

**ORDINARY COUNCIL MEETING**

**WEDNESDAY, 26 AUGUST 2020**

**ATTACHMENT BOOKLET 1**

Attachment No. 1          Tenterfield Bike Plan

Attachment No. 2          Pedestrian Access & Mobility Plan (PAMP)





# **Tenterfield Shire Council**

## **Tenterfield Bike Plan**

**Version 2.1– August 2020**

XXXX 2020 (Res No. XXX/20)

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1	23 April 2014	Initial version adopted	Engineering Dept		
2.1	August 2020	Revision of plan	Engineering Dept	FK	FK

## 1. Introduction

Cycling is vital to any integrated transport network. It provides healthy, efficient and convenient travel with minimal impact on the environment.

One of the main reasons for a bike plan is so that Council can determine a coordinated and strategic approach to deliver cycling infrastructure and promotional programs to the community.

### 1.1. Background

Transport for New South Wales (TfNSW formerly RMS) developed the guide *How to prepare a bike plan – November 2012*.

It is the responsibility of every Council in NSW to ensure that a bike plan is developed and implemented to provide for safe and convenient cycling routes that will encourage people to cycle rather than use their cars.

The Bike Plan is essentially a strategic document that identifies the cycling network hierarchy and an associated cycling facilities action plan. It was developed through community consultation, data collection, and review of existing standards and current practice.

The outcomes of this process are the identification of cycling routes within the study area that form a coherent network and the development of an action plan for these routes identifying locations where work is required to ensure the routes are safe, convenient, and meet current standards.

The benefits to the community of a properly implemented Bike Plan cover a wide range of transportation, environmental and social matters, such as:

- Contribute to a healthy, active and liveable community,
- Help reduce greenhouse gas emissions,
- Improve bicycle and pedestrian infrastructure,
- Reduce dependency on private motor vehicle usage,
- Reduce road congestion,
- Reduce parking congestion,
- Increase mobility and independence for those without cars,
- Increase capacity for local public transport networks,
- Reduce health costs, travel times, noise and vehicle operating costs

Many Councils throughout NSW have developed their Bike Plans and some of the methods used by different Councils were incorporated in the process to provide a framework for best practice. TfNSW developed a practical manual to be used as a guide for Council staff or others undertaking a Bike Plan. The guide highlights the main issues that need to be considered during the process.

The Bike Plan approach entails cooperative funding from Council and Transport for NSW with some initial funds allocated to Tenterfield Shire Council some years ago for development of the initial Bike Plan for the town of Tenterfield.

Tenterfield Shire Council is committed to providing long term planning for cycling as desirable replacements for short trips to community facilities, where the facilities and infrastructure can be sustainably supported by the community. The Bike Plan works together with the Tenterfield Pedestrian Access and Mobility Plan (PAMP) which is a separate document.

## **1.2. Study Aims**

The focal aim of the Tenterfield Bike Plan is to identify the cycling routes of most significance to the community and provide a strategy for the enhancement of those routes in terms of safety and mobility.

## **1.3. Study Objectives**

The objectives of the Tenterfield Bike Plan consider the existing cycleway network, its maintenance requirements and the likely availability of funding to meet the objectives.

Specifically, the plan looks at connectivity within the network, directness, safety, accessibility and mobility and has focused strongly on providing continuity of cycling routes of similar standard linking the major pedestrian generators.

The objectives of the plan are:

- To ensure safe and convenient independent mobility by providing cycle access to as many places as possible particularly to community facilities.
- To integrate the needs of all cyclists by providing for and maintaining high quality facilities that are socially inclusive.
- To provide clean, well-lit streets and cycle ways free from obstruction, with sufficient opportunities to cross roads safely.
- To provide safe access for those who chose cycling as primary mode of transport for short to medium distance trips.
- To ensure clear signage and onsite information is provided to increase awareness of cycling movements.
- To ensure that cycle paths are safe for all users.

#### **1.4. Methodology of Bike Plan**

In preparing this Bike Plan, three broad stages were involved in the process, namely;

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

There were a number of components involved in the various stages of this methodology including:

- Data review
- Surveys
- Community consultation
- Development of Cycle routes
- Audit of the routes
- Development of actions and the forward works program

#### **1.5. Structure of Report**

The structure of this document is based on the suggested contents from the TfNSW guidelines on “How to Prepare a Bike Plan”. The document is split into 10 parts as follows:

1. Introduction and background
2. Study Area
3. Research, Review and Data Collection
4. Characteristics of the Local Government Area
5. Public Consultation
6. Saddle Survey
7. Funding Sources and Implementation of Tenterfield Bikeplan
8. Monitoring Program
9. Recommendation for Future Studies
10. Conclusions and Recommendations

In addition to these parts, there are several other relevant attachments. These are listed in the Table of Contents at the beginning of this document.



## **2. Study Area**

Tenterfield Shire Council covers an area of 7,333 km<sup>2</sup> and has a population of approximately 6,600. The Council area is comprised of a mix of villages and rural communities as well as the township of Tenterfield.

Considering the extent and condition of infrastructure, this Bike Plan addresses the cycling demands in the township of Tenterfield which comprises over half of the Shire's population.

### **2.1. Scoping Study**

Although cycle and traffic volumes in the Tenterfield Local Government Area (LGA) are relatively low in comparison with the much more densely populated areas, the need to provide adequate facilities is just as important to the community.

#### Tenterfield

Figures from the 2016 census show that the population of Tenterfield UCL (Census 2016) is 2,914. The main method of travel in the area is mostly by private vehicle with small numbers using public transport. Public transport is mostly used for inter town travel with few opportunities for intra town trips, other than those undertaken by various forms of community transport. Walking and biking is very popular along the bikeway system that follows Tenterfield Creek.

### **3. Research, Review and Data Collection**

#### **3.1. Literature Review**

The main resource for the preparation of this Bike Plan was the document titled **“How To Prepare A Bike Plan”** produced by TfNSW in 2012. This document is essentially a practical manual for the preparation of a Bike Plan, and includes information on document structure, methodology and implementation.

Various reference documents that were consulted included:

- NSW Bicycle Guidelines
- Cycling Aspects of Austroads Guides
- NSW Safe Systems Approach

#### **3.2. Traffic Data**

Traffic volumes through the main street are considered high (6,321 Average Annual Daily Traffic 2011) and supports the direction towards the construction of a Tenterfield bypass. Transport for NSW has determined a preferred route for the bypass.

#### **3.3. Cycle Crash Data**

Tenterfield LGA Pedestrian crash data 2014-2018 was examined as part of the overall road accident data available from TfNSW through the NSW Police records.

The analysis of total road crashes for the Tenterfield LGA shows that one cycle accident occurred in 2016 and one in 2018.

#### **3.4. Design Standards**

Constructed cycleways in Tenterfield are generally in accordance with Austroads Guidelines. In view of the relatively low cycle density, the width of the cycle ways has been standardised at 2.0m which is the minimum suggested bicycle path width. The guideline desirable width is 2.5m, however lesser widths are acceptable where cyclist volumes and operational speeds will remain low.

## **4. Characteristics of Local Government Area**

### **4.1. Population**

According to the Australian Bureau Statistics there:

- were 6,600 people in the shire as at 2019. It was equal to 0.08% of the New South Wales population of 8,129,000;
- the population reduced over the 5 years from 2011 to 2016 by approximately 200 people.

Persons age 85 years and over make up 2.7% of the total population in Tenterfield LGA which is the same as the average for regional NSW. This is an increase from 2.3% in 2011 to 2.7% in 2016.

The children aged under 15 years make up 15.6% of the shire population, while people aged under 40 years represent one third of the population.

## **5. Public Consultation**

The development of the initial Bike Plan community consultation was to determine what level of service the community considered acceptable for each cycling route, and to identify current or future needs to determine access priorities.

The community consultation was conducted including local paper media, letters to identified groups and public display.

### **5.1. Identified Groups**

Community Centres, Schools and an informal cycling group were identified as being potentially interested in cycling needs in the community. A survey was circulated in the community calling for feedback in relation to current cycling facilities and the need for future cycling facilities.

Community members were asked to identify locations they felt were unsafe and hazardous and any additional cycle paths that could be justified.

## **5.2. Identified Cycling Issues**

The following issues were identified:

- The cycle way continuation from Scott Street and Saddlers estate
- The extension to the footpath from Millrace to Rouse Street, where the highway turns westwards on the eastern side of Rouse Street.
- The on-road cycleway along Miles street has a missing link section between Logan and Bulwer St on the southern side of the road that needs to be constructed.
- An on road cycleway should be painted along Molesworth Street to provide access to the western side of town.

## **5.3. Community Consultation Survey**

Community consultation would be considered with any further revision of the document.

## **6. Saddle Survey**

The existing cycle facilities audit forms part of Tenterfield Council's Bike Plan. Field audits undertaken on a bike are essential to determine the type and scale of work required along designated cycle routes. Generally, audits were undertaken by an experienced asset manager who has training and experience in road safety auditing.

### **6.1. Route selection**

Cycle routes were selected for the study area. Taken into consideration were cycle attractors and generators, central business district (CBD), community consultation, identified hazardous locations and existing cycle facilities. With the CBD being the initial priority, feeder routes to the CBD were identified then extended to outlying areas. A number of cycle generators and attractors are located within the study area. Cycle attractors include central business districts, schools, business zone, supermarkets and recreational facilities (e.g. sporting facilities and parks).

Existing cycle facilities were reviewed as part of the Bike Plan. Off road paths provide a safer cycling environment and often present shortcuts between areas, therefore making them more appealing for cyclists.

Bike Plan routes:

- Provide links between main attractors and generators
- Improve existing cycle hazards locations

- Formalise existing cycle links
- Create new off-road facilities

## **6.2. Route Audit Process**

On site physical audits were conducted along all high, medium and low priority cycle routes. The key focus of the route audits was any identified access impediments for cyclists. The identified difficulties found in a number of locations were:

- Poor maintenance of bitumen edge,
- Lack of separate cycle ways,

## **6.3. Work Prioritisation Methods**

The facility audit identified high, medium or low priority issues. Those issues identified as a high priority have been included in the Appendix 1, including indicative costs for rectification.

A prioritised modified condition score was applied to issues identified for action. Further refinement was then carried out which also considered other factors including Councils existing works program and results of the community consultation.

## **6.4 Existing and Proposed Cycle Track Network**

The map on the following page outlines the networks:

- Black represents existing off road track (with underpasses below Molesworth St and New England Highway);
- Red represents existing on road tracks designated by line marking;
- Yellow represents proposed on road tracks;

Tenterfield Bike Tracks



## **7. Funding Sources and Implementation of Bike Plan**

Generally funding for implementation of the projects identified in this Bike Plan come from Council and the TfNSW. The works identified in this Bike Plan total \$94,550 at present date estimates.

Council's budget for 2020/2021 and immediate forward plans do not contain any specific funding for additional cycle way construction.

The TfNSW process is to fund approved cycle ways 50%. In addition, Council has the opportunity of imposing conditions on major developments to require the construction of cycle ways if the development warrants it (for example, the Saddlers Estate link was part of a development condition and was supplemented by a 50% grant from TfNSW).

## **8. Monitoring Program**

Initial monitoring of this plan will consist of input to future budget considerations. Works as completed will be recorded and incoming comments will be recorded to gauge effectiveness.

It is proposed to review the plan on a five-year basis. This will allow the document to be reviewed against works completed and community expectations. The five year cycle will also allow for a review of the objectives to ensure they remain relevant.

## **9. Recommendation for future studies**

As described earlier in this study many deficiencies have been identified during the route audit process. Considering the limitation of the scope of the Bike Plan, several issues will remain unsolved. If incorporated with another plan or program, this document may assist in resolving those problems.

At this point, it is not envisioned that further studies will be required outside the review of this Bike Plan at the nominated interval unless external funding is provided. Further detailed investigation and design will be required for many projects.



## **10. Conclusion and Recommendations**

This Bike Plan will be a valuable tool to assist in providing enhanced access for pedestrians and cyclists. The implementation of the nominated improvements to the cycle facilities in Tenterfield will also provide a safer pedestrian environment for school children.


It is recommended that Council continue to seek external funding opportunities to enable the implementation of Bike Plan actions in the Operational Plan to support the community's priorities and allow the project to be implemented in a financially sustainable process.




**11. Appendix 1 - High priority works schedule**

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Scott Street (East side of road)	Molesworth to Martin Streets	Encroaching weeds need to be removed and bitumen reinstated	200m	\$150	\$30,000	1	
Scott Street (West side of road)	Molesworth to Martin Streets	Encroaching weeds need to be removed and bitumen reinstated	200m	\$150	\$30,000	2	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority
New England Highway	Near Willows bridge to Rouse Street	Extend the concrete cycleway along the eastern side of the road to Rouse Street	221	\$225	\$50,000	3
						COMPLETED

Miles Street	Logan to Bulwer Streets	Widen pavement to fill in "missing link" for on road cycleway	120m	\$250	\$30,000	4
						

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Molesworth Street	Rouse St to Railway Avenue	Paint an on road cycleway both sides of road to provide a western link	1.3km	\$3,500	\$4,550	5	
Scott Street	Douglas to Clive Street	Construct an on road cycleway by widening the bitumen on both sides of the road and providing kerb and gutter	225m	\$300	\$67,500	6	COMPLETE

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Scott Street	Clive to football oval	Construct an on road cycleway by widening the bitumen on both sides of the road and providing kerb and gutter	350m	\$300	\$105,000	7	COMPLETE



# **Tenterfield Shire Council**

## **Pedestrian Access and Mobility Plan (PAMP)**

**Version 2.1– August 2020 (incorporating the Disability Action Plan)**

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1.1	2014	Initial draft	Engineering Dept		
1.2	June 2014	Revision 1	Engineering Dept		
1.3	25 June 2014	Adopted by Council	Res. No. 220/14		
2.1	August	Revision 2 – Updated PAMP	Engineering Dept	FK	FK

## 1. Introduction

Walking is an integral part of the transport system and day-to-day mobility. Walking provides an important role in bringing people out into the community for a wide range of reasons, be it travelling to work, school, visiting local facilities, getting to public transport or walking for fitness and recreation. Walking is one of our most social, accessible and sustainable modes of transport. Most individual trips, whatever the primary mode used, begin and / or finish with a walk section, so that walking is a fundamental component of all travel. Thus, pedestrians form the largest single road user group.

Walking provides a range of benefits to both individuals and society as a whole ranging from health and fitness, economic including tourism, and environmental. Walking is a form of transport that has a negligible environmental impact. Outlined below is a summary of some of the benefits.

### **Health and wellbeing of communities**

In the last ten years, it has emerged that one of the major causes of preventable illness is overweight and obesity. Improving the frequency of participation in physical activity (e.g. walking) is the best way to combat obesity and set a lifelong pattern for an active and healthy lifestyle. Risks that are easily addressed by exercise are more commonly observed in socially disadvantaged communities.

### **Responding to climate change**

We are currently living in a time where climate change and the issues arising from it will affect upon our everyday lives. Increased walking can reduce air pollution and reduce greenhouse gas emissions.

### **Economic benefits**

Achieving increases in walking numbers can have economic benefits for communities. This can be a result of a more productive workforce. Physical activity can increase an individual's health resulting in a more fit and productive workforce with reductions in absenteeism.

The importance and benefits of walking are recognised within our communities and it is commonly acknowledged that further actions are needed in order to provide for safe and convenient walking.

Pedestrian Access Mobility Plans (PAMPs) are aimed at not only promoting walking, but also reducing the incidence and severity of pedestrian crashes. It aims to optimise and promote the movement of recreational, commuter and local pedestrians throughout the community. This is achieved by providing more appropriate pedestrian facilities especially in busy areas and improving access for mobility-impaired groups.

*The Pedestrian Council of Australia comments that 'walking is a fundamental and direct means of access to most places and to the goods, services and information available at those places' and that 'walking can be an ideal substitute for short car trips, including those to public transport stops. Those short trips contribute*



*disproportionately to air pollution: the more they can be avoided, the better for us all'.*

Pedestrian Council of Australia (1999) The Australian Pedestrian Charter

## 1.1. Background

Transport for New South Wales (TfNSW formerly RMS) developed the Pedestrian Access and Mobility Plan (PAMP) program to ensure better planning for pedestrians and to assist the NSW Councils with planning for pedestrians.

It is the responsibility of every Council in NSW to ensure the Pedestrian Access and Mobility Plan (PAMP) is developed and implemented to provide for safe and convenient pedestrian routes that will encourage people to walk rather than use their cars. It also has a responsibility to ensure that people who do not have access to cars – particularly the young – are able safely to reach needed facilities in their everyday activities, and that as far as possible, people with a physical disability do not have their access impaired because of that disability.

The PAMP is essentially a strategic document that identifies the pedestrian network hierarchy and an associated pedestrian facilities action plan. It is developed through community consultation, data collection, and review of existing standards and current practice.

The outcomes of this process are the identification of pedestrian routes within the study area that form a coherent pedestrian network and the development of an action plan for these routes identifying locations where work is required to ensure the routes are safe, convenient, and meet current standards.

The benefits to the community of properly implemented Pedestrian Access and Mobility Plan are wide range of transportation, environmental and social, such as:

- more appropriate pedestrian facilities, especially in the busy areas
- improved access for mobility impaired groups in the community, including older persons
- safe and convenient crossing opportunity on major roads
- reduced injuries to pedestrians
- meeting the special events needs for pedestrians
- pedestrian facilities which are consistent and appropriate throughout NSW.

Since the development of the program, many of the Councils throughout NSW have developed their PAMP's. After reviewing the methods used by different councils in NSW, improvements have been incorporated in the process to provide a framework for best practice. Roads and Maritime Services have developed a practical manual to be used as a guide for council staff or others undertaking a PAMP. The Guide highlights the main issues that need to be considered during the process.

The PAMP approach includes cooperative funding from Council and Transport for NSW (TfNSW). Initially in 2013/14 funds were allocated to Tenterfield Shire Council for development of a PAMP for the town of Tenterfield.

Tenterfield Shire Council is committed to providing long term planning for pedestrian access and mobility, to promote walking and cycling as desirable replacements for short trips to community facilities. The PAMP will work together with the Tenterfield Bike Plan which is a separate document.

## **1.2. Study Objectives**

The focal aim of the Tenterfield PAMP is to identify the pedestrian routes of most significance to the community and provide a strategy for the enhancement of those routes in terms of safety and mobility.

## **1.3. Objectives**

The objectives of the PAMP need to be clear and achievable within a reasonable period. In setting the objectives, the PAMP considered the existing footpath network, its maintenance requirements and the likely availability of funding to meet the objectives.

Specifically, it looks at connectivity within the network, directness, safety, accessibility and mobility and has focused strongly on providing continuity of pedestrian routes of similar standard linking the major pedestrian generators.

The PAMP was developed by officers from the technical services, community services and planning and environmental services divisions of Council, and the document is subject to internal review and community consultation.

The objectives of the plan are:

- To ensure safe and convenient independent mobility by providing pedestrian access to as many places as possible particularly to community facilities.
- To integrate the needs of all pedestrians by providing for and maintaining high quality facilities that are socially inclusive.
- To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons. Specific issues associated with disability are addressed in the Disability Action Plan.
- To provide clean, well-lit streets and footpaths free from obstruction, with sufficient opportunities to cross roads safely.
- To provide safe access for those who chose walking as primary mode of transport for short to medium distance trips.
- To ensure clear signage and onsite information is provided to increase awareness of pedestrian movements.
- To ensure that pedestrian spaces are safe for all users.

#### **1.4. Methodology of PAMP**

In developing the PAMP, three broad stages were involved in the process, namely;

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

There were a number of components involved in the development of the PAMP including:

- Data review
- Surveys
- Community consultation
- Development of PAMP routes
- Pedestrian audit of the routes
- Development of actions and the forward works program

#### **1.5. Structure of Report**

The structure of this report is based on the suggested contents for a PAMP report from the TfNSW guidelines on “How to Prepare a PAMP”. The document is split into 10 parts as follows:

1. Introduction
2. Study Area
3. Research, Review and Data Collection
4. Characteristics of the Local Government Area
5. Public Consultation
6. Audits
7. Funding Sources and Implementation of PAMP
8. Monitoring Program
9. Recommendation for Future Studies
10. Conclusions and Recommendations

In addition to these parts, there are several other relevant attachments. These are listed in the Table of Contents at the beginning of this document.

## **2. Study Area**

Tenterfield Shire Council covers an area of 7,333 km<sup>2</sup> and has a population of approximately 6,600. The Council area is comprised of a mix of villages and rural communities as well as the township of Tenterfield.

Considering the extent and condition of infrastructure, this PAMP addresses the pedestrian demands in the township of Tenterfield which comprises over half of the Shire's population.

### **2.1. Scoping Study**

Although pedestrian and traffic volumes in the Tenterfield Local Government Area (LGA) are relatively low in comparison with the much more densely populated areas, the need to provide adequate facilities is just as important to the community.

#### Tenterfield

Figures from the 2016 census show that the population of Tenterfield UCL (Census 2016) is 2,914. The main method of travel in the area is mostly by private vehicle with small numbers using public transport. Public transport is mostly used for inter town travel with few opportunities for intra town trips, other than those undertaken by various forms of community transport. Walking and biking is very popular along the bikeway system that follows Tenterfield Creek.

### 3. Research, Review and Data Collection

#### 3.1. Literature Review

The main resource for the preparation of this PAMP was the document titled ***“How To Prepare A PAMP”*** produced by TfNSW (formerly RMS and RTA) in 2002. This document is essentially a practical manual for the preparation of a PAMP, and includes information on document structure, methodology and implementation of a PAMP.

Traffic Planning has been identified as a key issue in the Tenterfield Shire ***“4 Year Delivery Program (2017-21)”***. One of the objectives in this document is to undertake traffic planning to facilitate safe and efficient traffic flows and pedestrian movements.

Councils ***“Community Strategy Plan”*** identifies the need to have an effective interconnected transport system that is safe, efficient and affordable for us as a community.

Councils ***“Tenterfield Main Street Masterplan”*** encourages improved access to the town centre. It proposes a number of measures to meet these objectives and that information has been included in this report.

A recent report by GHD for the TfNSW (formerly RMS) dated April 2013 ***“Tenterfield Heavy Vehicle Bypass - Assessment of Route Options – Preliminary Traffic and Transport Study”*** provides recent traffic data and some pedestrian data.

#### 3.2. Traffic and Pedestrian Data

Traffic volumes through the main street are considered high (6,321 Average Annual Daily Traffic 2011) and supports the direction towards the construction of a Tenterfield bypass. Transport for NSW has determined a preferred route for the bypass.

A preliminary traffic and Transport Study for the heavy Vehicle Bypass revealed the following points of interest:

- Existing pedestrian crossings in Rouse Street have an afternoon peak significantly higher than the morning peak. Afternoon peak numbers were 67 for peak hour at the crossing north of Manners Street, 63 for peak hour at the crossing south of High Street and 21 for peak hour at crossing south of Molesworth St;
- Turning movements to / from High Street are higher in the afternoon peak than in the morning peak. They represent between 20-30% of through traffic volumes;
- Heavy vehicle volumes on both through and turning into / from High Street are generally in the order of 10%.
- The afternoon peak hour traffic count at the Rouse Street / High Street intersection amounted to 243 vehicles northbound, 213 vehicles southbound,

45 vehicles turning east into High St (from south), 49 vehicles turning west into High Street (from south), 58 vehicles turning east into high street (from north), 16 vehicles turning west into High Street (from north), 65 vehicles turning south into Rouse Street from High Street, 44 vehicles turning north into Rouse Street from High Street and 16 vehicles going straight ahead in High street.

### **3.3. Pedestrian Crash Data**

Tenterfield LGA Pedestrian crash data 2014-2018 was examined as part of the overall road accident data available from TfNSW through the NSW Police records.

The analysis of total road crashes for the Tenterfield LGA shows that two pedestrian accidents occurred in 2016 and one in 2017.

### **3.4. Design Standards**

Path surface and dimension standards in Tenterfield are out dated and are generally not in accordance with current Australian Standard 1428 and 1742 series and the Austroads Guide to Traffic Engineering Practice Part 13: Pedestrians.

Examples of “poor infrastructure” can be found in many locations, particularly bad kerb ramps and absence of paved footpaths – see photo below.



The review of the background information mainly provides information to help formulate concept and support the direction of thinking for the PAMP rather than to raise key findings.

## **4. Characteristics of Local Government Area**

### **4.1. Population**

According to the Australian Bureau Statistics there:

- were 6,600 people in the shire as at 2019. It was equal to 0.08% of the New South Wales population of 8,129,000;
- the population reduced over the 5 years from 2011 to 2016 by approximately 200 people.

Persons age 85 years and over make up 2.7% of the total population in Tenterfield LGA which is the same as the average for regional NSW. This is an increase from 2.3% in 2011 to 2.7% in 2016. The children aged under 15 years make up 15.6% of the shire population.

There has been a consistently slight increase in the aged population for a numbers of years. This factor must be a major consideration in planning for pedestrian access and mobility.

### **4.2. Road Hierarchy**

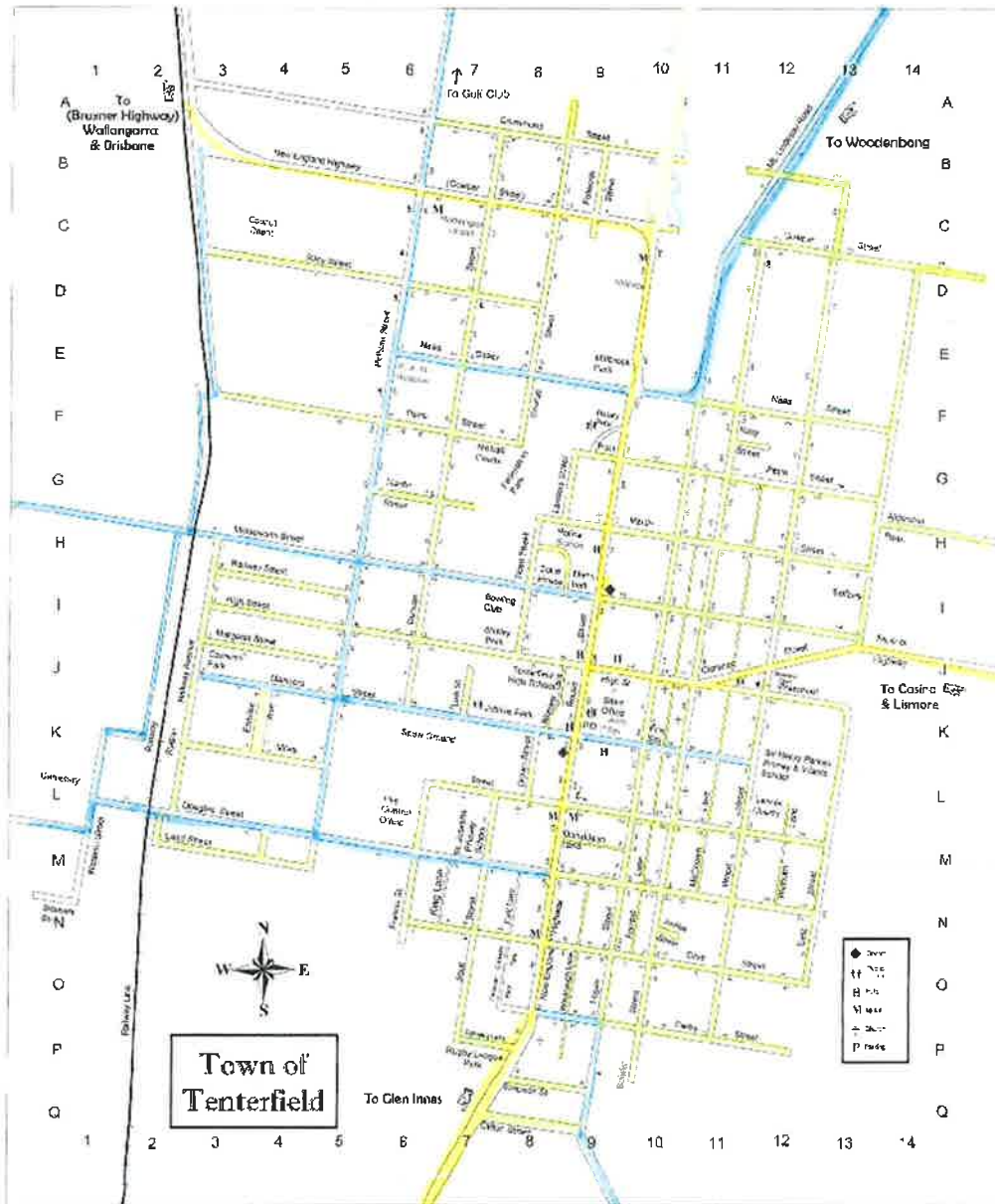
The New England Highway passes through Tenterfield generating reasonable traffic volumes in the study area. The width of some of the streets has made pedestrian travel more difficult and pedestrian facilities will need to be considered to assist with road crossing in these areas.

Councils Road hierarchy and classification system for urban streets and rural roads is defined as per the TfNSW Road Design Guide.

A hierarchical road network is essential to maximise road safety, residential amenity and legibility. Each class of road in the network serves a distinct set of functions and is designed accordingly. The road hierarchy for Tenterfield is shown in Figure 1.

Legend for map:

- Class A Roads – Arterial (State Highways) -Yellow
- Class B Roads – Sub Arterial (Regional Roads) – Blue
- Class C Roads – Collector – Blue
- Class D – Local Access – Green
- Class E – Lanes - Green



**DISCLAIMER**

Although all care is taken in the preparation of this plan, Tenterfield Fire Co. will accept no responsibility for any omissions, errors, or misprints or their uses. The information contained within this plan is pictorial representation only.

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Street Name	Ref.	Street Name	Ref.	Street Name	Ref.	Street Name	Ref.
Burns Street	H1	Dundas Street	K9	High Street	K7	Salway Street	H3
Burns Street	H10	Edin Street	L12	Logan Street	P8	Salway Street	G1
Clarke Street	J11	Elfrida Avenue	K4	Lyons Street	J1	Stuart Street	P6
Cotton Street	L21	Errol Lane	N9	McGowan Street	J3	Stuart Street	O7
Cove Street	N6	Francis Street	N5	Munro Street	G6	Stuart Street	P0
Coyler Street	B3	George Street	F8	McDermott Lane	M1	Trail Lane	O8
Crown Street	L3	High Street	L5	McKenzie Street	K3	Watson Lane	N2
Cross Street	O8	Janine Street	N10	McLennan Street	L10	Wardell Street	L1
Deveraux Lane	N6	King Street	P1	McKenzie Street	E9	Wardell Lane	P5
Deveraux Lane	P8	King Lane	N7	Palmer Street	M3	Wood Street	P11
Deveraux Street	L7	Laird Street	M2	Palmer Street	H4	Woolough Street	M4
Deveraux Street	A3	Lauda Street	C9	Palmer Street	L9		

**Figure 1**

**Tenterfield Road Hierarchy**



### **4.3. Public Transport**

Public transport in Tenterfield LGA is limited to community transport services operated by government agencies or non-profit organisations, school buses and taxi services.

The location of set down and pick up areas and taxi ranks have been considered in identifying PAMP routes and projects. These have also been taken into consideration for PAMP work priorities process.

There limited inter-regional transport services servicing Tenterfield including;

- Crisps Coaches (Tenterfield to Toowoomba/Brisbane)
- Northern Rivers Busline (East to Lismore)
- CountryLink Rail Connection Bus to Armidale

The Countrylink service is a rail connection to the NSW rail service at Armidale.

The bus/coach stop is serviced from the bus stop in the CBD at Manners Street opposite the Telegraph hotel.

### **4.4. Future Pedestrian Needs**

As mentioned in "Tenterfield Community Strategy Plan", there is a demographic shift which will see an increase in the aged population. This expected growth and the increase of people choosing to walk, and the increase of special mobility vehicles, pedestrian facilities must cater for a number of different needs.

With the completion of this PAMP, through the thorough crash analysis, community consultation and existing facility audit, the aim is to create pedestrian facilities for all pedestrians.

## **5. Public Consultation**

The development of the initial PAMP included community consultation to determine what level of service the community considered acceptable for each pedestrian route category, and to identify current or future needs to determine access priorities.

The community consultation was conducted including local paper media, letters to identified groups and public display.

### **5.1. Identified Groups**

Seniors groups, Community Centres, Disability Groups and Schools were identified as being potentially interested in pedestrian needs in the community. A survey was circulated in the community calling for feedback in relation to current pedestrian facilities and the need for future pedestrian facilities.

Community members were asked to identify locations they felt were unsafe and hazardous, areas where they walk and they find difficult to walk, locations where they have difficulty crossing the road and areas they would like to walk if made available.

### **5.2. Identified Pedestrian Issues**

The following issues were identified:

- The Manners Street bus stop in front of the Home and Community Care (HACC) building is used for inter and intra state coach services, and as a drop off and collection point for local services. Existing pedestrian levels may grow through efforts to provide improved shelter at the site and an aging population. Current disability access is limited and needs to be improved as does public amenity signage.
- The Tenterfield Main Street Plan identified the following issues:
  - 40 kph High Pedestrian Zone was implemented along Rouse Street from Miles to Molesworth Streets and also along part of High Street to the east.
  - Reconstruct the existing pedestrian crossing in Rouse Street near High Street has been completed.
  - Relocated the pedestrian crossing in Rouse St north of High Street has been completed.
  - A crossing to facilitate pedestrian movements to the cinema and school of arts has been installed.

### **5.3. Community Consultation Survey**

Community consultation comments were incorporated into this document except for the following matters that were raised:

- The extension to the footpath at the north end of Rouse Street has been completed.
- Haddington Nursing Home requested that pedestrian facilities should be provided from Haddington, especially for taking residents for walks in wheel chairs. Unfortunately the Haddington facility has been constructed a long way from any existing footpaths network and connectivity would require more funding than the rest of the plan allows (approximately 1km of footpath). Further, there is a large difference in elevation and steep terrain making wheelchair transport very difficult.
- Meals on Wheels suggested a number of additional pedestrian crossings, many of which will be reconfigured as part of the main street project, but not all will be marked pedestrian crossings because they do not meet the warrants required for formal pedestrian crossings.
- A suggested upgrade to the small section of footpath on the eastern side of Crown St behind Sexton and Green. This would require significant additional works including retaining structures and kerb and gutter.

## **6. Audits**

The pedestrian facilities audit forms part of Tenterfield Council's Pedestrian Access and Mobility Plan.

On-foot field audits are essential to determine the type and scale of work required along designated pedestrian routes. Generally, audits were undertaken by an experienced asset inspector or manager who has training and experience in road safety auditing, or in design for access and mobility. These audits will generally be undertaken when funding is available for upgrading of facilities.

### **6.1. Route selection**

Pedestrian routes were selected for the study area. Taken into consideration were that pedestrian attractors and generators, central business district (CBD), community consultation, identified hazardous locations and existing pedestrian facilities. With the CBD being the initial priority, feeder routes to the CBD were identified than extended to outlying areas. A number of pedestrian generators and attractors are located within the study area. Pedestrian attractors include central business districts community centres, hospital/s, medical and age care centres, schools, business zone, churches, supermarkets and recreational facilities (e.g. sporting facilities and parks).

Existing footpaths and pedestrian facilities were reviewed as part of the PAMP. Off road paths provide a safer walking environment and often present shortcuts between areas, therefore making them more appealing for pedestrians.

PAMP routes:

- Provide links between main attractors and generators
- Improve existing pedestrian hazards locations
- Formalise existing pedestrian links
- Create new off-road facilities

### **6.2. Route Audit Process**

On site physical audits were conducted along all high, medium and low priority pedestrian routes. The key focus of the route audits was any identified access impediments for pedestrians with particular focus on access for less mobile pedestrians such as the elderly and people with disabilities. The identified difficulties found in a number of locations were:

- Poor kerb ramp design
- Lack of footpaths
- Incoherent footpaths

### **6.3. Work Prioritisation Methods**

The facility audit conducted identified high, medium or low priority issues. Those issues identified as a high priority have been included in the Appendix 1, including indicative costs for rectification.

A prioritised modified condition score was applied to issues identified for action. Further refinement was then carried out which also considered other factors including Councils existing works program and results of the community consultation.

## **7. Funding Sources and Implementation of PAMP**

Generally funding for implementation of the projects identified in this PAMP would come from Council and TfNSW. The works identified in this PAMP total \$169,500 for state roads and \$296,500 for local roads.

Council's budget for 2020/2021 does not contain any funding allowance for the provision of new or replacement of existing pedestrian facilities. Following the major works undertaken with the main street revitalisation, any future works would need to have external grant funding.

The TfNSW process on Implementation Funding for PAMP works is State Roads projects 100% TfNSW for road crossing facilities and kerb ramps only, and Regional and Local Roads on a 50/50 TfNSW and Council basis. TfNSW funds road crossing facilities and kerb ramps only.

## **8. Monitoring Program**

Initial monitoring of this plan will consist of management of works within the current budget projections, and input to future budget considerations. Works as completed will be recorded and incoming comments will be recorded to gauge effectiveness.

It is proposed to review the plan on a five-year basis. This will allow the document to be reviewed against works completed and community expectations. The five year cycle will also allow for a review of the objectives to ensure they remain relevant.

## **9. Recommendation for future studies**

As described earlier in this study many deficiencies have been identified during the route audit process. Considering the limitation of the scope of PAMP several issues will remain unsolved. If incorporated with another plan or program, this document may assist in resolving those problems.

At this point, it is not envisioned that further studies will be required outside the review of this PAMP at the nominated interval unless external funding is provided. Further detailed investigation and design will be required for many projects.

## **10. Conclusion and Recommendations**



This PAMP continues to be a valuable tool to assist in providing enhanced access for pedestrians, cyclists and the mobility and/or vision impaired. The implementation of the nominated improvements to the pedestrian facilities in Tenterfield will also provide more opportunity to the aged and a safer pedestrian environment for school children.

It is recommended that Council continue to seek external funding opportunities to enable the implementation of PAMP actions in the Operational Plan to support the community's priorities and allow the project to be implemented in a financially sustainable process.



**11. Appendix 1 - High priority works schedule – State Highways**



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority
Rouse Street	Miles / Manners to High / Molesworth 100m from Rouse St	40 KPH High Pedestrian Activity Zone	1	\$600,000	\$600,000	1
High Street						
Rouse Street	Manners to Molesworth St	Relocate and reconstruct pedestrian crossings	4	incl in 40 kph	incl in 40 kph	2
Rouse Street	Manners and High St	Relocate informal crossing ramps further from the highway	6	incl in 40 kph	incl in 40 kph	3
Rouse Street	Manners and High St	Regrade paved footpaths both sides (Only in conjunction with future major work)	900m2	\$105	\$94,500	4
Rouse Street	Manners St	Broken pavers around water meter covers. Repair trip hazards.	10	\$500	\$5000	5

**COMPLETED**

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Rouse Street	Manners St	Broken pavers around Telstra cover. Repair trip hazard.	4	\$500	\$2000	6	COMPLETED
Rouse Street	High St	Entry needs reconstruction to provide a trip free area  (Defer for development or landowner works)	1	\$25,000	\$25,000	7	
Rouse Street	Molesworth St	Replace cracked footpath and drain  (Defer for development or landowner works)	25m	\$600	\$15,000	8	







Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Rouse Street		Replace slab to remove trip hazard	2m	\$1,000	\$2,000	9	
Rouse Street	High St	Replace unused access (Defer for development or landowner)	1	\$8,000	\$8,000	10	



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Rouse Street	Miles Street	Construct concrete footpath when - TfNSW advise of any supporting funding	25m	\$400	\$10,000	11	
High Street	Logan St	Repair Access (Defer for development or landowner works)	10m	\$150	\$15,000	12	



**12. Appendix 2 - High priority works schedule – Local roads**



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority
Manners Street	Logan Street	Sunken pavers	1	\$150	\$150	1 COMPLETED
Manners Street	Rouse Street	Replace old broken and uneven concrete adj. Exchange Hotel	32m2	\$250	\$8000	1a COMPLETED

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Access lane to CBD from parking west of Rouse	N/A	Uneven asphalt surface with trip hazards	50m2	300	\$15,000	2	
Miles Street	Rouse Street	Old Concrete, trip hazard	45m2	\$300	\$13,500	3	



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Manners Street	Bulwer Street	40mm trip hazard Remove tree root and reconstruct section	1.2m	\$1000	\$1,200	4	
Manners Street	Bulwer Street	Sunken pavers trip hazard	1	\$2,000	\$2,000	5	



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
High Street	Rouse Street	Uneven old concrete - replace	54 x 2.5m	\$600	\$81,000	6	
Logan Street	High Street	Replace bitumen with concrete footpath	18m x2m	\$550	\$19,800	7	



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Manners Street	Whereat Lane	Grind footpath trip hazard	1	\$1,000	\$1,000	8	
Manners Street	Whereat Lane	Grind footpath trip hazard	1	\$1,000	\$1,000	9	



Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Manners Street	Whereat Lane	Grind footpath trip hazard	1	\$1,000	\$1,000	10	
Manners Street	Bulwer Street	Repair trip hazard	1	\$2,000	\$2,000	11	





Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Scott Street	Miles Street	Grind trip hazard	1	\$1,000	\$1,000	12	
Manners Street	Wood Street	Repair trip hazard #181	1	\$5,000	\$5,000	13	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Manners Street	Wood Street	Repair Trip Hazard #181	1	\$10,000	\$10,000	14	
Molesworth Street	Rouse Street	Repair trip hazards	1	\$10,000	\$10,000	15	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Molesworth Street	Rouse Street	Replace with concrete	10m	\$1,000	\$10,000	16	
Miles Street	Rouse Street	Upgrade to concrete	30m x 2m	\$600	\$36,000	17	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Miles Street	Rouse Street	Upgrade to concrete Defer for developmental works – landowners driveway	10m	\$1,000	\$10,000	18	
Railway Avenue	Manners Street	Replace concrete	17m	\$1,000	\$17,000	19	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Wood Street	Manners Street	Extend concrete footpath from Manners Street to School Crossing	50m	\$400	\$20,000	20	

Street	Cross Street	Description of works	# or length	Unit Cost	TOTAL	Priority	
Nass Street	Pelham Street	Path linking the hospital front carpark to the clinic'	50m	\$400	\$20,000	21	
Rouse Street	Mid block CBD	Bruxner Park steps investigation	Item	20,000	20,000	22	