Proud of our past - Confident of our future

DISTRICT COUNCIL OF THE COPPER COAST

CYCLING AND WALKING STRATEGY
ACKNOWLEDGEMENTS

District Council of the Copper Coast would like to acknowledge the significant contribution towards the content of this strategic plan by the following individuals:

- Department of Transport Energy and Infrastructure
- Members of the Yorke Peninsula Cycling Club
- Rotary Club (Copper Coast)
- Lions Club (Copper Coast)
- Railway Group
- Heart Foundation Walking group
- OPAL
FROM THE MAYOR

District Council of the Copper Coast, with its compact central core and wide variety of gentle coastal and hilly hinterland scenic countryside is ideally placed to encourage both its residents and visitors to enjoy its amenities through walking and cycling.

The coastal area from Port Hughes, through Moonta Bay, Wallaroo and North Beach is ideal for increased walking and cycling access. The short distances involved and the proximity of homes, resorts, shops, businesses, schools, entertainment and recreational venues enable people to quickly and conveniently access these areas by foot or cycle.

The Copper Coast, with its outstanding scenery, farmland, bushland, coastal vegetation, country towns and scenic roads and trails network is an ideal setting for development of tourist and recreational activities based on long distance walking, cycling, and off-road cycling.

More recently, however, we have come to recognise that walking and cycling must penetrate the mainstream of future transport solutions. It is recognised that we must achieve a 10% shift of trips from the private motor vehicle to alternatives including public transport, cycling and walking.

As early as 2004 as part of the Yorke regional Recreation, Sport and Open space Strategy Council recognised the need to enhance the provision of trails through improved trail connections, additional trails and clearly defined and promoted trails. Most recently it was also recognised the lack of maps available for network of existing trails. This strategy aims to fill the identified gaps.

The District Council of the Copper Coast is grappling seriously with Australian’s love of their private motor vehicle.

This is one battle we must win if we are to avoid congested roads and subsequent pollution that dominates some urban centres. In the past, residents have shown their love for this region in taking up the high rise fight.

I am confident that together we can protect the magnificent Copper Coast lifestyle. The ‘Cycling and Walking Strategy’ is an important step towards this goal, and I commend it to you.

Mayor Paul Thomas
INTRODUCTION

This document sets out the District Council of the Copper Coast Cycling and Walking Strategy (DCCCCWS). The Copper Coast is recognised as a great place to walk and ride a bike and has a well established coastal path network and off-road trail network in farming areas. The Council area is a popular destination for road cyclists and has an expanding on road bicycle network. However there is still much to be done to make the Copper Coast a friendlier cycling and walking place.

Whilst cycling and walking have well recognised recreation and health benefits, for the Copper Coast, there is an added transport imperative for developing this strategy.

Our long term transport planning notes that we must achieve a 10% shift from trips by private motor vehicle to alternative transport options (20% in peak holiday times). This outcome is essential if we are to maintain our low-key road environment, minimise noise and severance impacts on our community. Cycling and walking are a key alternative to private use of the car and an increase in trips utilising cycling and walking will therefore assist in achieving this long-term transport goal.

The District Council of the Copper Coast Cycling and Walking Strategy will therefore form a key component of the proposed Copper Coast Integrated Local Transport Plan (NILTP). This Plan will cover a range of transport issues including public transport, the road network, parking, freight, and travel demand management, as well as cycling and walking.

The need to develop a cycling strategy has also been influenced by the South Australia strategic plan Objective – Improving Wellbeing – ‘to exceed the Australian average for participation in sport and physical activity by 2014’ (T2.3). This is matched by Councils Social Objective – Wellbeing – ‘To enhance the quality of life of our community by encouraging health, wellbeing and safety’ and Cultural Objective – opportunity – ‘to promote community identity by supporting rich lifestyle experiences including arts, heritage, culture and leisure activities’.

Further, the District Council of the Copper Coast community has expressed its desire for a cycling strategy. The need for a strategy was also recognised by the Obesity Prevention and Lifestyle (OPAL program) and the Elder Friendly Community initiative.

The purpose of the Strategy is to put into place a strategic direction for the future planning and facilitation of cycling and pedestrian activity in the Copper Coast region from both a transport and recreational perspective. In addition, the provision of walking and cycling facilities enhances the tourist holiday experience and allows our visitors and residents to access the natural beauty of the area.
The Strategy aims to:

- Establish a vision for cycling and walking for the Copper Coast.
- Provide links to Federal, State or Regional Strategies and to the District Council of the Copper Coast Strategic Plan 2008 – 2018 and where necessary clarify the strategic statements in these Strategies.
- Increase participation in cycling and walking, both as a form of recreation and for transport purposes.
- Establish an integrated planning approach for the development of cycling and walking networks and facilities for the Copper Coast region that will, over time, provide inclusion for people of all abilities.
- Outline the guiding principles and the processes for consultation, planning, and deciding the actions to be delivered for infrastructure for cycling and walking, and for education and promotion programs.
- Present a framework for ongoing monitoring and evaluation of cycling programs.
- Improve staff awareness of the importance of cycling and walking, and facilitate improved coordination within Council.

This Strategy does not cover the planning, development and maintenance of the Copper Coast walking and cycling Trails Network or bushwalking in general. This strategy recognises the importance of these activities and their role in enhancing the health and wellbeing of Copper Coast residents and visitors.

It is recognised that a more detailed strategy is required to adequately address trail development for walking and cycling in general areas.
USER GROUPS AND THEIR REQUIREMENTS

Cyclists and pedestrians have varying reasons for choosing to cycle or walk. An appreciation of the various users helps to identify trip demands, related infrastructure requirements and current barriers, which in turn helps to determine a priority of actions which will increase the amount of travel by these modes.

Cyclists - Groupings and Overview of Their Needs

To analyse cycling needs in the Copper Coast, it is of value to recognise five broad groups of cyclists. Each has specific interests and desires, as detailed below.

School Children

This is the largest group of bike users and because of the ages involved, special considerations are required for routes that are predominantly used by this group. They need direct routes that connect residential areas to schools in a radial layout if possible. The speed range is low, and safe road crossings are important. Preference for off-road routes, but also use footpaths and quiet streets. Skill varies with age.

Sports Groups

This group is growing in numbers and includes road racers, triathletes as well as mountain bike riders. The on-road sport cyclists require high speed facilities and generally it is undesirable to mix this group with the slower speed groups. They generally seek circuit ride opportunities and will use all forms of road - arterial to neighbourhood streets. Trip lengths can vary from 20km - 100km+. Weekdays and weekends form peak riding periods.

The Tour Down Under is an important event for South Australia. It is a focus for cycling in South Australia, and important in promoting cycling locally. The District Council of the Copper Coast is aiming to have a leg of future Tour Down Under events.

Mountain Bikers seek a challenging trail network, generally in bushland settings. They have distinct requirements for riding experiences along undulating routes, trip lengths vary between 1-3 hrs in duration. The Copper Coast region has limited cycling paths to meet this requirement.

Commuter & Utility

There are two types of commuter cyclist - those who prefer paths or low stress roads, and those who wish to get to their destination as soon as possible. The latter type desires the most direct route and use busy roads.
They require a wide kerbside lane or a marked bike lane and a smooth surface.

Utility cyclists ride for a variety of purposes such as shopping and travel to community facilities. Their trips are generally of relatively short distance, and similar to the commuter cyclist, their preference is for low stress roads and paths. For the Copper Coast, more cyclists will be in this category than the former.

**Recreational & Tourist**

This group is less comfortable riding in heavy traffic and requires greater protection than commuter or sport cyclists and seek cycling environments away from vehicle traffic and other disruptions. They desire an attractive bikeway system linking points of interest and tourist accommodation with tourist attractions or paths in scenic areas. This group generally prefers an off-road, slow to medium speed route with special emphasis on facilities like shade, rest spots, lookouts, toilets, and bike parking facilities. Weekends form peak riding periods as do early morning and afternoon times on weekdays.

**Disabled, Elderly & Parents with Prams**

The use of motorised wheelchairs is increasing with the aging population. These users need routes connecting shopping and residential areas. These routes require minimal crossfalls and smooth surfaces, and require special attention at crossovers.

The speed range is low. Greater protection from motor vehicle traffic is required with the need for reduced roadway crossing distances, refuge areas in road crossings, traffic calming, traffic signals, tactile markings, audible warnings and hand rails.

It can be seen that a number of these groups have similar requirements, and it is often necessary to provide facilities for more than one group in any one corridor.

Due to the growth in power assisted bicycles, it will be necessary to manage their use within the existing and future path network. These bicycles require extra width and space due to their higher travel speeds. To limit conflict with walkers measures will need to be taken to ensure cyclists who use these form of bicycles comply with road traffic regulations and receive education on appropriate use on pathways.
Walkers - Groupings and Overview of Their Needs

Walkers utilise shared paths, footpaths, shopping and tourist precincts, roads, and trails across the Copper Coast. They use these for recreational and transport purposes similar to cyclists. It is also worth noting that every trip made by whatever mode, will have a component of walking involved.

It is more difficult to classify pedestrians and their needs, but the following is useful.

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Children</td>
<td>Because their perceptual and cognitive capacity is not necessarily well developed, special considerations are required for this group. Trip length is generally short (generally up to 1.5km) and radiates from each school using roadside footpaths. There is considerable potential to increase travel for this group.</td>
</tr>
<tr>
<td>Recreation</td>
<td>This group walk for fitness and relaxation. Often involve scenic pathways and parks or forests, and have a tendency for circuit trips. Users are growing in numbers. Many of the Copper Coast's tourists come into this category. Trips occur throughout the day.</td>
</tr>
<tr>
<td></td>
<td>Recreational walking is the most popular form of outdoor activity in South Australia this activity is particularly popular with women and for people aged 45 years and over (Yorke Regional Recreation, Sport and Open Space Strategy – The Strategy Plan 2004). Also included in this group are joggers who tend to be more common early morning and use similar routes, with a preference to flat and even surfaces.</td>
</tr>
<tr>
<td></td>
<td>Recreational walkers include people seeking opportunities to walk along high profile bushland trails for short, medium and long distance circuits or through trips. This group require support facilities such as route signage, car parking facilities and access to tourist facilities.</td>
</tr>
<tr>
<td>Utility/Commuter</td>
<td>This group travel to a variety of destinations such as work, shopping, community facilities, or to public transport. Their trips are generally of relatively short distance (research indicates a practical limit of around 1.5km), mostly using roadside footpaths. Council's transport planning aims to increase numbers in this category.</td>
</tr>
<tr>
<td>Disabled and Elderly</td>
<td>Trip purposes similar to Utility above. Level smooth surfaces with safe road crossings are important. This group rates high in the accident statistics. Use is higher</td>
</tr>
</tbody>
</table>
### Parents with Prams

Trip purposes similar to Utility above. Level smooth surfaces with safe road crossings are important. Width requirements for twin-strollers to be considered.

### Rollerbladers and Skateboarders

Trips are predominately for fun. Utilise smooth consistent paths. Speed is higher than walkers. Use is higher late afternoons and weekends.
WALKING AND CYCLING INFRASTRUCTURE

General
The need to continue to develop an on and off road cycling and walking network to provide safe, convenient access for locals and visitors to the Shire is paramount to encourage more walking and cycling.

The Yorke Regional Recreation, Sport and Open Space Strategy details the need to provide local and regional network linkages for walking and cycling. The demand for walking and cycling facilities is high and will continue to grow. People want to access recreation, commercial and transport facilities safely with few barriers to entry. The Yorke Regional Recreation, Sport and Open Space Strategy highlights the demand for increased walking facilities in the Copper Coast area to meet population changes, and a general demand to link rural communities with coastal communities through a combination of off-road trails, sealed paths and on-road bicycle facilities.

The walking and cycling network for the Copper Coast can be broadly divided into the following:

1. Transport: primarily on-road
2. Recreation: primarily off-road
3. Fitness and Competition: primarily on road
4. Touring: primarily off road with on road connections

Each network must provide a series of interconnected routes that meet the needs of the various cycling and walking groups.

The infrastructure of the network includes:

- Sealed paths, trails and road lanes marked with bicycle lanes and advisory signage.
- Associated infrastructure and amenities such as signage, route maps, bike racks, refuse bins, drinking fountains, seating, toilets and landscape plantings.
- End of journey facilities which include the above noted associated infrastructure and amenities, as well as showers, and change rooms.

The creation of a safe, convenient, efficient and attractive walking and cycling network requires the provision of the following elements:

- Measures to reduce traffic volumes and/or speed in areas where there is significant potential to increase cycling and walking activity through reducing actual or perceived danger.
- A network of routes between townships and suburbs that form the primary cycling and walking network.
- Development of a comprehensive local cycling and walking network for individual neighbourhoods.
- Individual facilities to overcome barriers to walking and cycling journeys across major roads, intersections, rivers and bridges.
- Significant recreational routes in a range of environments.
- Integration of cycling and walking routes with other transport modes.
Network of Cycling & Walking Routes
For the purpose of this Strategy, it is important to classify the elements of the hierarchy of the planned network of routes. These are defined in Table 1 on the following pages. Key components of the network are off-road paths (shared use), on-road bicycle lanes, and some specific special footpaths such as stairways and boardwalks.

The existing and desirable physical standards of the elements of the route network are described in detail in the Cycling and Walking Network Development Plan. Design standards and new initiatives based on sound engineering and design principles will be adopted based on local requirements.

The nature of walking allows this activity across virtually any public space. However, walking is not encouraged on road carriageways and preference is to provide an off-road path. Council is progressively extending the pathway network along road corridors and through parks and reserves to accommodate walking activity.

Copper Coast Trail
The District Council of the Copper Coast has an extensive coastal walking network in the Wallaroo/North Beach area and through the Port Hughes/Moonta Bay Trail network. The Copper Coast Trail provides an extensive recreational off-road pathway network and valuable tourist asset to the region. The trail is predominately unformed tracks in bushland and beach settings. The network provides a diversity of experiences and opportunities for self reliant recreation and is used by bushwalkers, horseriders and cyclists. The prioritisation, maintenance, upgrade and promotion of the Copper Coast Trail resides with Council.

Council will continue to extend the copper Coast Trail to link with the existing formal path networks in urban areas. The focus will be on the completion of gaps in the network and upgrading trails to an appropriate standard and addressing problem areas. The trail network will be expanded to meet growing population demands in both rural and urban areas to ensure equitable trail use opportunities.

The Copper Coast Cycling and Walking Network Hierarchy Maps are attached to this Strategy as Appendix A. These maps show the most important sections of the network – the Primary and Secondary routes for both cycling and walking. This network has been developed from a consideration of the generators and attractors for trips, and an understanding of users' needs. Not all routes currently exist on the ground, and planning and development of the network will evolve over time.

The Tourist routes on the Copper Coast Cycling and Walking Network will be shown on maps distributed for users, and will be comprehensively signed. The use of print and electronic media to maximise interest in walking and cycling opportunities within the Shire will be considered in the development of information to potential users of the network.
Table 1 - Classification of the Network

<table>
<thead>
<tr>
<th>Sub-Classification by Trip Purpose</th>
<th>Description – for cyclists</th>
<th>Examples</th>
<th>Description – for walkers</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Commuting Routes</td>
<td>Both off-road paths, and on-road where marked lanes are required.</td>
<td>Provide pedestrian links or access to specific destinations. Path of travel should be direct.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Key pedestrian Area/Shopping precincts</td>
<td>Both off-road paths and on-road, where marked lanes are required. Low speed operation.</td>
<td>High pedestrian volumes, requiring wide fully paved and smooth surfaces and ramped cross-overs. High level associated facilities such as litterbins.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) On-road Sport Cyclists Routes</td>
<td>Routes to have a marked bike lane through urban areas, and an adequate shoulder in rural areas.</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>d) School Access</strong></td>
<td>Routes connecting schools to key areas. Require careful attention to safety, especially at crossings. Important that routes be low stress.</td>
<td>Routes connecting schools to key areas. Require careful attention to safety, especially at crossings.</td>
<td></td>
<td></td>
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<td>-------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>e) Recreation and Tourist Routes</strong></td>
<td>Mostly off-road pathways, but where necessary they use roadways that should have a marked bike lane and lower traffic speeds. It is preferred that these routes be off-road, and be sufficiently wide to safely carry both pedestrians and cyclists.</td>
<td>The majority of these routes are off-road pathways away from the roadside. It is preferred that they be sufficiently wide to safely accommodate both pedestrians and cyclists. Typically provide access to scenic areas, parks etc.</td>
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</tr>
</tbody>
</table>

### SECONDARY ROUTES

This is the network routes that provide the major links to trip attractors within the Shire, and the major links to the Trunk Routes. These are the principal collectors and distributors.

Where off-road paths are used these are shared by cyclists and pedestrians. Sections of the Secondary Routes may also serve some local trips such as shopping etc.

<table>
<thead>
<tr>
<th><strong>Sub-Classification by Trip Purpose</strong></th>
<th><strong>Description – for cyclists</strong></th>
<th><strong>Examples</strong></th>
<th><strong>Description – for walkers</strong></th>
<th><strong>Examples</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a) Pedestrian area/shopping streets.</strong></td>
<td>A mix of off-road paths and on-road. Low speed operation.</td>
<td>Moderate pedestrian volumes requiring wide fully paved and smooth surfaces and ramped cross-overs.</td>
<td>High-level associated facilities such as litter bins.</td>
<td></td>
</tr>
<tr>
<td><strong>b) School Access</strong></td>
<td>Those routes radiating from schools, and require careful attention to safety, especially at crossings. Important that routes be low stress.</td>
<td>Those routes radiating from schools, and require careful attention to safety, especially at crossings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description – for cyclists</td>
<td>Examples</td>
<td>Description – for walkers</td>
<td>Examples</td>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
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<td></td>
</tr>
<tr>
<td>They utilise both on-road and off-road facilities. Where on-road, 50kph speed roads or lower are preferable.</td>
<td></td>
<td>For pedestrians these will be roadside paths and verges.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Support Facilities
The network requires a number of support facilities for users. The frequency and location of these facilities will depend upon the type of route and the end user. The lack of facilities can form a barrier to the use of the network. The facilities are listed in Table 2.

Table 2 - Support Facilities

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking fountains, seating on route, shade and shelter.</td>
<td>Particularly important on key recreational pedestrian paths. Due to high cost, target key areas. As a guide support facilities for recreational paths should be spaced as follows. Seating every 500m – 1km, shelters every 2km, water fountains every 1-2km</td>
<td>Hygiene considerations important to users of drinking fountains</td>
</tr>
<tr>
<td>Lighting</td>
<td>Important for personal safety. Target areas where night time incidents have occurred.</td>
<td>Use &quot;Crime Prevention Through Environmental Design&quot; principles</td>
</tr>
<tr>
<td>Bicycle parking and storage</td>
<td>Should be available at all major destination/attractors such as the major centres, transit interchanges and major community buildings. Important that these facilities are positioned in well supervised areas, especially at schools. Secure bike parking such as lockers and cages should be installed in areas where record of theft or bike left unattended for a lengthy period (e.g. railway station).</td>
<td>Encourage businesses to install facilities on their properties. Include requirements in new Planning Scheme.</td>
</tr>
<tr>
<td>Shower, change and locker facilities</td>
<td>Generally the responsibility of employers. Lack of facilities a major barrier to commuter cycling trips.</td>
<td>Encouragement programs required, and/or requirements as part of development conditions. Examine retrofitting facilities at key destinations. The new Copper Coast Plan has requirements for certain development applications.</td>
</tr>
<tr>
<td>Network Signage</td>
<td>The provision of directional and advisory signage is important to direct cyclists and walkers throughout the network and advise motorists of appropriate behaviour. These signs should define the cycling and walking routes, provide direction information and distances to destinations.</td>
<td>Need to develop a signage strategy which incorporates route directional signage for on-road bikeways and offroad shared paths and footpaths and multi-use trails in bushland areas</td>
</tr>
</tbody>
</table>
Operation and Maintenance

Pedestrian and cycle paths need to be maintained on a regular basis, both from a risk management perspective and from an asset management perspective. Maps, brochures and signage are essential for operation of the path network. Issues to consider are as follows:

Monitoring

Regular monitoring of the operation and safety of the path network is being undertaken (specified in the Recurrent Maintenance Manual).

Path maintenance

Pedestrian and cycling facilities need to be maintained on a regular basis. Council has in place a system for inspecting and maintaining the path network. It also has a system for responding to community reporting of maintenance issues (specified in the Recurrent Maintenance Manual).

Maps

As with road networks, maps are important for efficient operation of the system, but also important as a promotion tool. Council currently has a Copper Coast Bikeways Map. Local area maps may also be required.

Signage and pavement markings - regulatory, & directional

Important for safe and orderly movement. Signs should be as simple as possible. The Manual of Uniform Traffic Control Devices provides advisory guidance for design and use.

Enforcement

This covers user and driver behaviour. Largely safety matters, although prohibition of car parking on lanes and paths must be enforced to avoid obstructing use of the pathway.

KEY ISSUES

General

Predictions indicate that in around 10 years, unless the use of the car changes, the number of cars on the road in South Australia will increase by 70%, traffic congestion will double trip times and pollution levels will exceed recommended levels.

- South Australians produce nearly 30 million tonnes of greenhouse gases every year
- Each one of us contributes around 20 tonnes of greenhouse gases a year
- Transport accounts for 14% of the emissions
- Australians drove more than 200 billion kilometres in 2003
- Personal travel accounts for 34% of overall household greenhouse emissions.
There is currently considerable community concern about road traffic matters in the Coastal area. For the road network of Copper Coast to cope in the future without the need for further major expenditure, it is critical that many more trips are undertaken by walking and cycling, and by public transport. The alternative of catering for almost all forecast demands using private motor vehicle travel will have significant capital costs and much greater social and environmental costs. These include greenhouse gas emissions, vehicle noise emissions, and increased land needs for road works and parking.

Demographic trends in the Region indicate an ageing population particularly in the Moonta and Moonta Bay area. The anticipated demand for informal outdoor recreational activities such as walking and cycling is expected to increase. The demand for paths and trails for walking and cycling is expected to be high for people aged over 55 years of age.

The Copper Coast is a popular day trip / holiday destination for the population of Adelaide and wider South Australia. The demand for cycling and walking facilities is currently high and expected to increase.

**Priorities for Change**

For this Strategy, the priority is not about generating additional trips, but transferring car trips to walking and cycling. In 1999 SA Metropolitan Household Survey (Transport SA) indicated that 40% of motor vehicle trips are less than 5 kilometres in distance. Trips of this distance are easily achievable for many people by cycling.

Within the coastal strip of North Beach south to Port Hughes, these distances will be even less, and while these distances are accessible by cycling and walking, the overwhelming majority of trips are currently undertaken by car. The economic justification for investing in cycling infrastructure is sound. One study of a number of examples of infrastructure projects, and taking account of infrastructure costs, use of land, health benefits, pollution, road safety, congestion and travel time differences, found that the benefits of the project exceeded the costs by factors of between 5 and 20 times.

Trips most likely to transfer from the car are short distance (generally less than 1.5km) walking trips. This applies particularly for school trips, but also for trips for commuting and local shopping. Of next importance is cycling for the same purposes. The normal weekday peak traffic demands on the Copper Coast road network coincide with school start and finish times. Reducing the number of school trips by private motor vehicle will have a major impact on demand for new road infrastructure. There are also health/learning advantages from a focus on children, together with the prospect of creating an attitudinal shift towards cycling and walking in parents, siblings and in future generations.
Further, in the key tourist areas, the limited amount of available car parking means that an increasing number of trips to these areas in peak periods will have to be by walking or cycling. Provision of appropriate cycling, walking and public transport infrastructure to accommodate these trips is essential.

**Constraints to Change**

While there are many positive factors contributing to the growth of cycling and walking in the Copper Coast region, for the purposes of strategy direction, it is important to recognise some major constraints that currently exist. These include:

- Dispersed (linear) land use patterns causing reliance on the motor vehicle for majority of trips.
- Multiple nodes of business/commercial activity.
- Heavy vehicles making crossing roads difficult and hazardous.
- Lack of crossing refuges or traffic calming areas based on the needs of cyclists and walkers.
- Trend to send children to school of choice rather than local school.
- Fragmented sections of network/lack of connectivity e.g. lack of continuity of public space along Wallaroo Foreshore.
- Security concerns e.g. bicycle lock-up facilities.
- Lack of trip end facilities throughout the community at workplaces and at community centres.
- Motor vehicle speed.
- Lack of current information on the Copper Coast cycling and walking network.
- Roundabouts that do not have specific facilities for cyclists and pedestrians.
- Concern over stranger danger and reluctance to allow children to walk and cycle to school.
- Lack of “share the road” awareness by vehicle drivers.

To achieve its goals, this Strategy will need to implement measures to overcome these constraints.

**Support for Change**

There are now proven examples of achieving a transfer of trips from the private motor vehicle by adopting voluntary behaviour change programs known universally as TravelSmart.

Community feedback from a TravelSmart program would assist to identify what the community sees as the barriers to cycling and walking, and identify critical works necessary to improve the pathway networks to achieve mode shift.

Increasing cycling and walking to school is also supported by other educational programs such as Safe Routes to School program, BikeEd program, bicycle training as well as promotional programs such as Bike Week, walk or ride-to-work days, and community bike rides. Promotion of Council walk and cycle
facilities and encouragement strategies to promote their use are integral to success of this Strategy. Encouragement strategies can also include school competitions, community events, promoting health, environment, social and economic benefits, network maps, and marketing campaigns.

**Conclusion**

In summary, in the Copper Coast there is an economic, social and environmental imperative to reduce the use of the motor vehicle. There is also considerable scope for growth of walking and cycling in school, utility and commuting trips to assist the transport task and for growth in recreational trips for the health and wellbeing of the community. In addition, there is potential to encourage our visitors to use these modes.

Further to this the ability to incorporate a horse riding trail within the Copper Coast area will enhance the horse riding experience at a local club level, for individual horse enthusiast, encourage participation in regional horse riding events and introduce a new tourist experience to the area.

To assist in determining the priorities for walking and cycling, it is valuable to consider both the users (and trip purpose) and the key outcomes being sought. By considering the impact that increased participation by each of the key user groups will make on these key outcomes, it is possible to assess their contribution to the Copper Coast’s environmental, economic and social goals.
### Table 3 - Areas of Greatest Impact

<table>
<thead>
<tr>
<th>Outcomes Sought</th>
<th>User Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commuting / Shopping</td>
</tr>
<tr>
<td>Transport (minimise dependence on private motor vehicle)</td>
<td>H</td>
</tr>
<tr>
<td>Environment (reduce noise and greenhouse emissions, and reduce land take for roads and car parks)</td>
<td>H</td>
</tr>
<tr>
<td>Health (recreation, improved fitness and prevention of illness)</td>
<td>H</td>
</tr>
<tr>
<td>Contribution to Tourism/Economy (cost savings, improved tourist experience, purchases made locally)</td>
<td>M</td>
</tr>
<tr>
<td>Intergenerational Change (future generations accustomed to travel by walking and cycling)</td>
<td>M</td>
</tr>
<tr>
<td>Social Equity (affordable transport for people whose access may be limited by inability to drive, or income)</td>
<td>H</td>
</tr>
</tbody>
</table>

**Legend:**

H - high impact
M - medium impact
L – low impact

Table 3 indicates that for this strategy, actions focussed on school-based trips will achieve the greatest impact on the District Council of the Copper Coast’s corporate objectives. In order to realise the greatest impact, prioritisation of network linkages will focus on school based routes to provide a safe continuous pathway system. Education and encouragement programs will focus on encouraging more cycling and walking to school.
FRAMEWORK FOR STRATEGY DEVELOPMENT AND DELIVERY

The development and delivery of the Copper Coast Cycling and Walking Strategy must be integrated within a framework of policy direction and within a management and consultative framework.

Policy Framework

There are a number of overarching policies and directives guiding the planning and development of cycling and walking networks and encouragement for increased usage.

National
- The National Greenhouse Strategy
- ICLEI Climate Program
- The Australian National Cycling Strategy 2005-2010

State and Regional
- South Australia’s Strategic Plan 2007
- Safety in Numbers – A Cycling Strategy for South Australia 2006-2010
- Integrated Regional Transport Plan for Regional South Australia

District Council of the Copper Coast

The Copper Coast Cycling and Walking Strategy will support many existing Council policies and initiatives including;
- Strategic Plan 2008-2018
- Business Plan 2008-2018
- Copper Coast (DC) Development Plan 2009
The Strategy - Structure and Supporting Plans

The framework for the Copper Coast Cycling and Walking Strategy is described on the following diagram.

The Copper Coast Cycling and Walking Strategy is an overarching document that gives the vision and direction for the Copper Coast cycling and walking network for the next ten years. It should be reviewed every two years.

It must be read in conjunction with the Cycling and Walking Network Development Plan, and the Education and Promotion Plan.

These two Plans provide the implementation tools that will achieve the vision of the Copper Coast Cycling and Walking Strategy. Both Plans are also to be reviewed every two years. Council approves the actions for implementation in the Annual Budget and Business Plan process as well as for inclusion in the Long Term Financial Plan.

Cycling and Walking Network Development Plan

The Cycling and Walking Network Development Plan is directed by this Strategy document. Its purpose is to describe the practical and affordable program for capital works required to improve cycling and walking facilities over the next ten years for inclusion in the Asset Management Plan. Works included in this Plan are selected for inclusion in the District Council of the Copper Coast annual budget.

The Cycling and Walking Network Development Plan will;
- List all actions necessary to complete the cycling and walking network, including descriptions, costs and sources of funds.
- Describe the network hierarchy and the physical elements of the network.
• Describe the design and construction standards for cycling and walking facilities.
• Provide a summary of Council requirements for developers to undertake walking and cycle network planning in their development, in accordance with the proposed Copper Coast Pathways Map.
• Integrate the provision of cycling lanes with other works programs such as reseals, shoulder widening, and linemarking.
• Seek industry/community provision of cycling and walking facilities.
• Review accident statistics.
• Describe standards and responsibilities for maintenance.

Education and Promotion Plan
Education and marketing is of equal importance to constructing facilities for cycling and walking and will require a significant allocation of funds towards voluntary behaviour change programs that will need to be implemented successfully to reduce car use.

While the District Council of the Copper Coast has delivered encouragement and education programs for cycling, further work can be done to better coordinate these in the future.

The purpose of the Education and Promotion Plan is to describe the practical and affordable program for marketing, communication and promotion of the cycling and walking network, special events and education initiatives, and for any enforcement measures, over a ten year time frame to achieve the outcomes required by the Copper Coast Cycling and Walking Strategy.

The Education and Promotion Plan will;
• List the specific actions to be undertaken for inclusion in Council’s budget including timelines, costings and sources of funds.
• Describe the links to State Government promotional and media programs.
• Describe processes to form partnerships with community and State Government to promote educational programs for pedestrians and cyclists.
• Set out responsibilities for the specific actions to be undertaken.

Management Accountability
The General Manager Corporate and Community Services is accountable for the Copper Coast Cycling and Walking Strategy.

The Manager of Environmental services is accountable for the Cycling and Walking Network Plan.

The Manager Community Services is accountable for the Education and Promotion Plan.
Community Consultation

It is the intention of this Strategy to ensure that a range of opportunities is available for consultation on the implementation of the Copper Coast Cycling and Walking Strategy. This will be achieved as set out below.

Cycling and Walking Strategy Working Group

Internal and external consultation and communication is essential in ensuring that the program and implementation elements of the Strategy meet community needs, and that all planning is integrated.

To manage this consultation and communication, a Cycling and Walking Strategy Working Group will be formed. This Group will include community representatives, Elected Members(s), and appropriate staff. The General Manager Corporate and Community Services is to be accountable for the establishment of the Group.

It should comprise:

Representatives from internal Council Sections
- Infrastructure
- Community
- Environment

and, as required for specific issues,
- Planning Development
- Strategic Planning

Representatives from external community interest groups
- Representative with interests in cycling
- Representative with interests in walking
- Representative from Disability Access Group or Seniors Reference Group
- Representative from Schools
- Local Service Clubs

Representatives from State Government
- Department Transport, Energy and Infrastructure

And others as required for specific issues, including
- South Australian Tourism
- South Australian Police
- Office of Sport and Recreation

The Working Group will be a vehicle for ensuring coordination within Council’s departments, and shall be responsible for:
- Over-viewing and guiding the development of the Copper Coast Cycling and Walking Strategy.
- Reviewing the Copper Coast Cycling and Walking Strategy.
- Providing comment and input to the annual Cycling and Walking Network Plan and the annual Education and Promotion Plan.
- Reviewing the network hierarchy and the physical elements of the network as described in the Copper Coast Pathways Map.
- Being informed on the implementation of activities from the Cycling and Walking Network Plan and the Education and Promotion Plan which have been included in the annual budget.
- Reporting on operational and maintenance issues on the pathways.

**Partnerships with Agencies and the Community**

The General Manager Corporate and Community will ensure that external agencies are consulted in the development and implementation of both the Cycling and Walking Network Plan and the Education and Promotion Plan. Partnerships will be developed with these agencies to support the sharing of information and resources as appropriate.

The District Council of the Copper Coast is not wholly responsible for implementation of cycling and walking strategies within the Copper Coast. As noted elsewhere in this document, responsibilities also lie with other agencies including Department Transport, Energy and Infrastructure, South Australian Police, Department of Education, Health, Office of Sport and Recreation, Local Government Association of South Australia, Department of Natural Resources and Mines and Regional Development Association. These agencies have state-wide responsibilities and have relevant programs which can be implemented locally. They also present opportunities for sources of funds for Council.

Community consultation associated with the planning and implementation of education, publicity, special events and network development will depend on the nature of the matter being addressed, and will be in accordance with adopted Council practices.

**Integration with the District Council of the Copper Coast’s other Strategies and Plans**

To enable the development of a cost effective cycle and walking network, it must be incorporated into existing Council planning processes. In particular, this should include:

- Council's Strategic Plan, the Copper Coast Development Plan and the development assessment process.
- The Long Term Financial Plan.
- Transport planning, including the road network and public transport through the Integrated Regional Transport Plan.
- Other infrastructure projects and maintenance works.
STRATEGIC DIRECTION

Vision for 2020
The Copper Coast is renowned as a community where residents and visitors alike choose to “enjoy the journey” whenever possible by cycling and walking to their destination, and drivers respect this choice by providing safe space on the road where needed.

Goal
The goals of this strategy are:
- To increase the amount of cycling and walking in the Copper Coast by locals and visitors
- To increase the number of children walking and cycling to school by 10% each year

Strategy Themes
To identify the necessary Copper Coast-specific actions required, “Enjoy the Journey” has followed the strategy themes contained in the Safety in Numbers - A Cycling strategy for South Australia 2006-2010.

For the Copper Coast, the strategy themes are:
- Integrating policy and planning
- Implementing a quality network of walking and cycling routes
- Improving safety and security for cyclists and walkers
- Encouragement and promotion of cycling and walking
- Provision of trip facilities
- Integration of cycling and walking and public transport

A Strategic Objective has been developed for each of these themes. The six Strategic Objectives are described in the following section. For this strategy, each of these Strategic Objectives is to have a focus on school children. It is believed that this target group requires the greatest attention. The encouragement of this group to walk and cycle more will deliver positive benefits to the community as a whole.
STRATEGIC OBJECTIVES AND KEY IMPLEMENTATION PRIORITIES

The Key Implementation Priorities give direction to both the Cycling and Walking Network Plan and the Education and Promotion Plan to develop specific actions that will be required to achieve the vision and goals of “Enjoy the Journey”. These Key Implementation Priorities must be reviewed every two years.

Objective 1

- Integrate policy and planning to support walking and cycling by;
- Integrating policies that support walking and cycling into strategic plans, policy frameworks and program directions.
- Establishing a management framework for strategic planning and establish mechanisms to effectively coordinate and facilitate strategy implementation.
- Strategic land-use planning to improve walking and cycling amenity in new and existing urban areas.
- Fostering effective collaboration amongst stakeholders.

The framework for this Strategy has been developed to integrate policy and planning to support walking and cycling.

Key Implementation Priorities

- Implement the Management and Working Group structures, and the consultative processes described in this Strategy.
- Integrate the Cycling and Walking Network Plan and the Education and Promotion Plan with Copper Coast’s other strategies and plans.
- Ensure the Copper Coast Plan reflects the Cycling and Walking Objectives.
- Integrate this Strategy and the Plans with the Integrated Local Transport Plan for The Copper Coast.

Objective 2

Implement a quality network of walking and cycling routes by;
- Ensuring the network of routes, and its management, are to appropriate standards.
- Facilitating the planning and development of regional and local walking and cycling routes for specific transport, tourism, and recreation purposes.
- Integrating the development of walking and cycling facilities with other transport and infrastructure developments.

The Copper Coast Pathway Network will be delivered through the Cycling and Walking Network Plan (refer to Section 5.2.1). The hierarchy of the Primary and Secondary Network routes, for cycling both on and off road, and for walking links, is shown on the Copper Coast Cycling and Walking Network maps attached as Appendix A. Of particular importance is;
- The need to improve the road crossings for the Primary and Secondary Routes. The pathway network involves a large number of crossings of heavily trafficked roads, and generally the existing crossings cause delays and
concerns to pathway users. This is a major impediment to use of the pathway network.

- The need to complete key missing links in the network.

**Key Implementation Priorities**

- Finalising the District Council of the Copper Coast Cycling and Walking Network Map.
- Fully implementing the Pathways ICP for the Copper Coast.
- Review current Council standards for paths to ensure consistency with, or exceed if appropriate, other standards and design principles such as Australian Standard Design for Access and Mobility (AS1428 Parts 1, 2 and 4), South Australia’s Health’s program Stay on Your Feet Falls Prevention in Older People, and Crime Prevention Through Environmental Design.
- Developing or upgrading paths that will encourage short distance walking and cycling trips to school in lieu of car trips.
- Implement key missing links in the path network.
- Review all road crossings to ensure appropriate priority and safety is provided for users of the crossings.
- Continue to take the opportunity to implement improvements for cycling and walking when undertaking other works – e.g. road upgrades, resealing and line marking, or park upgrades (i.e. funded by these works)
- Encourage Department Infrastructure and Environment to widen shoulders for bicycle lanes on key routes.
- Developing or upgrading paths and road crossings that will encourage short distance walking and cycling trips for local shopping and commuting purposes in lieu of car trips.

**Objective 3**

*Improve Safety and Security for Cyclists and Pedestrians by;*

- Delivering an environment for walking and cycling to school that is accepted by parents as providing personal safety for children.
- Developing safe road network design and management practices.
- Fostering safer road and path user behaviour.

Safety aspects in the provision of pathways are included under Objective 2. However safety for cyclists and pedestrians involves a broader range of initiatives. These include taking account of pedestrian and cyclist needs in roadworks and developments, and addressing the behaviour of all road users. It is important to also to address the perceived personal safety dangers to children when they cycle and walk. These priorities need to be a part of normal practice for the relevant agencies.

**Key Implementation Priorities**

- Investigate methods to improve the personal safety of children in their cycling and walking trips to school.
- Identify and plan Local Area Traffic Management Schemes with focus to create cyclist and pedestrian friendly precincts.
• Investigate methods to improve safety of pedestrians and cyclists at roundabouts.
• Deliver a “share the road” advertising campaign.
• Encourage the appropriate authorities to enforce the behaviour of motorists in regard to sharing the road.

**Objective 4**

Effective encouragement and promotion of cycling and walking by;
• Providing effective information for users.
• Encouraging and supporting new, lapsed and existing cyclists to ride more often.
• Developing opportunities for all stakeholders to promote walking and cycling.

The encouragement and promotion of walking and cycling in the Copper Coast is to be delivered through the Education and Promotion Plan. The actions to deliver the following Key Implementation Priorities will typically involve staff time, and include planning and investigation work, and organising low-cost events.

**Key Implementation Priorities**
• Develop innovative encouragement programs for school children.
• Undertake a Safe Routes to School Program, and implement necessary infrastructure improvements.
• Conduct bicycle training program for school children.
• Undertake a Walking School Bus trial program.
• Develop a Safe Cycle and BikeEd project to address a range of education, enforcement and engineering issues related to cycling.
• Run a Workplace Travel Program.
• Develop new participation events, held regularly.
• Hold annual Bike Week programs; ride to work days, and community bike rides. Expand these to include walking.
• Work with walking groups e.g. Heart Foundation Walking group and JMovers to encourage regular walking.
• Investigate initiatives such as the provision of bicycles to encourage more of our visitors to cycle.
• Continue to update and distribute maps of the pathway network.

**Objective 5**

Widespread provision of trip facilities by;
• Increasing the supply of convenient and secure end of trip facilities.
• Developing and disseminating information on trip facilities.

Trip end facilities are particularly important for trips to school or work. Initial priority will be to provide these facilities for those schools undertaking cycling and walking programs. The particular needs will be derived within these programs, and funding will be included within these programs. These programs will be included in the Education and Promotion Plan.
Key Implementation Priorities

- Assist schools to install secure bicycle storage facilities.
- Incorporate facilities for cycling and walking in all new development approvals.
- Encourage local employers to incorporate end of trip facilities at their workplaces.

Objective 6
Integration of cycling and walking and public transport by;

- Developing and promoting initiatives to further integrate walking and cycling and public transport, including preparing and disseminating quality information to assist such integration.

Virtually all public transport trips will have a walking component. However integration of cycling and public transport requires special consideration. Pathways and road crossing improvements to provide access to bus stops will be delivered under Objective 2. Actions to better integrate walking and cycling and public transport will be included in the Education and Promotion Plan.

Key Implementation Priority

- Review Adelaide City Council trial of cycle racks on buses for applicability to the Copper Coast.
- Provide facilities for bicycle security at bus stops in the Copper Coast area.
MAJOR INVESTMENT DIRECTION

Funding Issues

Current allocation of Council budget to support walking and cycling has been approximately $70,000 per year. To date Council expenditure on education and promotion has been limited, and to achieve a 10% shift from trips by car, significant funds will need to be allocated in the future. The Education and Promotion Plan should be regarded as equally important (in both priority and funding) as the Cycling and Walking Network Plan.

Nevertheless, the realities of available funding and budget pressures will mean that it will not be possible to undertake all the actions to deliver the Key Implementation Priorities in the short term. Council should estimate amounts to approx $100,000 per year (current value) within the long term financial plan to deliver the priorities of the plan. A more accurate costing will need to be done to determine budget allocations to complete the remainder of the pathways network (as presently identified).

Proposed Funding Area

For the infrastructure and program expenditure for the 2011/12 Cycling and Walking Network Plan, and the Education and Promotion Plan, prioritisation should be based on trips to school on a school-by-school basis. This meets the fundamentally important aim of fully integrating both the building of facilities, and the education and encouragement programs.

The following schools are proposed.

- Wallaroo Primary
- St Mary Macillop
- Kadina Memorial High
- Wallaroo Mines
- Harvest Christian School
- Moonta Area School

Routes serving these schools will include sections of designated Principal and Secondary routes, as well as the local network.

This priority therefore;

- Is consistent with realities of available funding.
- Meets the aim of increasing the number of walking and cycling trips.
- Integrates delivery of infrastructure and education/promotion.
- Gives the triple payback of transport mode shift, health benefits and generational change.

All the other key implementation priorities (which involve staff time) involving planning, investigations and coordination, and the low cost promotional activities, should also be undertaken. In particular, investigations into the improvement, safety and efficiency of road crossings, must proceed.
In addition, the District Council of the Copper Coast Workplace Travel Plan should proceed.

The Cycling and Walking Network Development Plan, and the Education and Promotion Plan, will list the tasks and detailed programs necessary to be undertaken at each school, and determine the costs involved. These will be presented for Council consideration in Councils Annual Budget Process, and the level of funding decided will determine the extent of the infrastructure and education/promotion programs that can be delivered in the financial year.

Further Notes
It should also be noted that:

- The funding for the Copper Coast Trails network is not included in this Strategy.
- The amounts identified above do not represent the total funds that will be spent on cycling and walking facilities. New and upgraded facilities will be provided in new road works, road re-furbishment and in maintenance activities, as opportunities arise.
- There are a number of opportunities for Council to obtain funds from other government sources. These funds will be critical in allowing the Strategy to be delivered. Accountable officers must be constantly aware of potential sources for funds. Other opportunities to implement actions or reduce costs may be derived using community or business groups or encouraging businesses to undertake actions themselves.
- Funding offered by various government agencies often requires matching funds from Council. The offers are made to further the strategic objectives of the particular agency and these may not necessarily coincide with Council’s strategic direction. In these instances, allocation of Council funds can therefore divert Council from its strategic direction.
- The realities of available funding and budget pressures will mean that it will not be possible to undertake all the actions that may be desired. Further, ad hoc availability of funding from alternative sources or ad hoc opportunities to undertake works in conjunction with other activities such as roadworks, will inevitably mean programs for actions may change through the year.
- As stated above, the programs for actual actions to be implemented and funded will be developed in the Cycling and Walk Network Plan and the Education and Promotion Plan. Council will approve the funding for these actions in the annual Budget process.
- The proposed approach prioritises pathways development activities for the Copper Coast for at least the next two years, even allowing for a significant increase in funding.
- Once the current program is completed, an alternative approach will be required for priority setting. The subsequent review of this Strategy could consider a prioritising method for pathways development based on the following.
  
  Will contribute to major transport goals (30% weighting)
  Will improve connectivity (30% weighting)
- Fill an existing gap.
- Will provide a direct link between attractors and/or generators.
- Will improve safety (20% weighting)
  - Road crossings
  - Local area traffic management schemes
  - Roads with high speed limits
  - Roads with high volumes
  - High percentage of young or elderly users

Benefit Cost (20% weighting)
- Priority based on ratio of cost per potential user

Each of the above can be given an individual score (say out of 10) and then apply the weighting, and each separate item of works is rated on its total score. This will give a priority listing.
KEY PERFORMANCE INDICATORS AND STRATEGY REVIEW

The Copper Coast Cycling and Walking Strategy requires ongoing monitoring and annual review. The Strategy is a “living” document that must evolve and take account of the ever-changing environment of cycling and walking, particularly Federal and State policies, programs and funding. The regular review must take place prior to Council’s Annual Budget Process, to inform that process.

Responsibility to ensure that monitoring and review occurs rests with the General Manager Corporate and Community Services. Key Performance Indicators have been developed to provide adequate and cost effective information on the overall functioning of the Strategy as a whole. They will measure the outcomes of the Strategic Objectives. They cover:

- Supply of quality infrastructure
- Levels of cycling and walking to school
- Bicycle usage
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Strategy Themes</th>
<th>Monitoring Arrangements</th>
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<tbody>
<tr>
<td></td>
<td>Integrating policy and planning</td>
<td>Baseline Information</td>
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<tr>
<td></td>
<td>Implementing a quality network of walking and cycling routes</td>
<td>Target</td>
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<td></td>
<td>Improving Safety and Security for Cyclists and Pedestrians</td>
<td>Primary Research</td>
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<td></td>
<td>Encouragement and promotion of cycling and walking</td>
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<td>Integration of cycling and walking and public transport</td>
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**Extent of Children Walking and Cycling to school - at target schools**

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<th>Performance Indicators</th>
<th>Strategy Themes</th>
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<tr>
<td>Extent of Children Walking and Cycling to school - at target schools</td>
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<td></td>
<td>x</td>
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<tr>
<td></td>
<td>To be Established</td>
<td>10% increase each year in the number of children walking and cycling to school</td>
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<tr>
<td></td>
<td>Counts at school gates of target schools</td>
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**Length of Pathway Network completed**

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<th>Performance Indicators</th>
<th>Strategy Themes</th>
<th>Monitoring Arrangements</th>
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<td>Length of Pathway Network completed</td>
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<td></td>
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<td>Network 70% complete by 2015, and fully complete by 2017</td>
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<tr>
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<td>Measurement</td>
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<tr>
<td>Levels of Bicycle Usage – Mode share/ Trip type</td>
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**CYCLING AND WALKING STRATEGY**
INFORMATION AND RESOURCES

South Australia’s Strategic Plan

South Australia: Reducing the Greenhouse Effect. Environment Protection Agency, South Australia.

Austroads, roads Facts, 2005

Australian Greenhouse Office, Global Warming, Cool it, 2006

Safety in Numbers – a Cycling Strategy

Walk the Yorke – Leisure Trail Concept Plan
APPENDIX A

CYCLING AND WALKING NETWORK HEIRARCHY MAPS

Index of maps:
1. Kadina
2. Moonta
3. Wallaroo
4. District Council of the Copper Coast Area