Draft Connecting SEQ 2031

An Integrated Regional Transport Plan for South East Queensland

DRAFT FOR CONSULTATION

Tomorrow's Queensland:
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Toward Q2 Tomorrow's Queensland

Queensland Government

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The draft plan is all about your future and the next generation's future. You can get more information or contact the project team by:

- 1800 038 178 (free call across Australia. Call charges may apply from mobile and pay phones)
- Email us team@connectingseq.qld.gov.au
- Visit the website and provide feedback online at **www.connectingseq.qld.gov.au**
- Address: Connecting SEQ 2031
  Transport and Main Roads
  PO Box 213
  Brisbane QLD 4001

Foreword

Vision for a sustainable transport system

Transport is the lifeblood of our community. Getting our transport infrastructure and travel behaviour right are critical to ensuring economic prosperity, sustainability and quality of life in the future.

Nowhere is this more of a challenge than in south east Queensland where population growth of more than 80 000 people each year places pressure on our existing transport system and makes for a rapidly changing urban form.

This draft *Connecting SEQ 2031 — An Integrated Regional Transport Plan for South East Queensland* is the state government's blueprint for meeting the transport challenge over the next 21 years. Its purpose is to provide a coherent vision to guide government decision making and provide the community with an insight and say into how our transport system can look and work in the future.

It is clear that it is neither financially nor environmentally sustainable for road traffic to continue to grow at current rates. As such, this is a plan to fundamentally change current transport patterns by:

- doubling the share of public transport from 7% to 14% of all trips
- doubling the share of active transport (such as walking and cycling) from 10% to 20% of all trips
- reducing the share of trips taken in private motor vehicles from 83% to 66%.

The plan is a big one but we have made such big shifts in travel behaviour before. Two generations ago, most people did not own a private car and as recently as 20 years ago, half of all journeys to school were made by walking or cycling.

The draft *Connecting SEQ 2031* works in partnership with the state government's Regional Plan delivered in 2005 and subsequently updated in 2009, and the *South East Queensland Infrastructure Plan and Program*, which is updated annually.

Without good land use planning, transport planning is reduced to building roads among poorly-connected urban sprawl. With the good land use planning the state is undertaking, we can create higher density communities where people can get to everything they need within 15 minutes, ensure that public transport arrives ahead of communities and better utilise the major transport corridors we currently have.

The key elements of the draft *Connecting SEQ 2031* can be clearly articulated as:

- Rail forming the backbone of the transport network with its ability to carry large numbers of people. Rail will be enhanced through Cross River Rail, new higher-capacity trains, more frequent services and more efficient timetabling.
- Bus providing crucial urban links and being made more efficient, with more busways and bus priority on major roads.
- Walking and cycling becoming more appealing and safe, particularly through segregating walkers and cyclists from heavy traffic under programs like 'Complete 5', which provides a network of designated bike paths within five kilometres of principal and major activity centres.
- Roads continuing to play a major role in moving traffic, freight, buses and cyclists. A key function of the plan is to create a better functioning hierarchy of roads, so heavy traffic uses major motorways and highways and trucks are kept off suburban roads.

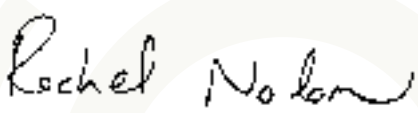
The government has delivered on busways as proposed in the 1997 *Integrated Regional Transport Plan*. The major busways will be completed over the next 20 years and the focus will shift to rail investment as the region continues to grow. While bus improvements will still be important, our rail network should be modernised and expanded to achieve a sustained swing to public transport.

This draft plan to change the transport mix again can only be realised with government funding to support the shift and community assistance, both through a willingness to support those investment decisions and, on the part of individuals, a willingness to change travel behaviour. The targets are ambitious but will be met if each south east Queenslander changes just five of their 25 trips each week from car to public or active transport.

This plan has been developed over two years by the Department of Transport and Main Roads in co-operation with the SEQ Council of Mayors and consultation with key stakeholders. It draws on the best available Australian and domestic research as well as a detailed analysis of south east Queenslanders' travel behaviour.

Now is your chance to have your say. Before this plan is finalised, formal public consultation will be undertaken. We look forward to hearing your views on the future of transport in this vibrant and growing region.

The Hon Anna Bligh, MP
Queensland's Premier and the
Minister for the Arts



The Honourable Rachel Nolan MP
Minister for Transport
Queensland Government

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Executive summary

South east Queensland is one of Australia's most desirable places to live and establish a business, and as such will continue to grow rapidly.

Our region's population is expected to grow from 2.8 million in 2006 to more than 4.4 million in 2031.

Providing for this growth while protecting our environment, lifestyle and safeguarding our future will mean a major change to the way we plan our cities, and to the way people and goods are moved.

The challenges

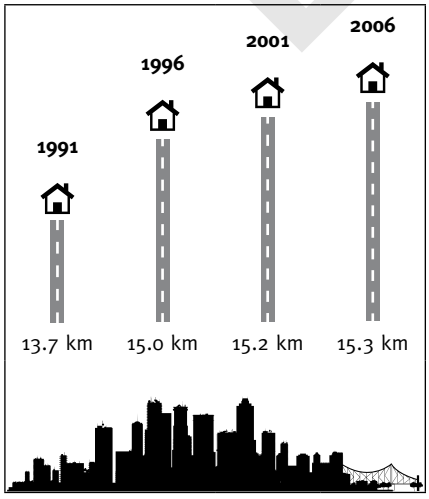
We can no longer plan our cities around cars and traffic growth. We need new policies to help develop cities so public transport, walking and cycling are more viable and more attractive.

Forecast population growth means transport trips will increase from about 10 million a day in 2006 to more than 15 million a day by 2031. Some trips are also getting longer due to the increasing size of our cities.

Tomorrow's transport system will need to support this growth to:

- enable the movement of goods and materials
- get people to and from work
- provide access to services and recreation.

Average commute distance (SEQ)



Source: Journey to work – ABS Census 2006–08

Compact and connected communities

The *South East Queensland Regional Plan 2009 to 2031* sets the region on a course towards more compact, better mixed urban development that supports public transport, walking and cycling.

The draft *Connecting SEQ 2031* has been developed as the guiding transport planning and policy document to support the desired outcomes of the *SEQ Regional Plan*. In doing so, the plan adopts an integrated approach that considers land use planning and the various modes of the transport system that move people and goods.

The draft *Connecting SEQ 2031* identifies public transport hubs in selected centres throughout the region.

These 'hubs' will form the basis for focusing public transport services on centres with a high potential for development of tertiary education, medical and commercial offices, with intensified high density residential activity to support higher public transport use.

Instead of sprawling communities with dispersed services, the region's cities can develop around these hubs, as a community of multiple centres connected by corridors served by high-frequency services.

And alongside these rail and bus 'turn up and go' public transport corridors, *priority transit corridors* will allow for medium density (low rise) residential and mixed-use development. A resident living in a *priority transit corridor* would be able to easily walk to a local centre or employment, as well as accessing high-frequency public transport to other centres.

This all leads towards a vision of an 'urban village' lifestyle in our cities, so people do not need a car to move around their community. These are 15-minute neighbourhoods where local services, entertainment and recreation are nearby, and there is ready access to frequent public transport.

Growth Summit Outcomes

The government held the Queensland Growth Management Summit in March 2010 and published its response in May. The growth summit outcomes include policies to encourage growth in regional Queensland and work with local governments in the region to confirm the distribution of dwelling targets in the region. Other growth management outcomes reflected in the draft *Connecting SEQ 2031* include:

- setting ambitious targets for a swing to public and active transport
- supporting 'decentralisation' of jobs to centres outside of the Brisbane CBD
- timely provision of infrastructure for new growth areas
- supporting considerable infill development oriented around public transport corridors.

What is a sustainable transport system?

A sustainable transport system is resilient and capable of being continued over the longer term with minimal effect on the environment. It will:

- meet the access and equity needs of individuals, businesses and community
- be affordable to construct, operate and maintain
- offer choice, convenience and support economic activity
- reduce pollution and waste
- limit consumption of resources to sustainable levels.

Our outcomes

The draft *Connecting SEQ 2031* is the Queensland Government's proposed long-term transport plan to develop a sustainable transport system in south east Queensland.

Our vision

The vision of the draft *Connecting SEQ 2031* is a transport system that:

'Supports the lifestyle enjoyed by residents and visitors, enhances the state's economic vitality and protects the natural environment.'

Achieving this transport vision would mean:

- residents in urban communities would have easy access to jobs, shops, recreation and lifestyle opportunities
- freight, business and commercial traffic would enjoy reliable travel times, to access to key destinations within the region and quality links to other places
- rural communities would have safe access to local services and other parts of the region. Though private transport would still meet the majority of rural transport needs, options for those who do not own a car or are unable to drive would be available.

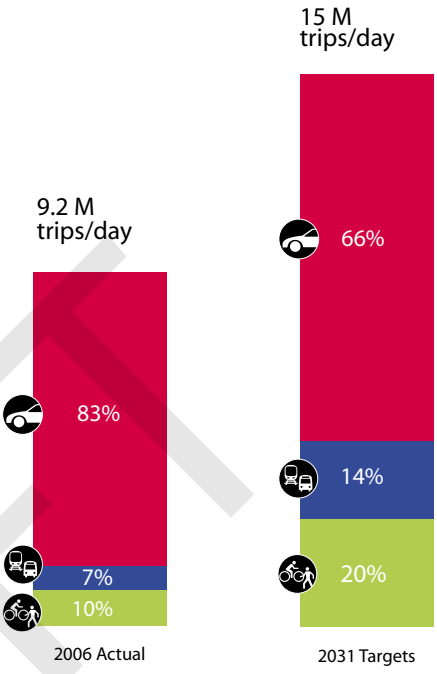
Targets

As recommended by key initiative 2.1 in the government's response to the Queensland Growth Management Summit, *Connecting SEQ 2031* establishes ambitious targets to change the way the region moves during the next 20 years by:

- doubling the share of active transport trips (such as walking and cycling) from 10% to 20% of all trips
- doubling the share of public transport from 7% to 14% of all trips
- reducing the share of trips taken in private motor vehicles from 83% to 66%.

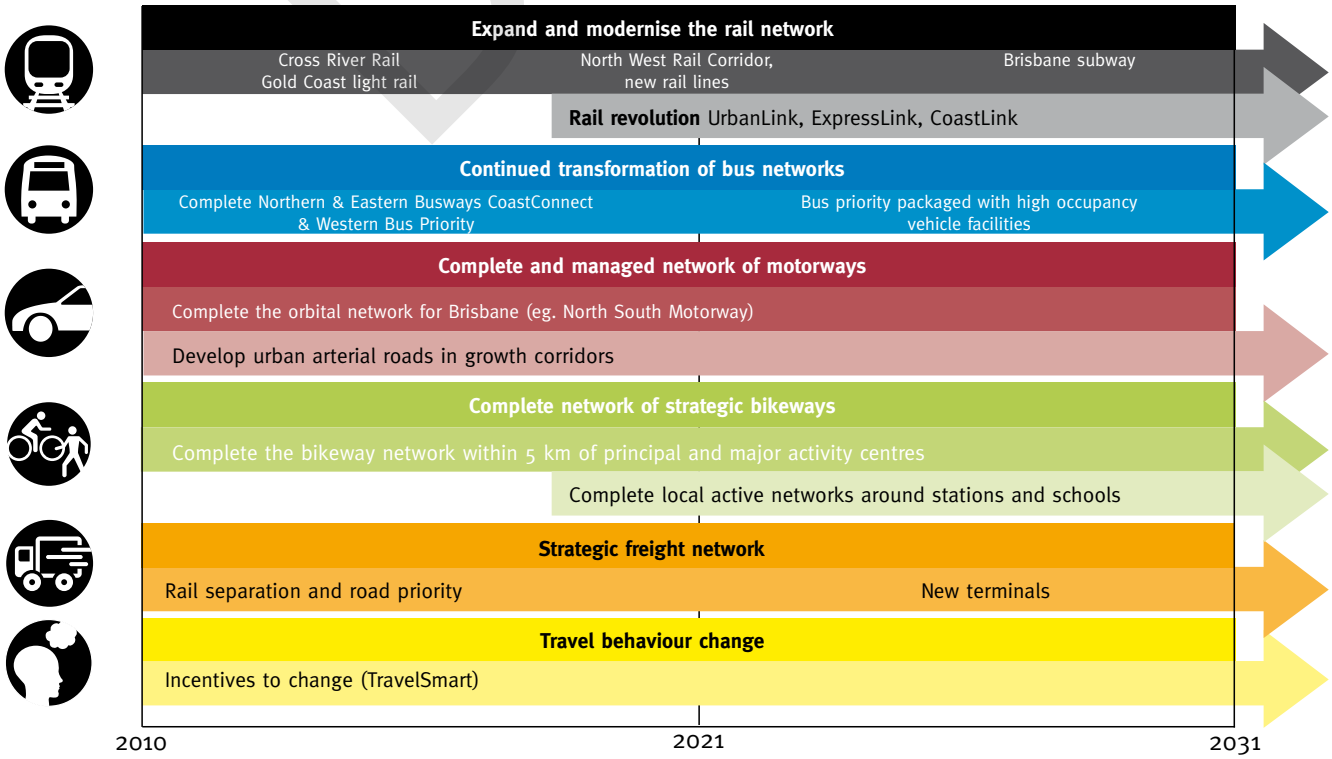
This may sound like a big task, but it can be achieved if each south east Queenslander changes just five out of 25 trips per week from car to public transport, cycling or walking.

The draft *Connecting SEQ 2031* also establishes targets to reduce the very high proportion of students who are driven to school.



To achieve the targets the weekly travel patterns of the average SEQ resident would need to change only incrementally.

Highlights of the plan



Expanding and modernising the rail network

The cornerstone of the draft *Connecting SEQ 2031* is a modernised and expanded rail network. Rail can support more compact urban form and move high volumes of people more efficiently.

New rail lines are included in the plan – expanding the reach of the rail network to more communities across the region.

A new north-west rail line from Strathpine to Alderley will serve growing communities in that area, as well as increasing rail capacity between Brisbane, Moreton Bay Regional Council and the Sunshine Coast.

Rail revolution

The plan proposes a major revolution of how services operate, starting with delivery of Cross River Rail, including:

- **UrbanLink** – converting inner parts of the greater Brisbane rail network to high-frequency 'turn up and go', all stops services using high capacity trains
- **ExpressLink** – all day express services connecting outer Brisbane suburbs to the rest of the region
- **CoastLink** – fast express services from the Gold and Sunshine Coasts to Brisbane in about an hour.

There will also be local all-stops UrbanLink services on the Gold and Sunshine Coasts to cater for local travel.

New types of rail services

Light rail on the Gold Coast

Light rail will provide high-frequency services to transform the busy coastal movement corridor on the Gold Coast.

A project to deliver light rail from Gold Coast Health and Knowledge Precinct to Broadbeach is well under way, with completion scheduled for 2014. The draft *Connecting SEQ 2031* envisages light rail extending to Coolangatta, with a connection to CoastLink rail services.

Brisbane subway

With an extra 100 000 people forecast to live in inner Brisbane (CBD, Spring Hill, Milton, South Brisbane and Fortitude Valley) and doubling of employment by 2031, there will be about 2.4 million trips a day in the inner city (up from one million in 2006).

The Brisbane subway will be an entirely separate new network. The London Underground and New York city subway are well-known examples of this style of rail operation.

Connecting SEQ 2031 – the rail strategy

1997 Integrated Regional Transport Plan

The Integrated Regional Transport Plan released in 1997 saw the establishment of the TransLink integrated public transport network and ushered in Brisbane's busways which are recognised internationally and across Australia as world's best practice in bus rapid transit systems. Busways have proved popular with the public and the busway system will be completed over the next 20 years.

As the region continues to grow and enters its next phase of maturity, the focus will shift to modernising and expanding the rail system to accommodate a much larger public transport task. Rail offers the most efficient way to move large numbers of passengers. This provides the opportunity to encourage more compact, more diverse urban settlement patterns which rely less on car transport and more on public transport, walking and cycling.

Signature projects – rail

Cross River Rail (planning under way)
A new north-south rail line and stations in the inner city Brisbane.

Rail revolution
A major revamp of how services operate on the region's rail network.

Brisbane subway
Toowong to Newstead (first section) providing a high-capacity, high-frequency, distributor system connecting central Brisbane.

Gold Coast light rail
Light rail from Helensvale to Coolangatta.

North-west rail line
New rail line from Strathpine to Alderley servicing communities in Brisbane's north-west.

Continuing to transform bus services

Buses will be crucial in achieving the target of doubling the share of trips on public transport from 7% to 14% by 2031 and will carry more than half the two million daily passengers needed to meet the 2031 target.

The draft *Connecting SEQ 2031* identifies high-frequency UrbanLink bus services on strategic corridors across the region as a key part of improving bus travel. The 'turn up and go' UrbanLink bus network will provide:

- frequency of 15 minutes or better off-peak, 10 minutes or better during the peak
- high-frequency all day (at least 6am to 9pm), seven days per week
- quality shelters and information
- simplified high-frequency network map with no need for a timetable
- a doubling of the proportion of SEQ residents within walking distance of 'turn up and go' services by 2031.

Brisbane busway network

Significant sections of the busway network are now in place and have proven highly successful, increasing bus passengers since the opening of the South East Busway in 2001. Planning is underway for the extension of the Northern Busway to Bracken Ridge and the Eastern Busway to Capalaba.

Priority for buses on the road network

Most bus services in the region operate on roads, usually in the same lanes as general traffic. During peak times, congestion signficantly impacts bus travel times and reliablity. The focus will be on providing bus priority on strategic corridors, supporting the high-frequency 'turn up and go' network. Providing priority for buses (such as bus lanes, transit lanes and queue jumps for buses) to avoid congested parts of the road network makes journeys faster and travel times more reliable.

The *SEQ High Occupancy Vehicle (HOV) Network Plan* will establish a network of strategic on-road bus priority and bus routes through centres to guide investment in bus priority facilities. Measures to be identified include bus lanes, transit lanes, bus-only access and bus queue jumps at traffic signals.

'Green links' for buses

There will also be a focus on 'green links' for buses and active transport. These could comprise:

- short sections of busway into major centres
- bridges for buses and active transport
- short cuts and bus gates.

Connecting SEQ 2031 – strategic bus corridors

Did you know?

Some parts of the busway network carry more than 12 400 passengers per hour, one way, while a typical motorway lane can carry about 2000 people per hour.

Signature projects – bus

Eastern and Northern Busways
Eastern Busway to Capalaba and Northern Busway to Bracken Ridge.

UrbanLink bus and HOV network
High-frequency 'turn up and go' UrbanLink bus services with priority on strategic corridors. Redesign of the bus network to provide effective feeder services to UrbanLink bus public transport corridors.

Western bus priority corridor
A high-frequency bus service with priority from Kenmore to the city.

CoastConnect
A high-frequency bus service with priority from Maroochydore to Caloundra via Mooloolaba and Kawana Town Centre.

Roads

The draft *Connecting SEQ 2031* sets a target to reduce the share of trips by private car from 83% to 66% by 2031, with a major shift to sustainable transport (public transport, cycling and walking). In 2031 this will mean about nine million private and small commercial vehicle trips, more than 600 000 heavy commercial vehicle trips, and more than one million bus trips on the region's road network each day.

Overall the number of trips on the road system would grow by 19%, or about 2.8 million trips per day between 2006 and 2031. On trend, if the targets for more sustainable transport were not achieved, the number of road trips would increase to almost 12 million.

Even the targeted 19% growth is significant and cannot be accommodated by the current road system. Further development of the region's strategic road network will be necessary to move essential traffic, avoid major congestion, and connect new communities and employment centres to the rest of the region.

New links will complete an orbital motorway network and new multi-modal arterial roads will ensure accessibility within new communities.

The draft *Connecting SEQ 2031* creates a functional hierarchy of roads to ensure heavy traffic uses a connected network of motorways and highways, and trucks do not have to unnecessarily use suburban roads. This hierarchy includes:

- motorways and highways to move large volumes of traffic over longer distances between communities
- multi-modal arterial roads to provide connections for all types of transport within communities
- bypass roads to remove through traffic from urban centres
- community boulevards to provide a high standard of amenity and local access to activity and town centres.

Signature projects – road

Connected and managed motorways
Complete a series of projects to connect all parts of the motorway network.

Use technology to optimise performance and maximise capacity of the motorway network.

Connecting SEQ 2031 – the major roads in SEQ

Did you know?
The number of heavy vehicle movements through the Port of Brisbane is expected to triple from 5000 vehicle movements per day in 2006 to 15 000 by 2031.

Freight

Freight movements are growing much faster than population due to economic development, the increasing levels of consumption and reliance on imported goods.

The draft *Connecting SEQ 2031* establishes a program of action to develop a strategic 24-hour freight network for the region, and supports national priorities for moving freight, including competitive international gateways and developing our rail networks so more freight can be moved by rail.

Signature projects – freight

Freight terminal strategy
Upgrade existing freight terminals and implement new freight terminals at strategic locations, including Bromelton.

Active transport

Did you know?
It is easy to achieve the recommended 30 minutes of physical activity each day by using active transport for short trips.

To encourage people to walk and cycle more, there will be investment in walking and cycling paths to separate pedestrians and cyclists from heavy motor traffic. Education programs will also help transform our culture to one that better embraces active transport.

The draft *Connecting SEQ 2031* target to double the share of trips by active transport from 10% to 20% by 2031 can be achieved if every south east Queenslander changed just two of their 25 trips each week from car to walking and cycling.

The most important priority for government is to enhance the attractiveness and safety of walking and cycling, especially by developing a network of interconnected bikeways and bike lanes that are segregated from heavy traffic.

The *SEQ Principal Cycle Network Plan* was released in 2007 and provides a master plan for the region's principal cycling routes to support local cycle networks. Continuing implementation of this network is part of our plan. The cycle network program under the *South East Queensland Infrastructure Plan and Program 2010–2031* (SEQIPP) has a $600 million allocation for cycling infrastructure.

End-of-trip facilities

Providing end-of-trip facilities at public transport stations, workplaces and activity centres can encourage more people to walk and cycle. Policies and town plans will ensure end-of-trip facilities including bicycle storage, lockers and showers are included in major new building developments.

Signature projects – active transport

Strategic bikeway network
Continue to develop bikeways that are separated from general traffic, including ongoing implementation of the *SEQ Principal Cycle Network Plan*.

Complete 5
Complete the principal cycle network within five kilometres of the region's activity centres as a priority for delivery. Complete 5 offers high potential to support a shift to active transport.

Connect 2
Connect 2 will focus on providing safe and convenient walking and cycling routes that connect to major public transport stations and stops, supported by holistic journey planning that incorporates walking and cycling routes and estimates of travel times.

Educated Ways
Educated Ways will focus on walking and cycling routes to schools and universities supported by travel plans to encourage more students to walk and cycle.

TravelSmart

The Queensland Government is investing heavily in new transport infrastructure, but we can't simply build our way out of congestion. It's just as important to use existing services and assets smarter and look at other ways to ease congestion.

Connecting SEQ 2031 includes the TravelSmart program – the world's largest travel behaviour change campaign. TravelSmart projects work directly with communities to increase the use of sustainable modes of transport.

TravelSmart's projects target households, schools and workplaces and provide information about local travel options to promote public transport, walking, cycling and carpooling. TravelSmart encourages people to think more about how their travel choices impact on their local community and environment.

A TravelSmart project completed in Brisbane's north in 2007 targeted 74 500 households and achieved a 13% reduction in vehicle kilometres travelled, proving how individuals acting together can ease the burden on the transport system. This project also achieved a:

- 49% increase in walking
- 50% increase in cycling
- 22% increase in public transport.

Based on the strength of these results, a TravelSmart campaign will be rolled out to 324 000 households by 2011 across suburbs in Brisbane, Ipswich, the Gold Coast and the Sunshine Coast. If similar results are achieved in the rest of the region, it will make a major contribution to managing traffic congestion and reducing greenhouse gas emissions.

Implementing Connecting SEQ 2031

The draft *Connecting SEQ 2031* is an aspirational plan that suggests a generational change towards a sustainable transport system in our fast growing region.

It is not intended to be fully funded. Many of the projects proposed are new and conceptual and have not been the subject of detailed cost estimates.

Business cases examining project need, scope, priority, affordability, funding options, timing and contribution to achievement of *SEQ Regional Plan* objectives will be developed for each project. These will be considered by governments having regard to their funding and priority setting process.

The estimated capital component for new and enhanced infrastructure is about $123 billion. This estimate is based on 'pre-project' estimates across 21 years from July 2010 to June 2031. The Queensland Government alone will not be able to meet the funding task during the 21 years.

Given the scale of funding required, the projects are dependant on significant Australian Government and local government support, with any contributions from the state being subject to fiscal capacity. *Connecting SEQ 2031* provides a planning framework that can be used to underpin bids for funding at all three levels of government.

Connecting SEQ 2031 will guide investment of available funds to deliver maximum benefits across the transport system. This plan will inform the development and annual revisions of the *Queensland Infrastructure Plan* (scheduled for release in 2011 to replace SEQIPP) which will give momentum to transport infrastructure delivery in south east Queensland in the context of state-wide funding contestability spanning geographical and sectoral boundaries.

Part A: Setting the scene

How *Connecting SEQ 2031* is structured

The figure below shows how to navigate this draft plan.

Part A: Setting the scene

- About *Connecting SEQ 2031*
- Transport challenges
- Our plan for the future
  - transport vision
  - our strategy for the future
  - transport policy goals
  - targeting success

Part B: Priorities for taking action

1. Creating compact and connected communities
2. Changing travel behaviour
3. Improving transport system efficiency
4. Supporting economic vitality
5. Protecting environmental quality and health
6. Delivering an integrated transport network

Part C: Detailed network strategies for 2031

- Public transport network
- Strategic road network
- Active transport network
- Freight network

Part D: What it means for your community

- 2031 transport networks for the region's cities
  - Brisbane city
  - Ipswich
  - Moreton Bay
  - Logan
  - Redland
  - Gold Coast
  - Sunshine Coast
- Rural communities
  - Somerset, Lockyer and Scenic Rim

Part E: Putting the plan into action

- Implementing *Connecting SEQ 2031*
  - Cost estimates
  - Deciding investment priorities
  - Reviewing the plan

1. About *Connecting SEQ 2031*

The draft *Connecting SEQ 2031* establishes a long-term plan to develop a sustainable transport system in south east Queensland. The plan adopts an integrated approach that considers land use planning and the various modes of transport.

This draft *Connecting SEQ 2031* comprises part of the Queensland Government's response to the Queensland Growth Management Summit held in March 2010.

This plan supports the delivery of well-designed and well-connected communities where people can work, attend schools, shop or recreate all within 15 minutes travel by a sustainable transport mode.

What is the role of Connecting SEQ 2031?

The draft *Connecting SEQ 2031* has been developed as the guiding transport planning and policy document to support the desired outcomes of the *SEQ Regional Plan 2009 to 2031*[1].

The *SEQ Regional Plan 2009-2031*, through Desired Regional Outcome 8, establishes a clear policy and legislative platform to move to a more compact settlement pattern and a better mix of urban development. This will support a greater use of public transport, walking and cycling.

The draft *Connecting SEQ 2031* builds on the *SEQ Regional Plan*'s land use framework by seeking to optimise the location of land use groups in relation to the transport network, in particular identifying:

- optimal areas to locate employment in terms of transport accessibility
- centres and corridors where a good standard of public transport service will maximise the opportunities for higher-density residential and office development.

The draft *Connecting SEQ 2031* includes a multi-modal plan and policy response for public transport, private vehicles, active transport and freight. This plan will guide the prioritisation of available funds to deliver maximum benefits across the transport system.

The draft *Connecting SEQ 2031* will inform the development and annual revisions of the *Queensland Infrastructure Plan* (scheduled for release in 2011 to replace SEQIPP). The *Queensland Infrastructure Plan* will give momentum to transport infrastructure delivery in the region in the context of state-wide funding contestability spanning geographical and sectoral boundaries.

The draft *Connecting SEQ 2031* will also inform other state government plans as well as local government planning schemes and transport plans.

It will also support the achievement of key targets in the government's state-wide plan *Toward Q2: Tomorrow's Queensland* that focus on:

- providing essential transport infrastructure to make Queensland Australia's strongest economy
- making Queensland greener by cutting car use
- making Queenslanders healthier by reducing obesity[2].

Connecting SEQ 2031 also aims to reduce greenhouse gas emissions from transport, supporting *ClimateQ: toward a greener Queensland*[3].

The integrated approach of the draft *Connecting SEQ 2031* is also intended to ensure Brisbane is aligned with the Council of Australian Government's national criteria for capital city strategic planning.

What is a sustainable transport system?

Many cities across the world are facing challenges from unsustainable travel patterns. These include growing traffic congestion, overcrowding on public transport, pollution, increasing dependence on oil based fuels and ageing transport infrastructure. This has impacts on quality of life, health and economic vitality.

A sustainable transport system is resilient and capable of being continued over the longer term with minimal effect on the environment. It will:

- meet the access and equity needs of individuals, businesses and the community
- be affordable to construct, operate and maintain
- offer choice, convenience and supports economic activity
- reduce pollution and waste
- limit consumption of resources to sustainable levels[4].

Evidence of a sustainable transport system would be seen through managed levels of congestion and system crowding, reducing levels of pollution and carbon emissions, and cost effective infrastructure and operating costs.

1 The *South East Queensland Regional Plan* covers the local government areas of Brisbane City Council, Moreton Bay Regional Council, Ipswich City Council, Logan City Council, Redlands City Council, Gold Coast City Council, Sunshine Coast Regional Council, Scenic Rim Regional Council, Somerset Regional Council, Lockyer Valley Regional Council and part of Toowoomba Regional Council. The draft *Connecting SEQ 2031* covers almost the same local government areas as the *South East Queensland Regional Plan*, with the exception of Toowoomba city, which will be included in transport planning for the eastern Darling Downs. While Toowoomba is not directly included, the draft *Connecting SEQ 2031* does consider strategic transport links to Toowoomba city.

2 Queensland Government 2008 *Toward Q2: Tomorrow's Queensland*

3 Queensland Government 2009 *ClimateQ: toward a greener Queensland*

4 MVA 2005 *World Cities Research: Summary Report*.

Major transport network enhancements since 1997

The previous *Integrated Regional Transport Plan for South East Queensland* (IRTP) was released in 1997. This plan established a strong platform for a shift to more sustainable transport and a move away from the car-dominated transport planning culture that had prevailed since the 1960s. Many improvements have been made to the transport network since 1999 – some of the major highlights are provided below.

Public transport

TransLink Transit Authority

TransLink was established in 2004 and has provided a platform for integration of the public transport system.

Since TransLink was formed in 2004, patronage on public transport has increased by 45% – from 124 million annual boardings in 2003–04 to 180 million annual boardings in 2008–09.

Improvements to public transport services

- establishing integrated fares and ticketing for all of SEQ, including introduction of the *go* card
- roll out of Bus Upgrade Zone (BUZ) services providing frequent, all-day services on key routes (in partnership with Brisbane City Council)
- enhancing passenger information with 'stop-specific' timetables posted at more than 70% of bus stops
- upgrading bus and rail stations, including widespread roll out of new bus shelters and expansion of park 'n' ride facilities
- introducing NightLink services between 1am and 5am from Brisbane CBD and Fortitude Valley on Friday and Saturday nights
- upgrading the standard of the fleet, with nearly 50% of the bus fleet now wheelchair accessible and significant improvements in disability access compliance for new and existing trains
- continuing support of combined entry and public transport tickets to events at The Gabba (Woolloongabba) and Suncorp Stadium (Milton), as well as Skilled Park Stadium (Robina). TransLink carried almost 2.5 million people to events in 2008–09.

Figure 1.1 - patronage on public transport in SEQ

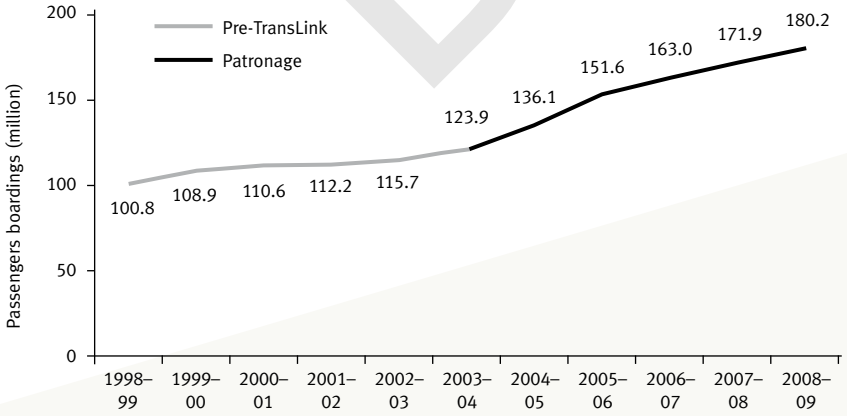


Figure 1.2 - Citytrain electric fleet

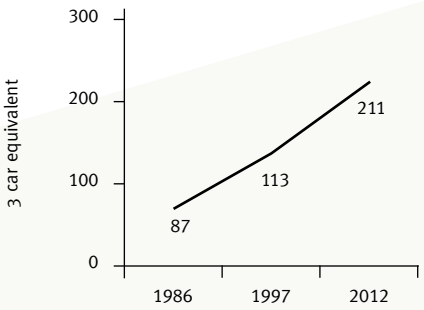


Figure 1.3 - SEQ Public Transport Enhancements since 1997

Brisbane Busway network

1. construction of the South East Busway to Eight Mile Plains
2. the Northern Busway CBD to Kedron
3. Boggo Rd Busway from Buranda to Dutton Park and the Eleanor Schonell Bridge from Dutton Park to University of Queensland
4. the Eastern Busway from Buranda to Coorparoo

Bus priority initiatives

5. Gold Coast Highway bus lanes
6. Waterworks Road transit lanes (Brisbane City Council project)
7. Smith Street transit lanes, Southport
8. Sippy Downs Green Link

Rail network

9. additional rail lines for the Gold Coast and Sunshine Coast with the Helensvale to Robina rail duplication completed in August 2008 and the Caboolture to Beerburrum duplication completed in April 2009
10. new rail line to the Brisbane domestic and international airports
11. extension of the Gold Coast rail line to Varsity Lakes
12. duplication of the Ferny Grove line from Mitchelton to Keperra, including two station upgrades
13. third track on the Ipswich rail line between Corinda and Darra
14. third track on the Salisbury to Kuraby line and seven station upgrades

Motorways and highways

Figure 1.4 - Upgrades to motorways and highways since 1997

1. Gateway Motorway upgrades, including the Gateway Bridge duplication (Sir Leo Hielscher), new Gateway deviation and Airport intersection upgrade
2. Nundah bypass on Sandgate Road
3. Ipswich Motorway upgrades
4. Clem7 tunnel providing a connection for motorists travelling between the north and south sides of the city (Brisbane City Council project)
5. Ted Smout Memorial Bridge (including bus lanes and active transport provision) providing a second bridge between Clontarf and Brighton
6. Port of Brisbane Motorway
7. Bruce Highway upgrades between the Gateway Motorway and Caboolture
8. Centenary Highway extension from Darra to Yamanto, via Springfield and Ripley
9. Tugun Bypass
10. Pacific Motorway upgrade to eight lanes from Logan Motorway to Smith Street and six lanes from Smith Street to Worongary
11. Sunshine Motorway upgrades
12. Pacific Motorway transit lanes from Upper Mt Gravatt to Eight Mile Plains
13. Logan Motorway upgrade
14. Inner City Bypass (Brisbane City Council project)

Active transport and Travelsmart

Active transport network

- Goodwill Bridge, Gardens Point to Southbank
- Kurilpa pedestrian and cycle bridge from North Quay to South Brisbane
- Toowong pedestrian and cycle link across the Centenary Motorway
- Normanby cycle and pedestrian facility
- Sir Leo Hielscher bridge pedestrian and cycle facility
- Ted Smout Memorial Bridge pedestrian and cycle facility
- Princess Alexandra Hospital cycleway beside the Boggo Road busway
- Bicentennial Bikeway upgrade from Park Road to Little Cribb Street
- Eenie Creek Bridge and cycleways in Noosa
- River Walk along the Brisbane River between Brisbane CBD to New Farm
- cycle centres at King George Square and Royal Brisbane Women's Hospital busway stations
- progressive delivery of V1 veloway from Brisbane CBD to Eight Mile Plains
- pedestrian and cycle crossings of Brisbane River at Jindalee and Indooroopilly
- inclusion of cycling facilities in the upgrade or delivery of state controlled road projects
- provision of active transport facilities in major developments (for example, providing bicycle parking and showers in office buildings).

TravelSmart

Improvements to transport infrastructure and services have been supported with travel behaviour campaigns, through TravelSmart in homes, schools and workplaces. A TravelSmart project completed in Brisbane's north in 2007 targeted 74 500 households and achieved a 13% reduction in vehicle kilometres travelled, proving how individuals acting together can ease the burden on the transport system.

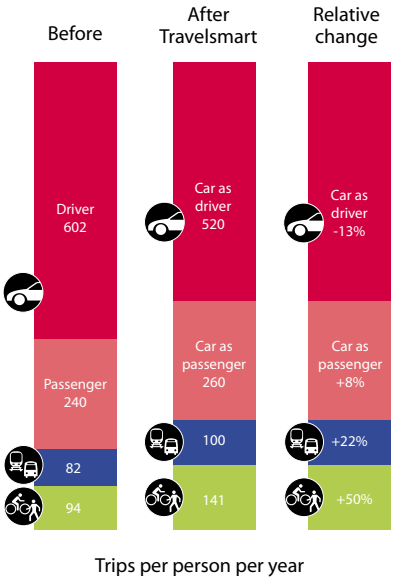


Figure 1.5 - North Brisbane Travelsmart results

2. Transport challenges facing the SEQ region

The strong population growth experienced in the region during the past 30 years is forecast to continue at similar levels during the next 20 years. With population forecast to grow from 3.1 million in 2009 to 4.4 million in 2031, current travel habits and the type of low density lifestyle currently prevalent in the region are simply not sustainable.

Action is necessary to avoid the consequences of unsustainable transport outcomes like air pollution, congestion, excessive reliance on oil-based fuels and reduced access to essential goods and services.

Understanding the challenges is an important first step in gaining community support for long-term improvements that will place the region's transport system on a sustainable path. This chapter summarises the challenges which are then addressed in subsequent sections of the draft *Connecting SEQ 2031* plan.

Population growth

For every 10 residents currently in the region, forecasts suggest there will be another six by 2031 and another 11 by 2056.

Each new resident makes between three and four trips per day, with most of these trips currently made by car. Forecast population growth will increase trips from 10 million trips per day in 2006 to 15 million by 2031. Freight and commercial traffic is forecast to more than double in the next 20 years, driven by lifestyle choices and business needing access to goods and materials on demand.

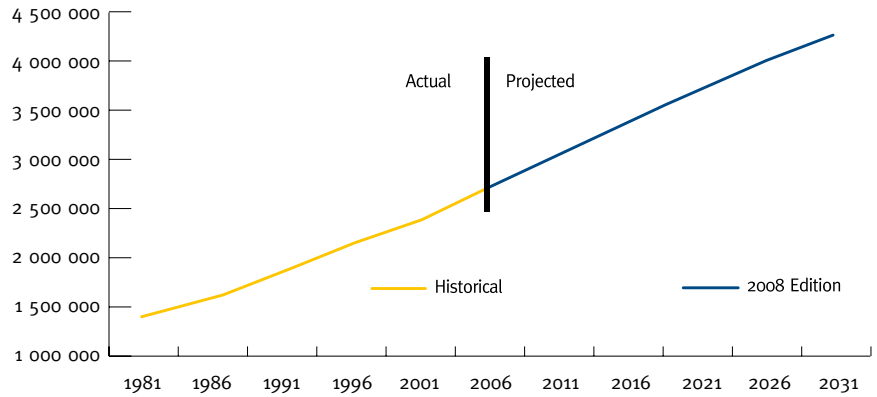
Accommodating the forecast growth in travel by continuing current travel patterns would have significant negative impacts on the quality of life for residents of and visitors to the region (for example, excessive congestion, traffic noise and air pollution). It would also reduce the region's competitiveness in the pursuit of modern business and industry growth.

Table 2.2 – forecast population growth in SEQ

SEQ facts	In 2006	In 2031	Increase
Total dwellings	1 051 000	1 744 000	66%
Total persons	2 706 000	4 244 000	57%
Lone persons and couples without children	512 000	957 000	87%
Population over 65	327 000	854 000	161%

Note: population numbers differ slightly to SEQ Regional Plan *due to exclusion of Toowoomba city from* Connecting SEQ 2031 *analysis*

Figure 2.1 – population projections for SEQ, medium series



Growth Summit Outcomes

The government held the Queensland Growth Management Summit in March 2010 and published its response in May.

The growth summit outcomes include policies to encourage growth in regional Queensland and work with local governments in SEQ to confirm the distribution of dwelling targets in the region.

Other growth management outcomes reflected in the draft *Connecting SEQ 2031* include:

- setting ambitious targets for a swing to public and active transport
- supporting 'decentralisation' of jobs to centres outside of the Brisbane CBD
- timely provision of infrastructure for new growth areas
- supporting considerable infill development oriented around public transport corridors.

It is important to note that the population of SEQ region grew by more than 80 000 people in 2008-09. This is much larger in population terms than the rest of Queensland combined, which added about 36 000 residents.

Sound planning for improved transport infrastructure and services and careful management of growth will still be essential.

Low density development

Between 1991 and 2006 the urbanised areas of the region grew at a faster rate than resident population, suggesting a decrease in the density of urban development. This means people are driving longer distances to work. Ongoing development of low density suburbs based on car use would work against achieving higher levels of sustainable transport.

Car dependency

Cars currently dominate the way people travel, with more than 80% of all trips by private car[6]. During the past 10 years there has been a steady decline in average vehicle occupancy with most cars now having only one occupant in peak periods. While the car provides major benefits to lifestyles, unrestrained growth of private car use has the potential to incur huge costs in infrastructure.

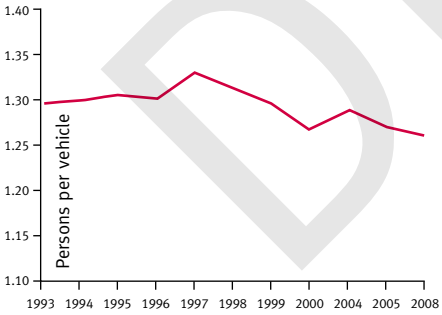
Continued growth in car travel will increase congestion and impact on freight and commercial movements.

A transport system heavily dominated by car travel can also mean quality alternatives are not readily available, making it difficult for people who are unable to drive or afford a car to access employment, services and recreation opportunities.

Table 2.1 – population growth and urban form in SEQ

	Population	Urban area
1991	1.9 million	1708 km²
2006	2.8 million	2801 km²
Growth	47%	64%

Figure 2.2 – Brisbane vehicle occupancy (AM peak)



Source: Department of Transport and Main Roads 2008 Vehicle Occupancy Survey

Figure 2.3 – household vehicle ownership rates (%)

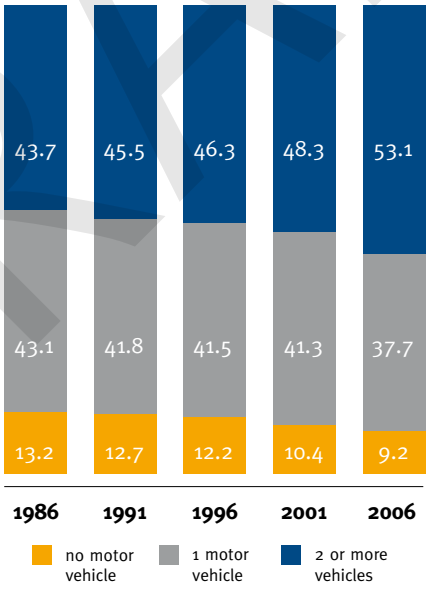


Figure 2.4 – journey to work mode share (%)

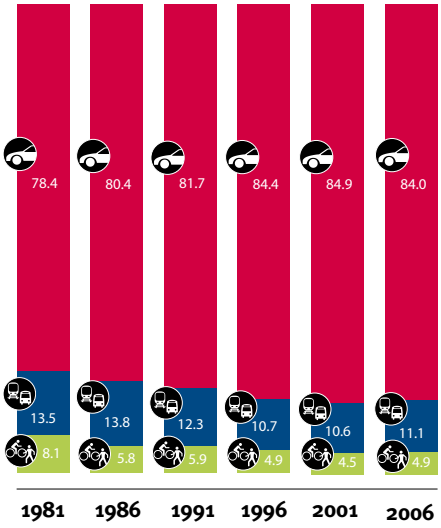
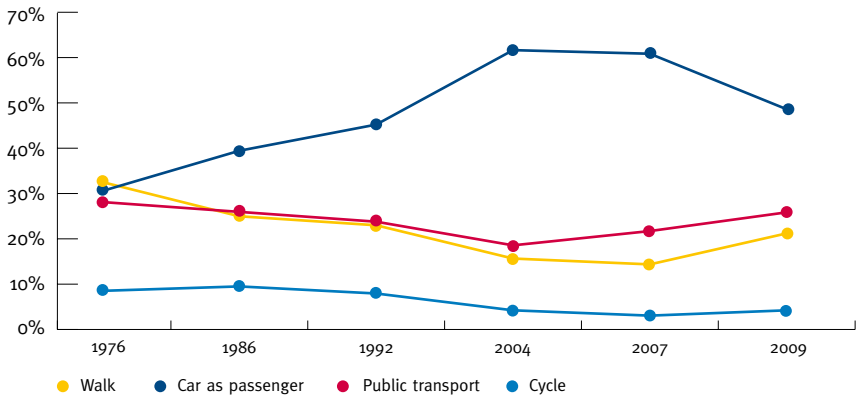


Figure 2.5 – journey to school mode share



Congestion

Congestion caused by unplanned incidents or by excessive demand relative to capacity is increasing.

The region's road, rail and bus networks all experience congestion in weekday peak hours. More time spent travelling means less business and leisure time, impacting on the region's economy and lifestyle.

While the busiest motorways often seem to be clogged with trucks, evidence shows the vast majority of traffic on the roads is actually small private and commercial vehicles.

Trips that have the greatest effect on peak-period travel are:

- trips to and from work and education
- car trips serving passengers, such as dropping a child at school.

Economic health

Transport plays an essential role in bringing together raw materials, production and labour activities. Most freight is moved by road.

If freight vehicles are consistently caught in traffic congestion the region will lose its ability to attract and retain industry.

The majority of freight and commercial vehicle movements take place in off-peak periods. Maintaining traffic flows during off-peak periods will be important in ensuring the future economic vitality of the region. There is also a need to develop rail networks so more freight can be moved by rail.

Figure 2.6 – travel speeds in SEQ

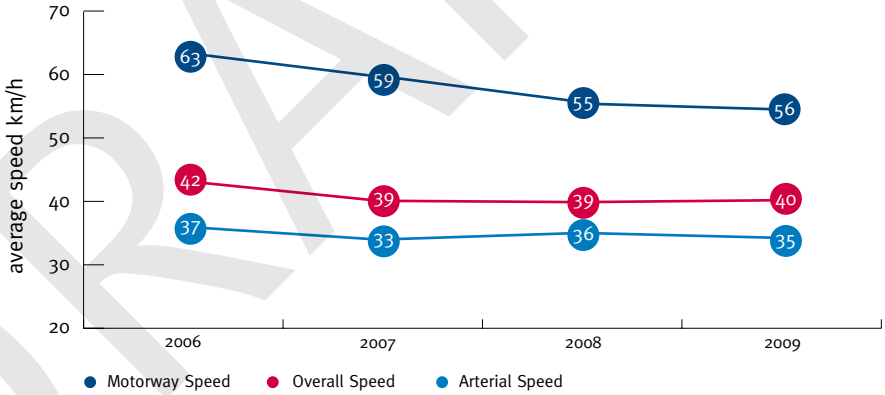
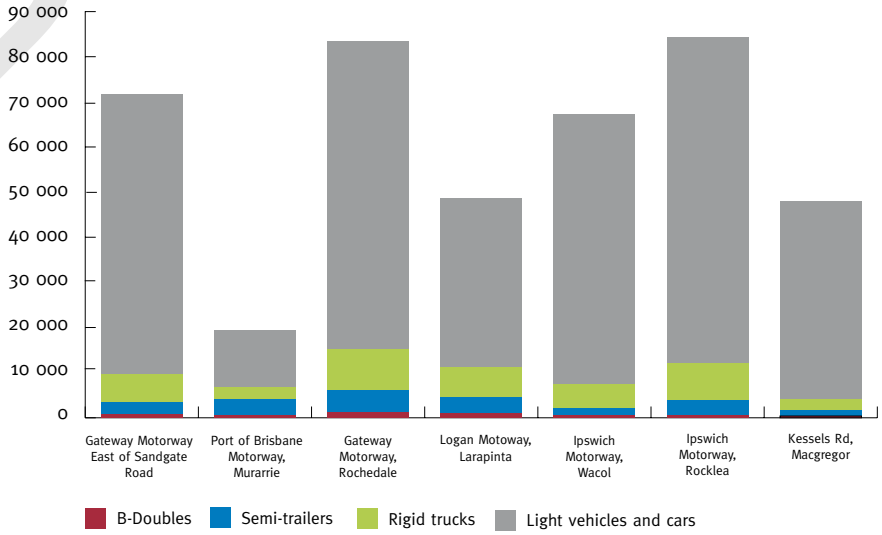


Figure 2.7 – vehicle types on key freight routes



Physical inactivity

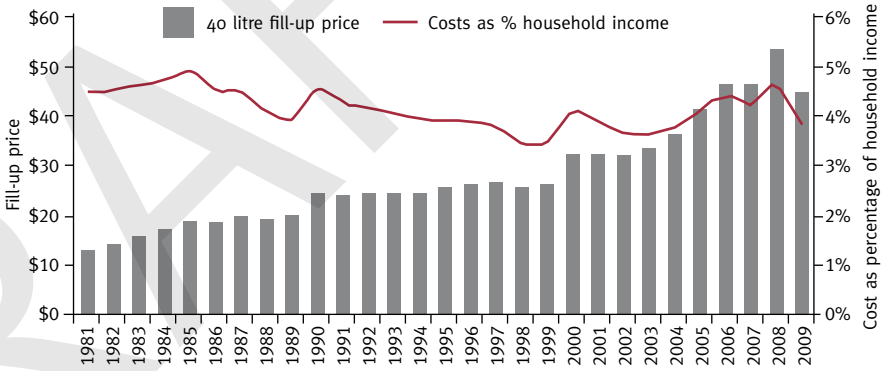
Excessive weight gain and physical inactivity is a major concern in Australia. In Queensland, six in 10 men, and four in 10 women are overweight or obese, and seven in 10 people exercise very little or not at all[7]. Making it easy to be active as part of daily travel allows people to incorporate physical activity into their daily routine.

Australian Government Physical Activity Guidelines recommend at least 30 minutes of physical activity on most, preferably all, days[8]. This can be easily achieved by using active transport for short trips. It takes just 12 minutes to walk one kilometre and nine minutes to cycle three kilometres. In SEQ about 35% of trips taken are less than three kilometres.

Energy

Nearly 95% of Queensland's transport energy consumption in 2006–07 used petroleum products[11]. Any sustained increase in oil prices or chronic shortages of oil would reduce the state's quality of life, undermine economic competitiveness and increase the cost of living. This increase could also impact disproportionately on urban fringe communities and low income earners.

Figure 2.8 – cost of a weekly petrol fill-up: comparison in dollars and as a percentage of income



Source: Australian Bureau of Statistics 2009 Austroads 2008 and 2009

Emissions

Transport is responsible for 10.4% of total greenhouse gas emissions in Queensland, with 85% from road transport[8]. However, in SEQ, transport accounts for a much larger 22% of the region's total greenhouse gas emissions[9]. If current transport trends continue, by 2031 road transport greenhouse gas emissions will increase by more than 150% on 1990 levels. As a major population centre, the region will need to play its part in achieving the Commonwealth Government's target of reducing national greenhouse gas emissions by a minimum of 5% and up to 25% (depending on national and international developments) of 2000 levels by 2020[10].

Other environmental factors that need to be managed include air pollution from transport activity which retains the potential to be a major concern.

System efficiency

The region already has an extensive transport system. New technology, lower scale infrastructure improvements (for example bus lanes) and travel demand management policies can be used to optimise the performance of the existing system.

Some parts of our busway network are carrying about 12 400 passengers per hour (in one direction). For comparison, a typical motorway lane can carry about 2000 people per hour.

Safety and security

A growing population means more transport activity and therefore the potential for more crashes. The annual cost of road crashes from fatalities, injuries and damage to property in SEQ is estimated to be more than $3 billion[12].

Road safety improvements to existing roads and intersections must be a high investment priority. Ensuring safety for vulnerable road users such as pedestrians and cyclists will become increasingly important as more people choose these transport options.

7 Australian Government 2009 *Physical activity guidelines (www.measureup.gov.au)*
8 Australian Government (Department of Climate Change) 2009 *Australian national greenhouse accounts, state territory greenhouse gas inventory 2007*
9 ICLEI Local Government for sustainability 2009 *SEQ Regional Plan climate change project: Phase 2 emissions analysis*
10 Queensland Government 2009 *Climate Q: Towards a Greener Queensland* p 165
11 Queensland Government 2008 *Toward Q2: Tomorrow's Queensland*
12 Queensland Government (Department of Transport and Main Roads) 2009 *Queensland transport facts*

3. An overview of our plan for the future

A vision of sustainable transport

The draft *Connecting SEQ 2031* aims to tackle the transport challenges and set the region on a path to a sustainable transport system. This journey begins by establishing a transport vision that builds on the vision of the *SEQ Regional Plan*.

South East Queensland Regional Plan vision

The vision for south east Queensland is a region of interconnected communities with excellent accessibility and an extensive system of efficient public transport that contributes to reducing greenhouse gas emissions[13].

The draft *Connecting SEQ 2031* transport vision

South east Queensland's transport system supports the lifestyle enjoyed by residents and visitors, enhances the state's economic vitality and protects the natural environment.

Achieving this transport vision would mean:

- residents in urban communities would have easy access to jobs, shops, recreation and lifestyle opportunities, with a range of travel choices available for the majority of trips
- freight, business and commercial traffic would enjoy reliable travel times, with reliable access to key destinations within the region and quality links to other places
- rural communities would have safe access to local services and other parts of the region. Though private transport would still meet the majority of rural transport needs, options for those who do not own a car or are unable to drive would be available.

Our key transport policy goals

To deliver the 2031 transport vision, the draft *Connecting SEQ 2031* has established nine key transport policy goals. These support the government's strategic directions as conveyed in *Toward Q2*, the *Transport Coordination Plan* and the *SEQ Regional Plan*. Achieving these goals by 2031 would meet future travel and economic development needs while supporting the desired lifestyle of SEQ residents. The goals are:

Protecting amenity and livability

The transport system contributes to making the region a better place to be and enhances amenity in SEQ communities.

Ensuring equity and accessibility

People can easily access goods, services, facilities and jobs, with many residents having these available locally or able to easily access them without using a car.

Supporting economic prosperity and employment growth

Freight and business traffic can move efficiently and reliably.

Delivering transport efficiently

Transport investment and land use patterns maximise the efficiency of the system, with a focus on getting the best use out of the network.

Managing congestion

Travel times are reliable and the cost of congestion is stabilised or reduced.

Creating a low carbon and environmentally responsible transport system

Greenhouse gas and other environmental emissions are reduced by increasing public and active transport use, reducing overall transport demand, using transport more efficiently and increasing the proportion of fuel-efficient and alternative fuel vehicles in the fleet.

Encouraging individual physical activity as a part of daily travel

Active transport (walking and cycling) is a convenient, safe and an attractive option for many trips.

Developing a resilient system

The transport network has alternative routes available when major incidents or events occur and the vulnerability to reduced oil supply, rising oil prices and climate change impacts is minimised.

Delivering safety and security

People feel safe and secure using the transport system and there is a steady reduction in the occurrence of crashes on the road and rail network.

Our strategy for the future

The draft *Connecting SEQ 2031* supports the long-term achievement of the key transport policy goals by:

- expanding and modernising the rail network
- continuing to transform bus networks
- completing and better managing a network of motorways and highways
- completing and managing a network of strategic bikeways
- targeting freight investment to support the economy
- encouraging voluntary travel behaviour change.

13 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p 10

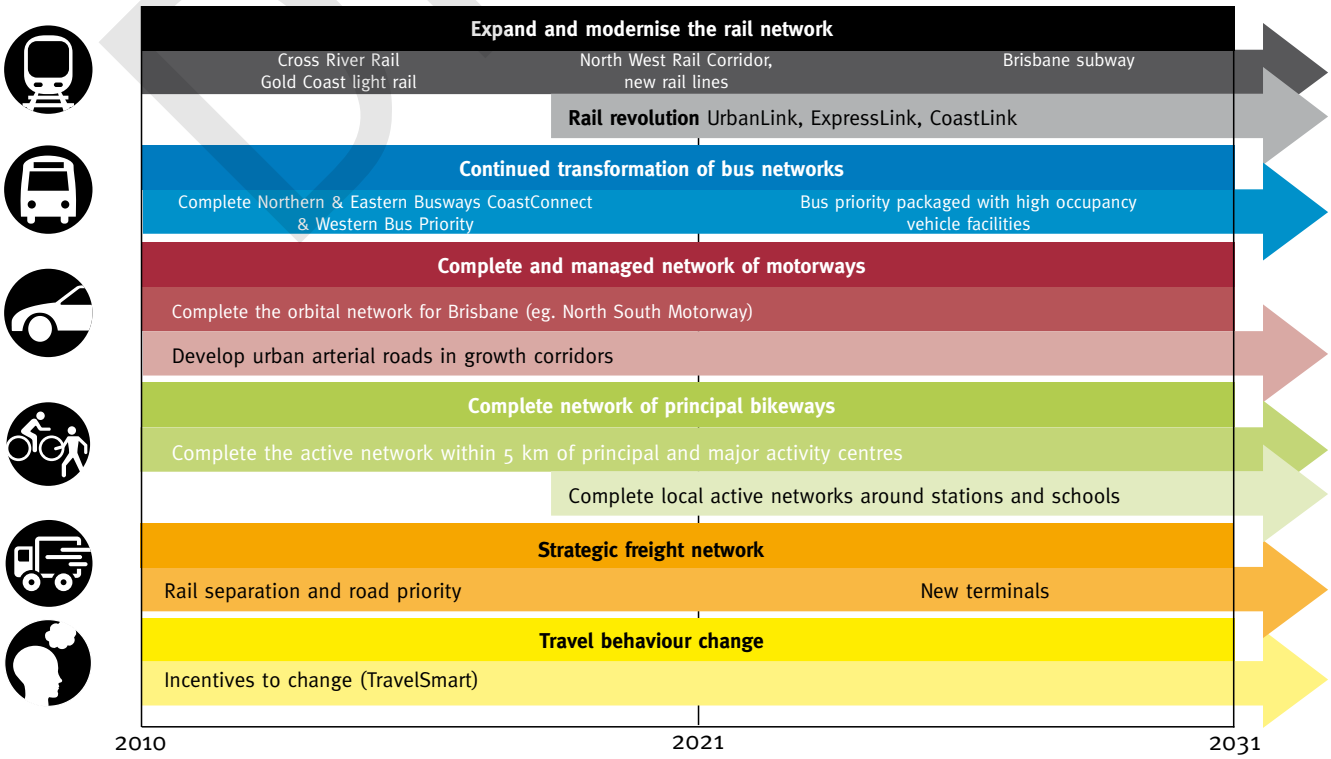
Highlights of the plan

Key initiatives include:

- Cross River Rail is a proposed rail line in the inner city, including a north-south tunnel under the Brisbane River and four new underground inner city stations. Cross River Rail will make a rail services revolution possible, including:
  - UrbanLink services with more frequent services and higher capacity trains operating inbound of Darra, Strathpine, Loganlea, Ferny Grove, Manly, Springfield, Shorncliffe and the Airport
  - ExpressLink services from Ipswich, Cleveland, Beenleigh, Caboolture and Kippa-Ring
  - CoastLink from Brisbane to the Gold Coast and Sunshine Coast.
- constructing an additional rail line between Alderley and Strathpine using the predominantly government-owned North West Transport Corridor
- expanding the reach of the rail network with extensions to Maroochydore, Coolangatta, Kippa-Ring, Springfield, Ripley and Flagstone
- extending the proposed light rail on the Gold Coast to Coolangatta
- a separate Brisbane subway from Toowong to West End to Newstead/ Bowen Hills, with extensions to Hamilton Northshore/Airport Village and Bulimba possible in the longer term
- continuing the busway network with the Northern Busway to Bracken Ridge and the Eastern Busway to Capalaba
- a high-frequency bus service with on-road priority from Kenmore to the city
- additional bus infrastructure investment through packaging of high-frequency bus services with bus priority measures (*High Occupancy Vehicle Network Plan*)
- active transport (such as walking and cycling) improvements on strategic corridors linking centres and within five kilometres of centres
- major freight investment to support the economy, including:
  - full development of Acacia Ridge freight terminal
  - dedicated dual gauge freight line from Acacia Ridge to Port of Brisbane
  - connected and managed motorways to ensure efficient 24-hour operation of freight vehicles.
- completing the strategic road network including:
  - completion of the orbital motorway network for Brisbane, including the new north-south motorway from Toowong to Everton Park
  - strategic arterial roads supporting motorways/highways through Moreton Bay Regional Council and Gold Coast City Council.
- introducing new technology to better manage road and public transport movements (for example, through better information on travel options, real time management of motorway flows and improved rail signalling).

Figure 3.1 summarises the key initiatives proposed by the draft *Connecting SEQ 2031*.

Figure 3.1 – highlights of the plan



Targeting success

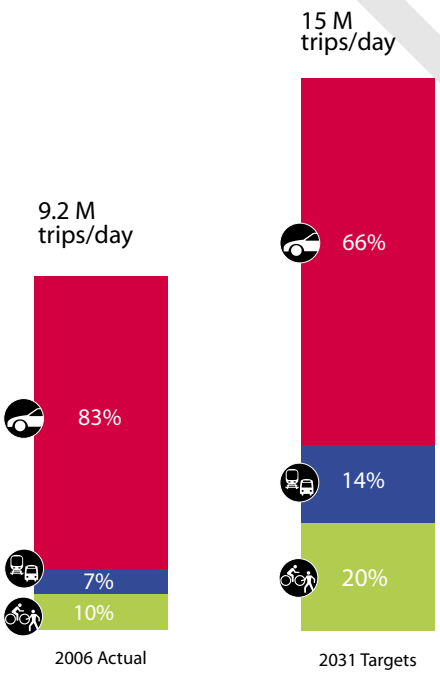
The draft *Connecting SEQ 2031* adopts regional targets as a measure of broadly tracking progress towards achieving the key transport policy goals. The mode share targets have been established through a combination of transport modelling and analysis of local behavioural data such as the Queensland Government Household Travel Survey and the Census Journey to Work.

The plan establishes ambitions to change the way the region moves by:

- doubling the share of active transport trips (such as walking and cycling) from 10% to 20% of all trips
- doubling the share of public transport from 7% to 14% of all trips
- reducing the share of trips taken in private motor vehicles from 83% to 66%.

Across the region this would mean the average person changing just five trips (2.5 return trips) out of a total of 25 per week to public transport, cycling or walking to achieve the 2031 mode share targets.

Figure 3.2 – SEQ daily travel targets



The SEQ region is diverse and contains many variations in urban settlement and availability of transport choices. To give a clearer indication of local area priorities, targets have been established for the seven local government areas where the majority of the population is located, with details included in Part D.

Journey to school targets

Connecting SEQ 2031 also establishes journey to school transport targets, as an important part of encouraging a long-term cultural shift in travel behaviours.

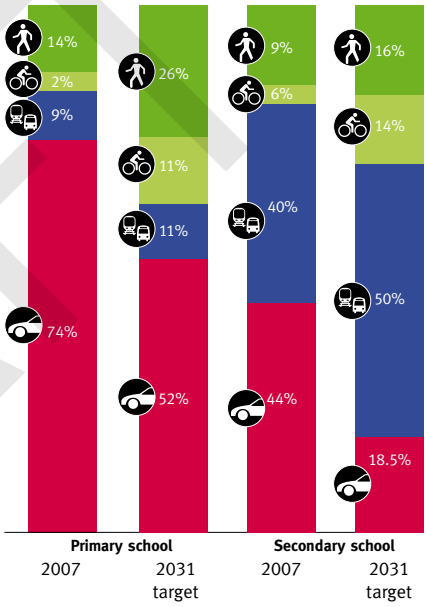
Shifting some of these shorter trips to cycling and walking will have flow on effects in terms of managing congestion, as well as delivering health outcomes as school students increase physical activity.

A complex range of factors influence changes in the way students travel to school, resulting in a decline in the share of trips by public transport, cycling and walking. These include:

- concerns about safety and security
- more parents travelling directly to employment after the school drop-off
- a trend towards a higher proportion of private school enrolments, increasing the distance from home to school
- more before and after school extracurricular activities, eliminating access to school bus services
- increasing size of schools, meaning students come from a wider catchment.

Figure 3.3 shows the daily journey to school transport targets for both primary

Figure 3.4 – 2031 journey to school transport targets



Source: 2007 mode share figures from SEQ Household Travel Survey

Figure 3.3 – average composition of 25 trips per person each week

To achieve the targets the weekly travel patterns of the average SEQ resident would need to change only incrementally.

Part B: Priorities for taking action

4. Six priorities for action

The draft *Connecting SEQ 2031* contains more than 150 strategic policies, actions and projects to develop a sustainable transport system in SEQ. Action will begin immediately and will be monitored, reported and reviewed regularly. Not everything in the plan is currently affordable, or needs to be done as a high priority. To help focus future transport action on the most important needs, six 'priorities for action' with essential 'key actions' have been established.

1. Creating compact and connected communities

Ensuring the transport system supports desired outcomes of *SEQ Regional Plan*

- Centres access hierarchy – establishing public transport and employment hubs based on the activity centres designated in the *SEQ Regional Plan*
- Creating 15-minute neigbourhoods – where people can access jobs, education, services and leisure activities within 15 minutes of their home
- Priority transit corridors – encourage increased density and mix of infill housing, local employment and community services along strategic public transport corridors
- Accessible business and industry areas – protect land close to priority freight routes for business and industry.

2. Changing travel behaviour

Making it easy for people to choose sustainable travel

- TravelSmart communities to support individuals to make sustainable travel choices
- TravelSmart schools to support generational change in school travel culture
- TravelSmart workplaces to encourage sustainable work travel and help manage peak period congestion
- Encourage trips outside peak periods.

3. Improving transport system efficiency

Using cost effective measures to improve the efficiency and reliability of the transport system

- One network – integrated management of state and local government-owned roads to maximise performance
- Electronic technology – use new technology to maximise throughout on the road and rail networks and enhance traveller information
- Incident response – better management of incidents to reduce delays
- Road user priority – ensure priority is provided for buses where it will improve the number of people able to be moved on a corridor.

4. Supporting economic vitality

Ensuring the transport system supports economic development and growth

- Strategic freight routes – important freight routes cater for freight, with missing links in the freight network provided
- Intermodal freight terminals – expand existing and provide new intermodal terminals
- High capacity public transport to centres – major centres are serviced with high-frequency public transport to get people to work.

5. Protecting environmental quality and health

Ensuring the transport system protects the environment

- Cleaner vehicles – support a shift to low-emission buses and cars
- Sustainable transport – support sustainable transport, including a decrease in private car use and more freight on rail.

6. Delivering an integrated transport network

Expanding the transport network to address deficiencies (full details of improvements for public transport, road, active transport and freight networks are included in Part C).

1 Creating compact and connected communities

Principle

Land use policies will be coordinated with strategic transport investment to support: a series of 15-minute neighbourhoods connected by public transport; and reliable freight and heavy vehicle access to the priority freight routes.

Policies to support compact and connected communities

1.1 Promote the *centres access hierarchy* and *priority transit corridors* to enable better coordination of public transport investment with higher density development

1.2 Foster transport and land use integration for development areas and identified growth areas by ensuring these areas provide access to community facilities by active transport and are of sufficient density to support viable public transport services

1.3 Promote the *priority freight network* and *connected and managed motorways network* to encourage industry, logistics and low density employment to locate in areas with direct access to airports, sea ports and markets.

The current form of new urban development in the region is based on car travel as the predominant mode of transport. There is also a preference for bigger homes in new suburbs. This results in a dispersed pattern of settlement that makes walking and cycling less attractive as well as reducing the effectiveness and increasing the cost of public transport operations.

More diverse, compact urban communities means the distance between origins and destinations is reduced. Non-motorised travel to local destinations like shops and schools is easier, while demand for public transport is more concentrated.

The *SEQ Regional Plan 2009–2031*

The *SEQ Regional Plan* (through Desired Regional Outcome 8) establishes a clear policy and legislative platform to achieve compact settlement as the region enters its next phase of growth[14]. Specifically, it requires:

- urban development to be within the designated urban footprint
- 50% of the future dwelling growth to be within existing urban areas to maximise existing investments in infrastructure and public transport services
- a diversity of uses and employment opportunities in new developments at densities that support walkable communities and allow efficient provision of public transport services
- higher density and mixed use development around regional activity centres and high-frequency public transport corridors
- priority be given to new development areas that are in close proximity to existing communities, or where direct transport linkages to existing urban areas can be established early in the development
- transport and land use planning to occur concurrently and development to be sequenced with transport infrastructure provision
- management of car parking supply in regional activity centres and around high-frequency public transport corridors to make development more walkable and support more walking, cycling and use of public transport
- protection of the strategic freight network, while managing the impact of freight movement in urban areas
- land accessible to the freight priority corridors and the ports is protected for industry, logistics and other lower density uses that generate high volumes of commercial or freight trips.

Supporting the SEQ Regional Plan

The draft *Connecting SEQ 2031* builds on the *SEQ Regional Plan's* land use framework by seeking to optimise the location of land use groups in relation to the transport network, in particular identifying:

- optimal areas to locate employment in terms of transport accessibility
- centres and corridors where a good standard of public transport service will maximise the opportunities for higher-density residential and office development.

14 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan p90*

Centres access hierarchy

The draft *Connecting SEQ 2031* establishes a centres access hierarchy where the standard of service for public transport access to activity centres is identified.

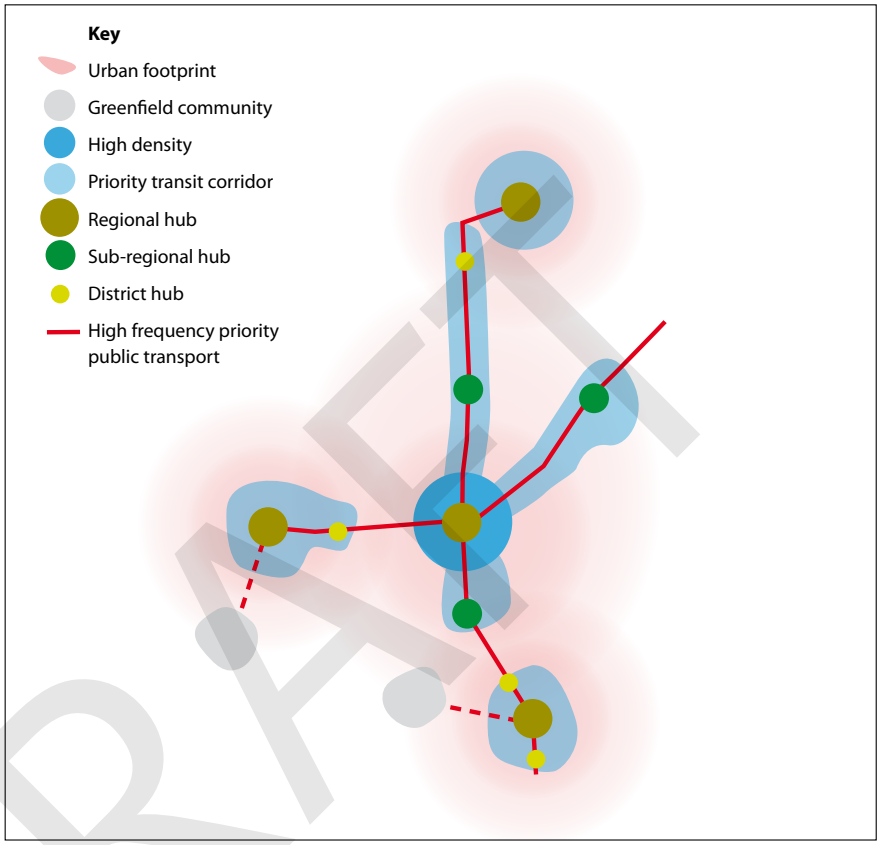
The hierarchy designations for activity centres are depicted on the transport and land use integration maps in part D.

The centres access hierarchy does not change the land use policies or the intent of the *SEQ Regional Plan*. It will help inform decisions so 'public transport contestable' land uses such as tertiary education, medical and office-based employment that will benefit from higher quality public transport can be located in those centres included in the hierarchy.

The centres access hierarchy includes three levels of public transport 'hubs'. The hubs will have high-frequency public transport services operating every 15 minutes or better, all day, seven days a week:

- Regional hubs: CBD-style centres that form the interchange and terminus for most public transport services in that part of the region and act as the key transfer location for public transport services to other parts of the region. These centres should be the primary locations for in-centre public transport contestable land uses. The regional hubs are Brisbane CBD, Ipswich CBD, Southport and Maroochydore. As specified in desired regional outcome 8 of the *SEQ Regional Plan*, development densities in these centres should be about 40 – 120 dwellings per hectare (net) or greater[15].
- Sub-regional hubs: centres with direct, frequent public transport connections to the regional hub, as well as being an interchange for multiple high-frequency public transport services, providing access to other areas of employment, education or services. They support the regional hub by acting as a secondary interchange for local and sub-regional services. These centres should be the secondary locations for in-centre public transport contestable land uses.
- District hubs: interchanges located at points of significant employment activity on corridors connecting them to the regional or sub-regional hubs. Some district hubs also have a special land use focus for a particular employment activity other than office or retail, for example knowledge-based or health service precincts.

Figure 4.1 – Centres access hierarchy



Priority transit corridors

As specified in the *SEQ Regional Plan*[15], by utilising transit oriented development principles along public transport corridors, a series of *priority transit corridors* will be developed through local planning schemes and government investment programs. These priority transit corridors will be included in new communities as well as providing the focus for infill development in existing urban areas.

They are corridors where the combination of multiple or overlapping services will provide high-frequency public transport and reliable services in both directions all day, every day. Residents who can walk or cycle to these corridors will be able to access local centres and employment areas and transfer to other services to access destinations elsewhere in the region.

The *Queensland Growth Management Summit* includes an action to release Transit Oriented Development Guidelines, supported by training and workshops to build understanding of how priority transit corridors can be developed while still meeting market expectations.

Priority transit corridors and transit corridors

- **priority transit corridors** are specified in the *SEQ Regional Plan* (sections 8.6 and 12.1) and are areas where an increase in density can start[16]
- **transit corridors** have the same features as priority transit corridors but may only be developed in the medium or long term
- These priority transit corridors and transit corridors are areas along key public transport routes where mixed use, public transport supportive activities and development comprising 40 dwellings or about 80 jobs per hectare or higher are to occur
- the location of these corridors is identified in the maps in Part D by:

Priority transit corridor

Transit corridor

15 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p 102
16 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p 96 and p 140

15-minute neighbourhoods

The *Queensland Growth Management Summit* outcomes include a vision of '15-minute neighbourhoods' as one model of how new communities should be created. This means well-designed, well-connected communities with opportunities for a resident to work, attend schools, shop and recreate within 15 minutes travel by a sustainable transport mode.

Establishing more homes, jobs and services defined in the centres access hierarchy and priority transit corridors will help realise a series of connected 15-minute neighbourhoods. With high-frequency public transport at the core of these hubs, residents can also walk or cycle to their nearest centre and from there readily access more jobs and services in the CBD and other centres across town.

Development areas and identified growth areas

New development and growth areas (identified in desired regional outcome 8 of the *SEQ Regional Plan*) should be designed around existing or planned public transport corridors, supported by connected active transport, feeder public transport and a local urban arterial road network. Ensuring an appropriate arterial road network is in place is also critical to protect motorways from overuse for local trips, reducing the capacity to carry longer distance and freight trips.

The development of new urban areas will be coordinated with the planned provision of road, active and public transport infrastructure. Part D of the draft *Connecting SEQ 2031* identifies the transport network requirements for the development areas identified in the *SEQ Regional Plan* and identifies critical infrastructure and services to these areas to guide investment decisions and ensure transport corridors are protected.

The *Queensland Growth Management Summit* outcomes include an action to investigate options to fund infrastructure to new growth areas.

International best practice suggests that 15 dwellings per hectare (net) are the minimum needed to support a regular public transport service. Higher residential densities and clustering of employment and other activities can support cost-effective delivery of more frequent services.

Accessible business and industry areas

The priority freight network for the region has been established and is shown in the *SEQ Regional Freight Network Strategy*[17] and *SEQ Regional Plan*[18].

Areas with good access to the priority freight network are defined as accessible business and industry areas. They are illustrated for each local government area in Part D. These areas should be reserved for land uses that generate significant freight or heavy vehicle movements such as warehouses, heavy and general industry, marine and aeronautical support industries and services. Land at accessible business and industry areas should be protected from incompatible land uses (for example, residential) and passenger network conflicts.

17 Queensland Government (Department of Transport and Main Roads) 2007 *South East Queensland Regional Freight Network Strategy* 2007–2012
18 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan p150*

Recent achievements

Compact urban form

☑ The *SEQ Regional Plan* establishes a clear policy to intensify transit oriented development around major public transport nodes or corridors. These developments have features which concentrate passenger demands and support walking to access local services.

Key actions – creating compact and connected communities

Category	Action Number	Description	Lead
Connected centres	1.1	Rail connections to centres (refer to 3.3, 6.1 and 6.2 for more detail)	TMR
Centres access hierarchy	1.2	Develop activity centres as *regional*, *sub-regional* and *district public transport hubs* as identified in the local government maps. These 'hubs' will form the basis for concentrating public transport services on centres with a high potential for development of tertiary education, medical and commercial offices, and intensified (higher density) residential activity to support increased public transport use.	LG
Priority transit corridors	1.3	Develop *priority transit corridors* at locations identified in the local government maps. These will allow for medium density (low rise) residential and compatible mixed use commercial development.	LG
		Develop transit corridors at locations identified in the local government maps.	LG
Transport and land use integration for development areas and identified growth areas	1.4	Coordinate major new land use development with provision of transport infrastructure and services agreed through infrastructure agreements	DIP
		Consider funding arrangements for early provision of public transport services in the development of infrastructure agreements	LG
		Develop a best practice guideline with design tools for land use planners and road designers to consider the transport – land use interface in activity centres	TMR

LG – local government; DIP – Department of Infrastructure and Planning; TMR – Department of Transport and Main Roads

2 Changing travel behaviour

Principle

Manage travel demand through changing travel behaviour as a cost effective way to manage congestion and make the best use of the existing transport system.

Policies to change travel behaviour

2.1 Focus on expanding the TravelSmart program to support a shift to public transport, cycling and walking

2.2 Support local government initiatives to manage parking in activity centres well serviced by public transport

2.3 Disperse peak hour travel pressures and reduce the growth of travel demand through incentives to change travel behaviour

2.4 Encourage changes in working hours and in freight logistics arrangements to spread the peak load on the transport network.

A shift away from unsustainable transport habits requires investment in alternatives as well as changes in travel behaviour. Behavioural change can reduce or spread peak demand and make better use of the existing transport network. It can also avoid costly investment in facilities that are only needed for a few hours each day.

People tend to fall into travel habits early in life and these can be hard to change, even though most people may agree in principle with the need to protect lifestyles and the environment. Many people also do not feel responsible for collective problems like congestion or pollution because they cannot solve them on their own. This can lead to individuals putting travel behaviour change in the too hard basket.

Behavioural change can be achieved by practical measures like discounted off-peak public transport fares which lead to clear benefits of riding off peak. These practical measures can be enhanced by measures which address the attitudes of individuals and ask them to reconcile contradictions between their stated values and their actual behaviour.

TravelSmart

The TravelSmart program employs a range of measures which target the attitudes and behaviours of individual members of the community. It supports investments in public transport, walking and cycling to help break old habits in homes, schools and workplaces.

TravelSmart's primary aims are to reduce vehicle travel sharing rides and using alternative, sustainable transport modes. A reduction in the total amount of travel reduces congestion and emissions, as well as saves money for individual users. The Climate Q response to climate change also identifies this will reduce emissions of greenhouse gases and contribute to a healthier Queensland.

TravelSmart programs involve the Queensland Government working together with local governments, businesses and the community. Supporting individuals to change just five of their 25 trips each week from car to public transport, cycling or walking would achieve our target to reduce the share of trips by car from 85% to 66%.

TravelSmart communities

TravelSmart communities projects work directly with households to increase the use of sustainable modes of transport across the whole community.

The Queensland Government has allocated $22.6 million to deliver TravelSmart communities to 324 000 households throughout Brisbane city, Ipswich, Sunshine Coast, Moreton Bay Regional Council and the Gold Coast during the next two years.

TravelSmart schools

Vehicles used for school-related travel purposes contribute to a number of growing problems on Queensland roads. Today, more children are being driven to school than ever before. The percentage of primary school children being driven to school has increased from 55% in 1992, to 74% in 2007.

Options that can be undertaken to improve the current situation include: events, raising awareness or developing a school travel plan to increase the use of sustainable transport modes.

TravelSmart workplaces

Work trips are the major contributor to peak hour traffic congestion, so it is important for organisations to promote and encourage the use of sustainable transport for journeys to and from a workplace to reduce single occupancy vehicle trips.

Businesses interested in becoming a TravelSmart Workplace can receive help to develop travel plans outlining how they will increase sustainable transport use, and help manage traffic congestion.

Carpooling

Carpooling is where people share a car to a common destination to reduce travel costs, fuel use, pollution and traffic congestion.

Carpooling is promoted as a TravelSmart alternative for people that reside a long distance from their workplace, or who may feel excluded from other TravelSmart activities such as walking and cycling due to their residential location.

Personal security is often cited as a concern as people are apprehensive about travelling with strangers. Workplace or school carpooling can address this concern as the staff or students have their workplace or school in common.

Successful carpooling requires careful consideration of security issues, back up planning and etiquette on such matters as cost sharing, the route, timing and punctuality, smoking, eating and even the choice of radio station.

If these matters are all addressed car pooling can save money and reduce traffic, environmental emissions and the pressure on car parking areas.

Encourage trips outside peak periods

With commuter trips being one of the major contributors to peak hour traffic and public transport congestion, encouraging trips outside peak periods will help manage congestion and use transport resources more efficiently across more of the day.

Public transport incentives

The government will continue to explore innovative options for providing incentives through fare products and other benefits. This includes measures like salary fringe benefits, such as transferring salary benefits direct to an employee's *go* card. Schemes based on this approach are common in the United States. These schemes may become more viable in Australia, if supported by reforms to taxation.

Car parking

Car parking supply is within local government control.

The state government will support efforts by councils to manage parking in regional activity centres well serviced by public transport.

Case studies

TravelSmart schools in Noosa

A TravelSmart project undertaken at three schools in Noosa achieved great results for the local community. Tewantin State School, Noosaville State School and Good Shepherd Lutheran College took part in the project, which involved the development of school travel plans, classroom activities (such as cycle skills classes) and distribution of access guides showing community facilities, cycleways and public transport information.

A total of 1300 households took part in the project, funded jointly by the Queensland Government and the local council. At the end of the project, one third of families were estimated to no longer use their cars as the main mode of transport, walking increased by a third, cycling almost tripled and car-pooling nearly doubled.

Brisbane City Council Active School Travel program

Brisbane City Council works with local schools to encourage more students to walk and cycle to school. Each year 21 schools are selected, with the council supporting schools to maintain motivation and commitment towards sustainable and long-term behaviour change. In 2007, participating schools achieved an 11% reduction in car trips across participating schools and in 2008, schools achieved 24.8% reduction in sole family car trips.

TravelSmart workplace, Department of Community Safety, Kedron

The Department of Community Safety (formerly the Department of Emergency Services) at Kedron in Brisbane recently took part in a TravelSmart workplace project, successfully meeting the targets and objectives of its travel plan. Results included a reduction in weekly car trips to work by 15% and increased public transport trips, which now account for 15.2% of all weekly trips

Some of the activities undertaken to achieve these results included participation in the Queensland and National 'Ride to Work' and 'Walk to Work' days, personal journey planning sessions, 'fuel for your feet' health information sessions, self defence classes, and cycling skills and bicycle maintenance workshops.

TravelSmart communities

TravelSmart Brisbane North achieved its objectives of increasing use of public transport, walking and cycling while reducing the number of vehicle kilometres travelled in the study area – results are detailed on the facing page.

The TravelSmart communities program is focused on encouraging people to try a new way of getting around by offering useful information and services. While the measureable change in the modes people use to get around demonstrates the success of the program, people who have participated in TravelSmart communities projects have reported many benefits of travelling smart such as:

- improved health – especially when making an effort to walk or cycle instead of driving
- reduced travel costs
- time savings – exercise as they travel, read on the bus, escape traffic jams
- less stress – they can relax on a bus or train, rather than deal with peak hour traffic
- increased social opportunities – carpool with a friend, or meet up with neighbours while out on a walk
- improved community safety – less cars and more people out and about.

Key actions – changing travel behaviour

Category	Action Number	Description	Lead
TravelSmart	2.1	Expand the TravelSmart program in line with the roll out of new transport networks and services and targeting trips to schools, universities and workplaces	TMR
Peak spreading	2.2	Develop and implement ongoing flexibility to stagger workplace start times in government, business and schools	TMR
Public transport incentives	2.3	Promote off-peak public transport travel by developing an all day network of frequent services	TTA
		Upgrade public transport stations and transfer facilities to support a whole of journey approach to public transport travel	TTA
		Continue to develop and enhance passenger information and trip planning facilities	TTA
		Continue to investigate the viability of further incentives to encourage a shift to public transport use, such as employer funded public transport fares	TMR

TMR – Department of Transport and Main Roads; TTA – TransLink Transit Authority

Recent achievements

☑ ***TravelSmart* communities**

The 2007 Brisbane North TravelSmart Communities project was jointly funded by Transport and Main Roads, the Australian Greenhouse Office (Commonwealth Government) and Brisbane City Council, in partnership with TransLink.
Project results include:

- 49% increase in walking
- 50% increase in cycling
- 22% increase in public transport
- 13% reduction in vehicle kilometres travelled in private cars
- 28 000-tonne reduction in greenhouse gas emissions per year, equivalent to the annual electricity use of around 2100 households.

☑ **Flexible workplace program**

Transport and Main Roads recently conducted a flexible workplace trial across government offices in central Brisbane. Some results include:

- a 34% decrease in morning peak hour travel and a 32% decrease in afternoon peak hour travel
- decrease in total travel with participants telecommuting and working compressed work weeks
- 36% reported a more enjoyable commuting experience with less traffic, less congested public transport and/or shorter waiting time.

☑ **Busways**

Delivery of the busway network for Brisbane is well under way and some of the benefits delivered by the busways include:

- higher public transport use with 20% patronage growth on the South East Busway compared to 12% on average growth for all Brisbane Transport services in 2005–06
- efficient use of space with the South East Busway moving up to 12 400 passengers an hour (one-way) during peak times
- fast, reliable, congestion free travel with busway passengers able to count on trips taking the same time each day
- reduced greenhouse gas emissions with a half full bus (about 30 passengers), producing around four times less greenhouse gas emissions per person per trip than an equivalent car trip. In the peak, with higher passenger loads on buses the environmental benefits would increase.

☑ **Car parking supply**

Brisbane City Council has limited the increases in supply of parking in the city frame area to a reasonable maximum since 1986, and has tightly managed the development of new public carparks. The success of this policy is reflected in the public transport now exceeding 50% in the morning peak[19] for all trips to the CBD and immediate surrounds.

☑ **Public transport incentives**

An example of a successful scheme is the integration of public transport fares with major event ticketing at stadiums in the region. Suncorp Stadium has a scheme supported by parking controls and a comprehensive public transport plan which regularly achieves more than 90% mode share for public transport to major events.

19 Queensland Government (Department of Transport and Main Roads) 2009 *South East Queensland Household Travel Survey* 2006

3 Improving transport system efficiency

Principle

Wider application of cost effective measures that improve the efficiency and reliability of the transport system will reduce the need for costly expansion of capacity.

Policies to improve transport system efficiency

3.1 State agencies and local governments will adopt a 'one network' approach to planning and management of strategic roads, including the relationship of the road with adjacent land uses

3.2 Travel time reliability will be improved through incident management schemes and use of intelligent technology to optimise movement of traffic

3.3 Bus priority and other high occupancy vehicle (HOV) facilities will be included on road corridors regularly affected by congestion, particularly where new, alternative traffic routes and infrastructure are provided

3.4 Motorways and strategic freight routes will be managed to ensure reliable travel times for freight

3.5 Rail system capacity will be improved by upgrades which enhance the efficiency of the existing network.

Expanding transport system capacity is expensive and has impacts on the surrounding community. An important feature of *Connecting SEQ 2031* is to make best use of investments we have already made, by optimising the performance of the existing transport network.

Measures to improve the efficiency of the network include:

- managing the various components of the network as a single system, not a series of separate facilities
- using electronic monitoring technology and automated data to review performance in real time and optimise performance as well as providing real time traveller information
- responding effectively and consistently to unplanned incidents
- assigning road user priority to public transport and freight vehicles on congested parts of the network
- improving rail utilisation by increased train capacity and more off peak services.

One network approach

Roads are the primary links in the transport network and need to be managed as an integrated network. Currently about 80% of the region's roads are controlled by local government, and the balance by Transport and Main Roads.

A roads alliance has been developed to ensure roads are planned and managed in a coordinated manner, so an agreed hierarchy of strategic and local roads is developed across the region. New traffic management centres combining state and local network management have been established in Brisbane, the Gold Coast and Sunshine Coast.

The Connected and Managed Motorway project aims to develop and manage a completed motorway network and its supporting arterials so traffic is able to move evenly around the road network.

Improved local planning processes developed by Transport and Main Roads through its State Planning Program will ensure new urban arterial roads are created in growth corridors to avoid over reliance on the strategic motorway and highway network.

Rail system efficiency can be enhanced by providing clearways for express services, removing open level crossings from major roads and providing more stabling locations to avoid dead running of trains at the start and finish of shifts.

Electronic technology

Further development of electronic technology through the traffic management centres and the managed motorways concept will allow for monitoring and management of the motorway and arterial network in real time. The technology will be able to vary speed limits and traffic flows on ramps and intersections so traffic flow is smoothed across the network, and incidents are detected rapidly.

The technology will also allow the provision of real time travel information so people can choose the best mode and time to travel. The previously separate signal management systems of the state and local governments will be made interoperable to provide integrated management of traffic flows on both state and local roads.

Incident response

Delays from unplanned traffic incidents account for up to 60% of delay hours on the road network each day. While the safety of crash victims remains paramount, an ongoing program of incident management is delivering better detection, improved emergency service responses and better clearance methods. This includes electronic surveillance and new traffic response vehicles to ensure safe site procedures and rapid clearances (as detailed on page 33).

Road user priority

More than 50% of public transport passengers are carried by bus on the road network. Road freight also dominates the freight task. Congestion on the free to use road network at peak periods is unavoidable and roads need to be managed to encourage people to use public transport or share rides.

The *SEQ HOV Network Plan* will identify policies and enforcement needs for high-occupancy vehicles on the region's strategic road network. In areas close to major freight terminals and industrial zones, it may be necessary to prioritise high capacity freight traffic.

Rail system capacity

Improved signalling on the rail system will boost capacity and enhance safety. The rail system will also benefit from higher capacity rollingstock on the inner suburban network, and timetable revisions to expand shoulder services to encourage people to travel just outside the peaks. Increasing use of the *go* card and off-peak pricing will continue to spread passenger loads throughout the day.

Key actions – improving transport system efficiency

Category	Action Number	Description	Lead
One network	3.1	Plan and manage the road network, as 'one network' regardless of ownership	TMR/LG
Road system efficiency, particularly for public transport and freight	3.2	Ensure local government and state government traffic management signal systems are interoperable so all signals are coordinated	TMR
		Improve traffic flow through ongoing upgrades of traffic signal management and incorporating bus priority	TMR
		Develop and implement the *SEQ HOV Network Plan* to provide priority on the road network for buses and other high occupancy vehicles	TMR/LG
		Progressively remove open level rail crossings on major roads, with Beams Road, Carseldine, Boundary Road at Coopers Plains and Cavendish Road at Coorparoo as high priorities	TMR/QR/ LG
Connected and Managed Motorways	3.3	Develop and implement the *Connected and Managed Motorway* project, using intelligent transport technology to improve the reliability of travel on the region's motorway network and improve traveller information	TMR
Rail system efficiency	3.4	Purchase rollingstock to support the transformation of the rail network to a higher capacity system	TTA
		Provide additional services to improve frequency of 'shoulder' services	TTA
		Investigate opportunities for new rail stabling locations to reduce dead running time for services	TMR/QR
		Establish network separation to provide 'clearways' for express services and increase frequency for all-stops services	TTA/QR
		Upgrade rail signals to increase line capacity from 20 to 24 trains per hour	TTA/QR
		Investigate communications based signalling and automated rain protection system to improve safety and increase line capacity from 20 to 30 trains per hour	TTA/QR
Incident management	3.5	Enhance systems to identify, respond to, and clear incidents on the road and rail systems	TMR

TMR – Transport and Main Roads; TTA – TransLink Transit Authority; QR – Queensland Rail; LG – Local Governments

Recent achievements

☑ New traffic management centres

New traffic management centres have been established in metropolitan Brisbane, Nerang on the Gold Coast and at Mooloolaba on the Sunshine Coast. These centres provide a base to coordinate incident responses and maximise efficient operations of the road network.

☑ Incident response

Since the joint Queensland Government and Brisbane City Council's Brisbane Metropolitan Transport Management Centre was established three years ago, the average time it takes to clear a road crash on the Brisbane network has reduced from one hour to 50 minutes.

Each year, the centre responds to almost 40 000 incidents on the Brisbane road network, including more than 6000 crashes, 20 000 vehicle breakdowns and 2500 planned events, such as changed traffic conditions due to roadworks or sporting events.

This joint effort is helping to manage the network efficiently, with an independent assessment of the centre estimating a reduction in congestion costs by as much as $27 million a year.

☑ TransLink *go* card

The *go* card has revolutionised public transport ticketing in the region by combining an integrated fares system with a prepaid card. Using a *go* card cuts individual boarding time from about 11 seconds to just three, which translates to a time saving of up to seven minutes on an average bus trip.

4 Supporting economic vitality

Principle

Ensure the transport system supports economic development and growth of employment by connecting:

- industries, suppliers and markets
- businesses to other businesses
- labour to employment.

Policies to support economic vitality

4.1 Service major employment centres with high-frequency public transport

4.2 Manage motorways and strategic freight routes to ensure travel time reliability for freight

4.3 Protect land for use by freight intensive industrial and commercial activities close to freight terminals and logistics centres, motorways, highways and other priority freight corridors

4.4 Direct heavy vehicle movements away from the suburban road network

4.5 Ensure the freight network supports the movement of freight by the most efficient mode.

Without efficient freight movements the region's economic growth will be restricted and availability of consumer goods will be reduced.

To achieve its economic potential, the region needs a modern, reliable and high-capacity freight network of rail lines, roads, and inter-modal transfer terminals that can move increasing volumes of goods without impacting on the amenity of cities.

Transport investment will support the *SEQ Regional Plan* policy of developing a diversified economy that aims to retain local jobs and build on the regional and sub-regional competitive advantages[20].

Connecting SEQ 2031 will also contribute to the *Toward Q2* target of making Queensland Australia's strongest economy by providing transport infrastructure to support growth.

Strategic freight routes

Between 2003 and 2020, the road freight task in Brisbane is forecast to grow by 3.7% per year, compared to 3% per year forecasts for Sydney and Melbourne[21].

Areas likely to experience major increases in road freight activity include:

- Brisbane CBD (primarily light commercial vehicles)
- Australia TradeCoast
- Acacia Ridge, Yatala, Brendale, Virginia, Wacol and Swanbank
- regional business centres such as Ipswich and Southport
- new industrial land areas such as Ebenezer, Bromelton, Park Ridge and Purga.

To meet demands for road freight, a connected and resilient network of managed motorways suitable for higher mass limit vehicles and 24-hour operation will be developed by upgrading existing motorways and providing strategic missing links.

Freight volumes through the Port of Brisbane are expected to increase substantially in the next two decades. Containerised trade is expected to triple with a forecast increase of 7.4% per year until 2025, above the national forecast average of 5.4% per year.

As a result, the number of heavy vehicle movements through the Port of Brisbane is expected to increase from 5000 vehicle movements per day in 2006 to 15 000 by 2031[22].

Increasing the share to and from the port of containerised freight movements carried by rail will reduce pressure on roads servicing the port.

Inter-modal freight terminals

The major inter-modal freight terminals are at Australia TradeCoast and Acacia Ridge. To provide for growth and support increased rail freight, two additional terminals will be needed by 2031.

Sites identified as candidates for new inter-modal terminals include:

- Bromelton
- Ebenezer in conjunction with the possible inland standard gauge rail from Melbourne
- north of Caboolture on the North Coast rail line.

20 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p 112
21 Bureau of Transport and Regional Economics 2006 *Working Paper 71 - Estimating urban traffic and congestion cost trends for Australia cities* p 42
22 DP World Brisbane 2008 *Submission to Infrastructure Australia, Stage 2 Port of Brisbane Motorway*

High-capacity public transport to centres

The relationship between where the labour force lives and employment locations affects the likely growth in demand for transport and the ability of businesses to access expert labour. The region currently suffers from a major imbalance between the location of employment and residential development. The city of Brisbane provides the economic core of the region, containing more than 50% of jobs but only 38% of population in 2006. Without government intervening this situation is unlikely to change significantly by 2031.

The *SEQ Regional Plan* aims to address the imbalance by ensuring major new communities include local and regional employment opportunities and locating employment centres at strategic points throughout the region[23].

However, in a diverse region with such a broad range of lifestyle choices, it is inevitable that people will not always live close to where they work.

The commuter role of the transport network is vital in connecting workers to jobs. Without ready access to labour resources, businesses will locate outside the region.

Interaction between businesses is also vital to support growth and diversification of the region's economy. Cities and regions develop because businesses like to cluster together to gain the benefits of shorter travel distances. Ensuring 'business to business' trips can be made efficiently will assist the region's cities to attract and retain business and industry growth.

Since modern businesses need to access business in other parts of Australia and overseas, reliable connections to the region's airports are also vital to supporting economic growth.

Commuter travel and business-to-business travel will be supported by connecting our major centres with high-quality public transport. This will allow:

- businesses to access a broader pool of expert labour from the region's major residential areas
- business travellers to access other business services located in any centre across the region, as well as ready access to the region's airports for domestic and international business travel.

Trucks off suburban roads

Each day about 140 000 heavy articulated vehicle movements and more than 200 000 medium rigid truck movements occur on Brisbane's road system.

It is estimated 80% of these movements use the suburban arterial road network for a substantial part of their journey.

Many of these suburban movements are necessary due to local delivery destinations, while others occur due to lack of a viable alternative route, or a desire to avoid a congested area or tolled motorway.

Strategies to remove unnecessary truck movements are already being put in place through constructing the Clem7, Airport Link and Gateway upgrades. There are also measures in place to restrict heavy vehicles using the Brisbane Urban Corridor as a through route.

Additional inter-modal freight terminals will be co-located with compatible land uses to enhance the efficiency of freight distribution. The terminals will be located away from residential areas to keep trucks off local roads.

In the future a complete orbital motorway network around Brisbane will provide a basis for directing and regulating heavy vehicle movements out of the suburban arterial road network.

The orbital motorway network of Brisbane will include:

- upgraded Gateway, Logan and Centenary Motorways
- the Northern Link tunnel to Inner City Bypass and Airport Link
- a new north-south motorway from Toowong to Everton Park with a connection to the Bruce Highway.

23 Queensland Government (Department of Infrastructure and Planning) *2009 South East Queensland Regional Plan* pp 111-114

Recent achievements

☑ **Gateway Motorway upgrade**
The Gateway Motorway has been upgraded to six lanes between Nudgee Road and Mt Gravatt-Capalaba Road with a second Gateway Bridge and Gateway deviation.

☑ **New motorway connections**
The Clem7 (Brisbane City Council project) opened in March 2010. Together with Airport Link (scheduled for completion in 2012), this will form a motorway standard connection from the M3 at Woolloongabba to the Gateway Motorway (M1).

☑ **Strategic rail network upgrades**
Strategic upgrades of the rail network will support rail freight movements, including the duplication of the rail line from Caboolture to Beerburrum and grade separation of the Beaudesert Road level crossing at Acacia Ridge.

Key actions – supporting economic vitality

Category	Action Number	Description	Lead
Road freight	4.1	Develop a resilient network of *Connected and Managed Motorways* suitable for 24-hour operation of freight vehicles	TMR
Trucks off suburban roads	4.2	Develop and implement a plan to remove truck movements from urban areas through regulation and electronic enforcement	TMR
Rail freight	4.3	Improve freight segregation on the suburban rail network and upgrade the north coast line with freight refuges for 1500-metre trains	TMR
		Undertake improvements to freight and passenger rail conflict points namely, Corinda junction and Roma Street/Exhibition configuration	TMR
		Upgrade the Dutton Park to Salisbury corridor to provide a dedicated freight track on the existing dual gauge track (linked to Cross River Rail delivery and additional passenger rail tracks) to accommodate rail freight accessing the Port, Acacia Ridge and Bromelton	TMR
		Protect a corridor for a standard gauge non-electrified rail link from Rosewood to Acacia Ridge (Southern Freight Rail Corridor) in conjunction with the possible inland freight rail line from Melbourne	TMR
		Investigate and adopt a target for increased freight by rail to and from the Port of Brisbane	TMR
		Investigate upgrade requirements to achieve short-haul transfer of freight by rail from the port to inter-modal terminals elsewhere in the region (rail shuttles)	TMR
Intermodal terminals	4.4	Investigate, procure and protect suitable sites for future road-rail inter-modal terminals at possible locations of Ebenezer, Bromelton and a site north of Caboolture	TMR
		Expand capacity of Acacia Ridge to accommodate 1500-metre trains	TMR
		Improve Paradise Road access to Acacia Ridge from the Logan Motorway	TMR

TMR – Department of Transport and Main Roads

5 Protecting environmental quality and health

Principle

A shift to a sustainable transport system involves long-term efforts to reduce carbon emissions and reliance on fossil fuels, with a strong focus on a cleaner fleet, reduced need to travel and greater use of public transport and active transport.

Policies to improve environmental quality and health

5.1 Provide for a shift towards a more fuel efficient and lower carbon-emitting vehicle fleet (private vehicles, buses, taxis, trains and trucks)

5.2 Encourage a shift to public and active transport and for goods from road to rail freight along specified corridors.

All the key action areas in *Connecting SEQ 2031* will focus on environmental quality and health including encouraging cleaner vehicles and increasing the attractiveness of active transport.

Policies and actions under the compact settlement key action area strongly reinforce the improvement of active transport as a mainstream mode of transport by concentrating attractions within easy walking or cycling distance of residential areas.

In terms of improving environmental quality and health, *Connecting SEQ 2031* will contribute to the following targets of *Toward Q2: Tomorrow's Queensland*:

- 2020 target: cut Queenslanders' carbon footprint by one third with reduced car and electricity use. *Connecting SEQ 2031* will increase the use of sustainable transport (walking, cycling, public transport and more freight on rail)
- 2020 Target: cut obesity by one third with *Connecting SEQ 2031* providing more opportunities for people to choose active transport options (cycling and walking) as part of daily travel.

Cleaner vehicles

The use of cleaner vehicles will be promoted by government programs to encourage the purchase of fuel efficient and low emission vehicles[24]. Campaigns to educate drivers to operate vehicles in a way that conserves fuel and reduces emissions (termed ecodriving) will also be implemented.

This includes a target to reduce greenhouse gas emissions from the Queensland Government fleet by 50% by 2017.

Cleaner buses will play a strong role in reducing air pollution. The government will continue to support compressed natural gas buses in Brisbane and trial low-emission, diesel-electric hybrid buses.

The Queensland Government will also actively work to encourage greater use of new, low-carbon transport technologies such as electric vehicles and alternative-fuel hybrid vehicles. This work will include examining likely infrastructure needs and impacts of these new technologies.

Mode shift to sustainable transport

Active transport (walking and cycling) will receive increased policy emphasis as a mainstream mode of urban transport, rather than being seen as a supporting mode for motorised transport.

State and local governments will adopt a 'whole of journey' approach to active transport planning to deliver a connected network of safe on and off road active transport facilities. This will include providing end-of-trip facilities with secure bicycle parking and showers in town centres and at strategic public transport stations.

Investment in roads entering regional activity centres, education precincts and transport hubs will focus on managing roads as multi-modal facilities catering for walking, cycling and buses, with a less dominant role for private vehicle traffic.

Key action area four also covers supporting more freight on rail, which will deliver environmental benefits, as well as help keep trucks off local roads.

24 Queensland Government 2009 *Climate Q:Toward a Greener Queensland*

Recent achievements

The Queensland Government is spending a record $100 million on cycling in 2009–10. The government and local councils have increased their focus on end-of-trip facilities and active transport routes by projects including:

☑ **Cycle centres**
Delivering the King George Square (420 bicycle parks) and Royal Brisbane and Women's Hospital (750 bicycle parks) cycle centres which provide secure bicycle and clothing storage, showers and bike repair facilities.

☑ **End of trip facilities**
Ensuring local planning regulations require incorporation of end-of-trip facilities in new office buildings. End-of-trip facilities have been included in government buildings in the CBD.

☑ **Eleanor Schonell Bridge**
Constructing the Eleanor Schonell Bridge as a green bridge for buses and active transport only. Delivering the Goodwill Bridge, Kurilpa Bridge and Toowong Bridge (over the Centenary Freeway) for active transport only.

☑ **Active transport included in major projects**
Gateway Upgrade Project includes a 4.2-metre-wide shared facility built as part of the Gateway Bridge (M1) duplication.

The Ted Smout Bridge from Brighton to Clontarf includes a 4.5 metre wide shared pedestrian and cycle facility which will form a link in the Moreton Bay Cycleway.

Princess Alexandra Hospital bikeway built by the Boggo Road Busway Alliance in conjunction with the busway, provides an overpass over Ipswich Road to Annerley Road. This cycle facility provides a link connecting the South East Freeway to the University of Queensland.

☑ **New and improved active transport corridors**
The Normanby Pedestrian and Cycle Link (opened in September 2007) connecting the Victoria Park bikeway via tunnel to Roma Street Parkland. The link provides ease of access to King George Square Cycle Centre and the CBD.

Bicentennial bikeway upgrade between Park Road and Little Cribb Street.

On-road cycleway connecting Brassall to Riverlink.

The Eenie Creek cycle and pedestrian bridge provides safe access over Eenie Creek Road for residents and students.

Key actions – improving environmental quality and health

Category	Action Number	Description	Lead
Lower emission vehicles	5.1	Ensure government purchasing policies require fewer vehicles in the fleet and encourage the purchase of fuel efficient and electric vehicles	TMR
		Undertake a campaign to encourage ecodriving to reduce vehicle emissions	TMR
		Undertake a low emission bus trial using diesel-electric buses	TMR
		Include incentives in TransLink bus contracts for operators to use low emission buses	TMR
		Encourage taxi licensees to operate low emission vehicles	TMR
Active transport	5.2	Complete the SEQ principal cycle network	TMR LG
		Undertake a comprehensive program to improve active transport connections to major centres, educational institutions and public transport	TMR
		Continue to enhance integration of active and public transport networks	TMR LG
		Adopt a policy for provision of active transport facilities on public land, in buildings and private developments, including end-of-trip facilities in commercial developments more than 2000m ^{2}	TMR LG

TMR – Department of Transport and Main Roads; LG – local government

6 Delivering an integrated transport network

Principle

The transport network will be expanded to address deficiencies and connect communities with the most sustainable mode to enable the system to cope with a significant increase in travel demand.

Policies to guide completion of an integrated network

6.1 Focus new investment on achieving a region of interconnected communities where transport contributes to a safe, healthy and accessible lifestyle

6.2 Make freight, public transport and active transport networks the priority for capacity enhancement projects

6.3 Rail will be the backbone of the future passenger system – investment priority will include ensuring the region is connected by efficient high-frequency rail, light rail and the Brisbane subway

6.4 Transform bus networks through continuing the Brisbane busway network, rolling out bus priority on radial and cross town routes and delivery of high-frequency services on strategic routes

6.5 Focus road network development on completing a connected and managed strategic road network, supported by multi-modal arterial roads for local travel.

Capacity enhancement focused on getting the right trips on the right modes is an important priority of the draft *Connecting SEQ 2031*.

While investments in new road facilities will always be required, building more and more roads to cater for peak period traffic demands will not support a shift to more sustainable transport modes.

Connecting SEQ 2031 emphasises the role of rail to increase the efficiency of passenger movements and support a longer term generational change toward compact urban settlement patterns, as specified in the *SEQ Regional Plan*.

A brief overview of the initiatives to complete the integrated transport network are included below. Further details of the network strategies for public transport, roads, active transport and freight are included in *Part C: Detailed Network Strategies for 2031*.

Public transport network

Cross River Rail

Cross River Rail is an additional rail link through the inner city to address the bottleneck in the inner city rail network. Cross river rail will provide the essential extra capacity to support the ongoing expansion of the rail network and the addition of higher frequency rail services.

It is a major step in transforming the region's rail network and will make the rail revolution possible delivering a high capacity transport system

With a $25 million commitment from the Commonwealth and Queensland Governments, planning for Cross River Rail is under way.

Rail revolution

There will be a major revamp to segregate rail options as capacity is expanded. This will ensure the system meets a broader range of traveller needs.

This will include:

- UrbanLink – higher frequency, all stops services all day, seven days a week. The first stage will be for services inbound from Springfield, Redbank, Ferny Grove, Strathpine, Shorncliffe, the Airport, Manly and Loganlea. This style of service would also run between Coomera and Coolangatta on the Gold Coast and between Beerwah and Maroochydore on the Sunshine Coast
- ExpressLink – transform outer suburban rail services to provide faster travel times and longer trains from Ripley, Ipswich, Beenleigh, Caboolture, Kippa-Ring and Flagstone
- CoastLink – fast express rail service from Brisbane to the Gold Coast and Brisbane to the Sunshine Coast, with a travel time of about one hour.

Brisbane subway

A separate subway system for inner Brisbane will be developed to improve public transport network coverage and capacity into the more densely populated urban areas. The initial line will cross from Toowong to West End, pass under the city heart and then link to Bowen Hills and Newstead.

Light rail on the Gold Coast

Light rail will provide a catalyst for land use change along the busy coastal corridor. Further extensions of light rail on the Gold Coast will be investigated as passenger demand builds on strategic bus routes.

Bus network

There will be continued transformation of bus networks through development of busways and on-road bus priority. Service improvements will include high-frequency UrbanLink bus services on strategic routes, including cross-town routes.

Local services will continue to provide the finer fabric of the public transport system.

Busways development will see the continuation of the Northern Busway to Bracken Ridge and the Eastern Busway to Capalaba.

There will also be a strong focus on supporting UrbanLink bus services with bus priority measures and upgraded facilities and information at stops.

The *SEQ High Occupancy Vehicle Network Plan* is currently being developed. This plan will identify strategic corridors and precincts where HOV facilities and treatments will improve the efficiency and reliability of the BusLink services.

Road network

Motorway network

Road construction will include the ongoing development of a connected and managed motorway network. This will include completing an orbital motorway network for Brisbane.

The Pacific Motorway and Bruce Highway will be upgraded to continue their role as motorways bypassing centres on the Gold Coast and Sunshine Coast. Longer term strategic road needs beyond 2031 will be limited to focus on connecting new development areas identified in the *SEQ Regional Plan* and will be partly funded through developer contributions.

Multi-modal road corridors

To support the creation of the orbital motorway network for Brisbane and development of the connected network of managed motorways, the government will work in partnership with local government and land developers to plan and develop a network of supporting multi-modal urban arterial roads.

These facilities will be managed to support intra-urban movements and reduce the need for local traffic to access the strategic motorway network.

Multi-modal urban arterials will generally be four lanes with a median and will include facilities for cyclists and pedestrians, as well as providing strategic corridors for buses.

They will be access controlled and in most cases intersections would be at-grade.

Where required bus priority measures will be provided. In cases where arterials comprise part of the principal cycle network, they may also contain high capacity segregated veloway style facilities, or on road cycle lanes on lower demand sections.

Key actions – completing an integrated transport network

Category	Action Number	Description	Lead
Cross River Rail	6.1	Construct Cross River Rail, a new rail link with underground stations through the inner city, connecting the North Coast/Caboolture line with the Gold Coast/Beenleigh line.	TMR
CoastLink network Sunshine Coast to Brisbane to Gold Coast	6.2	Implement extensions, upgrades and service structure required to facilitate higher capacity fast CoastLink services. Complete rail projects identified in the rail services plan in chapter 5, and the local government maps in Part D. The investment priorities will be: • Construct new rail line from Petrie to Kippa-Ring • Duplication and upgrade of North Coast line from Beerburrum to Landsborough • Complete the Sunshine Coast rail line from Beerwah to Maroochydore • Duplicate Gold Coast line from Coomera to Helensvale • Extend Gold Coast line from Varsity Lakes to Coolangatta	TMR/ TTA
Rail revolution	6.3	Transform the suburban rail network into two networks (UrbanLink and ExpressLink) with no crossing conflicts and increased capacity as identified in the rail services plan in chapter 5. Complete rail projects identified in the local government maps in Part D. The investment priorities will be to commence progressive roll out of UrbanLink services with new high capacity rollingstock, and construct the north west rail corridor	TMR/ TTA
Brisbane subway	6.4	Commence planning for a Brisbane subway as a distributor for passengers around the inner city. The priority for investment will be from Toowong to West End to the CBD to Bowen Hills/Newstead, with future extensions to be planned for beyond 2031.	TMR
Light rail	6.5	Complete light rail projects on the Gold Coast identified in the local government maps.	TMR
Strategic road network	6.6	Complete strategic road network projects identified in the local government maps. The investment priority will be to create a connected orbital motorway system for metropolitan Brisbane.	TMR
Bus networks	6.7	Continue development of Brisbane's busway network, with the continuation of the Northern Busway to Bracken Ridge and the Eastern Busway to Capalaba. The priority for investment will be: • extending the Northern Busway to Chermside with interim bus priority to Bracken Ridge • extending Eastern Busway to Carindale with interim bus priority to Capalaba • implementing the high-frequency UrbanLink bus services • expanding coverage and frequency of local bus services • developing park 'n' ride locations for bus • completing bus and high occupancy vehicle priority treatments identified in the local government maps to support UrbanLink bus services • developing a policy for public transport in rural communities	TMR/ TTA
Active transport network	6.8	Complete strategic active transport network projects identified in the local government maps and action tables. The priority will be to complete a connected network of safe bicycle routes within a five-kilometre radius of activity centres and establish cross-town 'trunk' bike routes	TMR

TMR – Department of Transport and Main Roads; LG – local government; TTA – TransLink Transit Authority

Part C: Detailed network strategies for 2031

5. Public transport network

Signature Projects – Rail

SP1 **Cross River Rail (planning under way)**
A proposed new north-south rail line in Brisbane's inner city, including a new tunnel under the Brisbane River and four new underground inner city stations.

SP2 **Rail revolution**

UrbanLink – higher frequency, all stops services all day seven days a week on services inbound from Springfield, Redbank, Ferny Grove, Strathpine, Shorncliffe, the Airport, Manly and Loganlea. This style of service would also run between Coomera and Coolangatta on the Gold Coast and between Beerwah and Maroochydore on the Sunshine Coast.

ExpressLink – transform outer suburban rail services to provide faster travel times and longer trains from Ripley, Ipswich, Ormeau, Kippa-Ring and Flagstone.

CoastLink – fast express rail service from Brisbane to the Gold Coast and Brisbane to the Sunshine Coast, with a travel time of about one hour.

SP3 **Brisbane subway**
Toowong to Newstead (first section) providing a high capacity, high-frequency, distributor system connecting central Brisbane destinations and distributing passengers from the bus and rail network across the intensely developed core of inner Brisbane.

SP4 **Gold Coast light rail**
Light rail constructed from Helensvale to Broadbeach, with an extension from Broadbeach to Coolangatta and the Gold Coast Airport.

SP5 **North-west rail line**
Construct additional rail from Strathpine to Alderley servicing communities in Brisbane's north west and supporting UrbanLink, ExpressLink and inter-city services.

Signature Projects – Bus

SP6 **Eastern and Northern Busways and on-road bus priority**
Construct Eastern Busway to Coorparoo and Northern Busway to Kedron and continue planning to extend busways to Capalaba and Bracken Ridge respectively with interim on-road bus priority treatments.

SP7 **UrbanLink bus services and HOV network**
High frequency UrbanLink bus services, supported by priority measures on strategic corridors. Redesign of the bus network to provide effective feeder services to UrbanLink public transport corridors.

SP8 **Western bus priority corridor**
An UrbanLink bus service with on-road bus priority from Kenmore to the city.

SP9 **CoastConnect**
A UrbanLink bus service with priority from Maroochydore to Caloundra via Mooloolaba and Kawana Town Centre.

Existing public transport projects

Significant investment is proposed under the *SEQ Infrastructure Plan and Program 2010* (SEQIPP) and the *Transport Plan for Brisbane 2008–2026* including:

- additional trains
- expanding the bus fleet
- expanding the total CityCat fleet to 19 vessels by 2012.

In conjunction with these fleet upgrades investment in fixed infrastructure includes:

- capacity expansion on the major rail lines (Gold Coast, North Coast and western lines)
- new rail line from Petrie to Kippa-Ring
- Gold Coast light rail project from Gold Coast Health and Knowledge Precinct to Broadbeach
- Northern Busway from Windsor to Kedron
- Eastern Busway from Buranda to Coorparoo
- bus lanes and bus access facilities on the road network across SEQ
- funding support to assist local governments to ensure 100% of bus stops comply with standards required under the *Disability Discrimination Act 1992* by 2022.

Public transport delivers many community benefits including reduced emissions, government savings by avoiding the need to build more roads and household savings by reducing the need to run cars. The government subsidises public transport to ensure a good level of service is provided across the region's cities, to reduce car dependency and protect environmental quality.

The Queensland Government's TransLink Transit Authority provides a single point of contact for planning and managing services, providing passenger information and receiving feedback on urban public transport in SEQ. The TransLink network includes:

- rail services operated by Queensland Rail under contract to TransLink Transit Authority
- buses run by private sector contractors and Brisbane Transport
- ferries operated by Brisbane City Council.

TransLink is working with state and local government partners and the private sector to ensure all the major urban areas of SEQ have an integrated network of public transport services that is easy for people to understand and use.

The growing public transport task

The draft *Connecting SEQ 2031* establishes a target of doubling the share of trips made on public transport by 2031.

This will see public transport's share of travel in SEQ increase from 7% to 14% of all trips – an average growth rate of 4.7% per year from 2006 to 2031.

The past five years have seen public transport patronage growing at 9% per year (figure 5.3), indicating a target based on 4.7% growth a year is achievable, though it will be difficult to sustain over a much longer period of two decades.

While shifting more trips to public transport will support the transport goals of the draft *Connecting SEQ 2031*, it means much more investment in public transport infrastructure and services will be needed. However, it will also mean less expenditure on costly upgrades to road corridors for private cars.

Under the multi-modal investment program proposed by the draft *Connecting SEQ 2031*, daily rail passenger kilometres are forecast to increase from four million passenger kilometres in 2006, to more than 13 million by 2031.

By comparison, bus passenger kilometres would increase from three million to seven million per day in the same period[25].

Figure 5.1 – daily public transport

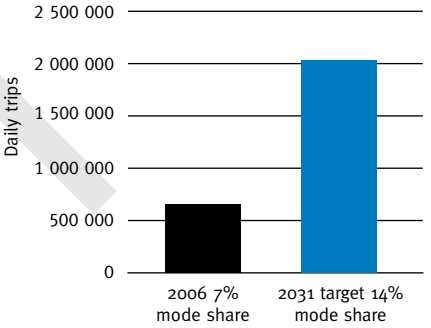


Figure 5.2 – capacity comparison: public transport vs private vehicle

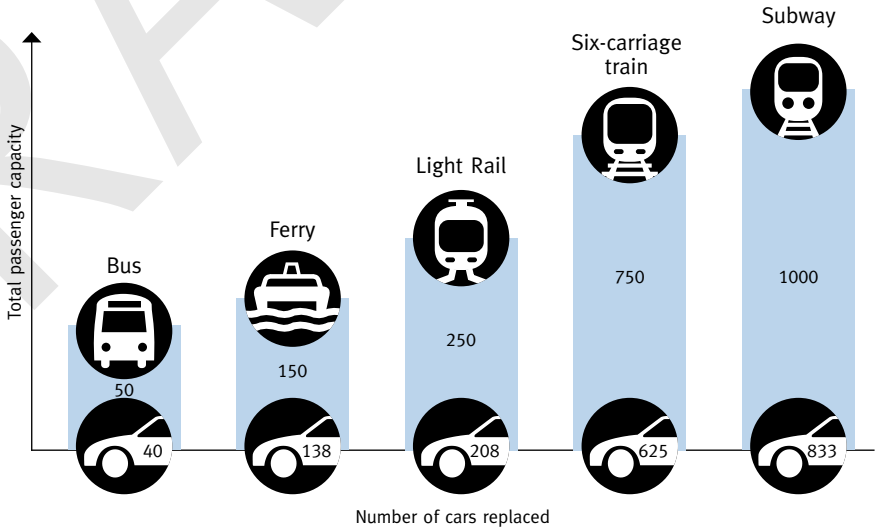
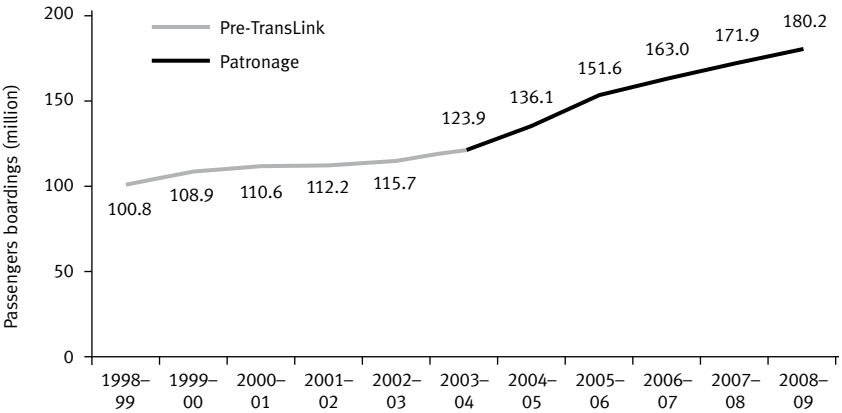


Figure 5.3 – patronage on public transport in SEQ



25 Department of Transport and Main Roads 2009 *Transport Modelling for Connecting SEQ 2031*

Overarching principles for an integrated public transport network

PT 1 Design **a system that is easy to use and understand**

PT 2 Provide a **quality journey** from the decision to use public transport, to arrival at the destination

PT 1 A system that is easy to use and understand

The draft *Connecting SEQ 2031* establishes that public transport system patronage will almost triple by 2031.

Adding more capacity needs to be done in a way that simplifies the network and improves the efficiency and overall attractiveness of the system.

In major movement corridors increasing demands will require high-capacity public transport. Rail is able to carry the highest volumes of passengers, and is the most cost-effective solution where demand is high and a quality service is required.

Future investment will establish rail as the backbone of the network. An expanded rail network will be supported by bus services to fill the gaps and to link communities not serviced by rail to the rail network.

PT 2 A quality public transport journey

A public transport trip has many dimensions, from the decision to use the service to arrival at the destination as shown in figure 5.4.

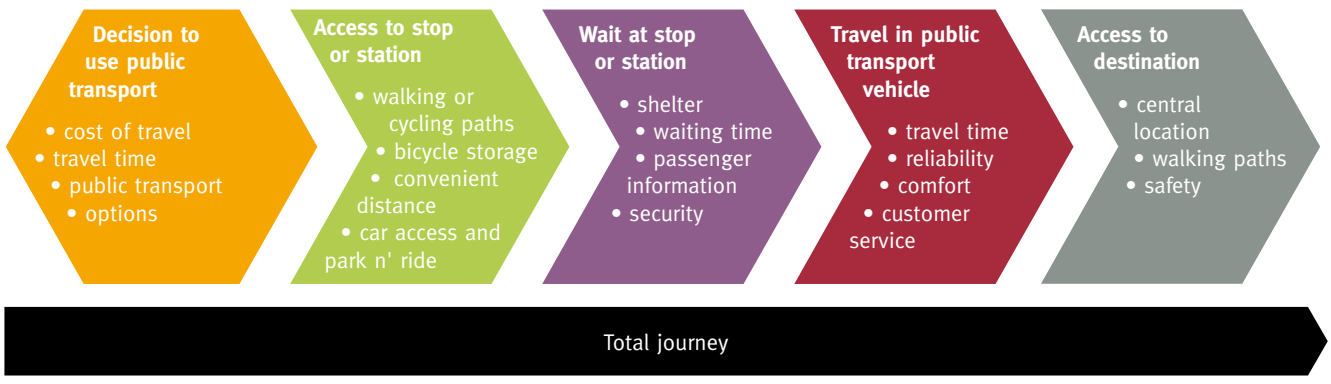
Public transport passengers should be able to expect quality service and facilities at all points of the trip. While some aspects may work well, they can be undermined by poor quality facilities or service in other areas.

For example, the benefits of improved bus travel times from major investment in infrastructure can be undermined by lack of shelter or long boarding delays at stops, poor customer service from a bus driver, or inconsiderate behaviour from other passengers.

The ability to easily access stops and stations can also impact on a passenger's experience.

Planning for the future public transport system needs to adopt a people-centred approach which pursues quality in all aspects of the system, where the customer's perspective is considered from the moment they consider making a trip, to arrival at their destination.

Figure 5.4 – a quality public transport journey ... from decision to destination



Supporting principles for an integrated public transport network

PT 3 Develop a network that operates at a good level of service **all day**

PT 4 Provide a clear network of **high-frequency UrbanLink bus and rail services** where passengers can 'turn up and go'

PT 5 Use **'trunk and feeder' design** in major cities to provide for anywhere to anywhere travel

PT 6 Encourage people to **access public transport by walking and cycling**, while recognising the need for car feeder roles in some markets

PT 7 Use **fares products** to encourage people to shift from car transport, and to manage and direct passenger growth

PT 3 An all day network

Traditional approaches to the delivery of public transport services focused on providing for weekday peak-period journeys to and from work. Off-peak and weekend services were run at much lower frequencies, meaning the majority of the fleet and driver resources were only utilised for a few hours of the day.

Modern lifestyles require more diverse travel options, with work trips now comprising only one-fifth of all travel. To better service modern travel patterns and make public transport an attractive travel choice for different trip types, not just travel to work, the future public transport network will be re-designed as an all-day network.

The majority of services will need to operate all day, seven days a week. During peak periods, extra supplementary services like commuter 'rockets' will provide for the higher passenger volumes.

PT 4 UrbanLink 'turn up and go' rail and bus network

TransLink will progressively roll out a network of high-frequency UrbanLink services on strategic rail, light rail and bus routes. This UrbanLink 'trunk' network will operate at headways of 15 minutes or better, seven days a week. This will allow passengers to simply 'turn up and go', without needing to consult a timetable.

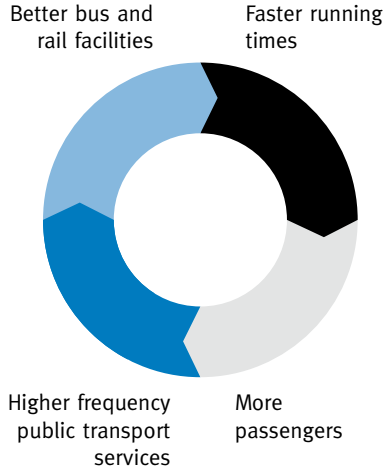
Delivery of a UrbanLink network establishes a self-reinforcing cycle whereby the attraction of more passengers allows a further increase in frequencies. Higher passenger volumes also make it viable to invest in infrastructure improvements to support faster travel times, which in turn also attract more passengers.

The success of a high-frequency network is already proven in Brisbane, with the BUZ (bus upgrade zone) routes, introduced by Brisbane Transport from 2002, resulting in increases in both peak and off-peak passengers.

The UrbanLink network: 'turn up and go'

- a connected trunk network of passenger rail, light rail and high-frequency buses
- services run along major corridors to connect activity centres and residential communities
- frequency of 15 minutes or better off-peak, 10 minutes or better during the peak
- high-frequency all day (at least 6am to 9pm), seven days per week
- quality shelters and passenger information
- operate on rail, busways or arterial roads with supporting bus priority measures to minimise impacts of traffic congestion
- passengers consult a simplified high-frequency network map with no need for a timetable
- a doubling of the proportion of SEQ residents within walking distance of 'turn up and go' services by 2031..

Figure 5.5 – UrbanLink services establish a cycle that continually builds patronage



PT 5 Trunk and feeder design

As the public transport system expands, moving to 'trunk and feeder' design for public transport services will improve services and make it easy to understand for passengers. Under trunk and feeder design, the UrbanLink bus and rail routes are supported by local bus feeder services to provide easy connections to all parts of the city.

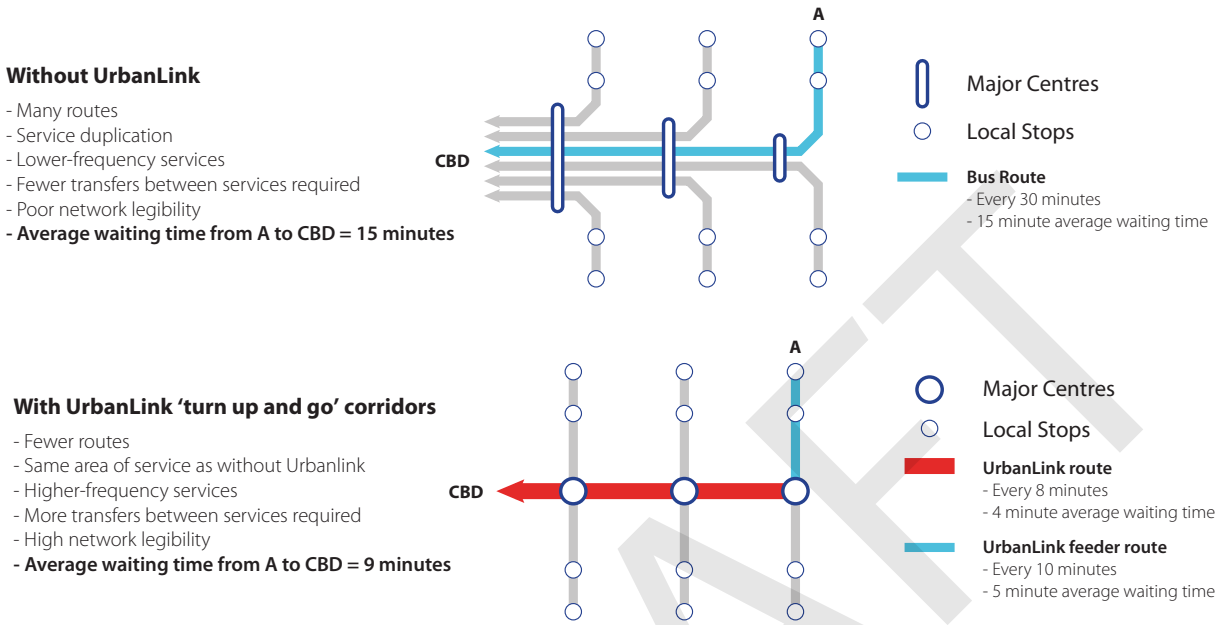
The alternative is the traditional 'single seat' bus planning approach which attempts to provide a large range of services connecting all parts of the city to its centre. In a large city where there are thousands of destinations to be serviced, adopting a 'single seat' approach results in a complicated service network with low frequencies on all routes.

Figure 5.6 (p.46) illustrates how 'trunk and feeder' network design allows demands to be consolidated, enabling high service frequencies on the trunk routes. Adopting this design for the future network will support delivery of the UrbanLink 'turn up and go' services, with shorter wait times on trunk routes and a better level of service on feeder routes. Strategic transfer points will be located at transit hubs (see Part B, priority for action 1), allowing passengers to access destinations anywhere in the city.

Existing single seat services will operate largely unchanged, as trunk and feeder design is applied to new services and service upgrades as demand grows.

Improving the quality and efficiency of key public transport stations will be important to support the move towards a 'trunk and feeder' network design. The TransLink Transit Authority has a program for the development and upgrade of stations, which includes identifying the role of stations in a formal hierarchy to inform the station design and facilities needed.

Figure 5.6 - trunk and feeder system



PT 6 Access to public transport

Cycling and walking

Increased walking and cycling to public transport will expand the coverage of sustainable transport options right to the door. It will also deliver environmental and health benefits and reduce the need for expensive, space-consuming park 'n' ride facilities.

Major initiatives to encourage walking and cycling to access public transport include:

- including information on walking and cycling in the TransLink trip planning tool to allow passengers to select routes based on their level of skill, confidence and ability
- including end-of-trip facilities at strategic rail and busway stations to encourage cycling and walking
- providing an additional 20 000 bicycle parking spaces at rail stations across the network by 2031 (about 250 spaces per station).

Kiss 'n' ride

Passenger set down or kiss 'n' ride provides an important means of access for people who are unable to walk or cycle to catch public transport. Providing kiss 'n' ride facilities for people with mobility difficulties encourages people to use public transport rather than drive all the way to their destination. Rail and busway stations will be designed to ensure kiss 'n' ride facilities are in place at appropriate locations, providing a safe zone to pick up and drop off passengers.

Park 'n' ride

Park 'n' ride is an important element of the public transport network that links passengers from low-density areas not directly serviced by public transport to the trunk system. It is not a preferred option for people who can use other sustainable modes like feeder bus, walking or cycling to access the trunk system.

The draft *Connecting SEQ 2031* proposes 20 000 additional park 'n' ride spaces be provided by 2031, by delivering an additional 750 spaces per year.

The Translink Transit Authority already has a program to deliver 2600 additional park 'n' ride spaces between 2009 and 2012, beyond the 750 per year planned to 2031.

Park 'n' ride facilities will be located away from centres and in areas where roads are less congested, in line with the following conditions:

- generally 10 kilometres outside the Brisbane CBD and 1–3 kilometres outside other activity centres identified in the *SEQ Regional Plan*
- away from areas identified for transit oriented development, transit hubs or identified as priority transit corridors (see part D for locations of transit hubs and priority transit corridors).

Commercial opportunities for a park 'n' ride including co-locating daytime park 'n' ride with night time commercial uses will also be explored.

PT 7 Fares products

Increasing use of the *go* card for fare collection on bus services will reduce travel times. Using a *go* card cuts average individual boarding time from around 11 seconds to just three. This translates to a time saving of up to seven minutes on an average bus service. In conjunction with the roll out of the high-frequency public transport network some peak period services will only accept *go* card as fare payment.

Off-peak price discounting will encourage more passengers to travel in the shoulder and off-peak. This will help manage the growth in peak demand and the requirement for costly infrastructure investment to cater for peak periods. Other fare products to be considered include pre-packaged tourist tickets and employer-funded *go* card credits as part of salary packages.

2031 rail network services plan

The Integrated Regional Transport Plan released in 1997 saw the establishment of the TransLink integrated public transport network with one ticket, and no transfer penalties across all public transport modes. It ushered in Brisbane's busways which are recognised internationally and across Australia as world's best practice in bus rapid transit systems. The busways have proved extremely popular with the public, carrying more passengers each day than all the city's major motorways.

The busway system will be completed over the next 20 years. As the region enters its next phase of maturity, and continues to grow in size, the focus will shift to modernising the rail system, and expanding it to accommodate a much larger task.

Why a strong focus on rail?

Connecting SEQ 2031 proposes significant investment in rail. Rail provides:

- increased efficiency of passenger movements by using the highest capacity service type; as demand increases rail offers the lowest cost per passenger space
- greater support for a longer term generational change towards compact urban form; rail has the ability to attract in fill development within walking distance of stations
- a major encouragement to shift away from car transport; rail offers complete segregation from road congestion
- reduced reliance on oil-based fuels; passenger rail in SEQ is fully electrified – there are no equivalent forms of bus power
- reduced emissions of greenhouse gases; emissions from trains only occur at the electricity generation source.

The draft *Connecting SEQ 2031* proposes to transform the way services operate on the current network as well as expand the reach of the network. The plan also highlights the need for new types of rail technology including light rail and the Brisbane subway.

The rail strategy proposed by *Connecting SEQ 2031* has the following features:

- Cross River Rail will provide a new rail line in the inner city including a new river crossing and new inner city train stations. This will help transform the existing rail network, making a revamp of the way services operate possible:
  - **UrbanLink** rail services with higher capacity trains operating inbound from Redbank, Strathpine, Loganlea, Ferny Grove, Manly, Springfield, Shorncliffe and the Airport
  - **ExpressLink** services from Ipswich, Cleveland, Beenleigh and Caboolture
  - **CoastLink** services from Brisbane to the Gold Coast and Sunshine Coast
- constructing a new rail line between Alderley and Strathpine using the predominantly government-owned North West Transport Corridor
- expanding the reach of the rail network with extensions to Maroochydore, Coolangatta, Kippa-Ring, Springfield, Ripley and Flagstone
- extending the proposed light rail on the Gold Coast from Broadbeach to Coolangatta
- a separate subway system from Toowong to West End to Newstead/ Bowen Hills, with extensions to Hamilton Northshore/Airport Village and Bulimba possible in the longer term.

The 2031 passenger rail network is illustrated in map 5.7.

Cross River Rail – a catalyst for the transformation of the rail network

The proposed Cross River Rail is a major project that will allow a transformation of the way rail services operate in SEQ. Progress of Cross River Rail can be followed online at www.crossriverrail.qld.gov.au

In 2008 the *Inner City Rail Capacity Study* identified a need for Cross River Rail due to a bottleneck in the inner city through Central and Roma Street stations. This bottleneck restricts the number of additional rail services that could be added to meet growing passenger numbers.

More than 53 000 people per day currently travel into the inner city by train between 7am and 9am[26]. Rail investigations conducted for *Connecting SEQ 2031* estimated this number will increase to be between 70 000 and 80 000 by 2016, and between 150 000 and 200 000 by 2031.

The peak period capacity of the rail system would need to expand to about four times its current capability by 2031.

Delivery of Cross River Rail, combined with existing rail infrastructure, new service initiatives and higher capacity trains will make it possible to move up to 240 000 people into the inner city during the two-hour peak.

Cross River Rail is a proposed new north-south rail line in Brisbane's inner city, including a new tunnel under the Brisbane River and four new underground inner city stations. This will mean more frequent trains and better services for all of south east Queensland's rail users.

The benefits of Cross River Rail to the SEQ rail network include:

- significantly increases the capacity of the inner city rail network
- makes possible to run both **UrbanLink** and **ExpressLink** services
- provides the ability for higher capacity, nine-car trains to stop in the Brisbane CBD
- allows for increased frequency of **CoastLink** services between Brisbane and the Sunshine and Gold Coasts
- provides additional freight rail capacity between Salisbury and the Port, allowing more freight to be carried on rail to and from the Port.

26 Queensland Rail *2008 Passenger Load Survey*

Rail revolution

The passenger rail system in SEQ will be completely overhauled to provide a modern high capacity network that will mean for some passengers rail transport will be quicker and more reliable than driving a car.

The improvements will be coordinated and shaped through a 'rail revolution' program that combines short and longer term measures including improved signalling, new styles of trains and transforming the way train services operate.

UrbanLink rail (high frequency)

UrbanLink services will start with the delivery of Cross River Rail and will start the transformation of the existing rail network. This transformation will be a catalyst for major regeneration and higher density development along rail corridors.

UrbanLink services will have higher frequencies, boosting capacity of the rail network. Services will use higher capacity trains with more doors to provide fast boarding and alighting at stations.

Transformation of the rail network to deliver UrbanLink services is underpinned by proposals to deliver Cross River Rail and the acquisition of new rollingstock designed with more doors for the shorter distance services.

Commencing delivery of UrbanLink services on sectors of the existing rail network in Brisbane is the highest priority for passenger rail, with many parts of the network close to capacity. In the longer term, local inner suburban services will also operate on the Gold Coast rail line between Coomera and Coolangatta and the new Sunshine Coast rail line from Beerwah to Maroochydore.

Delivery of UrbanLink services will include station upgrades to accommodate higher capacity trains. There will be a strong focus on integration with surrounding communities and supporting opportunities for urban regeneration.

ExpressLink

Alongside the creation of UrbanLink, the remaining sections of the greater Brisbane rail network would be operated as ExpressLink. The services will use existing trains with services starting at the end points of the greater Brisbane rail network. The 2031 end points of the greater Brisbane suburban express network are expected to be Ripley (via Ipswich), Kippa-Ring (via Petrie), Flagstone (via Salisbury), Ormeau, Caboolture and Cleveland.

The ExpressLink network will operate much the same as express services operate today, running all stops to a change point (where UrbanLink services terminate), then stopping only at major transfer locations and activity centres. Delivery of ExpressLink services will occur in parallel with delivery of UrbanLink services. Consistent with the principle to 'simplify the network' there would be one operating pattern all day for ExpressLink services (that is, they would run express both in the peak and off-peak).

CoastLink

The proposed 2031 rail network includes CoastLink services, stopping only at major strategic locations, to connect the Gold Coast and Sunshine Coast to Brisbane in about one hour. The achievement of a reliable one hour inter-city travel time to the growing coastal centres will:

- reinforce the *SEQ Regional Plan* principal activity centres as key locations for business with high-quality connections to the Brisbane CBD and Brisbane Airport, supporting business growth at these centres
- reduce long-distance private vehicle travel due to increased public transport patronage achieved by the new services.

This approach is similar to the European model of smaller cities with their own commuter systems, with connections between each city. For SEQ, rail investment must be strongly matched to economic development, land use and urban development policies to ensure that the necessary jobs are created in the growing coastal cities.

Providing fast CoastLink services also minimises the need for investment in motorway and highway upgrades to cater for regional movements.

Benefits of UrbanLink rail

- no need to consult a timetable, with frequent 'turn up and go' services
- easier for passengers to understand with the same stopping patterns on all services
- will introduce high-capacity trains with more doors and standing areas
- will double the capacity of the current network.

Benefits of ExpressLink

- fast, express-running services (competitive or faster than car) from outer suburbs to inner Brisbane
- makes the network easy for passengers to understand
- allows for transfers at key stations to access multiple destinations
- encourages people to travel off-peak.

CoastLink

- express services from Brisbane to Gold Coast and Brisbane to Sunshine Coast (both in about one hour travel time)
- an attractive inter-city peak and off-peak service frequency
- complete track realignment and duplication from Beerburrum to Landsborough
- Sunshine Coast Line from Beerwah to Maroochydore
- Gold Coast line extended to Coolangatta
- new rail lines proposed in Brisbane to address regional rail network capacity (for example, Cross River Rail and construction of rail from Alderley to Strathpine)
- upgraded and realigned track Kuraby to Beenleigh
- inter-urban trains capable of higher speed operations (160 km/h), provided with on-board wireless internet and other business facilities.

New Brisbane subway

By 2031 there will be 2.4 million trips per day in inner Brisbane (within about five kilometres from the CBD), up from about one million in 2006. A subway system for Brisbane will support the expected growth and expansion of the inner city.
This will be a new separate network, with separate operations to existing rail infrastructure. The London underground and New York subway are well known examples of this style of rail operation.

The Brisbane subway will provide a high-capacity, high-frequency distributor system connecting central city destinations and linking passengers from the bus and rail networks to destinations not within a comfortable walk of existing stations.

The priority corridor for delivery by 2031 will be from Toowong to West End to Bowen Hills/Newstead. This corridor would be under the CBD and intersect with existing rail and busway stations. Longer-term opportunities to expand the Brisbane subway could include:

- Bowen Hills/Newstead to Airport Village via Hamilton North Shore
- Newstead to Bulimba
- potential conversion of some sections of Brisbane's busway network to increase public transport capacity.

Light rail on the Gold Coast

The draft *Connecting SEQ 2031* enhances the role of light rail on the Gold Coast, supporting extensions beyond the current project from Gold Coast Health and Knowledge Precinct to Broadbeach.

Light rail will provide high-frequency services to transform the coastal corridor from Helensvale to Coolangatta as well as act as a catalyst for land use change. Further east-west extensions of light rail on the Gold Coast will be investigated as passenger demand builds on buses.

Initiatives supporting the 2031 rail network

As well as investing in new rail infrastructure, it is important to ensure services are being operated to optimise the use of rail infrastructure. These initiatives include:

- improving rail sectorisation following the delivery of Cross River Rail to improve capacity and reliability which will allow transformation of the network and provision of UrbanLink and ExpressLink services
- increasing the frequency of shoulder and contra-peak services to encourage peak demand to spread over a longer period
- purchasing higher capacity rollingstock
- removing open level crossings as rail service frequencies increase.

Signalling upgrades

The existing rail network is equipped with a variety of signalling technologies that have been deployed since the mid-1970s. The signal system has an overall maximum capacity of a single rail line limited to no more than 20 trains per hour per line, or a train every three minutes.

Improving the signalling system by modernising it and adding more circuitry and signals can allow for more trains per hour to utilise the broader network. This could feasibly achieve overall system headway of 24 trains per hour per line at a relatively low cost, allowing for four more trains per hour to use each line.

Advanced signalling technology would allow for communications based signalling which will improve safety and can also be configured to reduce headways substantially and therefore increase line capacity. A higher capacity of 30 trains per line could be achieved across the network, though at a higher cost.

Investigations as part of the rail revolution will confirm the best signals upgrade strategy based on achieving 24, and as much as 30 trains per line per hour over the next 20 years.

Brisbane subway features

- fully segregated operations, not impacted by incidents or congestion on the passenger rail network (or road network)
- lower infrastructure costs than suburban rail tunnels
- high capacity 20 000-40 000 passengers/hour/direction
- automatic train protection with high reliability and improved safety
- ultra high-frequency (headway to 90 seconds)
- closely spaced stations for higher accessibility
- integration with existing rail and bus stations.

Benefits of light rail

- can mix safely with pedestrians and general motor traffic
- able to carry 160–300 passengers per vehicle, safely and comfortably
- light and airy inside with space for luggage and wheelchairs.
- light rail vehicles can carry 10 000 passengers per hour and 100 000 passengers per day
- the length and capacity of light rail vehicles can be increased to meet the demands of the Gold Coast's fast-growing population.

Map 5.1 – indicative 2031 passenger rail services plan

Transport and Main Roads, Connecting SEQ 2031 – An Integrated Regional Transport Plan for South East Queensland, 2010

2031 bus networks and services

During the past 10 years, Brisbane's bus network has been undergoing a transformation, with:

- three major busways completed and two more under construction
- high-frequency BUZ services rolled out across Brisbane.

The draft *Connecting SEQ 2031* plans to continue this transformation and apply it across SEQ. An important factor will be providing priority for buses on congested roads to deliver frequent services with reliable travel times.

Transforming and expanding the bus network

The network planning principles identified in this chapter will underpin the design of new bus networks as service levels within existing urban areas are increased. Bus services will be provided in line with four service categories:

- **UrbanLink bus services** on strategic routes, many using busways or road corridors with bus priority
- **local bus services** as the fine fabric of public transport
- **peak-only services** on major commuter corridors to boost capacity
- **inter-regional links** providing long distance bus services where rail services are not available.

2031 UrbanLink bus network

The 2031 UrbanLink bus network is a connected network of high-frequency bus routes that include quality passenger facilities and vehicles.

The UrbanLink bus network combines services operating on busways, dedicated green links or green bridges, on-road bus priority and arterial roads.

The UrbanLink bus network will include more cross-town routes as centres across SEQ develop.

The early planning of the UrbanLink bus network will inform land use decisions, giving direction on locations where a high standard of public transport can support an increase in residential and employment density. The public transport hubs and priority transit corridors identified through *Connecting SEQ 2031* will provide the basis for this integrated transport and land use planning.

UrbanLink bus services on priority transit corridors will be given priority for roll out to support opportunities to increase residential and employment densities.

Concentrating passenger demands will support high-frequency operations and investment in bus priority/HOV facilities.

Map 5.2 illustrates the 2031 strategic high-frequency bus network for SEQ.

Part D provides more detail on corridors where bus and HOV priority measures could be delivered for each of the urban local governments in the region.

The UrbanLink bus network identified in the draft *Connecting SEQ 2031* will be subject to further evaluation through TransLink Transit Authority network planning to determine priority and timing.

Local bus services

While there is a long-term emphasis on creating a strategic high-frequency public transport network, local bus services will continue to provide the fine fabric of the public transport network.

TransLink will determine service standards based on local demands.

Supporting the transformation of the bus network

Providing priority for buses through congested parts of the road network makes journeys faster and travel times more reliable. As well as the obvious benefits to customers of more reliable services, productivity of bus and labour resources is improved, which reduces the number of additional buses needed to cater for passenger growth.

Brisbane busways and on-road bus priority

The 1997 Integrated Regional Transport Plan[27] identified the development of the busway network to serve major movement corridors in Brisbane.

Significant sections of the busway network are now in place and busways have proven highly successful, supporting large increases in bus passengers since the opening of the South East Busway in 2001. The extension of the Northern Busway from Herston to Kedron and the Eastern Busway from Buranda to Coorparoo are underway.

Connecting SEQ 2031 supports the continued transformation of bus travel through extending existing busways to provide high quality bus corridors to Brisbane's north, east and west. Planning is under way to extend the Northern Busway from Kedron to Bracken Ridge and the Eastern Busway from Coorparoo to Capalaba.

The staged Western Bus Corridor will be an on-road bus priority route linking Kenmore, Mt Ommaney and the outer western suburbs directly to the Inner Northern Busway and through to the central business district.

The CoastConnect project proposes on-road bus priority from Caloundra to Maroochydore. This would improve bus travel time and reliability between Caloundra and Maroochydore. It will deliver on road bus priority solutions such as bus/transit and cycle lanes, upgrading bus stations and stops and giving buses priority at congested intersections.

Linking on road bus priority to UrbanLink bus routes

The *SEQ High Occupancy Vehicle (HOV) Network Plan* will establish a network of strategic on road bus priority corridors and bus routes through precincts to help target investment in bus priority facilities. These initiatives will focus on providing priority for buses to support UrbanLink bus routes (see map 5.8 for details).

On major arterial roads *Connecting SEQ 2031* suggests there should be a general preference for providing additional capacity for buses and other high occupancy vehicles, as opposed to taking away lanes previously used for general motor traffic capacity. Where traffic capacity is removed this can sometimes result in merging conflicts which in turn trap buses and high value commercial vehicles in congestion further up in the traffic stream.

However, in some cases, for example where a major new road is added as an alternative route, or where a community boulevard is created, bus or HOV priority may be preferred over general motor traffic lanes.

An important feature of a successful on-road bus priority project is also to have an UrbanLink bus service, as well as other local bus services using the facility. This will assist in the bus priority investment providing a realistic alternative to driving a private car, and improve the response of the community to bus priority investment.

27 Queensland Government (Queensland Transport) 1997 *South East Queensland Integrated Regional Transport Plan*

Map 5.2 – 2031 UrbanLink bus network

Transport and Main Roads, Connecting SEQ 2031 – An Integrated Regional Transport Plan for South East Queensland, 2010

Across the region there will also be a focus on 'green links' for buses and active transport. These could comprise:

- short sections of busway into a major town centre
- dedicated bridges for buses and active transport such as the Eleanor Schonell Bridge which links the University of Queensland to West End, the City and the Eastern Busway
- short cuts and bus gates such as the 200 metre green link from the Sunshine Coast University to Sippy Downs – which improved road safety and saved ten minutes on every bus trip.

Flexible public transport

The important role of taxis

Taxis play an important role in supporting the overall transport task in Brisbane, providing a flexible door-to-door service, as well as 24-hour operations.

Taxi public transport services are provided on a commercial basis, with taxi licences administered by Transport and Main Roads.

Offering new options for providing taxi services such as more flexible taxi arrangements such as multi-hire so the cost of the fare to an individual is reduced, can provide an important function in the overall transport network. More flexible arrangements can help fill the gap between private and public transport in low-density parts of SEQ and rural communities.

Catering for special needs and an ageing population

For some people, neither the private motor vehicle nor mainstream public transport services are suitable travel options. A taxi may be the only real alternative, though it is too expensive for most people to use for all trips.

Queensland's population is ageing even more rapidly than it is growing, with residents aged over 65 forecast to increase from 333 700 in 2006 to about 924 000 in 2031, an increase of 177%, compared to a general population increase of only 57%[28]. This will increase the proportion of the region's population over 65 from 12.5% to 22% in just 25 years.

The leading edge of the post-war baby boom will reach age 75 around 2020, meaning a large wave of people with high mobility expectations will reach a point where driving a car is increasingly less viable. This will exacerbate the already significant road safety challenges presented by aged drivers and increase demands for age friendly public transport.

A major emerging issue for public transport policy in Australia is catering for a large number of previously mobile, independent people as they move to dependent mobility triggered by the loss of their licence.

An important disincentive for frail aged drivers to voluntarily cease driving is the lack of any realistic alternative to private transport. Mainstream public transport is not always an appropriate option, even though the system is being made accessible to people with mobility difficulties.

With an ageing population and an increasing rural population, the region will need to develop other public transport models that cater for:

- low volumes of passengers
- multiple trip purposes to access centres for the daily business of shopping, appointments and social activities
- a wide range of target groups, if not the community at large.

Increasingly, there will be a need to ensure the ready availability of a discrete range of services with:

- highly accessible vehicles
- door-to-door services
- higher levels of driver support/assistance
- a more flexible attitude to timetable design/adherence.

Council Cab services are being rolled out by many local governments in the region, though eligibility to use these services is usually somewhat restricted.

Transport and Main Roads will work with TransLink, local governments and other service providers to address low volume needs on a local basis, consistent with an overall framework. Steps to support this will include:

- ensuring self-help tools are available for local groups (for example, the *Community-based Transport Queensland Toolbox and Guidelines*)[29]
- ensuring an enabling regulatory framework
- developing a transport policy framework including guidelines and standards.

A policy framework for developing low volume public transport should ensure services:

- are unrestricted in terms of who can use them and able to service multiple travel needs
- make use of the latest technology to match passengers with rides to ensure vehicles are utilised efficiently
- leverage off existing transport services, assets and infrastructure (for example by utilising spare capacity on existing services and/or idle vehicles)
- are supported by recurrent funding and promote cross program, cross government collaboration and partnerships
- are provided by professional transport operators (whether commercial or not-for-profit).

28 Queensland Government (Department of Local Government and Planning) 2006 *Queensland Population Projections*
29 Queensland Government (Queensland Transport) and Local Government Association of Queensland 2006 *Community-based Transport Queensland Guidelines*

6. Strategic road network

Signature projects – Road

SP10 **Deliver Connected and Managed Motorways**
A series of projects to complete the motorway network. Use technology to optimise performance and maximise capacity of the motorway network, and provide real time information on travel times.

Road transport is the dominant means by which people and goods are moved around SEQ. Roads are versatile facilities and can carry not only private vehicles but large and small commercial freight vehicles, buses, taxis, cyclists and pedestrians. Hence 'road' is not a mode of transport, but a network of facilities able to be used by multiple modes of transport.

Roads will remain the most extensive part of the transport network connecting communities to each other and allowing:

- supplies to get to industry
- goods to get to markets
- people to get to work, education and recreation.

As regions grow, urban space becomes more constrained and valuable. Roads take up very large amounts of urban space, and inevitably the region must choose between providing more road space or using existing road space more efficiently. Heavy road traffic also reduces the appeal of communities and emit large volumes of pollution. The need to maintain liveability and protect the environment is also a vital consideration in road planning.

These imperatives mean efficient and essential means of transport like buses and commercial freight vehicles need priority on parts of the road network that are in high demand.

The draft *Connecting SEQ 2031* recognises the fundamental value of roads in the transport system of a rapidly growing region. It seeks to manage and expand the network in a way that meets the needs of all users, while supporting a major shift to sustainable transport.

Existing strategic road projects

Motorways

- Ipswich Motorway upgrade
- Cunningham Highway upgrade Ripley Road to Ebenezer
- Gateway Motorway upgrade Capalaba Road to Nudgee
- Airport Link
- East-West Arterial Road upgrade: Airport Link to Gateway Motorway
- Bruce Highway M1: additional lanes from Boundary Road to Caboolture
- Pacific Motorway M1: additional lanes and interchange upgrades: Nerang to Smith Street
- Pacific Motorway M1: Coomera Interchange.

Multi-modal arterial roads

- Mt Lindesay Highway upgrade: Green Road to Jimboomba
- Gold Coast Highway: additional lanes Government Road to Stevens Street
- Hope Island Road: additional lanes from Pacific Motorway to Columbus Drive
- Nerang–Broadbeach Road upgrades: bus lanes and intersection upgrades
- Maroochydore Road: additional lanes Bruce Highway to Martins Creek.

Overarching principles for developing the road network

R 1 **Plan and manage strategic roads as one network** irrespective of jurisdiction

R 2 **Design and manage roads for all users**, including active transport

R 1 Plan and manage strategic roads as one network

While an individual road may be the primary responsibility of state or local government, planning and managing the strategic road network as one network will maximise the efficiency and performance of the region's roads.

Transport and Main Roads has created a 'Roads Alliance' to ensure coordinated road management with local governments in Queensland. In SEQ this alliance is being used to ensure the movement of traffic and the assignment of priority to certain users is planned and managed in a coordinated framework.

A particular need is to ensure new growth areas are provided with local urban arterial roads within communities, so they do not rely on a connection to the nearest motorway or highway for local road transport needs.

R 2 Design and manage roads for all users

Recognising that roads need to cater for a broad range of users is central to the approach taken to develop the 2031 strategic road network in the draft *Connecting SEQ 2031*. This can be achieved by planning and managing the strategic road network as multi-modal corridors, with priority given to how the road system will support delivery of the key transport policy goals established in Chapter 3.

Managing congestion, primarily caused by private motor traffic, is an important goal. However, protecting amenity and liveability, improving environmental performance and supporting economic prosperity are equally important. Congestion management needs to be supported by policies which reduce the need to travel and provide quality alternatives to car travel, as well as supporting strategic road capacity improvements.

Managing the arterial road network in the region will consider the following:

- urban arterial roads are multi-modal corridors, with a high priority given to the needs of buses, cyclists and pedestrians
- ring roads and bypasses will be used to move local traffic around town centres, so that centres become walkable and attractive
- arterial road improvements will generally include cycling facilities (either on-road or off-road)
- priority will be provided for freight traffic where needed (for example freight lanes and priority ramp signalling access at interchanges with the motorway network where there are high volumes of heavy vehicles).

Supporting principles for developing the road network

R 3 Provide a clear **strategic road hierarchy** based on the function of the road

R 4 Develop a **completed, resilient network of strategic roads**

R 5 Protect **urban appeal** and quality of life when designing roads

R 3 Strategic road hierarchy

Planning and managing roads in line with a functional road hierarchy allows the right type of traffic to be assigned to the right road. This ensures efficient movement of traffic and protects amenity in urban communities. The draft *Connecting SEQ 2031* adopts a functional hierarchy of strategic roads which includes:

- high-capacity, high-speed **motorways and highways** to move large volumes of traffic over longer distances
- **multi-modal arterial roads** to provide connections within communities and cater for a range of road users including pedestrians, cyclists, public transport, private vehicles, as well as commercial delivery vehicles
- **bypass roads** to remove traffic from urban centres
- **community boulevards** to provide amenity through activity and town centres, designed to cater for low volumes of traffic, with priority given to pedestrians, cyclists and public transport.

It is also vital to match the engineering design and physical access arrangements to the desired function of the road. The draft *Connecting SEQ 2031* establishes the following guidelines to guide planning and management of the functional road hierarchy.

Motorways and highways

Motorways and highways are the highest standard of roads, intended for major freight movements, interstate traffic and movement of regional traffic between major cities. They may be four to eight lanes wide and the posted speed is usually 100km/h or 110km/h with access limited to ramps about two kilometres apart.

The speed and design of motorways and highways means they are not safe environments for pedestrians or cyclists and are generally unsuitable for public transport except for long distance, express services.

Motorway and highway standard design should be used where the road needs to carry high volumes of traffic over longer distances.

The higher speed motorway design will naturally attract high traffic volumes. If built in the inappropriate locations, where a lesser standard of road is required, motorway standard facilities can encourage increased levels of local car traffic and work against the achievement of higher levels of public transport and cycling.

Planning for roads within new communities should generally avoid the creation of high standard motorway facilities within the urban fabric.

In some cases, motorway development may need to be undertaken through suburban areas, when part of an orbital motorway network or bypass of an urban centre, with appropriate features to minimise visual and noise impacts.

The person-carrying capacity of motorways can potentially be increased through the provision of HOV and bus priority measures on ramps. However, motorway transit lane facilities can reduce overall capacity due to extra merging and weaving requirements.

In general, measures introduced on motorways to improve person carrying capacity will focus on better management of all vehicle flows through improved incident detection and clearance, variable speed limits and ramp metering.

Multi-modal arterial roads

Where an arterial road through a community is primarily required to carry local traffic, public transport and freight deliveries for local business it should be developed as a multi-modal arterial road. Most new arterial roads in the region will fall into this category.

Multi-modal arterial roads provide for higher volumes of local traffic within cities. They are generally four lanes though may be planned or developed to six lanes in major growth areas, which may include transit or bus lanes where volumes of buses are high.

Posted speed will be 60 to 80km/h and vehicle access is limited to well-spaced intersections, generally at-grade. They will have a median and turn protection and provision for public transport, walking and cycling, with dedicated lanes where needed.

Arterial road design must also recognise the existing and desired characteristics of the urban environment with emphasis given to landscaping, vistas and surrounding land uses.

Planning for new urban arterial roads will occur as part of local government town planning and structure planning process for new communities. This will ensure a well designed road hierarchy is incorporated into the development of new growth areas. The major new areas where new urban arterials need to be investigated are shown on the local government maps in Part D of *Connecting SEQ 2031*.

Bypass roads

Ring and bypass roads are used to move through traffic around activity centres, to enable centres to become walkable and attractive. Traffic inside the ring is given a low priority with walking, cycling and public transport emphasised. There may be special priority arrangements for delivery vehicles either through kerb space allocation and/or special-purpose lanes or streets within the centre.

Ring roads and by-passes are generally created by upgrading existing roads or streets and may be two or four lanes. Bus priority may be appropriate on some sections, though it is more likely a bus 'green link' would be provided direct to the heart of the centre. Car parking can be located adjacent to the ring road to reduce traffic entering the town centre.

Community Boulevards

Where an existing arterial road currently carries high volumes of traffic through a town centre or place of community significance, such as an entertainment precinct, restaurant 'eat street' or beachside suburb, it should be developed as a 'community boulevard'. Most traffic is diverted to a ring road or bypass road designed to cater for high traffic volumes.

Community boulevards are low speed multi-modal roads providing for buses, cyclists and pedestrians[30].

Cross movement for pedestrians between land uses on either side of the road is an important factor in the design of community boulevards.

Community boulevards are areas of higher emphasis on amenity, and with landscaping, built form, seating, and lighting. The design of the road creates legibility for users, a slower speed environment to support surroundings and ensure the safety of all modes. Where possible, car parking and lot access is predominantly at the rear of development fronting the boulevard to maximise the access for pedestrians, cyclists and bus passengers to the land uses.

Community boulevards will generally be developed along existing arterial or sub-arterial roads passing through activity centres, particularly at locations identified as hubs in the centres access hierarchy. They will support the creation of priority corridors.

Community boulevards may need to be supported by the development of parallel arterial roads or bypass roads around centres. Regional traffic and in particular, non essential heavy vehicle movements will be encouraged to use alternative routes, rather than community boulevards.

It is a priority of the draft *Connecting SEQ 2031* to develop a best practice guideline with design tools for land use planners and road designers to consider the road – land use interface in activity centres in an integrated manner.

Nundah Village – a bypass supporting urban renewal

Sandgate Road is an arterial road through Brisbane's inner north, with about 60 000 vehicles per day using the road.

Nundah Village is a shopping and community centre surrounded by a residential area characterised by restored colonial era homes and more modern medium density housing and schools. Over many years, its shopping centre declined due to traffic, parking, noise and an unfriendly pedestrian environment brought about by the high volumes of traffic using Sandgate Road.

A road tunnel was opened in 2002 and has taken the majority of the traffic out of Nundah village, providing a catalyst for urban renewal. New shops and restaurants have opened in the village and new apartments are being developed around the village to take advantage of its improved lifestyle and ready access to the centres of Brisbane.

The centres of Nundah and Toombul are the subject of ongoing considerable interest for transit-oriented urban renewal.

30 Westerman H 1998 *Cities for Tomorrow: Integrating transport, land use and the environment* Austroads: Sydney

R 4 Develop a completed resilient network of strategic roads

In some parts of the region the strategic network is incomplete and historical arterial roads are called upon to meet demands for long-distance freight and passenger travel.

This results in congestion, a poor mix of heavy long-distance vehicles and local car traffic and reduced amenity along the road corridor.

There is also an over-reliance on single sections of the motorway network, for example the Gateway Motorway north. When there is a major incident on this motorway, the metropolitan road network can be brought to a standstill.

Further improvements to the strategic road network in SEQ will be needed to provide a completed network that is resilient to:

- major incidents
- possible climate change impacts such as rising sea levels and extreme weather events
- possible long-term changes to settlement patterns and economic activity.

Connected and Managed Motorways

The Connected and Managed Motorways project will complete a high-speed, high-capacity network across the region that is suitable for 24-hour operation of heavy freight vehicles. It will also improve network resilience by ensuring an alternative high capacity route is available in the event of a major incident.

The components of the project are:

- a completed and connected network of motorways and highways across the entire region
- managed motorways will ensure traffic volumes entering and using motorways are matched to capacity, optimising motorway performance.

R 5 Consider urban surroundings in road design

Linking the functional road hierarchy to land use planning can ensure the right match between traffic volumes and quality of life along road corridors.

Shifting high-volume and heavy vehicle traffic to bypass motorways and major arterials allows urban areas to become places designed for people not vehicles.

Projects to complete the motorway network must be integrated with urban surroundings and safety projects on the historical arterial roads that no longer have to cater for high volumes of traffic.

The management of urban arterial roads must support sustained improvements as well as allow for infill and regeneration along corridors that provide trunk routes for public transport.

Managing road design and traffic capacity on radial arterial roads to support bus priority and urban renewal will provide support for urban infill and the compact urban form objectives of the *SEQ Regional Plan*.

Where an arterial road is identified as a high-frequency bus corridor, the Queensland Government and local governments will work together to develop land use plans for the corridor to facilitate mixed-use and higher density development.

In addition, some historical arterial roads can be converted to multi-modal arterials or community boulevards where all road users can mix safely.

At a more local scale, a bypass road for a congested town centre may be an appropriate solution to provide for through traffic and deliver benefits to support future development of the centre.

Initiatives to support strategic road network development

Servicing major new development areas

While investment priority will be given to efforts to support infill and redevelopment, there will be the need for new development areas to accommodate between 600 000 and 800 000 residents by 2031.

The *SEQ Regional Plan* identifies eight major residential and employment development areas, and three major employment development areas within the urban footprint[31].

The provision of roads and public transport to new development areas needs to be sequenced in line with the progress of development.

The state government will work with local governments and developers to coordinate transport investment with development timelines in these locations, so transport facilities are provided in the early stages of development.

This will mean that infrastructure agreements need to include significant funding of new road connections and public transport will need to be negotiated by local government and developers.

Since in some cases investment in rail may lag behind land use development, it will be important to ensure high-frequency bus services can operate efficiently on the road network in the early stages of development.

Multi-modal arterial roads in new communities

The road network in some developing parts of the region means communities are too reliant on motorways for local trips. Some urban areas have been developed and connected to a motorway as a virtual island with no arterial links to surrounding areas. A lack of urban arterial roads for local trips means the motorway is used for short trips, resulting in congestion for longer distance traffic and freight traffic which impacts on the region's economic vitality.

Motorways are the most expensive type of roads to build and the function of motorways to provide for longer distance travel needs to be protected. Urban arterial roads are more cost-effective for local trips and have the added benefit of being able to cater for the needs of all modes.

Transport plans should be developed for all major new communities to address how passengers and goods will be transported within and outside of that community. These plans must include new multi-modal urban arterial roads catering for local traffic and public and active transport which are funded and constructed as part of the development process.

Protection of priority freight corridors

The draft *Connecting SEQ 2031* establishes a strategic freight network. This will enable the optimum locations for new freight and industry enterprises to establish. Sites with ready access to the interchanges on the motorway network will provide reliable access to the port, inter-modal terminals and markets internal and external to the region. These sites should be identified and protected for freight-generating uses and buffered from sensitive uses and passenger network conflicts.

The draft *Connecting SEQ 2031* also identifies the transport network requirements for the *SEQ Regional Plan's* enterprise employment development areas to guide investment decisions and enable corridor protection.

Regional roads

The region's strategic road network includes roads outside the major urban areas to rural and semi-rural settlements. These roads are important because they provide the primary transport connection between these communities and larger urban settlements.

Ensuring rural connections are safe, have good flood immunity and sufficient capacity remains a major focus for road network planning in the region.

Catering for emerging technologies

New technology will continually evolve to assist in the management of the road network. The Connected and Managed Motorways Project is one example of how technology will be utilised in the future.

This project includes real time traffic incident and alternative route planning information on navigational systems and mobile phones.

Another emerging technology is cooperative transport technology. Vehicles communicate with each other and with kerbside infrastructure to improve detection of hazards and provide warnings of speed limit changes. These systems are being trialled around the world and may become 'mainstream' before 2031.

Preserving existing corridors

Several major corridors, and a number of smaller parcels of land preserved in the past are not the subject of current *Connecting SEQ 2031* proposals. For many of these corridors, the state already owns a significant proportion of the affected property.

These corridors will be preserved for future transportation purposes that may emerge as the region continues to develop. They could serve motorised transportation needs that emerge beyond 2031, or be utilised for purposes such as green links and active transport corridors. They will not be sold off or relinquished for non-transport purposes. Corridors to be preserved include:

- the Moggill Pocket Arterial Road/ Moggill – Warrego highway Connection
- the Samford Valley sub-arterial.

31 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p107

2031 strategic motorway network

Connected and managed motorways

Completing the motorway network

Projects to complete the motorway network include:

- completing an orbital motorway network for metropolitan Brisbane including development of the north-south motorway from Toowong to Everton Park (as outlined in the *Western Brisbane Transport Network Strategy*) with a connection to the Bruce Highway (M5)
- Centenary Highway upgrade Toowong to Ipswich Motorway (M5)
- Centenary Highway upgrade Logan Motorway to Springfield (M5)
- Gateway Motorway upgrade to six lanes north of Nudgee Road to Bruce Highway (M1)
- Port of Brisbane Motorway upgrade
- Bruce Highway (M1) upgrade (Caloundra Road to Curra)
- Pacific Motorway (M1) upgrade (Nerang to Tugun)
- Northern Link (M5).

Longer-term projects include:

- Warrego Highway upgrades (M2)
- Toowoomba bypass second range crossing
- Gateway Motorway (M1) southern extension to Jimboomba
- Southern Infrastructure Corridor
- Mount Lindesay Highway deviation west of Beaudesert to Bromelton
- Western Ipswich Bypass.

The 2031 strategic motorway network is illustrated in map 6.1.

Managing the motorway network

Technology will play a major role in managing traffic to optimise performance and maximise capacity. In peak periods demand regularly exceeds capacity resulting in significant congestion. It can take a number of hours before the capacity of the motorway is again at the maximum level.

Use of technology can help provide a more reliable service, even with high traffic volumes. This is done through controlling the volume of vehicles onto motorways and smoothing the merge conditions.

Techniques for managing motorways include:

- ramp signalling – to control the number and type of vehicles entering the motorway at interchange ramps. Ramps need adequate length for vehicles waiting to join the traffic stream. Ramps can give priority for freight, public transport or high occupancy vehicles as required
- lane use management – varying the purpose of the lane in real time, to allow breakdown clearances and better use of special purpose lanes to clear incidents
- varying speed limits – to ensure that traffic moves at the highest possible safe speed to arrive at a potential congestion point more evenly and avoid flow breakdown
- incident management – detecting and clearing incidents before they cause major impacts on traffic flow
- traveller information – to advise motorists of conditions and assist in safely negotiating incidents and changing lanes earlier to reduce merging delays
- speed detection and special-purpose lane enforcement.

Multi-modal arterial roads

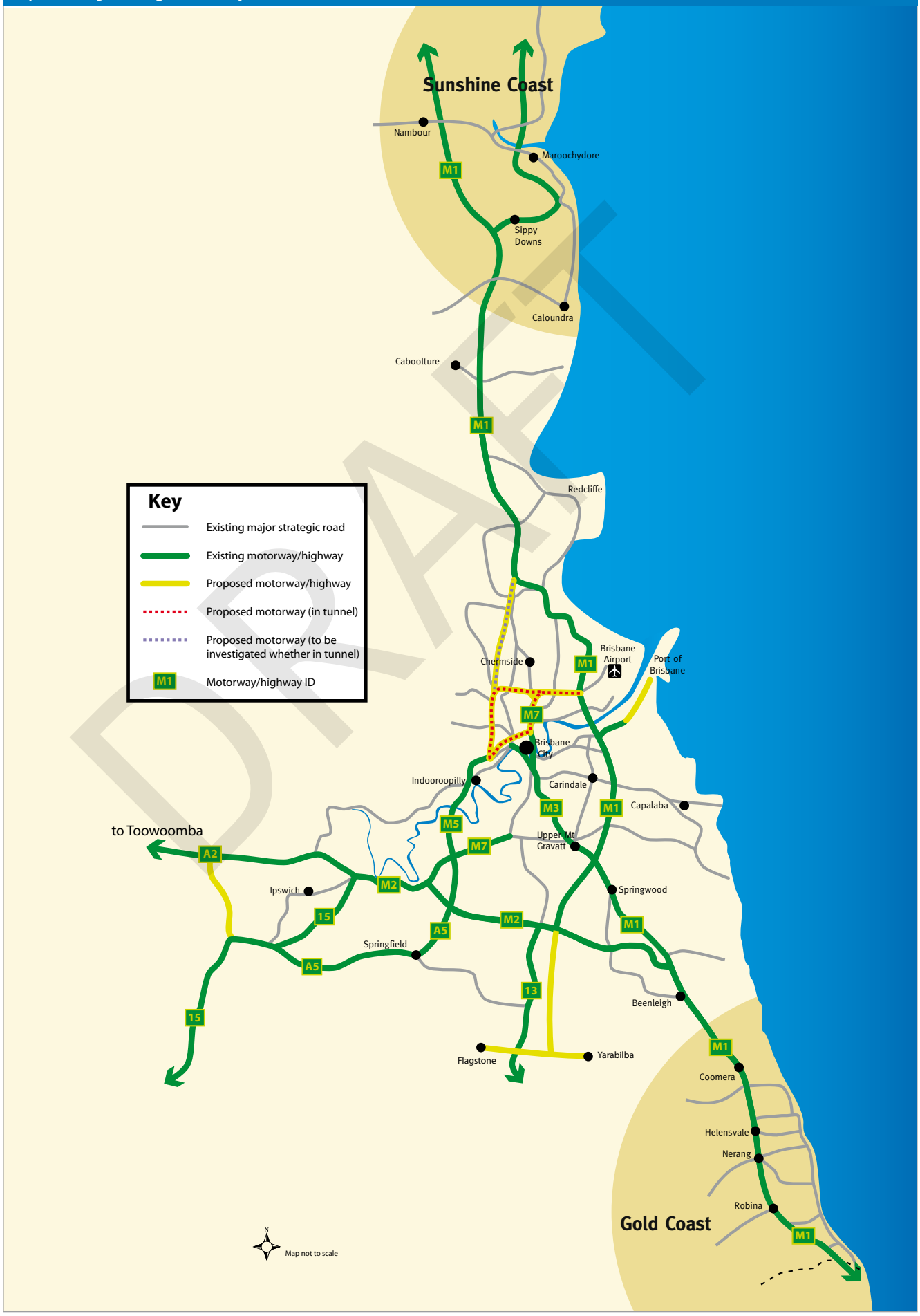
Developing multi-modal urban arterial roads

The concept of multi-modal urban arterial roads includes integration of walking, cycling and public transport into the design and management of the road, so it provides competitive options to using a car.

The draft *Connecting SEQ 2031* includes a strong focus on the developing of multi-modal urban arterial roads with the following characteristics:

- generally four lanes with a median and turn protection
- a corridor protected for six lanes in high-growth or strategic public transport corridors
- vehicle access restricted to well-spaced intersections (at grade)
- recognition of the existing and desired urban environment with emphasis given to landscaping and vistas where appropriate
- provision for public transport, walking and cycling with on-road bus priority and cycle facilities where needed
- regular opportunities for pedestrians to cross
- posted speed to be appropriate to a multi-modal user environment, generally a maximum of 80km/h
- kerbside parking generally not permitted with parking at the rear of properties, accessible from side streets through planned intersections
- building development may face the road but there is no direct driveway access.

Map 6.1 – 2031 strategic motorway network



7. Active transport network

Signature projects – active transport

SP11 **Develop a network of separated bikeways**
Continue to develop bikeways that are separated from general traffic, including the ongoing implementation of the *SEQ Principal Cycle Network Plan*.

SP12 **Complete 5**
Prioritise completion of the principal cycle network within five kilometre catchment of activity centres.

SP13 **Connect 2**
Provide safe and convenient pedestrian and cycling access to public transport stops and stations.

SP14 **Educated Ways**
Improve walking and cycling routes to schools and universities supported by school travel plans and so on.

Walking and cycling are efficient and sustainable modes of travel that are readily accessible to a large proportion of the population.

Because they involve the use of direct human power these active transport modes also support physical activity and deliver a community health benefit.

They are low cost and environmentally friendly, emitting no air or noise pollution and consuming no fossil fuels.

Despite the numerous benefits of walking and cycling for the individual and for the community, only about 10% of all trips taken each day in the region are currently by active transport.

Although bicycle sales are increasing, walking and cycling trends have been static over the past few decades due to urban sprawl and the increase of car-dependent suburbs, which make it more difficult to walk and cycle.

With the support of a long-term move to more compact communities, there is potential to increase the proportion of trips by walking and cycling and create greener, more liveable urban spaces.

Currently, walking accounts for about 9% of all trips and is also often a component of public transport trips.

Cycling accounts for only 1.2% of all trips in the region, yet nearly half of all residents have access to a bicycle.

Connecting SEQ 2031 sets the ambitious target of increasing cycling mode share to 9% of all trips and a modest increase in walking to 11%.

The total target of shifting the combined active transport mode share from 10% to 20% of all trips in SEQ can be achieved if every resident in the region shifted just two out of their 25 trips each week to walking or cycling.

The focus for encouraging the eightfold increase in cycling will be to shift some of the trips taken by car that are less than five kilometres.

Currently almost 50% of car trips fall into this category.

The Queensland Government will work with local governments across Queensland to prepare a comprehensive *Queensland Cycle Strategy* to guide policy and investments as this important goal is pursued.

- In Brisbane between 2005 and 2008, there has been a 50% increase in cyclists on key cycle routes
- In the 20 years between 1986 and 2006, the percentage of cycle trips to work in Brisbane has risen from 0.5% to 3%
- Between 2001 and 2008, there was a 42% increase in the number of people participating in regular recreational cycling in Queensland
- Between 2001 and 2006, there has been a 17% increase in the number of people choosing to ride to work in Brisbane
- About 10 000 participants took part in the 100km Wilson HTM Brisbane to Gold Coast Cycle Challenge in October 2009 compared to 5400 in 2007.

Existing active transport projects

The Queensland Government has committed to supporting more walking and cycling for transport in SEQ. Some initiatives to be delivered in partnership with local governments are:

- Brisbane City Council plans to complete stage 2 and stage 3 of the Bicentennial Bikeway upgrade and extend the Kedron Brook Bikeway to the west
- Redland City Council plans to complete missing links in the Moreton Bay Cycleway and roll out cycle facilities on the Moreton Bay Islands
- Sunshine Coast Regional Council plans to extend cycle facilities along David Low Way and to the west towards Bli Bli
- Ipswich City Council plans to complete the Goodna Creek Bikeway extending from Redbank Plains to Redbank Rail Station, cycle facilities linking Ipswich CBD to the Amberley Air Force Base and extending Brassall Bikeway to Wulkuraka
- Gold Coast City Council plans to construct bikeways in Varsity Lakes and construct a green bridge at Burleigh Waters to improve access between canal estates
- extensions to the V1 bikeway linking Brisbane CBD to the Gold Coast.

Overarching principles for developing the active transport network

A 1 Develop a **connected network of safe active transport routes** comprising major spines linking local walking and cycling networks for travel around the region's cities and towns

A 2 **Integrate walking and cycling with public transport** to extend its reach

A 3 **Create a community culture** that embraces walking and cycling

A 1 Connected network of safe active transport routes

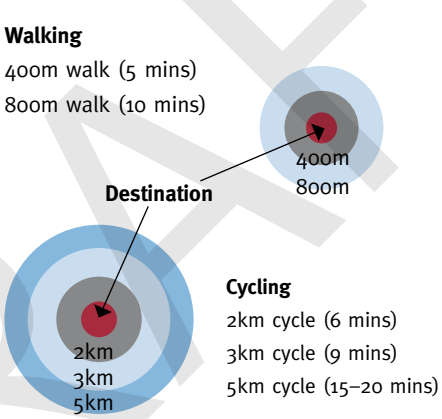
People consistently tell transport planners they would walk and cycle more if there were safer facilities. A critical part of supporting individuals to make the choice to shift to walking and cycling is providing a connected network of safe active transport routes, so these vulnerable road users do not have to mix with heavy vehicle traffic.

An active transport network covering 3000 km has been identified as part of the *SEQ Principal Cycle Network Plan*. The extent of completion of the principal cycle network varies across the region, but it is estimated about 23% of the overall principal network is complete (based on current information provided by SEQ local governments).

Several high-capacity cycling corridors have been identified in the *SEQ Principal Cycle Network Plan*. These corridors will be off-road or on-road protected cycle facilities with physical separation from general traffic. Some key active transport projects planned for delivery include:

- northern bikeway section 1 (Kedron to CBD)
- northern bikeway section 2 (Kedron to Aspley)
- delivery of a cycle corridor as part of the Port of Brisbane Motorway upgrade
- Go Between Bridge from South Brisbane to Milton (Brisbane City Council project).

Figure 7.1 – active transport catchments



A 2 Integrate walking and cycling with public transport

Most people walk to public transport, though there is an increasing trend to park 'n' ride. Cycling to public transport is currently restricted by a general lack of secure bicycle storage and the restrictions on carrying bikes on public transport vehicles.

Connect 2

Connect 2 will focus on developing and upgrading walking and cycling routes that connect to major public transport stations and stops. Providing safe and convenient pedestrian and cycling access to stations and stops increases the attractiveness of public transport and extends its reach deeper into residential communities.

Increased integration with public transport will also be supported through door to door journey planning. In the future, information for public transport passengers will incorporate walking and cycling routes and estimated travel times to allow users to select routes based on level of skill, confidence and ability. Local governments across SEQ will be important partners in delivering good design outcomes for walking and cycling access to public transport stations.

A 3 Create a community culture

To encourage people to walk and cycle more, there is a need to break away from a car culture and develop a sustainable, active culture in the urbanised parts of the region. An active culture is built on people having the confidence, incentive and facilities to walk or cycle whenever it suits them out of convenience as much as need. Encouraging a supportive culture for active transport in the region will also mean motorists are much more aware and supportive of active transport users on the road system.

Education, training and publicity will be used to promote the benefits of walking and cycling to individuals and the community. This must include programs that convey the clear message that the pedestrians and cyclists are legitimate road users. Promoting an active transport users code of conduct will also improve the respect shown by motorists to other road users.

Personalised programs such as TravelSmart already include messages about the benefits of travel behaviour change. This includes workplace and locality based travel plans and can potentially link to other state and national initiatives such as 'find your 30' (minutes of activity per day), ride to work, walk to work and walk to school days.

An applied research project is under way to quantify the cost and health benefits of active transport. A joint partnership with Queensland Health, the project will be based around specific infrastructure in four geographic areas and involve up to 20 Queensland schools. Tools for measuring the cost-benefit and health benefits of active transport strategies and infrastructure will be developed. This will allow governments to evaluate the health and economic benefits of promoting walking and cycling as legitimate transport modes.

Supporting principles for developing the active transport network

A 4 Complete the **SEQ Principal Cycle Network**, within five kilometres catchments of activity centres

A 5 Improve active transport routes to **activity centres, tertiary education institutions and schools**

A 6 Ensure **new communities** include components of the major cycle spines and local walking and cycling networks

A 7 Ensure new building developments include **end-of-trip walking and cycling facilities** such as showers and bicycle storage

A 4 SEQ principal cycle network

While SEQ has benefited from increased investment in active transport facilities over the past two decades, there are still many areas without a connected network.

The *SEQ Princpal Cycle Network Plan* was released in 2007 and provides a master plan for the region's principal cycling routes (spines) that support local cycle networks. These spines provide connections between areas of high population, major activity centres, public transport stations and other facilities like universities, school precincts and recreational precincts. Some cycle spines also support walking and wheelchair access when provided as off-road paths.

SEQIPP includes a $600 million allocation to deliver cycling infrastructure identified as part of the SEQ principal cycle network.

Some high level strategic active transport corridors are shown on the maps in Part D, 'What it means for your community'. These represent priorities for investment established through the *Connecting SEQ 2031* process. However the *SEQ Principal Cyle Network Plan* remains the main source document for establishing and delivering the region's active transport spines.

A 5 Activity centres, tertiary education institutions and schools

As well as improving the strategic cycle spines as proposed in the *SEQ Principal Cycle Network Plan*, there is a need to improve active transport access and safety from residential communities to their local attractions and centres. This can be addressed through the *Connect 2* project for public transport stations and stops (see previous page) as well as *Complete 5* and *Educated Ways* projects.

Complete 5

Trip distance and journey catchments are critical considerations in determining the attractiveness of active transport as a means of accessing centres. The five-kilometre catchment around the region's activity centres offers high potential to achieve a shift to active transport given that:

- around 85% of all cycle trips and almost all walking trips are less than five kilometres
- almost 50% of all car trips in SEQ are less than five kilometres
- around 85% of the region's population live within five kilometres of a *SEQ Regional Plan* activity centre
- 65% of the principal cycle network is within five kilometres of these activity centres.

Complete 5 will focus on completing the active transport network within five kilometre catchments of activity centres identified as potential major generators for active transport trips due to a concentration of employment, residential and/or retail activity.

Educated Ways

The modern trend is for families to travel longer distances to a school of their preference. Safety and security concerns have grown with increasing traffic. Currently 74% of primary school trips and 44% of secondary school trips are by car, which results in about a 20% increase in traffic in the morning peak. With the right mix of investment and policies, there is significant potential to shift more trips to active transport.

Educated Ways will focus on five-kilometre catchments around schools and universities located within five kilometres of centres. These improvements to active transport will be supported by initiatives to encourage more cycling and walking such as school travel plans, 'walking school bus' programs and ride to school days.

A 6 New communities

As discussed in chapter 8, ensuring arterial roads cater for all road users including pedestrians and cyclists will be an important part of ensuring walking and cycling are viable travel choices for a broader cross section of the community.

Almost 50% of new residential development will be in new communities. Incorporating appropriate facilities for active transport from the outset will be an integral part of the community design and approval process. This will include providing multi-modal arterial roads that cater for pedestrians and cyclists, as well ensuring that street layouts provide optimal connectivity for walking and cycling trips.

A 7 End-of-trip facilities

Providing end-of-trip facilities at public transport stations, workplaces and activity centres can encourage more people to walk and cycle. Policies and town plans will ensure end-of-trip facilities including bicycle storage, lockers and showers are included in major new building developments. These policies will provide guidance to public and private sector developers and include a minimum standard of end-of-trip facilities to be provided in new building developments.

The Queensland Government will also roll out a trial of Green Pods at selected rail stations. The Green Pod is a high quality end-of-trip facility for up to 28 cyclists in a space the size of a single car space. Green Pods will provide secure bike storage, lockers, showers at train stations.

2031 active transport networks

Although much of the infrastructure to provide for increased walking and cycling will be delivered at a local scale, *Connecting SEQ 2031* has identified the strategic active transport corridors where more substantial infrastructure will be needed to carry higher volumes of pedestrians and cyclists.

Map 7.1 shows strategic transport corridors and centres where active transport infrastructure should be prioritised. More projects are included on the local government maps in Part D of *Connecting SEQ 2031*.

Map 7.2 - 2031 strategic regional bikeway network

8. Freight network

Signature projects – freight

SP15 **Freight Terminal Strategy**
Upgrade existing freight terminals for enhanced access and increased capacity, and implement new freight terminals at strategic locations including Bromelton.

SP16 **Freight rail line upgrade Bromelton to Port of Brisbane**
Provide a narrow-gauge third rail from Bromelton to Acacia Ridge with loops for 1500-metre trains. Upgrade the interstate rail to enable movement of double stack containers to Acacia Ridge. In conjunction with the proposed Cross River Rail, provide a dedicated dual gauge freight line from Acacia Ridge to the Port of Brisbane.

Connecting SEQ 2031 has undertaken a major review of freight planning in the region. Significant economic growth, increasing household consumption levels and urban growth in SEQ are forecast to lead to a 130% increase in the total tonnage of freight movement between 2001 and 2031. This compares to a population growth of 86% in the same period.

Freight movement requires transport investment and sound policy management to ensure increased freight activities support economic vitality, and do not impact on road safety, local amenity and the environment. Government needs to play a central role in creating a safe, sustainable and productive freight network.

The *SEQ Regional Plan* establishes a principle of providing an efficient freight network to enhance the region's position as a major national and international freight and logistics centre servicing the Australian east coast[32].

The draft *Connecting SEQ 2031* gives a high priority to the development of a strategic network of priority freight routes of rail, roads and inter-modal terminals that allow for 24-hour freight operations and uncongested access to ensure:

- access for local businesses to inputs, supplies and markets (locally and offshore)
- competitive advantage and improve efficiencies for businesses
- attraction and retention of investment to expand the economy and create jobs
- social and environmental impacts of freight operations are minimised.

Existing strategic freight projects

Planning and investment to create a strategic network of priority freight routes of rail, roads and inter-modal terminals is well under way through network studies and planning for new road and rail freight facilities.

Freight network investigations

- Mt Lindesay–Beaudesert strategic transport network investigation
- Gateway Motorway (extension south of Logan Motorway) investigation and preservation
- proposed inland rail between Melbourne and Brisbane
- southern freight rail corridor from Rosewood to Kagaru.

Motorways

- Gateway Motorway upgrade from Capalaba to Nudgee
- Ipswich Motorway upgrade
- Cunningham Highway upgrade (Ripley Road to Ebenezer)
- Airport Link (M7)
- East-West Arterial road upgrade (Airport Link to Gateway Motorway) (M1)
- Pacific Motorway (M1) additional lanes and interchange upgrades (Nerang to Smith Street).

Rail freight

- dual gauging of existing track for freight from Acacia Ridge to Bromelton
- 4th track Corinda to Darra and resignalling Corinda Junction
- new crossing loop at Murarrie
- upgrade Yeerongpilly to Dutton Park rail line
- grade separation Beaudesert Road and passenger dual gauge rail line.

The growing freight task

It is estimated that businesses in the region produced 45 million tonnes of freight in 2004[33]. About 55% of this freight stayed within the region, used as inputs to local production activities or for household consumption. The remaining 45% left the region for consumption/production activities overseas or in other states. There are also large bulk freight flows, primarily coal and grain, travelling through the region to access the Port of Brisbane. Bulk crude oil and petroleum products also enter the region through the Port for refining and distribution.

Freight traffic is growing more rapidly than population and employment, and the total freight stream is expected to grow by nearly 130% to 169 million tonnes per annum (mta) between 2001 and 2031. Just over half of this will be produced by businesses in the region.

Table 8.1 provides an overview of regional freight movements based on 2001 levels and 2031 forecasts. All intra-regional freight is currently moved by road.

Rail has some penetration in longer distance movements as shown in Figure 8.1.

Table 8.1 – SEQ regional freight movements in 2001

Freight stream	2001 freight levels (tonnes)	2031 freight levels (tonnes)
Intra-SEQ freight	25	53
Inter-regional freight	43	101
Transit freight	6	16
Total freight	**74**	**170**

Source: Sd+D Input-Output Model, [figures from 2026 have been extrapolated to 2031]

32 Queensland Government (Department of Infrastructure and Planning) 2009 *South East Queensland Regional Plan* p 148
33 Strategic design and development (for Queensland Transport) 2004 *Study into input and output freight generation within SEQ*

Household consumption

SEQ households are forecast to consume a total 46 million tonnes of freight per year by 2031 – nearly three times 2001 consumption levels[34]. Consumption will increase faster than local manufacturing production, with an increasing proportion of goods being sourced from outside the region. Increased reliance on imported goods has implications for maintaining and upgrading international and interstate transport gateways.

Building and construction

Between 2009 and 2031, an estimated $123 billion in new infrastructure is needed for SEQ[35]. This infrastructure will provide long term benefits for industry, but will also generate substantial freight movements during development. For example, about 25 000 tonnes of crushed rock is needed to construct just one kilometre of a two-lane highway. This equates to about 700 round trip truck movements.

Building work around the region will also drive substantial growth in freight demands to produce over 690 000 new residences and workplaces for an additional 900 000 workers by 2031.

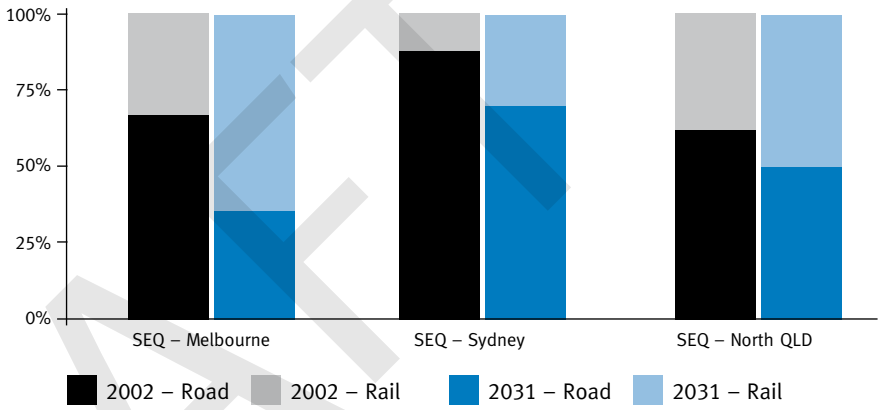
Regional freight gateways

The regional gateways are the Port of Brisbane, Brisbane Airport and three inter-modal road/rail freight terminals.

Brisbane Airport

The Brisbane Airport plays a supporting freight role in the Australia TradeCoast with both domestic and international air freight being less than 2% of the total tonnage of output through the Port of Brisbane. In 2006–07, the airport handled approximately 149 200 tonnes of domestic and international air cargo[36].

Figure 8.1 – mode share on key inter-regional routes



Source: Department of Transport and Main Roads 2008. SEQ Inter-modal Freight Strategy Terminal Study

However, the weight constraints on air freight mean that this small percentage is often high-value, light-weight cargo requiring urgent delivery such as parcel post and fresh seafood for export.

By 2026, air freight is expected to triple[37]. In addition, development of airport land is expected to increase generation of freight for on-site activities. All freight to and from the airport is moved by road. Since air freight is usually time critical, maintaining reliable roads to the airport is vital to supporting growth in air freight.

Port of Brisbane

The Port of Brisbane is integral to freight movements in SEQ with bulk commodities such as coal and grain passing through the region primarily by rail to access the port for export. The port is also the entry point to SEQ for containerised freight, bulk crude oil and petroleum products.

The Port of Brisbane is Australia's largest multi-user general cargo and commodity port and third largest container port. It is also the fastest growing port in Australia and overall freight volumes through the Port are expected to increase substantially in coming years, having undergone 14 years of consecutive record growth[38].

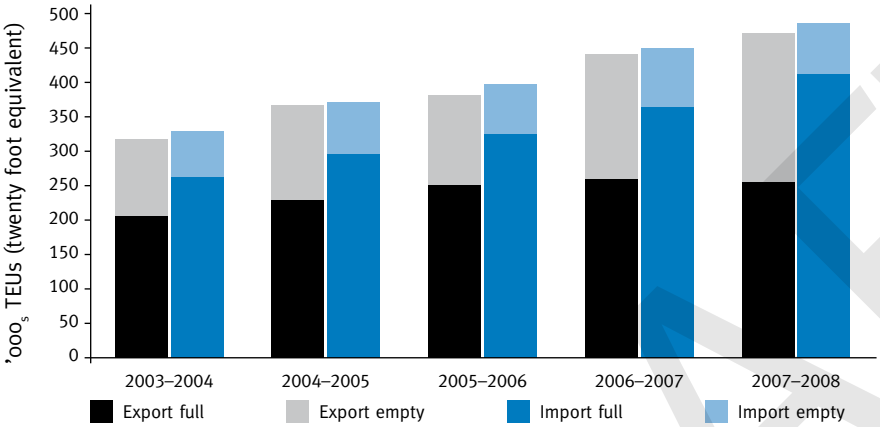
Approximately 95% of Queensland's container trade moves through the port. The volume of containerised trade is expected to triple in the next 20 years. To support these volumes, the trend forecasts suggest the number of heavy vehicle movements through the port will increase from current levels of about 5000 vehicle movements per day to 15 000 by 2031[39].

Rail accounts for 50% of export movements through the Port of Brisbane, predominantly related to the movement of coal, but accounts for just 2.6% of imports. Rail currently caters for 12.8% of container movements through the port and this has been steadily declining over the past five years[40].

The draft *Connecting SEQ 2031* recommends investment in rail facilities to accommodate short haul rail shuttles to terminals outside of the port precinct in order to address the decline in rail freight.

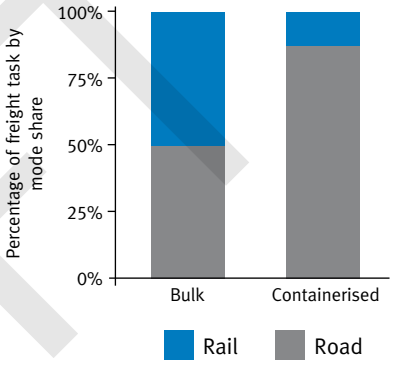
34 Strategic design + Development (for Queensland Transport) 2004 *Study into input and output freight generation within SEQ.*
35 Queensland Government (Department of Infrastructure and Planning) 2009 *SEQ Infrastructure Plan and Program (SEQIPP) 2009–2026*
36 *Brisbane Airport 2009 Preliminary Draft Masterplan*
37 PSA Consulting (for Australia TradeCoast Ltd) 2008 *Australia TradeCoast freight study* p 43
38 Queensland Government (Department of Transport and Main Roads) 2008 *Queensland ports trade statistics report for the five years ending 30 Jun 2008*
39 Queensland Government (Department of Transport and Main Roads) 2009 *draft Rail strategy for South East Queensland*
40 Portland Group and SAHA International 2008 *Four Key Supply Chains – Opportunities for Innovation*

Figure 8.2 – Port of Brisbane container throughput



Source: Department of Transport and Main Roads 2008 SEQ Inter-modal Freight Strategy Terminal Study

Figure 8.3 – rail/road mode shares for freight through the Port of Brisbane



Source: Queensland Department of Transport and Main Roads 2009 Rail Strategy for SEQ

Brisbane inter-modal terminal

The Brisbane inter-modal terminal, located on Fisherman Islands supports containerised freight movements from both road and rail through the Port of Brisbane. It also handles local container movements going from the Australia TradeCoast precinct to rail. The site has dual gauge rail facilities and has the capacity to handle long term growth forecasts in containerised trade through the Port. However, the very high levels of growth forecast for port movements will reduce its ability to handle the full range of future domestic inter-modal traffic generated within the surrounding Australia TradeCoast precinct.

Acacia Ridge freight terminal

The Acacia Ridge freight terminal is Queensland's primary road–rail inter-modal terminal and is used for both inter- and intra-state rail freight movements. The terminal is located 14 kilometres south of Brisbane, and has dual gauge rail lines servicing the corridor to Bromelton and the Port of Brisbane, as well as standard gauge connections to Sydney and narrow gauge connections to overland networks.

Interstate freight growth is likely to have the greatest impact on Acacia Ridge in the future. Table 8.2 shows forecast growth for interstate freight between 2004 and 2029. While there is uncertainty about how rail mode share may change, and what other infrastructure projects might support future growth of interstate freight, even modest growth within this market segment is likely to have a substantial impact on the capacity of the Acacia Ridge site. Investment in the establishment of new inter-modal terminals will be necessary to accommodate growth in containerised trade beyond 2015.

Moolabin freight terminal

There is a small road and narrow gauge rail inter-modal terminal at Moolabin which is privately owned and heavily constrained in respect of expansion potential. The eventual use for this terminal may be for rail management purposes with the terminal function being transferred to Acacia Ridge or a major new terminal to the south.

Table 8.2 – forecast growth for interstate freight

Market	2004 base year		2029 forecast		
	Total Mt pa	Rail share Mt pa	Total Mt pa	Rail share without inland rail Mt pa	Rail share with inland rail Mt pa
Sydney – Brisbane	7.0	0.8 (11%)	17 – 19	4 (~22%)	4 (A)
Melbourne – Brisbane	4.5	1.5 (30%)	10 – 13	7.4 (64%)	0.7 (B) 7.9 (C)

(A) – likely increase in market share due to available capacity not assessed
(B) – Remaining traffic on the existing route via Sydney
(C) – Traffic on new inland rail

Source: Department of Transport and Main Roads 2008. SEQ Inter-modal Freight Strategy Terminal Study

Overarching principles for developing a freight network

F1 Develop a **strategic network of freight routes** (rail, strategic roads, supporting roads) and **inter-modal terminals**

F2 **Manage the strategic freight network** and its environment to provide a good level of service for freight vehicles, 24 hours a day

F1 Strategic network of freight routes and inter-modal terminals

In the past, investment for freight was often seen as less important than high profile projects to eliminate commuter transport problems.

Investing in a strategic freight network has flow-on benefits in terms of economic development, improved safety and community appeal. Having a clearly identified strategic freight network also informs industry location choices so new businesses have guaranteed access to materials and markets.

Rail freight routes

All rail freight currently originates from outside the region, and rail freight continues to lose market share to road freight.

The right mix of policies and investments can support an increase in the share of freight on rail. This will reduce congestion and bottlenecks at the Port of Brisbane and move bulk and containerised goods at a lower cost and with less environmental and community impact than heavy road freight.

The draft *Connecting SEQ 2031* seeks initially to address the present decline of rail freight for containerised goods. In the longer term it seeks to achieve an increased market share in both bulk and containerised rail freight.

Road freight routes

The *SEQ Regional Plan* identifies a number of roads as priority freight routes. The road network will be planned and managed so that priority freight routes are developed to appropriate standards and operating environments, supported by regulation and technology.

Priority freight routes (regardless of ownership, management or jurisdiction) will need to ensure reliable movement of road freight and business trips to maintain the economic viability of the region. Priority freight routes will also limit trucks on suburban roads to movements necessary for delivery to local destinations.

Inter-modal terminals

Current limitations around road and rail access constrain throughput at the Acacia Ridge terminal to 500 000 containers per year, meaning capacity at Acacia Ridge may be exhausted as early as 2015[41].

The long-term limit to inter-modal capacity at Acacia Ridge and the Port of Brisbane's inter-modal terminal is an important factor for managing continued growth on rail, particularly for inter-regional and inter-state freight.

To accommodate expected growth and support greater use of rail, the freight terminal strategy proposed by the draft *Connecting SEQ 2031* includes:

- enhancements to Acacia Ridge, including catering for 1500-metre trains to provide an ultimate capacity of 750 000 containers
- expansion of facilities at Fisherman Islands, including the Brisbane inter-modal terminal to meet demand
- a new inter-modal terminal in Bromelton to supplement capacity at Acacia Ridge
- a potential new inter-modal terminal at Ebenezer to support the proposed southern freight rail corridor
- relocation of the existing constrained Moolabin terminal to allow this to be used for other purposes including stabling of passenger trains
- new rail terminal facilities to meet individual significant freight users (at Bromelton, Ebenezer, Australia TradeCoast and Swanbank)
- a potential new inter-modal terminal in the north coast area (between Caboolture and Landsborough) to service the Moreton Bay and Sunshine Coast councils and freight from North Queensland. A new inter-modal terminal to the north would also relieve pressure on the inner city rail network, freeing up capacity.

F2 Manage the strategic freight network

Road is the predominant mode of transporting freight in SEQ, accounting for 75% of long distance and 100% of intra-regional movements.

Policies to improve freight routes and protect road freight vehicles from chronic congestion caused by commuter traffic will assist the vital exchange of goods and materials for both intra-regional and export markets.

Actions to support the strategic freight network could potentially include providing freight vehicles with priority access to motorways through priority freight lanes on ramps and other 'managed motorway' actions.

The Connected and Managed Motorways project aims to upgrade and develop the region's existing motorways to form a complete and mature motorway standard network. This is a strategic project for developing the region's freight network and improving reliability for freight transport across the region. The details are described in the road network strategy (chapter 6).

Light freight movements

Movement of freight by light vehicles (small trucks and delivery vans) is important for the growth of local jobs and to meet 'just in time' delivery parameters for service all day.

With most light freight moved in the off-peak, there is a need to ensure the road network performs at a reasonable level of service between the daily am and pm peaks.

Another issue for light freight movement is conflicts with other users in busy activity centres. As activity in centres increases, competing demands for road kerb space will increase.

Ensuring light freight vehicles have ready access to delivery points will be a continuing challenge for the management of individual centres.

41 Queensland Government (Department of Transport and Main Roads) 2008 *South East Queensland Intermodal Freight Terminal Study*

Supporting principles for developing a freight network

F3 Develop facilities to allow more **containerised freight to be carried on rail**

F4 Ensure local roads are designed and managed to accommodate **'last mile' freight movements**

F5 **Protect land close to freight routes** for use by freight generating businesses

F6 **Protect existing and future freight terminal sites** from incompatible development including non-industrial and industrial uses generating traffic volumes that will compromise terminal access

F3 Containerised freight on rail

Historically, freight planning in SEQ restricted the role of rail to handling bulk products over long distances. The government will work with industry and terminal operators to improve long and short haul rail freight opportunities, to reduce the impact of road freight transport on the community and the environment.

Transport and Main Roads is investigating the potential for a rail shuttle service to operate between the Acacia Ridge inter-modal terminal and the Port of Brisbane. In the longer term a new site north of Caboolture could also be used for shuttle access to and from the port[42].

The use of a rail shuttle service would increase the number of rail freight movements to an intermodal terminal, then truck to its final destination. However, it would free up access through a constrained road network to the port as well as reduce congestion and loading delays at the port.

F4 'Last mile' freight movements

The region's strategic road freight network is comprised mainly of state controlled roads. These roads carry heavy freight transport including vehicles operating under the national higher mass limits. Local roads often carry freight traffic for the so called last mile – the final part of the journey. Last mile transport can raise two challenging issues:

- road pavement, bridges and structures may not be designed to accommodate heavy or higher mass limit vehicles
- heavy vehicles generally need to access local roads, town or city centres to provide delivery, creating safety and livability conflicts.

Constraints at the point of delivery such as restricted hours of operation, inadequate design of delivery docks (including adjacent manoeuvre area) and poor access from the road can reduce freight efficiency and make logistics more complex and difficult. This is a particular problem for food and beverage deliveries to supermarkets.

Many freight customers now expect time-critical deliveries each working day. In many cities around the world, policy makers are taking innovative steps to facilitate greater uptake of night deliveries to help reduce congestion, address adverse environmental impacts and improve road freight industry efficiency.

The Queensland Government will work with the Commonwealth Government, local governments and the road freight industry to ensure a response to last mile issues that does not compromise livability or transfer inappropriate costs to local budgets. This will include identifying regional freight routes and ensuring efficient freight movement and route compliance arrangements.

F5 Protect land close to freight routes

Strategic freight routes service only limited areas of the region. If some of the developable land areas served by routes are taken up with inappropriate uses that do not generate freight transport needs, the opportunity to reduce freight transport through suburban areas is lost.

As the region's freight task continues to grow it will be important to ensure that land use planning supports extended hours of operation in circumstances where impacts on local communities can be effectively managed.

The draft *Connecting SEQ 2031* establishes a strategic road and rail freight network to help advise the optimum locations for industry to establish. Sites with ready access to the interchanges on the motorway network are the best locations to locate industry. This ensures that reliable access to the port, inter-modal terminals and markets (internal and external to the region) can be provided.

The Queensland Government will work in partnership with local governments to identify future strategic freight routes in town plans and protect adjoining land use at strategic access points for industry and logistics land uses.

Formally recognising and publicising priority freight routes will be important for ensuring that vehicles use appropriate roads and corridors and to preserve corridors for the future.

F6 Protect existing and future freight terminal sites

The government will plan and secure sites for new terminals that are well located with road and rail access. The sites need to be recognised in state and local planning instruments to avoid incompatible land uses being approved that reduce effective freight operations and generate high levels of local traffic congestion.

The freight terminal strategy proposed by the draft *Connecting SEQ 2031* includes at least three new terminals which need to be planned, secured and protected in planning instruments as soon as possible:

- a new inter-modal terminal in the Bromelton state development area in parallel with upgrades of the interstate corridor to supplement capacity at Acacia Ridge
- a potential new inter-modal terminal at Ebenezer to support the proposed southern freight rail corridor and Inland Rail
- a potential new inter-modal terminal in the north coast area (between Caboolture and Landsborough).

42 Queensland Government (Queensland Department of Transport and Main Roads) 2009 draft *Rail Strategy for South East Queensland*

2031 strategic freight network

2031 rail freight network

A range of improvements to the rail network are proposed to enhance the role of rail freight including:

- new and upgraded inter-modal facilities (as discussed under F1)
- improvements to rail corridors to increase freight capacity
- new rail corridors and corridor sections with dedicated freight tracks to avoid conflicts with passenger rail.

A summary of the major enhancements in rail infrastructure needed by 2031 to support a major shift in the movement in freight from road to rail are outlined in table 8.3.

Rail network improvements will need to address conflicts between passenger and rail freight where they share the same corridor.

2031 road freight network

The strategic road network planning in *Chapter 8* of this draft *Connecting SEQ 2031* contains the details of how road freight facilities will be developed, and how the road system can be better managed to prioritise freight movements. The most important road freight projects and policies are:

- the Connected and Managed Motorways project which aims to complete a high speed, high-capacity road network across the region and manage its operation to ensure efficient 24-hour operation of freight vehicles
- protection of proposed priority road freight corridors as part of new development
- planning and funding multi-modal arterial roads within new communities to support local deliveries protect the capacity of the strategic motorway network to provide reliable, congestion-free longer distance movement of freight vehicles.

Strategic motorway and highway projects are also identified in detail in chapter 6. In particular there are four longer term projects of importance to the road freight network. These roads will service proposed new freight terminals and connect major industrial areas around the region. Planning and strategic protection of these corridors should be completed as a priority:

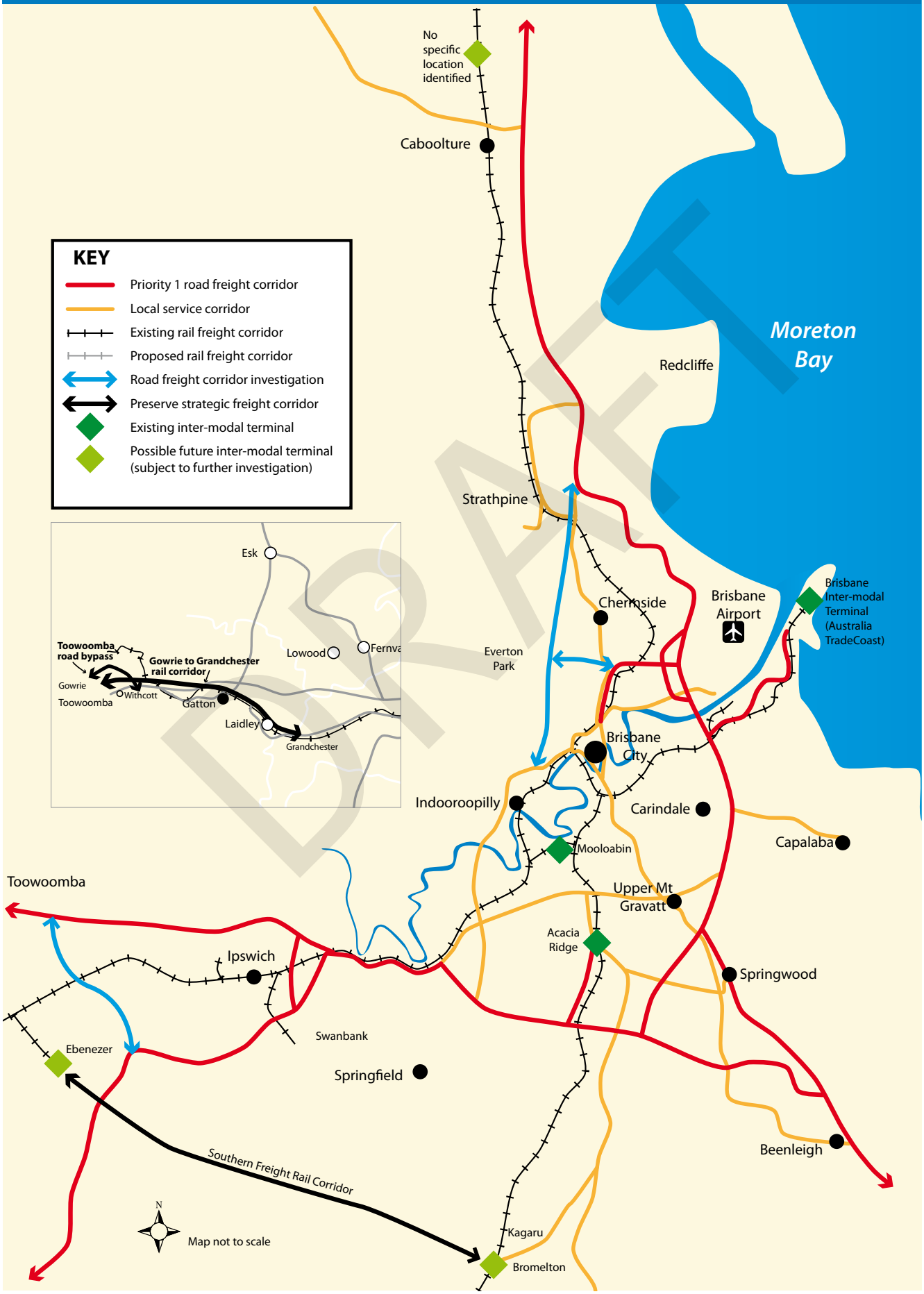
- Gateway southern extension to Jimboomba
- Southern infrastructure road corridor from Jimboomba to Ormeau
- Mt Lindesay Highway deviation west of Beaudesert to Bromelton.

Map 8.4 shows the 2031 strategic freight networks.

Table 8.3 – rail infrastructure to support rail freight

New and upgraded inter-modal facilities (as discussed above under regional freight gateways)	New or upgraded rail corridors
Full development of Acacia Ridge	**The interstate rail corridor:** loop extensions to allow for 1500-metre-long trains grade separate at-grade junctions to improve the flow of passenger and freight services development of Cross River Rail to allow Gold Coast commuter services to use new tracks and to allow dedicated use of the existing dual gauge track for freight transport between Acacia Ridge and the Port additional dual gauge passing loops on freight line from Yeerongpilly to Lytton Junction
Expansion of Fisherman Islands including the Brisbane Inter-modal Terminal	
New inter-modal terminal in the Bromelton state development area	
New inter-modal terminal at Ebenezer (in conjunction with proposed inland rail)	**The Western rail corridor:** track and bridge upgrades Corinda Junction grade separation to eliminate freight/passenger conflicts protect a corridor for a standard gauge non-electrified rail link from Rosewood to Kagaru (Southern Freight Rail Corridor) in conjunction with the inland freight rail line from Melbourne preserve rail corridor from Gowrie to Grandchester
Re-location of the existing constrained Moolabin terminal	
New rail terminal facilities at Ebenezer and Swanbank	
Potential new inter-modal terminal in the north coast area (between Caboolture and Landsborough)	**The North Coast rail line:** Caboolture to Nambour duplication and alignment improvement third track on the Exhibition branch additional track and freight refuges crossing loop extensions to allow 1,500 metre long trains

Map 8.4 – 2031 strategic freight network



Part D: What it means for your community

9. 2031 transport networks for the cities of SEQ

The cities of SEQ include the local government areas of Brisbane City Council, Moreton Bay Regional Council, Logan City Council, Redland City Council, Ipswich City Council, Gold Coast City Council and Sunshine Coast Regional Council. While there are many rural communities within the region, more than 90% of SEQ residents live and work in urban areas.

The *SEQ Regional Plan* seeks to contain urban sprawl and concentrate the vast majority of population and employment growth over the next two decades into these urban local government areas.

Solutions for the 2031 transport networks need to be tailored at a local level. The draft *Connecting SEQ 2031* establishes transport planning policies and actions for each urban local government based on:

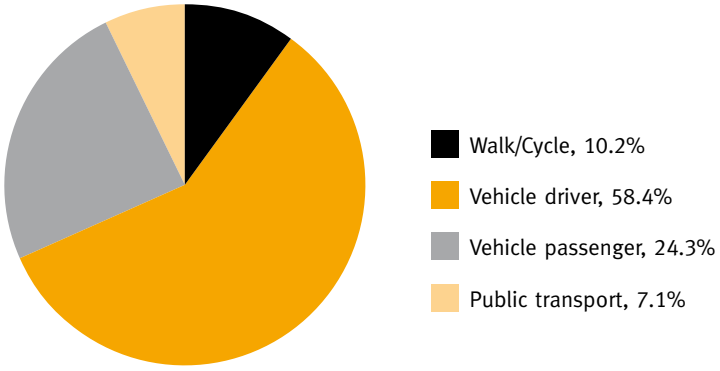
- key local challenges
- transport and land use integration issues
- 2031 transport network
- transport projects.

Some high level strategic active transport corridors are shown on the maps. These represent priorities for investment established through the *Connecting SEQ 2031* process. However the SEQ Principal Cycle Network Plan (2007) remains the main source document for establishing and delivering the region's active transport spines.

Population in 2006: 2.8 million
Forecast population in 2031: 4.4 million
Dwellings in 2006: 1.05 million
Forecast additional dwellings in 2031: 690 000
Daily trips by residents in 2006: 9.8 million
Daily trips by residents in 2031: 14.3 million

Note: These are the population forecasts contained in the SEQ Regional Plan. *They do not take into account the commitment from the Queensland Growth Management Summit to review population forecasts in consultation with local governments. Any changes to population forecasts will require transport infrastructure projects and delivery timeframes to be revised.*

Figure 9.1 – SEQ 2008 daily mode share



Source: Department of Transport and Main Roads 2008 Household Travel Survey

Brisbane City Council

Population in 2006: 991 000

Indicative planning population in 2031: 1 270 000

Dwellings in 2006: 397 000

Forecast additional dwellings in 2031: 156 000

Daily trips by residents in 2006: 3 470 000

Daily trips by residents in 2031: 4 270 000

Figure 9.2 – 2008 journey to work trip length

	<3km	<5km	<10km	<20km	<30km	>30km
SEQ	13%	23%	46%	75%	89%	11%
Brisbane	15%	26%	55%	88%	96%	4%

Figure 9.3 – CBD as destination[51]

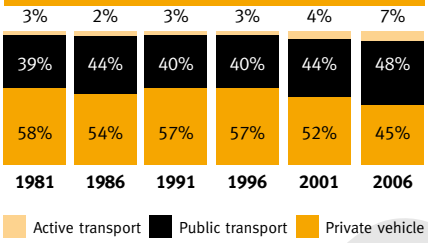
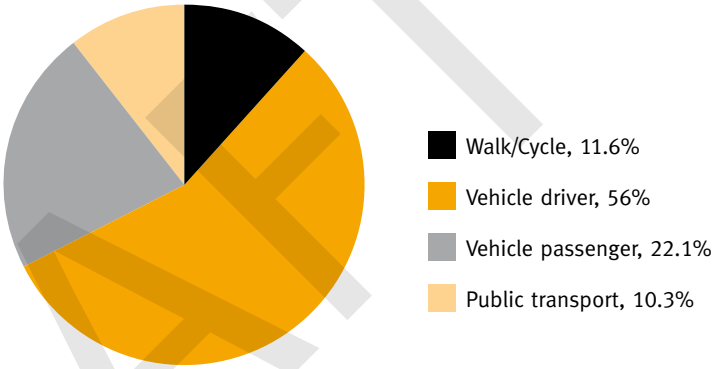


Figure 9.4 – current mode share



Brisbane City Council is the region's commercial and administrative core. It contains economic drivers of regional, state and national importance, including the CBD and adjacent city frame employment areas and the region's main air and sea ports in the Australia TradeCoast. Employment growth is also occurring in centres like Chermside and Upper Mt Gravatt, and industrial growth in areas around Wacol, Acacia Ridge and Australia TradeCoast. Although it has only 38% of the region's population, Brisbane city has more than 50% of the jobs.

The population of Brisbane city is forecast to increase by 28% from 991 000 in 2006 to 1 270 000 in 2031[43]. Opportunities for new urban development are almost exhausted within the Brisbane city area and almost 90% of population growth will be accommodated in existing urban areas, focused around public transport stations and corridors. The rate of population growth in Brisbane is forecast to slow considerably from an annual average of more than 16 000 people in 2006 to an annual average of 5200 after 2016.

Although policies are being enacted through the *SEQ Regional Plan* to locate jobs closer to where residential growth is occurring, business and industry interdependencies mean Brisbane will continue to dominate employment growth, with an extra 320 000 jobs by 2031. This will place ongoing pressure on transport infrastructure with residents from across the region travelling to jobs located within the Brisbane city limits.

Inner Brisbane will remain the dominant employment centre, with around 20% of all the region's jobs located in the inner 17 suburbs. There will be significant job growth in the CBD, South Brisbane, Bowen Hills and Woolloongabba.

Australia TradeCoast will be the region's second largest employment location, with jobs increasing from 43 000 in 2006 to 111 000 in 2026[44].

Significant job growth is also planned for activity centres such as Chermside, Upper Mt Gravatt, Toowong, Indooroopilly and Mitchelton.

Quick transport facts on Brisbane city

- over 90% of journey to work trips start and finish within the city limits
- only 9% of households do not have a private vehicle while 31% of residents do not have a licence
- highest public transport use in the region with 10.3% of all trips by public transport and 18.1% of trips to work by public transport
- 55% of journey to work trips are less than 10 kilometres – the highest in the region
- the average journey to work trip length is 11.3 kilometres
- 78.1% of all trips are by private cars
- 25% of Brisbane residents live within one kilometre of a high-frequency public transport service (15 minutes or better all day)
- high public transport use for trips to the Brisbane CBD (48%).

43 Australian Bureau of Statistics *2006 Census of Population and Housing*
44 Australia TradeCoast 2008 *Economic Assessment & Forecast Study*

Brisbane City Council

Transport issues and challenges for Brisbane to 2031

- trips made by Brisbane residents will grow by 23% from 3.47 million in 2006 to 4.27 million in 2031
- significant job growth in the CBD, South Brisbane, Woolloongabba and Bowen Hills will require public transport infrastructure to take passengers close to where they work
- lack of an orbital road network results in many trips passing through inner suburbs, compounding congestion on the radial road network and also reducing amenity in inner suburbs
- the Brisbane Urban Corridor from Ipswich Motorway (Rocklea) to Gateway Motorway (Wishart) has limited potential to expand traffic capacity due to incompatible land uses and a constrained corridor
- congestion on the road network is adversely impacting travel times and reliability for all vehicles using the road network
- ability to improve rail services is increasingly constrained by inner-city rail capacity
- lack of direct cross-town public transport services to provide access to activity centres outside the CBD
- around 50% of forecast job growth is expected to be outside activity centres, spread between low density industrial or logistics hubs, office parks, smaller activity centres and home-based offices. This type of development can be more difficult to service with public transport, which will place increasing pressure on congested roads

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	10.3%	20%	10.6%	13%	1.0%	11%	78.1%	56%
Work trips	18.1%	35%						

Figure 9.5 – average composition of 25 trips made per person each week for Brisbane city

To achieve these targets, the weekly travel patterns of the average Brisbane resident would need to change only incrementally.

- significant job growth in the Australia TradeCoast will increase travel demand to the area. The type of employment, 24-hour nature of some industries and the large scale of land use will present challenges for servicing this area with public transport. Roads servicing the area are likely to experience significant traffic growth
- congestion is affecting access to the Port, which impacts on economic growth capabilities
- road network constraints limit opportunity to expand development at Acacia Ridge and alternative locations for industry are needed
- lack of continuous, direct active transport facilities to the CBD and centres in Brisbane city
- *The National Land Transport Network* passing through the south and east of the city gets congested with commuters during peaks – this slows down inter- and intra-state freight traffic.

Targets

Brisbane has significant potential to increase the share of trips by public and active transport. The strong focus on denser urban development through urban infill will support a shift to more sustainable transport modes. Achieving the transport targets of *Connecting SEQ 2031* would result in:

- increasing in the share of trips by public transport from 10.3% to 20% taking daily trips from 360 000 in 2006 to 860 000 in 2031
- increasing in the share of trips by walking from 10.6% to 13%
- increasing in the share of trips by cycling from 1.0% to 11%.

This would see the share of trips by private car reduced to 56%, with private car trips made by Brisbane residents reducing from 2.7 million in 2006 to 2.4 million in 2031. However, with high levels of population growth in all the local governments adjacent to Brisbane City Council, coupled with strong jobs growth, the number of car trips made on the road network within the city limits will still increase.

Brisbane City Council

Transport and land use integration in Brisbane city

Centres access hierarchy

The Brisbane CBD and city frame is the primary activity centre and public transport hub for SEQ. By 2031 the inner city will need several new rail stations. With many more trips to the CBD and inner city, through traffic will need to be minimised and much more space provided for pedestrians, cyclists and public transport.

Bowen Hills and Boggo Road/Park Road/ Buranda will be sub-regional hubs for the inner city with multiple high-frequency 'turn up and go' public transport services converging at these locations. They will be major interchange locations in the network, allowing passengers to transfer to access multiple destinations across the inner city and greater Brisbane.

Upper Mount Gravatt, Indooroopilly and Chermside are designated as sub-regional hubs due to the existing momentum of development, mixed use and employment in those locations and the convergence of several high-frequency priority public transport corridors. These sub-regional hubs should be the focus for encouraging clustering of public transport contestable employment outside the inner city.

Increasing densities along transit corridors

The policy for urban redevelopment in Brisbane relies on high-frequency public transport services linking multiple precincts of higher density residential areas, major employment locations, major hospitals and universities.

Some areas along rail lines and busways contain character housing or other important cultural heritage features making them unsuitable for redevelopment.

However, there are many parts of the city where regeneration can occur in tandem with increased investment in the UrbanLink services, busways and high-frequency bus corridors.

'Priority transit corridors' have been identified in inner Brisbane to connect a large number of specialist and general employment precincts and other major destinations such as universities and hospitals.

These priority transit corridors are where land use planning is significantly advanced and building stock is predominantly of redevelopment age, enabling land use change in the short term.

In later years of *Connecting SEQ 2031*, land use mix and densification is also strongly advocated along:

- the Eastern Busway corridor to Carindale
- Northern Busway corridor to Chermside
- along the rail corridor between Carseldine and Strathpine

Implementation will be subject to further detailed land use planning in partnership with local government.

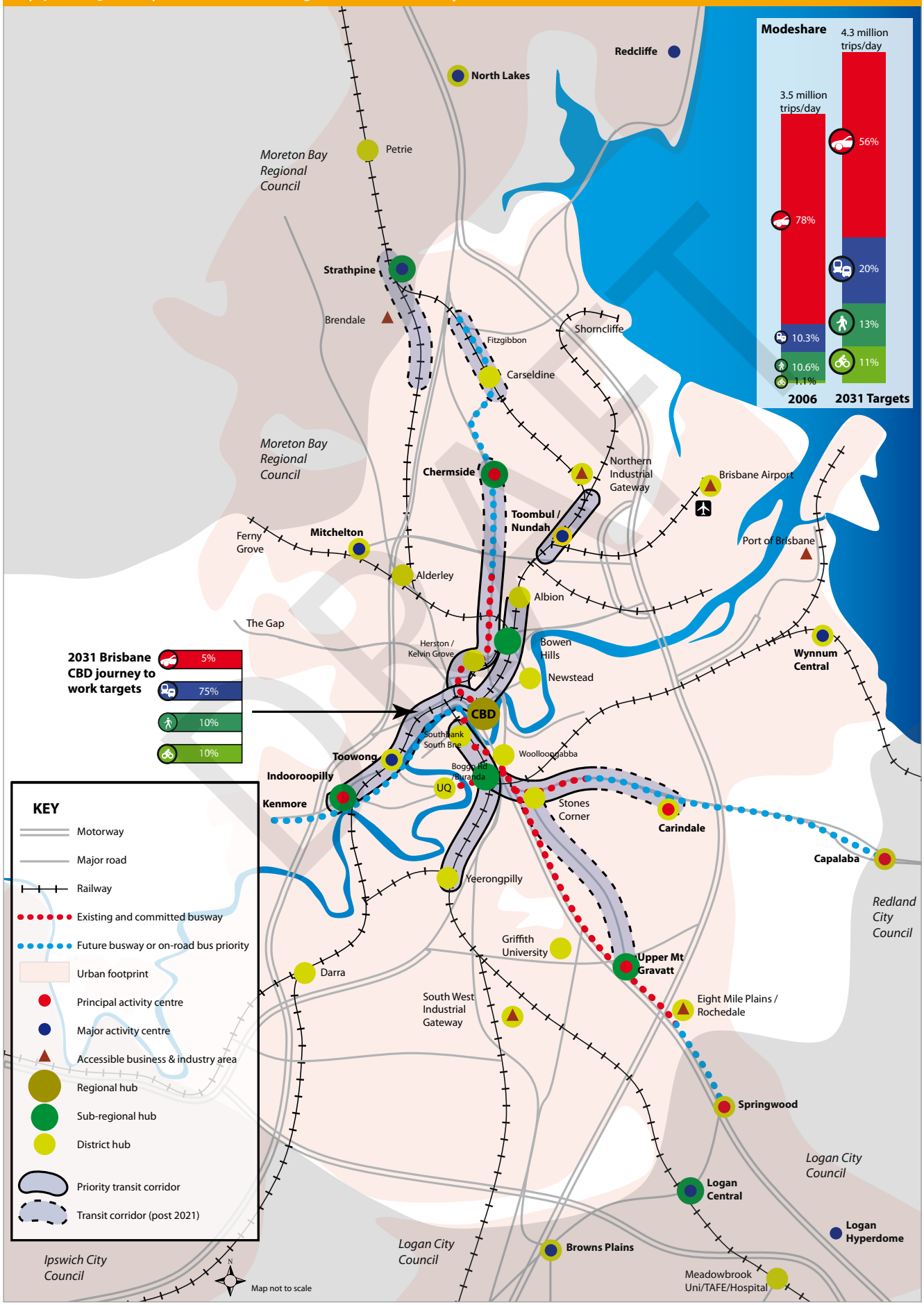
The proposed additional rail corridor from Alderley to Strathpine will provide opportunities to increase densities and develop a priority transit corridor near stations.

The centres access hierarchy and transit corridors for focusing higher density residential development are illustrated in Map 9.1.

Accessible business and industry areas

The *SEQ Regional Plan* establishes accessible enterprise precincts at Australia TradeCoast, South West Industrial Gateway, Rochedale and the Northern Industrial Region. These areas will be the focus for business and industry that needs good access to the priority freight network. Industry expansion at Acacia Ridge will be minimised due to the need to protect the inter-modal freight terminal from local congestion, and the limited opportunity to expand the traffic capacity of the Brisbane Urban Corridor.

Map 9.1 – 2031 transport and land use integration in Brisbane city



Brisbane City Council

2031 transport network

Public transport

With significant investment in rail as the backbone of the public transport network, Brisbane's urban rail network will be separated into two networks:

- a high-frequency **UrbanLink** network using higher capacity trains that carry more passengers and have more doors to allow faster boarding/exiting
- an **ExpressLink** network with services connecting the principal activity centres of Cleveland, Caboolture, Beenleigh and Ipswich as well as other rail termini including Ripley, Kippa-Ring, Ormeau and Flagstone. These services will run all stops to a change point where they meet the UrbanLink network, and then run express to give passengers a rapid connection to Brisbane CBD.

Delivery of Cross River Rail will allow services to be increased across the entire SEQ rail network as well as providing new inner city rail stations, enabling rail passengers to get closer to their destination. The addition of a rail corridor from Alderley to Strathpine will provide communities in the north-west of the city with a high quality public transport service and support urban regeneration where appropriate.

To support high levels of population and employment growth in inner Brisbane, a new subway is proposed from Toowong to Newstead.

The Brisbane subway will be separate to the existing rail network with the ability to operate at steeper grades and tighter turning circles making it easier to implement in the dense urban fabric of Brisbane city. A new Toowong to West End green bridge will be used for public and active transport.

An extension of Doomben rail line to Hamilton North Shore should be preserved as an option for future transport solutions.

The extension of the Northern Busway to Kedron and the Eastern busway to Coorparoo are under way. Planning is underway to extend the Northern Busway to Bracken Ridge and the Eastern Busway to Capalaba. Interim bus priority treatments will also be considered.

TransLink will continue to roll out high-frequency 'turn up and go' UrbanLink bus services on radial and cross-town routes. These routes will be packaged with improvements to bus stops and bus priority on the road network where needed to provide faster and more reliable bus travel times.

Green bridges will also be used to provide river crossings for public transport, cyclists and pedestrians.

Ferry services

The current network of ferry services including the CityCat and cross river ferry network are operated and managed by Brisbane City Council.

Ferry services play a relatively minor role in the total transportation task for SEQ. The ferry network does strongly enhance the livability and connectivity of the inner Brisbane transport network by providing access to many areas which are challenging to access by other forms of public transport.

Active transport

Active transport infrastructure will be provided to the inner-city and centres, supported with end-of-trip facilities to encourage significant growth in commuter cycling.

Linking active transport to 'healthy and active' messages to combat growing health problems presents significant potential to deliver broader benefits to the community, while also addressing oil dependence, congestion and environmental issues.

New green bridges will provide additional river crossings for cyclists and pedestrians.

Roads

Significant employment growth coupled with commercial and residential development in inner city Brisbane means governments will need to work together to remove traffic from inner city suburbs and increase the space for pedestrians, cyclists and public transport.

Part of the solution will be completing the orbital road network for Brisbane, providing motorists with alternative routes that do not require them to pass through inner city suburbs.

Brisbane City Council will also continue development of its strategic TransApex program of road tunnels to reduce traffic passing through the Brisbane CBD, and upgrading Kingsford Smith Drive arterial road to improve freight access to the northern sector of the Australia Trade Coast.

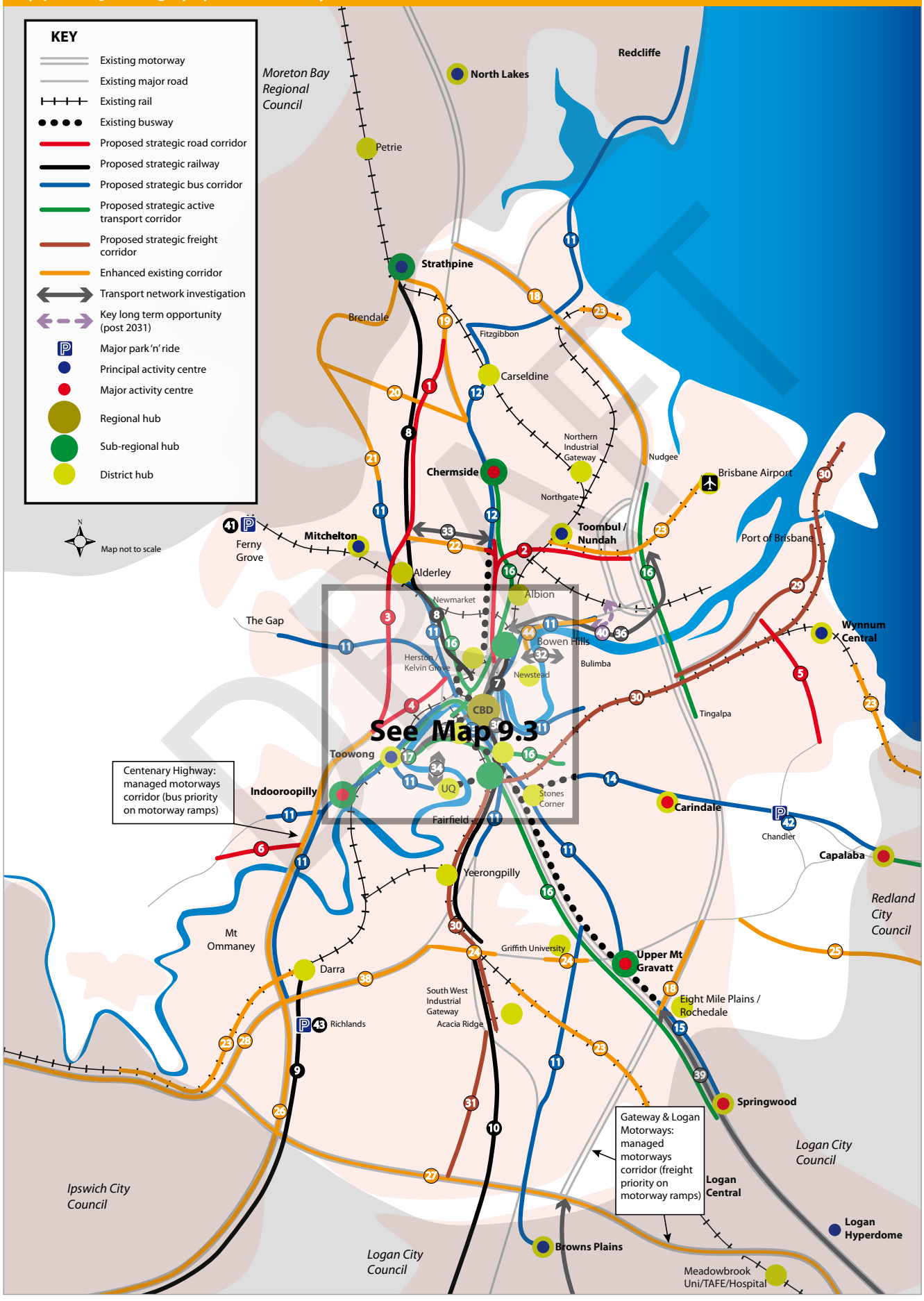
This will provide strong support for the policy of 'trucks off suburban roads' which seeks to remove a high proportion of the 340 000 large truck movements made in the metropolitan area each day on suburban roads.

Maps 9.2 and 9.3 show the 2031 strategic projects for Brisbane city.

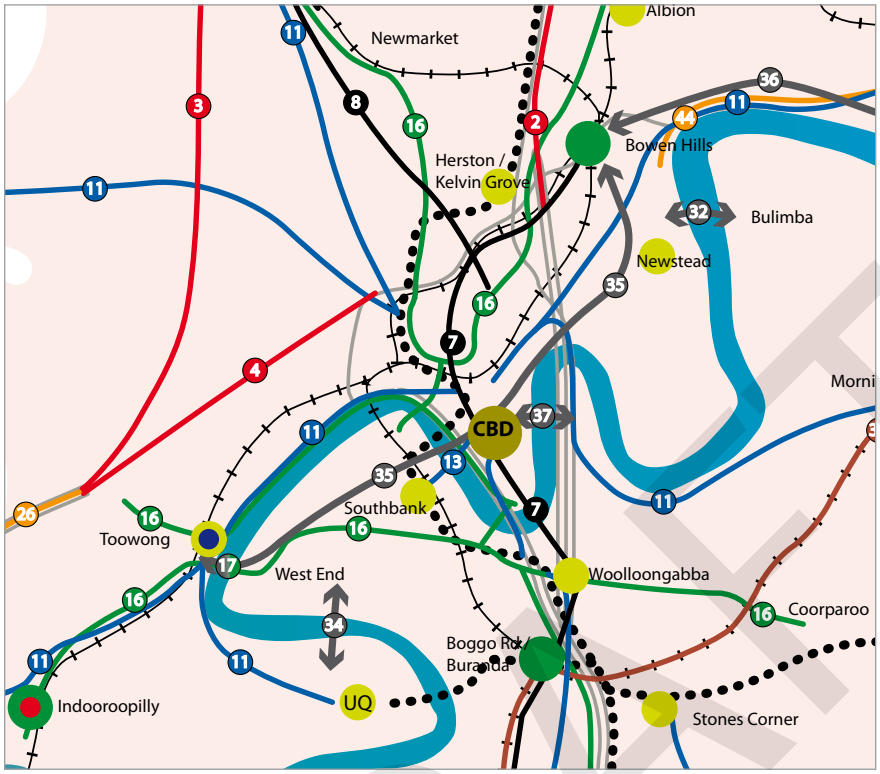
Partnering with Brisbane City Council

- updating planning policies and regulations to allow increased densities in priority transit corridors located along urban rail and busway corridors
- supporting the high public transport targets to the CBD and frame through traffic management, land use planning and parking policies
- providing western bus priority from Kenmore to CBD in parallel with delivery of Northern Link tunnel
- delivering community boulevards along older arterials when through traffic is moved to a new major road
- providing more facilities for pedestrians, cyclists and buses in the CBD and city frame
- providing safe cycle routes on the north side of Brisbane and to the CBD.

Map 9.2 – 2031 strategic projects Brisbane city



Map 9.3 - 2031 strategic projects inner city Brisbane



Summary list of projects

B1 North-west motorway from Everton Park to Bruce Highway to complete the orbital motorway network (potentially in tunnel)

B2 Airport Link from Kedron to Brisbane Airport (in tunnel)

B3 Western Orbital Motorway from Toowong to Everton Park (in tunnel)

B4 Northern Link from Toowong to Kelvin Grove (in tunnel)

B5 Tilley Road extension from Lindum to Mt Gravatt-Capalaba

B6 Kenmore bypass from Centenary Motorway to Moggill Road

B7 Cross River Rail

B8 North-west rail corridor from Strathpine to Alderley and possible connection to Cross River Rail (in tunnel)

B9 Darra to Springfield rail line

B10 Passenger rail service on interstate rail corridor Salisbury to Flagstone

B11 Strategic bus/HOV priority corridors packaged with UrbanLink bus services

B12 Busway from Kedron to Bracken Ridge

B13 Victoria Bridge Bus Access improvements

B14 Busway from Coorparoo to Capalaba

B15 Extension of South East Busway to Springwood

B16 Strategic active transport corridors

B17 Investigate green bridge from Toowong to West End Bridge

B18 Upgrade of Gateway Motorway

B19 Urban arterial upgrade from Strathpine to Carseldine

B20 Upgrade to urban arterial from Albany Creek to Aspley

B21 Upgrade to urban arterial from Strathpine to Albany Creek

B22 Upgrade Stafford Road as urban arterial

B23 Passenger rail upgrades; Eagle Junction to Domestic Airport; Manly to Cleveland; Darra to Redbank; Sandgate to Shorncliffe; Kuraby to Beenleigh

B24 Safety upgrades to Brisbane Urban Corridor

B25 Upgrade Redland sub-arterial road

B26 Upgrade Centenary Motorway from Toowong roundabout to Springfield

B27 Upgrade Logan Motorway from Ipswich Motorway to Pacific Motorway

B28 Upgrade Ipswich Motorway from Dinmore to Darra

B29 Upgrade Port of Brisbane Motorway

B30 Rail freight improvements from Acacia Ridge to Port of Brisbane

B31 Enhance Paradise Road corridor for strategic freight movement

B32 Investigate green bridge from Bulimba to Newstead

B33 Investigate Stafford Road as motorway option (in tunnel)

B34 Investigate green bridge from West End to UQ/St Lucia (pedestrian and cycle)

B35 Investigate Brisbane subway from Toowong to Newstead/Bowen Hills via West End and city (potentially in tunnel)

B36 Investigate Brisbane subway from Bowen Hills to Airport village via Hamilton/Northshore (potentially in tunnel)

B37 Investigate green bridge from Kangaroo Point to city

B38 Plan upgrades to Ipswich Motorway from Darra to Rocklea

B39 Upgrades to Pacific Motorway from Gateway Motorway to Logan Motorway

B40 Preserve rail corridor to Hamilton/ Northshore

B41 Ferny Grove major park 'n' ride

B42 Chandler major park 'n' ride

B43 Richlands major park 'n' ride

B44 Upgrades to Kingsford Smith Drive

Note: responsibility for delivery of these projects is to be determined

Ipswich City Council

Population in 2006: 142 400

Indicative planning population in 2031: 435 000

Dwellings in 2006: 52 000

Forecast additional dwellings in 2031: 118 000

Daily trips by residents in 2006: 498 000

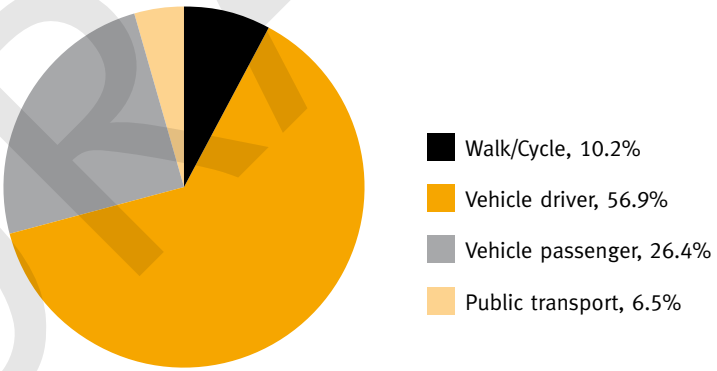
Daily trips by residents in 2031: 1 520 000

Note: these figures do not include increased population for Ripley identified as part of the Queensland Growth Management Summit

Figure 9.6 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Ipswich	9%	19%	36%	61%	80%	20%

Figure 9.7 – current mode share



Ipswich City Council is the western gateway to the region and is forecast to experience the fastest rate of growth in SEQ, with population increasing by 206% between 2006 and 2031. This means the population will triple in about two decades. Transport improvements will be central in determining how well growth is accommodated and how employment and industry development occurs locally to support the population growth.

Population growth will be accommodated mainly in new development areas including Springfield, Springfield Lakes, Augustine Heights, Bellbird Park, Redbank Plains, Ripley, Yamanto, Redbank, Riverview, Bundamba, East Ipswich and Wulkuraka.

There will also be some infill development in the corridor from the University of Queensland Ipswich Campus to Brassall.

The city centres of Ipswich and Springfield will be the focus for business and community services, with the emerging town centre of Ripley increased in importance as the population of Ripley grows.

Major employment growth areas include Ebenezer/Willowbank, Swanbank, New Chum, Bundamba, and Wulkuraka industrial area, Carole Park, the Royal Australia Air Force Base Amberley and the Amberley Aerospace and Defence Support centre and the Ipswich Motorsport Precinct.

Quick transport facts on Ipswich city

- low public transport mode share with 6.5% of daily trips and 10.2% of work trips by public transport
- high car dependency with 83% of trips by private vehicle
- 8% of households do not have a car
- 36% of residents do not have a driver's licence
- 64% of residents travel more than 10km to work, with the average commute trip 18 kilometres long.

Ipswich City Council

Transport issues and challenges for the city of Ipswich

- daily trips made by Ipswich residents will triple from 500 000 in 2006 to 1.52 million in 2031
- providing adequate transport infrastructure to keep pace with rapid population growth
- increasing congestion on the road network will impact on freight and commercial vehicle movements
- increasing pressure on road network capacity due to population growth and high car dependency
- supporting growth in local jobs so local employment opportunities are available for residents
- staging of new urban development to manage population growth and allow adequate provision of transport infrastructure and public transport services early in new development areas
- encouraging more trips by public and active transport for travel to Ipswich CBD as it grows in importance as a service and employment centre.

2031 targets

With high levels of population growth forecast for Ipswich, increasing the share of public and active transport will be important to help manage growth in travel demand.

The 2031 transport targets for Ipswich city aim to reduce the share of trips made by private car from 83.3% to 70%. This will consist of an:

- increase in the share of trips by public transport from 6.5% to 12%, taking daily trips from 33 000 in 2006 to 185 000 in 2031 (460% increase)
- increase in the share of trips by walking from 9.5% to 11%
- increase in the share of trips by cycling from 0.7% to 7%.

This would still see the number of daily private car trips increase by 165%, from 415 000 in 2006 to 1.1 million in 2031.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	6.5%	12%	9.5%	11%	0.7%	7%	83.3%	70%
Work trips	8.6%	17%						

Figure 9.8 – average composition of 25 trips made per person each week

To achieve these targets, the weekly travel patterns of the average Ipswich resident would only need to change incrementally.

Transport and land use integration

Centres access hierarchy

Ipswich CBD is the regional hub for the western corridor and provides an interchange point between rail and bus services. Ipswich CBD is a focus of the *SEQ Regional Plan* as an alternative major business location to the Brisbane CBD.

Springfield is designated as the sub-regional hub and will develop into a major retail, tertiary education and employment centre. It will be linked to destinations in Brisbane city by the frequent UrbanLink services. There will also be frequent bus services linking Springfield to Ipswich, Goodna and Ripley.

Ripley, Amberley and Goodna are designated as district hubs. Ripley town centre will ultimately accommodate a large number of jobs and will be upgraded to a sub-regional hub, when population and employment numbers increase.

Increasing employment density around transit corridors

The priority transit corridor for Ipswich is between the University of Queensland Ipswich Campus and Brassall via the Ipswich CBD and Riverlink shopping centre. A high-frequency public transport service will be provided all day, seven days a week to link multiple destinations along this corridor.

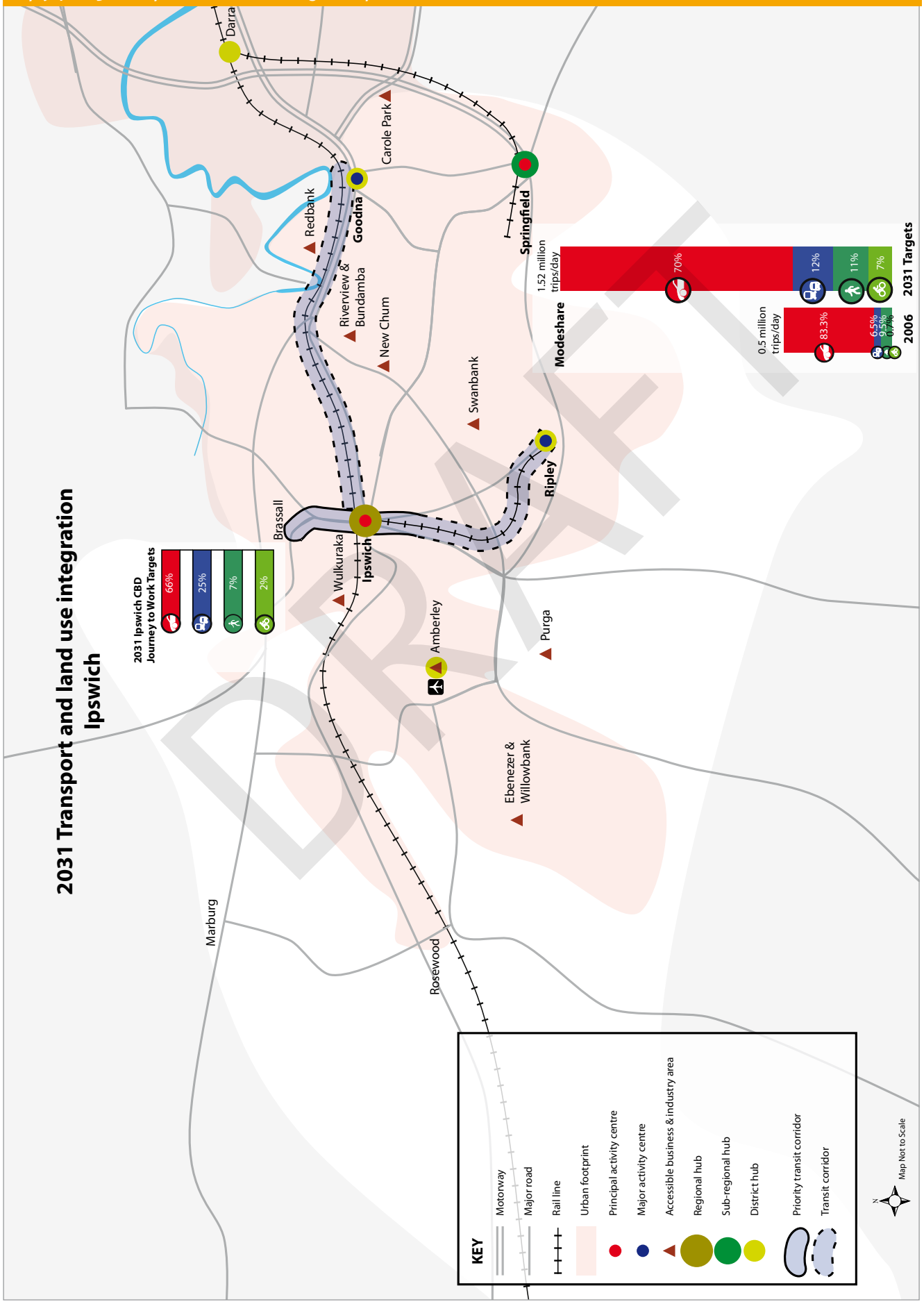
The new rail line to Springfield will be completed by 2013. To support the new rail corridor from Ripley to Ipswich after 2021, Ripley will be master planned to ensure land use mix and densification occurs around the future rail stations. In the longer term a transit corridor may be established along the existing rail line between Ipswich and Goodna.

Land use density and mix should also be generally supported within 400-800 metres of public transport stations or stops along high-frequency public transport corridors.

Accessible enterprise precincts

Business and industry areas with good access to the priority freight routes are Redbank, Riverview/Bundamba, New Chum, Swanbank, Purga and Ebenezer/Willowbank. Amberley Aerospace Park will be provided with quality road and public transport access as it will have both office jobs and requirement for heavy vehicle access.

Map 9.4 - 2031 Transport and Land use Integration Ipswich



Ipswich City Council

2031 transport network

An improved rail network is the centrepiece of the future transport network for Ipswich city. A new rail line from Darra to Springfield will link new communities to Brisbane city by 2013.

UrbanLink rail services will operate from Springfield to Brisbane, providing a high-frequency service all day.

The new Ipswich to Ripley line will link the major emerging Ripley community to the principal regional activity centre of Ipswich by 2031. This is consistent with Ipswich City Council planning priorities to ensure development in Ripley that supports employment and government services in Ipswich. This will support local employment growth and reduce overall travel. A rail connection from Ripley to Springfield is a longer term opportunity.

ExpressLink rail services will provide fast travel times between Ipswich CBD and central Brisbane of about 45 minutes, and to Brisbane Airport in just over an hour. This will support growth of Ipswich CBD into a sophisticated employment centre of regional significance.

There will also be high-frequency UrbanLink bus services packaged with bus priority facilities to provide access from the residential communities to the rail stations and activity centres within Ipswich city, supported by an upgraded local bus network.

Substantial revitalisation and employment growth is planned for Ipswich CBD. To support the redevelopment of Ipswich CBD an inner ring road network will be completed, allowing a stronger focus on public and active transport in the city centre.

Much of the population growth in Ipswich city will be in new communities. Creating a quality urban arterial network that caters for active transport, buses and private vehicles will support local travel by sustainable transport modes. Priority for buses will be provided on bus routes where it is needed, to deliver reliable travel times.

Provision of active transport infrastructure within five kilometres of Ipswich CBD, Springfield and Ripley will be prioritised. Key strategic active transport corridors connecting these major centres will also be planned and prioritised.

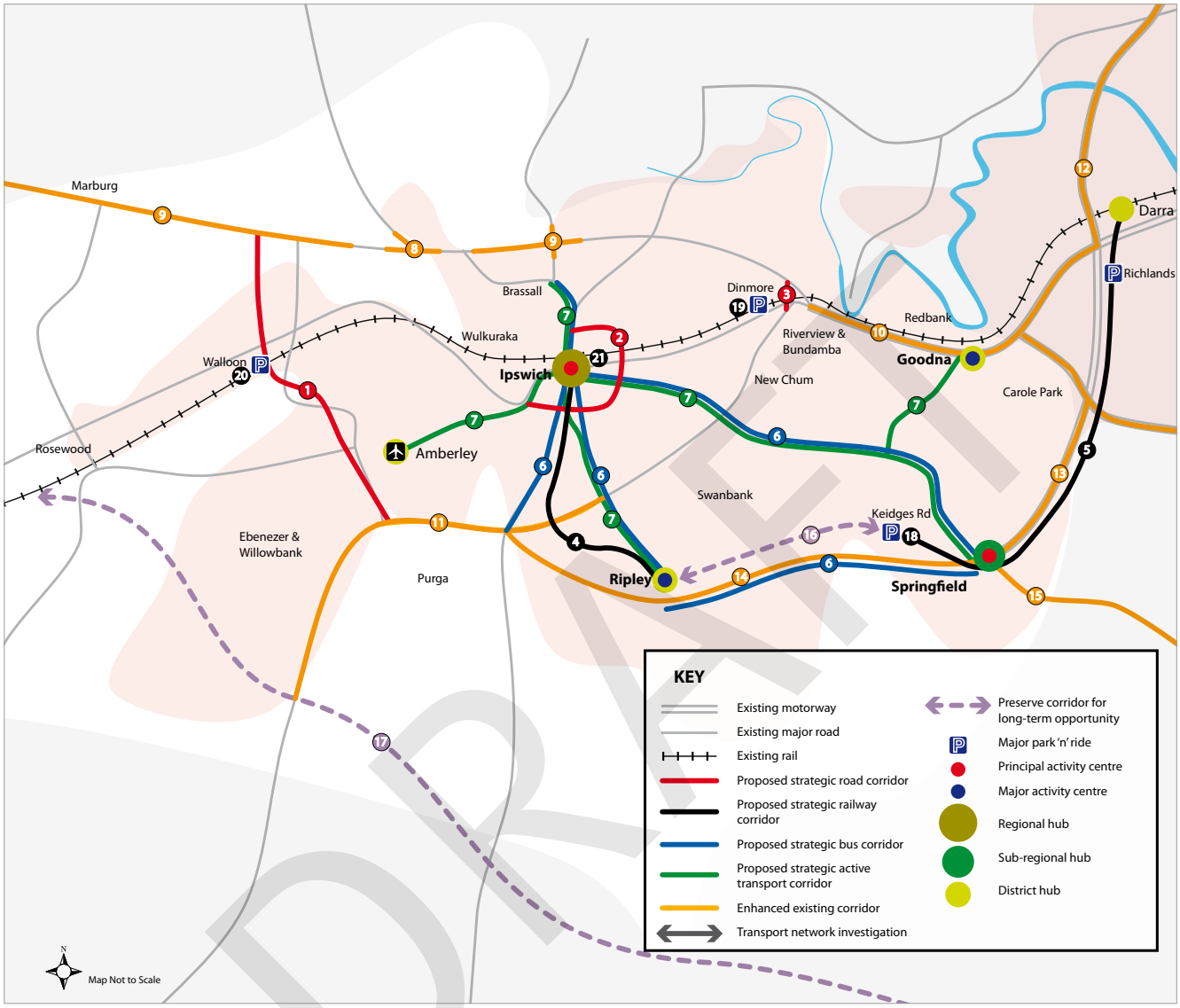
The Southern Freight Rail corridor will be preserved from Rosewood to the interstate rail line at Kagaru to ensure a future connection can be provided if the inland rail project is progressed. This line would also link the Ebenezer strategic inter-modal freight terminal to the freight rail network.

Map 9.5 shows the 2031 strategic transport network for Ipswich city.

Partnering with Ipswich City Council

- supporting redevelopment along the north–south corridor between Brassall and University of Queensland Ipswich Campus
- supporting redevelopment of Ipswich CBD, an inner ring road and redeveloped rail station complex
- focusing on achieving higher public transport, cycling and walking mode share for travel to Ipswich CBD through supportive land use planning, traffic management and car parking policies
- ensuring the Ipswich city planning scheme requires medium density mixed use development around stations along the future rail corridor between Ripley and Ipswich
- providing active transport facilities within five kilometres of Ipswich, Ripley and Springfield town centres
- ensuring local road upgrades consider bus and active transport needs, particularly on designated high-frequency bus routes
- protecting land around accessible enterprise areas from incompatible land uses (for example residential, retail).

Map 9.5 - 2031 Strategic projects Ipswich



Summary list of projects

I 1 Western Ipswich Bypass

I 2 Ring road around Ipswich CBD including upgrading existing roads and extension of Norman Street to provide an additional crossing of Bremer River

I 3 Cunningham Highway to Warrego Highway connection

I 4 Ipswich to Ripley rail line

I 5 Darra to Springfield rail line

I 6 Strategic bus/HOV priority corridors packaged with UrbanLink bus services

I 7 Strategic active transport corridors

I 8 Upgrade of Warrego Highway and Brisbane Valley Highway interchange

I 9 Upgrade Warrego Highway between Ipswich and Gatton

I 10 Upgrade Ipswich Motorway from Dinmore to Darra

I 11 Upgrade of Cunningham Highway from Ripley Road to Ebenezer

I 12 Upgrade Centenary Highway Toowong to Ipswich Motorway (M5)

I 13 Upgrade Centenary Highway Logan Motorway to Springfield (M5)

I 14 Upgrade Centenary Highway from Springfield to Cunningham Highway

I 15 Upgrade to urban arterial from Springfield to Greenbank

I 16 Ripley to Springfield passenger rail, preserve corridor

I 17 Preserve Southern Freight Rail Corridor from Rosewood to Kagaru

I 18 Keidges Road major park 'n' ride

I 19 Dinmore Road major park 'n' ride

I 20 Walloon Road major park 'n' ride

I 21 New Ipswich rail station

Note: responsibility for delivery of these projects is to be determined

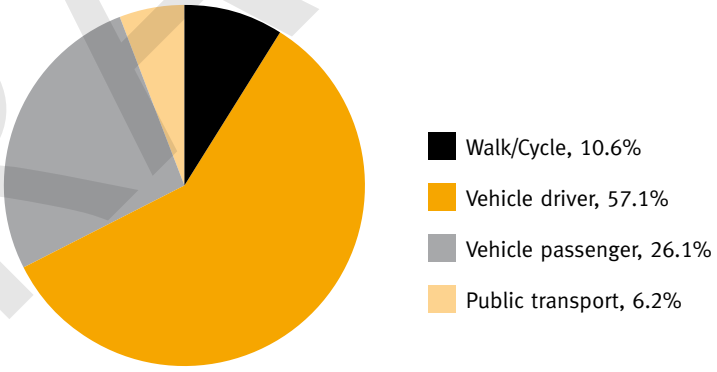
Moreton Bay Regional Council

- Population in 2006: 333 000
- Indicative planning population in 2031: 513 000
- Dwellings in 2006: 123 900
- Forecast additional dwellings in 2031: 84 000
- Daily trips by residents in 2006: 1 165 000
- Daily trips by residents in 2031: 1 830 000

Figure 9.9 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Moreton Bay	10%	18%	31%	57%	79%	21%

Figure 9.10 – current mode share



The population of Moreton Bay Regional Council will increase from 333 000 in 2006 to 513 000 in 2031 – an increase of 54%. Most of the population growth will be in new development areas, particularly around Mango Hill, North Lakes, Griffin and Narangba.

Caboolture and Strathpine will be the focus for business and employment. North Lakes and Redcliffe will also develop as major activity centres.

Further industrial employment growth will occur through expansion of the existing enterprise areas at Burpengary, Morayfield, Brendale and Caboolture.

Transport improvements to accommodate growth and ensure reliable links to Brisbane will be an important feature of the draft *Connecting SEQ 2031* plan.

They will reduce dependence on car transport and expand the local transport network so there is less reliance on the Bruce Highway (M1) for local trips.

Quick transport facts about Moreton Bay Regional Council

- approximately 50% of work destinations are outside the local government area
- low public transport mode share of 6.2%
- long commute distances with 69% of work trips longer than 10km and 21% longer than 30 kilometres
- the average commute trip is 20.3 kilometres long
- 31% of the population do not have a driver's licence.

Moreton Bay Regional Council

Transport issues and challenges in Moreton Bay

- daily trips made by Moreton Bay residents will increase by 56% from 1.17 million in 2006 to 1.83 million in 2031
- dispersed land uses and low residential density, together with high car availability and inexpensive parking, encourage private vehicle use
- strong local employment growth is needed to prevent a future shortfall in jobs and offer employment diversity for residents
- poorly connected arterial road network, with heavy reliance on the Bruce Highway (M1) for local trips
- limited crossings of the Pine River reinforce reliance on the Bruce Highway
- lack of transport infrastructure and services for rapidly developing new communities
- current urban form of Caboolture/ Morayfield and Strathpine does not encourage active transport or allow easy servicing by public transport
- capacity constraints on the Caboolture rail line, particularly for increasing peak express services to the Brisbane CBD.

2031 targets

The 2031 transport targets aim to reduce the share of trips made by private car from 83.2% to 70%, through an:

- increase in the share of trips by public transport from 6.2% to 11%, taking daily trips from 72 000 in 2006 to 190 000 in 2031
- increase in the share of trips by walking from 8.9% to 11%
- increase in the share of trips by cycling from 1.7% to 8%.

This would still see private car trips increase from 970 000 in 2006 to 1.3 million in 2031.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	6.2%	11%	8.9%	11%	1.7%	8%	83.2%	70%
Work trips	7.10%	22%						

Figure 9.11 – average composition of 25 trips made per person each week in Moreton Bay

To achieve the 2031 targets, the weekly travel patterns of the average Moreton Bay resident would need to change only incrementally.

Transport and land use integration

Strathpine is designated as the sub-regional hub and will be the hub for rail services from Sunshine Coast, Caboolture, Brisbane city and Kippa-Ring. Local bus services will use Strathpine as a hub. Caboolture, Petrie and North Lakes will be district hubs and Caboolture will continue to be the terminus for the ExpressLink rail services.

Caboolture is currently a Principal Activity Centre under the *SEQ Regional Plan* and will continue to be the focus for health and business services.

Improved centre planning in Caboolture will support a walkable town centre with improved access to the rail station. Moreton Bay Regional Council and the Queensland Government are working in partnership to develop masterplans for Caboolture and Strathpine. Relocation of the park 'n' ride facilities to the east of Caboolture rail station will allow for transit supportive redevelopment close to the station.

The car-oriented strip development and 'big box' retail at Morayfield is not suited to encouraging a high intensity of employment or supporting public and active transport use and will not be a strong focus for increased public transport services.

Increasing densities along transit corridors

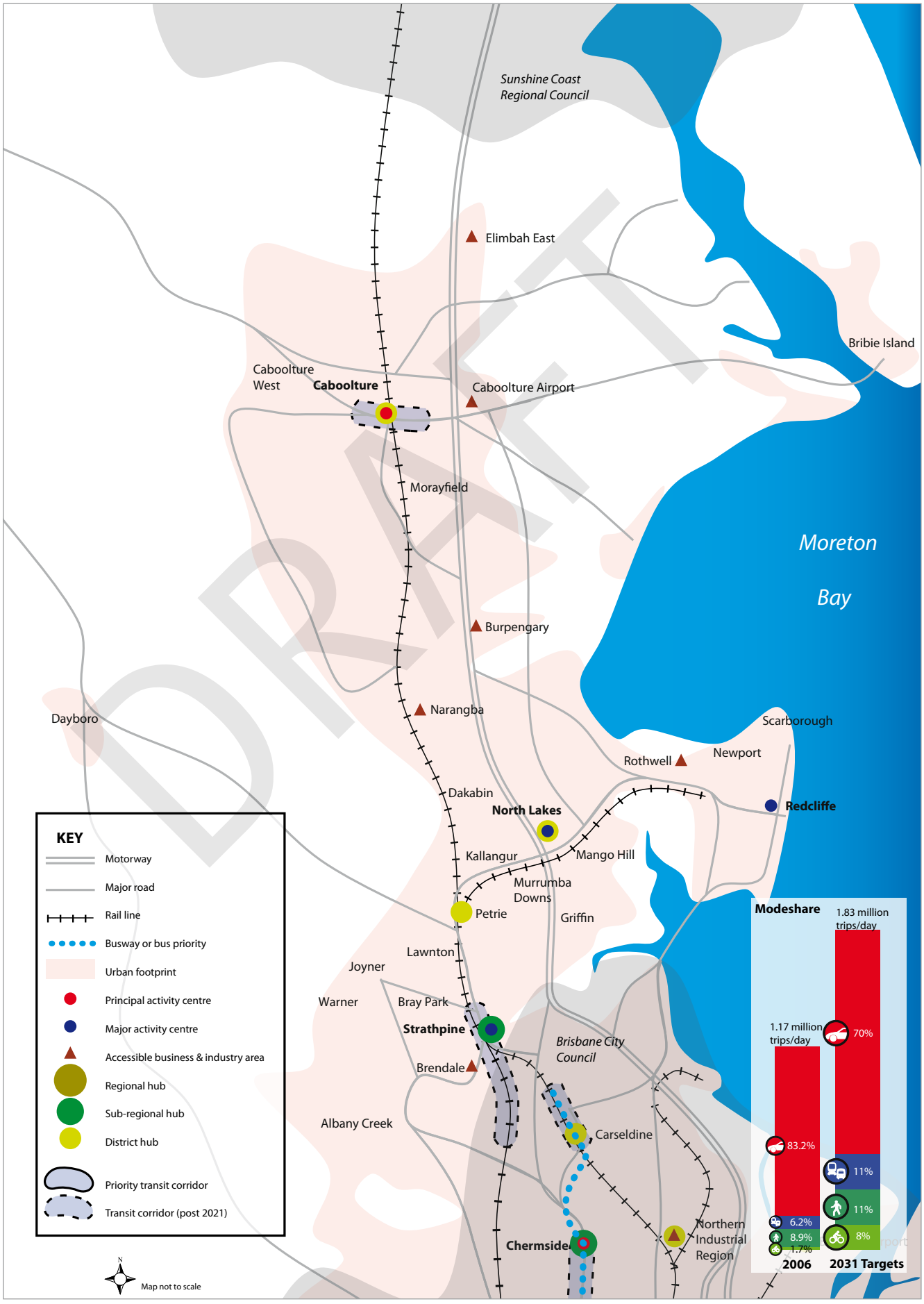
Planning for urban arterial road corridors east of the Bruce Highway and west of Strathpine may provide an opportunity to progressively redevelop Gympie Road through Strathpine to a mixed mode community boulevard for a redeveloped and expanded Strathpine town centre. Implementation will be subject to further detailed land use and transport planning in partnership with local government.

Land use density and mix is generally supported within 400-800 metres of all other public transport stations or stops along high public transport corridors.

Accessible enterprise precincts

Caboolture Airport, Burpengary, Narangba Business Park, Elimbah East and Brendale Industrial Area will have a high standard of access to priority freight routes. Freight movement will be supported by the upgrade and delivery of managed motorways initiatives on the Bruce Highway (M1).

Map 9.6 – 2031 transport and land use Integration Moreton Bay



Moreton Bay Regional Council

2031 Moreton Bay transport network

By 2031 Moreton Bay will have a stronger rail network.

A new rail line from Petrie to Kippa-Ring will be in place by 2016 providing ExpressLink services for the communities at North Lakes, Mango Hill, Kallangur and Kippa-Ring.

An additional rail line from Strathpine to Alderley and upgrades to the Caboolture line, will allow more frequent ExpressLink services, with UrbanLink services starting at Strathpine.

CoastLink services from the Sunshine Coast line will also stop at Caboolture and Strathpine. This will provide enhanced access to Strathpine, Caboolture, Brisbane city and the Sunshine Coast.

High-frequency UrbanLink bus services packaged with bus priority measures from surrounding communities will hub at Caboolture, North Lakes and Strathpine to reinforce their role as centres and provide access to the rail network. UrbanLink bus services from Redcliffe will link to the rail network at Kippa-Ring, or use the bus priority on the Ted Smout Memorial Bridge to link to the Northern Busway and the Shorncliffe rail line at Sandgate.

There will be links to Brisbane's orbital road network through Old Northern Road and the new north-west motorway from Bald Hills to Darra (via Everton Park).

Enhancing the arterial road network both to the east and west of the Bruce Highway (M1) is a crucial component of improving accessibility for all modes of travel in Moreton Bay. These new roads will be designed to provide quality links to destinations within Moreton Bay for public transport and cycling and general motor traffic.

Priority will be given to active transport infrastructure provision within 5km of Strathpine, Caboolture, Petrie, North Lakes, Redcliffe and Kippa-Ring. A strategic active transport corridor from Strathpine to Redcliffe will also be prioritised for delivery in the short to medium term.

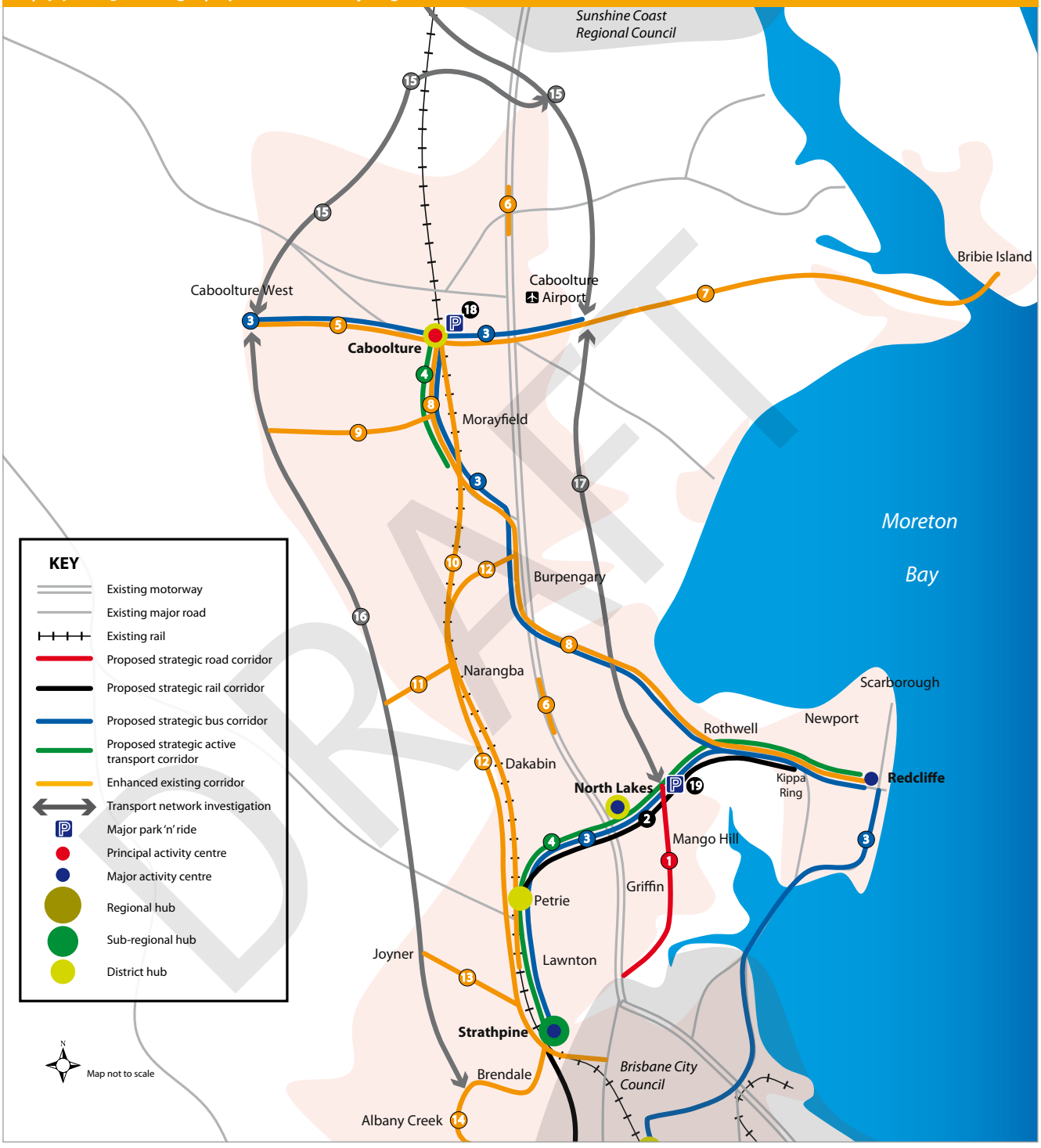
A potential new intermodal freight terminal will be investigated between Caboolture and Landsborough to better service the Moreton Bay and Sunshine Coast councils and freight from Northern Queensland.

Map 9.7 shows the 2031 strategic transport network for Moreton Bay Regional Council.

Partnering with Moreton Bay Regional Council

- developing integrated transport and land use master plans for Strathpine and Caboolture centres, including community boulevard treatments
- supporting redevelopment around Strathpine including increased densities and mixed use development and management of car parking location and supply
- master planning in Caboolture town centre to improve connectivity to rail station, including relocating of park 'n' ride on the eastern side of the station.

Map 9.7 – 2031 strategic projects Moreton Bay Regional Council



Summary List of Projects

- M1 North South Urban Arterial from Bruce Highway to Mango Hill
- M2 Rail line from Petrie to Kippa-Ring
- M3 Strategic bus/HOV priority corridors packaged with UrbanLink bus services
- M4 Strategic active transport corridors
- M5 Upgrade of Caboolture West connection (Bellmere Road)
- M6 Upgrade Bruce Highway intersection at Pumicestone Road and Boundary Road
- M7 Upgrade Caboolture–Bribie Island road
- M8 Upgrade Caboolture to Redcliffe corridor to urban arterial
- M9 Upgrade urban arterial from Morayfield to Upper Caboolture
- M10 Upgrade rail line from Lawnton to Caboolture
- M11 Urban arterial connection from West Moreton Bay arterial to Burpengary Road
- M12 Upgrade road between Burpengary and Strathpine to urban arterial
- M13 Upgrade road from Joyner to Strathpine to urban arterial
- M14 Upgrade road from Strathpine to Albany Creek to urban arterial
- M15 Investigate need for urban arterial network north of Caboolture
- M16 Investigate improved urban connections for local trips in new growth areas
- M17 Investigate east Moreton Bay urban arterial from Mango Hill to Caboolture–Bribie Island
- M18 Major park 'n' ride at Caboolture North
- M19 Major park 'n' ride at Kinsellas Road

Note: responsibility for delivery of these projects is to be determined

Logan City Council

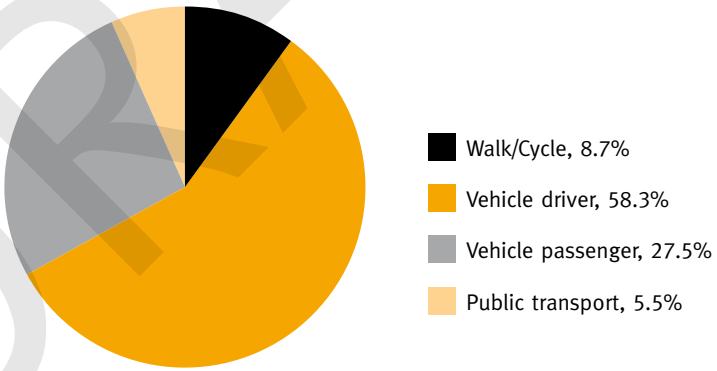
- Population in 2006: 260 000
- Indicative planning population in 2031: 434 000
- Dwellings in 2006: 90 000
- Forecast additional dwellings in 2031: 70 000
- Daily trips by residents in 2006: 910 000
- Daily trips by residents in 2031: 1 490 000

Note: these figures do not include increased population for Flagstone and Yarrabilba identified as part of the Queensland Growth Management Summit

Figure 9.12 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Logan city	9%	15%	29%	56%	80%	20%

Figure 9.13 – current mode share



Logan City Council covers a large area and includes the southern suburbs of greater Brisbane and the major growth areas to the north of Beaudesert.

Forecast growth of population from 260 000 in 2006 to 434 000 in 2031 will mean a population increase of 67%. In the short to medium-term population growth is expected to be focused around Park Ridge and Bahrs Scrub, adjacent to existing urban development. Beyond 2021 population growth will occur in the south-west, including new communities at Flagstone, Greenbank and Yarrabilba.

Logan City Council is pursuing employment growth and diversification to prevent a jobs shortfall by 2031. Historically, the Logan economy has comprised retail and manufacturing services. Logan City Council aims to significantly increase commercial and office based employment opportunities at Logan Central, Springwood and Beenleigh. New urban communities at Park Ridge, North Maclean, Flagstone and Yarrabilba will provide significant local employment and will require good access to the major industrial development area at Bromelton, in the neighbouring Scenic Rim Regional Council.

Quick transport facts on Logan City

- low public transport use, with 5.5% of daily and 7.1% of work trips by public transport
- long commute distances, with 44% of work trips longer than 20 kilometres, with the average commute trip 19.4 kilometres
- 7% of households do not have a car
- 34% of the population do not have a driver's licence.

Logan City Council

Transport issues and challenges

- new road and public transport corridors will be required to service new communities
- need to improve links to Ipswich
- links need to be provided to major employment and industrial growth area at Bromelton in Scenic Rim Regional Council.

2031 targets

Logan city will experience a significant growth in travel demand with trips made by Logan city residents increasing by 64% from 910 000 trips per day in 2006 to 1.49 million trips per day in 2031.

The 2031 transport targets are to reduce the share of trips by private car from 85.8% to 73%, through an:

- increase in the share of trips by public transport from 5.5% to 10%, taking daily trips from 50 000 in 2006 to 140 000 in 2031
- increase in the share of trips by walking from 8.1% to 10%
- increase in the share of trips by cycling from 0.6% to 7%.

This would still see private car trips increase from 780 000 in 2006 to 1.1 million in 2031.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	5.5%	10%	8.1%	10%	0.6%	7%	85.8%	73%
Work trips	7.0%	22%						

Figure 9.14 – average composition of 25 trips made per person each week in Logan city

To achieve these targets, the weekly travel patterns of the average Logan city resident would need to change only incrementally

Transport and land use integration

Centres access hierarchy

Logan Central is a sub-regional hub and is the administration centre of the Logan City Council. It is located on the Beenleigh/Gold Coast rail line and has better land use characteristics to support public transport use than other centres in Logan.

Beenleigh, Springwood, Browns Plains and Meadowbrook will be district hubs.

The proposed major greenfield centres of Flagstone and Yarrabilba will be included in the centres access hierarchy as they develop.

Increasing densities around transit corridors

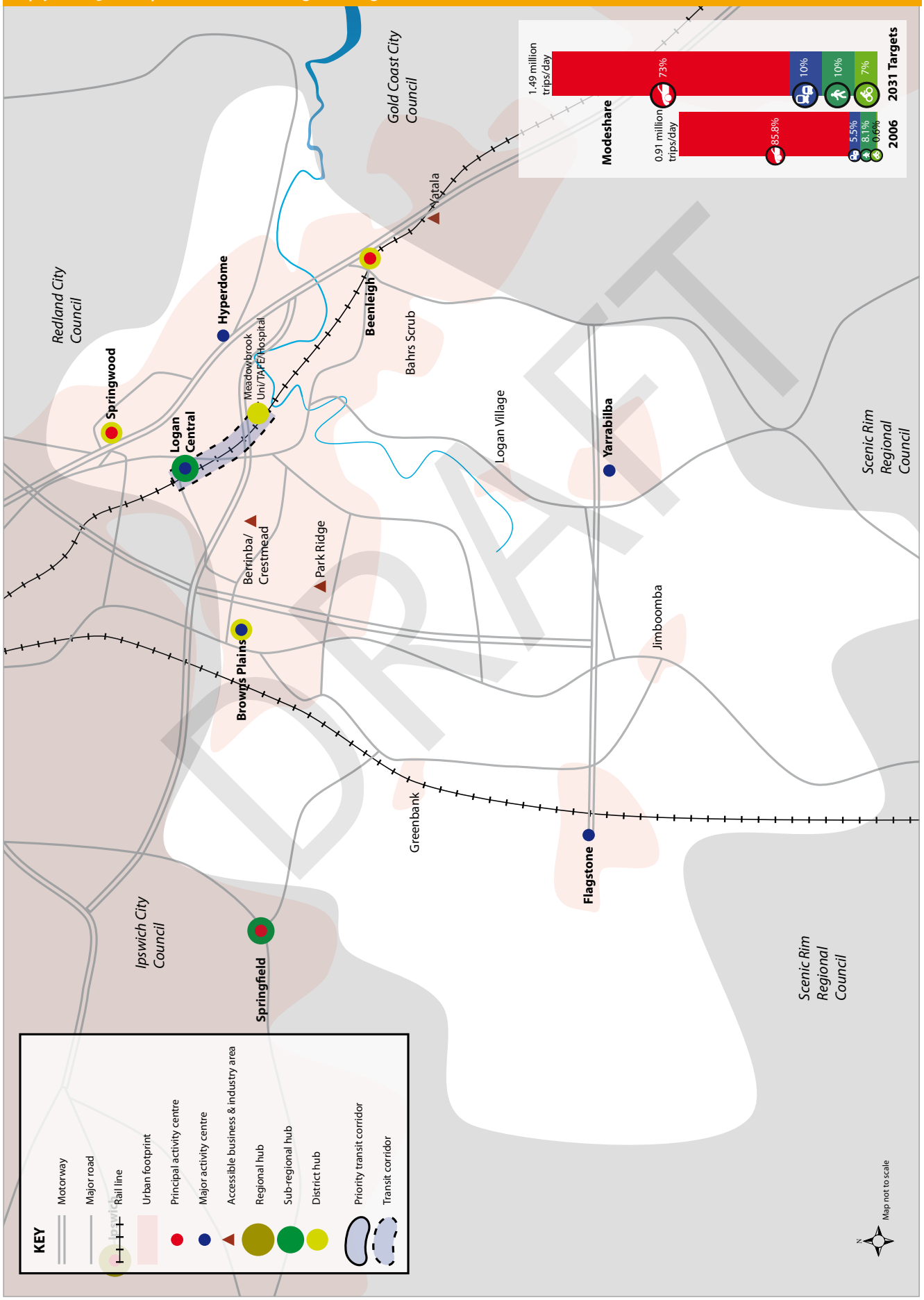
In later years of the plan, land use mix and densification is supported between Logan Central and the Meadowbrook TAFE/University/Hospital precinct. Implementation will be subject to further detailed land use planning in partnership with local government.

Land use density and mix is generally supported within 400-800m of all public transport stations or stops along the other priority public transport corridors.

Accessible enterprise precincts

Heavy industry should be encouraged to locate in Park Ridge as it has good access to the priority freight network.

Map 9.8 - 2031 transport and land use integration Logan



Logan City Council

2031 transport network for Logan city

The passenger rail service is expected to extend from Salisbury to Flagstone by 2031 to service existing and new communities and will provide ExpressLink services to Brisbane. The extension of this line to Beaudesert is a longer term opportunity.

UrbanLink bus services will provide quality connections between activity centres at Logan Central, Springwood, Logan Hyperdome and Browns Plains. The extension of the South East Busway to Springwood will also provide benefits to residents travelling to destinations located on the busway network in Brisbane city.

There will also be an UrbanLink bus service from Yarrabilba to Ripley via Flagstone and Springfield. Bus services will link Yarrabilba to the rail network at Beenleigh and Loganlea.

There will also be a focus on improvements to the Logan Motorway and Mt Lindesay Highway to ensure the efficient movement of freight. Delivery of the Southern Freight Rail Corridor between Rosewood and Kagaru in conjunction with the Inland Rail project would enable standard gauge rail connections from western Queensland, the southern states and Ipswich industrial areas to Bromelton, Acacia Ridge and the Port of Brisbane.

New multi-modal arterial road corridors need to be planned and provided to all new population growth areas. Park 'n' ride access will also be provided at the edge of urban development to allow the dispersed semi-rural communities access to high standard public transport services.

A southern extension of the Gateway Motorway from the Logan Motorway to the Southern Infrastructure Corridor will provide access to the region's motorway network for new communities. This extension will also enable freight vehicles from the Park Ridge Enterprise Precinct improved access to the Port, Pacific Motorway and Ipswich Motorway. A corridor study will confirm the corridor alignment and timing.

The Southern Infrastructure Corridor is expected to be in place between Flagstone and Yarrabilba, with a corridor preserved from Yarrabilba to the Pacific Motorway.

A long-term road corridor from Flagstone to Bromelton will be preserved.

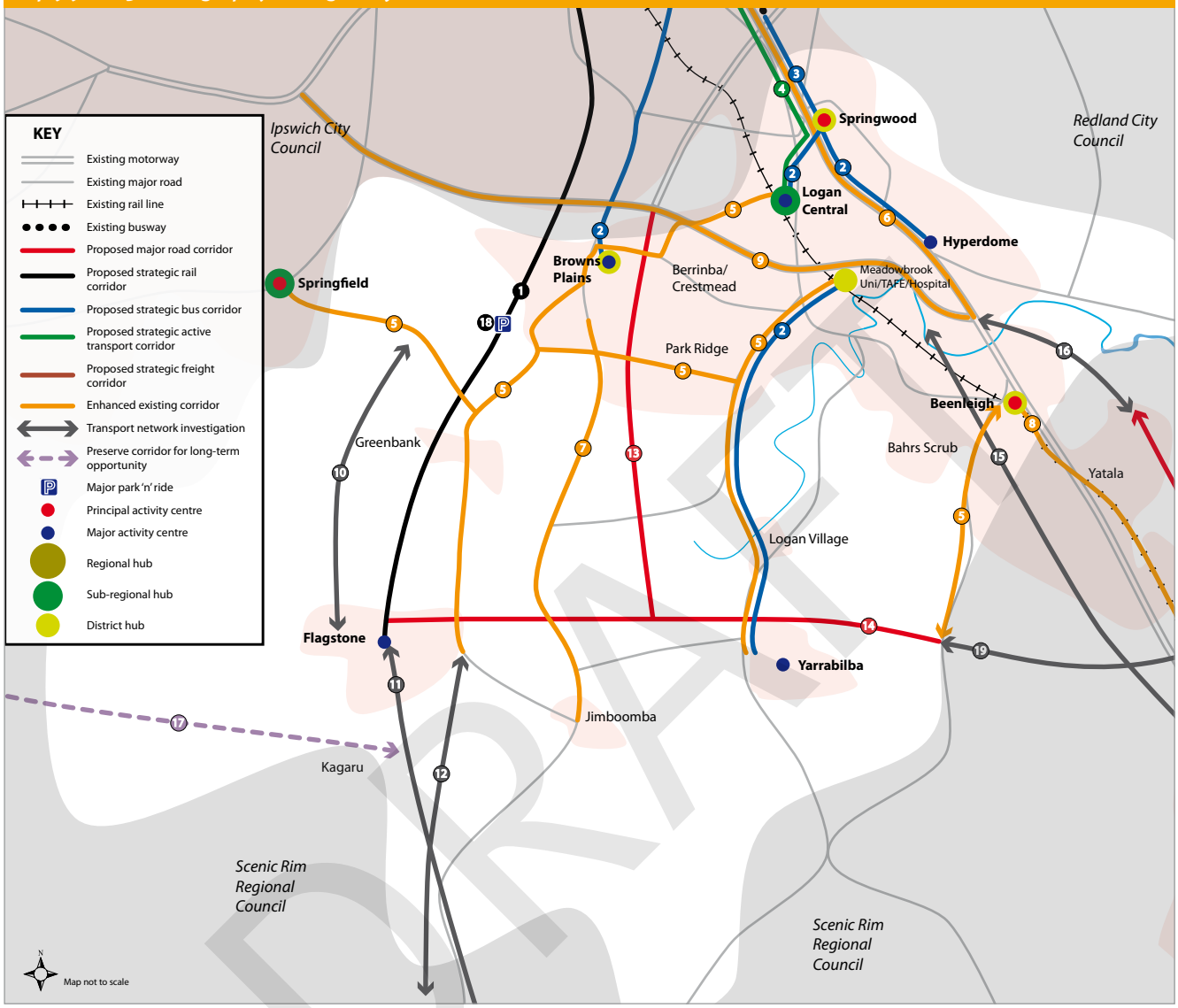
Improved active transport infrastructure will include a focus on routes within five kilometres of the centres of Logan Central, Springwood, Beenleigh and Browns Plains.

Map 9.9 shows the 2031 strategic transport network for Logan city.

Partnering with Logan City Council

- ensuring the planning scheme supports long-term change towards high density employment and mixed use development between Logan Central and Meadowbrook
- providing road and rail infrastructure to service the major new communities of Flagstone and Yarrabilba
- working to ensure appropriate transport network design and infrastructure charging before approving new development areas
- investigating major infrastructure projects including
  - the passenger rail to Beaudesert
  - freight rail from Bromelton to Rosewood via Kagaru
  - the Southern Infrastructure Road Corridor from Yarrabilba to Ormeau.

Map 9.9 – 2031 strategic projects Logan city



Summary List of Projects

L1 Passenger rail service Salisbury to Flagstone

L2 Strategic bus/HOV priority corridors packaged with UrbanLink bus services

L3 Extension of South-East Busway to Springwood

L4 Strategic active transport corridors

L5 Upgrades to urban arterials: Logan Central to Browns Plains; Browns Plains to Flagstone; Springfield to Greenbank; Greenbank to Logan Reserve via Park Ridge; Meadowbrook to Yarrabilla; Yarrabilba to Beenleigh

L6 Upgrade of Pacific Motorway from Gateway Motorway to Loganholme

L7 Upgrade Mt Lindesay Highway

L8 Upgrades to rail line from Beenleigh to Robina

L9 Upgrade Logan Motorway from Ipswich Motorway to Pacific Motorway for freight

L10 Investigate urban arterial from west Mt Lindesay to east of Spring Mountain

L11 Investigate passenger rail from Flagstone to Beaudesert

L12 Investigate Flagstone to Bromelton Road corridor

L13 Extend Gateway Motorway extension from Logan Motorway to Southern Infrastructure Road Corridor

L14 Construct Southern Infrastructure Road Corridor from Flagstone to Beaudesert-Beenleigh Rd

L15 Investigate upgrading arterial connections from Gateway Motorway to Oxenford to improve north-south links for local trips

L16 Investigate urban arterial connection from Logan city to Intra-regional transport corridor

L17 Finalise and preserve Southern Freight Rail Corridor from Rosewood to Kagaru

L18 Hillcrest major park 'n' ride

L19 Investigate Southern Infrastructure Corridor to Pacific Motorway Beaudesert-Beenleigh Road

Note: responsibility for delivery of these projects is to be determined

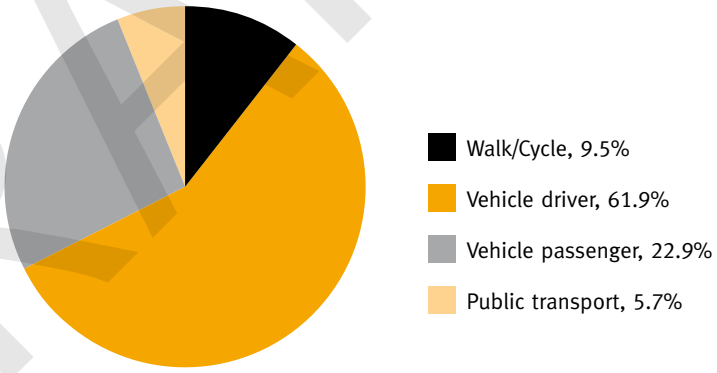
Redland City Council

- Population in 2006: 131 000
- Indicative planning population in 2031: 169 000
- Dwellings in 2006: 50 000
- Forecast additional dwellings in 2031: 21 000
- Daily trips by residents in 2006: 460 000
- Daily trips by residents in 2031: 660 000

Figure 9.15 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Redland city	10%	19%	34%	55%	86%	14%

Figure 9.16 – current mode share



Redland City Council comprises a group of urban, rural, bushland and island communities fringing Moreton Bay on the eastern side of greater Brisbane.

The population of Redland city is forecast to increase by 29% between 2006 and 2031. This increase is modest both in terms of size and growth rate, compared to the rest of the region's cities. About 70% of the growth will be infill development in existing urban areas.

The importance of the koala population in Redland city is well recognised and influences transport and land use policies. Intensified development of all kinds brings wider roads with more traffic, which increases the potential for injury to the koala population.

Many commuter trips are focused on Brisbane city. There are opportunities to increase local employment in the existing activity centres and the enterprise precincts at Thornlands and Redland Bay. Council has a goal of 60% employment self containment which requires an additional 24 000 jobs within Redland city by 2031.

Urban development is focused around existing centres that are linked though an established road and rail network. Two small development areas in Thornlands will be master planned to ensure public and active transport connections are provided.

The rail network is indirect and limited to the northern parts of the city. There has been an historical reliance on bus services for commuter travel to Brisbane as they provide a more direct service from the southern and eastern suburbs.

Quick transport facts on Redland city

- low public transport use, with 5.7% of daily and 8.4% of work trips by public transport
- two-thirds of work trips are longer than 10 kilometres, with the average commute trip 18km
- 6% of households do not have a car, the lowest in SEQ
- 28% of the population do not have a driver's licence.

Redland City Council

Transport issues and challenges

- dispersed settlement is difficult to service with public transport
- even with local employment growth many residents will need to travel to Brisbane, Logan and the Gold Coast for work
- ferry transport and car parking for Moreton Bay islands which could grow from a population of 5200 to more than 24 000, depending on council policies and infrastructure availability
- traffic congestion on some routes affects travel time reliability, particularly Old Cleveland Road, Redland Bay Road and Finucane Road.

2031 targets

The 2031 transport targets aim to reduce the share of trips made by private car from 84.8% to 72%, with an:

- increase in the share of trips by public transport from 5.7% to 10%, taking daily trips from 25 000 in 2006 to 65 000 in 2031
- increase in the share of trips by walking from 8% to 10%
- increase in the share of trips by cycling from 1.5% to 8%.

This would still see private car trips increase from 390 000 in 2006 to 480 000 in 2031.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	5.7%	10%	8%	10%	1.5%	8%	84.8%	72%
Work trips	8.4%	20%						

Figure 9.17 – average composition of 25 trips made per person each week in Redland city

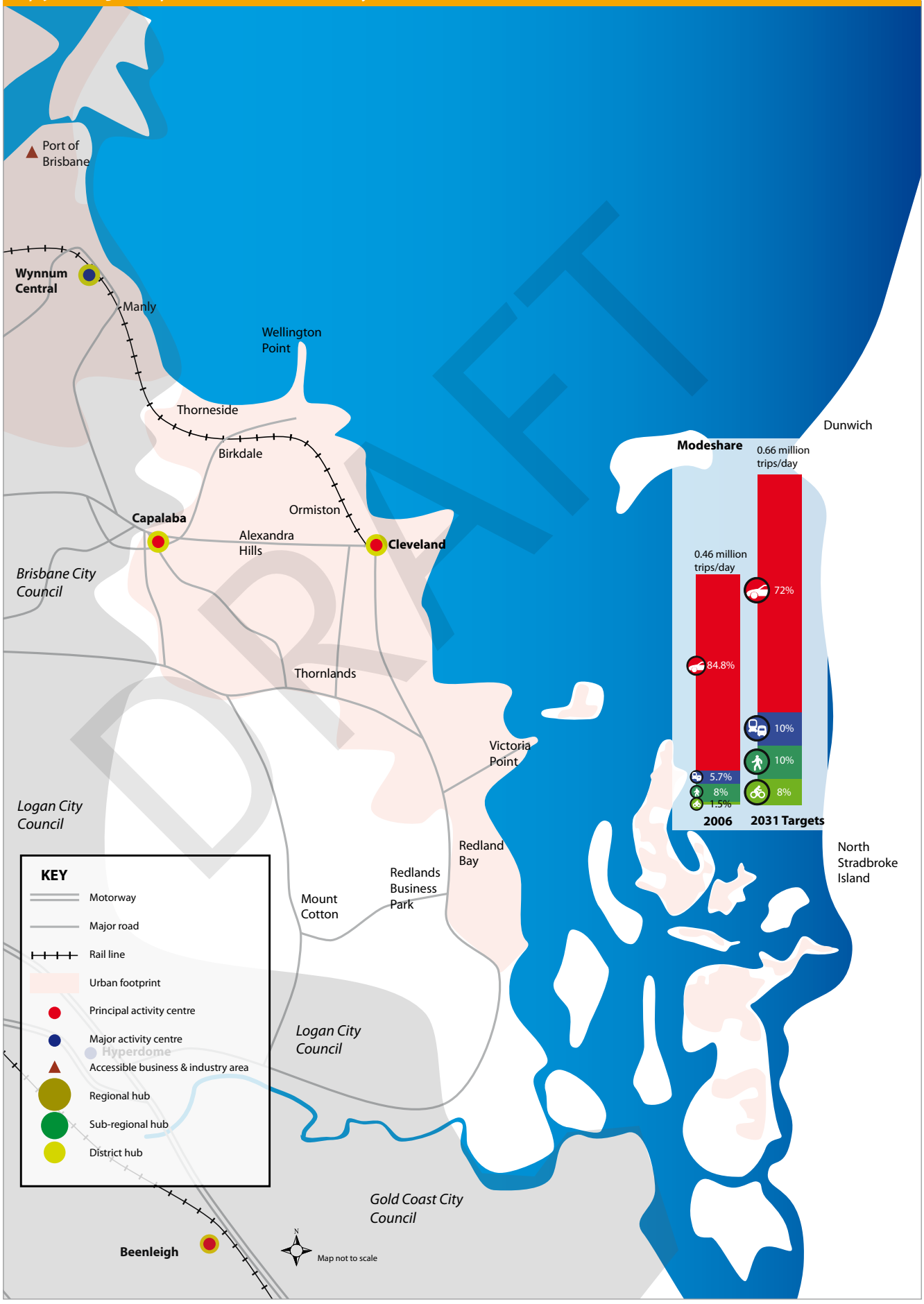
To achieve these targets, the weekly travel patterns of the average Redland city resident would need to change only incrementally.

Transport and land use integration

Centres access hierarchy

Capalaba and Cleveland will be district hubs and the focus for public transport contestable employment growth. The sub-regional hub at Carindale in Brisbane city, will be a hub for many bus services and will be the terminus for the Eastern Busway, with Capalaba linked by bus priority. Planning for Capalaba and Cleveland includes intensified, well-planned residential and commercial development, with provision for eight storey buildings focused around walkable town centres.

Map 9.10 – 2031 transport and land use Redland city



Redland City Council

2031 transport network for Redland city

The Eastern Busway will be in place from Coorparoo to Capalaba. This will benefit bus services to Brisbane city allowing buses faster and more reliable travel time to Brisbane city.

This is an example of infrastructure being planned in Brisbane city which will provide significant benefits for Redland city residents as many trips will be made to Brisbane and elsewhere in the region.

Duplication of the Cleveland line from Manly to Cleveland will allow more frequent rail services to Brisbane and Brisbane Airport.

ExpressLink services will improve running times between Cleveland and Brisbane, while UrbanLink services will increase capacity and frequency services inbound from Manly.

The removal of open level crossings will improve safety and improve traffic flow.

A strategic transport corridor has been protected for many years as an extension of Moreton Bay Road from Capalaba to Cleveland. This corridor will not be required as a road given the establishment of targets for increased public and active transport mode shares and the restricted population growth in Redland city.

An investigation of the best use for the corridor needs to be undertaken jointly between council and the state government. The corridor could be used for some form of dedicated public transport use to connect the centres of Cleveland and Capalaba. However, it has no potential to support denser public transport oriented urban development and this would reduce its effectiveness. Its best use is likely to be a combination of active transport, recreation and environmental protection uses.

A local road connection from Redland Bay Road across the Logan River would improve connections to employment and other attractions in Logan and Gold Coast City Councils. It would reduce reliance on the single M1 crossing point of the Logan River at Loganholme. This low traffic road would not form any part of a longer corridor between Brisbane and the Gold Coast.

Cleveland will be an active transport precinct, with a focus on improving active transport facilities within a five-kilometre radius of Cleveland centre.

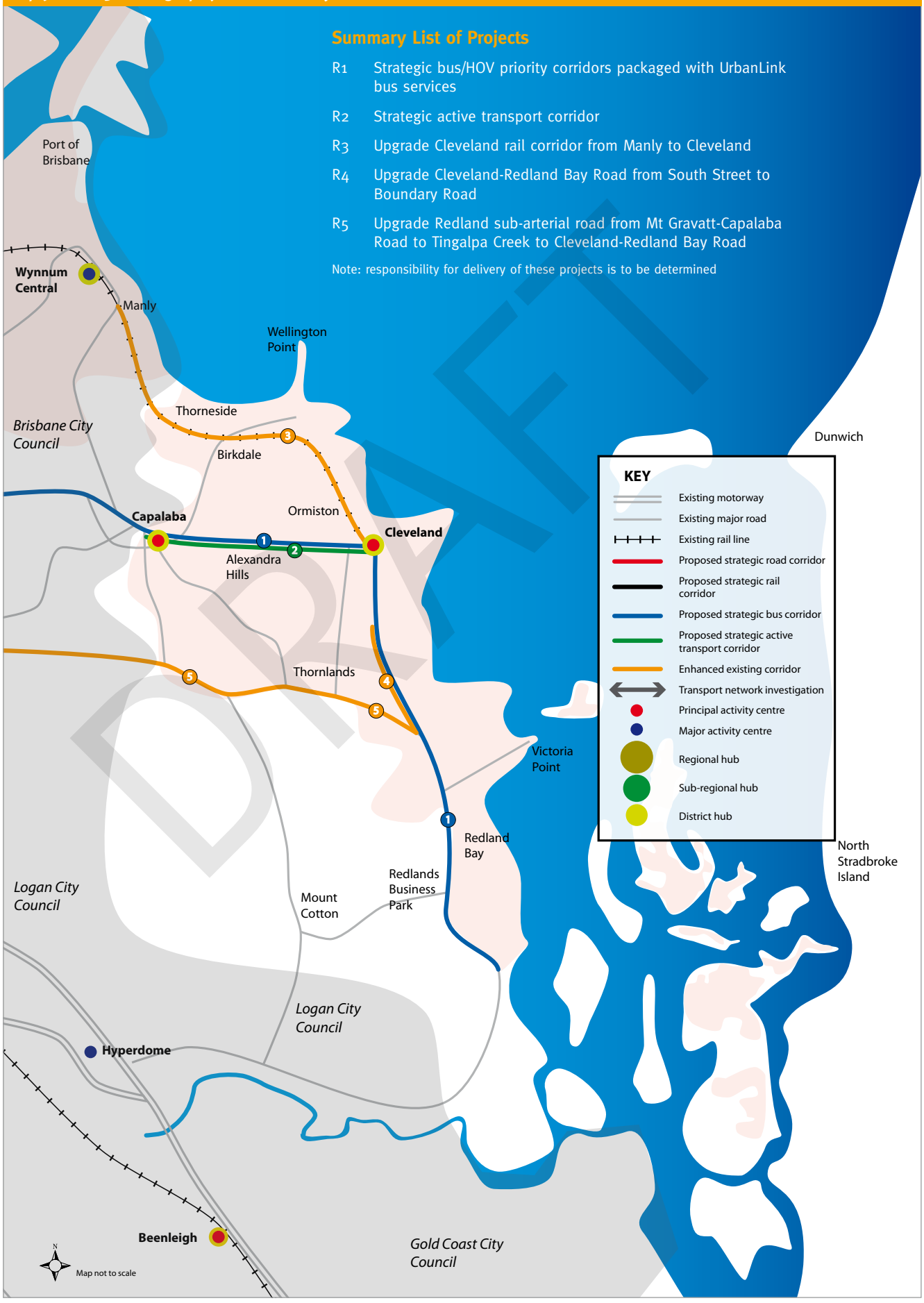
Redland City Council is dealing with a range of issues concerning population growth and provision of infrastructure for Moreton Bay islands. This includes development of local parking and transport policies.

Map 9.11 shows the 2031 strategic transport network for Redland city.

Partnering with Redland City Council

- ensuring the planning scheme supports increased densities and managed location and supply of car parking in Capalaba and Cleveland towns
- ensuring appropriate public and active transport network design and infrastructure charging before approving new development areas
- investigating the best use of the Moreton Bay Road extension corridor
- investigating the need for and timing of a local connection across the Logan River to link the cities of Redland and Gold Coast without having to rely on the Pacific Motorway corridor.

Map 9.11 – 2031 Strategic projects Redland Bay



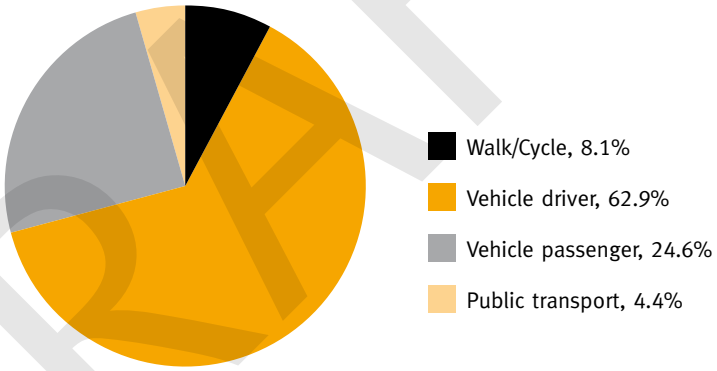
Gold Coast City Council

- Population in 2006: 467 000
- Indicative planning population in 2031: 749 000
- Dwellings in 2006: 202 500
- Forecast additional dwellings in 2031: 143 000
- Daily trips by residents in 2006: 1 630 000
- Daily trips by residents in 2031: 2 760 000

Figure 9.18 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Gold Coast	13%	25%	49%	79%	88%	12%

Figure 9.19 – current mode share



Although it began as a weekend and holiday destination for Brisbane residents, the Gold Coast has become Queensland's second largest city, with a range of coastal and hinterland lifestyles and an increasingly diverse and sophisticated range of employment opportunities.

Growth is forecast to continue into the next two decades, with population increasing by 60% from 467 000 in 2006 to 749 000 in 2031. Under the *SEQ Regional Plan*, over 65% of this growth will be accommodated as infill development within existing urban areas.

Urban development is concentrated in growth centres between Yatala and Coolangatta.

Continuous development extends south of Coolangatta beyond the Queensland border into the Tweed Shire. The urban form consists of medium to high density development along the coastal spine and pockets of canal development, surrounded by larger areas of low density residential housing. Rural residential living areas are located further west.

The highest population density is between Surfers Paradise and Broadbeach, with medium density between Broadbeach and Coolangatta. These suburbs are connected by the spine of the Gold Coast Highway which is the corridor for the proposed Gold Coast light rail project.

Other areas with new or infill medium density development include Southport, Carrara, Tugun, Reedy Creek, Helensvale, Bundall, Robina and Varsity Lakes.

The development of new communities will be focused at Coomera, Hope Island, Pimpama, Ormeau, Maudsland and Reedy Creek.

Substantial employment growth will be required to support forecast population growth to 2031. Employment has traditionally been in the housing and tourism sectors but has diversified in the last decade to include considerable export oriented commerce, education and technology businesses. There are also specialist precincts like the film and media industry cluster at Oxenford and the Gold Coast Marine precinct at Coomera.

Gold Coast city has generally been assumed to have a strong dependence on commuter trips to Brisbane, however about 15 000 workers commute to Brisbane each day, compared to 10 000 greater Brisbane residents who commute to the Gold Coast.

Transport decisions will play an integral role in the ongoing development of the city and in particular, delivering a vision of a much more sustainable, less car dependent community. The Gold Coast light rail project provides an important catalyst to support sustainable urban lifestyles.

Quick transport facts on Gold Coast city

- public transport mode share is 4.4% of all trips
- around half of the population travel less than 10km to work, representing significant potential to increase the number of people cycling to work
- 8% of the Gold Coast workforce is employed in Brisbane
- 29% of the population do not have a driver's licence
- average distance travelled to work is 15.2 kilometres for all destinations other than the Brisbane CBD
- Gold Coast residents travelling to the Brisbane CBD have an average journey to work trip length of 71.5 kilometres.

Gold Coast City Council

Transport issues and challenges

- significant population and activity growth on the Gold Coast will result in a major increase in trips
- major holiday destination with significant increases in transport activity during peak tourist periods
- public transport, walking and cycling needs to play an increasing role in moving people efficiently, to ensure accessibility is maintained
- increasing capacity on Gold Coast to Brisbane passenger rail services, especially in peak periods
- providing new rail stations on the Gold Coast line to accommodate urban growth while maintaining a rapid journey from Brisbane to Gold Coast
- providing a light rail system to meet demand in the higher density coastal corridor between Southport and Coolangatta to ensure accessibility to activities
- servicing travel demand from the growth area of Coomera to the rest of the Gold Coast and providing alternatives to car travel
- east-west bus services need to be enhanced between heavily populated coastal areas to encourage greater use of the rail line for longer trips to reduce impacts on the Pacific Motorway
- lack of Albert River crossings, resulting in pinch points on the road network
- poor connectivity in many local communities
- an over reliance on the Pacific Motorway for local trips due to lack of urban arterial roads providing connections to centres.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	4.4%	15%	6.8%	8%	1.3%	8%	87.5%	69%
Work trips	3.8%	20%						

Figure 9.20 – average composition of 25 trips made per person each week on the Gold Coast

To achieve these targets, the weekly travel patterns of the average Gold Coast resident would need to change only incrementally.

2031 targets

By 2031 the Gold Coast is expected to have a population of almost 800 000 with daily trips growing by 69% from 1.63 million in 2006 to 2.76 million in 2031.

With an estimated 65% of new housing developed through urban infill, the 2031 transport targets aim to reduce the share of trips made by private car from 87.5% to 69%, made up of an:

- increase in the share of trips by public transport from 4.4% to 15%, taking daily trips from 72 000 in 2006 to 400 000 in 2031
- increase in the share of trips by walking from 6.8% to 8%
- increase in the share of trips by cycling from 1.3% to 8%.

This would still see the number of daily private car trips made by Gold Coast residents increase 33%, from 1.43 million in 2006 to 1.91 million in 2031.

Transport and land use integration

Centres access hierarchy

The extended Southport business centre is the regional hub and location for public transport contestable commercial, administrative and educational uses. Southport will accommodate 40 000 extra residents and 25 000 jobs by 2031.

Robina and Helensvale will be the sub-regional hubs on the Gold Coast. Robina is on the rail line and also will have a high-frequency bus connection to the light rail at Broadbeach. Helensvale is at the junction of the light rail and passenger rail and is a suitable location for hubbing bus services.

Coomera is an emerging major centre with potential for transit oriented development and will be the future hub for high-frequency bus services accessing Coomera centre as well as providing a connection to the rail line.

Increasing densities along transit corridors

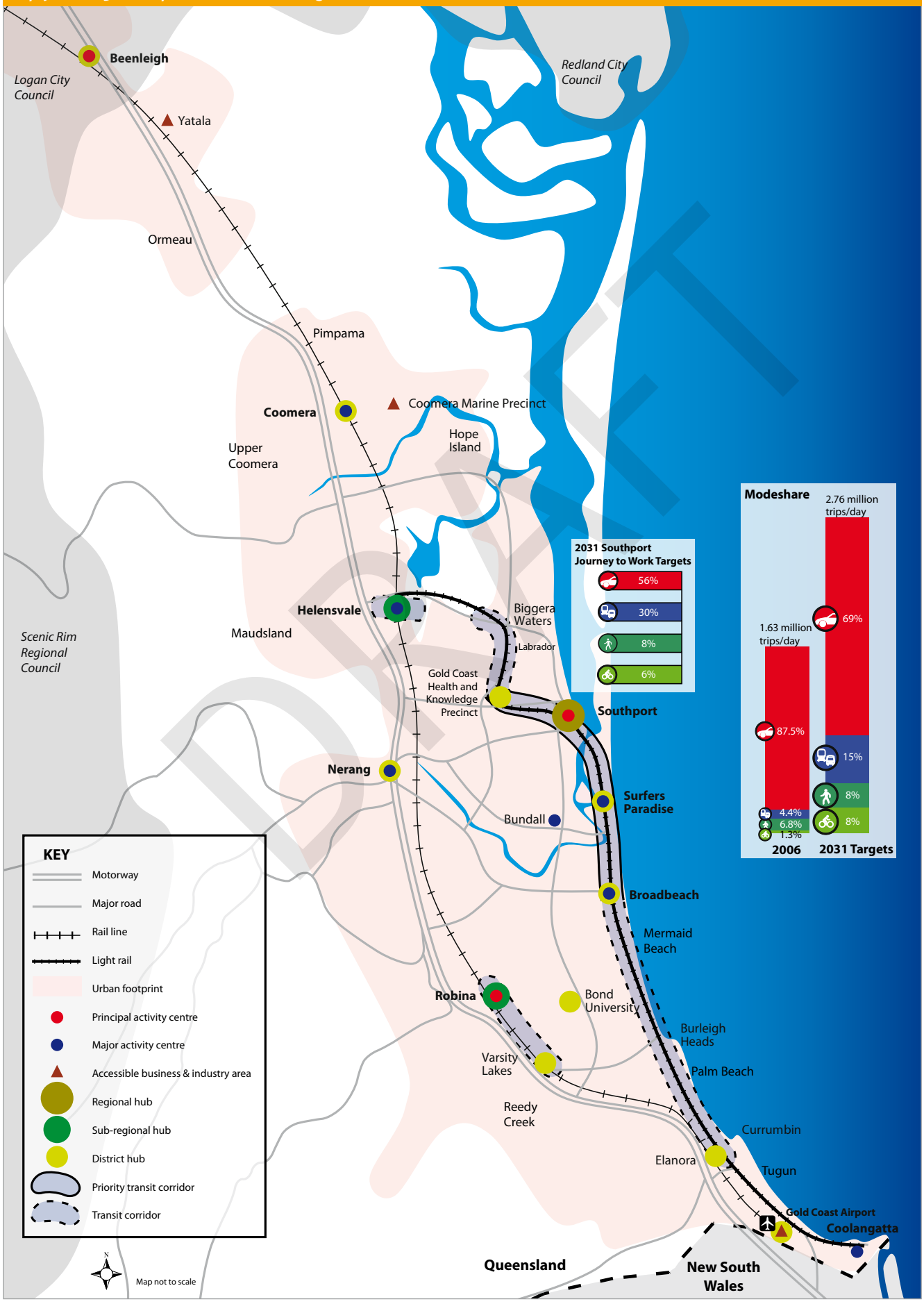
The priority transit oriented corridor is the Gold Coast light rail corridor from Gold Coast Health and Knowledge Precinct to Broadbeach. Stage one of the light rail will connect multiple destinations including Griffith University, the new Gold Coast Hospital and Southport, as well as high density residential destinations along the coastline including Broadbeach and Surfers Paradise. With multiple destinations, a high-frequency of public transport services will operate along the corridor all day, every day.

Future stages of the light rail will connect from the Gold Coast University Hospital to Helensvale rail station, and from Broadbeach to Coolangatta.

The Broadbeach-Elanora corridor along the Gold Coast Highway should also be a focus for increased densities and mixed use development as the light rail extends south. Implementation will be subject to further detailed land use planning in partnership with local government.

Land use density and mix is supported within 400-800 metres of all other public transport stations or stops along high-frequency public transport routes illustrated in the transport and land use integration map (Map 9.12).

Map 9.12 - 2031 Transport and Land use integration Gold Coast



Gold Coast City Council

2031 transport network for the Gold Coast

The transport network on the Gold Coast will be reoriented away from its present heavy reliance on the Pacific Motorway and Gold Coast Highway spines to be organised around the major public transport spines of the Gold Coast light rail, strategic high-frequency bus corridors and the Gold Coast rail line.

The Gold Coast rail line will extend to Coolangatta. New stations on the existing Gold Coast rail line will be investigated to support industrial and residential communities within the urban footprint.

Services will be layered with CoastLink services to Brisbane city and UrbanLink services between Coomera and Coolangatta.

The pattern of very high density development along the coastal strip makes mass public transport critical for accessibility. The 2031 light rail network will extend from Helensvale to Coolangatta and will provide residents and tourists with a high quality service to access destinations and attractions located on the coastal corridor.

The light rail will be supported by improved public transport links to the rest of the coast, particularly low and medium density communities located between the coast and the Gold Coast rail corridor. This will need to be facilitated by improved high-frequency bus services packaged with bus priority on east-west connecting roads.

The high proportion of work (34%) and daily trips (71%) less than 10 kilometres in length represents significant potential to increase the share of trips made by active transport. Getting the right infrastructure in place will help support growth in active travel, which can help relieve some of the growth pressures on other parts of the transport network.

The strategic active transport corridor will link Helensvale to Robina via Southport, Surfers Paradise and Broadbeach. Provision of active transport infrastructure should be prioritised within five kilometres of Southport, Robina, Broadbeach and Helensvale.

The northern areas of the Gold Coast and urban areas to the west of the Pacific Motorway require urban arterial roads for local trips, bus services, walking and cycling to reduce the potential for car dependence and overuse of the Pacific Motorway for local trips.

The development of urban arterial roads will require more river crossings. The current reliance on the limited crossings of the Albert River means that the Pacific Motorway and its service roads cater for virtually all trips that cross the river. This makes the transport network vulnerable at this point and forces use of the motorway for local trips, reducing its capacity and efficiency for longer distance and freight trips.

An upgraded Pacific Motorway (M1) will cater for inter-regional trips and long distance freight. It will also inevitably perform a western bypass function. Ensuring the Pacific Motorway meets these needs requires development of urban arterial roads in the growth areas to carry local traffic and act as bus and active transport strategic corridors.

Apart from interstate freight transport using the Pacific Motorway, the major Yatala industrial development area requires reliable road freight links to:

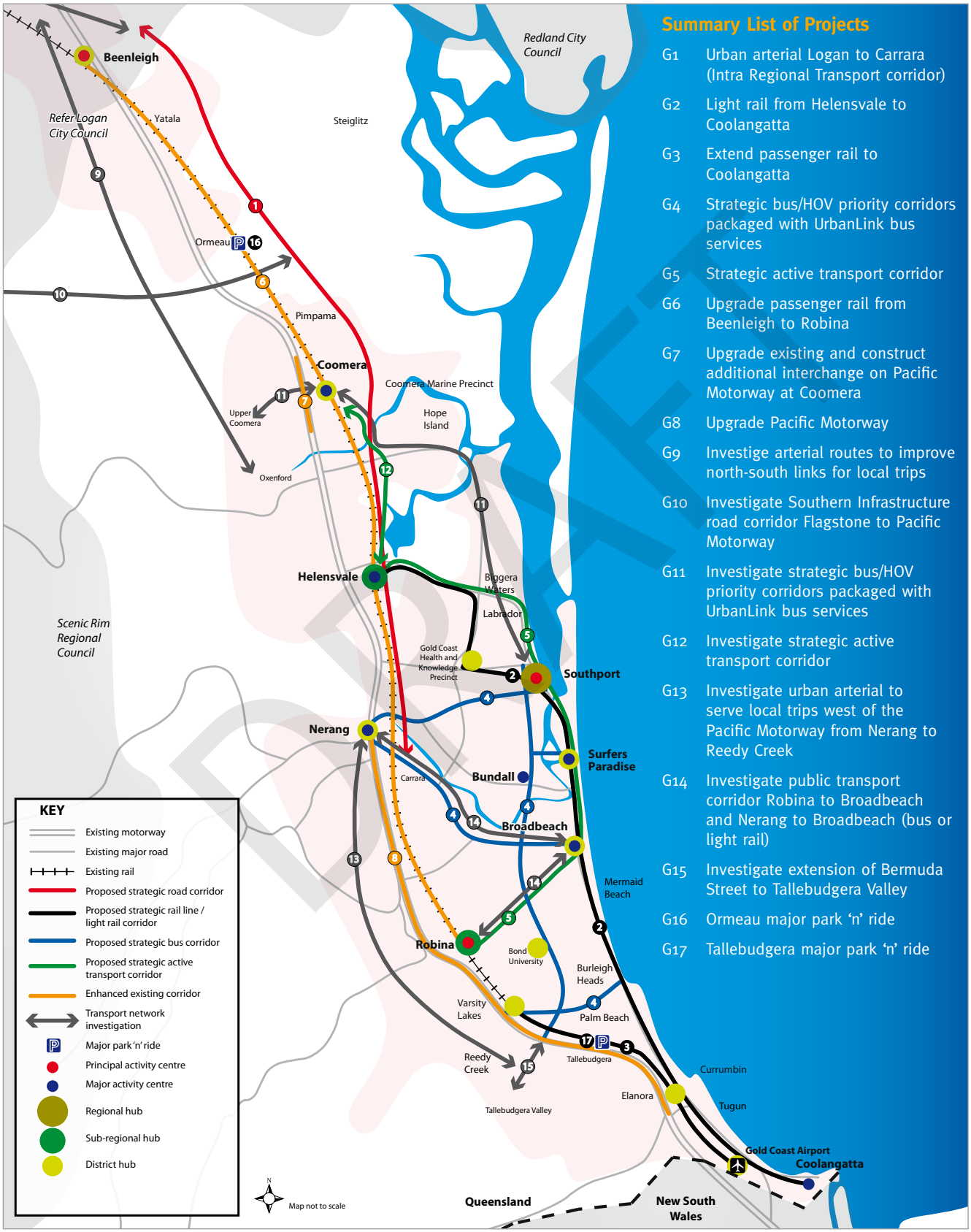
- industries in metropolitan Brisbane
- Acacia Ridge inter-modal terminal to the Port of Brisbane
- the future major industrial area at Bromelton.

A long-term corridor should be preserved for the proposed Southern Infrastructure Corridor from Ormeau to Yarrabilba.

Partnering with Gold Coast City Council

- working together to deliver community boulevard treatment on the Gold Coast Highway in conjunction with delivery of light rail
- supporting increased densities and mix of development along the Gold Coast light rail corridor and around existing and future stations on the Gold Coast rail line
- encouraging location of public transport contestable employment in Southport
- investigating the Southern Infrastructure road corridor from Ormeau to Greater Flagstone in Logan city.

Map 9.13 – 2031 Strategic projects Gold Coast



Note: responsibility for delivery of these projects is to be determined

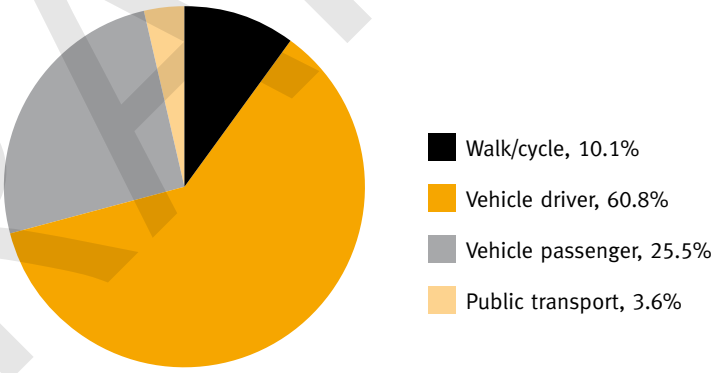
Sunshine Coast Regional Council

- Population in 2006: 295 000
- Indicative planning population in 2031: 497 000
- Dwellings in 2006: 130 000
- Forecast additional dwellings in 2031: 98 000
- Daily trips by residents in 2006: 1 030 000
- Daily trips by residents in 2031: 1 755 000

Figure 9.21 – 2008 journey to work trip length

	‹3km	‹5km	‹10km	‹20km	‹30km	›30km
SEQ	13%	23%	46%	75%	89%	11%
Sunshine Coast	16%	29%	50%	75%	85%	15%

Figure 9.22 – current mode share



The Sunshine Coast includes residential areas and centres located along the coast, as well as the major inland towns of Nambour and Beerwah. The Sunshine Coast hinterland also contains small towns including Maleny, Mapleton and Peachester.

Population on the Sunshine Coast is forecast to increase by 68% from 295 000 in 2006 to 497 000 in 2031. Most of the growth will be accommodated in new development areas. There is an important opportunity to achieve a more sustainable form of new urban development by ensuring new communities are designed around public transport and active transport.

A high proportion of urban development is located south of the Maroochy River, with major new development areas of Caloundra South and Palmview.

Maroochydore will be the principal focus for business, community services and employment on the Sunshine Coast.

Major activity centres such as Caloundra will also play an important role for retail, health and community services. Nambour will support employment locally and in its surrounds.

Kawana town centre, located on the proposed Sunshine Coast rail line, is an emerging major centre with the opportunity to develop as a hub for public transport and a location for well designed high density employment uses. Major new employment centres could also emerge at:

- proposed Caloundra South town centre
- Caloundra Regional Business and Industrial Park with forecast employment of nearly 30 000 by 2031
- Sippy Downs with a university, business hub and enterprise areas with forecast employment of 20 000 people and with 15 000 students by 2031
- Sunshine Coast Airport industrial precinct.

Quick transport facts on the Sunshine Coast

- high car dependency with 86% of personal trips in private vehicles
- low public transport use, with only 3.6% of all trips by public transport and 2.5% of journey to work trips on public transport
- 5.4% of journey to work trips are by active transport – the second highest in SEQ after Brisbane city
- 50% of journey to work trips are less than 10 kilometres, but 15% are longer than 30 kilometres
- 28% of the population do not have a driver's licence
- average distance travelled to work is 17.3 kilometres for all destinations other than the Brisbane CBD
- Sunshine Coast residents travelling to the Brisbane CBD have an average trip length of 96 kilometres.

Sunshine Coast Regional Council

Transport issues and challenges for the Sunshine Coast

Some of the issues for the transport system on the Sunshine Coast include:

- relatively dispersed residential areas and centres located along an extensive coastal spine are difficult to service with public transport, particularly north of the Maroochy River
- major holiday destination with significant increases in transport activity during peak tourist periods
- public transport links between centres and population growth areas need to be enhanced to keep up with population growth
- large gaps between populated areas west of the coastal strip make these areas difficult to service with public transport
- lack of arterial road network to cater for local trips, forcing use of the Bruce Highway for many local trips
- 28% of residents will be aged over 65 by 2031, presenting a major challenge to ensure people can continue to access health care facilities and recreational opportunities, particularly when they are no longer able to drive
- the need for improved public transport connections to major employment destinations in Moreton Bay Regional Council and Brisbane City Council.

	Public Transport		Walking		Cycling		Car	
	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target	2006 Actual	2031 Target
All trips	3.6%	10%	8.4%	10%	1.7%	8%	86.3%	72%
Work trips	2.5%	15%						

Figure 9.23 – average composition of 25 trips made per person each week

To achieve these targets, the weekly travel patterns of the average Sunshine Coast resident would need to change only incrementally.

2031 targets

Growth on the Sunshine Coast will mean a 71% increase in daily trips from 1.03 million in 2006 to 1.76 million in 2031.

The 2031 transport targets aim to reduce the share of trips made by private car from 86.3% to 72%, made up of an:

- increase in the share of trips by public transport from 3.6% to 10%, increasing daily trips from 40 000 in 2006 to 175 000 in 2031
- increase in the share of trips by walking from 8.4% to 10%
- increase in the share of trips by cycling from 1.7% to 8%.

Meeting the targets would still see the number of daily private car trips made by Sunshine Coast residents increase by 42% from 890 000 in 2006 to 1.26 million in 2031.

Sunshine Coast Regional Council

Transport and land use integration

Centres access hierarchy

Maroochydore is the logical regional hub for the Sunshine Coast as it is the principal activity centre and is forecast to accommodate 18 000 employees by 2026. Maroochydore will be the main interchange point between intra-regional and suburban public transport services on the Sunshine Coast. It will contain a high standard multi-modal interchange used as an eventual terminus for the rail line, *CoastConnect* bus corridor and other suburban bus routes.

Kawana town centre is a sub-regional hub primarily due to the existing momentum of development and employment. The plan proposes a new rail line from Beerwah to Maroochydore. The *CoastConnect* bus corridor will provide on-road priority for buses between Caloundra and Maroochydore.

Sippy Downs and Caloundra Regional Business and Industrial Park are district hubs. Both are on multi-modal road corridors linking them to sub-regional hubs and both are forecast to be significant future employment precincts. Sippy Downs ITC Business Hub, university and enterprise area together will eventually accommodate 20 000 jobs and 15 000 students.

Caloundra Regional Business and Industrial Park will eventually accommodate 30 000 jobs. While many of these types of jobs may not be public transport contestable, creation of a core of intensive employment density around a future stop or station will support a high-frequency public transport service.

Sunshine Coast Airport at Marcoola and its associated aeronautical support industry and office park is also a district hub in the transit hierarchy. It can be easily connected to the Maroochydore hub and the airport will generate public transport demand.

Increasing densities around transit corridors

The priority transit oriented corridor is the northern section of the *CoastConnect* bus corridor from Maroochydore to Kawana town centre. It will connect Caloundra to the new Sunshine Coast Hospital and Kawana town centre with the existing Kawana shopping centre, Mooloolaba coastal centre and the regional hub and principal activity centre of Maroochydore. Because of the multiple destinations, a high-frequency and reliable public transport service can be provided all day every day.

In later years of the plan, land use mix and densification is supported along: the *CoastConnect* bus corridor between Kawana and Caloundra; the Sunshine Coast rail line between Kawana Town Centre and Caloundra; and along a future high-frequency bus route linking Sippy Downs with Palmview and Caloundra South. Implementation will be subject to further detailed land use planning in partnership with local government.

Land use density and mix is generally supported within 400-800 metres of all other public transport stations or stops along high-frequency public transport routes.

Accessible enterprise areas

Sippy Creek and Kunda Park are enterprise areas identified in the *SEQ Regional Plan* that have good access to the priority freight network. Business and industry that requires heavy vehicle access should be encouraged to locate in these areas.

2031 transport network for the Sunshine Coast

By 2031 there will be a significant passenger shift to public transport, especially in the urban communities south of the Maroochy River.

The *CoastConnect* bus corridor will provide frequent fast, efficient and reliable bus services between Maroochydore and Caloundra South.

The Sunshine Coast rail line from Beerwah to Maroochydore will provide a better link to the rest of SEQ for the communities concentrated along the coast. Services will be layered, with a CoastLink service to Brisbane and an all stops UrbanLink services from Beerwah to Maroochydore.

There will be improvements to the arterial road network including provision of multi-modal corridors between Mooloolaba and Caloundra South and bus and active transport facilities on a new arterial road from Sippy Downs to Caloundra South. A corridor for a longer term local arterial road will be preserved from the Bruce Highway to Beerwah in the event Beerwah East area is developed beyond 2031.

The Bruce Highway and Sunshine Motorway will be upgraded for safety and local capacity improvements to act both as an inter-regional network and an urban bypass system for the Sunshine Coast. No new urban motorway links are proposed, with new major strategic roads within the urban development areas being developed to a multi-modal arterial standard that caters for buses, active transport and local traffic.

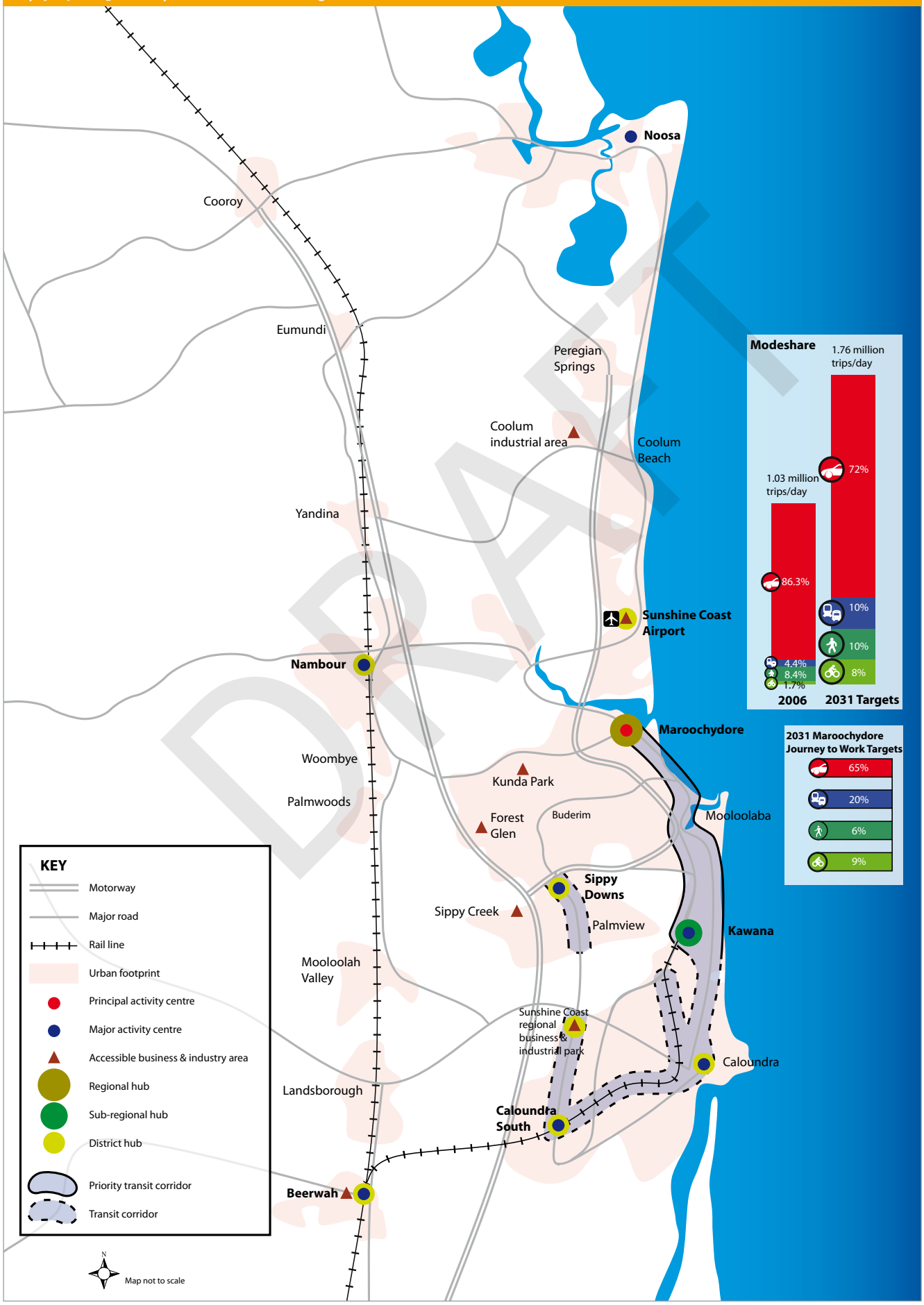
High quality active transport facilities will be provided within 5 kilometres of Maroochydore, Sippy Downs, Kawana and Nambour.

Map 9.15 illustrates the 2031 strategic transport network for the Sunshine Coast.

Partnering with Sunshine Coast Regional Council

- encouraging public transport contestable jobs to locate in Maroochydore and Kawana town centres
- supporting increased public transport use to Maroochydore through land use planning, precinct planning, traffic management, car parking supply and pricing
- ensuring land use plans support increasing densities and mixed use in transit corridors
- planning to ensure business and industry uses that depend on heavy vehicle access locate in Sippy Creek or Kunda Park
- Sunshine Coast Regional Council, through its Sunshine Coast sustainable transport strategy has a strong focus on achieving sustainable transport outcomes for the Sunshine Coast region. *Connecting SEQ 2031* sets the building blocks for helping council achieve these outcomes.

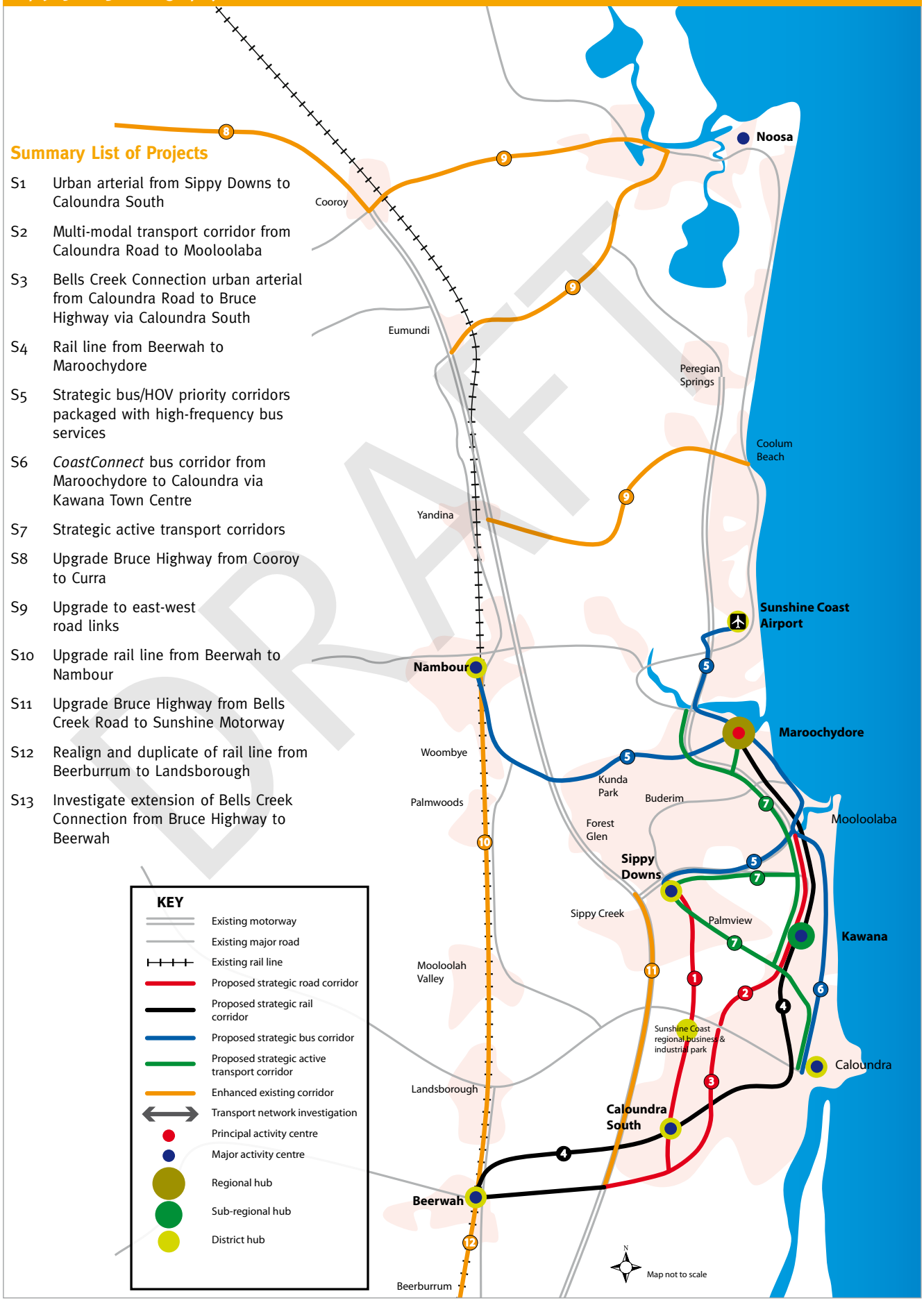
Map 9.14 – 2031 Transport and Land use integration Sunshine Coast



Map 9.15 – 2031 Strategic projects Sunshine Coast

Summary List of Projects

- S1 Urban arterial from Sippy Downs to Caloundra South
- S2 Multi-modal transport corridor from Caloundra Road to Mooloolaba
- S3 Bells Creek Connection urban arterial from Caloundra Road to Bruce Highway via Caloundra South
- S4 Rail line from Beerwah to Maroochydore
- S5 Strategic bus/HOV priority corridors packaged with high-frequency bus services
- S6 *CoastConnect* bus corridor from Maroochydore to Caloundra via Kawana Town Centre
- S7 Strategic active transport corridors
- S8 Upgrade Bruce Highway from Cooroy to Curra
- S9 Upgrade to east-west road links
- S10 Upgrade rail line from Beerwah to Nambour
- S11 Upgrade Bruce Highway from Bells Creek Road to Sunshine Motorway
- S12 Realign and duplicate of rail line from Beerburrum to Landsborough
- S13 Investigate extension of Bells Creek Connection from Bruce Highway to Beerwah



Note: responsibility for delivery of these projects is to be determined

Transport and Main Roads, Connecting SEQ 2031 – An Integrated Regional Transport Plan for South East Queensland, 2010

10. Rural communities

The Somerset, Lockyer Valley and Scenic Rim Regional Councils cover nearly half of the area of SEQ but in 2006 they contained just 86 000 people, or 3.2% of the region's population. A similar number of people live in the rural areas of the other more urbanised city and regional councils.

The urban footprint, identified in the *SEQ Regional Plan 2009–2031*, restricts the incursion of urban development into these rural areas and the spread of existing rural towns into the surrounding countryside.

However, these local government areas are all forecast to experience annual growth rates of more than 2% per year during the next 20 years and by 2031 are expected to have a combined population of 166 000.

Providing transport infrastructure and adequate public transport services to rural communities and the rural towns in the more urbanised coastal councils, presents special challenges and different transport needs. Strategic infrastructure projects are illustrated in the rural communities map 12.1 on p119.

Public transport in rural communities

About 200 000 of the region's 2.8 million residents live in small towns or rural areas, which have different transport needs to urban communities.

Public transport to rural areas will be provided through partnerships between Transport and Main Roads and local governments. TransLink is responsible for servicing the urban areas of SEQ and cannot extend the service area to rural communities as demands are too low for a TransLink service.

People living in rural communities need a basic form of public transport in cases where they cannot solely rely on private cars.

For smaller towns and villages outside of the Translink contract areas, a range of services is provided by contracts administered by Transport and Main Roads. New rural services can be considered on a case by case basis, subject to evidence of demand and meeting criteria established to ensure efficient use of government resources.

Rural public transport services generally fall into the category of low volume public transport, and will continue to be developed according to local needs (see principles to guide this work in next column).

The hinterland service connecting Nambour to Maleny, developed through a partnership between Transport and Main Roads, TransLink and the Sunshine Coast Regional Council is an excellent example of an initiative that would meet the suggested policy framework for low volume public transport in the rural areas of SEQ.

Principles for public transport services to rural communities

To cater for the growing population outside the designated TransLink urban service area, a new set of arrangements will be made for the planning and delivery of local public transport services. In smaller population centres these will be developed around population and estimated demand thresholds with matching levels of service delivery based on these principles:

- subject to available funding and evidence of demand, consideration will be given to establishing general route services between centres with a population greater than 500 and neighbouring towns with a population greater than 7500 where the distance between the two population centres is 40 kilometres or less
- as a guideline, village-to-town or town-to-town services provide a minimum of one return service per day, Monday to Friday. However, the actual level of service in each instance will be dependent upon the available funding and the existing level of demand
- for population centres where the resident population exceeds 7500, consideration will be given, subject to available funding, to declaring the centre as a service contract area and for the provision of general route services within the population centre itself
- for new contracts in rural communities, the level of service and model of service delivery will be determined by the available resources (existing passenger transport services and infrastructure; new funding sources) and underlying demand. As a general rule, services will not extend beyond daylight hours, Monday to Friday.

Somerset Regional Council

Population in 2006: 19 600

Indicative planning population in 2031: 32 700

Annual population growth rate: 2.1%

Somerset is the largest local authority in area in SEQ but it has the smallest population. There are five small towns – Fernvale, Lowood, Esk and Toogoolawah in the Brisbane Valley and Kilcoy to the east. The last three towns have a high degree of employment self-containment. However, most future growth will occur in the towns of Lowood and Fernvale because of their proximity to Ipswich.

The Brisbane Valley and D'Aguilar Highways, which form part of the SEQ strategic road network, bisect the council area and are the backbone of the local transport system.

All of the towns except Lowood are located on these roads and only Kilcoy has a partial town bypass. The economy is based on agriculture and forestry which generates local freight traffic and the highways are the main links from SEQ to the South Burnett and northern Darling Downs.

Transport issues and challenges for Somerset

- the need to upgrade the junction of the Brisbane Valley Highway and the Warrego Highway at Blacksoil
- the upgrade and maintenance of the Brisbane Valley and D'Aguilar Highways to cater for the increasing volumes and variety of traffic
- need for town bypasses of Lowood and Fernvale
- need for frequent and direct public transport links between Lowood, Fernvale and Ipswich
- the conflict between freight traffic, other vehicles and pedestrians, especially in the towns
- elderly and isolated residents in the northern parts of the Brisbane Valley.

Partnering with Somerset Regional Council

- continuing to encourage the promotion of community transport services in the townships, especially in the north of the Brisbane Valley
- encouraging active transport in the townships by the provision of walking and cycling paths to and between community facilities.

2031 transport network for Somerset

By 2031 the Brisbane Valley and D'Aguilar Highways will be of a standard to provide safe travel through the Somerset area for freight, tourists and local residents featuring wide lanes and shoulders and a number of passing lanes. A grade separated interchange at Blacksoil will allow safe access to the Brisbane Valley and Warrego Highways.

The towns of Fernvale, Lowood and Kilcoy will have bypasses to separate highway and local traffic. This will allow the development of town centres that are conducive to walking and cycling. Lowood and Fernvale will be linked to Ipswich CBD and the Ipswich rail line by feeder bus services.

Lockyer Valley Regional Council

Population in 2006: 31 900

Indicative planning population in 2031: 57 500

Annual population growth rate: 2.4%

The Lockyer Valley covers the west and south western parts of the SEQ region. The significant population centres are in the north of the Lockyer area, either side of the Warrego Highway which runs from east to west linking Brisbane and Toowoomba. The rail line from Brisbane to Toowoomba also runs through the council area.

The main towns are Gatton and Laidley and there is a significant area of rural residential settlement north of the Highway around Plainlands. There are also a number of rural villages along or near the highway and rail line.

The main industry is agriculture, with some industrial development planned in Gatton and at Plainlands. A new prison is planned north of Gatton. Although there is a high level of employment self containment, there is considerable commuter traffic to Toowoomba and Ipswich.

A new proposed rail line from Grandchester to Gowrie (including a crossing of the Toowoomba range) will be preserved as part of a Commonwealth Government planning study.

The Toowoomba Bypass project identified a 42-kilometre road corridor that connects Lockyer Valley to the north of Toowoomba. The corridor leaves the Warrego Highway west of the Helidon Spa, crosses the range (includes a tunnel through part of range) south of Mount Kynoch and continues west.

The corridor swings to the south-west to cross the Warrego Highway near Charlton before continuing to join the Gore Highway about 17 kilometres south-west of Toowoomba. This bypass requires funding from the Commonwealth Government and no decision has been made on when work on the bypass might start.

Transport issues and challenges for Lockyer Valley

- the need for heavy vehicle bypasses in Laidley, Gatton and Helidon
- the need for park 'n' ride and interchange facilities for bus commuters especially at Plainlands
- the location of villages, especially Withcott, and other development across the Warrego Highway resulting in safety issues due to local traffic needing to cross
- the need to limit access points along the Warrego Highway
- the use of back roads by commuters driving to Ipswich because of highway congestion.

Partnering with Lockyer Valley Regional Council

- encouraging the promotion of community transport services within the townships and between the townships and villages
- encouraging active transport in the townships by the provision of walking and cycling paths to and between community facilities.

2031 transport network for Lockyer Valley

By 2031 a network of local roads caters for the needs of residents to travel within Lockyer Valley with a limited number of grade separated crossings of the Warrego Highway. Heavy vehicles from local industrial areas bypass the townships to access the highway.

Bus services connect to Ipswich rail services with high quality bus stops along the Warrego Highway equipped with park 'n' ride and kiss 'n' ride facilities.

Local public transport is provided in Gatton and community transport links the villages to the larger towns. A network of bicycle and walking paths allows for safe travel within the towns and villages and, where practical, connecting villages to Gatton or Laidley.

Scenic Rim Regional Council

Population in 2006: 34 800

Indicative planning population in 2031: 71 000

Annual population growth rate: 2.9%

The Scenic Rim covers the southern area of SEQ between the cities of Logan and Ipswich and the Queensland border. There are two towns – Beaudesert (the Principal Rural Activity Centre) and Boonah. There are also a number of villages, principally in the Fassifern Valley and the mountains along the eastern boundary behind the Gold Coast.

The main transport routes are the Cunningham Highway running to the south west, which links Brisbane to Sydney and the Mt Lindesay Highway running south, which links the area to Brisbane and northern New South Wales. These are identified as Priority One and Priority Two freight routes in the *SEQ Regional Plan*. The interstate standard gauge rail line also runs south through the area.

The main industries have been agriculture, tourism and forestry but the establishment of the Bromelton State Development Area will see the focus move to industrial and logistics businesses. The eastern half of the council area has always been influenced by the southern spread of the Brisbane and Ipswich urban areas and this will continue into the future with the eventual development of Greater Flagstone over the northern border in Logan city. Bromelton will be an employment destination not only for the residents of Scenic Rim but also Brisbane and Logan Cities, particularly the greenfield areas of Flagstone and Yarrabilba.

Transport issues and challenges for Scenic Rim

- the need for a heavy vehicle bypass of Beaudesert on the Mt Lindesay Highway
- the need to bypass Tamborine Mountain because of traffic and parking issues
- the need to preserve the Beaudesert to Nerang Road corridor
- the need to plan and preserve an east-west corridor in the long term
- the need to plan for road connections between Logan, Bromelton and Beaudesert.

2031 transport network for Scenic Rim

The future transport network needs are dominated by the development of the major Bromelton industrial area and the build up of population growth in the south of Logan City Council.

Bromelton will be a multi-modal freight terminal on the interstate rail line, acting as a logistics hub for southern SEQ. It requires an upgrade of Mt Lindesay Highway and a western bypass of Beaudesert. It may also be linked by rail with the Ebenezer industrial area with the construction of the Southern freight rail line.

Partnering with Scenic Rim Regional Council

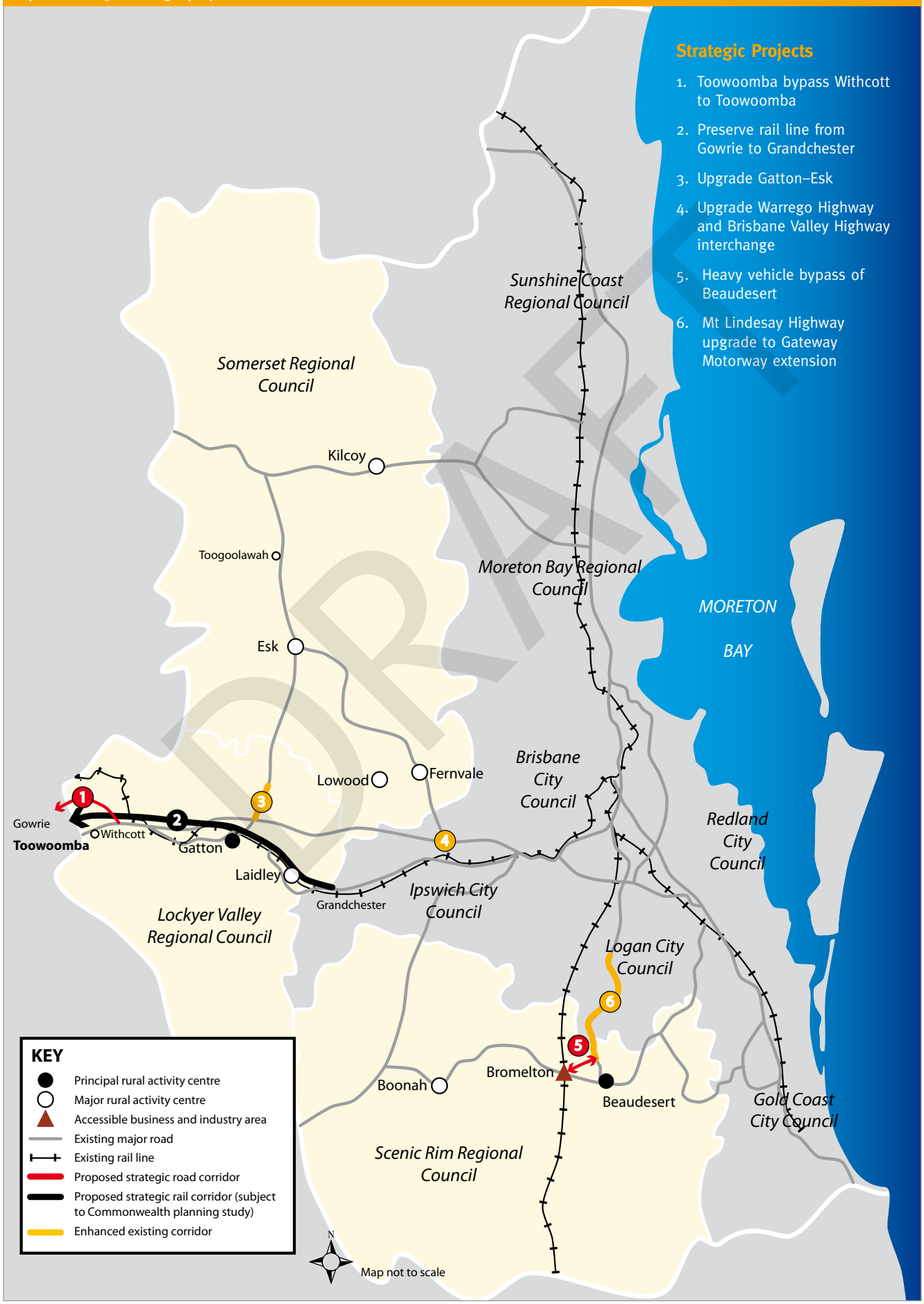
- encouraging the promotion of community transport services within the townships and between the townships and villages
- encouraging active transport in the townships by the provision of walking and cycling paths to and between community facilities
- ensuring the planning and preservation of bypass and arterial routes around Beaudesert.

The extension of the Gateway Motorway to Jimboomba will be required to serve Flagstone and Yarrabilba and this will provide the main connection between Bromelton and Brisbane, including the port.

The upgrade of the Mt Lindesay Highway connection to Logan and the extension of passenger rail to Flagstone will ease travel between Brisbane and Beaudesert. The upgrade of the Cunningham Highway will provide faster access to Ipswich for residents in the west of Scenic Rim.

The town of Beaudesert will be serviced by public transport and community transport will service the smaller towns to connect them to the urban area to the north. A network of cycle and walking paths will provide safe access to community facilities in the various towns.

Map 10.1 – 2031 strategic projects rural communities



Transport and Main Roads, Connecting SEQ 2031 – An Integrated Regional Transport Plan for South East Queensland, 2010

Part E: Putting the plan into action

11. Implementing *Connecting SEQ 2031*

The draft *Connecting SEQ 2031* is part of a process of generational change to a sustainable transport system in a fast growing region.

Many of the projects proposed are new and conceptual and have not been the subject of detailed cost estimates. This will occur through planning and project evaluation processes as the implementation process proceeds.

Long term planning must recognise the importance of current and future costs and benefits of transport investment, and the high cost of doing nothing.

Although the region needs to carefully assess each major transport investment for its contribution to the future, it must also maintain a long term focus on the need to improve the transport system to protect lifestyles and support economic growth in the face of sustained population growth.

Economic appraisal of *Connecting SEQ 2031*

If implemented in full, *Connecting SEQ 2031* is forecast to generate positive economic benefits for all users of the transport system.

Journey times and reliability on motorways/highways and public transport would be maintained even in the face of growth in travel demand.

Reliable travel times, managed congestion levels, improved connectivity and more efficient use of resources will lead to benefits including:

- attracting and retaining new business and industry
- reliable access to employment for the region's workforce
- fewer crashes
- reduced growth in greenhouse gas emissions
- reduced reliance on oil-based fuels.

Public transport users will also benefit through investment in higher standard vehicles and station facilities. In addition, the strategy also generates flow on benefits from reduced vehicle kilometres—leading to fewer accidents and lower greenhouse gas emissions from congestion.

The draft plan recognises additional wider economic benefits to SEQ improving the 'effective density' of the region, in essence bringing businesses closer together.

Businesses in the region are then able to take advantage of the reduction in transport costs to improve their links to clients, markets and labour all of which help to raise productivity and increase GDP. Additional GDP benefits are also accrued from businesses being able to increase output from reductions in transport costs.

Cost estimates for *Connecting SEQ 2031*

The draft *Connecting SEQ 2031* has been developed in the midst of a significant global economic downturn and at a time when the Queensland Government is strongly committed to an infrastructure building program unprecedented in the state's history.

Funding will remain tight and must be carefully prioritised. Each transport project and policy must be examined in the context of its contribution to developing a sustainable transport system and protecting and enhancing the lifestyles and economic health of a growing region.

Strategic capital cost estimates for implementing the draft plan have been based on 'pre-project' level of cost estimation for the 21-year period from July 2010 to June 2031.

The estimated capital component for new and enhanced infrastructure could be in the order of $123 billion.

In addition to this, it is important to recognise the non-capital component (operation, maintenance and administration) which is based on historical trends and could be in the order of $102 billion.

The draft *Connecting SEQ 2031* is not intended to be fully funded.

It is a vision to inspire action and guard against complacency. The projects and actions contained in the plan will be used to assess funding needs, develop proposals for private sector interest and underpin bids for funding from all levels of government.

Given the scale of funding required, the projects are dependant on significant Commonwealth Government and local government funding support, with any contributions from the state being subject to fiscal capacity and from the private sector only for commercial elements.

The plan will also provide a framework to guide the investment of available state and local government funding to ensure it is prioritised to deliver maximum benefits across the transport system.

Business cases examining project need, scope, priority, affordability, funding options, timing and contribution to achievement of *SEQ Regional Plan* objectives will be developed for each project and considered by governments having regard to their funding and priority setting processes.

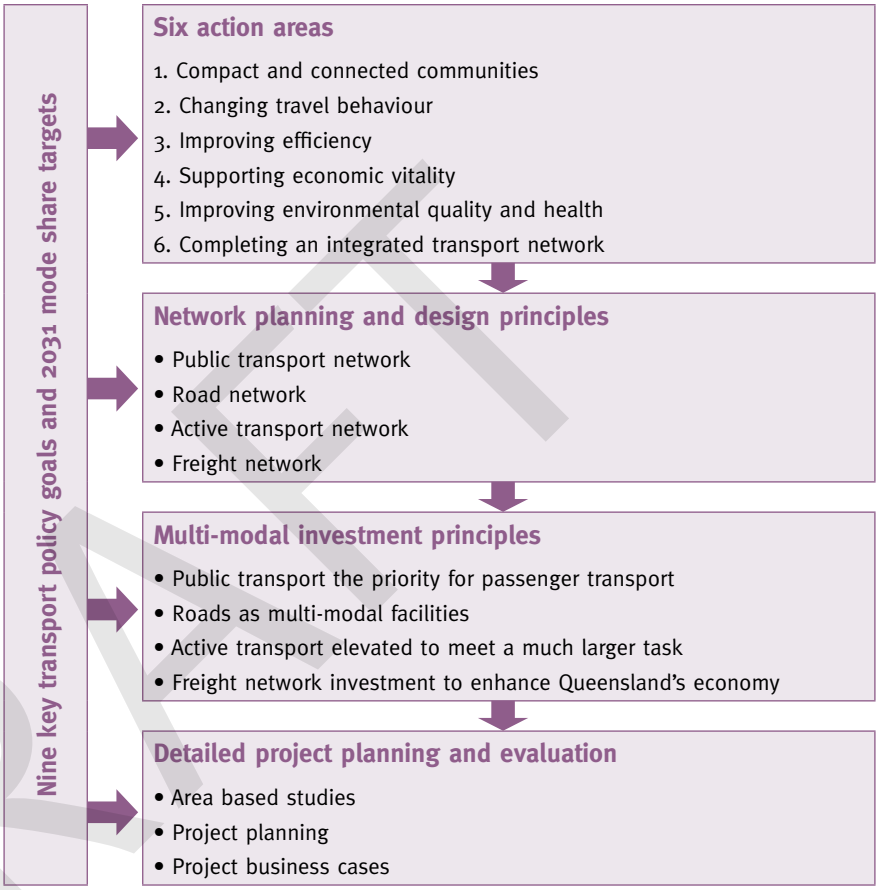
Deciding investment priorities

Funding for transport investment in SEQ is contestable with other state funding priorities spanning geographical and sectoral boundaries. Within the allocation of funding for transport in the region the draft *Connecting SEQ 2031* establishes a framework for deciding investment priorities.

An important influence for deciding future initiatives investment priority will be the priority locations that are planned for population and employment growth.

Figure 11.1 describes the flow of planning and decisions to formulate the projects described.

Figure 11.1 – deciding investment priorities



The draft *Connecting SEQ 2031* has also established key transport policy goals and a series of regional and local mode share targets to help determine how the transport system should be improved during the next two decades.

The six key action areas (Part B) will help focus future transport investment and policy decisions, ensuring resources are prioritised to maximise progress towards the key transport policy goals.

These high level goals and action areas are supported by a more detailed planning and prioritisation framework:

- the network strategies described in Part C of the draft *Connecting SEQ 2031* include 'overarching principles' and 'supporting principles' to guide the planning and development of the public transport, road, active transport and freight networks
- the planning guidelines in Part C are supported by the multi-modal prioritisation principles. These principles establish the relative importance of investment in modes and networks, to enable the Queensland Government and the region's local governments to ensure available funding is put to the best use to achieve the key transport policy goals.

To assist the ongoing development of projects to implement the draft *Connecting SEQ 2031*, the multi-modal investment principles have two tiers (as shown in figure 11.2):

- tier one establishes how investment should be prioritised **across** the networks (public transport, roads, active transport and freight)
- tier two establishes how investment **within** each network should be prioritised.

These principles will be used in conjunction with local priorities and analysis of transport needs to develop area based studies and investment projects which can then be planned and assessed under detailed investment appraisal processes.

Reviewing and monitoring the plan

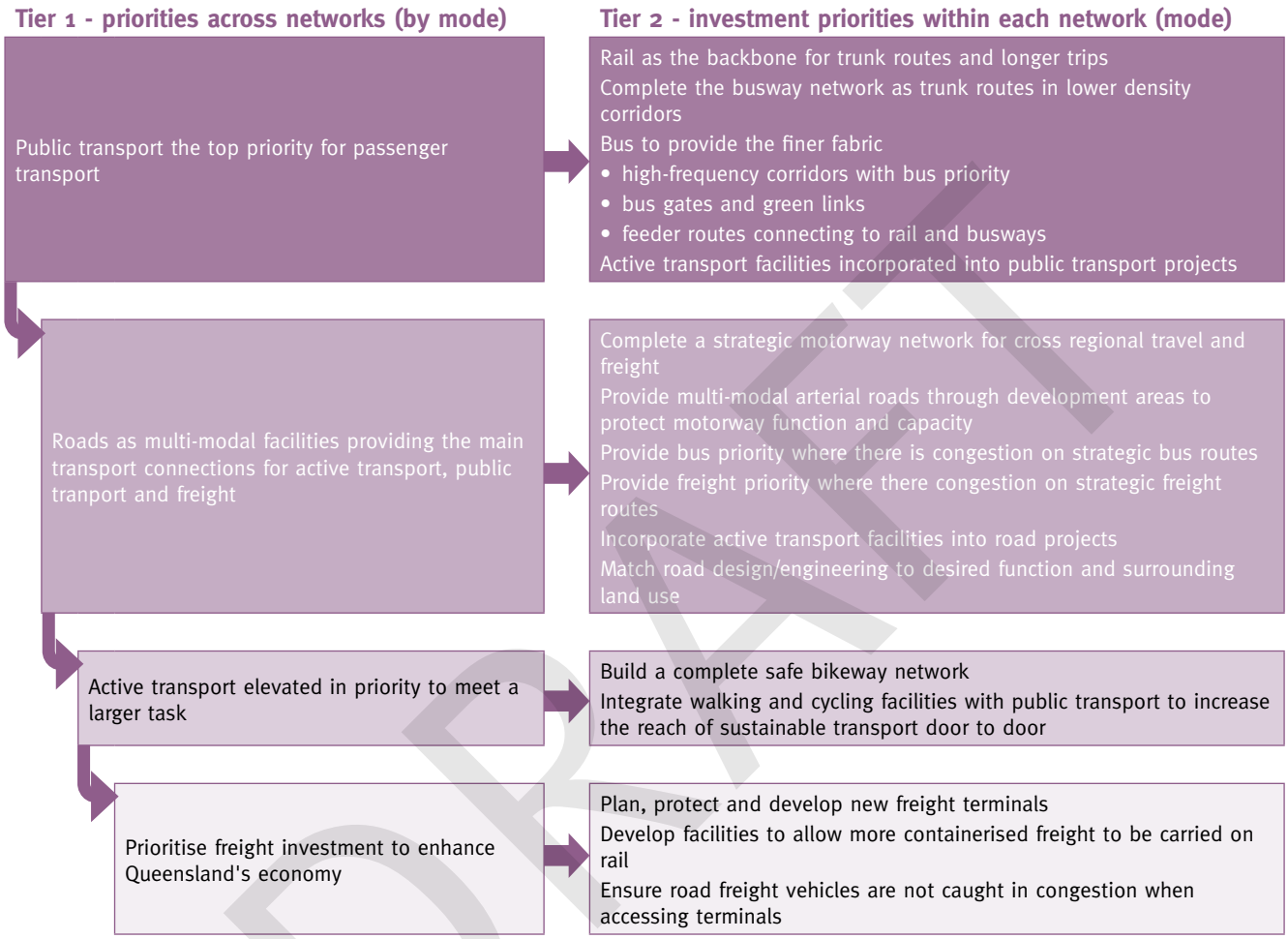
Keeping the plan current

Connecting SEQ 2031 is a companion document to both the *SEQ Regional Plan* and *SEQIPP*. It has a primary role in responding to and informing the content and implementation of both of these documents.

Connecting SEQ 2031 has a secondary role of informing other transport plans as well as local government planning schemes.

It is important to ensure that the review of *Connecting SEQ 2031* is in line with the requirements of the *SEQ Regional Plan* and *SEQIPP*. The *SEQ Regional Plan* is reviewed every five years and *SEQIPP* is updated annually. The *Queensland Infrastructure Plan* will be developed about mid-2011 to replace SEQIPP.

Figure 11.2 – multi-modal investment principles



Within this framework, a comprehensive revision of *Connecting SEQ 2031* should be undertaken in line with the review of the *SEQ Regional Plan*. *Connecting SEQ 2031* will inform the annual revisions of the *Queensland Infrastructure Plan*, specifically to ensure that the strategic intent of the plan is being captured and actioned.

Monitoring delivery

The success of *Connecting SEQ 2031* as a plan for future transport outcomes relates to, and should be monitored in the following order:

- adherence with the strategic intent of the plan
- implementation of the plan: the timely prioritisation of investment
- outcomes associated with implementation of the plan: achieving targets set within the plan.

The strategic intent of the plan should be reflected in all region wide planning and investment prioritisation processes including new investment contestability frameworks established by Transport and Main Roads.

Delivering The Plan

Connecting SEQ 2031 requires a whole of community and whole of government response to achieve the key transport policy goals. The plan suggests and requires that there is a role for everyone in the region to play in achieving the key transport policy goals through the implementation of the plan.

Transport and Main Roads is chiefly accountable for coordinating the delivery of *Connecting SEQ 2031*. However, the plan does recognise the efficiencies in partnering with other state government agencies, local governments, the Commonwealth Government, TransLink Transit Authority and the private sector to plan and deliver the key actions.

There are actions defined in the plan which are not the responsibility of Transport and Main Roads to deliver or are able to be more efficiently delivered by other partners.

Glossary

Accessibility	The ease with which people can get from one place to another by different modes of transport. Includes access by people with disabilities.
Active transport	Non-motorised travel, such as walking and cycling.
Busway	A dedicated corridor built for exclusive use of buses and emergency service vehicles.
BUZ	Bus Upgrade Zone refers to a network of 'no timetable needed' high-frequency bus services.
Commercial traffic	Travel for business purposes and the delivery of goods and services.
Commute	Travel to access employment from a home. Sometimes termed 'journey to work' travel.
Community boulevard	Multi-modal links through activity centres, particularly hubs, providing balanced access for buses, cycles, pedestrians and vehicles as well as cross movement for pedestrians between land uses on either side of the link. Community boulevards are areas of high amenity with landscaping, built form, seating, lighting and pavements that attract pedestrians and treat them as the priority. The design of the road creates legibility for users and creates a slower speed environment to facilitate safety for all. Car parking and lot access is predominantly at the rear of development to maximise the access of pedestrians, cycles and bus passengers.
Congestion	In the context of transport, a condition where the use of a piece of infrastructure exceeds the level at which it functions efficiently.
Connectivity	Refers to directness of links and quality of connections.
Contra-peak	Contra-peak refers to public transport services running in the opposite direction to the direction of the highest passenger volumes. For example, in the morning peak the highest passenger volumes on the Ipswich line would be on services running towards Brisbane CBD. The contra-peak direction would be services running towards Ipswich, with low passenger volumes generally experienced in the contra-peak direction.
District hub	Local interchanges located on corridors connecting them to the regional or sub-regional hubs. They are activity centres or employment areas or high density residential areas that can be serviced by high-quality public transport.
Ecodriving	Techniques that drivers use to optimise their fuel economy.
Educated Ways	Educated Ways will focus on five- kilometre catchments around schools and universities located within five kilometres of centres.
End-of-trip facilities	Facilities for cyclists and pedestrians which can include bicycle parking, lockers, change rooms and showers.
Emissions	The release of gases from industrial processes, agricultural production and engine exhausts of vehicles, including carbon dioxide and other greenhouse gases.
Greater Brisbane	The urban areas Brisbane city, Logan city, Redland city, Ipswich city and Moreton Bay Regional councils.
Heavy articulated vehicle	Three to five-axle truck consisting of prime mover and trailer. Up to 19 metres long.
High-frequency services	Bus, light rail or rail services operating at least every 15 minutes all day (6am to 9pm minimum), seven days a week.
High occupancy vehicle (HOV)	A vehicle carrying multiple passengers. T2 and T3 lanes are examples of HOV-focused infrastructure.
Infill development	New construction in established urban areas could include intensification of existing uses such as from houses to townhouses or apartments.
Light commercial vehicle	Light commercial vehicles are smaller commercial vehicles such as utilities, vans and very small trucks up to a mass of 3.5 tonnes, as opposed to rigid and articulated trucks.
Logistics hubs	Centres where freight loads are consolidated for long distance shipment or dis-aggregated for local distribution. May involve transfer from one mode to another.
Major activity centre	An economic activity centre identified under the *South East Queensland Regional Plan* which serves a catchment of sub-regional significance and accommodates concentrations of employment in a way which complements Principal Activity Centres (see definition).
Medium rigid truck	Two or three axle truck up to 14.5 metres long.
Modelling	Transport modelling uses data inputs to describe and predict the movements of people, goods and information in a given or possible future environment.

Modes	The different types of transport such as walking, cycling, private car and public transport (includes buses, trains and ferries).
National Land Transport Network	National and inter-regional land transport corridors that are of critical importance to national and regional growth.
Oil Vulnerability	The vulnerability of people, industries, regions or countries to changes in the supply and price of oil.
Orbital network	Network of roads or motorways around the edges of the urban area designed to allow the movement of traffic from one side of the region to the other without going through the city centre.
Peak hours	The times of day when most travel occurs, generally on working days in the morning and in the late afternoon to early evening, when commuters travel between home and work and drop off at and pick up children from school.
Principal Activity Centre	An economic activity centre identified in the *South East Queensland Regional Plan* which serves a catchment of regional significance and accommodates key concentrations of employment.
Priority transit corridors	These are serviced by a high-frequency public transport services and are identified as areas where higher-density development would have the most benefit in delivery of transport outcomes.
Public transport	Travel by modes such as buses, rail, ferries and light rail which are provided for public use.
Public transport contestable activities	Activities such as employment, education, medical, retail and professional services where regular travel patterns, central location and no need to carry bulky equipment make it feasible to choose public transport for the journey.
Public transport infrastructure	Includes rail lines and stations, busways and stations, public transport stops, trains, buses, ferry terminals and ferries.
Redevelopment	Construction replacing previous structures, usually larger (see Infill).
Regional hub	The interchange and terminus for all public transport services in that part of the region and the key transfer location for high-frequency services to other regional hubs in SEQ. These centres should be the primary locations for in-centre public transport contestable land uses in the sub-region.
Reliable travel time	Travel time reliability means people can expect consistent travel times every time they travel.
SEQIPP	*South East Queensland Infrastructure Plan and Program 2010–2031*. A Queensland Government plan first released in 2005 which is updated annually. In association with the *South East Queensland Regional Plan*, it identifies regionally significant infrastructure planned to accommodate future growth to the year 2031.
Sub-regional hub	Have direct frequent public transport connections to the regional hub but are also the interchange for multiple high-frequency public transport services from other activity centres or key employment, education or service precincts in the sub-region. They will support the regional hub by acting as a secondary interchange for local and sub-regional services. These centres should be the secondary locations for in-centre public transport contestable land uses in the sub-region.
TMR	Department of Transport and Main Roads.
Transit oriented development	A form of medium to high density mixed-use development (including residential, commercial, employment and community activities) around public transport stations.
Transit	Travel by modes such as buses, rail, ferries and light rail which are provided for public use. The terms 'public transport' and 'mass transit' can also be used.
TransLink Transit Authority	A Queensland Government authority that works in conjunction with local governments, other parts of the Queensland Government and public transport operators to deliver public transport services to a defined urban area within SEQ.
Transport disadvantage	The situation where people have little or no choice regarding how or to where they travel. Transport disadvantaged may be people who cannot drive or afford a car, or live too far from walking or cycling routes or public transport and are dependent on a car to travel. The level of disadvantage is also affected by a person's age, capacity or social disadvantage.
Travel demand management	A general term to describe strategies which result in a more efficient use of transport resources.
TravelSmart	A voluntary travel behaviour change program for individuals and organisations. It encourages the use of environmentally friendly transport such as public transport, cycling, walking and car pooling with the use of campaigns and projects to raise awareness, improve access to information and promote opportunities to use environmentally friendly transport.
Veloway	A high standard cycling facility with a lane in each direction.

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Project Sponsors	Mark Cridland and Natalie Ormsby
Project Director	Ken Deutscher
Project Leader	Arthur Stamatoudis
Project Managers	Gavin Nicholls and Emma Kirkby
Document Author	Nicole Dennis

Study Team

Adam Hatfield	John Smith	Mark Norton
Josephine Raftery	Pepijn Thijsse	Peta Harwood
Anna Andrews	Kellie Doonan	

Photos courtesy of Queensland Rail, TransLink, Penny Farthings Pushbike Parking.