

# *Warren Shire Council*



***DRAFT***  
***Pedestrian Access and Mobility Plan***  
***Report, November 2014***

*Accessible Public Domain*

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## Executive Summary

Warren Shire Council has obtained assistance from the NSW Roads and Maritime Services (RMS) to jointly fund the development of Pedestrian Access and Mobility Plans (PAMPs) for the Town of Warren and the Village of Nevertire, and engaged *Accessible Public Domain (APD)*, an Access Consultancy, to assist in their development.

The ultimate aim of a PAMP is to deliver safe, equitable, connected and dignified paths of travel for pedestrians of all ages and abilities. To achieve this aim it is necessary to firstly identify elements of the public domains of the Town and Village that render pedestrian paths of travel unsafe, inequitable or undignified, and determine where existing paths need to be connected to provide continuity of passage.

Those elements were identified during the first stage of the project – surveys of the study areas within Warren and Nevertire, undertaken from 26 to 30 September 2014. The opportunity was also taken to survey Collie and to include comments on that Village in the Access Audit Report.

This Draft PAMP Report, together with the Access Audit Report and photographs, shows the condition of existing pedestrian paths of travel and identifies a range of issues that confront the citizens of Warren Shire and its visitors.

As the population ages, it is necessary for Councils to ensure that the physical infrastructure under their control is constructed and maintained in a condition that allows residents to retain their preferred lifestyles and to enable them to remain active members of their community for as long as possible. It is noted that the percentage of Warren residents aged 55 and older is higher than that for New South Wales.

Elements of the public domain that may have posed no problems in the past may become problems later in life. For example, older pedestrians take longer to cross wide streets; people with mobility disabilities have difficulty with kerb ramps that have a lip; and people who use wheelchairs or mobility scooters need passing areas so that they may safely pass other wheelchair or mobility scooter users.

On 14 August 2014, the New South Wales Government passed the Disability Inclusion Act, which will commence formally in December 2014. The Disability Inclusion Act requires Councils to consider the needs of people with disability in all planning proposals, and to develop a Disability Inclusion Action Plan.

The adoption of the Final Pedestrian Access and Mobility Plan will be a significant step in the development of Council's Disability Inclusion Action Plan.

The Access Audit Report identifies paths of pedestrian travel and other facilities that require attention and proposes actions to overcome the problems. Actions are given a priority of 1 to 4, depending on the need to rectify the problems in the short, medium or long term. Priorities are influenced by the number of attractors in the vicinity, the road hierarchy and the need to comply with Australian Standards.

Although there is currently no Australian Standard that specifically targets the public domain, there are Australian Standards that require compliance with some elements of the public domain; for example, kerb ramp design must comply with AS1428.1 (2009), and bus stop design must comply with the Disability Standards for Accessible Public Transport, 2002 (DSAPT).

The Disability (Access to Premises – Buildings) Standards, 2010, were established under Section 31 of the Disability Discrimination Act, 1992, and incorporated into the Building Code of Australia on 1 May 2011.

One of these Standards (AS1428.1: Design for access and mobility. Part 1: General requirements of access – New building work) provides design parameters for elements of the public domain such as the construction or refurbishment of public toilets, and the design of kerb ramps.

The DSAPT sets a timetable for all public transport and accompanying infrastructure to be fully accessible by the 31 December 2022. That is, all bus stops under Council's control, except School Bus Zones, need to meet the criteria for accessibility by that time.

Transport for New South Wales provides funding for bus facility improvement projects under the Country Passenger Infrastructure Grants Scheme. As a submission for funding requires an Access Compliance Report prepared by an Accredited Access Consultant a report has been included on the condition of TrainLink Bus Stops in Warren and Nevertire, **see Item 6.07**.

Implementation of the Access to Premises and Accessible Public Transport Standards not only provides assistance to people who have a disability and their Carers, but to aged citizens, parents with strollers and small children, people with luggage and delivery personnel, as well. The removal of hazards also reduces the likelihood that ambulant people will experience a trip or fall, which may result in a disability.

Although some of the works proposed in the Access Audit Report may not be achieved in the short term, or may be costly to implement, the Audit has identified several actions that can improve the safety and walkability of the public domain in the short term.

Of particular concern is the need to ensure that paths of travel are free of hazards for people who are blind, deafblind, or who have some other form of vision impairment - hazards such as overhanging branches or vehicles parked on a footway.

The Access Audit Report identifies where pedestrian paths of travel require maintenance; where they can be extended; and where additional pedestrian facilities might be introduced. It has also identified access issues at Council facilities such as public toilets and parks, and identifies some strategies to enhance local tourism.

The PAMP report remains an active document that links with other Council Plans, and the Access Audit Report remains an important resource for Council Officers.

### 1.01 Background.

In 2012, the New South Wales State Government introduced its Long Term Transport Master Plan, a strategy that will integrate land use planning with all modes of transport, including walking and cycling.

In 1998, the Roads and Traffic Authority of New South Wales (RTA) - now the Roads and Maritime Services (RMS) - introduced the Pedestrian Access and Mobility Plan (PAMP), a program to ensure better planning and design for pedestrian facilities.

A PAMP is a strategic plan that assists Councils to improve or introduce new pedestrian facilities that are safe, convenient and connected, and to help develop policies that will encourage greater participation in the community by people of all ages and abilities; help residents to maintain their preferred lifestyle; and provide encouragement for travellers to linger long enough, or stay for an extended period, so that they can experience the many attributes of the Shire.

This valuable Council-State partnership will help to achieve some of the aims of the *Warren Shire Community Strategic Plan 2022*:

- *Maintain streets and footpaths to a high level of usability;*
- *Improve transport infrastructure;*
- *Enhance the experience of visitors;*
- *Provide good quality community infrastructure; and*
- *Ensure that all community members have the opportunity to participate in the Shire's progress and development through the Community Engagement Strategy*

The PAMP provides Council with the opportunity to review its existing policies, strategies and designs in relation to roads and footways, and will link with Delivery and Operational Plans.

A PAMP is developed in three stages. Stage I requires an Access Audit of pedestrian paths of travel within defined study areas to identify existing or potential hazards. This was carried out by [APD](#) in September 2014, and involved a visual assessment and photographic survey of footways; roadways; open spaces and pedestrian facilities.

Stage II of the project involves the preparation of this Draft Report and the development of the Access Audit Report, which includes Draft priorities for Council's consideration.

Stage III will involve the implementation of the Plan by Council.

The final PAMP will assist Council in developing strategies to improve access to the Shire's many facilities and areas of historical, cultural and ecological significance, and to assist in developing partnerships with the NSW State Government, developers, local businesses, community groups and other stakeholders.

### 1.02 Funding of the PAMP

Funding for Stages I and II is provided on a 50-50 basis between Council and the NSW Roads and Maritime Services. Some of the works identified for implementation in Stage III may be included in Council's annual Works Programs, but some of the work identified may represent a significant cost.

It is important to recognise that Council may not be able to fund such works, given its current level of expenditure on pedestrian facilities. In addition, it is also important to note that there is a high level of competition for RMS financial assistance from other Councils and only a limited amount of funding is available.

Funding for PAMP works on State Roads is fully provided by the RMS, and works on Regional and Urban Roads is funded on a 50-50 basis by the RMS and Council.

One of the main drivers for the preparation of a PAMP is to demonstrate that Council has a clear, documented plan for pedestrian access and mobility, which will place Council in a better position to access grants and funding from other sources to assist in the implementation of PAMP projects.

### 1.03 Study Objectives

The objectives of this PAMP are:

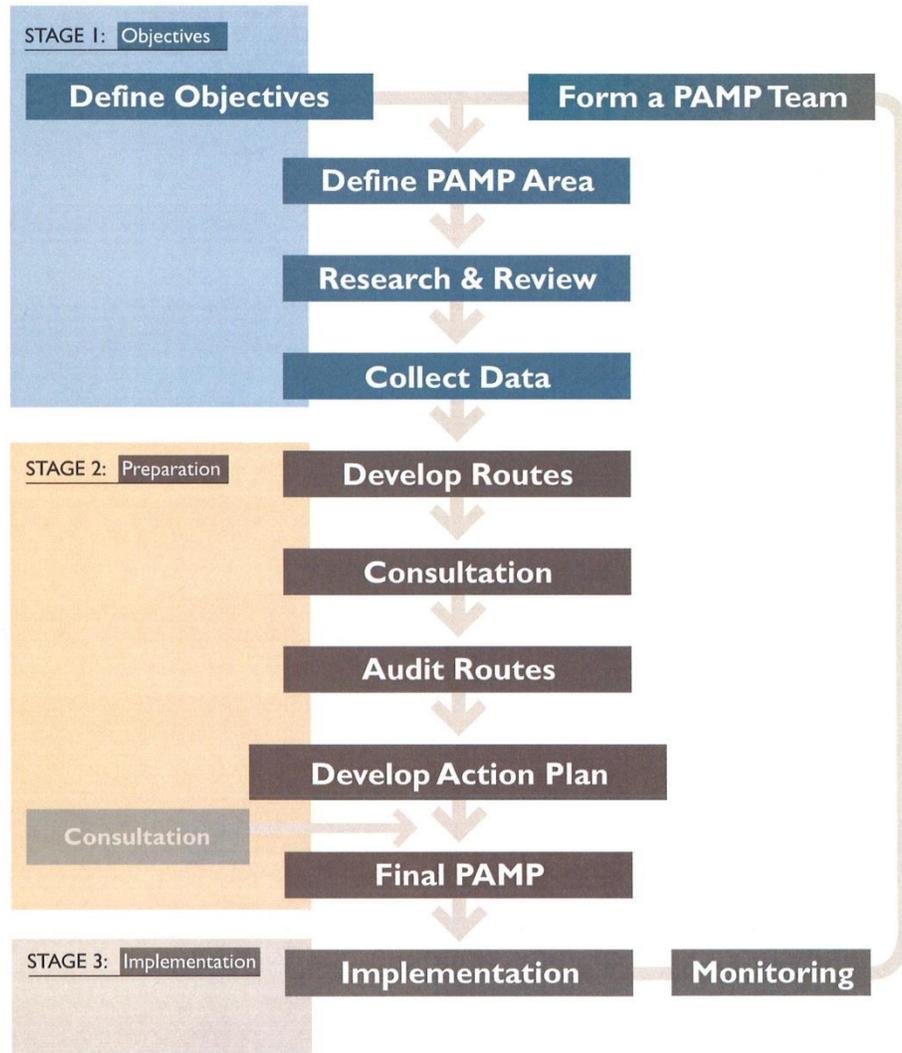
- To facilitate improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration
- To reduce pedestrian access severance and enhance safe and convenient crossing opportunities on roads
- To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons by providing infrastructure and facilities which also cater to their needs
- To provide links with other transport services to achieve an integrated land use and transport network of facilities that comply with technical standards
- To ensure pedestrian facilities are employed in a consistent and appropriate manner throughout NSW
- To ensure pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups
- To accommodate special event needs of pedestrians, e.g. 2015 Anzac Day Centenary Ceremonies
- To further Council's obligations under the Commonwealth Disability Discrimination Act, 1992

Although not an objective of this Project, *APD* has taken the opportunity to comment on potential Shared Pedestrian and Bicycle Paths.

HOW TO PREPARE A PAMP METHODOLOGY

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



#### **1.04 Benefits of a PAMP**

The RMS Guidelines state that a PAMP can provide transportation, environmental and social benefits to the community, such as:

- Appropriate pedestrian facilities
- Improved access for people of all ages and abilities
- Safer pedestrian paths of travel and road crossings
- A reduction in the number of pedestrian falls and injuries and, as a consequence, a reduction in the number of claims against Council
- Links with transport services to improve land use and a better transport facilities network
- Integration with Council's planning instruments such as Local Environmental Plans, Development Control Plans and Strategic Plans.

#### **1.05 Disability Standards**

The RMS Guidelines require compliance with the Disability Discrimination Act, 1992, (DDA) and Australian Standard AS1428.1, *Design for access and mobility. Part 1: General requirements for access-New building work*.

The Disability Standards for Accessible Public Transport (DSAPT), established under Section 31 of the DDA, require Councils to ensure that all bus stops and other public transport infrastructure under their control are fully accessible by the end of 2022.

There are 16 criteria that must be met for a bus stop to be fully accessible, but not all criteria apply to any one stop. The provision of Bus Waiting Shelters is not one of the criteria. Shelters provide other benefits like weather protection and seating, but they do not provide accessibility.

Although School Bus Stops are not included in the DSAPT, consideration has been given to the provisions of that Standard at School Bus Zones within Coonamble.

#### **1.06 Road Safety Initiatives**

On 11 May 2011, the United Nations launched its Decade of Action for Road Safety 2011-2020, in an effort to reduce the incidence of pedestrian accidents and deaths on the world's roadways.

In addition, the Australian Road Research Board has introduced the Safe Systems Approach to Road Safety, to encourage all Australian road authorities to review their policies and designs in an effort to reduce the number of pedestrian and vehicle accidents, by focusing on safer vehicles, safer speeds and safer road designs.

The adoption of a PAMP will help Warren Shire Council achieve the aims of both of these safety initiatives.

## 1.07 Methodology and Consultation

Elements of the Project are carried out as shown in the Roads and Maritime Services diagram on page 7. The Access Audit involved a visual and photographic survey of the areas nominated by Council in Warren and Nevertire, shown on the Plan in Appendix A. The photographic survey presents an historical record of the condition of a public domain feature as it existed in September 2014.

The Draft PAMP has been developed with the assistance of Council's Manager, Engineering Services and Projects and Assets Engineer. An important contribution to the project was a community stakeholders meeting held at the Warren Cultural and Sporting Complex on Monday 29 September 2014, and attended by representatives from Council; the NSW Roads and Maritime Services; Aboriginal Land Council; Calara House; Community Transport and Australian Red Cross.

The survey involved a visual inspection of every footway, road crossing, other paths of pedestrian travel, and pedestrian facilities within the study areas, and an assessment was made of any feature that is required to be amended, repaired or improved.

Audits paths generally followed one side of a street and then the other, wherever paved footways exist, so as to provide a sequential review of a particular path of travel. Most intersections were also audited for pedestrian paths of travel, connectivity and safety.

The Access Audit Report identifies and describes a particular feature and reports on the work required for improvement or compliance with the RMS Guidelines. Priorities 1 to 4 are assigned to proposed works.

Priority 1 works are those that are considered to be urgent by virtue of the condition of the pedestrian element, its location and frequency of use; for example, many of the proposed works along sections of the Oxley Highway through Warren are given a priority of 1. Although several Items are listed with a priority of 1 in the Access Audit they fall into different categories, not all of which are Council's responsibility.

Priority 4 works are those that are located in low use areas, but which should be considered in future works programs; for example, the paving of un-made footways in sparsely populated urban areas where an increase in housing is expected in future years.

Monitoring of the PAMP will be carried out by Council and will consist of management of the proposed works within current budget projections, and input into future budget considerations.

Priorities are also assessed by the number of attractors in the vicinity, such as schools and child care centres; frequented places such as the Library and Council Offices; meeting places and shops, restaurants and businesses.

## **2.00 Study Areas (Maps in Appendix)**

The audited area of **Warren** is that approximately bounded by the following streets -

- Udora Road and Gillendoon Street in the north;
- Stubbs and Garden Avenues, and Oxley Parade, in the east;
- Wilson Street in the south; and
- Zora Street in the west

The audited area of **Nevertire** is that approximately bounded by the following streets -

- Narromine Street in the north;
- The Oxley Highway in the east;
- The Mitchell Highway in the south; and
- Gobabla Street in the west

The audited area of **Collie** is that approximately bounded by the following streets -

- Wonbobbie Street in the north;
- Coonamble Street in the east;
- Curban Street in the south; and
- The Oxley Highway in the west

## **3.00 Characteristics of Warren Shire**

### **3.01 Area and Population**

The Shire of Warren occupies an area of 9,900 square kilometers, with a total population of almost 3,000 and a population in Warren Township of about 1,600.

The Town of Warren lies on the banks of the Macquarie River; Nevertire is located on the intersection of the Mitchell Highway and Oxley Highway; and Collie is located on the Oxley Highway.

### **3.02 Road Hierarchy**

Most roads in the study area are Urban Streets or lanes, with two State Highways –

- The Oxley Highway (SH 34) passes through the Township of Warren, via Burton Street;
- The Mitchell Highway (SH32) and Oxley Highway (SH 34) pass through the Village of Nevertire; and
- The Oxley Highway passes through the Village of Collie.

Most roads in the business and residential areas of the Warren Township have kerbs and gutters; and lanes are generally sheeted in bitumen with no kerbs or gutters. Most footways in the business and residential areas are constructed in concrete or decorative block paving. In other streets the footways are mostly un-made.

### 3.03 Transport

- A TrainLink bus service operates through Warren Township and Nevertire four days per week, to connect with the western XPT rail service at Dubbo.
- Private Bus Companies provide School and Community services.
- Warren Aerodrome is a CASA registered airport but has no regular domestic services. An objective of the Warren Shire Community Strategic Plan is to promote future use of this facility.

### 4.00 Pedestrian Issues

The following elements of the public domain were inspected during the Survey:

- Footways (widths, crossfalls, paving type)
- Kerb and gutter
- Kerb ramps
- Pedestrian crossings, refuges and medians and some elements of road design
- Parking and driveways
- Bus stops and waiting shelters
- Street furniture and overhanging vegetation

The opportunity was taken to audit other pedestrian facilities in the vicinity of the paths of travel, these included-

- Public toilets
- Access to public buildings
- Access to parks and monuments

The following features of the pedestrian networks were identified during the Audit as areas requiring attention-

- Unpaved and un-connected footways in residential areas
- The need for reconstruction / repairs of existing paved footways (cracking, wide joints, disturbed block paving, lifted slabs)
- Kerb ramps that do not comply with Australian Standard AS1428.1 (2009)
- Kerb extensions to reduce pedestrian walk time across wide roadways
- A lack of appropriate public seating
- The need for equitable and dignified access to shops, businesses, facilities and tourist destinations
- The lack of street name signage
- The lack of property numbers
- Overhanging vegetation

In 2007, the World Health Organisation Global Age-friendly Cities Guide and Checklist identified barriers in eight categories of city-living, including footways and public seating, as nominated by older people in 33 cities around the world. As the population ages the challenge is to create an accessible public domain that allows people of all ages and abilities to continue their preferred lifestyle.

The removal of impediments and hazards will encourage older citizens, people with disabilities, people who use mobility devices such as wheelchairs and mobility scooters, and children with scooters to make better use of their environment.

As with other Rural Centres, many of the streets in Warren are wide. Streets in the Central Business District and local shopping precinct have angle parking, and traffic volumes and speeds are generally moderate.

However, wide streets require longer crossing times and, in some locations, angle parking means that pedestrians have to advance 4 - 5 metres onto the roadway from the kerb to obtain clear vision of on-coming traffic. These arrangements can present concerns for older people, parents with small children and people with physical disabilities or mental health issues. It is **recommended** that consideration be given to the construction of kerb extensions at some locations in order to reduce these difficulties.

The installation of Tactile Ground Surface Indicators within pedestrian refuges or medians provides safety for people who have vision impairment.

## **5.00 Features of pedestrian paths of travel that require attention in the short term**

There are a number of high-need, low-cost actions that can be taken in the short term to improve paths of pedestrian travel, not all of which require Council resources.

### **5.01 Overhanging trees (Photograph 1, 2, 3)**

Overhanging vegetation is a particular hazard for people who have vision impairment or are deafblind, and for children or adults on bicycles.

The Standards require a minimum vertical clearance over a pedestrian path of travel of 2000 mm; and 2400 mm for a designated cycle path.

Children up to the age of 12 are permitted to ride bicycles on a footway, as are their accompanying adults.

The removal of overhanging vegetation by Council and property owners is considered to be a high need, low cost action.

### **5.02 Loose Gravel (Photograph 4)**

Loose gravel on a firm surface is a fall hazard for all pedestrians. The removal of loose gravel by Council and residents from areas under their control is considered to be a high need, low cost action.



1. Trees overhang the Shared Path on the western side of Oxley Highway, between Zora Street and the Bridge over Gunninbar Creek.



2. Low hanging tree, west side of the Oxley Highway, north of Dubbo Street.



3. Shrubberty reduces the width of footways.



4. Loose gravel from a mid-block laneway creates a trip hazard for all pedestrians.



5. A kerb is required to separate the footway from the fuel lanes at Service Stations.



6. Grass overgrowth on footways is a potential trip hazard for people with vision impairment.

**5.03 Service Stations (Photograph 5)**

The driveways at some Service Stations are badly damaged across the footway and require reconstruction. Service Station proprietors should be required to provide barriers along the property line to protect pedestrians from vehicles in the ‘filling’ aisles, and to prevent damage to footways. The reconstruction by owners of damaged driveways, and the provision of barrier kerbs, are considered to be high-need, low-cost actions.

**5.04 Grass growth in footway joints and cracks (Photographs 6 and 7)**

Grass in joints and cracks poses a trip hazard for people with vision impairment and older people who do not lift their feet and tend to shuffle. The poisoning and removal of grass is considered to be a high need, low cost action.



7. Grass in footway joint.



8. Wide joint in footway.



9. Telstra pit dropped at entrance to Church.



10. Manhole collar and lid damaged.

**5.05 Service pits (Photographs 9 and 10)**

Several locations are identified in the Access Audit Report where service covers and collars are damaged. Their repair by the appropriate Authority is considered to be a high need action, at relatively low cost to Council.

**5.06 Wide joints (Photograph 8)**

Wide joints have the potential to create a hazard for people who use a wheelchair or walking aid. The sealing of joints is considered to be a high need, low cost action.

**6.00 Other issues of concern along a pedestrian path of travel**

**6.01 Kerb Ramps (Photographs 11, 12, 13 and 14)**

The importance of kerb ramps cannot be underestimated. Their location, design and construction in compliance with AS1428.1 (2009) not only ensures safe, equitable and dignified access for people of all ages and abilities, but reduces the incidence of potential accident claims against Council. **(Photograph 11)**

People with vision impairment rely on kerb ramps for their quick and safe passage to or from a footway, and for providing a direction of travel.



11. Correctly constructed kerb ramp.



12. Narrow kerb ramp with steep splays.



13. Radius kerb needs to be reduced to allow the construction of standard kerb ramps.



14. Kerb ramp and gutter are both very steep, creating a tip hazard for wheelchairs.

The existence of a lip at the base of a kerb ramp prevents some people who use wheelchairs from accessing the footway as the front wheel of a manual chair usually has a small radius and cannot mount the lip. If the kerb ramp is too steep some people will spend more time on the roadway while trying to access the kerb ramp, or while trying to find an alternate path of travel to the footway, thus increasing their safety risk.

Lips also present a hazard for aged pedestrians, people who have an ambulant disability or people who have vision impairment or are deafblind, particularly when the kerb ramp is in shadow.

Where the road camber is steep it is possible for a wheelchair, power chair or mobility scooter to become stuck in the “V”, thus remaining on the roadway until help arrives. There is also the potential for the chair to tip over, which could be disastrous for some people, particularly those who use a power chair. **(Photograph 14)**

At some locations the Access Audit Report recommends the construction of kerb ramps on corners where the footway is unmade. Street corners that have a paved footway and compliant kerb ramps provide a safe haven for pedestrians as they cross from one corner to the other.

At other corner locations, where the construction of standard kerb ramps is restricted because of a large radius kerb, it is recommended that the radius be reduced, so that standard kerb ramps can be constructed on straight lengths of kerb.

Tactile Ground Surface Indicators (TGSI's) are required where the gradient of the kerb ramp is flatter than 1:8.5, to alert people with vision impairment that they are not on a sloping footway but on a kerb ramp and nearing a hazard, such as a roadway.

The TGSI mat is to be 600-800 mm deep, and fixed 300 mm from the gutter line. The mat is to extend across the full width of the kerb ramp, excluding the splays.

## **6.02 Pedestrian refuges and walk-throughs in medians (Photographs 15 and 16)**

Some people who are blind or have low vision do have the ability to detect contrasting colours. The surface of a pedestrian refuge or walk-through should therefore provide a colour contrast with the median.

For example, a concrete walk-through in a concrete median does not provide a cue for some people, but an asphalt surfaced walk-through in a white concrete median does provide that cue.

The walk-through should be at the same level as the roadway. A raised surface can present a potential trip hazard in the middle of the road for people with vision impairment, or for and aged people who tend to shuffle rather than lift their feet. **(Photograph 16)**



15. TGSIs should be placed within the walk-through or pedestrian refuge.



16. A walk-through at the same level as the roadway would assist people who use a wheelchair. TGSIs are required.

### 6.03 Tactile Ground Surface Indicators (TGSIs)

People who read TGSIs are taught to read them strictly in compliance with Australian Standard AS1428.4.1. TGSIs laid in any other configuration send a confusing message to the reader which could place the person in jeopardy.

If TGSIs cannot be laid in strict accordance with the Standard, advice should be sought from an Accredited Access Consultant or from Guide Dogs NSW/ACT or Vision Australia. Excessive use of TGSIs is not recommended as other cues might be more appropriate in some instances.

### 6.04 Rails, ramps and steps

There are a number of sites where ramps or steps are located. These are identified in the Access Audit, with recommendations for improvements.

An important consideration for steps is to provide equal height risers. Unequal height risers have the potential to cause a person to fall or stumble.

Two or more steps are required to have a handrail each side, or one may be centrally located if the steps are wider than 2 metres.

Steps are required to have contrast nosings for their full width. The colour of the nosings should provide a luminance contrast of 30% to their surroundings.

TGSIs are generally required at the top and base of a set of steps or ramps, depending on their location.

For example, the steps to the Court House (**Photograph 17**) should have the following features –

- The lowest three risers should be of equal height
- Compliant handrails are required each side
- Contrast nosings are required, full width
- TGSIs are required at the top of the steps. They are not required at the base of the steps on the footway as they would send an incorrect message to persons who walk past the Court House

Ramps and steps require handrails on each side, so that a person who has an upper body or limb restriction has a choice of the handrail that best suits their ability.

A lower rail is required on handrails, so that a wheelchair does not roll under the upper rail and become wedged. (**Photograph 18**)



17. Steps are required to have handrails on each side.



18. Lower rail required.



19. Handrails are required on both sides of a ramp.



20. The bare surface at the side of the footway is lower than the footway level.

**6.06 Street furniture**

Some items of street furniture are not accessible, as identified in the Access Audit, and shown in **photographs 21, 22 23 and 24.**



21. Public Telephone is not accessible. A hard-stand area, with circulation space 1540 mm X 2070 mm, is required in front of the door.



22. Seat at TrainLink Bus Stop requires an armrest.



23. A- frames should be located on the outside of the footway.



24. Public Posting Box is not accessible. A hard-stand area, with circulation space 1540 mm X 2070 mm, is required in front of the posting slot.

**6.07 Footway Construction**

**6.07.01 Footway width**

The minimum width of a pedestrian path of travel is 1 metre. Where the surfaces at the sides of a footway are lower than the footway those surfaces should be raised so that they are level with the footway for a width of 600 mm. **(Photograph 20)**

### 6.07.2 Crossfall

Australian Standards require the maximum crossfall of a footway to be 1:40. This can be reduced where the longitudinal gradient of a footway is steep. Where a crossfall is steeper than 1:40 there is the tendency for a wheeled device to roll towards the kerb. This may create a control problem for the operator, particularly if that person has a restriction of the upper body.

### 6.07.3 Slip resistance

Every surface has a degree of slip-resistance. Circumstantial evidence has shown that adjacent pavements with markedly different degrees of slip-resistance pose a slip or trip hazard to all pedestrians.

As a person walks from one surface to another there is often a need to change gait or pace. In walking from a surface with a high slip-resistance to one of low slip-resistance there is the potential to slip. In walking from a surface with a low degree of slip-resistance to one of high slip resistance there is the potential to stumble.

**NOTE:** All paving should be non-slip in wet and dry conditions, with consideration also given to gradients.

### 6.08 Bus Stops

The Disability Standards for Accessible Public Transport, 2002, (DSAPT) set the following target dates by which bus stop infrastructure is to be fully accessible:

- 31.12.2007.....25%
- 31.12.2012.....55%
- 31.12.2022.....100%

Any new bus stop established after October 2002 is required to be fully compliant.

These dates apply to all bus stops, including those for School bus services.

Compliance with the following 16 criteria is required for a bus stop to be fully accessible:

- Access paths to the bus stop (which may include a kerb ramp)
- Handrails and grabrails
- Manoeuvring areas
- Stairs
- Passing areas
- Symbols
- Ramps
- Signs
- Waiting areas
- Tactile ground surface indicators
- Boarding area
- Lighting
- Allocated space
- Street furniture
- Surfaces
- Information

Not all criteria apply to any one bus stop.

It is pointed out that Waiting Shelters are not included in the criteria. Shelters can provide weather protection, seating and lighting, but they do not provide accessibility.

However, if a Waiting Shelter is provided, a space (800 mm wide) for a person who uses a wheelchair must also be provided within the shelter.



25. TrainLink Bus Stop on the northern side of the Mitchell Highway in Nevertire has no wheelchair space.



26. TrainLink Bus Stop on the northern side of the Mitchell Highway in Nevertire has a steep Boarding Point and no connecting path to the footway.



27. TrainLink Bus Stop on the southern side of the Mitchell Highway in Nevertire is not accessible.



28. TrainLink Bus Stop on the eastern side of the Oxley Highway in Warren has no wheelchair space.

The TrainLink Bus Stops in Warren and Nevertire do not fully comply with the DSAPT. It is **recommended** that funding be sourced under the Country Passenger Infrastructure Grants Scheme to provide full accessibility to the Shire's three TrainLink Bus Stops.

#### **6.08.01 Nevertire TrainLink Bus Stop, north side of the Mitchell Highway, for east-bound passengers (Photographs 25 and 26)**

The TrainLink Bus Stop on the northern side of the Mitchell Highway requires attention to the following elements:

- There is no connecting path from the footway to the Waiting Shelter.
- The Boarding Point has an excessive crossfall.
- There is no Allocated Space for a wheelchair within the Waiting Shelter
- The seat has no armrest
- The eastern side of the Timetable is not accessible
- The Mitchell Highway is wide at this location which could present a problem for aged passengers, or people with disability

#### **Recommendation**

1. Provide a Waiting Area, Circulation Space and a Boarding Point on a concrete slab that has a maximum crossfall of 1:40
2. Construct a paved path, at least 1000 mm wide, from the footway to the front of the Waiting Shelter
3. The clear space between the shelter and the kerb is to be at least 1600 mm wide
4. Raise the surfaces either side of the paved path to be level with the paved path for a width of at least 600 mm
5. The existing seat is amended, or replaced, to provide an Allocated Space 800 mm wide, for a person who uses a wheelchair
6. The existing, or new, seat is fitted with an armrest
7. The Timetable is located within the new concrete slab, with circulation space of 1500 mm on both sides
8. Construct kerb extensions either side of the Mitchell Highway, to reduce the crossing time for slow moving passengers

#### **6.08.02 Nevertire TrainLink Bus Stop, south side of the Mitchell Highway, for west-bound passengers (Photographs 27)**

The TrainLink Bus Stop on the southern side of the Mitchell Highway requires attention to the following elements:

- The Waiting Area, Circulation Space and Boarding Point are all at roadway level
- There is no Allocated Space for a wheelchair within the Waiting Shelter
- The seat has no armrest
- There is no Timetable

**Recommendation**

1. Construct a 150 mm high concrete slab to provide a Waiting Area; Circulation Space and a Boarding Point, at a level that reduces the step up to and down from the Bus
2. Construct a ramp up to the slab, with a maximum gradient of 1:14. A path with a gradient flatter than 1:20 is preferred, as ramps with gradients between 1:14 and 1:20 require handrails on each side
3. If a path with a gradient flatter than 1:20 is provided, the surfaces either side of the path are to be level with the path for a width of 600 mm
4. Provide a Timetable that has circulation space of 1500 mm on both sides
5. The existing seat is amended, or replaced, to provide an Allocated Space 800 mm wide, for a person who uses a wheelchair
6. The existing, or new, seat is fitted with an armrest
7. Construct a paved path of travel from the proposed kerb extension to the Waiting Shelter

**6.08.03 Warren TrainLink Bus Stop, east side of the Oxley Highway (Photograph 28)**

The TrainLink Bus Stop on the eastern side of the Oxley Highway requires attention to the following elements:

- The clearance between the Waiting Shelter and the kerb is less than 1600 mm.
- There is no Allocated Space for a wheelchair within the Waiting Shelter
- The seat has no armrest
- The Timetable is not accessible

**Recommendation**

1. Provide a width of 1600 mm between the Waiting Shelter and the kerb
2. Relocate the Timetable so that it has circulation space of 1500 mm on both sides
3. The existing seat is amended, or replaced, to provide an 800 mm-wide Allocated Space, for a person who uses a wheelchair
4. The existing, or new, seat is fitted with an armrest

**6.09 Accessible Parking**

Australian Standards require parking spaces for drivers or passengers with a disability to be located on a surface that has a maximum crossfall from front to back and from side to side of 1:33 for an asphalt surface, or 1:40 for a concrete surface.

It is preferable for the parking space to grade gently forward so that, if a wheelchair moves as a driver or passenger transfers from their seat to the chair, it will roll forward against the open car door.

It is also preferable for an accessible parking space to allow the driver to drive into and out of the space in a forward motion. The reversing procedure can be difficult for some people with disabilities such as upper body restrictions.

It is preferable that on-street accessible parking spaces be located parallel to the kerb, so that the driver can park and leave the space with the aid of the side vision mirrors, and without having to reverse. This is particularly important where road cambers are steep and a driver is required to turn the body to assist with navigation.

Conversion of the angled parking Accessible Parking Spaces at the Dubbo Street Medical Centre and the Public Pool to parallel parking, would assist drivers with an upper body restriction. **(Photographs 29 and 30)**



29. A parallel Accessible Parking Space near the Medical Centre, just west of the kerb ramp, is recommended.



30. A parallel Accessible Parking Space near the entrance to the Pool, just south of the kerb ramp is recommended.



31. Street name signs at the same height.



32. Street name signs located at different heights.

### **6.10 Street signage (Photographs 31 and 32)**

The lack of street name signs was frequently noted during the survey.

When signs that indicate connecting streets are placed at the same height one is hidden from a driver's view by the other. A driver who slows down to try and view the other sign could become a hazard to other drivers or pedestrians.

The relocation of one sign, 50-75 mm below the other, would allow both signs to be read at the same time, from either street. For the benefit of residents or visitors this is considered to be a high-need, low-cost action.

### **7.00 Paths of pedestrian travel that require attention, as identified in the Access Audit Report – (Map in Appendix)**

In addition to minor localised footway repairs or reconstruction the following extensive reconstructions are **recommended** -

#### **Nevertire:**

##### **7.01 Clyde Street**

- West side between Mitchell Highway and Narromine Street

##### **7.02 Narromine Street**

- North side between Public School and Clyde Street
- North side between Clyde Street and Nevertire Memorial Hall

#### **Warren:**

##### **7.03 Oxley Highway**

- West side between the Caltex Service Station and Udora Road
- West side between Udora Street and the vehicle entry to Oxley Park
- West side between Lawson Street and Dubbo Street
- Across Zora Street

##### **7.04 Stafford Street**

- West side between Reinhard Way and Dubbo Street
- East side between Bundemar Street and Dubbo Street

##### **7.05 Readford Street**

- West side between Thornton Street and Dubbo Street

##### **7.06 Lawson Street**

- Both sides between the Oxley Highway and Readford Street
- South side between the Oxley Highway and its eastern end

**7.07 River Avenue**

- East side between Milson Street and Garden Avenue

**7.08 Hale Street**

- East side between Chester Street and Thornton Street

**7.09 Chester Street**

- Both sides between Readford Street and the Oxley Highway
- South side between the Oxley Highway and Hale street

**7.10 Hospital connection**

- South side of Warren Cultural and Sporting Complex to Oxley Park

**7.11 Udora Road**

- North side between the Oxley Highway and Warren Hospital

**8.00 Recommended kerb extensions**

For the safety of aged pedestrians, people with disability and parents with small children, it is **recommended** that consideration be given to reducing the width of road crossings at the following important locations, by the construction of kerb extensions -

**Nevertire:****8.01 Mitchell Highway**

- Across the Mitchell Highway, between Clyde Street and the Oxley Highway, to connect the east-bound and west-bound TrainLink Bus Stops

**Warren:****8.02 Dubbo Street at Hale Street**

- From the SW corner to the NW corner
- From the SW corner to the SE corner

**8.03 Dubbo Street at Readford Street**

- From the SW corner to the SE corner

**8.04 Chester Street at Boston Street**

- **From the SW corner to the NW corner**

### 9.00 Potential Shared Pedestrian and Bicycle paths

The opportunity was taken during the PAMP survey to examine the potential for new Shared Pedestrian and Bicycle Paths

#### 9.01 Oxley Highway

- East side, from Milson Street to the Tiger Bay Wetlands carpark

#### 9.02 Bundemar Street and Hale Street

- South side, from the Oxley Highway to the western side of Hale Street; and the western side of Hale Street to Chester Street, to connect with Warren High School

#### 9.03 Connecting the existing Shared Path south of Zora Street to the Tiger Bay Wetlands and the Warren Cultural and Sporting Complex

- South side, from the Oxley Highway to Stafford Street; western side of Stafford Street to Dubbo Street; northern side of Dubbo Street to Readford Street; western side of Readford Street to Lawson Street; northern side of Lawson Street to the Oxley Highway; a dismount section from Lawson Street across the Macquarie River Bridge to Milson Street
- From the dismount point on the northern side of the Macquarie River Bridge to the Cultural and Sporting Complex, and the Hospital, via Oxley Park

### 10.00 Picnic facilities

- An accessible path of travel is required from the nearest footway to picnic facilities (**Photograph 33**)
- The accessible picnic table in **Photograph 34** allows a person who uses a wheelchair, or a toddler in a stroller, to be included at the table



33. Picnic table not accessible.



34. Accessible picnic table

## 11.00 Cenotaphs

The Anzac Centenary in 2015 is likely to draw record crowds to various events and wreath-laying ceremonies.

It is **recommended** that consideration be given to the issues raised in the separate Cenotaph Report included in the Annexures

## 12.00 Passing areas on the Macquarie River Bridge (Photograph 32)

The incidence of wheelchair, power chair and mobility scooter use is increasing, as are their sizes and widths. As these conveyances are classed as pedestrians they are entitled to use footways and this can pose a problem if the footway is not wide enough to allow two of them to pass.

The Standards require a passing area to be 1800 mm wide and 2000 mm long.

A potentially dangerous situation occurs on the Macquarie River Bridge where, in the event that two mobility conveyances approach each other and are unable to pass, one occupant may have to reverse down the gradient of the Bridge. Such a manoeuvre is potentially dangerous and stressful for the occupant.

It was reported at the Community Stakeholders Meeting that there is a need for people who use wheelchairs or mobility scooters to travel to and from the Public Hospital, across the Bridge, and that passing on the Bridge has been identified as a problem. (The northern and southern footways on the Bridge are 1700 mm wide).

It is **recommended** that Council submit a request to the NSW Roads and Maritime Services to widen both footways at the mid-point of the Bridge to provide compliant passing areas.



32. Macquarie River Bridge, north side, looking east.



33. Macquarie River Bridge, south side, looking west.

### 13.00 Documents consulted in the preparation of this PAMP

- The Roads and Maritime Services NSW guidelines on “How to Prepare a Pedestrian Access and Mobility Plan”
- Warren Shire Community Strategic Plan 2022
- Disability Discrimination Act, 1992
- Disability (Access to Premises- Buildings) Standards, 2010
- Disability Standards for Accessible Public Transport, 2002
- United Nations Decade of Action on Road Safety, 2011-2020, Report
- Australian Road Research Board Safe Systems Approach Report

### 14.00 Conclusion

This PAMP is a valuable tool to assist in providing enhanced access and mobility for pedestrians. The implementation of the proposed projects will provide improved opportunities for older citizens to remain active participants in the community, and a safer pedestrian environment for school children.

A valuable outcome of a PAMP is the potential for an improvement in the local economy, by improving facilities and destinations for tourists.

It is **recommended** that Council provide a budget allowance for the implementation of the PAMP projects which reflects the community’s expectations and priorities, and to allow the projects to be implemented in the shortest possible timeframe.

To assist in the funding of the works it is also **recommended** that Council pursue all possible funding avenues as they become available.

It is **recommended** that the PAMP be reviewed every 5 years.

### 15.00: Appendices

- **Survey area of Warren**
- **Survey area of Nevertire**
- **Survey area of Collie**
- **PAMP Paths of Travel in Warren Township (Green)**
- **PAMP Paths of Travel in Nevertire (Green)**
- **Potential Shared Pedestrian/Cycle Paths (Yellow)**
- **Potential Kerb Extensions (Orange)**

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