



ROADS

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BACKGROUND

The importance of the road network in the area is emphasised by the fact that:

- about 87% of all person trips in the region is undertaken by car (or 93% of all trips by some form of road dependant transport)
- a large proportion of all freight is transported by road.

Dispersed and low-density land uses resulted in a car dependant population in the region. The road system is generally of high quality, with sufficient capacity to accommodate existing traffic volumes.

The Bruce Highway connects Rockhampton with the cities of Mackay in the north and Gladstone in the south. It traverses through Rockhampton on

the north via Yaamba and Moores Creek Road, over the Neville Hewitt Bridge (crossing the Fitzroy River) and along the city fringe via Albert and George Street. Port Alma (75km to the south), the Rockhampton airport (5km) and the Port of Gladstone, can be accessed via road links from the Bruce Highway.

The Capricorn Highway connects the major urban areas of Rockhampton and Gracemere (and Stanwell industrial precinct). The Capricorn Highway is a sealed road suitable for heavy loads (an approved type 1 road train route).

The Burnett Highway provides a link between Rockhampton and Mount Morgan.

Apart from the highway system in the area various other roads were considered in the CapIRTP

ROAD SECTIONS CONSIDERED IN CAPIRTP

- Bruce Highway from northern border of CapIRTP area (Ogmore) to the border (Raglan) in the south (includes Yaamba Road, Moores Creek Road, Albert Street, George Street, Gladstone Road and Lower Dawson Road).
- Capricorn Highway from Rockhampton, via Gracemere to eastern border of CapIRTP area.
- Burnett Highway from Rockhampton via Mount Morgan to the southern border of the CapIRTP area
- Rockhampton - Yeppoon
- Rockhampton - Emu Park Road (including Lakes Creek Road)
- Yeppoon to Emu Park (the Scenic Highway)
- Gavial - Gracemere Road (connecting Gracemere with the Bruce Highway south of Rockhampton)
- Yeppoon - Byfield Road
- Rockhampton - Ridgeland Road
- Bungundarra Road
- Queen Elizabeth Drive/Musgrave Street (Fitzroy Bridge)
- Moores Creek Road (Bruce Highway to Norman Road)
- Norman Road and Dean Street in Rockhampton
- Yeppoon - Emu Park (Tanby Road and access to Kinka Beach and Rosslyn Bay)
- Ridgeland - Rosewood - Wycarbah Roads (Fitzroy Loop)
- Keppel Sands Road
- Ogmore Connection Road
- Bajool - Port Alma Road
- Duaringa - Apis Creek Road
- Marlborough - Sarina Road
- Fons Drive (links Glendale to Glenlee and southward to Rockhampton via Belmont Road)
- Farnborough to Yeppoon (via Pacific Drive, Crannies Road, Adelaide Park Road and Limestone Creek Road)





STUDIES

A number of studies have been completed to access the road network requirements in the area. The most significant of these studies are the:

- Rockhampton Transport Study - Road Network and Traffic Review (1991)
- Livingstone Shire Land Use/Transportation Study (1993)
- Yeppoon Transport Options Study (2002).

Other studies conducted in the area include the Alma Street proposed bypass for heavy vehicles (1999) and traffic study for Lakes Creek Road (2000). The outcomes of these studies have been considered in the development of a future road network for the area.

ROCKHAMPTON TRANSPORT STUDY 1991

A review of the Rockhampton Transport Study indicated that the study overestimated future traffic movements. The shift of development from the south side to the north of Rockhampton also altered travel patterns significantly. As a result, the identified road improvements have changed in terms of both location and time of implementation.

LIVINGSTONE SHIRE LAND USE/TRANSPORT STUDY 1993

A review of the Livingstone Shire Land Use/Transportation Study showed that the outcomes of the study are still largely relevant. Current traffic counts (1991) reflect the low traffic scenario. Upgrades identified in the study have largely been undertaken.

The study identifies Tanby Road, Park Street, Rockhampton-Yeppoon Road and Adelaide Park Road as those urban roads most likely to suffer from increased

congestion. All these roads have a sufficiently wide reserve, with the exception of Adelaide Park Road. The study indicates the need for an alternative route to the west, bypassing the existing built-up area.

YEPPOON TRANSPORT OPTIONS STUDY 2002

The Yeppoon Transport Options Study (2002) was undertaken to identify and evaluate alternative transport requirements to support desired planning outcomes for Yeppoon to 2030. It seeks an optimum solution to reduce the impact of current transport operations.

The two issues considered in the study comprised:

- the impact on amenity and safety of logging trucks using Anzac Parade between Yeppoon CBD and the foreshore and Livingstone Shire Council's future development intent for Yeppoon
- the impact of the current rail station in James Street and Livingstone Shire Council's future intent for this part of the Yeppoon CBD.

A number of rail options were investigated and it was concluded that the existing location of the railway station compromises development options for the Yeppoon CBD and creates significant traffic impacts (heavy vehicles accessing the existing packaging facilities at the railway station). The study suggests the development of a multi-modal facility at Bondoola, on the outskirts of Yeppoon, adjacent to the existing rail line and the Yeppoon-Rockhampton Road. It further suggests an alternative heavy vehicle route connecting with the Yeppoon-Rockhampton Road at Bondoola to alleviate amenity and safety issues along Anzac Parade.



QUEENSLAND GOVERNMENT STRATEGIES AND INITIATIVES

The recently released *Roads Connecting Queenslanders* (Main Roads) provides a strategic long-term direction for the Queensland road system and Main Roads. The document focuses on the four key outcomes for the Queensland road system that contribute to government's priorities for the state. These are:

- safer roads to support safer communities
- efficient and effective transport to support industry competitiveness and growth
- fair access and amenity to support liveable communities
- environmental management to support environmental conservation.

The Department of Main Roads' *Roads Connecting Queenslanders* replaces the previous Road Network Strategy document and provides the future direction for roads in Queensland. Being the department's leading policy document it shows how Main Roads will plan for long-term needs and make strategic choices using available funds to respond to community, industry and government expectations of Queensland's roads.

It also recognizes that the road system is essential to connect wider transport and infrastructure development, land use, regional development and the activities of people, communities and industries.

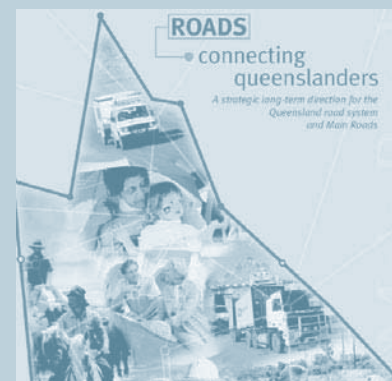
Main Roads recently released *Investment Guide for Queensland's State Controlled Roads* outlines cost-effective strategies for consistent improvement to

Main Roads' higher order roads. The guide provides a twenty-year outlook for road development across the state and is a starting point for more detailed planning activities. Its strategies are based on enhancing equity across the state and attempt to balance competing road network objectives with anticipated funding. The first release of the guide focuses only on higher order roads; the remaining district roads require additional consideration. The guide acknowledges the importance of integrated transport planning to achieve its objectives.

Projects for the department's *Road Implementation Program* will align with the strategic intent outlined in the Investment Guide, but will depend upon government priorities, stakeholders' expectations and available funds.

The statewide investment guide, along with the policies and priorities from *Roads Connecting Queenslanders*, is framed to contribute to the development of integrated regional transport plans.

The Main Roads and Local Government Alliance supports the principles behind the development of integrated planning. The main purpose of the alliance is for Main Roads and local government, through a combined approach to road network planning, to improve the delivery of road infrastructure for those roads deemed to be of local significance. Integrated transport plans will provide an important input to the planning undertaken by the alliance partners. As such, there are recognised benefits for the current group of councils involved in the CapIRTP to continue working as a group of councils with Main Roads in the proposed alliance





PLANNING PRINCIPLES FOR ROADS

The principles adopted for roads in the area align with those in the *Roads Connecting Queenslanders*. These include:

- safer roads to support safer communities
- efficient and effective transport to support industry competitiveness and growth
- fair access and amenity to support liveable communities
- environmental management to support environmental conservation.

ROAD NETWORK ISSUES

Road network issues raised during consultation include:

- capacity and future requirements of roads between the Capricorn Coast (Yeppoon and Emu Park) and Rockhampton; Rockhampton and Gracemere; and north-south along the Capricorn Coast
- intersection capacity at McLaughlan Street and Capricorn Highway (Gracemere), along Lakes Creek Road and Boundary Road, the Bruce Highway, High Street to Moores Creek Road and various intersections at Musgrave Street and the area around Aquatic Place
- impact of through traffic volume on Rockhampton (via Albert Street and George Street and through traffic use of Norman Road and Dean Street in preference to the Bruce Highway)
- impact of land use on road infrastructure requirements and service levels such as major new developments and industry expansions (forestry expansion in the Byfield area and the intensification of agriculture along the reaches of the Fitzroy River at Riverslea and Rookwood) on the road system
- impact of traffic growth on cross-river access in Rockhampton (Stanley Street alternative crossing)

- impact of flooding on road infrastructure provision and performance
- access to the Shoalwater Bay Military Training area (along with existing military facilities that may be able to be used in emergency situations), to Port Alma and to the Bruce Highway at Glenlee and The Caves (when future expansion occurs)
- there may be significant increases in the volume of traffic on roads servicing agricultural developments around the Lower Fitzroy River from Ridgeland to Rookwood-Riverslea
- rail/road conflicts at all intersections along Denison Street
- heavy vehicle traffic on various roads such as the Scenic Highway, Anzac Parade, Bolsover Street and Alexandra Street
- need for an alternative southern access to Rockhampton City for use in emergencies
- preferred routes for the movement of over-dimensional vehicles through Rockhampton
- possible impact in road network (access) in Mount Morgan if proposed mining, tourism and feed lot developments eventuate
- impact of potential increase in tourist traffic along the Scenic Highway.

ROAD NETWORK IMPROVEMENT OPTIONS

Generally, the road network is operating at a high level of service with low levels of congestion and short travel times. Results of the road network model indicate that, in general, the road system is capable of accommodating traffic growth until 2015 with only minor capacity improvements needed at key intersections and along major arterials. The 2030 analysis showed that demand would exceed capacity of existing arterial roads causing congestion.

The CapIRTP road network was modelled to assess its responsiveness



against a range of possible growth scenarios. The results of the analysis indicate that network improvements along the Yeppoon-Rockhampton Road, Tanby Road, the Capricorn Highway (between Rockhampton and Stanwell) and the Bruce Highway (through Rockhampton) will need to be considered.

The Yeppoon to Rockhampton Road and Capricorn Highway (between Rockhampton and Stanwell) may require more passing lanes in the short to medium term, with duplication in the long term.

Tanby Road requires upgrading to relieve the pressure of future traffic increases along the Scenic Highway from Yeppoon to Emu Park. The Scenic Highway carries a considerable proportion of local traffic and holiday traffic and has a low speed profile. The upgrading of Tanby Road will improve access and travel times between Yeppoon and Emu Park.

The CapIRTP investigated options to reduce through traffic (especially heavy vehicles) in Rockhampton. A cursory analysis of alternative through route options has been undertaken for Rockhampton City. The options for alternative through-routes investigated, included two options each on the western and eastern side of Rockhampton City. The results of the analysis indicated that:

- the capacity of the existing road network is adequate to accommodate traffic growth beyond 2030
- the cost to provide the alternative through-route options outweighs the benefits derived from the estimate number of users beyond 2030
- the construction of the alternative through-route options will have a detrimental impact on road traffic reliant businesses
- the western through-route options

have the potential to exacerbate the impact of flooding.

The construction of an alternative through route around Rockhampton City may be a requirement beyond 2030. However, a process should be put in place to ensure retention of a possible future corridor once the alignment has been established. Options to improve traffic flow along Albert Street and George Street should be investigated in the short term.

Results from public consultation indicated that logging trucks travelling via Yeppoon are causing conflict with pedestrians along Anzac Parade. Current safety and amenity issues need to be addressed. The increase in the logging traffic has been a catalyst for the upgrading to a sealed standard of the existing road (Yeppoon – Byfield Road). The Yeppoon Transport Options Study (2002) suggested an alternative heavy vehicle route connecting with the Yeppoon-Rockhampton Road. The Yeppoon Western Bypass Road and the upgrading of Tanby Road are now funded projects.

Road capacity improvements could induce an increase in car travel. Options to reduce car travel should be considered (such as car pooling, incentives and disincentives, alternative land use development and so on). For example Central Queensland University is a major attractor with access from the Bruce Highway and Norman Road. Adjacent development could reduce trips via the Bruce Highway and Norman Road by providing direct linkages. The CapIRTP supports alternative transport solutions to car travel that will improve economic, social and environmental outcomes.

The need for future road development should occur in conjunction with road safety and management strategies.





ROAD FREIGHT

Road freight needs to be considered in the development of existing and future road options. The road system is maintained in a good state of repair and the pavement and alignment on most roads are generally suitable for heavy commercial traffic. The introduction of significant additional commercial traffic as a result of industrial development in the corridor would nonetheless significantly affect the remaining life of existing infrastructure and may require pavement strengthening.

The highest daily heavy vehicle traffic volumes (about 1,000 heavy vehicles per day north and south of Rockhampton in 2000) occur along the Bruce Highway. A large proportion of this heavy vehicle traffic is through traffic. The highest heavy vehicle movements occur on the Bruce Highway road through the city along Moores Creek Road (1,320 heavy vehicles per day in 2001), George Street (1,580 heavy vehicles per day in 2001) and Lower Dawson Road (1,620 heavy vehicles per day in 2001). A large proportion of local freight movements within the CapIRTP area consist of cattle transport from the hinterland (Gracemere environs) to the abattoirs along Lakes Creek Road. The road sections between Gracemere and Rockhampton carried about 800 heavy vehicles per day (2000), while about 770 heavy vehicles per day (2000) travelled along Lakes Creek Road. Another main heavy vehicle route includes the Rockhampton to Yeppoon Road (450 heavy vehicles per day in 2001, that includes a proportion of logging trucks from the Byfield forestry area).

ROAD FREIGHT ROUTES

The *Guideline for Multi-combination Vehicles in Queensland* (Queensland Transport Version 4 July 2001) provides the conditions under which road trains (including B-triples, AB-triples and prime mover/semi-trailer combinations towing one converter dolly) and B-doubles may be used on roads in the CapIRTP area. B-doubles are currently trialled on the Byfield Road. Appropriate routes have

been determined, based on the load capacity of the route and access.

ROAD FREIGHT ISSUES

A number of road freight issues have been identified from previous studies as well as from workshops with the road freight industry such as:

- the capacity of existing road infrastructure to support future freight requirements
- the appropriate allocation or shifts between modes such as road and rail
- the economic efficiency of road freight movement
- the negative impacts such as heavy vehicle noise (i.e. noisy vehicles on steep grades towards Rockhampton airport) and safety
- heavy vehicles (in particular dangerous goods) travelling via inappropriate land uses (residential areas, school zones and shopping nodes) and their impact on amenity and safety
- parking of heavy vehicles (on roads in residential areas)
- the movement of freight to and from the Rockhampton Railway Station creating heavy vehicle issues in Bolsover Street and the CBD environs
- insufficient areas to break up long vehicles and inadequate break-up and rest area facilities (safety is a primary concern)
- existing road conditions such as steep grades (with loose gravel), rail and road intersections (long vehicles can obstruct rail operations if not allowed sufficient space to stop at close road intersections), need for more passing lanes (mainly at hills) and roundabouts
- insufficient access to industries
- access to current information on routes (road and bridges)
- need for clear signage, placed at an appropriate distance to allow sufficient time to react.



ROAD FREIGHT IMPROVEMENT OPTIONS

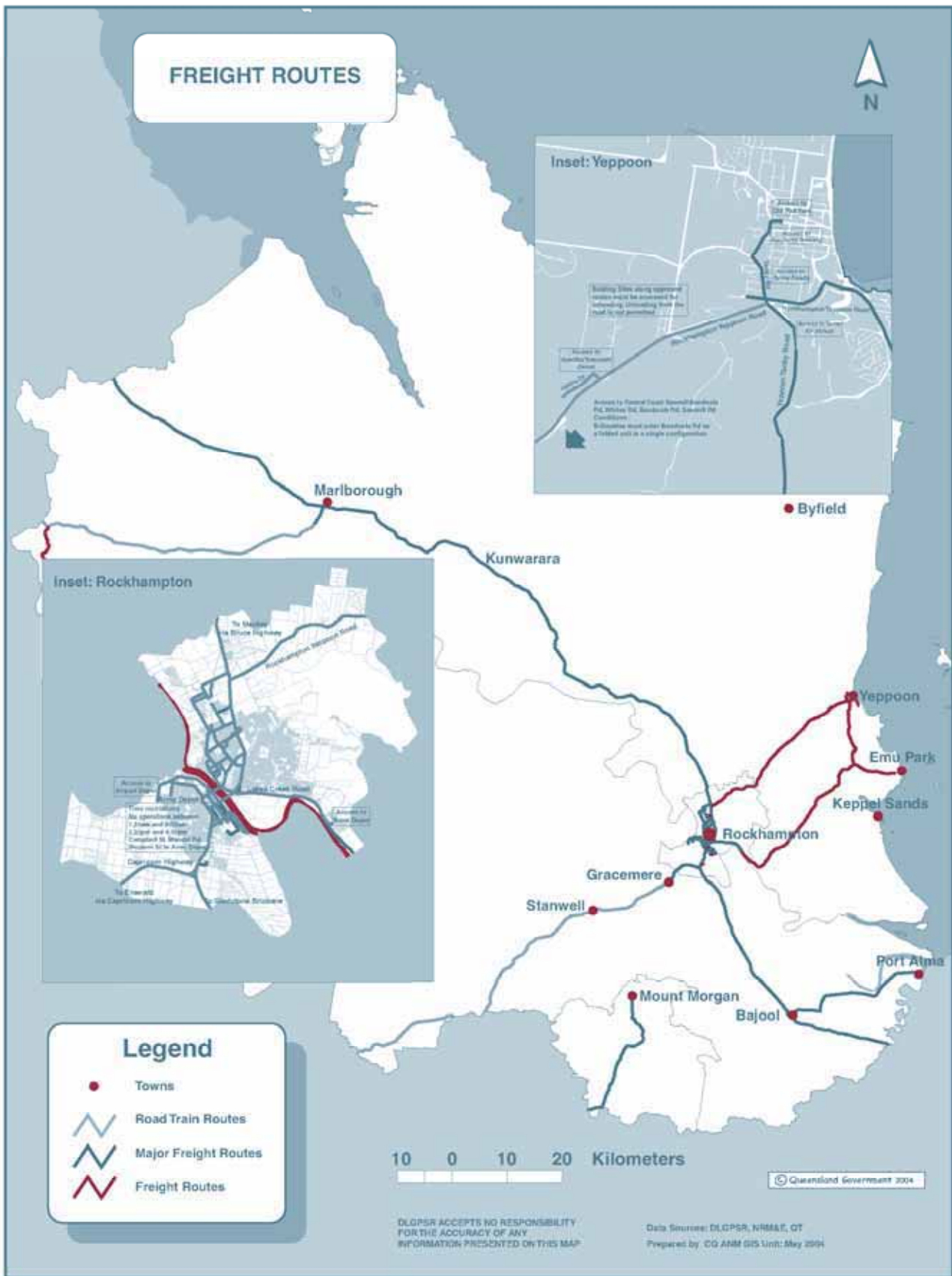
There are a number of options for reducing the impact of road freight. These include:

- establishment of break-up and service areas (i.e. west of Gracemere)
- transfer road freight to other modes such as rail
- redirection of heavy vehicles along safer routes
- construction of alternative heavy vehicle routes
- construction of intermodal facilities on the north and south side of Rockhampton and Yeppoon.

ACTIONS FOR ROADS (FREIGHT & PASSENGER)

Action	Timing	Responsibility
Rd1 Undertake a detailed urban road planning study for Tanby Road and Scenic Highway.	Completed	LSC, DMR
Rd2 Investigate options to resolve transport issues such as: <ul style="list-style-type: none"> - transport of quarry material from Nerimbera (Livingstone Shire) - heavy vehicles in Bolsover Street - rail/road issues in Bolsover Street - heavy vehicles along Lakes Creek Road - access to Parkhurst Industrial Estate - through traffic on Norman Road and Dean Street - southern access to Rockhampton for emergency vehicles - intersection capacity at Gracemere and Capricorn Highway - intersection capacity at Stanwell and Capricorn Highway. 	Short term Short term Long term Short term Medium term Short term Short term Short term Medium term	LSC, DMR&E RCC QT, RCC, QR, DMR RCC, DMR RCC, DMR RCC RCC, FSC, DMR FSC, DMR FSC, DMR
Rd3 Review multi-combination vehicle, dangerous and hazardous goods routes: <ul style="list-style-type: none"> - through Rockhampton - through Yeppoon CBD - at Emu Park. 	Short term Completed Long term	RCC, DMR, QT LSC, DMR, QT LSC, DMR, QT
Rd4 Consider the transport implications of current industry development and infrastructure planning studies associated with the Stanwell Industrial Corridor and agricultural areas along the Fitzroy River.	Short term	DMR, Councils QT, DSD&I
Rd5 Review road access to the Shoalwater Bay military area.	Medium term	LSC, DMR, ADI
Rd6 Undertake investigations into the provision of alternative freight routes to address the impact of through transport of freight.	Medium term	DMR, Councils, QT, DSD&I
Rd7 Commence planning to address cross-river capacity (including consideration of approach and major intersection requirements and bicycle and pedestrian access) (also see Rd8).	Long term	RCC, DMR
Rd8 Preserve future transport corridors, e.g. Rockhampton alternative through route.	Long term	DMR, QT, Councils
Rd9 Investigate future planning and funding of grade-separated rail and road crossings to minimise the risk of collision and traffic delays.	Ongoing	QT, QR, DMR, Councils





CAPITAL PROGRAM FOR ROADS

Description of Works	Order of Cost	Lead Agency	Timing	Funding Status
CRd1 Rockhampton-Yeppoon Road (Mackays Road to Hidden Valley Road section) widening and sealing.	\$1.39M	DMR	Completed	Funded
CRd2 Capricorn Highway (Rockhampton-Duaringa) Neerkol-Spring Creek rehabilitation and widening	\$1.75M	DMR	Completed	Funded
CRd3 Capricorn Highway (Rockhampton-Duaringa) Stanwell-Stuart Creek widening.	\$1.70M	DMR	Completed	Funded
CRd4 Yeppoon-Emu Park Road Mulambin and Rosslyn Bay Roads intersection improvements.	\$0.75M	DMR	Medium Term	Unfunded
CRd5 Rockhampton-Emu Park Road (West of Pattison Street section) widening.	\$0.8M	DMR	Short Term	Funded
CRd6 Rockhampton-Emu Park Road (Cooper Street Intersection) intersection improvements	\$0.3M	DMR	Completed	Funded
CRd7 Rockhampton-Emu Park Road (Berserker/Dean Street Intersections) install traffic lights - Dean Street.	\$0.7M	DMR	Short Term	Funded
CRd8 Rockhampton-Emu Park Road (Berserker/ Thozet Road intersections) installing traffic signals.	\$0.8M	DMR	Medium Term	Funded
CRd9 Yeppoon-Tanby Road (Taranganba Road intersection) widening and sealing.	\$0.67M	DMR	Medium Term	Funded
CRd10 Gavial-Gracemere Road (Bruce Highway-Gavial Creek section) upgrade.	\$0.9M	DMR	Short Term	Funded
CRd11 Gavial-Gracemere Road (Washpool Creek-Breakspear Street section) upgrade.	\$0.94M	DMR	Medium Term	Unfunded
CRd12 Burnett Highway (Mt Morgan-Rockhampton) Dee River area at-grade intersection improvement.	\$0.85M	DMR	Short Term	Funded
CRd13 Burnett Highway (Mt. Morgan-Rockhampton) Poison Creek bridge widening.	\$0.42M	DMR	Short Term	Funded
CRd14 Rockhampton-Yeppoon Road (Median Access 3 – Median Access 9 section) rehabilitation and widening.	\$2.93M	DMR	Short Term	Funded
CRd15 New Yeppoon Western Bypass Road and Yeppoon - Tanby Road widening and sealing	\$26M	DMR	Short Term	Funded
CRd16 Yeppoon-Byfield Road Byfield Creek, bridge replacement.	\$0.4M	DMR	Medium Term	Funded
CRd17 Yeppoon multi modal facility construction.	\$2.5M	LSC	Medium Term	Unfunded
CRd18 Tanby Road to Rosslyn Bay link construction.	\$6M	LSC	Medium Term	Unfunded
CRd19 Farnborough Road to Adelaide Park Road link construction.	\$10M	LSC	Medium Term	Unfunded
CRd20 Taranganba Road upgrade to dual carriageway.	\$2.5M	LSC	Medium Term	Unfunded
CRd21 Artillery Road and Coowonga Road upgrades.	\$6M	LSC	Medium Term	Unfunded



PROGRAM OF ROAD PROJECTS

