Sunshine Coast Council

our place
our future

Sunshine Coast
Active Transport Plan 2011-2031

Acknowledgements

Council wishes to thank all interested stakeholders for their valuable contributions towards the development of the *Sunshine Coast Active Transport Plan 2011-2031* through the community consultation program.

This document has been developed by Sunshine Coast Regional Council's Regional Strategy and Planning Department (Integrated Transport Planning Branch).

Foreword

Council's vision to get people out of cars and into more sustainable modes of transport is a step closer to reality with the release of the *Sunshine Coast Active Transport Plan 2010-2031* (the Plan). The Plan sets out the opportunities and challenges to get the Coast community walking and cycling more often.

Walking and cycling will play an important transport role in the future, creating a sustainable transport system for the Sunshine Coast. Increasingly, active transport will help to maintain and improve our lifestyle, keep us healthy and contribute to the sustainability of the region. The goal is to see the Sunshine Coast recognised as an active transport focussed community where people of all ages walk and cycle for transport and recreation. Walking and cycling are becoming a natural part of our daily lives, and by 2021 the number of these trips will have doubled.

The Plan sets out a comprehensive framework for walking and cycling on the Sunshine Coast. The Plan makes clear that providing sustainable transport networks with safe pathways, footpaths and on-road cycling facilities while supporting pedestrians and cyclists in their choices is key to our vision of sustainability. The policies and actions in the Plan make the planning for active transport current, consistent and coordinated. Actions are tailored for the Sunshine Coast with a focus on connecting communities to centres, public transport and schools.

There is a new focus and priority on walking, cycling and public transport above personal vehicle use, through planning, development and urban design. The Plan details the important supporting services and infrastructure such as end-of-trip facilities and safe, continuous and direct walking and cycling networks connecting people to where they want to go.

The safety of our residents as they travel is a high priority. Improving road safety and infrastructure will be combined with programs that develop skills and awareness for all road users. Information, education and encouragement will make cycling and walking real transport options and see the cycling and walking culture flourish on the Sunshine Coast.

In our positions of Mayor and Chair of the Integrated Transport Services Portfolio, we commend the important policy directions and actions of the Plan and invite you to work with council in supporting walking and cycling as a key component of our sustainable future.

Cr Bob Abbot
Mayor

Cr Vivien Griffin
Integrated
Transport Portfolio

Executive summary

Purpose

The *Sunshine Coast Active Transport Plan 2011-2031* (the Plan) sets out the strategic planning for walking and cycling on the Sunshine Coast. The Plan will ensure that planning for active transport is current, consistent and coordinated. The active transport networks consist of all pathways, footpaths and on-road cycling facilities. Active transport infrastructure also includes crossings, on-trip and end-of-trip facilities.

Why active transport

Efforts at many levels of transport planning aim to increase the levels of walking and cycling. These initiatives are motivated by a desire to maintain our distinctive lifestyle by reducing vehicle use, congestion and the resulting environmental consequences of pollution, green house gas emissions and resource consumption. Concerns of liveability and public health are also strong motivators. The community is increasingly looking to active transport as a way to improve our future.

Planning context

The Plan has been prepared as a supporting plan of the *Sunshine Coast Sustainable Transport Strategy 2011-2031*. The Plan provides more detail regarding the planning and implementation of active transport priorities. Previous studies and planning also support the Plan and these are listed in Appendix A with other relevant State and national guidance.

The active transport vision

The Sunshine Coast is recognised as an active transport friendly place where people of all ages walk and cycle for enjoyment and transport. Our community recognises and values our safe, high quality connected networks, which improve our lifestyle, health and sustainability.

The targets set for the Plan anticipate that current levels of investment in facility improvements and support programs (e.g. TravelSmart) are increased by the additional costed actions included in the policy sections of this Plan. Even higher mode share may be achieved through integrated land use and transport planning measures, changes in travel demand management policies (especially parking management), accelerated changes in travel behaviour created by external stimuli (e.g. oil price shocks) or other measures promoted by the Sustainable Transport Strategy. More specific and higher targets have also been set for activity centres and Greenfield areas, other urban areas, schools and for urban areas for trips of less than five kilometres.

To achieve the vision for active transport, the plan sets out policies and actions in seven clear priority areas:

- Integrated planning
- Networks and infrastructure
- Safety
- Inform educate and encourage
- Funding active transport
- Engage and partner and
- Monitor and report.

Integrated planning

Transport planning needs to be integrated across many levels of planning, interests and modes. Active transport requires integration into an urban structure that makes walking and cycling trips convenient, pleasant and safe. The assessment of development applications plays an important role of achieving this goal in new development. The Plan policy framework will guide the development of active transport requirements in the new planning scheme and priority infrastructure plan. The planning scheme will require appropriate facilities to be part of new subdivisions and redevelopments with permeable street networks and connections through open space.

Walking and cycling will be positively catered for while acknowledging that cars will remain the dominant mode of transport. Modes are considered in a user hierarchy order that considers pedestrians first then cyclists, public transport users, specialist service vehicles and other general motor transport in that order. Retrofitting of a workable active transport system on existing car-based networks will be done by managing demands in the transport corridors.

The Plan has adopted a 'whole of journey' approach where a focus is on walking and cycling networks connecting to public transport stops, stations and interchanges. The policies in the Plan have been integrated with other council policies, State planning and best Australian and international practice.

Policies for 'Integrated planning' are:

- **P1** land use planning and development patterns favour and promote active transport as the preferred method of travel.
- **P2** activity centres are active transport supportive and contain residential and employment generating land uses at densities which increase self containment and reduce the need for long trips.
- **P3** Greenfield development achieves active transport supportive residential development densities and provides safe cycling and walking routes.
- **P4** transport and land use planning are undertaken concurrently and development is sequenced with timely infrastructure provision.
- **P5** urban design and place making in new and existing communities are planned and developed to support integration of active transport.
- **P6** council will develop a comprehensive active transport network of on and off-road links that integrates with other transport modes.
- **P7** transport planning and management considers pedestrians first then cyclists, public transport users, freight and specialist service vehicles and private vehicles in that order.

Networks and infrastructure

Network planning improves community mobility and amenity by providing interconnected routes and facilities based on peoples needs and tailored to the location. The goal is to provide pedestrians and cyclists with safe, comfortable, direct connections to where they want to go.

All pedestrian and cycling infrastructure need to be comfortable, direct, coherent, attractive and safe. There is potential to increase the number of active transport trips by encouraging more females and cautious riders to cycle. Physically separated or off-road cycle infrastructure is producing greater uptake by women and cautious riders in general. Further investigation will analyse the advantages and disadvantages of using physically separated cycleways on Sunshine Coast cycle priority corridors.

Existing data was combined from many sources to create a comprehensive, amalgamated and consolidated dataset of pathways and on-road facilities. Mapping of the extent of the existing pathway network and on-road network is shown in Appendix B.

Demographics and travel behaviour of Sunshine Coast residents have been analysed to deliver actions tailored specifically to the Sunshine Coast active transport environment including actions with a focus on connecting communities to centres, public transport, school trips and variations with location and age.

The Coastal Pathway is examined as a component of the active transport network and considers the pathway function, funding, construction and management. A consistent approach and allocation of responsibility will be taken to ensure consistency and a coordinated approach.

Policies for ‘Networks and infrastructure’ are:

- **P8** provide a safe, continuous, direct and coherent walking and cycling environment that supports and encourages walking and cycling as an alternative to private car use and as healthy recreational activity for all ages.
- **P9** ensure the transport network and places are designed to cater for active transport movement.
- **P10** positively provide for cyclists and pedestrians on all roads and streets and in every council transport or other relevant project.
- **P11** a range of solutions is used to reduce the attractiveness of private vehicle use including traffic reduction, demand management, reallocation of road space to pedestrians and cyclists and expansion of active transport facilities.
- **P12** pedestrian and bicycle infrastructure provides and maintains a satisfactory level of service for all users including those with disabilities and limited mobility.
- **P13** tourists are encouraged to utilise active transport while visiting the Sunshine Coast.
- **P14** council standards and guidelines use best practice in design, operation and maintenance of pedestrian and cycling facilities.

Safety

Various measures are needed to improve road safety. Infrastructure that improves conditions needs to be combined with programs that develop skills for all road users. council’s goal is to work towards zero pedestrian and cyclist trauma involving serious injuries and death.

Cyclists and pedestrians account for 11 per cent of the severe and fatal casualties on all roads in the Sunshine Coast region. Almost one in five severe and fatal casualties on council controlled roads is either a cyclist or a pedestrian. An analysis of cyclist crashes found that the most common crash was a cyclist leaving a footpath and entering the road. Intersections are the most dangerous locations for cyclists. The most common reported crashes for pedestrians were from directly crossing roads. Pedestrian and bicycle crash ‘blackspots’ have been identified for safety improvements. Safety improvements for younger users will be focussed around schools and where pathways cross roads.

Policies for ‘Safety’ are:

- **P15** the pedestrian and cycling environment is designed, built and maintained to be safe.
- **P16** support the improvement of road user behaviour and education of all road network users to reduce road trauma and consequential costs to the community.

Inform, educate and encourage

The development of a cycling and walking culture is a priority for council. A co-ordinated approach will be used in marketing of cycling and walking as legitimate transport options. TravelSmart program will improve awareness of walking and cycling as transport options, increase participation in active transport, especially to schools and for work related trips as well as provide specific walking and cycling information.

Education and awareness programs are an essential part of improving safety for pedestrians and cyclists. Council has recently launched a road safety program and will continue to run similar campaigns tailored for the Sunshine Coast.

Policies for 'Inform, educate and encourage' are:

- **P17** TravelSmart programs focus on marketing the benefits of all available transport alternatives so that users understand the positive impact of their actions on the sustainability of the Sunshine Coast.
- **P18** give residents and visitors the knowledge and skills to use walking and cycling for transport and recreation and support and encourage people who walk and cycle.
- **P19** create an improved image of cycling amongst residents to encourage increased participation.

Funding active transport

Indicative costings have been developed for the actions detailed in the Plan with an indication of the scale of the cost noted against each action. Many of the identified actions will be undertaken using existing resources and through existing operational budgets. Costs not covered by existing budgets are identified as requiring an additional commitment of $2.5 million per annum to active transport capital budgets and an additional full time staff member. These funding allocations are possible from a reallocation of funding within the overall transport budget in line with council's commitment to increasing the priority given to active transport compared to travel by private vehicles.

An objective method of prioritising projects is needed to determine the order in which projects should be undertaken. A robust method will also ensure that the current support for cycling can continue to be justified and potentially increased. Prioritising will focus on higher density centres and corridors, education centres, public transport connections, safety, replacing short vehicle trips and strategically important links.

An agreed prioritisation method will be determined for each active transport capital works program based on criteria and weighting to be finalised through consultation with all stakeholders. Council's priorities for regional routes eligible for Cycle Network Program grants will mirror the criteria used by the State. Projects for the Coastal Pathway need to be prioritised within a single capital works subprogram.

Policies for 'Funding active transport' are:

- **P20** planning and delivery of active transport infrastructure, services and maintenance and rehabilitation of existing infrastructure is cost effective.
- **P21** transport investments are adaptive to potential changes in transport preferences in the future with an increasingly higher allocation towards delivery of alternative transport infrastructure and services.
- **P22** all new projects that impact on the transport network will be funded to include provisions for pedestrians and cyclists.
- **P23** development contributes to the implementation of active transport.

Engage and partner

The Plan is the result of significant community involvement including community feedback on the Sustainable Transport Discussion Paper, the draft version of the Plan and the Cycling Reference Group. The Cycling Reference Group will continue to assist in the implementation of the Plan's strategies and actions. Council will seek opportunities to discuss active transport outcomes with the local development industry.

There are significant advantages in developing the council cycle network concurrently with road infrastructure, other transport infrastructure projects and the regional bicycle network projects. Council has requested Transport and Main Roads to investigate ways of providing a coordinated and cost effective approach to road programs so that cycling facilities can be provided at the time of major road maintenance.

The policy for 'Engage and partner' are:

- **P24** active transport is supported by strong council leadership, community engagement and by developing effective partnerships.
- **P25** decisions for the planning and delivery of the Sunshine Coast active transport system are based on collaborative efforts from a range of stakeholders, including all levels of government, the private sector and the Sunshine Coast community.

Monitor and report

A monitoring program will gather quantitative and qualitative measures of progress towards targets and actions of the Plan. The monitoring program will also provide a detailed annual progress report, called a *Pedestrian and Bicycle Account*, to council and the community.

Policies for 'Monitor and report' are:

- **P26** progress toward meeting key policy areas for active transport is measured, analysed and reported annually.
- **P27** a *Pedestrian and Bicycle Account* provides information to decision makers, council and the community and guides the implementation of the Plan.

1 Background

The Plan sets out a comprehensive approach for walking and cycling on the Sunshine Coast. The plan will ensure that the planning for active transport is current, consistent and coordinated.

Active transport by definition includes non-motorised forms of transport involving physical activity, such as walking and cycling. Active transport is also an essential component of public transport as these trips generally include walking or cycling components as part of the whole journey. The active transport networks consist of shared pathways, footpaths and on-road cycling facilities and includes crossings, on-trip and end-of-trip facilities.

The population of the Sunshine Coast was estimated to be 323,000 people in June 2009 (ABS, 2010). Since the 1980's the Sunshine Coast has been one of the fastest growing areas in Australia. Over the last 10 years, the Sunshine Coast population has grown by approximately 8500 people annually (three per cent). The State Government planning population for 2031 is 497,000 permanent residents (*SEQ Regional Plan 2009-2031*, 2009), which is an increase of 54 per cent over 20 years. Council is focussing on determining the sustainable carrying capacity of the region, which may vary from the State forecast. A growing population on the Sunshine Coast means a growing demand for travel.

High tourist and visitor numbers, especially during peak tourist seasons, considerably increase the number of people in the region. The Sunshine Coast hosted 2,777,000 overnight visits in the year ended March 2007. Visitors are predicted to grow by approximately 60per cent in the next 20 years. Our active transport infrastructure should be planned for an average demand 10 per cent higher than that generated by the resident population with larger increases expected in tourist precincts.

1.1 Purpose of the Plan

The Plan develops the policy framework and future direction to:

- confirm the vision for active transport for the Sunshine Coast
- develop future-focussed policies for active transport
- set the direction for more sustainable trips, lower greenhouse gas emissions, healthier lifestyles, less congestion and benefits for tourism
- set active transport mode share targets
- help plan safe and efficient pedestrian and cycling networks
- plan networks integrated with land use and based on existing and projected travel demand
- set the framework for delivering walkable neighbourhoods with high levels of accessibility
- integrate the Plan into the new planning scheme and Priority Infrastructure Plan
- define internal processes within council that will ensure active transport is considered an essential and integral component of transport and planning activities
- identify opportunities to improve safety for pedestrians and cyclists
- provide continuity and consistency with State strategies and the Principal Cycle Network and Transport and Main Roads networks
- integrate and link to Federal, State and council corporate strategies and funding opportunities
- reinforce an integrated approach to the planning, development and maintenance of active transport facilities with internal and external parties
- increase participation in walking and cycling for both transportation and recreation
- develop a framework for the continuing monitoring and evaluation of active transport programs.

2 Why active transport

'We build cities for cars, not people, resulting in congestion, noise, ugly urban landscapes, and deaths and injuries from accidents.' – **David Suzuki**

Efforts at many levels of transport planning aim to increase the levels of walking and cycling. These initiatives are motivated by a desire to maintain our distinctive lifestyle by reducing vehicle use, congestion and the resulting environmental consequences of pollution, green house gas emissions and resource consumption. Concerns of liveability and public health are also strong motivators. The community is increasingly looking to active transport as a way to improve our future.

2.1 Creating liveable urban spaces

Sunshine Coast residents often express concerns about losing our lifestyle to 'big city' urban expansion. Walking and cycling create more liveable urban spaces, slowing the speed of movement and improving access and social interaction within our communities. Denser, pedestrian and bicycle friendly communities will make us less dependent on cars to get to schools and shopping. It means widening footpaths and narrowing roads.

Australia is one of the most urbanised nations and we make lots of short journeys. Short car trips are the most polluting per kilometre, as the engine is cold. Active transport burns no fossil fuels, produces no harmful emissions and incurs minimal costs. Cycling or walking for short journeys is a practical, easy way to lower our impact on the urban environment. Perhaps the most compelling argument in favour of walking and cycling is that these modes of travel will make you happier.

2.2 Improving health

The more time we spend in our cars the less time we're spending being active. Over half the Australian population participate in lower-than-recommended levels of physical activity, and this number is growing (Australian Institute of Health and Welfare, 2006). In contrast, the World Health Organisation estimated in 2000 that a 30-minute cycle trip a day provides all the exercise you need to halve the chance of becoming obese or diabetic.

A substantial number of Australian children are not active enough to get the health benefits of physical activity. Australian children's walking and cycling for transport are low in comparison to many other developed countries, and have declined substantially in recent decades. The *2007-08 National Health Survey* found that 17 per cent of children are overweight and close to eight per cent are obese.

Increased activity levels reduce health care costs. The Australian Government Department of Health and Ageing has found the current value of cycling participation to the health system is more than $220 million a year (Bauman et al., 2008). We need to re-engineer physical activity back into our lifestyles by redesigning our communities to be denser and more compact, with better walking and cycling facilities. Fortunately, our climate makes it easy to combine the benefits of active transport into our daily lives.

2.3 Increasing social equity

Individuals and communities are economically and socially disadvantaged if they can't access employment, services and social opportunities. Currently, 14 per cent of Australians who are over 18 years of age do not have access to a car and may be disadvantaged if they do not have alternative transport options.

Cycling provides a low-cost, flexible transport option, particularly for young people. Walking is universally available, affordable and socially inclusive providing a free and direct means of accessing local goods and services, community amenities and public transport.

Walking and cycling complement public transport by extending the effective catchment areas. A ten-minute trip to public transport can provide a two square kilometre catchment by walking and up to 32 square kilometre catchment by bicycle at average speeds of travel.

2.4 Reducing the cost of congestion

Being stuck in traffic is taking a serious toll on our time and the environment. Private vehicles are the primary cause of congestion (Bureau of Transport and Regional Economics, 2007). The Bureau found that the cost of avoidable congestion in Australia for 2005 was $9.4 billion and is estimated to soar to $20.4 billion by 2020.

The *South East Queensland In-depth Travel Behaviour Survey* found that 10 per cent of private car trips are less than one kilometre in length and 34 per cent are less than three kilometres (Queensland Transport, 2005a). These trips are ideal candidates for changing to walking and cycling and offer huge potential for reducing congestion and saving us all time and money.

2.5 Responding to climate change and greenhouse gas emissions

Changes to weather patterns, increasing temperatures and rising global sea levels are some of the impacts already being caused by climate change. Overwhelming scientific evidence indicates that human-induced climate change is happening. Increasing amounts of greenhouse gases in the atmosphere are mainly responsible. We need to take urgent action to stabilise greenhouse gas emissions if we are to avoid the increasing damaging results (Department of Infrastructure and Planning, 2009).

Passenger cars are responsible for almost half of total transport emissions (Department of Climate Change and Energy Efficiency, 2007). The transport sector is the fastest growing source of greenhouse gas emissions. Between 1990 and 2007, transport sector emissions in Queensland increased by almost 59 per cent. In 2007, the transport sector was the fourth largest source of greenhouse gas emissions

in Queensland. If we do not take action, Australia's emissions in 2020 will be nearly 80 per cent higher than they were in 1990.

The sooner we act the smaller the cost will be both personally and as a community. Increasing our use of active and public transport can make a significant contribution to lowering greenhouse gas emissions and meeting Queensland's goal of reducing our carbon footprint by one-third by 2020.

2.6 Coping with peak oil

Peak oil is a term used to describe how the depletion of known oil reserves, combined with expanding demand will lead to a point of maximum production, or peak, followed by declining output. Petrol prices could increase to between $2 and as much as $8 per litre by 2018 (CSIRO, 2008).

As Australian cities are the most car dependent urban areas outside the USA, the increasing cost of oil will also have a major impact on the cost of everything we do and use, even where we can afford to live. Peak oil doesn't seem important until you realize that oil is used in so much of what we do, grow and buy everyday. As the world's demand for food, products and transport continues to grow while oil production peaks the cost of fuel and food will continue to increase. Sustainable transport options such as public transport, cycling and walking will play an increasing role as our oil dependence affects our transport choices.

'Of course, nobody has to change survival is optional. But most rational people would see it as the preferred way forward.'
– Professor Ian Lowe AO

3 Planning and policy context

The Plan supports the overarching Sustainable Transport Strategy. The Plan provides more detail of the policies and actions for active transport priorities. The *Sunshine Coast Regional Council Corporate Plan 2009-2014* is council's key strategic document and the Plan has been developed in line with the 'Accessibility and Connectedness' theme. The relationship between the Plan and council's other active transport activities is illustrated in Figure 3.1.

There are numerous strategies, plans and studies by the Sunshine Coast Council and from the three pre-amalgamation councils, which are important in the development of this Plan. Many are still the current council policy or adopted positions.

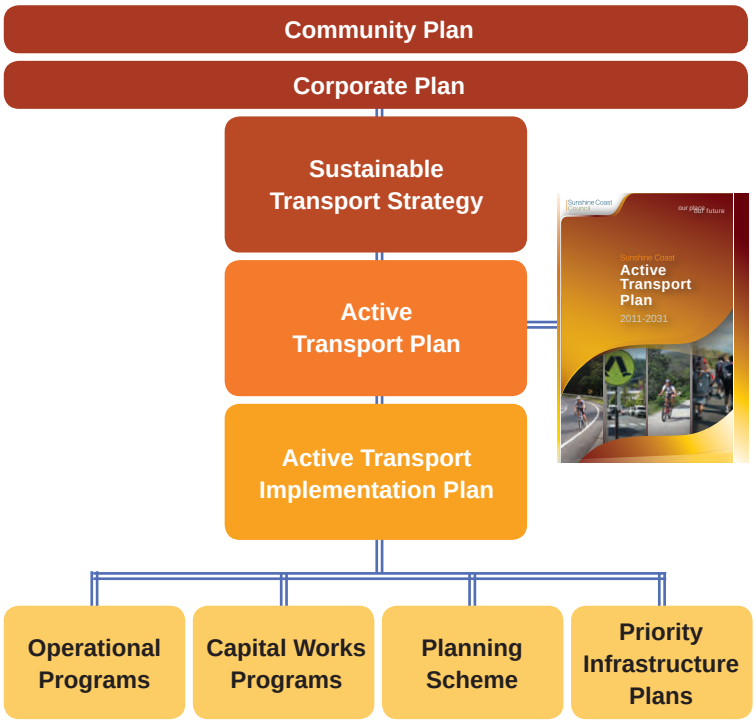
A number of recent state, national and international initiatives and strategies have contributed to a new planning environment. These documents provide clear direction on the need to increase active transport in Australia and to develop more sustainable transport networks.

Appendix A lists the documents that have influenced the Plan.

A number of strategies and plans currently under development in council have a strong connection or relevance to the Plan. The projects that have a direct impact include the *Open Space Strategy, the Coastal Pathway Strategic Plan, Recreational Trail Strategy, Regional Corridor Placemaking Strategy, Open Space Strategy, Affordable Living Strategy, Climate Change and Peak Oil Strategy, Energy Transition Plan, Social Infrastructure Strategy, Regional Sport and Active Recreation Strategy* and *Wellbeing Strategy*.

A new planning scheme is being prepared for the Sunshine Coast to be complete in 2012. The outcomes and recommendations of the Plan relating to planning will be included in the new planning scheme and *Priority Infrastructure Plan. The Active Transport Implementation Plan* will be developed to implement the policies and actions of the Plan.

Figure 3.1: Council active transport activities



4 A vision for walking and cycling on the Sunshine Coast

The Sunshine Coast deserves high quality walking and cycling infrastructure and services that match the needs of our diverse communities both now and into a changing future. Infrastructure needs to be sustainable and climate resilient and ensure the Sunshine Coast remains a great place to live and visit. Providing walking and cycling infrastructure will help shift some motor vehicles trips to more sustainable transport. The aim of this plan is to provide the networks and supporting programs to encourage a significant change to more trips per household per day by walking and cycling.

The *Corporate Plan 2009-2014* defines council's vision for the region as *To be Australia's most sustainable region – vibrant, green, diverse*. The active transport vision builds on this base to set goals for planning, implementation and management.

The active transport vision for the Sunshine Coast is:

The Sunshine Coast is recognised as an active transport friendly place where people of all ages walk and cycle for enjoyment and transport. Our community values our quality active transport infrastructure and programs that improve our lifestyle, health and sustainability.

4.1 Opportunities and challenges

There are a number of challenges facing walking and cycling on the Sunshine Coast including:

- natural barriers (rivers, creeks, hilly terrain) and man-made barriers (rail lines, motorways, highways and canals) restrict pedestrian and cycle movement or require significant diversions to cross
- low density land uses patterns and dispersed communities make walking or cycling trips longer and less preferred and increase the cost of providing facilities
- a lack of facilities to match current demand, particularly in and around town centres
- ensuring the needs of pedestrians and cyclists are considered ahead of other modes of travel when designing transport networks in urban areas
- providing sufficient funding in capital works programs for active transport improvement projects
- pedestrians and cyclists need to be taken into account when scoping, designing and constructing all road-based capital works projects and
- better coordination of planning and funding priorities between council and State agencies for active transport projects as the State controls a large percentage of our arterial roads.

There are also a number of opportunities that we can take advantage of to meet the challenges including:

- the mild climate of a subtropical coastal region
- skilled and knowledgeable staff and enthusiastic community members
- council's established program of travel behaviour change that encourages voluntary changes in community travel
- a willingness and a mandate from council to move towards a sustainable transport system and
- the rapidly increasing manufacture and uptake of electric power assisted bicycles (e-Bikes) making cycling an easier, attractive option for many more people.

Table 4.1: Proposed mode share targets [1]

Mode	Current mode share[2]	Target future mode share	
	2007	2016	2021
Activity centres and Greenfield areas (Noosa, Nambour, Maroochydore, Kawana, Sippy Downs, Caloundra, Palmview and Caloundra South) [3]			
	10%	13%	**15%**
	2%	4%	**7%**
Combined	12%	17%	**22%**
Other urban areas (Caloundra to Maroochydore, Pacific Paradise to Noosa and Hinterland villages and communities)			
	Unknown	12%	**14%**
	Unknown	3%	**6%**
Combined	Unknown	15%	**20%**
All urban areas for trips less than 5 km			
	Unknown	5%	**10%**
Schools			
	16%	18%	**20%**
	8%	9%	**10%**
Combined	24%	27%	**30%**
Sunshine Coast region			
	8.0%	10%	**13%**
	1.8%	3%	**5%**
Combined	9.8%	13%	**18%**

[1] For the purpose of setting mode share targets, a trip is defined as travel by a person from an origin to a destination for a single purpose. See Glossary for more details

[2] 2007 current mode shares are from *2007 Household Travel Survey*

[3] The current mode shares figures for Activity Centres and Greenfield sites are based on broad SLA data surrounding the activity centre locations and should be regarded as only a general indication of mode share

4.2 What would success look like?

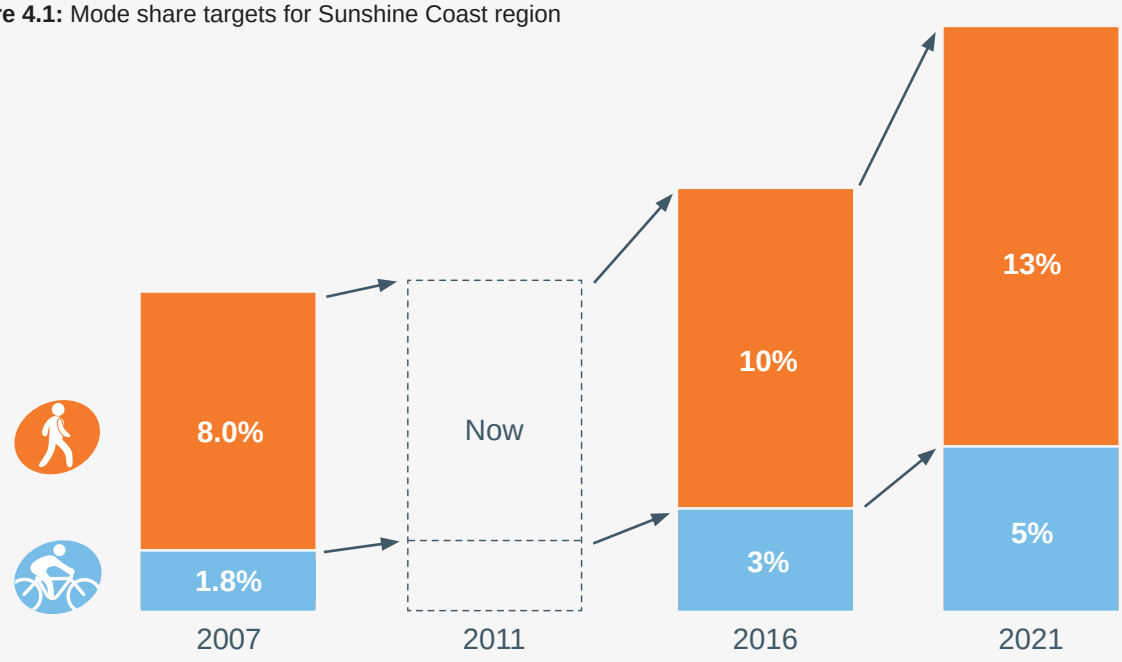
Mode share describes the percentage of travellers using a particular type of transportation. Mode share targets are most useful when they consider our different types of communities and trip patterns. Targets have been developed for areas with a high number and percentage of short trips (e.g. activity centres, schools and other identified areas) to focus on the higher potential for changing these trips to walking and cycling. The proposed target mode shares are shown in Table 4.1.

The regional cycling target is broadly consistent with the State target of eight per cent of all trips by cycle in 2031 (Transport and Main Roads, 2010b). The State forecast for walking of 10 per cent of all trips in 2031 is considered low and is a reflection of the lower priority given to pedestrian programs. It is expected that the State will increase the focus on walking in the future with State targets then more in line with the Sunshine Coast forecast. The overall targets for walking and cycling on the Sunshine Coast are illustrated in Figure 4.1.

The targets anticipate that current levels of investment in facility improvements and support programs (e.g. TravelSmart) are increased by the additional costed actions included in the policy sections of this Plan. Even higher mode share may be achieved through integrated land use and transport planning measures, changes in travel demand management policies (especially parking management), accelerated changes in travel behaviour created by external stimuli (e.g. oil price shocks) or other measures promoted by the *Sustainable Transport Strategy*.

In line with the *Road Safety Plan* being developed by council, this Plan sets an aspirational goal of *Moving towards zero pedestrian and cyclist trauma involving serious injuries and death*.

Figure 4.1: Mode share targets for Sunshine Coast region



5 Active Transport Plan framework

To achieve the vision for active transport, the Plan sets out seven clear priority areas:

- Integrated planning
- Networks and infrastructure
- Safety
- Inform, educate and encourage
- Funding active transport
- Engage and partner and
- Monitor and report.

Each of these priority areas is underpinned by a number of policies and actions, which are discussed and detailed in Chapter 6 to Chapter 12 to follow.

The actions are given a **timeframe** as follows:

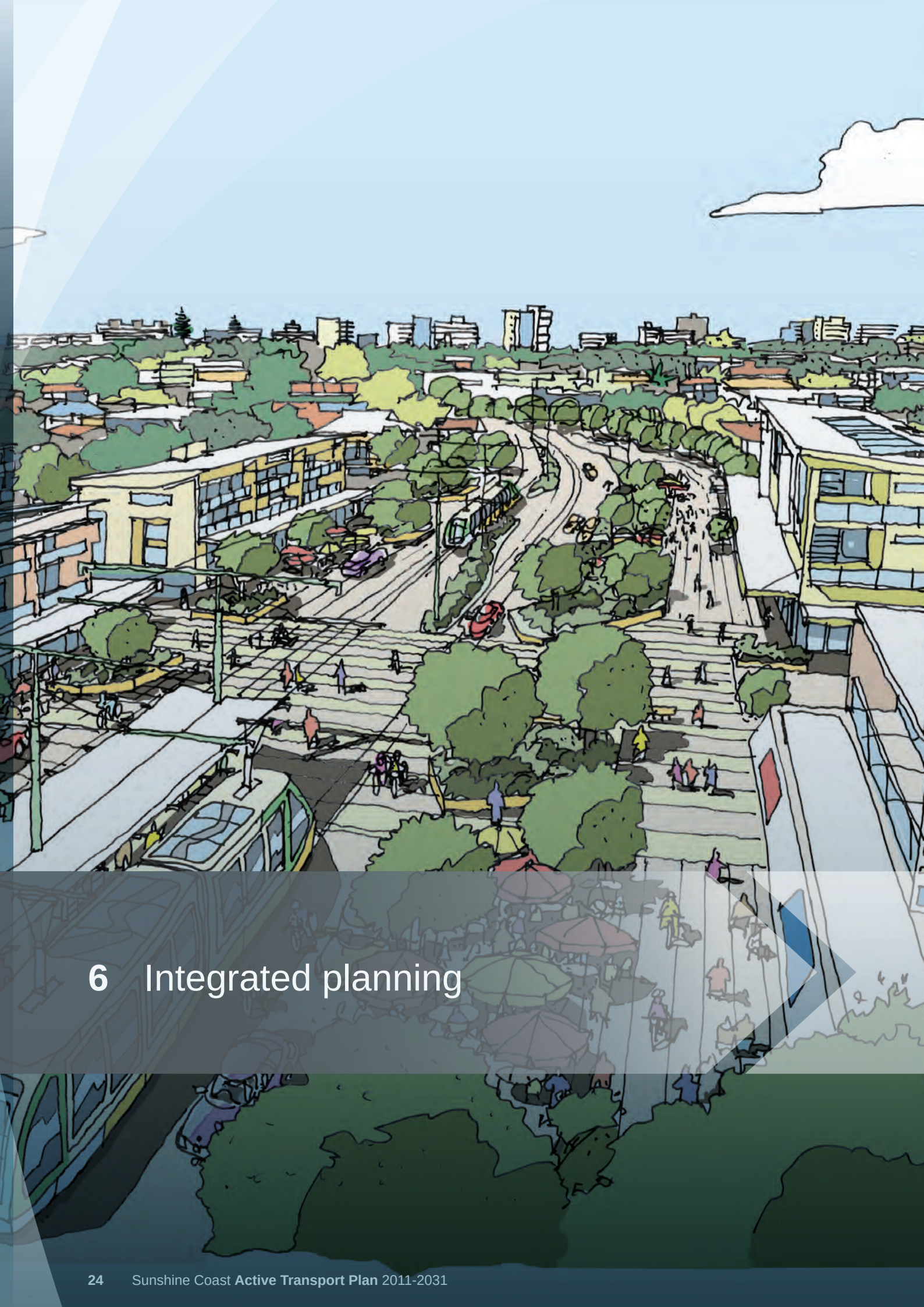
Timing	Description
2011 or 2012	Immediate actions to be undertaken within the first or second year
2016	Short term actions to be undertaken within five years (by end of 2016)
2021	Medium term actions to be undertaken within 10 years (by end of 2021)
2031	Long-term actions to be undertaken after 10 years and before 2031
Ongoing	Continuing action or ongoing.

General costings are also given for each action. Many of the identified actions will be undertaken using existing resources and through existing operational budgets. Costs not covered by existing budgets are discussed in Chapter 10 Funding active transport.

The general **cost ranges** are as follows:

Cost range	Description
Low	$0 to $100,000 or part of normal operational budget
Med	$100,000 to $1,000,000
High	Greater than $1,000,000

Abbreviations used to identify responsible parties (and applicable branch within council) are defined in Chapter 13 – Glossary and abbreviations.



6 Integrated planning

To be successful, transport planning needs to be integrated across many levels, interests and modes. Integration can be vertical where direction, knowledge and priorities from other levels of planning are taken into account. Examples include State planning and local area planning influencing each other and ensuring that strategic, tactical and operational planning are coherent. Horizontal integration takes account of other types of planning including land use, urban design and planning for other transport modes.

6.1 Integrating transport with land use and placemaking

Good urban structure makes walking and cycling trips convenient, pleasant and safe. To make walking and cycling the preferred travel choice, State planning guidelines recommend that development provide mixed land uses and densities (Transport and Main Roads, 2010a). The guidelines promote active transport as the base on which the access and movement strategy is built. A variety of destinations such as schools and shops are within walking or cycling distance, and high residential densities (over 30 dwellings per hectare) support these activities. Development patterns can reduce our reliance on private vehicles and promote public and non-motorised transport choices.

These higher-density mixed-use development patterns also create diverse communities, increased social activity and inclusion and cater for various stages of life (Planning Institute of Australia, 2009). Good urban design and placemaking has been shown to increase active and healthy lifestyles. At the street level improvements in lighting, ease and safety of street crossings, pathway continuity, traffic calming structures and aesthetic enhancements have been shown to increase physical activity levels by 35 per cent (Queensland Government and Heart Foundation, 2010).

6.2 Development applications

The assessment of development applications play an important role in integrating walking and cycling facilities into new development. The planning scheme will require appropriate off-road shared pathways, on-road cycle lanes, on-trip and end-of-trip facilities to be part of new subdivisions and redevelopments with permeable street networks and connections through open space.

To help meet these requirements, pedestrian and cycling assessment criteria will be developed for the review of development applications and procedures will be introduced so that the officers with the best active transport expertise are involved in the review process.

6.3 Integrating transport systems

Road hierarchy has been an important part of defining the relationship between transport corridors and urban structure in modern transport planning. The use of road hierarchies has provided a safe, efficient and convenient road system for the movement of people and goods while minimising the adverse impacts of traffic flow, particularly on residential amenity and pedestrian safety.

A well-designed road hierarchy defines the primary purpose of each road or street element, the relationship between the road system and the land use it serves, how it can be managed and its design requirements. Design requirements include cross sections for the various types of road and street types in the hierarchy.

Pedestrian and cycle hierarchies

Roads are used by pedestrians, cyclists, public transport, freight and private cars. While cars will remain the dominant mode, other modes need to be positively provided for. The major networks of general traffic, pedestrian, bicycle, public transport and freight can be drawn as separate networks but need to be managed as an integrated system.

The component links of each network can be categorised according to their function, design standards and management in what is known as a hierarchy. Mode can have unique hierarchies. The hierarchy for the cycle network is explained in Table 6.1.

Table 6.1: Hierarchy classifications for cycling

Hierarchy	Network function
Regional routes	These routes are of regional significance and provide the quickest and most direct routes connecting areas of high population density and major activity centres. They form the high speed movement spine for the cycle network and will have the highest use. Their primary purpose is to provide high speed corridors for long distance trips such as commuter trips, sports and cycle touring.
District routes	These routes serve a district function and act as collectors/distributors linking residents and smaller centres to the Principal routes. They provide a network which ensures safe and convenient access to the Principal routes for long distance trips, but also facilitates shorter cycle trips within districts.
Local routes	These routes act as connections to local centres and facilitate short cycle trips within local areas such as utility trips, and trips to schools.

Walking can be considered as a network and also as location based as pedestrian activity is often concentrated around particular land uses like shopping precincts and recreation areas. A pedestrian hierarchy based on pedestrian priority areas will be developed from land use mapping and the location of activity centres, town, village and local centres. The development of pedestrian networks is also needed to deliver connectivity and to allow pedestrians to negotiate other transport networks.

User hierarchy

A general planning and management principle has been adopted for the network where modes are considered in an order of user hierarchy that considers pedestrians first then cyclists, public transport users, specialist service vehicles (emergency services, waste etc.) and other general motor transport in that order as shown in Table 6.2. This reinforces the view that all users are important and the vulnerability of pedestrians and cyclists requires that their needs should be considered early in any design or management decision.

Table 6.2: User hierarchy

Consideration	User/Mode
Consider First	▶ Pedestrians
	▶ Cyclists
	▶ Public transport users
	▶ Freight & specialist service vehicles
Consider Last	▶ Other motor traffic

Source: Department for Transport, 2007

The user hierarchy is not meant to imply that all modes must be catered for in all corridor sections and does not mean that pedestrians will always have a higher priority than other modes. However the needs of pedestrians should be considered first, followed by other users so that all modes on a particular corridor are served in a balanced and safe way.

For example, on motorways vehicles may have priority on the carriageway, however the needs of pedestrians and cyclists to move along and across the corridor have to be considered early in the design process and effective solutions found for their needs.

Managing transport systems

Managing an existing road or street is often about prioritising the use of restricted space in the corridor between competing demands from various modes and other uses for the corridor space (e.g. parking). Contemporary road management looks to integrate and balance the demands for space and time within and along the corridors. Roads will be managed as multi-modal facilities catering for walking, cycling and buses, with a less dominant role for private vehicles.

Assigning priority to a particular mode for a corridor section means that other modes may be in competition for the available space. The level of service (LOS) provided to individual modes is used to measure the effectiveness of transport infrastructure for that mode. LOS can be used to negotiate the trade-offs between the various demands. Currently bicycle and pedestrian pathways are not rated on a level of service basis. Systems have been developed elsewhere to rate the performance of pedestrian and cycle facilities. On-road cycle facilities are generally rated on a basis of the road speed limit, width of cycle lane, number of daily trips on the road and pavement surface. Pedestrian pathways are usually given levels of service based upon directness, continuity, security, visual interest and amenity and street crossings.

Corridor priority mapping will be undertaken to guide the priority, form and operation of the pedestrian and cycling networks. The *Sustainable Transport Strategy* includes further detailed discussion on how these methods will be used to meet the needs of pedestrians and cyclists in existing and often constrained urban areas. A Transport Management Plan, to be developed under the *Sustainable Transport Strategy*, will develop a model to manage transport corridors to deliver the planned priority and level of service to the walking and cycling networks.

Public transport integration

The Plan has adopted a 'whole of journey' approach where the focus is on walking and cycling networks connecting to public transport (bus and rail) stops, stations and interchanges. The focus will be to provide safe, convenient and attractive connections radiating from these stops into the surrounding residential communities.

Bicycle parking needs to be provided at all connections to public transport to make changes between modes as attractive as possible. Higher-level end-of-trip facilities including secure bicycle parking, lockers and showers are required at strategic public transport stations. Council will investigate installing these facilities with the assistance of Translink Transit Authority.

The ability to carry bicycles on buses has the potential to further expand the reach of combined active and public transport for some trips. Trips where there is a desire to ride at the destination, for example bus routes that connect residential areas to recreational routes like the Coastal Pathway, are particularly suited to carrying bicycles. There has been mixed results from Australian experience of bicycles on buses. The most successful scheme is Canberra's *BIKE'n'RIDE*, which allows bicycles on the Intertown Route buses equipped with external bike racks. Council will negotiate with Translink Transit Authority and Sunbus to trial bicycles on buses on suitable Sunshine Coast routes.

6.4 Integrating policies

The policies in the Plan have been integrated with other council policies (see Chapter 3 Planning and policy context). This ensures that decisions made in one area complement, and do not compromise, decisions or interests in another. The same approach has been used to integrate council policy with State planning including the draft integrated regional transport plan for South East Queensland, *Connecting SEQ 2031*, which includes the State blueprint for meeting the active transport challenge.

Walking is often the mode of travel taken for granted. The first step we can take in developing a successful strategy for walking is to positively acknowledge that walking is important and is a priority for council. An effective way of achieving this is to recognise and adopt the *International Charter for Walking*. Queensland Transport has adopted the principles and vision of the charter in developing the *Action Plan for Walking 2008-2010*. The charter supports a vision of a world where people choose and are able to walk as a way to travel and to be healthy and authorities recognise the value of walking, have a commitment to healthy, efficient and sustainable communities and work together to overcome the physical, social and institutional barriers which often limits people's choice to walk.

The Plan is the policy framework guiding the development of active transport requirements in the new planning scheme. The Plan also guides the development of the active transport trunk network infrastructure, which is partially funded through infrastructure charges.

These charges are developed in the Priority Infrastructure Plan for active transport as part of the new planning scheme. The method of charging development for trunk infrastructure is currently being reviewed by the State Government with the goal of simplifying charges and providing greater certainty (Department of Infrastructure and Planning, 2010). Regardless of the final decision on the reform, council will need to undertake a similar degree of planning to provide an appropriate capital works program and a sustainable funding model for active transport.

6.5 Policies and actions – Integrated planning

Policies	
P1	Land use planning and development patterns favour and promote active transport as the preferred method of travel.
P2	Activity centres are active transport supportive and contain residential and employment generating land uses at densities which increase self containment and reduce the need for long trips.
P3	Greenfield development achieves active transport supportive residential development densities and provides safe cycling and walking routes.
P4	Transport and land use planning are undertaken concurrently and development is sequenced with timely infrastructure provision.
P5	Urban design and place making in new and existing communities are planned and developed to support integration of active transport.
P6	Council will develop a comprehensive active transport network of on and off-road links that integrates with other transport modes.
P7	Transport planning and management considers pedestrians first then cyclists, public transport users, freight and specialist service vehicles and private vehicles in that order.

Actions	Timing	Cost	Responsible[1]
Land use planning and placemaking			
▶ Encourage and plan an urban environment that reduces demand for private vehicle trips providing a higher level of accessibility and connectivity for pedestrians and cyclists than for private vehicles.	Ongoing	Low	SCC/SPlan
▶ Assess and improve the level of accessibility for walking and cycling to public transport nodes, activity centres and other key walking and cycling attractors.	2011	Low	SCC/ITP
▶ Ensure that the external active transport network is available to connect to Greenfield urban development.	Ongoing	High	SCC/TES
▶ Improve facilities for pedestrians in urban areas by creating pedestrian priority areas, wider footpaths, more priority for crossings, shortcuts, environment improvements, design features in building applications and better connections across bridges.	Ongoing	High	SCC/TES/PDS
▶ Develop bicycle and pedestrian friendly precincts around schools, key employment nodes, activity centres and public transport interchanges using measures including Local Area Traffic Management Plans.	Ongoing	High	SCC/TES

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

Actions	Timing	Cost	Responsible[1]
Development applications			
▶ Ensure that off-road shared pathways, on-road cycle lanes, on-trip and end-of-trip facilities are part of new subdivisions and redevelopments with permeable street networks and connections through open space networks.	Ongoing	Low	SCC/DS
▶ Develop pedestrian and cycling criteria for the review of development applications and consult appropriate officers with active transport expertise in the review process.	2011	Low	SCC/DS/ITP/ ITS
▶ Develop criteria for the scale and types of developments (e.g. size, impact, location) where teams are to be called to review development applications and include appropriate council active transport representatives in the Development Application Pre-lodgement meetings.	2011	Low	SCC/DS/ITP/ TES
▶ Review existing development approval conditions to ensure Traffic Management Plans provide for pedestrians and cyclists during construction and developments comply with development approval conditions at completion.	2011	Low	SCC/DS/ITS

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

Actions	Timing	Cost	Responsible[1]
Integrated transport systems			
▶ Develop and use a transport management model including corridor priority mapping to manage the needs of competing modes and land uses in transport corridors providing priority to walking and cycling where required.	2011	Low	SCC/ITP
▶ Investigate bicycle parking required at all bus stops, stations, interchanges and rail stations and implement these facilities in conjunction with Translink Transit Authority.	2016	Med	SCC/ITS/TES, TTA
▶ Negotiate with Translink Transit Authority and Sunbus to accommodate bicycles on buses.	2016	Low	SCC/ITS, TTA, Sunbus
▶ Provide a CBD bicycle parking station and end-of-trip facility co-located at the Maroochydore bus station in conjunction with Translink Transit Authority.	2013	Med	SCC/BMPS, TTA
Policy integration			
▶ Ensure that active transport policies are consistent with all other council corporate policies and adopted positions.	2011	Low	SCC/ITP
▶ Adopt the *International Charter for Walking*.	2011	Low	SCC/ITP
▶ Include best practice walking and cycling infrastructure and end-of-trip facilities in the planning scheme and Priority Infrastructure Plan.	2012	Low	SCC/ITP/SPlan

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

7 Networks and infrastructure

Network planning improves community mobility and amenity by providing interconnected routes and facilities based on peoples needs and tailored to the location. The goal is to provide pedestrians and cyclists with safe, comfortable, direct connections to where they want to go. The infrastructure we build today will still be with us for decades to come. We need to build the right facilities for the future now.

7.1 Pedestrians and their requirements

There are three general reasons for walking transport to a destination, connection to public transport and recreation. Pedestrians range from toddlers to the elderly including those with a disability or sensory impairment. A pedestrian is defined as a person on foot, or in or on a contrivance with wheels not defined as a vehicle. This definition includes people pushing prams and strollers, on skateboards, in a wheelchair and on a number of other wheeled devices. Pedestrians can be grouped into three general categories on foot, on small wheels and mobility impaired as shown in Table 7.1.

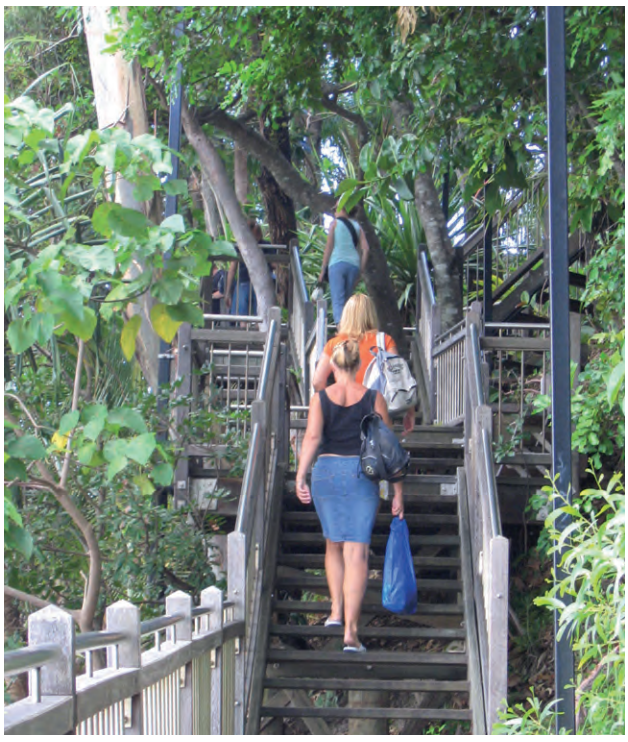


Table 7.1: Types of pedestrians

Type of pedestrian	Sub groups
On foot	▶ Able pedestrian ▶ Pedestrian with dog ▶ Runner/jogger ▶ Impaired pedestrian ▶ Aged pedestrian ▶ Pedestrian with a guide dog ▶ Sensory impaired pedestrian
On small wheels	▶ Skateboard ▶ Pedestrians with pram/stroller ▶ Kick scooter ▶ Inline skates/ roller skates ▶ Segways
Mobility impaired	▶ Motorised mobility scooters (gophers) ▶ Manual wheelchairs ▶ Electric wheelchairs ▶ Pedestrians with a walking frame

Source: Adapted from Land Transport New Zealand, 2007

Each of these pedestrian subgroups travels at differing speeds and have different needs for space in which to manoeuvre. For instance, mobility scooters can travel faster than most pedestrians but often require more time and space to move between footpath and road levels.

All pedestrian routes and areas should be safe, smooth, with surfaces free of vegetation and debris. This is particularly important for vision-impaired pedestrians. Personal security must be built into design using Crime Prevention through Environmental Design (CPTED) principles to encourage walking by all ages and both sexes. Pedestrian facilities should provide seasonal shade, which can be provided by well-sited trees. On trip facilities, including seating, wayfinding signage, lighting and water fountains, are required to create an enjoyable experience and encourage more walking trips.

The interaction between vehicular traffic and pedestrians is managed by providing differing types of pedestrian facilities including:

- kerb extensions and pedestrian refuges
- children's crossings (flagged school crossings)
- pedestrian crossings (zebra crossings)
- pedestrian operated signals
- pedestrian facilities integrated with intersection signals
- provision for pedestrians at roundabouts
- improved public lighting and
- lowering traffic speeds.

As part of the development of the Plan, data has been collected and mapped to update information on the location and type of pedestrian facilities including shared pathways, footpaths and crossings within road reserves.

7.2 Cyclists and their requirements

Cyclists form a diverse group of users varying in age, capability and experience. A useful grouping of cyclists, reflecting needs and facilities classifies five types of cyclists (Table 7.2).

Table 7.2: Types of cyclists

Cyclist	Characteristics	Trip Length	Speed	Network Infrastructure
Vulnerable	▶ Inexperienced adults, elderly, children and youths. ▶ School students need direct routes radiating from schools to residential areas. Safety is paramount. Preference is for off-road routes, footpaths and quiet streets.	Short (less than 5 km) Local area	Less than 20km/h	Off-road shared pathways Dedicated cycleways
Utility	▶ Use bicycles as a general-purpose mode of transport to shopping and community services. Can include trips to public transport. Preference is for low stress roads and pathways.	Short (less than 5 km) Local area	less than 20km/h	On-road facilities Dedicated cycleways Off-road shared pathways
Commuter	▶ Adults possibly confident in traffic who value speed and directness. Will use quality higher speed off-road bikeways	Medium (up to 15 km)	20-30 km/h	On-road facilities Dedicated cycleways Higher standard pathways
Recreational	▶ Prefer scenic routes probably away from traffic.	Varies	Varies	On-road facilities Dedicated cycleways Off-road shared pathways
Sport	▶ Adults and youths. ▶ Lengthier rides of varying terrain for fitness and training on quiet roads.	20km – 100km+	Greater than 25km/h	On-road circuits Dedicated cycleways

Derived from RTA, 2002 and Noosa Cycling and Walking Strategy

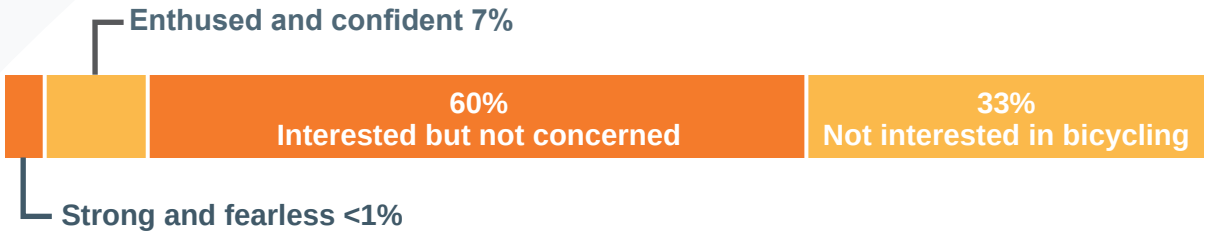


Figure 7.1: Four types of cyclists in Portland by proportion of population
Source: City of Portland Bureau of Transportation, 2010

The Australian Sports Commission reports that 10 per cent of all exercise, recreation and sport in Queensland is by bicycle, placing cycling ahead of netball, AFL and jogging/running in terms of participation. The growing rise in cycling as the new lifestyle sport is becoming very evident on Sunshine Coast roads and recreational pathways both in the early morning and on weekends.

The city of Portland, Oregon uses a classification of cyclists based on their level of confidence in using a bicycle for transportation. The classification, shown in Figure 7.1, shows that for those residents who are potential cyclists, the overwhelming majority are in the 'interested but concerned' category.

One of the main goals of an active transport plan is to convert non-cyclists to 'enthused and confident' cyclists.

Typical components of cycling network infrastructure are detailed in Table 7.3.

Mountain bike (MTB) cycling routes are unsealed with technical challenges used exclusively by MTB cyclists or shared with bushwalkers and horse-riders and are more appropriately handled in the *Recreational Trail Strategy*. Connections between these facilities and the cycling network are addressed in this Plan.

All types of cycle infrastructure need to be comfortable, direct, coherent, attractive and safe.

- **Comfortable:** Cycle routes will be smooth, with surfaces free of vegetation and debris. Broken glass is a particularly dangerous and troublesome issue for cyclists resulting in frustrating interruptions to trips. A program of regular on-road and off-road sweeping is required to maintain an acceptable level of service on these facilities. Cycle facilities will have seasonal shade, which can be provided by well-sited trees. On trip facilities including wayfinding signage and watering points are provided as well as quality end-of-trip facilities in selected locations and workplaces.
- **Direct:** Cycle routes will be direct with minimum of delays. A common issue for the slower travel modes of walking and cycling is the delay created by physical and infrastructure barriers. These barriers can include bodies of water, rivers and creeks as well as man made infrastructure including motorways, very busy roads and bridges. Topography and gradients can also provide obstacles to walking and cycling. These barriers and how to overcome them by providing alternatives facilities and routes are addressed as part of the network planning and project prioritisation process.

Table 7.3: Types of Infrastructure

Infrastructure	Description
Veloway/ cycleway and shared pathways	2.5-4 m sealed pathway that has minimal interruptions to users. A high quality off-road shared pathway or veloway will generally avoid intersections or include priority crossings for cyclists. A veloway is reserved for cyclists, whilst a shared pathway caters for cyclists and pedestrians. The width of the pathway and the number of pedestrians present will determine the level of service to cyclists.
Footpaths	1.5-2.5 metre wide sealed pathway. In Queensland cyclists and pedestrians share all footpaths unless otherwise signed. Footpaths are only suitable for cyclists travelling at lower speeds due to site distances, driveways and intersection crossings.
Infrastructure	**Description**
Urban on-road cycle network	Made up of bicycle lanes, bicycle awareness zones, green intersection treatments, shared zones and local streets. The network can be defined by designated space for cyclists or by creating speed environments that are low enough to allow cyclists and motor vehicles to share the road safely.
Rural on-road cycle network	Road shoulders are the key infrastructure for cyclists on the rural road network. This can be combined with lower traffic volumes and reduced speed limits to improve safety.
Rural off-road pathways	In rural residential areas off road pathways may be sealed or unsealed. Unsealed pathways are a viable alternative to expensive sealed pathways in these lower density areas.

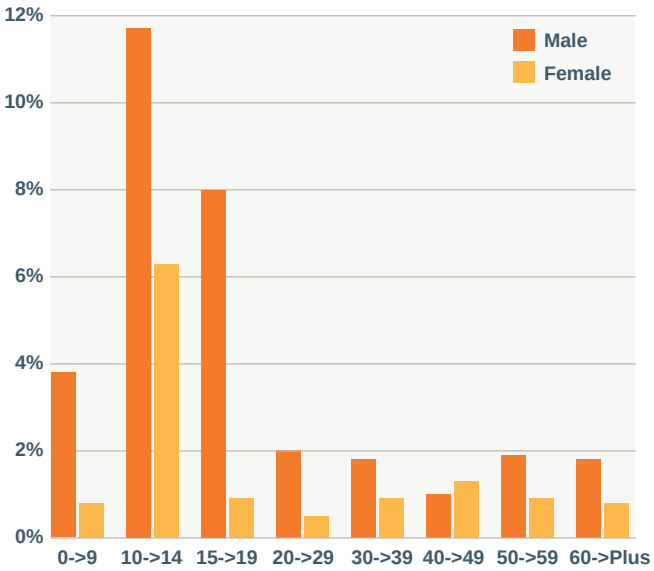


Figure 7.2: Cycling by gender and age group – 2006/08 Household Travel Survey

- **Coherent:** Routes will make sense even to inexperienced or visiting cyclists. This requires consistent standards for similar facilities with consistency at the different levels of the cycle hierarchy. Priority routes should look and feel like significant infrastructure. The network will connect people to where they want to go, providing continuous connections to all recognised trip attractors.
- **Attractive:** Cycle facilities will provide an enjoyable experience for all users. The active transport environment contributes to a 'sense of place' recognising that attractive streets and pathways are significant contributors to civic amenity.
- **Safe:** Cycles routes will be safe, provide personal security and limit conflict between cyclists and other vehicles and pedestrians. Personal security will be built into all design to encourage cycling by all ages and both sexes. Crime Prevention through Environmental Design (CPTED) principles are to be used to maximise cyclist safety for off-road facilities. Traffic speed and volume directly impact on cyclist's safety and as these increase cyclists may need to be separated from motorists. Safety is a critical concern at intersections.

In Southeast Queensland, generally twice as many males as females cycle (Figure 7.2).

This suggests that there are conditions or factors that lower the rate of female participation in cycling for transport, which contrasts with European experience where women fully participate. Females account for 55 per cent of all Dutch riders and 49 per cent of all German riders. Australian experience shows that the proportion of female riders is a strong indicator of whether the urban environment supports cycling. Research shows that women are more risk adverse in cycling than men and this translates into a need for safe cycle infrastructure as a prerequisite for increased participation. Physically separated or off-road cycle infrastructure is producing greater uptake by women and cautious riders in general. In New York City, men are three times more likely to cycle than women yet an off-road bike path in Central Park had 44 per cent female riders. Pathways through parks and reserves, which are remote from regular casual surveillance or are dark or treed, will keep women away from pathways and in cars.

There is potential to increase the overall number of active transport trips by encouraging more females to cycle in all age groups.

As part of the preparation of the *Sydney Cycle Strategy and Action Plan*, adopted in 2007, the City of Sydney undertook social research to investigate why cycling rates in Sydney were lower than other Australian cities. The results conclusively showed that 75 per cent of City non-regular cyclists said having bicycle-dedicated lanes and off road routes would make them cycle more regularly.

Separated cycleways

There is scope for extending the coverage of an 'off-road' network separated from general traffic, which can provide significant increases in cycling by providing facilities within or immediately adjacent to the vehicle carriageway. These physically separated 'on-road' facilities provide a significantly higher degree of safety (Figure 7.3).

The existing extent and type of on-road cycling infrastructure is producing cycling levels significantly below those targeted. A new approach is needed similar to that being introduced in Sydney, Melbourne and New York City with a focus on physically separated dedicated facilities to attract larger numbers of newly converted cyclists on key cycle routes. These facilities can be linked to quiet streets to encourage female and less experienced cyclists if we are to see significant improvement to total cycle uptake.

Figure 7.3: Separated cycleway artist impression

Further investigation will be undertaken to analyse the advantages and disadvantages of using similar physically separated cycleways on Sunshine Coast cycle priority corridors. Factors to be examined include corridor space requirements, safety, road rules, conflicting uses and the ability of this type of facility to attract significant additional cycle patronage.

New forms of mobility

'E-Bikes' is one of the names used for electric motor assisted pedal bicycles, which are catering for an increasing demand for an efficient and affordable mode of transport. Under current Queensland transport legislation, power assisted bicycles and small electric powered motorbikes having motors not exceeding 200 watts are exempt from registration requirements. These vehicles can be ridden on roads as long as the rider obeys the road rules relating to bicycles and wears a helmet.

The power assistance allows cyclists to handle grades which would cause problems for the average cyclist and helps commuter cyclist travel to work without raising a sweat, avoiding the need for showers, fresh clothing and other facilities. E-Bikes can also extend the comfortable range for cycle commuting, making the commute a more enjoyable and practical experience. As the number of e-Bikes increases the cost can be expected to decrease substantially possibly triggering an additional demand for cycling above current planning. Trends in e-Bike growth on the Sunshine Coast will be monitored to ensure that facilities keep pace with new demand. E-Bikes will require secure parking at destinations and facilities where the battery packs can be readily recharged.

By 2031, 28 per cent of the population on the Sunshine Coast will be 65 years or older. Motorised mobility scooters are a practical form of transport for older persons and there is an increasing need to provide for these in the active transport network. Council will monitor use and developments for motorised mobility scooters.

7.3 Existing networks

The Plan collected data from many sources including council and State to create a comprehensive, amalgamated and consolidated dataset of off-road pathways and on-road facilities. Off-road pathways include shared pathways, footpaths and cycleways.

There are more than 1000 kilometres of council pathways. The on-road cycling network is a combination of facilities on council controlled roads and streets and Transport and Main Roads (TMR) controlled corridors. There are approximately 275 kilometres of dedicated council network (not including shared local streets) and 355 kilometres of TMR network. Appendix B shows the existing pathways and on-road networks.

A breakdown of the off-road path network based on path width is shown in Table 7.4.

Table 7.4: Total length of existing pathways

Path Width	Length	% of total network
1.2m and less	457km	43%
1.3m to 1.8m	166km	16%
1.9m to 2.9m	377km	35%
3.0m and greater	14km	6%
Total Length	**1,060km**	

There is a wide range of pathways widths with over 40 per cent of pathways wider than 1.8 metre. An increasing amount of pathway is suited to genuine shared use with over five per cent of pathways at least 3.0 metre wide.

The existing on-road facilities have been rated as either meeting standard or being below standard to give a snapshot of the existing network in Table 7.5.

Table 7.5: Length of existing on-road facilities

Control	Network length	At standard[1]	Below standard
Council	275 km	72%	28%
TMR	355 km	12%	78%
Total length	**630 km**		

(1) Compared to Austroads standards and includes unmarked shoulders of suitable width

There is little data on the location, type and quality of existing bicycle parking and this needs to be assessed. A process is also needed to update the Sunshine Coast pathways and on-road cycle spatial database regularly with new infrastructure and data from within council, the State and other sources.

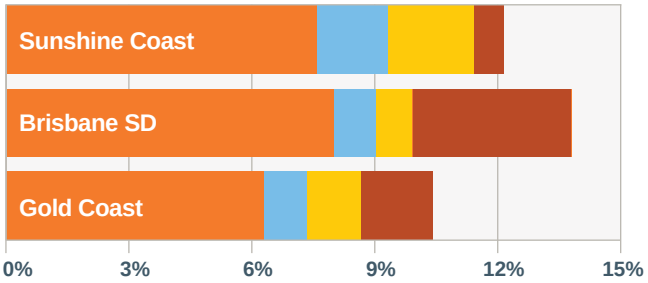
There is limited information available on the condition of the council pathways network. Existing data has been included in the pathways dataset and will be improved and updated through a programmed process of path asset condition and safety audits and assessments. TMR have conducted an assessment of existing infrastructure on the Principal Routes (both on-road and pathways) and this information has been included in the council dataset. The council on-road facilities will be assessed as part of road condition and safety audits.

7.4 Walking and cycling trips

Walking accounts for eight per cent of weekday trips made by Sunshine Coast residents, while cycling is used for 1.8 per cent of all weekday trips as shown in Figure 7.4 (Queensland Transport, 2007b). These percentages do not include cycling and walking to access public transport.

Figure 7.4: Active transport and public transport mode share
Source: Queensland Transport Household Travel Survey, 2007

	Walking	Bicycle	School Bus	Public Bus
Sunshine Coast	8.0%	1.8%	2.2%	0.8%
Brisbane SD	8.4%	1.1%	1.0%	4.1%
Gold Coast	6.7%	1.1%	1.4%	1.9%



A percentage for cycling of 1.8 per cent of person trips is not a large share, however the figure does show that the Sunshine Coast was leading bicycle travel in South East Queensland in 2007. A slightly larger mode share for walking in Brisbane may be explained by the higher degree of urbanisation.

Figure 7.5: shows the distribution of walking and cycling trips by age group.

As age increases, trips made by walking also increase. We need to provide facilities that provide for an aging population as older people increasingly rely on walking trips to meet their needs.

School age children make a high percentage of their trips by cycling and walking. The percentage of cycling trips for the school age groups however is lower than might be expected and is significantly lower than the 30 per cent cycling mode share in nearby Moreton Bay Regional Council. There is an opportunity for increasing walking and cycling to school. One of the focus areas for improving active transport will be on the catchments surrounding schools and tertiary education centres.

Figure 7.5: Walking and bicycle trips by age group – 2006/08 Household Travel Survey
Source: Queensland Transport Household Travel Survey, 2007

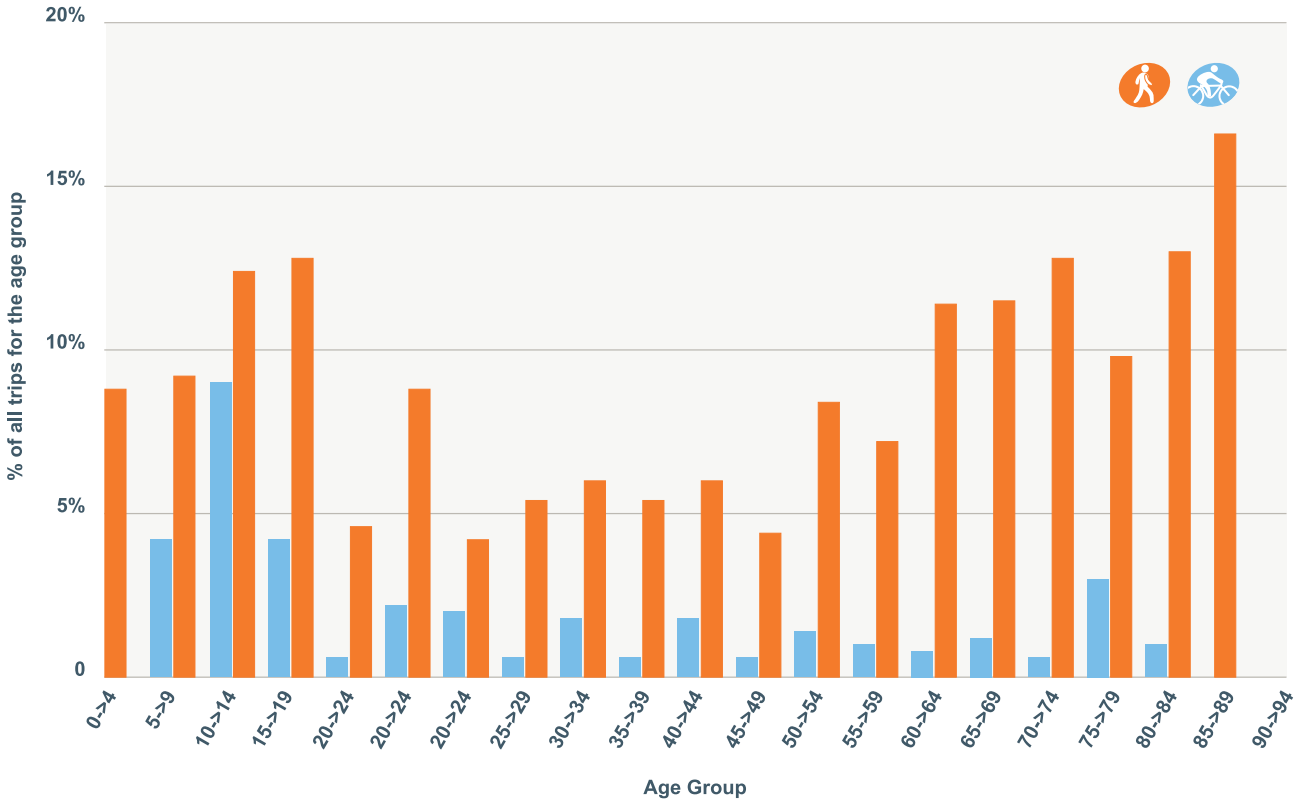
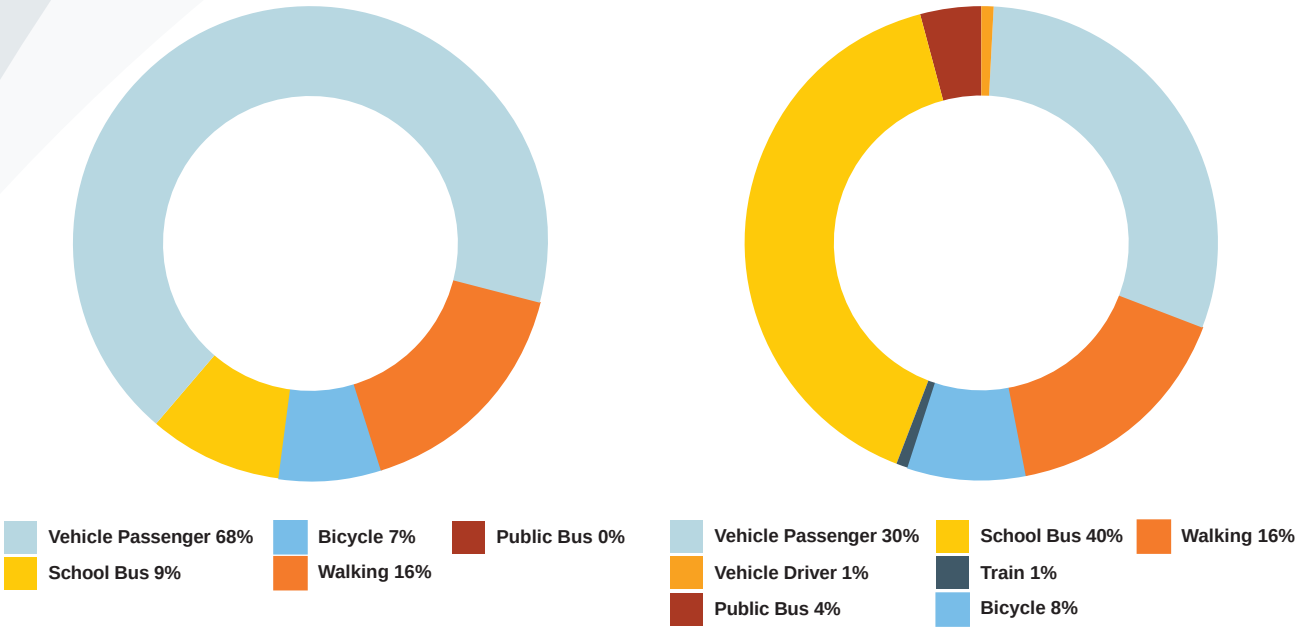


Figure 7.6: Sunshine Coast mode share for trips to primary and secondary schools



School students travel on direct routes radiating from schools to residential areas. Preference is for off-road routes, footpaths and quiet streets however high school students will use on-road cycle facilities. Safety is paramount with parents often choosing to deliver students to school by private vehicle if cycling or walking is considered unsafe. More children are being driven to school than ever before. In 2007 on the Sunshine Coast it is estimated that 68 per cent of trips to primary school and 31 per cent of trips to secondary school were made by car (Figure 7.6).

Trips to school by car have increased by 15 per cent between 1986 and 2004. At the same time the number of children walking and cycling to school has decreased from around a third to a quarter. Even though many children tell us that they would like to walk or cycle to school, a chauffeuring culture has increasingly come to dominate our transport choices. Replacing school trips by private vehicle with walking and cycling trips will reduce congestion in school zones at school start and finish peak times. More cars on the road also make it more dangerous for children who do walk or cycle to school.

Walking trips are higher for rural primary schools compared to urban primary schools. Cycling is significant in urban schools but minimal in both rural primary and secondary schools. The demand for infrastructure to support cycling to school is around urban schools while walking infrastructure is required around all schools.

The current extent of walking and cycling varies with location across the region (Table 7.6).

Table 7.6: Percentage of walking and cycling trips by location

Area	Walking	Bicycle
Buderim	6.5%	2.6%
Caloundra	6.7%	2.5%
Coolum	7.6%	2.9%
Maroochydore	11.0%	1.6%
Mooloolaba	12.7%	1.7%
Nambour	9.2%	1.0%
Noosa	9.9%	2.6%
Rural	7.9%	0.3%
Total	**8.0%**	**1.8%**

The more highly urbanised, commercial and tourist areas like Maroochydore and Mooloolaba have a higher proportion of walking trips and slightly under the average for cycling trips. The less dense areas of Buderim, Caloundra and Coolum provide lower levels of walking trips but noticeably higher levels of cycling. This may reflect the more dispersed nature of these urban areas. The proportionately higher level of cycling trips made in the Noosa area possibly reflects the more extensive and attractive nature of the active transport network in that area.

Cycling accounts for approximately one per cent of daily trips in Australia and 1.8 per cent on the Sunshine Coast. This amount of mode share is similar to the UK, USA and Canada but is considerably lower than northern European countries, which range from the Netherlands (27 per cent), Denmark (16 per cent) and around 10 per cent in Belgium, Germany and Sweden (Puncher, J. and Buchler, R., 2008).

During the 1950s and 1960s cycling levels in the Netherlands decreased in the same way as other countries. The current level of cycling in the Netherlands is a result of that country's response to the 1970s oil crisis and concerns about the quality of life. The Netherlands took a conscious decision to develop planning and transport policies that supported cycling over car travel and continue to do so. Other major world cities have also embraced active transport. The UK has significantly increased levels of cycling in six Cycling Demonstration Towns including the major towns of Derby (population 240,000) and Brighton and Hove (population 243,000) where cycle counts increased by 27 per cent between 2005 and 2009 (Cycling England, 2009).

New York City is seeing inspiring results with a 45 per cent increase in bicycle commuting following a dedicated three year program of innovative walking and cycling measures including improvements to the quality of city spaces which have allowed people to reclaim their streets for living.

The key to achieving high levels of cycling in these cities appears to come from providing dedicated cycling facilities along high traffic volume roads and at intersections, combined with traffic calming of quiet routes in residential neighbourhoods.

Residential areas generate active transport trips while other land uses (e.g. shopping centres, commercial centres, community and recreation facilities, including beaches) attract trips. Urban areas along the coast and the hinterland centres are the most significant attractors and generators of walking and cycling activity.

Major attractors of trips include:

- Maroochydore as a Principal Regional Activity Centre
- major Regional Activity Centres at Noosa, Nambour, Sippy Downs, Kawana, Caloundra, Beerwah and Caloundra South
- structure planning areas at Maroochydore, Palmview and Caloundra South
- high tourist demand locations
- regional shopping centres and local centres
- schools and tertiary education centres
- public transport stops and interchanges
- sport, recreation and community facilities and
- industrial precincts.

The average Sunshine Coast cycling trip is approximately 16 minutes, or an average distance of five kilometres. The average walking trip is approximately 13 minutes, or an average walking trip length of approximately one kilometre. Bicycles can be faster than any other mode of travel when travel time is measured from door to door for short-distance trips up to five kilometres long on a congested urban road network. Urban centres, which attract the highest proportion of short car trips, also offer the best market for increasing walking and cycling trips. Providing infrastructure within five kilometres of major centres will provide the best opportunity to make significant changes to travel patterns.

Pedestrian planning

Limited data has been collected on pedestrian movements. Infrastructure has often been provided in response to complaints or injuries. More information will be collected to make sure facilities match demand.

Pedestrians require smaller catchments for trips e.g. trips to local shops, schools or public transport. Walking trips are generally designed for a 400-metre or five minute walk. Trips by walking can be greatly extended by connections to other modes especially public transport and this is a focus for walking networks in the Plan. Walkable journeys need to take account of hilly topography in some areas of the Sunshine Coast by providing convenient, shaded pathways for pedestrian movement patterns. The catchment should be reduced in these conditions and street crossings and public transport stops should be spaced more closely for pedestrian convenience.

Walking as a mode of transport can be dealt with at a 'place' scale as well as a network level as pedestrian activity is often related to land use at a location e.g. higher density centres and shopping strips. Pedestrian priority areas will be determined based on land use mapping and the location of activity, town, village and local centres. By 2026, the number of people over the age of 65 is predicted to more than double to 100,000 persons. An ageing population will change the existing trip patterns with increased walking trips to local centres and increased use of mobility aids.

A focus of the Plan is to provide transport corridors in these areas with a higher emphasis on amenity, with slower speed environments and increased safety for all users. Council will undertake a program to improve safe street crossings for all major roads to increase opportunities for crossing without increasing pedestrian travel distances.

Cycle network planning

The cycle network has been developed in part by updating previous and current council planning combined with relevant State planning. The planning includes future facilities identified through the Transport and Main Roads (TMR) *Cycle Network Link Strategy*, *Principal Cycle Network Plan* routes, Palmview Structure Plan and approved major development applications. The extent of the network was further refined and improved through workshops with council staff and external stakeholders. This ensures the proposed network meets the specified general route requirements and that the network layout provides an acceptable level of service for connectivity while addressing future trip patterns.

The type of facility provided on each link in the network and the timing of the infrastructure will be determined as part of the *Active Transport Implementation Plan* guided by the policies of the Plan.

7.5 The active transport network

The active transport network is a combination of the pedestrian and cycling networks. The shared pathway network is common to both the pedestrian and off-road cycle networks resulting in a significant overlap of the two networks. There is increasing conflict evident on some of the busier pathways created by the variation in speeds between the various pedestrian and cyclist subgroups. These pathways will be monitored and options investigated to reduce conflicts.

On-road cycling facilities are located on roads that are controlled by either council or TMR. All off-road walking and cycling facilities are managed by council, including those located within TMR corridors. Certain sections of the network, either council or TMR controlled, are identified as part of the *SEQ Principal Cycle Network (PCNP)*. The *PCNP* is used by the State in the planning and construction of state-controlled cycle routes and the prioritisation and allocation of State funding and grants for cycle network planning and infrastructure by council.

On some TMR corridors (Sunshine Motorway) cycling is prohibited on the carriageway, however off-road pathways can be provided as grade separated facilities in the corridor. The TMR policy for *Cycling on State Controlled Roads (2004)* states in part that:

- Main Roads will seek to make state-controlled roads cycle-friendly by incorporating cycle-friendly design in traffic operations, road-upgrading, and maintenance projects
- along priority cycling routes, Main Roads will positively provide for cyclists in road-upgrading projects and
- where a state-controlled road is shown as part of a priority cycling route but where cycling cannot be positively provided for, Main Roads will negotiate with local government and stakeholders to achieve a suitable alternative solution.

In 2009, TMR undertook a prioritisation of future cycle links on TMR controlled roads in the North Coast Region. A prioritised list of links was produced without costing or linked funding.

The active transport network will establish a comprehensive network of high quality cycle and pedestrian routes and facilities throughout the Sunshine Coast, connecting communities to centres, public transport, open space, community and recreational areas, to include:

- an integrated council and TMR continuous network of roads and pathways where cyclists are positively provided for at a standard consistent with the network hierarchy.
- pn-road cycle lanes forming a local, district and regional cycling hierarchy
- adequate shoulders on all new roads, resealed roads and rural roads
- off-road paths within existing urban areas as part of infrastructure contributions for new development and as part of infrastructure agreements for new development in structure plan areas
- an integrated and efficient network of pathways, shared zones in urban centres, safe crossing facilities and intersection designs that prioritise pedestrian needs
- streets within new centre cores, designed as a series of low speed boulevards with wide footpaths, active building frontages and shaded awnings which connect to pathways within open and public spaces
- adequate pavement width, appropriate placement of signage, tactile ground surface indicators and audio tactile devices preventing obstacles for persons with a disability, particularly vision impairment
- pathways designed for motorised and non-motorised mobility aids, scooters, skateboards and new technology as it becomes available
- cyclist specific way-finding signs making for a very easy to understand and use system and
- end-of-trip facilities including secure lock-up areas, showers and safe lighting.

The draft active transport network for the Sunshine Coast is shown in Appendix B. The *Active Transport Implementation Plan* will further refine the network.

7.6 Coastal Pathway

The Plan includes the Coastal Pathway planned to run continuously from Tewantin to Golden Beach as part of the active transport network. The Coastal Pathway provides a significant transport function in addition to a recreational function for the majority of its length. Some sections of the Coastal Pathway primarily serve a recreational purpose (usually where there is a more direct parallel route available to link generators and attractors of walking and cycling trips) however there are also significant sections of the Coastal Pathway that form the connection between coastal communities. These sections serve both transport and recreational purposes because there is no parallel alternative available or the Coastal Pathway route serves as the most efficient, safest or attractive link.

An enjoyable experience is also a desirable attribute of commuter routes and has been shown to encourage and promote increased non-motorised trips to work. Recent results in Sydney and elsewhere are showing that dedicated off-road facilities with a perceived greater level of safety are a prime factor in achieving behaviour change (Puncher, Gerard and Greaves, 2010). The Plan includes open space attractors within the network planning to ensure that pathways with a strong recreational focus are integral parts of the network. Considering recreational routes within the active transport network produces an integrated network.

Where pathways provide both a transport and a recreational function, the pathway treatment may need to be different from a single function pathway or trail. These pathway sections need to provide for the needs of all significant uses. The number of pathways catering to both transport and recreational users will increase as the population continues to expand and the number of people participating in an active lifestyle increases.

The State has identified the Coastal Pathway as 'Coastal Route' within the *Principal Cycle Network Plan* and uses other 'Principal Routes' to provide connectivity in some sections of the Coastal Pathway. The Coastal Pathway has been assigned to different networks in the current *draft Priority Infrastructure Plans (PIP)* and needs to be included in a single PIP in the new planning scheme.

There is increasing conflict between cyclists and pedestrians on the Coastal Pathway. In part this is caused by the mix of modes, the variation in speed between modes, the mix of differing trip purposes and the lack of width in many locations including some that have only recently been constructed. This issue can be resolved by addressing the level of service that needs to be delivered to both walking and cycling for recreation and transport functions in particular locations.

There is no clear understanding of the current traffic and demand on the Coastal Pathway for either transport or recreation beyond some basic data on the volume cyclists at a number of points on the pathway. This data does highlight a strong commuter component, which is expected to grow. Additional quality data is required on the type of cyclists, pedestrians and other recreational users (e.g. joggers) to inform decisions on the level of service being provided now and in the future and the standards that should be applied to the shared use of these facilities (e.g. widths and whether sections should be shared or separated pathways). A count program will be undertaken specifically for the Coastal Pathway.

A consistent approach and allocation of responsibility needs to be taken across the region for the design, construction and upgrading of the Coastal Pathway to ensure consistency and a coordinated approach to delivery. Funding for the Coastal Pathway is discussed in Chapter 10 Funding active transport.

Both the *Active Transport Implementation Plan* and the *Coastal Pathway Strategic Plan* will coordinate planning of the Coastal Pathway from different perspectives for routes where the transport and recreational functions coincide. A single council unit will be given responsibility for the design, construction and maintenance of the Coastal Pathway guided by standards specified in both *Active Transport Implementation Plan* and the *Coastal Pathway Strategic Plan*.

7.7 Design, construction and maintenance standards

The specific types of facilities to be used for network links and the standards for those facilities will be developed in an *Active Transport Implementation Plan* to be undertaken based on the Policies and Actions recommended by this Plan. Design and standards will be in line with Austroads standards and best practice available. In order to have a 'whole of council' approach to providing consistent infrastructure, council desirable standards for design and signage of pedestrian and bicycle facilities will be reviewed, consolidated and made available to all stakeholders.

The detailed requirements for infrastructure will be included in the transport policies to be developed for the new planning scheme. These policies will ensure that applying minimum standards will only be considered if significant constraints exist on a case-by-case basis.

Council standards and landscape design manuals are to be reviewed so that pathways in parks and road verges are designed to avoid close, dense vegetation or large trees minimizing root damage to rigid pavements providing clearances and adequate sight distances.

7.8 Policies and actions – Networks and infrastructure

Policies	
P8	Provide a safe, continuous, direct and coherent walking and cycling environment that supports and encourages walking and cycling as an alternative to private car use and as healthy recreational activity for all ages.
P9	Ensure the transport network and places are designed to cater for active transport movement.
P10	Positively provide for cyclists and pedestrians on all roads and streets and in every council transport or other relevant project.
P11	A range of solutions is used to reduce the attractiveness of private vehicle use including traffic reduction, demand management, reallocation of road space to pedestrians and cyclists and expansion of active transport facilities.
P12	Pedestrian and bicycle infrastructure provides and maintains a satisfactory level of service for all users including those with disabilities and limited mobility.
P13	Tourists are encouraged to utilise active transport while visiting the Sunshine Coast.
P14	Council standards and guidelines use best practice in design, operation and maintenance of pedestrian and cycling facilities.

Actions	Timing	Cost	Responsible[1]
Network			
▶ Plan and program for safe, continuous direct, convenient, attractive and coherent connections between destinations, including homes, schools, work places, shopping areas, services, recreational opportunities and public transport.	Ongoing	High	SCC/ITP/ITS
▶ Support and encourage walking and cycling in higher density centres by allocation of corridor space, implementing shorter traffic signal phases to reduce waiting times for pedestrians at key signalised intersections and undertaking a program of safe street crossings of all major roads to increase opportunities for crossing without increasing travel distances.	2016	High	SCC/TES, TMR
▶ Progressively bring footpaths in existing developments to the required standard following audits.	2016	High	SCC/TES
▶ Investigate the use of physically separated cycleways for major cycle corridors.	2011	Low	SCC/ITP/ITS
▶ Develop and implement parking management programs to find space for on-road bicycle facilities.	2012	Low	SCC/ITP
▶ Undertake school site assessments of existing and planned schools to implement a local cycling and walking network plan and infrastructure improvement program using TravelSmart, Transport Infrastructure Development Program and Safe School Travel Programs resources.	2016	Low	SCC/ITS
▶ Investigate the location of existing 50km/h and 60km/h speed zones in relation to the active transport network and shopping strips to examine the possibility and impacts of local traffic areas and/or reducing speed limits.	2011	Med	SCC/TES
▶ Investigate opportunities for shared zones for pedestrians and bicycles in the road network.	2016	Low	SCC/TES
▶ Investigate opportunities for developing pathways on the perimeter of subdivisions avoiding intersections and increasing the level of service and safety for pedestrians and cyclists.	2011	Low	SCC/ITP/ITS
▶ Plan and implement improvements to the Coastal Pathway catering for the transport and recreation needs and level of service required at each location.	Ongoing	High	SCC/SPol/ITP/ TES
▶ Encourage TMR to provide coordinated and cost effective road programs that provide cycling facilities at the time of major road maintenance.	2011	Low	SCC/ITP/ITS, TMR
▶ Implement a 'better streets' program that removes unnecessary 'road clutter' that does not support cycling and pedestrian activity e.g. remove 'No Cycling' signs and pedestrian and cycling barriers.	2016	Med	SCC/ITS/TES
▶ Investigate existing structures (e.g. bridges) and barriers (e.g. rivers, canals, motorways, rail and major roads) and provide infrastructure that give a satisfactory level of service.	2016	High	SCC/ITS/TES
▶ Develop on-road sport cyclist training routes of an appropriate standard and signage.	2016	Low	SCC/TMR

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

Actions	Timing	Cost	Responsible[1]
Trip facilities			
▶ Develop standards for on-trip facilities to include weather protection, sun and shade considerations, lighting, passive surveillance and water points in active transport networks.	2011	Low	SCC/ITS
▶ Plan and coordinate a program of tree planting to provide seasonal shade and sunshine to existing pathways.	Ongoing	Med	SCC/ITS/PG
▶ Program and implement high standard end of trip facilities improvements at major cycle trip attractors such as activity centres, public transport interchanges, patrolled beaches, education facilities, hospitals, libraries and council offices using partnership opportunities where possible.	2016	Med	SCC/ITS/TES
▶ Encourage the provision of a high standard of secure bicycle parking in residential facilities and end-of-trip facilities at major employers through Green Travel Plans or through planning scheme provisions.	2016	Low	SCC/SPol/ITS
▶ Provide appropriately sized temporary bicycle parking at council run or sponsored events.	Ongoing	Low	SCC/ITS
▶ Audit and record the location, type and quality of existing bicycle parking.	2011	Low	SCC/ICTS
▶ Apply a consistent walking and cycling signage program across the region in line with the *Regional Wayfinding Signage Style Guide* complying with TMR *A guide to signing cycle networks* guidelines.	2016	Med	SCC/PDS
Tourism			
▶ Encourage the use of active transport for trips and recreation by tourists and at tourist destinations.	2011	Low	SCC/ITS/CC
▶ Identify, develop and promote tourism cycle routes and facilities.	2011	Low	SCC/ITS/CC
▶ Investigate the feasibility of a public bicycle hire scheme to be established in high tourist demand locations.	2016	Med	SCC/ITP/ITS
Design, construction and maintenance standards			
▶ Review, update and publish desirable standards for design and signage of pedestrian and bicycle facilities.	2011	Low	SCC/ITS
▶ Ensure that minimum standards will only be considered if significant constraints exist with each case considered separately.	Ongoing	Low	SCC/DS
▶ Review council standards to ensure vegetation and trees in parks and road verges are planned to minimize root damage to pathways and provide adequate clearances and sight distances.	2011	Low	SCC/TES/PG

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

Actions	Timing	Cost	Responsible[1]
Design, construction and maintenance standards			
▶ Encourage a culture within council where walking and cycling are included with equal consideration in the design and maintenance of roads, footpaths, parks, landscaping and developments.	Ongoing	Low	SCC/ITS
▶ Coordinate planning, design and construction of bicycle and pedestrian facilities with other road works such as intersection upgrades, reseals/resurfacing, shoulder widening and line marking.	Ongoing	Low	SCC/TES
▶ Ensure that reseals and rehabilitation of roads on the cycle network have a complementary capital works component to provide cost effective on-road cycle facilities at the same time.	2011	Med	SCC/TES
▶ Ensure all bicycle route markings are re-instated or introduced after completion of any transport construction work.	Ongoing	Low	SCC/TES
▶ Assign a single council unit to be responsible for the design, construction and maintenance of the Coastal Pathway guided by both the *Coastal Pathway Strategic Plan* and the Plan to ensure consistency and a coordinated approach to delivery.	2011	Low	SCC
▶ Undertake pedestrian and cycling facilities audits, including signage and tactile infrastructure, as part of the works maintenance audit program using audit guidelines developed for the purpose.	Ongoing	Low	SCC/ICTS
▶ Develop a program of regular maintenance e.g. pathway sweeping and vegetation clearance.	Ongoing	Med	SCC/TES
▶ Program the relocation of bollards and gates to minimise cyclist safety issues.	2016	Med	SCC/TES
▶ Develop a checklist of active transport factors to be considered by Parks and Gardens officers in determining when a design or works program e.g. landscaping and tree planting in road reserves, should be referred to Transport and Engineering Services Branch.	2011	Low	SCC/TES/PG
▶ Create bicycle friendly parks providing direct, convenient cycling access routes through parks where these routes have been identified on the bicycle network.	2016	Med	SCC/PG/ITS
▶ Assess requests for walking facilities through a standardised process.	Ongoing	Low	SCC/TES
▶ Create a 'virtual' team of officers from the planning, operation and maintenance areas involving walking and cycling within council to improve the coordination advice and guidance with a 'whole of Council' approach.	2011	Low	SCC

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

Actions	Timing	Cost	Responsible[1]
Active Transport Implementation Plan			
Develop and implement an Active Transport Implementation Plan, which includes: ► pedestrian priority mapping and cycle network plans showing location and type of facility ► prioritisation of projects for each of the active transport capital works programs based on criteria and weighting to be finalised through consultation with Councillors, officers and stakeholders ► a detailed Year one to Year five Capital Works Plan of new facilities and upgrading of existing substandard facilities using the agreed prioritisation method ► catalyst projects for active transport ► A medium to long-term project schedule using the agreed prioritisation method to inform a new Active Transport Priority Infrastructure Plan and ► consistent standards for the planning and construction of facilities.	2011	Low	SCC/ITS/ITP

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.


SHAREI
ZONE
PRD
nationwide
next
365 KSC

8 Safety

Many types of measures are needed to improve road safety. Infrastructure that improves conditions needs to be combined with programs that develop skills for all road users. Pedestrians and cyclists will feel safe and secure using well-designed safety focussed transport networks supported by education and awareness programs. Council's goal is to work towards zero pedestrian and cyclist trauma involving serious injuries and death. Education and awareness programs will be discussed in Chapter 9 'Inform, educate and encourage'. This chapter will examine the data on pedestrian and cyclist crashes and how safety can be improved by changing the road environment.

Analysing crash data is an accepted way of quantifying safety issues for road users. However there are some major limitations to this data, which specifically apply when it is being used to assess the safety of pedestrians and cyclists.

A study published by NRMA-ACT Road Safety Trust (Drew and Richardson, 2008) compared records of injured cyclists and pedestrians from Canberra hospitals, to police crash records for the same period. It found 97 per cent of bicycle crashes that resulted in hospitalisations were not captured in the police crash history, and 36 per cent of crashes involving pedestrians were not recorded. A recent Monash University study (Watson and Cameron, 2006) also noted that crashes involving cyclists were seldom reported unless someone was killed or seriously injured. For this reason, there is likely to be a large under-representation of minor crashes in the data used for crash analysis of cyclists.

Key findings from the Monash study were based on reported crash data. The study found:

- the risk of serious injury for those aged under 20 increases inversely with age and the risk of serious injury increases with age for people aged over 50 years
- crashes from adjacent directions at intersections predominated along with manoeuvres such as U-turns and entering or leaving parking and
- one-third of crashes involved collisions with cars or trucks, while another third involved falling off bikes.

Crash data for the Sunshine Coast region was analysed for a six-year period between 2003 and 2008. In this period, cyclists and pedestrians accounted for 11 per cent of the severe and fatal casualties on all roads in the Sunshine Coast region. Cyclists and pedestrians accounted for 18 per cent of severe and fatal casualties on council controlled roads. Almost one in five severe and fatal casualties on council controlled roads is a cyclist or a pedestrian. This is a high statistic given the modest number of users. Crashes involving cyclists and pedestrians were analysed separately to understand the contributing circumstances and trends associated with casualties.

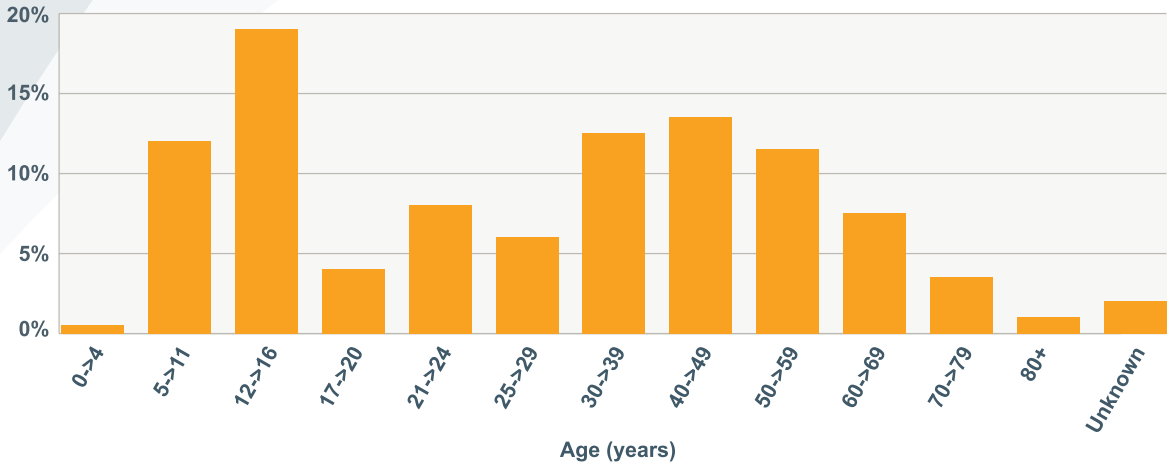


Figure 8.1: Sunshine Coast recorded cyclist crashes by age (2003-2008)
Source: TMR Web Crash, 2010

8.1 Pedestrian crashes

The analysis of pedestrian crash data found that 319 pedestrians were injured as a result of crashes between 2003 and 2008 on the Sunshine Coast. Of these, 25 were fatally injured and 135 were hospitalised. This means about 50 per cent of pedestrians involved in crashes were either seriously injured or killed. There was a relatively even representation of age groups amongst pedestrian casualties with no particularly age group being over represented.

The most common types of reported crashes involving pedestrians were:

- 50 per cent of casualties were associated with accidents where a pedestrian was trying to cross the road. This type of accident was not broken down to reflect whether it occurred on the straight (where a car has right of way) or at an intersection, where a pedestrian has right of way. However, it was reported that over 20 per cent of crashes occurred at T intersections
- 22 per cent of crashes were linked to walking with or facing traffic
- 15 per cent of crashes were linked to playing on the road and
- approximately 20 per cent of crashes that resulted in pedestrian casualties highlighted alcohol as a contributing factor.

8.2 Cyclist crashes

There were 354 recorded incidents where cyclists were killed or injured between 2003 and 2008 on the Sunshine Coast. Of these people, 122 were hospitalised or fatally injured. The highest number of casualties was in younger age brackets with cyclists between 12 and 16 years making up about 20 per cent of casualties, and cyclists between five and 11 years making up a further 12 per cent. There were also significant numbers of casualties in the 30-39, 40-49 and 50-59 age groups. Figure 8.1 shows the cyclist casualties by age.

The most common type of crash occurred when a cyclist left a path to cross a road (Figure 8.2). This type of accident accounted for 14 per cent of casualties. There were higher numbers of these kinds of crashes recorded on arterial roads such as Nicklin Way and David Low Way. In this situation cyclists crossing minor streets are at risk of being hit side-on by a turning vehicle.

Cyclists between five and 16 years made up almost one third of the casualties involved in this type of crash. This data is consistent with previous research where the *Australian Road Safety Report* (Australian Transport Safety Bureau, 2006) found this to be the most common type of crash causing fatalities of cyclists in urban areas.

Figure 8.2: Location of most common bicycle crash

The next most common types of crashes were:

- right turn movements through intersections (seven per cent of bicycle rider casualties)
- sideswipes from vehicles travelling parallel (seven per cent of bicycle rider casualties) and
- sideswipes from left turning vehicles (five per cent of bicycle rider casualties).

8.3 Crash 'blackspots'

Blackspots for pedestrian and cyclist casualties were also analysed for the region. Table 8.1 shows those roads where more than five reported casualties have occurred.

Table 8.1: Locations with five or more reported pedestrian and cyclist casualties

Street	Fatality	Hospitalised	Medical Treatment	Minor Injury	Total
Maroochydore – Noosa Rd	3	16	14	2	**35**
Maroochydore – Mooloolaba Rd		12	14	9	**35**
Nicklin Way		13	7	11	**31**
Mooloolaba Rd		5	6	4	**15**
Brisbane Rd	1	8	2	3	**14**
Bruce Hwy	4	4	2	3	**13**
Nambour Connection Rd	3	4	1	2	**10**
Beerburrum St		2	5	1	**8**
Noosa Pde		2	2	4	**8**
David Low Way		1	7		**8**
Bulcock St		5	2	1	**8**
Noosa Dr		5	2		**7**
Sugar Rd		3	2	1	**6**
Duporth Ave			3	3	**6**
Caloundra Rd		3	2	1	**6**
Cooroy – Noosa Rd		2	2	2	**6**
Buderim St		1	2	2	**5**
Goonawarra Dr		2	3		**5**
Glasshouse Mountains Rd	3	2			**5**
Sunshine Mwy	1	4			**5**
Lowe St			2	3	**5**
Hastings St		3	1	1	**5**

8 Safety

This high level review of literature and crash data highlights a number of key issues for improving safety for cyclists and pedestrians in our region:

- local crash data confirmed pedestrians and cyclists as the most vulnerable road users. They represent at least 18 per cent of fatalities and serious casualties on local government roads. The safety of pedestrians and cyclists is to be prioritised in future planning of the road network
- intersections are the most dangerous locations for cyclists. The most commonly recorded crash in our region was where a cyclist leaves a pathway and enters the road. This usually occurs at a street crossing. Traditional methods of controlling this type of crash have given priority to motor vehicles and relied on cyclists to dismount. This approach is impractical and rarely adhered to. More effective methods to be used include: paying careful attention to intersection design and reducing kerb radii to slow turning vehicles, providing raised priority crossings on minor streets, including grade separated crossings in concept plans for road and pathway upgrades, designing the pathway network to avoid intersections (i.e. follow waterways, canals, coastlines and perimeters of new developments)
- the most high-risk situation for pedestrians is a road crossing. A major focus will be to provide safe environments for crossing roads and ensuring that crossing locations are practical and accessible. Slower roads, and more contained roads are also easier to cross
- on-road cyclists are also most at risk at intersections. Over 40 per cent of crashes were found to be in these locations. The highest number of crashes occurred on state controlled roads, but in many instances this was near an intersection with a council controlled road. This highlights the need to provide quality green treatments at intersections
- a significant number of accidents occurred where vehicles were travelling in adjacent directions. There is a need to raise awareness of on-road cyclists both by infrastructure and driver and rider education
- measures being taken to minimise crashes will consider the types of minor crashes that can occur and the likelihood and location of those risks when preventative measures are programmed. For example, ‘drop offs’ from pathway edges seldom cause serious reported injuries but may occur frequently and require regular auditing and remedial action
- safety initiatives and infrastructure works that improve safety for younger users are to be concentrated around schools and pathways where they intersect with roads. The data indicates that there is benefit in focussing on areas where there are higher levels of seniors expected and in the vicinity of hotels and nightclubs
- suitable physical infrastructure and supporting policies are to be provided for safe and convenient bicycle travel. Once this starts to happen, cycling can be expected to increase, and to have relatively good safety outcomes. Although increasing numbers of cyclists may improve safety (Jacobson, 2003), council needs to focus on direct policy initiatives and infrastructure to create an environment where walking and cycling is safe and
- by applying speed reduction measures, council can improve the safety of both cyclists and pedestrians without using additional road space or removing green space. This is one of the most effective ways for making street environments safer and reducing both the likelihood and consequences of accidents. Research shows that speed limit reductions would have the greatest impact on improving cycling and pedestrian networks on roads with low levels of congestion and few intersections.

8.4 Policies and actions – Safety

Policies	
P15	The pedestrian and cycling environment is designed, built and maintained to be safe.
P16	Support the improvement of road user behaviour and education of all road network users to reduce road trauma and consequential costs to the community.

Actions	Timing	Cost	Responsible[1]
▶ Ensure pedestrian and bicycle facilities are designed and delivered to provide a safe network for all.	Ongoing	Low	SCC/TES
▶ Analyse crashes involving pedestrians and cyclists, to target resources to prevent injuries and save lives. Special attention to be given to shopping centres, major intersections, roundabouts, crossing barriers, public transport interchanges, educational precincts and location near hotels and nightclubs.	Ongoing	Low	SCC/ITS
▶ Investigate use of reduced speed limits in selected locations to support safer walking and cycling.	2011	Low	SCC/ITS
▶ Design and construct bicycle and pedestrian infrastructure using CPTED principles including street and path lighting.	Ongoing	Low	SCC/TES
▶ Develop and implement a 'Safe Streets for Seniors' program, including measures such as providing more crossing time for pedestrians in local centres with higher populations of older residents.	2016	Med	SCC/ITS/TES
▶ Minimise conflicts between users by focussing improvements on road intersections and pathway/road crossings and by providing overpass/underpasses, wider pathways, crossings and refuges and separation of users in high conflict areas.	Ongoing	High	SCC/TES/ITS
▶ Audit the road network to ensure that there are safe pedestrian and cycle crossings where required.	Ongoing	Low	SCC/ICTS/ITS
▶ Ensure the safety of pedestrians and cyclists through regular maintenance activities and by responding quickly to reported safety and maintenance issues.	Ongoing	Low	SCC/TES
▶ TravelSmart Sunshine Coast undertakes programs and initiatives that promote safe cycling to school and higher education, addressing both infrastructure and education.	Ongoing	Med	SCC/ITS
▶ Educate drivers, cyclists and pedestrians on how to safely share streets, including awareness of bicycle safety and legal obligations working with driving schools, State agencies and local media campaigns.	Ongoing	Low	SCC/ITS
▶ Implement other pedestrian and cyclist safety actions included in the *Road Safety Plan*.	2011	Low	SCC/TES

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

9 Inform, educate and encourage

The development of a cycling and walking culture is a priority for council. A co-ordinated approach is required in the broad marketing of cycling and walking as legitimate transport options. The majority of residents on the Sunshine Coast have cycled at some stage in their life but not many people choose cycling as their primary mode of transport. Many school students stop cycling at the age they can drive, as driving equates to newfound freedom and getting from 'A to B' in a car is easy. The challenge is to reconnect people to cycling and walking and create a matching culture.

9.1 TravelSmart Sunshine Coast programs

The current TravelSmart Education and Encouragement program is wide ranging and targets specific audiences. Unfortunately not all locations on the Sunshine Coast are conducive for cycling and walking and many of the messages are not relevant to residents who experience unpleasant and difficult walking and cycling conditions. Greater co-ordination is required with council's travel behaviour change program and infrastructure improvements to make sure that people are aware of their options to cycle and walk in their local area and have the infrastructure to make this possible.

Councils TravelSmart program will aim to improve awareness of walking and cycling as transport options, increase participation in active transport, especially to schools and for work related trips as well as provide specific walking and cycling information. The whole program will be packaged to ensure that walking and cycling become viable transport options for work, school, recreational and utility trips.

These types of programs, which engage with households, have had encouraging levels of success in helping people make a sustained change to more active transport. As an example, Smarter Travel Sutton in the UK has delivered an

85 per cent increase in cycling in the first two years of its program by providing tailored advice and working with employers, schools and other partners.

Council is recognised as a leader in travel behavioural change programs, which have targeted specific interest groups such as primary school students, women, seniors and parents. The focus of the program is on voluntary travel change to active transport modes. Giving people advice and information on the benefits of walking and cycling, the infrastructure available in their area, organising community events, providing school cycle skills education programs have proven successful in increasing walking and cycling activity.

Councils' TravelSmart Schools Program developed in partnership with Transport and Main Roads and schools in early 2005 is expanding across the region to include over 20 Schools by 2014. The program delivers cycle training to primary age students and is packaged as a suite of measures to market more walking and cycling to school. Four council officers currently support the program.

The development of Travel Plans within schools and for workplaces is a key approach to encouraging people to walk and cycle more often. The challenge to convert more people to take up walking and cycling as a transport option that supports a healthy lifestyle will require continued investment in quality infrastructure as well as development and expansion of existing TravelSmart programs.

9.2 Education and awareness campaigns

Education and awareness programs are an essential part of improving safety for pedestrians and cyclists. Council has recently launched a road safety program called 'Share with Care' that aims to make it safer for cyclists and pedestrians on the Sunshine Coast. The campaign also provides information about new cycling infrastructure and road rules.

The campaign uses guides and advertising to explain and encourage elements of road safety including:

- 'a metre matters' campaign, in partnership with the Amy Gillett Foundation, encourages motorists to provide cyclists with safe operating spaces on roads
- details to promote understanding about bicycle lanes, green cycle lanes and bicycle awareness zones,
- advice and guidance on how pedestrians and cyclists can share pathways safely and
- education on safety tips and rules for pedestrians and cyclists.

It is vital for our continuing safety and wellbeing that everyone understands the rules that guide good travel behaviour and that no matter how we travel we all take personal responsibility to respect and look out for each other. Council will continue to run similar campaigns that are tailored for the Sunshine Coast experience and are evaluated to keep the programs effective.

9.3 Policies and actions – Inform, educate and encourage

Policies	
P17	TravelSmart programs focus on marketing the benefits of all available transport alternatives so that users understand the positive impact of their actions on the sustainability of the Sunshine Coast.
P18	Give residents and visitors the knowledge and skills to use walking and cycling for transport and recreation and support and encourage people who walk and cycle.
P19	Create an improved image of cycling amongst residents to encourage increased participation.

Actions	Timing	Cost	Responsible[1]
▶ Develop marketing strategies and implement community education programs that encourage more people to enjoy the benefits of active transport for transport, recreation and health.	2011, Ongoing	Low	SCC/ITS/CC
▶ Implement and evaluate TravelSmart workplace, school and community projects and events e.g. Bike Week, National Ride to Work Day, Walk to Work Day, Walk Safely to School Day and ride2school events.	Ongoing	Low	SCC/ITS/AHC, EQ
▶ Continue the TravelSmart Sunshine Coast school program for primary and secondary schools.	Ongoing	Low	SCC/ITS, EQ
▶ Investigate opportunities for Sunshine Coast-wide promotional walking programs e.g. 10,000 Steps.	2011	Low	SCC/ITS/AHC
▶ Run campaigns promoting an environment where drivers, pedestrians and cyclists respect and look out for each other.	Ongoing	Low	SCC/ITS/CC
▶ Educate cyclists about defensive riding practices and road rules.	Ongoing	Low	SCC/ITS/CC
▶ Develop and implement initiatives that improve all path users' awareness of how they can responsibly share pathways.	2011	Low	SCC/ITS
▶ Provide quality, current information for residents and visitors in the form of travel maps and websites, and annually update maps of pedestrian and bicycle facilities and routes within the Sunshine Coast.	2011, Ongoing	Low	SCC/ITP/ITS
▶ Provide and update a region wide cycling page on the council website including a web link for pedestrians and cyclists to report issues and hazards with the ability to upload photos.	2011	Low	SCC/ITS
▶ Investigate the development of an online bicycle trip planner to inform cyclists of safe cycling routes between destinations for transport and recreation (possibly in conjunction with TravelSmart Online Mapping).	2011	Low	SCC/ITS/ITP
▶ Instigate ways of providing adult bicycle training for individuals, businesses and seniors.	2011	Low	SCC/ITS
▶ Develop an internal program to promote active transport awareness and focus across council operations and develop a training program to increase staff skills.	2012	Low	SCC/ITS
▶ Implement Green Travel Plans for council offices and promote the benefits of walking and cycling to council employees as a demonstration project for sustainable travel using active transport.	2011	Low	SCC/ITS

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

10 Funding active transport

Indicative costings have been developed for the actions detailed in the Plan with an indication of the scale of the cost noted against each action. Many of the identified actions will be undertaken using existing resources and through existing operational budgets.

Costs not covered by existing budgets are identified as requiring an additional commitment of $2.5M per annum to active transport capital budgets. An additional full time staff member will also be required to implement the new initiates set out in the Plan. These funding allocations are possible from a reallocation of funding within the overall transport budget in line with council's commitment to increasing the priority given to active transport compared to travel by private vehicles.

For those costs that cannot be accommodated within existing budgets, it should be noted that the cost of action indicates up-front costs only and does not factor in return on investment to council or to the community. To achieve its goals, council will endeavour to secure financial support from the public and private sectors and explore the feasibility of collaborative projects with government, industry and education partners.

An effective and prioritised program of delivering active transport infrastructure is needed to meet the goals and objectives outlined in the Plan.

10.1 Prioritising projects

An objective method of prioritising projects is needed to determine the order in which projects should be undertaken. A robust method will also ensure that the current support for cycling can continue to be justified and potentially increased.

Choosing criteria

Cycling and walking can use different criteria in prioritising projects. Many elements of cycling prioritisation can be applied to pedestrian facilities, however demand and benefit calculations need to be modified to meet the characteristics of pedestrians. There is also a lack of research or practical experience to support estimation of the effects of proposed initiatives. For example, estimation of the level of usage that will be generated by new bicycle facilities cannot be done with the same robustness that is possible for motor vehicle traffic impacts of new road investment.

The approach used by council will allow the prioritisation to be transparent, efficient and accountable. The method will allow those responsible for decision-making to make informed decisions based on clear, comparable and consistent information for all proposals.

To align with council's sustainability goals, active transport proposals need to be assessed in terms of triple bottom line sustainability, which is comprised of three inter-related areas:

- **social –** social progress which recognises the needs of everyone
- **economy –** prudent use of resources in a viable and equitable way and
- **environment –** protection of the physical and atmospheric environment.

The various types and quality of information available for the assessment and evaluation of the environmental and social aspects of active transport are much less developed than those relating to the economic assessment. Less prescriptive methods incorporating both qualitative and quantitative measures related to key goals, objectives and outcomes are required.

Recently, corporate governance has been introduced to sustainability assessment. Governance is defined as the way in which an organisation is controlled and governed in order to achieve its objectives within an acceptable degree of risk.

Weighting criteria

Having determined the criteria to be used in a prioritisation scheme, each criterion is given a weighting reflecting the relative importance. The weightings can vary between the various subprograms.

10.2 Capital Works program

Council uses a multi-criteria analysis prioritisation model for the assets and infrastructure capital works program to allow a comparison of projects within each subprogram based on a common set of criteria. The model provides for different weightings of criteria for each program and where possible each subprogram.

Methods incorporating both qualitative and quantitative measures are required to rank projects. These measures should be related to key goals, objectives and outcomes for active transport. The data to measure quantitative criteria needs to be relevant and available. Criteria data should therefore be from reliable sources and measured with clear and documented processes to build confidence in the results and allow the process to be used for any new projects.

Program focus

The selection of criteria and the particular weight given to a particular criterion depends on the overall goals that are set. The Plan has set out a number of specific areas on which prioritising will focus including:

- higher density centres and corridors
- connections between centres (major and local centres)
- trips within five kilometres of centres (replacing short vehicle trips)
- connections to education centres
- links to Public Transport stops and interchanges
- links to overcome major physical barriers (e.g. motorways and watercourses)
- improving locations that are not safe
- providing facilities with a higher baseline level of safety (e.g. physically separated bikeways) and
- missing links in the network

There are some differences in how the criteria might be applied to pedestrian and cycling facilities. Cycle facilities focus on route catchments whereas pedestrian facilities focus on locations and land use. One of the methods available for cycling examines the concentration of likely motorised trips of five kilometres or less derived from the strategic transport model for the Sunshine Coast. These trips are those with the greatest potential for change to active transport and are a more accurate measure of new cycling potential.

Estimates of current and potential demand for active transport trips can be made using population density and the number and variety of attractors in a catchment. The variety is a useful measure of the ability to attract a range of different types of users. A combination of these methods is used to establish existing

and potential demand for walking and cycling trips and allows prioritising of projects that are designed to meet these demands.

Ways of measuring and prioritising links and projects against these potential criteria have been investigated as part of the development of the Plan and are available for using in developing a prioritised program of projects as part of the Active Transport Implementation Plan.

An agreed prioritisation method is to be determined for each of the active transport capital works programs based on criteria and weighting to be finalised through consultation with Councillors, officers and stakeholders. The proportion and total allocation of funding to each active transport subprogram in the capital works program can then be based on the priorities determined for walking and cycling.

Prioritisation for the State Principal Cycle Network

For projects eligible for State Cycle Network Program (CNP) funding, TMR have indicated to council that future funding for Sunshine Coast projects will need to compete with all other SEQ projects and the best and highest ranked projects in SEQ will be the projects approved in any year.

Council's priorities for regional routes eligible for CNP grants (currently in the Strategic Pathway Network subprogram) will mirror the criteria used by the State for the CNP. This will ensure that the projects prioritised and submitted for grant applications receive the highest State ranking and greatest likelihood of receiving grants.

Projects, which rank lower using the State criteria, can proceed if council wishes to apply different criteria to prioritise projects and is willing and able to fully fund those projects. It is recommended that a separate capital works subprogram be created to provide funding for these projects and other projects not eligible for CNP subsidy. The new subprogram will have a prioritisation method based on the existing council capital works method modified to reflect the priorities

determined as appropriate to this level of the active transport network.

Alternatively these projects could be included within an increased allocation to a regional Local Pathway Network subprogram where projects are ranking regionally and funded separately to the Divisional allocation for local pathways.

Coastal Pathway

The Coastal Pathway is eligible for 50 per cent subsidy for approved projects under the State Cycle Network Program (CNP) and has previously received subsidy through this program and Department of Communities, Sport and Recreation Infrastructure Program.

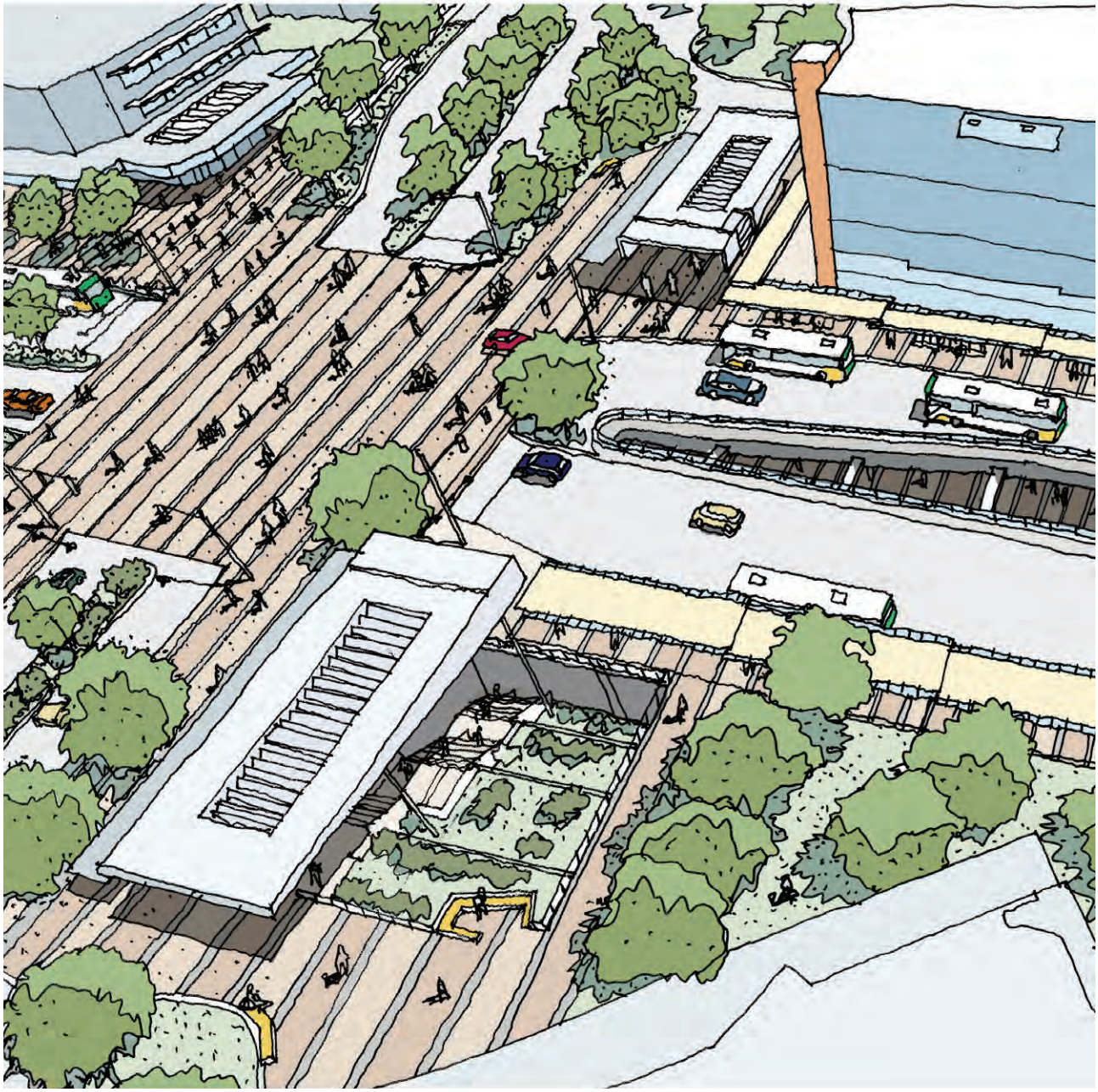
The Coastal Pathway is currently funded from a variety of council Capital Works subprograms as a legacy of the previous councils. All projects for the Coastal Pathway need to be prioritised within a single new capital works sub program to provide consistency, transparency and equity. Matching subsidy for the Coastal Pathway can then be sought from the appropriate State program based on the major function provided by a particular link.

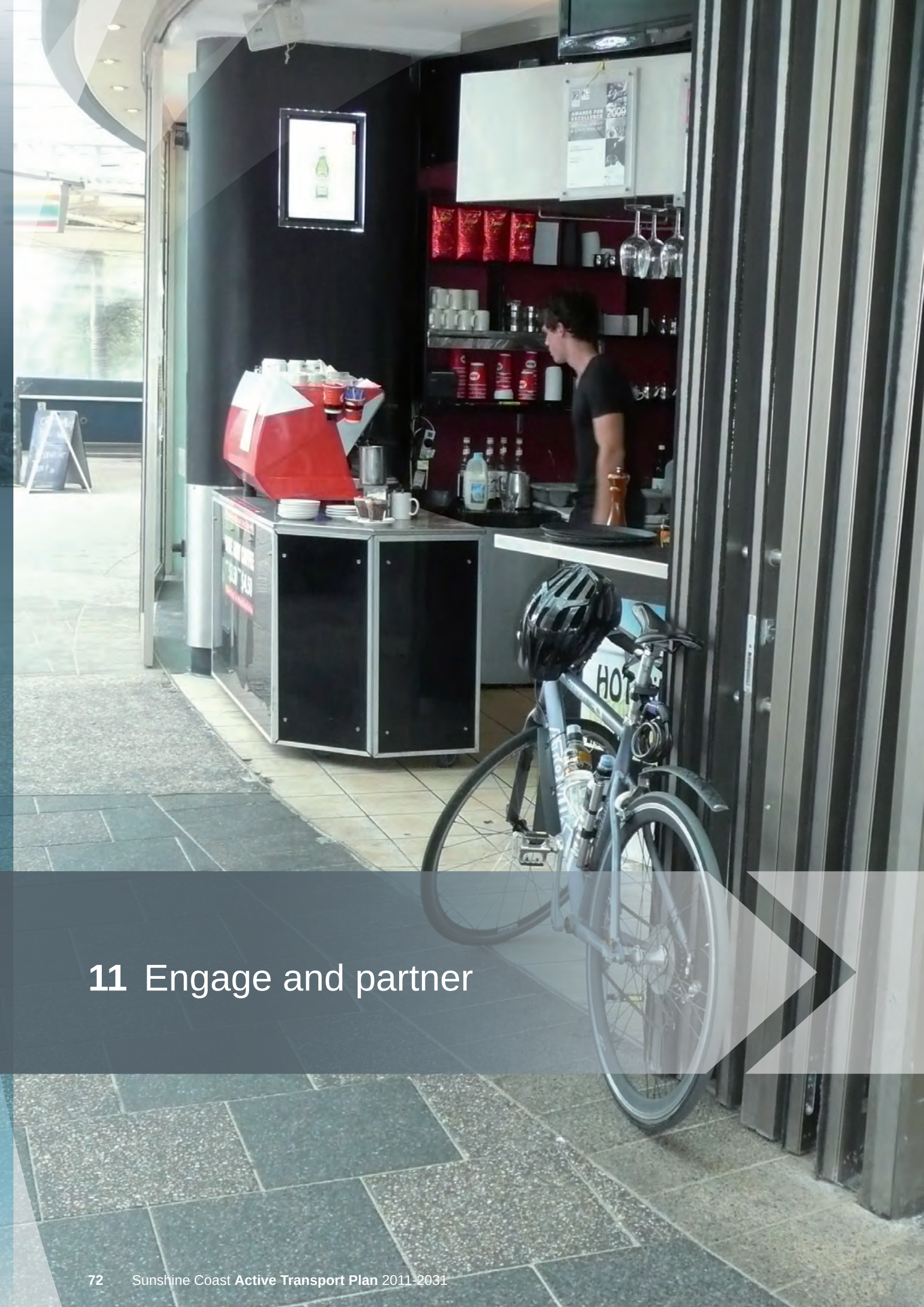
10.3 Policies and actions – Funding active transport

Policies	
P20	Planning and delivery of active transport infrastructure, services and maintenance and rehabilitation of existing infrastructure is cost effective.
P21	Transport investments are adaptive to potential changes in transport preferences in the future with an increasingly higher allocation towards delivery of alternative transport infrastructure and services.
P22	All new projects that impact on the transport network will be funded to include provisions for pedestrians and cyclists.
P23	Development contributes to the implementation of active transport.

Actions	Timing	Cost	Responsible[1]
Revise the active transport funding model by: ▶ Providing an increasingly higher allocation of the capital and operational transport budgets to the delivery of active transport infrastructure and services (as supported by the *Sustainable Transport Strategy*) ▶ Determining the proportion of the overall active transport budget to be allocated to infrastructure including signage and end of trip facilities, education and encouragement initiatives and safety initiatives ▶ Using the priorities for infrastructure developed by the Active Transport Implementation Plan ▶ Prioritising council projects eligible for State Cycle Network Program grants using the same criteria used by the State ▶ Creating a new capital works subprograms focussing on improving accessibility and maximising connectivity in local areas networks including traffic calming, increased crossing phases and safety improvements that is prioritised separate to the strategic network and on a region wide basis ▶ Ensuring that the maintenance budget allocated to active transport infrastructure is sufficient to maintain the facilities to an acceptable standard, including vegetation removal, sweeping and emergency maintenance ▶ Increase the proportion of funding to the subprogram for on-road facilities to make existing road infrastructure more bicycle friendly, including the use of kerb relocation, pavement markings and bike lanes and ▶ Funding the Coastal Pathway infrastructure from a new capital works program and seeking State subsidy from the appropriate State program based on the major function provided by each section.	2011	High	SCC/ITS/TES/ ITP
Allocate sufficient budget to financially support the actions of the Plan.	Ongoing	High	SCC
Prepare an active transport Priority Infrastructure Plan for the network and supporting infrastructure including the Coastal Pathway.	2012	Low	SCC/ITP

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.





11 Engage and partner

11.1 Community involvement

The Plan is the result of significant community involvement including community feedback on the *Sustainable Transport Discussion Paper*, the draft version of this Plan and the active support and participation of the Cycling Reference Group.

Sustainable Transport Discussion Paper

The 'Our Place Our Future' community engagement program was undertaken between October and December 2009 as part of the preparation of the new planning scheme. At the same time council released a series of strategies and discussion papers. The *Sustainable Transport Discussion Paper* identified challenges and suggested responses, which have the potential to achieve sustainable transport alternatives. The paper included individual Strategy Statements for Cycling and Pedestrians.

In the community feedback on the discussion paper there was a general consensus that greater priority needs to be given to active transport. Some responses had recreational interests, others commuter or school travel. Safety concerns were common, as were suggestions for considering pedestrian priority spaces. Suggestions for cycle support infrastructure such as bike racks and provision for bike on public transport were also received.

Responses to the Draft Plan

Community feedback on the discussion paper resulted in 25 submissions. The majority of comments related to providing improvements to networks and infrastructure. Other themes commonly raised included safety, integration planning, education and awareness and funding. The community input has been included in the final version of the Plan.

Cycling Reference Group

The Cycling Reference Group was formed in early 2010 as a way to integrate the community views and needs for cycling with State and Federal Government agencies and to include community requirements in council projects. The Group includes representatives of cycling clubs, advocacy groups, a Bicycle User Group, cycle focussed businesses, and motivated individuals along with State agency representatives and Bicycle Queensland.

The Group has been directly involved as representatives of the community in the development of the Plan and have raised a number of issues addressed by this Plan. The Cycling Reference Group will continue to assist in the implementation of the strategies and actions included in this Plan.

Development industry

There is substantial benefit to be gained by engaging with the development industry on the Sunshine Coast to increase opportunities for better active transport outcomes. This industry sector is responsible for constructing a significant proportion of new active transport infrastructure each year. A clear understanding of the goals and focus of active transport planning will assist developers and council in making sure that the type and quality of facilities matches the expectations of all parties including residents of new developments. Understanding the concepts and approach taken by council rather than council having to enforce compliance will provide better outcomes for all.

Council will actively seek ongoing opportunities to discuss active transport outcomes with the local development industry.

11.2 Integration opportunities

There are often significant advantages in developing the council cycle network concurrently with the road infrastructure, other transport infrastructure projects and the regional bicycle network projects. Major projects (committed and proposed) nominated by the SEQIPP and Transport and Main Roads Road Implementation Program (RIP) have been examined and individual projects are discussed below.

MMTC, CAMCOS and CoastConnect

Transport and Main Roads (TMR) has three major transport proposed projects on the Sunshine Coast, namely the road aspects of the Multi-Modal Transport Corridor (MMTC), the rail aspects of the MMTC (CAMCOS – Caboolture to Maroochydore Corridor Study) and CoastConnect Quality Bus Corridor from Caloundra to Maroochydore. Stakeholders have done a large amount of work in these individual projects.

The CoastConnect project in particular involved lengthy negotiations towards accommodating cycling infrastructure on the corridors along Nicklin Way, Brisbane Road, Alexandra Parade and Aerodrome Road. These negotiations have clearly defined the need for on-road cycling facilities as well as off-road pathways and integrated connections to bus stops along the CoastConnect corridor. Planning for the MMTC project included the option of a dedicated cycleway and walking and cycling facilities for the length of the corridor. Negotiations are expected to continue with TMR on the details of active transport provisions as these projects proceeds to later stages.

Sunshine Motorway/Emu Mountain Road Upgrade

In late 2006, the Queensland Government started a planning study to investigate how the Sunshine Motorway and Emu Mountain Road, from the Pacific Paradise interchange to Eumundi-Noosa Road, should be upgraded for the future. An important focus was providing safer and more efficient access to the growing residential and commercial centres around the corridor. The proposed planning option includes a separated high quality bikeway parallel to the Motorway and east west connections that cross or connect with the motorway corridor.

Other road network development

Other opportunities for infrastructure integration will continue to be identified and secured, coinciding with the upgrading/construction of the council and State controlled road networks. This objective requires council to adopt procedures that encourage a culture where walking and cycling are included as an equal consideration in the design and maintenance of roads, footpaths, parks, landscaping and developments. Council will adopt procedures that ensure the needs of pedestrians and cyclists are met during the construction or maintenance of all new or existing roads and that all bicycle route markings are re-instated or introduced after completion of any transport-related construction work.

Council will also coordinate funding programs to ensure reseals of roads on the cycle network include a capital works component to provide on-road cycle facilities at the time of the maintenance and coordinate planning, design and construction of bicycle and pedestrian facilities with other road works such as intersection upgrades, reseals/resurfacing, shoulder widening and line marking.

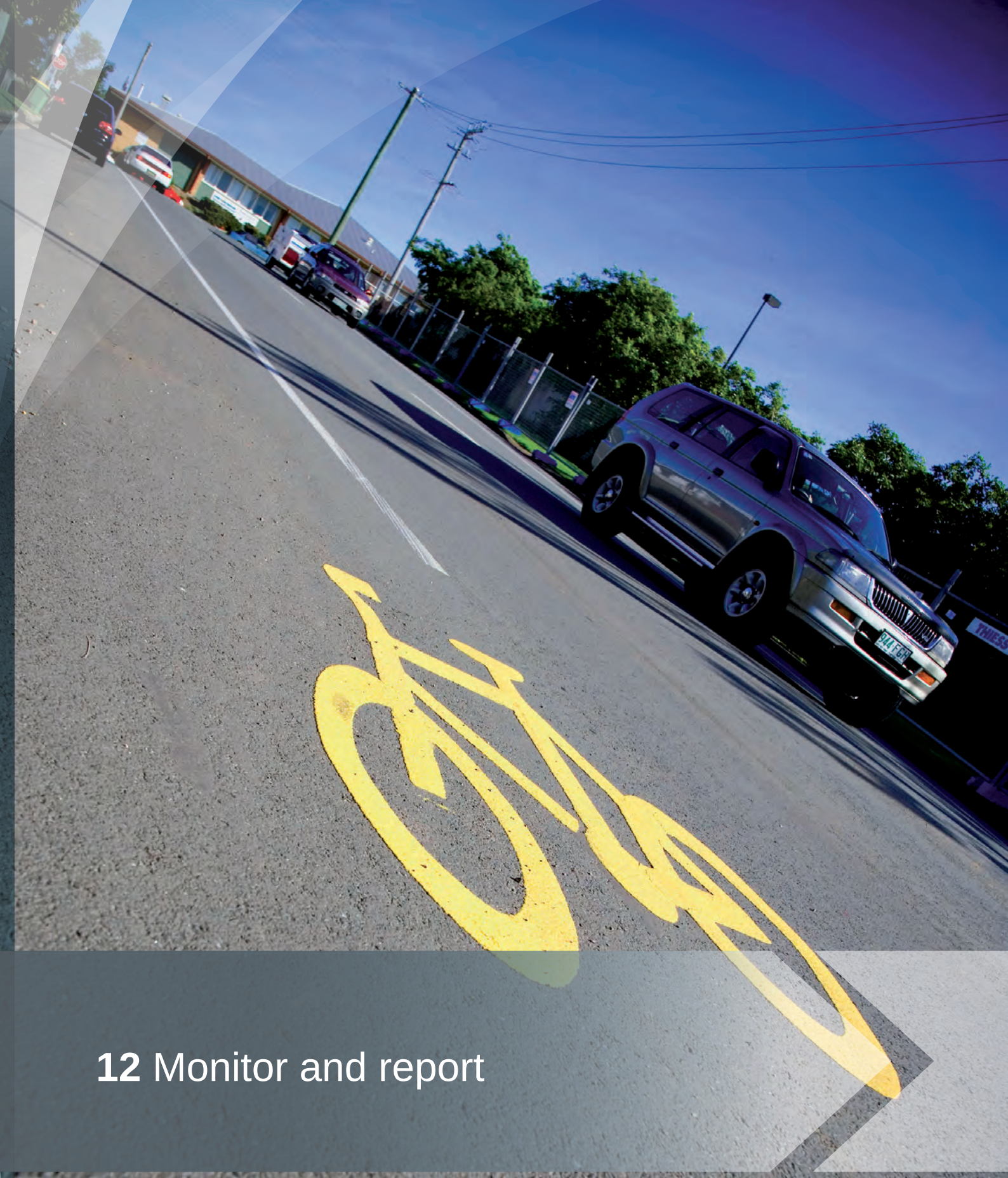
For facilities under TMR control, council has formally requested that TMR investigate ways of providing a coordinated and cost effective approach to road programs so that cycling facilities can be provided at the time of major road maintenance. Council has also requested that TMR give the highest priority to the completion or incorporation of cycling facilities where they have not been successfully provided in recent State capital works projects. Council and the cycling community have also requested TMR to mark cycling standard shoulders with bicycle symbols. Marking cycling facilities would take advantage of the positive safety and promotional benefits of designating the allocated space for cyclists and send a positive message to motorists that cyclists share the roadway.

11.3 Policies and actions – Engage and partner

Policies	
P24	Active transport is supported by strong council leadership, community engagement and by developing effective partnerships.
P25	Decisions for the planning and delivery of the Sunshine Coast active transport system are based on collaborative efforts from a range of stakeholders, including all levels of government, the private sector and the Sunshine Coast community.

Actions	Timing	Cost	Responsible[1]
▶ Use the Cycling Reference Group to better understand and manage cycling stakeholder and community needs and expectations.	Ongoing	Low	SCC/ITP/ITS
▶ Create a Pedestrian Reference Group to promote community pedestrians' needs and expectations with council, State and Federal Government agencies and to include community requirements within council projects.	2011	Low	SCC/ITP
▶ Partner with health agencies and the tourism industry to maximise health, social and economic benefits of walking and cycling.	2012	Low	SCC/ITS
▶ Consult with stakeholders on both maintenance and capital works that might impact on pedestrians and cyclists to provide a suitable result that meets local needs using the Sunshine Coast Cycling Reference Group and Pedestrian Reference Group.	Ongoing	Low	SCC/TES/ITS
▶ Collaborate across government agencies, development industry, business, interest groups and other organisations in implementing the Plan and making decisions about active transport.	Ongoing	Low	SCC/ITP/ITS
▶ Lobby and work closely with Transport and Main Roads to ensure suitable active transport facilities are delivered by State projects.	Ongoing	Low	SCC, TMR

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.



12 Monitor and report

Having set goals and targets for active transport it is important to have a process that gauges the progress being made. Currently only a small amount of data is being collected about active transport on the Sunshine Coast.

A new active transport monitoring program will gather quantitative and qualitative measures of the progress towards targets as well as gauging the progress in implementing the actions of the Plan. The quantitative measures will include a targeted program of counts and surveys at major links and locations in addition to the annual bicycle count program of selected Sunshine Coast sites. The qualitative measures will include social research and surveys of people who walk and cycle and those that don't to determine their reasons for their choice, knowledge of existing facilities and awareness of campaigns. The results will inform the direction of the implementation of the Plan.

On-road cyclist numbers will be collected as part of the traffic count program and council will continue to install pedestrian and cyclists automated count facilities on projects constructed under the State subsidised Cycle Network Program.

The monitoring program will also provide a detailed annual progress report, called a *Pedestrian and Bicycle Account*, to council and the community. The results and information from the ongoing data collection and analysis of walking and cycling will be made available to the community, professionals and decision makers.

12.1 Policies and actions – Monitor and report

Policies	
P26	Progress toward meeting key policy areas for active transport is measured, analysed and reported annually.
P27	A *Pedestrian and Bicycle Account* provides information to decision makers, council and the community and guides the implementation of the Plan.

Actions	Timing	Cost	Responsible[1]
▶ Develop a framework for ongoing monitoring and evaluation of the implementation of the Plan.	2011	Low	SCC/ITP
▶ Undertake a program of counts and surveys to increase the understanding of local walking and cycling and measure the progress towards active transport objectives. Collect cyclist on-road volumes as part of traffic count programs.	Ongoing	Low	SCC/ITP
▶ Provide a detailed annual progress report to council and the community.	Ongoing	Low	SCC/ITS/ITP
▶ Monitor the growth in the use of e-Bikes to ensure planning and matching provision of supporting facilities.	Ongoing	Low	SCC/ITP/ITS
▶ Undertake surveys of pedestrian and cyclist numbers before and after construction of new or upgraded facilities.	Ongoing	Low	SCC/ITS
▶ Undertake social research and surveys of people who walk and cycle and those that don't to determine reasons for their choice, knowledge of existing facilities and awareness of campaigns.	2011	Low	SCC/ITP
▶ Provide information from analysis of cycling and walking to the community, professionals and decision makers.	Ongoing	Low	SCC/ITP
▶ Develop a process to update the Sunshine Coast pathways and on-road cycle spatial database regularly to record new infrastructure and data.	2011	Low	SCC/ICTS

[1] See Chapter 13 Glossary and abbreviations for details of abbreviations for responsible parties.

13 Glossary and abbreviations

13 Glossary and abbreviations

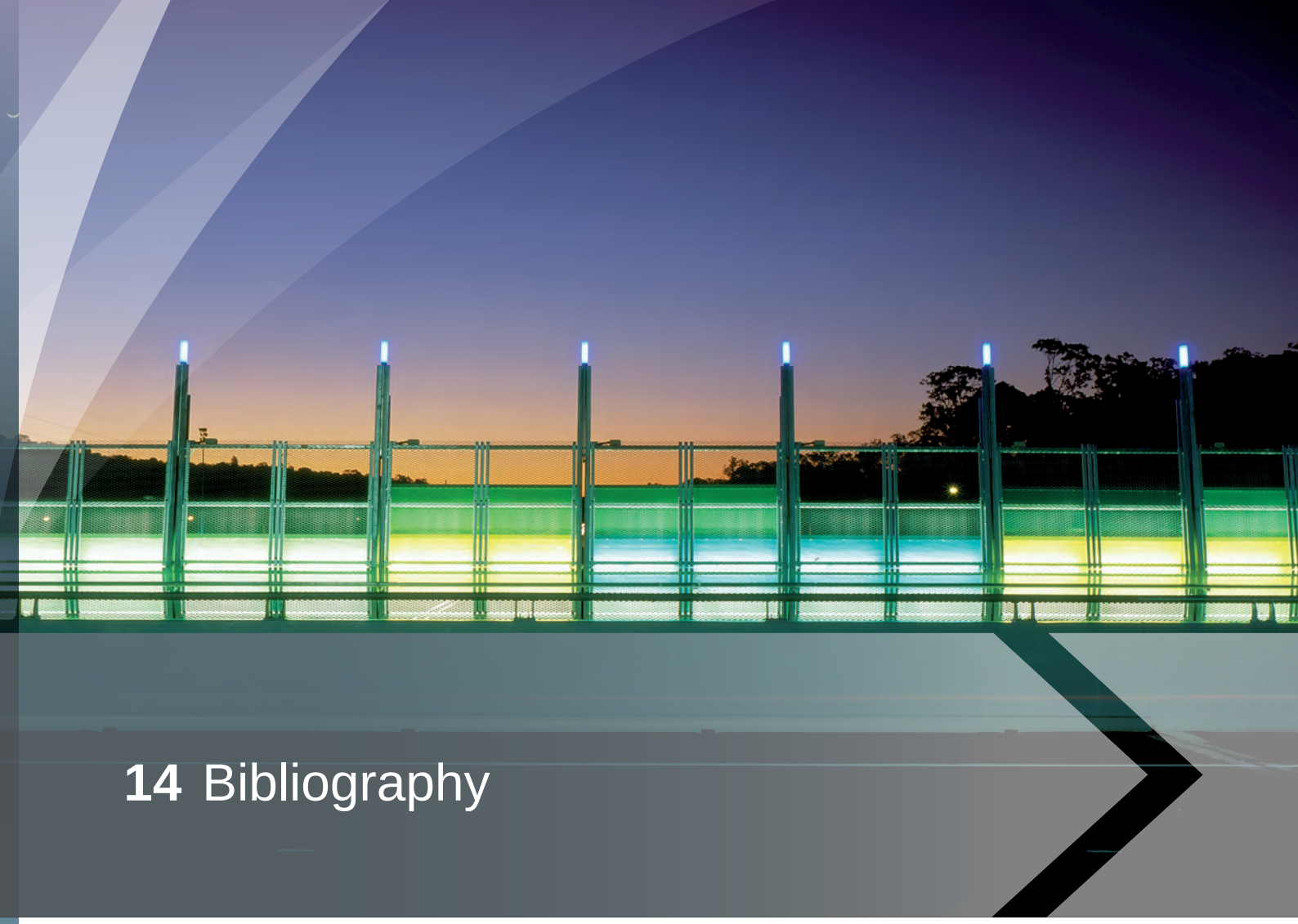
Glossary

ABS	Australian Bureau of Statistics
Accessibility	The ability to reach desired goods, services, activities and destinations. Access is the ultimate goal of most transportation.
Active transport	Active transport includes non-motorised forms of transport involving physical activity, such as walking and cycling.
Austroads	The association of Australian and New Zealand road transport and traffic authorities
Avoidable congestion	Avoidable congestion is described as situations where the benefits to drivers of travel in congested conditions are less than the costs imposed on other members of the community and consists of business time costs, private time costs, extra vehicle operating costs and extra air pollution costs.
CPTED	Crime Prevention Through Environmental Design is a crime prevention approach that designs environments in ways that lessen or prevent the incidence of crime.
Spatial database	A spatial database is data storage designed to store, query, and manipulate geographic information and spatial data.
Household Travel Survey	Household travel surveys collect detailed information on travel by individuals across all modes within a defined area. Household travel surveys have been conducted across South East Queensland including the Sunshine Coast in 1992, 2003/4 and 2006/08.
Level of service	Level of service (LOS) is a measure used by traffic engineers to determine the effectiveness of elements of transportation infrastructure.
Mobility	Physical movement. Mobility can be provided by walking, cycling, public transport, car pooling, taxis, private vehicles, trucks and other motorised modes.
Mode share	Mode share describes the percentage of travellers using a particular type of transportation.
Off-road	Off-road pathways include shared pathways, footpaths and cycleways.
On-road	On-road cycle facilities include cycle lanes, suitable shoulders, green pavement markings and Bicycle Awareness Zones (BAZ).
SEQ	South East Queensland
Sustainability	Meeting the needs of the present without compromising the ability of future generations to meet their own needs.
TMR	The Queensland Department of Transport and Main Roads
Trip	For the purpose of setting mode share targets, a trip is defined as travel by each person from an origin to a destination for a single purpose. Several changes of travel mode may be part of a single trip however a single mode is assigned to each trip e.g. a trip may include a walk leg before and/or after a public transport leg however the mode assigned is public transport. Two people travelling in a private vehicle from the same origin to the same destination are considered to be two trips.
TTA	Translink Transit Authority
Veloway	High quality, grade separated dedicated cycle facility.

Abbreviations of parties responsible for implementing actions

Abbreviation	Description
AHC	Active and Healthy Communities (Community Services)
BMPS	Business and Major Project Services (Infrastructure Services Department)
CC	Corporate Communications (Organisation Performance Department)
DEV	Development industry organisations and representatives
DS	Development Services (Regional Strategy and Planning Department)
EQ	Education Queensland
ICTS	Information Communication Technology Services (Organisational Performance)
ITP	Integrated Transport Planning Branch (Regional Strategy and Planning Department)
ITS	Integrated Transport Services Team, (Infrastructure Services Department)
PDS	Place Design and Standards Team (Infrastructure Services Department)
PG	Parks and Gardens Branch (Infrastructure Services)
SCC	Sunshine Coast Council
SPlan	Strategic Planning Branch (Regional Strategy & Planning Department)
SPol	Social Policy Branch (Regional Strategy and Planning Department)
TES	Transport & Engineering Services Branch (Infrastructure Services)
TMR	Queensland Department of Transport and Main Roads
TTA	Translink Transit Authority


10
GIVE WAY
TO
PEDESTRIANS
10
SHARED
ZONE



14 Bibliography

Australian Bureau of Statistics, 2010, *3218.0 Regional Population Growth, Australia*, Table downloaded 12 August 2010, http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02008-09.

Australian Institute of Health and Welfare, 2006, *Australia's Health, 2006*, Canberra.

Australian Transport Safety Bureau, 2006, *Deaths of cyclists due to road crashes*, ATSB Road Safety Report, July 2006, Canberra.

Bauman A., Rissel C., Garrard J., Ker I., Speidel R., Fishman E., 2008, *Cycling: Getting Australia Moving: Barriers, facilitators and interventions to get more Australians physically active through cycling*, Cycling Promotion Fund, Melbourne.

Bureau of Transport and regional Economics, 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, Working Paper No. 71, Canberra.

Centre for Subtropical Design, 2010, *Subtropical Design in South East Queensland, A Handbook for Planners, Developers and Decision-Makers*, QUT, Brisbane.

City of Portland Bureau of Transportation, 2010, *Portland Bicycle Plan for 2030*, Portland Oregon.

City of Sydney, 2007, *Sydney Cycle Strategy and Action Plan*, Sydney.

CSIRO, June 2008, *Fuel for thought – The future of transport fuels: challenges and opportunities*, CSIRO, ACT, Australia.

Cycling England, 2009, *Lift Off for Cycling, Cycling Demonstration Towns Report 2009*, UK.

Department for Transport, 2007, *Manual for Streets*, London.

14 Bibliography

Department of Climate Change and Energy Efficiency, 2007, *Australian National Greenhouse Accounts, 2007, State and Territory Greenhouse Gas Inventories 2007*, viewed May 2009, http://www.climatechange.gov.au/inventory/2007/pubs/state_territory_inventoryv.pdf.

Department of Infrastructure and Planning, 2009, *South East Queensland Regional Plan 2009-2031*, Brisbane.

Department of Infrastructure and Planning, 2010, *Interim Consultation Report – Infrastructure Charges Taskforce November 2010*, Brisbane.

Department of the Premier and Cabinet, 2008, *Towards Q2: Tomorrow's Queensland*, Brisbane.

Drew, B. and Richardson, M., 2008, *Amalgamation of Police and Hospital Trauma in the Australian Capital Territory 2001-2003*, Canberra.

Duffy, P. 2007, *Demographic Data Used for Transport Modelling*, unpublished research, Maroochy Shire Council, Nambour.

Jacobsen, P. 2003, *Safety in numbers: more walkers and bicyclists, safer walking and bicycling*, Injury Prevention, vol. 9, no. 5, pp. 205-9.

Land Transport New Zealand, 2007, *Pedestrian Planning and Design Guide*, Wellington.

Lowe, I., 2009, *A big fix: radical solutions for Australia's environmental crisis*, Melbourne.

Manne, R., and McKnight, D., (Ed.), Lowe, I.,2010, *Goodbye to All That? The Limits of Growth Revisited*, Melbourne.

Planning Institute of Australia, 2009, *Healthy Spaces and Places*, Kingston ACT.

Puncher, J and Buhler, R 2008, *Making cycling irresistible: lessons from the Netherlands, Denmark and Germany*, Transport Reviews, vol. 28, no. 4, pp.1-57.

Puncher, J. Gerard, J. Greaves, S., 2010, *Cycling Down Under: A Comparative Analysis of Bicycling Trends and Policies in Sydney and Melbourne,* Journal of Transport Geography, Vol 18, in press.

Queensland Government and Heart Foundation, 2010, *Active, healthy communities: A resource package for Local Government to create supportive environments for physical activity and healthy eating*, Queensland Government, Brisbane.

Queensland Transport, 2005a, *In-Depth Travel Behaviour Analysis*, unpublished research, Brisbane.

Queensland Transport, 2005b, *Smart Travel Choices for South East Queensland Green Paper*, Brisbane.

Queensland Transport, 2007a, *South East Queensland Principal Cycle Network Plan*, Brisbane.

Queensland Transport, 2007b, *SEQ Household Travel Survey*, unpublished data, Brisbane

Queensland Transport, 2009, *Action Plan for Walking 2008-2010*, Brisbane.

Roads and Traffic Authority, 2002, *How to Prepare a Pedestrian Access and Mobility Plan*, Sydney.

Suzuki, D. and Boyd, D., 2009, *Suzuki's Green Guide*, Allen & Unwin, NSW.

Transport and Main Roads, 2010a, *Transport and Main Roads Interests in Planning Schemes*, viewed online 13 August 2010, http://www.tmr.qld.gov.au/Projects/Name/T/Transport-and-Main-Roads-Interests-in-Planning-Schemes.aspx.

Transport and Main Roads, 2010b, *Draft Connecting SEQ 2031*, Brisbane.

Watson, L. and Cameron, M. 2006 *Bicycle and motor vehicle crash characteristics*, Monash University Accident Research Centre, Report No. 251.

15. Appendices

Appendix A: Planning and policy context

Appendix B: Active Transport Network Maps: see attached CD

Appendix A – planning and policy context

Sunshine Coast Council context

- *Caloundra City Bicycle and Pedestrian Strategy* (2008 Amendment)
- *Recreational Links and Trails Strategy* (CCC, 2002)
- *Open Space Strategy* (CCC, 2007)
- *Noosa Cycling and Walking Strategy* (NSC, 2004)
- *Noosa Trail Network* (Noosa Plan)
- *Maroochy Shire Bikeways Plan Review* (MSC, 2003)
- *Recreational Trails Strategy* (MSC, 2003)
- *Maroochy Shire Transport Strategy* (MSC, 2007)
- *SunTran Sub-regional Integrated Transport Strategy for the Sunshine Coast, Stage 2 Report* (SCRC, 2007)
- *Caloundra Central Business Area Master Plan* (CCC, 2003)
- *Caloundra Regional Centre Planning Study* (CCC, 1999)
- *Caloundra Coastal Walk Master Plan* (CCC, 2003)
- *Caloundra Coastal Walk Environmental Review* (CCC, 2005)
- *Maleny and Environs Local Area Plan, Landsborough and District Local Area Plan* (CCC, 2000)
- *Glass House Mountains and Beerburrum Local Area Plan* (CCC, 2001)
- *Coolum Integrated Land Transport Plan* (MSC, 2005)
- *Coolum Integrated Land Use and Transport Study* (MSC, 2005)
- *Mooloolaba Integrated Land Transport Plan* (MSC, 2003)
- *The Noosa Plan 2006*
- *Caloundra City Plan 2004*
- *Maroochy Plan 2000*
- *Draft Priority Infrastructure Plans*
- *Corporate Plan 2009-2014*
- *Climate Change and Peak Oil Strategy 2010-2020* (2010)
- *Draft Structure Plans for Maroochydore Principal Activity Centre, Palmview and Caloundra South*

State context

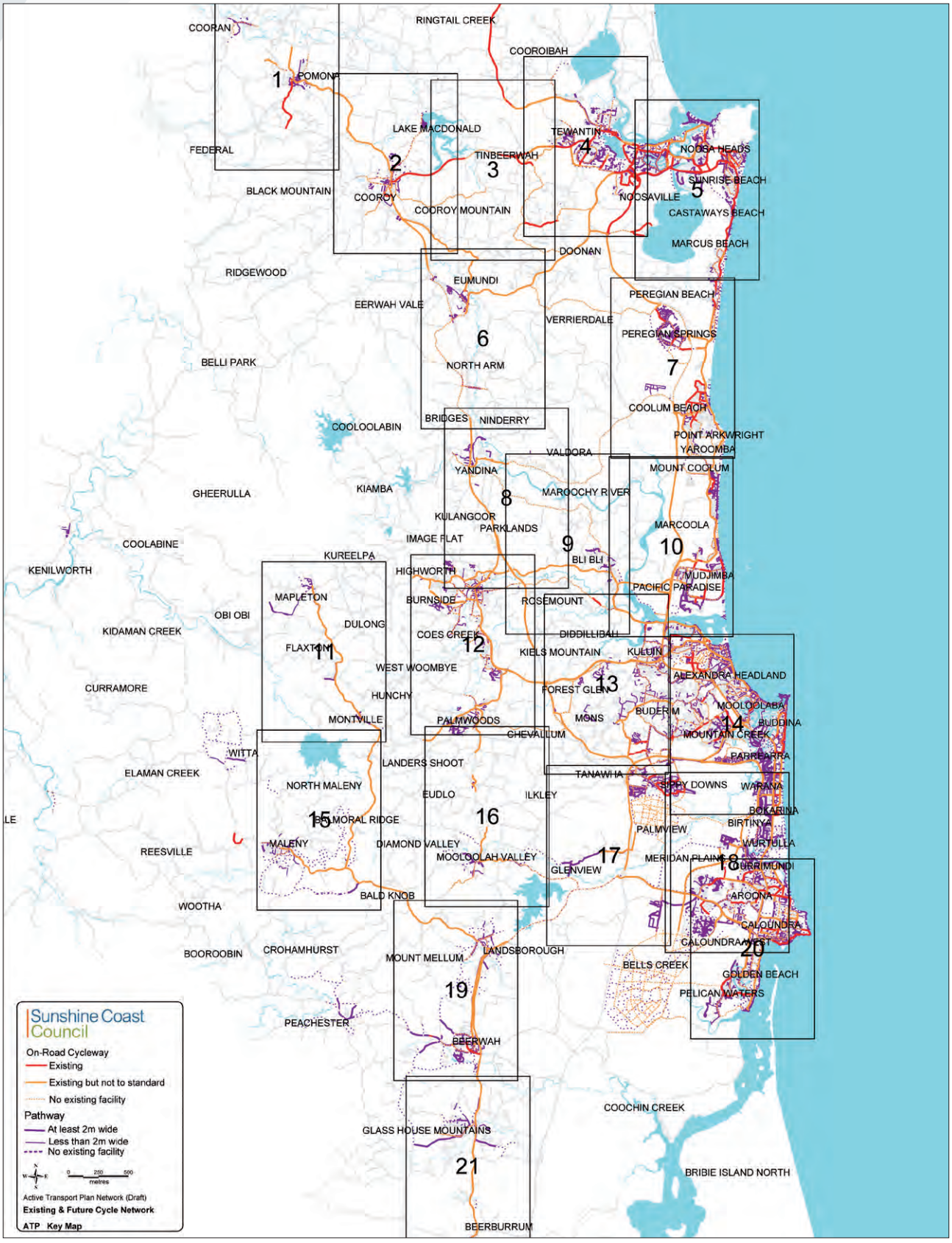
- *Draft Connecting SEQ 2031* (2010)
- *South East Queensland Regional Plan 2009-2031*
- *Interim Consultation Report – Infrastructure Charges Taskforce* (2010)
- *Smart Travel Choices for SEQ Green Paper* (2005)
- *Queensland Cycle Strategy* (2003)
- *SEQ Principal Cycle Network Plan* (PCNP)
- *Action Plan for Walking 2008-2010* (2009)
- *Easy Steps: a toolkit for planning, designing and promoting safe walking* (2005)
- *ClimateQ: toward a greener Queensland* (July 2009)s
- *Complete Streets* (IPWEAQ, 2010)
- *Cycling on State Controlled Roads Policy* (2004)
- *Agreement for Cost Sharing Based on Responsibilities within State-Controlled Roads* (DMR and LGAQ 2000).
- *Cycle Network Link Strategy* (TMR, 2009)

Broader context

- *An Australian Vision for Active Transport* (Australian Local Government Association et al, 2010)
- *National Cycling Strategy 2011-2016* (Austroads, 2010)
- *Cycling – Getting Australia Moving* (CPF, 2008)
- *The International Charter for Walking* (Walk21, 2006)

Appendix B – Active Transport Network maps: Index of maps

See attached CD for individual location maps



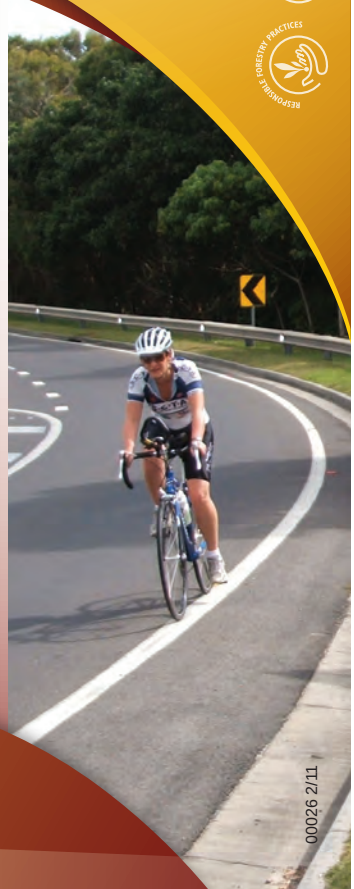
our place
our future

Sunshine Coast
Active Transport Plan
2011-2031

Sunshine Coast Council

07 5475 7272 or 1300 00 7272
mail@sunshinecoast.qld.gov.au
Locked Bag 72 Sunshine Coast Mail Centre Q 4560

Live chat www.sunshinecoast.qld.gov.au



00026 2/11