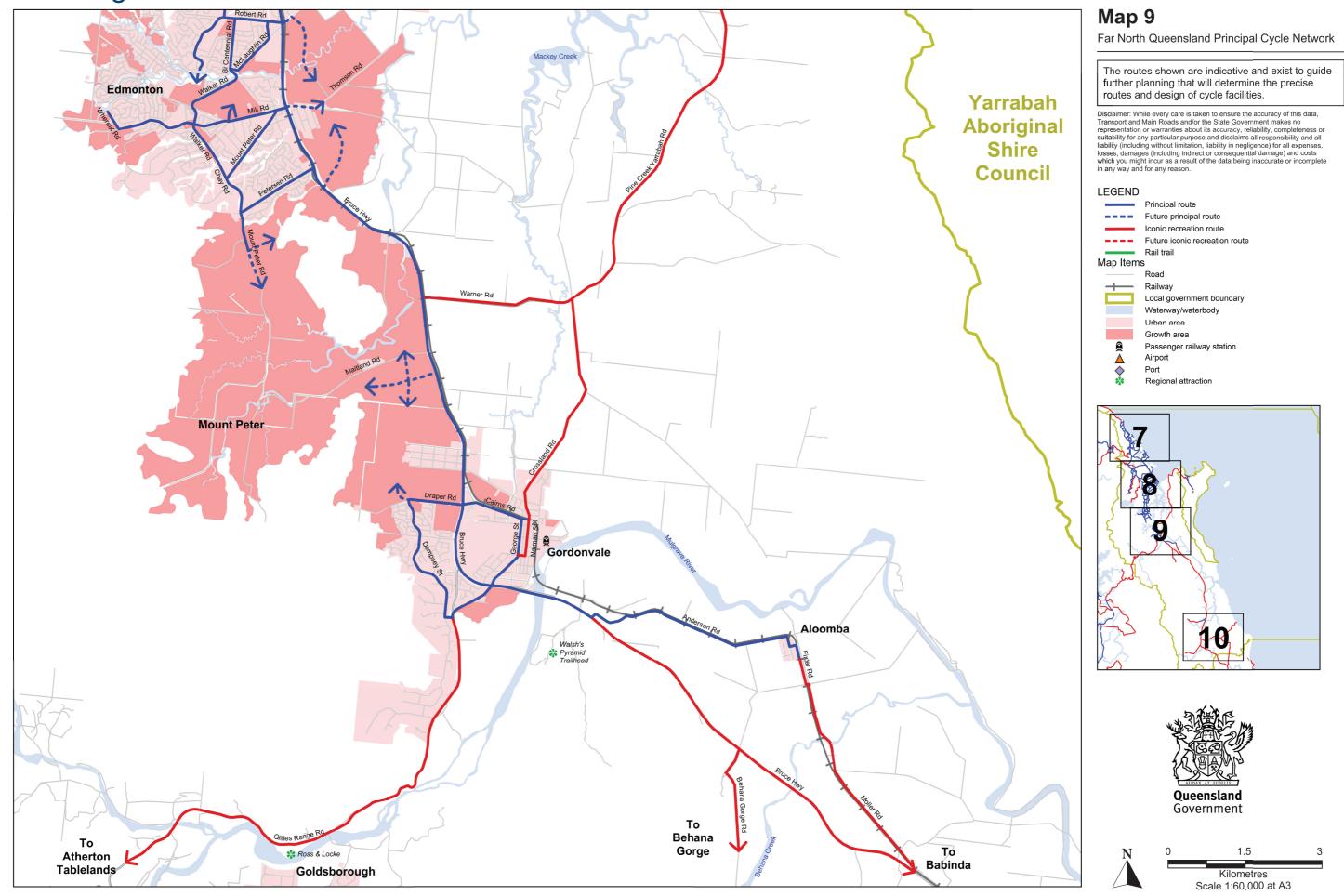


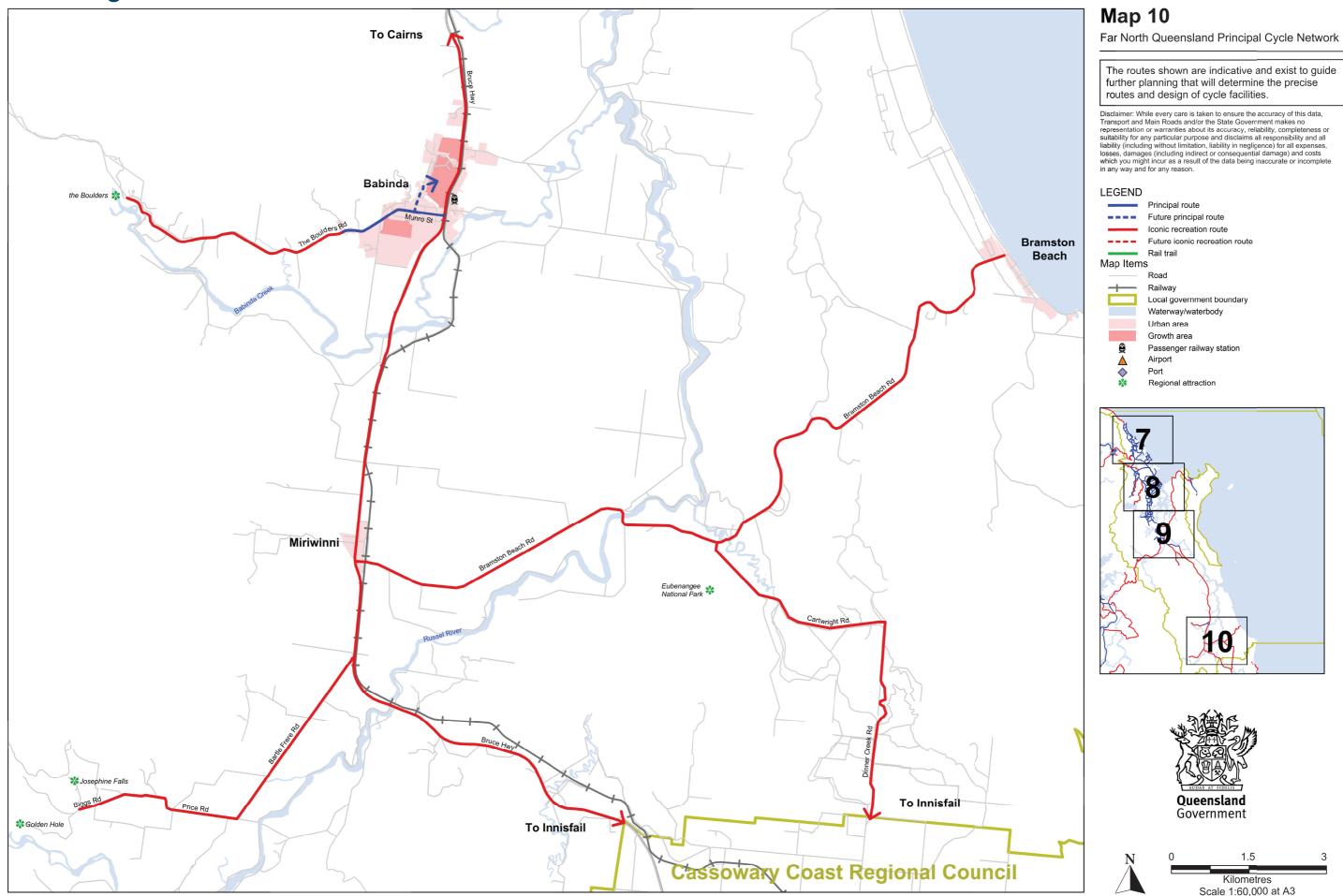
Government











Yarrabah Aboriginal Shire Council

Yarrabah Aboriginal Shire Council is located 10 km directly east of Cairns. The region is home to 2,687 people and is expected to increase to 3,781 in 2036 at an average annual growth rate of 1.5%.

Yarrabah has an overall young median age with 34% of the population between 0 and 14. A key focus of the principal cycle network is providing safe connections to the primary and high school.

Connecting the communities of Mourigan and Djenjhi with the Yarrabah township area is another focus of the principal network. The extent of the network along Back Beach Road reflects the urban growth area.

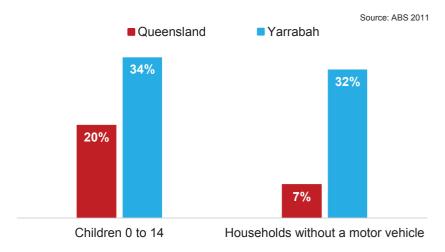


Figure 19. Demographic indicators reflecting high cycling opportunities.

Case Study: Reeves Creek Bridge, Yarrabah

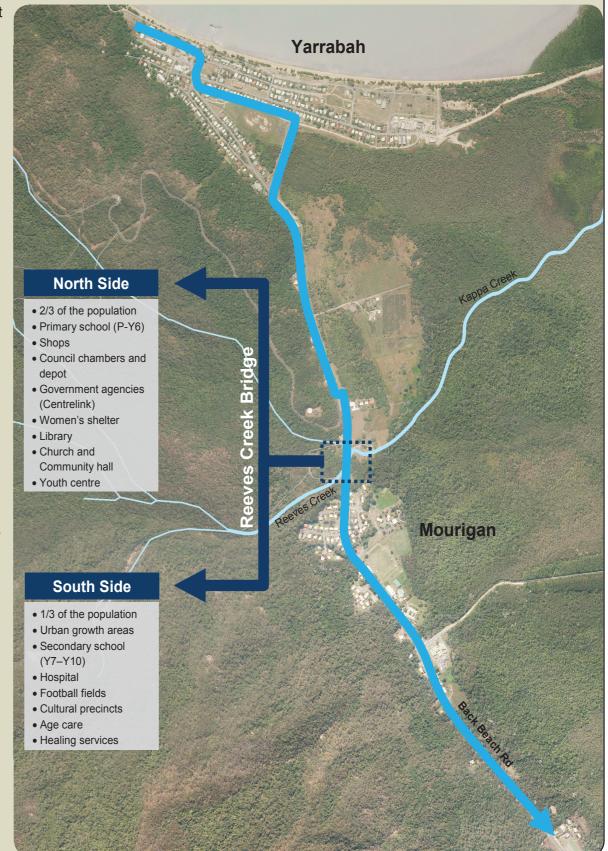
The pedestrian bridge over Reeves Creek was not suited to the active transport demands generated by the Yarrabah community. The bridge was 1.2m wide and estimated to be around 20 years old. It was not wide enough to allow two pedestrians or cyclists to pass. This was not desirable given that the schools, residential areas, shops and community facilities are separated by Reeves Creek.

The Yarrabah community has low car ownership and relies heavily on active transport for making daily trips to school, shops and the local commercial centre.

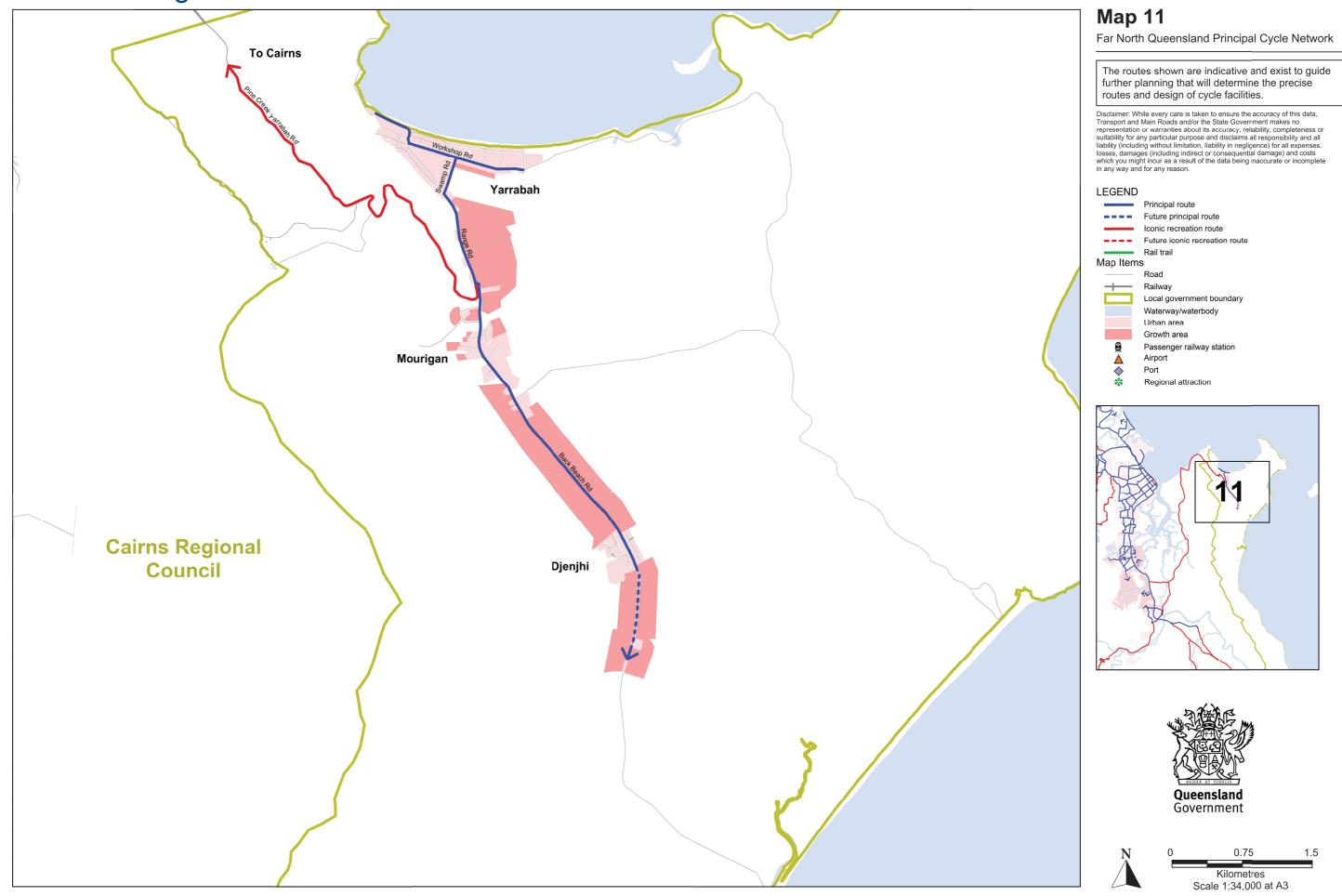
\$1.2 million was made available to replace the road bridge with contributions from the federal government's Regional Development Australia Program, Department of Transport and Main Roads and Department of Housing and Public Works.

The scope of the road bridge replacement project did not initially include pedestrian and cycle facilities. By having Back Beach Road and the connection over Reeves Creek identified in the 2009 FNQPCNP, it flagged the demand, location and functional requirement for a cycle route in this location. As a result, the scope of the road bridge replacement project was amended to include a light weight pedestrian bridge.

This project demonstrates the benefit of the FNQPCNP in ensuring that active transport facilities are considered in road projects at the design stage. This results in efficiencies and cost savings being realised by reducing the need to retrofit at a later date. The Reeves Creek Bridge replacement project provided an ideal opportunity to improve active transport infrastructure for the local community.



Yarrabah Aboriginal Shire Council



The Cassowary Coast is situated south of Cairns and has a vibrant agricultural and tourism sector. In 2014, the region's estimated resident population was 28,705. This is expected to increase to 31,476 in 2036 at an average annual growth rate of 0.4%.

Cassowary Coast's main commercial centres are Innisfail in the north and Tully in the south. The urban footprint of Innisfail and Tully is largely contained within a 2 km radius of the town centre, resulting in an environment that is highly conducive to cycling.

The coastal communities of Bingil Bay, Mission Beach, Wongaling Beach, and South Mission Beach are located within a 10 km coastal strip. Connection between the townships is important to improve accessbility between the residential and commercial areas, school, and recreation facility of Marcs Park.

Connections have been provided to a number of significant employment nodes. These include the South Johnstone Mill, the Tully Mill and Mourilyan Harbour.

The Bruce Highway connects various small townships in the Cassowary Coast including Mourilyan, Silkwood, El Arish, Feluga, Midgenoo, Kennedy and Cardwell and has been included as part of the principal cycle network.

Iconic recreation routes have been identified that provide connections to:

- Various beaches along the coastline including Ella Bay, Etty Bay, Kurrimine Beach, Bingil Bay, Mission Beach, Wongaling Beach, and South Mission Beach.
- A western network that connects South Johnstone and Mena Creek with a link into the Misty Mountains Wilderness track.
- Access to Cardstone Village west of Tully. This link has long term
 potential of providing a scenic route between Cardstone Village
 and Tully, however this will be dependent on the Cardstone
 Village development being pursued.
- · Connection to Alligators Nest, north of Tully.

The Palmerston Highway provides a scenic long distance connection to the Atherton Tablelands. This route in addition to Henderson Drive, South Johnstone Road, Boogan Road and Mourilyan Harbour Road are B-Double routes. The development of any cycle infrastructure in these locations needs to consider the safety issues associated with combining active transport with heavy vehicles.



Figure 20. Shared facility, Cardwell.

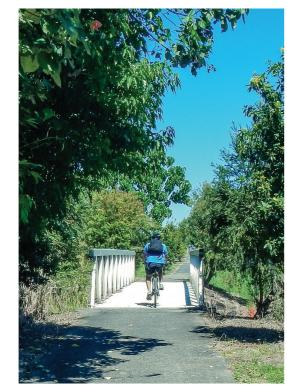


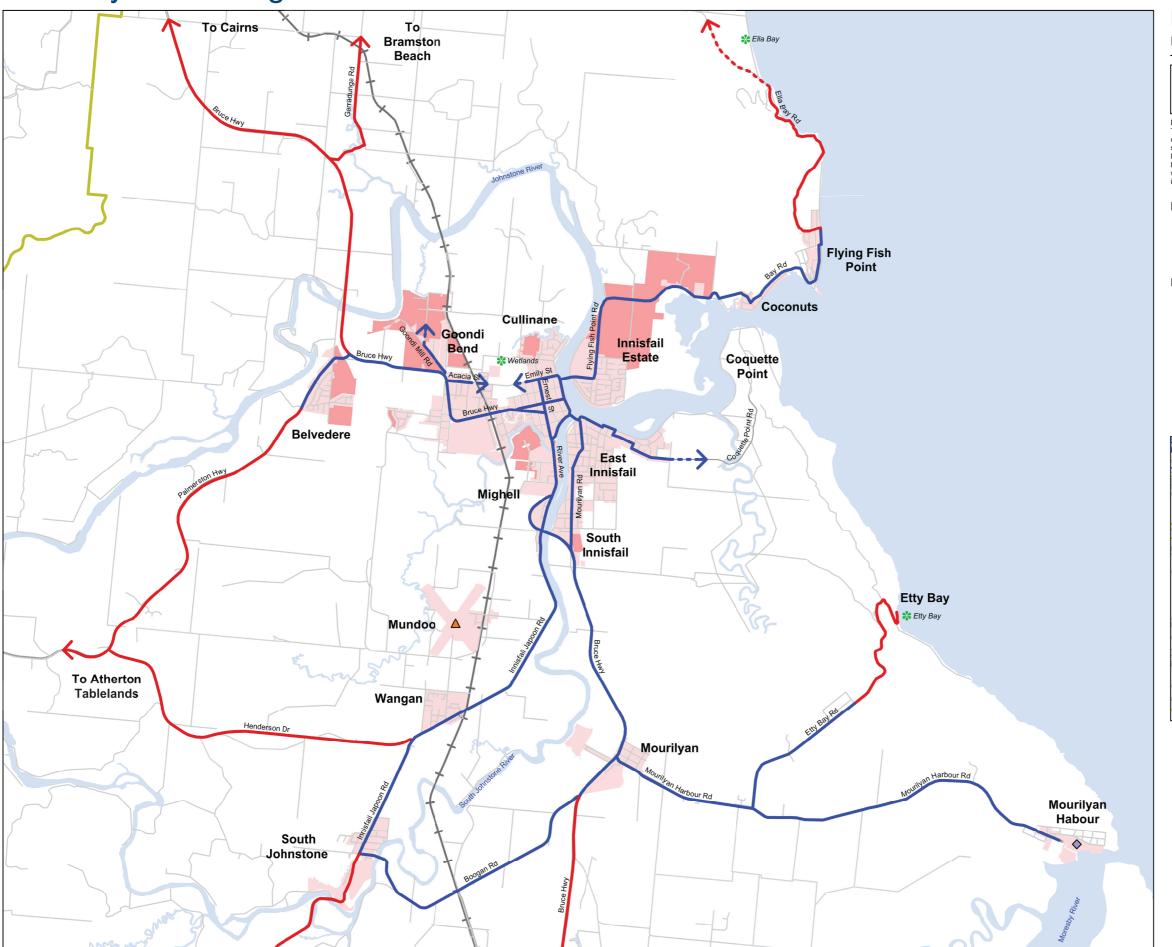
Figure 21. Shared facility, Mission Beach.



Figure 22. Shared facility, Mission Beach.



Figure 23. Strategic cycle network for Innisfail - Cassowary Coast.



Map 12

Far North Queensland Principal Cycle Network

The routes shown are indicative and exist to guide further planning that will determine the precise routes and design of cycle facilities.

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LEGEND

 Principal route --- Future principal route Iconic recreation route --- Future iconic recreation route

Map Items

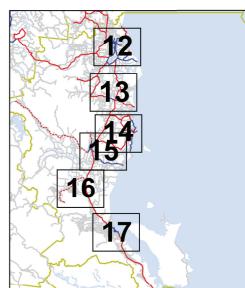
Local government boundary Waterway/waterbody

Urban area

Growth area Passenger railway station

Airport

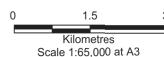
Port Regional attraction

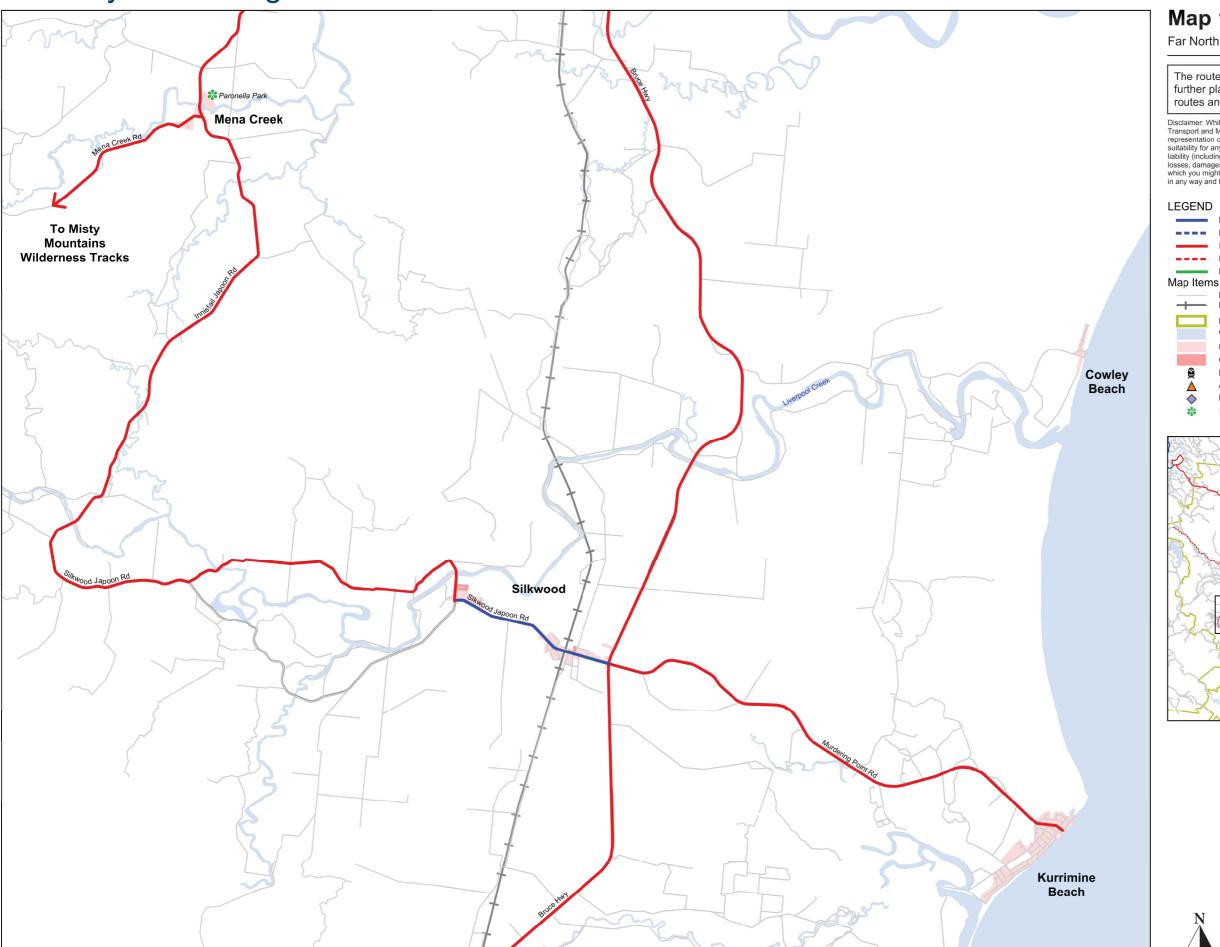




Queensland Government







Map 13

Far North Queensland Principal Cycle Network

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LEGEND

 Principal route --- Future principal route Iconic recreation route

--- Future iconic recreation route

Local government boundary

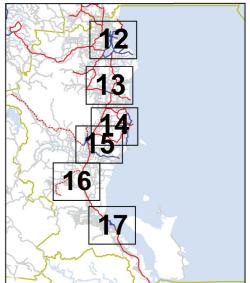
Waterway/waterbody

Urban area Growth area

Passenger railway station

Airport Port

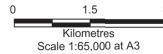
Regional attraction

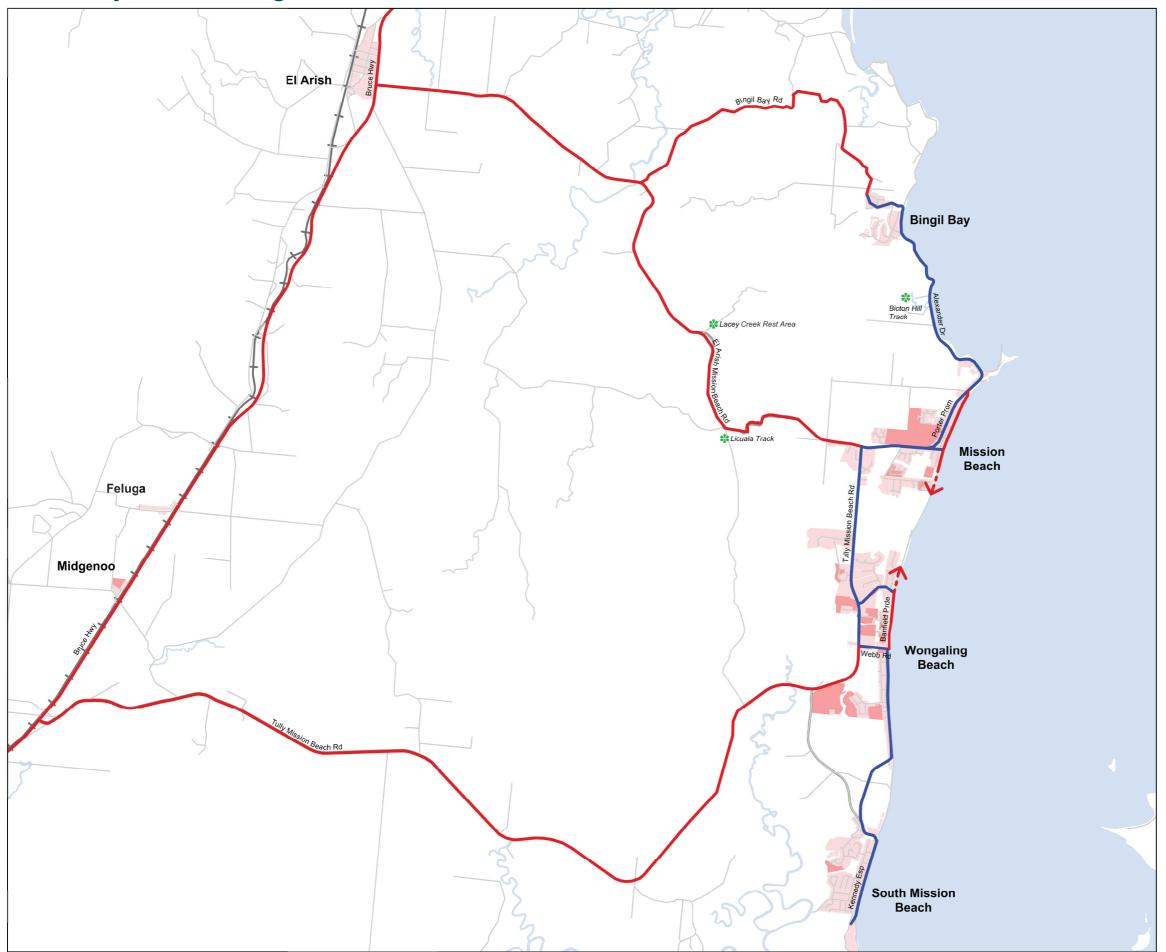




Government







Map 14

Far North Queensland Principal Cycle Network

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LEGEND

 Principal route --- Future principal route Iconic recreation route

--- Future iconic recreation route

Map Items

Local government boundary

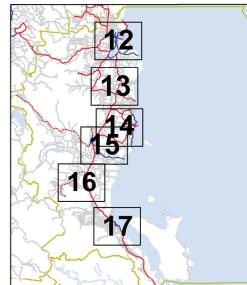
Waterway/waterbody Urban area

Growth area

Passenger railway station Airport

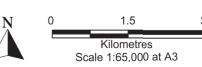
Port

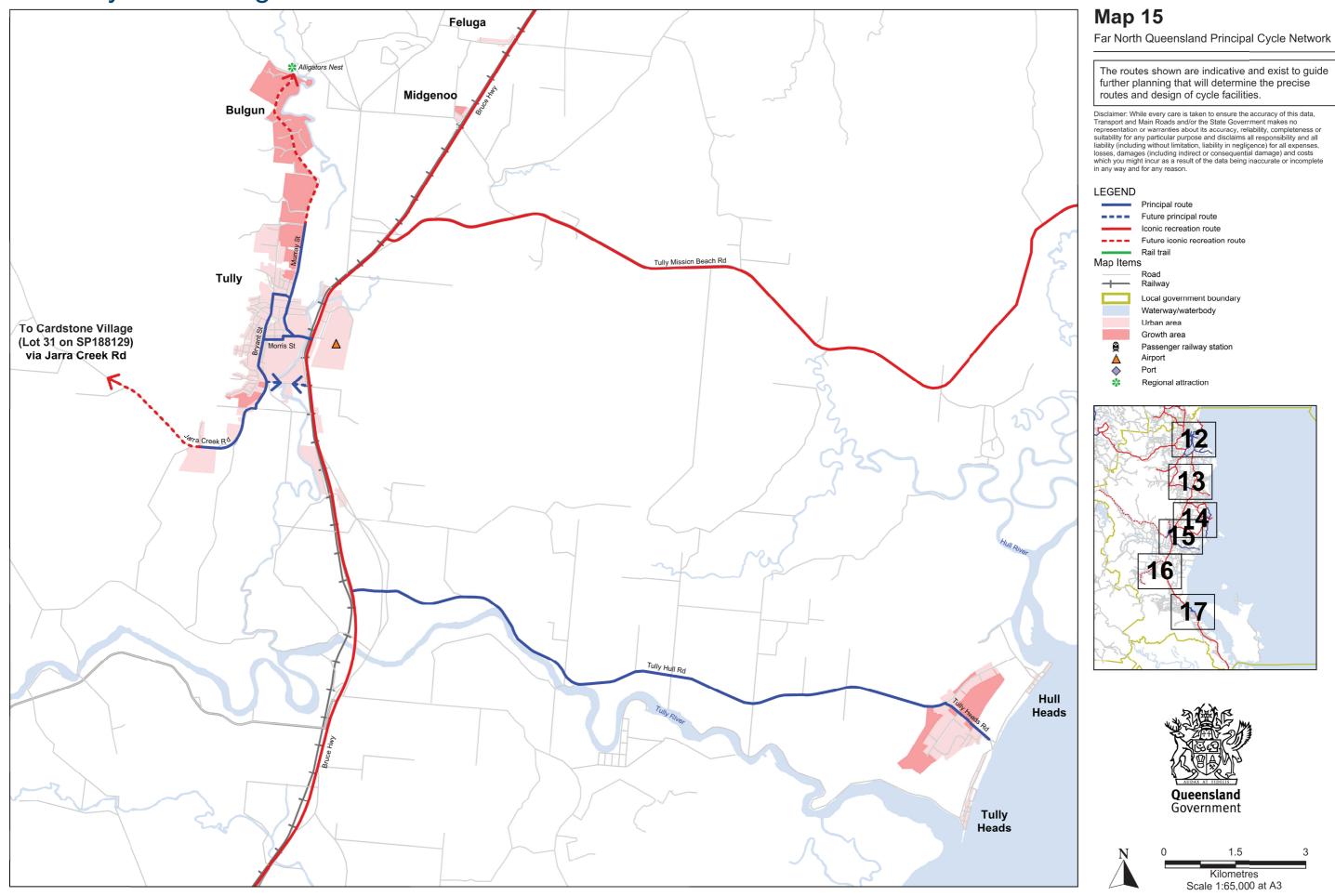
Regional attraction

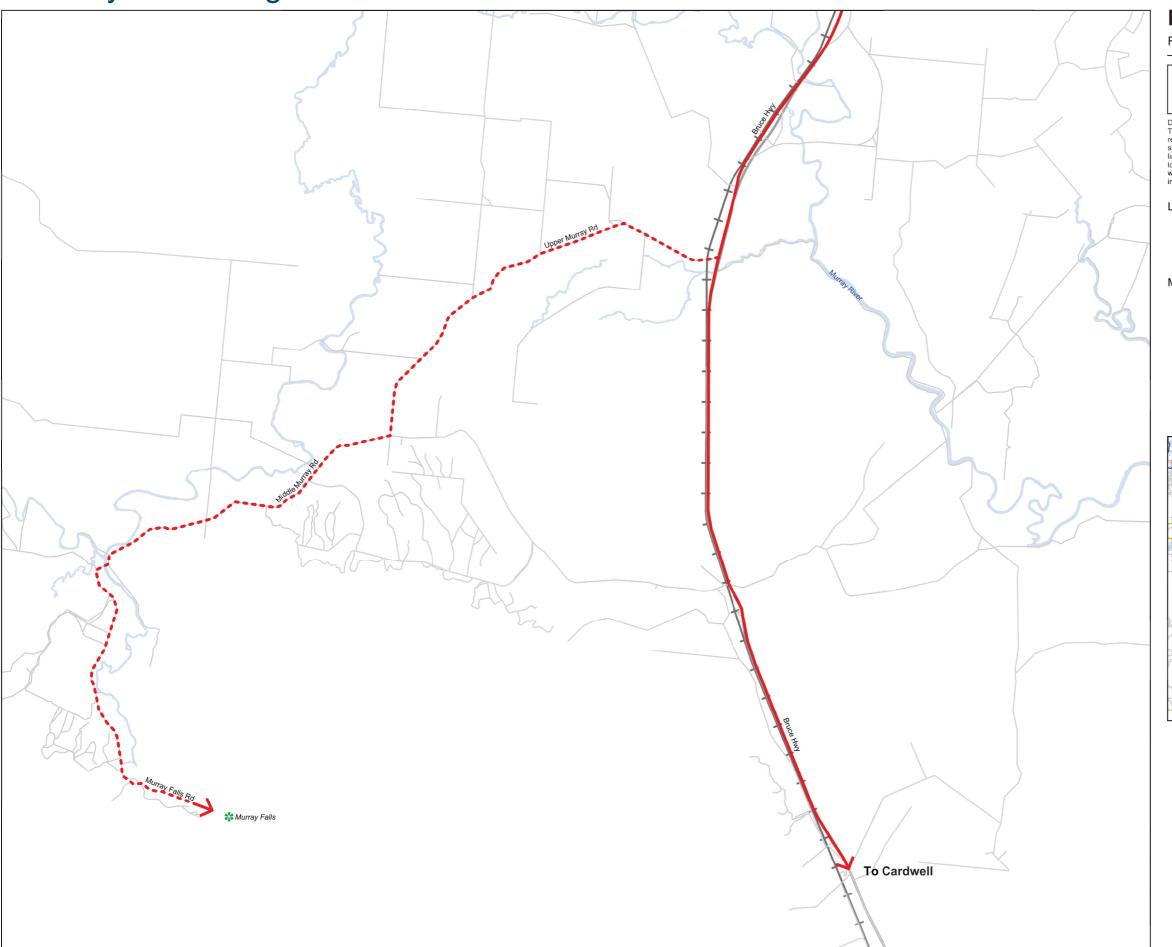




Government







Map 16

Far North Queensland Principal Cycle Network

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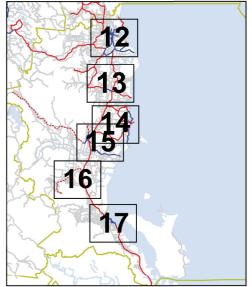
LEGEND



Airport

♦ Port

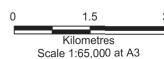
Regional attraction

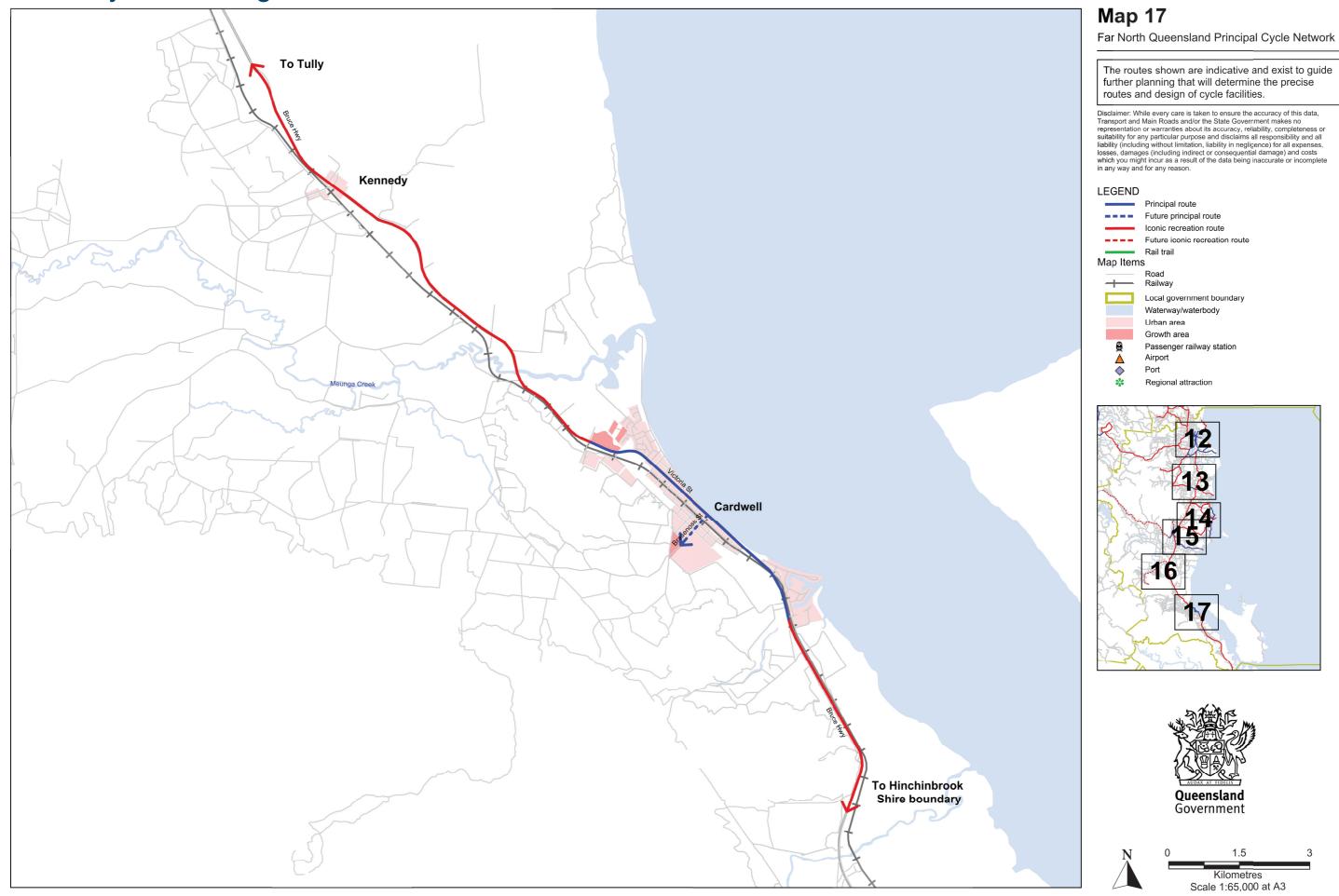




Queensland Government







In 2014, Mareeba Shire Council was home to 21,537 residents. This is expected to increase to 28,623 in 2036 at an average annual growth rate of 1.3%.

Mareeba is the Shire's main commercial centre and has significant future growth potential with substantial urban growth areas being identified by Council. Future principal routes have been suitably included to reflect these growth areas.

The principal network in Mareeba focuses on providing safe cycle connections between the CBD and Mareeba's northern, southern and eastern residential suburbs. Mareeba's compact urban form results in a cycle friendly town.

Byrnes Street is a vibrant main street and central shopping and commercial area of Mareeba, however it is also a high traffic volume, narrow B-Double route constrained by vehicle parking. Approximately four crashes involving cyclists, including one fatality were reported during 2007-12 on Byrnes Street.

The plan identifies Walsh Street as an alternative route providing a north-south connection. The route improves accessibility to the hospital, major supermarkets and private schools, providing a good potential to encourage cycling trips.

An iconic recreation route is identified along the Kuranda Range (Kennedy Highway) connecting Mareeba to Cairns. This long distance cycle link provides cycling tourists with a unique opportunity to explore the region and ride some challenging and scenic routes. Given the constrained environmental and topographical conditions of the Kuranda Range, it may not always be possible to develop separated cycle facilities. Rather, alternative treatment methods to improve cyclist safety (for example signage, road markings) may be investigated.

Myola Road connects the small communities of Kowrowa, Myola and Kuranda in the Shire's east and has been included as part of the principal cycle network. The proposed network connects the local schools, swimming pool and the commercial facilities located in the Kuranda area.

The Mareeba-Atherton rail trail is also shown. This is a parallel network to the Kennedy Highway and it has the potential in the long term to function as a commuter route between Atherton and Mareeba.

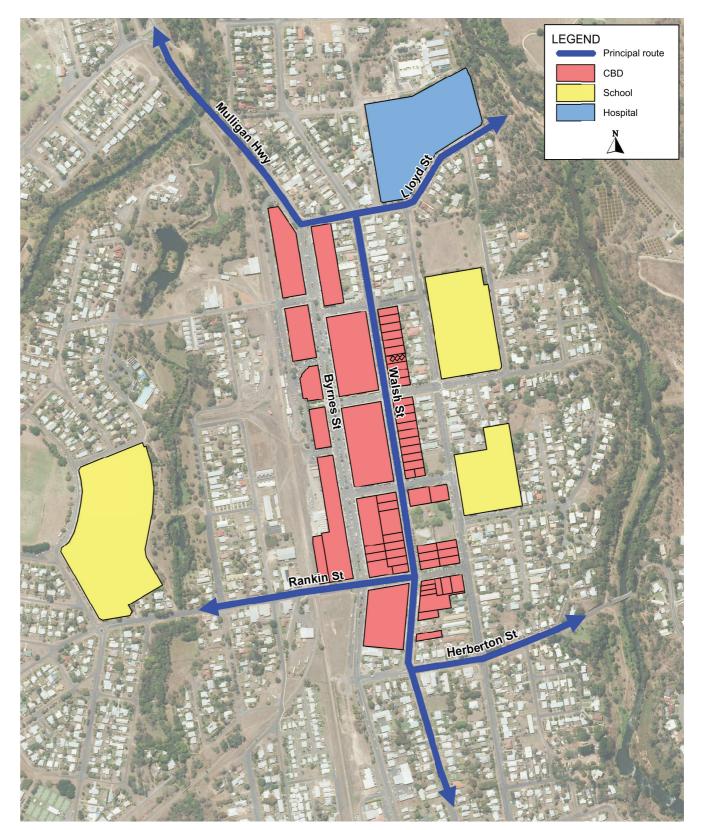
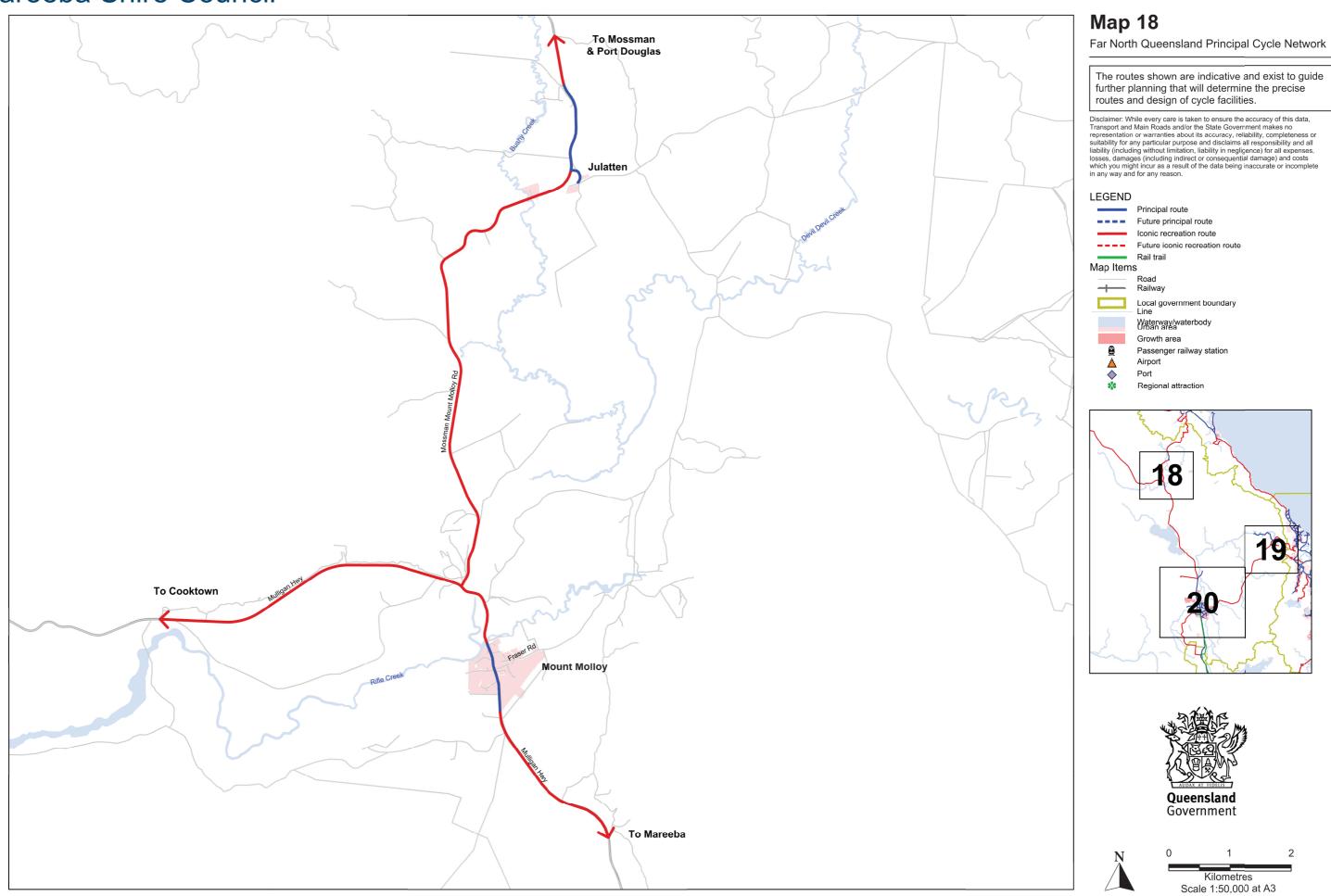
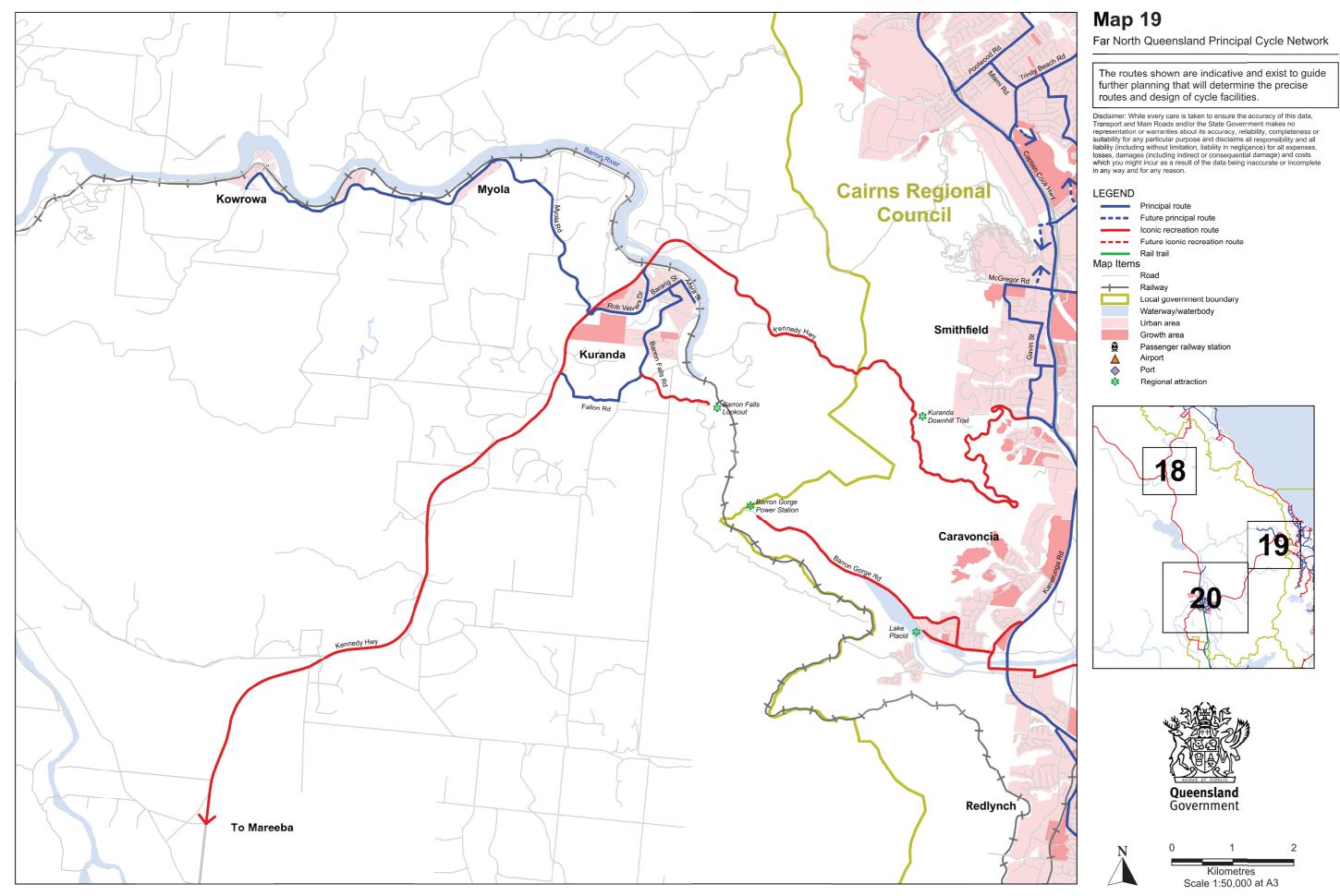
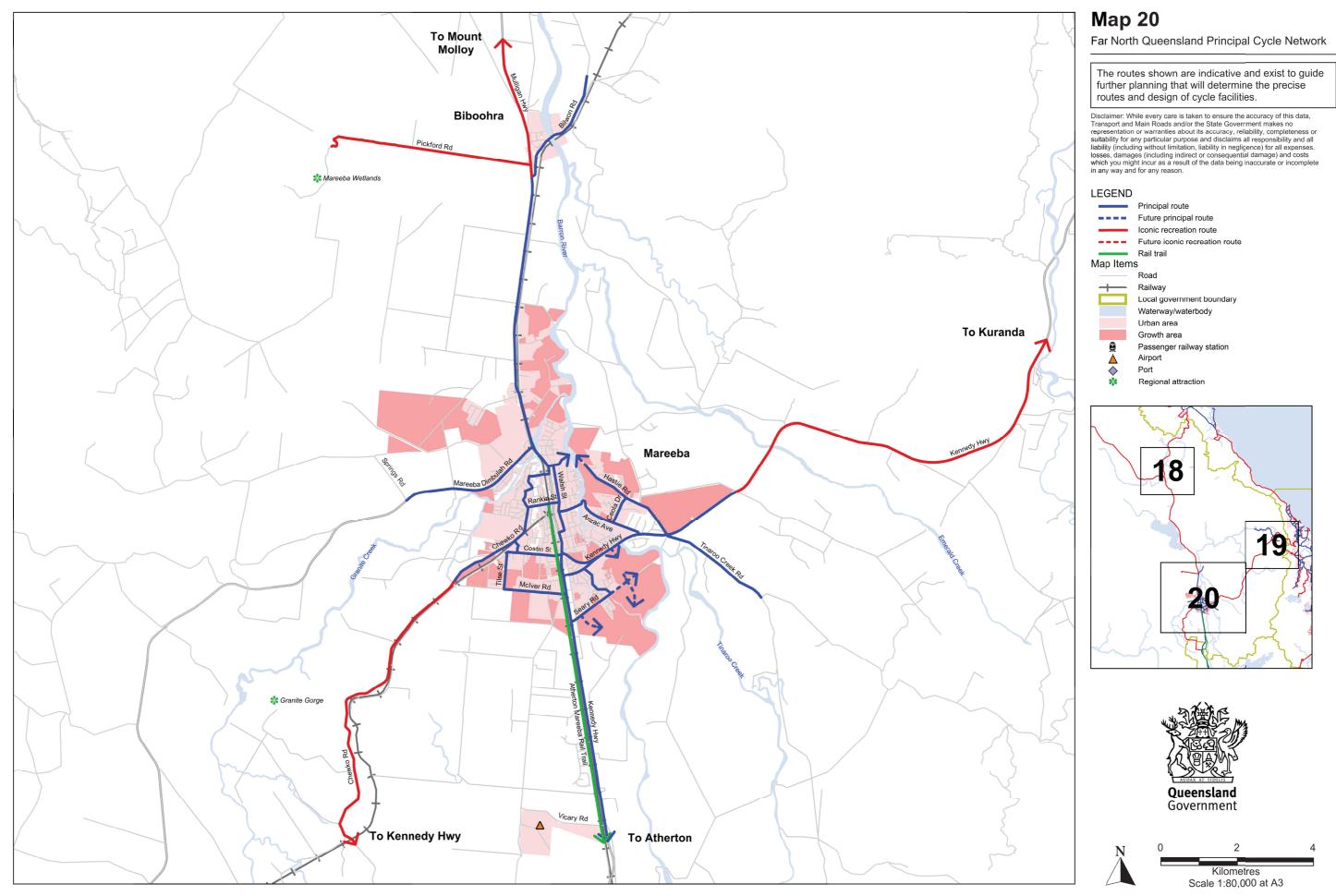


Figure 24. Walsh Street connection, Mareeba







The Tablelands is located west of Cairns and is in an elevated position with a strong agricultural sector. Atherton is the main commercial centre, with smaller centres located at:

- Malanda
- Millaa Millaa
- Ravenshoe

Walkamin

Herberton

Tinaroo

Yungaburra

Tolga.

Kairi

Some of these centres are within 5 km of each other. A focus of the plan is to connect these communities enabling bike trips to work, school and shops.

The 2014 estimated resident population of the Tablelands was 24,973. This is expected to grow to 29,390 in 2036 at an average annual growth rate of 0.8%. With 20% of the Tablelands population aged 65 and older, the cycle network focuses on providing safe connections to utility and lifestyle destinations. Connecting people to where they want to shop and undertake other personal business trips will enable more people to cycle, more often. Increased low-impact exercise/recreational facilities that are well integrated with the cycle network will also be of value to this age group.

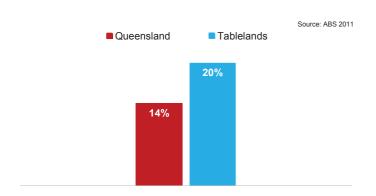


Figure 25. Population aged 65 and over.

The Atherton Tablelands is a major tourist destination containing many attractions, including:

- Lake Tinaroo
- Lake Barrine
- Yungaburra village
- Curtain Fig Tree
- the Avenue of Honour
- Hasties Swamp

- Malanda Falls
- Mt Hypipamee National Park
- Dinner Falls
- Millaa Millaa Falls
- Zillie Falls
- Ellinjaa Falls.

The FNQPCNP depicts an extensive network of iconic recreation routes that connect these attractions.

In supporting the tourism values of the region, the plan identifies a network of rail trails that use the disused railway lines. The railway corridor provides a linear space that has the potential to be developed for active transport purposes. This includes opportunities for both journey to work and recreational trips.

While parts of the rail trail including the link between Atherton and Walkamin have already been constructed, other parts of the network are no longer intact. This is due to private ownership, leases and permits. For instance, 6.4 km of the link between Kairi and Yungaburra is in private ownership and for this reason the link has not been shown on the plan.

The plan identifies long distance cycle links connecting the Tablelands with Cairns via the Gillies Range Road and the Palmerston Highway. Connecting the Tablelands with the coast provides cycling tourists with a unique opportunity to explore the region and ride some challenging and scenic routes.

Given the constrained environmental and topographical conditions of these roads, it may not always be possible to develop separate cycle lanes, but rather consider other treatment methods to improve cyclist safety and retain the efficiency of the road network.

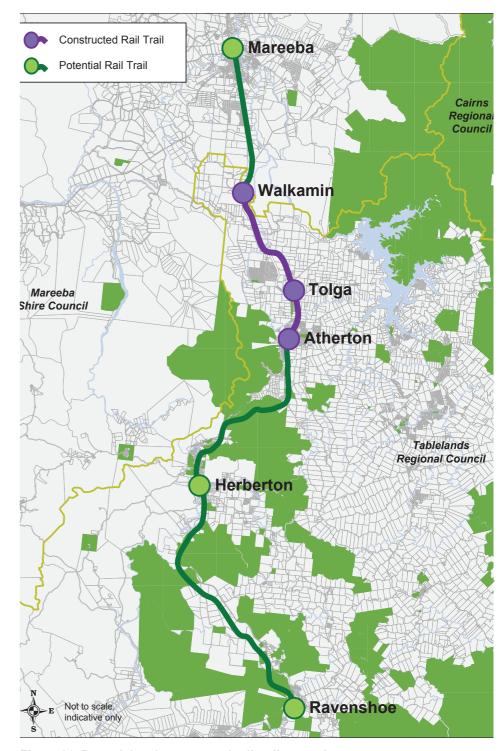
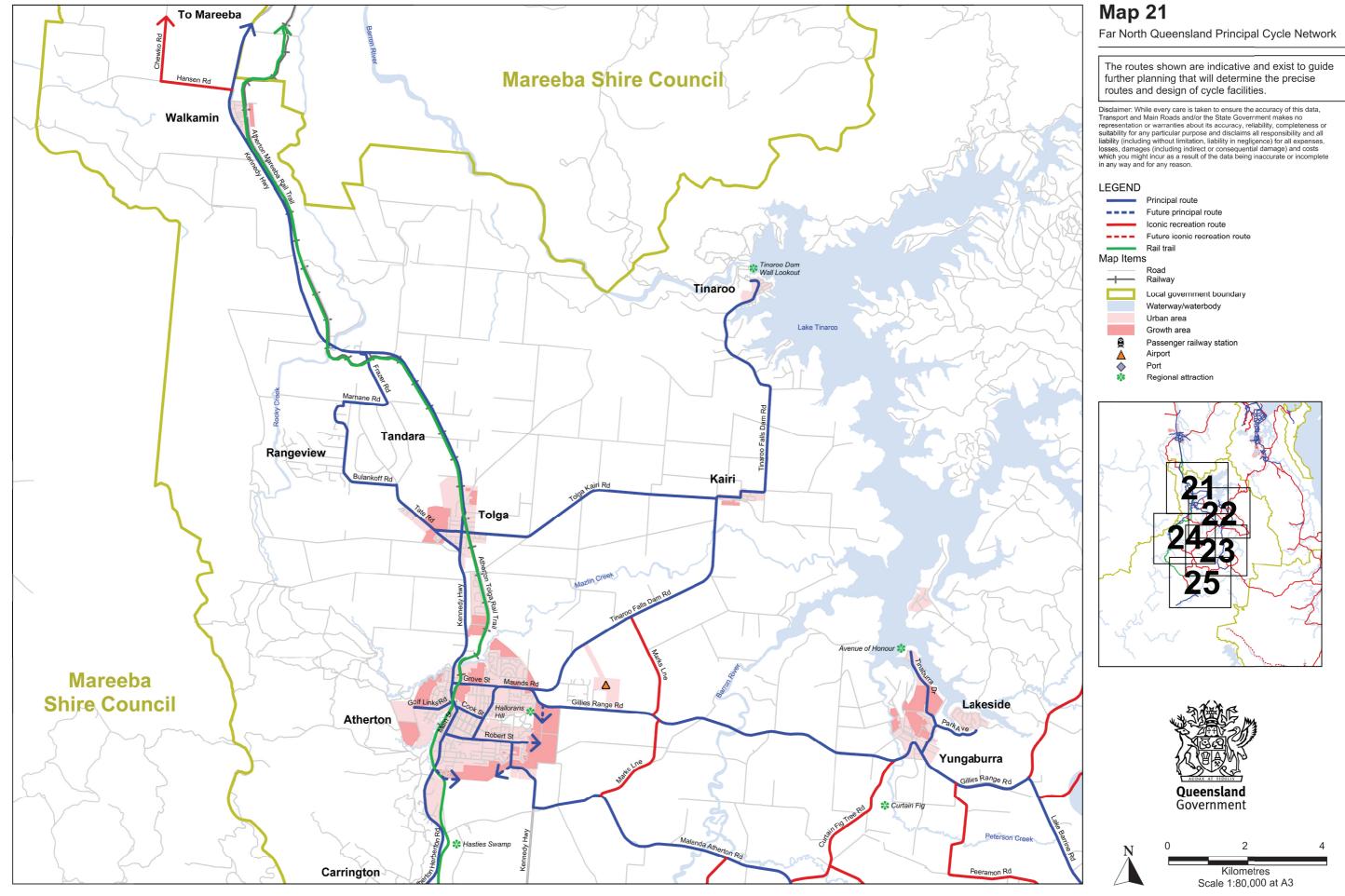
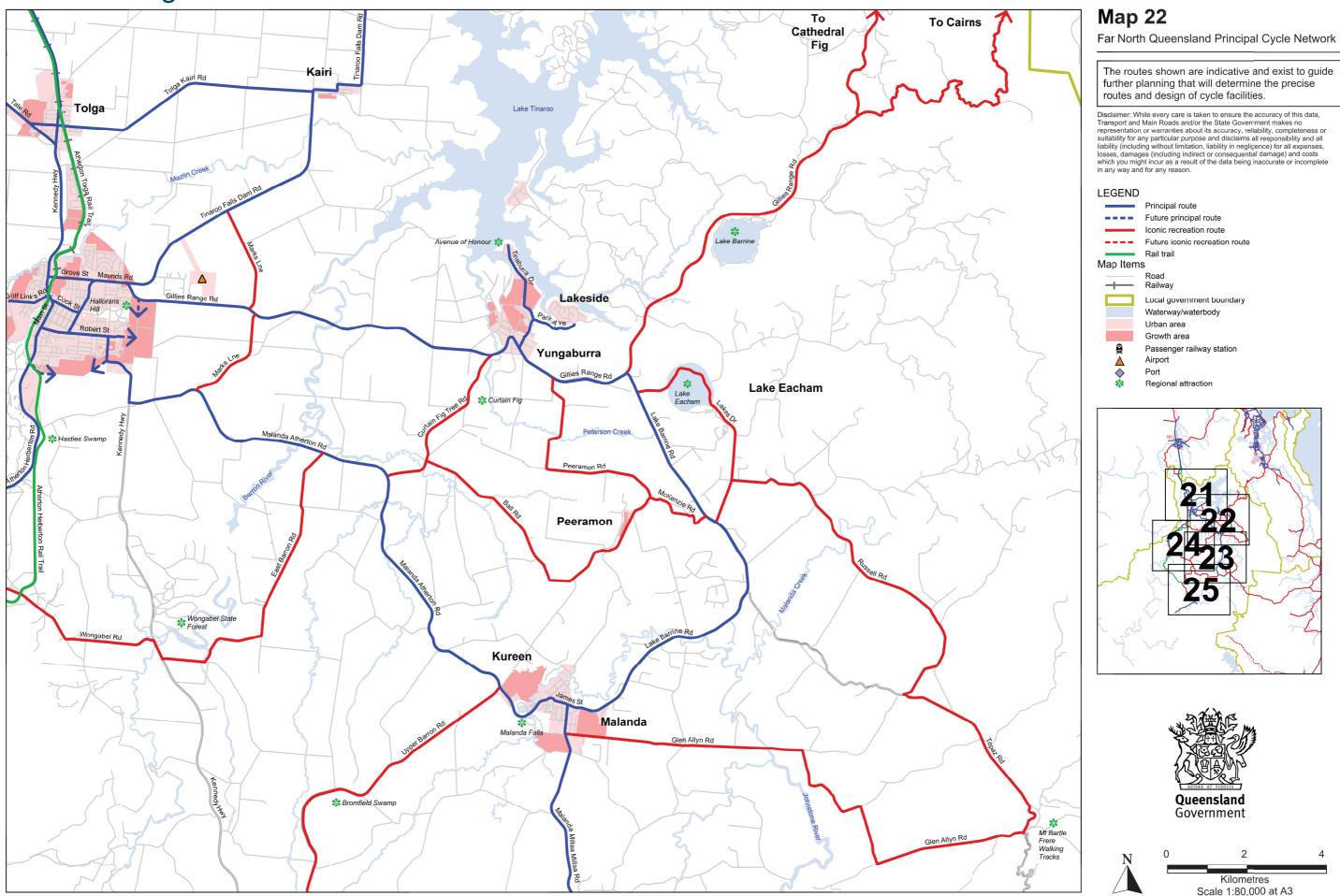
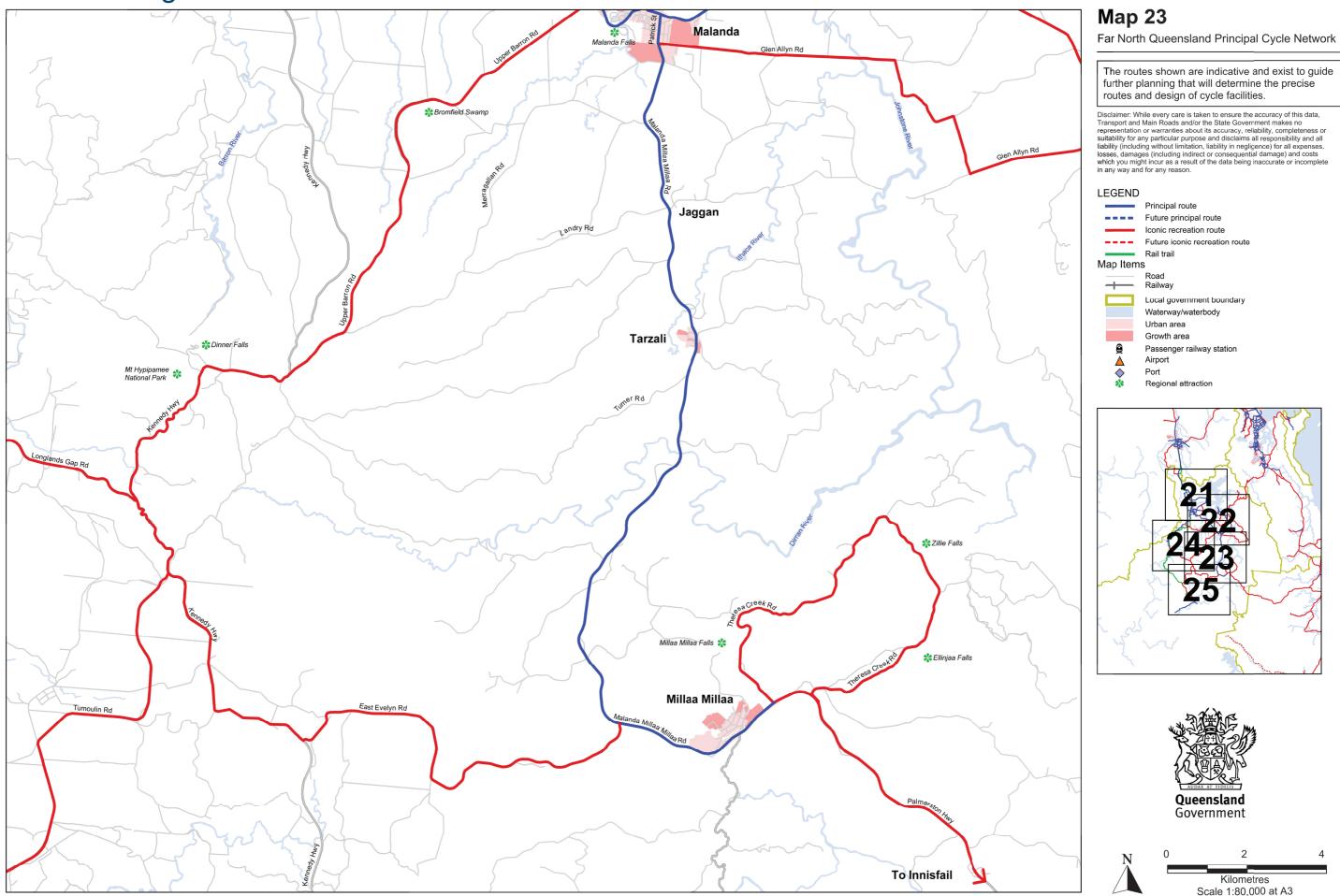
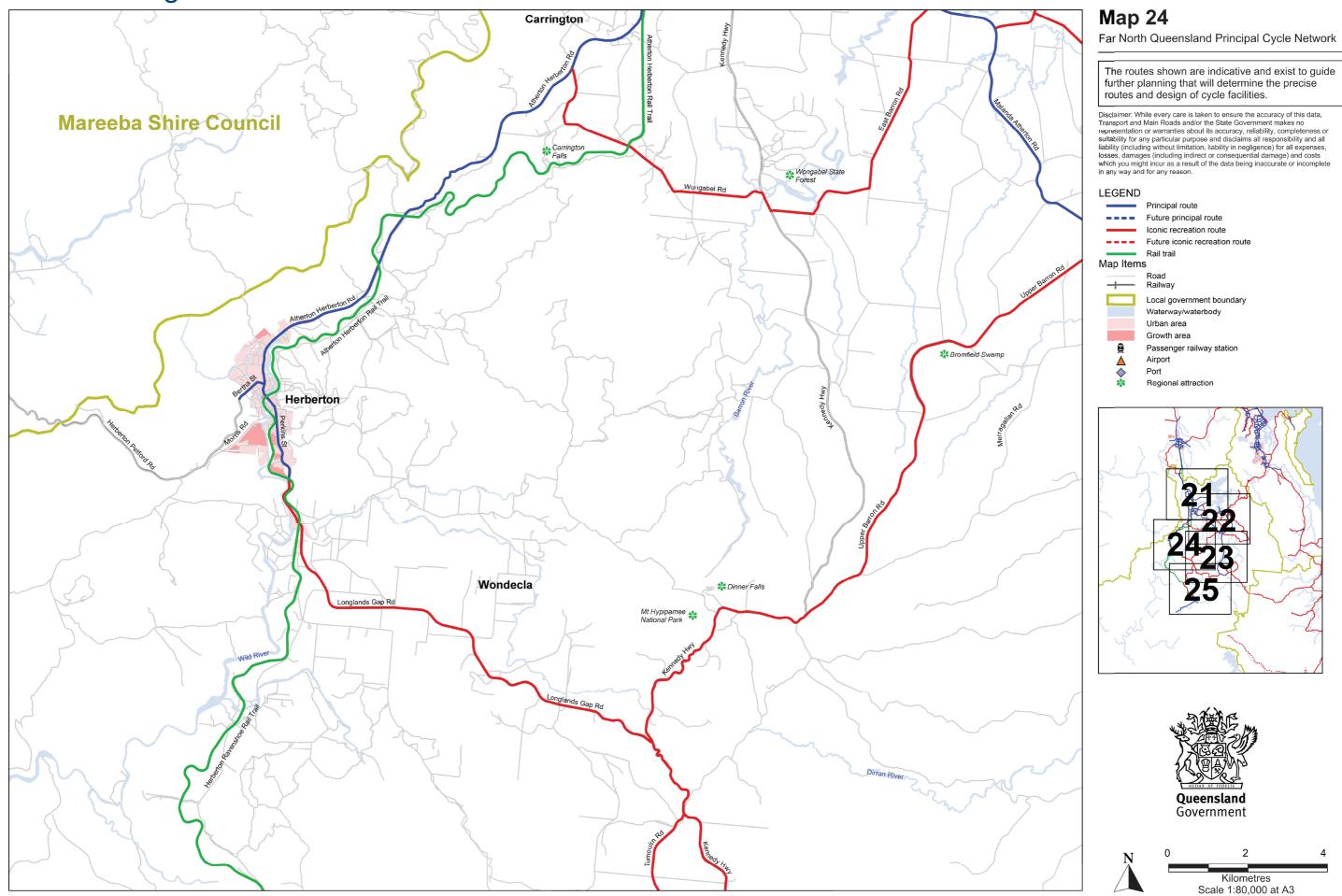


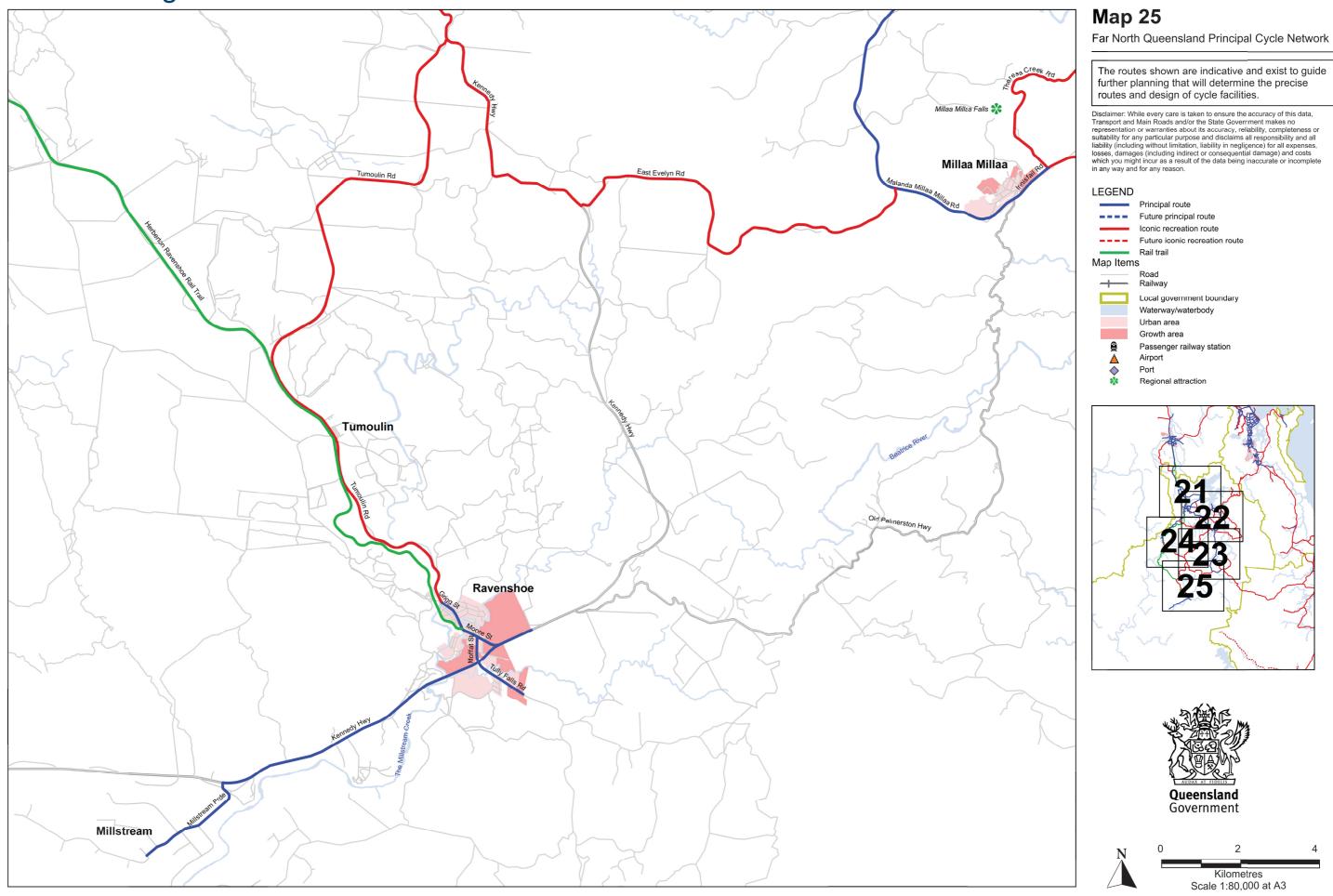
Figure 26. Potential and constructed rail trail network.











Weipa Town Authority

Weipa is a mining town located on the west coast of Cape York Peninsula. The urban footprint is largely contained within a 4 km strip, providing relatively short cycling trip distances. This has contributed to Weipa's high cycling to work mode share of 6.1%.

Weipa has experienced a high population growth rate in recent years of 3.1% (2009-2014) and it is the second most populated local government area in the Cape York region.

The Weipa Town Authority manages the township with the support of local Traditional Owners under the Weipa Township Agreement.

Weipa has close ties with Napranum which is located 10 km from Weipa. Napranum residents access Weipa for a range of services including education. The network links Weipa and Napranum via John Evans Drive and Kerr Point Road.

A key focus of the FNQPCNP is to connect the four localities of Evans Landing, Nanum, Trunding and Rocky Point. Linking these communities by the principal cycle network enables journey to work, journey to school and utility trips to be made by cycling.

Iconic recreation routes have been identified that provide connections to Lake Patricia and Lake McLeod in addition to the coastal area

between Duyfken Crescent and Rocky Point. The coastal and lakes areas of Weipa provide scenic values and contribute to the tourism values of the area.

Connections have been provided to a number of significant employment nodes. These include the Andoom, Lorim Point and East Weipa mining areas.

The road to Andoom involves the crossing of the Mission River Bridge which is 1,040 m long and supports a single lane road and railway track used by bauxite carrying trains. Although it may not be feasible to develop separate cycle infrastructure on this link given the bridge constraints, the link is considered important given its role in accommodating journey to work trips and may require other treatments to improve the safety of cyclists.

The Weipa area has an extensive local cycle network that is located in the open space and runs as a central spine through the residential areas. The proposed principal network will complement the local network and provide for trips between the communities. Infrastructure located in the open space will continue to have a local function with the principal cycle network having a longer distance function.

Napranum Aboriginal Shire Council

Napranum is home to 943 people and can anticipate moderate population growth at an average annual growth rate of 0.8% over the next 20 years. Napranum Aboriginal Shire Council is located on the western coast of Cape York, 10 km from Weipa.

Napranum has a high potential for cycling with 47% of household's without a motor vehicle. Supporting cycling as part of everyday travel can make an important contribution to the overall accessibility of the community.

The key priority for the principal cycle network in Napranum is to provide connections to the airport, shop, and site of the new school (prep-year 3) in addition to connecting Napranum to Weipa.

An iconic recreation route along the esplanade is also included. The esplanade offers scenic values and Council has plans to upgrade the esplanade with a footpath, playground and BBQ facilities.



Figure 27. Mission River Bridge, Weipa.

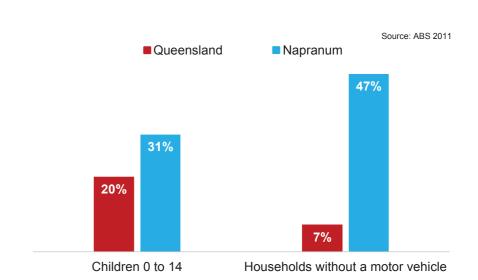
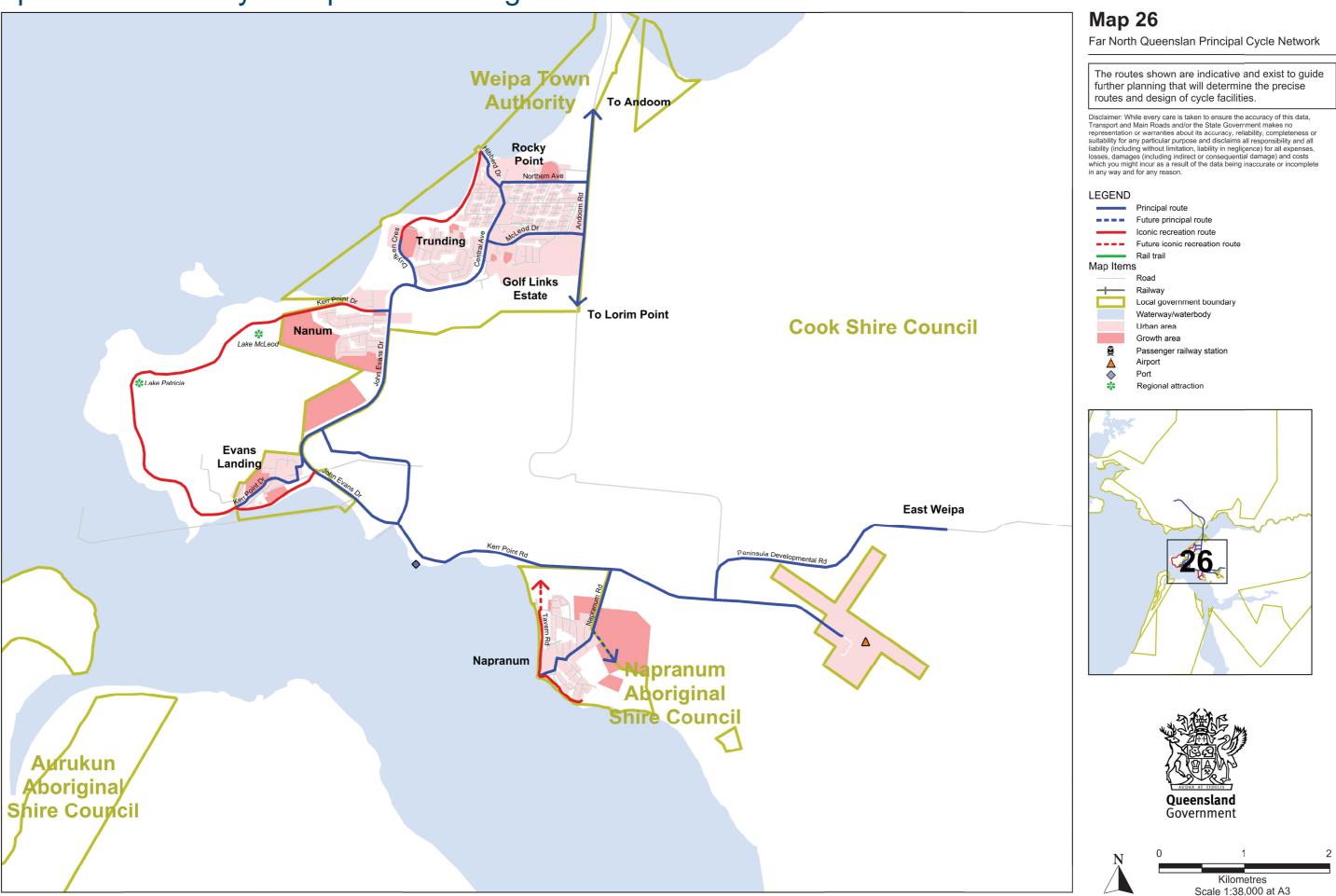


Figure 28. Demographic indicators reflecting high cycling opportunities.

Weipa Town Authority & Napranum Aboriginal Shire Council



6 Review of the plan

As shown in Figure 29, the FNQPCNP will be regularly reviewed. On an annual basis, Transport and Main Roads will send an update form to all local governments and Transport and Main Roads' regional offices seeking details on proposed planning led alterations to the principal cycle network and details on routes that have been delivered in the past year. Information received will be included as input in future reviews of the plan. Information requested will include:

- description of affected route(s)
- type of and description of change (alteration, removal, addition or delivery)
- description of basis for change (planning document or construction project)
- detailed justification for change against the planning principles outlined in Section 3
- description of delivered cycle infrastructure and adherence to applicable standards
- · maps and photos of change
- contact person for required additional information.

7 More resources

There are a number of resources and guides covering the development of cycle networks in Queensland, ranging from state wide target setting to technical specifications for infrastructure. Practitioners are encouraged to review the following:

- Queensland Cycle Strategy 2011-2021
- AUSTROADS Guides
- Traffic and Road Use Management Manual
- Transport and Main Roads' A Guide to Signing Cycle Networks, July 2009
- Manual of Uniform Traffic Control Devices
- Transport and Main Roads' Cycling Infrastructure Policy
- Transport and Main Roads' Technical Note 128, Selection and Design of Cycle Tracks, May 2015
- · Queensland Development Code.

Start Years 1-4 Year 5

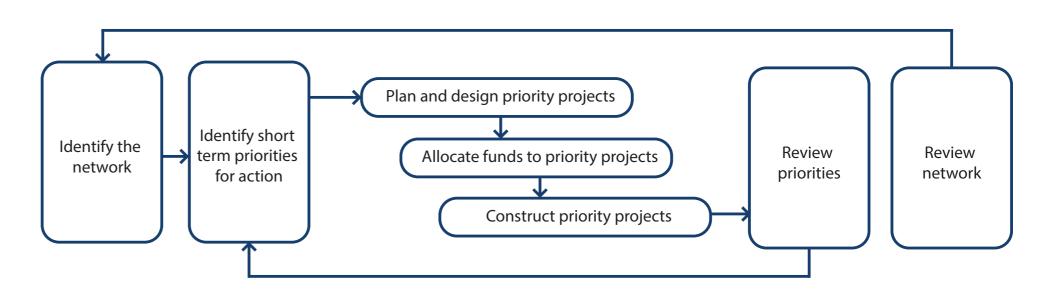


Figure 29. Indicative planning and prioritisation cycle.