
NARROMINE SHIRE COUNCIL
ORDINARY MEETING BUSINESS PAPER – 14 AUGUST 2024
REPORTS TO COUNCIL – INFRASTRUCTURE AND ENGINEERING SERVICES

1. WORKS REPORT

Author	Director Infrastructure and Engineering Services
Responsible Officer	Director Infrastructure and Engineering Services
Link to Strategic Plans	CSP – 4.3.4 Ensure Council's property assets are monitored and well managed

Executive Summary

This report provides information regarding works undertaken for the given period for operational and capital works.

Report

The Works Report (**Attachment No. 1**) for the period 5 July 2024 to 4 August 2024 is presented to Council for information.

Financial Implications

Council has provision for these services in its Operational Budget.

Legal and Regulatory Compliance

Local Government Act 1993
Roads Act 1993

Risk Management Issues

Nil

Internal/External Consultation

Nil

Attachments

- Works Report (**Attachment No. 1**).

RECOMMENDATION

That the information be noted.

NARROMINE SHIRE COUNCIL
ORDINARY MEETING BUSINESS PAPER – 14 AUGUST 2024
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2. PEDESTRIAN ACCESS MOBILITY PLAN

Author	Director Infrastructure and Engineering Services
Responsible Officer	Director Infrastructure and Engineering Services
Link to Strategic Plans	CSP – 4.3.4 Ensure Council's property assets are monitored and well managed

Executive Summary

This report provides an update on the Narromine Shire Council Pedestrian Access and Mobility Plan (PAMP).

Report

The Narromine Shire Council's PAMP (**Attachment No. 2**) aims to enhance pedestrian access and mobility across its three towns, focusing on creating safe, convenient, and interconnected walking paths to promote walking and improve the overall experience for residents and visitors alike.

At the June 2024 Council Meeting, it was resolved to place the Pedestrian Access Mobility Plan on public exhibition for a period of 28 days. The document was placed on public exhibition to 1 August 2024. During this period, no public submissions were received.

Before the document was exhibited, informal feedback was incorporated, resulting in minor modifications. Enhancements were made for clarity, and spelling and grammar were corrected. Additionally, two new projects were included:

1. A high-priority footpath in Trangie, extending from Café 2823 to Ewe Too.
2. A low-priority footpath along First Avenue.

The Narromine Shire Council PAMP, identifies the pedestrian network hierarchy and associated action plans for management and implementation. The plan emphasizes the integration of walking and connecting the town's key areas by foot and cycle paths and includes recommendations of appropriate pedestrian facilities, and development of pedestrian routes. The plan also includes a list of prioritized pedestrian infrastructure improvements for safer and more attractive transport choices.

Financial Implications

The plan will be used to assist with determining budget items and grant funded projects into the future.

Legal and Regulatory Compliance

Local Government Act 1993
Roads Act 1993

2. PEDESTRIAN ACCESS MOBILITY PLAN (Cont'd)

Risk Management Issues

Nil

Internal/External Consultation

Consultation has been conducted with the community and stakeholders, including an online survey and in-person engagement sessions, including with Councillors. The plan was placed on public exhibition for 28 days and no submissions were received.

Attachments

Draft Pedestrian Access Mobility Plan (**Attachment No. 2**).

RECOMMENDATION

That the Pedestrian Access Mobility Plan be endorsed by Council and the priority list be adopted.

3. NARROMINE AERODROME VEHICLE CONTROL POLICY UPDATE

Author	Director Infrastructure and Engineering Services
Responsible Officer	Director Infrastructure and Engineering Services
Link to Strategic Plans	CSP – 4.3.4 Ensure Council's property assets are monitored and well managed

Executive Summary

The Narromine Aerodrome Vehicle Control Policy was last updated in 2020 and is due for review. This report details the recommended changes to the policy.

Report

The Narromine Aerodrome Vehicle Control Policy (**Attachment No. 3**) provides structure and regulation to control vehicle access to the airside of the Narromine Aerodrome. This policy is designed to minimize risk and ensure the safety of all users of the Narromine Aerodrome.

The main proposed changes in this revision include:

- Minor updates to spelling and definitions
 - Format update to ensure emphasis on key points.
 - Updated application form
-

3. NARROMINE AERODROME VEHICLE CONTROL POLICY UPDATE (Cont'd)

The updated policy aims to reflect current and best practice at the Narromine Aerodrome.

Financial Implications

None. Adherence to policy does not result in additional cost; all aerodrome operations are included within Council's operational budget.

Legal and Regulatory Compliance

Local Government Act 1993
Roads Act 1993

Risk Management Issues

This policy is critical to ensure the safety of all aerodrome users. The policy is also required to ensure Council is appropriately training and monitoring drivers and vehicles that have permission to travel airside at the Narromine Aerodrome.

Internal/External Consultation

Nil

Attachments

- Narromine Aerodrome Vehicle Control Policy (**Attachment No. 3**)

RECOMMENDATION

That the revised Narromine Aerodrome Vehicle Control Policy be endorsed.

Melanie Slimming
Director Infrastructure and Engineering Services

Works Report

Water and Sewer

Over the past month, the Water and Sewer team has made significant progress despite the winter season. With water consumption lower during this period the teams has observed a reduction in reported leaks, allowing a focus on preventative maintenance. A key focus has been the improvement and trouble-shooting of Council's smart-meter system, Aqualus. These changes should streamline Council processes and improve user experience. Additionally, the team have successfully removed exposed asbestos pipes from a number of locations around Narromine and Trangie. The old pipes have been replaced with plastic ensuring improved safety and continued drainage functionality.

Facilities and Major Projects

Council is continuing to work with contractors to facilitate installation of new pool ladders and the shade sails. The works are on track to be completed by the pool opening in early October.

Council's Store upgrade (located at the Narromine Depot) is progressing with most internal works complete and roller doors to be installed. The changes will improve security at the depot, reduce access to the store by all staff, improving recording and management of stock and will increase storage space enabling the store to hold more items, reducing reliance of stores in-town holding commonly used items.

The Narromine Cemetery Baby Grave area is undergoing a transformation. The oleander bushes have been removed and new white-picket fencing has been ordered. A number of Council teams, including Facilities, Parks and Gardens and Construction are working together to perfect this important improvement project. Additionally, the Cemetery toilets will be replaced and relocated. Council is currently working through the Development Application (DA) process that is required for working within the cemetery.



Figure 1: The Baby Grave area at the Narromine Cemetery is undergoing a beautification project

Netwaste Clean-Up

The annual NetWaste Clean-Up event is scheduled for October 10th. Council will start to communicate this in the coming months. NetWaste is an Australian waste management organization that collaborates with local councils and communities to promote sustainable waste practices and provide waste disposal solutions. The NetWaste Clean-Up events allow residents to dispose of specific types of waste that are not usually accepted at the Narromine or Trangie Waste Depots.

Wetlands

The Wetlands carpark from Gainsborough Road is now sealed and line marked. The area is nearly complete, with Council working on the finishing touches including the landscaping and seeding of the mounds to reduce erosion. Council met with specialized contractors in July to determine the appropriate methodology for the expansive area.



Figure 2: The new wetlands carpark is complete

Parks and Gardens

In recent efforts, the Parks and Gardens team has been diligently addressing vandalism across all towns by removing graffiti and restoring damaged areas, enhancing the overall appearance and safety of our public spaces. Concurrently, the team is engaged in extensive weed spraying to manage and control invasive vegetation, which helps in maintaining the health and aesthetics of our green areas. Additionally, they are actively cleaning and maintaining culverts to ensure that stormwater can flow unobstructed during rain events. This proactive approach aims to prevent flooding and mitigate potential damage to infrastructure. These combined efforts reflect the team's commitment to preserving the quality and functionality of our parks and public spaces, ensuring they remain welcoming and resilient throughout the year.

In early August the new rotary park toilet and barbeque area was sealed. The Parks and Gardens team will be planting lawn in the unsealed area.



Figure 3: The toilet and barbeque area at Rotary Park was sealed in July. Lawn is to be installed around the shelter

The kerb and gutter along Fourth Avenue is complete, with the works significantly tidying the area and improving stormwater flow. The road shoulder will be sealed in the coming months as the weather warms to ensure a smooth and robust finish.



Figure 4: Kerb and gutter has been installed along Fourth Ave

Roads

Due to recent wet weather, road maintenance and construction projects were delayed during July, however, some great progress has occurred with many sealing projects completed.

Council has completed the first 2 km of Tullamore Road (approx. 15 km south of Narromine). Due to persistent wet weather and increasing damage on our unsealed road network Council will be finishing works on Tullamore Road shortly with the completed section to be sealed by mid-August. Works will resume after harvest in warmer months. The grader team on this site will move to undertake flood repairs on unsealed roads across the Shire.

Council has received flood funding for a number of roads across the Shire, with the total funding exceeding four million dollars. The bulk of the funding must be spent by March 2025 and all efforts are currently going into finalising our forward works program to ensure teams are appropriately managed to complete the work within the tight timeframe. Due to the recent wet weather Council is receiving an increase in requests from the public to undertake repairs on unsealed roads. Council's road team is actively managing the priority list and working with our new AI tools to ensure appropriate priorities are placed on every request.

Road works on Enmore Road, Trangie are continuing, with the first kilometer sealed in late July. A number of trees have been removed from the road edge, significantly improving visibility around corners. This road is a heavily used freight route so increased visibility and widened corners are critical in ensuring the safety of drivers.



Figure 5: Tree Removal on Enmore Road



Figure 6: Enmore Road has recently been sealed

Sealing and line marking of the light vehicle parking area on Burraway Street occurred in late July. The team are finalizing the signage for the area and plan for opening to occur in August.



Figure 7: Burraway Street Carpark has been sealed and line marked

Gainsborough Road line marking is also complete with signage to be installed in the coming weeks. The road will be opened once all signage is installed. Council is currently working with Transport for NSW to adjust the speed limit along Tomingley Road, currently the speed limit changes from 50 km/h to 110 km/h very close to the edge of town. Transport is supportive of changing the 110 km/h to 80 km/h and increasing the speed to 110 km/h on the southern side of Gainsborough Road. This will significantly improve safety at the Tomingley/Gainsborough roads intersection and also reduce the speed of traffic entering town.



Figure 8: Sealing and linemarking of Gainsborough Road is complete

Northern Stormwater Drainage

Council has secured grant funding to enhance stormwater management at key locations, including the Newell Highway (Burraway Street) and Dundas Park and more generally, the northern side of Narromine Township. The design phase of this project is complete, and the scope of works has been finalised. The project will feature the installation of large-diameter pipes, exceeding one meter in width, along Meryula Street. These new pipes will efficiently capture stormwater from the northern side of the railway line and direct it towards the river, addressing longstanding drainage issues in the area.

The project is set to go out to tender within the next month, with both under-boring and open excavation methods anticipated. Once a contractor is selected, Council will initiate further public consultations to share information about the construction impacts and the benefits of the new stormwater infrastructure. This proactive approach aims to keep the community informed and engaged throughout the project's progression.

Pedestrian Access and Mobility Plan (PAMP)

Final Report

Narromine Shire Council

August 05, 2024

→ The Power of Commitment



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1. Introduction

Walking is a fundamental and direct means of access to most places and to the goods, services and information available at these places. Those creating public and private spaces or facilities must give priority to 'walk in' access, which is attractive, safe, convenient, and accessible for everyone. All responsible agencies should respect the pedestrians' inalienable right-of-way on footpaths and recognise the importance of constructing and maintaining them for transport, health, safety, leisure and social purposes.

The Narromine Shire Pedestrian Access and Mobility Plan (PAMP) provides a framework for the future management, use and enhancement of the walking network for pedestrians of all ages and mobility. This PAMP is a strategic document that identifies the pedestrian network hierarchy and associated action plans for management.

The strategic, high-level objectives of this PAMP are to:

- Integrate walking into the transport system, as a legitimate form of transport to encourage more walking.
- Provide appropriate pedestrian facilities, where required, to enhance accessibility and mobility.
- Identify clusters and patterns of pedestrian crashes to address safety issues.
- Develop and integrate pedestrian routes.

An important function of the PAMP is to identify pedestrian needs and clearly indicate the Council's direction for the management and improvement of pedestrian needs within the Council LGA.

Different land uses require pedestrian facilities for a range of users. Pedestrians, including commuters and recreational walkers, need to be catered for, as well as the elderly, the mobility and visually impaired, residents, School children, and tourists.

The guidance document *How to Prepare a Pedestrian Access and Mobility Plan (Roads and Maritime, March 2002)* states that:

- *“A PAMP is a comprehensive strategic and action plan to develop pedestrian policies and build pedestrian facilities. PAMPs aim to co-ordinate investment in safe, convenient, and connected pedestrian routes. A PAMP provides a framework for developing pedestrian routes or areas identified by the community as important for enhanced, sustainable safety, convenience and mobility.”*

Definition of Pedestrian

A pedestrian includes (for the purposes of this PAMP):

- A person walking.
- A person driving a motorised wheelchair that cannot travel over 10 km/h on ground level.
- A person in a non-motorised wheelchair.
- A person pushing a motorised or non-motorised wheelchair.
- A person in or on a wheeled recreational device or toy.

1.1 Purpose of this report

The purpose of this PAMP is to review the current and future pedestrian needs in the Narromine Local Government Area (LGA) to provide improved facilities for pedestrians. This PAMP provides a list of prioritised pedestrian infrastructure improvements for safer, more attractive transport choices for residents and visitors. This comes with the aim of increasing pedestrian activity and improving the amenity for all local residents and visitors to the study area. The Council PAMP has been prepared in accordance with the Roads and Maritime guidance document *How to Prepare a Pedestrian Access and Mobility Plan (Roads and Maritime, March 2002)*.

This study has focused on reviewing the existing and proposed pedestrian network, with the aim of extending and improving the existing network of pedestrian facilities. As part of this report, it is recommended that the Council develop a program for the maintenance of existing facilities. This study, therefore, aims to add the greatest value to Council's strategies and works program by identifying the gaps in existing networks and extending the networks where appropriate.

1.2 PAMP Objectives

The objectives of PAMPs 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 major roads.
- To identify and resolve pedestrian crash clusters.
- To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons through the provision of pedestrian infrastructure and facilities which cater to the needs of all pedestrians.
- To provide links with other transport services to achieve an integrated land use and transport network of facilities that comply with the best technical standards.
- To ensure pedestrian facilities are employed in a consistent and appropriate manner throughout NSW.
- To link existing vulnerable road users plans in a co-ordinated manner, such as bike plans, maintenance programs and accessible public transport.
- To ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups.
- To accommodate special event needs of pedestrians.
- To meet obligations under the *Commonwealth Disability Discrimination Act* (1992).

1.3 Study Area

Narromine Local Government Area (LGA) is located within the Orana Region of New South Wales, around 40 kilometres to the west of Dubbo and 430 kilometres to the west of Sydney. The LGA is located in the Macquarie Valley and is composed of three towns and localities covering an area of around 5,224 square kilometres.

The town of Narromine is the LGA's major centre, situated on the banks of the Macquarie River. Other towns within the LGA include Trangie and Tomingley. The population of Narromine LGA is approximately 6,427 based on the 2021 Australian Bureau of Statistics (ABS) Census data and most of the population is centred around the main centre of Narromine and outlying towns of Trangie and Tomingley.

The primary focus of this PAMP is around the three towns of Narromine, Trangie, and Tomingley in Narromine LGA. A map of the Narromine LGA is shown in Figure 1.1.

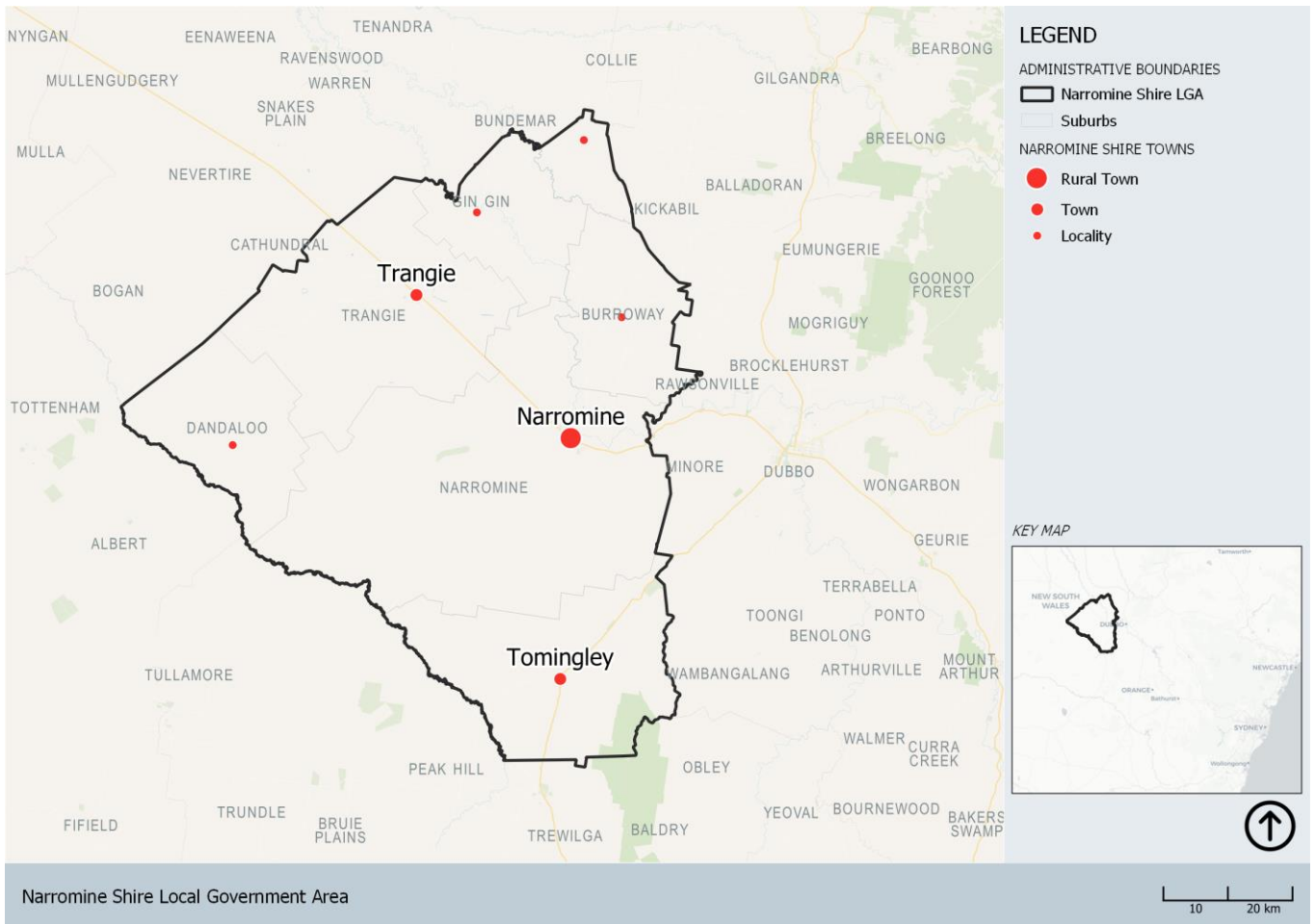


Figure 1.1 Narromine Local Government Area

1.4 Structure of this report

The remaining sections of this report are structured as follows:



- **Section 2 – Strategic context and policy review:** provides a summary of the previous pedestrian planning and related policies from the Council and various NSW Government agencies.
- **Section 3 – Background review:** outlines the context of Narromine’s population / demographic characteristics and current walking infrastructure.
- **Section 4 – Design guidelines and planning for pedestrians:** provides an overview of best practice standards that apply to the treatment of pedestrian facilities.
- **Section 5 – Proposed pedestrian improvements:** a list of potential pedestrian improvements is given with the different types of infrastructure to improve safety, amenity, and access for pedestrians.
- **Section 6- Priorities for pedestrian improvements:** an assessment of the pedestrian requirements was conducted and is provided with short, medium and long term infrastructure projects. An indicative cost and level of difficulty to implement them is included.
- **Section 7- Conclusions and recommendations:** provides the key findings in the PAMP, with a list of recommendations and priorities in the PAMP for pedestrian access and mobility improvements.

2. Strategic context and policy review




2.1 Regional context

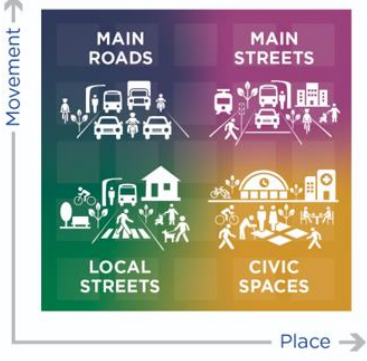




GHD conducted a review of the following documents in relation to the regional level transport context specific to Narromine LGA. This review covered the plans, policies, and reports that are summarise in Table 2.1.



Table 2.1 Review of Strategic Planning Context (Regional)

Planning Document	Relevant / Reference to Narromine
<p>Future Transport Strategy (Transport for NSW, 2022)</p>  <p>This strategy replaces Future Transport Strategy 2056 Shaping the future, which was published in 2018. It contains a suite of strategies, policies and plans for transport developed in concert with the Department of Planning and Environment, the Greater Cities Commission, Infrastructure NSW and other government agencies, to provide the integrated vision for the state.</p>	<p>The key strategies are summarised as follows:</p> <p>Support car-free, active, sustainable transport options so that customers can have connected cycleway networks to serve places such as local centres that are effectively integrated with public transport.</p> <p>Support thriving and healthy 15-minute neighbourhoods so that local communities can have healthy lifestyles by prioritising walking and cycling.</p> <p>Provide spatially efficient ways for people walking and cycling by making sure that strategic walking and cycling routes are safely connected to the key destinations.</p> <p>Improve the safety of people walking and cycling:</p> <ul style="list-style-type: none"> – Deliver reduced speeds and speed limits. – Deliver infrastructure safety treatments, including through the Towards Zero Safer Roads Program. – Continue investing in pedestrian crossings, refuge islands and traffic-calming measures. – Ensure micro-mobility devices are embedded safely within networks.
<p>Transport for NSW Active Transport Strategy</p> 	<p>The purpose of the NSW Active Transport Strategy is to double active transport trips in 20 years. This strategy draws on the Future Transport Strategy and its vision for walking, bike riding and personal mobility. This Strategy provides longer term ambitions accompanied by five-year priority moves to guide planning, investment, and priority actions for active transport across NSW.</p> <p>The NSW Active Transport Strategy focuses on five areas:</p> <ul style="list-style-type: none"> – Enable 15-minute neighbourhoods. – Deliver continuous and connected cycling networks. – Provide safer and better precincts and main streets. – Promote walking and cycling and encourage behaviour change. – Support partners and accelerate change. – Walking and bike riding in NSW is shown overleaf.

Planning Document	Relevant / Reference to Narromine
	<h3>3. Walking and bike riding in NSW</h3>
<p>A 20-Year Economic Vision for Regional NSW (Department of Regional NSW, 2021)</p> <p>This is a plan that outlines the 20-year economic vision for regional NSW. It addresses how the NSW government sets out a long-term investment plan and framework for social and economic success in the regional NSW.</p>	<p>The NSW Government plans priority actions for regional economic development with the following principles to promote active transport:</p> <ul style="list-style-type: none"> – Principle 2: Improved travel between regional centres and from regional centres to international gateways. <ul style="list-style-type: none"> • Within five years, the NSW Government will improve active transport activity with walking and cycling investments for better health, social and environmental outcomes. – Principle 7: Regulation and planning to promote commercial opportunities. <ul style="list-style-type: none"> • Within five years, the NSW Government will increase opportunities to grow wellbeing and liveability with the investment in active transport and open space infrastructure that is walkable, safe, connected, and accessible.
<p>National Road Safety Strategy 2021-30 (Department of Infrastructure, Transport, Regional Development and Communication, 2021)</p> <p>The National Road Safety Strategy aims to reduce the annual number of fatalities by at least 50 percent and serious injuries</p>	<p>The strategy sets multiple priorities to reach Vision Zero and consider how the road transport system works together to prevent death and serious injury. Followings are the priority that supports pedestrians and cyclists to have a safe trip.</p> <ul style="list-style-type: none"> – Provide safe access for all road users. – Increase community understanding of risky road use and address it through education and enforcement. – Better transport options and assistance. – Governments at all levels will plan and implement network-wide safety improvements. – Governments will focus on designing a Safe System that is future focused.

Planning Document	Relevant / Reference to Narromine
<p>by at least 30 percent by 2030 and reach towards Vision Zero by 2050.</p> <p>This Strategy addresses three main roles to improve road safety. Three main themes are safe roads, safe vehicles, and safe road use.</p>	
<p>State Infrastructure Strategy 2022-2042 (Infrastructure NSW, 2022)</p>  <p>State Infrastructure Strategy outlines the infrastructure needs and priorities and strategic directions to deliver and achieve better outcomes for the next 20 years. In order to achieve the best outcomes, Infrastructure NSW applied the guiding principles. This includes:</p> <ul style="list-style-type: none"> Optimise existing assets and networks. Partner with local governments and communities Drive Collaboration across government pursue long-term fiscal and market sustainability. 	<p>The key objectives, strategic directions and recommendations summary for active transport are summarised below:</p> <p>Objective: Service growing communities</p> <p>NSW government aims to achieve evolving needs of citizens by delivering quality infrastructure that enables better access to essential services.</p> <p>Strategic Directions:</p> <ul style="list-style-type: none"> Deliver housing in great neighbourhoods for all parts of the community. Improve access to efficient, quality services through better use of assets and a better mix of physical infrastructure and technology-enabled solutions. Continue NSW’s investment program in sectors that require renewal, with a focus on TAFE and Justice. <p>Recommendations summary</p> <ul style="list-style-type: none"> Fund and deliver a prioritised active transport infrastructure program to support liveability and 15-minute neighbourhoods. Improve efficiency and service quality in the social infrastructure sectors through co-location and divestment of legacy assets. Establish a prioritised program of investments for Justice and TAFE infrastructure services and identify options to complement initiatives outlined in 20-year health and education sector infrastructure strategies.
<p>Cycleway Design Toolbox: Designing for cycling and micro mobility (Transport for NSW, 2020)</p>  <p>This Cycleway Design Toolbox aims to achieve high-quality cycling infrastructure by providing design guidance for high-quality cycling infrastructure. This design toolbox is for all bicycle users regardless of their ages and abilities in the context of New South Wales.</p>	 <p>There are six (6) design principles that assist in achieving high-quality cycling intrastate. The principles are listed below:</p> <ul style="list-style-type: none"> Safe: Providing safe cycling infrastructure so cycling users can access places safe and perceived to be safe so that people of all ages and abilities feel comfortable when using facilities. Direct: Providing direct routes that minimise the time and distance of cycle users. Connected: Providing high-quality cycling infrastructure that is simple to navigate and consistent along the routes so that people can easily reach their day-to-day destinations. Attractive: Providing cycle infrastructure that is well-designed and attractive. The attractiveness of a cycleway facility includes safe and quality cycling routes and the surrounding environment, such as shade, quality public open space, and welcoming destinations. Comfortable: Providing the quality routes that all cycling users can feel the comfort. The comfortable routes include adequate width for the volume of users, a smaller number of steep gradients and stopping and limited interaction with high speed or high volume motorised traffic. Adaptable: Design cycling infrastructure that has flexibility in design to accommodate changes in user needs and demand over time.

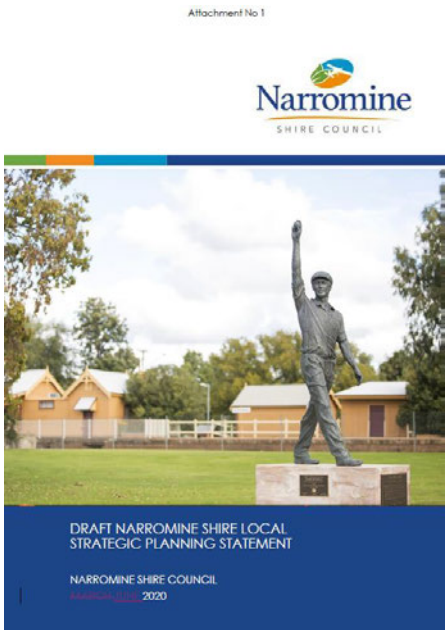
Planning Document	Relevant / Reference to Narramine
<p>NSW Movement and Place Framework (Transport for NSW)</p> <p>NSW movement and Place Framework is a 'place-based' approach that build and support thriving communities by collaboration on shared outcomes.</p> <p>This framework classifies that streets are not just for a movement for people, they are also places where people can live and work.</p> 	<p>This approach aims to support analysis and support the planning, design, and delivery of a well-designed built environment. Also, it supports collaboration in working towards a place-based vision.</p> <p>Well-designed built environment is classified by five themes and 36 Built Environment Indicators as shown below:</p>  <ul style="list-style-type: none"> 1. Mode share* 2. Walking paths 3. Cycling accessibility 4. Public transport accessibility* 5. Freight network accessibility* 6. Bus and strategic freight reliability 7. Equitable access 8. Steepness 9. Public space* 10. Local living 11. Primary schools 12. Transport node facilities 13. Places to stop and rest 14. Mix of uses* 15. Population density 16. Housing diversity 17. Local jobs 18. Economic development and regeneration 19. Tree canopy* 20. Biodiversity 21. Impervious surface 22. Waterways 23. Road safety* 24. Pedestrian crowding 25. Safe speed for environment 26. Community safety 27. Air quality and noise* 28. Urban heat 29. Permeability* 30. Building height 31. Street enclosure 32. Street space for pedestrians 33. Culture and heritage 34. Land division 35. Legibility 36. Building density <p>This provides for the integrated and efficient movement of people and goods as well as the demands of places and communities.</p> <p>In order to ensure the best outcome, Transport for NSW sets three key strategies as below:</p> <ul style="list-style-type: none"> - Establishing the vision for the project. - Identifying the issues and opportunities. - Establishing and assessing solutions.
<p>Walking Space Guide towards Pedestrian Comfort and Safety & Pedestrian Crossing Guideline (Transport for NSW)</p> <p>This Walking Space Guide provides a set of standards and tools to assist those responsible for Walking Spaces on streets, to ensure that sufficient space is provided to achieve comfortable environments which encourage people to walk.</p>	<p>Relevance to Narramine study in providing practical guidance on how to improve the pedestrian networks in Narramine, Trangie and Tomingley based on TfNSW guidelines.</p> <p>Walking Space Guide – Footpath Types</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="662 1444 837 1792"> <p>Type 1 Local footpath – Low activity</p>  </div> <div data-bbox="869 1444 1045 1792"> <p>Type 2 Local footpath – Medium activity</p>  </div> <div data-bbox="1077 1444 1252 1792"> <p>Type 3 Main street footpath – Medium activity / Local footpath – High activity</p>  </div> </div>

Planning Document	Relevant / Reference to Narromine
<p>Design of roads and streets A guide to improve the quality of roads and streets in NSW (Transport for NSW)</p> <p>This is a practical 'how to' manual explaining how we can improve our design of roads and streets throughout NSW by better understanding their role and context as local places.</p> 	<p>This document is applied alongside the movement and place framework to enable planners and designers to create meaningful and appropriate functional street and road environments.</p> 

2.2 Local context




GHD conducted a review of planning documents in relation to the local level transport context specific to Narromine LGA, including plans, policies, and reports detailed in Table 2.2.



Table 2.2 Review of strategic planning context (local)


Planning Document	Relevant / Reference to Narromine LGA
<p>Narromine Shire Council Local Strategic Planning Statement-2020-2040</p> 	<p>The <i>Narromine Shire Local Strategic Planning Statement 2040</i> sets the framework for Narromine Shire’s economic, social and environmental land use needs over the next 20 years. It outlines clear planning priorities describing what will be needed, where these are located and when they will be delivered. The LSPS sets short, medium and long-term actions to deliver the priorities for the community’s vision. The LSPS brings together and builds on the planning work found in Council’s other plans, studies and strategies, such as the Local Environmental Plan (LEP), Development Control Plan (DCP) and Community Strategic Plan (CSP). The LSPS will be used to update key components of these plans to present a consistent strategic direction for Narromine.</p> <p>The LSPS gives effect to the Central West and Orana Regional Plan 2036, implementing the directions and actions at a local level. As an integrative local plan, it is also informed by a number of the NSW Premiers Priorities, the Regional Development Framework and the Destination Country and Outback NSW Management Plan 2018-2020, amongst others.</p> <p>The LSPS identifies themes and priorities for the Narromine LGA that will support and develop local identity, values and opportunities.</p> <p>Vibrant Communities: -</p> <ul style="list-style-type: none"> Priority 1- A safe, active and healthy community. Priority 2- A vibrant and diverse community that has a strong sense of belonging and wellbeing. Priority 3- Access to formal and informal education, information, and other services and opportunities to enhance their lives. Priority 4- A range of housing options for the community. Priority 5- A well connected community through cycle ways, footpaths and public transport. <p>Growing Economy</p> <ul style="list-style-type: none"> Priority 6 Sustain and grow our local population.

Planning Document	Relevant / Reference to Narromine LGA
	<p>Priority 7 Development, diversification and sustainability of the local business and industry base.</p> <p>Priority 8 Encourage employment and skills development to address industry needs and grow the regions knowledge base.</p> <p>Protecting and Enhancing Our Environment</p> <p>Priority 9 Manage natural environments for current and future generations.</p> <p>Priority 10 Sustainable community with appreciation of natural assets.</p> <p>Priority 11 Values the efficient use of utilities, natural resources and energy.</p>
<p>Narromine Shire Council Development Control Plan-2011</p> 	<p><i>The Narromine Shire Council Development Control Plan 2011 (DCP) applies to all land within Narromine Shire Council Local Government Area. The purpose of this plan is to support the broad objectives of the Narromine Local Environmental Plan 2011 (LEP) by:</i></p> <ul style="list-style-type: none"> – Supporting the provisions of the LEP. – Providing consistent and equitable development standards throughout the Narromine Local Government Area. – Encouraging a high standard of development that respects and is sympathetic with the environment. – To provide the public with an understanding of its policies for development. <p>This DCP supplements the LEP by providing general information and detailed guidelines and controls which relate to the decision-making process.</p>
<p>Narromine Shire Community Strategic Plan 2027</p> 	<p>The Community Strategic Plan shares the community vision and aspirations for the future of the Narromine LGA. It provides a long-term framework on how all stakeholders will work towards a brighter future for the LGA of Narromine community. The Community Strategic Plan will guide and influence how all stakeholders can deliver the community’s vision, including how Council uses its resources to deliver services across the LGA.</p> <p>The Community Strategic Plan provides a unified direction for all stakeholders to move forward and ensures the lifestyle needs of our residents, businesses and visitors and future aspirations as a community are met. This Plan provides the foundations for a sustainable future for our communities; fosters community engagement and participation; encourages strong community and Council ownership; and enables Council to take advantage of future Federal and State Government funding initiatives.</p> <p>The Vision Statement:</p> <p><i>“The Narromine Shire Community Strategic Plan 2027 represents a key milestone in planning for the future of our community and those who live, work and visit the Shire. Capturing the thoughts of the various groups, organisations, residents and industries was central to forming a united vision”.</i></p> <p>The purpose of this plan is to identify the core strategic objectives of the Narromine LGA community for the future.</p>

Planning Document	Relevant / Reference to Narromine LGA
<p>Narromine Shire Pedestrian Access and Mobility Plan 2011-2021</p>	<p>In 2004, the Narromine Shire Council engaged David Riches and Associates Pty Ltd (DRA) to develop a Pedestrian Access and Mobility Plan (PAMP) for the three major towns in the Narromine Shire Council area. The document covered the period from 2011 - 2021.</p> <p>Since then, new projects have been identified that Council would like to include in the PAMP, and it was considered timely to conduct a review of the PAMP to include additional works that provide connectivity within the existing pedestrian facility network.</p> <p>The towns identified for the study were Narromine, Trangie and Tomingley. Within each town, the PAMP plan was designed to assist Council in providing a road network and built environment that caters to the needs of all pedestrians. Pedestrians for the purpose of the Narromine PAMP included older persons, pedestrians with mobility and vision impairments, residents, School children and recreational pedestrians.</p> <p>Planning objectives for Narromine have been drawn from TfNSW guidelines in consultation with Council and the PAMP committee. The agreed key objectives for the Narromine Shire PAMP are:</p> <ul style="list-style-type: none"> - To facilitate improvements in 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 Narromine LGA roads. - To identify and resolve known and potential pedestrian crash points. - To facilitate improvements in the level of personal mobility and safety for pedestrians with disabilities and older persons through the provision of pedestrian infrastructure and facilities that cater to the needs of all pedestrians. - To ensure that pedestrian facilities remain appropriate and relevant to current and future surrounding land use and pedestrian user groups.
<p>Roads Management Strategy May 2024</p>	<p>The Roads Management Strategy (the Strategy) has been developed to ensure the operational functions of Council are in line with:</p> <ul style="list-style-type: none"> - The legislative requirements such as the NSW Roads Act 1993, and Roads Regulations 2008. - Relevant guidelines and standards to ensure a consistent and industry adopted approach in terms of road planning, road design, road construction and road maintenance. - Strategic directions adopted by Narromine Shire Council Asset Management Strategy, Asset Management Plans and Long-Term Financial Plans. - Community (Residential, Commercial and Industrial) needs and expectations.

Planning Document	Relevant / Reference to Narromine LGA																
<p style="text-align: center;">Road Management Strategy</p>  <p style="text-align: right; font-size: small;">Adopted by Council: 8 May 2014 Resolution Number: 2024/087 Narrromine Shire Council</p>	<ul style="list-style-type: none"> - NSW Government Future Transport Strategy 2056; and - Draft Central West and Orana Regional Transport Plan, October 2021. <p>This Strategy describes how Council manages its road network to ensure that Council has a consistent, clear and sustainable approach to its road management and roads operations.</p> <p>This Strategy principally addresses matters relating to roads and streets which are the responsibility of Council as the Roads Authority. These include:</p> <ul style="list-style-type: none"> - Regional Roads. - Local Rural Roads. - Local Urban Streets. - Bridges and culverts. - Other ancillary infrastructure (roadside drainage, signs, line marking, traffic islands, pedestrian crossings, guard rails, etc.). 																
<p>Asset Condition Rating Assessment Manual</p>  <p style="text-align: center; font-size: x-small;">Asset Condition Rating Assessment Manual</p>	<p>The Asset Condition Rating Assessment Manual has been developed by Narrromine Shire Council, which identifies that a structured condition assessment process must be undertaken to ensure consistency in the determination of remaining useful life for use in modelling renewals. Condition assessments will involve undertaking a survey or audit process.</p> <p>To ensure adequate provision is made for the long-term replacement of major assets by:</p> <ul style="list-style-type: none"> - Ensuring that Council's services and infrastructure are provided in a sustainable manner, with the appropriate levels of service to residents, visitors and the environment. - Safeguarding Council assets, including physical assets and employees by implementing appropriate asset management strategies and appropriate financial resources for those assets. - Creating an environment where all Council employees take an integral part in the overall management of Council assets by creating and sustaining an asset management awareness throughout the organisation by training and development. - Meeting legislative requirements for asset management. - Ensuring resources and operational capabilities are identified, and responsibility for asset management is allocated. - Demonstrating transparent and responsible asset management processes that align with demonstrated best practices. 																
<p>Narrromine Shire Council- Business Process Reflect</p>  <p style="text-align: center; font-size: x-small;">BUSINESS PROCESS REFLECT</p> <p style="font-size: x-small;">DOCUMENT CONTROL This document was last revised on: 12/12/2023 This document was approved on: 24/02/2024</p> <table border="1" style="font-size: x-small; width: 100%;"> <thead> <tr> <th>Change History</th> <th>Version</th> <th>Date</th> <th>Details of Changes</th> </tr> </thead> <tbody> <tr> <td></td> <td>1.0</td> <td>24/02/2024</td> <td>Initial Document Control</td> </tr> <tr> <td></td> <td>1.1</td> <td></td> <td>Document approved by council comments from staff</td> </tr> <tr> <td></td> <td>1.2</td> <td></td> <td>Document approved</td> </tr> </tbody> </table>	Change History	Version	Date	Details of Changes		1.0	24/02/2024	Initial Document Control		1.1		Document approved by council comments from staff		1.2		Document approved	<p>This Business Process Document has been developed for use in Narrromine Shire Councils Reflect operations. The document aims to outline different responsibilities and actions relating to the use of Reflect and its integration into NSCs maintenance operations to create more efficient practices and formalise the process.</p> <p>As maintenance is a key area for management and delivery it has been identified as an integral function to the delivery of its levels of services. This process will allow Narrromine Shire Council to more effectively identify, process and repair defects in the LGA area by implementing a repeatable and standardised process with participation from different levels of the Infrastructure and Engineering Department.</p>
Change History	Version	Date	Details of Changes														
	1.0	24/02/2024	Initial Document Control														
	1.1		Document approved by council comments from staff														
	1.2		Document approved														

Planning Document	Relevant / Reference to Narromine LGA
<p>Narromine Local Environmental Plan 2011</p> <p>Narromine Local Environmental Plan 2011</p> 	<p><i>Narromine Local Environmental Plan (LEP)</i> aims to make local environmental planning provisions for land in Narromine in accordance with the relevant standard environmental planning instrument under section 3.20 of the Act. The particular aims of this Plan are as follows: -</p> <ul style="list-style-type: none"> – To protect and promote the use and development of land for arts and cultural activity, including music and other performance arts. – To encourage economic development through tourism activities, business, employment initiatives and fostering industry growth. – To protect and conserve the natural environment including surface and ground water, soil, air and native vegetation by encouraging sustainable development. – To encourage sustainable agricultural practices, including intensive agriculture, by minimising land use conflicts and facilitating farm adjustments.
<p>Narromine Shire Council Draft Delivery Program 2022/23-2026/27</p> 	<p>The Delivery Program sets out the principal activities to be undertaken by Council over a Council term, to implement the objectives identified in the Community Strategic Plan.</p> <p>This is the plan where the community's strategic goals are translated into actions. These are the principal activities to be undertaken by Council to implement the objectives established by the Community Strategic Plan within the resources available under the Resourcing Strategy. The Delivery Program is a statement of commitment to the community from each newly elected Council. It is designed as the single point of reference for all principal activities undertaken by Council during its term. All plans, projects, activities and funding allocations must be directly linked to this Program. As Local Government is a division of State Government, it is appropriate that Council's goals are linked to the 32 goals developed by the State Government in their 2021 plan. These are referenced as 'SP number' for each Delivery Program goal.</p> <p>Narromine Shire Vision</p> <p>The Narromine Shire is a friendly place to live with a strong sense of community that values our services, facilities and our natural rural environment. We are a community that values the diversity of people, ideas, perspectives and experiences. We work together to strive towards a vibrant, safe and engaged community that provides opportunities for all its members. Our Council is a leader for our community, sharing the responsibility for growth, development and provision of services.</p>
<p>Narromine Shire Council Resource Strategy</p>	<p>The <i>Narromine Shire Council Resourcing Strategy</i> identifies how Council will achieve the objectives of the Community Strategic Plan. The Community Strategic Plan expresses long term community aspirations; however, these will not be achieved without sufficient resources – time, money, assets and people to actually carry them out. The Resourcing Strategy comprises:</p> <ul style="list-style-type: none"> – Long Term Financial Plan (10-year plan) projecting Council's financial position for at least 10 years and includes improvement strategies proposed by Council to improve sustainability. – The Statement of Revenue Policy provides information on Council's rating structure, fees and charges, including a comparison of proposed modifications to the rate base. – Workforce Management Strategy outlining Council's strategies and actions for developing and maintaining a workforce to underpin the delivery of four-year objectives outlined in the Delivery Program. – Asset Management Plan (10-year plans) including transport, water and sewerage, waste, aerodrome, recreation facilities, buildings and stormwater drainage.
<p>Narromine Shire Council Operational Plan 2023/2024</p>	<p>The Narromine Shire Council Operational Plan (OP) is the annual plan detailing Council's activities and budget for the immediate next year under the Delivery Program.</p> <p>The Council has developed a four-year Delivery Program and a ten-year Community Strategic Plan.</p>

Planning Document	Relevant / Reference to Narromine LGA
	<p>The major focus of the Council in developing the budget is to ensure its long-term financial sustainability and to maintain its assets. The budget setting has been based on the guiding principles of the Community Strategic Plan.</p>

3. Background review

This section provides context for existing pedestrian trends in the LGA, including pedestrian crashes, population, and employment statistics, as well as travel mode share trends.

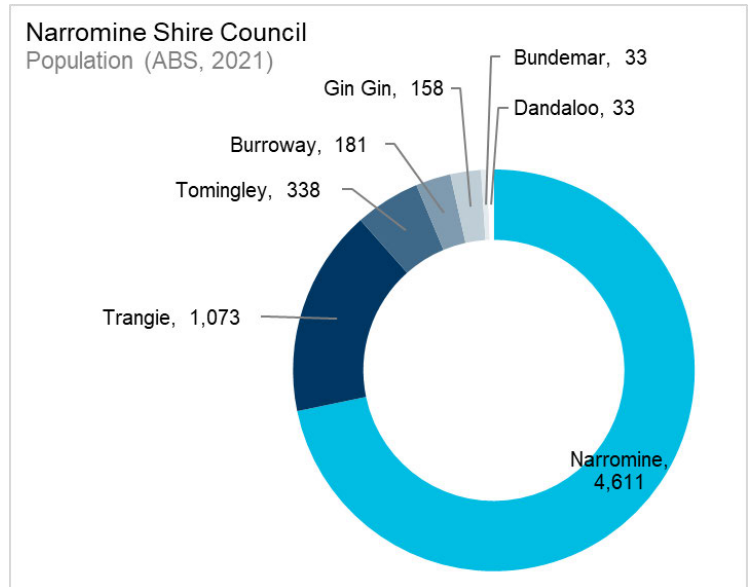
3.1 Population data

Based on the 2021 Australian Bureau of Statistics (ABS) Census data ('Census'), Narromine LGA has a residential population of around 6,430.

Figure 3.1 provides a summary of how the population is distributed across each of the towns within the LGA.

As shown, the majority of the population in the LGA is concentrated in the towns of Narromine, Trangie, and Tomingley. Narromine alone makes up approximately 72 percent of the total population in the LGA.

Population in the LGA has seen a steady decline over the last few decades. NSW Government's population projections indicates that this decline will continue over the next 20 years, with population estimated to decrease by an average of -1.46 percent annually, or a decrease of about 1,600 by 2041.



Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

Figure 3.1 Narromine Shire Council population

Census data also indicate that a significant portion of the LGA's population are vulnerable road users, with 21 percent of the population under the age of 15, and 28 percent of the population over the age of 60. The age distribution of the population of Narromine LGA is shown in Figure 3.2.

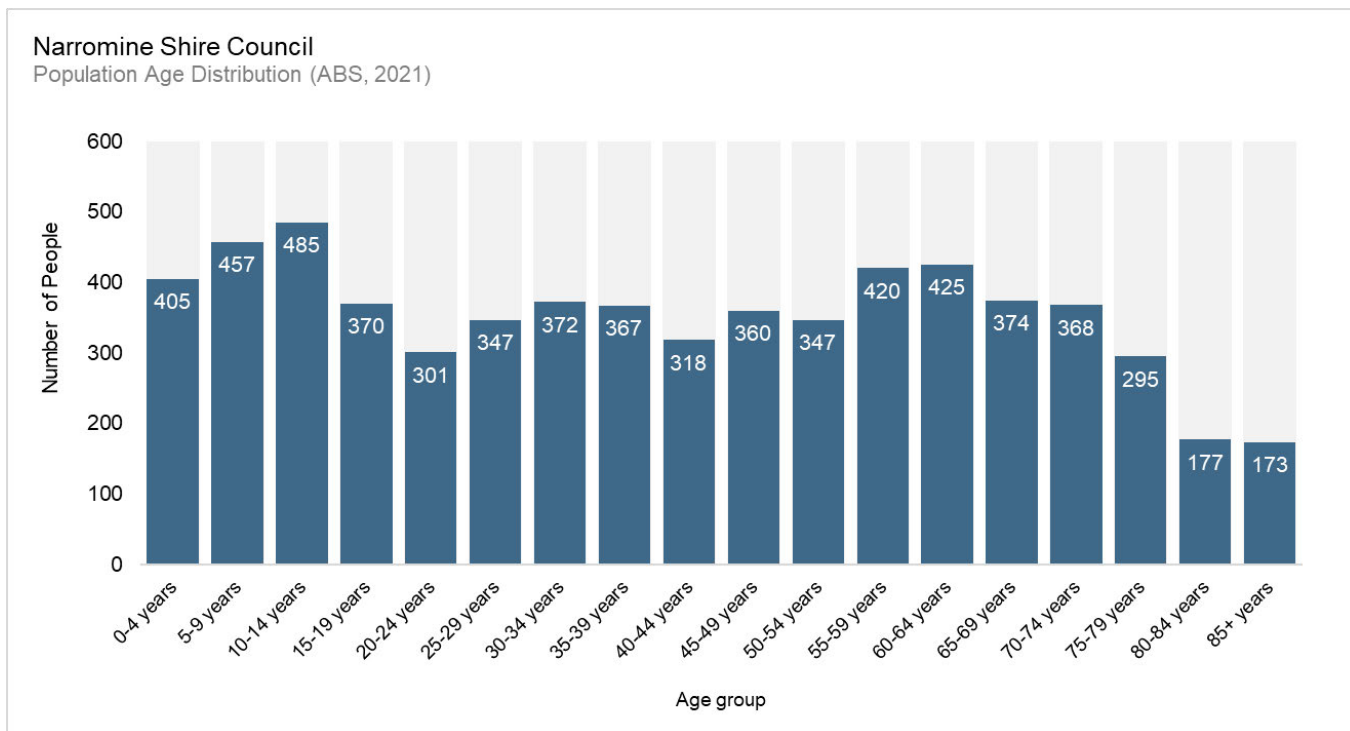


Figure 3.2 Narromine LGA Population Age Distribution

Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

3.2 Family characteristics

Census data indicates that couple families with no children are the most common family unit type in the Narromine LGA (647 families, 42 percent), followed by couple families with children (586 families, 38 percent), as shown in Figure 3.3

As children are unable to drive, the provision of a robust pedestrian network would help support their mobility, indicating the opportunity to target a younger demographic for the pedestrian access and mobility plan.

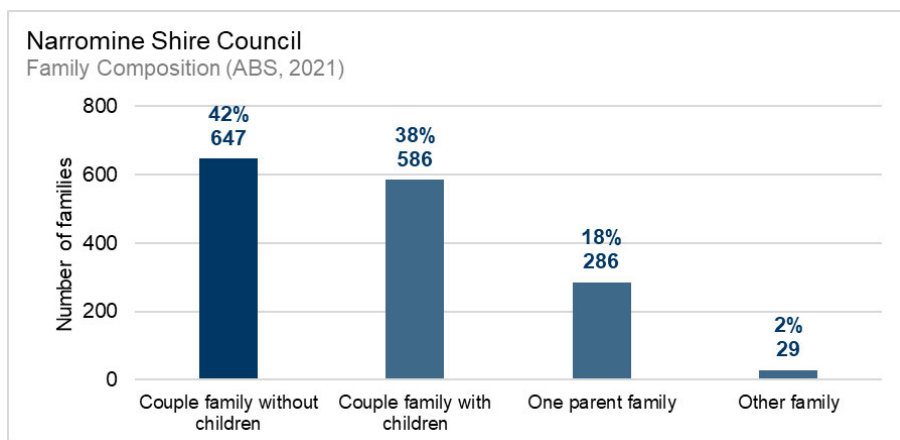


Figure 3.3 Composition of families in Narromine LGA

Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

3.3 Employment

Census data indicates that 2,652 residents of Narromine LGA are employed in 2021. Of those employed, 65 percent are full-time workers, 28 percent work part time, and seven percent are “away from work”.

Figure 3.4 shows the employment status of residents of Narromine LGA compared to NSW based on 2021 Census data. The data indicate that the employment levels in Narromine are higher (63 percent) than the regional NSW benchmark (55 percent), for full-time work. The proportion of unemployed residents looking for work is roughly equivalent to that of NSW, at four to five percent.

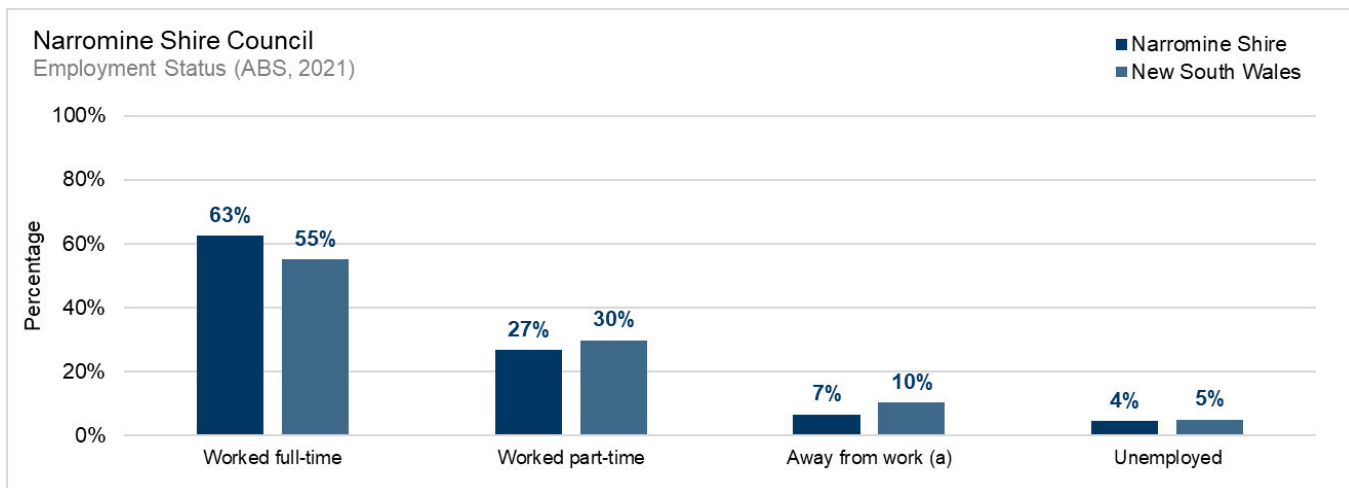
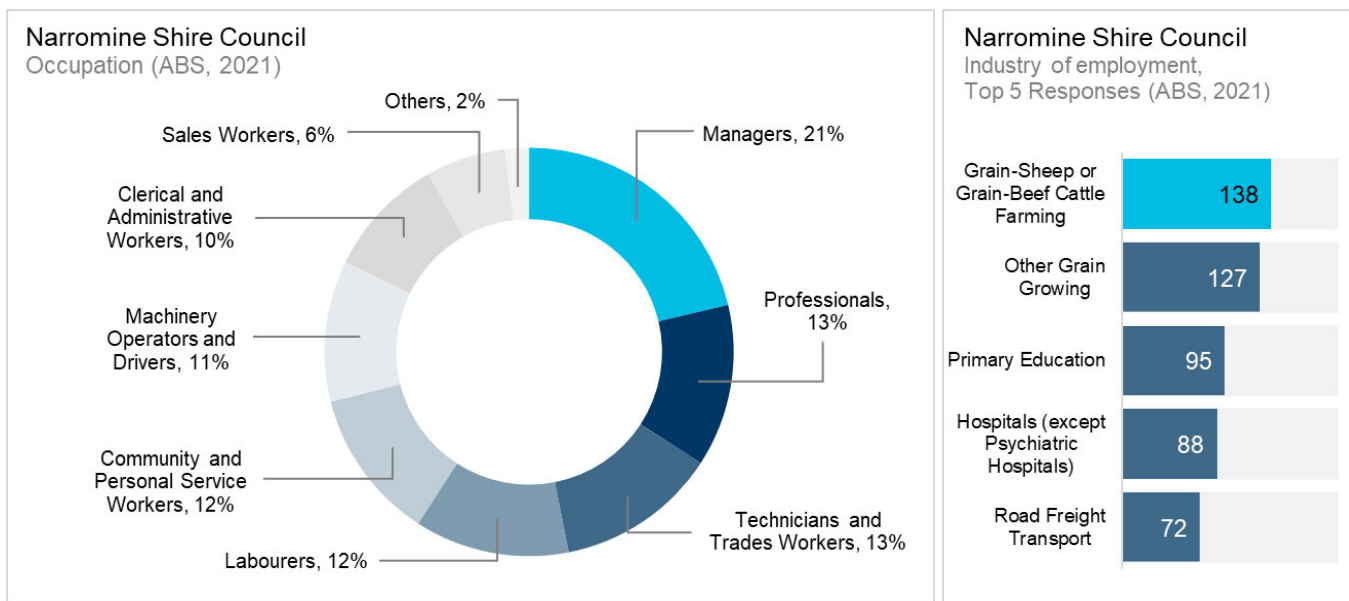


Figure 3.4 Narromine LGA Employment Status

Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

The most common occupations of employed residents in Narromine LGA are shown in Figure 3.5, together with the top reported industries of employment. The data in Figure 3.5 indicates that the top five most common occupations in the LGA were *Managers* (21 percent), *Professionals* (13 percent), *Technicians and Trade Workers* (13 percent), and *Labourers* and *Community and Personal Service Workers* (both at 12 percent).

The most commonly reported industries for employment were *Grain-Sheep or Grain-Beef Cattle Farming* (five percent), *Other Grain Growing* (five percent), *Primary Education* (four percent), *Hospitals* (three percent) and *Road Freight Transport* (three percent).

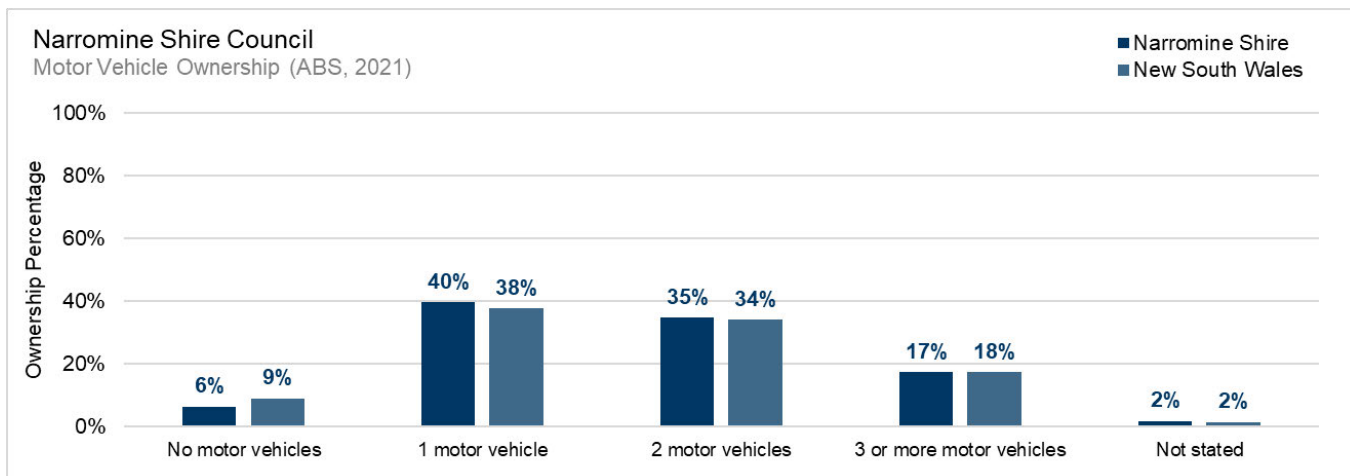


Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

Figure 3.5 Narromine LGA Occupations and Industries (2021)

3.4 Vehicle ownership

Vehicle ownership in Narromine LGA is broadly in line with that of NSW, with only six percent of households stated to not have access to a motor vehicle, as shown in Figure 3.6. However, it remains paramount that members of the community without access to a motor vehicle are not excluded or isolated by a lack of suitable public and active transport networks.



Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

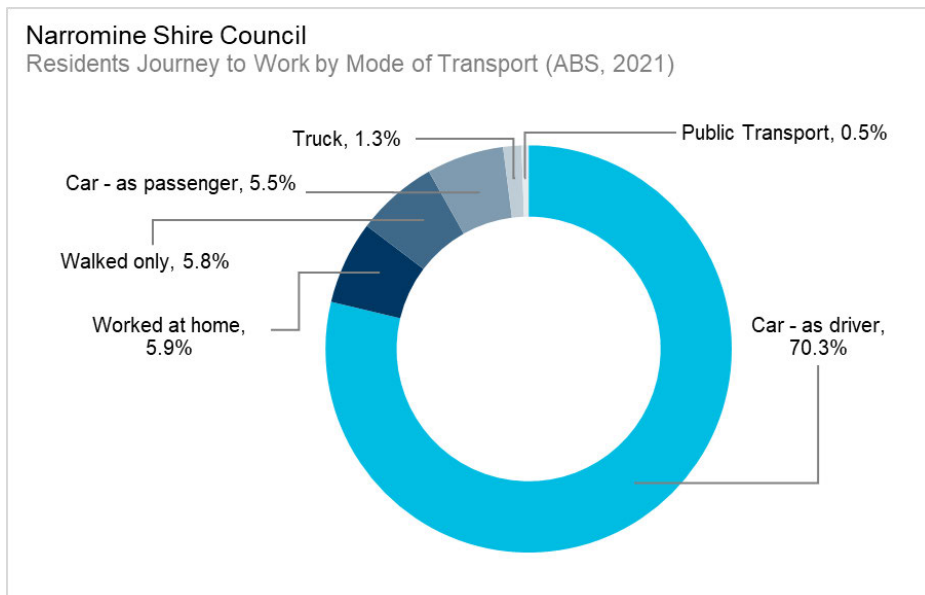
Figure 3.6 Vehicle Ownership Narromine LGA vs NSW

High motor vehicle ownership rates are an indicator of car dependence. Additionally, highly car-dependent households have increased vulnerability to petrol prices, interest rates and inflation.

Whilst access to a car can bring increased mobility and employment opportunities, the flip side of this coin is that households become car dependent. Car-dependent households that have to pay to run multiple cars are at a financial disadvantage to households that have fewer or no cars but have access to other forms of mobility.

3.5 Journey to work

The Journey to Work data for the Narromine LGA is displayed in Figure 3.7. It is worth noting census data was collect during 2021 in which the impacts of COVID 19 and some restrictions may have impacted results, GHD have since checked the proportions against the 2016 census data pre COVID 19 and found results to have not changed significantly. Particularly when considering post COVID 19 trends such as a sustained increase of working from home and hybrid working, which have remained in 2023 and are expected to continue.



Source: Australian Bureau of Statistics (ABS) Census of Population and Housing (2021)

Figure 3.7 Narromine Residents Journey to Work by Mode of Transport

The data in Figure 3.7 indicates that:

- The majority of Narromine residents (75 percent) drive to work as driver or passenger.
- A small amount (0.5 percent) utilises public transport.

- Around six percent of workers walk to and from their places of employment.

3.6 Future population

According to the NSW Government Planning Portal, the 2021 Narromine LGA population of around 6,300 is forecast to decline to around 4,700 people by 2041, as shown in Table 3.1. This is a decrease of approximately 1.46 percent a year from the current population.

Table 3.1 Future population

Region	2021	2041 Projected population	Annual Percentage
NSW	8,166,757	9,872,934	+0.95%
Narromine	6,304	4,695	-1.46%

Source: NSW Population Projections | Planning Portal - Department of Planning and Environment

3.7 Crash data review

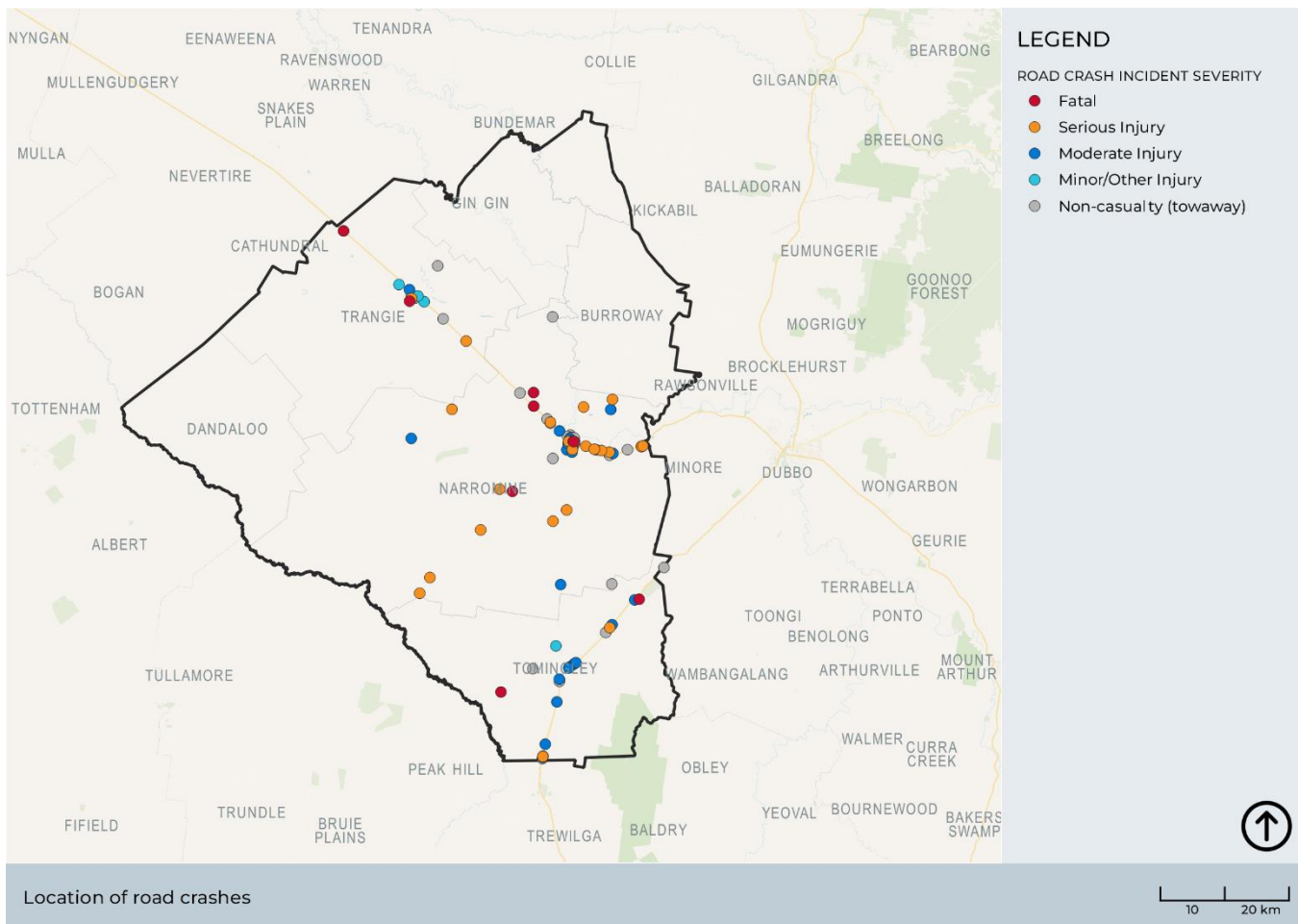
Road crash information in the study area was collected from road crash statistics published by the NSW Centre for Road Safety. From 2017 to 2021, a total of 94 road crash incidents were recorded in the study area – with 60 crash incidents in Narromine, 22 in Trangie, and 12 in Tomingley (refer to Table 3.2).

Table 3.2 Number of crashes per town (2017-2021)

Location of Crash (Town)	Degree of crash					Total
	Non-casualty (towaway)	Minor / Other Injury	Moderate Injury	Serious Injury	Fatal	
Narromine	19	1	15	21	4	60
Trangie	6	2	9	3	2	22
Tomingley	4	3	1	2	2	12
Total	29	6	25	26	8	94

Source: Crash and Casualty Statistics 2017-2021, Centre for Road Safety

The location of recorded crashes between 2017 and 2021 in the three towns is shown in Figure 3.8, while the crashes recorded in urbanised areas near the town centres are shown in Figure 3.9.



Source: Crash and Casualty Statistics 2017-2021, Centre for Road Safety

Figure 3.8 Location of road crashes (2017-2021) – study area



Source: Crash and Casualty Statistics 2017-2021, Centre for Road Safety

Figure 3.9 Location of road crashes (2017-2021) – urbanised areas

3.7.1 Pedestrians

Crash statistics for incidents involving pedestrians on roads within the study area (Narromine, Trangie and Tomingley) over a five-year period between 2017 and 2021 were obtained from TfNSW. This crash data was used to determine the main factors contributing to crashes within the study area.

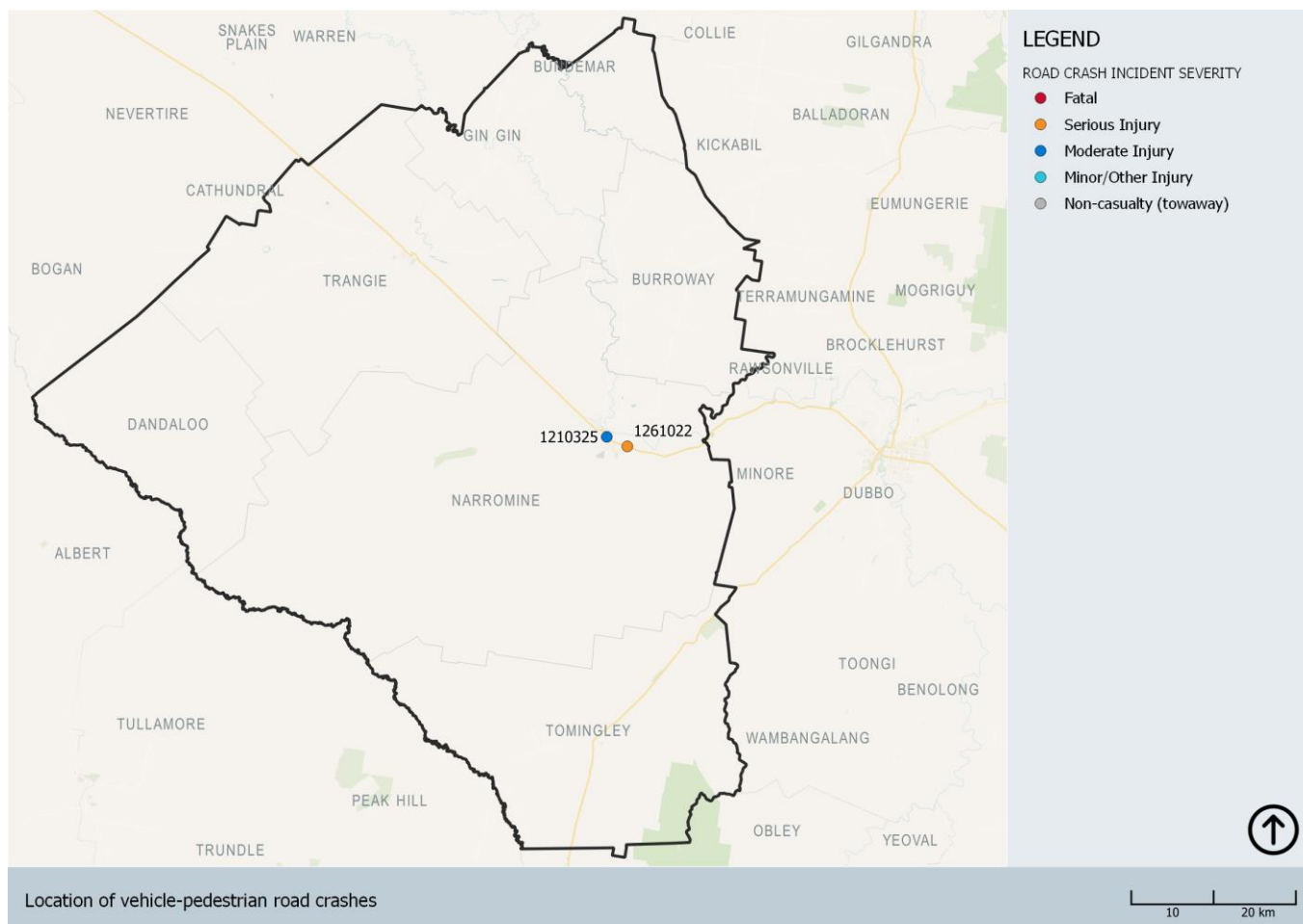
Table 3.3 provides a summary of the incidents involving pedestrians within the study area between 2017-2021, which resulted in serious injuries or moderate injuries. Analysis of the data reveals the following:

- There were no crashes that resulted in fatalities for pedestrians in the given period.
- There were two pedestrian crashes that resulted in serious or moderate injuries.

Table 3.3 Pedestrian Crashes

Degree of Crash	Locality	Road	Conditions	Description
Serious Injury	Narromine	Mitchell Highway	Darkness	Pedestrian on carriageway
Moderate Injury	Narromine	Mitchell Highway	Daylight	Pedestrian from far side of the road

Source: TfNSW Centre for Road Safety, 2021



Source: Crash and Casualty Statistics 2017-2021, Centre for Road Safety

Figure 3.10 Location of pedestrian crashes (2017-2021)

3.8 Existing pedestrian networks

This section presents maps of the existing walking networks generated for each town.

3.8.1 Narromine

The existing pedestrian network within the Narromine Township is presented in Figure 3.11.

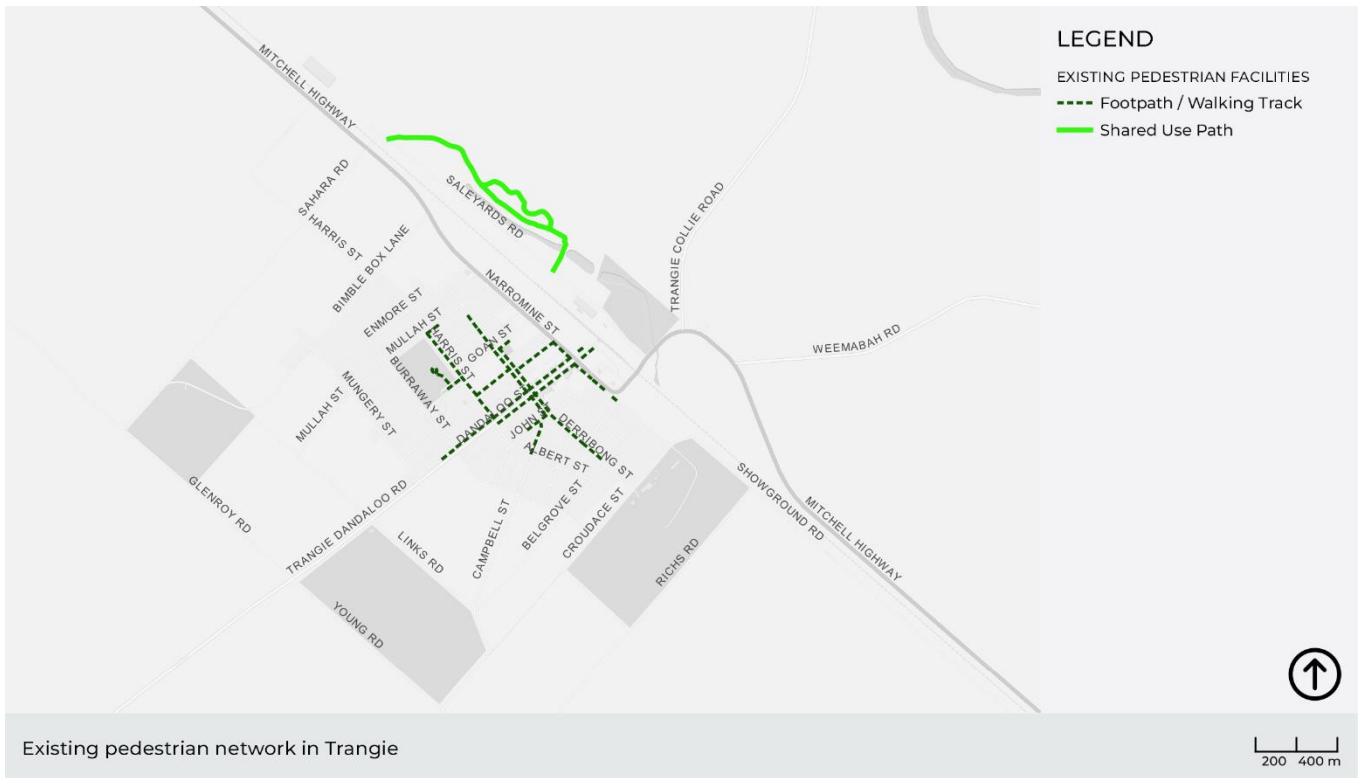


Source: Council data and site visits

Figure 3.11 Existing pedestrian network in Narromine

3.8.2 Trangie

The existing pedestrian network of Trangie Township is presented in Figure 3.12.

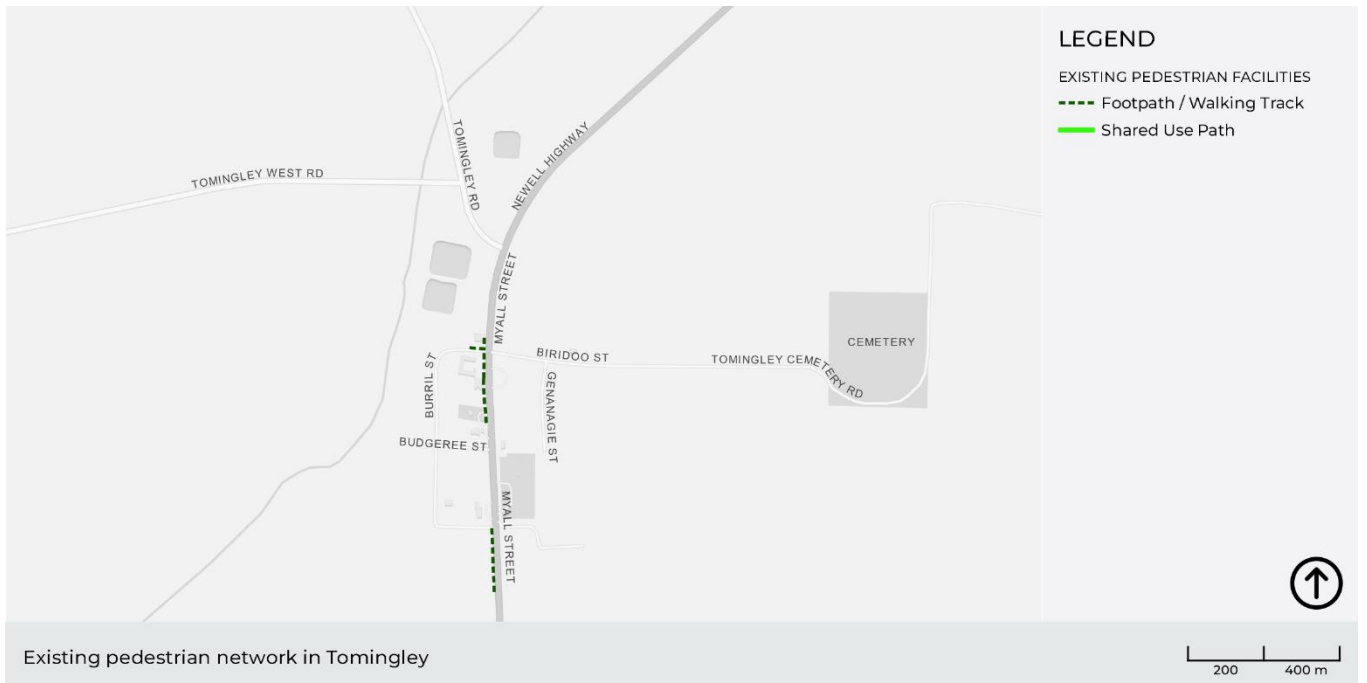


Source: Council data and site visits

Figure 3.12 Existing pedestrian network in Trangie

3.8.3 Tomingley

The existing pedestrian network of Tomingley Township is presented in Figure 3.13.



Source: Council data and site visits

Figure 3.13 Existing pedestrian network in Tomingley

3.9 Land use data

3.9.1 Narromine

This section maps the key identified trip generators whilst overlaying the pedestrian footpath network provided by Narromine Shire Council within Narromine (refer to Figure 3.14 and Table 3.4), Trangie (refer to Figure 3.15) and Tomingley (refer to Figure 3.16).

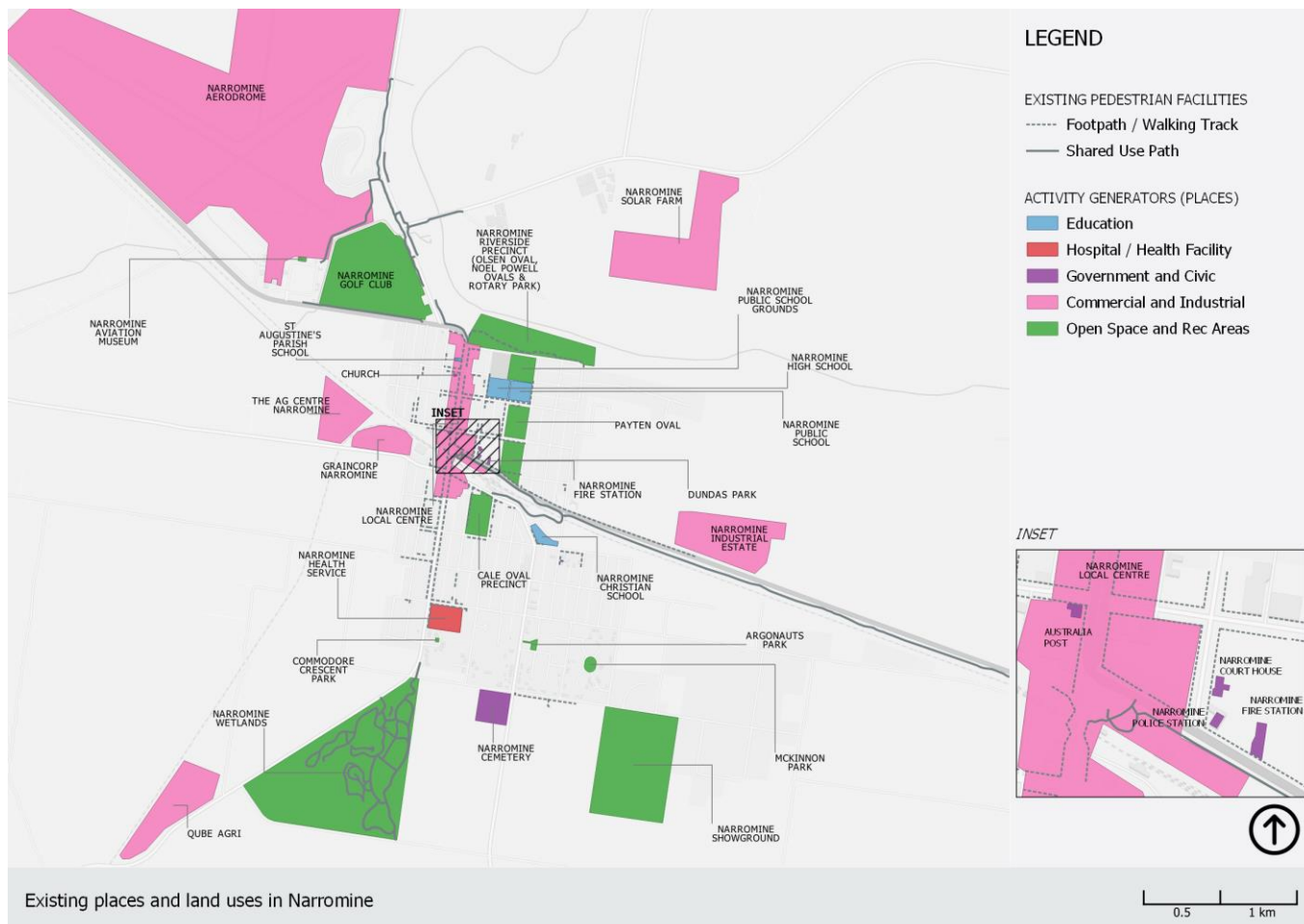


Figure 3.14 Narromine Land use

Table 3.4 Narromine township land use data

Types	Description
Parks and recreation	Narromine Aquatic Centre, Payten Park, Rotary Park, Apex Park, Dundas Oval/Park, Narromine Bowling Club, Narromine Golf Club, Narromine Sports and Fitness Centre, Narromine Netball Courts, Narromine Showgrounds.
Civic and cultural facilities	Narromine Shire Council, Fire and Rescue NSW Narromine Fire Station, Narromine Police Station, Narromine Courthouse, Narromine Cemetery, Narromine Aviation Museum.
Educational and health facilities	Narromine Hospital & Community Health, Narromine High School, Narromine Christian School, Narromine Pre-School Kindergarten, Narromine Shire Family Health Centre, Narromine Public School, Narromine Christian School.
Community and religious	St Augustine Catholic Church, Narromine Baptist Church, Christian Outreach Centre, Saint Mary’s Anglican Church, St. Andrew’s Uniting Church, Narromine Seventh Day, Community Wellbeing Hub.
Narromine CBD	Court House Hotel, Coles Narromine, and a large number of shops, restaurants and cafes.

3.9.2 Trangie

Details of the key land uses in Trangie are shown in Figure 3.15 and summarised in Table 3.5.



Figure 3.15 Trangie Land use

Table 3.5 Trangie township land use data

Township	Description
Parks and recreation	Trangie Bowling Club, Trangie Racecourse & Showground, Trangie Skate Park, Burns Oval Trangie Aquatic Centre, Memorial Park, Trangie Golf Club
Civic and cultural facilities	Trangie Police Station, Service Memorial Club, Trangie Local Aboriginal Land Council, Trangie Library, Wungunja Cultural Centre
Educational and health facilities	Tots on Temoin, Trangie Hospital, Challenge Community Centre, Trangie Central School, St John's Primary School
Community and religious	St Andrews Uniting Church
Trangie CBD	IGA Trangie, Trangie Pharmacy, SPAR Trangie and a number of shops, restaurants and cafes.

3.9.3 Tomingley

Details of the key land uses in Tomingley are provided in Figure 3.16 and Table 3.6.

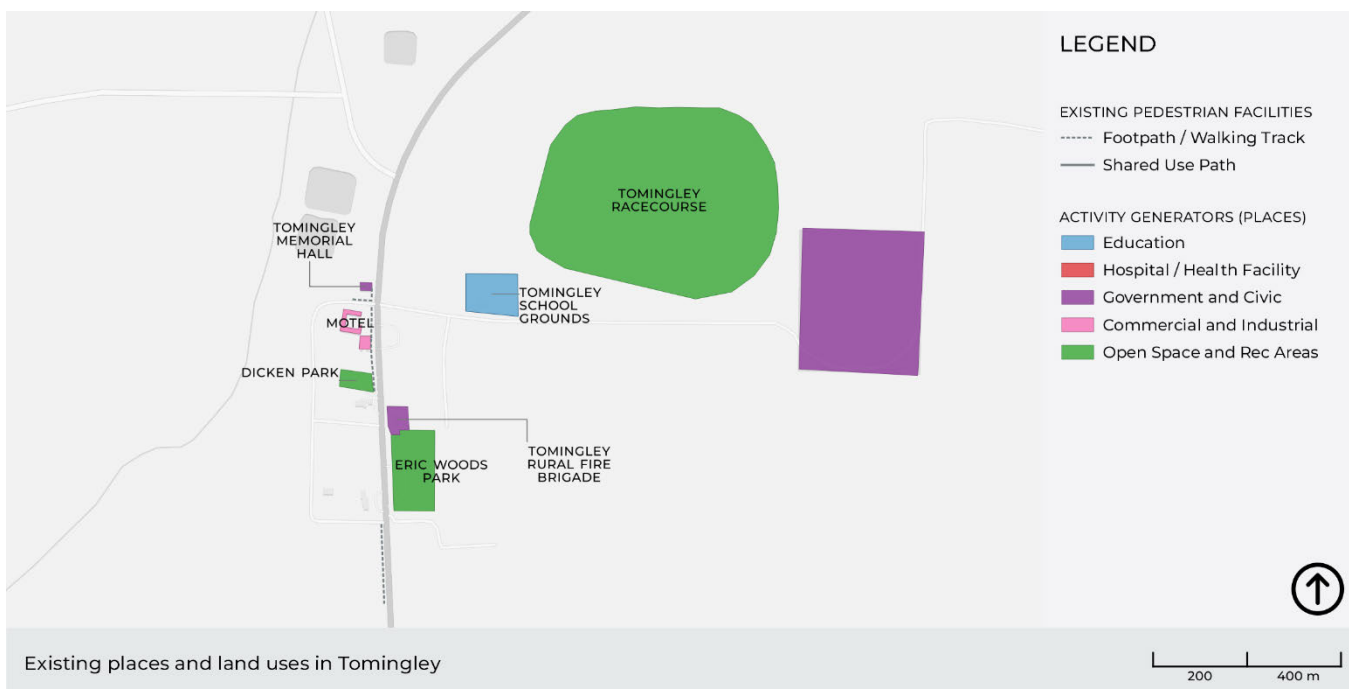


Figure 3.16 Tomingley Key Land use

Table 3.6 Tomingley land use data

Township	Description
Parks and recreation	Tomingley Rest Area, Dicken Park, Eric Woods Park
Civic and cultural facilities	Tomingley Memorial Hall, Tomingley Rural Fire Brigade, Tomingley Cemetery
Tomingley CBD	BP service station and Hotels

Based on a review of the land use data, it is noted that:

- The townships generally have a mix of amenities within a short distance of residential areas, including commercial and recreational destinations.
- The terrain is generally level in the study area (Narromine, Trangie and Tomingley).
- There are a variety of amenities accessible within the towns, including parks and museums, to support recreational movement and activities.

3.10 Summary of site visit


A site visit of the three townships of Narromine, Trangie and Tomingley was conducted to identify key constraints associated with the current pedestrian network and opportunities for improvements. The site visit involved inspections of current infrastructure for pedestrian access and mobility within the three towns, including but not limited to pedestrian footpaths, pedestrian lighting, facility accessibility and safety. The accessibility and connectivity of key points of interest within each town, previously identified via a desktop study, were assessed in addition to the wider pedestrian network.




3.10.1 Narromine Township




Narromine Township is the primary retail, commercial and recreational centre within the wider Narromine LGA, with a significantly larger population than the other townships. Within Narromine Township, there are several recreational facilities, including Narromine Aquatic Centre, Narromine Golf Club and Narromine Bowling Club.




In Narromine Township, several accessibility and safety concerns for pedestrians were identified. Several roads, including the Mitchell Highway, are wide for pedestrians to cross with limited crossing facilities. The Mitchell Highway, a key road corridor for freight, passes through the Narromine Township, posing a safety concern to pedestrians crossing the highway. Additionally, shared paths and bicycle lanes are in poor condition. Whilst footpaths are provided near on-street car parking areas and the retail/commercial facilities on the Mitchell Highway, they are generally disconnected from the wider network. A detailed list of the identified issues during site visit can be found in Table 3.7.





Table 3.7 *Pedestrian issues identified in Narromine Township*




Issue ID	Project	Issue	Photo
1	Mitchell Highway (Burraway Street) crossing	There is no direct crossing provided for people who are travelling from the south of Narromine to cross Burraway Street to access Dundas Park. A pedestrian crossing on Burraway Street between Manildra and Meryula Streets is recommended.	




Issue ID	Project	Issue	Photo
2	Mitchell Highway (Burraway Street) to Narromine High School Path	There is a lack of footpaths between Dundas Park and the railway path to Narromine High School and Narromine Public School. A footpath networks should be installed to improve connectivity.	
3	Third Avenue Nth - St Augustine infant path connection	Footpaths are provided only in front of the infant School.	
4	Culling Street Crossing	There are no pedestrian crossings available to access/egress the parks from Dandaloo Street.	




Issue ID	Project	Issue	Photo
5,6	Completion of Derribong Avenue shared path	The shared paths are terminated near Temoin Street, restricting pedestrian accessibility.	
7	Narromine Christian School crossings	There is no crossing provided on Algalah Street, near the School entrance, which poses a safety concern for students crossing the street.	
8	Narromine Christian School Terangion Street path missing links	The footpaths are provided only along the parking area and are disconnected from the wider footpath network.	

Issue ID	Project	Issue	Photo
9	Merilba Street access to Narromine High School	The footpaths are poorly maintained, which can cause a trip hazard. Extension and replacement of bitumen from concrete in front of the High School along the eastern side of Merilba Street with shared path.	
10	Ellengerah Street to Narromine High School	There is a connectivity and continuity issue along Ellengerah Street from Merilba Street to Dandaloo Street, resulting in safety and accessibility concerns for pedestrians.	
11,12	Narromine Wetlands to Narromine Hospital path	There is a connectivity and continuity issue along Dandaloo Street between Cathundril Street to Nellie Vale Road. Some sections are constructed from loose gravel.	

Issue ID	Project	Issue	Photo
13	Cemetery to Narromine hospital path	There are no footpaths available from Narromine Cemetery to the hospital (along the western side of Algalah Street and the southern side of Cathundril Street), resulting in a safety and accessibility concern for pedestrians.	
14	Narromine hospital path	Connectivity and accessibility issues along the southern side of Cathundril Street due to the absence of a concrete path.	
15	Cemetery Crossing	There is a potential connectivity and safety issue as no crossing is provided across Tomingley Road in front of the Narromine Cemetery. Council is encouraged to review this issue within the Narromine Cemetery Master Plan. Parking within the cemetery is to be encouraged to reduce risk at this location.	
16	Showground connection path along Dappo Road	The Dappo Road footpath currently runs from Algalah to approximately and A'Beckett Street, finishing approximately 220m shy of the Showgrounds. Continuation of this footpath is recommended to enable connectivity to this well-visited area.	

Issue ID	Project	Issue	Photo
17	Nymagee Street Path	There is limited connectivity along Nymagee Street to the residential area for pedestrians, resulting in a safety and accessibility concern.	
18	Third Avenue Bowling Club path	<p>It is reported that some seniors use Third Avenue South to access the bowling club. There are no footpaths along Third Avenue, which causes accessibility and safety issues for seniors.</p> <p>It is noted that there is no kerb and gutter along Third Avenue and to ensure appropriate stormwater management this would need to be installed prior to a footpath.</p>	
19	First Avenue path extension	There are limited footpaths along First Avenue, resulting in a safety and accessibility concern for pedestrians.	

Issue ID	Project	Issue	Photo
20	Southern side Second Avenue (outside Narromine Transmission)	The existing footpaths are not connected and not filled with asphalt, which can cause trip hazards.	
21	Dandaloo Street footpath surface condition	Trip hazard-footpath not levelled, and the kerb ramp are not compliant with design standards-Transport for NSW-R0300 Kerb and Channel Series and AS-1428.1:2021-Design for access and mobility.	
22	Crossing on the corner West of Dandaloo Street and Nymagee Street West	There is a continuity and safety issue due to no crossing.	




Issue ID	Project	Issue	Photo
23	Kerb ramp on Meryula Street and Nymagee Street	No Kerb ramps along Meryula Street to Narromine Public School for prams and mobility devices to access the newly proposed footpath (refer to PAMP ID 17).	
24	Narromine High School bus/garbage/disability access gate at Meringo Street	It is reported that the gate access requires an improvement for better accessibility to students and people who use a wheelchair.	
25	Meringo Street and Meryula Street near Narromine Public School	There is a lack of pedestrian priority crossings near Narromine Public School.	




3.10.2 Trangie Township

In GHD's site visit to Trangie Township, issues related to the connectivity of pedestrian facilities as well as safety were identified. A lack of pedestrian crossings in the township, particularly around recreational facilities, created a safety concern for pedestrians. Additionally, shared paths designated for both pedestrians and bicycle riders were not clearly identified. Whilst footpaths were provided near car parking, they were disconnected to the wider network. The Mitchell

Highway also passes through the Trangie Township, posing a safety concern to pedestrians crossing the highway as there are limited formal crossing opportunities. A detailed list of the identified issues during the site visit can be found in Table 3.8.



Table 3.8 Pedestrian issues identified in Trangie


PAMP ID	Project	Issue	Photo
26	Pram ramp to road connections in Trangie	Existing pram ramps are not properly connected to the road when crossing, resulting in safety and accessibility concerns for pedestrians using prams and wheelchairs.	
27	Country Women's Association pram ramp path connection (east leg of Temoin Street and Derribong Street intersection)	The existing pram ramp is not maintained and is in poor condition, becoming a slip and trip hazard. There is limited access to footpaths from the southern side of Derribong Street.	
28	St Johns Primary School crossing	There are limited pedestrian crossing facilities and footpaths near the School on Dandaloo Street, Harris Street and Temoin Street.	

PAMP ID	Project	Issue	Photo
29	Multi-purpose service (MPS) disabled parking upgrade	<p>Issues raised in the community consultation with accessibility and safety of ramp usage for wheelchairs.</p> <p>The footpath is not sufficiently wide enough for wheelchair access along the northern side of Harris Street.</p>	
30	Multi-Purpose service (MPS) connection missing link	<p>There are missing links identified. No footpaths are available along the eastern side of Mullah Street and the southern side of Derribong Street towards Weemabah Street.</p>	
31	Trangie Aquatic Centre crossing	<p>The existing footpath near the aquatic centre is disconnected, with no pedestrian crossing facilities across Harris Street.</p>	

PAMP ID	Project	Issue	Photo
32	Trangie Aquatic Centre to MPS (Multi-purpose service) path	There is no footpath adjacent to Trangie Skate Park along Harris Street, resulting in safety and accessibility concerns for pedestrians.	
33	Challenge disability service path links	There is a missing link identified along the eastern side of Temoin Street to Harris Street, resulting in a safety and accessibility concern for pedestrians.	

PAMP ID	Project	Issue	Photo
34	St John's Parish School to Trangie Aquatic Centre path	An issue raised in community consultation with a missing link from the School along the western side of Harris Street to the aquatic centre.	
35	Trangie Pre-School Connection path	Missing link identified along Temoin Street from Pre-School to Derribong Street, resulting in a safety and accessibility concern for pedestrians.	


PAMP ID	Project	Issue	Photo
36	Trangie Showground connection path	There is no footpath along the northern side of Derribong Street between Belgrove Street and Croudace Street, resulting in safety and accessibility concerns for pedestrians.	
37	Mitchell Highway - Goan Waterhole connection path	A missing link has been identified along Mitchell Highway between Dandaloo Street and Saleyards Road, resulting in a safety and accessibility concern for pedestrians.	


PAMP ID	Project	Issue	Photo
38	North leg of Dandaloo Street and Narromine Street intersection	The existing pedestrian refuge island is not wide enough for bicycles or prams.	

3.10.3 Tomingley Township

In GHD's site visit to Tomingley Township, similar issues to the other townships were found. A lack of pedestrian crossing across the Newell Highway created a safety concern for pedestrians. Additionally, a lack of footpaths near various facilities and residential areas, as well as an open swale drainage, presented slip and trip hazards for pedestrians. A detailed list of the identified issues during site visit can be found in Table 3.9.

Table 3.9 Pedestrian issues identified in Tomingley

PAMP ID	Project	Issue	Photo
39	Crossing to Eric Woods Park	No crossing across the Newell Highway to access Eric Woods Park.	

PAMP ID	Project	Issue	Photo
40	BP service station path	No footpaths from BP service station to key facilities along Newell Highway.	

3.11 Community and stakeholder engagement

A number of stakeholder engagement tasks have been undertaken to support the development PAMP, as follows:

- Community online survey in November 2023
- In person engagement in October 2023
- Letters from the stakeholders.

3.11.1 Community online survey

A total number of 30 questions were prepared for a community online survey on the PAMP webpage to capture qualitative and quantitative feedback from a broad cross-section of the community and stakeholders. The survey results provide insight with regard to the current use of pedestrian infrastructure, constraints affecting pedestrian access and mobility, opportunities for improvement, and community insights.

A total of 32 respondents completed the survey anonymously, providing valuable insights. A summary of respondents is as follows:

- 68 percent of the respondents reside in Narromine – Urban area followed by Narromine – Rural area with 15 percent.
- 29 percent of respondents are aged between 25 – 34 years old, followed by 26 percent of 45 -54 years old.
- 79 percent of respondents are female, 18 percent are male, and three percent preferred not to say.
- 94 percent of respondents have access to a motor vehicle.

The summary of the key results from the community online survey include:

- More than half of the respondents (56 percent) use the footpaths daily and 28 percent of the respondents use the footpaths a few times a week.
- It was identified that the respondents are discouraged to use the footpaths due to the disconnection/poorly maintained/narrow footpaths (26 percent) and not enough cross walks (22 percent).
- Driving was the most common mode of transport used by respondents overall when commuting to/from work (75 percent) and when commuting to/from local shops, cafes and restaurants (50 percent).
- 59 percent of respondents indicated that they walked for recreational activities (fitness, leisure, weekend use, etc)
- Most respondents (88 percent) thought that the investment of Narromine Shire Council in active transport infrastructure is very important.
- It was indicated that the respondents would be encouraged to walk more with the pedestrian infrastructure changes. Top changes noted were:
 - Additional crossings for pedestrians (74 percent)
 - Better quality footpaths (66 percent)
 - Availability of footpaths (63 percent)
- Following key comments have been made on encouraging people walk more or to walk on a regular basis.
 - Management of heavy vehicles route for children to walk and provision of safer pathways.
 - Attention to road routes and development of more bypasses should be a priority.
 - Pedestrian crossings near the school areas.
 - Cleanliness of attractions/footpaths (i.e. playground)
 - Shaded seating
 - More cycle tracks/bicycle lanes

Improvement to pedestrian facilities in support of mode share for walking.

A form of community online survey and the summary of all the questions and responses are provided in Appendix C.

3.11.2 In person engagement

GHD facilitated two workshops for Narromine and Trangie in October 2023 with several stakeholders invited by Narromine Shire Council. The workshop enabled stakeholders to articulate their concerns about the current conditions of pedestrian facilities and the needs for pedestrian access and mobility. The workshops support the preparation of pedestrian facilities and access improvements in terms of safety, efficiency, and practicality. The following is the organisation of attendees of workshops, with the list of attendees is included in Appendix A.

- Narromine: None (no attendee)
- Trangie: St. John's Parish School, Trangie Multi-Purpose Health Service (MPS), Trangie Local Aboriginal Land Council, Country Women's Association (CWA)

It was unable to obtain the Narromine stakeholders' thoughts and concerns of the current condition due to the absence of stakeholders. Therefore, the stakeholder from Trangie Township provided their thoughts and concerns about the pedestrian facility issues.

Key findings from the workshop were as follows in Table 3.10.

Table 3.10 Issues raised in the workshop

Item (issues)	Description
CWA pram ramp path connection	The existing pram ramp is not maintained and is in poor condition, becoming a slip and trip hazard. There is limited access to footpaths from the on-street parking spaces.
St John's Parish School crossing	There are limited pedestrian crossing facilities for students to cross from the eastern side of Dandaloo Street.
MPS / doctors disabled parking upgrade	Issues raised with the accessibility and safety of ramp usage for wheelchairs. The footpath is not sufficiently wide for wheelchair access.
St John's Parish School to Aquatic Centre path	There is a missing link from the School along the western side of Harris Street to minimise the students to cross the road to access/egress the aquatic centre.
Goan Waterhole connection path	A missing link is identified along Michell Highway between Dandaloo Street and Saleyards Road, resulting in a safety and accessibility concern for pedestrians.
Third Avenue Bowling Club path	It is reported that some seniors use Third Avenue South to get to the bowling club. There are no footpaths along Third Avenue, which causes accessibility and safety issues for seniors.

Narromine Shire Council received additional comments from the stakeholders who did not attend the engagement workshop. Narromine High School and Narromine Christian School provided their opinions and concerns on the existing pedestrian facilities, as shown in Table 3.11. Appendix B shows the letter from the stakeholders about their comments on the Pedestrian Access Mobility Plan (PAMP).

Table 3.11 *Comments provided by Narromine High School*

Stakeholder	Item (issues)	Description
Narromine High School	Merilba Street access to Narromine High School	The existing footpath along the eastern side of Merilba Street requires a road upgrade due to a trip hazard.
Narromine High School	Narromine High School bus/garbage/ Disability access gate at Meringo Street	It is reported that the gate access requires an improvement for better accessibility to students and people who use a wheelchair.
Narromine High School	Culling Street crossing from Narromine High School to Rotary Park	Issues were raised with the accessibility and safety to access Noel Poel Oval and Rotary Park from the high School as many students and staff use the parks for field trips and sporting activities.
Narromine High School	Recreational facilities and main shopping area access from Narromine High School	There is a connectivity issue with accessing recreational facilities and main shopping areas from the High School.
Narromine Christian School	Footpath upgrade along Algalah Street	To improve the connectivity issue and improve the safety of students.
Narromine Christian School	Terangion Street on both sides of the road all the way to saleyards for students (Dandaloo Street)	It is reported to improve the connectivity of footpaths and the safety of the School community.
Narromine Christian School	Terangion Street crossing for students	It is reported to improve the connectivity of footpaths and the safety of the School community.

It is noted that issues/comments detailed in Table 3.10 and Table 3.11 are generally consistent with the issues listed in Section 3.10 .

Following the workshop, the PAMP questionnaire has been prepared to obtain further feedback from the stakeholders who were unable to attend the workshop.

4. Design guidelines and planning for pedestrians

4.1 Planning for pedestrians

Walking is a widely accessible form of transportation, and many trips involving other modes of transport also include some components of walking, such as walking to and from public transport interchanges and car parking. Planning for safe and convenient pedestrian access is an important aspect of transportation planning.

This section provides an introductory guide to planning for pedestrians¹.

4.1.1 Creating a Safe and Attractive Pedestrian Environment

Pedestrians use most areas of the public domain, including roads, footpaths, nature strips, open spaces and shopping areas. Some planners and engineers incorrectly assume that planning for pedestrians will follow the same logic as traffic planning:

- Car > 'trips' > 'routes' > 'traffic network'

The planning scale for pedestrians is detailed to accommodate the local nature of the trips. Pedestrian movement can be better conceptualised in terms of:

- Pedestrian > 'activity' > 'areas of activity' > 'pedestrian environment'

Pedestrians tend to be more attuned to the amenity, personal safety and design of the environment around them and are particularly vulnerable to motorised vehicles. Pedestrian planning involves more emphasis on their needs with respect to these important concepts, rather than more traditional traffic engineering concepts such as road geometry.

4.1.1.1 Pedestrian needs

Provision of pedestrian infrastructure should aim not only to satisfy the requirements of standards and existing users' needs but should also aim to promote walking as a healthy way of getting around, for transport and recreational purposes. The benefits of increased walking include healthier people, with fewer car trips and an overall safer and more active public domain. The following elements are required to produce a high-quality pedestrian environment:

Safety

Pedestrians highly value their perceived and actual safety in the public domain. Safe, well-lit and frequent road crossings must be provided for pedestrians along major streets. Pedestrians usually will not take large detours from the key desire lines across major streets to access safe crossing locations. Good lighting and open space is also important in improving the security of pedestrian spaces and ensuring that walking is accessible to people of all ages and genders at any time.

Directness

Pedestrian facilities must serve the key desire lines between major centres of activity. This is important, as pedestrians usually tend not to like walking too far out of their way to use facilities such as crossings due to the extra effort associated with walking further. Access should be as direct and visible as possible to encourage walking trips. Barriers such as major roads should be overcome with additional crossing points wherever possible, such as signalised or grade-separated crossings, and engineered barriers like fences should only be used to direct pedestrians in the absence of other options.

¹ How to Prepare a Pedestrian Access and Mobility Plan, Roads and Traffic Authority of NSW (RTA), 2002

Amenity

Pedestrians are generally very sensitive to the quality of the overall urban environment around them, including traffic volumes, noise and quality of walking surfaces, among other factors. Attention to the amenity of areas at a human scale can provide an attractive walking environment and encourage these trips, while poor amenity may have the opposite effect. Targeted works to improve the amenity of areas with high pedestrian activity, such as around shopping streets, commercial buildings and public buildings, are generally thought to provide the highest value in terms of the benefits they produce.

Spot improvement programs can also target localised areas of high need.

Suitable for all users

Pedestrian environments must be of appropriate quality and accessibility for all people choosing to use them. Standards such as *Austrroads Guide to Traffic Management*, *Guide to Road Design* and *AS1428.1-2021 - Design for access and mobility* require compliance of path widths, gradients, ramps and freedom from obstructions such as street furniture and signage to accommodate the numbers of pedestrians and any mobility devices used. Hearing and vision-impaired users must also be considered in the design of pedestrian environments, particularly regarding any safety issues.

4.1.2 Best practice standards

The following are essential design aspects according to the best practice standards when considering pedestrians.

Minimum Footpath Widths

The Walking Space Guideline summary states that the minimum target walking space is 2.0m. Table 4.1 outlines the minimum widths for various types of footpath users.

Table 4.1 Minimum Footpath Widths

Type	Suggested minimum width (m)	Description
Type 1-Local Footpath-low activity	2.0	<ul style="list-style-type: none"> Low activity local footpaths are appropriate where people walking are unlikely to pass people coming the other way. These footpaths support two friends walking together and passing if they walk in single file.
Type 2-Local footpath – Medium activity	2.3 + 0.6m Passing zone	<ul style="list-style-type: none"> Medium activity local footpaths are appropriate where people walking are more than likely to pass people coming the other way. These footpaths support two people passing abreast or two friends walking together passing another person using the Passing Zone
Type 3-Main street footpath – Medium activity / Local footpath – High activity	3.2m (3.0m not adjacent to active shopfronts)	<ul style="list-style-type: none"> Medium activity main street footpaths are appropriate where people walking are virtually certain to pass people coming the other way. These footpaths support two friends walking together and passing another person without having to walk in single file
Type 4-Main street footpath – High activity	3.9m (3.7m)	<ul style="list-style-type: none"> High activity main street footpaths are appropriate where people walking are virtually certain to meet multiple groups of people coming the other way. These footpaths support two friends passing two friends coming the other way without either group having to walk in single file

Type	Suggested minimum width (m)	Description
Type 5-Main street footpath – Very high activity	less than or equal to 9.5 People Per Metre / Minute	– Very high activity main street footpaths are appropriate where it is very busy most of the time. These footpaths provide enough space for large numbers of people to walk comfortably.

Source: [Walking Space Guide Summary](#)



Figure 4.1 Walking Space Guide Summary

Source: [Walking Space Guide Summary](#)

Austrroads Guide to Road Design Part 6A 2021 – Paths for walking and cycling maximum grades

Grades of footpaths and drop kerbs are important as they affect the usability and safety of pedestrian facilities. Long sections of steep footpaths can be difficult or impossible for mobility-impaired users to negotiate.

Steep kerb ramps can also cause safety issues for mobility-impaired users. Users can become vulnerable to general traffic as they attempt to leave the carriageway and proceed up steep ramps.

It is noted that AS 1428.1 – 2021, specifies that kerb ramps should not exceed a gradient of 1:8 as wheelchairs may tip backwards. This is considered an absolute maximum ramp gradient and should only be used in extenuating circumstances.

Table 4.2 shows the maximum grades for footpaths and kerb ramp treatments.

Table 4.2 Maximum Grades

Footpaths	Grade
Recommended maximum grade (footpaths)	1:20 (2.5% cross fall)
Absolute maximum grade (kerb ramps)	1:8

Source: AS1428.1 Design for Access and Mobility Part 1 2021 –General Requirements for Access-New Building Work

Pedestrian refuges

A refuge in the middle of a pedestrian crossing may be desirable in locations where there are high numbers of more vulnerable pedestrians such as young children or elderly pedestrians, or where there are high volumes of traffic. The refuge can simplify the cognitive load for the pedestrian because they only have to concentrate on one direction of vehicular travel at a time.

Refuges alone may not result in vehicle speed reduction. Some speed reduction may be achieved if the refuge creates a significant narrowing of traffic lanes. Kerb extensions along with the refuge may also help to achieve reduced vehicle speeds. The general dimensions of pedestrian refuges are illustrated in Figure 4.2



Figure 4.2 Pedestrian crossing with refuge, Jacksons Road, North Narrabeen. Refuges are often supplemented with kerb blisters or extensions

Source: TfNSW Pedestrian crossing guideline

Wombat crossings

Wombat crossings are generally the same dimensions as flat top road humps (with pedestrian priority provided with the use of 'zebra' style line markings). It provides priority to pedestrians as well as acting as a traffic-calming measure. The minimum length of the device, including ramps is six metres, and the desirable minimum height of the platform is 100 mm. Wombat crossings generally have ramp gradients of 1:15 to 1:20 to be bicycle and/or bus friendly. Wombat crossings can be used when the warrant for such a traffic control is met as required in AS 1742.10.



Figure 4.3 Rothschild Ave, Rosebery at the intersection with Cressy Street- Wombat crossing example.

Source: Raised pedestrian 'wombat' crossing (nsw.gov.au)

Tactile Ground Surface Indicators (TGSIs)

TGSIs should also be provided at all pedestrian crossing locations to indicate the edge of the roadway to sight-impaired pedestrians.



Figure 4.4 Tactile Ground Surface Indicators example (TGSIs)

Source: AS1428.1 2021 - Design for access and mobility & Access

Pedestrian crossing with kerb blisters

Kerb blisters are structures used to locally narrow the carriageway. The advantage of kerb blisters over kerb extensions is that they generally have minimal impact on drainage and therefore may present a simpler option for some councils to implement. Kerb blisters narrow the crossing distance for pedestrians and improve visibility between pedestrians and drivers.



Figure 4.5 Kerb blisters, Jacksons Road, North Narrabeen

Source: TfNSW Pedestrian crossing guideline

Pedestrian crossings at shared paths

In NSW, bicycle riders are not legally allowed to ride across a pedestrian crossing. Bicycle riders will generally not dismount despite the law. In recognition of this, it is preferable to provide suitable facilities rather than taking an

enforcement mentality. Therefore, to enable bicycle riders to cross without dismounting, space can be allocated beside the pedestrian crossing.



Figure 4.6 Pedestrian crossing with bicycle space allocated beside it, Chippendale Way, Chippendale Pedestrian ramps

Source: TfNSW Pedestrian crossing guideline

Kerb ramps

Kerb ramps and pram ramps are required so that paths cater for users of all abilities.



Figure 4.7 Kerb ramps

Source: Inner West Council

Transport for NSW Pedestrian crossing guidelines

The Transport for NSW Pedestrian crossing guideline, section 6, set out minimum criteria for pedestrian crossings in AS 1742.10 are:

- Non-arterial road
- 50 km/h or less
- No more than one lane of moving traffic on each approach
- Adequate sight distances (refer to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections)
- Adequate kerb ramps (refer to AS 1428)
- Adequate lighting (refer to AS/NZS 1158.4).

Local governments may choose to use TfNSW warrants outlined in the *Supplement to Australian Standard AS 1742.10-2009*. However, the threshold of combined pedestrian and vehicle volumes required by the TfNSW warrants may be difficult to achieve on local or sub-arterial roads.

As an alternate to the TfNSW warrants, councils may use the following pedestrian demand calculation:

- In each of two separate one-hour periods in a typical day, the pedestrian flow per hour (P) crossing the road is, or is expected to be, equal to or greater than 20.
- Children and elderly or mobility impaired pedestrians count as two pedestrians.

Inner West Council Pedestrian crossing warrant policy

The Policy outlines the criteria to be used for assessing the suitability of a site for the installation of a pedestrian (zebra) crossings on local and regional roads. TfNSW Supplements to Australian Standards sets out the state road warrant for the installation of a pedestrian (zebra) crossing. In the absence of a specific TfNSW warrant for non-arterial roads, this Policy sets out an interim warrant for the installation of a pedestrian (zebra) crossing on local and regional roads.

The following warrants have been prepared to assist in assessing the need for pedestrian (zebra) crossings on local and regional roads:

Normal Warrant

- A pedestrian (zebra) crossing is deemed to meet the numerical warrant for a pedestrian (zebra) crossing if the crossing point meets the following volumes in three separate one-hour periods in a typical day:
 - Pedestrian volumes ≥ 30
 - Vehicle volumes ≥ 200

Reduced Warrant

- A pedestrian (zebra) crossing is deemed to meet the numerical warrant for a pedestrian (zebra) crossing if the crossing point is predominately used by school children and the crossing point meets the following volumes in two counts of one hour duration immediately before and after school hours:
 - Pedestrian volumes ≥ 30
 - Vehicle volumes ≥ 200

Austroads Pedestrian Tool

- The pedestrian facility selection tool is designed to select the most appropriate type of pedestrian crossing based on walkability, safety and economic outcomes.
- The online tool assesses the viability of different types of pedestrian crossing facilities according to the physical and operational parameters of a site and its safety performance. It can be used to assess both mid-block and intersection locations.

- Practitioners are required to enter a range of site variables into the tool, including site information, physical/environmental variables, operational variables and safety performance.
- The tool can assess raised platforms, kerb extensions, median refuges, zebra crossings, signals, grade separation or combinations of these facilities.

4.1.3 Methodology for identifying pedestrian needs

4.1.3.1 Identifying activity generators and primary routes

The following subsections outline the approach adopted to develop a hierarchy of pedestrian needs.

4.1.3.1.1 Primary pedestrian activity zone

This is typically the main commercial street. Throughout the day, pedestrians are attracted to this zone from surrounding residential areas, and it is therefore an important trip attractor. Also, there are high levels of pedestrian activity occurring within this zone, making it an important area for internal pedestrian movements (between shops and to car parking).

4.1.3.1.2 Secondary pedestrian activity generators

This includes shops, Schools, sporting facilities, clubs, hospitals and community facilities such as churches that are not located within the Primary Pedestrian Activity Zone. These land uses will attract people, but possibly only at certain times of the day or week.

4.1.3.1.3 Tertiary pedestrian activity generators

These include the above land uses from the Secondary Activity Generators but differentiate them based on a lower level of activity. Again, these are not located within the Primary Pedestrian Activity Zone.

4.1.3.1.4 Primary pedestrian routes

These are routes from residential areas to the Primary, Secondary and Tertiary Activity Zones and Generators. They are trunk or collector level routes, which do not reach every property but instead form a network of routes that are accessible to a significant catchment of population. These routes take account the existing street network and topographical constraints, aiming to provide a direct and convenient route to the major trip generators. The demographic use of connecting generators is considered when defining the routes (i.e., Schools and playing fields, aged care facilities and return service league clubs).

4.1.3.1.5 Identification of infrastructure provision goals

The hierarchy above provides a basis for applying standard treatments and ensuring the development of a comprehensive and structured pedestrian network. Specific treatments may be required in some of these areas to accommodate the user needs or where other community suggestions are made.

These treatments form the basis of the proposed improvements. While this standard may not be achievable in the short-term due to the capital investment required, it is nevertheless a useful guide to work towards.

4.1.3.1.6 Aims in the development of infrastructure recommendations

The major aims of the proposed improvement work, in decreasing order of priority, are:

- Fill any shortcomings in the Primary Pedestrian Activity Zone areas through new footpaths and crossing points, particularly if safety issues have been raised.
- Establish a network of key pedestrian routes in the town centre and between major trip generators including Schools. Prioritised routes are those that serve a wide range of community users and can remove pedestrians from unsafe environments.

- Broaden the extent of the network to areas outside of the Primary Pedestrian Activity Zones.
- Provide additional pedestrian routes for primarily recreational or tourism purposes.

Additionally, crossing points are generally catered for via pedestrian refuges, rather than a zebra crossing or signalised crossing. This is because there are onerous requirements to install marked pedestrian crossings in terms of pedestrian and vehicle warrants, as described by the Australian Standards requirements of *AS 1742 Part 10*. Refuges are of benefit to pedestrians as they allow for a staged crossing of a road and provide a visual cue for motorists that pedestrians can be expected in the vicinity of a refuge.

4.1.3.2 Lighting

Lack of street lighting resulted in visibility for pedestrians to see past bushes, road curves and traffic, making it dangerous to cross the road. Public street lighting is primarily required to provide for the safe and comfortable movement at night of both vehicles and pedestrians.

Adequate lighting at pedestrian crossings is particularly important as they are in operation at all times and clear visibility is essential to ensure drivers are able to give way to people on the crossing at any time (refer to AS/NZS 1158.4). Daytime shadowing may also affect visibility and should be taken into account when considering risk factors.

All street lighting provided on public roads shall be designed in accordance with the Road Lighting Design Standards as nominated in the Australian Standard AS1158.4:2022 -Lighting for roads and public spaces and the NSW Public Lighting Code.

5. Proposed pedestrian improvements

This section of the report details the proposed PAMP network improvements aimed at driving a modal share shift towards pedestrians, increasing connectivity, improving the user experience, and improving accessibility to pedestrians for the Narromine community to provide better transport equity. The proposed improvements have been formulated following:

- Site observations
- GIS mapping
- Review of best practice
- Review of existing conditions
- Review of previous Narromine PAMP
- Community and stakeholder engagement and discussions with Narromine Shire Council.

5.1 Types of Pedestrian Improvements

Pedestrian infrastructure initiatives are classified under the following categories:

- **Amenity** which is the attractiveness of an area for pedestrians. Improvements could involve upgrading an existing footpath surface or introducing landscaping or art feature along walkways.
- **Safety** along the route to address safety issues for pedestrians from traffic or other physical hazards including trip hazards. This also includes perceived safety issues for pedestrians such as walking along or crossing busy roads.
- **Information** that includes wayfinding signage, maps, brochures and pamphlets.
- **Disabled/pram access** along the routes that do not comply with Disabled Discrimination Act (DDA) standards and other issues, including steep gradients and access via steps.
- **Connectivity** with new links between streets and land uses.
- **Severance** for pedestrians to cross busy roads, railway lines or waterways.
- **Access to adjacent land uses** with new pedestrian access to land uses being blocked by fences or walls.

These pedestrian and access improvements can include the types of projects shown in Table 5.1, which also indicates the benefits of each pedestrian improvement.

Table 5.1 Potential Pedestrian Infrastructure Initiatives

Initiative	Amenity	Safety along the route	Information	Security	Disabled/ Pram Access	Connectivity	Severance	Access to adjacent land use
Footpath Resurfacing	✓	✓			✓			
Footpath Replacement	✓	✓			✓			
New Footpath	✓	✓			✓		✓	✓
Bridge Crossing		✓			✓	✓	✓	✓
Underpass Crossing		✓			✓	✓	✓	✓
Lighting	✓	✓		✓				
Ramps					✓	✓		

Initiative	Amenity	Safety along the route	Information	Security	Disabled/ Pram Access	Connectivity	Severance	Access to adjacent land use
Lifts					✓	✓		
Stairs						✓		
Pedestrian/ Cyclists Actuated Signal Crossing		✓			✓	✓	✓	
Zebra Crossing		✓			✓	✓	✓	
Raised pedestrian/cyclists crossing (Zebra)		✓			✓	✓	✓	
Shared Zone	✓	✓			✓			
Reduced Traffic Speed Limit		✓						
Traffic Calming	✓	✓						
Wayfinding/ Signage			✓	✓				
Information			✓	✓				

5.1.1 Cost Estimate

The indicative unit costs shown in Table 5.2 for the purposes of costing the prioritised pedestrian improvement works.

Table 5.2 *Indicative Cost Estimate Assumptions*

Treatment	Unit cost
New footpaths – 1.8m wide, no reinforcement (per sqm)	\$200
Footpath upgrade /resurfacing (per sqm)	\$100
Shared path – 3.0m wide, reinforced (per sqm)	\$350
Line marking (per 100m)	\$100
Footpath grinding (each)	\$150
Kerb ramp – to suit a standard 1.5m wide path	\$10,000
Driveway treatment (raised continuous footpath)	\$25,000
Kerb blister / extension	\$40,000
Pedestrian refuge	\$40,000
Pedestrian Refuge + 2 blisters	\$50,000
Service lid repair	\$5,000
Zebra crossing	\$10,000
Raised pedestrian crossing (Wombat)	\$140,000
Tactile Ground Surface Indicators	\$600
Road signage	\$500
Bus stop seats	\$5,000
Bus stop pad	\$10,000
Bus stop shelter (slimline)	\$15,000

Treatment	Unit cost
Public seating	\$5,000
Pedestrian fence (handrail) per m	\$300
Pedestrian fence (guard rail) per m	\$500
Removal of pedestrian infrastructure and upgrade	\$10,000
Replace stair (per m)	\$1,000
Vegetation trimming (per site)	\$10,000
Bollard	\$500
Resurface road at intersection	\$25,000
Raised traffic calming (raised threshold)	\$140,000
Full driveway	\$20,000
Street Lighting	\$5,000

Where possible, unit rates provided by the Council have been used directly. For items where costs were not available previous studies, estimation, and professional judgment have been used. These costs are indicative and are subject to change, and no allowances are made for contingencies or actual site design and installation.

5.2 Vehicle speed

Vehicle speed is a significant factor in pedestrian and cyclists' safety. According to the Transport for NSW Cycleway Design Toolbox, where separation is not a possible improvement for all road users, safety risk mitigation can be achieved by reducing motor traffic volumes and speeds of 30km/h or less.


The NSW Cycleway Design Toolbox recommends the implementation of Quiet-ways as follows:

- To enhance road safety for cyclists, the following measures should be taken:
 - Reduce traffic volumes to <2,000 Passenger car unit per day.
 - Minimise or eliminate through-traffic by applying filtered permeability, closing streets to motor vehicles, or incorporating pinch points at the entry and exit.
 - Reduce speed limits to <30 km/h.
 - Reduce road width to <3.0 m per lane, but preferably less.
 - Apply traffic calming measures such as raised/tactile centre medians.
 - Impede sight lines through carefully located landscape features or street furniture.
 - Parking and loading zones should be provided outside the main carriageway to prevent dooring.



5.3 Narromine, Trangie and Tomingley proposed pedestrian improvements




A full list of the proposed improvements is provided in Table 5.3. The issues and constraints identification (ID) references relate to those provided in Figure 5.1. The proposed improvements have been formulated from Site observations (refer to Section 3.10), GIS mapping, review of best practice, review of existing conditions, review of previous Narromine PAMP, community and stakeholder engagement and discussions with Narromine Shire Council.



Table 5.3 Identified issues and proposed treatment




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
1	Narromine	Mitchell Highway (Burraway Street) crossing	<p>There is no direct road crossing provided on Burraway Street to access Dundas Park or amenities on the northern side of Burraway Street. Increased traffic with the light vehicle parking area requires a safe way for pedestrians to cross the busy road into Narromine.</p> 	Provide pedestrian refuge with blisters to cross Burraway Street at an appropriate location between Meryula and Manildra Streets.	2	-	\$80,000
2	Narromine	Mitchell Highway (Burraway Street) to Narromine High School Path	<p>There is a lack of footpaths between Dundas Park and the railway path (Dandaloo/Burraway Street) to Narromine High School and Narromine Public School. A footpath network should be installed to improve connectivity between the southern area of town, the main ovals and the school, promoting walking and outdoor activity within the township.</p>	Provide footpath along the western side of Meryula Street between Meringo Street and Burraway Street (Mitchell Highway). The path will connect to the existing High School pedestrian crossing on the corner of Meryula / Meringa streets.	-	491	\$176,760



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
3	Narromine	Third Avenue Nth - St Augustine infant path connection	Footpaths are provided only in front of the infant School. 	Connect the existing footpath from the Infant School to First Ave (eastern side of Third Avenue).	-	65	\$23,400
4	Narromine	Culling Street Crossing	There are no crossings available to access the parks safely from Dandaloo Street and Narromine High School. 	Provide pedestrian refuge with blisters for pedestrian safety (and heavy vehicle accessibility) on Culling Street between Meryula and Manildra Streets.	2	-	\$80,000




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
5	Narromine	Completion of Derribong Avenue shared path	The shared paths are terminated near Temoin Street, restricting pedestrian accessibility. 	Extend the shared path to Dandaloo Street	-	295	\$90,000
6	Narromine	Completion of Derribong Ave shared path	The shared paths are terminated near Temoin Street, restricting pedestrian accessibility. 	Provide pedestrian refuge with blisters to the existing paths, which are located on the southern part of Derribong Avenue	2	-	\$80,000
7	Narromine	Algalah Street	There is no footpath provided along the western side of Algalah Street from Terangion Street to Temoin Street.	Provide footpath along the western side of Algalah Street from Terangion Street to Temoin Street.	-	430	\$154,800




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
8	Narromine	Christian School Terangion Street path missing links	The footpaths are provided only for the parking area and are disconnected from the wider footpath network. 	Provide footpath to Dandaloo Street along Terangion Street for safe accessibility for students. The new footpath will act as a feeder path for residents and good connectivity to Apex Park.	-	637	\$229,320
9	Narromine	Merilba Street access to Narromine High School	The footpaths are poorly maintained, which can cause a trip hazard. 	Replace bitumen footpaths in front of the High School along the eastern side of Merilba Street with shared path (concrete).	-	100	\$18,000
10	Narromine	Ellengerah Street to Narromine High School	There is a connectivity and continuity issue along Ellengerah Street from Merilba Street to Dandaloo Street, resulting in safety and accessibility concerns for pedestrians.	Provide a footpath on Ellengerah Street to connect the existing path on Merilba Street (west of the high school for	-	155	\$55,800




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
				better accessibility to the main street (Dandaloo Street) and a missing footpath between the existing footpaths along the eastern side of Merilba Street.			
11, 12	Narromine	Narromine Wetlands to Narromine Hospital path	There is a connectivity and continuity issue along Dandaloo Street between Cathundril Street to Nellie Vale Road. Some sections are constructed from loose gravel. 	Replace gravel paths with concrete footpaths.	-	135	\$48,600
13	Narromine	Terangion Street/ Dandaloo Street crossing	Lack of connectivity & safety issue for pedestrians to cross.	Provide pedestrian refuge crossing to connect Terangion Street across Dandaloo Street.	2	-	\$80,000




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
14	Narromine	Narromine hospital path	Connectivity and accessibility issues along the southern side of Cathundril Street due to the absence of concrete path. 	Replace bitumen footpaths in front of the hospital with shared path (concrete).	-	30	\$5,400
15	Narromine	Cemetery Crossing	There is a connectivity and safety issue as no crossing is provided across Tomingley Road in front of the Narromine Cemetery. 	Provide pedestrian refuge with blisters to cross Tomingley Road. Consider within Narromine Cemetery Master Plan, onsite parking is to be thoroughly reviewed.	2	-	\$80,000
16	Narromine	Showground connection path along Dappo Road	There is a continuity and connectivity issue along Dappo Road from the existing footpath to the showground entrance, resulting in a safety and accessibility	Extend existing footpath to the showgrounds.	-	220	\$79,200




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
			<p>concern for pedestrians.</p> 				
17	Narromine	Nymagee Street Path	<p>There is limited connectivity along Nymagee Street to the residential area for pedestrians, resulting in a safety and accessibility concern for pedestrians.</p> 	<p>Extend Nymagee Street footpaths (southern side of the street) to the east to Manildra Street from the roundabout of Meryula Street and Nymagee Street. Footpath to act as a feeder path to access to residential areas (east)</p>	-	255	\$91,800
18	Narromine	Third Avenue bowling club path	<p>No footpaths are provided on Third Avenue. Reported in community consultation that some seniors using Third Avenue to access Narromine Bowling Club.</p>	<p>Provide footpaths along Third Avenue South from Backwater Road to Cathundril Street.</p>	-	270	<p>\$97,200</p> <p>*Note: kerb and gutter is required before the footpath can be installed.</p>




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
19	Narromine	First Avenue path extension	<p>The are limited footpaths along First Avenue, resulting in a safety and accessibility concern for pedestrians.</p> 	Provide footpaths along the northern side of First Avenue to Sixth Avenue. Footpath to act as a feeder path to access the residential area (northwest)	-	235	\$84,600
20	Narromine	Southern side Second Avenue (outside Narromine Transmission)	<p>The existing footpaths are not connected and not filled with asphalt, which can cause trip hazards.</p> 	Fill driveway to meet pathway.	1	3	\$1,080
21	Narromine	Dandaloo Street footpath surface condition	<p>Trip Hazard-Footpath not levelled, and Kerb ramp are not compliant with design standards-Transport for NSW-R0300</p>	Grind and level footpath. Upgrade Kerb ramps to comply	-	-	\$10,000




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
			<p>Kerb and Channel Series and AS-1428.1:2021- Design for access and mobility.</p> 	<p>with <i>Transport for NSW-R0300 Kerb and Channel Series and AS-1428.1:2021- Design for access and mobility.</i></p>			
22	Narromine	Crossing on the corner West of Dandaloo Street and Nymagee Street West	<p>There is a continuity and safety issue due to no crossing.</p> 	<p>Provide pedestrian refuge to cross Nymagee Street.</p>	2	-	\$80,000
23	Narromine	Meryula Street and Nymagee Street	<p>No Kerb ramps along Meryula Street to Narromine Public School for prams and mobility devices to access the newly proposed footpath (refer to PAMP ID 17).</p> 	<p>Introduce Kerb ramps on Meryula Street/Nymagee Street intersection to comply with <i>Transport for NSW-R0300 Kerb and Channel Series and AS-1428.1:2021- Design for access and mobility.</i></p>	3	-	\$30,000




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
24		Narromine High School bus/garbage / disability access gate at Meringo Street	It is reported that the gate access requires an improvement for better accessibility to students and people who use a wheelchair. 	Improve accessibility by upgrading the road surface condition of the ramp and the footpath in front of the entrance.	-	10	\$1,800
25	Narromine	Meringo Street and Meryula Street near Narromine Public School	Lack of pedestrian priority crossings near Narromine Public School. 	Provide pedestrian refuge crossing at Meringo Street and Meryula Street near Narromine Public School	2	-	\$80,000
26	Narromine	Terangion Street crossing	It is reported to improve the connectivity of footpaths and the safety of the School community. 	Provide pedestrian refuge on Terangion Street crossing to assist students safely cross the street	2	-	\$80,000



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
27	Narromine	Culling Street/Manildra Street	<p>Linkage issue for pedestrians and cyclists</p> 	Link Bicycle Lane with line marking	1	-	\$1,000 approximately (\$1/m per line)
28	Narromine	Manildra Crossing-Mitchell Highway	<p>Lack of connectivity & safety issue for pedestrians- Gravel footpath along Mitchell Highway</p> 	Footpath to link the pedestrian from Manildra Crossing to the gravel footpath along Mitchell Highway-a pedestrian maze is required to cross the rail line.	-	258	\$92,880
29	Narromine	Manildra Crossing-Mitchell Highway	<p>Lack of pedestrian crossings</p> 	Implement a pedestrian maze to cross the rail line.	1	-	TBC



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
30	Narromine	Road on North of Baystone Way	Lack of pedestrian crossings 	Pedestrian refuge with two blisters for pedestrians to be linked from the footpath already constructed from North/South to link north to south.	1	-	\$50,000
31	Narromine	Manildra Street/Terangion Street	Lack of pedestrian crossings 	Pedestrian refuge upgrades to assist pedestrians crossing Manildra to access southeast part of the township.	1	-	\$40,000
32	Narromine	Cathundril Street/Algalah Street	Missing link of footpath connectivity 	Footpath to link from Timbrebongie House to Cemetery.	-	818	\$294,480



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
33	Narromine	Dandaloo Street to Wetlands	Missing link of footpath connectivity 	Footpath to link existing footpath along Dandaloo Street to the Wetlands.	-	440	\$158,400
34	Narromine	Merilba Street	No pathways along Merilba Street near Narromine High School-uneven pathway and trip hazard 	Provide a footpath along Merilba Street near Narromine High School.	-	550	\$198,000
35	Narromine	Merilba Street	No pedestrian crossing near Narromine High School 	Provide a pedestrian refuge on Merilba Street near High School.	1	-	\$40,000


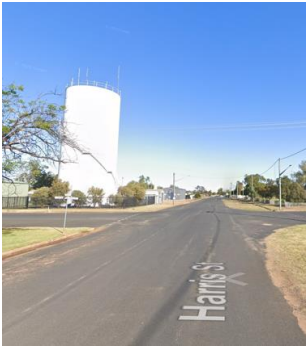
PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
36	Narromine	Algalah Street	Lack of footpath near Narromine Christian School 	Provide a footpath along the eastern side of Algalah Street from Tomingley Road to Derribong Avenue near Narromine Christian School.	-	1220	\$439,200
37	Narromine	Algalah Street/Terangion Street	No crossing is provided on Algalah Street (in front of the School entrance) to walk along Terangion Street. There is a safety issue when students crossing the street. 	Provide pedestrian refuge and blisters on north and south leg of Algalah Street near Christian School at Algalah Street/Terangion Street.	2	-	\$100,000
38	Narromine	Algalah Street/Minore Street	No pedestrian crossing near Narromine Christian School. 	Provide pedestrian refuge and blisters on north and south leg of Algalah Street near Christian School at Algalah Street/Minore Street.	2	-	\$100,000



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
39	Narromine	Dandaloo Street/Cathundril Street	No pedestrian crossing near medical centre and bowling club. 	Provide pedestrian refuge and blisters on the south leg of Dandaloo Street near the medical centre.	1	-	\$50,000
40	Narromine	Mitchell Highway (Trangie Road) - BP station	Lack of pedestrian crossings 	Provide pedestrian refuge near the BP service station.	1	-	\$50,000
41	Trangie	Pram ramp to road connections in Trangie	Existing pram ramps are not properly connected to the road when crossing, resulting in safety and accessibility concerns for pedestrians using prams and wheelchairs. 	Provide pram ramps at the intersection of Harris Street and Goan Street at the end of the footpath for better pedestrian accessibility.	4	-	\$40,000




PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
42	Trangie	Country Women's Association pram ramp path connection (east leg of Temoin Street and Derribong Street intersection)	<p>The existing pram ramp is not maintained and is in poor condition, becoming a slip and trip hazard. There is limited access to footpaths from the southern side of Derribong Street.</p> 	Provide new pram ramps for better accessibility for people who use wheelchairs and prams.	1	-	\$10,000
43	Trangie	St Johns primary crossing	<p>There are limited pedestrian crossing facilities and footpaths near the School on Dandaloo Street, Harris Street and Temoin Street.</p> 	<p>Option 1: Extend the footpath along the eastern side of Dandaloo Street then provide crossing (blisters) in front of the cultural centre (to avoid bus zone in front of the School)</p> <p>Option 2: Extend the footpath along the eastern side of Dandaloo Street then provide crossing in front of the entrance of St John's Primary School (for direct access to the school).</p>	-	230	\$122,800
44	Trangie	Multi-purpose service (MPS) disabled parking upgrade	<p>Issues raised in the community consultation with accessibility and safety of ramp usage for wheelchairs.</p> <p>The footpath is not sufficiently wide for wheelchair access along the northern side</p>	Provide line marking for parking spaces for better accessibility and safety to wheelchairs. Improve accessibility and safety by widening the footpath for wheelchairs.	-	-	\$1,000 approximately (\$1/m per line)





PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
			of Harris Street. 				
45	Trangie	Multi-purpose service (MPS) connection missing link	There are missing links identified. No footpaths are available along the eastern side of Mullah Street and the southern side of Derribong Street towards Weemabah Street. 	Provide footpaths along the eastern side of Mullah Street and the southern side of Derribong Street towards Weemabah Street. Connect the proposed footpath to the existing footpath along Harris Street and Derribong Street. Make a loop for better pedestrian access to the hospital and improve pedestrian accessibility to their houses.	-	250	\$90,000
46	Trangie	Aquatic centre Crossing	The existing footpath near the aquatic centre is disconnected, with no pedestrian	Provide pedestrian refuge with blisters to connect and continue the existing path to the aquatic centre.	2	-	\$80,000



PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
			crossing facilities across Harris Street. 				
47	Trangie	Trangie Aquatic Centre to MPS (Multi-purpose service) path	There is no footpath adjacent to Trangie Skate Park along Harris Street, resulting in safety and accessibility concerns for pedestrians. 	Provide footpaths along the park side for better accessibility and connectivity for multiple park facilities.	-	260	\$93,600
48	Trangie	Challenge disability service path links	There is a missing link identified along the eastern side of Temoin Street to Harris Street, resulting in a safety and accessibility concern for pedestrians.	Provide a footpath along the eastern side of Temoin Street towards Harris Street to connect the missing link.	-	55	\$19,800

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
49	Trangie	St John's Parish School to Trangie Aquatic Centre path	<p>Issue raised in community consultation with a missing link from the School along the western side of Harris Street to the aquatic centre.</p> 	Provide a footpath along the western side of Harris Street from the cultural centre to the aquatic centre to provide safer access to students	-	225	\$81,000
50	Trangie	Trangie Pre-School Connection path	Missing link identified along Temoin Street from pre-School to Derribong Street, resulting in a safety and accessibility concern for pedestrians.	Provide a footpath along Temoin Street from Pre-School to Derribong Street.	-	100	\$36,000

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
							
51	Trangie	Showground connection path	<p>There is no footpath along the northern side of Derribong Street between Belgrove Street and Croudace Street, resulting in a safety and accessibility concern for pedestrians.</p> 	Provide a footpath along Derribong Street from Belgrove Street to Croudace Street.	-	155	\$55,800
52	Trangie	Goan Waterhole connection path	Missing link identified along Mitchell Highway between Dandaloo Street to	Provide a footpath along Mitchell Highway from	-	415	\$149,400

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
			<p>Saleyards Road, resulting in a safety and accessibility concern for pedestrians.</p> 	Dandaloo Street to Saleyards Road.			
53	Trangie	North leg of Dandaloo Street and Narromine Street intersection	<p>The existing refuge island is not wide enough for bicycles and prams.</p> 	Provide a wider refuge island for bikes and prams.	1	-	\$40,000
54	Trangie	Dandaloo Street	<p>Lack of pedestrian crossings</p> 	St John's Primary School pedestrian refuge (median) to assist with access for School drop off.	1	-	\$50,000
55	Trangie	Harris Street	Lack of connectivity & continuity issue	Upgrade from bitumen to concrete to complete the link from	-	115	\$41,400

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
				Dandaloo Street to Temoin Street.			
56	Trangie	Harris Street/Temoin Street	Lack of pedestrian crossings 	Pedestrian crossing (median) to assist with access from Northeast foot traffic to Southwest on Harris Street/Temoin Street.	1	-	\$50,000
57	Trangie	Harris Street	Lack of connectivity & continuity issues to the existing footpath 	Improvement to the existing footpath at the hospital.	-	20	\$3,600
58	Tomingley	Crossing to Eric Woods Park	There is no crossing across the Newell Highway to access Eric Woods Park. 	Provide pedestrian refuge with blisters in front of Eric Woods Park.	2	-	\$80,000

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
59	Tomingley	BP service station path	There are no footpaths from BP service station to key facilities along Newell Highway. 	Provide footpath along the western side of Myall Street from BP station to the existing bus stop located in the south of town.	-	155	\$55,800
60	Narromine	Newell Highway	Lack of pedestrian crossings 	Pedestrian refuge (median) for access across the Newell Highway for pedestrians.	1	-	\$50,000
61	Narromine	Southern side of Narromine station	Lack of footpath and crossings on Southern side of station	Council to investigate to provide footpath and crossing on Southern side of the station for pedestrian to cross.	-	-	TBA
62	Narromine	Mitchell Highway	Lack of footpath and crossings along Mitchell Highway entrance from Trangie into Narromine along Golf Club. The footpath is not connected to the network	Council to investigate to provide footpath and pedestrian refuge along Mitchell Highway from Macquarie Stockfeed into Narromine along Golf Club.	-	-	TBA
63	Narromine	First Avenue Connection Footpath	Improve connectivity between northwest residential area and main town attractions	Installation of a footpath along the northern side of First Avenue between Third Avenue and Sixth Avenues	-	250	\$90,000

PAMP ID	Town	Street / Intersection	Description of Issue	Description of Proposed Treatment	Number of units	Distance (m)	Estimated Cost (\$)
64	Trangie	Dandaloo Street and Mitchell Highway (Narromine Street)	Increase connectivity and reduce trip hazards in the main retail area of Trangie.	Install a concrete footpath from the corner to the existing footpath in front of "Ewe Too"	-	40	\$35,000

Each of the treatments detailed in Table 5.3 is displayed in the following maps:

- Narromine-Figure 5.1
- Trangie-Figure 5.2
- Tomingley-Figure 5.3

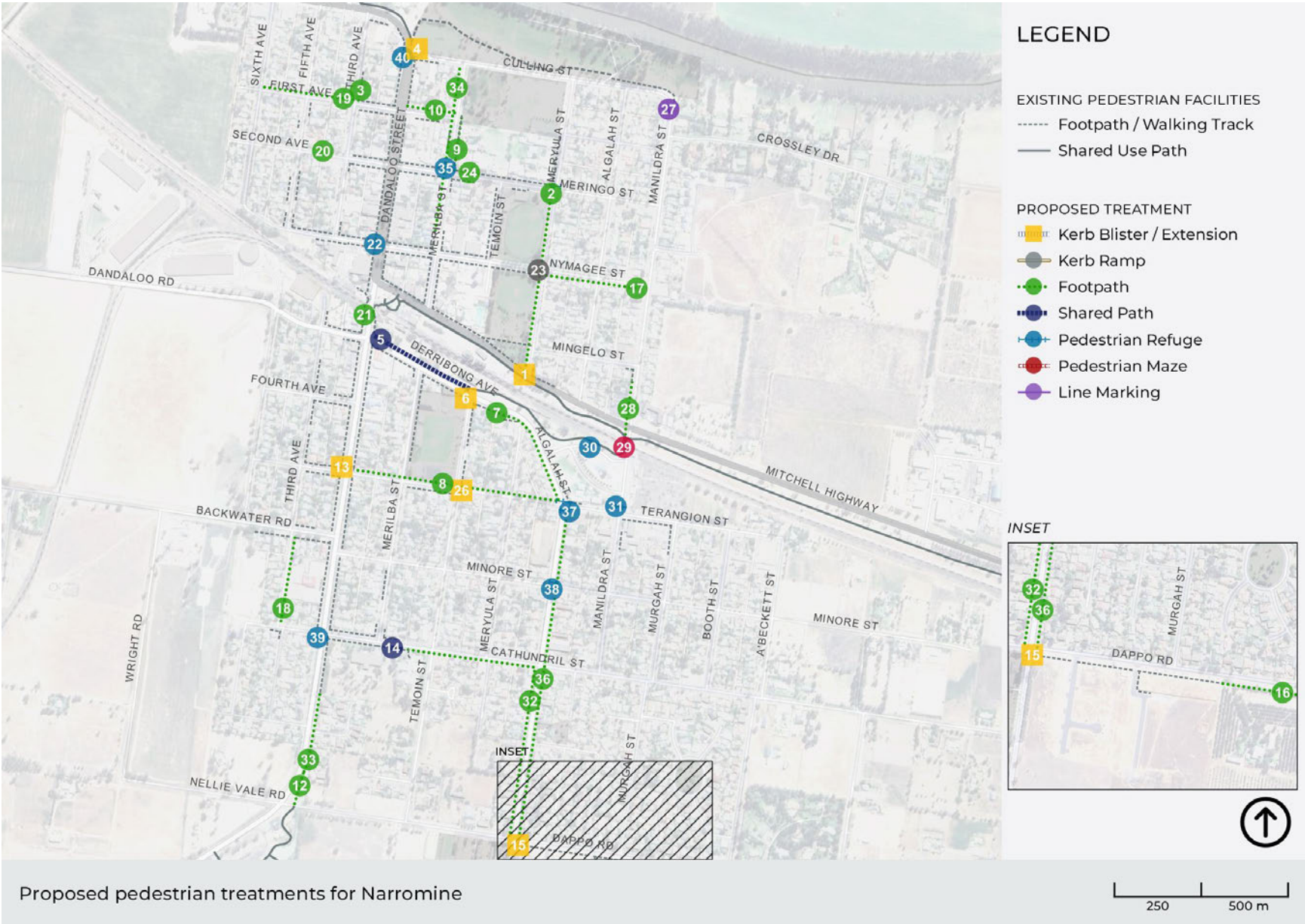


Figure 5.1 Proposed pedestrian treatments for Narromine



Figure 5.2 Proposed pedestrian treatments for Trangie

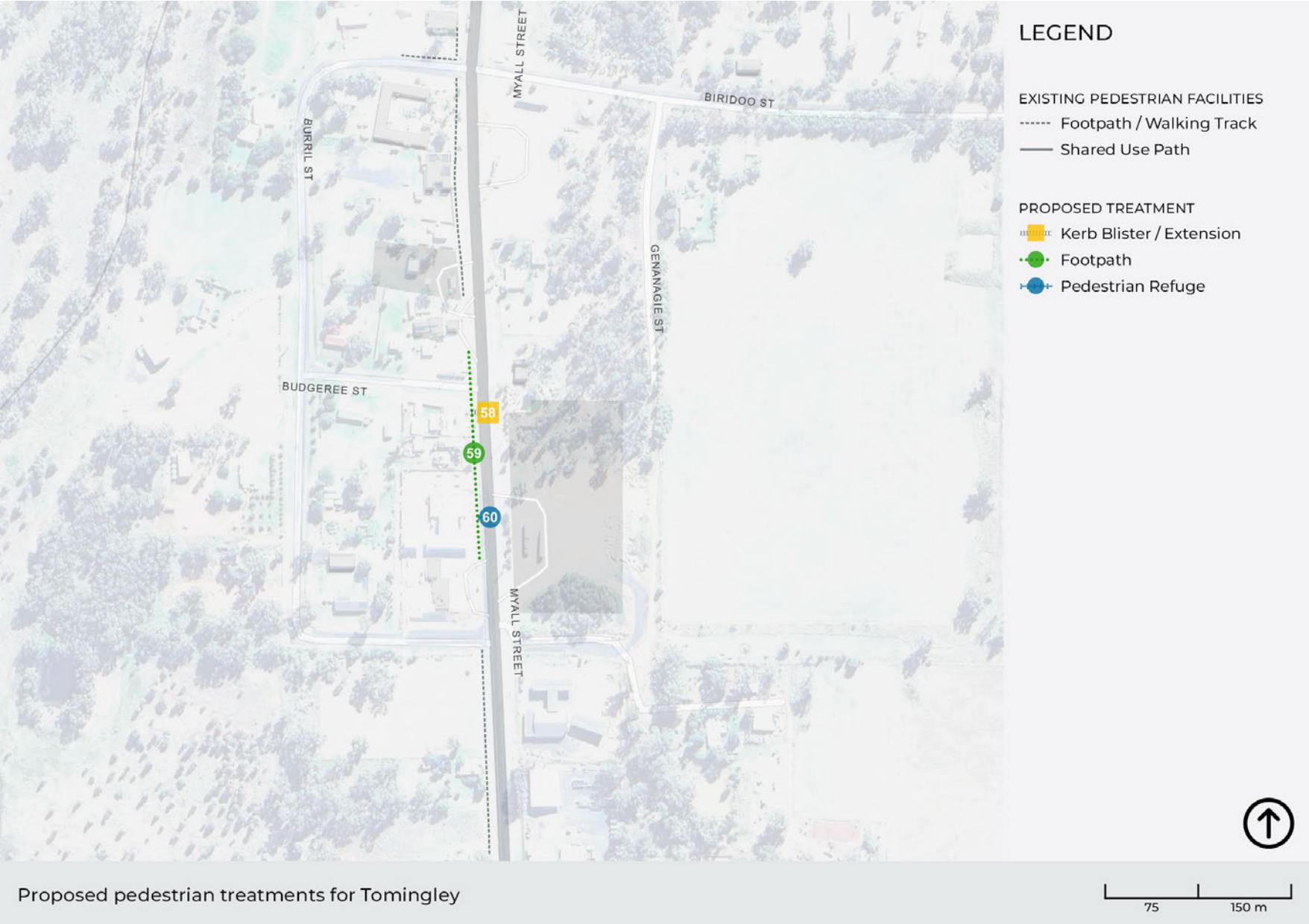


Figure 5.3 Proposed pedestrian treatments for Tomingley

6. Priorities for pedestrian improvements

6.1 Methodology to prioritise pedestrian requirements

The *How to Prepare a Pedestrian Access and Mobility Plan (2002)* provides guidance on what is important in providing footpaths. This method was used to determine the prioritisation of the proposed improvements.

Scores were derived for each of the recommended pedestrian improvements for the purpose of prioritising projects. The Weighted Criteria Scoring System from the Transport for NSW *How to Prepare a Pedestrian Access and Mobility Plan (2002)* was used to prioritise each proposed improvement, as shown in Table 6.1.

Table 6.1 TfNSW Weighted Criteria Scoring System

Category	Criteria
Land Use	Number of Attractors/Generators
	Land Use Type
	Proximity to Attractors/Generators
	Future Development with Attractors/Generators
Traffic Impact	Road Hierarchy
Safety	Identified as Hazardous Area (from consultation)
	Identified Pedestrian Crashes
Facility Benefits	Demonstrated Path
Continuity of Routes	Addition to Existing Facility
Priority	Pedestrian Route Hierarchy

The TfNSW defines the overall work prioritisation as:

- High (100 – 70)
- Medium (<70 – 40)
- Low (<40).

In order to determine the priorities of the pedestrian access improvement items, the infrastructure initiatives or studies are given a priority rating to be accommodated in the Council budget cycle. A possible weighted scoring system is provided in Table 6.2. However, a system could be customised to suit specific council areas according to local needs.

Council is likely to receive requests for additional works beyond those identified in this plan. The same methodology can be applied to these requests to determine their level of prioritisation.

Table 6.2 Weighted Scoring Criteria to Prioritise the PAMP Initiatives

Category	Criteria	Performance Conditions 1	Score 2, 3	
Land Use	Number of attractors/generators (locations)	more than 5 locations	10	
		3-5 locations	8	
		1-2 locations	5	
		0 locations	0	
Land use type	Land use type	Schools	10	
		commercial/retail	8	
		residential	5	
		other	0	
Proximity to generators/attractors	Proximity to generators/attractors	less than 250 metres	10	
		>250-500 metres	8	
		>500-1,000 metres	5	
		>1,000 metres	0	
Future development with attractors/generators	Future development with attractors/generators	High	5	
		medium	3	
		low	1	
Traffic Impact	Road hierarchy	State Road	15	
		Regional Road	10	
		Local Road	8	
		Special use	5	
		Other	0	
Safety	Identified as hazardous area (from audit or consultation)	High	10	
		Medium	8	
		Low	5	
		None	0	
	Identified pedestrian crashes	Identified pedestrian crashes	>3 reported crashes per year	15
			3 reported crashes per year	10
			2 reported crashes per year	8
			1 reported crash per year	5
			0 reported crashes per year	0
Facility Benefits	Demonstrated path	High usage	10	
		Medium usage	8	
		Low usage	5	
		No demonstrated use	0	
Continuity of routes	Addition to existing facility	Link existing facilities	10	
		Extension of facilities	8	
		Addition to facilities	5	
		Other	0	
Priority	Pedestrian route hierarchy	High use	5	
		Medium use	3	
		Low use	1	

Notes:

¹ Only one performance condition is to be selected for each criterion e.g. Land use type residential = 5.^{2,3} The maximum score achievable overall is 100.

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

Source: How to Prepare a Pedestrian Access and Mobility Plan, Roads and Traffic Authority of NSW (RTA), 2002

6.1.1 Limitations of TfNSW methodology

Please note that there are limitations to the TfNSW based methodology for prioritising each proposed improvement. For example, the Weighted Criteria Scoring System does not include the presence of existing footpaths on the opposite side of the street. This results in the proposed improvement having a higher priority using the TfNSW method (as it is assumed there is no footpath on the route).

In addition, at some key generators, pedestrian facilities may be urgently required (outside an aged care facility, for example). However, the weighting system may not provide a score that is significantly higher for the same type of facility at a less critical location. Therefore, consideration needs to be taken when assessing priorities in conjunction with the Transport for NSW methodology.

The methodology also does not apply a weighting for the costs associated with identified works. Noting the limitations on the amount and timing of funding being available, it is likely that works would not necessarily ultimately be delivered in the same order they are scored.

6.2 Ranking of the pedestrian improvements

Results from the Transport for NSW weighted prioritisation is provided in Table 6.3. Recommendations are based on GHD site-based prioritisation. Transport for NSW weighted prioritisations are provided in full in Appendix D.

The overall work prioritisation has been determined for high, medium and low priority projects by using the following prioritisation scoring ranges:

- High priority: 100-70
- Medium priority: <70-40
- Low priority: <40.

Table 6.3 Infrastructure Provision Goals for Narromine LGA

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
64	Trangie	Dandaloo / Mitchell Highway	Install a concrete footpath from the corner to the existing footpath in front of "Ewe Too"	TBC	TBC	High	\$35,000
28	Narromine	Manildra Crossing- Mitchell Highway	Footpath to link the pedestrian from Manildra Crossing to the gravel footpath along Mitchell Highway-a pedestrian maze is required to cross the rail	81	1	High	\$92,880
1	Narromine	Mitchell Highway (Burraway Street) to High School Path	Provide pedestrian refuge with blisters to cross Burraway Street between Meryula and Manildra Streets.	79	2	High	\$80,000
29	Narromine	Manildra Crossing-	Implement pedestrian maze to cross the rail line	79	2	High	TBC

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
		Mitchell Highway					
32	Narromine	Cathundril Street/Algalah Street	Footpath to link from Timbrebongie House to Cemetery	76	4	High	\$294,480
33	Narromine	Dandaloo Street to Wetlands	Footpath to link existing footpath along Dandaloo Street to the Wetlands	74	5	High	\$158,400
39	Narromine	Dandaloo Street/Cathundril Street	Provide pedestrian refuge and blisters on the south leg of Dandaloo Street near the medical centre	72	6	High	\$50,000
30	Narromine	Road on North of Baystone Way	Pedestrian refuge with two blisters for pedestrians to be linked from the footpath already constructed from North/South to link north to south.	71	7	High	\$50,000
31	Narromine	Manildra Street/Terangion Street	Pedestrian refuge upgrades to assist pedestrians crossing Manildra to access southeast part of the township.	71	7	High	\$40,000
55	Trangie	Harris Street	Upgrade from bitumen to concrete to complete the link from Dandaloo Street to Temoin Street	71	7	High	\$41,400
56	Trangie	Harris Street/Temoin Street	Pedestrian crossing (median) to assist with access from Northeast foot traffic to Southwest on Harris Street/Temoin Street.	71	7	High	\$50,000
57	Trangie	Harris Street	Improvements to the footpath at the hospital	71	7	High	\$3,600
4	Narromine	Culling Street Crossing	Provide pedestrian refuge with blisters for pedestrian safety (and heavy vehicle accessibility).	70	12	High	\$80,000
36	Narromine	Algalah Street	Provide a footpath along the eastern side of Algalah Street from Tomingley Road to Derribong Avenue near Narromine Christian School	70	12	High	\$439,200
37	Narromine	Algalah Street/Terangion Street	Provide pedestrian refuge and blisters on north and south leg of Algalah Street near Christian School at Algalah Street/Terangion Street.	70	12	High	\$100,000
38	Narromine	Algalah Street/Minore Street	Provide pedestrian refuge and blisters on north and south leg of Algalah Street near Christian School at Algalah Street/Minore Street.	70	12	High	\$100,000

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
54	Trangie	Dandaloo Street	St John's Primary School pedestrian refuge (median) to assist with access for School drop off	70	12	High	\$50,000
2	Narromine	Mitchell Highway (Burraway Street) to High School Path	Provide a footpath along the western side of Meryula Street, between Meringo Street and Burraway Street. The path will connect to the existing high school pedestrian crossing on the corner of Meryula and Meringo Streets	69	17	Medium	\$176,760
34	Narromine	Merilba Street	Provide a footpath along Merilba Street near High School	69	17	Medium	\$198,000
35	Narromine	Merilba Street	Provide a pedestrian refuge on Merilba Street near High School.	69	17	Medium	\$40,000
40	Narromine	Mitchell Highway (Trangie Road) -BP station	Provide pedestrian refuge near the BP service station.	69	17	Medium	\$50,000
6	Narromine	Completion of Derribong Avenue shared path	Provide pedestrian refuge with blisters to the existing paths, which are located on the southern part of Derribong Avenue	68	21	Medium	\$80,000
9	Narromine	Merilba Street access to Narromine High School	Replace bitumen footpaths in front of the high School along the eastern side of Merilba Street to shared path (concrete)	67	22	Medium	\$18,000
25	Narromine	Meringo Street and Meryula Street near Narromine Public School	Provide pedestrian refuge crossing at Meringo Street and Meryula Street near Narromine Public School	67	22	Medium	\$80,000
41	Trangie	Pram ramp to road connections	Provide pram ramp at the intersection of Harris Street and Goan Street at the end of the footpath for better pedestrian accessibility	67	22	Medium	\$40,000
46	Trangie	Aquatic centre Crossing	Provide pedestrian refuge with blisters to connect and continue the existing path to the aquatic centre	67	22	Medium	\$80,000
5	Narromine	Completion of Derribong Avenue shared path	Extend the shared path to Dandaloo Street	66	26	Medium	\$90,000

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
49	Trangie	St Johns to aquatic centre path	Provide footpath along the western side of Harris Street from the cultural centre to the aquatic centre to provide safer access to students	65	27	Medium	\$81,000
21	Narromine	Dandaloo Street	Grind and level footpath. Upgrade Kerb ramps to comply with Transport for NSW-R0300 Kerb and Channel Series and AS-1428.1:2021- Design for access and mobility.	64	28	Medium	\$10,000
22	Narromine	Crossing on the corner West of Dandaloo Street and Nymagee Street West	Provide pedestrian refuge to cross Nymagee Street.	64	28	Medium	\$80,000
8	Narromine	Christian School Terangion Street path missing links	Provide footpath to Dandaloo Street along Terangion Street for safe accessibility for students. The new footpath will act as a feeder path for residents and good connectivity to Apex Park.	63	30	Medium	\$229,320
17	Narromine	Nymagee St Path	Extend Nymagee Street footpath (along southern side of the street) to the east to Manildra Street from the roundabout of Meryula Street and Nymagee Street. Footpath to act as a feeder path to access to residential areas (east)	63	30	Medium	\$91,800
50	Trangie	Pre-school Connection path	Provide footpath along Temoin Street from pre-school to Derribong street	63	30	Medium	\$36,000
47	Trangie	Aquatic centre to MPS path	Provide footpaths along the park side for better accessibility and connectivity for multiple park facilities	63	30	Medium	\$93,600
59	Tomingley	BP service station path	Provide footpaths along the western side of Myall Street from BP station to the existing bus stop located in the south of town	62	34	Medium	\$55,800
14	Narromine	Cemetery to hospital path	Replace bitumen footpaths in front of the hospital to shared path (concrete)	62	34	Medium	\$5,400
44	Trangie	MPS / doctors disabled parking upgrade	Provide line marking for parking spaces for better accessibility and safety to wheelchairs. Improve the accessibility and safety by widening the footpath for wheelchairs	62	34	Medium	\$1,000 approximately (\$1/m per line)

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
3	Narromine	Third Ave Nth - Street Saint Augustine infant path connection	Connect the existing footpath from Infant School to First Avenue. Extend the existing footpath to Sixth Avenue (northern side). First Avenue will act as a feeder path for north west residential area.	60	37	Medium	\$23,400
7	Narromine	Algalah Street	Provide footpath along the western side of Algalah Street from Terangion Street to Temoin Street	60	37	Medium	\$154,800
10	Narromine	Ellengerah Street path to High School	Provide footpath on Ellengerah Street to connect the existing path on Merilba Street (west of the high School for better accessibility to the main street (Dandaloo Street) and a missing footpath between the existing footpaths along the eastern side of Merilba Street	60	37	Medium	\$55,800
13	Narromine	Terangion Street/Dand aloo Street crossing	Provide pedestrian refuge crossing to connect Terangion Street across Dandaloo Street.	60	37	Medium	\$80,000
23	Narromine	Meryula Street and Nymagee Street	Introduce Kerb ramps on Meryula Street/Nymagee Street intersection to comply with Transport for NSW-R0300 Kerb and Channel Series and AS-1428.1:2021- Design for access and mobility.	60	37	Medium	\$30,000
26	Narromine	Terangion Street crossing	Provide pedestrian refuge on Terangion Street crossing to assist students safely cross the street	60	37	Medium	\$80,000
42	Trangie	CWA pram ramp path connection	Provide new pram ramp for better accessibility for people who use wheelchairs & prams	60	37	Medium	\$10,000
52	Trangie	Goan Waterhole connection path	Provide footpath along Mitchell Highway from Dandaloo Street to Saleyards Road	59	44	Medium	\$149,400
12	Narromine	Wetlands to hospital path	Replace gravel path to concrete footpaths	57	46	Medium	\$48,600
58	Tomingley	Crossing to Eric Woods Park	Provide pedestrian refuge with blisters in front of Eric Woods Park.	57	46	Medium	\$80,000
24	Narromine	Narromine High School bus / garbage / disability access gate at Meringo Street	Improve the accessibility by upgrading road surface condition of ramp and the footpath in front of the entrance	57	46	Medium	\$1,800

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
53	Trangie	Café crossing replacement	Provide wider refuge island for bikes and prams	57	46	Medium	\$40,000
20	Narromine	South side Second Ave (outside Narromine Transmission)	Fill driveway to meet pathway	55	50	Medium	\$1,080
48	Trangie	Challenge disability service path links	Provide footpath along the eastern side of Temoin Street towards Harris Street to connect missing link	55	50	Medium	\$19,800
16	Narromine	Showground connection path	Extend existing footpath along Dappo Road to the Showgrounds.	54	52	Medium	\$79,200
43	Trangie	St Johns primary crossing	Option 1: Extend the footpath along the eastern side of Dandaloo Street then provide crossing (blisters) in front of the cultural centre (to avoid bus zone in front of the School) Option 2: Extend the footpath along the eastern side of Dandaloo Street then provide crossing in front of the entrance of St John's primary School (for direct access to the School)	54	52	Medium	\$122,800
60	Narromine	Newell Highway	Pedestrian refuge (median) for access across the Newell Highway for pedestrians	54	52	Medium	\$50,000
18	Narromine	Third avenue bowling club path	Provide footpaths along Third Avenue South from Backwater Road to Cathundril Street **Kerb and gutter is required prior to construction of footpath.	54	52	Medium	\$97,200
19	Narromine	First Avenue path extension	Provide footpaths along the northern side of First avenue to Sixth Avenue. Footpath to act as a feeder path to access to residential area (northwest)	53	56	Medium	\$84,600
27	Narromine	Culling Street/Manildra Street	Link Bicycle Lane with line marking	53	56	Medium	\$1,000 approximately (\$1/m per line)

ID	Location	Street/ Intersection	Description of Proposed Treatment	TfNSW Priority	TfNSW Rank	Priority	Cost Estimate (\$)
45	Trangie	MPS connection missing link	Provide footpath along the eastern side of Mullah Street and southern side of Derribong Street towards Weemabah Street. Connect the proposed footpath to the existing footpath along Harris Street and Derribong Street. Make a loop for better pedestrian access to the hospital and improve the pedestrian accessibility to their houses	53	56	Medium	\$90,000
51	Trangie	Showground connection path	Provide footpath along Derribong Street from Belgrove Street to Croudace Street	50	59	Medium	\$90,000
63	Narromine	First Ave between third and sixth avenues	Provide a footpath along the northern side of First Avenue	45	59	Medium	\$90,000
61	Narromine	Southern Side of Narromine station	Council to investigate to provide footpath and pedestrian refuge on Southern side of station for pedestrian to cross	37	60	Low	TBC
62	Narromine	Mitchell Highway	Council to investigate to provide footpath and pedestrian refuge along Mitchell Highway from Macquarie Stockfeed into Narromine along Golf Club.	37	60	Low	TBC
15	Narromine	Cemetery crossings	Provide pedestrian refuge with blisters to cross Tomingley Road	37	60	Low	\$80,000

High priority improvements are recommended to be delivered in the short term, and medium priority improvements in the medium term. Each of the priority levels detailed in Table 6.3 is displayed in the following maps:

- Narromine - Figure 6.1
- Trangie - Figure 6.2
- Tomingley-Figure 6.3.

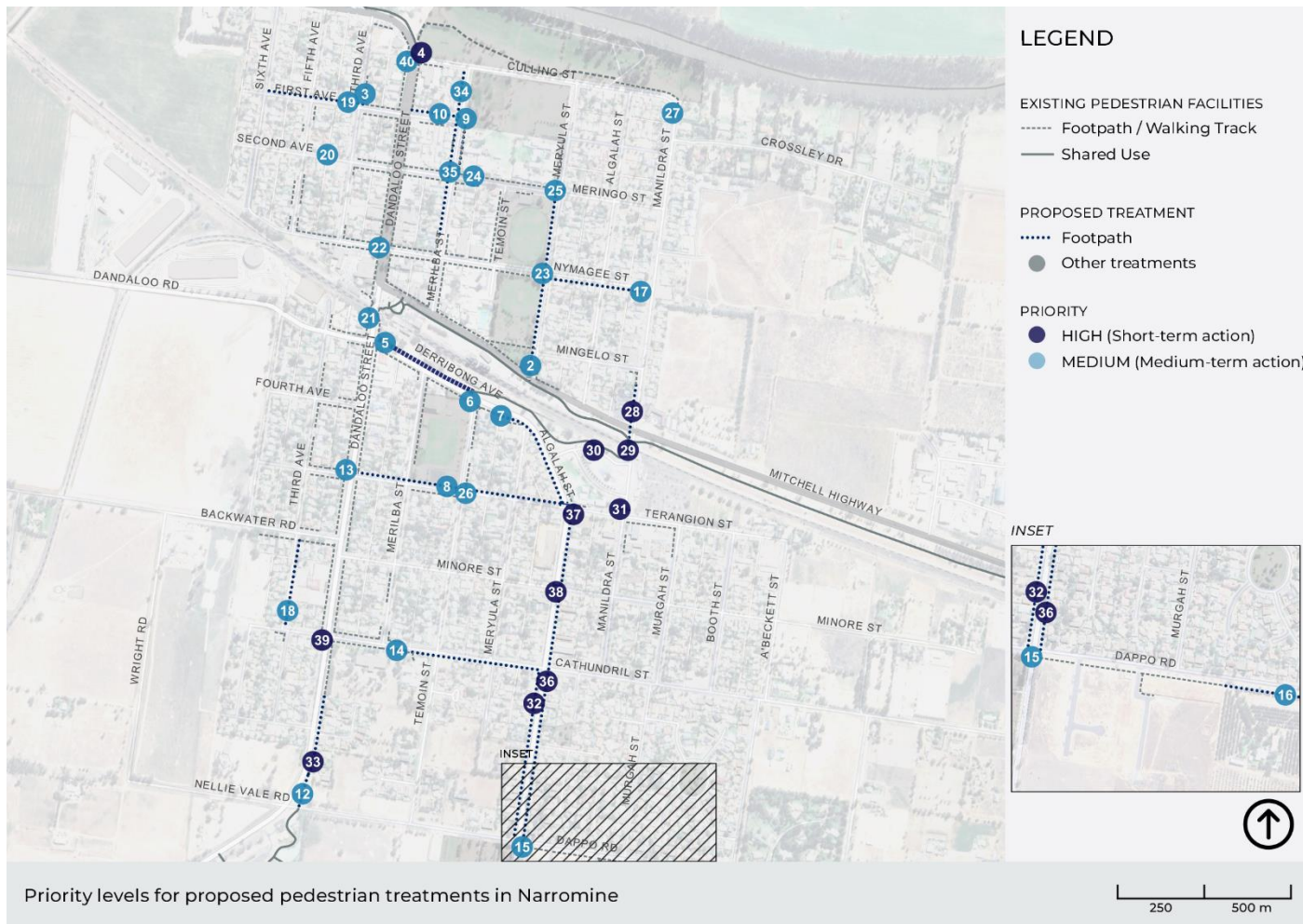


Figure 6.1 Priority levels for proposed pedestrian treatments-Narromine

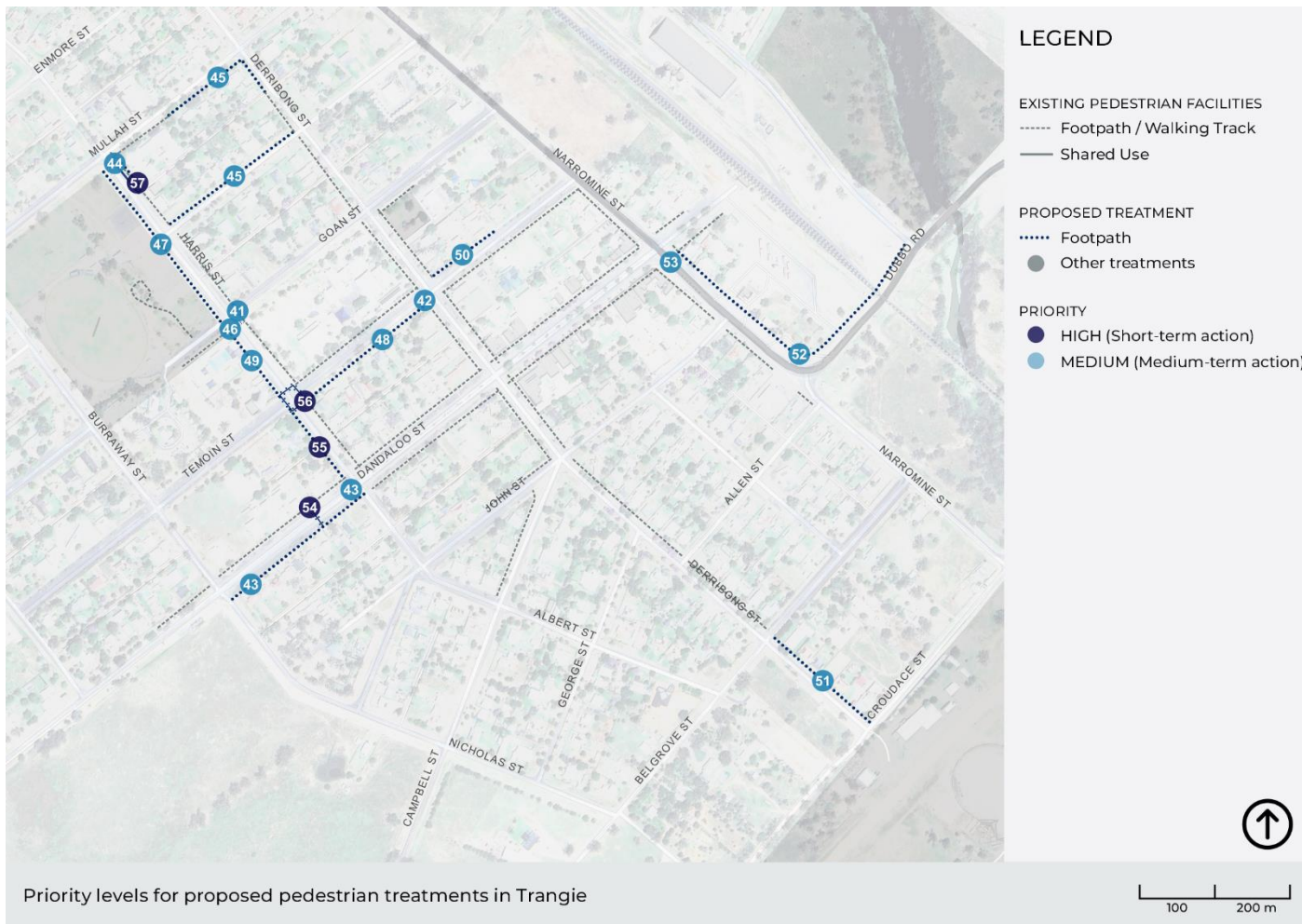


Figure 6.2 Priority levels for proposed pedestrian treatments-Trangie

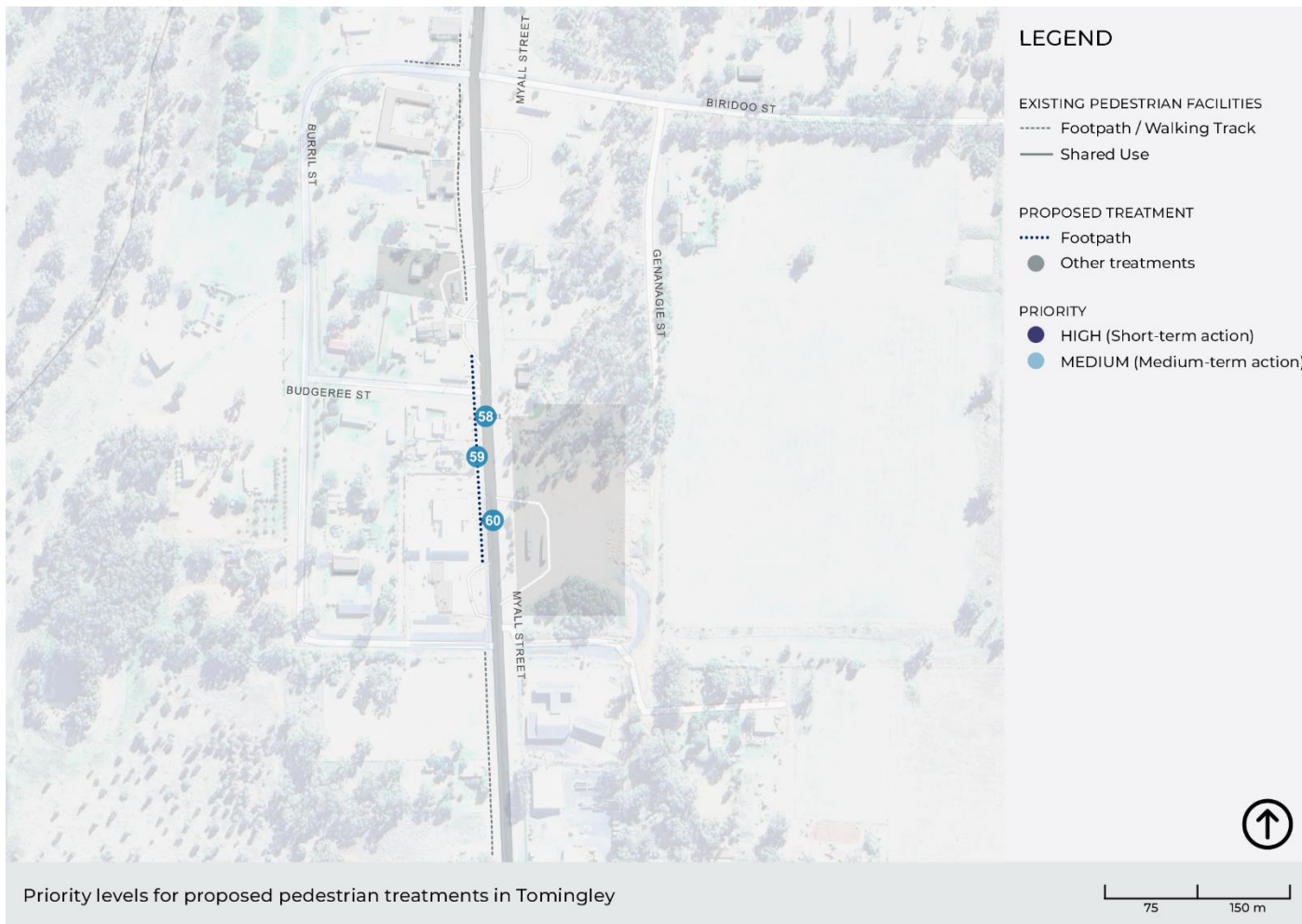


Figure 6.3 Priority Levels for Proposed Pedestrian Treatments-Tomingley

7. Conclusions and recommendations

GHD was engaged by Narromine Shire Council to prepare PAMP for the townships of Narromine, Trangie and Tomingley to improve the walking environments for all pedestrians and mobility scooters. The development of this study included the following activities:

- Review relevant background reports, policies and plans.
- Undertake stakeholder engagement.
- Undertake site audits of current pedestrian infrastructure.
- Identify priorities improvements for walking infrastructure.

7.1.1 Background review

The findings from the background review highlighted that:

- The majority of State and Local Government planning policy documents reviewed as part of this study aim to encourage sustainable travel modes, including walking. The plan identified will help to support this objective by providing improved walking connections.
- A review of crash data for the study area indicates that there were two crashes involving pedestrians over the five-year period between 2017 and 2021 in Narromine.

7.1.2 Community and stakeholder consultation

A number of community and stakeholder engagement tasks have been undertaken to support the development of the PAMP, as follows:

- Community online survey in November 2023
- In person engagement in October 2023
- GHD facilitated two workshops for Narromine and Trangie in October 2023 with several stakeholders invited by Narromine Shire Council. The workshop enabled stakeholders to articulate their concerns about the current conditions of pedestrian facilities and the needs for pedestrian access and mobility. The workshops support to prepare the pedestrian facilities and access improvements in terms of safety, efficiency, and practicality.

Key Findings from the workshop included: -

- The existing pram ramp is not maintained and is in poor condition, becoming a slip and trip hazard.
- There is limited access to footpaths from the on-street parking spaces.
- Narrow footpaths are not well suited to persons with impaired mobility.
- There is a missing link from the School along the western side of Harris Street to minimise the students to cross the road to get to the aquatic centre.
- It is reported that there is a connectivity issue with accessing recreational facilities and main shopping areas from the High School.

7.1.3 Key recommendations

The study found many locations within the Narromine LGA, which require improved pedestrian infrastructure, as shown in Table 5.3. This includes upgrades to existing infrastructure that are either of poor quality/damaged, additional pedestrian crossing facilities, new footpath connections.

Pedestrian improvement works were identified and prioritised for the study area. It is recommended that Council considers all of the recommended implementations, particularly those ranked as high or medium priority in Table 6.3.

It is recommended that Narromine Shire Council internally review the proposed improvements and consider the prioritisation of works and the ease of implementation of the proposed measures in order to provide the maximum benefit in the short and medium term for the residents of Narromine LGA.

7.1.3.1 Footpaths

Upgrade or provide new footpaths at the following locations. The details of the proposed upgrades are provided in Table 5.3 and Appendix D.

7.1.3.1.1 Narromine

- Mitchell Highway
- Meryula Street
- Third Avenue
- Terangion Street
- Ellengerah Street
- Merilba Street
- Hospital path
- Dandaloo Street
- Nymagee Street
- First Avenue
- Cathundril Street
- Algalah Street
- Mullah Street
- Belgrove Street
- Saleyards Road
- Myall Street

7.1.3.1.2 Trangie

- Mitchell Highway
- Harris Street
- Dandaloo Street
- Harris Street/Temoin Street
- Goan Waterhole connection path
- Showground connection path
- Mullah Street
- Derribong Street
- Aquatic centre to MPS path.

7.1.3.1.3 Tomingley

- Newell Highway
- Myall Street.

7.1.3.2 Pedestrian crossing facilities

Upgrade or provide new crossings at the following locations in all three towns. The details of proposed upgrades are provided in Table 5.3 and Appendix D.

- Meringo Street and Meryula Street
- Manildra Street/Terangion Street
- Merilba Street
- Algalah Street/Terangion Street
- Algalah Street/Minore Street
- Dandaloo Street/Cathundril Street
- Mitchell Highway (Trangie Road) -BP station
- Café crossing replacement.
- Dandaloo Street
- Harris Street/Temoin Street
- Newell Highway.

The proposed upgrade or provision of new kerb ramp locations within the Narromine LGA study area are detailed in Table 5.3 and Appendix D.

7.1.4 Cost

Where possible, unit rates provided by the Council have been used directly. For items where costs were not available, previous studies, estimation and professional judgement have been used. These costs are indicative and are subject to change and make no allowances for contingencies or actual site design and installation (including site establishment, excavation and disposal).

The total costs for the proposed upgrades for the PAMP are in the order of \$4,599,920. The cost breakdown for high and medium priority projects is as follows:

- \$1,629,960 for high priority works.
- \$2,969,960 for medium priority works.

Appendix A

Trangie Workshop Attendee List

Organisaiton	Name	Phone	Email
St. John's Parish School			
Trangie Multi-Purpose			
Trangie Local Aboriginal			
CWA			

Appendix B

Comments from stakeholders



Narromine High School
Respect, Responsibility & Care



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Submission for the Narromine Shire Council Pedestrian Access and Mobility Plan

Thank you for giving Narromine High School the opportunity to make a submission regarding the Narromine Shire Council Pedestrian Access and Mobility Plan.

Narromine High School would like to comment & draw attention to two areas, one being access into the school & the other being access to public spaces and amenities around the school.

Access into Narromine High School

- Merilba Street access – Merilba Street is the main entrance way to access our administration block, student entrance & Wellbeing Hub. These access points are very heavily used by general public, school students & staff. The footpath is very uneven & has different surfaces. It has been identified as a trip hazard. Upgrade of the pathway from the administration block to the cement pathway at the Ag plot would be one of our priorities.
- Meringo Street access – Narromine High School has 3 access points in Meringo Street. The bus access gate, the vehicle/garbage access gate & disability access gate. Consultation with stakeholders is required, to assess this area for better access to the school for students & disability services.

Access from Narromine High School to public spaces and amenities

- Merilba street to Noel Poel Oval & Rotary Park – NHS Staff and students use both these areas for field trips & sporting activities. A pathway from the school to the parks, ovals & gym equipment, with a safe crossing at Culling Street is required.
- Sports Centre, Dundas Park, Payten Oval, Swimming Pool & main shopping area – NHS staff & students access all areas. There isn't a connected pathway from the school to these areas.

We look forward to hearing the outcome of our suggestions included in the PAMP planning.

Kind regards



David Stuart
Relieving Principal

A Positive Behaviour for Learning School



Friday, November 10, 2023

Dear Narromine Shire Council,

As a stakeholder we thank you for inviting us to have input into the development of the Pedestrian Access & Mobility Plan.

Narromine Christian School has grown considerably over the last few years and the activity around our school before, during and after school hours has increased exponentially. The footpath upgrade along Algalah Street in July 2020 was a much needed addition but we would like you to consider further upgrades.

As our school continues to grow, we have more families choosing to pick up and drop off their students at the start and end of the school day. We also have a lot of afterhour's activities that bring families to the area. If the curb and guttering was continued along Terangion Street on both sides of the road all the way to the saleyards it would allow for more parking, help with drainage and create a defined walkway, this would alleviate our ongoing and increasing safety concerns for our school community. Continuing the pathway would also go a long way in assisting in this space.

We realise a pedestrian crossing is not an option at this stage given our schools proximity to the main road (Algalah) but if this were to change at any stage in the future, we would like you to reconsider options around Narromine Christian School. Perhaps on Terangion Street a pedestrian crossing could still be an option worthy of considering.

Regards



Mrs Debbie Robertson
Principal
Narromine Christian School

Narromine Christian School

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Operated by Seventh-day Adventist Schools (SNSW) Ltd
ABN 33 110 697 375

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Appendix C

Narromine Shire Council PAMP Survey 2023

How often do you currently use the footpaths e.g., walking (including the use of mobility scooter and parents with prams)? Please choose one.

Table 7.1 Use of footpaths

Response options	Response rate
Daily	56%
A few times a week	28%
A few times a month	9%
once a month	0%
Less than once a month	6%
Never	0%

Table 7.1 indicates that a significant number of respondents (56 percent) utilise footpaths daily. The next largest group were those that use footpaths about a few times a week at 28 percent.

It is observed that all respondents utilise footpaths at least less than once a month. Accordingly, the upgrade of the footpath facilities in the Narromine LGA will benefit a significant majority of residents.

What is preventing you from regularly using footpaths/what are your biggest difficulties with your current use of active transportation? Please select all that apply.

Table 7.2 Reasons for not using footpaths.

Response options	Response rate
Distance	8%
Weather	6%
Topography	6%
Not enough bike lanes	8%
Bike lanes that are disconnected from each other/ too narrow/ not separated from traffic	6%
Not enough cross walks	22%
Footpaths are disconnected from each other/ too narrow/ poorly maintained	26%
Living with a disability	2%
Caring for someone who is living with a disability	2%
Parent or caregiver with a pram	9%
Other (please specify)	6%

Table 7.2 outlines the reasons that survey respondents provided for not currently using footpaths regularly, with respondents being able to select multiple options. The results of the survey indicate that disconnected footpaths were the most common reason, with 26 percent of respondents selecting this option. The next most selected reason was not enough cross walks at 22 percent.

These results indicate that respondents from the local area aren't utilising footpath modes due to connectivity issues and poor quality of footpaths. Further, the upgrades of the active transport facilities are likely to induce local residents to walk (or cycle) for short trips.

Do you or does anyone in your primary care, use any of the following:**Table 7.3** Active transportation used by people in respondent's primary care

Response options	Response rate
Walking Stick/ Walking Frame	8%
Wheelchair	2%
Mobility Scooter	4%
Guide dog or walking cane	2%
Skateboard, rollerblades, roller-skates or recreational scooter	16%
Bicycle	31%
Pram	22%
Others	0%
None of the above	14%

Based on Table 7.3, (other than walking) bicycles are the most common active transportation used by people in respondents' primary care with 31 percent, followed by pram with 22 percent and skateboards, rollerblades, roller-skates or recreational scooters with 16 percent. This indicates that the connectivity of footpaths to parks will improve the efficiency and safety of people in respondent's primary care. Also, the improvement in the quality of footpaths is likely to give pram users more confidence in terms of safety.

What type of MAIN transport do you typically use for the following activities? Please select ONE in each category (as applicable).**Table 7.4** Primary transport methods by activity

Activity	Transport mode	Response rate
Commuting (to/from work)	Drive	75%
	N/A	22%
	Walk	3%
Commuting (to/from School)	Bus	3%
	Drive	31%
	N/A	50%
	Walk	16%
Accompanying child/children to School	Bus	9%
	Drive	25%
	N/A	38%
	Walk	28%
Commuting (to/from bus stop)	Drive	16%
	Mobility scooter	3%
	N/A	47%
	Walk	34%
Commuting (to/from local shops, cafes and restaurants)	Cycle	3%
	Drive	50%

Activity	Transport mode	Response rate
Recreational (fitness, leisure, weekend use, etc.)	Walk	47%
	Drive	34%
	N/A	6%
	Walk	59%

Table 7.4 outlines the responses relating to the respondent's primary mode of transport for a range of activities, noting that the response rates in the table show the proportions for each travel mode for each activity individually.

Across all activities, it was found that:

- Driving was the primary mode of transport, especially for commuting to local shops as well as work and School (50 percent, 75 percent, and 31 percent, respectively).
- Walking was the highest ranking mode for recreational trips (59 percent), accompanying child/children to School (28 percent) and commuting to/from bus stops (34 percent).

Overall, how would you describe the physical condition of the existing pedestrian infrastructure in the Narromine LGA?

Table 7.5 Existing cycling infrastructure ratings by area

Area	Condition	Response rate
In Narromine	Good	13%
	OK	38%
	Poor	28%
	Very Good	3%
	Very Poor	19%
In Trangie	Good	13%
	Not sure	53%
	OK	22%
	Poor	9%
	Very Poor	3%
In Tomingley	Not sure	69%
	OK	16%
	Poor	6%
	Very Poor	9%

Table 7.5 outlines respondents' perceptions of the existing pedestrian infrastructure grouped by Narromine, Trangie, and Tomingley, with the response rates showing the proportion of responses for each condition for that specific area.

The results indicate that:

- In Narromine, a high proportion of respondents identified the pedestrian infrastructure as being "OK" with 38 percent followed 47 percent of "poor or very poor" respondents.
- In Trangie, more than half of respondents was not sure about Trangie's pedestrian infrastructure as 68 percent of respondents are residing in Narromine. The responds then followed by "OK" with 22 percent.

- Similar to Trangie, respondents responded about the pedestrian infrastructure in Tomingley as “unsure” with 69 percent. 16 percent of respondents identified the pedestrian infrastructure as “OK” and nine percent of respondents found it very poor.

Please rate your level of agreement with this statement: "I am familiar with the routes and pathways that can be used to navigate around my area...."

Table 7.6 Familiarisation with local routes

Area	Condition	Response rate
As a pedestrian	Agree	56%
	Disagree	3%
	Neither Agree nor Disagree	3%
	Strongly Agree	34%
	Strongly Disagree	3%
As a pedestrian occupying a mobility scooter	Agree	16%
	N/A	59%
	Neither Agree nor Disagree	19%
	Strongly Agree	3%
	Strongly Disagree	3%
As a parent or caregiver with a pram	Agree	34%
	N/A	38%
	Neither Agree nor Disagree	9%
	Strongly Agree	16%
	Strongly Disagree	3%

Table 7.6 shows the responses to how familiar with the local routes and pathways for active transport respondents were in their local area. It is noted that:

- The responses indicate that a large number of respondents were familiar with the local pedestrian pathways with 90 percent strongly agreeing or agreeing and six percent disagreeing or strongly disagreeing.
- A large proportion, 59 percent, of responses indicated that their familiarity with routes for mobility scooters as not applicable. Additionally, 19 percent of respondents were neither agreed or disagreed regarding mobility scooter routes.
- A half (50 percent) of respondents as a parent or caregiver with a pram were familiar with the local pedestrian routes with 34 percent agreeing and 16 percent strongly agreeing, 38 percent of respondents indicated as not applicable and only three percent of respondents disagreeing.

How Important is it to you that Narromine Shire Council invests in active transport infrastructure?

Table 7.7 Perceived importance of active transport infrastructure investment

Response option	Response rate
Very important	88%
Somewhat important	12%
Not important	0%

Table 7.7 shows how important respondents thought investment in active transport infrastructure was by the council, with a significant proportion of 88 percent of respondents indicating that investment in the infrastructure was very important to them and 12 percent answering, 'somewhat important'. No respondents identified investment in active transport as being unimportant.

The outputs indicate that the upgrade of active transport facilities within Narromine LGA would have a high level of community support.

Please indicate whether the following changes would make you more likely to engage in active transport on a more regular basis for local trips or to commute to work/study. Please provide an answer for each option. As a pedestrian (including users of mobility scooters and parents with prams)

Table 7.8 Pedestrian mode change likelihood

Proposed infrastructure change	Response option	Response rate
Increased knowledge of pedestrian routes	I am likely to walk more	41%
	I might walk more	31%
	No change	28%
Availability of footpaths	I am likely to walk more	63%
	I might walk more	25%
	No change	13%
More direct footpaths to public transport	I am likely to walk more	41%
	I might walk more	15%
	No change	44%
Better quality footpaths	I am likely to walk more	66%
	I might walk more	28%
	No change	6%
Additional road crossings for pedestrians	I am likely to walk more	74%
	I might walk more	13%
	No change	13%
Pedestrian barriers on busy roads	I am likely to walk more	62%
	I might walk more	16%
	No change	22%
Provide amenities along paths	I am likely to walk more	62%
	I might walk more	19%
	No change	19%

Table 7.8 outlines the results of respondents' likelihood to use walking as a mode of transport more regularly for a number of proposed changes to the current facilities and/or programmes in the LGA. The results show that the following infrastructure change would affect respondents the most to be more likely to walk more with:

- Additional road crossings for pedestrians (74 percent)
- Better quality footpaths (66 percent)
- Availability of footpaths (63 percent)
- Pedestrian barriers on busy roads (62 percent)
- Provision of amenities along paths (62 percent)

It was noted that the following would affect the least in changing respondents' walking behaviour with response of "no change":

- More direct footpaths to public transport (44 percent)
- Increased knowledge of pedestrian routes (28 percent)

How often do you walk/navigate or ride over 1km on the pedestrian network?

Table 7.9 Frequency of people walking/navigating or riding over 1km on the pedestrian network

Purpose of walking/navigating or riding	Response option	Response rate
For exercise or leisure	Daily	28%
	Less than once a week	16%
	More than once a week	31%
	Not applicable	0%
	Not often	25%
For commuting to and from School or work	Daily	13%
	Less than once a week	13%
	More than once a week	16%
	Not applicable	34%
	Not often	25%
To access recreational facilities, sports field or parks	Daily	13%
	Less than once a week	19%
	More than once a week	41%
	Not applicable	9%
	Not often	19%
To access the CBD (shops, supermarket, facilities and amenities)	Daily	19%
	Less than once a week	6%
	More than once a week	56%
	Not applicable	3%
	Not often	16%
For commuting to and from bus stop	Daily	6%
	Less than once a week	16%
	More than once a week	6%
	Not applicable	53%
	Not often	19%
To access medical facilities	Daily	6%
	Less than once a week	28%
	More than once a week	13%
	Not applicable	13%
	Not often	41%

Table 7.9 outlines the results of respondents' frequency of walking/navigating or riding over one kilometre on the pedestrian network. The results show that:

- 56 percent of respondents walk over one kilometre to access the CBD for shopping more than once a week.
- More than once a week, 41 percent of respondents walk over one kilometre to access recreational facilities followed by 31 percent of respondents walk for exercise or leisure.

It was also noted that people do not likely to walk over one kilometre for the following purposes:

- 53 percent of respondents were not applicable on walking over one kilometre for commuting to and from bus stops.
- 34 percent of respondents were not applicable on walking over one kilometre for commuting to and from School or work.
- 41 percent of respondents were not likely to walk to access medical facilities.

At what times do you use walkways/pathways?

Table 7.10 *Period when people normally walk*

Period	Response option	Response rate
Morning (before 10am)	Weekdays	28%
	Weekends	56%
	Not applicable	16%
Late morning (10 am to Midday)	Weekdays	50%
	Weekends	19%
	Not applicable	31%
Lunch time (Midday to 2 pm)	Weekdays	50%
	Weekends	31%
	Not applicable	19%
Afternoon (2 pm to 4.30 pm)	Weekdays	44%
	Weekends	50%
	Not applicable	6%
Afternoon peak (4.30pm to 6.30 pm)	Weekdays	44%
	Weekends	41%
	Not applicable	15%
Evening (after 6.30 pm)	Weekdays	62%
	Weekends	16%
	Not applicable	22%

Table 7.10 outlines the period of respondents normally walk. The results indicated that respondents like to walk on weekdays during the following periods:

- Late morning (10 am to Midday)
- Lunch time (Midday to 2pm)
- Afternoon peak (4.30pm to 6.30pm)
- Evening (after 6.30pm)

On weekends people walking during:

- Morning (before 10am)
- Afternoon (2pm to 4.30pm)

Satisfaction with the footpath network

The respondents rate the satisfaction with the footpath network in terms of pleasantness, convenience, design, extent of network and safety. Figure 7.1 shows that most of the respondents were “*somewhat*” satisfied with the footpath in terms of pleasantness, convenience, design, and extent of network. However, it was also noted that the respondents were not satisfied at all on the safety of the footpath network. Improvement of the safety of the footpath network will assist in engaging people who are likely to walk more.

Also, it was identified that the main factors contributing to the dissatisfaction of safety were related to the poor quality of the footpath (i.e. uneven surface), and connectivity and continuity of footpath network (i.e. no crossings).

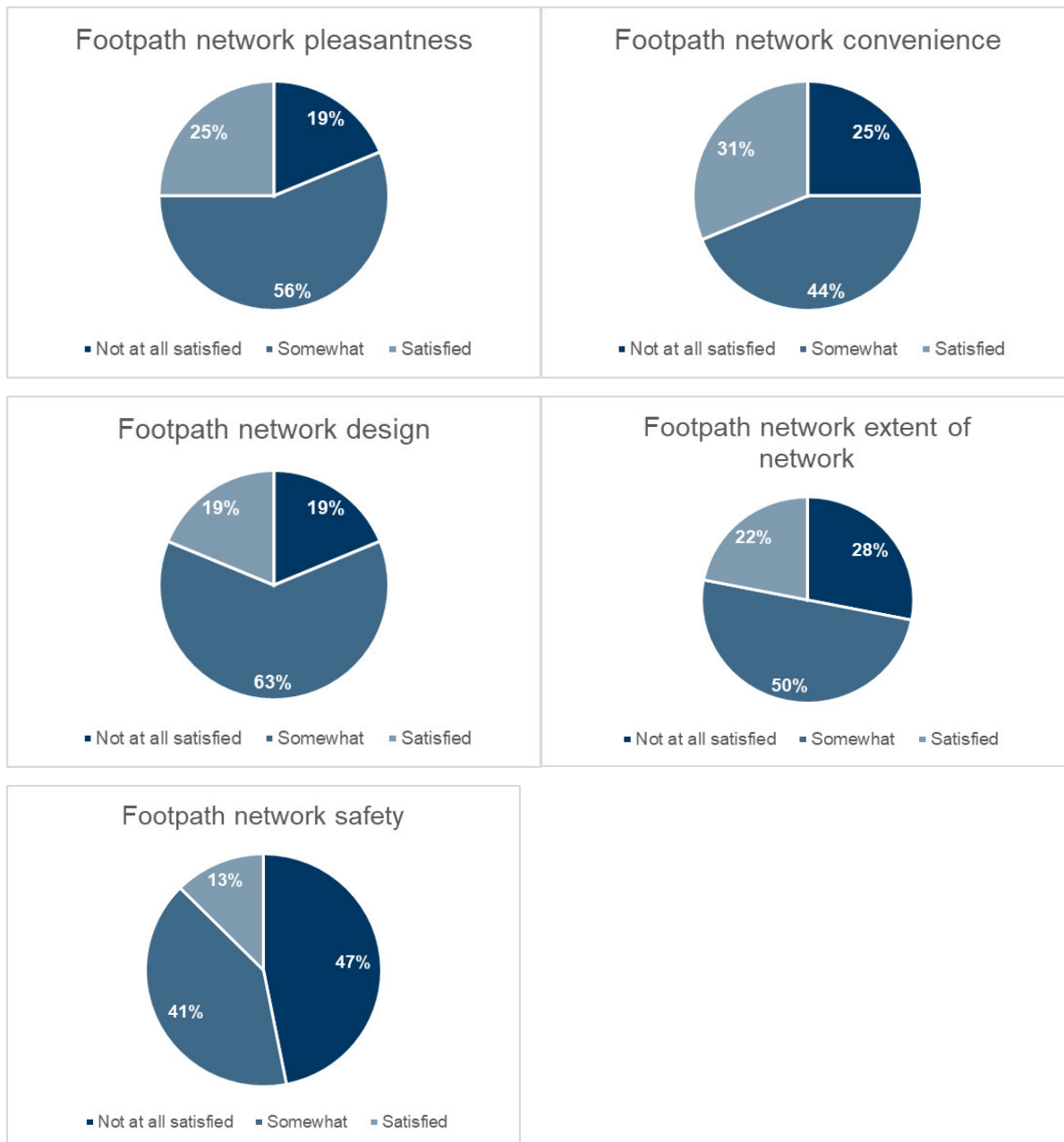


Figure 7.1 Satisfaction rate on footpath network

Please select the following answers that discourage you from using the footpaths and pedestrian networks more often. Please select all that apply.

Table 7.11 Discouraging factors using the footpaths and pedestrian networks

Response options	Response rate
The paths are too steep and/or hilly	0%
The road has no marked or dedicated footpath	14%
There is a lack of safe pedestrian crossings	21%
There are too many people using the footpaths	0%
The paths I use are poorly maintained	17%
The paths I use are poorly designed	5%
I feel uncomfortable/unsafe walking along the route	5%
Weather/climate (too hot, too wet or too cold)	6%
The distance is too long to walk	2%
There are too many animals (e.g.: swooping, magpies or dogs)	8%
There is too much traffic along the road	8%
The route is insufficiently lit at night to use	10%
other	4%

Table 7.11 outlines that the main discouraging factor using the footpaths and pedestrian networks is due to a lack of safe pedestrian crossings with 21 percent followed the factor “the footpaths that are poorly maintained” with 17 percent. This indicates that the respondents concerned about the safety and connectivity of footpaths network. The survey outputs indicate that improvement of safety and connectivity of footpaths network would encourage people to walk more.

If you encounter any of the following issues on the pathways network, please provide details and locations in other option below.

Table 7.12 Issues encountered on the footpaths network

Response options	Response rate
Uneven pathway and trip hazards	15%
Lack of kerb ramps or poor kerb ramp design	9%
Lack of safe crossing opportunities	13%
Overgrown pathway or narrow pathway	4%
Pathway obstruction e.g.: Trees, rubbish bins etc	4%
Missing section of footpath	13%
Lack of tactile strips	4%
Lack of wheelchair accessible shops, building at destination	2%
Height of gutters	1%
Lack of pathway information (maps etc)	3%
Insufficient lighting	6%
Maintenance and cleanliness of footpath	10%
Lack of amenities (benches, bike racks, etc)	6%

Response options	Response rate
Personal safety/security concerns	6%
Other	5%

Table 7.12 shows the issues encountered on the footpaths network. The results of the survey indicate that uneven pathway and trip hazards was the most common issues identified by the respondents, with 15 percent. The next most selected issues encountered were:

- Lack of safe crossing opportunities and missing section of footpath – 13 percent.
- Maintenance and cleanliness of footpath – 10 percent
- Lack of kerb ramps or poor kerb ramp design – nine percent

These results indicate that the maintenance of footpaths is required within the LGA, and further investigation needs to be undertaken to identify the location of the footpath in poor condition. Further, it was noted that the roads around Narromine Christian School were identified as the most hazardous and unsafe locations for pedestrians due to a lack of crossings and busy roads.

Please indicate whether the following changes would make you more likely to use pathways for local trips, leisure or commuting.

Figure 7.2 shows what change would make respondents more likely to use pathways for local trips, leisure or commuting. It is identified that the better quality footpaths would change respondents definitely use pathways more with 72 percent followed by increased knowledge of pedestrian routes with 69 percent.

It is also note that the additional roads would change the respondents' likeliness to use pathway the least with 19 percent. Further question provided to indicate the location for additional pathways. Respondents indicated as "none" followed School areas.

The outputs indicate that the upgrade of the existing footpaths would encourage local residents to use pathways more for local trips, leisure or commuting.

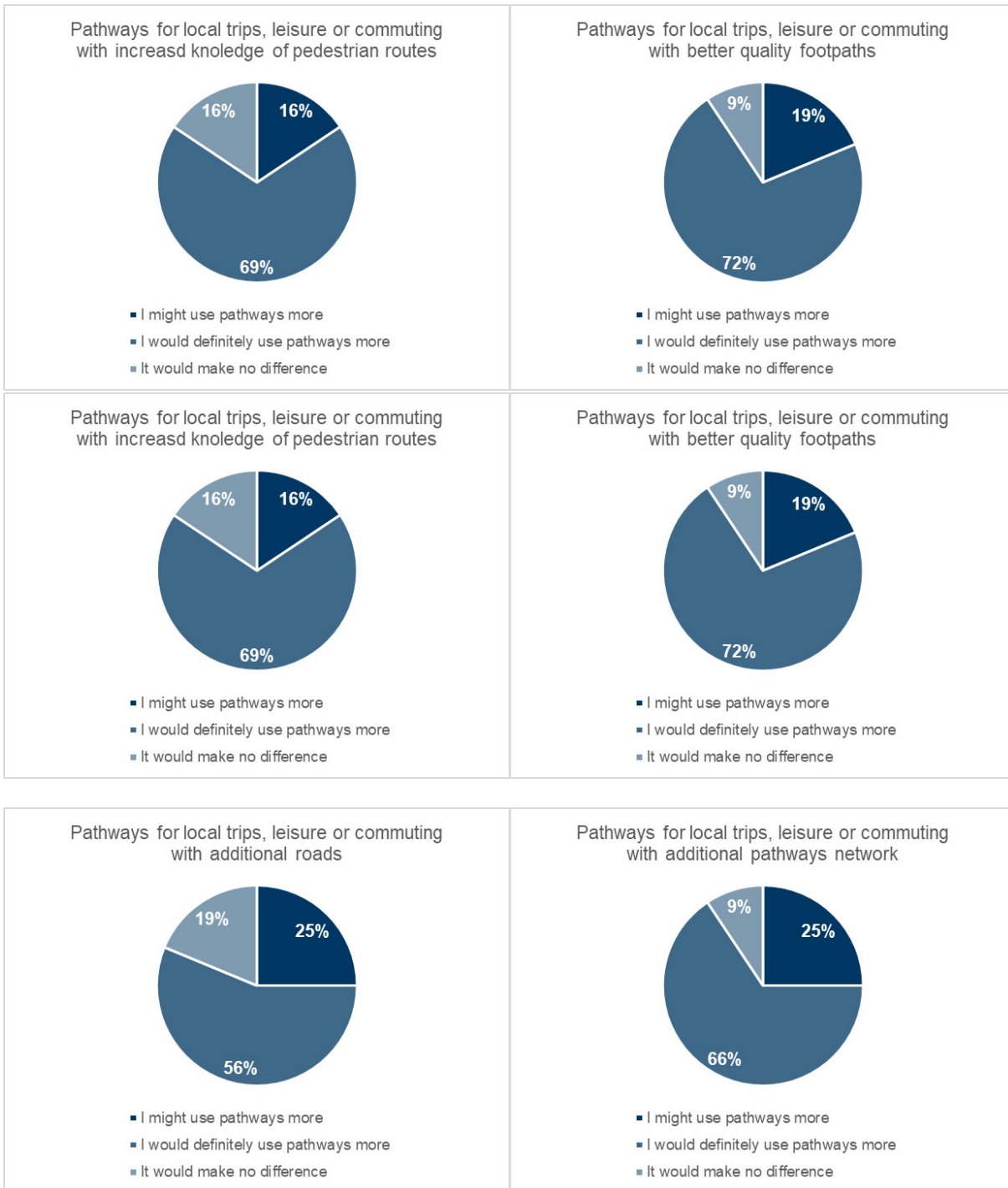


Figure 7.2 Pedestrian mode change likelihood for local trips, leisure or commuting

Is there anything else that would encourage you to walk more or to walk on a regular basis?

Following comments have been made to encourage people to walk more or to walk on a regular basis:

- Better quality of footpaths
- Management of heavy vehicles route for children to walk and provision of safer pathways.
- Attention to road routes and development of more bypasses should be a priority.
- Pedestrian crossings near the School areas.

- Less swooping magpies
- Less flies and magpies
- Management of dogs (i.e. leash on)
- More cycle tracks/bicycle lanes
- Off road walking options
- Removing of the trip hazards
- Have the silos painted with art
- Cleanliness of attractions (i.e. playground)
- Overhanging branches regularly removed.
- Shaded seating
- Wider footpaths
- More trees for shading
- Cleanliness of existing footpaths.

Appendix D

Prioritisation of proposed pedestrian infrastructure

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NARROMINE AERODROME VEHICLE CONTROL POLICY

Document Version Control			
Responsible Department	Prepared By	Resolution No.	Review Period
Infrastructure and Engineering	Paul Gallagher	2009/211	Three (3) years
Infrastructure and Engineering	Director of Infrastructure and Engineering Services	2020/134	Four (4) years
Infrastructure and Engineering	Director of Infrastructure and Engineering Services	2024/xxx	Three (3) years

NARROMINE SHIRE COUNCIL – NARROMINE AERODROME VEHICLE CONTROL POLICY**DEFINITIONS**

Word	Definition
Airside	The secure area of the airport that is beyond the security screening checkpoints. It includes areas where aircraft are parked, loaded, unloaded, refuelled, and boarded. Essentially, it encompasses all parts of the aerodrome that are accessed by aircraft, airport personnel, and authorized vehicles involved in the handling and servicing of aircraft.
Authorised Vehicle	A vehicle authorised by Council or the gliding operator (for glider towing vehicles) to operate on the airside of the aerodrome.
Glider Runways (Glider Strips)	The entire area enclosed by the orange markers.
Landside	The part of the aerodrome that is available for vehicles and the public and is not intended for use by aircraft.
Manoeuvring area	The part of the airport where aircraft are maneuvered for takeoff, landing, taxiing between runways, taxiways, and parking positions, including aprons. It includes: <ol style="list-style-type: none"> 1. Runways: Where aircraft take off and land. 2. Taxiways: Routes for aircraft to move between runways and aprons. 3. Aprons: Areas where aircraft are parked, loaded, unloaded, refuelled, and boarded.
Movement Area	That part of the aerodrome used for take-off and landing by aircraft and for the surface movement of aircraft, including Taxiways and Aprons.
Runways	The sealed portions of runways.
Runway Strips	The grass areas between the sealed areas and the gable markers

NARROMINE SHIRE COUNCIL – NARROMINE AERODROME VEHICLE CONTROL POLICY

PURPOSE

The purpose of the Narromine Shire Council Aerodrome Authorised Vehicle Policy is to regulate and limit vehicle access to the airside of Narromine Aerodrome. This control is intended to minimize the risk of aircraft damage and passenger injury on aprons, while prioritizing aircraft movement on runways and taxiways.

AUTHORISED PERSONS

Only Aerodrome Reporting Officers, Aerodrome Manager, Civil Aviation Authority personnel, aircraft operators with a glider in tow or a person under the immediate supervision of the aforesaid or nominated authorised vehicle drivers are permitted to drive vehicles on the Movement Area. Authorised vehicle access around the aerodrome is via the designated Perimeter Roads. Glider Towing Vehicle drivers must attend an Airside Driving Safety Briefing conducted by the gliding operator. The gliding operator shall keep a register of authorised drivers and vehicles.

AUTHORISED VEHICLES

1. Types of Vehicle Authorisation

- **Authorised Vehicle:** Vehicles permitted to operate on the Movement Area of the Narromine Aerodrome. Authorisation is granted by Council upon submission of a completed Authorised Vehicle Application Form for approval. **Renewal is required annually, with application made to Council each calendar year.**
- **Glider Towing Vehicle:** Authorisation for these vehicles must be obtained from the gliding operator. This authorisation allows the vehicle to travel on the Movement Area only when towing a glider. When not towing, Glider Towing Vehicles must use the Perimeter Roads.

2. Duration and Validity

- Authorised Vehicles can operate on the Movement Area independently of towing a glider.
- Glider Towing Vehicle authorisation is valid for the period indicated on the form, usually for the duration of an event and typically less than a month.
- The gliding operator issuing the authorisation maintains a register of authorised Glider Towing Vehicles. This register must be available to be shared with Council upon request.

3. Sticker Placement

- Upon authorisation, a sticker must be affixed to the front windscreen of the vehicle. The sticker is provided to the driver by Council or the gliding organisation.

Vehicle Authorisation may be withdrawn should these conditions not be complied with fully.

NARROMINE SHIRE COUNCIL – NARROMINE AERODROME VEHICLE CONTROL POLICY

MANOEUVRING AREA

Only Aerodrome Reporting Officers, Aerodrome Manager, Civil Aviation Authority personnel, Authorised Vehicle drivers, or individuals under their immediate supervision are authorised to drive vehicles on the Maneuvring Area of Narromine Aerodrome. Vehicles towing gliders are treated as taxiing aircraft and are exempt from the following conditions but must adhere to CTAF (Common Traffic Advisory Frequency) procedures.

The following conditions must be met by authorised personnel operating vehicles on the Maneuvring Area:

1. Vehicles must:
 - a. Have a radio capable of two-way communication with aircraft; or
 - b. Be under the supervision (as per Note 1) of a vehicle equipped with such a radio.
 - c. A flashing orange light displayed on top of the vehicle.
2. Vehicles must not operate:
 - a. Between sunset and sunrise,
 - b. When visibility is less than 800 meters, unless equipped with headlights set to dipped beam

Authorised Vehicles must use flashing lights, on top of the vehicle to enhance visibility.

Note 1: When under supervision, a vehicle must maintain a distance of between 5 meters and 10 meters behind the supervising vehicle.

VEHICLE OPERATORS (DRIVERS)

No operator of a vehicle should assume that there is a right to drive on the airside of Narromine Aerodrome. Any breach of these conditions may result in the authorisation for the vehicle being withdrawn. A person operating a vehicle on the airside must;

1. Be trained and competent to do so,
2. Hold a current driver's licence, and
2. Know the terminology used to describe, and be familiar with airside areas,
3. Understand the significance of aerodrome signs and markings,
4. Where appropriate, be competent in the use of radio communications equipment and understand radio instructions, and
5. In the case of glider pilots and crew, attend an Airside Driving Safety Briefing conducted by the gliding operator.

The owner of the Authorised Vehicle or gliding operator shall, ensure that the operator of the vehicle is authorised and satisfies the above criteria.

INSURANCE

Applicants must confirm with their insurer that they have at least \$20 million insurance cover for death, injury, environmental harm or property damage to third parties caused by or arising from the use of the vehicle on the aerodrome. All authorised vehicles must be registered to be able to access the Perimeter Road.

NARROMINE SHIRE COUNCIL – NARROMINE AERODROME VEHICLE CONTROL POLICY

GENERAL

When driving Airside drivers must;

1. **Report All accidents and incidents involving the vehicle under their control immediately to Council's Aerodrome Reporting Officer.**
2. Obey all regulatory and guide signs and adhere to the following maximum speed limits: - 10 km/hr for aprons and within 20 metres of any aircraft, and elsewhere as signed.
3. Pass behind taxiing aircraft, NOT in front.
4. Not drive under aircraft or within 3m of any part of an aircraft except when required for the servicing of the aircraft or when towing a glider, Narromine Shire Council – Narromine Aerodrome Vehicle Control Policy 6
5. Stay at least 20m from aircraft with engine running or displaying red rotating beacons or strobe lights,
6. Ensure that passengers not authorised or briefed on airside safety remain in vehicle at all times,
7. Not drive in a manner likely to jeopardise the safety of any person,
8. Not drive whilst affected by alcohol or drugs that would preclude you from lawfully driving on public roads,
9. Comply with directions given to you by Narromine Shire Council staff,
10. Not park or leave vehicle unattended on the movement area except in designated parking areas or beside the Perimeter Roads.
11. Perimeter gates are to be closed at all times, to ensure site safety and security is maintained.

Narromine Shire Council reserves the right to inspect vehicles operating airside and to prohibit operation airside in the event of non-compliance.

Narromine Aerodrome Airside Vehicle Permit Application Form

Privacy Notice: Narromine Shire Council is collecting the personal information you supply on this form for the purpose of processing your application. Council is authorised to do this under the *Aviation Transport Security Regulations 2005*, *Civil Aviation Safety Regulations 1998* - Manual of Standards Part 139, Narromine Airport Transport Security Program and Narromine Aerodrome Manual. Your personal details will not be disclosed to any other person or agency external to Council without your consent unless required or authorised by law.

This form is to be completed when a customer wishes to apply for an airside vehicle permit (AVP) for a motorised vehicle that is required to operate in airside areas of Narromine Aerodrome. Applications must be submitted no less than seven working days before the AVP is required. Please refer to the Narromine Aerodrome Airside Vehicle Permit (AVP) Fact Sheet for further information.

P: 02 6889 9999 | E: mail@narromine.nsw.gov.au | W: www.narromine.nsw.gov.au | ABN: 99 352 328 405 | 118 – 124 Dandaloo Street, Narromine NSW 2821 | PO Box 115, Narromine NSW 2821



Applicant Details			
Organisation name:			
Contact name:			
Postal address:			
Preferred contact number:		Email:	
Company Endorsement			
I/We agree that the vehicle described in the application will be maintained, insured and operated in accordance with the applicant's obligations under the Narromine Aerodrome Manual and Narromine Aerodrome Airside Vehicle Indemnity and Release, which I/we have read, agreed to and understood. I/We agree to release and indemnify the Council in accordance with the terms and conditions in the Airside Vehicle Indemnity and Release. I also agree and acknowledge that the Council may cancel or suspend the AVP at any time without refund. I submit this form with the relevant supporting documentation as required. I declare that the details are correct to the best of my ability.			
Authorised signatory name:		Position:	
Signature:		Date:	
Vehicle Details			
Registration number:	Make:	Model:	
Year:	GVM:	Tonne:	
Is communication equipment fitted to the vehicle? <i>(required for category 3 and 4)</i> <input type="checkbox"/> Yes <input type="checkbox"/> No			
If the vehicle is required to operate within 15 metres of an aircraft, does it comply with CAO 20.9? <input type="checkbox"/> Yes <input type="checkbox"/> No			
AVP Categories <i>(please select the applicable category)</i>			
<input type="checkbox"/>	Category 1 Perimeter road only		
<input type="checkbox"/>	Category 2a GA Apron (all of the GA Apron including the GA Apron taxiways and taxilanes)		
<input type="checkbox"/>	Contractor / Council Employees		
<input type="checkbox"/>	Glider towing to launch areas		
<input type="checkbox"/>	All airside areas		
<input type="checkbox"/>	To residential Sky Park blocks		
<input type="checkbox"/>			

OFFICE USE ONLY	Inspecting officer:	Signature:	Date inspected:	
	Approved by:	Signature:	Date approved:	
	AVP number:	AVP category:	Issue date:	Expiry date:

AVP Requirement

Why is the AVP required? Please specify the type of work and areas of operation below:

Insurance Details

Name of insurer:

Policy number:

Policy limit:

Expiry date:

Exclusions:

Supporting Documentation

Please remember to provide the following supporting documentation when submitting this form:

- If applicable, a letter from the 'contracting company' sponsoring the access.
- Evidence that the vehicle meets the vehicle requirements for an Airside Vehicle Permit:
 - Registration certificate (where applicable); and current drivers licence sighted
 - Compliance with CAO 20.9 (for vehicles and plant to be operated within 15 metres of aircraft)
- A completed RRC Vehicle Indemnity and Release Form.
- Evidence of appropriate insurance cover showing at least \$20 million cover for aircraft movement area use.
- Payment of any administration fee associated with the AVP application (where currently applicable).

Additional Information

For renewal applications:

If possible, previously issued AVP Stickers should be returned to the Airport Administration Office upon receipt of the new AVP Sticker. Alternatively, written or photo confirmation that the old AVP Sticker has been removed will be accepted.

FACT SHEET NARROMINE AERODROME AIRSIDE VEHICLE PERMIT (AVP)



Issue of AVPs

An Airside Vehicle Permit (AVP) is an authority issued by Narromine Aerodrome that permits the operation of motorised vehicles on the airside areas of Narromine Aerodrome.

The issue of an AVP does not however entitle the Vehicle Operator to a parking space on the airside at Narromine Aerodrome or to access the airside where such access is not necessary for the particular Vehicle.

Aerodrome Management reserves the right to remove any vehicle / equipment from the aerodrome regardless of the current AVP issue status. All towing or other removal costs are the responsibility of the Vehicle Operator.

Applying for an AVP

Applications must be submitted no less than seven working days before any anticipated need for the AVP.

If granted, an AVP may be issued for a period of up to one year. AVP's may be issued for longer periods in exceptional circumstances. AVP renewals will be completed on the standard application form.

Vehicle Requirements

Vehicles and equipment operated on airside areas are to be in a safe and roadworthy condition (registered vehicles must comply with relevant State Laws / Regulations). Vehicles must be maintained in a sound mechanical condition so as to prevent avoidable breakdowns, leaking of fluids or inability to comply with other requirements of the Aerodrome Manual.

Council reserves the right to inspect vehicles operating within airside areas to ensure compliance with the requirements of this Part. Non-compliance will result in prohibition of airside operations of that vehicle.

Insurance Requirements

Vehicle operators must provide proof of insurance for each vehicle seeking registration airside.

The policy must clearly state that the Insurance Company is aware that the vehicle is to be used airside at Narromine Aerodrome.

The value of the Policy for third party indemnity must be no less than \$20 million.

Assessment Criteria

The major criterion for the issue or renewal of an AVP is that the applicant must, if required, demonstrate an operational need to drive a vehicle on the airside on a frequent and unescorted basis. The applicant must further show that the operational task(s) cannot otherwise be undertaken landside.

Vehicle Markings and Signs

Vehicles will comply with the requirements of MOS Part 139, Chapter 8.10.4.

Vehicles operating on the movement area at night or in conditions of poor visibility must be capable of displaying dipped headlights and taillights.

Drivers Licence

A current drivers licence to be sighted by an authorised person.

FACT SHEET NARROMINE AERODROME AIRSIDE VEHICLE PERMIT (AVP)

Airside Area Categories

The Airside areas for which access is authorised are:

Category 1	Perimeter Road
Category 2a	GA Apron - All of the GA Apron including the GA Apron taxiways and taxilanes.
Category 2b	RPT Apron Limited - The RPT Apron, but does not include the RPT Apron Taxiway to the west of the parking clearance line.
Category 3a	All RPT Apron - All of the RPT Apron including the RPT Apron taxiway. The RPT Apron taxiway (west of the RPT Apron parking clearance line) must be accessed only when absolutely necessary to service aircraft.
Category 3b	RPT & GA Aprons - The RPT Apron, including the RPT Apron taxiway, and the GA Apron, it also allows the holder to cross Runway 04/22 via Taxiways HOTEL, GOLF AND ECHO.
Category 4	All Airside Areas
Category 5	Defence Access Areas – Determined for each exercise.

