

FITZROY

REGIONAL TRANSPORT PLAN

2019



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We acknowledge the Traditional Owners and Custodians of the land to which this plan applies and pay our respects to their Elders both past and present. Aboriginal and Torres Strait Islander readers are warned, images in this document may contain or represent deceased persons which may cause sadness or distress.

The Department of Transport and Main Roads wishes to acknowledge the valuable input and contribution from our local government partners to develop this plan.

Cover images: Fisherman's Landing, Port of Gladstone (background); Cattle road train (inset, left); Cycling near Central Queensland University (inset, centre); Airplane (inset, right).

Inside cover image: Pineapples on sale at Farmer's Market, Yeppoon

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Farm near Biloela

1. Introduction



1.1 A shared direction for transport

The *Fitzroy Regional Transport Plan* (the Plan) outlines a shared direction for shaping the region's transport system over the next 15 years.

The Plan was developed in consultation with local government and key stakeholders, with input from customers and industry. The Department of Transport and Main Roads will continue to work in partnership with all levels of government, the community and industry to implement the Plan and achieve shared goals for the region.

The Plan covers all modes of transport, with a focus on the networks and services in the region, and the inter-regional and international connections that are vital to the region's social and economic prosperity.

The Fitzroy region is home to over 225,600 people and includes the local government areas of Banana, Central Highlands, Gladstone, Livingstone, Rockhampton and Woorabinda.¹

1.2 What is a Regional Transport Plan

The purpose of the *Fitzroy Regional Transport Plan* is to set out regional transport priorities and actions for developing the transport system in a way that supports regional goals for the community, economy and environment.

The Plan has been developed in accordance with the *Transport Planning and Coordination Act 1994* and meets the department's legislative responsibility to develop integrated regional transport plans that complement land use planning, and support the goals and objectives of Regional Plans.

Regional Transport Plans are a fundamental component in the hierarchy of integrated system planning. They have an essential role in defining local responses to wider community goals, system objectives, problems and priorities, through the development of policy choices and transport system strategies at a regional level.

Regional Transport Plans have a clearly defined role in the Transport and Main Roads' planning process. They are not intended to specify new infrastructure solutions or funding commitments, as that is the role of the *Queensland Transport and Roads Investment Program* (QTRIP).

The approach to developing Regional Transport Plans is aligned with the *Australian Transport Assessment and Planning Guidelines* for best practice transport assessment and planning (Figure 1).

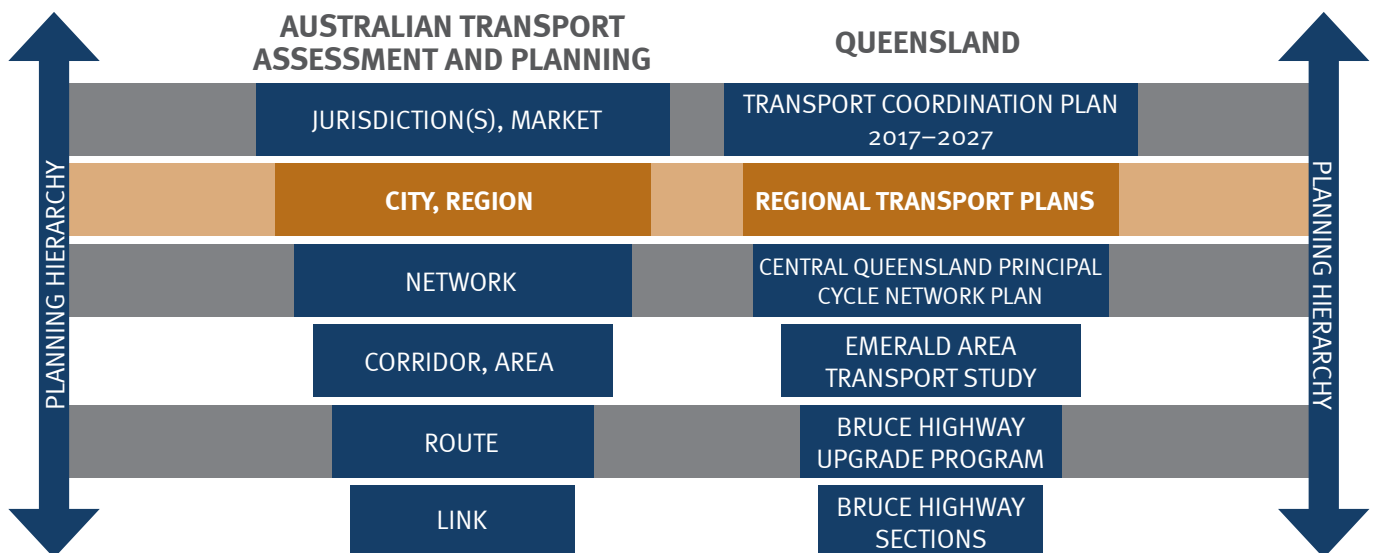


Figure 1: Examples of how Queensland responds to the Australian Transport Assessment and Planning hierarchy

¹ Queensland Government Statistician's Office. (2019). *Queensland Government Population Projections, 2019 edition (medium series)*.

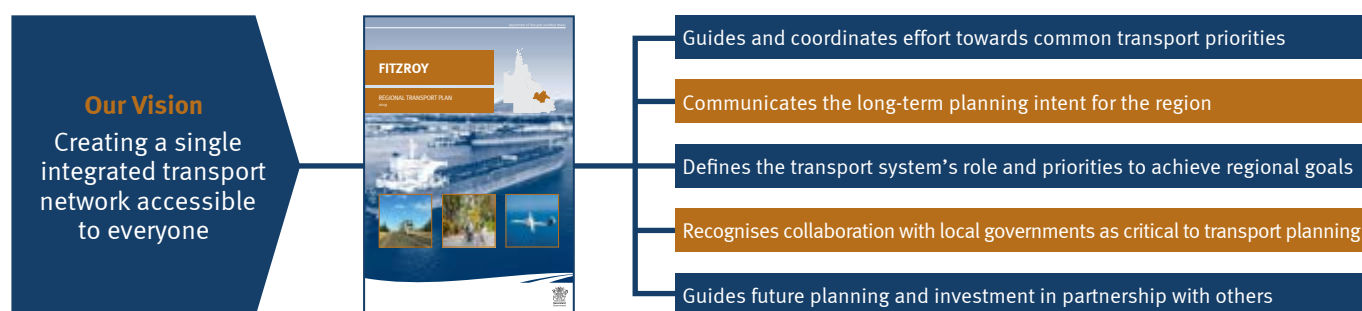
The regional policy choices and system strategies expressed in the Plan are used to:

- inform detailed planning or investigations at a network, area, corridor, route or link level
- guide development, assessment and selection of specific investment solutions.

The Plan supports the department's vision of 'creating a single integrated transport network accessible to everyone' through:

- guiding and coordinating effort towards common transport priorities
- communicating the long-term planning intent for the region
- defining the transport system's role and priorities to achieve regional goals
- recognising collaboration with local governments as critical to 'one-network' transport planning
- guiding future planning and investment in partnership with others.

The Plan will be used by Transport and Main Roads to inform investment decisions to develop the regional transport network.



1.3 Strategic alignment

This Regional Transport Plan has been developed in the context of relevant policies, strategies, plans and investment frameworks across all levels of government. These policy and planning documents are reflected in the objectives, challenges, opportunities and priorities identified in the Plan.

The Plan aligns with:

- *State Infrastructure Plan*
- *State Planning Policy*
- *Central Queensland Regional Plan 2013*
- local government land use and transport plans, and strategies
- economic development strategies
- the Australian Government's *Australian Infrastructure Plan* (prepared by Infrastructure Australia).

The Plan responds to customer needs, as well as the goals and directions of the community, industry and all levels of government.

Transport and Main Roads also produces statewide strategies and plans that guide coordinated outcomes for transport networks and services across Queensland. These high-level plans set the broader framework for taking action at the regional and local level.

Key planning documents include:

- *Transport Coordination Plan 2017–2027*
- 'Queensland Transport Strategy' (draft)
- *Transport and Main Roads Strategic Plan 2019–2023*
- *Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015–2021*
- *Queensland Cycling Strategy 2017–2027*
- *Bruce Highway Action Plan*
- *Queensland Freight Strategy*
- *Queensland Walking Strategy 2019–2029*
- *Queensland Tourism and Transport Strategy*

Priorities and actions identified in the Plan align with current statewide transport policies and objectives. The department regularly reviews and updates statewide strategies and plans and future updates to the Plan will reflect these outcomes.

The future of transport

Queensland Transport Strategy (draft)

The draft Queensland Transport Strategy (QTS) provides a 30-year vision for Queensland's transport system that is designed to respond to, and maximise the benefits from, current and emerging trends and technologies for Queensland households, businesses and the wider community.

The draft QTS identifies five high-level customer-focused outcomes for the future transport system:

1. Accessible, convenient transport
2. Safe journeys for all
3. Seamless, personalised journeys
4. Efficient, reliable and productive transport for people and goods
5. Sustainable, resilient and liveable communities.

The draft QTS sets a high-level policy platform for the Department of Transport and Main Roads (TMR) to realise its vision of creating a single integrated transport network accessible to everyone. It complements other strategic planning documents by setting longer-term outcomes and directions for TMR which are directly aligned to the short-term priorities in the *TMR Strategic Plan 2019–2023* and the medium-term objectives of the *Transport Coordination Plan 2017–2027*.

Regional Transport Plans are consistent with and support the draft QTS and will play a key role in achieving its outcomes by setting regional priorities and identifying and coordinating key actions to develop our future transport system.

The future of mobility

The popularity of new transport services, such as on-demand transport and car sharing, is increasing globally. Enabling the introduction of new mobility providers and technology and prioritising investment in shared transport services are two directions from the draft QTS in which Mobility-as-a-Service (MaaS) will play a key role.

Transport and Main Roads is exploring the concept of MaaS, which embodies a shift away from personally owned modes of transportation and towards aggregated mobility solutions that are consumed as a service.

MaaS is a combination of public and private transport services accessed digitally to provide personalised journey planning, booking and payment, and offers choice and dynamic travel options to influence behaviour and better optimise the network.

MaaS will not be a 'one-size fits all' approach and will look different across the state, based on community needs, availability of transport options and infrastructure.

In rural and regional Queensland, MaaS could be used to increase travel opportunities connecting rural communities to health, education and other social services to maintain an appropriate level of service and improve transport accessibility. Specific transport solutions for rural communities could involve long haul transport services, low technology options and the repurposing of under-utilised assets in the community.

Climate change and a low emissions future

In Queensland, the transport system has recently been impacted by extreme weather events such as cyclones, floods, severe and prolonged drought and fires - and climate change may exacerbate existing conditions, leading to even greater impact in future. Building a more resilient transport system is a priority in all Regional Transport Plans for Queensland.

A key part of taking action in response to climate change is the journey to zero net emissions. *The Pathways to a clean growth economy: Queensland Climate Transition Strategy* outlines how the Queensland Government proposes to prepare for the transition to a clean growth economy and a zero net emissions future.

The transport sector will play a significant role in this transition, including:

- enabling low carbon transport options using emerging alternative fuel technologies, to ensure Queensland is in the best position to capture the benefits and opportunities these vehicles will bring. The Queensland Government has developed *The Future is Electric: Queensland's Electric Vehicle Strategy* and is also exploring potential uses of hydrogen fuel cell vehicles.
- reflecting zero net emissions goals in infrastructure planning
- supporting low-carbon construction, infrastructure and transport systems
- improving passenger transport systems to be low emission, well-maintained, affordable, reliable, frequent and integrated.

Regional Transport Plans recognise opportunities for increased use of low carbon technology across the transport system in a way that responds to the local context and provides a pathway for an increased mode shift to sustainable transport options such as walking, cycling and passenger transport.

1.4 Alignment with the *State Infrastructure Plan*

The *State Infrastructure Plan* outlines the Queensland Government's strategic direction for the planning, investment and delivery of infrastructure throughout Queensland. This Regional Transport Plan applies the transport policy objectives of the *State Infrastructure Plan* at a regional level.

The Queensland Government's strategic direction for transport infrastructure is expressed by the *State Infrastructure Plan* responses (Table 1). Accordingly, many of the planning actions in this plan respond to these with a particular focus on improving supply chains, safer connections between regional centres, and better use of data and technology.

Table 1: *State Infrastructure Plan* responses (Part A, p 52)

| TRANSPORT | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Focus on maintenance and rehabilitation of existing infrastructure to reduce the long-term cost of repair and improve network resilience. | Unlock the potential of critical supply chains by identifying and improving the freight network. | Seek innovation and technology solutions to create a better performing and lower emissions transport system. | Digitally connected smart infrastructure to improve capacity, safety and security. | Connect regional communities with access to essential services and opportunities. |

1.5 Alignment with the *Transport Coordination Plan 2017–2027*

The *Transport Coordination Plan 2017–2027* (TCP) provides a strategic framework for the planning and management of transport resources in Queensland over a 10-year timeframe. The TCP was developed in accordance with the requirements of the *Transport Planning and Coordination Act 1994* and identifies the high level objectives for transport in Queensland, across five key areas:

- **Customer experience and affordability** – transport meets the needs of all Queenslanders, now and into the future.
- **Community connectivity** – transport connects communities to employment and vital services.
- **Efficiency and productivity** – transport facilitates the efficient movement of people and freight to grow Queensland's economy.
- **Safety and security** – transport is safe and secure for customers and goods.
- **Environment and sustainability** – transport contributes to a cleaner, healthier and more liveable environment and is resilient to Queensland's weather extremes.

The TCP provides a suite of transport key performance indicators (KPIs) to measure progress towards these objectives and also includes clear criteria for prioritising spending on transport that align with the *State Infrastructure Plan's* options assessment approach.

The TCP is the overarching medium-term strategic document that provides guidance and direction for more detailed transport strategies and plans produced by Transport and Main Roads, such as Regional Transport Plans and modal strategies. The TCP is consistent with the Queensland Government's overall strategic planning for Queensland, including the government's objectives for the community, and the *State Infrastructure Plan*.

The system-wide transport objectives articulated in the TCP have informed the Fitzroy region's priorities and corresponding transport objectives, actions and measures of success. The TCP's transport KPIs have provided a means to measure the impact the Regional Transport Plan has on the region's transport system – and what this will mean for customers, the community, the economy and the environment.

1.6 Alignment with the *State Planning Policy*

The *State Planning Policy 2017* outlines the Queensland Government's interests in land use planning and development for Queensland. It identifies and seeks to protect, through the planning framework, three state transport interests: state transport infrastructure; strategic airports and aviation facilities; and strategic ports.

The *State Planning Policy* identifies three strategic airports within the region – the Rockhampton, Emerald and Gladstone Airports and two strategic ports – Port of Gladstone and Port Alma.

1.7 Alignment with regional planning

The Queensland Government produces statutory regional plans throughout the state to provide strategic direction and policies for delivering regional outcomes which align with the state's interests in land use planning and development. Regional planning allows government, community and industry to maximise opportunities arising from population change and economic growth, and for all levels of government and the private sector to inform the forward planning, prioritisation and future delivery of infrastructure and services.

Central Queensland Regional Plan

The *Central Queensland Regional Plan* (the regional plan) was released in 2013 and is a statutory document supporting the delivery of regional outcomes. Covering the same local government areas as the *Fitzroy Regional Transport Plan*, the regional plan has identified two high level regional outcomes:

- Agriculture and resources industries within the Central Queensland region continue to grow with certainty and investor confidence.
- The growth potential of towns within the Central Queensland region is enabled through the establishment of Priority Living Areas. Compatible resource activities within these areas which are in the communities' interests can be supported by local governments.

Since development of the regional plan in 2013, there have been changes to mineral commodity values and the mining investment cycle. This has resulted in a shift in population trends and settlement patterns within the region, including an overall slowing in population growth.

Transport and Main Roads has used updated population forecasts to inform its transport planning activities. Although the population projections outlined in the regional plan are no longer current, the broad goals and intent are still relevant, and have informed development of the *Fitzroy Regional Transport Plan*.

The regional plan takes precedence over all local government planning instruments and provides the context for local planning. It recognises the need for an integrated transport network throughout the region to enable communities to become better connected and more accessible. The priority outcomes for the transport network include:

- prioritising transport programs to improve freight networks, including those affected by growing and changing demands related to surrounding coal basins
- improving the reliability and condition of transport networks affected by population and resource sector growth and the networks' resilience during natural disasters
- better modelling and the identification of emerging transport issues
- achieving community benefits through improving accessibility to destinations and improved safety and amenity.

Regional planning allows government, industry and the community to take advantage of opportunities arising from population change and economic growth, and for all levels of government and/or the private sector to inform the forward planning, prioritisation and future delivery of infrastructure and services.



Reconstruction works on the Dawson Highway, Collards Creek

1.8 Achievements to date

Transport and Main Roads has reflected on the objectives outlined in the *Central Queensland Regional Plan 2013*, along with other strategic direction setting documents. The following transport network improvements have been delivered in the region to support the regional plan's priority outcomes.

Safety initiatives

Safety initiatives across the region that have been recently completed or are underway include intersection upgrades, road widening, overtaking lanes, and more rest and parking areas for heavy vehicles. Wide centreline treatments are a key initiative that are progressively being delivered in the region and across the state, reducing the likelihood of cross-centreline crashes.

A range of safety upgrades are being delivered or have recently been completed on the Bruce Highway including the following projects:

- intersection upgrades and the addition of overtaking lanes at various locations south of Bororen (part of the Bruce Highway Safety Package)
- construction of the Daisy Dell southbound overtaking lanes (funded by the Australian Government) north of Bororen
- safety works between Bajool and Gavial Creek, and Bororen and Rodds Bay Road (jointly funded by the Australian Government and Queensland Government).

Various sections of the Burnett Highway between Monto and Biloela have been widened and sealed to enhance road safety.

A range of safety upgrades have been planned for or commenced on Gladstone-Benaraby Road. The Queensland Government has committed \$20.4 million to delivering these upgrades, which include 14 kilometres of wide centreline treatment, and visibility, intersection, access and pavement upgrades. The Gladstone-Benaraby Road project is being delivered through the Queensland Government funded High Risk Roads initiative.

Network resilience and capacity

A program to replace five aging timber bridges on the Dawson Highway between Gladstone and Biloela has been completed, with new bridges opened in April 2018. This program of bridge replacements has improved safety and flood immunity on the Dawson Highway, as the old timber bridges were narrower and subject to regular closure due to flooding. The new bridges also enhance freight efficiency on the Dawson Highway through increased weight-carrying capacity.

Similarly, replacement of the old timber bridge at Poor Man's Gully on the Burnett Highway with a wide, modern, pre-stressed concrete bridge has improved safety and enhanced freight efficiency by enabling higher-mass vehicle loads.

In December 2018, on-site work commenced to duplicate the Bruce Highway north of Rockhampton at Parkhurst to address the growth and development underway in this corridor.

Other upgrades completed in 2018-19 include realignment of the Fitzroy Developmental Road and replacement of Palm Creek bridge (north of Taroom) and construction of a new boat ramp and floating walkway at Robert Clark Drive in Rockhampton.

Improving heavy vehicle access and efficiency

Road infrastructure upgrades targeted at improving heavy vehicle access and freight efficiency are delivered across the region each year. Recent examples include intersection improvements to allow last mile travel for high productivity vehicles (HPV) through Rockhampton to access the two abattoirs and address industry concerns about safety and time losses due to cross-loading of cattle. The construction of overtaking lanes, road widening and break down facilities on the Gregory Highway, between Clermont and Emerald, has enabled this link to accommodate HPVs (in a project jointly funded by the Queensland and Australian governments).

The contract to design and construct upgrades to the Capricorn Highway (between Rockhampton and Gracemere) was awarded in the 2018–2019 financial year. The upgrades will address traffic growth on this corridor, improving access and freight efficiency to the Bowen Basin and Western Queensland. Construction is expected to commence in 2019 and be completed by late 2020.

Active transport

The *Central Queensland Principal Cycle Network Plan* (CQPCNP) and associated priority route maps were developed collaboratively by local governments and Transport and Main Roads. The CQPCNP identifies high-order cycle routes that make up the regional cycle network and is used to guide coordinated delivery of a connected cycle network in the region. Councils are eligible to apply for 50/50 funding of cycling infrastructure planning and delivery on principal cycle routes through the Cycle Network Local Government Grants program. On-road cycling infrastructure works on Norman Road and North Street have addressed missing links in Rockhampton's cycling network. Works have also been completed in Gladstone on the priority cycle network.

1.9 Developing Regional Transport Plans

Planning principles

All levels of government routinely face increasing pressure to fund more public services and infrastructure in order to meet community expectations. Funding is limited, so competing priorities must be continually balanced.

Regional Transport Plans will help to achieve this in several ways:

- by establishing the region-centric planning that leads to good investment decisions—a focus at this level helps to ensure that funds are prioritised to meet regional needs and customer expectations
- by promoting consideration of non-infrastructure solutions for regional priorities, which are often more cost effective than building new infrastructure
- by helping to identify and align cross-agency priorities and actions to promote efficient and coordinated planning and investment.

In the context of constrained funding, Regional Transport Plans are being developed with the view that solutions to transport challenges and customer needs and requirements are not always about building new or expanding existing infrastructure, but include identifying new and innovative ways to do more with less. The best outcome may not be a new road or other type of transport facility. Instead, it may be modification of an existing asset, for example, reconfiguring a road to accommodate bicycle or bus lanes.

Consideration of lower cost and non-infrastructure solutions within planning and investment decision-making processes ensures we are getting the most from our existing assets and using infrastructure smarter and more efficiently than before. Identifying shared goals and partnership opportunities across government and with the private sector positions the region to leverage collective expertise and resources to achieve more with available funding. The department's approach to identifying, prioritising and investing in transport system solutions aligns to the *State Infrastructure Plan's* options assessment approach as shown in Figure 2.



Emu Park bus stop, part of the Rockhampton urban bus network

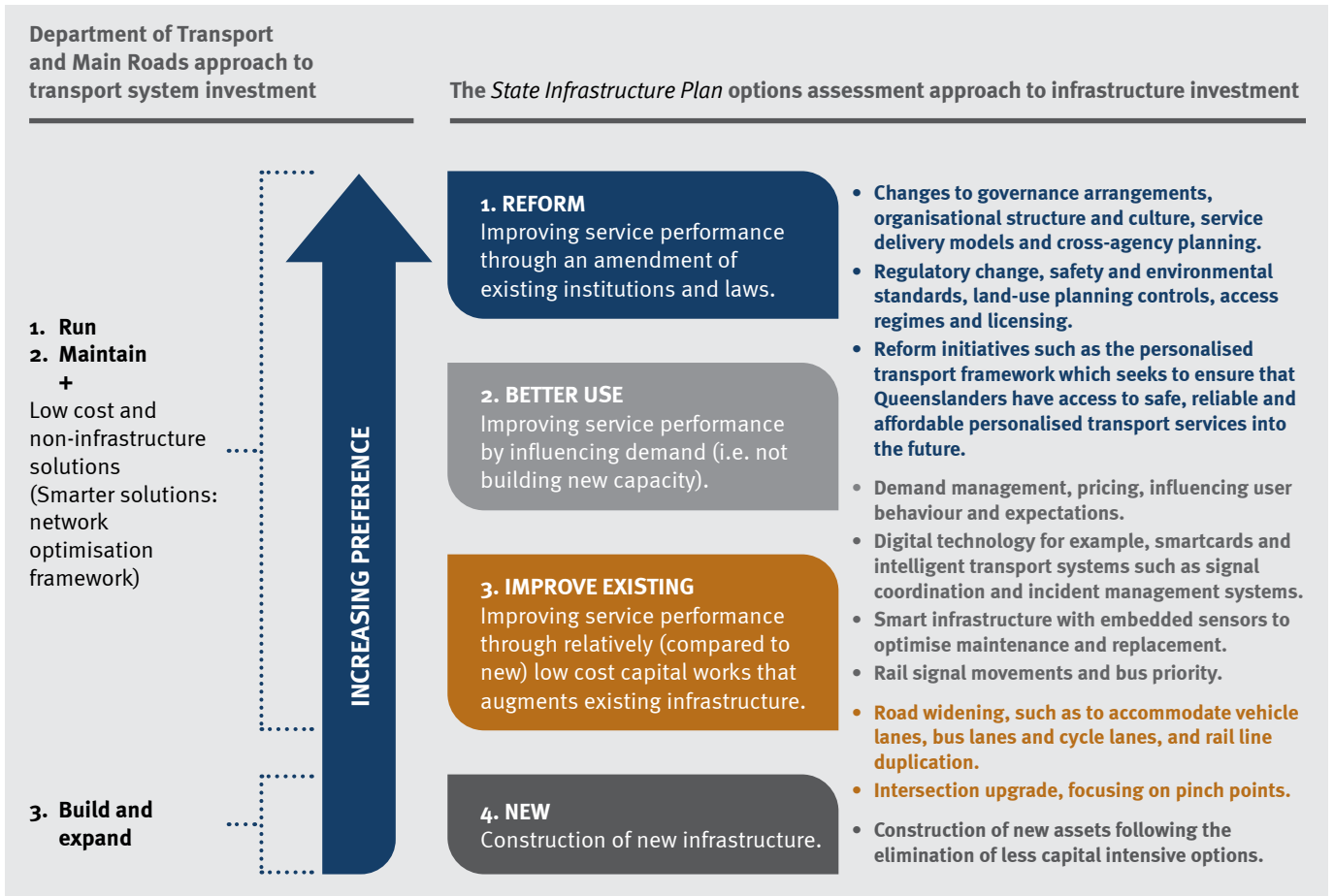
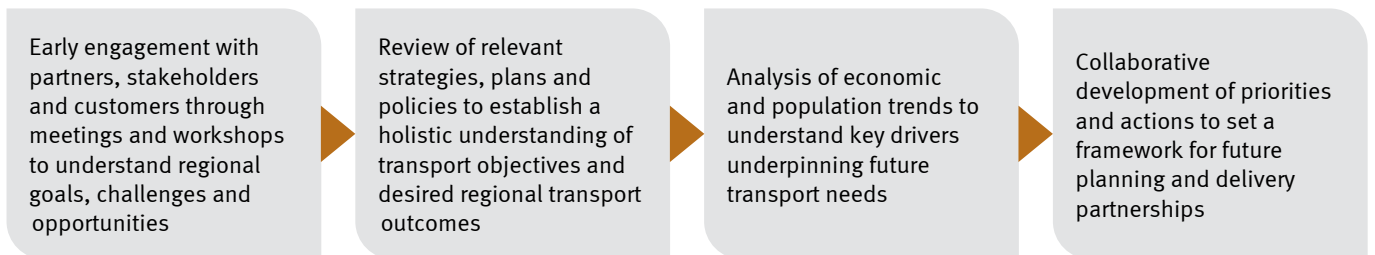


Figure 2: Alignment between the departmental and government approaches to infrastructure investment

Process

The Plan was developed with a ‘customer-first’ and ‘one network’ approach. Early engagement with customers, stakeholders and partners was vital to identify and understand the region’s issues, challenges, opportunities, goals and priorities for taking action. Key stages in the development process are set out below.



Customer-first approach

A 'customer-first' approach is about being conscious of how customers experience the transport system, and being willing to change the way we do things to improve that experience. It also means viewing the transport system as customers do: as 'one network', with little perceivable difference between the various parts provided or managed by the different levels of government. Transport and Main Roads' customer-centric approach is central to the way it does business. The approach is about shaping deliverables and services with customers in mind, co-designing solutions that embrace the future, and communicating effectively and meaningfully.

Engaging with our customers

To achieve a 'one network' approach, the department involved customer representatives early in the creation of all Regional Transport Plans, and engaged and developed content in partnership with local government and other government agencies. To inform the development of the Plan, representatives were selected from different locations in the region, covering a range of sectors and interests, including agriculture, mining, health, tourism and small business. To gain customer input, the department hosted workshops, and facilitated a number of one-on-one interviews. Some of the key issues that emerged from this engagement included:

- Insufficient reliable, all-weather access routes and services to and within the region.
- Poor intra and inter-regional connectivity (including between regional cities) impacts on accessibility and can cause isolation of communities.
- Variability in road and rail network conditions limiting the efficiency of the transport network.
- Changing climate and seasonal weather patterns intermittently restrict the reliability of the existing transport network.
- The dispersed land use pattern of the region makes it challenging to maintain an efficient transport system, and minimise environmental impacts.

This input from customers has informed the priorities and actions for action identified in this Plan.

'One network'

Regional Transport Plans are developed on the basis that the transport system operates as 'one network'. Working and collaborating with all relevant transport system stakeholders to develop this Plan ensures planning priorities for the regional transport system are considered as a whole. Transport and Main Roads will continue to partner with local governments and transport operators to continuously improve the transport system and the experiences of our customers.

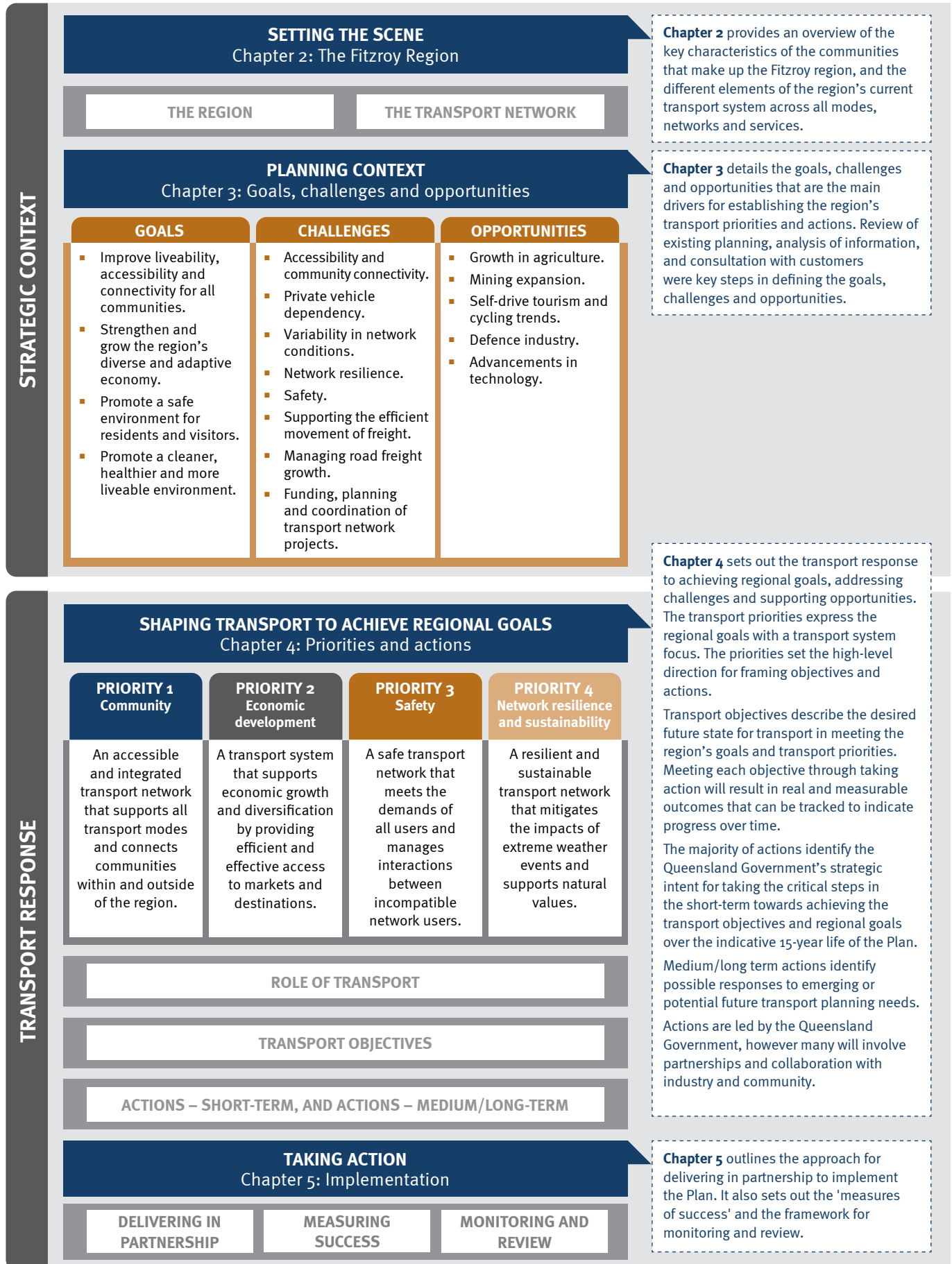
Structure

The document comprises five chapters covering an introduction, setting the scene, planning context, transport response and implementation. The sequence and content of chapters reflects the development and implementation stages for the Plan.

- **Chapter 1** introduces the purpose, scope and strategic alignment of the Regional Transport Plan.
- **Chapter 2** provides an overview of the region's community, economy and transport system.
- **Chapter 3** describes the region's goals, challenges and opportunities and their relationship to transport.
- **Chapter 4** sets out the priorities, objectives and actions for shaping the transport system over the next 15 years.
- **Chapter 5** outlines the Plan's implementation and review process.

Table 2 outlines the key components of the Regional Transport Plan.

Table 2: Structure of the Fitzroy Regional Transport Plan



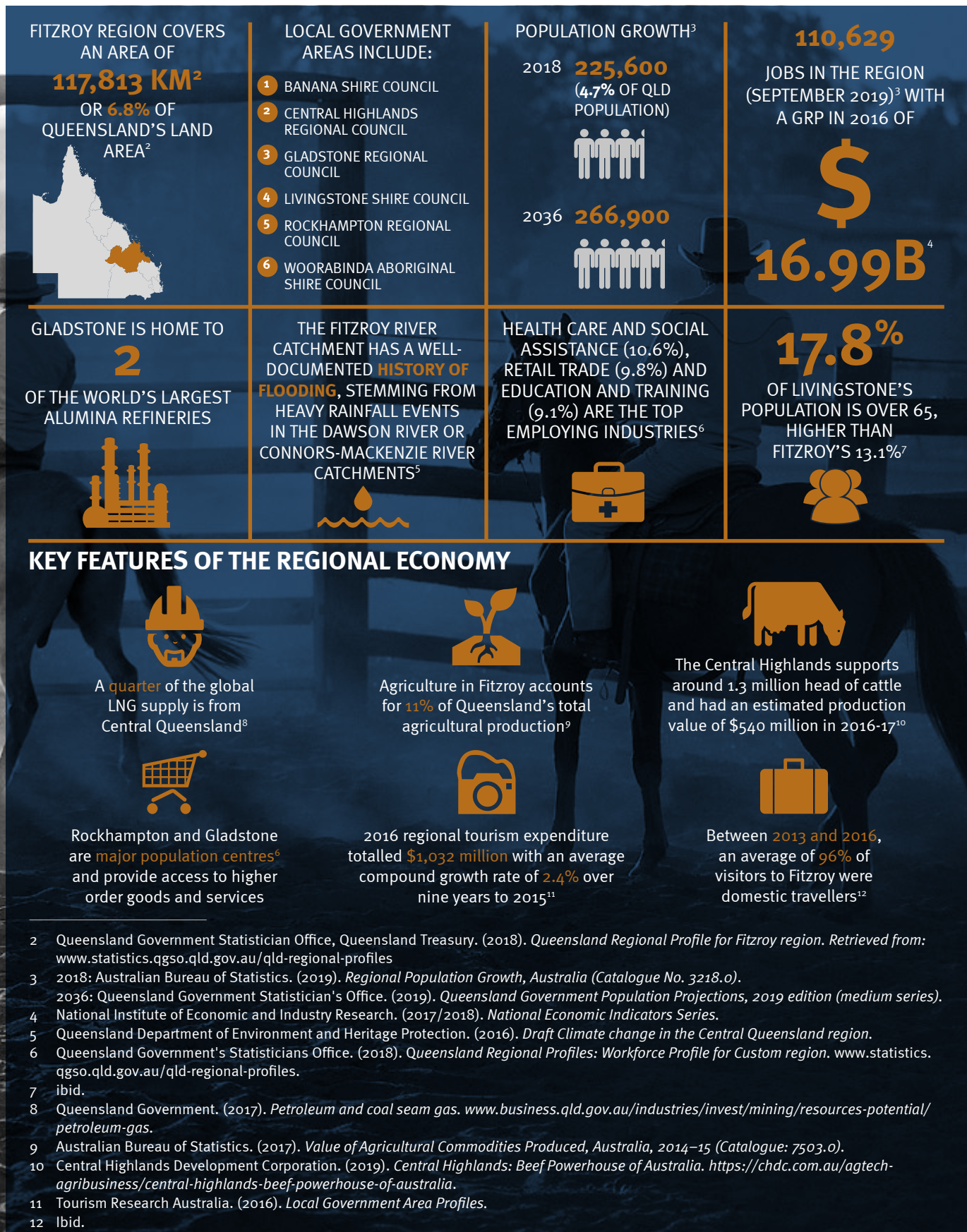


Walking on Wreck Beach, Great Keppel Island

2. The Fitzroy Region



2.1 Region overview



Local government areas

| Local government areas* | 2018 estimated resident population | 2036 projected population |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>BANANA SHIRE COUNCIL</p>  <p>Employment and economy Major employing industries are: mining (20.5 per cent); agriculture, forestry and fishing (17.2 per cent); and manufacturing (6.7 per cent).</p> <p>Access The region is serviced by three major highways: the Leichardt Highway, connecting from the Capricorn</p> | <p>2018 Pop'n 14,300</p> | <p>2036 Pop'n 13,400</p> <p>Highway in the north through to Goondiwindi in the south; the Dawson Highway, connecting from Gladstone to Springsure to the west; and the Burnett Highway, which starts just outside Rockhampton and connects through to Nanango in North Burnett. Direct flights from Brisbane arrive at Thangool Aerodrome. Banana Shire also includes the Moura Coal Rail system, a predominantly coal network of rail corridors connecting to the Port of Gladstone.</p> |
| <p>CENTRAL HIGHLANDS REGIONAL COUNCIL</p>  <p>Employment and economy Major employing industries are: mining (34.5 per cent); agriculture, forestry and fishing (10.3 per cent); and retail trade (6.9 per cent).</p> <p>Access Central Highlands local government area includes: a major north–south connection along the Gregory Highway, connecting Emerald to Clermont in the north</p> | <p>2018 Pop'n 28,600</p> | <p>2036 Pop'n 29,800</p> <p>and Springsure in the south where it connects to the Dawson Highway; and a major east–west link with the Capricorn Highway, connecting to Longreach in the west and Rockhampton in the east. The Central Highlands local government area is on the Central West Rail line, which utilises the Blackwater Coal Rail system between Rocklands and Nogoa and supports both passenger and freight services.</p> |

* Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016–Working Population Profile–W09 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.

Local government areas*

2018
estimated resident population2036
projected
population

GLADSTONE REGIONAL COUNCIL

2018 Pop'n
63,0002036 Pop'n
72,900**Employment and economy**

Major employing industries are: manufacturing (14 per cent); construction (10 per cent); and retail trade (9.7 per cent).

Access

Gladstone Regional Council area is serviced by several highways and major arterials. The Bruce Highway provides a major north–south connection to southern centres such as Brisbane and the northern centres of Mackay, Townsville and Cairns. The Dawson Highway provides a major east–west route, connecting with the Bruce and other highways and providing access to central and western sections of the region. The highway network is supported by major arterial roads, including Gladstone–

Mount Larcom Road and Gladstone–Benaraby Road, that connect to the Bruce Highway.

Gladstone is home to Queensland's largest multi-commodity port (with eight main wharf centres) and is connected to the resource sector through private rail lines. The North Coast line provides freight and passenger rail services, connecting to centres along the east coast of Queensland between Brisbane and Cairns. Gladstone Airport offers daily passenger services as well as freight capabilities.

Gladstone provides marine transport services to islands within the Great Barrier Reef, including North West Island and Heron Island, supporting the region's tourism market.

LIVINGSTONE SHIRE COUNCIL

2018 Pop'n
37,6002036 Pop'n
51,400**Employment and economy**

Major employing industries are: education and training (12.3 per cent); retail trade (10.7 per cent); and accommodation and food service (10.6 per cent).

Access

The Bruce Highway traverses the shire, although access to the population centres of Yeppoon and Emu Park are through Rockhampton via Rockhampton–Yeppoon Road and Rockhampton–Emu Park Road respectively. Yeppoon provides marine transport services to the Keppel Island Groups, supporting the region's tourism market.

* Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016–Working Population Profile–W09 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.

Local government areas*

2018
estimated resident
population

2036
projected
population

ROCKHAMPTON REGIONAL COUNCIL

2018 Pop'n
81,100

2036 Pop'n
98,600



Employment and economy

Major employing industries are: health care and social assistance (16.6 per cent); retail trade (11.6 per cent); and education and training (10.7 per cent). Rockhampton is also known as the beef capital of Australia, demonstrating the importance of the beef industry to the region.

Access

Rockhampton Regional Council area is serviced by several major highways and arterial roads. The Capricorn Highway connects Rockhampton to western centres such as Emerald and Barcardine. The Burnett Highway to the south-west links

to Mount Morgan and Biloela. The Bruce Highway connects Rockhampton to major centres on the eastern seaboard, including Brisbane to the south and Townsville and Cairns to the north. Rockhampton supports an airport with regular daily passenger services and freight capabilities. The city is also the junction of two rail lines: the North Coast line and the Blackwater Coal Rail system, both supporting passenger and freight services.

The Port of Rockhampton (Port Alma) provides access to national and foreign markets.

WOORABINDA ABORIGINAL SHIRE COUNCIL

2018 Pop'n
1000

2036 Pop'n
900



Employment and economy

Major employing industries are: health care and social assistance (27.3 per cent); public administration and safety (23.9 per cent); and education and training (17.4 per cent).

Access

Access to the Woorabinda township is provided via the Fitzroy Developmental Road, which connects to the

Capricorn Highway in the north and the Dawson Highway in the south. An east-west connection is provided to the shire via Baralaba-Woorabinda Road. Woorabinda has no dedicated public transport service. The shire is supported by an airstrip however no regular passenger flights service the airport.

FITZROY REGION TOTAL

225,600

266,900

* Population statistics for 2018 are based on Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia (Catalogue No. 3218.0, various editions)*. Population statistics for 2036 are based on Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*. Employment statistics are based on Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016-Working Population Profile-Wo9 (place of work)*. Employment industries are categorised as per the employment divisions of Australian Bureau of Statistics. (2013). *Australian and New Zealand Standard Industrial Classification 2006 (Revision 2.0) (Catalogue No. 1292.0)*.

2.2 Transport network

The region’s transport network includes road, rail, marine, air, active transport and public transport infrastructure and services. An overview of the region’s transport network is shown in Figure 3.

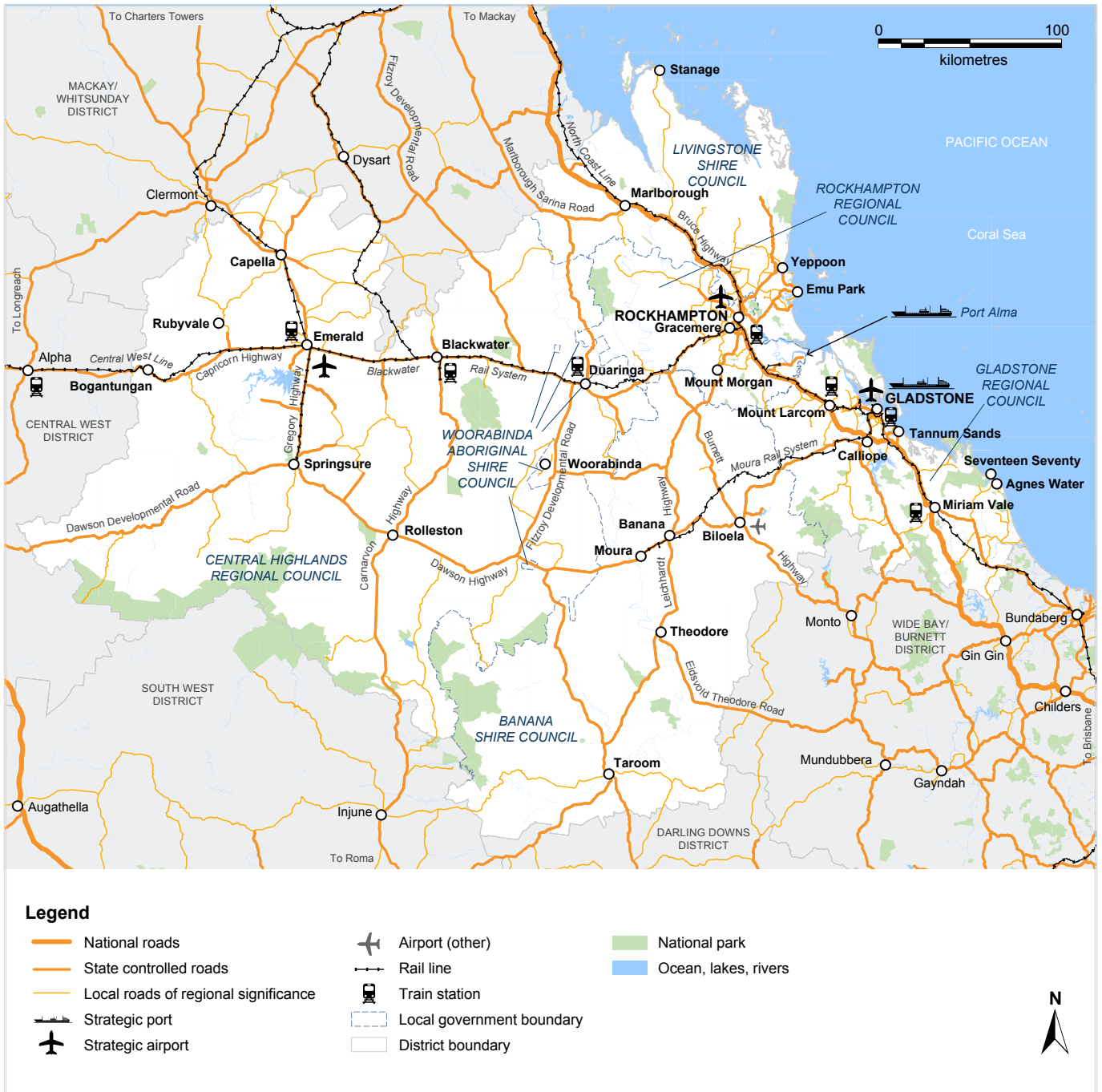


Figure 3: Overview of Fitzroy region transport network

366 KM
NATIONAL LAND
TRANSPORT NETWORK

3,163 KM
STATE-CONTROLLED ROADS

14,647 KM
LOCAL GOVERNMENT
MANAGED ROADS¹³



PORT ALMA HAD A TOTAL
THROUGHPUT OF

233,285 TONNES

IN THE 2016–2017 FINANCIAL
YEAR AND SPECIALISES IN
EXPORT/IMPORT OF DANGEROUS
GOODS¹⁴



COMMERCIAL OPERATORS
MANAGE A NUMBER OF

RAIL LINES

CONNECTING COAL MINES
TO THE PORT OF GLADSTONE



THE NORTH COAST RAIL LINE
CARRIED

6.8 BILLION

GROSS TONNE KILOMETRES
AND THE CENTRAL WEST LINE

85 MILLION

IN THE 2015–2016
FINANCIAL YEAR¹⁵



565,531

PASSENGERS PASSED THROUGH
ROCKHAMPTON AIRPORT AND

265,613

THROUGH GLADSTONE AIRPORT IN
THE 2017–2018 FINANCIAL YEAR¹⁶



PORT OF GLADSTONE IS THE
LARGEST MULTI-COMMODITY PORT
IN QUEENSLAND WITH A TOTAL
THROUGHPUT OF

119.4 MILLION

TONNES IN THE 2017–2018
FINANCIAL YEAR¹⁷



CAR

IS THE DOMINANT
MODE OF TRANSPORT
IN THE REGION



THE PORT OF GLADSTONE
HANDLES

30 DIFFERENT
COMMODITIES, HAS

8 MAIN WHARF
CENTRES COMPRISING
OF

20 WHARVES¹⁷

82
FATALITIES AND

1463
CRASHES REQUIRING
HOSPITALISATION
OCCURRED BETWEEN
2013 TO 2017¹⁸



5.1%

OF HOUSEHOLD DO NOT
HAVE A CAR COMPARED
TO QUEENSLAND'S

6%¹⁹



13 Transport and Main Roads. (2017). *QTRIP 2018-17 to 2020-21*.

14 Gladstone Ports Corporation. (2017). www.gpcl.com.au/operations/port-alma-shipping-terminal.

15 Queensland Rail. (2016). *Queensland Rail Annual Report 2015-16*.

16 Department of Infrastructure and Regional Development. (2019). *Airport traffic data statistical report*. Retrieved from https://bitre.gov.au/publications/ongoing/airport_traffic_data.aspx.

17 Gladstone Ports Corporation. (2018). *Gladstone Ports Corporation Annual Report 2017/18*.

18 Queensland Government (2019). *Road Crash Locations*. www.data.qld.gov.au/dataset/crash-data-from-queensland-roads/resource/e88943c0-5968-4972-a15f-38e120d72eco.

19 Australian Bureau of Statistics. (2017). *Census of Population and Housing, 2016, General Community Profile- G30*.

Roads

The Fitzroy region's road network plays an essential role in connecting people and goods to where they need to go, both within and outside the region. It provides for a range of freight and passenger movements, including oversize overmass (OSOM), other heavy vehicle movements, commuter, coach and tourist trips, which support the regional economy and enhance liveability. The region's road network also forms a significant part of Queensland's stock route network, which is vital for moving stock on foot, using water facilities and accessing grazing pastures.

The Bruce Highway is the region's primary north–south inter-regional road route and is part of the National Land Transport and National Key Freight Route Networks. It connects the region's coastal centres with major centres along Queensland's coastline, including Brisbane, Townsville and Cairns. The Bruce Highway passes through Rockhampton, Marlborough, Calliope and Miriam Vale.

The State Controlled Road Network includes a range of highways and arterial roads supporting freight and passenger movements within and through the region. The Capricorn Highway is the region's primary east–west route and part of the National Key Freight Route. It connects with the Bruce Highway at Rockhampton and the Landsborough Highway in Barcaldine. The Dawson Highway is an alternate east–west route, with sections providing an important freight role as well as connecting communities to inland and major coastal centres and destinations. The Gregory, Carnarvon, Leichhardt and Burnett Highways provide north–south connections, linking with the Capricorn and Dawson highways and supporting access to neighbouring regions.

The region's highway network is supported by a network of arterial roads, providing connectivity within and between towns. Local roads support access within urban areas and to tourism attractions and farm gates.

A high proportion of heavy vehicle movements are evident on state-controlled roads, contributing on average a quarter of the annual average daily traffic in the region. This presents challenges for road safety, pavement condition and amenity with trucks passing through towns.

The Roads and Transport Alliance and Regional Roads and Transport Groups

The Roads and Transport Alliance is a cooperative governance arrangement between the Department of Transport and Main Roads, the Local Government Association of Queensland (LGAQ) and local governments to invest in and regionally manage the Queensland transport network. Its objectives are to:

- maximise the economic, social and environmental benefits of joint investments
- achieve maximum efficiencies through collaboration and innovation in network planning, program development and delivery
- improve technical skills through training, technology and knowledge transfer
- optimise safety
- maximise investment on the Queensland transport network.

The Alliance includes Regional Roads and Transport Groups (RRTG) which support collaboration between Transport and Main Roads and local government. There are three RRTGs in the Fitzroy region, including Rockhampton, Gladstone and Bowen Basin (which includes Isaac Regional Council).



Road rehabilitation west of Calliope

Bus and coach

Urban public transport bus services are available in Rockhampton and Gladstone. The Rockhampton area supports 19 urban bus routes extending to the nearby towns of Yeppoon, Emu Park, Mount Morgan and Gracemere. Services generally operate every 30 minutes to one hour during the peak hours and every one to two hours in the off-peak period. Capricorn Sunbus and Young's Bus Service operate these services in addition to school services in Rockhampton, Gracemere and Yeppoon and bus charters.

In Gladstone, Buslink operate eight routes on weekdays and no weekend services. The frequency of services is typically low, varying between five and 12 buses a day per route. Buslink also operates Gladstone's school services.

Several subsidised long-distance coach lines operate in the region, operated by Mackay Transit and Bus

Queensland. Mackay Transit provides daily return services between Emerald and Mackay, while Bus Queensland provides three return services per week between Toowoomba and Rockhampton. Greyhound Australia offers two return services per week between Rockhampton and Longreach and five return services per week between Emerald and Rockhampton. Greyhound Australia and Premier Motor Services both provide services between Brisbane and Cairns. Several bus and coach companies provide contracted/charter long-distance coach services between Mackay, Emerald, Gladstone and Rockhampton and to mines and infrastructure projects in the Bowen Basin.

Coach services provide important inter-regional connections for passengers and in some cases also carry freight. In 2016–2017, contracted and subsidised bus and coach services transported approximately \$30,000 in freight throughout the region.²⁰



Urban bus service arriving at Yeppoon

²⁰ Information is collected on a monthly basis as per the terms and conditions of Service Contracts and executed between the Department of Transport and Main Roads and all contracted operators.



Tilt Train at Gladstone

Rail

The region's rail network includes the North Coast and Central West lines, and Blackwater and Moura Coal Rail systems, facilitating both freight and passenger movements.

The North Coast line links Brisbane to Cairns, running through the centre of Rockhampton. In the 2015–2016 financial year, the North Coast line carried 6.8 billion gross tonne kilometres (GTKs) of containerised and general freight, industrial products, sugar and molasses.²¹

The Central West line adjoins the Aurizon Blackwater Coal Rail system at Emerald and runs from Emerald to Winton via Longreach. In the 2015–2016 financial year, the Central West line carried 85 million GTKs of livestock and gypsum.²¹ Aurizon is currently contracted to run 184 services per year on the Central West system.

A substantial component of the rail network in the Fitzroy region is currently owned and operated by Aurizon as part of the Blackwater and Moura Coal Rail systems. These systems primarily service coal mines, with connections to power stations and the Port of Gladstone.

Passenger services include:

- The Queensland Rail Spirit of the Outback rail service, a twice weekly return service on the Central West line and Aurizon network between Rockhampton and Longreach, stopping within the region at Daringa, Bluff, Blackwater, Emerald and Anakie. The service originates in Brisbane on the North Coast line.
- The Tilt Train rail service on the North Coast line providing a seven-hour 30-minute journey between Brisbane and Rockhampton with seven return services per week and stopping within the region at Gladstone, Mount Larcom and Miriam Vale.
- The Spirit of Queensland is Queensland's longest rail service supporting five return services per week from Brisbane to Cairns. The service stops within the region at Miriam Vale, Gladstone, Mount Larcom and Rockhampton.

Air

Scheduled passenger services are available at Rockhampton, Gladstone, Emerald and Thangool airports and air services are supported by airstrips across the region.

Rockhampton Airport is the region's largest airport with capabilities to support both domestic and international aircraft, including B747 to B776 and A340.²² In the 2017–2018 financial year, 563,531 passengers travelled through Rockhampton Airport. Owned and operated by Rockhampton Regional Council, Rockhampton Airport is also a base for the Royal Flying Doctor Service.²³

Gladstone Airport is operated by Gladstone Airport Corporation under direct control of the Gladstone Regional Council.²⁴ In the 2018–2019 financial year, 246,640 passengers passed through Gladstone Airport.²³

Emerald Airport is owned and operated by Central Highlands Regional Council and offers flights to Brisbane and other destinations outside the region. In the 2018–2019 financial year, 196,373 passengers passed through Emerald Airport.²³

Thangool Airport is owned and operated by Banana Shire Council and offers return flights to Brisbane several days a week. Thangool Airport had a total of 7464 passengers in 2018²³. In the same year, animal-proof fencing, runway lighting updates, installation of a generator, and the build-up and overlay of emergency services holding areas had commenced as per the Thangool Safety and Security Upgrade²⁵. The project was funded by the 'Building our Regions' program and Banana Shire Council (50:50) and aims to:

- reduce the risk of aircraft damage from wildlife accidents
- ensure lighting is clear and compliant with legislation
- maintain refuelling access during power outages in emergency situations.

Air freight services are available at both Rockhampton Airport and Gladstone Airport.

21 Queensland Rail. (2016). *Queensland Rail Annual Report 2015–2016*.

22 Rockhampton Regional Council. (2017). www.rockhamptonregion.qld.gov.au/CouncilServices/Rockhampton-Airport.

23 Department of Infrastructure, Transport, Cities and Regional Development. (2019). *Airport traffic data statistical report*. Retrieved from https://www.bitre.gov.au/publications/ongoing/airport_traffic_data.aspx.

24 Gladstone Airport Corporation. (2017). *About us*. www.gladstoneairport.com.au/aboutus.

25 Department of State Development, Manufacturing, Infrastructure and Planning. (2019). *Thangool Aerodrome Safety and Security Upgrade*. Retrieved from <https://www.dsdmip.qld.gov.au/index.php/component/mtree/royalties-resource-producing-communities/1421-thangool-aerodrome-safety-and-security-upgrade>.

Marine

The Port of Gladstone and Port Alma Shipping Terminal are located within the Fitzroy region and are both managed by Gladstone Ports Corporation. The Port of Gladstone is Queensland's largest multi-commodity port, handling over 30 different products including coal, bauxite, alumina, aluminium, cement and Liquefied Natural Gas (LNG). It is one of only four Priority Ports identified for major growth. The port is located on Gladstone Harbour and has eight main wharf centres, comprising 20 wharves. In the 2017–2018 financial year, the port had a total throughput of 119.4 million tonnes, with 1799 vessels visiting the port. Coal, LNG and aluminium and associated products accounted for the majority of throughput, with the remainder comprising a variety of other products including cement, petroleum and grain.²⁶

The Port Alma Shipping Terminal is a smaller port terminal within the Port of Rockhampton. It is located 62 kilometres east of Rockhampton on the southern tip of the Fitzroy River delta. The Port Alma Shipping Terminal has three wharf facilities and limited supporting infrastructure. Berths 1 and 2 are suitable for general cargo operations while Berth 3 is dedicated to tallow/fuel cargoes.²⁷ In the 2017–2018 financial year, the port handled 255,254 tonnes of cargo, with over 84 vessels passing through the port. Ammonium Nitrate and Petroleum products were the most significant products by volume, followed by tallow and salt. Other throughput included explosives, containers and general cargo.²⁸

Roslyn Bay, south of Yeppoon, is a regionally significant harbour. It includes considerable marine infrastructure and supports a range of commercial and recreational activities, including bareboat charters, cruises and ferry services to Great Keppel Island.

Recreational boating is an important aspect of the region's lifestyle. In June 2016, 47,842 recreational vessels were registered in the Gladstone region which equates to one vessel for every 11 people (compared with a statewide average of one in 18) and one out of every four people held a recreational maritime licence (compared to one in five statewide). Recreational boating is supported by a range of boating infrastructure across the region, such as floating walkways, pontoons and boat ramps. Facilities are provided across the region, including at Gladstone Marina, Callide Dam, Fairbairn Dam (Lake Maraboon) and the Fitzroy River.

Active Transport

Active transport refers to non-motorised travel such as walking and cycling. Active transport infrastructure is provided across the region in the form of footpaths, shared pedestrian and cycle paths and on and off road cycle lanes.

Rockhampton has the most extensive cycle network in the region, while the population centres of Gladstone, Emerald and Yeppoon have varying levels of network connectivity and cycle facilities. Aside from these centres, the cycle network is largely undeveloped. Ongoing development of the region's cycling network for recreational and commuter use is guided by the *Central Queensland Principal Cycle Network Plan*.

Census data (2016) shows that 4.2 per cent of the region's working population used active transport to travel to work on the day of the census. This was less than the proportion for the neighbouring Mackay, Isaac and Whitsunday region (5.3 per cent) but similar to the whole of Queensland (4.3 per cent).²⁹

Mobility and community transport services

Convenient and affordable transport options for access to employment, education, social and community services are essential for supporting liveable and prosperous communities.

Travel subsidies and special transport services are available to people with a transport disadvantage, including the elderly, sick and people with a disability who require travel assistance to access essential health and community services. The range of transport services available in the region include subsidised taxi travel, community bus services, and patient transport services delivered by the Queensland Ambulance Service.

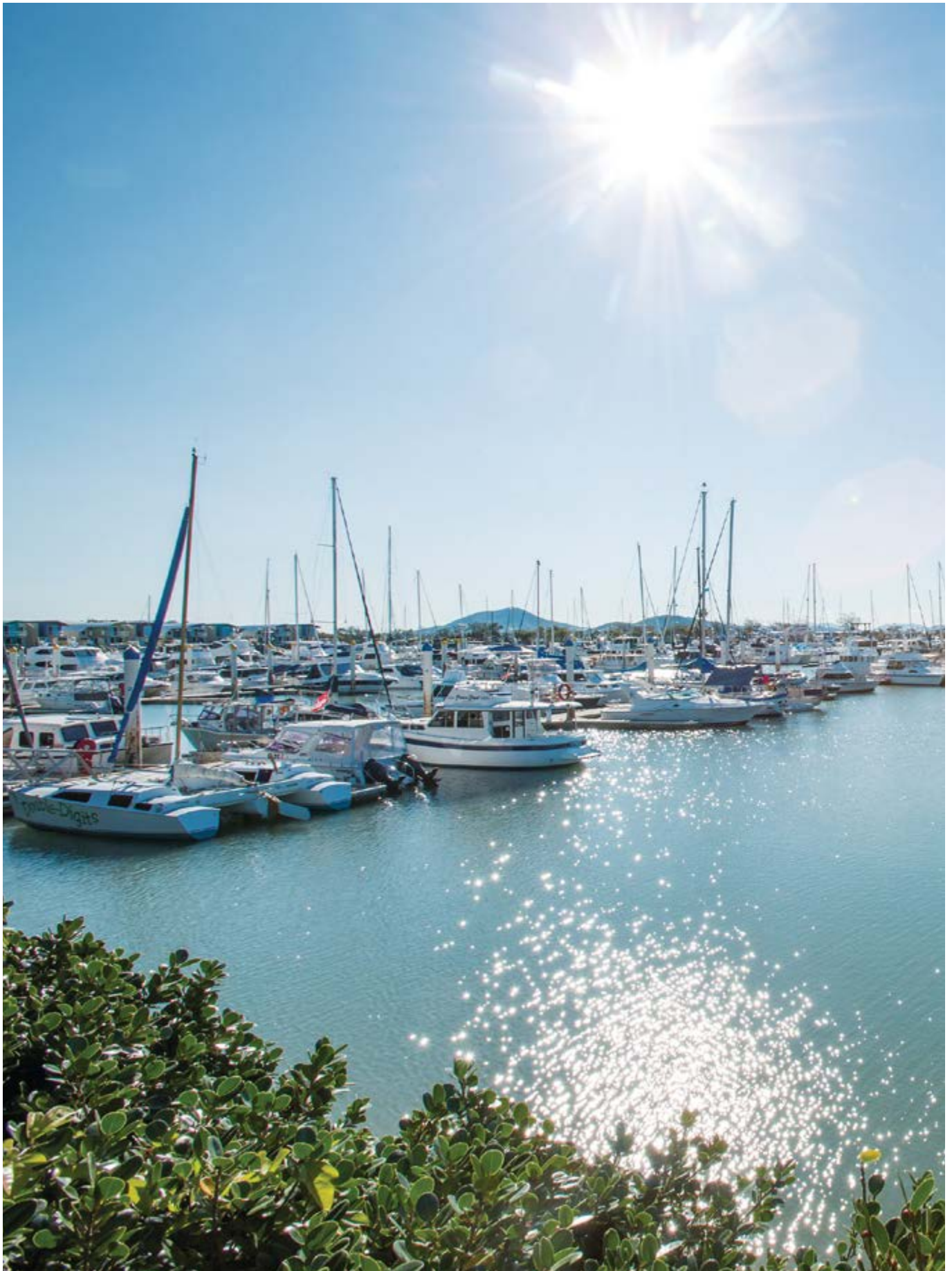
Taxi services are available in Biloela, Blackwater, Emerald, Gladstone, Mount Morgan, Rockhampton and Yeppoon. Other personalised transport services such as booked hire now also play a role in the region's transport system. This trend towards more diverse transport options offers customers improved choice about how they travel.

26 Gladstone Ports Corporation. (2018). *Gladstone Ports Corporation Annual Report 2017/18*, www.gpcl.com.au/operations/port-of-gladstone.

27 Port of Rockhampton Gladstone Ports Corporation. (2017). *Port of Rockhampton*. www.gpcl.com.au/operations/port-alma-shipping-terminal.

28 Department of Transport and Main Roads. (2017). *Port Procedures and Information for Shipping – Port Alma*, www.msqa.qld.gov.au/Shipping/Port-procedures/Port-procedures-port-alma.

29 Australian Bureau of Statistics. (2017). *Census of Population and Housing, 2016, Working Population Profile - W22 (place of work)*.



Great Keppel Island Marina



Bustard Head, Seventeen Seventy

3. Goals, challenges and opportunities



3.1 Goals

Goals describe the region's desired economic, social and environmental outcomes that set the direction for all planning activities and initiatives in the region, not just for transport. Transport and Main Roads has engaged with the region's local governments, industry representatives and other state agencies to understand the high level goals for the region's future development.

Goals were developed for the *Fitzroy Regional Transport Plan* based on a review of local, regional, state and

national planning documents and directions set by stakeholders. Goals help frame the priorities and actions for transport towards achieving regionally specific outcomes for the community, economy and environment.

The relationship between goals and priorities is presented in Figure 4. Priorities are the transport response to the region's goals in the context of addressing challenges, and supporting opportunities.

FITZROY REGIONAL TRANSPORT PLAN GOALS



Figure 4: Regional goals and relationship to transport priorities



Alexandra Railway Bridge

3.2 Challenges

Accessibility and community connectivity

Accessibility and community connectivity are major functions of the transport network and a challenge in some areas of the region, particularly for less populated inland areas. Transport enables access to employment and the goods and services that are required to sustain local communities. Although employment opportunities and basic goods and services are available in towns across the region, access to higher order services (such as specialist medical care, speciality shopping and major events) requires travel to major centres within and outside the region.

Accessibility varies across the region, particularly to the major centres of Rockhampton, Gladstone and Brisbane, which offer differing levels of higher order services.³⁰ Rockhampton and Gladstone also act as regional hubs for access to rail and air services to other major centres such as Brisbane, Mackay, Townsville and Cairns. Scheduled long-distance coach services connect smaller centres on the Capricorn, Dawson and Bruce highways to Rockhampton.³¹

Passenger air services provide connectivity, with shorter travel times than other modes to major centres outside the region. For those living in the Fitzroy region, air travel can be less affordable due to the need to take multiple flights to reach many destinations. Additional air routes and services in Fitzroy, particularly to the Central West, could improve regional connectivity for residents and tourists between the east coast and central Queensland.

Although the Fitzroy region has a lower proportion of households without access to a car (5.1 per cent) when compared to Queensland (6 per cent), the impact is potentially higher in towns that do not have passenger transport services, such as a taxi service for local trips and passenger air and long-distance coach services for regional



Children riding to school, Rockhampton

and inter-regional trips.

The Rockhampton and Gladstone areas both have urban bus and taxi services, while Biloela, Emerald, Blackwater, Mount Morgan and Moura have access to taxi services. Outside of these areas, those without access to a motor vehicle are reliant on active transport and community transport options where available. Low population densities, coupled with widely dispersed communities, make it challenging to provide viable public transport services, placing a greater reliance on car use.

Active transport connectivity varies across the region. For cyclists, connectivity is challenged by factors such as: topography and natural barriers; urban development patterns; conflict with the high proportion of heavy vehicle movements on major corridors; and missing links in cycle infrastructure.

Well-designed streets, paths and public spaces that provide physical separation from motorised traffic, wayfinding, adequate shade and amenities play an important role in overcoming barriers and encouraging more people to walk and ride as an everyday activity.

Woorabinda is one of the most isolated communities in the region, with no scheduled long-distance passenger services, and a high rate of households without a motor vehicle (48.6 per cent compared to Queensland's six per cent).³² Woorabinda residents have no access to regular passenger services and must rely on community buses or private vehicle travel. While community buses provide a level of access for residents without access to a motor vehicle, accessibility to services outside the local community is limited.

Queensland Walking Strategy

The *Queensland Walking Strategy 2019–2029* provides a framework for promoting walking as an accessible, active transport mode across Queensland, delivering health benefits for Queenslanders and access to important destinations such as schools, shops, and public transport.

The strategy sets out the vision for the next 10 years and directly contributes to the vision for a single integrated transport network accessible to everyone. The Strategy is accompanied by an action plan that identifies the areas for further investment over the next two years.

30 Department of Transport and Main Roads. (2017). *Central Queensland taxi service areas*. www.tmr.qld.gov.au/business-industry/Taxi-and-limousine/Industry-information/Taxi/Taxi-fares-service-areas-and-maps/Central-Queensland.

31 Department of Transport and Main Roads. (2014). *Central Queensland Principal Cycle Network Plan*.

32 Queensland Government Statistician's Office, Queensland Treasury. (2017). *Queensland Regional Profile Fitzroy region*.

Private vehicle dependency




For much of the region, access to employment, education, goods and services is principally provided through private vehicle travel. In addition to a high proportion of households with access to a motor vehicle, the region also has a higher proportion of households owning two or more vehicles than the Queensland average (as shown in Table 3).³³ This reliance on private vehicle travel, coupled with future population growth, will place increasing pressure on the road network.

In the Rockhampton and Livingstone local government areas, future population growth in suburbs such as Parkhurst and Gracemere and growth in Yeppoon and Emu Park will lead to more trips on the road network between these centres.³⁴ Current traffic volumes impact

on travel times and this trend is anticipated to continue. The impact of increased traffic volumes include reduced network reliability, reduced safety and longer travel times. Increased greenhouse gas and air pollutant emissions, poor community amenity and health are also linked to a high reliance on private vehicle use.^{35,36}

Congestion around schools was raised by stakeholders as an issue; school-based congestion is common in many urbanised centres across Australia, evidenced by changing travel-to-school behaviours. Only 20 per cent of secondary students and approximately 37 per cent of primary school children use active modes of transport to travel to school, which is a reduction from close to 70 per cent in 1970.³⁷ Within the region, 24 per cent of school trips in Gladstone are by active transport, while for Rockhampton only 14 per cent of education trips are by active transport.^{38,39}

Table 3: Motor vehicles per occupied private dwelling within the Fitzroy region local government areas compared to Queensland (2016)³³

| | Dwellings with no motor vehicles |  1 motor vehicle |  2 motor vehicles |  3 or more motor vehicles |
|-------------------|----------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| | % | % | % | % |
| Fitzroy region | 5.1 | 31.5 | 38.1 | 21.4 |
| Banana | 4.0 | 25.3 | 36.1 | 29.9 |
| Central Highlands | 3.1 | 28.9 | 39.1 | 24.8 |
| Gladstone | 4.0 | 30.4 | 41.3 | 21.3 |
| Livingstone | 4.1 | 30.6 | 38.1 | 22.5 |
| Rockhampton | 6.9 | 34.7 | 36.0 | 18.6 |
| Woorabinda | 48.6 | 31.8 | 11.4 | 1.2 |
| Queensland | 6.0 | 34.2 | 37.4 | 19.0 |

33 Australian Bureau of Statistics. (2017). *Census of Population and Housing, 2016, General Community Profile - G30*.

34 Department of Transport and Main Roads. (2012). *Fitzroy River Floodplain Study*.

35 Commonwealth of Australia. (2017). *Australia State of the Environment, 2016*. www.soe.environment.gov.au/theme/built-environment/topic/2016/livability-transport.

36 The State of the Environment Report identify health impacts associated with communities with high reliance on private vehicle include higher incidences of diseases associated with inactivity such as obesity and heart disease.

37 Bureau of Infrastructure, Transport and Regional Economics. (2016). *Australia State of the Environment Report 2016*.

38 Department of Transport and Main Roads. (2012). *Household Travel Survey Gladstone and Biloela*.

39 Department of Transport and Main Roads. (2015). *Household Travel Survey Rockhampton and Yeppoon*.

Variability in network conditions

Transport network accessibility, reliability, efficiency and safety can be impacted by differing road conditions. In the Fitzroy region these include a combination of sealed and unsealed roads, narrow seal widths and bridge load limits on the road network and single track sections, speed restrictions imposed by load restrictions on timber bridges and distances between signals for the rail network. Variations in transport network conditions impact safety and the efficiency of freight to, from and within the region.

Freight efficiency is dependent on the weakest link in the transport connection between production and market. These weakest links are often the ‘first and last mile’ that provide a connection for industry to the road network but also can be associated with narrow seals and bridge load limits on higher order roads. These issues restrict the size of vehicles that can be used to transport freight and limits the use of High Productivity Vehicles (HPV). HPVs deliver the greatest benefit if they can be used for the entire door to door journey as the costs of breaking down and assembling vehicles can easily exceed line haul savings if the larger vehicle cannot be used for the whole journey.

For rail freight, efficiency can be improved through infrastructure upgrades such as passing loops and signalling upgrades, which can allow longer trains to use the network at a higher frequency.

The Capricorn Highway provides an example of network condition impacting safety. Variations in seal width with large sections of narrow seal mean road users have limited margin for error when overtaking or passing other vehicles. Inconsistent seal widths and substandard road conditions increase the chances of crashes on the network and impacts asset costs due to increased pavement edge damage and maintenance needs.

Network resilience

The region is located within the Fitzroy Basin, the largest river catchment in Queensland. The Fitzroy catchment has a history of flooding due to large rainfall events—most recently in February 2015 from Cyclone Marcia and April 2017 with Cyclone Debbie. Following Cyclone Debbie, the Bruce Highway and North Coast line rail services were closed for eight days and Rockhampton Airport was closed for a total of 12 days.^{40,41} These events significantly impact the region’s economy and community, damaging infrastructure and private property. Poor weather resilience and a lack of flood immunity prolong these impacts, particularly where damage to transport network assets close or limit use.

Both the Bruce and Capricorn Highways have several waterway crossings that flood with heavy rainfall. During flood events in 2010 and 2011, the Capricorn Highway experienced repeated closures and suffered significant damage at multiple locations between Rockhampton and Emerald. These flood events isolated communities, resulting in food and medical supplies shortages. Access is critical immediately after a disaster event to allow first responders to assess damage and community impacts. Improved flood immunity and network resilience can be achieved by taking a network approach through strategic investment at a route level in improving flood immunity, identifying alternate routes, real-time information during and following an event advising route options and use of other modes (such as air) for disaster management planning and response.

Queensland Climate Transition Strategy

The *Queensland Climate Transition Strategy* outlines how the state proposes to prepare for the transition to zero emissions industries of the future. Much of what Queenslanders said in the strategy about the future relates to transport:

- the future should be powered by clean and renewable energy and technology
- we need low-carbon construction, infrastructure and transport systems
- key opportunities are in renewable energy, battery and power storage, cleaner technologies and electric vehicle industries
- improve public transport systems to be low-emission, well-maintained, affordable, reliable, frequent and integrated.

Action 2.5 of the Strategy identifies that the Government will develop a Zero Net Emissions Transport Roadmap. This will consider better integration of transport policy with land use planning to reduce travel demand and optimise public and active transport infrastructure and services. It will also look at ways to reduce emissions from private, passenger and freight transport, such as through improved vehicle and fuel efficiency, technology and innovation, and fuel shift.

40 RACQ. (2017). *Good news: Bruce Hwy reopened in Rocky*. www.live.racq.com.au/2017/04/good-news-bruce-hwy-reopened-rocky/.

41 Queensland Rail. (2017). www.queenslandrail.com.au/aboutus/mediacentre/media%20releases/RailshuttleservicesforfloodaffectedNQ.

Safety

In the Fitzroy region, there were 82 fatalities and 1463 crashes requiring hospitalisation between 2013 and 2017.⁴² Alcohol, fatigue and speed were contributing factors to these crashes. Hitting objects, overturned vehicles, rear-end and angle crashes are the major crash types which accounted for over 80 per cent of the total crashes during the five-year period. Due to the high speed and remote nature of many of the region's state-controlled roads, 42 per cent of crashes occurred at a posted speed limit of 80–110 km/h.

Driver fatigue among non-resident workers is a road safety risk for the region's rural highways. The relative risk of fatality as a result of fatigue is 13.5 times higher on rural roads than in urban areas.⁴³ Driver fatigue combined with mobile phone black spots and high volumes of heavy vehicles associated with the mining and agricultural industries contribute to this risk. Increased caravan traffic associated with the annual drive tourism season is also a risk, creating safety issues due to caravans sharing the road with heavy vehicles.

Maritime safety is also an issue in the region. During 2016, the region received 64 marine incident reports involving 85 vessels—76 Queensland regulated ships and nine domestic commercial vessels. The most commonly reported incidents were collisions between ships, collisions with objects, swamping and groundings. Eighteen people were injured, including three who died and eight admitted to hospital.⁴⁴

Supporting the efficient movement of freight

The region is heavily reliant on the freight industry and the transport network to connect key production areas to market. Transport also supports the supply of essential goods to communities throughout the region. The quality and efficiency of freight connections influence the cost of living for residents, the productivity and profitability of industry and is a factor in the region's attractiveness for new investment. Network resilience, the condition of the transport network, interactions with incompatible land uses, intermodal integration, potential conflicts between freight movements and other network users and levels of access for HPV and oversize overmass (OSOM) vehicles are challenges for freight efficiency within and beyond the region.

Increasing freight demand and potential conflicts between freight and other road network users can affect the efficiency of freight movements. The competing demands of local, commuter, tourist and freight vehicles can impact safety, travel time reliability and the availability of rest stops, particularly on higher-trafficked routes such as the Capricorn and Bruce highways. This issue is also evident in Rockhampton where heavy vehicle routes converge and transect the city.

In urban areas, traffic signals, property access and high local traffic volumes during travel peaks, impact road freight efficiency. The Bruce Highway has 6.5 kilometres

CASE STUDY:

Improving freight efficiency

Improved freight efficiency can be achieved through non-transport aspects of the supply chain. A new meat processing facility is being considered near Emerald with the proposed capability to process over 100,000 head of cattle per annum to supply the domestic and international markets. With its location providing easy access to a significant supply of local cattle and the site positioned close to road and rail networks, the facility offers potential advantage in transport cost savings with both efficient transport of cattle to the facility and processed meat to customers in the Australian or export marketplace.⁴⁵



Cattle truck, Central Highlands

42 Queensland Government (2019). *Road Crash Locations*. www.data.qld.gov.au/dataset/crash-data-from-queensland-roads/resource/e88943co-5968-4972-a15f-38e120d72eco.

43 Legislative Assembly of Queensland, Parliamentary Travelsafe Committee. (2005). *Driving on empty: Fatigue driving in Queensland*.

44 Department of Transport and Main Roads. (2017). *Marine incidents in Queensland 2016* www.msq.qld.gov.au/About-us/Marine-incident-annual-reports.

45 Central Highlands Regional Council. (2018). *Central Highlands Meat Processing Plant Feasibility Study*.

of direct property access, 17 signalised intersections and 47 un-signalised intersections as it passes through Rockhampton impacting on traffic flow and freight movements. In other areas, such as Emerald, road freight movements through town are also impacted due to reduced speed limits, traffic calming and interactions with local traffic.

The movement of OSOM freight on the road network is important in providing access to Shoalwater Bay Training Area and for the resource and agriculture industries. The challenge with OSOM is to provide a network that supports OSOM movements through corridors with adequate height and width clearance, pavement strength and suitable geometry. Managing the movement of OSOM vehicles by time and route mitigates potential efficiency impacts on other freight and general traffic movements. Increased mining activity in the region will potentially add to the demand for OSOM freight movements.

Rail freight efficiency in the Fitzroy region is impacted by numerous level crossings and poor track alignment in some urban areas. This is particularly an issue in Rockhampton where the North Coast line shares road space through the centre of the CBD, causing delays and safety issues for all modes. The load limit on Alexandra Rail Bridge over the Fitzroy River is a prime constraint on rail freight traffic in this area, and deficiencies on the Yeppoon branch line restrict agricultural supply chains. There are also constraints resulting from the single track sections and limited lengths of passing loops.

Managing road freight growth

Across Queensland, road freight accounted for 67 per cent of domestic freight by volume in 2015–16, with freight volumes forecasted to increase by 24 per cent from 2016 to 2026.⁴⁶ The region relies on the road network for the transport of essential goods to communities and for the efficient movement of freight to market within and external to the region, even when rail is an available alternative.

HPVs or larger truck combinations are an efficient way to move more freight with fewer trips, but these vehicles can require more room to safely corner and negotiate intersections, larger break down areas, and can have a greater impact on the life of road pavements.

In line with the strategic direction set by the *Queensland Freight Strategy* (2019), there is a desire for maximising rail freight use along strategic corridors. A mode shift to rail could ease the pressure on the road network particularly for bulk materials such as fuel, gravel and quarry materials. Stakeholders indicate a combination

of factors contribute to the underutilisation of rail freight including a lack of ongoing investment, operational restrictions and cost structures, as well as the flexibility in moving cattle by road freight. Central Queensland Inland Port's strategic location will take advantage of rail and road network access and may assist in addressing some inefficiencies of rail transport, while upgrades to the Yeppoon Branch line to the meatworks in Rockhampton could also encourage a mode shift from road to rail.

The Queensland Government provides subsidies through the Regional Freight Transport Services Contract and the Livestock Transport Services Contracts to contribute to the affordability and continuation of rail freight services. Future rail upgrades in the Fitzroy region, such as a future rail bypass of Rockhampton, will be investigated in accordance with demand.

Funding, planning and coordination of transport network projects

The Fitzroy region transport network comprises a combination of national, state and local government-owned and privately-owned or operated infrastructure assets. Local governments own and manage airports and manage approximately 14,647 kilometres of road or 80 per cent of the region's road network. Outside the population centres of Gladstone and Rockhampton local government areas, small populations mean a limited rates base to fund essential services, including the management of the transport network. Queensland and Australian Government programs are essential in assisting local governments in the delivery of services.

Coordinating planning, funding and delivery of projects remains a key challenge across jurisdictional boundaries. This often occurs where key routes have differing strategic value within or across local government boundaries. Integrating planning and coordinating priorities across the region are important to ensure that the region's infrastructure and network meets the needs of the region.

The development, upgrade and maintenance of the region's transport network are essential to deliver regional transport priorities. However, justifying investment can be a challenge, particularly when comparing traffic volumes on rural roads to that of urban roads. Alternative investment decision making tools can be utilised to augment traditional cost-benefit analysis techniques where economic return is often difficult to ascertain. In this regard, the state government is working with the CSIRO to develop a regionally focussed freight model and Austroads have also released a tool designed to identify and support investment in 'Life Line' freight routes.⁴⁷

⁴⁶ The Centre for Transport, Energy and Environment, and Pekol Traffic and Transport. (2018). *Queensland Transport Facts 2018*.

⁴⁷ Austroads. (2017). *Assessment of 'Life Line' freight routes*. https://austroads.com.au/resources/documents/supporting-documents/webinars/Austroads_Webinar-Assessment_of_Line_Line_Freight_Routes.pdf.

CASE STUDY: The Central Queensland Inland Port

The first stage of an intermodal 'inland port' is being developed at Yamala, 25 kilometres east of Emerald. Intermodal freight terminals provide a point in the land based supply chain where freight is transferred between different modes of transport. This occurs to combine the flexibility of road transport with the line-haul efficiency of rail as shown in Figure 5.⁴⁸

The site at Yamala is 21.3 kilometres from the junction of the Gregory and Capricorn highways, has Type 1 heavy vehicle access and freight rail access connecting to the Port of Gladstone. The site is adjacent to an existing cotton gin and is suitably located to support the grain industry.

The objective of the inland port is to improve supply chain efficiency between key origins and destinations, incentivising greater utilisation of rail freight and preserving the level of service on state-controlled roads, providing benefits to the wider community.

Planning for the inland port encompasses industrial and support activities on site, servicing the surrounding agricultural catchment and facilitating bulk and containerised aggregation, intermodal transfers and efficient distribution.⁴⁹

To deliver the first stage, funding has been secured from the Department of State Development, Manufacturing, Infrastructure and Planning under the Building our Regions program and from the Central Highlands Regional Council. This stage includes a major upgrade to the intersection of the Capricorn Highway and Bonnie Doon Road and an upgrade to Bonnie Doon Road for access to the site. Construction of a 1.5-kilometre rail siding will also provide rail access in the first stage.

As a junction point for rail and road networks, an intermodal freight terminal in this location is a way to encourage a modal shift from road to rail, particularly in supporting the resource sector. For high volume commodities, such as fuel, inland ports provide the opportunity for rail to move freight in bulk from port to the intermodal facility where road transport then distributes to final destination.

INTERMODAL/EXPORT

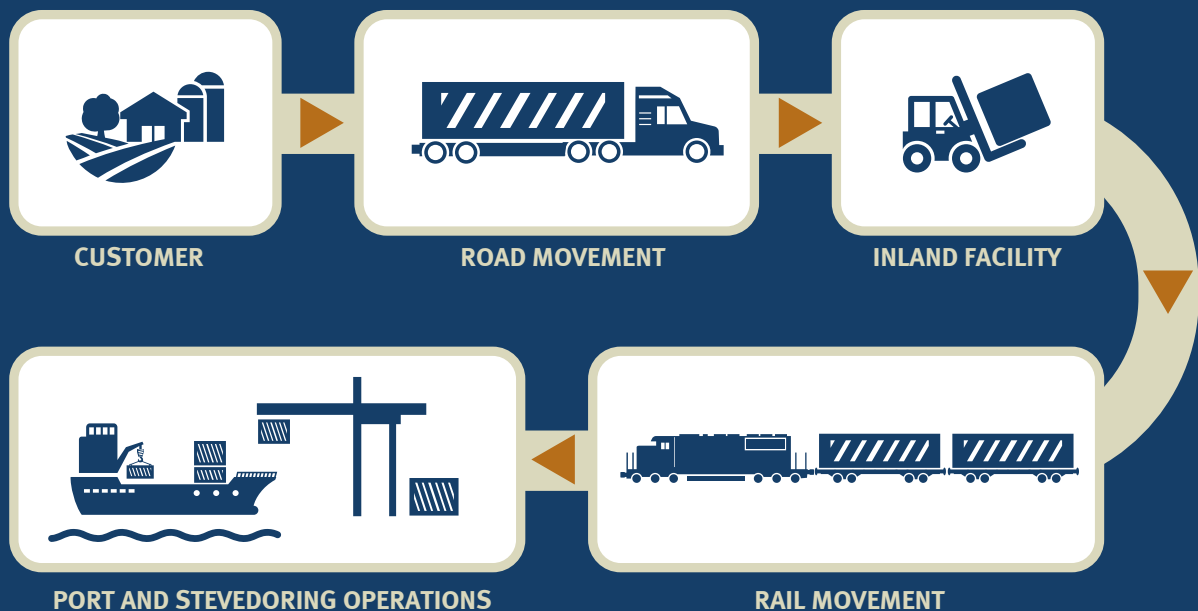


Figure 5: Intermodal transport from road to rail to port

⁴⁸ Queensland Transport and Logistics Council. (2017). *Intermodal*. www.qtlc.com.au/transport-logistics-industry/land-based-logistics-industry.

⁴⁹ CQ Inland Port. (2017). *Welcome to CQ Inland Port*. www.cqinlandport.com.au.

3.3 Opportunities

Growth in agriculture

The Fitzroy region produced agricultural commodities with an estimated value of \$1.3 billion in 2015–2016 with the local government areas of Banana and Central Highlands accounting for over 81 per cent of the region's total agricultural production.⁵⁰

In 2015–2016, Banana Shire produced \$23.1 million of legumes and \$22.4 million of cereal crops, representing 31 per cent and 29 per cent of the region's crops respectively.⁵⁰ Likewise, the Central Highlands produced \$539.2 million of processed livestock, \$57.8 million of cotton and \$21 million of grapes. These figures represent 51 per cent of the region's livestock yields, 75 per cent of the region's cotton, and 99 per cent of the region's grapes.⁵⁰

Agricultural production across the region is underpinned by the Fitzroy Basin, which is the largest river catchment flowing to the eastern seaboard. The region's highly productive agricultural land and its production of a small number of minimally processed commodities provides significant trade and export opportunities, which will be a key focus in future regional freight planning initiatives.

Of the region's land area, 81 per cent is used for agriculture, with around 75 per cent of agricultural land used for grazing. The Fitzroy region is characterised by high-productivity grazing land with significant meat processing capabilities, and facilities capable of processing cattle from both within and outside the region.

Currently, there are three abattoirs located in the region (two in Rockhampton and one in Biloela) with a combined processing capacity of 3320 head of beef per day primarily for the export market. Opportunity for future development of additional meat processing facilities is being promoted to attract funding by Central Highlands Regional Council for Emerald.

The future expansion and development of cattle feedlots in areas close to current abattoirs in Rockhampton and Biloela will also increase the supply of higher value cattle to processors in the region. Opportunity to target higher value niche markets through enhanced production specifications, such as certified organic beef products are also available, in addition to emerging growth areas such as mung beans, macadamias, melons and lychees.

There are two identified water management projects which will support the long-term supply of quality water to the region's agricultural areas through enhancing the availability of water for the Fitzroy and adjoining regions.

- **Lower Fitzroy River Infrastructure Project:** Construction of a new weir at Rookwood on the Fitzroy River. This project has an approved Environmental Impact Statement with conditions and has funding commitments from State and Federal Governments, with a plan to begin construction in 2019.
- **Nathan Dam and pipelines:** An 888,000-megalitre dam, with annual yield of 66,000 megalitres; and a 149-kilometre trunk pipeline. This project currently has an active Environmental Impact Statement.

These projects have potential to provide the Fitzroy region with further opportunities to expand and grow the agricultural industry through effective water management. With expansion, there will be increased agricultural output requiring transport to domestic and international markets.



Mandarins growing near Emerald

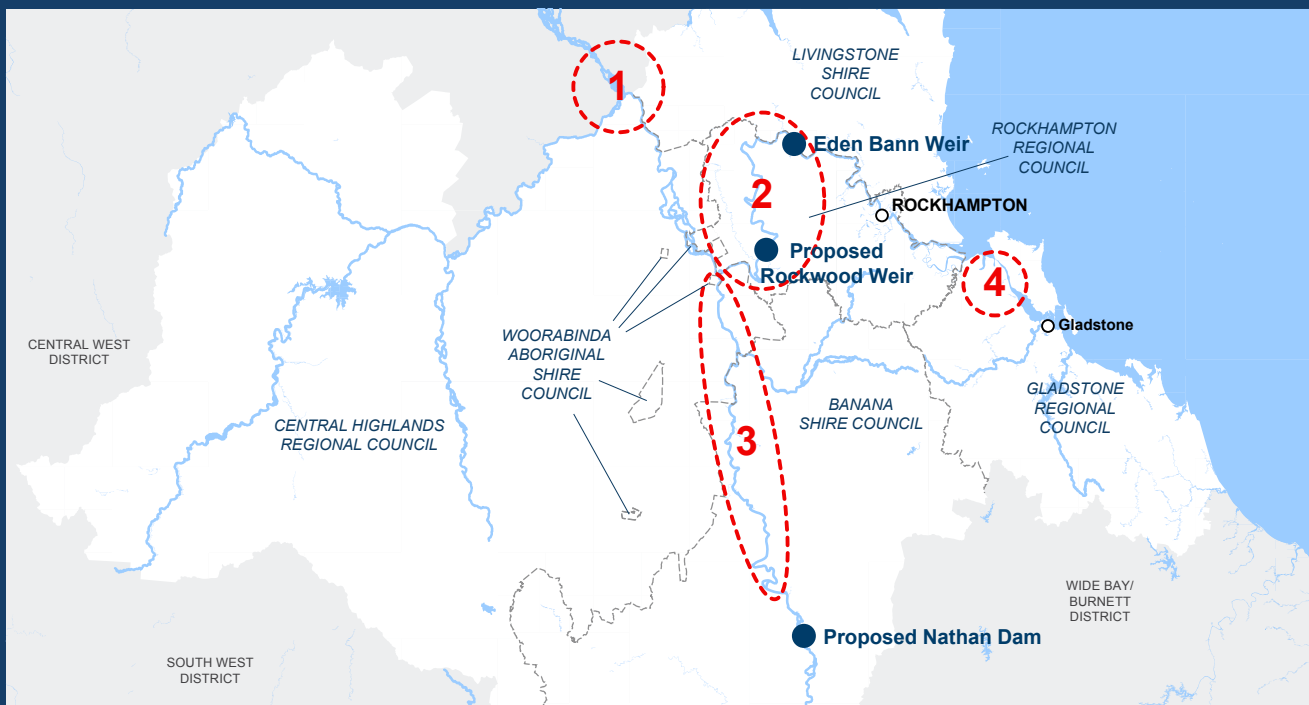
⁵⁰ Australian bureau of Statistics. (2018). *Value of Agricultural Commodities Produced Australia 2015–2016 Table 4 State and SA4 Region*.

CASE STUDY: Growing Central Queensland

Growing Central Queensland is a regional initiative which aims to capture sustainable agribusiness. The initiative includes four potential agriculture precincts within the Fitzroy region (shown in Figure 6).⁵¹

- 1 **Mackenzie River Agricultural Corridor** – this corridor is a highly productive area with some of the best soils in Central Queensland that produce crops and cattle.
- 2 **Fitzroy River Agricultural Corridor** – this area has potential for development of an agricultural corridor along the Fitzroy River and surrounding region.
- 3 **Dawson River Agricultural Corridor** – includes the proposed Nathan Dam and pipelines and the proposed Duaringa Weir with a capacity of 6,000 megalitres.
- 4 **Gladstone Agribusiness Corridor** – includes the Port of Gladstone and city of Gladstone, which offers an ideal setting to locate a hub for the value-adding field of agricultural transport and logistics.

Figure 6: Growing Central Queensland agricultural corridors⁵²



The strength of agricultural production and agribusiness manufacturing sectors in the Fitzroy Region provides for a diverse range of beef investment opportunities. Meat processing facilities are substantial in scale and contribute significantly to the regional economy and state exports. New investment is being sought to extend the capacity and productivity of Central Queensland's beef sector in response to increased global demand for the commodity.⁵³

Industry organisations have suggested a range of transport and logistic infrastructure projects to support these agricultural corridors, such as containerisation facilities, cold storage, multi-modal freight coordination and improved road train access to Port of Gladstone.

51 Regional Development Australia Fitzroy and Central West Inc. (2015). *Growing Central Queensland Review*.

52 Regional Development Australia Fitzroy and Central West Inc. (2014). *Growing Central Queensland*. www.rdafcw.com.au/growing-centralqueensland/.

53 Regional Development Australia Fitzroy and Central West Inc. (2015). *Growing Central Queensland Beef Investment Prospectus*.

Mining expansion

The region's mining and resource activity includes underground and open-cut thermal and coking coal mining, minerals and coal seam gas (CSG), quarrying, and gemstones extraction.⁵⁴ The central, southern and western parts of the region (the local government areas of Banana, Central Highlands and Gladstone) are key areas for resource operations, processing and transportation. The region has also contributed significantly to the development of Queensland's liquefied natural gas (LNG) industry. The Bowen and Surat basins' production of CSG provides the primary gas supply for the state's export LNG industry through Port of Gladstone.

To support the timely, safe and efficient movement of freight, ongoing improvements and maintenance of the transport network will be required, especially where new mine developments, such as in the Galilee Basin, will generate increased demand, particularly during construction.

The challenge of catering to the development of new mines in the Bowen and Galilee basins is determining which mines will be developed and the timeframe. There is currently a large volume of freight moving across the region, and the addition of further demand will lead to potential conflicts between heavy vehicles and an increase in commuter movements on the network resulting in safety and efficiency challenges.

Conditioning mine operators to provide transport for workers, such as bus transport, will minimise potential safety and demand impacts of a 'drive in drive out' workforce: this is already occurring at some mines in the region. New mining projects may also require greater 'fly-in fly-out' capacity, and upgrades to existing airports, such as at Emerald, to cater for any growth in demand for these services. For example, Rockhampton has been selected as one of two 'fly-in fly-out' hubs for Adani's new Carmichael coal mine. The airport will support flights between Rockhampton and a new airstrip located at the mine.



Alumina refinery, Gladstone

⁵⁴ Department State Development, Infrastructure and Planning. (2013). *Central Queensland Regional Plan*.

Self-drive and cycling tourism trends

Self-drive and cycling tourism trends provide an opportunity for economic growth for the Fitzroy region. Self-drive tourism is popular, with caravans and recreational vehicles frequenting the region, while cycling tourism is an emerging market.

The self-drive market is expected to experience significant growth due to Australia's aging population and a corresponding increase in retirees who travel around Australia.⁵⁵ The region's self-drive tourism market encompasses those who travel long distances by road from other regions and states and those who fly into the region and then drive to explore the area. Data shows that tourism expenditure in the Fitzroy region has increased by an average annual compound rate of 2.4 per cent over the nine years to 2015; this is largely driven by intra and inter-state tourists, with 96 per cent of the region's visitation comprising domestic visitors.⁵⁶

Areas such as Krombit Tops National Park near Biloela provide scenic driving routes to the 1945 crash site of Beautiful Betsy (a WWII Liberator bomber), Marble Waterhole and picturesque lookouts over Boyne Valley. The national park also offers various nature walks and tracks in sub-tropical rainforest and blackbutt forest areas.⁵⁷

Although a significant opportunity for the region, growth in self-drive tourism is also a challenge, particularly for the region's road network in catering for increased demand and risk of conflict between network users. The influx of private vehicles (many towing caravans) during peak holiday periods can interfere with the efficient movement of freight. Variations in road conditions, long distances between overtaking lanes and high traffic volumes can result in travel time delays and safety risks. Other issues include increased demand for available rest areas, wayfinding signage and a lack of education for tourists about driving to the conditions experienced on regional roads and interacting with freight vehicles (including OSOM vehicles).

A range of transport network features can contribute to a positive visitor experience and encourage growth of self-drive tourism. These features include the consistency and condition of the road network, tourism signage, provision of tourist rest and scenic stops, and improved mobile network coverage for safety, navigation and access to real-time transport network information. Growth in cycling tourism can be supported by continued investment in active transport facilities and through investigation of recreational cycling opportunities.

Defence industry

The region includes the Shoalwater Bay Training Area (SWBTA), which is used by the Australian Army, Navy and Air Force, as well as foreign forces. The region's transport networks, including airports, ports and roads, provide essential access to the SWBTA for military personnel and equipment.⁵⁸

Rockhampton Airport's facilities are regularly used by the Australian Defence Force, Singapore Armed Forces and, biennially, United States Armed Forces (as part of Exercise Talisman Sabre). The Optech Building (which is leased to Defence) and associated aprons are located to the north of the Rockhampton Airport passenger terminal. The Port of Gladstone has also been used to support transport of military equipment into and across the region, including for Singaporean training exercises. Once equipment is brought in through ports (air and sea), the Defence industry then utilises the road network to transport equipment through the region to the SWBTA.

The SWBTA is set to be expanded and a new military area in north Queensland developed as part of the Australia-Singapore Military Training Initiative (ASMTI). Under this initiative, the Singapore Government will invest approximately \$2 billion to deliver enhanced military training facilities in these locations, benefiting the Australian Defence Force and providing significant local economic opportunities. The ASMTI will allow for up to 14,000 Singaporean Armed Forces personnel to conduct

CASE STUDY: Cycling tourism

Cycling tourism is an emerging market. Scenic cycle routes and disused rail corridors as active transport links between areas of interest may present an opportunity for tourism and recreational use. The Capricorn Coast Pineapple Rail Trail is currently only a 4.5-kilometre link in Yeppoon, but has the potential to follow the disused rail corridor to the south of Rockhampton. Such routes can attract day trippers and contribute to the local economy.

Cycling tourism, although still attracting a small market share, is an emerging trend with more domestic and international travellers looking for experiences that involve adventure and help maintain a healthy lifestyle.⁵⁹ Continued investment in the Fitzroy region's active transport networks, and providing information targeted at tourists on suggested routes and itineraries, may assist in attracting cycling tourism to the region.

55 Queensland Government. (2016). *Business and Industry Portal Drive Tourism in Queensland*.

56 Based on an average between 2013 and 2016. Tourism Research Australia. (2017). *Central Queensland Regional Profile*.

57 Sandstone Wonders. (2019). *Krombit Tops National Park*. Retrieved from <https://sandstonewonders.com/discover/krombit-tops/>.

58 Department of Defence. (2017). *Australia-Singapore Military Training Initiative* www.defence.gov.au/Initiatives/ASMTI/.

59 Australian Government Austrade. (2015). *Growing Cycling Tourism in Victoria – Summary*.

training in Central and North Queensland over 18 weeks a year for 25 years. This initiative will deliver economic benefit to the Fitzroy region and have implications for the region's transport system. Planning is required, in consultation with the Australian Department of Defence, to fully understand the implications of the expansion of defence facilities and the need for upgraded transport infrastructure.

Advancements in technology

Telecommunications and other technologies, coupled with improved mobile network coverage, provide opportunities to improve community connectivity, safety and reliability of transport networks in the region.

Communications technology can reduce some of the need to travel on the transport network (such as through the use of email, internet and video conferencing) allowing individuals to work, access distance education, seek healthcare and socialise with others regardless of location. It also offers an opportunity for improved user experience through the provision of real-time information. Real-time information could provide road condition, road work and incident information to road users in advance of travel. This would allow users, including the freight industry, tourists and the local community, to retime their

journey or select an alternative route, reducing delays and improving the efficiency of travel. Currently, signage and publications of road conditions can be slow to respond to changed conditions, inconveniencing road users and compromising safety.

The communication of real-time information may also improve safety at level crossings. Dedicated Short Range Communication (DSRC) is a wireless technology which has been piloted by LaTrobe University to improve safety at level crossings. The technology application provides vehicles and train drivers a 360-degree level of awareness of their surrounding traffic situation, and allows them to communicate when approaching the same level crossing. Where there is the possibility of a collision, a warning message is delivered to the driver's vehicle.⁶⁰

Technological advancements, such as low and zero emission and cooperative and automated vehicles, have the potential to change the way freight and people move, and the type of vehicles travelling on the network. For regional areas, a significant challenge to the deployment of low and zero emission and cooperative and automated vehicles is the provision of supporting infrastructure; this could include requirements for physical infrastructure such as sealed roads, signage and road marking, and digital infrastructure such as mapping data and communications infrastructure.⁶¹

Technology has also allowed for improved and automated data collection and vehicle tracking tools, providing the opportunity to more accurately and cost effectively understand and plan for freight movements and travel demand. Drone technology is also assisting with the condition inspection of transport infrastructure, including inspections post network flooding.

Mobile phone coverage is an important element of realising certain opportunities brought about by advances in technology. Through roll-out of the Mobile Black Spot Program, the Australian Government, supported by co-contributions from state and local governments, mobile network operators, businesses and local communities, is continuing to improve mobile phone coverage and competition in regional and remote Australia. Funding has been confirmed for 23 base stations across the Fitzroy region, including at Emu Park, Taroom and along the Dawson Developmental Road, through the first four funding rounds of the program⁶².



Road status signage, Bruce Highway

60 LaTrobe University. (2017). *Improving Safety at Level Crossings*. www.latrobe.edu.au/technology-infusion/innovation/transport/improving-safety-at-level-crossings.

61 Australian Government Department of Infrastructure and Regional Development. (2017). *Submission to the Standing Committee on Industry, Innovation, Science and Resources Inquiry into the social issues related to land*.

62 Department of Communications and the Arts. (2017). *Mobile Black Spot Program*. www.communications.gov.au/what-we-do/phone/mobile-services-and-coverage/mobileblack-spot-program.



Salt mine, Port Alma

4. Priorities and actions



Priorities set the direction for the region's transport network over the next 15 years. The four regional priorities established through the *Fitzroy Regional Transport Plan* development process are:

- **Priority 1:** An accessible and integrated transport network that supports all transport modes and connects communities within and outside of the region.
- **Priority 2:** A transport system that supports economic growth and diversification by providing efficient and effective access to markets and destinations.
- **Priority 3:** A safe transport network that meets the demands of all users and manages interactions between incompatible network users.
- **Priority 4:** A resilient and sustainable transport network that mitigates the impacts of extreme weather events and supports natural values.

Actions are identified under each of the priorities. Actions are grouped into short-term and medium/long-term. Short-term actions identify the first critical steps needed to achieve the transport objectives and regional goals over the indicative 15-year life of the Plan. Medium/long-term actions identify possible responses to emerging or potential future transport planning needs. Actions will be reviewed and updated periodically as part of the implementation, monitoring and review process described in Chapter 5.

Actions are primarily planning and partnership initiatives to be further scoped, defined and programmed in collaboration with partners and stakeholders. Transport and Main Roads through its planning, investment, management, operations and maintenance of the transport network gives priority to improving safety for our customers.

Actions, and the subsequent project recommendations that follow, will inform future updates of investment plans and programs – such as the *State Infrastructure Plan*, the *Queensland Transport and Roads Investment Program* (QTRIP), and other relevant service and infrastructure investment strategies – across all levels of government and transport service providers.

Each action under the four priorities are linked to transport objectives and measures of success. Transport objectives are key drivers for taking action. Measures of success have been selected where data to track performance is readily available. Base-line data and performance metrics will be included in separate implementation plans. These metrics will be used to indicate progress towards meeting the goals and priorities set out in this Plan.

The relationship framework linking priorities, objectives and measures of success is shown in Table 4.



Boolimba Bluff Walk, Carnarvon National Park

Table 4: Relationship between priorities, transport objectives and measures of success

| <p style="text-align: center;">TRANSPORT SYSTEM</p> <p style="text-align: center;">The safety of all transport system customers is our primary priority as we create a single integrated transport network accessible to everyone.</p> | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RTP PRIORITIES | <p style="text-align: center;">PRIORITY 1</p> <p style="text-align: center;">Community</p> | <p style="text-align: center;">PRIORITY 2</p> <p style="text-align: center;">Economic development</p> | <p style="text-align: center;">PRIORITY 3</p> <p style="text-align: center;">Safety</p> | <p style="text-align: center;">PRIORITY 4</p> <p style="text-align: center;">Network resilience and sustainability</p> |
| ROLE OF TRANSPORT | <p>Responding to the challenges of:</p> <ul style="list-style-type: none"> accessibility and community connectivity private vehicle demand growth and dependency and maintaining travel time reliability. <p>And opportunities for:</p> <ul style="list-style-type: none"> advances in technology. <p>By taking action to:</p> <ul style="list-style-type: none"> improve liveability, accessibility and connectivity for all communities in the Fitzroy region. | <p>Responding to the challenges of:</p> <ul style="list-style-type: none"> variation in network conditions managing road freight growth supporting the efficient movement of freight. <p>And opportunities for:</p> <ul style="list-style-type: none"> growth in agriculture, mining and tourism defence advances in technology. <p>By taking action to:</p> <ul style="list-style-type: none"> strengthen and grow the Fitzroy region’s diverse and adaptive economy. | <p>Responding to the challenges of:</p> <ul style="list-style-type: none"> safety variability in network condition. <p>And opportunities for:</p> <ul style="list-style-type: none"> growth in agriculture self-drive tourism trend advances in technology. <p>By taking action to:</p> <ul style="list-style-type: none"> promote a safe environment for residents and visitors. | <p>Responding to the challenges of:</p> <ul style="list-style-type: none"> safety accessibility and community connectivity supporting the efficient movement of freight network resilience. <p>And opportunities for:</p> <ul style="list-style-type: none"> advances in technology. <p>By taking action to:</p> <ul style="list-style-type: none"> improve the resilience of the Fitzroy region’s transport network. |
| TRANSPORT OBJECTIVES | <p>1.1 A transport system that connects communities and provides reliable access to essential goods and services across the Fitzroy region.</p> <p>1.2 A multi-modal transport system that offers a range of accessible, efficient and reliable transport options for residents and visitors.</p> <p>1.3 A transport system that is integrated with land use, providing residents and visitors with a range of viable transport options that promote active and sustainable transport modes.</p> | <p>2.1 An integrated transport network that increases the productivity and efficiency of supply chains.</p> <p>2.2 A transport system that provides safe and reliable access to the region’s natural assets and tourism destinations.</p> | <p>3.1 A transport network that is safe and reliable for all users.</p> <p>3.2 All transport users understand safe travel behaviour.</p> | <p>4.1 A resilient transport network that keeps the Fitzroy region open and moving following weather events, and provides the emergency connections needed to keep the region safe.</p> <p>4.2 A sustainable transport system that supports protection of the natural environment.</p> |
| MEASURES OF SUCCESS | <ul style="list-style-type: none"> Level of transport disadvantage decreases. Greater access and connectivity to places, services and information. Proportion of people choosing to walk, cycle and take public transport increases. | <ul style="list-style-type: none"> Freight productivity improves. Transport supports the region’s tourism economy. | <ul style="list-style-type: none"> Reduction in transport-related incidents, crashes, injuries and fatalities. Increase accessibility to telecommunication and digital information. | <ul style="list-style-type: none"> Reduced frequency and duration of unplanned closures. |

4.1 Priority 1: Community



Yeppoon

Priority 1 aligns to:

- the Transport Coordination Plan's objectives for community connectivity, customer experience and affordability, and environment and sustainability
- the *State Infrastructure Plan's* focus on transport infrastructure that improves prosperity and liveability by connecting regional communities with access to essential services and opportunities
- the *Central Queensland Regional Plan's* priority outcome to achieve community benefits through reliability and condition of transport networks affected by population and resource sector growth and achieving community benefits through improving accessibility to destinations and improved safety and amenity.

An accessible and integrated transport network that supports all transport modes and connects communities within and outside of the region.

Liveability is shaped by a combination of factors such as the amenity of the natural and built environments, economic prosperity, social stability and equity, accessibility, educational opportunity as well as cultural, entertainment and recreational possibilities. The affordability of essential goods and services and employment are basic factors influencing liveability, as is access to centres providing higher-order goods and services.

Transport systems play an essential role in the liveability of communities by facilitating access to employment, education, goods and services as well as social and entertainment opportunities. Providing convenient and accessible connections to where people want to go is a key objective for building and operating the transport system.

Transport objectives

Objective 1.1: A transport system that connects communities and provides reliable access to essential goods and services across the Fitzroy region.

Liveability and lifestyle opportunities significantly impact on where individuals choose to reside. Accordingly, promoting liveability and the sustainable growth of the Fitzroy region through inclusive access to educational establishments, employment opportunities, health facilities and other essential goods and services is important. Through the expansion and maintenance of transport schemes, services and infrastructure that connect communities, and efficient and affordable access to goods and services (including recreational areas) the liveability of the region for residents can be improved.

Objective 1.2: A multi-modal transport system that offers a range of accessible, efficient and reliable transport options for residents and visitors.

Mobility decisions are heavily dependent on the availability, affordability and reliability of the transport network and services. The transport system should be fit-for-purpose and provide safe and efficient travel options for all members of the community, regardless of age or personal circumstances. This includes public and active transport facilities to increase mode choice and enhance the mobility of residents and visitors, while also supporting a decrease in road network congestion in major centres.

Objective 1.3: A transport system that is integrated with land use, providing residents and visitors with a range of viable transport options that promote active and sustainable transport modes.

Integrated and effective land use and transport planning ensures that transport infrastructure and services are aligned with land uses, making it easier for people to access jobs, services and experiences that promote health and well-being. Transport network planning should identify current and future access needs in a way that sustains economic growth, conserves the environment and supports quality of life for both residents and visitors.



Campervan at the Dawson River, Moura

Actions

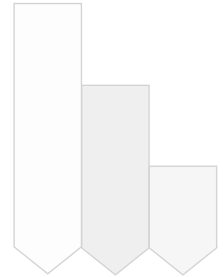
PRIORITY 1: COMMUNITY

OBJECTIVES

Objective 1.1: A transport system that connects communities and provides reliable access to essential goods and services across the Fitzroy region.

Objective 1.2: A multi-modal transport system that offers a range of accessible, efficient and reliable transport options for residents and visitors.

Objective 1.3: A transport system that is integrated with land use, providing residents and visitors with a range of viable transport options that promote active and sustainable transport modes.



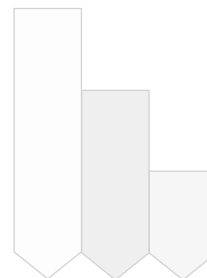
| Actions – short-term | 1.1 | 1.2 | 1.3 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|
| <p>A1.01 Public transport plan Partner with local governments to develop public transport plans for major and service centres in the region (including Gladstone, Rockhampton, Yeppoon and Gracemere) with a focus on investigating opportunities to:</p> <ul style="list-style-type: none"> improve connectivity, efficiency and service frequency between residential areas, major centres and key employment and education nodes improve connections between active and public transport modes to increase accessibility and promote patronage growth investigate the suitability of alternative service models that meet different or changing customer needs (for example, Demand Responsive Transport services). | ✓ | ✓ | ✓ |
| <p>A1.02 Pedestrian access and mobility plan Work with local government to develop a Pedestrian Access and Mobility Plan for key activity centres in cities and towns (including Rockhampton, Gladstone and Yeppoon) to strengthen and preserve walkability, urban design and local amenity.</p> | ✓ | ✓ | ✓ |
| <p>A1.03 Principal cycle network implementation Undertake planning to deliver the principal cycle network to support more cycling, more often on safe, direct and connected routes via:</p> <ul style="list-style-type: none"> standalone options analysis and business case development for cycling infrastructure on highest priority routes; and explicit provision for cycling infrastructure as part of planning for other TMR funded projects on all principal routes, in accordance with the department's Cycle Infrastructure Policy. | ✓ | ✓ | ✓ |
| <p>A1.04 Boating infrastructure Continue to prioritise investment in boating infrastructure across the region, such as at Stanage Bay and Inkerman Creek, based on an assessment of demand and input from the community and stakeholders using tools such as the <i>Recreational Boating Facilities Demand Forecasting Study</i>.</p> | | ✓ | |
| <p>A1.05 Access for people with disabilities Improve the end-to-end journey for people with a disability by working in collaboration with key stakeholders to achieve the objectives of the <i>Disability Action Plan 2018–2022</i>.</p> | ✓ | ✓ | ✓ |
| <p>A1.06 Principal cycle network plan review In collaboration with local governments, review and update the <i>Central Queensland Principal Cycle Network Plan</i> every five years and accompanying Priority Route Maps every two years for the townships and cities in the Fitzroy region. Consider as part of the review an expanded geographic scope to include additional townships across the region.</p> | ✓ | ✓ | ✓ |

PRIORITY 1: COMMUNITY (cont.)**OBJECTIVES**

Objective 1.1: A transport system that connects communities and provides reliable access to essential goods and services across the Fitzroy region.

Objective 1.2: A multi-modal transport system that offers a range of accessible, efficient and reliable transport options for residents and visitors.

Objective 1.3: A transport system that is integrated with land use, providing residents and visitors with a range of viable transport options that promote active and sustainable transport modes.

**Actions – medium/long-term****1.1 1.2 1.3****A1.07 Community based transport**

Support local government in identifying opportunities to improve access to transport services suited to their communities, particularly isolated communities such as Woorabinda. This may include investigating new and existing shared transport services and community-based transport options, and how these may be supported through technology and tools that allow coordination between transport providers as well as the integration of end-to-end journey planning, booking and payment options.

✓ ✓ ✓

A1.08 Network and area studies

Undertake and update multi-modal network and area studies and support implementation of these plans through operational planning where appropriate to plan for anticipated future transport demands, including those relating to population, employment and economic changes and growth, including for major centres such as Rockhampton, Gracemere and the Capricorn Coast, Gladstone and Emerald.

✓ ✓ ✓

A1.09 Technology

Partner with local government through the Regional Roads and Transport Groups to identify facilitation requirements and responsibilities, network impacts and potential benefits of cooperative and automated as well as low and zero emission vehicles in the region and inform strategic policy and planning. The work should align with *The Future is Electric - Queensland's Electric Vehicle Strategy*, and other relevant statewide strategies and plans, to ensure integration and connectivity.

✓ ✓ ✓

A1.10 Active transport

Support local governments to deliver targeted promotion, engagement, behaviour change and educational activities to increase use of new high priority principal cycle routes under Transport and Main Roads' Cycle Network Local Government Grants program.

✓

A1.11 Long-distance passenger transport services improvement investigation

In collaboration with community and industry, explore the feasibility of improving long distance passenger services, including additional routes, scheduling and service integration, to improve accessibility and connectivity within and beyond the region. Options to be explored include potential east-west air services (such as between Rockhampton, Emerald and Longreach) and road-based services which provide improved access to regional activity centres for communities with low car ownership (such as Woorabinda). Where possible, opportunities to improve fare affordability should also be identified.

✓ ✓

CASE STUDY: Demand Responsive Transport

Demand Responsive Transport (DRT) is a new type of shared transport designed to make it easier to get around a local area when buses and trains aren't available. It is being trialled across Logan (in South East Queensland) to make it easier for Logan residents who do not have walkable access to buses and trains to get around their local area. The trial is offered across a number of suburban areas.

Residents register to set up a DRT account and book a service by phone and provide pick up location and destination, planned travel time and information on any special requirements such as luggage or accessibility information. Users also receive automated phone calls as a reminder of an upcoming trip and SMS alerting that the driver is approaching.

DRT sends out smaller vehicles like sedans or mini vans to pick up several passengers at once and take them to selected destinations. This includes transport to local bus and train stations (to connect with other TransLink services) and selected local facilities - such as shops, medical centres and libraries.

The DRT model offers a range of benefits with greater flexibility and convenience for customers, and improved efficiency in service delivery. Service providers use sophisticated route optimisation software to create genuine shared trips – not just vehicle sharing – grouping passengers into flexible service routes. The pre-booked, shared transport services are flexible and adapt to customer demand. Unlike a typical bus, DRT changes its routes and vehicles to suit the number of passengers who want to travel and where they're going.

By matching vehicles and travel timetables with actual demand, DRT offers a more efficient way to provide transport for people living in areas that may be lacking public transport services due to population size or because the geography limits access of traditional vehicles like buses. It also provides the most efficient vehicle use during times of lower demand.

DRT may be an alternative service model that could be adopted in the Fitzroy region as part of a wider Public Transport Plan to improve access within major towns and centres in the region.



Maxi taxi collecting passengers in Logan trial



Figure 7: Priority 1 region map

This map is indicative to illustrate proposed strategies for the region and is not intended to be accurate in terms of exact geographic extent.

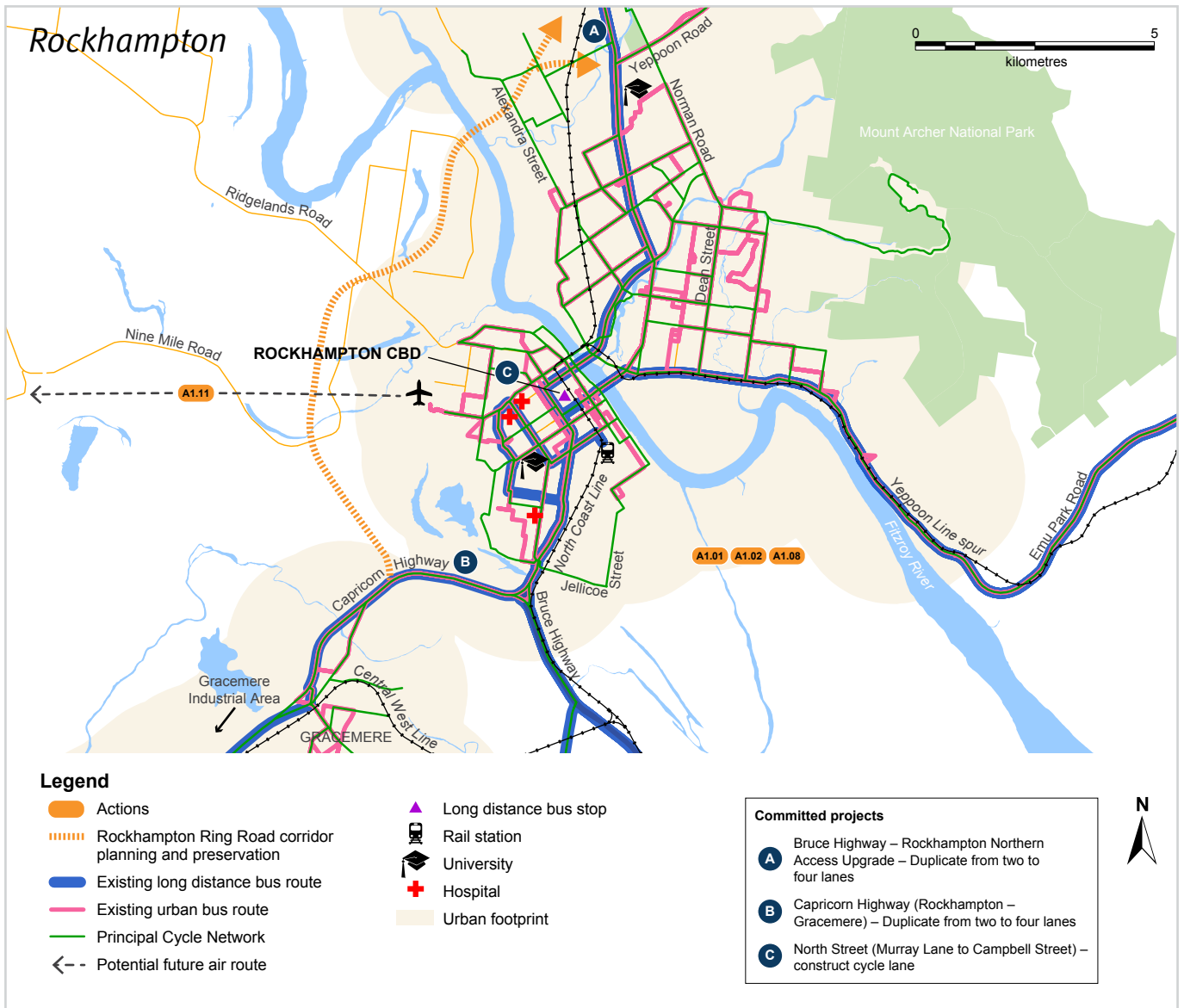


Figure 8: Priority 1 Rockhampton map

This map is indicative to illustrate proposed strategies for the region and is not intended to be accurate in terms of exact geographic extent.

4.2 Priority 2: Economic development



Gracemere saleyard

A transport system that supports economic growth and diversification by providing efficient and effective access to markets and destinations.

A transport system that supports economic development and diversification will help position the region for a strong economic future. This will support growth in jobs, enable businesses to expand and support the development of new economic opportunities for the region's residents.

Reliable and efficient supply chains are critical in managing the freight task for the Fitzroy region. Supporting productivity with legible and consistent networks will underpin the region's economy. Productive supply chains, which are able to meet current and future demand, help attract business and improve profitability for industry.

At the centre of Queensland, the Fitzroy region plays a significant role in the movement of Queensland's freight, with origins and key destinations in the region.

Enabling people to efficiently and safely reach their place of work contributes meaningfully to the regional economy. Travel to work in the Fitzroy region is principally undertaken using private vehicles, which places pressure on the road network. This can result in increased road safety considerations, particularly for workers in the resource industry who drive long distances to their place

Priority 2 aligns to:

- the Transport Coordination Plan's objective for efficiency and productivity
- the *State Infrastructure Plan's* focus on integrated transport infrastructure that improves the efficiency of freight and unlocks the potential of critical supply chains
- the *Central Queensland Regional Plan's* outcome for agriculture and resources industries within the Central Queensland region to continue to grow with certainty and investor confidence.

of work. The transport system needs to support these movements into the future and provide opportunity for people to shift to other transport modes for their journey to work.

Providing for the movement of tourists to destinations throughout the region will support the growth of the self-drive tourism market. The benefits of self-drive tourism to rural and regional businesses include expenditure on leisure activities and attractions, overnight stopovers and basic travel necessities (such as fuel and food).

Transport objectives

Objective 2.1: An integrated transport network that increases the productivity and efficiency of supply chains.

The efficient movement of goods between producers, manufacturers and customers is vital to support economic growth in the region. Improvements to transport infrastructure that increase the efficiency of the freight network will foster a more productive supply chain. The optimisation of industry supply chains, through holistic long-term planning for freight movements, will improve network connectivity and productivity.

Objective 2.2: A transport system that provides safe and reliable access to the region's natural assets and tourism destinations.

A well-integrated and safe transport network is required to support the tourism industry and attract more tourists to the region. Ease of access, wayfinding signage, clear and legible route choices, adequate rest stops and scenic lookouts enhance the region's appeal to potential tourists. Well-maintained and enhanced transport infrastructure also promotes access to the region via bus, coach, rail, air and sea.



Rockhampton Airport

Actions

PRIORITY 2: ECONOMIC DEVELOPMENT

OBJECTIVES

Objective 2.1: An integrated transport network that increases the productivity and efficiency of supply chains.

Objective 2.2: A transport system that provides safe and reliable access to the region's natural assets and tourism destinations.

| Actions – short-term | 2.1 | 2.2 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| <p>A2.01 Regional freight plan Develop an integrated multi-modal freight plan to identify and prioritise freight network improvements to support supply chain efficiency across the region. The plan will consider current and emerging freight demands including strategic locations for heavy vehicle rest and breakdown facilities; access and movement requirements for oversize overmass and high productivity vehicles; first and last mile links; supply chain coordination models, and the role of the region's ports (such as the Port of Gladstone and Port Alma), airports, rail terminals and key freight routes.</p> | ✓ | |
| <p>A2.02 Corridor, route and link planning Update corridor, route and link planning for the State Strategic and State Regional road network in the region. Identify important corridors and links which require inter and intra-regional planning and coordination to enhance transport network connectivity to and within the region. Examples include: Gladstone-Benaraby Road, Gladstone–Mt Larcom Road, Rockhampton–Yeppoon Road, Gavial–Gracemere Road, Fitzroy Developmental Road, and the Dawson Highway between Gladstone and Biloela.</p> | ✓ | ✓ |
| <p>A2.03 Tourism In partnership with state and local tourism agencies, undertake a regional transport needs analysis to identify the travel needs of tourists and visitors traveling to the region's key tourism destinations, such as the gemfields around Emerald, Carnarvon Gorge, Agnes Water and 1770, Southern Great Barrier Reef Islands, Mt Morgan, Yeppoon and Great Keppel Island Group.</p> | | ✓ |
| <p>A2.04 Port access Work with stakeholders to identify multi-modal access requirements for freight to the region's ports, including Gladstone Port and Port Alma.</p> | ✓ | |
| <p>A2.05 Supporting active transport tourism Provide advice to local government, other state government agencies and tourism bodies to support planning, design and construction of rail trails and tourism routes in the region to support active transport tourism – for example, the rail trail linking Yeppoon to Rockhampton (extension of the Capricorn Coast Pineapple Rail Trail) and the cycle route linking Emu Park to Yeppoon.</p> | | ✓ |
| <p>A2.06 Bridge renewal Undertake regional bridge renewal investigations and planning for bridge replacements or structural enhancements across the state controlled road network for high priority structures in the region. This includes undertaking options analysis/business case development to rehabilitate or replace vulnerable culverts or bridges on roads such as the Dawson Highway, Burnett Highway and Rockhampton-Yeppoon Road.</p> | | ✓ |

PRIORITY 2: ECONOMIC DEVELOPMENT (cont.)**OBJECTIVES**

Objective 2.1: An integrated transport network that increases the productivity and efficiency of supply chains.

Objective 2.2: A transport system that provides safe and reliable access to the region's natural assets and tourism destinations.

Actions – medium/long-term**2.1****2.2****A2.07 Defence**

Undertake long-term planning to ensure that the transport network is appropriate to meet the requirements of the Defence industry in the Fitzroy region. Planning should consider the Shoalwater Bay Training Area, Rockhampton Airport, Port Alma and Gladstone Port.

✓

A2.08 Access to industrial areas

Work with stakeholders to plan for safe and appropriate levels of access to industrial areas in the region, for example the industrial areas at Yamala, Gracemere, Parkhurst and Gladstone (including the Gladstone State Development Area).

✓

A2.09 North Coast Rail line

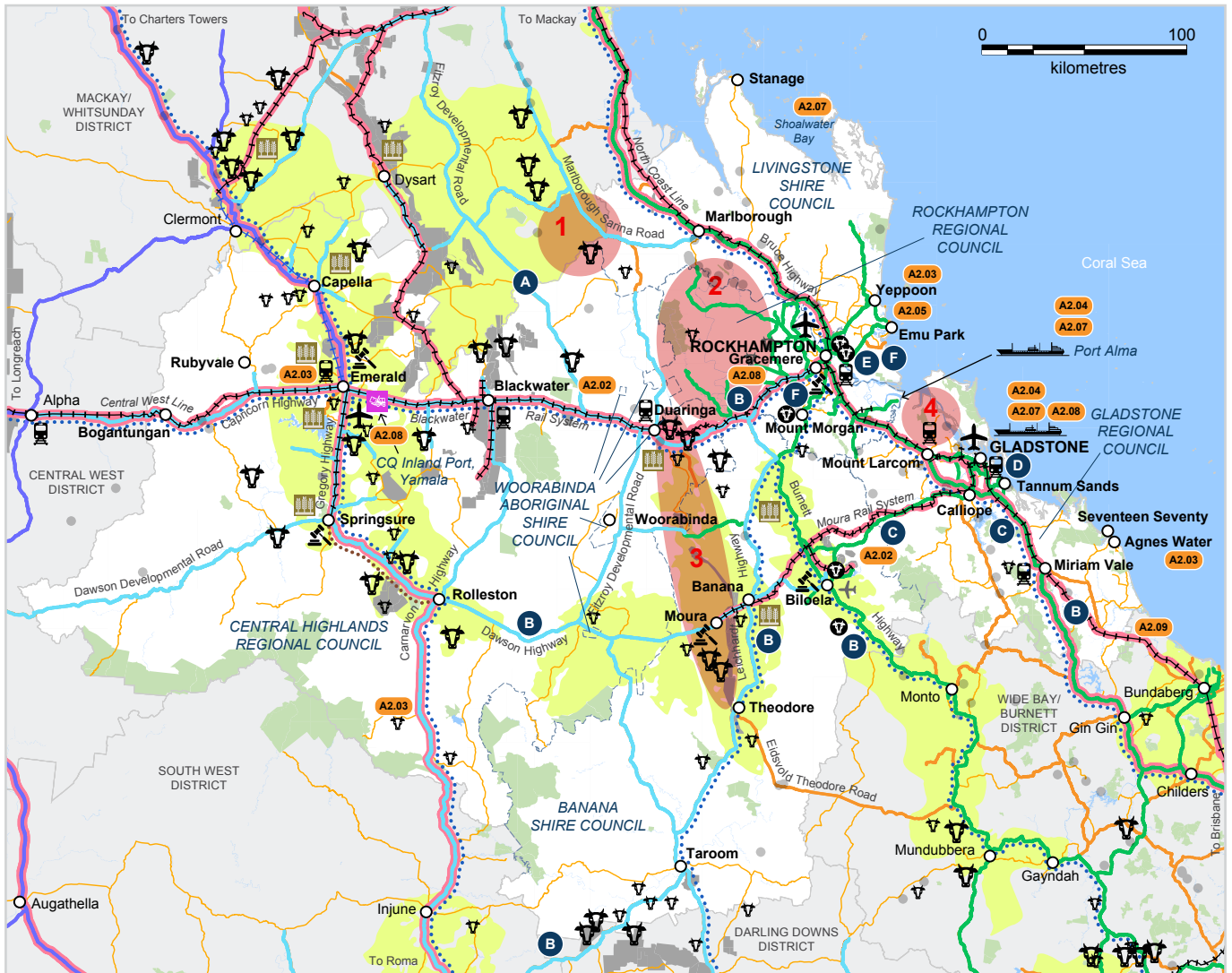
Develop a North Coast Line Action Plan to prioritise planning that will support rail freight and passenger efficiency improvements. This may include opportunities to reduce the number of level crossings, increase the length of passing loops, improve flood resilience, and re-align low speed sections of the North Coast line.

✓

✓



Cotton gin adjacent to the Central Queensland Inland Port site, Yamala



Legend

National Key freight routes

- Road
- - - Rail

Multi-combination vehicle routes (state-controlled roads)

- B-double (23-25m)
- B-double and Type 1 road train
- B-double and Type 1 and 2 road train
- - - Other rail lines
- - - Primary stock route
- - - State strategic touring route

- Cattle feedlot (1000+ head of cattle)
- Cattle feedlot (500-999 head of cattle)
- Cattle processing
- Livestock saleyard
- Grain silos
- Inland port
- Coal bearing areas
- Other mining sites
- Actions
- Important agricultural areas
- National park
- Ocean, lakes, rivers

Growing Central Queensland – potential agriculture precincts⁶³

- 1 Mackenzie River Agricultural Corridor
- 2 Fitzroy River Agricultural Corridor
- 3 Dawson River Agricultural Corridor
- 4 Gladstone Agribusiness Corridor

Committed projects

- A Fitzroy Developmental Road – undertake transport project planning
- B Construct/replace bridges (various locations)
- C Strengthen/upgrade bridges (various locations)
- D Gladstone Port Access Road upgrade planning
- E Yeppoon Rail Line upgrade
- F Rockhampton Ring Road corridor planning and preservation



Figure 9: Priority 2 region map

This map is indicative to illustrate proposed strategies for the region and is not intended to be accurate in terms of exact geographic extent.

63 Regional Development Australia Fitzroy and Central West Inc. (2014). *Growing Central Queensland*. www.rdafcw.com.au/growing-central-queensland/.

Priority Port of Gladstone Master Plan

The Port of Gladstone is identified as one of only four priority ports under the Sustainable Ports Development Act 2015, which recognises its significance to the future of the region and Queensland. The Queensland Government is leading master planning for the priority Port of Gladstone as required by the *Sustainable Ports Development Act 2015*, and in response to the *Reef 2050 Long-Term Sustainability Plan*.

The priority Port of Gladstone is Queensland's largest multi-commodity port, handling more than 30 different products including the export of coal, alumina, cement, Liquefied Natural Gas (LNG), petroleum and grain. It also supports cruise shipping and the tourism

industry. The priority Port of Gladstone underpins the growth and prosperity of the Fitzroy region and its sustainable growth will enable opportunities for regional employment, trade and investment into the future, highlighting its significance to the regional, state and national economies.

On 5 November 2018, the priority Port of Gladstone master plan was finalised and released. The master plan establishes a long-term strategic outlook for the land and marine areas considered important for the efficient development and operation of the port and associated supply chain infrastructure, to ensure port and port-related development is sustainably managed while protecting the Great Barrier Reef.



Port of Gladstone

CASE STUDY: Improving cattle supply chains

Moving cattle from the farm gate to market is a key factor affecting the profitability of the cattle industry. Transport impacts on animal condition and profitability, especially in Northern Australia where there are long distances from production to market. Sufficient access to truck stops on freight corridors is essential to manage driver fatigue and animal welfare. Disruptions to the transport network are also common during wet seasons, preventing stock reaching ports or abattoirs.

The inefficient movement of cattle impacts economic viability and reduces the industry's profitability and resilience and can erode the geographic advantage of the north's proximity to Asia-Pacific markets.

To understand and assess the efficiency of agricultural supply chains, CSIRO developed the Transport Network Strategic Investment Tool (TraNSIT). The tool is used to understand the impacts of infrastructure and policy changes on agricultural supply chains. The tool has

been used to assess infrastructure improvement scenarios linked to the Federal Government's Northern Australia Beef Roads Programme.

For example, TranNSIT was used to assess potential cattle freight cost savings associated with improving access (from B-double access to Type 1 road train access) to abattoirs in Rockhampton. The assessment found that improved access was expected to deliver a saving of \$1.63 per head of cattle. The Queensland Government subsequently committed \$10 million to a program of road network upgrades, which were completed in February 2017, providing access for Type 1 road trains. These upgrades have removed the requirement for road trains travelling between Gracemere saleyards and the Rockhampton abattoirs to breakdown prior to entering Rockhampton from the Capricorn Highway, leading to improved supply-chain efficiency and reduced transport costs.⁶⁴



Cattle property, Cooper Downs

⁶⁴ CSIRO. (2016). *Transport Network Strategic Investment Tool (TraNSIT) Application to Northern Australia Beef Roads Program*.

4.3 Priority 3: Safety



Heavy vehicle passing through road works

Priority 3 aligns to:

- the Transport Coordination Plan's objective for safety and security
- the *State Infrastructure Plan*'s focus on infrastructure that improves the capacity, safety and security of the transport network
- the *Central Queensland Regional Plan*'s priority outcome to achieve community benefits through improving accessibility to destinations and improved safety and amenity.

A safe transport network that meets the demands of all users and manages interactions between incompatible network users.

Transport infrastructure that provides for safe travel is only one element of transport network safety; transport user behaviour and vehicles are also significant contributors. Customers should feel safe using the transport system and understand their role in ensuring the safety of themselves and other travellers. The safety of all transport users is fundamental to the planning and management of the transport network. Arriving at a destination safely and without incident is often assumed but each day crashes occur. Fortunately, not all these are serious but even those crashes that only result in vehicle damage and minor injury have personal and economic implications.

Improving transport network safety can be achieved through a combination of improved infrastructure, information, communication technology and education. Examples of initiatives that support and encourage safety include rest areas to mitigate driver fatigue and improved education on the unique characteristics of driving on remote roads (such as interaction with road trains and driving on unsealed roads).

Transport objectives

Objective 3.1: A transport network that is safe and reliable for all users.

Enhancing and managing transport infrastructure is essential in creating a reliable transport network, particularly for road users. The standard of road infrastructure must support all road users—including cyclists and pedestrians—to travel safely, with reduced rates of crashes, injuries and fatalities. Transport infrastructure can improve safety by separating incompatible road users (for example, cyclists and trucks). A safe transport network also provides a better travel experience for residents and visitors due to an increased perception of personal safety and security.

Objective 3.2: All transport users understand safe travel behaviour.

Education and awareness programs that target both residents and travelling visitors have the ability to create a sense of accountability and responsibility for all road users. Specifically, these programs encourage road users to adhere to road and transport rules while making smart decisions about how they travel and how to be proactive about safety.



Cyclist using on-road cycle lanes

Actions

PRIORITY 3: SAFETY

OBJECTIVES

Objective 3.1: A transport network that is safe and reliable for all users.

Objective 3.2: All transport users understand safe travel behaviour.

| Actions – short-term | 3.1 | 3.2 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| <p>A3.01 Intelligent transport systems Identify opportunities for increasing the use of technology for signage, communicating real-time information and road condition monitoring to improve the accuracy and timeliness of information on network closures, weather and safety events.</p> | ✓ | ✓ |
| <p>A3.02 Education Continue to develop region specific education, promotion and communication campaigns in partnership with community, industry and other authorities to encourage safe travel behaviour on roads, public transport and active transport pathways in the region.</p> | | ✓ |
| <p>A3.03 Road safety treatments Continue to identify, prioritise and nominate locations, links and networks for road safety treatments. Potential treatments for consideration include installation of wide centre-line on sections of Gladstone-Benaraby Road and the Capricorn Highway to reduce the risk of head-on collisions, traffic operation plans for managing incidents on the Bruce Highway, intersection treatments which prioritise emergency vehicle access and signage indicating sections of road with a high crash history.</p> | ✓ | |
| <p>A3.04 Boating safety Undertake boating safety initiatives for coastal and inland waterways and waterbodies.</p> | ✓ | ✓ |
| <p>A3.05 Improving mobile coverage Investigate potential solutions to improve mobile communication coverage across the region's transport network (for example, at recognised rest stops).</p> | ✓ | ✓ |
| <p>A3.06 Rail crossings Continue to improve safety at rail level crossings through initiatives such as reducing the number of level crossings, improving infrastructure and exploring new technology to align with the <i>Queensland Level Crossing Safety Strategy 2012–2021</i>.</p> | ✓ | ✓ |
| <p>A3.07 Stock routes Continue to review and make recommendations to the Department of Natural Resources, Mines and Energy for primary stock routes throughout the Fitzroy region to improve road safety and the efficiency of agricultural practices.</p> | ✓ | ✓ |
| Actions – medium/long-term | | |
| <p>A3.08 Rest stops Determine investment priorities for new or upgraded rest areas to address driver fatigue risks, encourage safe travel, and to provide sufficient capacity and amenities to enhance customer experiences and safety. Ensure planning and provision of rest areas addresses safety risks associated with potential for incompatibility or conflicts between trucks and recreation vehicles.</p> | ✓ | ✓ |

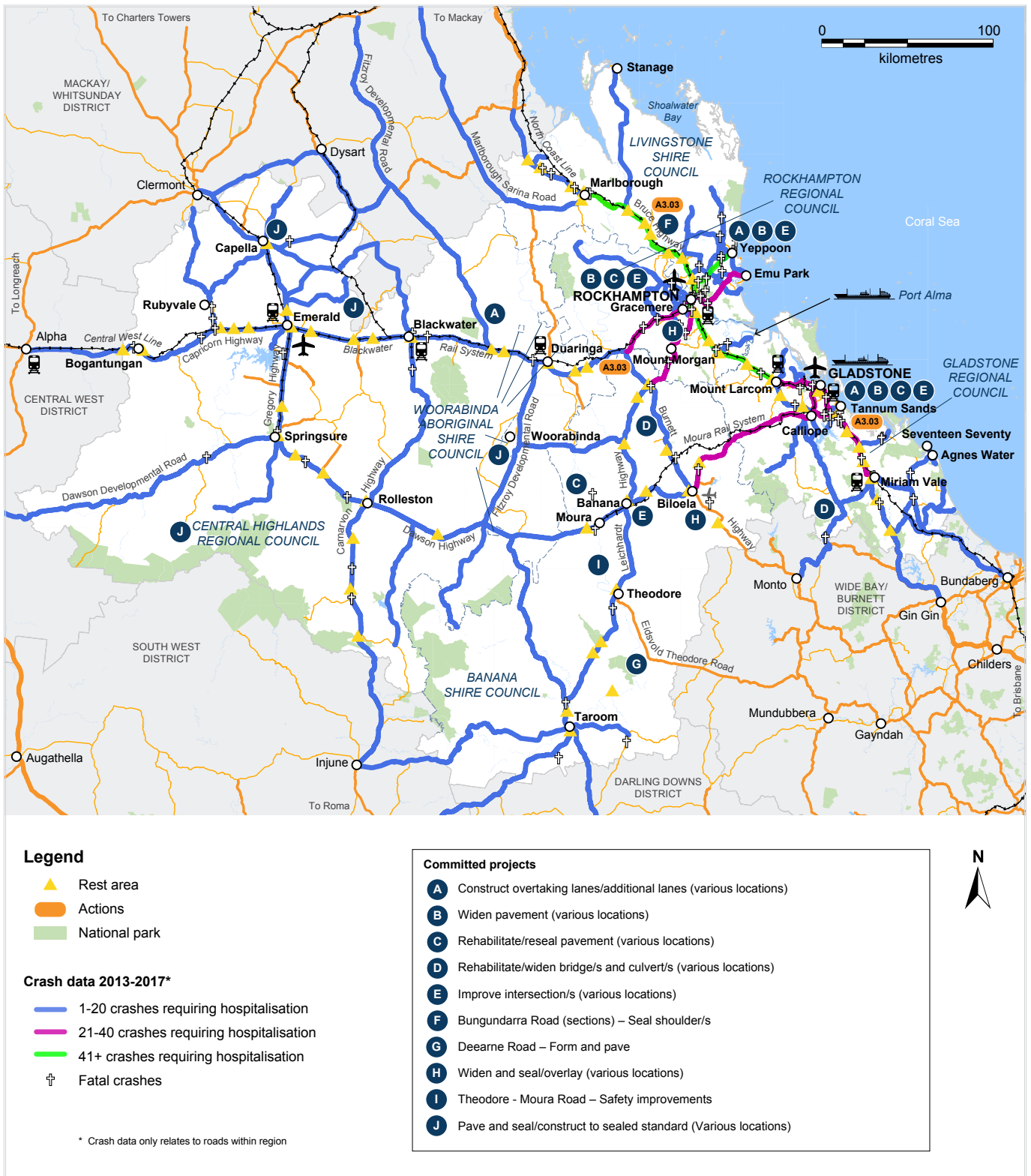


Figure 10: Priority 3 region map

This map is indicative to illustrate proposed strategies for the region and is not intended to be accurate in terms of exact geographic extent.

CASE STUDY: Wide centreline treatment

Crashes involving vehicles crossing over the centreline, causing head-on collisions, are one of the most severe types of crashes. The Department of Transport and Main Roads is committed to improving safety along Queensland roads, particularly on long stretches of highways where driver fatigue and unsafe overtaking can contribute to these head-on crashes. In recent years wide centreline treatments have become internationally recognised as an effective and relatively low-cost measure to reduce head-on collisions.

Wide centreline treatments replace the existing dividing centreline/s on a road with two new lines approximately one metre apart, which creates a greater distance

between opposing directions of traffic. This extra distance provides additional reaction time if a driver unintentionally drifts across the centreline towards oncoming traffic.

Wide centreline treatments also increase road safety by providing additional space when motorists are passing cyclists or vehicles that are stopped on the side of the road, as well as when they are overtaking, as it allows for better visibility of oncoming traffic. The treatment is often applied to heavily trafficked, high speed roads and highways and usually requires widening of the road shoulder to accommodate the wider centreline.



Wide centreline treatment, Bruce Highway, Gin Gin

4.4 Priority 4: Network resilience and sustainability



Flooded road, Rockhampton floods, 2011

A resilient and sustainable transport network that mitigates the impacts of extreme weather events and supports natural values.

Development and operation of a resilient and sustainable transport system supports liveability for residents, economic development and protection of the natural environment. The effective prioritisation, coordination and management of transport infrastructure and operations contribute to achieving a sustainable, efficient and connected transport network.

Resilience is the ability of the transport system to retain performance during a disaster, or return to a normal state of operation (or a desired level of functioning) quickly following a disaster. The resilience of the transport network is critical in emergency response immediately after a disaster, with first responders requiring safe access to address damage and community impacts.

Extreme weather can lead to road closures, infrastructure damage and delays across the region. The impacts cover not only the period during which the road is closed due to inundation or damage, but the time it takes for road or bridge inspection prior to reopening, restrictions until damage is addressed and delays associated with road works to repair damage. Resilience is also important in improving the reliability of the transport network, as well as decreasing repeat maintenance costs.

Priority 4 aligns to:

- the Transport Coordination Plan's objectives for environment and sustainability
- the *State Infrastructure Plan's* focus on reliable transport infrastructure that is resilient and adaptive to weather events and climate change
- the *Central Queensland Regional Plan's* priority outcome to improving the reliability and condition of transport networks affected by population and resource sector growth and the networks' resilience during natural disasters.

Protecting natural values is important to the community and the ongoing success of the region's tourism industry. Development of a sustainable transport system which minimises environmental impacts will support protection of the region's natural values. Supporting and providing opportunities for sustainable transport options, including walking, cycling, public transport and low and zero emission vehicles, is important to the development of a more environmentally sustainable transport network.

Transport objectives

Objective 4.1: A resilient transport network that keeps the Fitzroy region open and moving following weather events, and provides the emergency connections needed to keep the region safe.

The closure of major roads, ports, airports and rail tracks has significant impacts on freight transport, local businesses, visitors and residents in the region.

Network closures are often inconvenient and can significantly increase travel time and cost. Importantly, closures can also be unsafe and reliable access is required to support emergency connections (including access for first responders following incidents and emergencies) and enable safe network use. Improving the resilience of the transport network increases the safety of the region.

Objective 4.2: A sustainable transport system that supports protection of the natural environment.

The Fitzroy region includes a range of natural attractions which enhance liveability and amenity for residents and attracts tourists. Protecting lifestyle and environmental values is critical to the prosperity of the region. Attracting people to live in or visit the region supports local businesses and helps grow the tourism industry.

The transport network will be developed in a way that protects and enhances the region's natural features. A transport system that is compatible with the environmental and lifestyle values of the region will:

- lessen impacts on the environment
- protect lifestyle and amenity for communities
- support and promote more tourism in the region.

Actions

PRIORITY 4: NETWORK RESILIENCE AND SUSTAINABILITY

OBJECTIVES

Objective 4.1 A resilient transport network that keeps the Fitzroy region open and moving following weather events, and provides the emergency connections needed to keep the region safe.

Objective 4.2 A sustainable transport system that supports protection of the natural environment.

| Actions – short-term | 4.1 | 4.2 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| <p>A4.01 Flooding investigations</p> <p>Undertake transport network flooding investigations across the region to identify key flooding locations, such as low lying areas affected by the Fitzroy River, Nogoia River and Dawson River, and understand requirements and improvements needed to reduce the impact of flooding and improve the resilience of the network.</p> | ✓ | |
| Actions – medium/long-term | | |
| <p>A4.02 Disaster management</p> <p>Undertake critical transport network response planning and support local and district disaster management groups to improve accessibility and safety during extreme weather events (for example, improving access to Emerald in large rainfall events) including the resilience and reliability of communication systems and processes.</p> | ✓ | |
| <p>A4.03 Climate change</p> <p>Consider the effect of climate change in the planning of the transport network in the Fitzroy region, through long-term scenario modelling and analysis.</p> | | ✓ |
| <p>A4.04 Sustainable infrastructure</p> <p>Consider natural systems and environmental processes when undertaking planning, design and business cases for major transport infrastructure projects. This includes, for example, minimising impacts on the Great Barrier Reef Marine Park, the Great Barrier Reef Coast Marine Park and declared fish habitat areas, along with adjacent estuarine and marine habitats.</p> | | ✓ |

CASE STUDY: Flinders Highway Flood Study – a route approach to addressing flood immunity

Northern Queensland's Flinders Highway runs east–west across 770 kilometres connecting Cloncurry, and towns along its route, to Townsville. The Flinders Highway has a history of poor flood performance with long and frequent road closures during the wet season. Although previous studies and infrastructure projects had addressed a handful of individual crossings, there was no means of assessing overall flood immunity or impacts for the overall route.⁶⁵

The Flinders Highway Flood Study assessed the entire route in terms of flood immunity and impacts on the efficient movement of goods and services and providing more reliable access for tourists and the community. A tool was developed to inform decision making through a holistic assessment of highway flooding and its impacts by combining hydrologic, hydraulic

and economic assessments and accounting for simultaneous closures at multiple crossings during storm events. The tool provides Transport and Main Roads with a means of consistently comparing upgrade options and prioritising investment in structures that improve overall flood immunity, thereby providing the greatest economic benefit.



Water level marker indicating flooding depth on the Flinders Highway

CASE STUDY: Foamed bitumen pavements thwart Tropical Cyclone Debbie

Tropical Cyclone Debbie crossed the Queensland coast near Airlie Beach in late March 2017, unleashing damaging winds and torrential rain. It then tracked south to deliver wide spread flooding in several regions, including Rockhampton and areas in south-east Queensland and northern New South Wales.

Innovations in pavement technology have provided for a more resilient transport network. The flooding aftermath of Cyclone Debbie tested the practical effectiveness of foamed bitumen pavement when three-metre floodwaters inundated Camp Cable Road on the Mt Lindesay Highway. There were concerns that, with the extent of the flooding, road condition would be compromised. When waters receded, the foamed bitumen pavement was found completely intact.

Recent heavy rainfall has also demonstrated the resilience of the pavement on the Bruce Highway near Bowen, in Warrill View, south of Ipswich, and on the Yeppen floodway in Rockhampton.

Foamed bitumen pavements are an innovation of Transport and Main Roads and when constructed in the right environment with appropriate stabilisation are more resilient to flooding. They have survived unscathed in some of the worst-hit parts of the state and

display impressive strength in the face of catastrophic weather. While some conventional thin asphalt/granular pavements suffered catastrophic damage from flooding, foamed bitumen pavements in similar circumstances have shown to be highly resilient.

By utilising foamed bitumen, Transport and Main Roads is not only saving on the cost of construction—foamed bitumen costs less per cubic metre than asphalt—but also on the cost of maintaining and rehabilitating roads after natural disasters like ex-Tropical Cyclone Debbie.



Flooding on Mt Lindesay Highway, March 2017

65 Department of Transport and Main Roads (2016). *Flinders Highway Flood Study*.

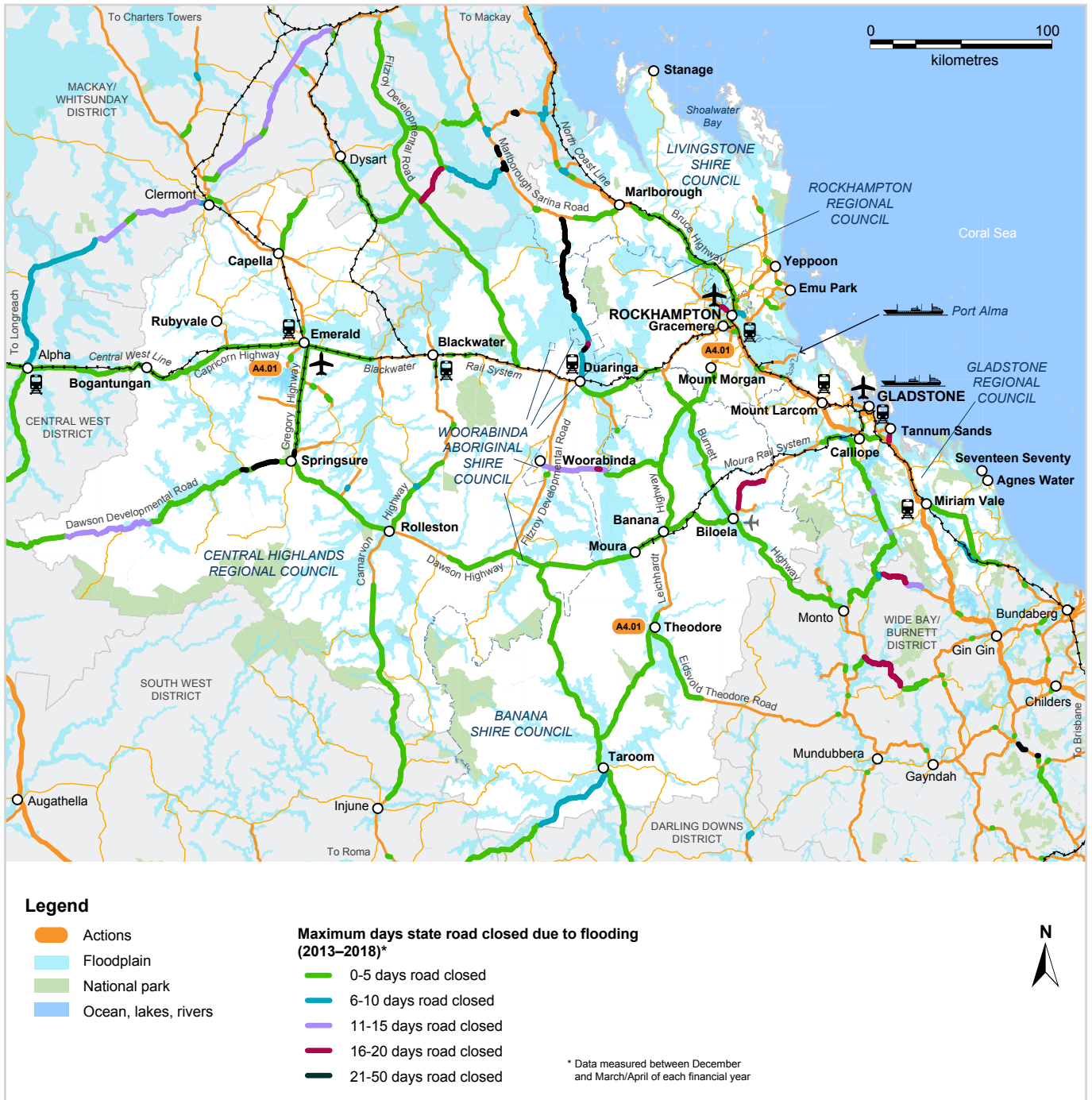


Figure 11: Priority 4 region map

This map is indicative to illustrate proposed strategies for the region and is not intended to be accurate in terms of exact geographic extent.



Cotton field at Kiely's Farm, Emerald



Snorkelling, Heron Island

5. Implementation



5.1 Taking action

Delivering the *Fitzroy Regional Transport Plan* will require:

- further integration with the strategic direction of the region’s local governments
- continued engagement with our stakeholders and customers
- collaborative and considered decision making
- a drive from all partners to deliver a safer, more efficient, reliable and integrated transport network.

This Plan will be used to inform transport planning priorities and investment decision making for the region. The Plan will ensure that future investments address priorities that matter to customers, stakeholders and the community.

Figure 12 shows the importance of the Regional Transport Plans in the Transport and Main Roads investment lifecycle.

Transport and Main Roads provides opportunities for customers to provide input into planning actions outlined in this plan via the department’s website. Information on our projects including planning, studies and construction projects can be found at www.tmr.qld.gov.au/projects.

Transport and Main Roads and its planning partners are responsible for ensuring the priorities and actions in the Plan are realised. They will be delivered by:

- **Informing the *Queensland Transport and Roads Investment Program (QTRIP)***
QTRIP is released annually. It is a funded program of work that will be delivered over the upcoming four years. Projects are listed on QTRIP after having gone through an investment prioritisation process that will be informed by this Plan.
- **Aligning with the *State Infrastructure Plan***
Regional Transport Plans will inform the programs of work within the *State Infrastructure Plan*. QTRIP informs the *State Infrastructure Plan*’s construction pipeline. Regional Transport Plans align planning and investment frameworks with the region’s challenges and opportunities.
- **Being considered in local and federal government investment decisions and plans**
This Plan has been prepared in consultation with other levels of government and considers their strategic planning and policy documents.
- **Delivering the Transport System Planning Program (TSPP)**
The TSPP is a rolling program of planning projects across all modes and all regions with projects ranging from network to link level and investment proposal activities. Demonstrated alignment with RTPs is essential for planning projects to be eligible for funding under the TSPP.

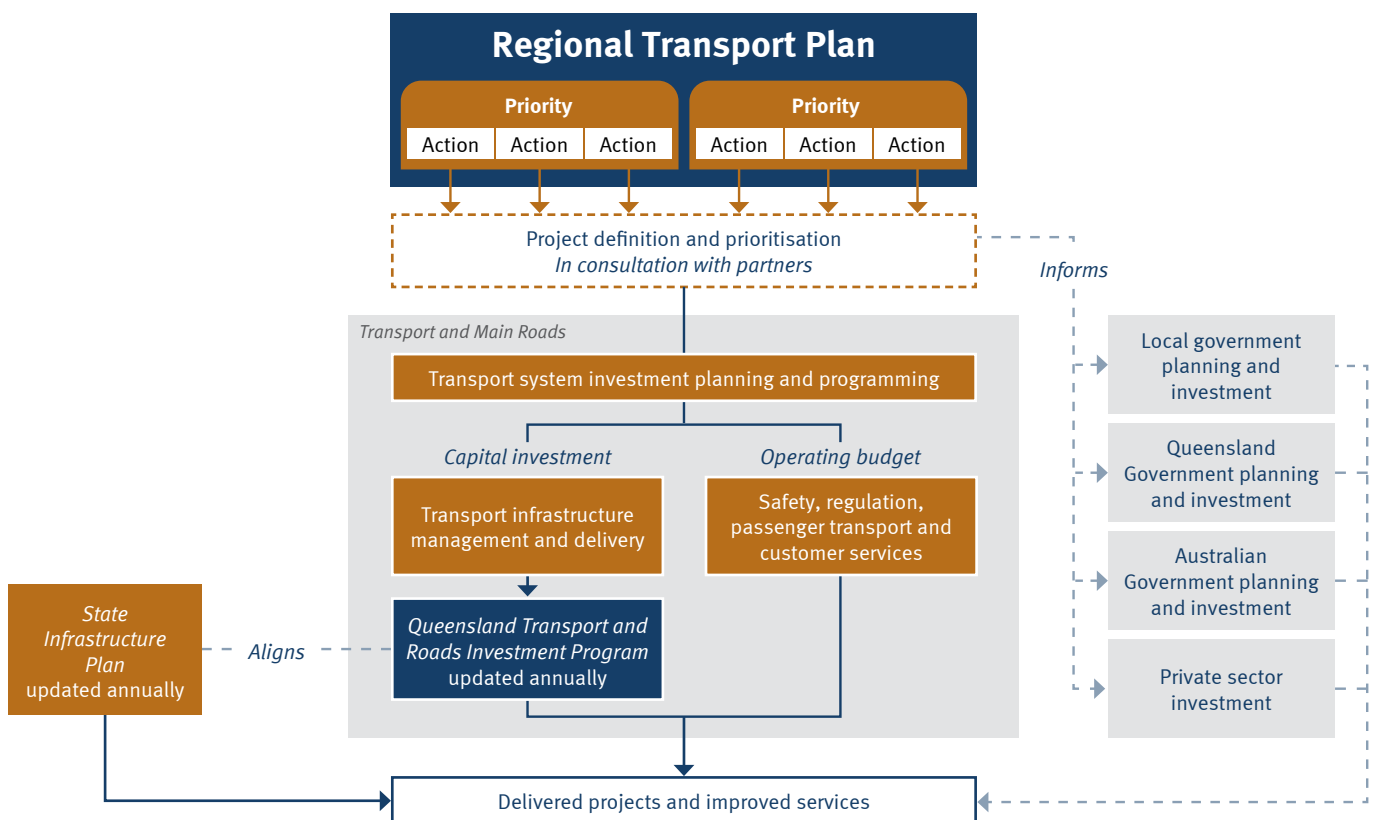


Figure 12: Regional Transport Plans are a critical step in Transport and Main Roads investment lifecycle

5.2 Delivering in partnership

More can be achieved when partnering with stakeholders to deliver shared goals using collective expertise and resources. Throughout the development of the *Fitzroy Regional Transport Plan*, Transport and Main Roads has built relationships with stakeholders from all levels of government, business and industry. These relationships will be further developed in delivering the actions outlined in this Plan. Opportunities for partnering include:

- collaborative planning leveraging knowledge from researchers, universities and education providers
- inviting project development support from individuals or organisations with an interest in implementing an initiative or action
- supporting and encouraging private sector investment through project facilitation to accelerate action delivery and realise economic or commercial benefits, for example, through investment facilitation or public-private partnerships
- providing resource support such as human resources, equipment or material.

Cooperative transport planning is the foundation for delivery of Regional Transport Plans. Each Plan will be delivered with a focus on cooperation, coordination and collaboration. This approach builds on the framework for inter-agency cooperation established within the Roads and Transport Alliance (RTA). The RTA is a partnership between Transport and Main Roads and the Local Government Association of Queensland, on behalf of local governments, for the stewardship of Queensland's regional road and transport network.

Local governments together with Transport and Main Roads form Regional Roads and Transport Groups (RRTGs). Moving forward RRTGs will work collaboratively to prioritise investment on road and transport infrastructure and should evolve further to influence the strategic planning and management of regional transport networks. This includes reviewing and identifying specific economic drivers, opportunities and challenges as they change over time to inform project identification and prioritisation.

The priorities and actions outlined in this Regional Transport Plan will help focus RRTGs in their approach to strategic transport planning and local transport infrastructure investments.



Gem Gallery, Debarado Mine, Rubyvale

5.3 Measuring success

Overall, the effectiveness of this Plan within the region will be measured against the measures of success outlined for each priority (Figure 13). These align to Transport and Main Roads' *Transport Coordination Plan 2017–2027* and will allow the department to track if Regional Transport Plans are meeting transport system objectives.

It is important to note that some of the measures of success may be updated as required to ensure they continue to provide an effective measurement of performance.

PRIORITY 1: COMMUNITY

| MEASURE OF SUCCESS | PROPOSED INDICATOR | SOURCE |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Level of transport disadvantage decreases. | Proportion of population in areas of unmet transport need (high mobility disadvantage and not served by public transport). | Transport and Main Roads |
| Greater access and connectivity to places, services and information. | Proportion of the population with good accessibility to a range of essential services in urban areas (by walking, cycling or public transport).* | Transport and Main Roads |
| Proportion of people choosing to walk, cycle and take public transport increases. | Proportion of people choosing to walk, cycle and take public transport to work [^] . | Australian Bureau of Statistics |

PRIORITY 2: ECONOMIC DEVELOPMENT

| MEASURE OF SUCCESS | PROPOSED INDICATOR | SOURCE |
|-------------------------------------------------|--------------------------------------------------------------------------|--------------------------|
| Freight productivity improves. | Heavy vehicle operating costs | Transport and Main Roads |
| Transport supports the region's tourism economy | Percentage variation from posted speed limit on state-controlled roads** | Transport and Main Roads |

Figure 13: Measures of success and proposed indicators

* Rockhampton and Gladstone urban areas using the Land Use and Public Transport Accessibility Index (LUPTAI) model to estimate levels of access to destinations by various modes.

** Proxy measure for improving reliability to access the region's tourism destinations via road.

[^] Proxy measure for a more accessible transport system through an increased use of a greater range of transport options.

PRIORITY 3: SAFETY

| MEASURE OF SUCCESS | PROPOSED INDICATOR | SOURCE |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Reduction in transport related incidents, crashes, injuries and fatalities. | Number of road crashes resulting in fatalities or hospitalisation. | Transport and Main Roads |
| | Road crashes (resulting in fatalities or hospitalisation casualties) per kilometre on state-controlled roads | Transport and Main Roads |
| | Road crashes (resulting in fatalities or hospitalisation casualties) per 100 million vehicles kilometres travelled on state-controlled roads. | |
| | Number of people killed or seriously injured in marine incidents per 10,000 registered vehicles. | Transport and Main Roads |
| Increase accessibility to telecommunication and digital information. | Proportion of the state-controlled transport network (road and rail) will mobile reception coverage. | Transport and Main Roads |

PRIORITY 4: NETWORK RESILIENCE AND SUSTAINABILITY

| MEASURE OF SUCCESS | PROPOSED INDICATOR | SOURCE |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------|
| Reduced frequency and duration of unplanned closures. | Frequency and total duration of road closures on the transport network (state-controlled roads) during flood events. | Transport and Main Roads |
| | Frequency and total duration of unplanned closures on the transport network (state-controlled roads). | Transport and Main Roads |

5.4 Monitoring and review

This Plan will be monitored, periodically reviewed and updated to ensure it remains current and relevant.

In the short term, monitoring will focus on ensuring that the actions put forward are prioritised and progressed through departmental and local planning programs. As the Plan matures and planning and delivery is completed, monitoring will focus on tracking progress against objectives and measures of success (Figure 14).

It is intended that a review of the Plan will be carried out every three-to-five years to maintain its alignment with other government and non-government plans, programs and initiatives.

This review will also consider changes to land use, the region's economy, environmental considerations, demography, technological innovations, the progress of significant infrastructure projects and any other factors which may require a shift in the priorities or objectives for the region.

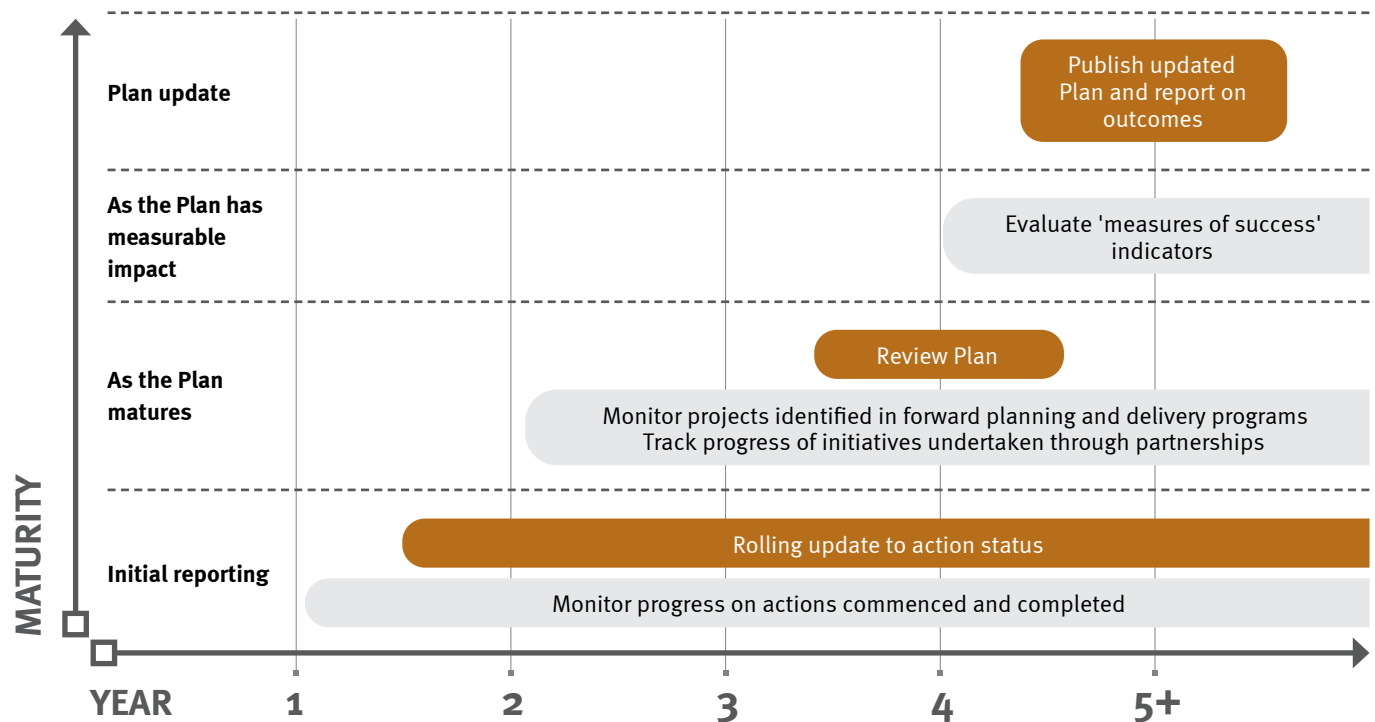
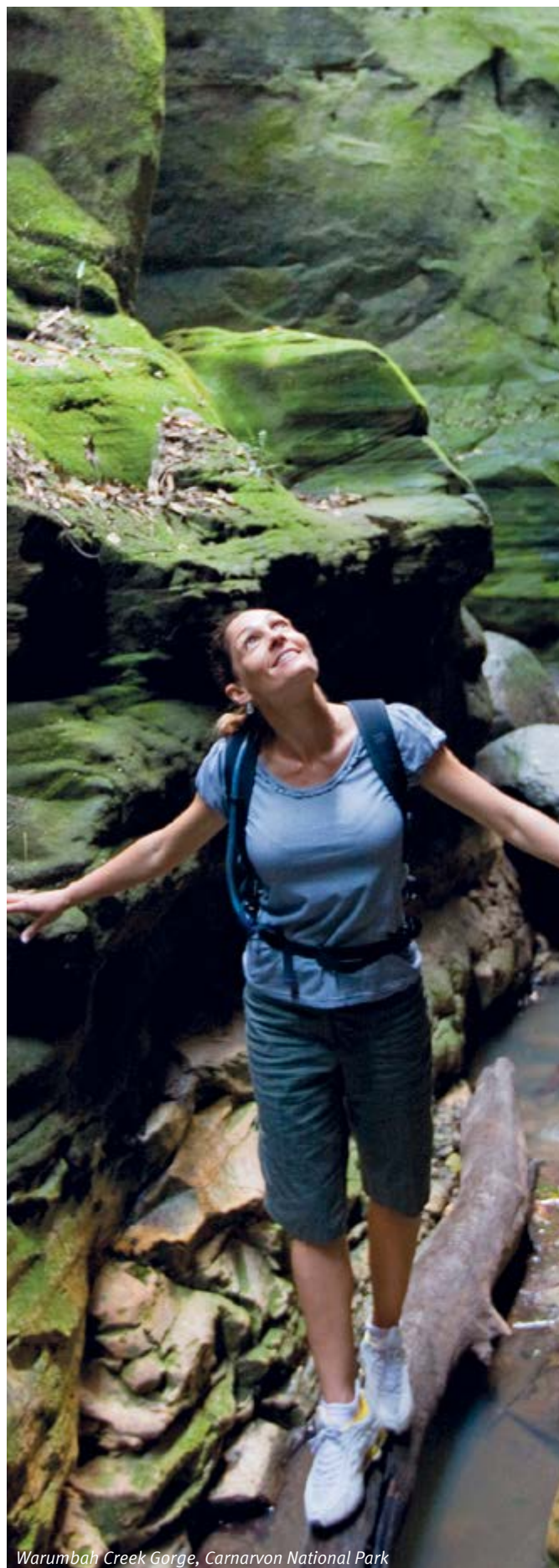


Figure 14: Monitoring, reporting and review as the Plan matures

Further information

Please email TMR_Regional_Transport_Plans@tmr.qld.gov.au for further details on this or other Regional Transport Plans.



Warumbah Creek Gorge, Carnarvon National Park

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Inside front cover, Pineapples on sale at Farmer's Market, Yeppoon, Tourism and Events Queensland.

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