
HOW TO PREPARE A PEDESTRIAN ACCESS AND MOBILITY PLAN

An easy three stage guide



Roads and Traffic Authority
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PAMPs are partnerships between State and Local Governments to co-ordinate investments on safe, convenient and coherent pedestrian infrastructure on key pedestrian routes.



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INTRODUCTION

WHY DEVELOP A PEDESTRIAN ACCESS AND MOBILITY PLAN (PAMP)?

Together with the Roads and Traffic Authority of New South Wales (RTA), all local councils in NSW have a responsibility to provide safe, convenient and connected pedestrian routes which will encourage people to walk rather than use their cars.

In 1998 the RTA began a new program to assist planning for pedestrians. The program was developed to ensure better planning for pedestrians.

Since that time more than a dozen PAMPs have been commissioned using a partnership approach. PAMPs help to link State and Local Government planning instruments (e.g. Local Environment Plans (LEPs), Development Control Plans (DCPs) and Councils' requirements under Sections 79c and 94 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

HOW A PAMP WORKS

A PAMP is a comprehensive strategic and action plan to develop pedestrian policies and build pedestrian facilities.

PAMPs aim to co-ordinate investment in safe, convenient and connected pedestrian routes. A PAMP provides a framework for developing pedestrian routes or areas identified by the community as important for enhanced, sustainable safety, convenience and mobility.

PAMPs are developed through partnerships between State and Local Governments, developers and other stakeholders.

HOW THIS GUIDE CAN HELP YOU

This Guide is a practical manual for council staff, councillors, local community groups or others undertaking a PAMP. It was developed after reviewing the methods used to prepare PAMPs by a variety of NSW councils. As a result of the review, improvements have been incorporated in the process to provide a framework for best practice. The Guide offers a step-by-step approach to pedestrian planning and highlights the main issues you need to consider at all stages.

The Guide will also help others with an interest in the pedestrian environment, such as health authorities, to understand and share the process.

BENEFITS OF PAMPs

Properly implemented PAMPs can provide wide transportation, environmental and social benefits to the community, such as:

- more appropriate pedestrian facilities, especially in busy areas
- improved access for mobility-impaired groups in the community, including older persons
- safe and convenient crossing opportunities on major roads
- reduced injuries to pedestrians
- links with other transport services to achieve an integrated land use and transport facilities network
- integration with planning instruments (e.g. Council's planning documents, including Section 94 and Section 79 (c) under the EP&A Act, provisions within Local Environment Plans (LEPs) and Development Control Plans (DCPs))
- links with existing vulnerable road user plans such as bike plans, maintenance programs and accessible public transport
- meeting the special event needs of pedestrians
- pedestrian facilities which are consistent and appropriate throughout NSW.



FUNDING

Funding is necessary for all stages of a PAMP: you will need initial funding to undertake the PAMP, then further funding to implement its actions and monitor progress.

To undertake a PAMP

Councils may apply to their Regional RTA office for funding. The RTA provides funds to successful PAMP applications on a 50/50 basis with local councils.

These two main sources for funding, the RTA and local councils are applicable to the first two stages of a PAMP, Objectives and Preparation. Bear in mind, however, that the RTA's resources depend on annual allocations from government while council resources could be already committed.

In the early stages, it may be possible to reduce the burden on council by commissioning volunteers from interested community groups to carry out audits or other aspects of the PAMP process.

For implementation of the PAMP Works Schedule

The bulk of funding will be needed for the actions set out in the Works Schedule (see Appendix 9). Funding for this third stage, the Implementation of a PAMP, is discussed on page 17, under the heading STEP 2 Organise Funding.

WHO PREPARES THE PAMP?

Local councils are responsible for preparing a PAMP. They may choose to use an external consultant or their own resources. If an external consultant is engaged to develop the PAMP, council's level of involvement needs to be determined at the outset. The options are for council to be involved in all details of the PAMP process or, if resources are limited, to simply review key stages of the PAMP. Generally, council staff will be involved throughout the process to ensure that the final PAMP is a useful document that satisfies their needs.

If a consultant is engaged, you should consider the following requirements:

- a Project Brief
- participation in a steering committee and focus workshops
- background documents and data for consultants such as: policy/planning documents, footpath condition audits, previous pedestrian studies, pedestrian crash records and maps
- contact within council for the public consultation process
- review of the criteria for PAMP route selection and prioritisation
- review of draft PAMP routes
- review of the criteria for works schedule prioritisation
- review of the draft and final PAMP report including maps and a works schedule/action plan.

WHO IS A PEDESTRIAN?

A pedestrian includes:

- a person driving a motorised wheelchair that cannot travel over 10 kilometres per hour (on level ground)
- a person in a non-motorised wheelchair
- a person pushing a motorised or non-motorised wheelchair
- a person in or on a wheeled recreational device or wheeled toy.

HOW LONG DOES IT TAKE?

A PAMP will take a minimum three to six months to prepare. The process involves:

- initial setting up
- tendering
- conduct
- consultation
- reporting
- approval and works schedule.

If extensive public participation is conducted, however, you should allow a minimum period of six months.

Extensive public participation is recommended to ensure that all partners have a sense of ownership in the completed PAMP. Subsequently, the engineering works identified through a PAMP may take one to five years or more to complete.

COUNCIL'S COMMITMENT

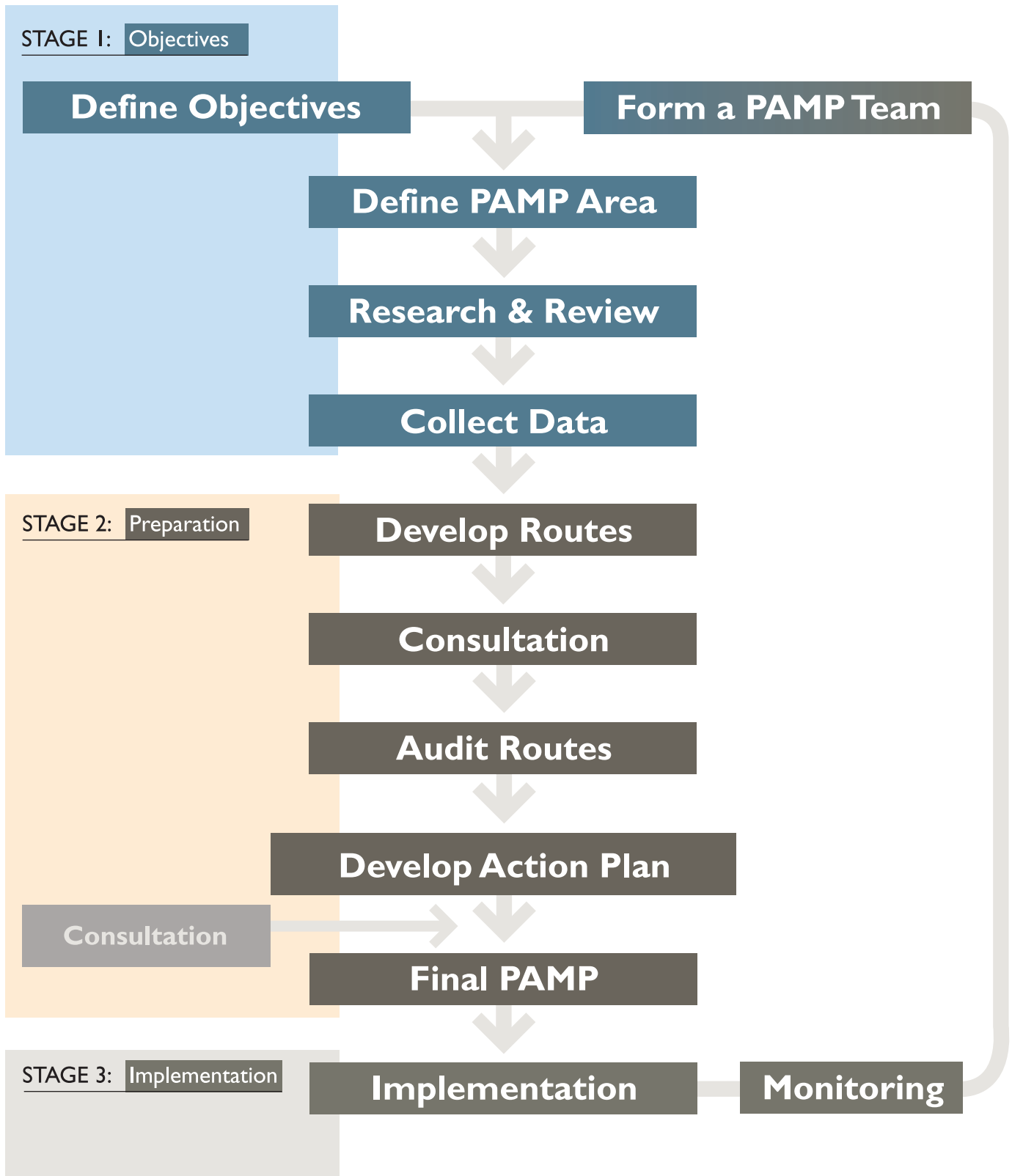
The PAMP process will need a council's sustained commitment and resources, including time, staff, enthusiasm and funding. Moreover, the necessary planning documents must be kept current; and adequate funds must be obtained from developers under the EP&A Act Section 94 for on-road pedestrian facilities and under Section 79 (c) for off road infrastructure.

The council also needs to build the ownership of the PAMP among all partners (the RTA, council staff, councillors, local community groups and any others). When the partners have a stake in a PAMP, they are encouraged to:

- use the completed PAMP
- commit to the implementation of engineering works identified by the PAMP
- undertake future reviews and updating of the PAMP

The Diagram, How to Prepare a PAMP- Methodology shows the three broad stages involved in the process:

- Stage 1: Objectives
- Stage 2: Preparation
- Stage 3: Implementation



STEP I

DEFINE YOUR OBJECTIVES

A PAMP should have clear objectives that can be achieved within a reasonable time. When setting objectives, consider that existing works such as a footpath or maintenance program may solve some of the problems that the PAMP will address. You should also review the availability of council staff and funding.

Most importantly, think about the outcomes you want from a PAMP and how the pedestrian network may be improved. Consider these factors:

- coherence (with logical connections)
- directness
- safety
- comfort
- attractiveness
- accessibility and mobility
- equal access for all user groups in the community.

OTHER POTENTIAL OUTCOMES:

- co-ordination of plans for vulnerable road users such as cyclists, pedestrians, people with disabilities
- co-ordination of works schedules in council
- establishment of encouragement and education programs
- promotion of walking for pleasure and health
- promotion of environmental sustainability.

To help achieve your PAMP objectives, you will also need to identify:

- main pedestrian routes (the network)
- users' concerns
- existing use and crash history
- new requirements for footpath and crossings
- any other works

Ideally, your PAMP should try to meet the RTA's guiding objectives, shown in the table below.

RTA GUIDING PAMP OBJECTIVES	
	OBJECTIVE
1	To facilitate improvements in level of pedestrian access and priority, particularly in areas of pedestrian concentration.
2	To reduce pedestrian access severance and enhance safe and convenient crossing opportunities on major roads.
3	To identify and resolve pedestrian crash clusters.
4	To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons through the provision of pedestrian infrastructure and facilities which cater to the needs of all pedestrians.
5	To provide links with other transport services to achieve an integrated land use and transport network of facilities that comply with best technical standards.
6	To ensure pedestrian facilities are employed in a consistent and appropriate manner throughout NSW.
7	To link existing vulnerable road users plans in a co-ordinated manner (e.g. Bike plans, maintenance programs, accessible public transport, etc).
8	To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups.
9	To accommodate special event needs of pedestrians.
10	To meet obligations under the Commonwealth Disability Discrimination Act (1996).

STEP 2

SELECT THE MOST SUITABLE OBJECTIVES

The practice of focusing on selected objectives was adopted in many of the PAMPS reviewed by the RTA when preparing this Guide. Since circumstances vary widely between council areas, ensure that your objectives will be suitable for funding according to the 50/50 split between the RTA and councils.

For example, some councils chose to place a strong focus on:

- equal access for all types of users and co-ordination of works schedule
- identifying and resolving user concerns
- promoting pedestrian safety, and direct networks that better integrate communities across roads, rail or rivers.

STEP 3

RATE THE PAMP'S OBJECTIVES .

It is important to be able to measure whether or not your objectives are being met once the PAMP is implemented. However, rating various objectives is not always easy. The best approach is to draw on local knowledge and experience when you first set the PAMP objectives. Involve departments such as planning, roads, access, safety, parks and community services to ensure that all relevant issues are considered before determining the main objectives.

For quality rating purposes, the RTA has developed a procedure that should be used to rate your PAMP against the RTA guiding objectives. An example of this rating system and the meaning of the overall score, is detailed in Stage 3 Implementation, Step 7, page 20

The scope, objectives and the PAMP rating system should be set out in a Project Brief. See Appendix I for a sample Project Brief.

STEP 4

FORM A PAMP TEAM

Depending on the council area and the PAMP objectives, the project team can be made up of some or all the following:

- Council Road Safety Officer (RSO)
- Council Planner
- Council Engineer
- Council Access Officer (to deal with issues for persons with disabilities and mobility impairments)
- external consultant
- RTA officers
- representatives from local community groups.

The experience of other PAMP teams is that a sense of ownership is enhanced when all relevant departments within the council are involved from the start of the project. Full involvement also ensures better co-ordination and enthusiasm during the funding application and when the project works are implemented.

Most PAMP teams would include community consultation, particularly with representatives of community and disability groups. The presence of the RSO and Access Officer is very valuable in this part of the project because of their strong relationship with local groups.



STEP 1

DEFINE THE PAMP AREA

Local councils throughout New South Wales vary greatly in size and development densities, particularly among regional councils. Clearly, it is not reasonable to cover the whole LGA in every PAMP. Before deciding on the scope of your PAMP, check the options for defining PAMP areas shown in the table below.

The area of a PAMP can be:

- the whole Local Government Area (LGA)
- the Central Business District(s)
- a selection of centres/townships
- specific areas within centres/townships.

PAMPs are concerned with the external pedestrian environment. They do not include areas such as:

- inside railway stations
- internal arcades
- shopping centres

STEP 2

RESEARCH AND REVIEW

PAMPs usually contain a literature research and review, including:

- Council's planning documents, including local and neighbouring pedestrian and bicycle plans
- Development Control Plans (DCPs), Local Environmental Plans (LEPs) and zoning maps
- Council's disability and access policies and reports
- Council's Section 79c and 94 (Environmental Planning and Assessment Act 1979 [EP&A Act - This acronym is already used in the document]) provision for the study area
- design standards
- previous submissions to council
- future infrastructure needs
- new subdivisions
- State and Federal Government planning documents.

OPTIONS FOR AREA DEFINITION OF PAMP

URBAN LGA		REGIONAL LGA
INNER SYDNEY LGA (e.g. MARRICKVILLE)	OUTER SYDNEY LGA (e.g. CAMPBELLTOWN)	
whole LGA	main centre(s)	main centres
in depth study of major high pedestrian areas	strategic plan for whole LGA	specific high pedestrian areas within main centres
	in depth study of pedestrian activity locations	cross regional routes.

When setting parameters for the PAMP area, consider your objectives, resources and available budget. Also, take into account how much information already exists within council. You may find that previous studies, works schedules, facility condition audits and the like, could have an impact on the selection of a PAMP area. Up to a point, more information at the start of the project may allow a larger area to be included in the budget.

In the long term, successive PAMP projects can define additional areas to create a complete coverage of the whole local council area. This method allows council to address different issues within various PAMP areas as funding and resources become available. The RTA can provide examples of completed PAMPs that may help decide the best option for your area.

STEP 3

COLLECT DATA

The quality of information and the way information is gathered will add to the PAMP Team's understanding of the area, and to the success of the final PAMP. See examples of data and presentation in Appendices 3 to 10.

Data Types

Useful types of data for PAMPs include:

- facilities schedules (see Pedestrian Facility List in Appendix 2)
- pedestrian crash data (see Appendix 3)
- vehicle counts

- pedestrian counts, including Facility User Group (see Appendix 4) types and mix to inform Level of Service (see page 11 of AUSTROADS Part 13, 1995)
- pedestrian Origin-Destination (O-D) surveys
- footpath condition audits
- social and demographic/population data
- public transport availability and usage.

STEP 4

CONDUCT SITE VISITS AND PLOT MAPS

An initial site visit is usually needed to gain experience of the local scene and observe user behaviour. No literature or data review can provide this 'actuality' information.

The nature of a site visit depends on what information is already available and what more you need. Some council areas with substantial existing information will need on-foot visits only at specific locations. In others the PAMP team will need to collect more information and the initial site visits should cover all or most of the defined PAMP area, mainly on foot.

Site visits should include high pedestrian activity areas, and generators or attractors aligned to those used in council town planning such as:

- retail (shops)
- education (schools)
- transport nodes (such as rail, bus and taxi stops)
- main town centres
- parks and nature reserves.

At this stage, information should be coded to a common legend and plotted on maps (see Appendix 6). Colours and symbols should correspond to council planning scheme maps and Department of Planning and Planning conventions. Ideally, the information can be coded directly onto a Geographical Information System (GIS) maintained by council. This method allows layers of accurately coded information to be viewed and manipulated for analysis within the GIS system or printed for presentation. An example is shown on page 13 in the following section. Details of the information type and source will depend on the objectives and budgets of individual PAMPs.

STEP 5

DEVELOP PAMP ROUTES

A key benefit of a PAMP is to provide a prioritised pedestrian network that can help council focus limited resources in critical areas. At this point, all the information collected so far should be organised and given priorities. Within the PAMP's strategic framework, council is better able to plan pedestrian works in their order of priority or urgency.

Four main areas of information should have been collected during the preceding steps of the PAMP process:

Pedestrian trip generators and pedestrian trip attractors These are locations that pedestrians travel to and from many times, and can also be gathering points for pedestrians.

Opportunities These locations may include new path or through-site links, new facilities such as road crossings, new developments.

Constraints Locations that include physical constraints such as road and rail lines, other road users, zoning, or behavioural constraints such as dependency on cars, or public perceptions of personal safety.

Design standards The type of work or treatment may be influenced by the people expected to use the route (e.g. near a retirement village), so specific situations will need consideration. See Appendix 4 on Facility User Groups)

Based on the information that you have collected, the draft PAMP routes are then drawn onto the base map, as shown in the example on page 13.

Draft PAMP routes should:

- provide links between main attractors and generators
- improve existing pedestrian hazards locations
- formalise existing pedestrian links
- create new off-road facilities.



Draft Routes

(for more detailed information on the Draft Routes diagram, see Appendix 7)



STEP 6

CONSULT WITH THE COMMUNITY

Most PAMPs include community consultation, usually conducted using one or more methods, such as:

- stakeholder workshop
- information sessions and discussion groups
- questionnaire surveys
- press release and advertisement in the local newspaper and other media
- public exhibition of the Draft PAMP.

Groups to consult include:

- the Guide Dog Association
- the Ageing and Disability Department
- the Australian Quadriplegic Association

- the MS Society
- the NSW Police Service
- Area Health Services
- local schools and colleges
- local hospitals
- local religious centres
- State Rail Authorities
- State Transit Authorities
- private bus companies
- taxi companies
- neighbouring councils.

STEP 7

AUDIT THE ROUTES

On-foot Route Field Audits are essential to determine the type and scale of work required along designated pedestrian routes. Generally, audits will be undertaken by a PAMP team member who has training or experience in road safety auditing, or in design for access and mobility. Some issues to consider are shown in the table below. Examples of Audit Sheets and site photographs are shown in Appendix 8 and Appendix 10.

The audit should include all roads and paths used by

pedestrians in the PAMP area at different times of day and under different conditions. If this is not possible within the available resources and budget, there are a number of ways to streamline field audits. Depending on the PAMP's objectives, the needs of PAMP area, and the budget, council can adopt one or a combination of the following approaches:

- draft route priority, e.g. high priority routes
- issues, e.g. kerb ramps, crossings, nodes
- areas, e.g. CBD
- user groups, e.g. schools, retirement homes.

EXAMPLES OF ISSUES TO CONSIDER DURING FIELD AUDITS	
ISSUES	CONSIDERATIONS
Path of Travel	<ul style="list-style-type: none"> ■ gradient ■ width of paved path ■ crossing at side streets (kerb ramp) ■ conditions of walking surface ■ vertical clearance ■ obstructions ■ barriers and grates.
Pedestrian Crossings	<ul style="list-style-type: none"> ■ crossing type ■ signage and line marking ■ audible/tactile facilities at signals ■ raised threshold ■ kerb ramp and tactile indicators ■ crossing specific lighting ■ Facility User Groups and Levels of Service ■ new crossing opportunities and possible treatments.
Lighting	<ul style="list-style-type: none"> ■ design ■ location.
Fixtures	<ul style="list-style-type: none"> ■ signage, bus shelters, seating, bins, water fountains, outdoor seating, shop advertisements (A-frame boards) ■ design, colour contrast ■ location ■ disability-specific, issues such as access path, height of facilities, design ■ maintenance required.

STEP 8

DEVELOP AN ACTION PLAN

After completion of the Route Field Audit, you will have identified the broad issues and opportunities, gathered all necessary data and developed a draft strategic plan. Your next move is to produce an Action Plan in the form of a works schedule for implementing the PAMP.

Works Schedule

A Works Schedule places the proposed PAMP actions into a clear format and order of priority. Details of the works will depend on the method used to collect data and the focus of the PAMP. A recommended approach is to group and prioritise works by type or possible funding sources. For example, works can be grouped by:

- area or street
- nature of works (e.g. capital works, maintenance)
- type of works (kerb ramp, foot path, crossings).

For council and RTA funding approval processes, the works program should include the following details for each item:

- location
- work item description
- reasons for suggested works (e.g. safety, access, network connectivity, future development)
- pedestrian facility type (Appendix 2) or Facility User Group (FUG) (Appendix 4)
- level of service of the provided facility
- estimated cost
- possible funding sources (if appropriate)
- priority.

It is advisable to include all recommendations for actual items in the PAMP works schedule even though some issues may need further study. This method has proved to be most successful in getting a PAMP implemented through council's existing works schedule.

Some councils also prefer to include PAMP recommendations to local planning instruments since this ensures that pedestrian needs are addressed in future developments.

Work items are generally placed in order of priority because of budget and resource constraints. An example of prioritising works is shown in the table on the next page. The criteria and maximum scores shown in the table are examples only and should be developed to suit specific council areas according to local needs and environment. One important reason for items to be costed and prioritised is that it makes it easier to apply for funding through council and the RTA. See Appendix 9 for an example of a works schedule, and associated photos in Appendix 10.



Weighted Criteria Scoring System for PAMP Works Prioritisation (example only)

CATEGORY	CRITERIA	PERFORMANCE CONDITIONS(1)	SCORE(2)	
Land Use	Number of attractors/ generators (locations)	<input type="checkbox"/> more than 5 locations	<input type="checkbox"/> 10	
		<input checked="" type="checkbox"/> 3-5 locations	<input checked="" type="checkbox"/> 8	
		<input type="checkbox"/> 1-2 locations	<input type="checkbox"/> 5	
		<input type="checkbox"/> 0 locations	<input type="checkbox"/> 0	
Land use type		<input type="checkbox"/> schools	<input type="checkbox"/> 10	
		<input type="checkbox"/> commercial/retail	<input type="checkbox"/> 8	
		<input checked="" type="checkbox"/> residential	<input checked="" type="checkbox"/> 5	
		<input type="checkbox"/> other	<input type="checkbox"/> 0	
Proximity to generators/ attractors		<input type="checkbox"/> less than 250 metres	<input type="checkbox"/> 10	
		<input checked="" type="checkbox"/> >250-500 metres	<input checked="" type="checkbox"/> 8	
		<input type="checkbox"/> >500-1000 metres	<input type="checkbox"/> 5	
		<input type="checkbox"/> >1000 metres	<input type="checkbox"/> 0	
Future development with attractors/ generators		<input type="checkbox"/> high	<input type="checkbox"/> 5	
		<input checked="" type="checkbox"/> medium	<input checked="" type="checkbox"/> 3	
		<input type="checkbox"/> low	<input type="checkbox"/> 1	
Traffic Impact	Road hierarchy	<input type="checkbox"/> State road	<input type="checkbox"/> 15	
		<input type="checkbox"/> Regional road	<input type="checkbox"/> 10	
		<input checked="" type="checkbox"/> local road	<input checked="" type="checkbox"/> 8	
		<input type="checkbox"/> special use	<input type="checkbox"/> 5	
		<input type="checkbox"/> other	<input type="checkbox"/> 0	
Safety	Identified hazardous area (from consultation)	<input type="checkbox"/> high	<input type="checkbox"/> 10	
		<input type="checkbox"/> medium	<input type="checkbox"/> 8	
		<input checked="" type="checkbox"/> low	<input checked="" type="checkbox"/> 5	
		<input type="checkbox"/> none	<input type="checkbox"/> 0	
	Identified pedestrian crashes (reported to police or local knowledge) as a 3 year average		<input type="checkbox"/> >3 reported crashes per year	<input type="checkbox"/> 15
			<input checked="" type="checkbox"/> 3 reported crashes per year	<input checked="" type="checkbox"/> 10
Facility Benefits	Demonstrated path	<input type="checkbox"/> high usage	<input type="checkbox"/> 10	
		<input type="checkbox"/> medium usage	<input type="checkbox"/> 8	
		<input checked="" type="checkbox"/> low usage	<input checked="" type="checkbox"/> 5	
		<input type="checkbox"/> not demonstrated	<input type="checkbox"/> 0	
Continuity of routes	Addition to existing facility	<input type="checkbox"/> link up footpath	<input type="checkbox"/> 10	
		<input checked="" type="checkbox"/> extension of footpath	<input checked="" type="checkbox"/> 8	
		<input type="checkbox"/> add to devices	<input type="checkbox"/> 5	
		<input type="checkbox"/> other	<input type="checkbox"/> 0	
Priority	Pedestrian route hierarchy	<input type="checkbox"/> high	<input checked="" type="checkbox"/> 5	
		<input type="checkbox"/> medium	<input type="checkbox"/> 3	
		<input type="checkbox"/> low	<input type="checkbox"/> 1	
WORK TOTAL SCORE (3)			65	

NOTES

(1.) Only one performance condition is to be selected for each criteria e.g. Land use type residential = 5.

(2.) The overall work prioritisation is then determined by adding up each criteria scores to reflect the environment of the specific area. e.g. High (100-70), Medium (<70-40), Low (<40) or Considering (not scored).

(3.) The maximum score achievable overall is 100.

STEP 9

PROMOTE THE PAMP

Now you have an opportunity to hold a second round of community consultation where the work of the PAMP Team is presented: the draft maps, works schedule and fully developed report. Depending on available funds, a range of activities should be planned, including:

- a public display/exhibition
- place the PAMP on the council website with opportunities for public response
- contact the local media with a press release of the draft PAMP.

Invite public and council comment on the PAMP and after reviewing these, include any appropriate comments in the final PAMP documentation.

STEP 10

FINALISE THE PAMP

The final PAMP report should record all the steps you have taken to this point: the methodology, main findings and recommended works. See the suggested table of contents shown opposite.



SUGGESTED CONTENTS FOR A PAMP REPORT

1	Introduction
1.1	Background
1.2	Study Objectives
1.3	Methodology of PAMP
1.4	Structure of report
2	Study Area
2.1	Scoping study (selection of the study area)
2.2	Study Area
3	Research, Review and Data Collection
3.1	Literature Review
3.2	Traffic and Pedestrian Data
3.3	Pedestrian Crash Data
3.4	Opportunities and Constraints (crossings, crash clusters, new links, etc)
3.5	Design Standards
4	Characteristics of Local Government Area
4.1	Population and Land use
4.2	Road Hierarchy
4.3	Public Transport
4.4	Future Pedestrian Needs
5	Public Consultation
	Sub-section titles should reflect the different groups consulted and different methods
6	PAMP Routes
6.1	Route Selection
6.2	Route Prioritisation Methodology
6.3	Opportunities and Constraints
7	Audits
7.1	Route Audit Process
7.2	Cost Estimate for Typical Items
7.3	Work Prioritisation Methodology
7.4	Physical Works Schedule
8	Funding Sources and Implementation of PAMP
9	Monitoring Program
10	Recommendation for Future Studies
11	Conclusions and Recommendations
	Figures (not an exhaustive list)
Figure 1	Pedestrian Crashes
Figure 2	Land Use/Attractors and Generators
Figure 3	Crossing location and facility types
Figure 4	PAMP Routes and Priorities
	Appendices (not an exhaustive list)
Appendix A	Physical Works Schedule
Appendix B	Design Guidelines for Pedestrian Facilities
Appendix C	Audit Results

STEP 1

ENSURE YOUR PAMP IS COMPLETE

A fully documented, clear and concise PAMP is more likely to remain relevant and appropriate throughout the implementation stage. Check that your PAMP includes:

- a report
- report drawings
- appendices of stages
- maps and support information.

The success of the PAMP's implementation also depends on council's commitment, budget allocation and the monitoring program. Works identified in the PAMP can be carried out within the council as:

- maintenance works
- capital works
- road safety items
- public parks upgrades.

Many of the councils taking part in the PAMP review commented that because of its strategic nature, a PAMP helps to identify Section 94 contribution opportunities. It also allows council to include some recommendations in planning documents, including Section 79(c) provisions within Local Environment Plans (LEPs) and Development Control Plans (DCPs).

STEP 2

ORGANISE FUNDING

Generally funding for Stage 3 Implementation comes from the RTA and council (e.g. Section 94).

Other funding sources include:

- developers
- local clubs and community groups
- Department of Ageing and Disability, NSW
- Department of Education and Training, NSW
- Department of Health, NSW
- Department of Housing, NSW
- Department of Public Works and Services, NSW
- Department of Sports & Recreation
- Department of State & Regional Development, NSW
- TransportNSW (Department of Transport)
- Department of Planning
- State Rail Authority
- State Transit Authority.

A PAMP is essential to support all major pedestrian funding requests that are directed through the RTA Regions by councils using the prioritised Works Schedule. This demonstrates to all partners (RTA, council staff, councillors, local community groups, other stakeholders) that all

available funding sources are being used effectively to improve the pedestrian network.

RTA Policy on Implementation Funding for Stage 3

State Roads 100% RTA* (road crossing facilities only)
Regional and Local Roads 50/50 RTA and council.

* RTA funds road crossing facilities and kerb ramps only.
Also note that the RTA funding level per year depends on RTA budgets.

STEP 3

SET A REALISTIC BUDGET

With funding coming from a variety of council and government sources, it may be difficult to determine how much to ask for. As an example, recent PAMP estimates ranged from \$20,000 per year to \$170,000 per year of which council may be contributing 50% or more..

For this reason, it is important that the PAMP Team understands the probable implementation budget and provides a realistic works schedule. Other less urgent needs should still be noted in case additional funds become available.

STEP 4

MONITOR THE PAMP

As a broad based initiative, the PAMP will need to be regularly reviewed and monitored to check its progress and success. Keep the monitoring process relatively simple to encourage responsibility among all council departments involved in the implementation. A straightforward approach will produce meaningful results and can be a useful tool for council. The content of the monitoring program will depend on performance indicators discussed here.

Typical monitoring program

As an example, your monitoring program should include the information listed below. You may also wish to add data that is specific to your council's PAMP.

- Recording of all proposed pedestrian works in a database accessible to relevant council officers for updating as items are completed.
- Analysis of information already collected regularly by most councils, such as pedestrian crashes, traffic volumes.
- Analysis of data from other sources, such as journey-to-work data from TransportNSW (Department of Transport)

- Collection of information or data specifically for the monitoring program, such as Origin-Destination information, pedestrian counts, user surveys.
- Periodic updating of the PAMP, say every five years.

STEP 5

REVIEW THE PAMP OBJECTIVES

In addition to monitoring and assessing actual implementation, the monitoring process needs to revisit the PAMP objectives. This process should be undertaken about every two years, to confirm whether the PAMP's aims remain appropriate and relevant or need revision.

STEP 6

DO A SWOT ANALYSIS

As part of the monitoring process, the PAMP's methodology needs to be assessed in a continuous improvement process. This helps to ensure that the PAMP is applied in a consistent and appropriate manner throughout urban and regional communities in the local government area.

The assessment can include a SWOT analysis (Strengths/Weaknesses/ Opportunities/Threats) with scoring based on how well the PAMP objectives were achieved.

Be sure to call for comment from a number of people who are not PAMP Team members. This will provide a wider context and ensure that all the major SWOTs are covered. The following table shows some typical responses.

SWOT ANALYSIS FOR TYPICAL PAMP METHODOLOGY	
STRENGTHS AND OPPORTUNITIES	WEAKNESSES AND THREATS
<p>Strengths</p> <ul style="list-style-type: none"> ■ comprehensive community consultation including surveys in minority ethnic communities ■ database completed from work items proposed for PAMP (used to track work progress) ■ strong focus on access and mobility. 	<p>Weaknesses</p> <ul style="list-style-type: none"> ■ no specific resolution of pedestrian crash clusters ■ prioritisation of works based on steering committee and consultant ■ criteria not clear ■ no costings.
<p>Opportunities</p> <ul style="list-style-type: none"> ■ council's existing access audits in the area ■ council's existing strong commitment to accessibility ■ endorsement by council, priorities to be adopted in all work programs by all departments (with flexibility) ■ does not include some suburbs and links to other suburbs. 	<p>Threats</p> <ul style="list-style-type: none"> ■ other departments in council responsible for the work not adopting the PAMP priority (Already overcome with endorsement of the PAMP by council) ■ funding for implementation ■ low response to public consultation.

STEP 7

DETERMINE QUALITY

A rating system worked out by the RTA allocates scores of low, medium or high to the PAMP methodology. You should use a rating score sheet on which the original guiding objectives are measured against the actual PAMP. Scoring can be done at each of the three stages or on completion of the initial draft version. It must be done on the final version before final payment is made. The RTA must be informed of the score achieved by the final version for record-keeping purposes.

An example of a score sheet is shown in the following table. It demonstrates that a PAMP can be assessed at any stage of development, based on ten common guiding objectives. Using a scale of 1 to 10, each guiding objective is rated from not meeting the objective to meeting the objective.

- 0 to 59 is considered Poor: 'Major improvements may be required'
- 60 to 89 is considered Acceptable: 'Some key improvements may be required'
- 90 and above is considered Good: 'Minor improvements may be required'.

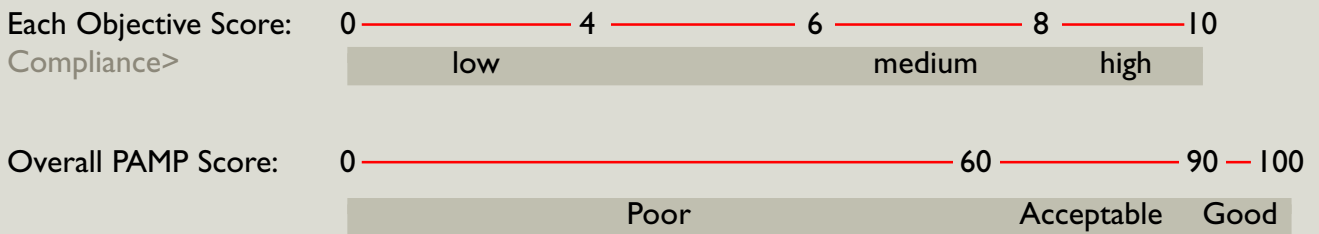
SCORE SHEET FOR TYPICAL PAMP METHODOLOGY

RTA GUIDING OBJECTIVE	SCORE (1)		
	Low 0 to 5	Medium 6 to 8	High 9 to 10
1 To facilitate improvements in level of pedestrian access and priority, particularly in areas of pedestrian concentration.		7	
2 To reduce pedestrian access severance and enhance safe and convenient crossing opportunities on major roads.	5		
3 To identify and resolve pedestrian crash clusters.		6	
4 To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons through the provision of pedestrian infrastructure and facilities which cater to the needs of all pedestrians.		8	
5 To provide links with other transport services to achieve an integrated land use and transport network of facilities that comply with best technical standards.			9
6 To ensure pedestrian facilities are employed in a consistent and appropriate manner throughout NSW.	3		
7 To link existing vulnerable road users plans in a coordinated manner (e.g. bike plans, safer routes to school, maintenance programs, accessible public transport, etc).		6	
8 To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups.			9
9 To accommodate special event needs of pedestrians.	4		
10 To meet obligations under the Commonwealth Disability Discrimination Act (1996).		6	
PAMP TOTAL SCORE (example only) (2)	12	33	18
	63		
OVERALL RATING: ACCEPTABLE			

NOTES

- (1) Each Objective is scored out of 10: low (0 to 5); Medium (6 to 8) and High (8 to 10).
- (2) The maximum score achievable overall is 100.

SCORE SHEET FOR TYPICAL PAMP METHODOLOGY



STEP 8

BUILD ALLIANCES AND PARTNERSHIPS

In recent times the PAMP process has been driven mainly by the RTA and undertaken by councils through consultants. This process is appropriate given the RTA's responsibility for roads and council's experience in working at the local level. There is a case, however, for wider government involvement and funding. After all, the PAMP process addresses many broad issues including liveability, equity, public transport and environmental sustainability. You could consider seeking support from other government authorities in a 'whole of government' approach, involving:

- Department of Planning
- Australian Transport Safety Bureau
- TransportNSW (Department of Transport)
- State Rail Authority
- State Transit Authority
- National Parks and Wildlife Service
- Department of Health and Area Health Services
- State & Regional Development.

More stakeholders may be found in the private sector. You could approach street furniture providers, major shopping centre owners, and potential sponsors for financial or alternative forms of assistance.

CONCLUSION

This Guide offers a variety of ways for you to produce a PAMP that will suit the needs and circumstances of your local council and community. Whatever method you choose, at the core of the PAMP concept is a partnership approach to improving conditions for pedestrians.

HOW OTHER COUNCILS PRODUCED A PAMP

The RTA can provide you with the information on councils, and their consultants, who have used the PAMP approach. These include Auburn, Bankstown, Burwood, Canterbury, Fairfield (only Cabramatta), Hurstville, Marrickville, North Sydney and Wollongong). A list of references and further information is also provided at the end of this Guide.

FOR MORE INFORMATION

Manager
 Pedestrian Policy and Programs
 Roads and Traffic Authority NSW

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GLOSSARY

Centre

A concentrated location which provides a major focus for employment, retailing, cultural and community activities.

Facility user groups

The age profile of pedestrians irrespective of impairments. The groupings are Pre-school, Infants, Primary, Secondary, Young Adults, Adults and Elderly.

Level of service

Freedom to select normal walking speed, ease and convenience of passing and cross and reverse flow movements, often measured in terms of crowd density and flow rate.

Mobility impaired person

A person who is unable to walk, or who is able to walk only short distances, because of loss of the use of one or both legs or other severe medical or physical handicap.

Pedestrian

Any person walking including: a person driving a motorised wheelchair that cannot travel at over 10 kilometres per hour (on level ground), a person in a non-motorised wheelchair, a person pushing a motorised or non-motorised wheelchair, a person in or on a wheeled recreational device or wheeled toy.

Pedestrian crash clusters

Any location up to 100 metres long with three or more pedestrian crashes over five years.

Pedestrian concentration

A precinct in which the most predominant mode of transport is walking.

Road network

System of links and nodes which make up the system of roads on the ground. It includes link characteristics and turning restrictions or prohibitions.

Road-related area

Any of the following:

- an area that divides a road
- a footpath or nature strip adjacent to a road
- an area that is not a road that is open to the public and designated for use by cyclists or animals
- an area that is a road and is open to or used by the public for driving, riding or parking vehicles.

Traffic facilities

Any sign, signal, marking or installation placed or erected under public authority for the purpose of regulating, warning or guiding traffic and other road users.

Vision impaired person

A person who is unable to see, or who has limited sight, because of loss of the use of one or both eyes or other severe sight based disability.

LIST OF RELEVANT GUIDELINES AND STANDARDS

AMCORD, A National Resource Document for Residential Developments

Commonwealth Disability Discrimination Act 1996

NSW Government, Action for Transport 2010, An Integrated Transport Plan for Sydney, 1998

NSW Government, Integrated Transport Strategy - for the Greater Metropolitan Region ; 1995

NSW Government, NSW Health, Walking for pleasure and Health

NSW Government, NSW Healthy Ageing Framework, 1998 - 2003

NSW Government Disability Policy Framework, 1998

NSW Local Government Act 1993, Chapter 7

NSW Roads and Traffic Authority, Technical Direction 98/6, Use of Traffic Calming Devices as Pedestrian Crossings

NSW Government, Department of Local Government Circular to Councils 'A Guide to Major and Special Events Planning', Circular No. 97/65, 1997

Roads and Traffic Authority (NSW), Project description for Development and Implementation of Pedestrian Access and Mobility Plan, 1998a

Roads and Traffic Authority (NSW), Safer Routes to School

Roads and Traffic Authority (NSW), RTA Community Involvement Practice Notes and Resource Manual, 1998b

Roads and Traffic Authority (NSW), Sharing the Main Street, 2000

Roads and Traffic Authority (NSW), EASy Audit 1997 (computer road safety audit program)

FURTHER READING

Active Australia, Simply Active Everyday - A Plan to Promote Physical Activity in NSW, 1998 - 2002

Arup Transportation Planning, How to Prepare a PAMP - Performance Review Report, for RTA NSW, May 2001 (Internal RTA document)

Pedestrian Council of Australia, The Australian Pedestrian Charter, 1999

PAMPs completed. These include Auburn, Bankstown, Burwood, Canterbury, Fairfield (only Cabramatta), Hurstville, Marrickville, North Sydney and Wollongong)

Surface Transportation Policy Project (STPP), 2000, Mean Streets 2000.

TeamWest Regional Priorities group, February 1999, TeamWest Greater Western Sydney 1999 Regional Agenda.

Transport and Traffic Planning Associates, November 1996, Blacktown City Council Luxford Road Pedestrian Crossing Study, Transport and Planning Associates.

Western Sydney Regional Organisation of Councils (WSROC)/ Roads and Traffic Authority (NSW); Access for Persons with Mobility Disabilities - A Manual of Best Practice; 1998

Other references include: local council footpath maintenance and upgrade programs; Regional Transport Strategies and Accessible Public Transport Plans prepared by groups such as Department of Transport, RTA, council; i.e. PAMP study reports; Bikeplan reports; cities for the 21st Century (1995); Streets and roads for all Modes (1996); and NSW Government Staysafe Committee Reports dealing with pedestrian safety.

APPENDICES

- 1 Example of a Project Brief
- 2 Pedestrian Facility List
- 3 Pedestrian Crashes
- 4 Pedestrian Facility User Group (FUG) Profile
- 5 Pedestrian Crossing Locations and Facilities Types - Examples of Legends and Maps
- 6 Attractors and Generators - Examples of Legends and Maps
- 7 Pedestrian Routes
- 8 Examples of Field Audit Sheet and Photographs
- 9 Examples of Work Schedule
- 10 Location Photographs and Problem Definition of Pedestrian Facility





CONSULTANT BRIEF

PEDESTRIAN ACCESS AND MOBILITY PLAN (PAMP)

1. Introduction

The Local Government Area covers some square kilometres in the heartland of It has a population of approximately with a diverse mixture of backgrounds and cultures.

The contains some schools, shopping centres, railway stations, industrial estates and approximately km of local, km of regional andkm state roads. The area is characterised by growth, particularly development.

In order to meet the present and future needs of its residents and visitors from other areas and as part of its Transport Strategy to provide a safe road environment and ensure a co-ordinated approach to transport planning, Council is committed to long term planning for the provision of pedestrian access and mobility to the highest possible standard.

This project also reflects the RTA's initiative to encourage local Councils to improve planning for pedestrian amenity and facility.

2. Project Description

The road network and built environment must cater to the needs of all pedestrians including older persons, pedestrians with mobility and vision impairments, residents, school children, tourists and recreational pedestrians.

The rationale for Pedestrian Access and Mobility Plans (PAMPs) is focussed on State and Local Government investment in safe, convenient and coherent pedestrian infrastructure on key pedestrian routes, which have a high probability of attracting people to walk rather than use their cars. Additionally, PAMPs provide a strategic and coordinated framework for investment in pedestrian infrastructure on routes that have been identified by the community as important to sustainable and enhanced safety, convenience and mobility for walkers.

The core features of PAMPs are broken into three primary stages:

- The first two stages are concerned with the development of the PAMP. The outcome of the PAMP development is the identification of key pedestrian routes, within the study area, which form a coherent pedestrian network. Additionally, an Works Schedule is developed for these key pedestrian routes identifying locations where work is required to ensure that these routes are safe, convenient, coherent and meet current RTA guidelines and relevant Australian Standards.
- The overall focus of the PAMPs is to enhance pedestrian safety, mobility and access. That is, to develop pedestrian networks which enable pedestrians with and without disabilities to enjoy safe, convenient and coherent independent mobility.

TABLE I.1: PEDESTRIAN FACILITY LIST

No	Pedestrian Facility Type (Notes 1, 2, 4, 8 and 9)
Time separated facilities (TSF) - {allotting short time periods for use of a section of road}	
1.	Pedestrian crossing (zebra) (Note 6)
2.	Children's crossings (Note 6)
3.	Pedestrian's actuated traffic signals (mid-block)
4.	Pelican crossings - mid-block
5.	Pelican crossings - intersection
6.	Pedestrians at signalised intersections
7.	Pedestrians at railway crossings
8.	Puffins (ITS)
9.	Cris-cross (Scramble) Crossings.
10.	Enhancement : ■ IOA.Audio Tactile Push Buttons; ■ IOB.Wheel chair detection;
11.	School Crossing Supervisors (Note 5)
12.	Signalised Children's crossing (Note 7)
Physical pedestrian aids (PPA) - {reduce conflict and simplify decisions for pedestrians and drivers}	
1.	Pedestrian refuges
2.	Traffic islands
3.	Medians
4.	Kerb extensions/Blisters and carriageway narrowing's
5.	Loading islands
6.	Safety Zones
7.	Pedestrian fencing
8.	Raised pedestrian crossing.
9.	Raised pedestrian crossing with blisters and handrails.
10.	Elongated pedestrian refuge
11.	Footpath
12.	Footway
13.	Walkways
14.	Pram/Kerb Ramps (to AS 1428.1)
15.	Enhancement : ■ 15A.Tactile/ Guidance Strips (to AS 1428.4);
Physically separated facilities (PSF) {eliminating conflict between vehicles and pedestrians}	
1.	Subways
2.	Bridges
3.	Pedestrian Malls
Integrated facilities (IF) {pedestrians and vehicles shared existing road space}	
1.	Pedestrian (Warning; Regulatory and Directional) signs
2.	Shared Zones
3.	School Zones
4.	Local Area Traffic Management Schemes (Note 3)
5.	Pavement Markings
6.	Lighting for Pedestrian Facilities (Note 10)
7.	Pedestrian refuge in splitter island of a roundabouts

NOTES:

- (1) From AS 1742.10 - 1990 Manual of Uniform Traffic Control Devices Part 10: Pedestrian Control and Protection
- (2) The weighted average cost of providing a facility is used in the Works Schedule of the PAMP
- (3) Part of the Traffic Calming Program (1744)
- (4) Refer to: RTA's Signs and Markings Manual; RTA's Guidelines for Traffic Facilities Manual and Australian Standard 1742 - 1990 manual of uniform traffic control devices
- (5) Refer to: RTA's School Crossing Supervisors Manual (1998)
- (6) Children's crossing with a Pedestrian Crossing (zebra or Marked footcrossings) - Do not install - use is restricted to existing sites only
- (7) Currently under trial and is used in conjunction with a School Supervisor
- (8) Pedestrian facilities may be used to complement each other at a single site eg. TSF1 + PPA4; TSF2 + PPA4; TSF1 + PPA8 + IF3.
- (9) The appropriate Program is determined by the primary user/objective for implementation. See Program Guidelines in SLA and Strategic Plan.
- (10) Lighting within the context of this program may only be funded as an integral component of a facility eg. Floodlighting of a Marked footcrossing on a State Road; floodlighting new footways on bridges. It is categories as detailed in AS 1158.1-1986 (A1, A2, A3, B1, B2, C1, C2, and C3). Also refer to Austroads "Guide to Traffic Engineering Practice - Roadway Lighting - Part 12 (Tables 4.1, 5.1 and 5.2).

TABLE I.2: PEDESTRIAN FACILITY USER GROUP PROFILE

No	Facility User Group (FUG):	Details
		(eg. Total Pedestrian numbers, Mobility Impaired %, Vision Impaired % eg
FUG1	Pre-school (0 - 4 years old);	eg: 30; M10%:V5%
FUG2	Infants (from 5 - 8 years old);	eg: 100; M10%:V5%
FUG3	Primary (from 9 - 11 years old);	eg: 400; M20%:V5%
FUG4	Secondary (from 12 - 17 years old);	eg: 300; M50%:V5%
FUG5	Young Adults (from 18 - 25 years old);	eg: 30; M10%:V5%
FUG6	a) Adults(from 26 - 39 years old); b) Adults(from 40 - 59 years old);	eg: 30; M5%:V5%
FUG7	a) Elderly (from 60 -69 years old +). b) Elderly (from 70+ years old +).	eg: 10; M0%:V5%

NOTES:

(1.)There are not gaps between the age groupings eg: FUG1 = Pre-school 0-4 years of age means the pedestrian has not turned 5 yet.

(2.)Facility User Group Profile: This covers all pedestrians user groups to assist in determining if the facility is still appropriate and relevant.

(3.)For definition of Infants, primary and secondary you will need to contact the Education Department.

(4.)Definition of Facility User Groups (FUG) and Pedestrian User Groups(PUG) are as a guide like the following:

- >FUG 1: Pedestrians who are considered pre-school children, that is they have not turned 5 years of age yet
- >FUG 2: Pedestrians who are considered Infants school children, that is they are more than 5 years of age and have not yet turned 9 years of age
- >FUG 3: Pedestrians who are considered Primary school children, that is they have turned 9 years of age and

- have not yet turned 12 years of age
- >FUG 4: Pedestrians who are considered Secondary school children, that is they have turned 12 years of age and have not yet turned 18 years of age
- >FUG 5: Pedestrians who are considered young adults, that is they have turned 18 years of age and have not yet turned 26 years of age
- >FUG 6: Pedestrians who are considered adults, that is they have turned 26 years of age and have not yet turned 60 years of age
- >FUG 7: Pedestrians who are considered elderly, that is they have turned 60 years of age or are older (60+ years of age).



- The success or failure of a PAMP relies on the level and quality of community and other key stakeholder input into the development process. Community consultation is an integral component of the PAMP development process.
- The third stage of PAMPS is the implementation of the Work Schedule, pedestrian facilities and adjustment to existing infrastructure identified in the Works Schedule on key pedestrian routes. (This refers to the implementation stage in the PAMP guideline [Figure 1: PAMP Methodology]).

A major feature of the project is the use of PAMPs as a means to ensure that pedestrian facilities are employed in a consistent and appropriate manner throughout NSW and meet the needs of the different pedestrian user groups. PAMPs provide a medium for the integration of land use and transport systems.

The plans detail pedestrian concentration, centres of activity, identifiable accident clusters, walking patterns and links between land use, pedestrian facilities (existing and proposed), including pedestrian accessibility, and mobility issues within a general radius of 1.5 km to 2 km from these concentrations and consider recreational walkers (4 km radius).

3. Study Area

The study area comprises the whole/part of the Local Government area in general and in particular will focus on areas of higher pedestrian activity including but not limited to localities such as schools, shopping centres and business districts, railway stations, bus routes and community recreational and sporting facilities.

The study should also consider areas of future development and recommend procedures to ensure inclusion of the PAMP process in planning instruments covering developing areas.

4. Statements of Direction

- 4.1 Integrate consistent and continuous pedestrian networks into the land use and transport system, to facilitate and encourage more walking.
- 4.2 Linkage of pedestrian concentrations to pedestrian networks to facilitate and encourage safe and convenient accessibility and mobility for pedestrians.
- 4.3 Identify clusters and patterns of pedestrian crashes to highlight areas that restrict safe and convenient accessibility and mobility for pedestrians.

4.4 Development and integration of intra and inter pedestrian routes, that form part of a connected pedestrian network.

4.5 Linkage to and between Planning Instruments (e.g. Local Environment Plans (LEPs) and Development Control Plans (DCPs)).

5. Objectives

- 5.1 To facilitate improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration;
- 5.2 To reduce pedestrian access severance and enhance safe and convenient crossing opportunities on major roads;
- 5.3 Identify and resolve pedestrian crash clusters;
- 5.4 To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons through the provision of pedestrian infrastructure and facilities which cater to the needs of all pedestrians;
- 5.5 To provide links with other transport services to achieve an integrated land use and transport network of facilities that comply with best technical standards;
- 5.6 To ensure pedestrian facilities are employed in a consistent and appropriate manner throughout NSW.
- 5.7 Link existing vulnerable road user plans in a coordinated manner (e.g.: Bike Plans, Safer Routes to Schools Plan, Footpath Maintenance Programs, and associated issues to accessible public transport etc);
- 5.8 To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups;
- 5.9 To accommodate special event needs of pedestrians; and
- 5.10 To further Council's obligations under the Commonwealth Disability Discrimination Act (1996).

6. Project Deliverables

- 6.1 Coordinated and pro-active forward infrastructure planning, utilizing all available forms of funding e.g. Council's Section 79c and 94 (Environmental Planning and Assessment Act 1979).
- 6.2 Improved pedestrian facilities asset management in areas of pedestrian concentrations.
- 6.3 Integration of pedestrian facilities network development and corridor management generally within a 1.5 to 2km radius from a pedestrian concentration.

6.4 Strategic pedestrian facilities program development and monitoring.

6.5 Integration partnerships with other transport mode operators.

6.6 Providing appropriate, safe and convenient pedestrian facilities which cater to the needs of all pedestrians.

6.7 Highlight opportunities to develop corridors for recreational walkers (4km radius from pedestrian concentrations).

6.8 Development of a program of works for 5 to 15 years.

7. Study Tasks

The Brief seeks innovative submissions to meet the specific needs of the study area in the Local Government Area and as such, consultant proposals (if it goes to external tender) should not be limited to the tasks listed below. Proposals which depart from the tasks but incorporate new or different approaches that meet the objectives of the PAMP are also welcome.

7.1 Data Collection

Review Existing Pedestrian Network Information

Existing information on pedestrian networks should be reviewed. Examples of existing information include, but are not limited to:

- Safer Routes to Schools facility audits(RTA);
- Footpath maintenance and upgrade programs/plans (Council);
- Regional Transport Strategies and Accessible Public Transport Plans (DoT, RTA, Council); and
- Development Control Plans (Council).

Conduct Network Characteristic and Pedestrian User Group Surveys

Surveys and pedestrian facility (See Table I) audits should be conducted in order to provide a comprehensive picture of current pedestrian demands and needs. At a minimum, the surveys should identify:

- Significant generators and attractors (detail use type) of pedestrian traffic in the AM, PM and late PM peaks;
- Pedestrian trip details such as volume estimates; pedestrian routes; trip origins and destinations; time of day demand; types of pedestrian users; factors that may inhibit walking; pedestrian related crashes; road speed and classification etc.;

- Pedestrian crash concentrations segmented into Facility User Group Profiles (See Table 2); and
- Local users and pedestrian catchment areas outside the local government or study area.

As part of the surveys, interviews with relevant organisations, pedestrian facility user groups (FUG), and other stakeholders (e.g. Industry groups, Chambers of Commerce, Access Committees etc) are to be conducted. It is necessary in the preliminary planning stages to identify all relevant stakeholders and seek their input throughout the PAMP process.

In addition to establishing current walking patterns the surveys and interviews should be used to assist in identifying future pedestrian needs and desire lines.

Review Crash Data

Pedestrian crash data for a minimum five-year period, covering the whole study area, should be analysed. The crash data should be mapped onto GIS spatial maps (if available). Mapping the crash data helps to:

- Identify specific locations with distinct pedestrian crash clusters;
- Identify the relationship between land use and pedestrian crash clusters; and
- Identify pedestrian crashes involving particular pedestrian facility user groups (FUG) (e.g.: children or older pedestrians). Attention should be given to pedestrian casualty crashes.

7.2 Prepare Draft PAMP

- The draft PAMP should clearly identify a continuous and comprehensive, integrated pedestrian network. It is useful to develop a hierarchy within the pedestrian network (e.g. high, medium and low priority pedestrian routes). Factors such as pedestrian concentration and access to public transport and other community facilities will assist in ranking the priority of the identified routes. The method of ranking routes should be documented for future reference.
- A consistent method of ranking routes and assigning priority to facilities must be developed. Ranking systems may include indicators such as delay; exposure; pedestrian concentration; number of pedestrian casualty crashes; proximity or connection with public transport and other facilities etc.
- The draft PAMP must identify deficiencies in the proposed pedestrian network and highlight methods of appropriate treatment. All proposed treatments must cater to the needs of all pedestrians and be built in accordance with

appropriate standards e.g. all kerb ramps must be built strictly in accordance with AS 1428.1 and located strictly in accordance with AS 1428.4.

- The draft PAMP must identify proposed facilities for both existing and projected future pedestrian demand. The draft PAMP should account for future land use development in the study area and the proposed future transport links (e.g. bus routes; light and heavy rail proposals; widened pedestrian footpaths; bike paths; kerb extensions; kerb blisters at intersections; carriageway narrowings etc).

The plan should address, but not be limited to, the following items:

- Identify high, medium and low priority pedestrian routes and link these routes to those of the surrounding local council areas;
- Identify off-street and on-street routes;
- Identify locations where engineering, policy or behavioral safety countermeasures and road crossing facilities could be employed, with suggested solutions;
- Indicate pedestrian paths that are appropriate for shared use with bicyclists. Also identify segregated or exclusive pedestrian paths where appropriate;
- Measures to cater for dispersed pedestrian usage where pedestrian volumes are low and do not justify pedestrian paths, but require safe and convenient pedestrian access;
- Evaluate future DA's, land use changes and Council road and bicycle footpath proposals for their impacts on pedestrians and ability to draw Section 94 contributions based on pedestrian trips generated by new developments;
- Review existing requirements of land use developments to cater for pedestrians within the study area. Identify the associated infrastructure required for these facilities;
- Investigate the scope for dual-mode facilities at public transport interchanges covering, the rail, bus and light rail modes;
- Rail crossing (location and type); and
- Storage and access needs and opportunities for wheel chairs and wheeled electric carts used by older persons and pedestrians with mobility impairments.

A working paper should be prepared outlining the results of the consultation and the community comments.

7.3 Public Exhibition of Draft PAMP

Community consultation should be sought regarding the draft PAMP prior to preparation of the final PAMP.

7.4 Prepare a Final PAMP

The final PAMP should incorporate community feedback. Additionally, It must include the features identified for inclusion in the draft PAMP.

A schedule of proposed works to implement the PAMP is essential. These works should be ranked in order of priority (high, medium and low) over a maximum 15-year period (generally considered the life of the majority of traffic facilities). Concept plans should be developed for high priority works. Identification of appropriate facilities for medium and low priority works should also be included.

8. Management of Project

A project steering group will be established. The consultant will be responsible to the steering group, overseeing the study. The steering group will include representatives from:

- The Council represented by the Project Manager
-
- (contact telephone or facsimile
..... or email))
- Roads & Traffic Authority;
- The NSW Police Service; and
- Other relevant organizations which may be able to offer assistance from time to time e.g. Council's Access Committee.

The Steering Committee will oversee the work and comment on the various documents presented by the Consultant.

The Consultant is expected to liaise with the Steering Committee on a regular basis. Pre investigation/ report meetings shall be held prior to the start of the project and prior to the printing of the draft and final Reports. Other meetings shall be held as required by the Steering Committee to ensure the project is kept on track.

In addition to these meetings, a weekly report addressing the progress of the project is required. In most cases a brief report of progress by fax or email to the Project Manager on the Monday morning of each week reporting on the progress of the previous weeks work relative to the study timetable will be sufficient.

9. Resources

The following resources may be utilized during the development of the PAMP. Resources available to Council may be made available to the Consultant upon appointment.

- Any relevant PAMPS (They include Auburn; Bankstown; Burwood; Canterbury; Fairfield (only Cabramatta); Hurstville; Marrickville; North Sydney and Wollongong);
- Any relevant Bikeplans;
- WSROC / RTA: Access for People with Mobility Disabilities - A Manual of Best Practice (1998);
- AMCORD - A National Resource Document for Residential Developments;
- AUSTRROADS publication: Guide to Traffic Engineering Practice - Part 13 - Pedestrians;
- Integrated Transport Strategy - for the Greater Metropolitan Region (1995);
- Cities for the 21st Century (1995);
- Streets and Roads for all Modes (1996);
- Staysafe Committee Reports dealing with Pedestrian Safety;
- Council's Aerial photos;
- Council's Development Control Plans (DCPs);
- Council's Mobility Maps;
- Roads and Traffic Authority NSW: Sharing the Main Street;
- Commonwealth Disability Discrimination Act 1996
- Council's Works Improvement Program - Path Paving Construction and Pedestrian Facilities; and
- Australian Standards:
 - AS/NZS 1158.3.1 - 1999: Roadway Lighting Part 3.1: Pedestrian area (Category P) lighting - Performance and installation design requirements.
 - 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
- AUSTRROADS Guide to Traffic Engineering Practice Part 13: Pedestrians, 1995
- AUSTRROADS Guide to Traffic Engineering Practice Part 14: Bicycles, 1999.

- Standards Australia/AUSTRROADS: Road Safety Audit, 1994.
- Active Australia, Simply Active Everyday - A Plan to Promote Physical Activity in NSW 1998 - 2002
- RTA's Pedestrian Access and Mobility Plan - How to Prepare a PAMP - Guidelines
- Other references include: local Council footpath maintenance and upgrade programs; Regional Transport Strategies and Accessible Public Transport Plans prepared by groups such as Department of Transport, RTA, Council; PAMP study reports; Bikeplan reports; cities for the 21st Century (1995); Streets and roads for all Modes (1996); and NSW Government Staysafe Committee Reports dealing with pedestrian safety etc.

10. Budget/Timing

A cost estimate for the project is to be included in the proposal along with the identified activities/milestones, designated hourly rates for the nominated project team members and estimated time inputs for and specific responsibilities of each member of the project team and support staff. Additionally, cost estimates for report preparation and printing, plan preparation and printing, and travel will be required. There will be no additional payments, other than as agreed prior to the commencement of the study.

The budget is also to include all disbursements expected to be incurred by Council or on Council's behalf.

Submissions should specify a timetable, commencement and completion date and details of resources available to complete the study in the nominated time. Funding for the study has been approved on a shared arrangement with the Roads & Traffic Authority and accordingly the Authority and Council would require the study to be completed by The Consultant should specify in the submission any difficulty in complying with this timetable.

11. Report

Council requires six (6) bound copies of the draft report, from which Council will retain four (4) copies for its consideration and forward two (2) copies to the RTA for comment.

The final report is to be suitably bound and shall clearly indicate the findings and recommendations from the PAMP, with supporting details and

documentation. An executive summary of the PAMP shall be provided at the beginning of the report. Number of copies shall be as follows:

- (i) Ten (10) bound and one (1) unbound copies of the final report. Colour copies of the final PAMP plan should be provided with each final report.
- (ii) Computer discs of the text of the final report. The word processing program required is
- (iii) An internet version of the report and maps.
- (iv) GIS maps based on package.

12. General

12.1 Contractual Arrangements

The successful consultant must confirm acceptance by letter of the commission, in accordance with the Brief, before any work can commence.

Final contract documents will include Council's Brief, the Consultant's accepted tender/quote and both Council's and the Consultant's final letter(s) of acceptance.

12.2 Insurance

The Consultant is responsible for taking out insurance giving cover to them, their employees and any agent engaged by the Consultant. Professional Indemnity and Public Liability shall have a minimum cover of \$10 million for each and every event.

The Consultant's employees shall be covered by Workers Compensation as required by the Statute. The successful Consultant shall be expected to produce evidence of cover, noting the interest of Council as principle.

12.3 Payment

The principle required to be observed is that the Consultant's tender must identify with clarity, certainty and detail, the scope of total payments to be made and received under the Contract.

Progress payments will be made on submission of accounts detailing project expenditure at nominated stages (milestones). Payments shall be made at the following stages:-

- Stage 1** - Completion of "Draft Report" (40% of budget)
- Stage 2** - Completion of "Final Report" (40% of budget)
- Stage 3** - Completion of Contract (20% of budget)

The final payment of 20% shall be made upon approval of the Final Report by The Steering Committee.

Council is willing to consider an alternative payment system to the above, based on agreed milestones if so desired by the Consultant. Any variations to the suggested payment schedule above must be detailed in the Consultant's response to the Brief.

The Council will not make any payments where it is considered that the Consultant's performance is unsatisfactory in terms of the Brief described herein.

The consultancy may be terminated by Council under the direction of Steering Committee if the successful consultant:

- (a) Fails to complete the project tasks specified in the Brief within the agreed time schedule; or
- (b) Does not complete each project to a proper standard in the opinion of the Steering Committee.

Payment of fees to the consultant will cease if the consultancy is terminated. Upon termination of the consultancy there will be no payment of further stages.

13. Consultants

13.1 Experience

It is expected that the successful Consultancy will include professionals with a minimum 5 - 10 years experience in traffic management and planning and associated disciplines, and have been involved with a wide variety of projects. An understanding of the workings of Local Government is essential along with knowledge of local environmental plans and development control plans.

Submissions to this Brief should include details of experience and ability of all Study Teams members and should clearly demonstrate an ability to perform the required work. These details should accompany the quotation for consulting services. The submission should also include a Project Client Summary emphasizing projects of a similar nature to that outlined in this Brief along with contact names and numbers. The submission should also include a considered opinion of the Brief, detailing a thorough understanding of the Brief requirements.

13.2 Key Persons

Consultants are required to identify which members of their project team, if any, are regarded as essential to the performance of the project.

The Consultant should nominate a Project Manager to represent the Consultant at all meetings and discussions.

14. Provision for the Termination of Contract

In addition to a recommendation of Council's project manager to terminate the contract, there are other contractual conditions which may lead to Council terminating the contract. These are as follows:-

- Non-performance - if the consultancy fails to complete the assignment in accordance with the agreement, the right to terminate the contract forthwith is reserved.
- Unethical or unprofessional conduct - evidence of such will lead to termination of the contract.
- Criminal activity - where the consultant is found guilty of dishonest conduct or becomes bankrupt during the contract period.
- Unauthorised disclosure of information, non compliance with secrecy and confidentiality provisions and unauthorised contact with the media - no public statement or press release shall be issued without express permission. The consultancy shall respect the secrecy and confidentiality of Council information; and
- Conflict of Interest - The consultancy should declare any potential or actual conflict of interest without prior agreement. If a subsequent disclosure is made this will constitute grounds for termination.

Should termination of the contract be carried out by Council the consultancy will forfeit the balance of monies unpaid at the time of termination.

15. Conditions of Engagement

The study shall be carried out in accordance with AS 1422 (Int) - 1993 "General Conditions for Engagement of Consultants."

16. Agreement

When the recommended consultant has been selected, a written agreement will be required prior to the work commencing.

17. Definitions

- (a) Road Network
System of links and nodes which make up the network of roads on the ground. It includes link characteristics and turning restrictions or prohibitions.
- (b) Traffic Facilities
Any sign, signal, marking or installation placed or erected under public authority for the purpose of regulating, warning or guiding traffic and other road users.
- (c) Pedestrian Accident Cluster
Any location up to 100m long with 3 or more pedestrian accidents over 5 years.
- (d) Pedestrian
Any person walking and includes:
- a person driving a motorized wheelchair that cannot travel over 10 kilometers per hour (on level ground);
 - a person in a non-motorized wheelchair;
 - a person pushing a motorized or non-motorized wheelchair; and
 - a person in or on a wheeled recreational device or wheeled toy
- (e) Pedestrian Concentration
Refers to a precinct in which the most predominant mode of transport is walking.
- (f) Mobility Impaired Person
Means a person who is unable to walk, or who is able to walk only short distances, because of loss of the use of one or both legs or other severe medical or physical handicap.
- (g) Vision Impaired Person
Means a person who is unable to see, or who has limited sight because of loss of the use of one or both eyes or other severe sight based disability.
- (h) Centre
Means a concentrated location which provides a major focus for employment, retailing, cultural and community activities.
- (i) Facility User Groups
Means the age profile of the pedestrians irrespective of impairments. The groupings are Pre-School, Infants, Primary, Secondary, Young Adults, Adults and Elderly.

TABLE 2.1: PEDESTRIAN FACILITY LIST

No	Pedestrian Facility Type (Notes 1, 2, 4, 8 and 9)
Time separated facilities (TSF) - {allotting short time periods for use of a section of road}	
1.	Pedestrian crossing (zebra) (Note 6)
2.	Children's crossings (Note 6)
3.	Pedestrian's actuated traffic signals (mid-block)
4.	Pelican crossings - mid-block
5.	Pelican crossings - intersection
6.	Pedestrians at signalised intersections
7.	Pedestrians at railway crossings
8.	Puffins (ITS)
9.	Cris-cross (Scramble) Crossings.
10.	Enhancement : <ul style="list-style-type: none"> ■ 10A. Audio Tactile Push Buttons; ■ 10B. Wheel chair detection;
11.	School Crossing Supervisors (Note 5)
12.	Signalised Children's crossing (Note 7)
Physical pedestrian aids (PPA) - {reduce conflict and simplify decisions for pedestrians and drivers}	
1.	Pedestrian refuges
2.	Traffic islands
3.	Medians
4.	Kerb extensions/Blisters and carriageway narrowing's
5.	Loading islands
6.	Safety Zones
7.	Pedestrian fencing
8.	Raised pedestrian crossing.
9.	Raised pedestrian crossing with blisters and handrails.
10.	Elongated pedestrian refuge
11.	Footpath
12.	Footway
13.	Walkways
14.	Pram/Kerb Ramps (to AS 1428.1)
15.	Enhancement : <ul style="list-style-type: none"> ■ 15A. Tactile/ Guidance Strips (to AS 1428.4);
Physically separated facilities (PSF) {eliminating conflict between vehicles and pedestrians}	
1.	Subways
2.	Bridges
3.	Pedestrian Malls
Integrated facilities (IF) {pedestrians and vehicles shared existing road space}	
1.	Pedestrian (Warning; Regulatory and Directional) signs
2.	Shared Zones
3.	School Zones
4.	Local Area Traffic Management Schemes (Note 3)
5.	Pavement Markings
6.	Lighting for Pedestrian Facilities (Note 10)
7.	Pedestrian refuge in splitter island of a roundabouts

NOTES:

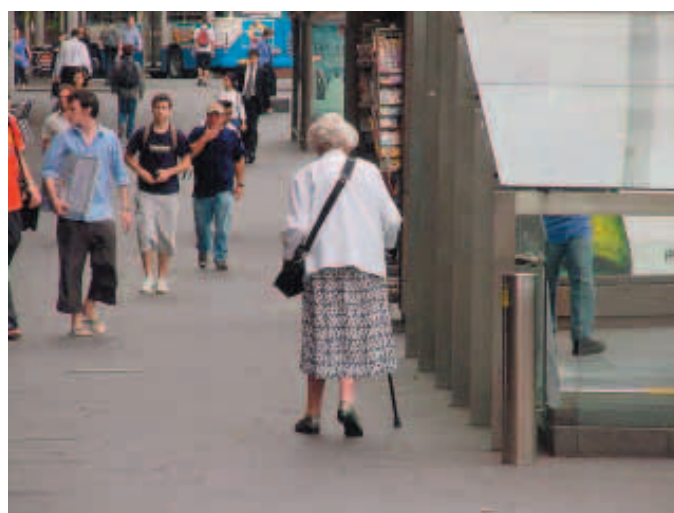
- (1) From AS 1742.10 - 1990 Manual of Uniform Traffic Control Devices Part 10: Pedestrian Control and Protection
- (2) The weighted average cost of providing a facility is used in the Works Schedule of the PAMP
- (3) Part of the Traffic Calming Program (1744)
- (4) Refer to: RTA's Signs and Markings Manual; RTA's Guidelines for Traffic Facilities Manual and Australian Standard 1742 - 1990 manual of uniform traffic control devices
- (5) Refer to: RTA's School Crossing Supervisors Manual (1998)
- (6) Children's crossing with a Pedestrian Crossing (zebra or Marked footcrossings) - Do not install - use is restricted to existing sites only
- (7) Currently under trail and is used in conjunction with a School Supervisor
- (8) Pedestrian facilities may be used to complement each other at a single site eg. TSF1 + PPA4; TSF2 + PPA4; TSF1 + PPA8 + IF3.
- (9) The appropriate Program is determined by the primary user/objective for implementation. See Program Guidelines in SLA and Strategic Plan.
- (10) Lighting within the context of this program may only be funded as an integral component of a facility eg. Floodlighting of a Marked footcrossing on a State Road; floodlighting new footways on bridges. It is categories as detailed in AS 1158.1-1986 (A1, A2, A3, B1, B2, C1, C2, and C3). Also refer to Austroads "Guide to Traffic Engineering Practice - Roadway Lighting - Part 12 (Tables 4.1, 5.1 and 5.2).

TABLE 4.1 : PEDESTRIAN FACILITY USER GROUP PROFILE

No	Facility User Group (FUG):	Details
		(eg. Total Pedestrian numbers, Mobility Impaired %, Visually Impaired % eg
FUG1	Pre-school (0 - 4 years old);	eg: 30; M10%:V5%
FUG2	Infants (from 5 - 8 years old);	eg: 100; M10%:V5%
FUG3	Primary (from 9 - 11 years old);	eg: 400; M20%:V5%
FUG4	Secondary (from 12 - 17 years old);	eg: 300; M50%:V5%
FUG5	Young Adults (from 18 - 25 years old);	eg: 30; M10%:V5%
FUG6	a) Adults(from 26 - 39 years old); b) Adults(from 40 - 59 years old);	eg: 30; M5%:V5%
FUG7	a) Elderly (from 60 -69 years old +). b) Elderly (from 70+ years old +).	eg: 10; M0%:V5%

NOTES:

- (1.) There are not gaps between the age groupings eg: FUG1 = Pre-school 0-4 years of age means the pedestrian has not turned 5 yet.
- (2.) Facility User Group Profile: This covers all pedestrians user groups to assist in determining if the facility is still appropriate and relevant.
- (3.) For definition of Infants, primary and secondary you will need to contact the Education Department.
- (4.) Definition of Facility User Groups (FUG) and Pedestrian User Groups(PUG) are as a guide like the following:
 - >FUG 1: Pedestrians who are considered pre-school children, that is they have not turned 5 years of age yet
 - >FUG 2: Pedestrians who are considered Infants school children, that is they are more than 5 years of age and have not yet turned 9 years of age
 - >FUG 3: Pedestrians who are considered Primary school children, that is they have turned 9 years of age and have not yet turned 12 years of age
 - >FUG 4: Pedestrians who are considered Secondary school children, that is they have turned 12 years of age and have not yet turned 18 years of age
 - >FUG 5: Pedestrians who are considered young adults, that is they have turned 18 years of age and have not yet turned 26 years of age
 - >FUG 6: Pedestrians who are considered adults, that is they have turned 26 years of age and have not yet turned 60 years of age
 - >FUG 7: Pedestrians who are considered elderly, that is they have turned 60 years of age or are older (60+ years of age).



Examples of Legend and Map



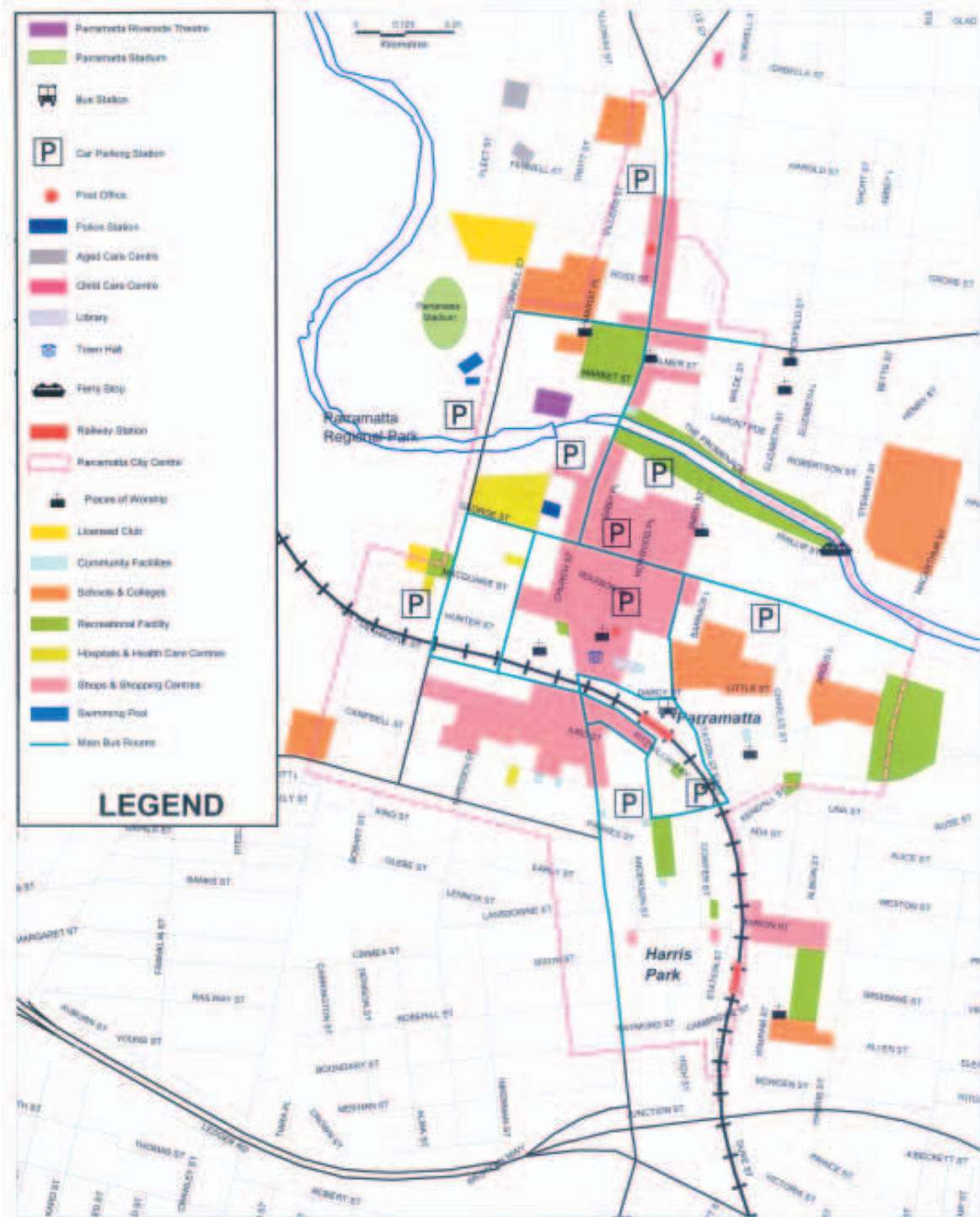
NOTE:
 (1.) See Pedestrian Facility Legend detailed in Table 5.1 on the next page, for a full list of symbols.

TABLE 5.1 PEDESTRIAN FACILITY LEGEND

No	Pedestrian Facility Type	Symbol (in Red on Maps)
Time separated facilities (TSF) - {allotting short time periods for use of a section of road}		
TSF1.	Pedestrian crossing (zebra)	
TSF2.	Children's crossings	
TSF3.	Pedestrian's actuated traffic signals (mid-block)	
TSF4.	Pelican crossings - mid-block	
TSF5.	Pelican crossings - intersection	
TSF6.	Pedestrians at signalised intersections	
TSF7.	Pedestrians at railway crossings	
TSF8.	Puffins (ITS)	
TSF9.	Cris-cross (Scramble) Crossings.	
TSF10.	Enhancement : ■ 10A. Audio Tactile Push Buttons; ■ 10B. Wheel chair detection;	
TSF11.	School Crossing Supervisors	
TSF12.	Signalised Children's crossing	
Physical pedestrian aids (PPA) - {reduce conflict and simplify decisions for pedestrians and drivers}		
PPA1.	Pedestrian refuge	
PPA2.	Traffic islands	
PPA3.	Medians	
PPA4.	Kerb extensions/Blisters and carriageway narrowing's	
PPA5.	Loading islands	
PPA6.	Safety Zones	
PPA7.	Pedestrian fencing	
PPA8.	Raised pedestrian crossing.	
PPA9.	Raised pedestrian crossing with blisters and handrails.	
PPA10.	Elongated pedestrian refuge	
PPA11.	Footpath	
PPA12.	Footway	
PPA13.	Walkways	
PPA14.	Pram/Kerb Ramps (to AS 1428.1) - if tactile ground tiles place a T after the symbol (ΣT)	
PPA15.	Enhancement : * 15A. Tactile/ Guidance Strips (to AS 1428.4);	
Physically separated facilities (PSF) {eliminating conflict between vehicles and pedestrians}		
PSF1.	Subways	
PSF2.	Bridges	
PSF3.	Pedestrian Malls	
Integrated facilities (IF) {pedestrians and vehicles shared existing road space}		
PSF1.	Pedestrian (Warning; Regulatory and Directional) signs	
PSF2.	Shared Zones	
PSF3.	School Zones	
PSF4.	Local Area Traffic Management Schemes	
PSF5.	Pavement Markings	
PSF6.	Lighting for Pedestrian Facilities	
PSF7.	Pedestrian refuge in splitter island of a roundabouts	
MISCELLANEOUS		
M.1.	High Priority Routes	
M.2.	Medium Priority Routes	
M.3.	Facility User Groups ranges from 1 to 7 (insert the number: see Appendix 4 eg. FUG 3 show as ③)	
M.4.	Level of Service (A to F, see Austroads Part 13) eg. if B show as %B	
M.5.	Threshold to an Local Area Traffic Management Schemes	
M.6.	Speed Hump	
M.7.	Roundabout	

EXAMPLES OF LEGEND AND MAP

Colours and symbols should correspond to Council planning scheme maps and Department of Planning conventions. Ideally the information can be coded direct to a Geographical Information System (GIS) maintained by Council.



The priority of the pedestrian route has must be declared as either High (H), Medium (M) or Low (L). This must be combined with other supporting information such as major Facility User Group (FUG) and level of Service (LoS) with the appropriate symbol for the pedestrian facility (see Appendix 5).



Reference must be made to the RTA's Pedestrian Facilities List (Appendix 2)

- The column headings can change but the should attempt to cover: Location Description with a reference to the BD location; Item type: these are either Paths of Travel, Major Intersections, Pedestrian Crossing's Fixtures, Barriers, Drainage (Gratings), etc. ; Considerations that draw on the Pedestrian Facility List in Appendix 2 and should be mentioned Yes/No; Issues for Attention, If it is Conforming with RTA/ Australian Standards High (H), Medium (M), Low (L);Action required; Priority (High (H), Medium (M), Low (L), under consideration (C)) based on Table Table 4 of the PAMP Guide; Location Photo Number; Cost Estimate; Location Identification Number (ID).

Location	Item	Considerations	Yes/No	Issues for attention	Non conformity HML	Action Description (including length if relevant)	Priority	Location/ Photo No.	Cost Estimate	ID Number
ALPHA St (North) Flushcombe Rd	Balmoral St	Paths of Travel	Gradients 1-20	Y	Greater than 1:20 Gradient 1:14 at rear of Westpoint carpark					
		Widths: Arterial	1800		2400mm-1500mm					
		Main	1500							
		Secondary	1200							
Carpark exit cnr Balmoral St		Kerb ramp/pram Crossing	N	Lips on kerb ramps	H	replace kerb ramps		PI		
		Design				Replace kerb ramps	H		\$800	BC(H)
		Location								
Cnr Patrick St		Condition of footpath	N	Minor cracking	H	maintenance on footpath 10m	P2			
		Uneven surface				Repair minor cracking 10m	M		\$200	BC38(M)
		Drainage								
		Slippery Surface								
		Vertical clearance	2000	Y						
		Service maintenance entries	N/A							
		Visual and tactile indicators	N							
		Obstructions								
Cnr Patrick St		Poles	Y	Electrical pole	H	relocate to kerb side				
		Signs				For consideration by Council: Consult with relevant departments to relocate pole away from path of travel	C			B127(c)
						For future reference, ensure that path of travel is not obstructed	C			B128(c)

Reference must be made to the RTA's Pedestrian Facilities List (Appendix 2)

- The column headings can change but they should attempt to cover: Identification Number (ID) of the location; Approach Number at the intersection (App.) and Page Reference (Page Ref.) in the Field Audit Sheets; If a photo was taken (Photo) and its Number; Location of the facility; Work Description to be undertaken with a reference to the RTA's Pedestrian Facilities List; and Cost Estimate of the works.

SECTION I BLACKTOWN CBD			HIGH PRIORITY - NEW WORKS		
ID No.	App. 4 Page Ref	Photo	Location	Work Description and Number of facilities in works	Cost Estimate
BC1(H)	1	Y	Alpha St (North), Carpark exit cnr Balmoral St	Replace kerb ramps (2)	\$800
BC2(H)	1		Alpha St (North), Flushcombe Rd intersection	Replace kerb ramps (2)	\$800
BC3(H)	4	Y	Alpha St (South), Coles entrance	Replace kerb ramps (2)	\$800
BC4(H)	7	Y	Prince St (West), Second Ave	Replace kerb ramp on north side (1)	\$400
BC5(H)	7		Prince St (West), Fourth Ave	Install kerb ramps (2)	\$800
BC10(H)	16		First Ave (North) Zolyomi Lane	Install kerb ramps (2)	\$800
BC15(H)	43		Balmoral St (East), Richmond St intersection	Install kerb ramp on south side (1)	\$400
BC16(H)	43		Balmoral St (East), Alpha St intersection	Replace kerb ramp (1)	\$400
BC18(H)	47		Third Ave (East), Prince St	Install kerb ramp on west side (1)	\$400
BC19(H)	48		Third Ave (East) Sunnyholt Rd	Relocate kerb ramps (2)	\$800
BC21(H)	50		Third Ave (West), Prince St intersection	Install kerb ramps (2)	\$800
BC22(H)	50		Third Ave (West), Prince St intersection	Relocate pedestrian crossing button to within 1m of kerb ramp	\$2000
BC23(H)	53		Sunnyholt Rd (East), Sackville St intersection	Relocate pedestrian crossing button to within 1m of kerb ramp	\$2000
BC24(H)	53		Sunnyholt Rd (East), Sackville St intersection	Install kerb ramps (2)	\$800
BC26(H)	58	Y	Sunnyholt Rd (East), Devitt St intersection	Replace kerb ramp (1)	\$400
BC28(H)	63		Prince St (East), Fourth Ave intersection	Install kerb ramps (2)	\$800
BC32(H)	74	Y	Flushcombe Rd (West), Westfield Pl	Install kerb ramp to allow access across roll top kerb	\$800
BC33(H)	83		Main St (North), Baronta St/Griffiths St intersections	Relocate kerb ramps (east on Baronta, east on Griffiths) (2)	\$800
BC34(H)	87	Y	Main St (South), Hereward Hwy/Blacktown Hospital	Replace kerb ramps (4)	\$1600
BC36(H)	88		Main St (South), Newtown Rd/Marcell Cnr intersections	Replace kerb ramps (Newtown Rd-West; Marcel Cr- east, west (3)	\$1,200
BC37(H)	100	Y,Y	Westfield Plaza, David Lane	Install kerb ramps (2)	\$800
Subtotal for new works					\$18,400

Photo Location:

UBD Map Reference:

Photo Number:



DESCRIPTION OF PROBLEM:

WORK TO BE UNDERTAKEN:

DESIGN DRAWINGS REQUIRED:

COST OF WORKS:

PRIORITY:



Roads and Traffic Authority
www.rta.nsw.gov.au