

## 6. ROUTE AUDITS AND RECOMMENDED ACTIONS

### 6.1 Prioritising Facilities

There are many actions that could be undertaken to improve conditions for all pedestrians including the elderly and people with disabilities in the study area. These actions are categorised as follows:

- all actions;
- actions for which South Sydney City Council is primarily responsible (ie not State or Federal Government, RTA, Education Department, Health Department etc);
- actions that differ by means of implementation (effectively the '4Es' approach to non-motorised transport used in Bikeplans: Engineering, Enforcement, Encouragement, Education); and
- engineering actions able to be undertaken by SSCC through the Action Recommendations.

The PAMP has been developed as shown in the PAMP Methodology flowchart (Figure 2). Within this, the Step 4 tasks are shown in more detail in the diagram which follows. Table 10 and Table 11 flowcharts provide a summary of the process.

#### 6.1.1 Solution Assessment

For each problem that is considered worthy of further investigation, the potential solutions available vary with the problem type and the road environment. The different road environments are:

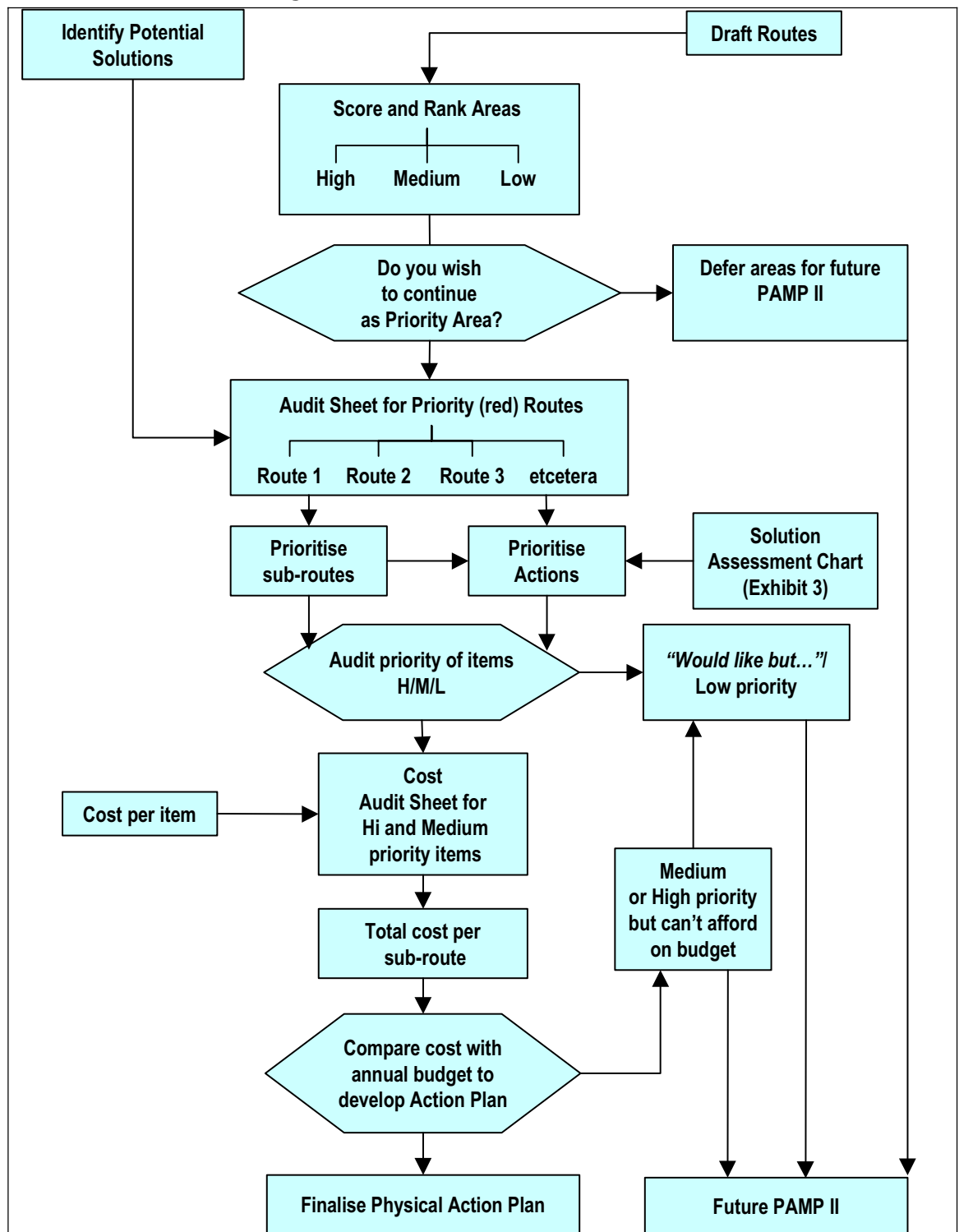
- State road;
- Regional road; and
- Collector/local road.

Typical solutions for the various problem type/road environment combinations have been considered. For some problem types the optimal solution may be a combination of actions.

For each problem under investigation, each potential solution is assessed against a set of performance criteria. The five assessment criteria used include:

- benefit to pedestrians;
- impact on other road users (including 'cross' public transport routes);
- cost;
- assessment with respect to Government strategies; and
- local impacts (social, environmental etc).

**Table 10 Problem Ranking and Solution Assessment Method**





The performance of each potential solution is scored against each criterion using simple, easily identifiable measures. The overall performance of each potential solution is then established by combining its performance against the full set of criteria into a single score. This could be achieved by weighting the criteria according to their relative importance, as shown in the sample sheet in Table 10. Determination of the weights to be applied to the various criteria could be achieved by polling representatives of the various groups with an interest in maintenance, development and operations of transport infrastructure and government services. A mechanism for consolidating these views into common weighting of the criteria has been developed. This is an extension of the method applied in the Social Audit approach used by Arup in ranking projects in other multi-dimensional evaluation framework (Singleton & Hulse, 1989).

Application of this method would allow each potential solution to be assigned an overall performance score. The scores of the range of potential solutions could be compared to identify the most appropriate solution (or combination of solutions) for the problem under investigation. In some cases, the scores may also identify that no solution is appropriate. For the current PAMP study, these assessments and weightings were estimated, rather than calculated for each problem and set of potential solutions.

### **6.1.2 Application**

The data collection program was felt to represent the level of survey effort likely to be possible under full implementation of the assessment program.

Actions were assessed subjectively using the assessment procedure described above, applying arbitrary weights. Although no significance can be assigned to the final score because of the arbitrary weights applied, the procedure was considered to be able to provide differentiation in the rating of potential solutions.

The assessment described confirms the value of the implementation procedure in a number of respects. Firstly, the procedure provides a mechanism for identifying operational problems worthy of attention. Secondly, it invites the designer to consider a range of potential solutions, rather than only the most obvious solution. Thirdly, it provides a means of assessing the performance of those potential solutions not only against operational objectives but also against broader community goals. The procedure therefore is likely to generate solutions, appropriate to operational and community needs, to the most important problems confronting the PAMP study.

Prioritisation has been considered on two levels - the location of the works and the nature of the works. The high priority sub-routes have been selected through the route network selection process outlined below in section 5.2. Identified works on those routes have been prioritised as high or low. The prioritisation of works is based on:

1. Safety and Access - crossing opportunities, kerb ramps, minimum paths of travel, and repairing footpath cracks;
2. Sensory Access - tactile tiles, audio tactile signal facilities, signage, lighting, clear paths; and
3. Facilities - Australian Standard seating, bins and bus stops etc.

## 6.2 The Audit Process

A physical access audit of the high priority routes (Figure 9) within the study area was completed during March and April 2003. The audit also included Devonshire Street between Elizabeth Street and Crown Street as an alternate route to Foveaux Street (Section 5.6.1).

The key focus of the audit was to identify access barriers for pedestrians with a specific focus on access for less mobile pedestrians such as the elderly and people with disabilities. The identified barriers found in a number of cases included:

- lack of kerb ramps, or poor kerb ramp design;
- lack of footpaving, or major cracking and raised paving in path of travel;
- lack of tactile hazard indicators at major crossings;
- poorly placed trees, bus shelters, signage seating impinging on paths of travel;
- poor pedestrian crossing signals (audible, tactile); and
- overhanging trees, A-frame advertising boards, seating and stock.

Other individual barriers were identified and highlighted within Audit Spreadsheets (Appendix B).

The locations of items that need to be addressed were also mapped in Figure 10 to Figure 13.

## 6.3 Low Priority Route Inventory

An inventory of footpath type and kerb ramp provisions was carried out for the low priority routes identified. The inventory recorded footpath types and width, and kerb ramp location at all road crossings along the route. The inventory did not include assessment of the design of the kerb ramp.

The findings are shown in Figure 14. The locations with no kerb ramp provisions are summarised in Appendix G.

## 6.4 Design of Pedestrian Facilities

As agreed with the RTA's Road Safety Directorate, pedestrian facilities identified within this PAMP must be constructed with consideration of the requirements of AS 1428 and AustRoads Part 13, Pedestrians, as the best standards that are currently available. The standards provide the design basis of the unit costs identified in the following section.

To suit local conditions, Council may need to modify standard designs. Council can also refer to the recently published "Manual of Best Practice – Access for people with Mobility Disabilities" (WSROC, 1998) and Designing Sidewalks and Trails for Access – Best Practices Design Guide (US DOT, 2001).

## 6.5 Cost Estimates

The cost estimates are based on the following unit prices. These estimates were developed based on Rawlinsons Australian Construction Handbook 2003, discussions with South Sydney City Council engineers and recent cost estimates undertaken for Councils throughout Sydney. These estimates are used as a guide only for the purpose of budget preparation.

Table 12 shows the indicative costs for actions classified as comments. Due to the variety of conditions and the nature of some of the actions, only an indicative cost is listed for preliminary budget purposes.

**Table 12 Unit Costs of Actions**

Reference	Item	Unit Cost	
AS 1428	Install tactile tiles per ramp	\$200	
AS 1428.1 Austroads Pt 13 Fig 2.6	Kerb ramp - typical	\$750	
Within 1m of kerb ramp	Move pedestrian crossing button (pedestrian activated), per button on new pole	\$2,000	
	Relocate bin/street furniture	\$400	
	Remove trees/item	\$1,700 large \$700 small	
	Repaint line marking, per intersection	\$2265	
	Repaint line marking, per zebra crossing	\$1300	
	Repair roadway crossing	\$2000	
	Repair footpath per linear metre (per 1.2 m width)	\$60	
	New footpath (1.2m)	\$120/m	
	New footpath (2.5m)	\$250/m	
	New footpath (3.6m)	\$360/m	
	Repair cracks in footpath	\$70/m	
	Standard sign and stem	\$180	
	AS 1428	Supply and install AS bench seat	\$1900
	AS 1428	Supply and install new bin	\$1100
	AS 1742.10 p24	Tactile/audible button (2)	\$1200
	Trim trees to 2m clearance	\$100-150/site	
AS 1742.10 Austroads Pt 13 fig 3.10	Marked zebra foot crossing (does not include lighting)	\$3,000	
	Upgrade Street Lighting	\$5,000 (local) \$10,000 (extended)	
	Bus Stop Upgrade to accessible	\$2,000	
	Enforcement of bylaw	\$500	
	Steel Handrail (32mm dia, Zinc chromate primed)	60/m	
	Consultation with Major Services	\$1,000	
	Steel pedestrian fencing along roadways	\$175/m	
	Street trees	\$2000 each	
	Drinking fountain	\$1350	
	Public art (budget allowance only)	\$1000	

**Note:** It should be noted that these cost estimates are based on typical unit costs for construction estimated from Rawlinsons Australian Construction Handbook and information from Council. The costs estimations have not taken into account specific conditions are each of the proposed work sites. The cost estimates are to be used as guide only for budget preparation.

## 6.6 Action Recommendations from Audit

### 6.6.1 Recommended Works

Summary tables of recommended works are in Appendix A. This is based on findings during field audits conducted in March/April 2003 (Appendix B). Relevant standards and concept plans for standard actions are reproduced in Appendix E. The Action Recommendations has identified works on a priority basis on two levels. The first level is a route prioritisation and the second level is a prioritisation of actions.

### 6.6.2 Presentation of the Action Recommendations

Each item of action presented in the Action Recommendations is identified by a unique ID number, cross-referenced with the ID number of the Audit Spreadsheet (Appendix B).

## 6.7 Recommendation from Research and Consultation findings

This section summarises the recommended works developed from issues identified in Sections 2, 4 and 5.6 of this report. The study developed the final recommendations based on the proposed pedestrian network facilities standard discussed in Section 5, field observation of the site, and surrounding land uses and pedestrian facilities. The issues and recommendations are discussed below and summarised in Appendix H and Figure 8.

### 6.7.1 Accident Analysis

The findings of the accident analysis is presented in Section 4.3. 18 cluster locations were identified in the study, mainly along Oxford Street, Cleveland Street and Redfern Street where high pedestrian activities occurs along roads with high traffic volumes. In addition to these clusters locations, the study also revealed the concentration of accidents involving pedestrians less than 16 years old and over 59 years old around the Redfern area, particularly around Redfern Park and the shopping area at Ragland St/Botany Road. The recommendations for these sites are:

- For cluster locations along Oxford Street, this study recommends a review of the proposed Oxford Street upgrade, including a Road Safety Audit on the proposed design.
- For other locations identified, this study recommends a road safety audit to identify all safety issues for traffic and pedestrians. For locations close together or along the same stretch of road, there could be benefit to perform RSA at the same time to facilitate area wide treatments where appropriate.
- For the Oxford Street/ Oatley Road intersection, a road safety audit was conducted by Transport and Urban Planning in July 2002. The recommendations from that audit that are considered to be pedestrian facilities are included in Appendix H.
- For the Cleveland Street/Crown Street/Baptist Street intersection and Cleveland Street/Wilton Street intersection, a pedestrian safety audit was conducted by Transport and Urban Planning in September 2000. The recommendations from the audit that are considered to be pedestrian facilities are included in Appendix H.

### 6.7.2 High Use by Elderly Pedestrian

Section 5.6.3 discusses the provision of Australian Standard seating along high priority routes and routes frequented by elderly pedestrians. The locations and cost estimation are presented in Appendix H.

### 6.7.3 Alternate Devonshire Street Route

Section 5.6.1 discusses the use of Devonshire Street as an accessible alternative to the Foveaux Street route. The recommended works and cost estimates are presented in Appendix H.

### 6.7.4 Pedestrian Crossings

Issues identified through the public consultation process were considered during the footpath audit and inventory and recommended works discussed in Section 6. However, submissions relating to new crossing opportunities have been considered separately. The locations with opportunities for new or improved pedestrian crossings identified in the study are presented in Table 13 with recommended works and estimated costs summarised in Appendix H.

**Table 13 Location for New or Improved Pedestrian Crossing**

Location	Issue
Crown Street / Landsdowne Street	No mid block crossing on Crown Street between Cleveland Street and Foveaux Street, particularly for access to shops.
Oxford Street / Riley Street	No crossing on western arm of intersection. (now outside South Sydney Council area)
Oxford Street / South Dowling / Barcom	No crossing on eastern arm
Riley Street / Reservoir Street	New crossing for access to Crown Street Public School.
South Dowling Street between Anzac Parade and Oxford St	No crossing
Campbell Street / Hunt Street	Marked crossing, advance signage obstructed by vegetation or missing, visibility issue at night, long crossing distance.
Moore Park Road / Oatley Road	Limited pedestrian crossing opportunities for access between Paddington and the Moore Park sports and entertainment precinct.
Moore Park Road / Anzac Parade	No crossing on eastern arm, pedestrian fencing installed.
Raglan Street / George Street	High speed traffic, missing advance warning signs and road markings.
Anzac Parade / Gregory Avenue	Limited crossing opportunities along Anzac Parade, end of footpath in across Moore Park is more than 300 metres from the nearest crossing at Macarthur Avenue. New at grade crossing may be unacceptable due to existing southbound Eastern Distributor portal.
Foveaux Street / Commonwealth Street	No crossing on Foveaux Street between Elizabeth Street and Riley Street.

### 6.7.5 Hotel Safety Audit

The main findings of the Hotel Road Safety Audit study were discussed in Section 4.1.2. The key recommendations concerning footpath and kerb ramp conditions have been included in the footpath audit findings in Section 6. The Hotel Safety Audit study commendations for pedestrian facilities are included in Appendix H.

The Hotel Safety Audit study recommendations in relation to traffic lanes and traffic speed are not included in this study as these are not considered to be pedestrian facilities.

## 6.8 Estimated Cost

The estimated cost for the works identified in Section 6 are summarised in Table 14 below. The work priority and action plan should be reviewed by Council as part of the annual budget review process.

It should be noted that these cost estimates are based on typical unit costs for construction estimated from Rawlinsons Australian Construction Handbook and information from Council. The costs estimations have not taken into account specific conditions at each of the proposed work sites. The cost estimates are to be used as guide only for budget preparation.

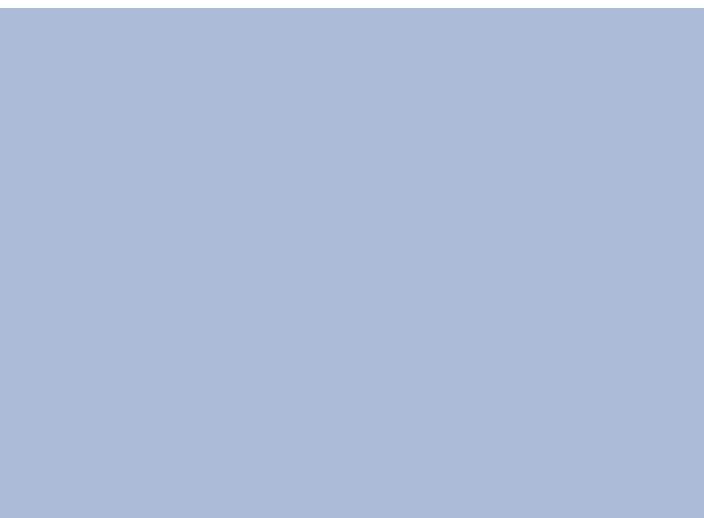
**Table 14 Estimated Cost of Works from Route Audit**

	Actions			Sub - Total
	High Priority	Low Priority	Comments	
Research and Consultation	\$51,520	\$586,380	\$48,000	\$685,900
High Priority Route Audit	\$40,990	\$66,600	\$2,500	\$110,090
Low Priority Route Inventory	\$63,000			\$63,000

\* only indicative cost estimation for comments

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- Walking as a Sustainable Mode of Transport
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## **7. CURRENT ISSUES - PEDESTRIAN ACCESS, MOBILITY AND SAFETY**

### **7.1 Walking as a Sustainable Mode of Transport**

#### **7.1.1 Ecologically Sustainable Development - Transport**

Ecologically sustainable development, or ESD, relates to four main objectives including:

- improving equity within and between generations;
- maintaining ecological processes;
- improving individual and community well being and welfare; and
- protecting biodiversity.

For a plan or project to be consistent with the principles of ESD, it must advance at least one objective and not adversely impact on any of the four objectives. The South Sydney PAMP is consistent with the principles of ESD specifically objectives one and three as listed. The PAMP network, if implemented, will improve the pedestrian environment within the study area therefore encouraging people to walk with health and environmental benefits such as improving air quality, decreasing noise levels and minimising the use of fossil fuels through the use of private vehicles. The provision of a safe and accessible pedestrian network increases personal mobility for all members of the community, particularly the elderly, persons with a disability and those who are unable to drive or cannot afford private transport.

#### **7.1.2 The Promotion of Physical Activity**

Wide ranging health, environmental, social and economic benefits result from increasing physical activity. Recent findings show that 30 minutes of physical activity every day result in major health benefits. This has led to the establishment of the NSW Physical Activity Task Force and both a state and national commitment to the promotion of physical activity.

### **7.2 Council Policy**

There has been increasing recognition of the importance of walking in transport policy development. The benefits of increasing levels of walking, and in achieving mode shift from the private car for shorter journeys, have been gaining increasing prominence. If this is to be achieved, walking will clearly need to contribute and increase its mode share. To reduce the risks for vulnerable road users it is recommended that walking be promoted to encourage mode shift and increased safety. It was suggested that the means for achieving this should include more initiatives to encourage walking, broader design guidance to incorporate non-motorised modes such as walking and cycling.

#### **7.2.1 Access for People with Disabilities**

The Council must provide equal access for all residents and visitors to the LGA including people with disabilities.

The provision of equal services is a base tenet of the Federal Disability Discrimination Act (1992) which legislates the right for equal participation of all members of the community in daily life.

The Disability Discrimination Act has three inherent themes including:

- equality;
- independence; and
- functionality.

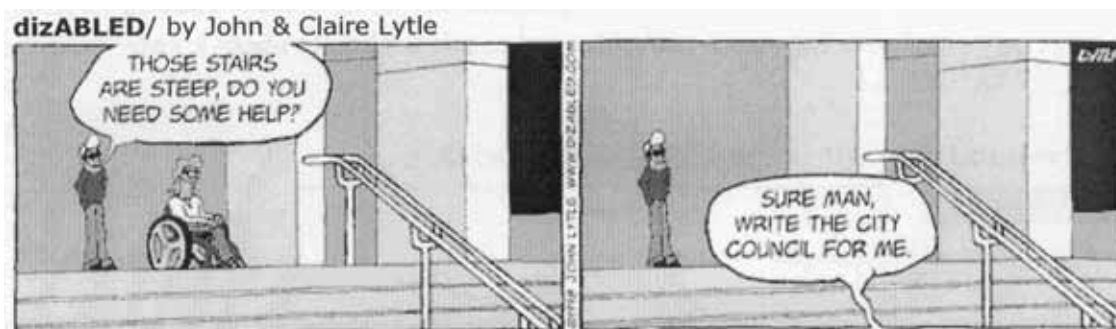
In their current condition the areas audited do not provide equal access, and thus are questionable under the spirit and intent of the legislation. This is due to a number of barriers on the streetscape (refer to Section 5.3 The Audit Process).

A time lined physical infrastructure improvement process must be initiated to remove identified barriers for people with disabilities. Should this occur, people with disabilities will have equal participation within the LGA.

Aligned with the development of additional physical infrastructure, many barriers to access can be removed simply through the enforcement of existing Council Policy, which if enforced promotes functional and useable environs.

A further advantage in the development of greater access on the streetscape is the reduction of inherent design problems that create occupational health and safety issues.

To maximise access for people with disabilities, planners and designers must give consideration to relevant design guidelines, specifically the Australian Standards 1428 series with particular note of Part 2: Enhanced and Additional Requirements - Buildings and Facilities. In alignment with promotion of such design recommendations, consideration should be given to the implementation of staff training specific to functional design facilitating people with disabilities.



### 7.2.2 Off Road Pedestrian Facilities

Opportunities for recreational networks have only been identified in the Action Recommendations in so far as they provide links to key recreational activity generators and attractors.

### 7.2.3 Education, Encouragement and Enforcement

Encouraging walking as a mode could be tackled by the introduction of measures aimed at educating people of the benefits associated with walking. People are likely to consider alternative modes to the private car for shorter trips within the local community. Therefore, by targeting these trips, and demonstrating the environmental and health benefits of increased walking activity, benefits could be gained. Possible ways in which awareness could be raised include mobile exhibitions or demonstrations by school or community liaison officers and it is considered essential that parents of children are also involved. Other initiatives that address the wider community include such things as promotional banners on road overpasses with slogans such as that used by Concord Council: 'If you're not going far, leave the car'. It is recommended that Council considers introducing such initiatives which could be linked into other areas including Community Pride, Safe Routes to Schools and the provision of special educational information.

Throughout the Action Recommendations (Appendix A), the enforcement of Council policy is listed as an action for numerous locations and issues throughout the Study Area. Problems include:

- A-frame boards blocking the path of travel;
- overhanging trees;
- location of bus stops and seating on the building line instead of the kerb line where possible (see Section 7.3.5); and
- stock on the footpath.

Council policy that considers these and other factors that cause the path of travel to be blocked should be regularly maintained and enforced by Council.

South Sydney City Council has proposed a CARES (Community and Road Education Service) facilities at Sydney Park , Alexandria. Council is planning to include a section on pedestrian safety with the education information for bicycle safety. Although the facility is outside the study area, it will be used to educate pedestrian and cyclist throughout the local government area.

#### **7.2.4 Security and Lighting**

Public areas should be sufficiently lit at night to maintain a safe pedestrian environment. Railway stations are generally lit to daylight standards although the areas immediately surrounding stations are often in darkness. Areas such as this and other pedestrian precincts such as retail areas, parks and pedestrian underpasses should be well lit. A night time safety audit should be undertaken to ensure acceptable lighting standards are maintained. Regular maintenance checks should also be undertaken by Energy Australia or the relevant service provider to ensure sufficient lighting in public areas.

The installation of any lighting facilities in the area should be done with consideration to AS/NZS 1158.3.1 - 1999: Roadway Lighting Part 3.1: Pedestrian area (Category P) lighting - Performance and installation design requirements.

#### **7.2.5 New National Road Rules**

New National Road Rules came into place throughout Australia on 1 December 1999. Within NSW these rules replaced the NSW Traffic Act 1909 (and amendments) and the Motor Traffic Regulations 1935. The implementation of these rules will see a change in regulation regarding the use of footpaths by cyclists. Rule 250 states that:

The rider of a bicycle who is 12 years old or older must not ride on a footpath if another law of this jurisdiction prohibits the rider from riding on the footpath.

For example, another law of this jurisdiction may provide that a commercial courier may not ride a bicycle on any footpath or any footpath in a particular area, or that an adult must not ride a bicycle on a footpath unless the adult is accompanying a child under 12 years who is also riding on the footpath.

In other words, where previously disallowed, cyclists under the age of 12, who are accompanied by an adult, will now be able to ride on the footpath. It is recommended that Council take into consideration the requirements for shared paths (AustRoads Part 13, Pedestrians, 1995 and Part 14, Bicycles, 1999) when installing any new footpath facilities within the LGA.

#### **7.2.6 New Developments**

Major new developments are occurring throughout the study area. As discussed in Section 6.3, Section 94 funding should be requested from developers for the provision of safe pedestrian facilities if the development will increase the number of pedestrians in the vicinity.

### 7.2.7 Special Events

A number of special events are held on an annual basis within the study areas including:

- Mardi Gras parade along Oxford St;
- Major football matches at the Aussie Stadium
- Major cricket matches at the Sydney Cricket Ground
- Special events held at the Moore Park Fox Studio complex

Pedestrian issues such as safety, mobility and access are major concerns for all special events that are held in public areas. Issues that should be considered in Council Policy include:

- access for all members of the community including the elderly and people with disabilities;
- transport to and from events including links to public transport nodes and car parking facilities;
- emergency evacuation procedures including access for emergency vehicles;
- crowd behaviour and policing;
- capacity of the area; and
- pedestrian safety relating to the consumption of alcohol.

Careful consideration by Council should be given to pedestrian safety, access and mobility for all special events. Reference should be made to The Department of Local Government Circular to Councils 'A Guide to Major and Special Events Planning', Circular No. 97/65, 1997 and to the RTA booklet 'Traffic Management for Special Events', March 1999.

## 7.3 Funding Sources

### 7.3.1 The Roads and Traffic Authority

The development of this PAMP is likely to assist in gaining additional funding from the RTA specifically for the completion of actions identified as part of this PAMP. All future RTA funding will be determined on an annual basis.

### 7.3.2 Section 94 Contributions

Section 94 of the Environmental Planning and Assessment Act 1979 allows Council to extract contributions from developers to provide for public facilities and services in the form of the dedication of land free of cost and/or payment of a monetary contribution.

Under Section 94, the consent authority may levy the developer for contribution to public services. Section 94 states:

Where a consent authority is satisfied that a development, the subject of a development application, will or is likely to require the provision of or increase the demand for public amenities and public services within the area, the consent authority may grant consent to that application subject to a condition requiring -

- (a) the dedication of land free of cost; or
- (b) the payment of a monetary contribution, or both.

A nexus between development and the need for a public amenity can be developed through the extent to which a development creates a need for a particular service or facility. Should developments increase pedestrian volumes to warrant facilities such as a pedestrian crossing

or pedestrian signals, funding should be sort through Section 94 Contributions for the provision of such facilities.

### **7.3.3 Local Area Traffic Management and other Council Works**

Many of the gains that can be made in road safety and management of traffic through Local Area Traffic Management schemes can also assist in improving the road environment for pedestrians. The provision of traffic, pedestrian and cyclist facilities in the road space should be considered in an integrated way and the same should apply in the allocation of funding.

### **7.3.4 Community Works**

Some works can be assisted by the community. An example would be the Community Cycleway construction program in Baulkham Hills Council area. Public liability in these matters should be investigated.

### **7.3.5 Sponsored Signage and Bus Shelters**

Bus shelters, signage, seating and rubbish bins can be provided by the private sector by cross-subsidy from advertising. A condition of installation of such items could be adjacent kerb ramps or sections of path. However, it is understood that the bus shelters from the existing contractor is too large to allow sufficient clear path width behind the shelter in many locations if placed at the minimum 600mm from the kerb edge.

Council should reconsider the design and placement of bus shelters in order to address pedestrian accessibility requirements. If new bus shelters must be located along the building edge due to width restriction, Council should consider the design of the shelters and the use of tactile indicators to assist pedestrian with visual impairments.

### **7.3.6 Sponsored Works**

Corporations, clubs or communities may be able to contribute through 'adopt-a-road' schemes. These could include shared-use corporate jogging tracks, courtesy seats, bequest/memorial seats, etc.

### **7.3.7 Partnerships**

Officers of the RTA have expressed a keen interest to approach the upgrading of pedestrian (and bicycle) accessibility in a 'partnership' approach with Council and CityRail's 'Easy Access' programs. An example cited was the Valley Heights overbridge where the RTA's highway crossing was enhanced by CityRail's connection to the railway station, and Council's links to the local network. Monitoring the PAMP

As the pedestrian network is developed, it will be important to monitor the progress of the network over time. In particular, it will be important to further develop an understanding of travel patterns and behaviour and the role that walking plays. Monitoring will relate to the following three areas:

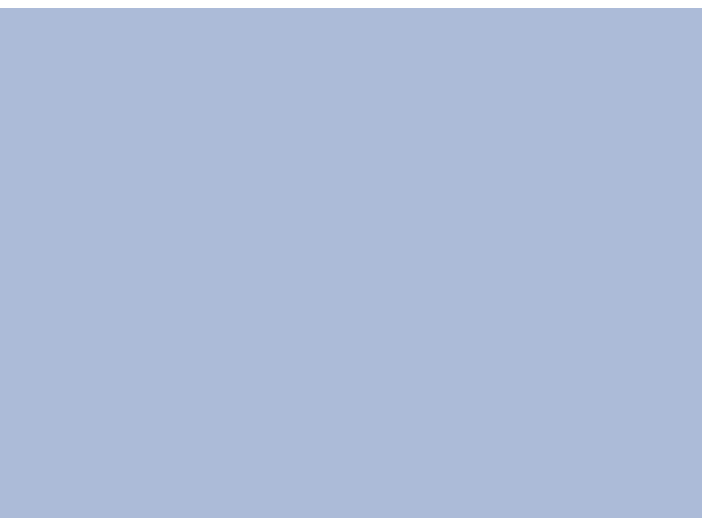
- route conditions and overall route quality;
- changes in demand; and
- implementation of Action Recommendations.

Monitoring of the quality of pedestrian routes could be undertaken by establishing an ongoing regular Route Quality Audit process, with the results catalogued and regularly updated. The quality of routes would be measured against the existing design criteria as part of a "look and see" audit process. This will enable the overall quality of routes to be improved, problems to be addressed and resources to be targeted appropriately.

A typical Route Quality Audit would involve an assessment of route conditions and would be undertaken by a person familiar with pedestrian design issues and involve a site visit along the specified route. A simple site visit report form could be developed that allows the auditor to note down a series of checks of the route against the design criteria specified. The route should also be reviewed in light of possible land use changes and Council works.

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## 8. CONCLUSIONS AND RECOMMENDATIONS

### 8.1 Conclusion

The study concluded that the objectives of the PAMP could be achieved in the study area by a staged implementation of actions across the areas of enforcement, encouragement, education and engineering. Many of these actions in the first three areas will occur as part of Council's other programs. In the latter, the proposed Action Recommendations (Appendices, A, H) should be implemented.

### 8.2 Recommendations

It is recommended that the Council consider for adoption the PAMP Network and associated Action Recommendations and other actions in conjunction with the RTA and other Authorities.

In addition to items identified in the Action Recommendations in Appendices A and H, specific recommendations given throughout this report include:

- All traffic management devices installed in the Study Area should consider the use of the area by pedestrians.
- In determining appropriate pedestrian crossing facilities the recommendations of Section 3 - Treatments for Pedestrians Crossing roads of Austroads Part 13, Pedestrians, 1995 should be taken into consideration.
- South Sydney City Council should lobby State Transit to encourage the introduction of more Easy Access Buses.
- All bus stops in South Sydney LGA should be audited to ensure that they meet the requirements for the successful use of Easy Access Buses.
- To maximise access for people with disabilities, planners and designers of new developments must give consideration to relevant design guidelines, specifically the Australian Standards 1428 series with particular note of Part 2: Enhanced and Additional Requirements - Buildings and Facilities.
- Encouraging walking as a mode could be tackled by the introduction of measures aimed at educating people of the benefits associated with walking. Council should consider the introduction of such initiatives, which could be linked into other areas including Safe Routes to Schools and the provision of special educational information.
- Council policy that considers factors that cause the path of travel to be blocked should be regularly maintained and enforced by Council.
- Following scheduled high priority works Council should review the low priority actions and also consider auditing the low priority routes within the study area.
- A survey of pedestrian areas at night should be undertaken to ensure acceptable lighting standards are maintained. Regular maintenance checks should also be undertaken to ensure sufficient lighting in public areas. The installation of all lighting facilities should be done with consideration to AS/NZS 1158.3.1 - 1999: Roadway lighting Part 3.1: Pedestrian area (Category P) lighting - Performance and Installation design requirements.
- As agreed with the RTA's Road Safety Directorate, pedestrian facilities identified within this PAMP must be constructed with consideration of the requirements of AS 1428 and AustRoads Part 13, Pedestrians, 1995 as the best standards that are currently available.

- Council should take into consideration the requirements for shared paths (Austroads Part 13, Pedestrians, 1995 and Part 14, Bicycles, 1999) when installing any new footpath facilities in the area.
- Council should request Section 94 funding from developers for the provision of safe pedestrian facilities if the development will increase the number of pedestrians in the vicinity.
- Careful consideration by Council should be given to pedestrian safety, access and mobility for all special events. Reference should be made to The Department of Local Government Circular to Councils 'A Guide to Major and Special Events Planning', Circular No. 97/65, 1997 and to the RTA booklet 'Traffic Management for Special Events', March 1999.
- The provision of traffic, pedestrian and cyclist facilities in the road space should be considered in an integrated way and the same should apply in the allocation of funding.
- Monitoring of the quality of pedestrian routes should be undertaken by establishing an ongoing regular Route Quality Audit process, with the results catalogued and regularly updated.

## 9. REFERENCES

- Accessible Housing Strategy – Draft LEP 2002, November 2002, BMCC
- Active Australia, Simply Active Everyday - A Plan to Promote Physical Activity in NSW, 1998 – 2002
- Arup - Geoplan (1997) South Sydney Bike Plan
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- AS 1428.1 - 1998: Design for Access and Mobility, Part 1 - General Requirements for Access - New Building Work
- AS 1428.2 - 1992: Design for Access and Mobility, Part 2 - Enhanced and Additional Requirements - Buildings and Facilities
- AS 1428.4 - 1992: Design for Access and Mobility, Part 4 - Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment
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