NORTH WEST QUEENSLAND

REGIONAL TRANSPORT PLAN

2019

Queensland Government

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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: Campervan on Barkly Highway (background); Emus in Cloncurry (inset, left); Road sign on Wills Developmental Road (inset, centre); Road train, Richmond (inset, right).

Inside cover image: Riversleigh Fossil Fields, Boodjamulla National Park.

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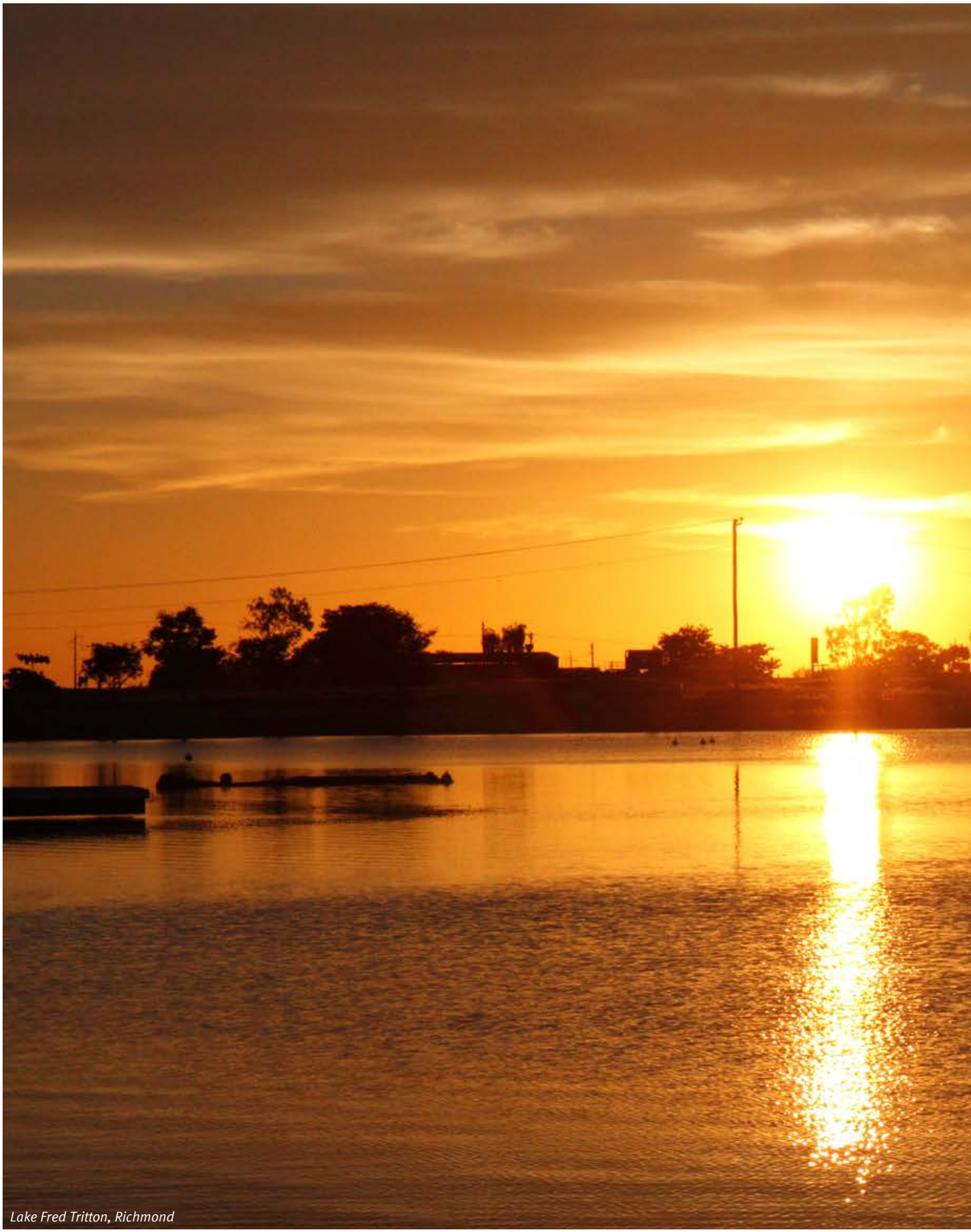


Lake Fred Tritton, Richmond

1. Introduction

1.1 A shared direction for transport

The *North West Queensland 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 North West Queensland's social and economic prosperity.

The North West Queensland region is home to approximately 30,000 people and includes the local government areas of Burke, Carpentaria, Cloncurry, Doomadgee, Flinders, McKinlay, Mornington, Mount Isa and Richmond.[1]

1.2 What is a Regional Transport Plan

The purpose of the *North West Queensland 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 Transport and Main Road's 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).

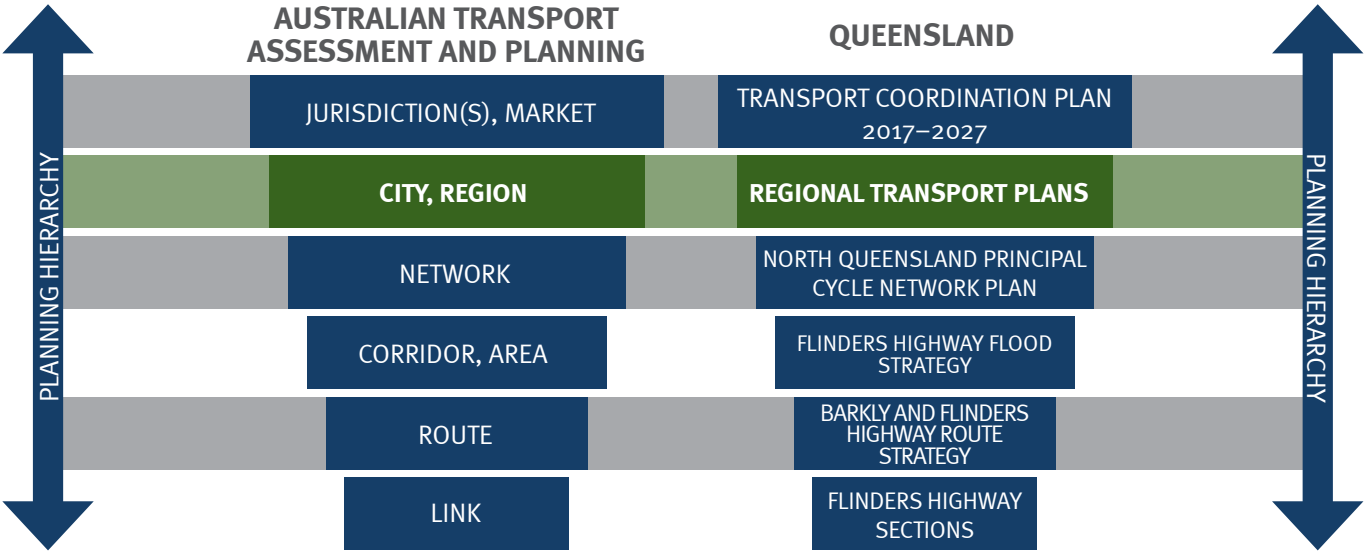


Figure 1: Examples of how Queensland responds to the Australian Transport Assessment and Planning hierarchy

1 Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.00).*

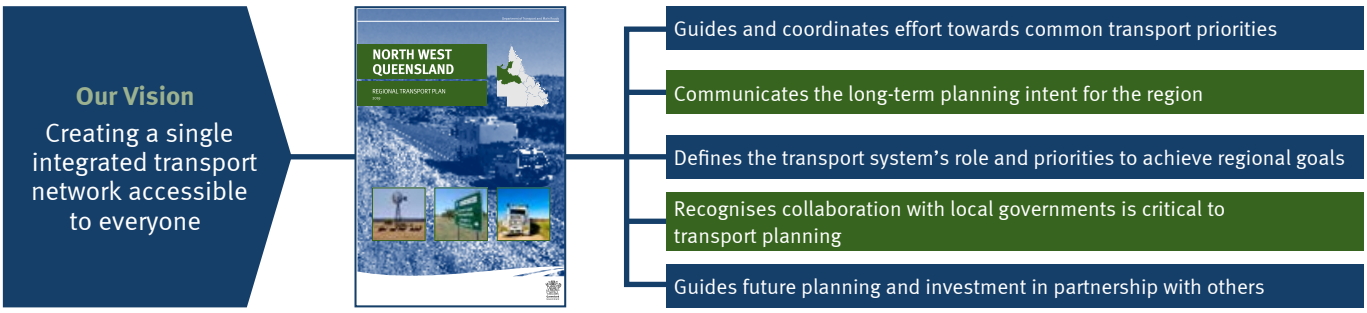
The regional policy choices and system strategies expressed in this Plan are used to:

- 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 is critical to 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*
- *North West Regional Plan*
- *Gulf Regional Development Plan*
- *A Strategic Blueprint for Queensland's North West Minerals Province*
- 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*
- *Queensland Freight Strategy*
- *Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015–2021*
- *Queensland Cycling Strategy 2017–2027*
- *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 North West Queensland 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 means for customers, the community, the economy and the environment.

1.6 Alignment with the *State Planning Policy*

The *State Planning Policy* 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 the Mount Isa Airport and the Port of Karumba as state strategic transport facilities.

1.7 Alignment with regional planning

North West Regional Plan 2010–2031

The *North West Regional Plan 2010–2031* covers the five local government areas of Mount Isa, Cloncurry, McKinlay, Richmond and Flinders. It outlines strategic directions, objectives and policies for the region covering land use, economy, community, environment and infrastructure.

The regional plan's vision is 'The North West region has a robust, diverse and sustainable economy and well-planned and coordinated infrastructure and services, built through the economic benefits of mining and agricultural industries. It is a place where people choose to live and visit due to its liveability, well-managed natural resources and the community's strong sense of cultural identity'. The objective for transport is 'Provide efficient, safe, sustainable, accessible transport for people and goods throughout the region—and to other regions—to support industry competitiveness, growth and improved liveability in communities'.

Gulf Regional Development Plan 2000

The *Gulf Regional Development Plan 2000* includes the local government areas of Burke, Carpentaria, Croydon, Doomadgee, Etheridge, Kowanyama and Mornington. The 20-year plan outlines strategies, recommendations and priority actions to address key issues for the Gulf, and provide guidance to policy development and implementation.

The development plan contains vision statements and goals for integrated transport covering themes such as:

- an efficient and cost-competitive freight industry operating from a number of regional and interstate sources
- improved range and affordability of goods and services that are available to the Gulf communities
- potential for Karumba as a major economic activity and transportation node for the region
- improved capability to export and import through the Port of Karumba
- improved access to markets via road and rail links to Mount Isa, Townsville, Cairns and the Northern Territory
- development and integration of key transportation facilities
- state-controlled roads are closed only by major flood events and there is decreased closure on local roads
- improved physical access to and between communities providing a choice of reasonable and affordable means of access within the region and to external service centres
- increased reliability, efficiency, safety and affordability of an integrated transport network
- respond to community needs and economic development requirements whilst developing the transportation system in an ecologically sustainable manner.

Other regionally significant plans and initiatives

Other regionally specific planning that has informed the *North West Queensland Regional Transport Plan* are listed below:

- *North Queensland Economic Future (2016)*
- *Mount Isa Economic Development Strategy (2017)*
- *Western Roads Upgrade Program (2016)*
- *Our North, Our Future: White Paper on Developing Northern Australia (2015)*
- *Principal Cycle Network Plan North Queensland (2016)*
- *Regional Road Map: Townsville and North West (2015)*
- *North West Queensland Strategic Development Study (2014)*
- *MITEZ Mount Isa-Townsville Economic Zone 50 Year Freight Infrastructure Plan (2012)*
- *Mount Isa Line Rail Infrastructure Master Plan (2012)*
- *Port Carpentaria Railway Project (2012)*
- *Gulf Savannah Integrated Regional Transport Plan (2000).*

Summary of regional planning themes

The *North West Queensland Regional Transport Plan* responds to themes that are common across regional and economic land use strategies. The key themes relevant to transport are:

- safety – improved safety across an integrated transport network
- economy – reliable transport networks with the capacity to improve productivity and support growth of key and emerging industries
- communities – greater levels of connectivity and access within and between communities to meet different customer needs in a way that is affordable, sustainable and promotes liveability
- coordination – working in partnership across agencies to maximise the benefits of investment in transport.

1.8 Achievements to date

This Regional Transport Plan outlines priorities and actions to respond to the challenges and opportunities facing the North West Queensland region. A snapshot of actions already undertaken or underway include:

Safety initiatives

The intersection of the Kennedy Developmental Road and McLaren Street, in the busy hub of Hughenden, was upgraded to clearly and safely direct the mix of type two road trains and residential traffic by amending the traffic movement priorities, reconfiguring the raised medians and realigning the roads leading into the intersection. Planning has commenced for various road safety projects on the Barkly Highway.

Queensland Government's Western Roads Upgrade Program

The state government established the $40 million Western Roads Upgrade Program (WRUP) to support economic development and job sustainability in western Queensland. By June 2017, all 15 projects under the program were complete, including works on Burke Developmental Road, Cloncurry-Dajarra Road, Diamantina Developmental Road, Gregory Downs-Camooweal Road, Gulf Developmental Roads, Richmond-Winton Road and Wills Developmental Road.

Mornington Island Airport

The Mornington Island Airport is the only emergency evacuation strip on Mornington Island and allows the Royal Flying Doctor Service to transport patients to mainland clinics and hospitals. The airstrip is also used for food and medical deliveries.

In December 2015, the Mornington Island airport runway was damaged by a storm event. Due to this damage, the runway was closed for repairs, and, when reopened, had a shortened runway and was subject to weight restrictions. The aircraft that usually provided passenger services needed to be replaced by smaller aircraft for the duration of the restrictions.

The runway was upgraded in 2017 as a joint project between Mornington Shire Council and the Queensland Government.

Improving flood immunity

The replacement of the Beams Brooke Bridge on Wills Developmental Road has been completed. Progression planning for a flood immunity upgrade strategy on the Flinders highway, between Mount Isa and Townsville is currently being undertaken. Culverts along Landsborough Highway are also planned to be replaced.

Improvements to sections of Flinders Highway, between Cloncurry and Hughenden and two kilometres west of Hughenden, were rehabilitated through the National Highway Upgrade Program. Road infrastructure improvements between Townsville and Torrens Creek and between Charters Towers and Richmond were funded through the Northern Australia Roads Program.

Construction of Hulberts Bridge, Richmond

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.

4WD crossing O'Shannasy River, Budjamulla National Park

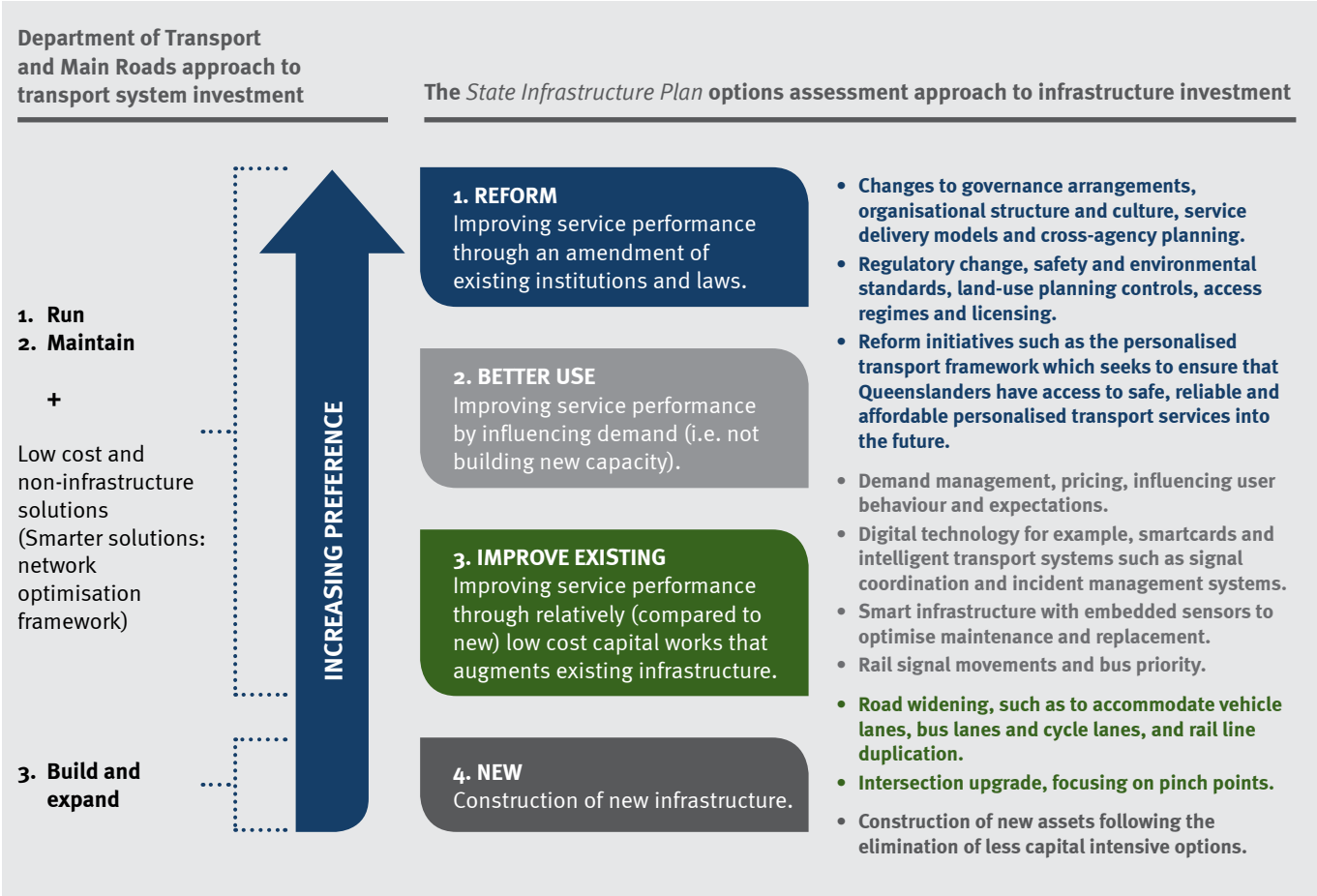
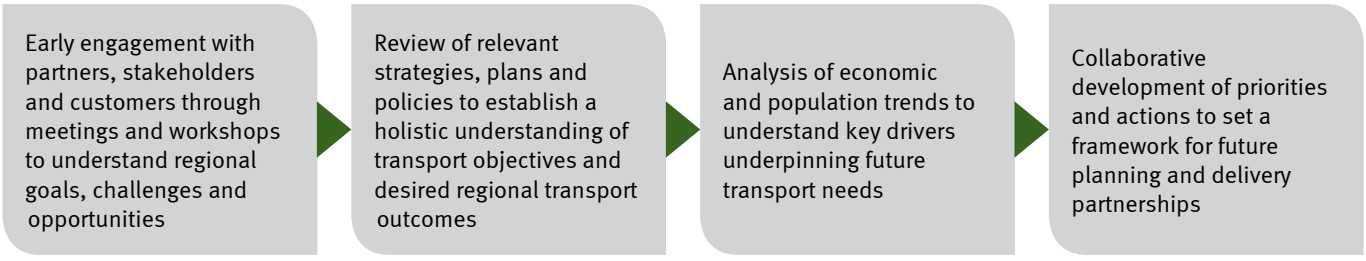


Figure 2: Alignment between the departmental and government approaches to infrastructure investment

Process

The *North West Queensland Regional Transport 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.

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.

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 this 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:

- the region's size and climate makes the transport network vulnerable and unreliable, particularly during the wet season
- better access to national and international export markets would create opportunities supporting the region's economic growth
- an improved transport network would increase safety and accessibility and help meet the diverse needs of the different users.

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

Richmond Enduro

Table 2: Structure of the North West Queensland Regional Transport Plan

STRATEGIC CONTEXT

SETTING THE SCENE
Chapter 2: The North West Queensland Region

THE REGION | THE TRANSPORT NETWORK

Chapter 2 provides an overview of the key characteristics of the communities that make up the North West Queensland region, and the different elements of the region's current transport system across all modes, networks and services.

PLANNING CONTEXT
Chapter 3: Goals, challenges and opportunities

GOALS	CHALLENGES	OPPORTUNITIES
■ Improve safety for everyone. ■ Increase economic productivity, particularly for key industries—mining, agriculture and an emerging tourism industry. ■ Improve community access to health, education, employment and recreation. ■ Improve connectivity within and external to the region.	■ Road safety. ■ Geographically dispersed population. ■ Changing demographics. ■ Access to alternative modes of transport. ■ Impact of wet weather conditions. ■ Increased demand for road freight. ■ Variability of road network standards. ■ Underuse of existing infrastructure. ■ Growth in self-drive tourism.	■ Agriculture. ■ Growth in tourism. ■ Future development in mining and resources industry. ■ Better use of existing infrastructure. ■ Advances in technology. ■ Rail network planning. ■ Economic projects and initiatives .

Chapter 3 details the goals, challenges and opportunities that are the main drivers for establishing the region's transport priorities and actions. Review of existing planning, analysis of information, and consultation with customers were key steps in defining the goals, challenges and opportunities.

TRANSPORT RESPONSE

SHAPING TRANSPORT TO ACHIEVE REGIONAL GOALS
Chapter 4: Priorities and actions

PRIORITY 1 Greater resilience, reliability and connectivity	PRIORITY 2 Improved supply chain efficiency	PRIORITY 3 A safer transport network that meets different users' needs
Resilient transport and communications networks that keep people engaged and connected within the North West Queensland region.	Improved supply chain efficiency, reliability and productivity, enhancing the North West Queensland region's access to national and international markets and facilitating opportunities for economic growth.	Enhanced and safer transport network for the North West Queensland region that better meets the competing demands of users, addressing conflicting and incompatible uses.

ROLE OF TRANSPORT

TRANSPORT OBJECTIVES

ACTIONS – SHORT-TERM, AND ACTIONS – MEDIUM/LONG-TERM

Chapter 4 sets out the transport response to achieving regional goals, addressing challenges and supporting opportunities. The transport priorities express the regional goals with a transport system focus. The priorities set the high-level direction for framing objectives, measures of success and actions.

Transport objectives describe the desired future state for transport in meeting the region's goals and transport priorities. Meeting each objective through taking action will result in real and measurable outcomes or 'measures of success' that can be tracked to indicate progress over time.

The majority of actions identify the Queensland Government's strategic intent for taking the critical steps in the short-term towards achieving 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 are led by the Queensland Government, however many will involve partnerships and collaboration with industry and community.

TAKING ACTION
Chapter 5: Implementation

DELIVERING IN PARTNERSHIP | MEASURING SUCCESS | MONITORING AND REVIEW

Chapter 5 outlines the approach for deliverng in partnership to implement the Plan. It also sets out the 'measures of success' and the framework for monitoring and review.

Normanton Station, Normanton

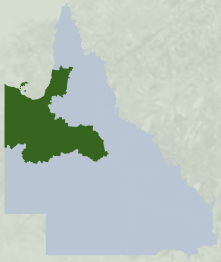
2.
The North West Queensland Region

2.1 Region overview

NORTH WEST REGION COVERS AN AREA OF

307,082 KM²

OR **17.7%** OF QUEENSLAND'S LAND AREA[2]



LOCAL GOVERNMENT AREAS INCLUDE:

1. BURKE SHIRE COUNCIL
2. CARPENTARIA SHIRE COUNCIL
3. CLONCURRY SHIRE COUNCIL
4. DOOMADGEE ABORIGINAL SHIRE COUNCIL
5. FLINDERS SHIRE COUNCIL
6. MCKINLAY SHIRE COUNCIL
7. MORNINGTON SHIRE COUNCIL
8. MOUNT ISA CITY COUNCIL
9. RICHMOND SHIRE COUNCIL

POPULATION GROWTH

2018 **30,139** (**>1%** OF QLD POPULATION)[2]

2036 **28,778**[3]

16,676 JOBS IN NORTH WEST IN 2016 – 28.1% EMPLOYED IN MINING[4]

ESTIMATED GRP OF **$3.482B** IN 2017/2018 MAKING UP 1.15% OF QUEENSLAND'S TOTAL GRP[5]

PRIMARY LAND USES IN THE NORTH WEST INCLUDE AGRICULTURAL LAND, SIGNIFICANT MINING AND EXTRACTIVE RESOURCE AREAS, AND NATIONAL PARKS AND NATURE CONSERVATION AREAS

THE LOCAL GOVERNMENT AREAS OF MCKINLAY SHIRE, RICHMOND SHIRE AND FLINDERS SHIRE HAVE BEEN DECLARED AS

DROUGHT AREA

SINCE APRIL 2013[6]

MOUNT ISA IS THE REGION'S MAJOR CENTRE, PROVIDING ACCESS TO ESSENTIAL GOODS AND SERVICES

63%

OF THE REGION'S POPULATION LIVE IN THE MOUNT ISA CITY COUNCIL AREA[2]

KEY FEATURES OF THE REGIONAL ECONOMY

NWQ provides jobs in a **wide range of sectors** including mining, agriculture, health and social services, public administration and retail trade

The North West Minerals Province surrounds Mount Isa and has a **significant portion** of the worlds known lead, zinc, silver, copper and gold deposits

23.3% of the region's residents are **employed by the mining industry**[2]

Agribusiness employs **7.7%** of the workforce and focuses on cattle grazing[7]

Tourism is emerging as a **growing feature** of the region's economy

325,000 head of cattle are traded annually at Cloncurry saleyards with the potential for throughput to reach up to 500,000 in the next 10 years.[7]

2 Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017–18 (Catalogue No. 3218.0)*. Retrieved from: statistics.qgso.qld.gov.au/qld-regional-profiles.

3 Queensland Government Statisticians' Office (2018), *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition.*

4 Australian Bureau of Statistics. (2017). *Census of Population and Housing: Working Population Profile, 2016 – Wo9 (Place of Work) (Catalogue No. 2006.0)*. Retrieved from: statistics.qgso.qld.gov.au/qld-regional-profiles.

5 National Institute of Economic and Industry Research (NIEIR). (2019). *National economic indicators for local government areas, 2017/2018.* Retrieved from economic-indicators.id.com.au/?es=6&StateId=3&Year=2018.

6 Queensland Government. (2019). *www.longpaddock.qld.gov.au/drought/drought-declarations/.*

7 Department of State Development, Manufacturing, Infrastructure and Planning. (2018). *Evaluation the commercial viability of a northern outback meet processing facility.* Retrieved from www.statedevelopment.qld.gov.au/index.php/regional-development/regional-economic-development/building-our-regions/royalties-resource-producing-communities/1252-major-infrastructure-upgrade-of-the-cloncurry-saleyards.

Local government areas

Local government areas and main population centres*	2018 estimated resident population	2036 projected population

Employment and economy

The major employing industries for residents in 2016 were public administration and safety (25.2 per cent) and agriculture, forestry and fishing (17.7 per cent). In 2011 mining was the main employing industry (26.6 per cent) due to zinc production at Century Mine. Production at Century Mine ceased in early 2016 but has since resumed as of August 2018.

Access

There is road access to Mount Isa and Cloncurry outside of wet season closures. Burketown has an airport, with regular scheduled weekly services to Mount Isa and Cairns.

Employment and economy

Carpentaria Shire is highly specialised in the agriculture and fishing industry. This industry employs 18.3 per cent of the area's resident workforce followed by public administration and safety (14.5 per cent), and health care and social assistance (10.1 per cent). Employment in the accommodation and food services industry (8.1 per cent) indicates the importance of tourism to the area.

Access

The Burke and Gulf Developmental Roads, and Burketown Normanton Road, all provide access to Normanton. Karumba Road and Burke Developmental Road provide the only access to Karumba and are subject to flooding. Both towns have airports.

* Employment statistics in this section are sourced from Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – General Community Profile – G51 (Industry of Employment by Age and Sex – place of usual residence), (Catalogue No. 2916.0)* and unpublished data. 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)*. 2018 population is sourced from Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.0)*. 2036 population is sourced from Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*.

Local government areas and main population centres*	2018 estimated resident population	2036 projected population

CLONCURRY SHIRE COUNCIL – Cloncurry

Employment and economy

The top industries for employing residents are mining (25.5 per cent), agriculture (11.5 per cent) and transport (9.9 per cent). Cloncurry Saleyards is the second-largest cattle handling facility in Queensland and third-largest in Australia.

Access

Cloncurry is located on the Flinders Highway and connected to the north by the Burke Developmental Road. Cloncurry Airport offers regular passenger services. Passenger rail services connect Cloncurry to Mount Isa and Townsville.

DOOMADGEE ABORIGINAL SHIRE COUNCIL – Doomadgee is a Deed of Grant in Trust (DOGIT) community

Employment and economy

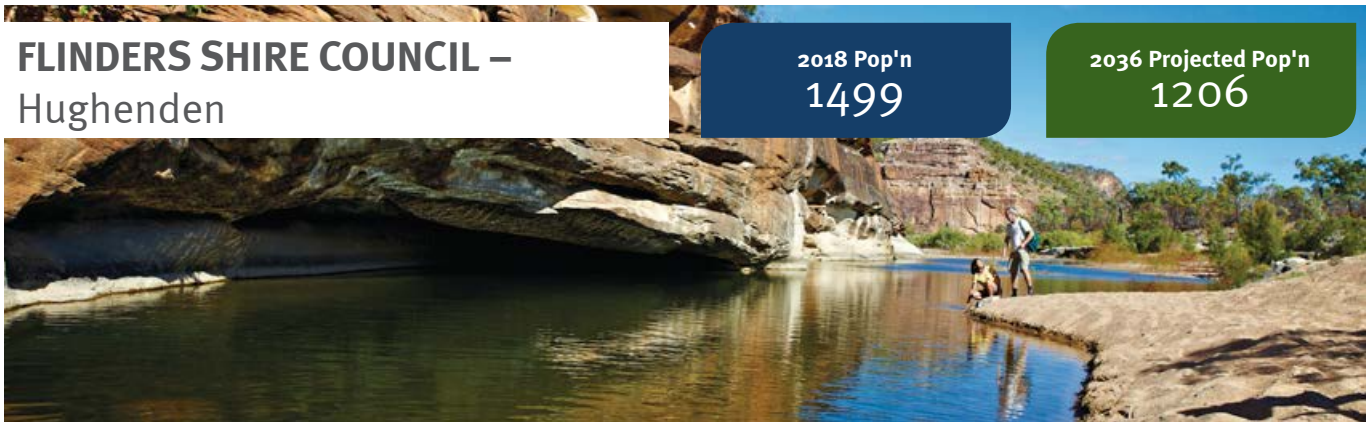
Doomadgee has a small resident workforce primarily employed in education and training (28.0 per cent), public administration and safety (20.4 per cent), other services (17.6 per cent), and health care and social assistance (16.8 per cent).

Access

Doomadgee is located on the Doomadgee Westmoreland Road and is 630 kilometres by road to Mount Isa and 1035 kilometres west of Cairns. Doomadgee Airport offers regular passenger services.

* Employment statistics in this section are sourced from Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – General Community Profile – G51 (Industry of Employment by Age and Sex – place of usual residence), (Catalogue No. 2916.0)* and unpublished data. 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)*. 2018 population is sourced from Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.0)*. 2036 population is sourced from Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*.

Local government areas and main population centres*	2018 estimated resident population	2036 projected population



FLINDERS SHIRE COUNCIL – Hughenden

2018 Pop'n 1499

2036 Projected Pop'n 1206

Employment and economy

Agriculture (35.2 per cent) is the largest employer in the region followed by the public administration and safety industry (12.7 per cent), and the transport, postal and warehousing industry (8.2 per cent). Flinders Shire is home to 20 per cent of Queensland's 12 million cattle.

Access

The Flinders Highway runs east and west through the shire, and the Kennedy Developmental Road runs north and south. Flinders Airport offers regular passenger services to Townsville. Passenger rail services connect Hughenden to Mount Isa and Townsville.

MCKINLAY SHIRE COUNCIL – Julia Creek

2018 Pop'n 814

2036 Projected Pop'n 644

Employment and economy

McKinlay Shire is highly specialised in the industries of agriculture and mining. These industries provide jobs for over nearly 50 per cent of the shire's resident workforce with 38.8 per cent employed in agriculture and 10.2 per cent in mining.

Access

The major access route for the shire is the Flinders Highway. The Julia Creek Airport offers regular passenger services. Greyhound Coach Services stop in Julia Creek, McKinlay and Kynuna. Queensland Rail offers two return rail services weekly in Julia Creek between Townsville and Mount Isa.

* Employment statistics in this section are sourced from Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – General Community Profile – G51 (Industry of Employment by Age and Sex – place of usual residence), (Catalogue No. 2916.0)* and unpublished data. 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)*. 2018 population is sourced from Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.0)*. 2036 population is sourced from Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*.

Local government areas and main population centres*

2018 estimated resident population

2036 projected population

MORNINGTON SHIRE COUNCIL – Gununa on Mornington Island

Employment and economy

Mornington Island's small resident workforce is employed mostly in community administration and services with 30.3 per cent of workers employed in public administration and safety, and 11.8 per cent in health care and social assistance.

Access

Town streets are bitumen-sealed. Mornington Shire is made up of offshore islands and is accessible only by air and sea. Mornington Island has an aerodrome with passenger services available to the island from Mount Isa and Cairns Monday to Friday. Council operates the barge shed and works with Carpentaria Freight, which operates barge services from Karumba.

MOUNT ISA CITY COUNCIL – Mount Isa

Employment and economy

Almost one-third of Mount Isa's 9000+ employed residents are employed in the mining industry (30.6 per cent). The health care and social assistance industry is the second-largest employer (11.1 per cent), reflecting Mount Isa's role as a centre for residents living in the North West.

Access

Mount Isa is equal distance between Brisbane and Darwin, with road and rail connections to the Port of Townsville 883 kilometres to the east. Mount Isa Airport also offers regular passenger services to Brisbane, Cairns and Townsville, and a number of towns in the region.

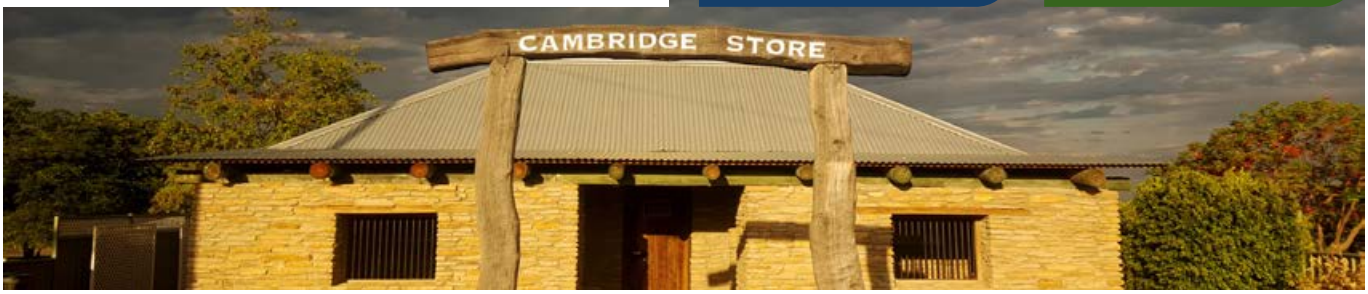
* Employment statistics in this section are sourced from Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – General Community Profile – G51 (Industry of Employment by Age and Sex – place of usual residence), (Catalogue No. 2916.0)* and unpublished data. Employment 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)*. 2018 population is sourced from Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.0)*. 2036 population is sourced from Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*.

Local government areas and main population centres*	2018 estimated resident population	2036 projected population

RICHMOND SHIRE COUNCIL – Richmond

2018 Pop'n 806

2036 Projected Pop'n 597



Employment and economy

More than 30 per cent of Richmond's resident workforce is employed in the agriculture industry. The second-largest industry of employment is public administration and safety at 17.5 per cent. Dinosaur fossils are a key tourist attraction for the area.

Access

The town of Richmond is located on the Flinders Highway halfway between Mount Isa and Townsville. Richmond Airport also offers regular passenger services. Passenger rail connects Richmond to Mount Isa and Townsville.

	2018 estimated resident population	2036 projected population
NORTH WEST QUEENSLAND REGION TOTAL	**30,139**	**28,778**

* Employment statistics in this section are sourced from Australian Bureau of Statistics. (2017). *Census of Population and Housing, Australia, 2016 – General Community Profile – G51 (Industry of Employment by Age and Sex – place of usual residence), (Catalogue No. 2916.0)* and unpublished data. 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)*. 2018 population is sourced from Australian Bureau of Statistics. (2019). *Regional Population Growth, Australia, 2017-18 (Catalogue No. 3218.0)*. 2036 population is sourced from Queensland Government Statisticians' Office. (2018). *Projected population (medium series), by local government area, Queensland, 2016 to 2041, 2018 edition*.

2.2 Transport network

An overview of the region's transport network is shown in Figure 3.

Figure 3: The North West Queensland region transport network

195,799 PASSENGERS

PASSENGERS PASSED THROUGH MOUNT ISA AIRPORT IN 2015–16 FINANCIAL YEAR[8]

LONG DISTANCES AND **LOW TRAFFIC** VOLUMES WITH A HIGH PROPORTION OF HEAVY VEHICLES ARE CHARACTERISTICS OF THE REGION'S ROAD NETWORK

THE MOUNT ISA LINE IS MORE THAN

1000 KM LONG

AND CONNECTS MOUNT ISA TO STUART (NEAR TOWNSVILLE) AND ON TO THE PORT OF TOWNSVILLE[9]

EXPORT OF ZINC CONCENTRATE FROM THE PORT OF KARUMBA IS ESTIMATED TO BE

300,000–400,000 TONNES PER ANNUM

OVER THE REMAINING 6.5 YEARS MINE LIFE OF THE REOPENED CEUNTURY MINE [10]

CAR

IS THE DOMINANT MODE OF TRANSPORT IN THE REGION

1024 KM

NATIONAL LAND TRANSPORT NETWORK

2551 KM

STATE-CONTROLLED ROADS[11]

11,147 KM

LOCAL GOVERNMENT MANAGED ROADS[12]

LONG-DISTANCE COACH AND PASSENGER RAIL AND AIR SERVICES PROVIDE ALTERNATIVES TO PRIVATE CAR IN CONNECTING WITH

LARGER CENTRES OUTSIDE THE REGION

APPROXIMATELY

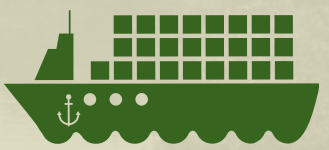
84,000

TONNES PER WEEK

OF FREIGHT COMMODITIES ARE TRANSPORTED ON THE MOUNT ISA LINE[13]

THE PORT OF TOWNSVILLE

IS OUTSIDE THE REGION BUT IS VITAL TO THE EXPORT OF THE REGION'S COMMODITIES



8 Queensland Airports Limited (2018). *Annual Report 2018.*
9 Queensland Rail. (2016). *Queensland Rail Annual Report 2015–16.*
10 Ports North. (2018). *www.portsnorth.com.au/karumba/.*
11 Department of Transport and Main Roads. (2018). *Queensland Transport and Roads Investment Program 2018–19 to 2021–22.*
12 Department of Local Government, Racing and Multicultural Affairs. (2018). *Local Government Comparative Reports – Road data 2016–17.*
13 Queensland Rail. (2018). *Queensland Rail Annual and Financial Report 2017–18.*

Roads

Roads cater to most passenger and freight movements through the North West Queensland region. Major roads include the Landsborough, Flinders and Barkly Highways, and the Wills, Karumba, Burke, Gulf, Kennedy and Diamantina Developmental Roads. The road network is characterised by limited routes across an expansive area with few alternative route options.

Average daily traffic volumes on the region's highways range from less than 100 vehicles per day (on roads like Kennedy Developmental Road north of Hughenden) to up to 6700 through Mount Isa. The proportion of heavy vehicles on major freight routes such as the Flinders and Barkly Highways can be up to 50 per cent of all road traffic. The relatively high proportion of heavy vehicles demonstrates the importance of the region's highways for carrying freight.

Bus and coach

Bus and coach operations in the region include school bus services and long-distance coach services. Subsidised routes are operated by Bus Queensland with seven return services per week between Mount Isa and Brisbane. The complete journey takes 26 hours, with stops at Mount Isa, Cloncurry, McKinlay and Kynuna.

There are three return services per week from Mount Isa to Townsville. The 12-hour journey includes stops at Mount Isa, Cloncurry, Julia Creek, Richmond and Hughenden.[14] There are no scheduled urban bus services in the North West Queensland region's population centres.

Non-subsided long-distance coach services are also available through Greyhound Australia with two return services per week between Townsville and Alice Springs, with stops at Mount Isa, Cloncurry, Julia Creek, Richmond and Hughenden,[15] and TransNorth Bus and Coach services between Karumba and Cairns with three return services per week, stopping at Karumba and Normanton.[16]

Industries, such as mining, provide private buses to transport their workforce between work sites and accommodation hubs.

Rail

The Mount Isa line consists of over 1000 kilometres of track that extends from Stuart (near Townsville) to Mount Isa and includes the Phosphate Hill branch. The Mount Isa line connects with the North Coast line to link through to the intermodal facility at the Port of Townsville. The types of freight transported on the Mount Isa line include minerals concentrates, fertiliser, fuel, refined metals, cattle and general freight.[17] The Inlander long-distance passenger service provides two services per week between Townsville and Mount Isa.

Steam locomotive, Cloncurry

14 Bus Queensland. (2015). *www.busqldoutback.com.au/timetables.*
15 Greyhound Australia. (2016). *www.greyhound.com.au/service-info/network-maps.*
16 TransNorth Bus & Coach. (2016). *www.transnorthbus.com/cairnskarumba.asp.*
17 Queensland Rail. (2017). *www.queenslandrail.com.au/forbusiness/the-regional-network/mount-isa-line-system.*

The journey from Townsville to Mount Isa takes 21 hours with stops at Charters Towers, Pentland, Torrens Creek, Hughenden, Richmond, Julia Creek, Cloncurry and Duchess before arriving in Mount Isa. The timetable links with the Spirit of Queensland (North Coast line) to enable passengers to interchange at Townsville.

The Gulflander tourist rail service runs between Normanton and Croydon, with one return service per week.[18]

North West Queensland – Inclusion in the Local Fare Scheme trial

The Local Fare Scheme aims to improve the standard of living in remote parts of Far North and North West Queensland by reducing the cost of air travel for eligible residents.

The scheme seeks to increase accessibility to basic health, employment, and education facilities those living in remote communities. Through financial assistance, the scheme allows eligible residents to move around more frequently, enabling social and recreational benefits that, in turn, will help boost the local economy.

The Local Fare Scheme provides subsidised air travel to eligible residents of Cape York, Gulf of Carpentaria and the Torres Strait through an airfare discount of up to $400 for return flights. The scheme is administered through participating airlines and local councils from selected airports in Cape York, Gulf of Carpentaria and the Torres Strait.

The scheme originally commenced on 1 July 2015, and currently expires on 30 June 2021. The future of the Local Fare Scheme is currently subject to Queensland Government funding. Communities eligible for the scheme include Aurukun, Coen, Kowanyama, Lockhart River, Northern Peninsula, Pormpuraaw, Weipa, Doomadgee, Mornington Island, Horn (Ngurupai), Badu, Talbot (Boigu), Coconut (Poruma), Darnley (Erub), Mabuiag, Kubin, Murray (Mer), Saibai, Sue (Warraber), Yam (Iama) and Yorke (Masig) Islands. [22]

More information can be viewed at www.tmr.qld.gov.au/Travel-and-transport/Local-Fare-Scheme-Far-North-Queensland.aspx.

Air

The privately-owned Mount Isa Airport is the region's largest airport and supports multiple commercial airlines. In the 2017–18 financial year, 195,799 travelled through the airport, up 7.5 per cent on the previous year.[19]

The recently upgraded, local government-owned Cloncurry Airport is the second-largest in the region after Mount Isa. Other local government-owned airports supporting regional air services include Julia Creek, Richmond, Hughenden, Doomadgee, Burketown, Mornington Island, Karumba and Normanton.

The region has two regulated air routes that are subsidised. These provide connections between:

- Townsville and Mount Isa with stops at Hughenden, Richmond and Julia Creek
- Cairns and Mount Isa with stops at Normanton, Mornington Island, Burketown and Doomadgee.

Marine

The North West Queensland region includes the Port of Burketown and the Port of Karumba. The Port of Burketown is a declared port, however, no commercial trade occurs.

The Port of Karumba, located at the mouth of the Norman River, has operated primarily as an export port for lead and zinc from Century Mine. Throughput increased by 6.7 per cent between the 2013–14 and 2014–15 financial years. Following its closure in 2015, Century Mine (now owned by New Century Resources) re-commenced operations in August 2018 and exports material through the Port of Karumba. Annual dredging of the port has been reinstated and is anticipated to continue for duration of the mine's lifespan.[20] The Port of Karumba also provides for general cargo, fuel and fishery products. Export of live cattle is a growing trade, but is restricted due to the constrained access of the shipping channel and the need to transfer cattle from barges.[21] Larger vessels use the Karumba roadstead anchorage point, 14 miles offshore, to tranship cargo from barges departing Karumba. This affects the port's efficiency and capability and, as a result, the port is most suited to low-volume, high-value export.

Carpentaria Freight operates freight-only barge services from the Port of Karumba to Mornington Island, Sweers Island and Bentinick Island.[23]

Although not located within the region, the Port of Townsville is important to the region's supply chain. Linked to the region by road and rail links, the Port of Townsville exports the bulk of the region's commodities.

18 Gulflander. (2011). *www.gulflander.com.au/Pages/TimetableandFares.aspx.*
19 Queensland Airports Limited. (2018). *Annual Report 2018.*
20 New Century Resources. (2019). *www.newcenturyresources.com/century-mine-project/*
21 Transport and Main Roads. (2015). *Trade Statistics for Queensland Ports 2010–2015.*
22 Transport and Main Roads. (2019). *www.tmr.qld.gov.au/Travel-and-transport/Local-Fare-Scheme-Far-North-Queensland.aspx.*
23 Carpentaria Freight. (2016). *www.carpentariafreight.com.au.*

Access and mobility

Personal travel in the North West Queensland region is highly dependent on private vehicles due to the dispersed settlement pattern and limited passenger transport options.

In 2016, more than 61 per cent of the region's employed persons travelled to work by private vehicle, 12 per cent by active transport and around four per cent by public transport including bus, ferry or taxi.[24] One percent of the region's workers cycled to work which is the same proportion of cycling to work for the whole of Queensland. Eleven per cent of the region's workers walked to work on census day. This figure is high compared to the Queensland average of around three per cent, and is a characteristic of smaller towns in the region where many people live within walking distance to where they work.

Most of the region's centres have established pathways along main streets and other parts of towns. These pathways support short-distance cycling and walking access to businesses, community facilities and services, tourism and recreational attractions, and residential areas.

Vehicle ownership rates vary across the region. In 2016, approximately half of households in the small community of Doomadgee, and island community of Mornington, did not own a private vehicle, compared to 9.5 per cent across the region and six per cent for Queensland. Throughout the region, transport options are limited due to the remoteness of many communities. Not owning a vehicle can present significant challenges for residents needing to access goods and services that aren't available locally, and can further add to transport disadvantage in remote communities. Transport disadvantage, through lack of transport options, particularly affects the elderly and people with a disability.

Mount Isa, Cloncurry, Karumba and Normanton have access to taxi services. A number of travel subsidies within the region are available for residents that meet eligibility requirements. This includes subsidised taxi travel for the elderly, and subsidised travel to eligible patients and their escort to access the locations where the treatment will be provided and subsidised air travel for remote communities.

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 areas for further investment over the next two years.

Gulflander tourist train leaving Normanton Station

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

Lawn Hill Gorge, Boodjamulla National Park

Lawn Hill Gorge, Boodjamulla National Park

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 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 the region's challenges and supporting the opportunities that present.

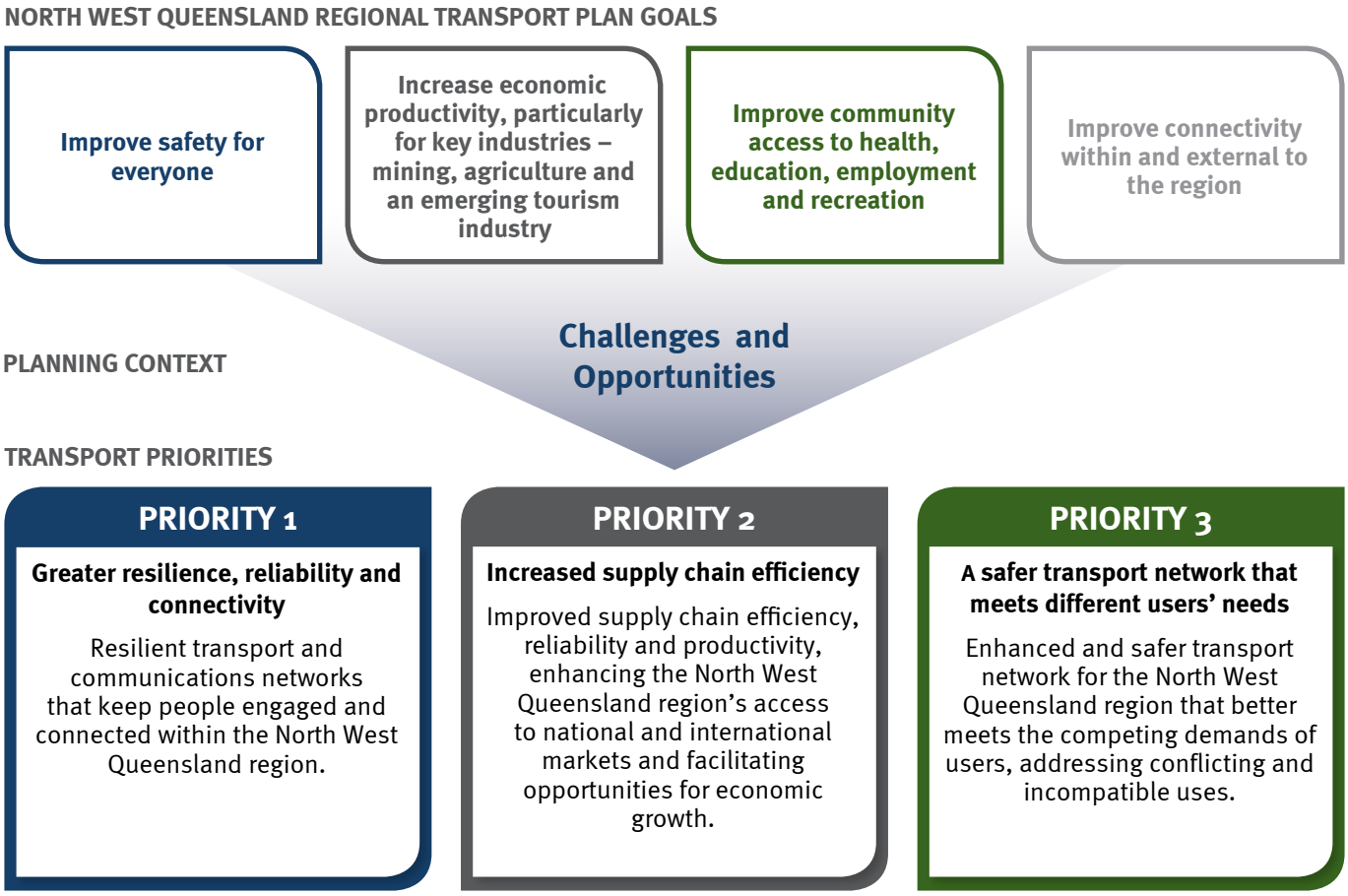


Figure 4: Regional goals and relationship to transport priorities

Cloncurry River Bridge, Cloncurry Shire

3.2 Challenges

Road safety

In the five years up to the end of 2017, there were 17 fatalities and 257 reported crashes requiring hospitalisation in the North West Queensland region.[25] Alcohol, fatigue and speed were factors, as well as road geometry and driver behaviour. Disruptions, damage, hospitalisations and fatalities because of incidents on the transport network come at a high cost to the community.

Safety for transport users can be influenced by a number of factors, including their awareness and respect for other road users (like heavy and recreational vehicles), changing road environments as the surrounding land uses change (for example, heavy vehicles passing through busy city centres, with people and cyclists in close proximity) and how different users share infrastructure (for example, rest areas with mixed vehicle usage, such as cars and heavy vehicles).

The region is prone to the impacts of seasonal flooding that can create hazards such as floodwaters, debris, washouts and potholes. Damage to road network infrastructure can be unseen and cause dangerous driving conditions. Crash risks can increase through a combination of bad weather and driving conditions, and poor driver behaviour or judgement, for example, not driving to conditions, or attempting to cross flooded roads.

Geographically dispersed population

Mount Isa and Cloncurry are the region's two main population, employment and service centres. More rural and remote communities outside of these centres face significant challenges for access to employment, education, health care and other services. Barriers include distance from centres, limited transport options, and isolation during and after flood events.

Changing demographics

Australia's ageing population is placing growing demand on health and support services. The overall proportion of people aged 65 and over in the North West Queensland region is a low at 8.3 per cent compared to the Queensland average of 15.0 per cent. However, in some place such as Flinders Shire, the proportion is much higher[26] (19.6 per cent). Access to public services and specialised medical treatment for people living in regional and rural locations can involve travel across significant distances. Maintaining affordable access to health and essential services, as well as social and recreational opportunities, is a key challenge for providing transport that adapts to the needs of changing population demographics.

Access to alternative modes of transport

The North West Queensland region relies heavily on private vehicles for long-distance travel due to limited alternative transport options and the dispersed nature of trip origins and destinations. Despite this, vehicle ownership in the region is lower than the Queensland average. North West households without a vehicle is 10.5 per cent, compared to Queensland's rate of 6.0 per cent.[27] Many communities are small and walkable, but there are limited alternative modes available for mobility impaired. Access to places beyond towns and communities is dependent on air and coach services.

Impact of wet weather conditions

The annual impact of the wet season on parts of the region's transport network is both immediate and cumulative. Repairs to the same stretch of road each year, with limited opportunities for enhancement, continue to place strain on limited maintenance budgets, particularly for local roads. Road closures due to flooding, load restrictions on saturated roads and the subsequent travel delays associated with repair of flood-damaged roads further limit access to employment and essential services. Seasonal road access can leave a number of North West Queensland communities isolated for weeks and even months at a time, particularly communities located in the Gulf of Carpentaria. High temperatures also affect road pavement and rail infrastructure and can affect the efficiency of the transport network.

Expansive black soils, such as on the Landsborough and Flinders Highways, contribute to the variable condition of the road and rail network. Black soils or 'cracking clays' expand when exposed to water, resulting in movement within and damage to both subgrades and pavements characterised by pavement rutting, failures and edge cracking.

Flinders Highway in between Richmond and Julia Creek, damaged road from flooding during February 2019.

25 Department of Transport and Main Roads. (2019) *Road Crash Locations (updated 30 January 2019).*
26 Australian Bureau of Statistics. (2018). *Regional population Growth, Australia, 2016-2017, (Catalogue No. 3218.0).*
27 Australian Bureau of Statistics. (2016). *Census of Population and Housing, 2016, General Community Profile – G30.*

Significant funding is required to construct, maintain and repair transport infrastructure in remote areas prone to flooding and subject to design issues such as black soils. It can be especially challenging to make the case to fund transport infrastructure works in sparsely populated areas separated by large distances, and with low volumes of demand relative to other parts of Queensland with competing priorities. Finding smarter ways to do more with less, finding innovative solutions to the region's design and delivery challenges, and making the case for resilient infrastructure to reduce whole of life costs will help attract additional investment and achieve more within funding constraints.

Achieving consistent and reliable travel times across networks and services provides greater certainty for residents, travellers, businesses and industry in planning journeys, move freight and access goods and services including emergency services. This is essential to make the region more attractive to visitors and investors, more liveable for residents, and more productive for local industries. While reducing the frequency and duration of closure due to flooding is a key focus area, there are other factors to consider, including:

The Queensland Climate Transition Strategy outlines how the state proposed 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.

- upkeep of road surface conditions, marine infrastructure and airstrips
- on-time running of passenger transport services
- effective travel information and communication systems
- access to roadside facilities such as service stations, rest areas, truck stops, and so on.

Increased demand for road freight

From 2016 to 2026 Queensland's road freight tonne-kilometres are forecasted to grow by 28.3 per cent to 62.0 billion tonne-kilometres.[28] Trucks and road trains make up a relatively high proportion of all traffic on the North West Queensland region's freight routes and highways. Mining and agriculture industries rely on freight-efficient vehicles, network access, and direct and reliable access to ports and markets, sometimes over significant distances. The freight industry is using larger and more freight efficient vehicle combinations (also referred to as high productivity freight vehicles) to meet demand and improve productivity, but uptake can be limited due to inconsistent road conditions, and network connectivity and reliability.

Expansion of mining and agriculture activity is a key economic development objective for the region. More road freight activity will generate more challenges for road safety and road maintenance. The feasibility of new mining and agriculture ventures might depend in some cases on investment in road network improvements to support access for higher productivity vehicles.

Variability of road network standards

Road network standards vary significantly across the North West Queensland region creating several challenges including limited ability to support freight efficient vehicle combinations. Network inconsistencies, such as narrow pavement widths, poor flood immunity, roughness and bridge load limits affect industry connections linking key production areas to markets and supply chains. These connections are often a combination of state, local and privately owned network managed under varying standards and funding arrangements.

There is also a lack of alternative routes when flooding cuts off the road network. This impacts the economic productivity of the region for the tourism, mining and agriculture sectors, and also for general commercial activities with high cost of freight and access to specialist labour and services.

Freight efficiency can be impacted by the weakest link in the transport connection between production and market. The weakest link in the network is often the 'first and last mile' connecting production areas and the road freight network. First and last mile issues restrict the size of vehicles used

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

to transport freight and limit the use of high productivity freight vehicles. High productivity freight vehicles deliver greatest benefits if they are for the entire end-to-end 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.

Underuse of existing infrastructure

The road network is the primary transport network for the movement of freight, even where rail could provide an alternative. Stakeholders indicated the rail network's 'user pays' model makes it difficult for rail transport to be price competitive. Therefore, rail is potentially underused and there could be opportunity to shift some of the road freight task to rail.

The rail line between Mount Isa and Townsville is vulnerable to flooding. Investment in this line (including provision of additional services) depends on a significant increase in the need to transport products and commodities out of the region, which has an unclear future in the current global market.

Growth in self-drive tourism

Growth in the self-drive and adventure tourism market is contributing positively to the region's economy. Its further development is a key opportunity identified by a number of local government economic development strategies in the region. However, the rise in the number of tourists, especially those towing caravans, and the higher demand during the dry season is presenting a challenge for maintaining safety and efficiency on key freight routes.

This is especially an issue for parts of the network with single lane roads also used by heavy vehicles, including cattle road trains. Tourists' lack of experience in driving on regional roads and interacting with high-efficiency freight vehicles increase the crash risk. Julia Creek-Kynuna Road, the Richmond-Winton Road and the Burke Developmental Road between Normanton and Donors Hill are regional examples of narrow roads with unforgiving road shoulders and limited passing opportunities. These roads all lie along major tourist routes, including Savannah Way or as part of the dinosaur trails to Winton and Longreach.

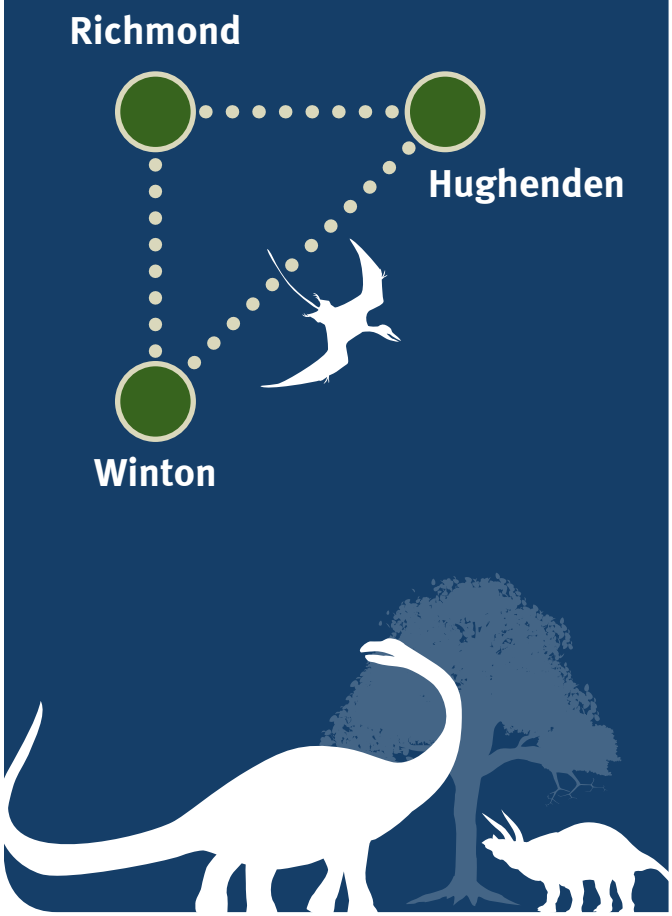
With no passing lanes between Cloncurry and Charters Towers along the Flinders Highway, the tourist influx in the dry season poses significant safety challenges for the transport network. High demand by tourists for rest areas can compete with transport industry needs for heavy vehicle rest areas and truck stops, and can place additional pressure on local government resources in providing necessary services at rest areas such as water, amenities and rubbish removal.

Australia's Dinosaur Trail[29]

The North West towns of Richmond and Hughenden along with Winton to the south make up Australia's Dinosaur Trail. The area is rich with dinosaur fossils, museums, fossicking sites and heritage trails giving visitors the opportunity to learn and experience the region's age of dinosaurs history. Suggested itineraries and the Australia's Dinosaur Trail Pass, which provides discounted entry to the four major ticketed attractions, encourages visitors to follow the trail.

Australia's Dinosaur Trail travel distances and estimated travel times

Journey	Approximate distance	Time
Winton to Richmond	218 km	150 min
Richmond to Hughenden	112 km	70 min
Hughenden to Winton	215 km	150 min



29 Australia's Dinosaur Trail. (2017). *www.australiasdinosaurtrail.com/*

3.3 Opportunities

Agriculture

Agriculture is a key industry in the North West Queensland region, contributing significantly to the local economy through the Desert Channels area and the Northern Gulf area.

Cattle grazing is the most significant agricultural activity. Cloncurry has Queensland's second-largest saleyard, trading 325,000 head of cattle per year.[30] It is an important facility in the industry's biosecurity by maintaining the state's tick free zone. Currently, around 75 per cent of cattle from the region travel to the Townsville and Rockhampton areas for processing with the remaining 25 per cent to South East Queensland markets. A CSIRO study identified that an abattoir at Hughenden would provide a 65 per cent reduction in livestock transport costs compared to transporting cattle to east coast plants or to live export. An abattoir would also see improved employment opportunities in the region and a boost to the local economy.[31]

The Queensland Department of Agriculture and Fisheries is endeavouring to develop the Flinders Gilbert Agricultural Zone from predominately grazing to diversify into irrigated agriculture. The area comprises two major Gulf river systems—the Flinders and Gilbert Rivers. Based on identified water storage and large areas of potentially irrigable agricultural soils, there is potential for irrigation developments totalling 30,000 to 50,000 hectares and supporting year-round mixed irrigated and dryland cropping and delivering crop production exceeding $95 million per year.[32] [33] The strategic location of this development allows delivery of produce to national and international markets through easy access to ports and international airports including via Townsville. As land transport is essential to reach market, road condition and network connectivity to support freight operations are key in the development of this area.

Further development of aquaculture and fishing in the Karumba area also presents an opportunity, particularly with the potential for future export to Asian markets.

Improving supply-chain efficiency is crucial in supporting growth of the agricultural industry. For example, cattle industry productivity could increase through key road upgrades providing shorter and more direct routes to markets, addressing capacity limitations and upgrading pavements.

Improving cattle industry productivity in the North West Queensland region

Access to reliable transport and supply chain data is a key challenge facing the movement of freight around Queensland. To help bridge the data gap, CSIRO has developed a model to inform the agricultural industry of the logistical issues influencing the transport of produce from the farm gate to market. TraNSIT (the Transport Network Strategic Investment Tool) is a computer-based tool that assesses expected savings associated with infrastructure investments and policy changes affecting commodity transport. The Australian Beef Roads Program utilise TraNSIT outputs for the objective assessment of investment options. Beef Roads projects within the region recently or soon to be completed include Croydon-Richmond Road (package one and two) with progressive sealing works totalling 15 kilometres, Richmond-Winton Road (package one) progressive sealing totalling 7.5 kilometres and Cloncurry-Dajarra Road progressive sealing works totalling 4.5 kilometres.

These works will benefit the cattle industry and other road users through:

- improved productivity, travel times and reliability
- improved road safety by providing adequate seal width for overtaking and passing of vehicles, and improving visibility by reducing dust and flying rock
- reduced road roughness and damage to cattle.

Many of these benefits also apply to other road users and sealing works benefiting the asset owners through reduced whole-of-life asset management costs.

Cattle grid

30 Department of State Development, Manufacturing, Infrastructure and Planning. (2018). *www.statedevelopment.qld.gov.au/index.php/regional-development/regional-economic-development/building-our-regions/royalties-resource-producing-communities/1252-major-infrastructure-upgrade-of-the-cloncurry-saleyards.*

31 Flinders Shire Council. (2015). *Beef Processing Opportunity.*

32 CSIRO. (2013). *Agricultural resource assessment for the Gilbert catchment.*

33 CSIRO. (2013). *Agricultural resource assessment for the Flinders catchment.*

Growth in tourism

The region is an 'emerging' destination and attracts tourists travelling by car, air, bus and train. Mount Isa attracts most of the region's tourists with approximately 145,000 overnight visitors annually.[34] A large and unique range of existing and future tourism opportunities can be capitalised on, including ecotourism, driving and adventure holidays, recreational fishing and outback experiences. The region's *Tourism Opportunity Plan* identifies six catalytic projects that will help increase the region's attraction and enhance the experience of tourists.[35] These include:

- the Lawn Hill/Riversleigh Tourism Master Plan (a national park 220 kilometres south of Burketown)
- Normanton Monsoon Centre
- Karumba Barramundi Discovery Centre Extension
- Mount Isa Rodeo Hall of Fame
- Julia Creek 'At the Creek' Stage 2
- Porcupine Gorge National Park Experience (just north of Hughenden).

The plan identifies poor connectivity between attractions, access and capacity constraints with air, road and rail as key issues affecting tourist experience and growth.

For self-drive tourism and recreational cycling and walking, safety and condition of the road network, tourism signage, and the provision of rest stops and scenic stops are important aspects of ongoing development and especially important to smaller communities seeking to encourage tourism.

Improving mobile communication coverage is also important, as without mobile coverage, transport users in the region rely on two-way radio to communicate incidents such as crashes and breakdowns, increasing the potential for isolation in remote areas. This is especially problematic when considering those needing urgent medical care or attention.

One aspect of the *Tourism Opportunity Plan* is to reduce the seasonality of visitation. Road network connectivity and reliability in the more northern areas of the region are impacted during wet season. Sealing and improved flood resilience can help lengthen the tourist season, but so can air access. For example, Carpentaria Shire Council recognises that some areas can be inaccessible by road for weeks and months during the wet season. In most instances, air access into the area is still available, which opens opportunities for fly-in tourism and specialised rarely available wet season activities linked to birdlife, fishing and the spectacular 'flooded landscape'.

With the closure of the Winton to Hughenden branch railway line in 2008, an opportunity exists for active transport to also support growth in tourism through undertaking planning to establish and manage rail trails. Planning and delivery of other iconic and scenic walking and cycling routes, and additional special events, like the Mount Isa Border Ride, present further opportunities to attract additional tourism to the region.

Canoeing, Lawn Hill Gorge, Boodjamulla National Park

34 Tourism Research Australia. (2019). *Local Government Area Profiles, 2017 – Mount Isa (C).*
35 Tourism Queensland. (2012). *Queensland's Outback, Gulf and Western Downs Tourism Opportunity Plan.*

Future development in mining and resources industry

The region supports a significant mining, energy and natural resources sector and several downstream sectors, including manufacturing and professional services. The Flinders and Barkly Highways and the railway connecting Mount Isa and the Port of Townsville are critical transport links for the mining and resource industry.

Although many facets of the sector are experiencing a period of transition, with volatility in demand and commodity prices, the industry will continue to offer economic opportunities and growth prospects for the region due to the wealth of resources present. In the 2014–2015 financial year, more than 70 per cent of Queensland's mineral production was sourced from the North West Minerals Province, with the area including an estimated 75 per cent of Queensland's proven metalliferous resources such as copper, silver, lead and zinc.[36] Vast areas of prospective ground are still unexplored.

Geologists have recently found evidence of rare minerals in the region. Referred to as the Diamantina Minerals Province, the area stretches from Fifield in central New South Wales, across the Central West Queensland region into North West Queensland region and up to the Merlin diamond mine in the Northern Territory. Minerals likely to be in the rare geological pipe formations include scandium, cobalt, nickel, copper, light and heavy rare earth elements, yttrium, niobium, hafnium, zirconium, tantalum, phosphorus, silver, gold and platinum, as well as potential for diamonds. These rare earth elements have special or unique properties that are used in many modern technologies such as fuel cells and mobile phones, and are in high demand around the world.[37]

Industry consultation to identify and plan for future growth scenarios, supply-chain resilience, use of technology and changing industry practices will assist the region in maximising economic opportunities related to mining and mineral processing.

Better use of existing infrastructure

The enhancement of existing road networks, particularly inland routes is an opportunity for the region. These routes connect rural communities, mining and agricultural areas with many providing designated routes for heavy vehicle freight movements.

A well-connected inland network already exists. However, network conditions vary, with narrow road widths, roughness and bridge load limits. Addressing these issues will:

- support high productivity freight vehicles on shorter more direct routes to market
- attract freight traffic away from the busier, higher utilised coastal routes
- improve road network resilience, providing a viable alternate route during times of disaster
- provide a safer, more reliable network to regional and rural communities.

Local government are asset owners of a significant portion of the road network in the region, including sections of the inland road network. The effectiveness of any route in the road network is limited to the weakest link. In some cases, the weakest link is in the first and last mile on the local government-controlled network. Local government, particularly in rural and remote areas, are financially constrained due to low population base and large

CASE STUDY: Road and rail flood recovery

February 2019 saw unprecedented monsoonal rain fall across large areas of North West Queensland resulting in major flooding damaging or washing away entire sections of the region's rail and road networks. This included closure and severe damage along parts of the Flinders Highway and Mount Isa rail line, vital to access for communities, jobs and freight supply chains in the region.

On the Flinders Highway critical repairs were fast-tracked by the Queensland Government to reopen a severely damaged 150-kilometre section between Julia Creek and Richmond within two weeks of flood waters receding.

The Mount Isa rail line was reopened by Queensland Rail in late April 2019 following an 11-week effort by 400 staff to fast-track repairs to more than 200 sites and 300 kilometres of damaged rail track. Planned rail line upgrades to remove previous speed and axle load restrictions were brought forward ahead of schedule and delivered as part of the recovery efforts, resulting in reductions for freight travel times from Mount Isa to Townsville by 50 minutes.

36 Department of Premier and Cabinet. (2017). *A Strategic Blueprint for Queensland's North West Mineral Province.*
37 Queensland Government. (2017). *www.statements.qld.gov.au/Statement/2017/4/16/rare-mineral-discovery-offers-fresh-frontier-for-qld.*

geographic areas to service. A 'one network' approach to managing the road network in partnership across jurisdiction provides the opportunity to identify and assist local governments in developing local infrastructure.

A number of non-infrastructure or low cost improvements to existing infrastructure (compared to new infrastructure) initiatives could also facilitate better use of existing transport infrastructure including:

- incentives (e.g. to use rail for freight)
- use of special purpose vehicles (i.e. high-productivity freight vehicles)
- 'value-add process' at point of origin to reduce bulk transport (e.g. an abattoir in Hughenden is estimated to deliver a 65 per cent reduction in livestock transport costs compared to transporting cattle to east coast plants or to live export)
- improved coordination and performance of transport asset management and services to gain efficiencies and improve accessibility
- establishing a complete and connected active transport network to provide improved travel options within communities, encourage physical activity, health and wellbeing, and reduce environmental impacts by replacing more short-distance vehicle trips with walking and cycling
- better use of common user infrastructure, such as port and rail loading facilities.

Cattle near Cloncurry

Advances in technology

Advances in technology offer opportunities to achieve transport objectives and address a range of challenges for the North West Queensland region, including for safety, increased connectivity, and better transport outcomes.

Communications technology can reduce some of the need to travel on the transport network 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 opportunity for an improved user experience through the provision of real-time information, delivering reliability and convenience, and the ability to coordinate transport information with other information such as tourism information. This could be applied to public transport and the road network through the provision of real-time road condition information, giving road condition, roadwork and incident information to road users in advance of travel. This would allow travellers to avoid delays by retiming their journeys, or choosing alternative routes. These time savings would benefit the freight industry, tourists and the local community.

At present, the mobile communication network coverage in the region is not complete, but improvements are continuing as part of the Australian Government's Mobile Black Spot Program.

Improved technology in road building is another opportunity to find solutions to regional challenges. Advances in design and construction techniques for roads on expansive black clay soils, could reduce repair costs and improve resilience of the transport network.

Advances in vehicle technology, sensors and alerts continue to offer safety benefits for the trucking and transport industry, and general road users (e.g. wildlife collision avoidance technology).

Intelligent transport system signage in the North West Queensland region

CASE STUDY: Vision Zero/Volvo Roo Tech

Vision Zero is the Swedish approach to road safety which supports the notion that no loss of life is acceptable. This philosophy has been adopted by car manufacturer, Volvo, which by 2020, aim to eliminate traffic incidents causing injury or death in new Volvo vehicles. Volvo has developed collision avoidance technology, popular in Sweden where elk are abundant. More recently Volvo has turned their attentions to adapting this technology to Australian conditions, specifically to avoid collisions with kangaroos. A collision with a kangaroo can be devastating with more than 20,000 incidents each year on Australian roads causing $75 million in property damage and numerous injuries and fatalities.

Volvo is developing technology where vehicle cameras and radars can detect the presence of kangaroos and automatically engage brakes, if necessary. Volvo Roo Tech, and other similar intelligent transport system initiatives, have the potential to greatly improve safety on Queensland's road network.

Rail network planning

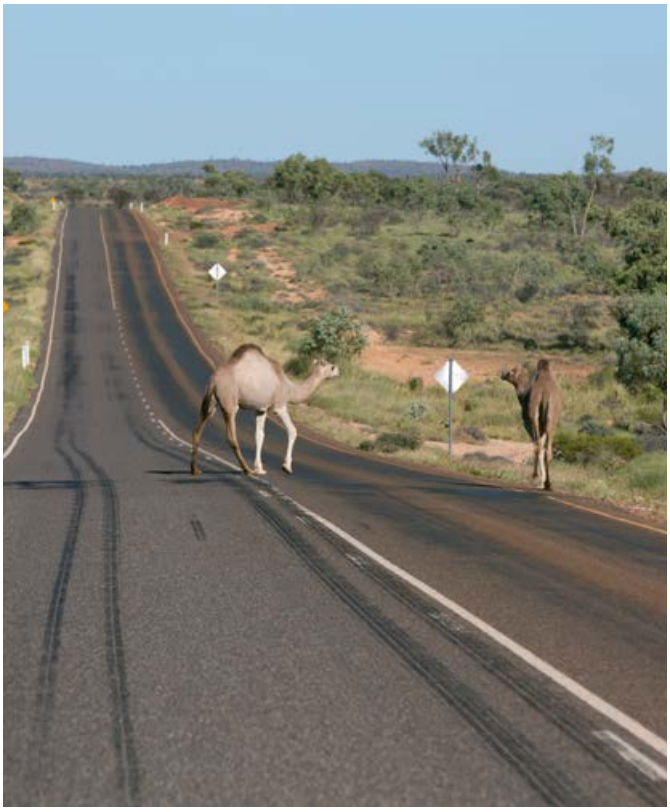
The Australian Government's *Our North, Our Future: White Paper on Developing Northern Australia* identified the potential benefit of a rail link between Mount Isa and Tenant Creek as a way of unleashing development opportunities in the region. In response to the white paper, the Northern Territory and Queensland Governments agreed to work together to undertake the preliminary planning to assess the economic feasibility of the connection. The link would provide rail access from the Northern Territory to the Port of Townsville, and also link Mount Isa with the AustralAsia rail link between Darwin and Adelaide which may provide potential benefits for the region's mining and agriculture industries.

Economic projects and initiatives

Major economic projects can have a significant influence on transport demand, transport planning and investment priorities. Key projects underway or proposed across the North West Queensland region that are likely to influence transport planning include:

- energy projects with new and upgraded facilities at Mica Creek Power Station in Mount Isa, the Camooweal Solar Project and Lake Julius power reliability improvements
- water projects including the Moondarra system upgrade by the Mount Isa Water Board
- replacement of the Mount Isa Health Campus
- upgrades to telecommunications networks through the Mobile Black Spot Program and Doomadgee to Burketown Optical Fibre Link Project
- major infrastructure upgrade of the Cloncurry Saleyards to cater to growth in cattle trade through the saleyards from around 325,000 head annually to up to 500,000 over the next decade[38]
- Julia Creek Membrane Bioreactor Sewerage Treatment Upgrade to deliver greater capacity and high-quality effluent suitable for re-use by council and the mining and agricultural sectors
- expansion of the Les Wilson Barramundi Discovery Centre in Karumba, which is expected to attract more tourists to the region
- Northern Gas Pipeline from Tennant Creek to Mount Isa is an $800 million, 622 kilometre gas transmission pipeline to connect gas reserves in the Northern Territory into an existing pipeline connecting Mount Isa and the east coast of Australia, which opened in December 2018[39]
- Construction of the 20 MW Hughenden Solar Farm project will provide enough clean energy for 10,000 average home. The project was sold in 2017 to Australian infrastructure investment specialists, Lighthouse Infrastructure[40]
- Development of a Kennedy Energy Park – a wind, solar and energy storage facility located in Flinders Shire. The project is expected to generate up to 1,200 MW of renewable energy for the region which would provide electricity for an equivalent of 800,000 homes.[41]

Undertaking investigations and planning to identify additional economic opportunities will also play an important role in the long-term setting of strategic directions for economic diversification and growth in the region. For example, undertaking of strategies and plans for economic development opportunities of airports in the region to grow their general aviation businesses.



Camels crossing the Barkly Highway (Cloncurry – Mount Isa)

38 Department of State Development, Manufacturing, Infrastructure and Planning. (2018). *www.statedevelopment.qld.gov.au/index.php/regional-development/regional-economic-development/building-our-regions/royalties-resource-producing-communities/1252-major-infrastructure-upgrade-of-the-cloncurry-saleyards.*

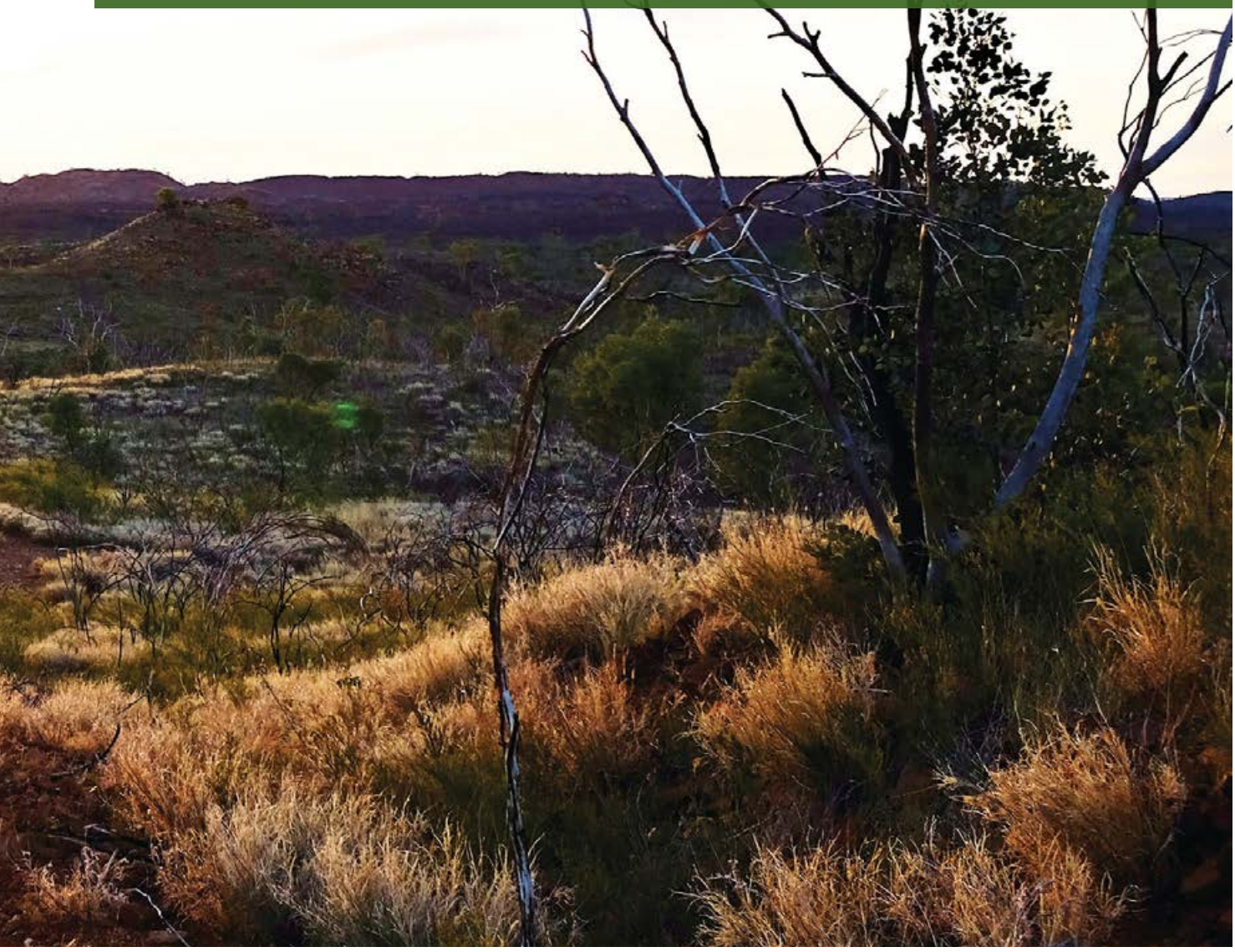
39 Australian Broadcasting Corporation News. (2018). *www.abc.net.au/news/2018-12-14/northern-gas-pipeline-opens-for-business-in-red-centre/10620202.*

40 BayWa r.e. (2019). *www.baywa-re.com/en/cases/asia-pacific/solar-park-hughenden/*

41 Kennedy Energy Park. (2019). *www.kennedyenergypark.com.au/project-details/*

Near Mount Isa

4.
Priorities and actions



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

- **Priority 1:** Greater resilience, reliability and connectivity
- **Priority 2:** Improved supply chain efficiency
- **Priority 3:** A safer transport network that meets different users' needs.

Actions are identified under each of the priorities. Actions are grouped into short-term and medium/long-term. Short-term actions identify the first 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, Queensland Transport and Roads Investment Program* (QTRIP), and other relevant service and infrastructure investment strategies across all levels of government and transport services providers.

Each action under the three priorities is 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 developed and used to indicate progress towards meeting the goals set out in this Plan.

Table 4 shows the relationship linking priorities, objectives and measures of success.

Upgrade of scenic lookout, Cloncurry

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

TRANSPORT SYSTEM

The safety of all transport system customers is our primary priority as we create a single integrated transport network accessible to everyone.

	PRIORITY 1 Greater resilience, reliability and connectivity	PRIORITY 2 Improved supply chain efficiency	PRIORITY 3 A safer transport network that meets different users' needs
RTP PRIORITIES	Resilient transport and communications networks that keep people engaged and connected within the North West Queensland region.	Improved supply chain efficiency, reliability and productivity, enhancing the North West Queensland region's access to national and international markets and facilitating opportunities for economic growth.	Enhanced and safer transport network for the North West Queensland region that better meets the competing demands of users, addressing conflicting and incompatible uses.
ROLE OF TRANSPORT	**Responding to the challenges of:** ■ wet weather impacts ■ increased road freight and tourism ■ network standards and conditions. **And opportunities related to:** ■ advances in communications technology ■ economic and community development projects. **By taking action to:** ■ identify and target resilience issues ■ reduce repair and rehabilitation costs ■ improve reliability and access ■ improve connectivity.	**Responding to the challenges of:** ■ increased freight demand ■ underuse of rail infrastructure ■ growth in self-drive tourism. **And opportunities for:** ■ economic growth ■ better use of existing infrastructure ■ advances in technology. **By taking action to:** ■ prioritise investment in key freight and tourist routes ■ address access and capacity needs at intermodal facilities such as ports, airports and railheads ■ understand and respond to the travel needs of the emerging tourism market.	**Responding to the challenges of:** ■ variable network standards ■ safety ■ freight and tourism growth ■ demography and settlement pattern. **And opportunities for:** ■ better use of existing infrastructure ■ safer tourist experience ■ support high productivity freight vehicles on more direct routes to market. **By taking action to:** ■ identify and address safety issues ■ plan and design facilities to meet different user needs ■ target safety education programs ■ utilise best practice environmental standards and sustainability principles.
TRANSPORT OBJECTIVES	**1.1** Develop a transport system that is more resilient to impacts of major weather events. **1.2** Achieve greater connectivity and more reliable travel times to support a liveable and productive region. **1.3** Find better ways to design, deliver, maintain and operate the transport system to achieve more within available funds.	**2.1** Invest in priority needs along key freight and tourist routes to support increased economic productivity and industry growth. **2.2** Achieve adequate levels of access, capacity and efficiency across the transport system to support stable or more competitive freight and passenger transportation costs. **2.3** Improve connectivity between labour and jobs, and markets and suppliers to support sustainable industry and employment in the region.	**3.1** Reduce risky or unsafe travel behaviour through targeted education programs and appropriate provision of facilities. **3.2** Reduce the risk and potential severity of crashes through targeted safety improvements. **3.3** Provide a transport environment that minimises conflict between different users.
MEASURES OF SUCCESS	■ Reduced frequency and duration of unplanned closures. ■ Maintain or improve road network reliability. ■ Greater access and connectivity to places, services and information.	■ Freight productivity improves. ■ Transport supports the region's economy.	■ Reduction in transport-related incidents, crashes, injuries and fatalities.

4.1 Priority 1: Greater resilience, reliability and connectivity

Resilient transport and communications networks that keep people engaged and connected within the North West Queensland region.

Communities and industry depend on a reliable transport network to achieve social and economic objectives. Reliable telecommunications systems are also essential for keeping people connected in times of emergency or disaster, and keeping travellers up to date about conditions affecting the network and their travel options.

The current transport system is of varying standards, and prone to extensive disruption and damage following flooding caused by heavy wet season rains and cyclones, and complications caused by underlying black (clay) soils.

Several freight transport routes in the region such as the Landsborough Highway between Cloncurry and Kynuna, and the Flinders Highway between Cloncurry and Julia Creek, are impacted by flooding during weather events, creating bottlenecks and significantly affecting freight movements. The impacts are compounded by a lack of viable alternative routes to avoid flood-affected areas.

Mitigating the impacts of weather conditions on connectivity and reliability is achieved through a combination of improved infrastructure, information and education initiatives. For example:

O'Connell Creek, Richmond

Priority 1 aligns to:

- the Transport Coordination Plan's objectives for 'community connectivity', and 'environment and sustainability'
- the *State Infrastructure Plan's* focus on transport infrastructure that reduces the long-term cost of repair, improves infrastructure resilience and improves safety and security
- regional planning objectives for greater levels of connectivity and access within and between communities.

Planning projects currently committed in QTRIP for the North West Queensland region that support Priority 1 include:

- progressing planning for a flood immunity upgrade strategy on the Flinders Highway between Mount Isa and Townsville
- continue planning for replacing culverts along the Landsborough Highway.

- **Infrastructure:** improve the ability of transport network infrastructure to recover quickly post-flood event without the need for repair and, where possible, identify and sign alternative routes to lessen connectivity impacts during road closures.
- **Information:** use communication technologies to provide real-time information and travel advice on alternate options to transport network users in event of unplanned (such as weather events) and planned (such as roadworks) events.
- **Education:** user education to plan your trip including considering transport network status information and alternative routes will lead to lessen inconvenience and improve safety.

Improved resilience and reliability in the North West Queensland region can be achieved through a combination of improved infrastructure, information, communication technology and education.

Transport objectives

Objective 1.1: Develop a transport system that is more resilient to impacts of major weather events.

The frequency and duration of closures of roads, ports, airports and rail lines can have a considerable impact on freight transport, local businesses, visitors, travellers and residents, particularly for remote customers. Network closures occur annually and can be lengthy. They cost industry money, disconnect residents, and inconvenience visitors and travellers. Wet season events and cyclones can't be avoided, however, more resilient infrastructure, and better management systems and response times, can reduce their impacts on the region's transport network.

Developing a more reliable transport system will:

- reduce road closures, allowing freight customers and products to reach markets on time and improve the transport system's resilience to reduce disruption to supply chains
- improve overall transport options for our customers and protect the economic function of the region
- improve year-round access to essential services
- improve network safety
- build wet season tolerance into, and maximise the opportunities presented by, a multi-modal network.

Objective 1.2: Achieve greater connectivity and more reliable travel times to support a liveable and productive region.

Customers need access to the region's essential services, especially during severe weather events, to access the things they need to stay safe and healthy. First responders also need the transport system to access people requiring assistance. The transport system can be developed to maintain connectivity by providing alternatives to routes that regularly flood, and reduce the impacts of inundation so roads can be opened immediately after the water recedes. Safety can be improved by mapping alternative routes, providing real-time information to customers about road closures and network conditions, and preparing contingency strategies.

Developing a more resilient transport system will:

- improve transport options for our customers and protect the economic function of the region under unexpected conditions
- improve access to essential services during and following extreme weather events
- improve network safety
- reduce confusion and uncertainty when disruptive weather events and transport incidents occur
- manage customer expectations regarding the operation of the transport network during and after disruptions
- allow customers to rely on communications networks to keep them updated on their travel options
- give customers a greater sense of awareness regarding transport decisions that affect their safety.

Objective 1.3: Find better ways to design, deliver, maintain and operate the transport system to achieve more within available funds.

Significant funding is required to construct, maintain and repair transport infrastructure in remote areas prone to flooding and subject to design issues, such as black soils. It can be especially challenging to make the case to fund transport infrastructure works in sparsely populated areas separated by large distances, and with low volumes of demand relative to other parts of Queensland with competing priorities. Finding smarter ways to do more with less, finding innovative solutions to the region's design and delivery challenges, and making the case for resilient infrastructure to reduce whole-of-life costs will help attract additional investment and achieve more within funding constraints.

Developing a more resilient transport system will:

- ensure infrastructure and services are fit for purpose and meet customer needs
- maximise the benefits of transport investment
- increase the efficiency of managing and operating the transport system
- overcome design and delivery challenges experienced at the regional level.

Actions

PRIORITY 1: GREATER RESILIENCE, RELIABILITY AND CONNECTIVITY

OBJECTIVES

Objective 1.1: Develop a transport system that is more resilient to impacts of major weather events.
Objective 1.2: Achieve greater connectivity and more reliable travel times to support a liveable and productive region.
Objective 1.3: Find better ways to design, deliver, maintain and operate the transport system to achieve more within available funds.

Actions – short-term	1.1	1.2	1.3
A1.01 Resilience and flood immunity Continue to identify and prioritise transport infrastructure upgrades to improve flood immunity and accessibility during the wet season and major weather events. This includes undertaking options analysis/business case development to improve or replace vulnerable floodways on roads such as Cloncurry-Dajarra Road.	✓		
A1.02 Road design for black soils Continue application of design guidelines that are best practice for road infrastructure on expansive black soils in the region.			✓
A1.03 Connecting remote communities strategy Develop an integrated multi-modal transport strategy that addresses community access between remote communities, rural towns and higher order community services, such as those based in Cairns, Townsville, Mount Isa or Brisbane.		✓	✓
A1.04 Bridge renewal Continue planning for necessary bridge replacements or structural enhancements (to address resilience, load limits and safety issues) 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 Barkly and Landsborough highways, the Burke and Wills developmental roads, and Cloncurry-Dajarra Road.	✓		
A1.05 Flood immunity projects for the Flinders Highway Continue planning, design and business case development to upgrade flood-affected sections of the Flinders Highway.	✓		
A1.06 Emergency transport access Continue to develop and adopt best practices for disaster response to facilitate emergency access and supply of essential goods to communities during and after extreme weather events.	✓		
A1.07 Custom design standards for remote area roads Consider 'fit-for-purpose' design standards for more remote areas to avoid cost-prohibitive requirements.			✓
A1.08 Affordable freight review Investigate freight options to address the cost of living and getting access to basic goods in the more remote parts of the region, including accessibility to fresh fruit and vegetables for improved health outcomes.		✓	

PRIORITY 1: GREATER RESILIENCE, RELIABILITY AND CONNECTIVITY (cont.)

OBJECTIVES
Objective 1.1: Develop a transport system that is more resilient to impacts of major weather events.
Objective 1.2: Achieve greater connectivity and more reliable travel times to support a liveable and productive region.
Objective 1.3: Find better ways to design, deliver, maintain and operate the transport system to achieve more within available funds.

Actions – short-term (cont.)	1.1	1.2	1.3
A1.09 Improving mobile coverage Investigate potential solutions to improve mobile communication coverage across the region's transport network, for example at recognised rest stops.	✓	✓	
A1.10 Local fare scheme Continue to evaluate the Local Fare Scheme in the Gulf of Carpentaria, Cape York and Torres Strait to ensure cost effective air travel and enable residents to move around more frequently.		✓	
A1.11 Long-distance passenger transport services improvement investigation Investigate improving long distance passenger services, including additional routes, in particular the feasibility of developing long distance bus routes throughout the region to provide an affordable option for the community to access Mount Isa, Cloncurry and other rural activity centres, particularly for communities with low car ownership.		✓	
Actions – medium/long-term	**1.1**	**1.2**	**1.3**
A1.12 Community based transport Support local government in identifying opportunities to improve access to transport services suited to their communities. 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.		✓	✓
A1.13 Coordinated road network stewardship Continue to work with local government under road maintenance and performance contract arrangements for coordinated management and stewardship of the road network.			✓
A1.14 All-weather airstrips Work with councils to investigate opportunities for regional airstrip improvements to enhance wet weather access, particularly for communities without other access alternatives, and to improve the responsiveness of aviation modes in emergency situations.	✓		
A1.15 Scenario planning for the longer term Commence long-term planning for scenario changes—such as climate change, flood resilience and water security—including developing strategies for the progressive seal and maintenance of priority transport links.	✓		

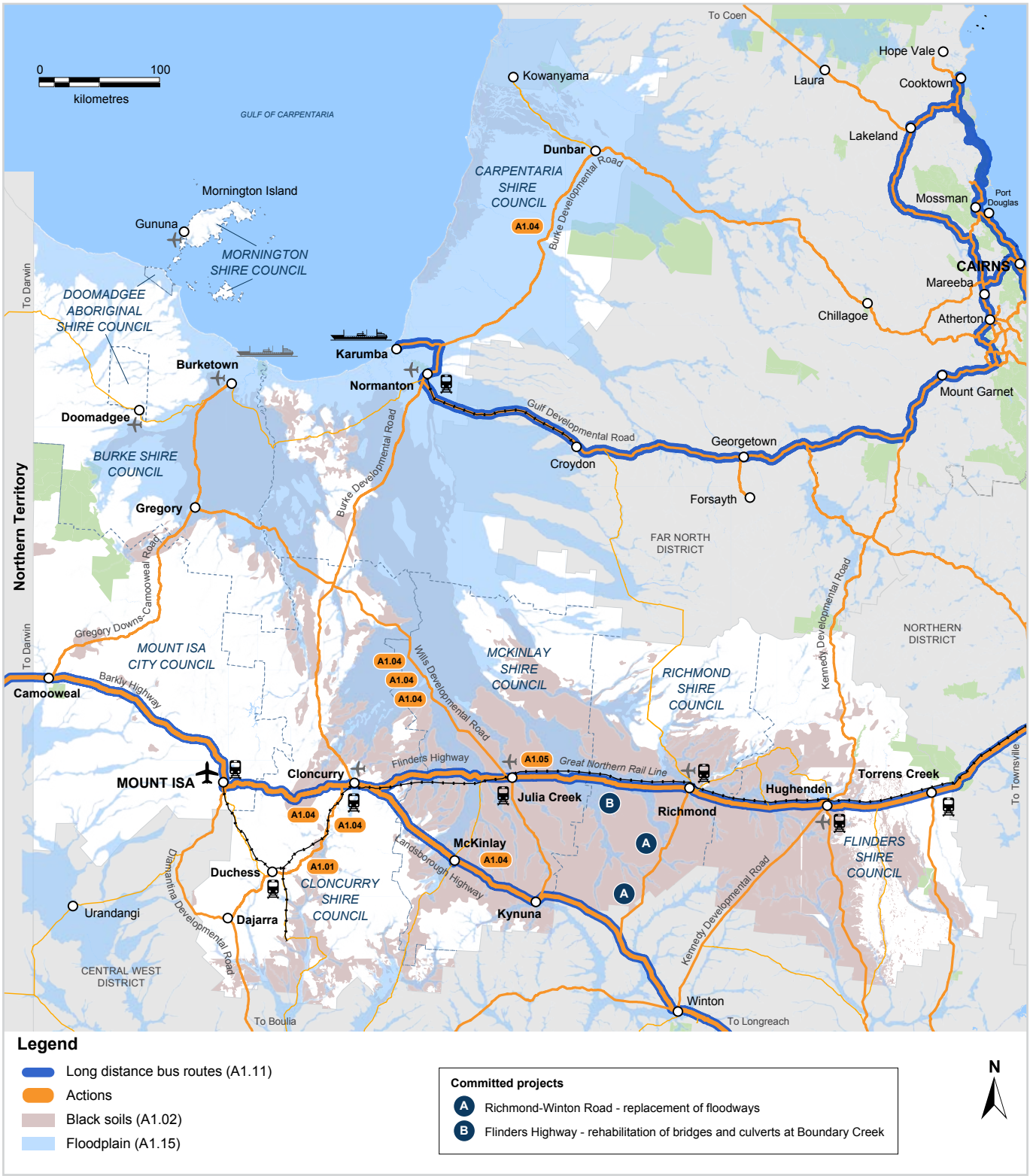
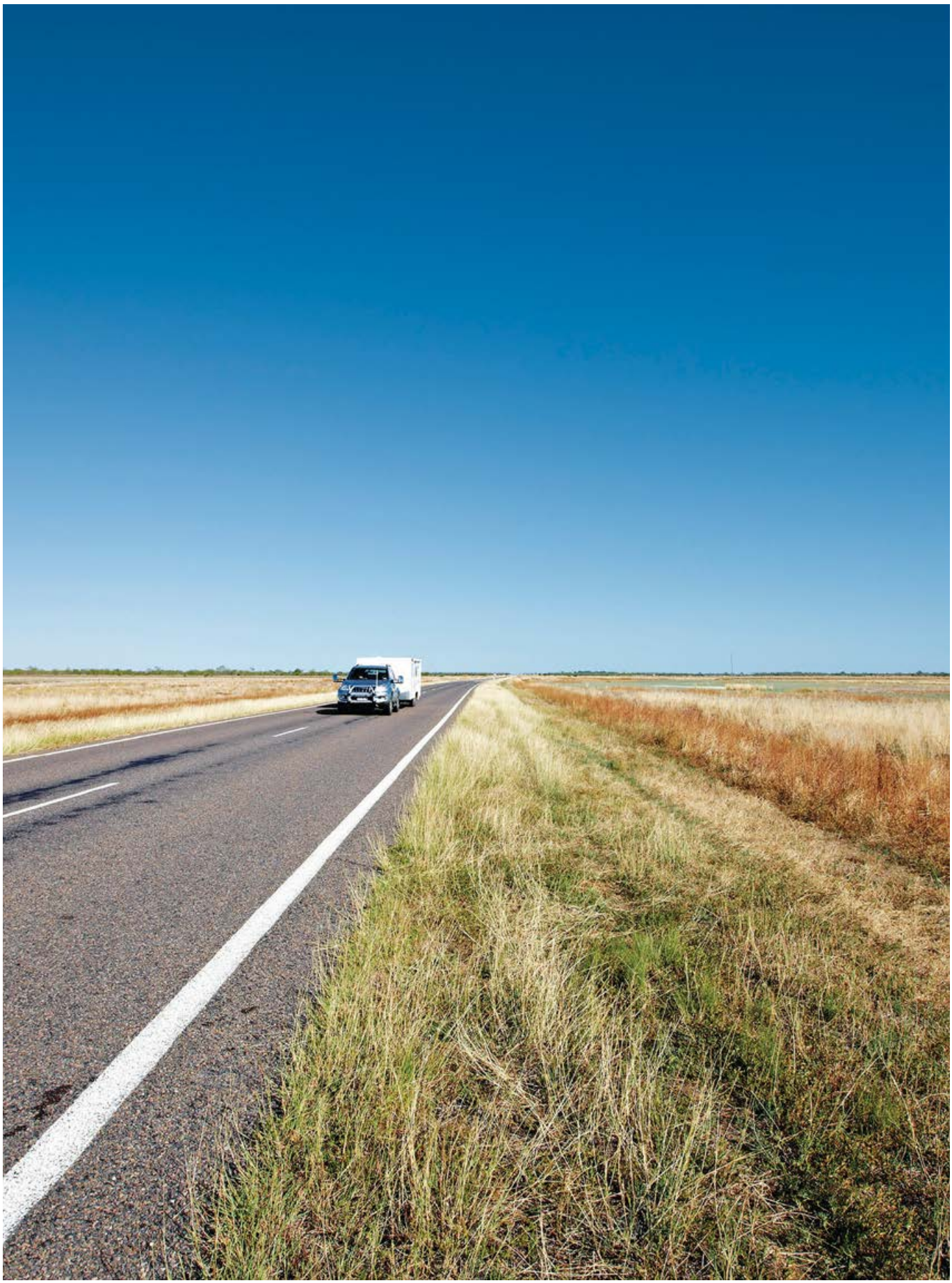


Figure 5: Priority 1 region map

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



Near Karumba, Carpentaria Shire

4.2 Priority 2: Improved supply chain efficiency

Improved supply chain efficiency, reliability and productivity, enhancing the North West Queensland region's access to national and international markets and facilitating opportunities for economic growth.

Efficient and reliable supply chains underpin the productivity of the region. Economic productivity and growth is essential for the region's prosperity, particularly for sustaining employment for strong communities. Addressing supply chain issues has the potential to improve the productivity of current ventures and promote the start-up of new ventures.

Supply chains are not just about moving freight or supporting mining and agriculture. Connecting an emerging tourism market to the region's cultural, historic and natural attractions is also a key opportunity for economic growth.

The transport system is crucial to the movement of goods and services, and access to employment, within the region and between the region and other destinations. Key examples include:

- **Agriculture:** movement of cattle and cattle products within the North West (including to and from the Port of Karumba) and North Queensland to the Port of Townsville and further south to domestic markets, as well as the potential for future crop growth increases in the Flinders and Gilbert catchments
- **Access to the Port of Townsville:** integral for the movement of resources into and out of northern Queensland including the North West Queensland region. While most transport to the port is via rail, road freight accounts for a significant portion.

Priority 2 aligns to:

- the Transport Coordination Plan's objective 'efficiency and productivity' where transport facilitates the efficient movement of people and freight to grow Queensland's economy
- the *State Infrastructure Plan's* focus on transport infrastructure that unlocks the potential of critical supply chains by identifying and improving the freight network
- regional planning objectives for reliable transport networks with the capacity to improve productivity and support growth of key and emerging industries

Mount Isa to Townsville Railway Line

The Queensland Government is investing $380 million over five years to maintain and improve the Mount Isa to Townsville rail line, making the journey for freight faster and more reliable. Works will include rail replacement, re-sleepering, bridge upgrades, ballast replacement, new and improved passing loops, and track upgrades and maintenance.

- **Drive tourism:** designated drive tourism routes include Overlanders Way (Townsville to Tennant Creek) and Savannah Way (via the Gregory Developmental Road between Broome and Cairns). The benefits of drive tourism to rural and regional businesses include the economic input from overnight stopovers and the purchase of basic travel necessities such as fuel and food. Drive tourism is expected to grow as Australia's population ages, with more retirees taking up touring around the country. Improved coordination with the tourism industry provides the opportunity to help drive visitors plan their journeys.

Transport objectives

Objective 2.1: Invest in priority needs along key freight and tourist routes to support increased economic productivity and industry growth.

Identifying and prioritising primary transport needs and facilities for tourism and freight can provide insights on how to best support and grow these industries through transport network development. Prioritised investment will:

- improve tourist satisfaction and potentially increase numbers
- facilitate faster and more efficient freight movement
- increase freight reliability.

Over the last decade, the North West Queensland region has experienced growth in domestic tourist numbers and agriculture. While both dependence on the mining sector and the impact of lower commodity prices have made the region more vulnerable to economic downturn, there are still significant mineral exploration opportunities, such as petroleum and geothermal energy. The region has the opportunity to build on established strengths in key industries, such as agriculture, mining and tourism.

Objective 2.2: Achieve adequate levels of access, capacity and efficiency across the transport system to support stable or more competitive freight and passenger transportation costs.

The efficient movement of goods among producers, manufacturers and customers, is important to the future growth of the region's economy. Efficient supply chains are achieved through holistic and integrated planning across all modes and jurisdictions that promotes seamless end-to-end movement of people and goods through the entire supply chain or journey. Capacity, reliability, access and connectedness that meet customer and industry needs are key requirements for developing a transport system that unlocks economic growth. Planning in partnership across all levels of government, and with customers and industry, is essential for finding the best solutions to optimise the transport system for faster, lower cost, and more reliable movement of people and goods.

The Australian Government's Beef Roads Program and Northern Australian Roads Program are delivering benefits to the North West Queensland region through road infrastructure improvements. Committed projects include:

- Almost $18 million for culvert upgrades on the Flinders Highway between Charters Towers and Richmond
- $50 million for works on the Kennedy Developmental Road between They Lynd and Hughenden
- Over $8 million for intersection upgrades on the Barkly Highway in the Mount Isa urban area
- Over $6 million for two packages of progressive sealing on Richmond-Croydon Road
- Over $3 million for progressive sealing on Cloncurry-Dajarra Road
- Almost $3 million for progressive sealing on Richmond-Winton Road

An optimised supply chain will:

- minimise unnecessary load transfers, splitting and handling, allowing direct connections between producers and receivers
- minimise transportation costs for producers, transporters, distributors and consumers
- provide reliable and direct access transport hubs, such as airports, seaports and rail terminals
- maximise use of existing capacity at the Port of Townsville through multi-user access arrangements.

Objective 2.3: Improve connectivity between labour and jobs, and markets and suppliers to support sustainable industry and employment in the region.

Transport plays a critical role in supporting economic growth and productivity by connecting businesses with input sources, other businesses and their markets. Planning for and investing in transport that reduces transport costs and expands access to markets is an important outcome for supporting economic growth and productivity.

Transport infrastructure that supports economic growth and productivity for the region's key industries will:

- reduce transport costs
- efficiently link the labour force to workplaces
- increase access to international markets
- increase access to production inputs and trade opportunities, and lead to long-term productivity gains.

Haulage train on Urandangi Road near Mount Isa

Actions

PRIORITY 2: IMPROVED SUPPLY CHAIN EFFICIENCY

OBJECTIVES
Objective 2.1: Invest in priority needs along key freight and tourist routes to support increased economic productivity and industry growth.
Objective 2.2: Achieve adequate levels of access, capacity and efficiency across the transport system to support stable or more competitive freight and passenger transportation costs.
Objective 2.3: Improve connectivity between labour and jobs, and markets and suppliers to support sustainable industry and employment in the region.

Actions – short-term	2.1	2.2	2.3
A2.01 Supporting self-drive tourism Undertake a regional transport needs analysis to understand the travel needs of tourists and visitors, and the strategic opportunities to inform initiatives and programs such as Drive Tourism, Tourism and Transport Connections, Natural Attractions and State Strategic Touring Route Signage Program (e.g. Australia's Dinosaur Trail).	✓		✓
A2.02 Business case methodologies Develop informed business cases that investigate ways of how evaluation and assessment methodologies can better reflect the benefits of investing in remote and regional transport projects (e.g. Infrastructure Australia's rural road group approach and the CSIRO TranSIT model approach).	✓	✓	
A2.03 Local employment plan for transport projects Continue to work with local government to promote local employment opportunities for transport infrastructure projects (planning and construction), including through local engagement requirements under federal funding provisions.			✓
A2.04 Planning for upgrades to key highways Undertake planning, design and business case development for safety, efficiency, and resilience improvements to Flinders, Barkly and Landsborough highways.	✓		
A2.05 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 future resource and agricultural sector freight requirements; access and movement requirements for oversize over-mass and high productivity vehicles (particularly to and in Cape York, the Atherton Tablelands, coastal ports and southern markets); first and last mile links; and the role of the of the region's ports (particularly Port Karumba), airports, rail terminals, and key freight routes.	✓	✓	✓
A2.06 Supporting active transport tourism Provide advice to local government, other state government agencies and tourism bodies to support planning, design and development of rail trails and tourism routes in the region to support active transport tourism. Suitable locations for developing walking, off-road cycling or horse riding trails could include sections along the disbanded Winton to Hughenden branch rail line.	✓		✓

PRIORITY 2: IMPROVED SUPPLY CHAIN EFFICIENCY (cont.)

OBJECTIVES
Objective 2.1: Invest in priority needs along key freight and tourist routes to support increased economic productivity and industry growth.
Objective 2.2: Achieve adequate levels of access, capacity and efficiency across the transport system to support stable or more competitive freight and passenger transportion costs.
Objective 2.3: Improve connectivity between labour and jobs, and markets and suppliers to support sustainable industry and employment in the region.

Actions – medium/long-term	2.1	2.2	2.3
A2.07 Responding to future economic development needs Position the region for future development and diversification in the mining and resources industry, particularly in the North West Minerals Province and Diamantina Mineral Province.	✓		✓
A2.08 Port development Consider the transport network planning response to support future upgrade and expansion plans for the Port of Townsville and/or Port of Karumba where upgrades can improve supply chain efficiency by allowing larger vessels to access the port, improve product handling capabilities and efficiency, and support multi-user access.	✓	✓	

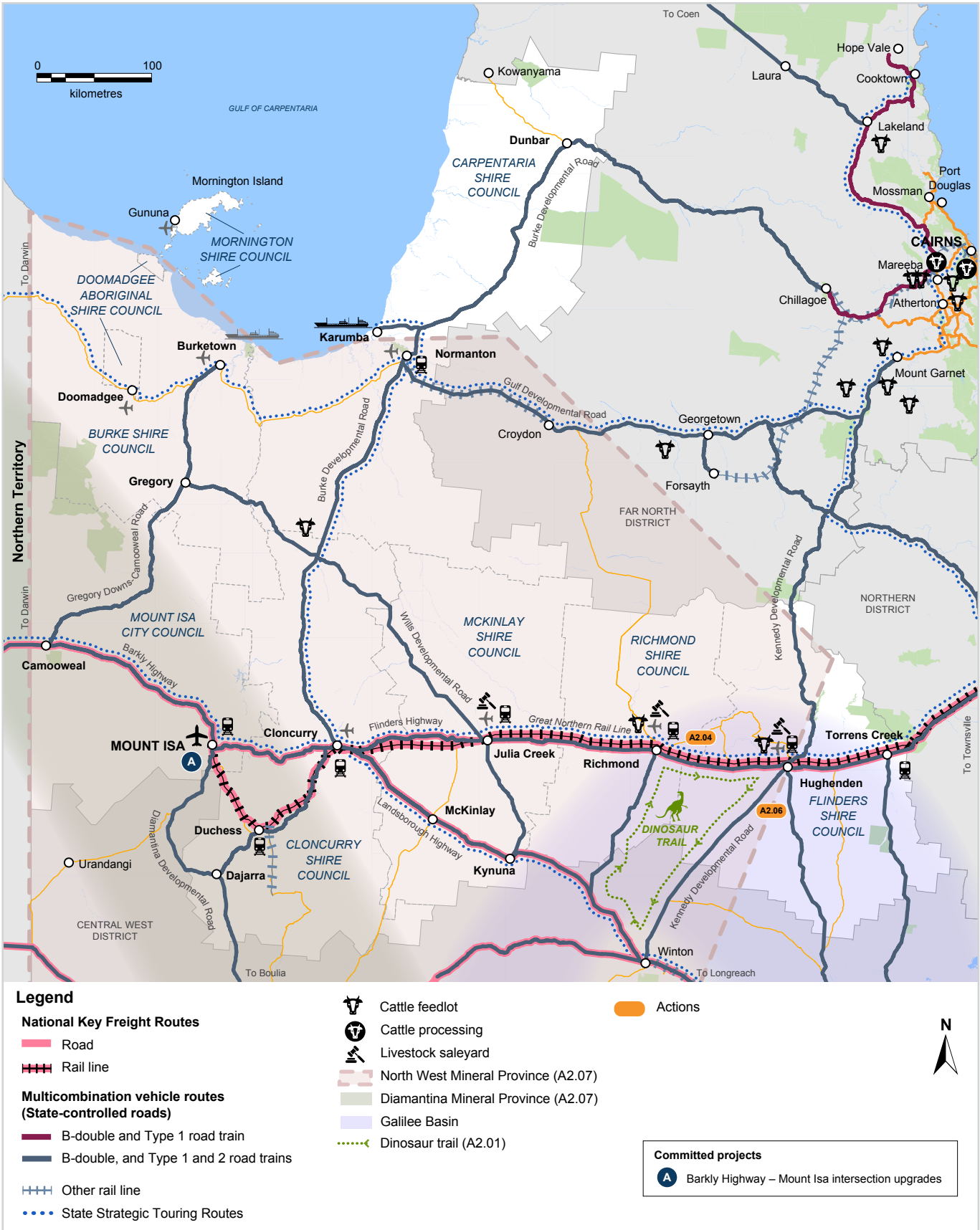


Figure 6: Priority 2 region map

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

Native forest, Richmond Shire

4.3 Priority 3: A safer transport network that meets different users' needs

Enhanced and safer transport network for the North West Queensland region that better meets the competing demands of users, addressing conflicting and incompatible uses.

A safe transport network is needed to ensure customers can reach their destination without incident. Transport users should feel safe using the transport system and behave in a way that promotes the safety of themselves and others.

A safer network that meets different users' needs can be achieved by:

- providing targeted and ongoing education and awareness campaigns tailored specifically for travel conditions in the North West Queensland region
- continuing to identify and deliver improved safety outcomes through dedicated programs such as Black Spot and Safer Roads Sooner
- identifying opportunities to improve safety as part of planning and design for all transport infrastructure projects
- providing roadside facilities, amenities and signage to encourage drivers to take rest stops on long trips.

A key consideration with planning rest areas and truck stops in the North West Queensland region is to ensure facilities meet the needs and demands of both self-drive tourists and the trucking and transport industry, and to reduce any potential conflicts or safety issues. This is especially important on highways that function as both key freight routes and tourist drive routes.

Priority 3 aligns to:

- the Transport Coordination Plan's objective 'safety and security' where transport is safe and secure for customers and goods
- the *State Infrastructure Plan's* focus on transport infrastructure that seeks innovation and technology solutions to create a better performing and lower emissions transport system, and connects regional communities with access to essential services and opportunities
- regional planning objectives for improved safety across an integrated transport network.

Transport objectives

Objective 3.1: Reduce risky or unsafe travel behaviour through targeted education programs and appropriate provision of driver facilities.

Accurate, convenient and timely information gives customers a sense of certainty by keeping them informed and increasing their situational awareness. Education is the primary tool in helping travellers understand when and how to travel safely. Timely and effective communication of travel behaviours and conditions will:

- empower customers to make informed decisions
- reduce confusion and uncertainty when disruptive weather events and transport incidents occur
- allow customers to rely on communications networks to keep them updated on their travel options
- manage customer expectations regarding the operation of the transport network and recognise its varying functions
- give customers a greater sense of awareness about transport decisions that affect their safety.

Objective 3.2: Reduce the risk and potential severity of crashes through targeted safety improvements.

Identifying and managing transport safety risk is an essential part of working towards zero deaths and reducing trauma on North West Queensland roads and rail networks. Personal safety is an equally important aspect of improving safety for our customers who need to feel safe, regardless of how they choose to travel.

Improving the safety and security of the transport network will:

- reduce the number of crashes on our road network
- reduce fatalities and hospitalisations
- improve economic and social benefits
- foster a greater sense of personal safety for our customers.

Objective 3.3: Provide a transport environment that minimises conflict between different users.

A traffic environment that minimises conflict between different users will:

- safely manage the interface between freight and tourist vehicle traffic
- include town area design that safely accommodates the needs of pedestrians and heavy vehicles
- provide rest areas that accommodate the needs of different road users
- incorporate road construction and design that limits conflict
- address the interface between road and rail services.

Crop harvesting, Richmond Shire

Actions

PRIORITY 3: A SAFER TRANSPORT NETWORK THAT MEETS DIFFERENT USERS' NEEDS	OBJECTIVES
Objective 3.1: Reduce risky or unsafe travel behaviour through targeted education programs and appropriate provision of facilities.	
Objective 3.2: Reduce the risk and potential severity of crashes through targeted safety improvements.	
Objective 3.3: Provide a transport environment that minimises conflict between different users.	

Actions – short-term	3.1	3.2	3.3
A3.01 Raising customer awareness about safe travel behaviour Continue to develop region specific education, promotion and communication campaigns in partnership with community, industry and other authorities to encourage safe travel behaviour (for all modes and all customers).	✓		✓
A3.02 Safe active transport in town centres Work with local government to improve the pedestrian environment in Mount Isa, Cloncurry and other rural activity centres in the region.	✓	✓	
A3.03 Road safety Continue to nominate sites, structures (such as bridges), links and networks in the region where road safety treatments and progressive sealing and widening of roads can be applied to enhance overall road safety outcomes. Priority roads to undertake options analysis/business case development for widening pavement and sealing of shoulders include the Burke and Wills developmental roads, and Julia Creek-Kynuna Road.		✓	
A3.04 Facilities to support a safe trucking and transport industry Incorporate the strategic intent of *Queensland's Heavy Vehicle Safety Action Plan* by ensuring road side facilities support safe trucking and transport operations.	✓	✓	✓
A3.05 Principal cycle network planning In collaboration with local governments update the *North Queensland Principal Cycle Network Plan* every five years and addendum *Priority Route Maps* every two years. Consider as part of review an expanded geographic scope to include local government areas in the region beyond Mount Isa City.			✓
A3.06 Principal cycle network implementation Undertake planning to deliver the principal cycle network to support more cycling, more often on safe, direct and connected routes through: ■ planning investigations for cycling infrastructure on highest priority routes ■ provision for cycling as part of planning for other TMR funded project on principal cycle routes.			✓
A3.07 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 *Disability Action Plan 2018–22*.	✓		✓

PRIORITY 3: A SAFER TRANSPORT NETWORK THAT MEETS DIFFERENT USERS' NEEDS (cont.)

OBJECTIVES

Objective 3.1: Reduce risky or unsafe travel behaviour through targeted education programs and appropriate provision of facilities.
Objective 3.2: Reduce the risk and potential severity of crashes through targeted safety improvements.
Objective 3.3: Provide a transport environment that minimises conflict between different users.

Actions – medium/long-term	3.1	3.2	3.3
A3.08 Rest areas Ensure planning for new projects incorporates opportunities for new or upgraded rest areas to encourage safe driver behaviour, and enhance customer experiences, particularly on drive tourism routes.	✓	✓	✓
A3.09 Wildlife collision avoidance technology Investigate collision avoidance technology to reduce crashes with wildlife.		✓	
A3.10 Rail crossing safety 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 *Queensland Level Crossing Safety Strategy 2012-2021*.		✓	✓
A3.11 Recreational boating review Continue to prioritise investment in boating infrastructure across the region based on an assessment of demand and input from customers and stakeholders, using tools such as the *Recreational Boating Facilities Demand Forecasting Study* (for individual local government areas).	✓		✓
A3.12 Stock routes Continue to update and develop management plans for primary stock routes throughout the North West Queensland region to improve road safety and the efficiency of agricultural practices.			✓

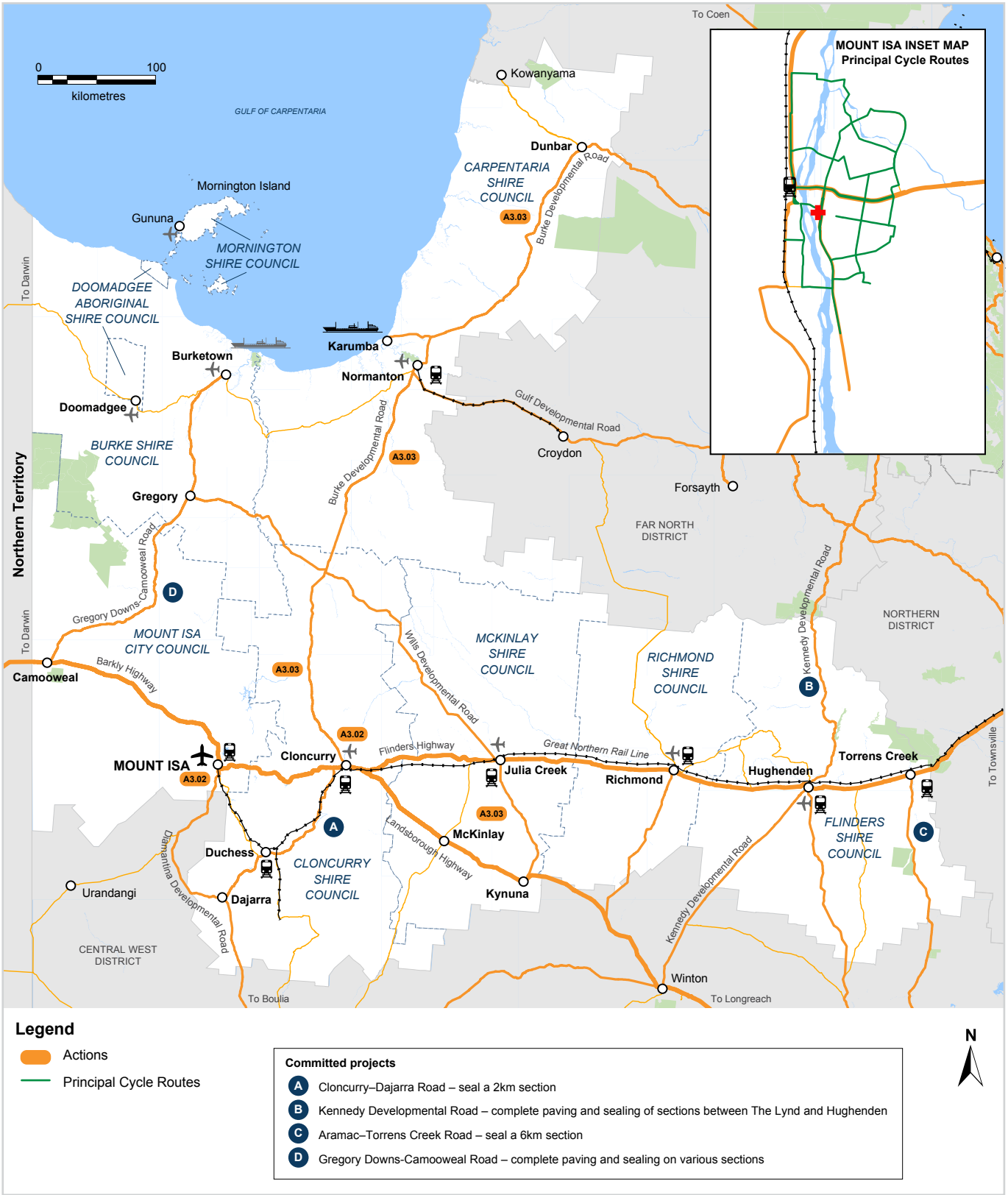


Figure 7: Priority 3 region map

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

Mount Isa City from lookout

Flood plain in Richmond Shire Council

5. Implementation

5.1 Taking action

Delivering the *North West Queensland 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 the priorities of customers, stakeholders and the community.

Figure 8 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 this 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.

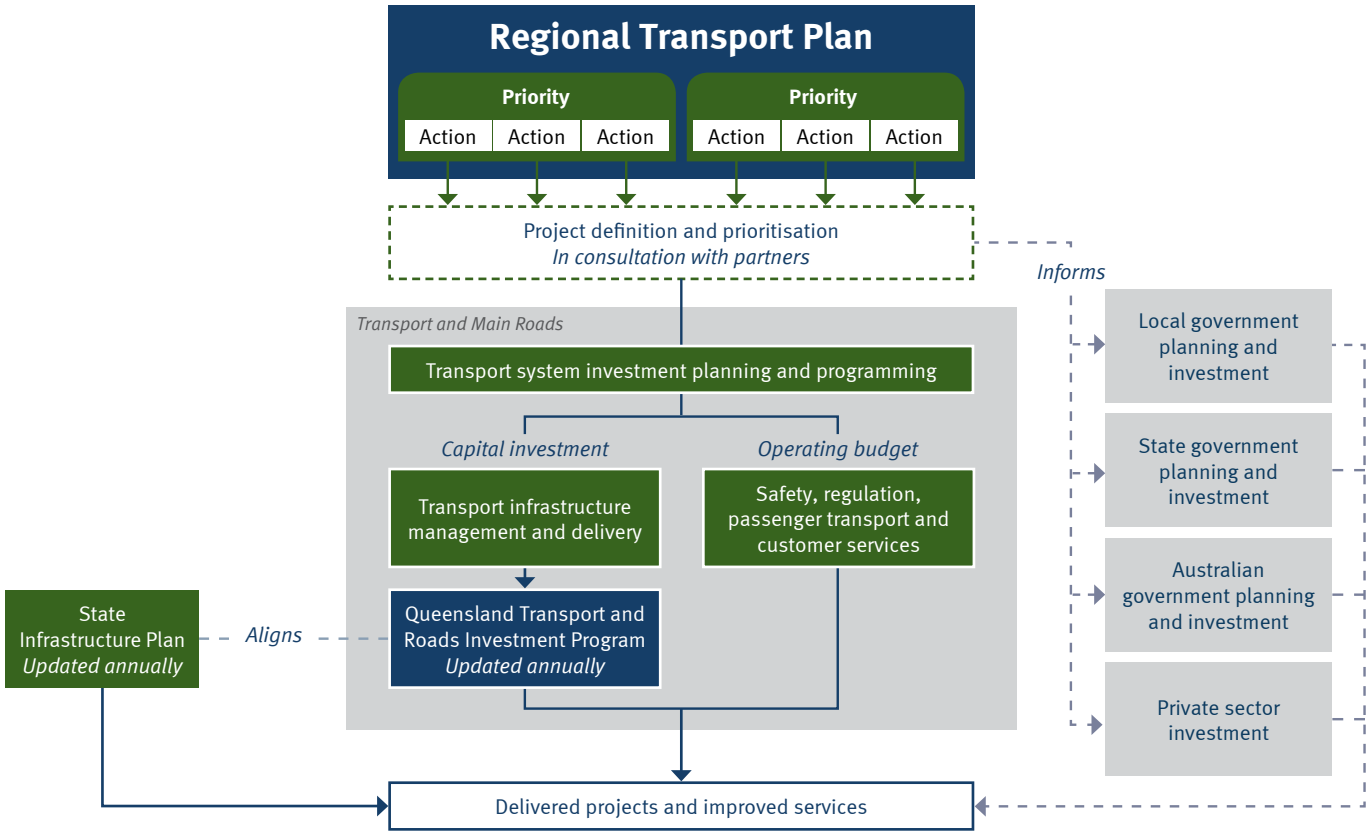


Figure 8: Regional Transport Plans are a critical step in Transport and Main Roads investment lifecycle

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 *North West Queensland 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.

Lake Fred Tritton, Richmond

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 9). These align to the 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: GREATER RESILIENCE, RELIABILITY AND CONNECTIVITY

MEASURE OF SUCCESS	PROPOSED INDICATOR	SOURCE
Reduced frequency and duration of unplanned closures.	Frequency and duration of unplanned closures on the state-controlled transport network due to flooding and other types of incidents.	Transport and Main Roads
Maintain or improve road network reliability.		
Greater access and connectivity to places, services and information.	Proportion of people choosing to walk, cycle and take public transport to work.^	Australian Bureau of Statistics
	Proportion of the state-controlled transport network (rail and road) with mobile reception coverage.	Transport and Main Roads

PRIORITY 2: IMPROVED SUPPLY CHAIN EFFICIENCY

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

PRIORITY 3: A SAFER TRANSPORT NETWORK THAT MEETS DIFFERENT USERS' NEEDS

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 and hospitalisation casualties) per 100 million vehicles kilometres travelled on state-controlled roads.	Transport and Main Roads
	Road crashes (resulting in fatalities and hospitalisation casualties) per kilometre on state-controlled roads.	Transport and Main Roads

Figure 9: Measures of success and proposed indicators

^ Proxy measure for a more accessible transport system through an increased use of a greater range of transport options.
^^ Proxy measure for improving reliability to access the region's tourism destinations via road.

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 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 10).

It is intended that a review of this 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.

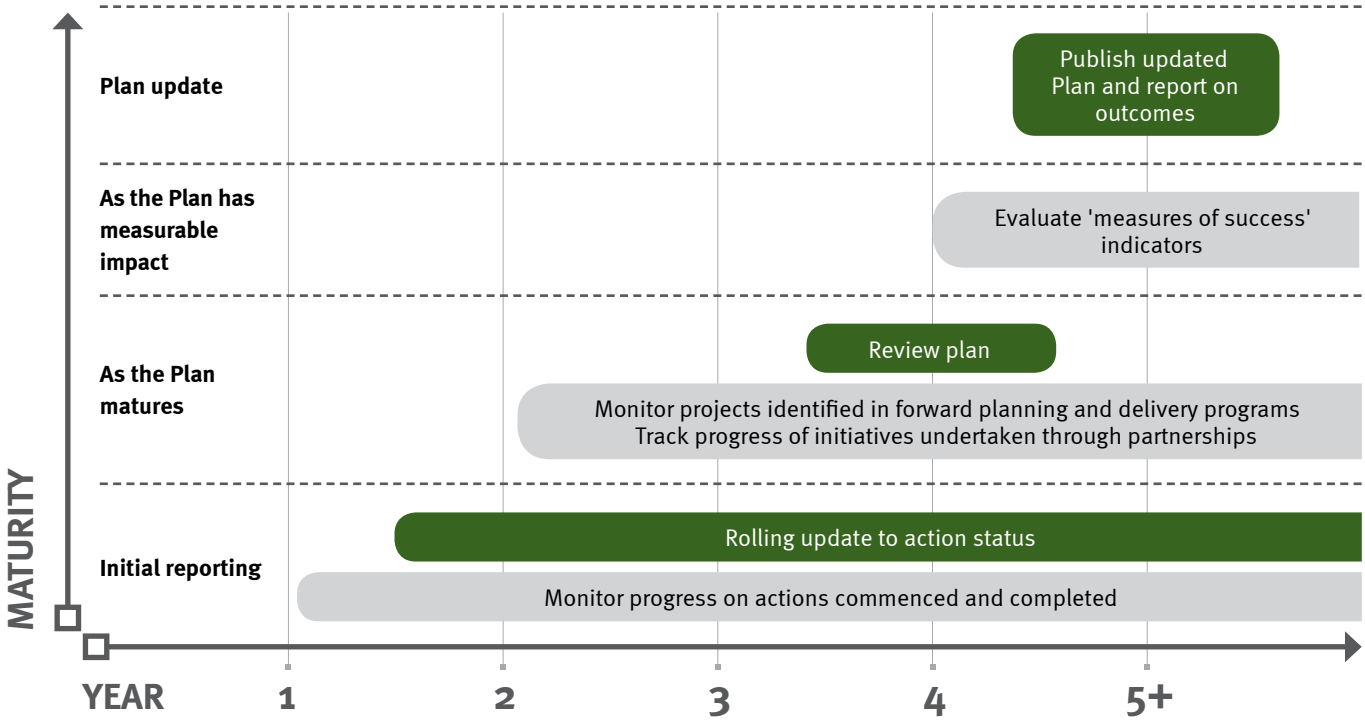


Figure 10: Monitoring, reporting and review as the Plan matures

Further information

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

Lightning over field, Richmond Shire Council

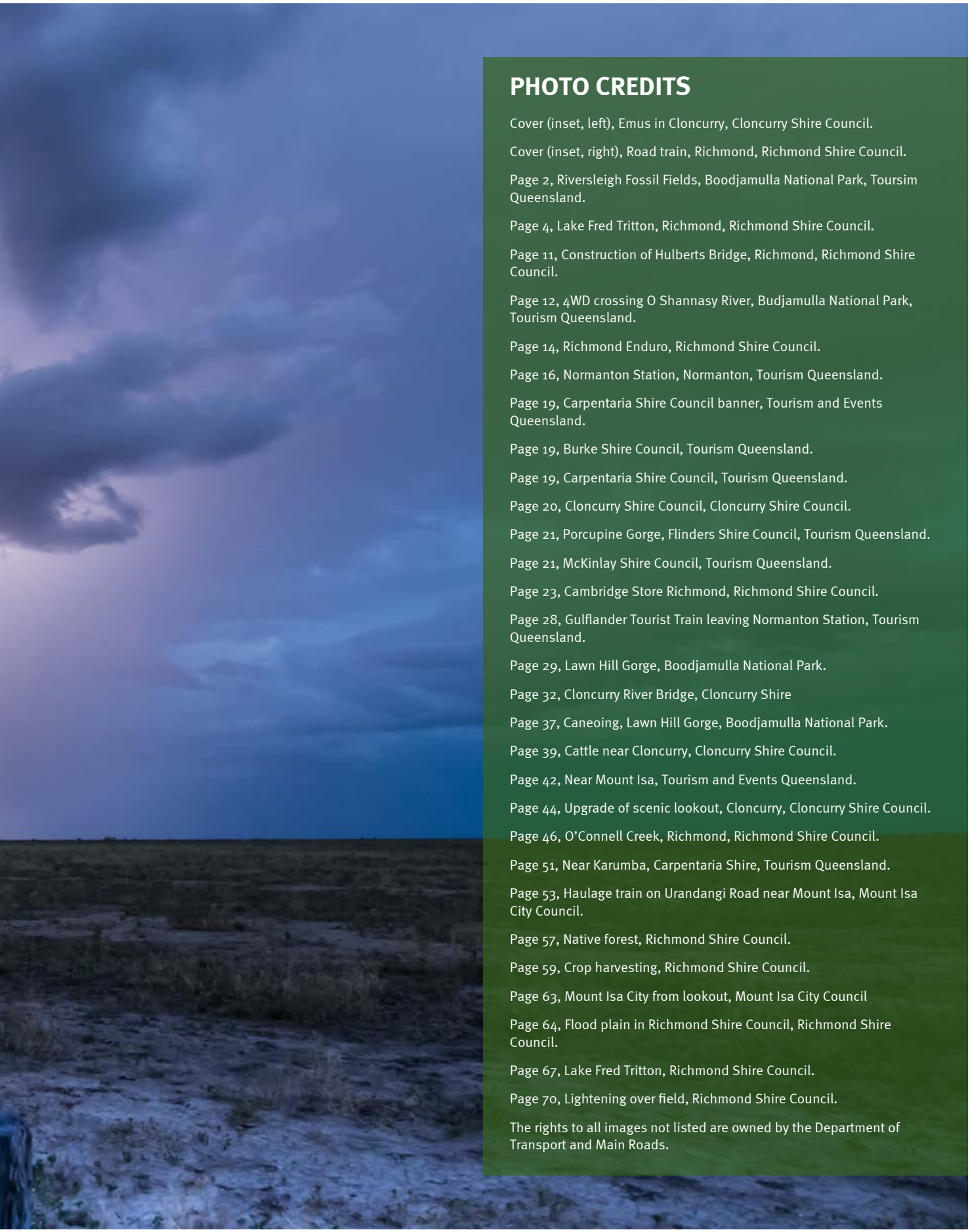


PHOTO CREDITS

Cover (inset, left), Emus in Cloncurry, Cloncurry Shire Council.

Cover (inset, right), Road train, Richmond, Richmond Shire Council.

Page 2, Riversleigh Fossil Fields, Boodjamulla National Park, Toursim Queensland.

Page 4, Lake Fred Tritton, Richmond, Richmond Shire Council.

Page 11, Construction of Hulberts Bridge, Richmond, Richmond Shire Council.

Page 12, 4WD crossing O Shannasy River, Budjamulla National Park, Tourism Queensland.

Page 14, Richmond Enduro, Richmond Shire Council.

Page 16, Normanton Station, Normanton, Tourism Queensland.

Page 19, Carpentaria Shire Council banner, Tourism and Events Queensland.

Page 19, Burke Shire Council, Tourism Queensland.

Page 19, Carpentaria Shire Council, Tourism Queensland.

Page 20, Cloncurry Shire Council, Cloncurry Shire Council.

Page 21, Porcupine Gorge, Flinders Shire Council, Tourism Queensland.

Page 21, McKinlay Shire Council, Tourism Queensland.

Page 23, Cambridge Store Richmond, Richmond Shire Council.

Page 28, Gulflander Tourist Train leaving Normanton Station, Tourism Queensland.

Page 29, Lawn Hill Gorge, Boodjamulla National Park.

Page 32, Cloncurry River Bridge, Cloncurry Shire

Page 37, Caneoing, Lawn Hill Gorge, Boodjamulla National Park.

Page 39, Cattle near Cloncurry, Cloncurry Shire Council.

Page 42, Near Mount Isa, Tourism and Events Queensland.

Page 44, Upgrade of scenic lookout, Cloncurry, Cloncurry Shire Council.

Page 46, O'Connell Creek, Richmond, Richmond Shire Council.

Page 51, Near Karumba, Carpentaria Shire, Tourism Queensland.

Page 53, Haulage train on Urandangi Road near Mount Isa, Mount Isa City Council.

Page 57, Native forest, Richmond Shire Council.

Page 59, Crop harvesting, Richmond Shire Council.

Page 63, Mount Isa City from lookout, Mount Isa City Council

Page 64, Flood plain in Richmond Shire Council, Richmond Shire Council.

Page 67, Lake Fred Tritton, Richmond Shire Council.

Page 70, Lightening over field, Richmond Shire Council.

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