CESSNOCK LGA
PEDESTRIAN ACCESS AND MOBILITY PLAN (PAMP)

FOR

CESSNOCK CITY COUNCIL (CCC)

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1. INTRODUCTION

1.1 BACKGROUND

Active modes of transport such as cycling and walking are the most basic and equitable forms of transport available. Most individual trips, regardless of the type of transport used, begin and / or finish with a walk section, making walking a major element of all travel. Cessnock City Council (CCC) is committed to providing long term planning for pedestrian access and mobility, to promote cycling and walking for short trips and to link public transport services and community facilities.

In working to achieve with the desired outcomes of the Cessnock 2023 Community Strategic Plan, Bitzios Consulting has been commissioned by Cessnock City Council (CCC) to develop a Pedestrian Access and Mobility Plan (PAMP). It is intended that this PAMP will provide CCC with a long term strategy for the development of pedestrian routes and facilities with a focus on encouraging and increasing localised pedestrian activity within Cessnock. This can be achieved by improving the safety, convenience, connectivity, and accessibility of pedestrian routes across the wider Cessnock LGA.

This report presents the findings of the study and contains:

- an assessment of the existing situation, pedestrian desire lines and activity centres;
- identification of deficiencies in the existing pedestrian network;
- community consultation and stakeholder issues;
- an audit of identified pedestrian routes; and
- a list of recommendations to detail further as projects for Council to implement.

1.2 STUDY OBJECTIVES

The aim of a PAMP is to provide a plan to improve pedestrian safety and to encourage walking within the study area. Key objectives of the CCC PAMP are as follows:

- *to facilitate a healthy, active, engaged and cohesive community that maintains its unique local identity and friendliness into the future through improved pedestrian facilities;*
- *to facilitate sustainable improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration;*
- *to reduce access severance and enhance safe and convenient crossing opportunities on major roads;*
- *to identify and propose resolutions to any 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 for 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 best practice technical standards;*
- *to ensure pedestrian facilities are employed in a consistent, sustainable and appropriate manner throughout NSW;*
- *to link existing vulnerable road user plans in a coordinated manner, (for example: Bike Plans, Road Safety Action Plan 2014 -15, New Footpath Priority Program, Footpath Maintenance Programs and associated issues to accessible public transport etc.);*
- *to ensure that pedestrian facilities remain appropriate and relevant to the surrounding land use and pedestrian user groups;*
- *to accommodate special event and festival needs of pedestrians;*
- *to further Council's obligations under the Commonwealth Disability Discrimination Act (1996) with particular focus on the requirements for DDA compliant bus stops;*
- *to improve access for mobility impaired users and infrastructure suitable for wheelchairs, walking aids, mobility scooters, guide dogs, prams and bicycles; and*
- *to establish a prioritised works program that includes reference to best practice standards, including the development of a GIS Map with specific locations identified*.

1.3 PAMP METHODOLOGY

The purpose of this PAMP is to guide the future provision and management of pedestrian access and mobility facilities within Cessnock. To achieve this, this PAMP has been produced in accordance with *'How to Prepare a Pedestrian Access and Mobility Plan (2002)'* by the *NSW Roads and Maritime Services (RMS)*. This document identifies three stages in the PAMP process (see Figure 1.1), namely:

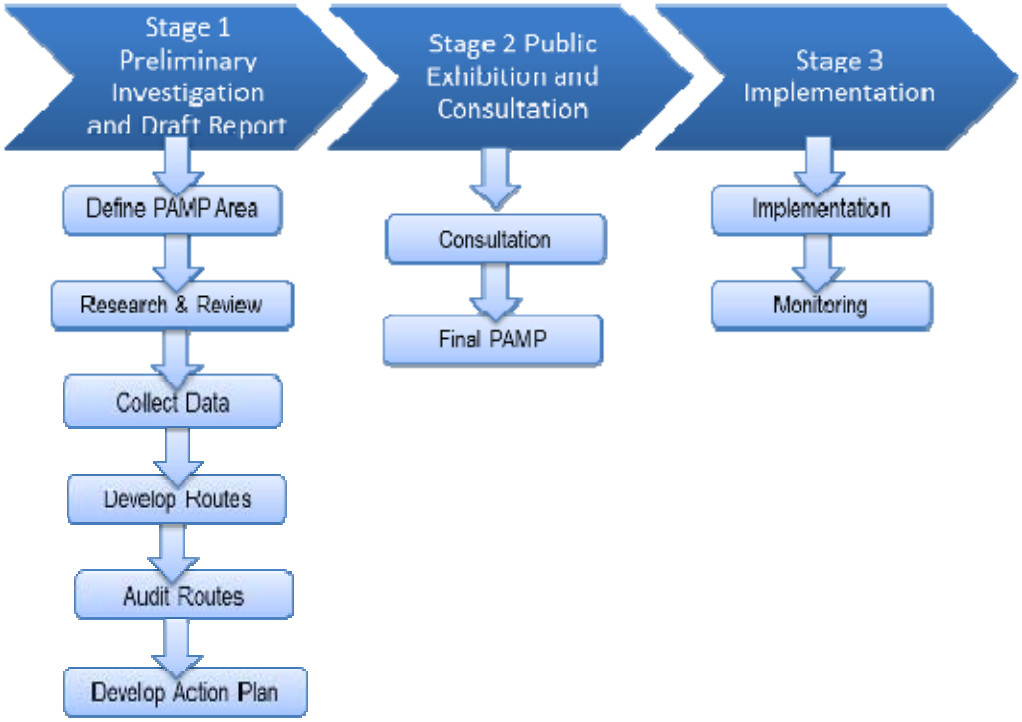


Figure 1.1: PAMP Development Methodology

This PAMP study focuses on the whole of the Cessnock LGA. As part of the initial stage of defining the PAMP area, it was necessary to divide the PAMP study area into individual towns and villages. From preliminary community surveys and future development projects three key zones within with high degrees of pedestrian activity have been identified as focus areas for the PAMP. These focus areas primarily consist of Cessnock CBD and surrounds, Branxton – Greta and surrounds and Kurri Kurri and surrounds.

A review of current Council plans and other relevant documents, as well as an analysis of existing community survey and pedestrian crash data was conducted to identify PAMP routes. These routes were then prioritised based on a range of criteria, as discussed in this report. Following community consultation and feedback from CCC, a recommended works program and suggested implementation program was established to improve and/or maintain the pedestrian facilities observed during the audit.

For more detailed information on the standard PAMP development methodology please refer to: http://www.rms.nsw.gov.au/business-industry/partners-suppliers/documents/technical-manuals/mobility-plan_how-to.pdf

1.4 STRUCTURE OF THIS REPORT

This report has been structured to provide

- background on the study area such as demographics and existing public transport facilities;
- a review of documentations, crash data, or previous studies in the area;
- the findings of the study investigations, route audits, and stakeholder responses; and
- recommendations to improve pedestrian facilities and encourage walking within the study area.

2. CHARACTERISTICS OF THE STUDY AREA

2.1 GEOGRAPHY

The 1950km^2 making up Cessnock LGA is primarily natural or agricultural, including a substantial amount of forested area. The southwest of the LGA is covered by Pokolbin, Yango, Watagan and Corrabare State Forests. The Aberdare State Forest is situated in the middle of the LGA, just south of Cessnock itself. The Lower Hunter National Park, Werakata National Park and Cessnock State Forest are also substantial forested areas. A large percentage of Cessnock LGA's population and urban development are situated along a narrow urban belt between Central Cessnock and Kurri Kurri which are separated by green zones. Residential settlement in Cessnock LGA is spread across a number of towns and villages, including:

- Cessnock, Aberdare and Kearsley (population 16,026);
- Bellbird and Bellbird Heights (population 2,890);
- Nulkaba (population 888);
- Kurri Kurri, Pelaw Main, and Stanford Merthyr (population 7,516);
- Buchanan, Mulbring and surrounds (1,634);
- Neath, Abermain, Weston and surrounds (population 7,022);
- Branxton, Greta and North Rothbury (population 5,965);
- Allandale, Lovedale, Pokolbin and Mount View (population 1,258);
- Millfield, Paxton, Ellalong and surrounds (population 2,958);
- Kitchener, Abernethy and surrounds (population 1,360); and
- Wollombi, Laguna and Rural West (population 995).

The Cessnock LGA boundaries are illustrated in Figure 2.1.

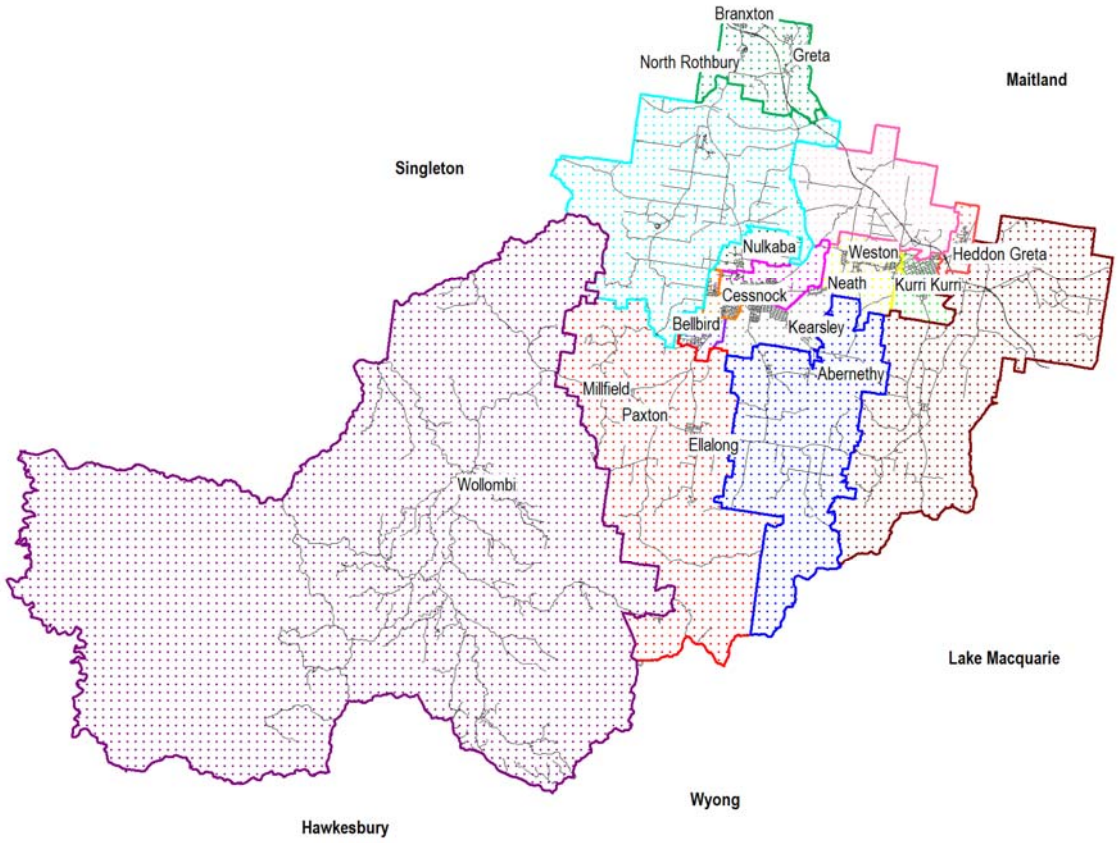


Figure 2.1: Cessnock LGA Boundaries

The Cessnock LGA is primarily natural bushland (approximately 40%) and rural (approximately 50%). The remainder is occupied by town centres such as Cessnock (CBD and residential surrounds) and Kurri-Kurri,

and villages such as Branxton and Wollombi. These urban areas are low density residential and commercial. The LGA rural and urban distinction map is shown in Figure 2.2.

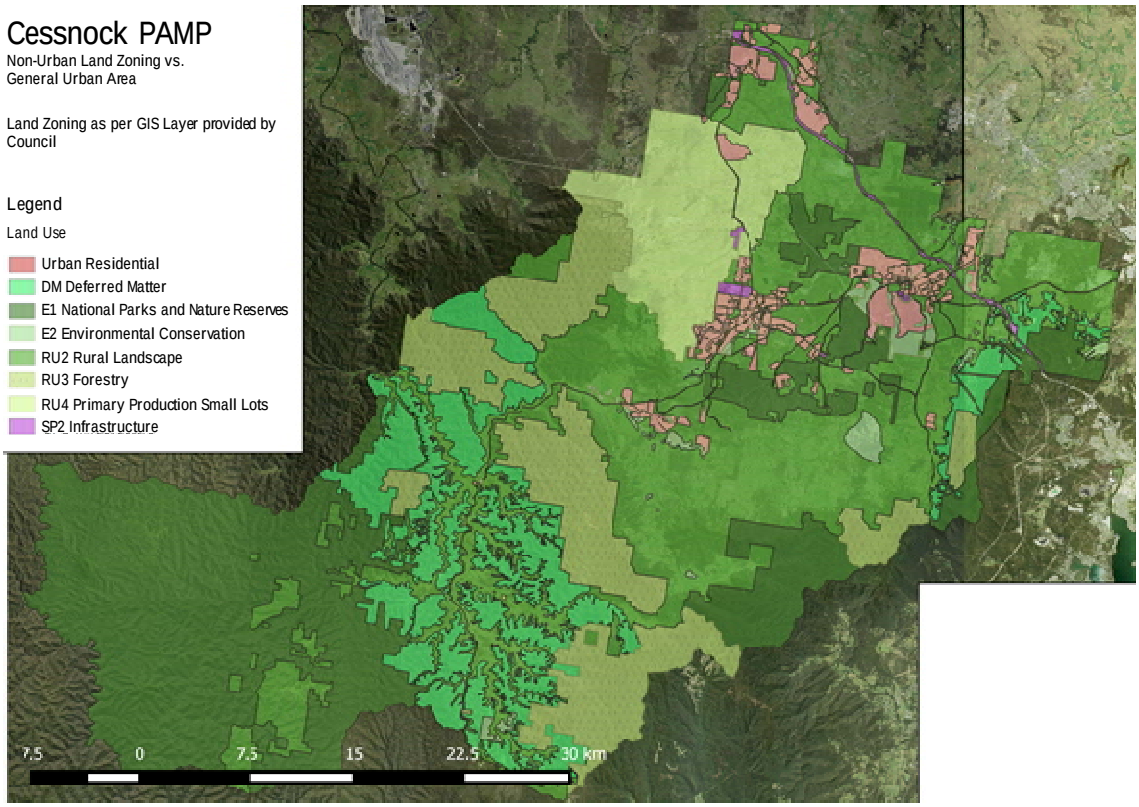


Figure 2.2: LGA Rural/Urban Distinction.

2.2 POPULATION AND DEMOGRAPHIC DATA

Cessnock's townships and villages have experienced steady population growth over recent years and is currently home to approximately 54,979 residents as at 30 June 2014 (Australian Bureau of Statistics - ABS). It is characterised by mainly low to medium density residential developments, national parks, and local shopping areas, as well as a number of key tourist centres including several State Forests, over 100 vineyards and wineries, Cessnock Performing Arts Centre and Richmond Vale Railway Museum.

Based on the CCC Social Atlas census data, the most populated towns/regions are Central Cessnock Townships (39%), Central Kurri Kurri Townships (15%), Neath - Abermain - Weston and Surrounds (14%) and followed by Branxton – Greta – North Rothbury (12%). The Cessnock Community Profile (*Profile.id*) shows that the population density across Cessnock LGA ranged between 0.01 persons per hectare (Wollombi, Laguna and Rural West) and 4.94 persons per hectare (Central Kurri Kurri Townships), with Central Cessnock Townships having a population density of 2.92 persons per hectare.

Between the 2006 and 2011 census data, Cessnock LGA experienced the highest population growth rate of 10% in the Hunter Region. This growth has been supported by the development of new residential estates, in addition to expanding community health and education facilities. Over this 5-year period the number of additional dwellings within the LGA grew from 19,166 to 20,985.

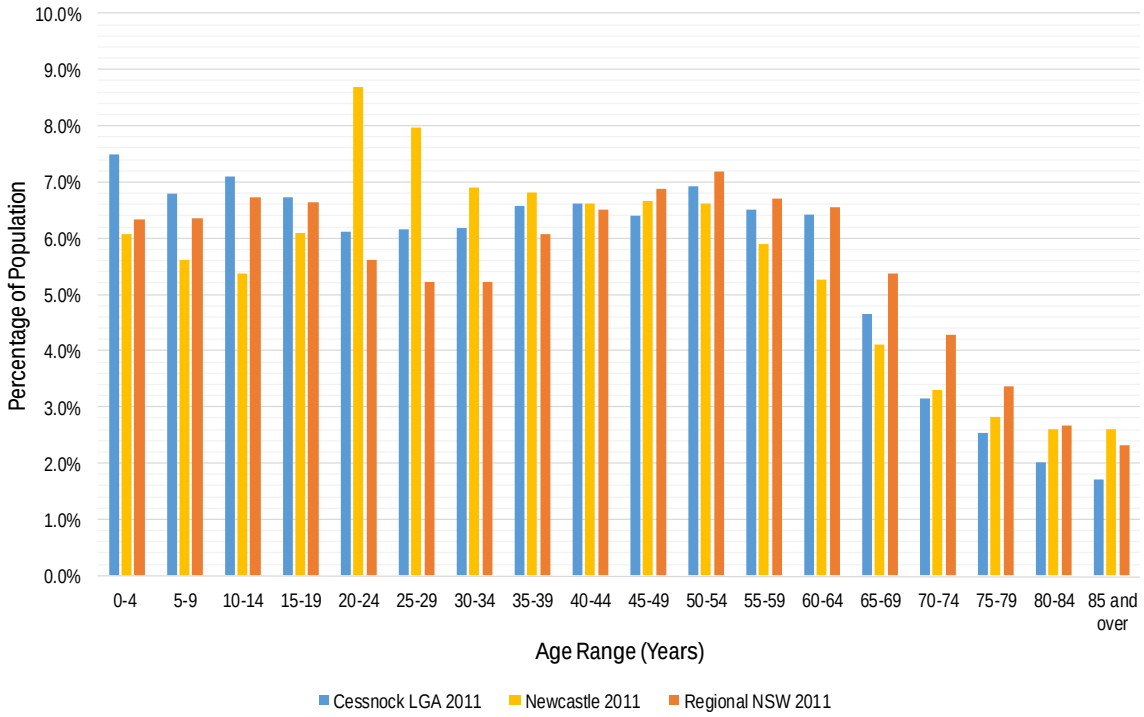
2.3 PEDESTRIAN USER GROUPS

Pedestrian planning considers a number of pedestrian facility user groups based on age and assumed capabilities. The ranges are classified as the following:

- Infants (ages 0-4)
- Pre-school (ages 5-8)
- Primary (ages 9-11)
- Secondary (ages 12-17)

- Young Adults (ages 18-25)
- Adults (aged 26-59)
  - Adults (a) from 26-39 years old
  - Adults (b) from 40-59 years old
- Elderly (aged 60+)
  - Elderly (a) from 60-69 years old
  - Elderly (b) 70+ years of age)

The age profile for the Cessnock LGA is presented in Figure 2.3 with comparisons against Regional NSW and Newcastle LGA for 2011 census data. The community profiles indicate that Cessnock has a higher proportion of residents aged between 0-4 years compared to both Regional NSW and Newcastle. This presents a current challenge regarding pram accessibility throughout Cessnock LGA when considering the present footpath conditions and lack thereof. Cessnock LGA also has a large percentage of their population aged between 5-19 years. A large portion of the 5-19 years' population are expected to attend school within central Cessnock and Kurri Kurri. This presents a current challenge to provide safe pedestrian footpaths and crossings to and from the school areas. In comparison to the rest of the Newcastle area, Cessnock LGA has a high proportion of residents aged over 50 years. In turn, there are significantly fewer residents aged 20-39 years. This shows that Cessnock LGA has an aging population. With an expected increase of residents aged between 60 and 75 years in the coming 20 years, this will present future challenges regarding pedestrian access and mobility for the elderly.



Source: CCC Community Profile (Profile.id)

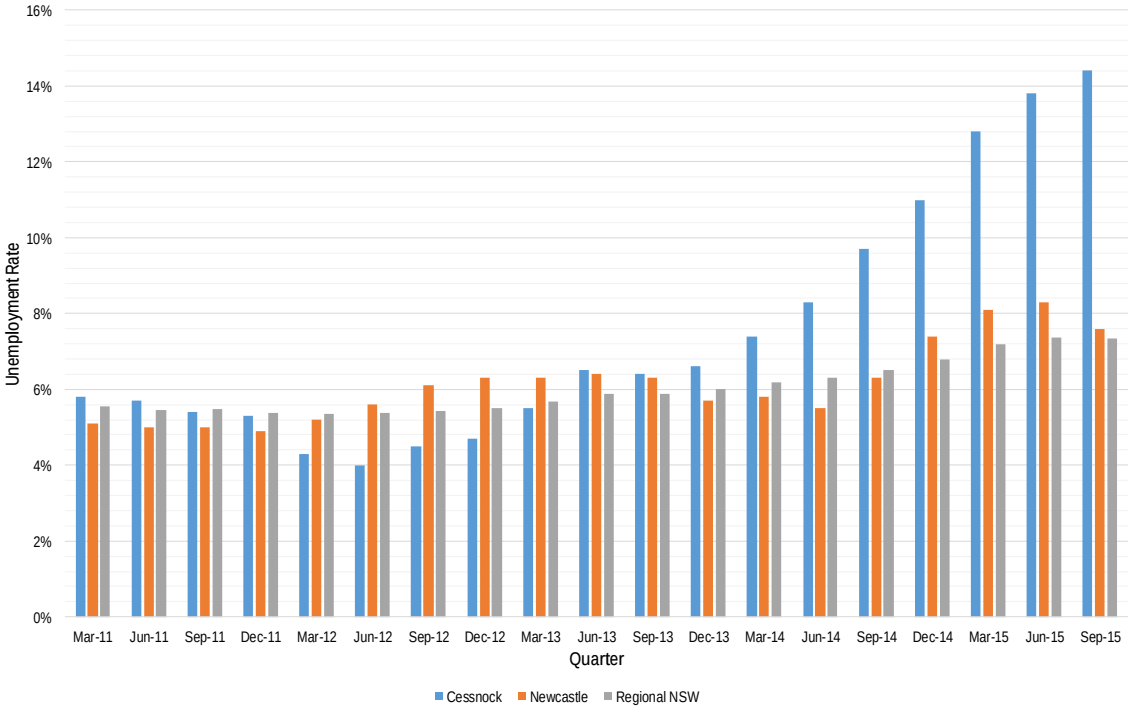
Figure 2.3: Age Profile of Cessnock LGA, Compared with Regional NSW and Greater Sydney

Typically, pedestrians aged 0-9 years have a greater need for good walking facilities, due to the use of prams (0-4 years old) and the vulnerability of young, inexperienced users. The 'seniors' group also require safe, accessible facilities for various reasons, including mobility impairment, decreased fitness, use of walking aids, and vision impairment.

2.4 EMPLOYMENT IN CESSNOCK

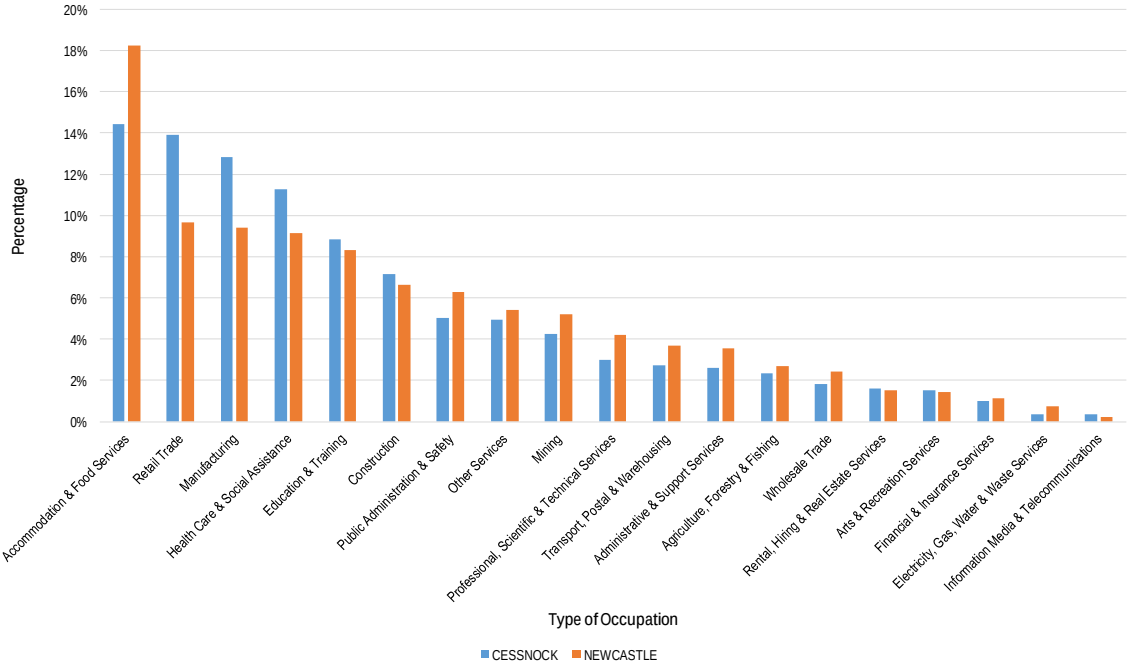
Figure 2.4 illustrates the unemployment rate for Cessnock residents starting at 5.8% in March 2011 which than steadily declined to the lowest unemployment rate of 4.0% in June 2012. However, the unemployment rate has rapidly increased over a period of 3 years to a rate of 14.4% in September 2015, which is likely due to the decline of the mining industry in the area. Compared to Newcastle's and Regional NSW's unemployment rates of 7.6% and 7.3% respectively, Cessnock LGA's unemployment rate is almost double.

Figure 2.5 shows that the four major sectors that Cessnock residents were employed by, were accommodation and food services (14.45%), retail trade (13.93%), manufacturing (12.84%) and health care and social assistance (11.25%). Compared to Newcastle the major occupation differences were accommodation and food service, retail trade, and manufacturing.



Source: REMPLAN data and CCC economic profile lite

Figure 2.4: Unemployment Rate (2015)



Source: REMPLAN data

Figure 2.5: Types of Occupation (2014)

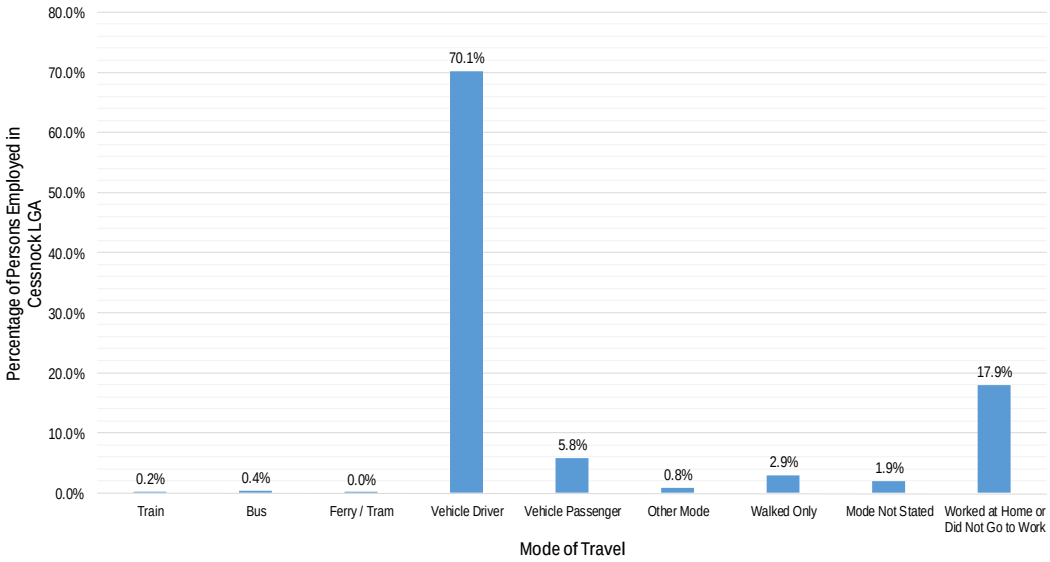
2.5 JOURNEY TO WORK DATA

The Australian Bureau of Transport Statistics 2011 Census Journey to Work data gives a good indication of popular origins, destinations, as well as the typical mode share for the study area.

Almost half of the employed residents of the area were employed within Cessnock LGA (44%). The next most popular destinations of employment were Singleton (11%) and Maitland (10%) followed by Newcastle

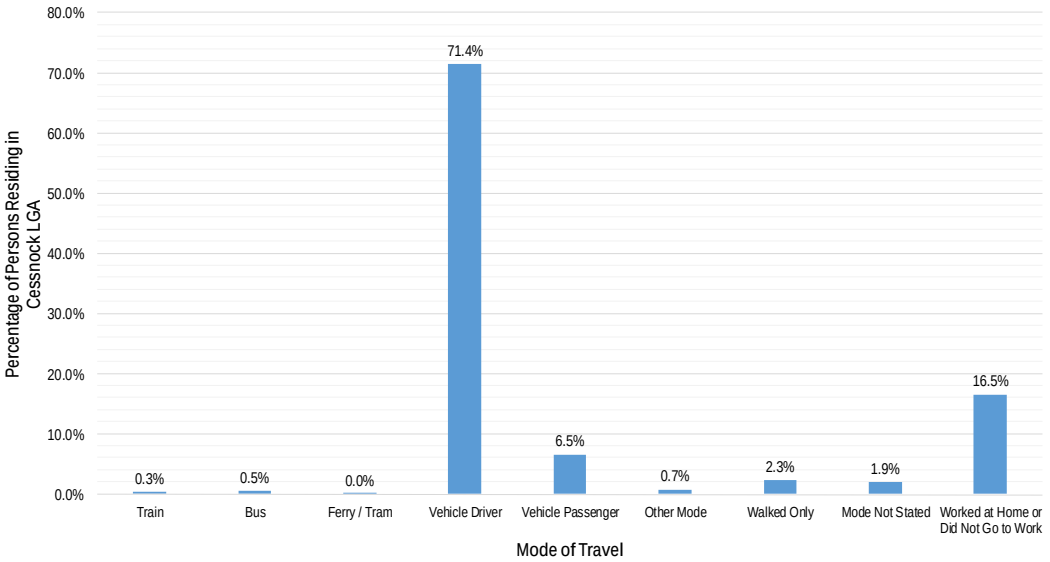
- Inner City (4%), Newcastle - Outer West (3%) and Lake Macquarie -North (3%). In addition, 65% of persons employed within the Cessnock LGA also resided within the area. A small number of those who work in Cessnock LGA resided in Maitland (12%), Lake Macquarie – North (3%), Lake Macquarie – West (3%), Singleton (3%) and other surrounding areas. That is, there are a high proportion of "local" journeys to work, with a relatively small proportion of "inbound" commute trips and reasonably high level of "outbound" commute trips. Figures 2.5 and 2.6 show the travel mode share for people working in the area and those living in the area.

As a regional community Cessnock has heavy reliance on cars as their main mode of transport to and from work. Both Figures illustrate above 75% of people travelling to work via vehicles, either as driver or passenger. Between 2% to 3% of employees opted to walk to work in Cessnock compared to an average of 4% for Regional NSW. According to the CCC Community Atlas.id only 0.2% of Cessnock's employed population travelled to work by bicycle (at any stage of their journey). It is important to note that walking forms part of every journey. At the start or end of each travel mode people will walk from their vehicle to their destination (i.e. shopping centre, school, sporting fields etc.) which highlights the importance of safe and easily accessible pedestrian facilities.



Source: NSW Bureau of Transport Statistics (BTS)

Figure 2.6: Journey to Work Mode – Persons Employed in Cessnock LGA

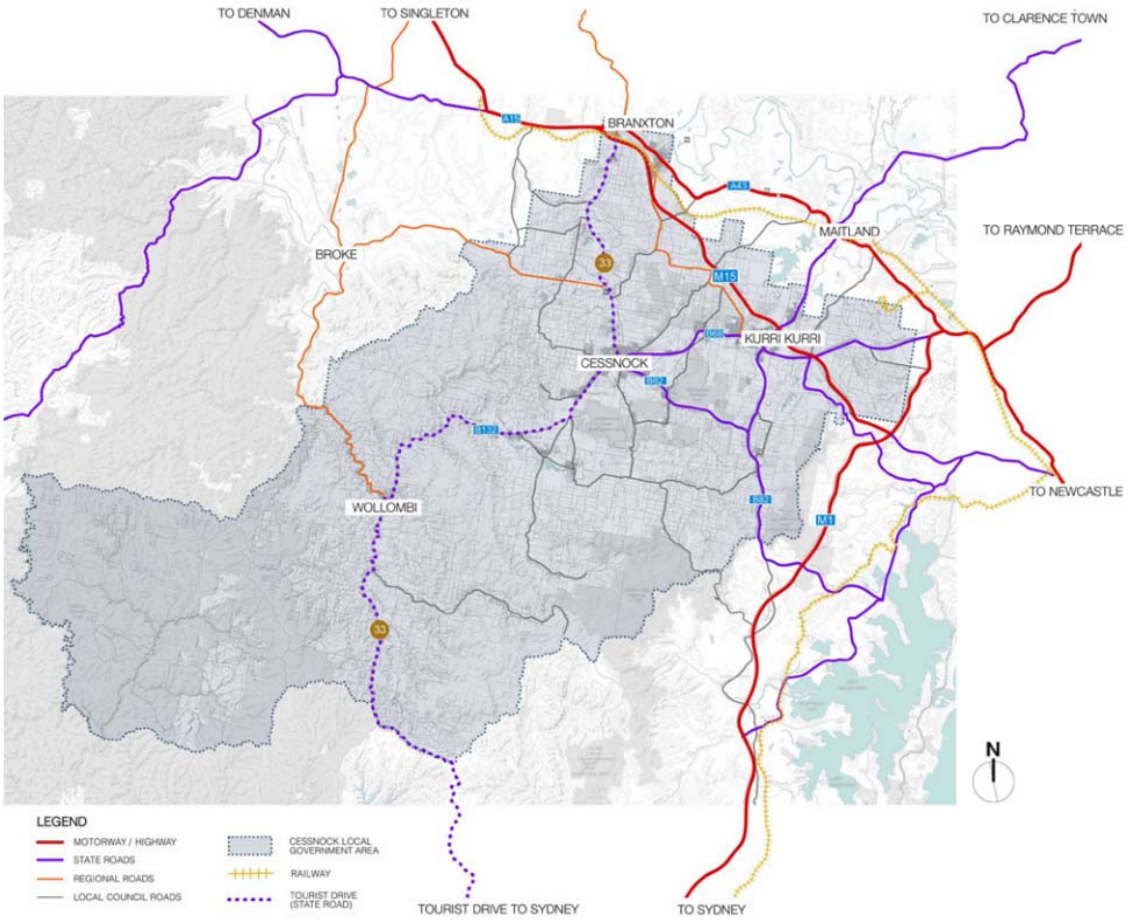


Source: NSW Bureau of Transport Statistics (BTS)

Figure 2.7: Journey to Work Mode – Residents of Cessnock LGA

2.6 ROAD HIERARCHY

A network of state roads is present within Cessnock LGA which connect Central Cessnock to Kurri Kurri, Maitland, Newcastle and other regions of the coast. State roads are fully funded by RMS. The existing functional road hierarchy within the LGA is shown in Figure 2.8 and described in more detail in Table 2.1.



Source: Cessnock City Signage Strategy 2015 (Moir Landscape Architecture)

Figure 2.8: Existing Road Hierarchy

Table 2.1: Existing Road Hierarchy

Road Classification	Road	Description
Motorway/ Freeway	Hunter Expressway	Runs along the northeaster border of the LGA. Opened to traffic in March 2014. The freeway generally has two lanes in each direction.
State Roads	A43 New England Highway	A section of New England Highway generally runs east-west along the northern border of the LGA through the townships of Branxton and Greta. The opening of Hunter Expressway significantly reduced traffic volumes on New England Highway, although it still remains a key strategic transport route
	B82 Vincent Street, Aberdare Road, Caledonia Street, Lake Road, Leggetts Road	Runs south from Cessnock town centre to the Pacific Highway passing through Kearsley, Elringron and Mount Vincent
	B82 Allandale Road, Wine Country Drive	Runs north from Cessnock town centre to the Hunter Expressway at Branxton via Nulkaba, Lovedale, Rothbury and Huntlee. This road section is also a designated tourist drive, connecting many of the local wineries to the Cessnock.
	B68 Lang Street, Cessnock Road, Maitland Road	Runs in east west direction between Cessnock and Kurri Kurri and the Hunter Expressway. The road is generally one lane in each direction and is the only direct connection between the two towns. The route passes through the villages of Neath, Abermain, and Weston
	B68 Victoria Street, Main Road, John Renshaw Drive	Connects Kurri Kurri/Cessnock and Hunter Expressway at Buchanan. The route continues to connect with the Pacific Highway at Tarro.
Regional Road	Wollombi Road	Connects Cessnock town centre with Bellbird, Pelton, Paxton, Greta Main and Wollombi.
	Paynes Crossing Road	Access between Broke and Wollombi. Mainly goes through rural settings with very narrow carriageway.
	Broke Cessnock Road	Two-lane (one lane in each direction) undivided carriageway. Access between Cessnock and Broke.
	Lovedale Road	Two-lane (one lane in each direction) undivided carriageway. Access between Lovedale and Allandale.
	Buchanan Road	Two-lane (one lane in each direction) undivided carriageway. Located to the east of Heddon Greta, it connects Buchanan to East Maitland via Mount Vincent Road to the north.
Tourist Drive (also State Road)	33 Tourist Drive (Wollombi Road / Great N Road / George Downers Drive)	Runs through the rural heart of the LGA between Branxton in the north and Wollombi in the west before heading south through Bucketty towards Calga and Sydney.
Selected Local Council Roads	Watagan Creek Road, Middle Road, Ellalong Road, Millfield Road, Quorrobolong Road and Sandy Creek Road	Very narrow roads. Generally have paved surfaces. Very low traffic volumes.

2.7 KEY PEDESTRIAN GENERATORS

Certain land uses or urban forms can be considered key pedestrian generators, typically these include:

- Shopping Precincts, and Main Streets
- Schools and Tertiary Education Centres;
- Hospitals and Medical Centres;
- Aged Care Facilities;
- Childcare Centres, Pre-Schools, Out of School Hours Care Facilities;
- Community Halls/Facilities, Neighbourhood Centres, Youth Centres; and
- Parks and Recreation Facilities.

The following approach was adopted in developing a hierarchy of pedestrian needs:

Primary Pedestrian Activity Zone

This is typically the main commercial area. Throughout the day, pedestrians are attracted to this zone from surrounding residential areas: therefore, it is 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 and from car parking).

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 activity, but possibly only at certain times of the day or week.

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.

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 car facilities and RSL clubs).

These were qualitatively ranked into Primary, Secondary and Tertiary areas/pedestrian generators based on the size and concentration of these land uses. Figures 2.9 – 2-14 illustrates the key pedestrian generators within Cessnock LGA, as well as the existing pedestrian facilities.

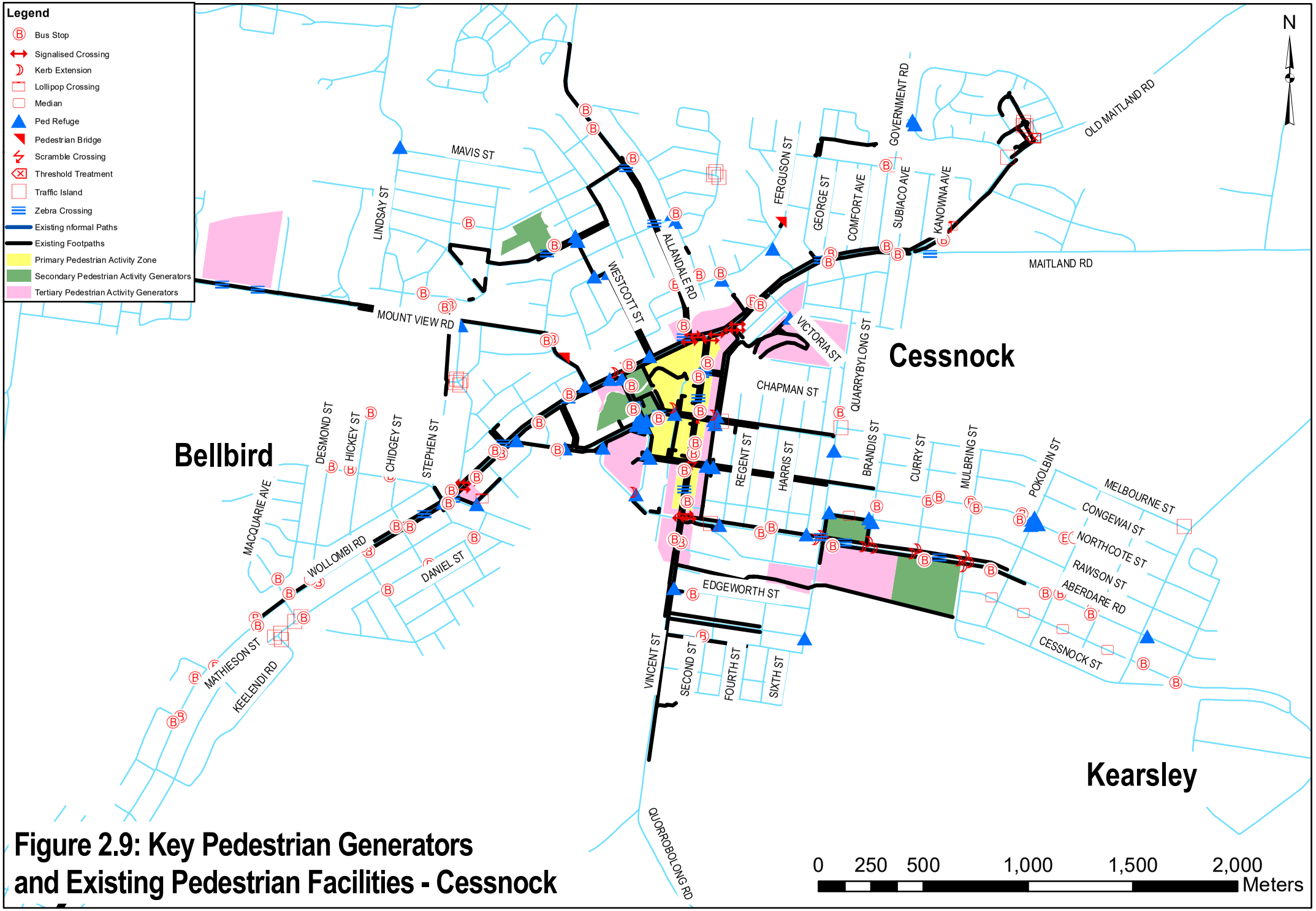


Figure 2.9: Key Pedestrian Generators and Existing Pedestrian Facilities - Cessnock

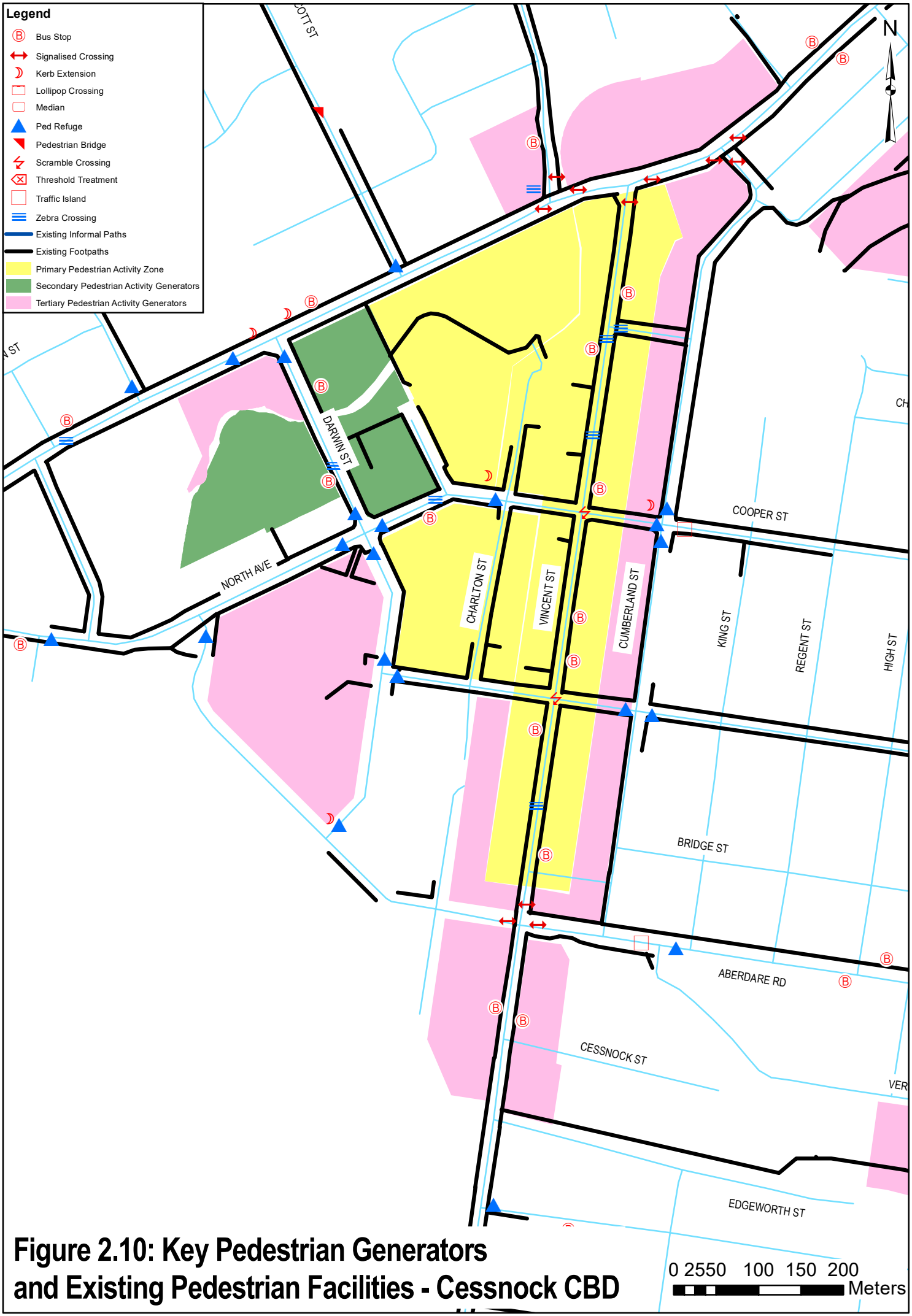


Figure 2.10: Key Pedestrian Generators and Existing Pedestrian Facilities - Cessnock CBD

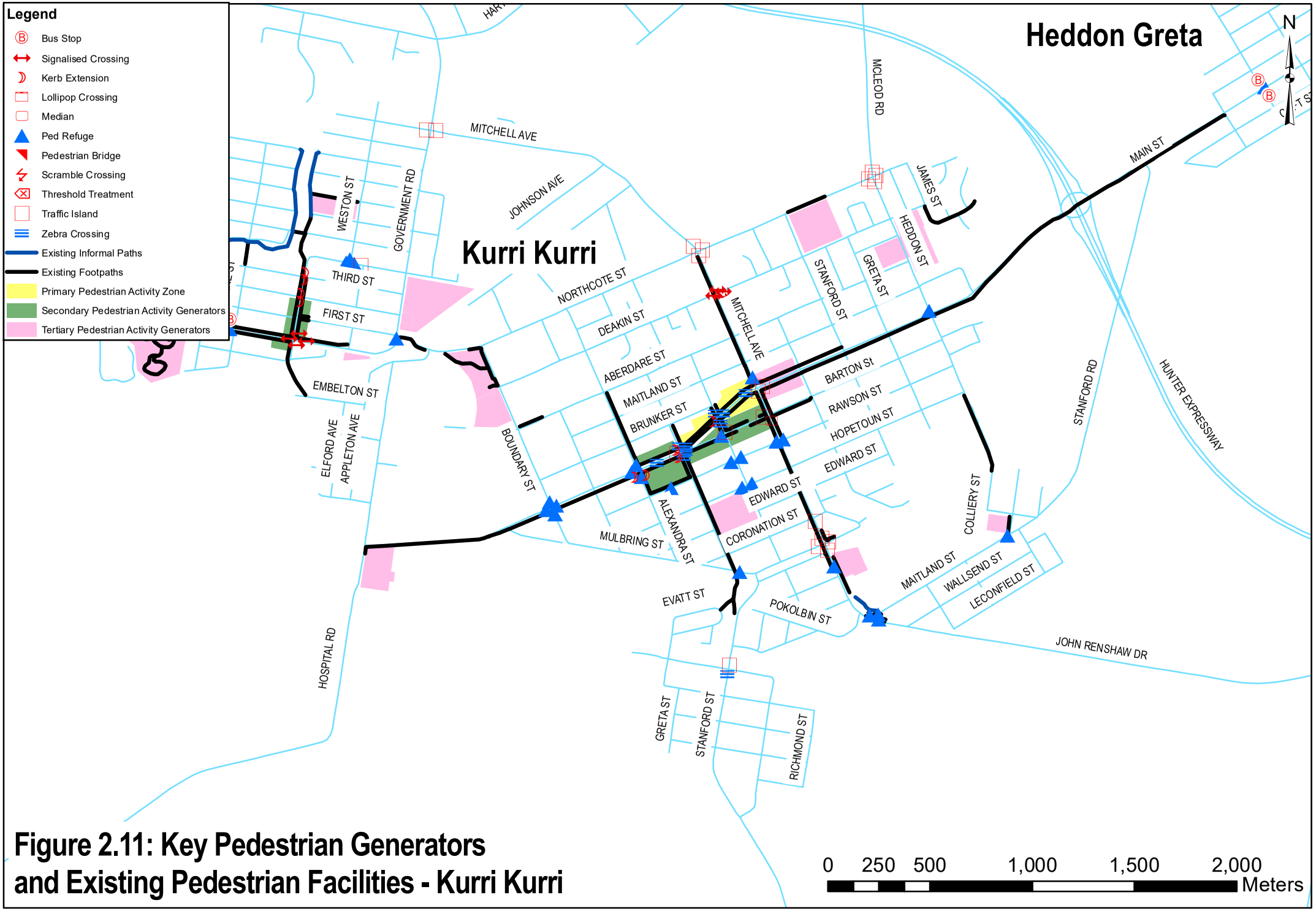


Figure 2.11: Key Pedestrian Generators and Existing Pedestrian Facilities - Kurri Kurri

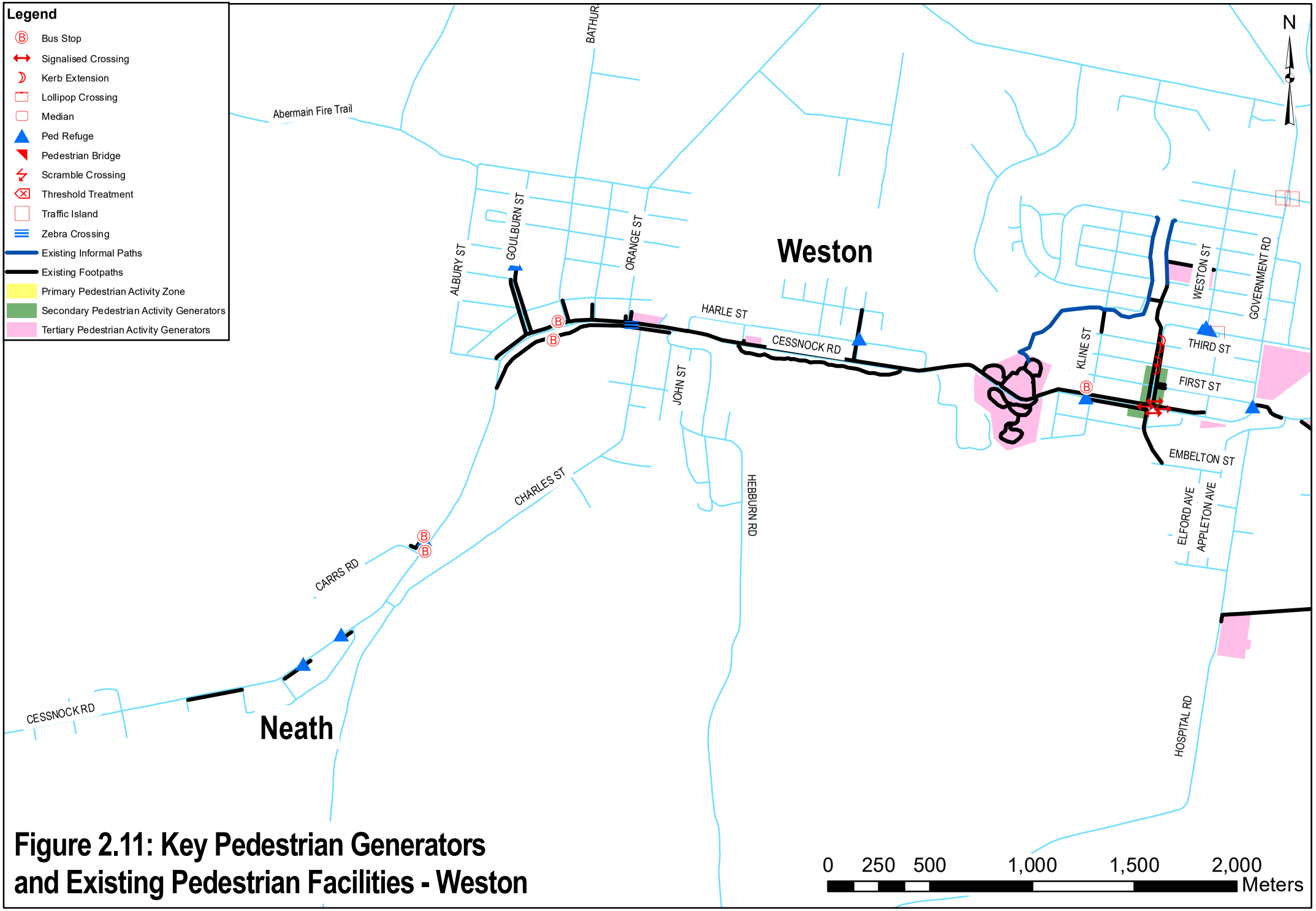


Figure 2.11: Key Pedestrian Generators and Existing Pedestrian Facilities - Weston

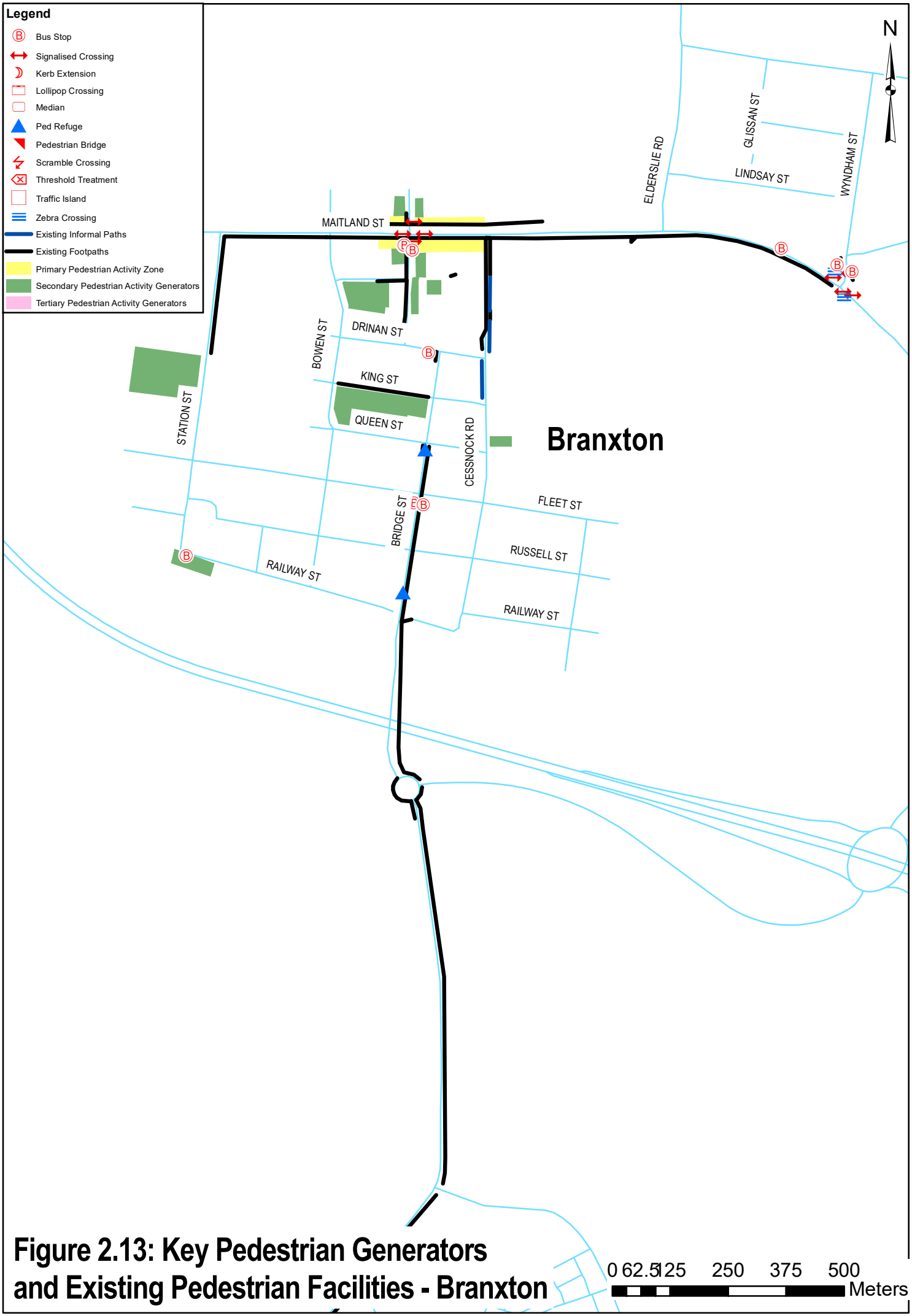


Figure 2.13: Key Pedestrian Generators and Existing Pedestrian Facilities - Branxton

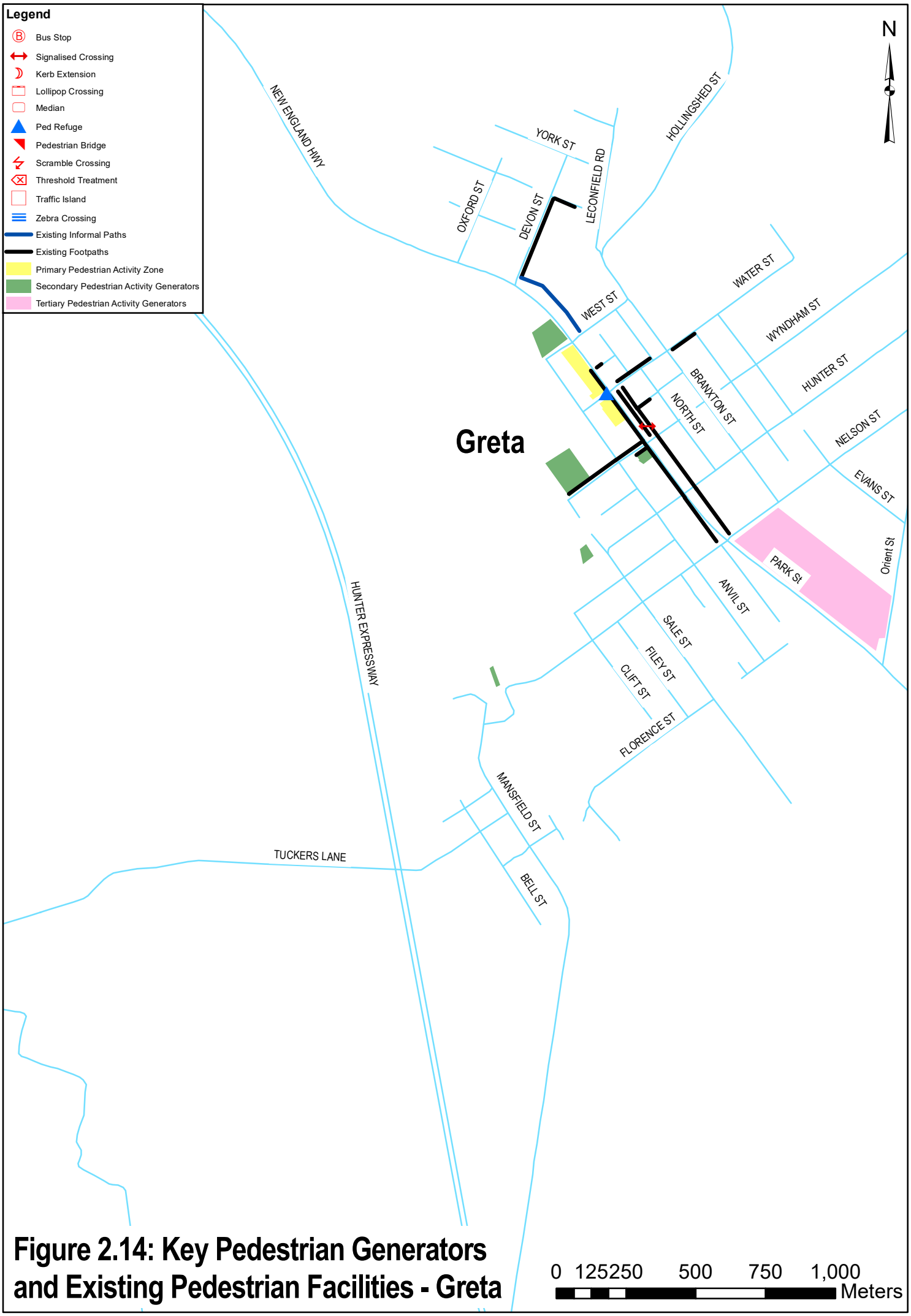


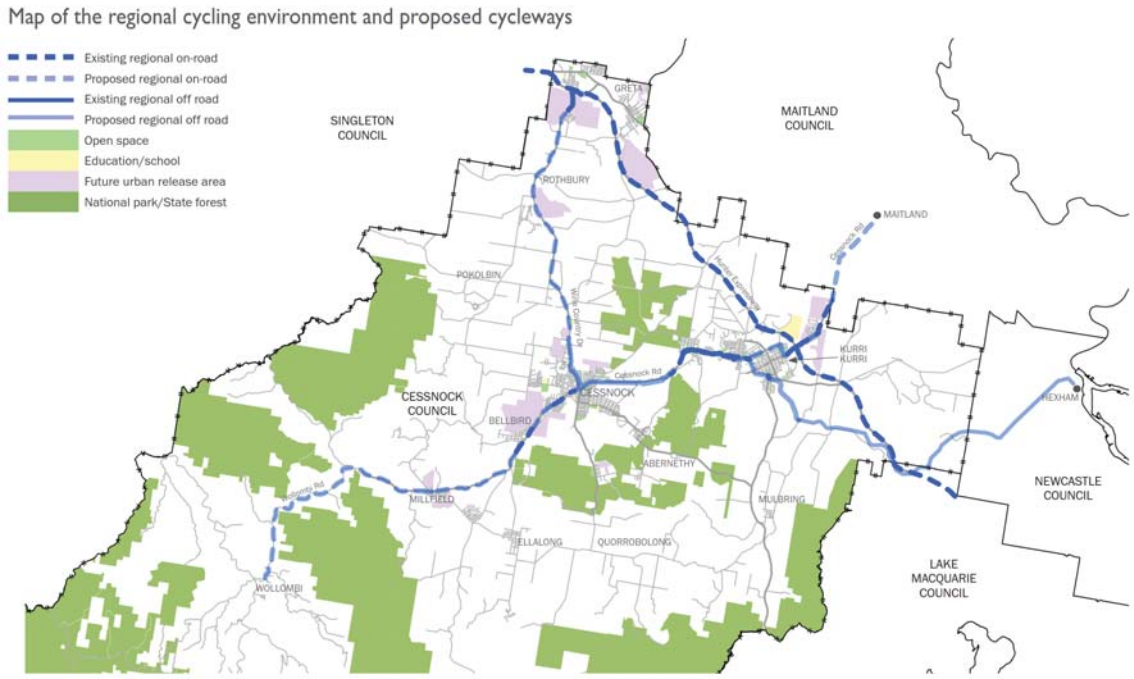
Figure 2.14: Key Pedestrian Generators and Existing Pedestrian Facilities - Greta

2.8 CYCLING STRATEGY

Cessnock City Council Bicycle Plan was prepared in 1995. The plan identifies a network of regional, arterial and local cycle ways. The plan is now out dated and requires updating. Council was successful in gaining partial funding of $123,000 in the Active Transport Program for a Cycleway Strategy and Pedestrian Access and Mobility Plan (PAMP). Cessnock City walkers and cyclists will benefit from improved cycle ways and footpaths.

The regional cycle environment showing the principle cycle network linking villages and adjacent LGAs is illustrated in Figure 2.15. For further details of existing and proposed cycle paths in key centres and villages refer to Council's draft Cycling Strategy (2016).

In addition, a pedestrian and cyclist wayfinding and facility branding strategy will provide benefits in improving network legibility and to highlight the presence of cycling and walking as alternative options to private vehicle travel.



Source: Draft Cessnock Cycle Strategy

Figure 2.15: Regional Cycle Environment

2.9 PUBLIC TRANSPORT

2.9.1 Current Public Transport Services

Table 2.2 illustrates the bus routes that currently operate within Cessnock LGA. Rover Coaches bus routes service Newcastle, Maitland and Central Cessnock with separate services operated by CDC's Hunter Valley Buses in North Rothbury, Branxton and Greta. Maitland (Route 164) is the most regularly serviced destination with a time frequency of 60 minutes and a total of 8 services both in the morning period (5am to 11:59am) and afternoon period (12pm to 9pm), compared to Newcastle as a destination with a total of 2 services both in the morning and afternoon periods.

Figures 2.16 and 2.18 illustrate the existing bus routes in Cessnock LGA while Figures 2.17 and 2.19 depict a 400m buffer zone surrounding the existing bus routes. The buffer provides an indication on the level of accessibility for residents to utilise the bus facilities.

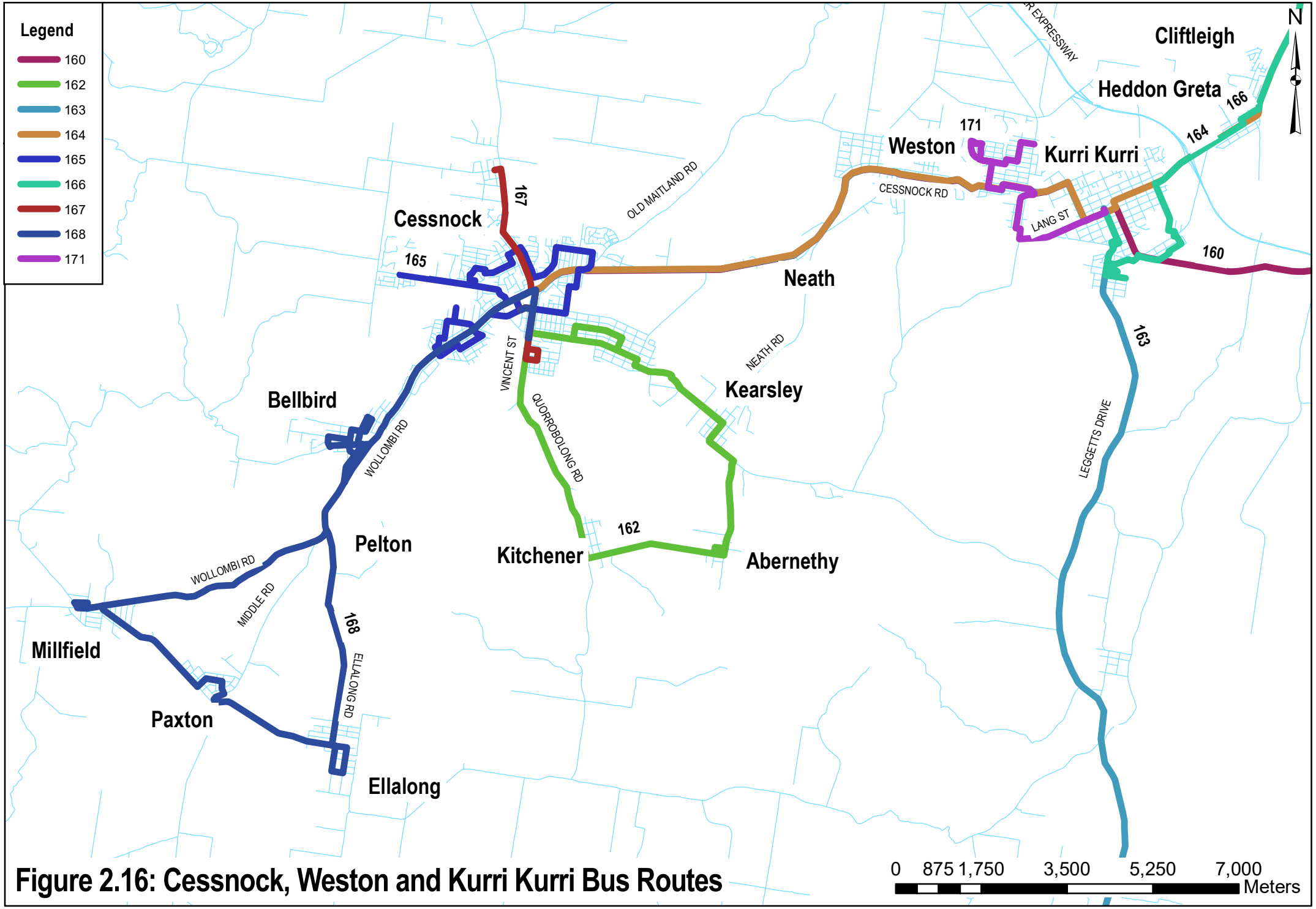


Figure 2.16: Cessnock, Weston and Kurri Kurri Bus Routes

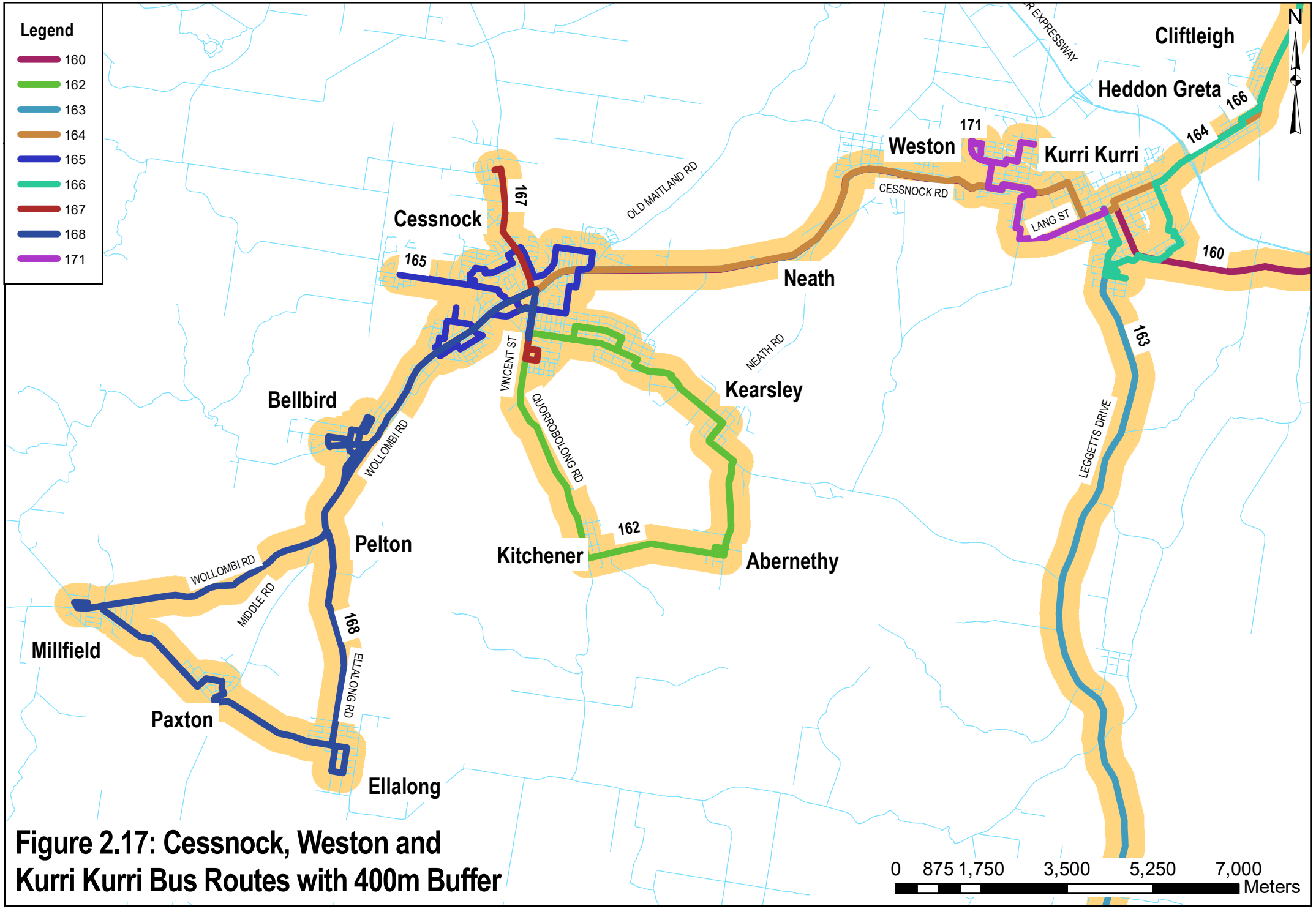


Figure 2.17: Cessnock, Weston and Kurri Kurri Bus Routes with 400m Buffer

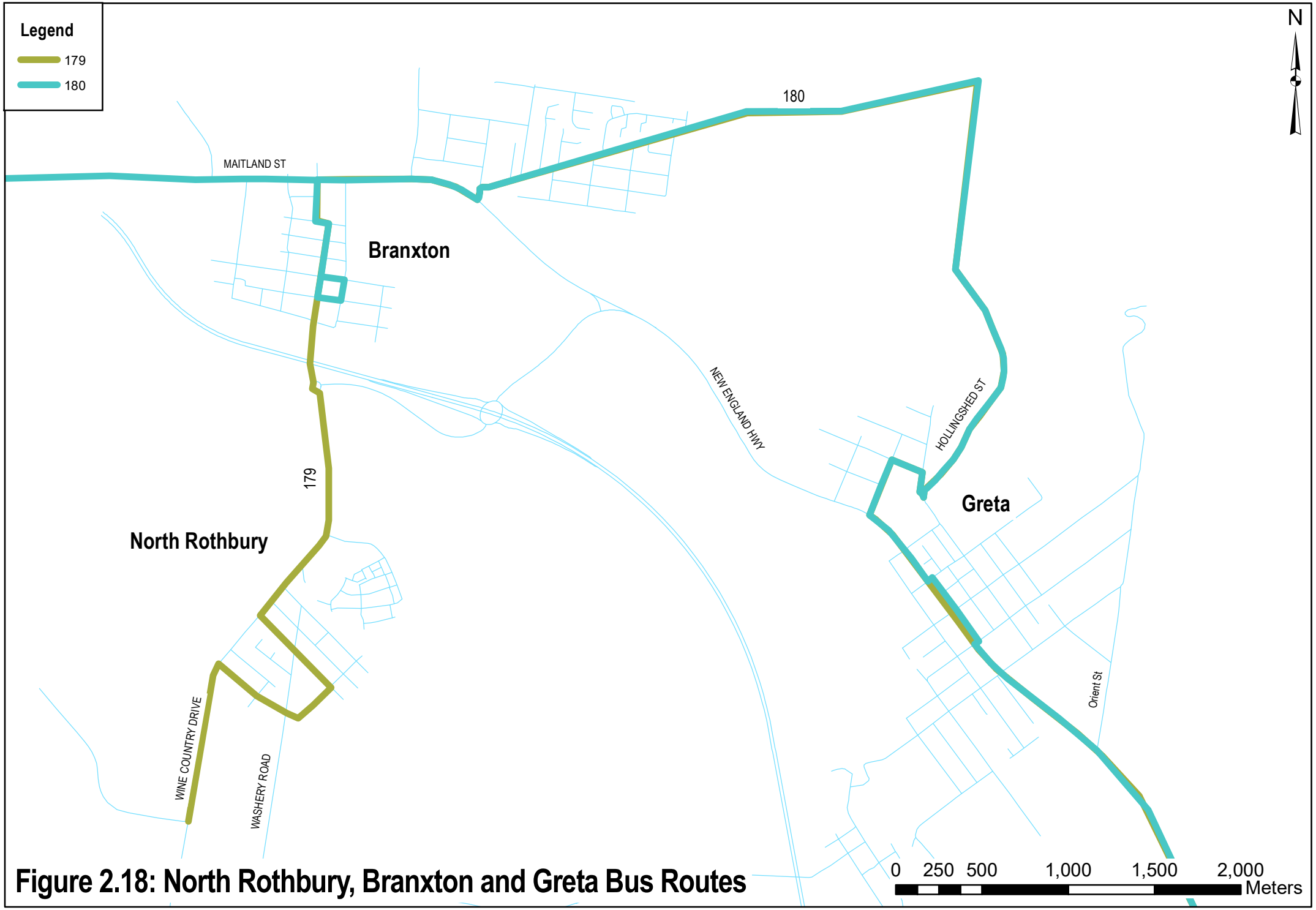


Figure 2.18: North Rothbury, Branxton and Greta Bus Routes

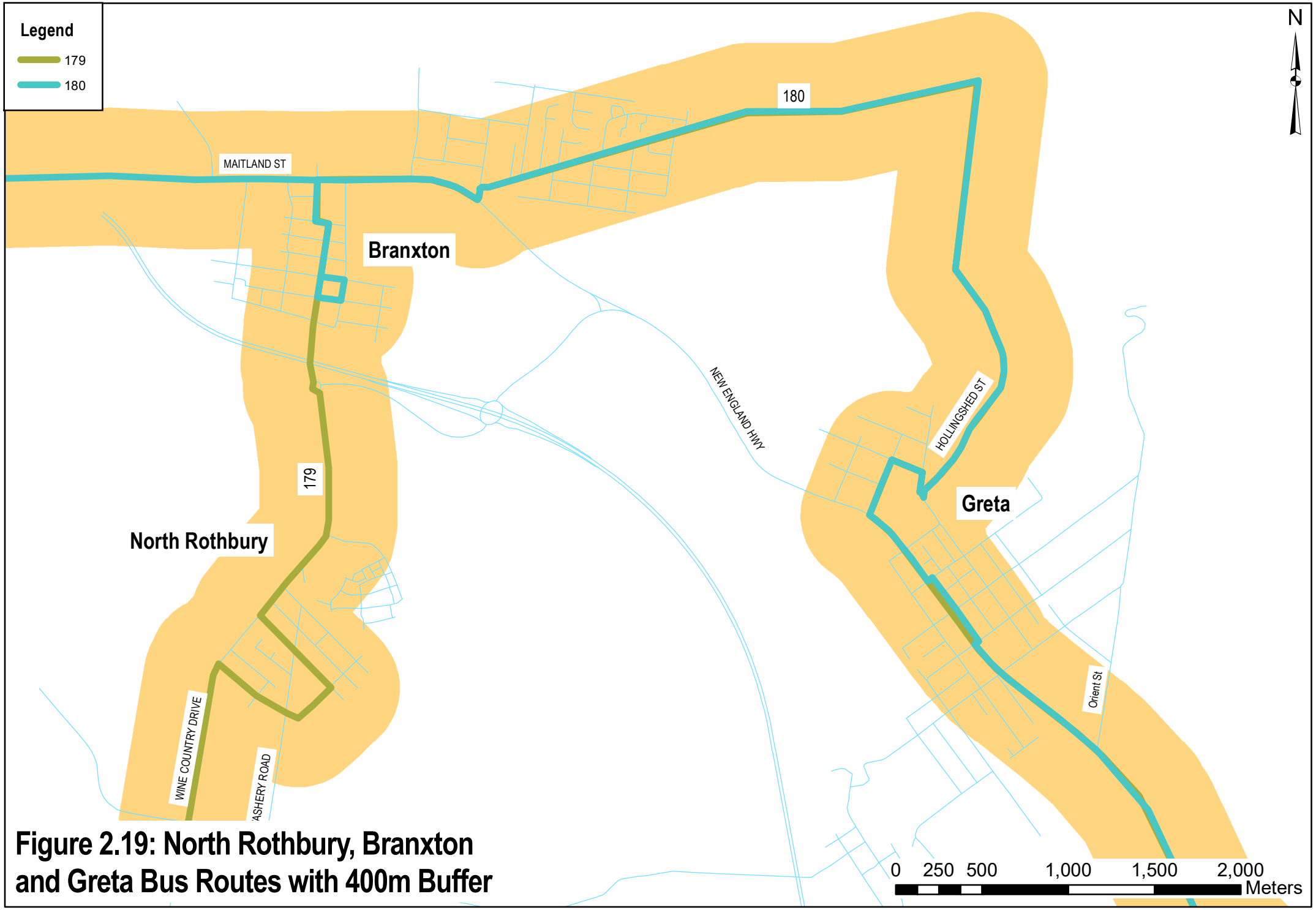


Figure 2.19: North Rothbury, Branxton and Greta Bus Routes with 400m Buffer

Table 2.2: Existing Bus Routes in Cessnock City LGA

Bus Route	Origin	Destination	Description	Time Frequency (Minutes)	Service Frequency (5am to 11.59am)	Service Frequency (12pm to 9pm)
160	Cessnock CBD	Newcastle	via Kurri Kurri, M15 Hunter Expressway, Newcastle University and Mayfield	60	2	2
162	Kearsley	Cessnock CBD	Kearsley (Abernethy) to Cessnock	120	2	3
162	Cessnock CBD	Kearsley	Cessnock to Kearsley (Abernethy)	130	2	3
163	Cessnock CBD	Morisset	via Kurri Kurri and M1 Pacific Motorway	600	1	1
164	Cessnock CBD	Maitland	via Kurri Kurri	60	8	8
165	Cessnock CBD	West Cessnock	Loop	120	4	4
166	Kurri Kurri	Maitland	Kurri to Maitland and Maitland to Kurri Kurri	120	3	3
167	Cessnock CBD	Nulkaba	Loop	75	2	1
168	Cessnock CBD	Millfield	Loop via Bellbird, Ellalong and Paxton	120	3	4
171	Weston	Kurri Kurri	Weston to Kurri Kurri and Kurri Kurri to Weston	120	2	2
179	North Rothbury	Stockland Green Hills (East Maitland)	via Maitland	60	5	0
180	Singleton Heights	Stockland Green Hills (East Maitland)	via Maitland	180	2	2

Source: NSW Transport

2.9.2 Rail Services

Within Cessnock LGA, Branxton and Greta train stations are serviced by the InterCity Trains Network branch of NSW Transport Sydney Trains. The services run daily between Newcastle and Scone in both directions. The facilities at both Branxton and Greta Train Stations are not DDA compliant as they do not cater for People with Disabilities (i.e. wheel chairs and visual impaired). Table 2.3 summarises the InterCity Trains Network timetable.

Table 2.3: Train Service Timetable for Branxton and Greta Stations

Service		Departure Times from Origin				Wheel Chair Accessible
Origin	Destination	AM		PM		
Branxton	Newcastle (Hamilton Station)	07:10	10:54	20:09	21:54	No
Greta	Newcastle (Hamilton Station)	07:14	10:58	20:13	21:58	No
Newcastle (Hamilton Station)	Branxton/Greta	04:21	08:17	16:32	18:02	Yes*

Source: Transport Sydney Trains

**Hamilton Train Station is wheel chair accessible, however Greta and Branxton Stations do not cater for People with Disabilities*

2.9.3 Disabled Access

Both Rover Coaches and CDC's Hunter Valley Buses provide bus services with wheel chair and disability accessibility. However, the bus stops located around the LGA do not cater for People with Disabilities and to an extent do not comply with regulations. To comply with the Disability Discrimination Act (DDA) everyone needs to be able to access public facilities.

Branxton and Greta train stations in Cessnock LGA are not accessible in terms of the DDA definitions. Considering future development in the area (Huntlee Development) and expected population growth, disability access to the train stations will be required so that everyone is equally serviced. As this is the responsibility of Sydney Trains, it is recommended that the Cessnock City Council lobby for better accessibility at stations.

3. RESEARCH, REVIEW AND DATA COLLECTION

3.1 LITERATURE REVIEW

To ensure the policy compliance of the PAMP a review has been undertaken of all relevant planning guides and policy documents across all levels of government and considered in relation to the Cessnock region.

3.1.1 NSW Walking Strategy

In September 2011, the NSW Government released NSW 2021 A Plan to Make NSW Number One which includes a target to increase walking for short trips and a commitment to develop a NSW Walking Strategy. Walking programs were also reviewed as part of the Long Term Transport Masterplan for NSW. While the strategy is yet to be released a number of background reports have been prepared:

- Walking for Travel and Recreation in NSW: What the Data Tells Us
- A Walking Strategy for NSW – Assessing the Benefits of Walking
- NSW Walking Strategy – Literature Review
- NSW Walking Strategy – Stakeholder Engagement Report
- Estimating the Benefits of Walking – A Cost Benefit Methodology

3.1.2 NSW Road Safety Strategy

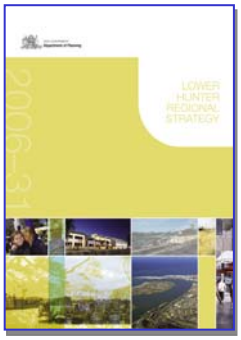
The NSW Government's strategic plan for the state of NSW aims to reduce the fatality rate on NSW roads to 4.3 per 100,000 population by 2016. NSW 2021 aims to improve road safety by identifying and upgrading black spots, promoting safety features in cars, enforcing speed limits and other road rules, and education to encourage road users to take less risks on NSW roads.

An alarming but not all that surprising statistic is that while the majority of road fatalities (68 per cent) are vehicle occupants (drivers and passengers), nearly one third of all fatalities are vulnerable road users (pedestrians, cyclists and motorcyclists).

The key measures in the NSW Roads Strategy to improve pedestrian safety are:

- improve pedestrian crossing safety, including reviewing signal phasing for pedestrians;
- work with local government to undertake road safety audits to address the maintenance and upgrade of pedestrian facilities;
- support the NSW Long Term Transport Master Plan and the walking investment program to address the infrastructure needs of pedestrians;
- trial innovative technology solutions to address pedestrian safety, including vehicle to person systems and vehicle based pedestrian detection systems;
- land use planning guidelines to consider pedestrian requirements, especially at transport hubs, new residential developments;
- research pedestrian distraction devices and the effects within the road environment;
- develop communications and awareness campaigns to promote safety with pedestrians and other road users; and
- review the application of shared paths and safer interaction between pedestrians and bicycle riders.

3.1.3 Lower Hunter Regional Strategy (2006)



The Lower Hunter Regional Strategy applies to the five local government areas of Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock, and is one of a number of regional strategies prepared by the Department of Planning.

The Regional Strategy represents an agreed NSW government position on the future of the Lower Hunter. It is the pre-eminent planning document for the Lower Hunter Region and has been prepared to complement and inform other relevant State planning instruments.

The primary purpose of the Regional Strategy is to ensure that adequate land is available and appropriately located to sustainably accommodate the projected housing and employment needs of the Region's population over the next 25 years.

Key transport outcomes of this strategy is to:

- integrate land use and transport planning to connect homes, employment and services, minimising the need to travel and encouraging energy and resource efficiency; and
- maximising the economic, social and environmental outcomes of strong connections within the Lower Hunter and from the Lower Hunter to the broader Greater Metropolitan Region, Australia and internationally.

An important actions relevant to pedestrian access and mobility including:

- concentrating employment and residential development in proximity to public transport to maximise transport access; and
- maximise redevelopment and infill opportunities for medium and high density housing within walking distance of centres.

3.1.4 Cessnock Development Control Plan (DCP) 2010

The *Cessnock DCP* provides the planning controls for developments in the Cessnock LGA. The aim of the plan is to and addresses the key environmental planning issues of the Local Government Area

Several sections of the Plan are relevant to this study, including those concerning:

- Access and Mobility (C6), to assist development proponents and Council in meeting the requirements for 'equality of accesses under both State and Federal discrimination legislation when new building work and / or land use development is proposed; and
- Crime Prevention through Environmental Design Guidelines (C8), the integration of Crime Prevention through Environmental Design principles at the earliest stage of a development proposal (including public infrastructure) to minimise crime opportunities post development. This includes promoting natural surveillance, avoiding landscaping which obscured natural surveillance, good lighting or the use of physical barriers to attract, channel or restrict the movement of people, making it clear where people are permitted to go or not go.

3.1.5 Cessnock Local Environmental Plan (LEP) 2011

The *Cessnock LEP 2011* provides a framework for the development of land with the City of Cessnock. The particular aims of this Plan are as follows:

(a) to strengthen and protect a high quality, sustainable lifestyle for Cessnock's residents and visitors;

(b) to conserve and enhance, for current and future generations, the ecological integrity, environmental heritage and environmental significance of Cessnock;

(c) to encourage development for employment purposes in appropriate locations having regard to proximity to appropriate infrastructure, to ensure the efficient use of land and services, to provide walkable urban environments and to reduce dependency on the use of private vehicles;

(d) to provide opportunities for a range of new housing and housing choice in locations that have good access to public transport, community facilities and services, retail and commercial services and employment opportunities, including opportunities for the provision of adaptable and affordable housing; and

(e) to recognise and protect the historical, cultural and economic values of the vineyards district in relation to agricultural production and associated flow on effects, including tourism.

3.1.6 Cessnock 2023 Community Plan

The *Cessnock 2023 Community Strategic Plan* provides a long term plan for the social, economic and environmental sustainability of the local government area, and its development involved extensive input from the Cessnock community. The plan articulates the following vision for the community:

"Cessnock will be a cohesive and welcoming community living in an attractive and sustainable rural environment with a diversity of business and employment opportunities supported by accessible infrastructure and services which effectively meet community needs."

The Plan presents a number of objectives and strategic directions under five desired outcomes, namely:

1. a connected, safe and creative community;
2. a sustainable and prosperous economy;
3. a sustainable and healthy environment;
4. accessible infrastructure, services and facilities; and
5. civic leadership and effective governance.

A number of these objectives and strategic directions relevant to mobility and access include:

- promoting social connections
  - our communities are linked by walking and bike tracks;
- better transport links;
  - we have access to a range of public and community transport within the LGA;
  - we have access to a range of public and community transport beyond the LGA; and
  - we have a new passenger train service in Cessnock.
- improving the road network;
  - we have a high quality road network; and
  - we have managed the traffic impact of the Hunter Expressway on local communities.

3.1.7 Cessnock City Council Community Research 2014

The *Community Survey* is conducted to gauge community priorities and satisfaction in relation to Council activities, services and facilities. It is also used to identify community priorities and assess progress against the desired outcomes in the Community Strategic Plan.

The key results relating to transport and pedestrian amenity in 2014 included the local road network being ranked as the highest priority issue (42%) in the LGA. While developing and maintaining the road network had the largest performance gap (difference between importance and satisfaction) and footpaths had the third largest gap.

3.2 Pedestrian Crash Data Summary

RTA crash data for Cessnock LGA was analysed from 2009 to 2013 to reveal all pedestrian and cyclist involved crashes in that period. A total of 35 pedestrian crashes and 22 cyclist crashes occurred over the 5-year period analysed with two pedestrians and one cyclist fatality. The fatalities were situated outside urban development regions on Lovedale Road and John Renshaw Drive for pedestrian and Broke Road for cyclist. Refer to Appendix A for detailed analysis on crash data and maps showing the locations of crashes.

3.3 Design Standards

The design standards adopted include a combination of Australian Standards, Austroads Guides and local RMS technical directions and model drawings (see Appendix B for details). Some of the reference documents used include:

Footpaths and Kerb Ramps:

- Australian Standard AS 1428.4.1 – 2009: Design for Access and Mobility;
- Austroads Guide to Road Design Part 6A, Pedestrian and Cycle Paths; and
- NSW Bicycle Guidelines (RTA 2005).

Crossings:

- RMS model drawings MD R173.B01.A1;
- Austroads Guide to Road Design Part 4. Intersections and Crossings;

- Australian Standard AS 1428.1 – 2009: Design for Access and Mobility;
- Australian Standard AS 1742.10: Pedestrian Control and Protection;
- RMS Technical Direction TDT 2002/12b (Stopping and Parking Restrictions at Intersections and Crossings);
- RMS Technical Direction TDT 2011/01a (Pedestrian Refuges); and
- Australian Standard AS 1158.4.

Bus Stops:

- Disability Standards for Accessible Public Transport 2002.

Under Council guidelines, it is recommended that design standards be consistent across the whole Cessnock LGA. Reference to standards specific to the Cessnock LGA are included in the CCC Engineering Requirements for Development. A full list of references is included in Appendix B.

3.4 PROPOSED DEVELOPMENTS AND CURRENT WORKS

There are a number of proposed residential developments within Cessnock LGA which consist of the following:

- Huntlee Subdivision Development, Branxton / North Rothbury (Huntlee Development Control Plan 2013);
- Averys Village Residential Development, Heddon Greta; and
- Hydro Residential Development, Kurri Kurri.

All developments are under planning phases and will likely provide up to date pedestrian footpaths and bike paths.

3.5 RESULTS OF COMMUNITY SURVEY

3.5.1 Methodology

In order to gain community input into the identification and prioritisation of future pedestrian facilities in the Cessnock LGA emails were issued to the following stakeholders:

- bicycle groups;
- bus company;
- schools;
- police;
- online survey; and
- access/disability support groups

The survey was undertaken through an online community survey (using *SurveyMonkey*) as part of the development of the Draft PAMP, and was made available on the CCC website's "*Have Your Say*" page from 17th November 2015. Disappointingly only 6 members of the community responded to this survey. In addition to the PAMP survey a survey was conducted for the Cessnock LGA Traffic and Transport Strategy from 21st October 2015 which covered similar questions relating to active transport modes with 49 responders.

The community questionnaires addressed the following topics:

- pedestrian and bicycle facility adequacy;
- issues with existing crossings, footpaths and kerb ramps; and
- desired upgrades to pedestrian facilities with regards to crossings, kerb ramps, streetscape, directional signage, accessibility, and safety and security.

3.5.2 Survey Summary

The 49 responders to the Traffic and Transport Strategy survey suggested that the active transport facilities in Cessnock LGA do not connect with all necessary pedestrian generators. The survey responders also

highlighted a lack of on-road, off-road and general recreational bike tracks throughout the majority of Cessnock. The community shows interest in both walking and cycling, however the conditions of footpaths and the absence of connected bike lanes is a deterrent for people who would like to use active transport more frequently. Figures 3.1 and 3.2 illustrate that bicycle and pedestrian facilities are largely regarded as inadequate within the community.

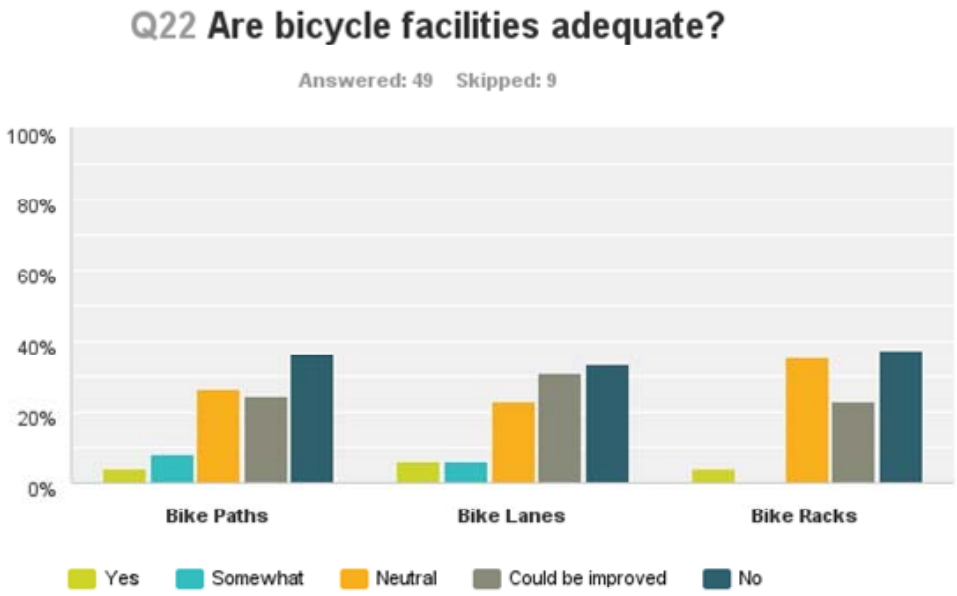


Figure 3.1: Adequacy of Bicycle Facilities

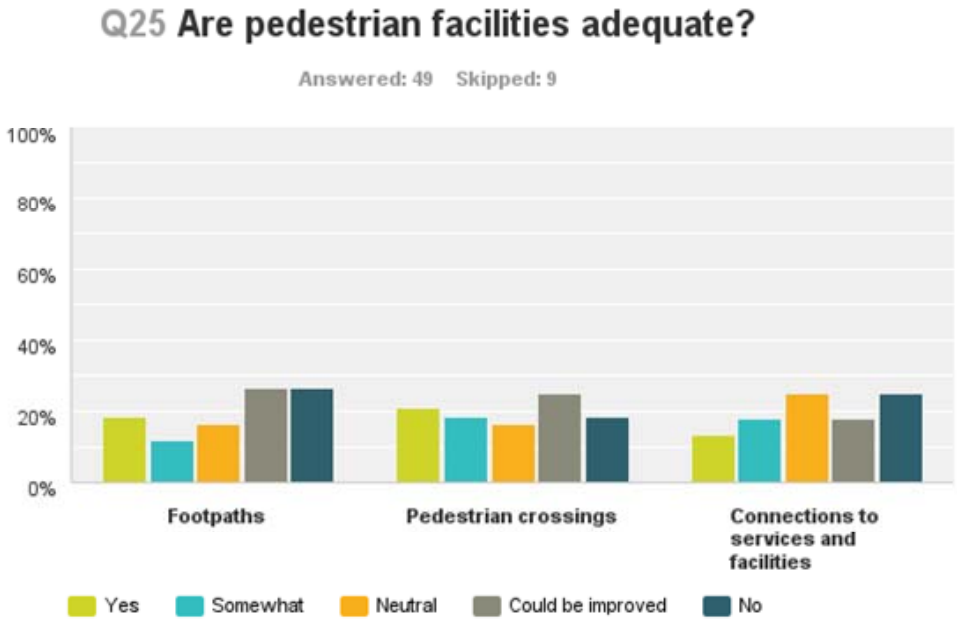


Figure 3.2: Adequacy of Pedestrian Facilities

Table 3.1 highlights selected comments made by patrons of the Cessnock LGA with regards to the lack of active transport facilities.

Table 3.1: Community Comments on Active Transport

Key Comments with regards to Active Transport (Walking and Cycling)
Cycling Related
No footpath or safe bike path from Abernethy to Lake Road Kearsley No bicycle park facilities on Lake Road near Kearsley Rd.
Off road cycle paths are needed across the city
There are few bike lanes on Cessnock roads. Having said that, being a regional/rural town, bikes are less often useful compared to metropolitan areas, so it is understandable.
No Bike lanes/foot paths in Cessnock west
No footpaths. No crossings, no bike lanes
There are no bike paths! Somewhere to ride on the weekend would be great. At the moment we travel to the Fernleigh track, Spears Point or The Entrance to use an off road bike track.
The only path / Lanes that I know of in our area is on McDonald's Road from near Drayton's, Pokolbin Estate, this project was never finished and is poorly maintained, especially along the hill near Lindeman's – Is there even one bike Rack in the area?
Nowhere to chain up bike in town
Our council provides little access for bike riders
Where are the bike racks in the CBD
Kearsley Road linking Abernethy to school urgently needs a bike path for the safety of children riding bikes to school.
Walking Related
Crossings need to be repainted especially upon entry to Cessnock Vincent street, to bus stop, lighting signage etc.
No footpaths in Cessnock west residential area, pedestrian crossings are dangerous as cars rarely stop on main road. No street lighting in O'Brien Street Cessnock
There are no footpaths in my area at all. In the town the grassed walking areas are never mowed and get to knee high grass.
We walk the kids to school every day and we have no footpaths here at all! I have to push my pram on the road and struggle with all the cars around.
The near complete absence/poor placement of pedestrian crossings in and around Coles, Woolworths and Cooper Street needs to be addressed.
Within the CBD of Kurri and Cessnock there is plenty of consideration given to pedestrian safety but when you move out of these areas footpath and safe pedestrian crossing can be substandard and needs more effort in addressing issues.
The pedestrian crossing on Cessnock Road at Abermain is in a dangerous position. It would be served better with Traffic lights & pedestrian crossing on the intersection. The way it is at the moment is taking your life into your own hands.
Footpaths in residential areas are often cracked, uneven, overgrown or non-existent.
Corner of Stuart & Ferguson Street extremely narrow intersection with very high traffic. Also, Abernethy Road to Kitchener large trucks and vehicle with no lines on a very narrow and dangerous road with bad corners and crests. Accidents waiting to happen unfortunately.
Abernethy has no concrete footpaths but most houses have 2 or 3 cars and occasionally caravans & boats so walkers (including 3 profoundly deaf residents) must walk on the road. They often don't hear cars coming up behind them and occasionally get abused by impatient drivers on the skinnier roads (Munro St especially).

The most common improvements suggested by the community are listed in Table 3.2.

Table 3.2: Suggested Improvements to the Pedestrian and Cyclist Facilities

Suggested Improvements
Bicycle Facility Improvements
Designated bike paths both on-road and off-road (i.e. Kearsley Road linking Abernethy to Kearsley)
Connect missing links between existing on-road bike paths
Bicycle tracks in scenic areas
Bicycle signs
Pedestrian Facility Improvements
Repair / maintain existing footpaths
Connect missing links between existing footpaths
Add footpaths around schools and residential areas
Safe intersection crossings
Wheel Chair / Pram access up gutters (i.e. ramps with no lip)

4. PAMP ROUTES

4.1 ROUTE SELECTION

The PAMP routes were initially selected based on the following criteria:

- proximity to pedestrian trip attractors and generators (schools, main streets, shopping centres);
- location of pedestrian crashes;
- findings from previous planning processes;
- concerns from community feedback; and
- relation to road hierarchy: routes that were closer to major roads, such as the Wollombi Road / Maitland Road, were selected as priority routes over local streets.

Table 4.1 identifies locations where pedestrian activity is likely to be high, including some examples.

Table 4.1: Examples of High Pedestrian Activity Areas

Location	Example
Within major centre	Vincent Street, Cessnock
Within minor centre	Clift Street, Branxton
Route to rail station	Railway Street, Branxton
Route to school/college	Deakin Street, Kurri Kurri
At or near bus stop	Wollombi / Maitland Road, Cessnock
At or near seniors centre/aged care	Mount View Road, Cessnock
At or near hospital/medical centre	View Street, Cessnock
At or near church	Cumberland Street, Cessnock
At or near recreation/tourism facility	Evans Street, Cessnock
Coincident with cycling route	Wollombi / Maitland Road, Cessnock

4.1.1 Cessnock CBD Route Selection

Route selection within Cessnock's CBD was focused around increasing connectivity and permeability between Vincent Street and the shopping centre car parks. Customers are more likely to follow a "park-once" principle with a well-connected network of pedestrian links, which has the added benefit of reducing traffic congestion within the centre. In this regard, new links are proposed to provide connectivity to and throughout the existing carparks which will produce a higher level of direction and guidance for pedestrians.

Figure 4.1 shows how the side streets and alleyways can be better utilised to increase the permeability in the area. The proposed paths provide links between existing footpaths and aim to increase pedestrian priority and therefore promoting a safe active network. Council will need to work with the private land owners to achieve the desirable pedestrian connectivity illustrated in Figure 4.1. The proposed links are indicative and are subject to change depending on the surrounding land owners.

There are five alleyways along Vincent Street that connect to car parking areas, four of which have existing footpaths but no designated pedestrian paths that connect the carpark area to the alleyways.

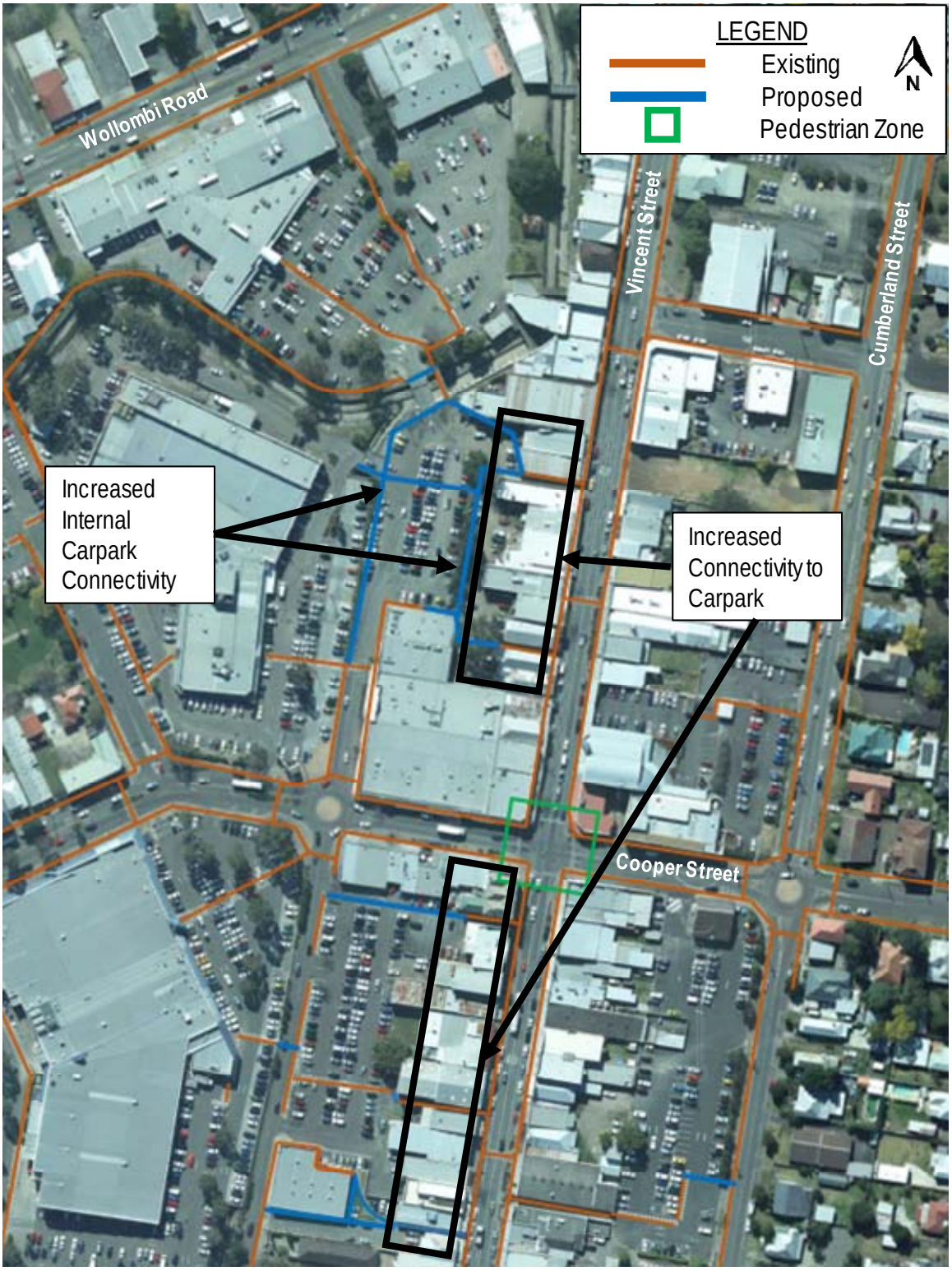


Figure 4.1: Cessnock CBD Routes

4.2 ROUTE PRIORITY

The PAMP routes were prioritised, either as high, medium, or low based on the same criteria used for selecting the routes. Higher priority was given to routes within major town centres and key pedestrian links to stations, bus stops, schools, and aged care facilities. The route prioritisation system is shown in Table 4.2.

Table 4.2: Route Prioritisation System Criteria

Criteria	Major Town Centre	Minor Town Centre	Local Residential Area
Primary link to pedestrian attractors/generators	High	Medium	Low
Secondary link to pedestrian attractors/generators	Medium	Low	Low
Location of pedestrian crashes	High	High to Medium	Low
Connections between existing footpaths or towns/villages	High to Medium	Medium	Medium to Low
Concerns from community feedback	Medium	Low to Medium	Low
Relation to road hierarchy	Medium	Low	Low

Routes adjacent to purely residential areas were identified as having low priority. It was assumed that most pedestrians accessing residential areas would drive and would generate very little pedestrian activity. Due to the size of the Cessnock LGA, only some low priority routes were able to be assessed during the audit.

4.3 ROUTE NETWORK

Based on the route priority system, and on the pedestrian crash clusters, a first draft PAMP priority route network was prepared. The draft route network contained priority routes for each of the city centres, but also a 'basic inter-town connector' route, which indicates a continuous pedestrian desire line between major towns and villages.

Maps for all the PAMP routes are provided in Appendix C.

4.4 ROUTE AUDIT

4.4.1 Methodology

Route audits were undertaken, over three days, of all the High Priority routes, as well as some Medium and Low priority routes, in order to identify any issues, using an audit checklist. Deficiencies were based on the '5C' criteria (as outlined in *Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths*), which are:

- Connectivity – is the route connected to the rest of the network?
- Comfort – is the route well maintained, smooth and unobstructed? Is the route attractive and free from excessive traffic noise?
- Convenience – are there adequate crossing opportunities? Are key destinations within walking distance of one another?
- Conviviality – how pleasant is the walking environment?
- Conspicuousness – are the walking routes clearly lit and easy to follow?

The audit considered footpaths, kerb ramps, crossings, bus stops, and other pedestrian facilities.

A checklist was developed, based on the relevant standards, for each issue as follows:

- Footpaths:
  - is the surface treatment consistent?;

- is the pavement width according to standards?;
- is the pavement uneven or cracked?;
- are there any obstructions?;
- is it a shared path?;
- is there clear signage?;
- slippery surface?;
- drainage?; and
- is the cross fall compliant with standards?

- Kerb ramps and crossings:
  - what type of crossing exists?;
  - is there sufficient pedestrian green time?;
  - is there sufficient visibility of the intersection?;
  - are kerb ramps designed according to standard?; and
  - what are the approaching vehicle speeds?;
- Bus stops:
  - provision of shelter;
  - provision of seating;
  - sufficient queuing space; and
  - easy access to kerb.
- Other pedestrian facilities:
  - Tactile Ground Surface Indicators (TGSI) for vision-impaired;
  - Signage, such as shared zones, speed limits;
  - provision of street lighting;
  - provision of shade; and
  - provision of bins.

The complete audit results are included with the Recommended Works Program found in Appendix D. The following sections highlight some examples of common issues for Footpaths, Kerb Ramps, Crossings and Bus Stops.

4.4.2 Footpaths

The most common issues associated with footpaths were damaged surfaces due to general wear and tear. In some cases, this created a level difference that made a trip hazard. There were also some missing links to other pedestrian facilities (i.e. bus stops and car parks), a notable example being the bus stop on Mitchell Avenue in Kurri Kurri.

Picture	Comment
	Cracked and uneven footpath on Wollombi Road, Cessnock

Picture	Comment
	Cracked and uneven footpath on Miller Street, Cessnock
	No linking to existing bus top on Mitchell Avenue, Kurri Kurri

4.4.3 Kerb Ramps

Although most corners had kerb ramps, in many cases they were either not present, damaged, had a lip at the gutter, or were aligned incorrectly (directing pedestrians diagonally across the intersection).

Picture	Comment
	Damaged kerb ramp presenting trip hazard at Central Plaza Shopping Centre Car Park Area, Cessnock

Picture	Comment
	No kerb ramp present to provide safe path for pedestrians to cross the road on Vincent Street (east), Cessnock
	Poor Alignment of existing kerb ramp on Campbell Street, Cessnock

4.4.4 Crossings

In descending order of pedestrian protection, the crossings were (a) signalised, (b) pedestrian (or zebra) crossings, or (c) pedestrian refuges. Although the type of facility often matched the pedestrian demand, the sign posting and/or road marking was not in accordance with current standards, or else was poorly maintained.

Picture	Comment
	Damaged road surface at the base of kerb ramp. Presents a dangerous trip hazard to pedestrians. Vincent Street, adjacent to Bunnings Warehouse, Cessnock.

Picture	Comment
	Faded pedestrian crossing and non-compliant sign colour Charlton Street, near Cessnock Plaza Shopping Centre, Cessnock

4.4.5 Car Parks

A recurring issue observed was shopping patrons abandoning their trollies on footpaths. This leaves the existing footpaths congested and difficult to manoeuvre especially for people with disabilities.

Picture	Comment
	Shopping carpark path congested with shopping trollies Cessnock Plaza Shopping Centre, Cessnock

4.5 AUDIT SUMMARY

A complete list of all audit findings is contained in Appendix D, showing issues observed for each town or village and locations of audit findings can be found in Appendix E.

In addition to the audit list, photos of observed issues have been geocoded to the location and are cross-referenced in the list. The photos have been provided to CCC.

5. DETAILED RECOMMENDED WORKS PROGRAM

5.1 WORKS PRIORITY

A priority level has been assigned to each recommended action, taking into consideration its contribution to pedestrian safety, ease of accessibility and the amenity of the surrounding environment. Priority levels were assigned as follows:

- High Priority (H) = Essential for pedestrian safety:
  - for issues that would likely result in pedestrians having to use heavily trafficked streets due to a lack of footpath, deficient pedestrian facilities, or misleading pavement markings or street signage;
  - for locations where there are high pedestrian volumes as well as high traffic volumes that should maintain/improve the level of pedestrian access and mobility in accordance with design standards;
  - for locations where kerb ramps are missing at pedestrian signal crossings at heavily trafficked roads, specifically the Vincent Street and Maitland / Wollombi Road;
  - for areas such as shopping centre car parks, where traffic directional signage (shared zones, advisory speed signs, etc.) is unclear and likely to impede pedestrian safety;
  - for some locations where there is very limited footpath provision near a major pedestrian attractor or generator, (e.g. Branxton Train Station access);
- Medium Priority (M) = Desirable for pedestrian safety, convenience or amenity:
  - for issues that would likely result in pedestrians having to use local low-trafficked streets due to a lack of footpath, deficient pedestrian facilities, or misleading pavement marking or street signage;
  - for faded pedestrian crossings or narrow kerb ramps across roads through town centres; and
  - for trip hazards near schools, child care centres, or aged care facilities;
- Low Priority (L) = Little impact on pedestrian safety, desirable for pedestrian convenience or amenity:
  - for minor footpath deficiencies, such as bad lip heights or narrow kerb ramps, in local streets;
  - for outdated symbol signs or faded traffic signs;
  - for minor bus stop deficiencies, such as missing shelters, seating, or bin provision; and
  - for lack of footpath provision in low pedestrian volume streets, where a footpath exists on the other side of the road.

5.2 COST ESTIMATES

The estimated costs of treatments are based on typical unit rates in addition to rates used in other PAMP studies for other local councils in NSW. The list of unit costs is shown in Table 5.1. These costs are indicative and should be used as a guide only.

Table 5.1: Indicative Costs

Reference (if applicable)	Item	Unit Cost
	Install new concrete footpath	$200 per m^2
	Road repair	$150 per m^2
AS 1428.4.1 Austroads Part 4 and 6A	Install new kerb ramp	$5,000 per item
	Install pedestrian (zebra) crossing sign	$200 per item
AS 1742.10 Austroads Part 4 and 6A	Re-mark pedestrian (zebra) crossing	$1,000 per item
	Install new bollards	$500 per item
	Install new wheel stops	$100 per item
	Clear vegetation (brush cutting/mowing 1m either side of footpath)	$1.10 per m^2

	Remove kerb ramps (part of repair/replacement of footpath)	$182.62 per m^2
TDT 2002/12b Austroads Part 4	Install new pedestrian refuge, which includes (approximately): ▪ Installing kerb ramps (x2) = $10,000 ▪ Pavement markings = $1,000 ▪ Pedestrian crossing signs (x4) = $800 ▪ Raised kerbs ($75/m^2) = $1000 ▪ Other costs associated, including erecting No Stopping signs, removal of existing street furniture, etc.	$13,000 per item
	Pavement grinding	$25 per item
AS 1428.4.1	Install TGSI	$200 per item
	Erect traffic sign	$200 per item

Based on the preliminary cost estimates, the total cost for all recommended treatments (across priority works and priority routes) is shown in Tables 5.2 and 5.3 below. These cost estimates do not include costs associated with RMS State Roads, as they not included as part of CCC funding or responsibility.

Table 5.2: Cost Estimates Summary for Priority Routes

		Route Priority			
		High	Medium	Low	Sub Total
Location	Cessnock	$1,281,100	$1,522,300	$2,469,700	$5,273,100
	Kurri Kurri	$22,500	$1,745,000	$1,969,500	$3,737,000
	Weston	$0	$414,500	$156,000	$570,500
	Branxton	$0	$434,300	$1,159,500	$1,593,800
	Greta	$0	$357,500	$1,230,200	$1,587,700
	Sub Total	$1,303,600	$4,473,600	$6,984,900	$12,762,100

Table 5.3: Cost Estimates Summary for Audit

		Audit			
		High	Medium	Low	Sub Total
Location	Cessnock	$77,576	$144,038	$38,665	$260,280
	Kurri Kurri	$13,000	$20,000	$80,429	$113,429
	Weston	$123,500	$2,400	$9,175	$135,075
	Branxton	-	-	-	$0
	Greta	-	-	-	$0
	Sub Total	$214,076	$166,438	$128,269	$508,784

Tables 5.2 and 5.3 (overleaf) shows the treatments that are considered High priority works for the High Priority PAMP routes. The full list of inspected routes (high, medium, and some low) with recommended works are provided in Appendix D and the new link ID's can be found in Appendix E.

6. FUNDING SOURCES

6.1 ROADS AND MARITIME SERVICES

RMS will generally fund works on State Roads including crossings and kerb ramps. State Roads are 100% funded by RMS, while works on Regional and Local Roads are funded 50/50 by RMS and CCC. In the last two cases, RMS contributes funding for road crossing facilities and kerb ramps only.

Within the study area, the following classifications apply for funding purposes:

- State Roads – Cessnock Road and John Renshaw Drive; and
- Regional Roads – Broke Cessnock Road and Tourist Drive (as detailed in Table 2.1).

All other roads are considered local roads and are under the jurisdiction of CCC. Further details of RMS funding can be found in the "Council Projects Funded by The RTA, Memorandum of Understanding" June 2009.

6.2 SECTION 94 CONTRIBUTIONS

The Environmental Planning and Assessment Act 1979 makes allowance for a consent authority to extract money for the provision of public amenity or public services. Should a development increase pedestrian activity or demand then it would be reasonable for Council to seek contribution toward improvements to pedestrian facilities in the area provided a link between the development and facility can be reasonable shown.

In relation to the PAMP, Council may consider including some of the works as part of their Section 94 contribution plan.

6.3 SYDNEY TRAINS

Works associated with the Cessnock LGA Train Stations (Branxton and Greta Stations), particularly the installation of disabled access at stations, is the responsibility of Sydney Trains. Funding for this is outside of the Cessnock City Council, but Council may consider joint funding for works such as upgrading pedestrian accessibility and linkages to the local road network across the railway line.

6.4 OTHER FUNDING SOURCES

Other potential funding sources include:

- Opportunities may exist for local community groups to assist Council in achieving some of the works; and
- Works associated with specific services, such as broken or sunken Telstra pits, are usually carried out by the respective service providers.

7. IMPLEMENTATION AND MONITORING PROGRAM

The next stages in the PAMP are to:

- organise funding sources to establish a budget and over what timeframe;
- establish an implementation program; and
- monitor the implementation of the PAMP and its outcomes.

The PAMP is intended to be implemented over the 10-year horizon of this Plan. Funding and budget for recommendations should be identified and set in the budget, and higher priority works be given precedent. In addition, it is recommended that the Cessnock Delivery Program be updated to incorporate the recommended works program outlined in this PAMP.

It is typical to have a monitoring program for the PAMP. This would involve:

- recording of all proposed pedestrian works in a database;
- analysis of crash statistics;
- collection of pedestrian count information; and
- periodic updating of the PAMP every five years.

8. CONCLUSIONS AND RECOMMENDATIONS

The PAMP presents a plan to improve pedestrian safety and encourage more walking within the Cessnock City Council Local Government Area.

Issues affecting pedestrians were discussed with community groups and residents. Major pedestrian issues identified were the lack of connectivity of some footpaths and the complete lack of footpaths in some locations. Other issues included poor surface and sub-substandard kerb ramps, sign posting and road marking.

High priority PAMP routes were defined, and a comprehensive field audit was conducted to catalogue issues with local footpaths, kerb ramps, bus stops and walking environments. A number of recommended works are proposed with indicative costs given for each PAMP route.

The total cost of the improvements identified is approximately $11 million.

If implemented, the proposed works will help to improve pedestrian safety and amenity across the CCC LGA and encourage residents and employees to undertake walking trips for shopping, work and leisure. It is recommended that these works be implemented as funding becomes available from CCC and RMS, as well as through Councils Special Rate Variation policy. Consideration could also be given to including some items in Council's section 94 contribution plan when it is updated.

GLOSSARY OF TERMS

CCC: Cessnock City Council

DDA: Disability Discrimination Act

GIS: Geographic Information System

PAMP: Pedestrian Access and Mobility Plan

PAMP Route: Key pedestrian routes identified in the study, and prioritised and audited based on their proximity to pedestrian attractors and generators, pedestrian crash clusters, community feedback, and relation to road hierarchy.

Pedestrian: Any person walking including: a person driving a motorised wheelchair that cannot travel at over 10 kilometres per hour (on level ground), a person in a non-motorised wheelchair, a person pushing a motorised or non-motorised wheelchair, a person in or on a wheeled recreational device or wheeled toy (Source: *RMS How To Prepare a Pedestrian Access and Mobility Plan*)

Pedestrian Attractors and Generators: Places that are likely to have high pedestrian activity, such as shopping centres, schools, train stations, bus stops, tourist centres, medical centres, retirement villages, etc.

Pedestrian Crash Clusters: Any location up to 100 metres long with three or more pedestrian crashes over five years (Source: *RMS How To Prepare a Pedestrian Access and Mobility Plan*)

Pedestrian Facility: Any traffic device associated with a pedestrian, including footpaths, kerb ramps, pedestrian crossings, pedestrian refuges, shared paths, bus stops, bus shelters, and pedestrian bridges

Road Network: System of links and nodes which make up the network of roads on the ground. It includes link characteristics and turning restrictions or prohibitions (Source: *RMS How To Prepare a Pedestrian Access and Mobility Plan*)

TGSI: Tactile Ground Surface Indicators

APPENDIX A

PEDESTRIAN CRASH DATA

1. PEDESTRIAN CRASH DATA

RTA crash data for Cessnock LGA was analysed from 2009 to 2013 to reveal all pedestrian and cyclist involved crashes in that period. Tables A1.1 and A1.2 show the locations of impact with the Road User Movement (RUM) Code of all recorded pedestrian crashes in the Cessnock LGA.

Table A1.1: Type of Pedestrian Accidents

Location of Pedestrian (RUM Code)	2009	2010	2011	2012	2013
Near Side (0)	1	4	1	5	3
Emerging (1)	0	0	2	0	1
Far Side (2)	3	2	1	0	1
Playing / Working (3)	3	1	0	0	1*
Walking with Traffic (4)	2*	1	0	0	0
Facing Traffic (5)	0	1	1	0	0
Other	2	0	1	0	0

**Indicates a Fatality*

A total of 35 pedestrian crashes occurred over the 5-year period analysed with two fatalities. The two fatalities were situated outside urban development regions on Lovedale Road and John Renshaw Drive. One of the pedestrians was walking with the traffic (RUM 4) while the other pedestrian was working near the road (RUM 3).

Table A1.2: Type of Cyclist Accidents

Location of Pedestrian (RUM Code)	2009	2010	2011	2012	2013
Cross Traffic (10)	1	0	0	2	2
Reared (30)	0	0	1*	1	0
Lane Change Right (34)	0	0	0	1	0
Emerging from Driveway (47)	0	0	2	1	0
Manoeuvring from Footpath (48)	1	3	0	1	0
Vehicle Door (63)	1	0	0	0	0
Out of Control on Carriageway (74)	0	1	2	0	0
Other	0	1	0	0	0

**Indicates a Fatality*

A total of 22 cyclist crashes occurred over the 5-year period analysed with one fatality. This fatality was situated North-West of Central Cessnock outside urban development on Broke Road with the cyclist travelling in the same direction (RUM 20) of the traffic along Broke Road.

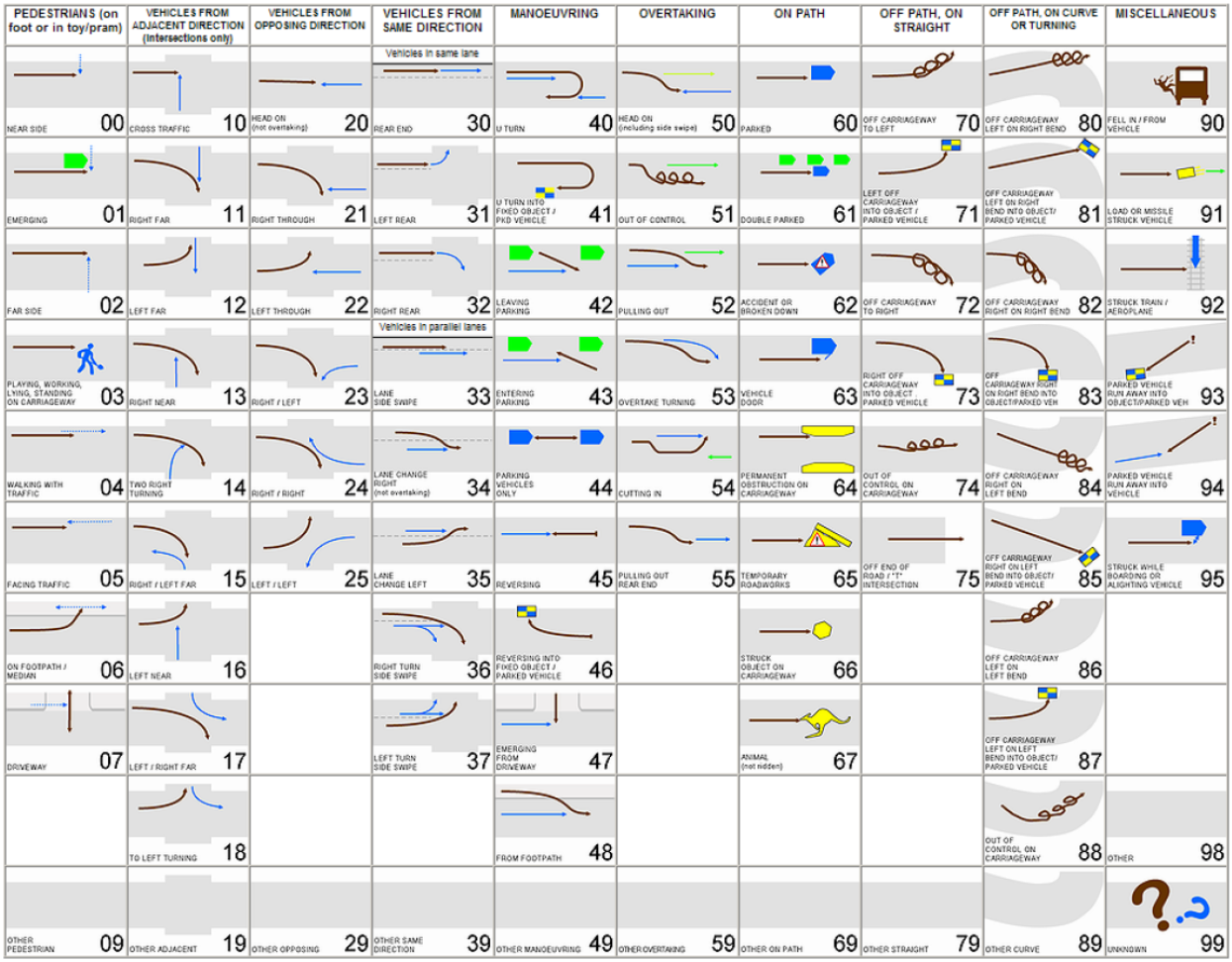
Figures A1.1 and A1.2 show the locations of pedestrians as well as bicycle crashes across Cessnock LGA in Cessnock and Kurri Kurri respectively. The pedestrian and cyclist crashes have generally been clustered around activity centres. Most of the crashes were situated around the Cessnock and Kurri Kurri main streets (Vincent Street and Lang Street). The most common RUM Codes for pedestrian crashes, which describes the first impact of the recorded crash, were found to be 0 and 2 implying that the pedestrian crash most likely occurred as a result of a pedestrian trying to cross the road. For bicycle crashes the most common RUM Codes were 10 and 48 which are cross traffic at intersections and manoeuvring from a footpath respectively.

Table A1.3: Location of Pedestrian and Cyclist Crashes

Road / Street Name	Region of Crash	Number of Pedestrian Crashes	Number of Cyclist Crashes
Wollombi / Maitland Road	Cessnock	3	4
Aberdare Road	Cessnock	2	3
Vincent Street	Cessnock	2	1
Allandale Road	Cessnock	1	2
North Avenue	Cessnock	0	2
Wine Country Drive	North Cessnock	3	0
Lang Street	Kurri Kurri	5	0
Barton Street	Kurri Kurri	1	1
Cessnock Road	Weston	2	0

Table A1.3 shows that Wollombi / Maitland Road has a total of 7 crashes (3 pedestrians and 4 cyclist). The majority of the crashes occurred within an 800m radius to Vincent Street (Cessnock main street) and Lang Street (Kurri Kurri main street). No fatalities occurred within a cluster (2 or more crashes within 150m), two were situated in the rural regions north of Cessnock and one east of Kurri Kurri. A full copy of the RUM code can be found at the end of this Appendix.

Rum Code


PEDESTRIANS (on foot or in toy/pram)
VEHICLES FROM ADJACENT DIRECTION (intersections only)
VEHICLES FROM OPPOSING DIRECTION
VEHICLES FROM SAME DIRECTION
MANOEUVRING
OVERTAKING
ON PATH
OFF PATH, ON STRAIGHT
OFF PATH, ON CURVE OR TURNING
MISCELLANEOUS
Vehicles in same lane
Vehicles in parallel lanes
NEAR SIDE 00
EMERGING 01
FAR SIDE 02
PLAYING, WORKING, LYING, STANDING ON CARRIAGEWAY 03
WALKING WITH TRAFFIC 04
FACING TRAFFIC 05
ON FOOTPATH / MEDIAN 06
DRIVEWAY 07
OTHER PEDESTRIAN 09
CROSS TRAFFIC 10
RIGHT FAR 11
LEFT FAR 12
RIGHT NEAR 13
TWO RIGHT TURNING 14
RIGHT / LEFT FAR 15
LEFT NEAR 16
LEFT / RIGHT FAR 17
TO LEFT TURNING 18
OTHER ADJACENT 19
HEAD ON (not overtaking) 20
RIGHT THROUGH 21
LEFT THROUGH 22
RIGHT / LEFT 23
RIGHT / RIGHT 24
LEFT / LEFT 25
OTHER OPPOSING 29
REAR END 30
LEFT REAR 31
RIGHT REAR 32
LANE SIDE SWIPE 33
LANE CHANGE RIGHT (not overtaking) 34
LANE CHANGE LEFT 35
RIGHT TURN SIDE SWIPE 36
LEFT TURN SIDE SWIPE 37
OTHER SAME DIRECTION 39
U TURN 40
U TURN INTO FIXED OBJECT / PKD VEHICLE 41
LEAVING PARKING 42
ENTERING PARKING 43
PARKING VEHICLES ONLY 44
REVERSING 45
REVERSING INTO FIXED OBJECT / PARKED VEHICLE 46
EMERGING FROM DRIVEWAY 47
FROM FOOTPATH 48
OTHER MANOEUVRING 49
HEAD ON (including side swipe) 50
OUT OF CONTROL 51
PULLING OUT 52
OVERTAKE TURNING 53
CUTTING IN 54
PULLING OUT REAR END 55
OTHER OVERTAKING 59
PARKED 60
DOUBLE PARKED 61
ACCIDENT OR BROKEN DOWN 62
VEHICLE DOOR 63
PERMANENT OBSTRUCTION ON CARRIAGEWAY 64
TEMPORARY ROADWORKS 65
STRUCK OBJECT ON CARRIAGEWAY 66
ANIMAL (not ridden) 67
OTHER ON PATH 69
OFF CARRIAGEWAY TO LEFT 70
LEFT OFF CARRIAGEWAY INTO OBJECT / PARKED VEHICLE 71
OFF CARRIAGEWAY TO RIGHT 72
RIGHT OFF CARRIAGEWAY INTO OBJECT PARKED VEHICLE 73
OUT OF CONTROL ON CARRIAGEWAY 74
OFF END OF ROAD / "T" INTERSECTION 75
OTHER STRAIGHT 79
OFF CARRIAGEWAY LEFT ON RIGHT BEND 80
OFF CARRIAGEWAY LEFT ON RIGHT BEND INTO OBJECT/ PARKED VEHICLE 81
OFF CARRIAGEWAY RIGHT ON RIGHT BEND 82
OFF CARRIAGEWAY RIGHT ON RIGHT BEND INTO OBJECT/PARKED VEH 83
OFF CARRIAGEWAY RIGHT ON LEFT BEND 84
OFF CARRIAGEWAY RIGHT ON LEFT BEND INTO OBJECT/ PARKED VEHICLE 85
OFF CARRIAGEWAY LEFT ON LEFT BEND 86
OFF CARRIAGEWAY LEFT ON LEFT BEND INTO OBJECT/ PARKED VEHICLE 87
OUT OF CONTROL ON CARRIAGEWAY 88
OTHER CURVE 89
FELL IN / FROM VEHICLE 90
LOAD OR MISSILE STRUCK VEHICLE 91
STRUCK TRAIN / AEROPLANE 92
PARKED VEHICLE RUN AWAY INTO OBJECT/PARKED VEH 93
PARKED VEHICLE RUN AWAY INTO VEHICLE 94
STRUCK WHILE BOARDING OR ALIGHTING VEHICLE 95
OTHER 98
UNKNOWN 99

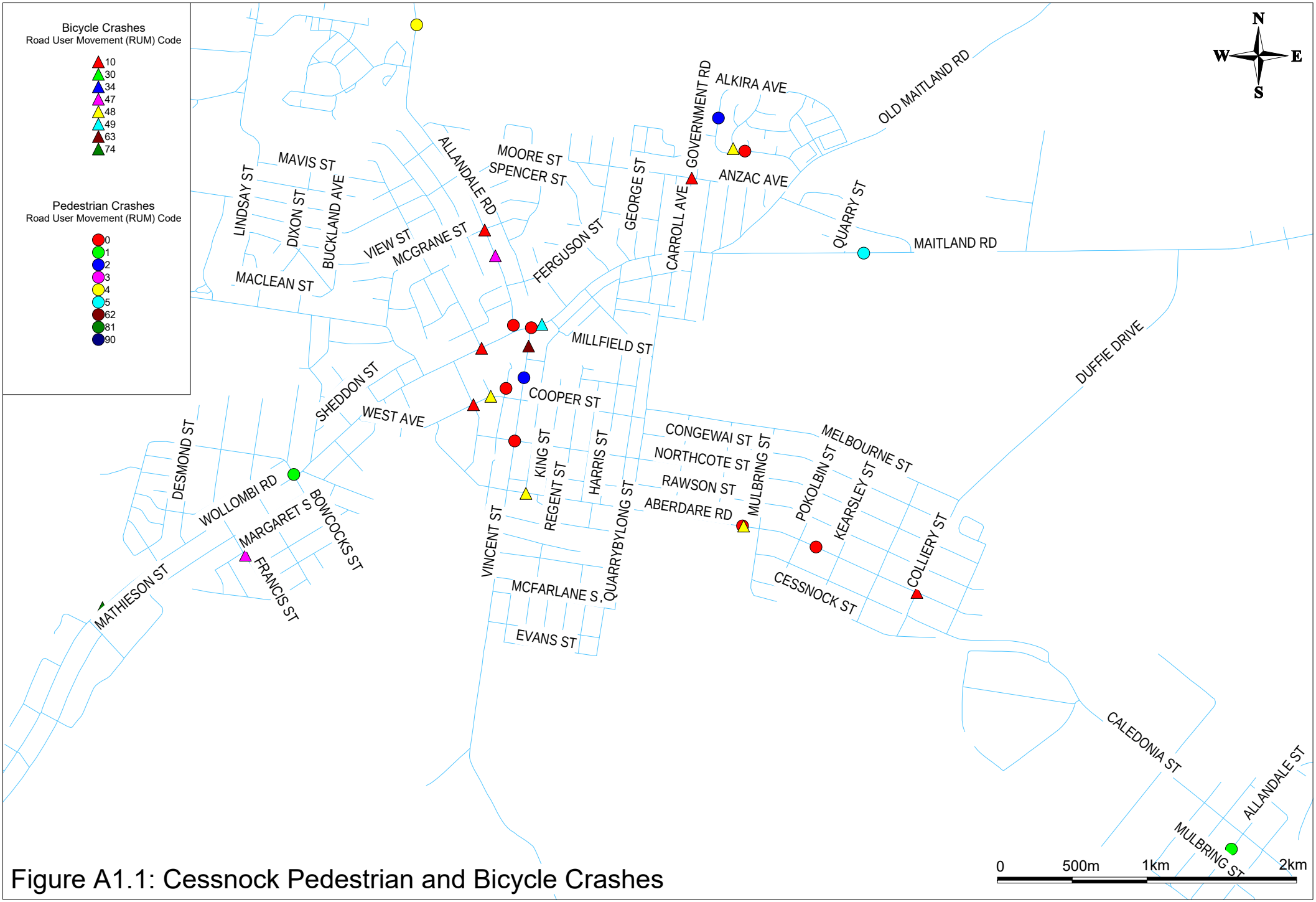


Figure A1.1: Cessnock Pedestrian and Bicycle Crashes

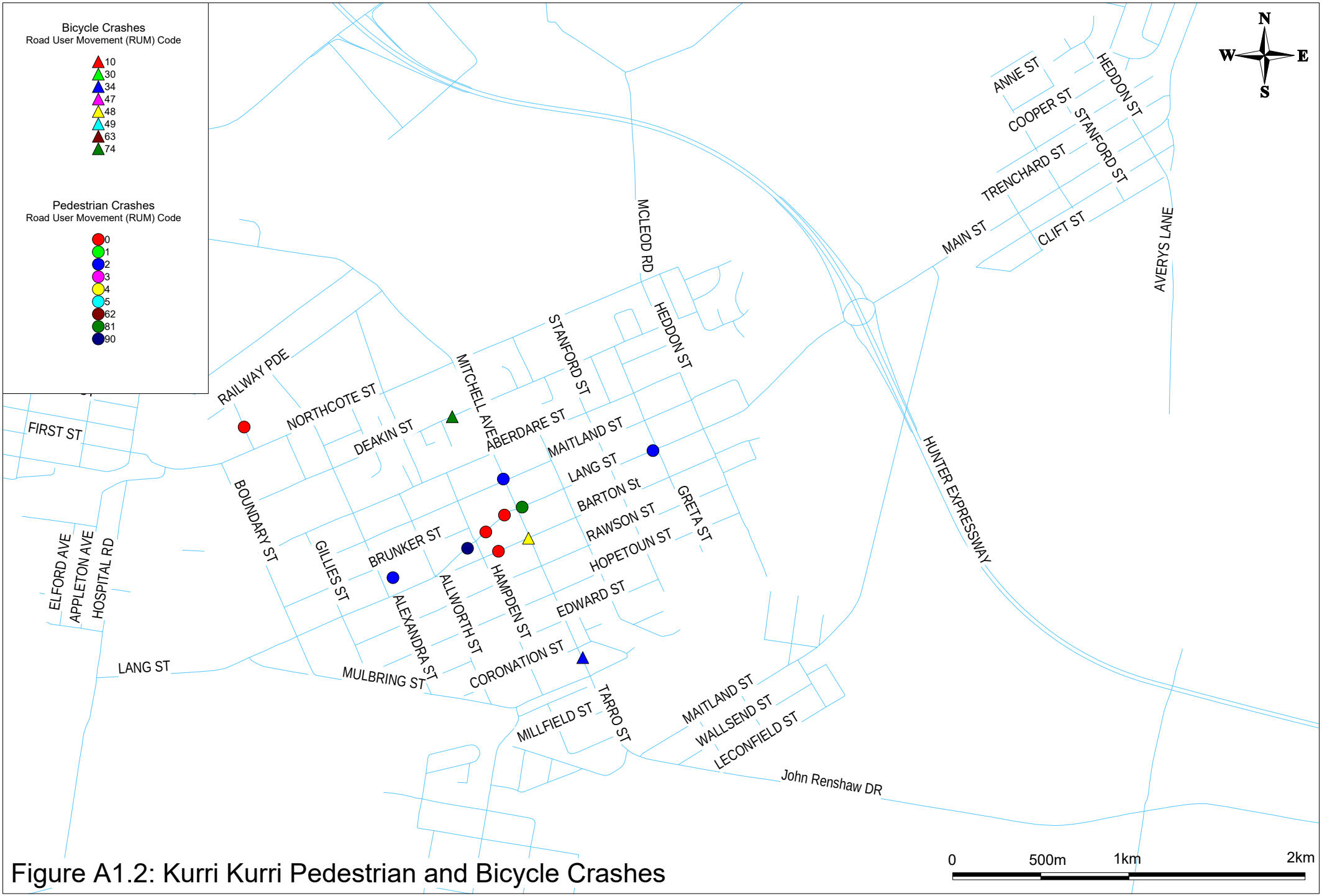


Figure A1.2: Kurri Kurri Pedestrian and Bicycle Crashes

APPENDIX B

DESIGN STANDARDS

DESIGN STANDARDS

Below is a list of links (where applicable) to all design standards and codes referenced in the PAMP. The design standards adopted include a combination of Australian Standards, Austroads Guides and local RMS technical directions and model drawings.

- Australian Standard AS 1158.4.

  http://shop.standards.co.nz/catalog/1158.4:2009(AS%7CNZS)/scope?
- Australian Standard AS 1428.4.1 – 2009: Design for Access and Mobility.

  https://infostore.saiglobal.com/STORE/PreviewDoc.aspx?saleItemID=2059516
- Australian Standard AS 1742.10: Pedestrian Control and Protection.

  https://infostore.saiglobal.com/STORE/PreviewDoc.aspx?saleItemID=1662054
- Austroads Guide to Road Design Part 4. Intersections and Crossings.

  https://www.onlinepublications.austroads.com.au/items/AGRD04-09
- Austroads Guide to Road Design Part 6A, Pedestrian and Cycle Paths.

  https://www.onlinepublications.austroads.com.au/items/AGRD06A-09
- Cessnock Requirements for Development
- http://www.cessnock.nsw.gov.au/planning-and-development/publications/engineering
- Disability Standards for Accessible Public Transport 2002.

  https://www.comlaw.gov.au/Details/F2005B01059
- NSW Bicycle Guidelines (RTA 2005).

  http://www.rms.nsw.gov.au/business-industry/partners-suppliers/documents/technical-manuals/nswbicyclev12aa_i.pdf
- RMS model drawings MD R173.B01.A1.

  http://www.rms.nsw.gov.au/business-industry/partners-suppliers/design-documents/model-road-drawings/mrd-general-concrete-paving.html
- RMS Technical Direction TDT 2002/12b (Stopping and Parking Restrictions at Intersections and Crossings).

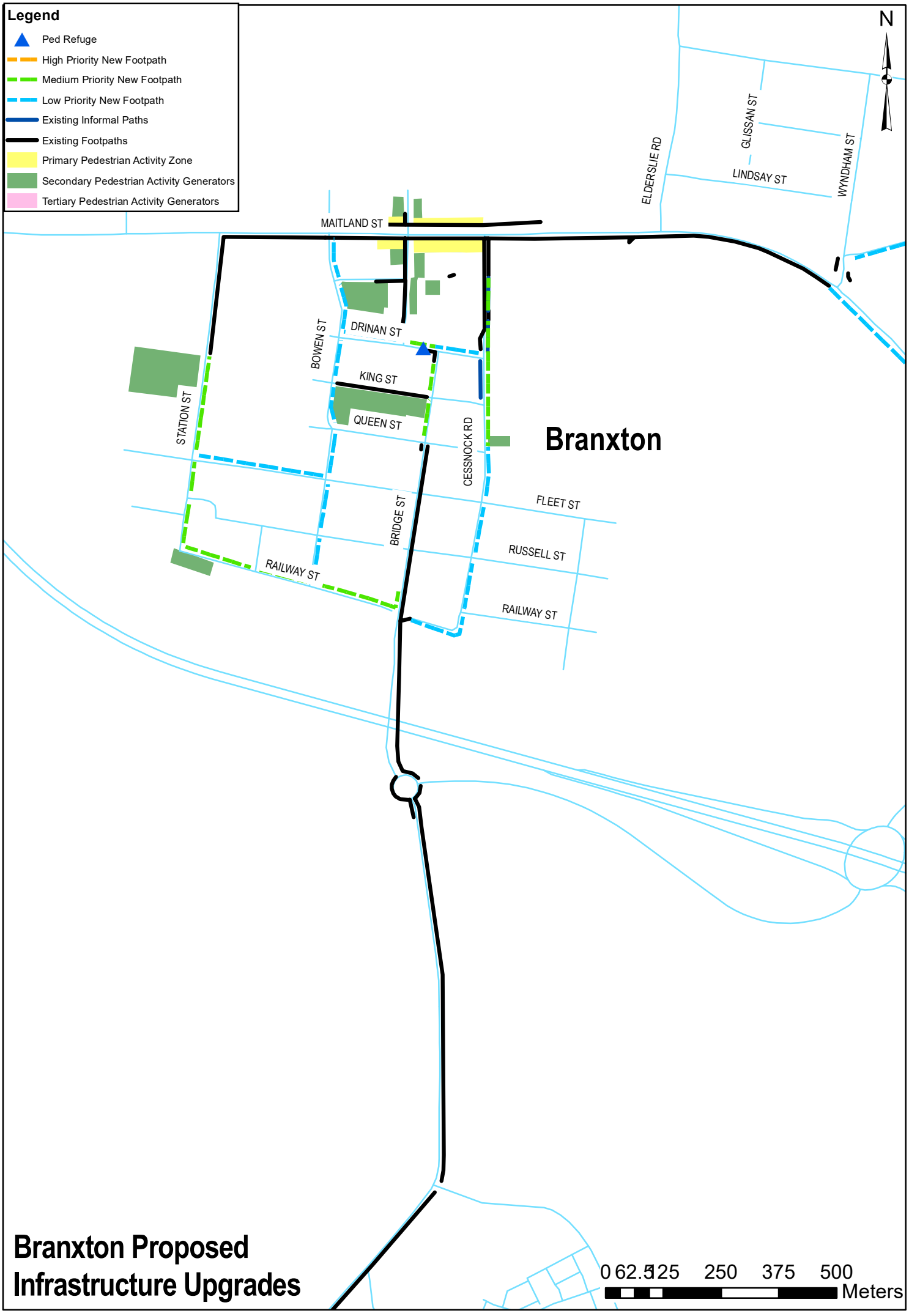
  http://www.rms.nsw.gov.au/trafficinformation/downloads/td02_12b.pdf
- RMS Technical Direction TDT 2011/01a (Pedestrian Refuges).

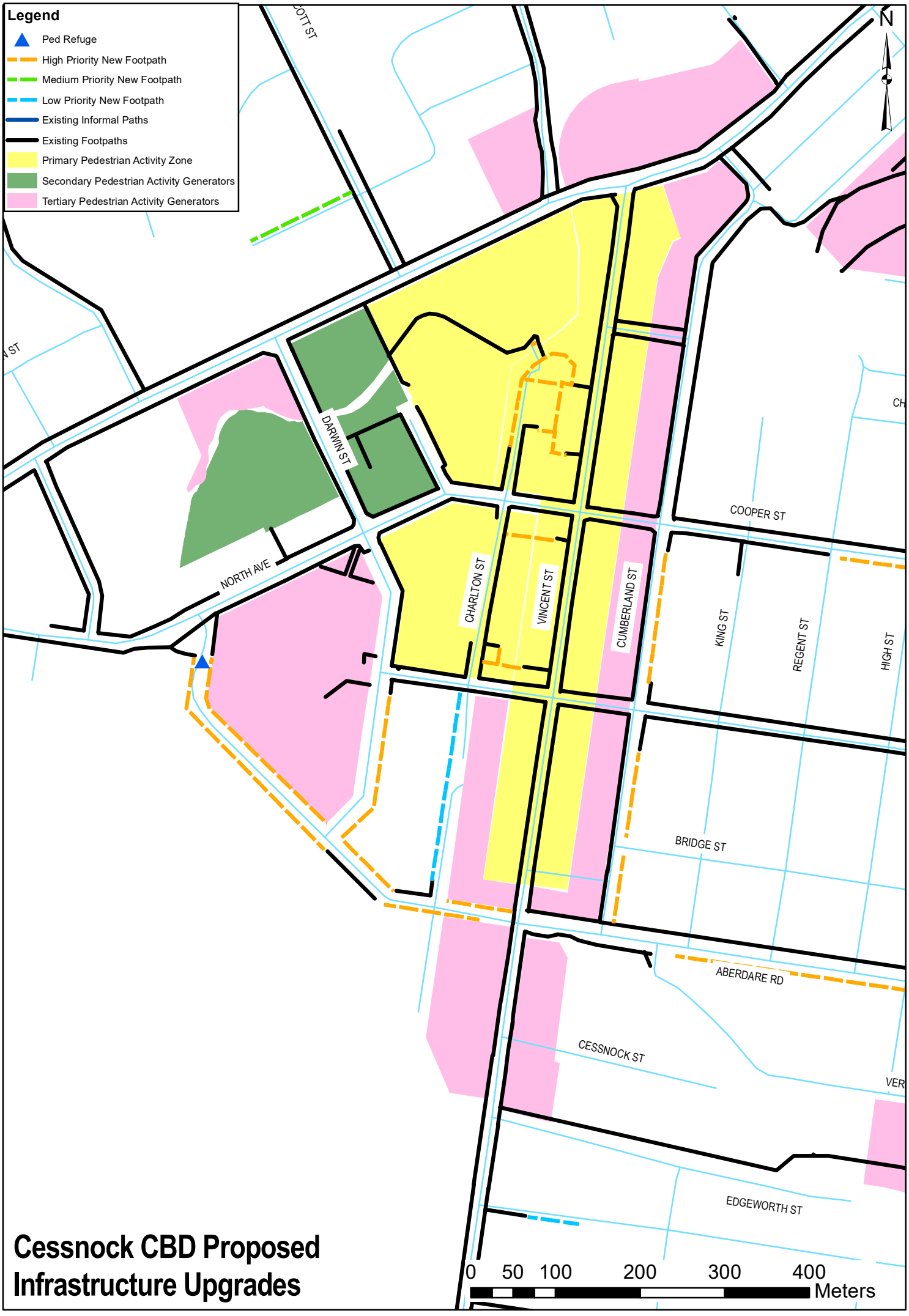
  http://www.rms.nsw.gov.au/trafficinformation/downloads/td11_01a.pdf
- RUM Codes (from Definitions and notes to support road crash data, TfNSW June 2014).

  http://roadsafety.transport.nsw.gov.au/downloads/definitions-notes.pdf

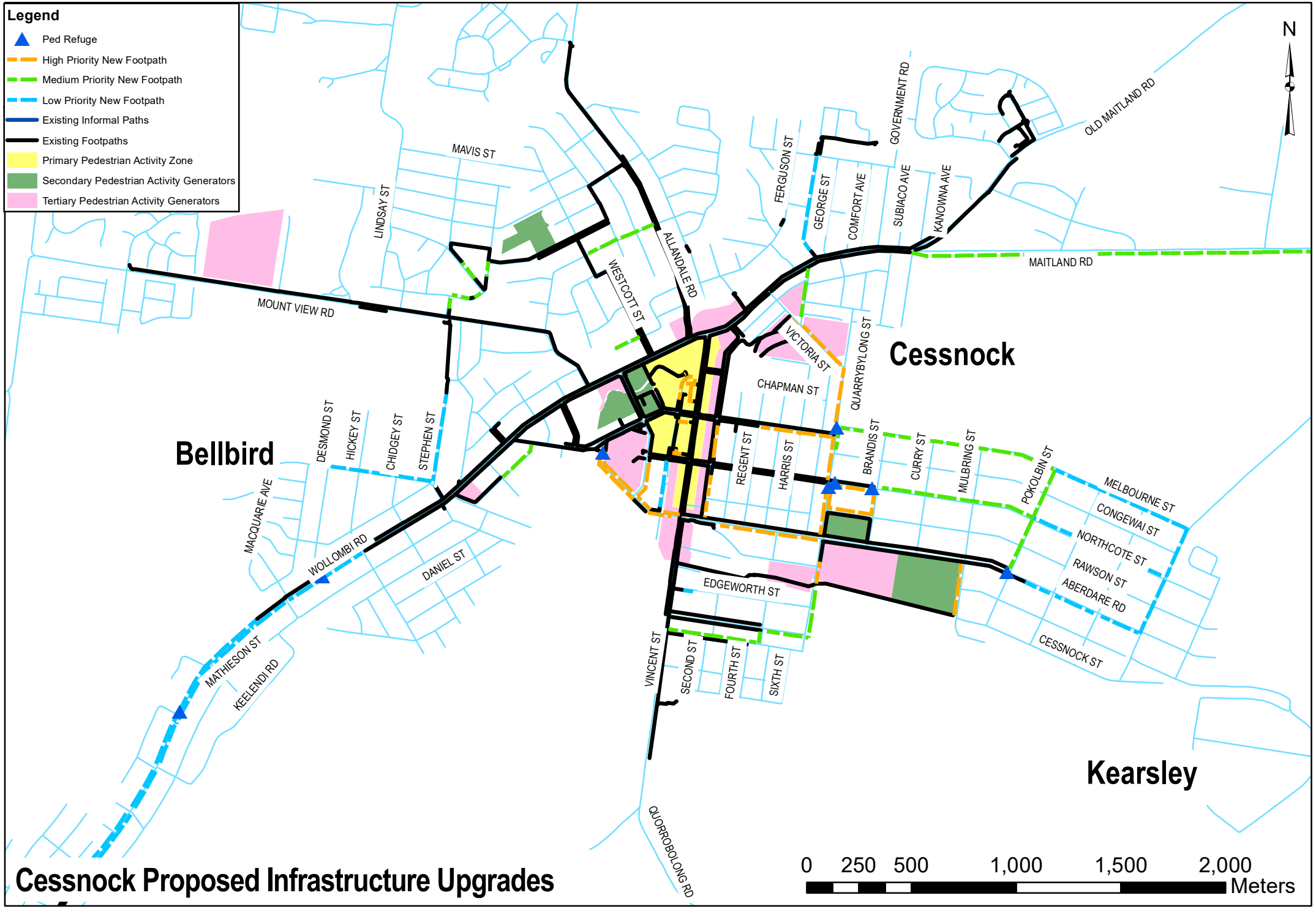
APPENDIX C

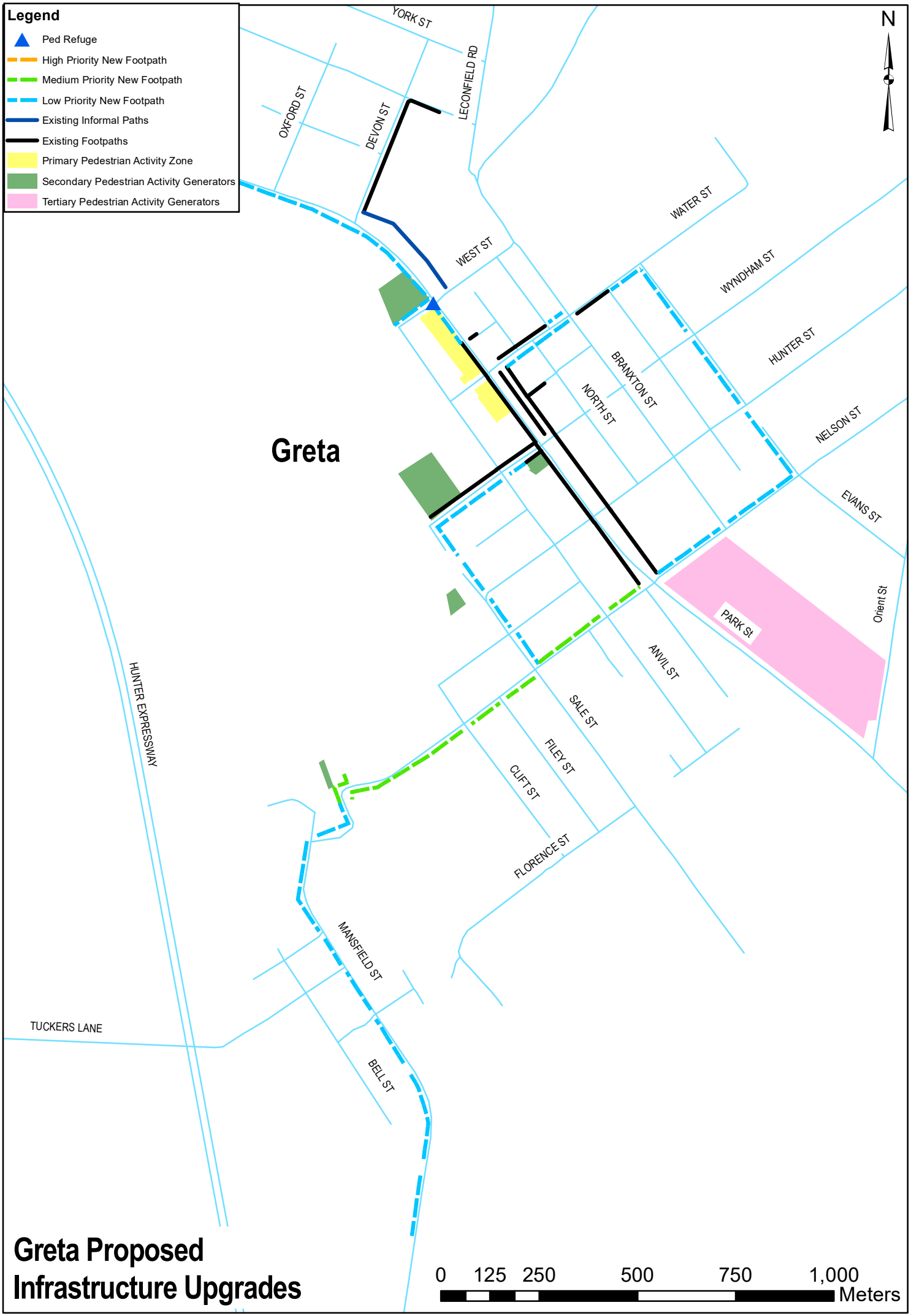
PAMP ROUTES (MAPS)

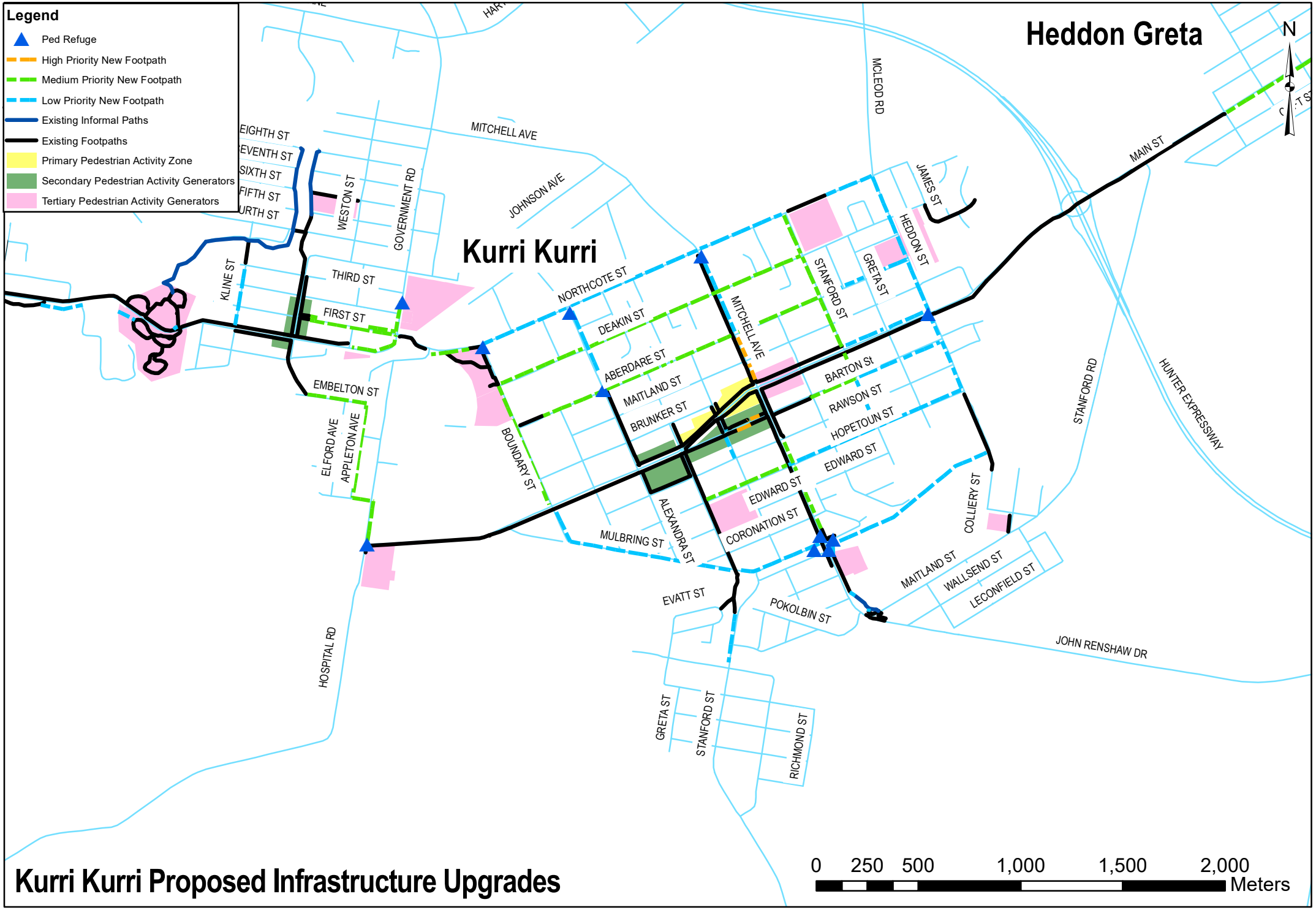

Legend
Ped Refuge
High Priority New Footpath
Medium Priority New Footpath
Low Priority New Footpath
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
MAITLAND ST
ELDERSLIE RD
GLISSAN ST
LINDSAY ST
WYNDHAM ST
DRINAN ST
BOWEN ST
KING ST
QUEEN ST
STATION ST
CESSNOCK RD
BRIDGE ST
FLEET ST
RUSSELL ST
RAILWAY ST
RAILWAY ST
Branxton
Branxton Proposed Infrastructure Upgrades
0 62.5 125 250 375 500
Meters

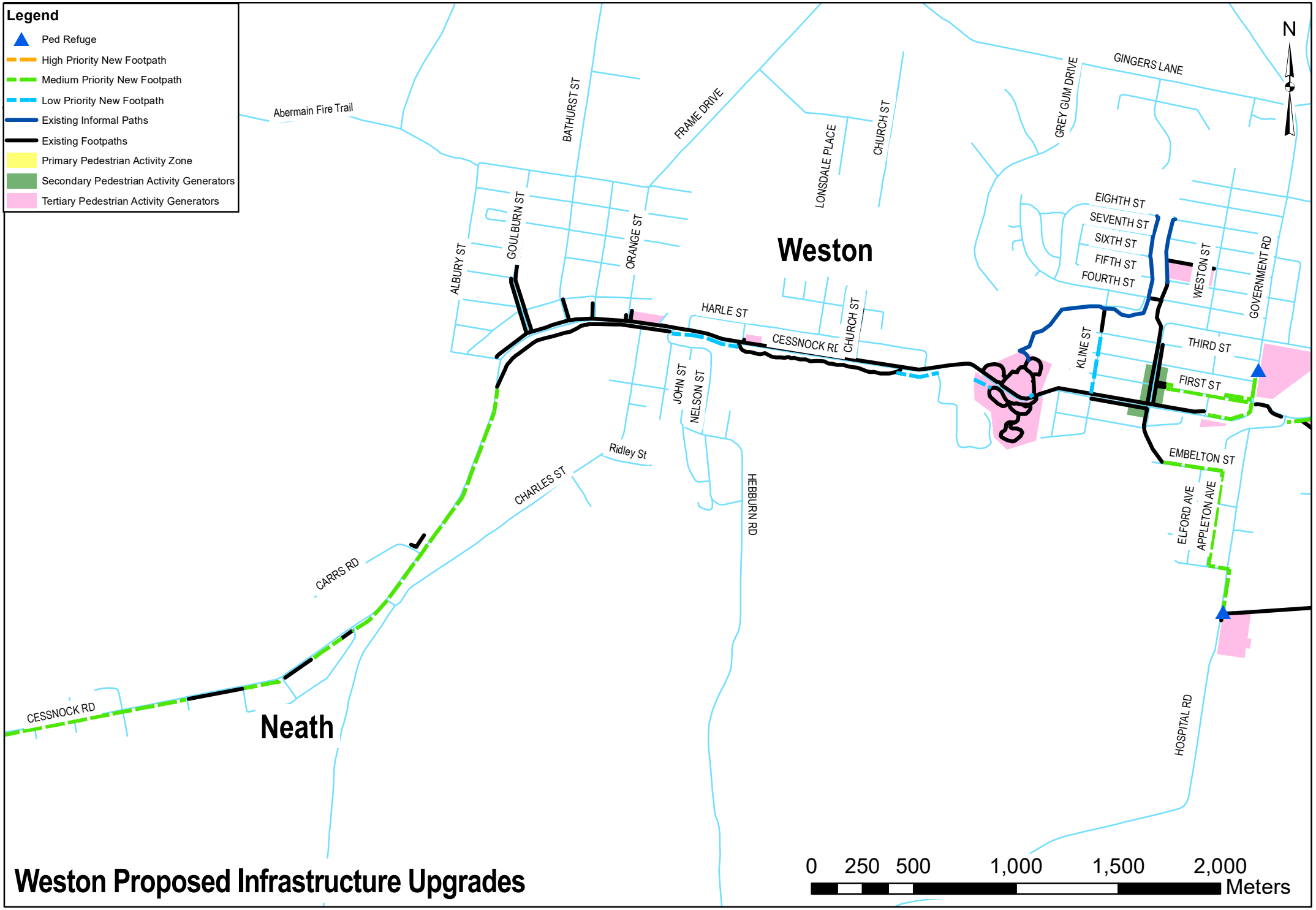


Cessnock CBD Proposed Infrastructure Upgrades


Legend
Ped Refuge
High Priority New Footpath
Medium Priority New Footpath
Low Priority New Footpath
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
Cessnock
Bellbird
Kearsley
MAVIS ST
LINDSAY ST
WESTCOTT ST
ALLANDALE RD
FERGUSON ST
GEORGE ST
COMFORT AVE
SUBIACO AVE
KANOWNA AVE
GOVERNMENT RD
OLD MAITLAND RD
MAITLAND RD
MOUNT VIEW RD
VICTORIA ST
QUARRYBYLONG ST
CHAPMAN ST
DESMOND ST
HICKEY ST
CHIDGEY ST
STEPHEN ST
REGENT ST
HARRIS ST
BRANDIS ST
CURRY ST
MULBRING ST
POKOLBIN ST
MELBOURNE ST
CONGEWAI ST
NORTHCOTE ST
RAWSON ST
ABERDARE RD
CESSNOCK ST
MACQUARIE AVE
WOLLOMBI RD
DANIEL ST
EDGEWORTH ST
VINCENT ST
SECOND ST
FOURTH ST
SIXTH ST
MATHIESON ST
KEELENDI RD
QUORROBOLONG RD
Cessnock Proposed Infrastructure Upgrades
0 250 500 1,000 1,500 2,000
Meters


Legend
Ped Refuge
High Priority New Footpath
Medium Priority New Footpath
Low Priority New Footpath
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
YORK ST
LECONFIELD RD
OXFORD ST
DEVON ST
WATER ST
WEST ST
WYNDHAM ST
HUNTER ST
BRANXTON ST
NORTH ST
NELSON ST
EVANS ST
Greta
PARK St
Orient St
ANVIL ST
SALE ST
FILEY ST
CLIFT ST
FLORENCE ST
HUNTER EXPRESSWAY
MANSFIELD ST
TUCKERS LANE
BELL ST
Greta Proposed Infrastructure Upgrades
0 125 250 500 750 1,000
Meters


Legend
Ped Refuge
High Priority New Footpath
Medium Priority New Footpath
Low Priority New Footpath
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
Heddon Greta
Kurri Kurri
N
EIGHTH ST
EVENTH ST
SIXTH ST
FIFTH ST
URTH ST
WESTON ST
GOVERNMENT RD
MITCHELL AVE
JOHNSON AVE
MCLEOD RD
JAMES ST
HEDDON ST
MAIN ST
KLINE ST
THIRD ST
FIRST ST
NORTHCOTE ST
DEAKIN ST
ABERDARE ST
MAITLAND ST
BRUNKER ST
MITCHELL AVE
STANFORD ST
GRETA ST
BARTON St
RAWSON ST
HOPETOUN ST
EDWARD ST
EMBELTON ST
ELFORD AVE
APPLETON AVE
BOUNDARY ST
ALEXANDRA ST
MULBRING ST
EDWARD ST
CORONATION ST
COLLIERY ST
STANFORD RD
HUNTER EXPRESSWAY
MAITLAND ST
WALLSEND ST
LECONFIELD ST
EVATT ST
POKOLBIN ST
JOHN RENSHAW DR
HOSPITAL RD
GRETA ST
STANFORD ST
RICHMOND ST
Kurri Kurri Proposed Infrastructure Upgrades
0 250 500 1,000 1,500 2,000
Meters



Weston Proposed Infrastructure Upgrades

APPENDIX D

RECOMMENDED WORKS PROGRAM

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
Audit Costings												
260	Cessnock	North Avenue	Current pedestrian crossing is noncompliant with standards and requires relocation	High	Relocate crossing further back as to make it compliant	CCC	H	$13,000 per item	1	$13,000	1783	Ped. Refuge
126	Cessnock	Quarrybylong Street East	Footpath section has been raised presenting a trip hazard.	High	Likelihood of trip incident is high.	CCC	L	$25 per item	1	$25	1642	Grinding
127	Cessnock	Quarrybylong Street	Pedestrian crossing line marking faded.	High	Likelihood of incident is high. Re mark the pedestrian crossing lines.	CCC	L	$1,000 per item	1	$1,000	1643	
121	Cessnock	Maitland Road South	Kerb ramps associated with pedestrian crossing and intersection with Gallagher Street East are not connecteed and do not have adjoining footpaths. Maitland Road	High	A short footpath between the kerb ramp connected to the pedestrian crossing and the kerb ramp on the eastern side of Gallagher Street.	RMS	M	$200 per m2	15	$3,000	1637	10m x 1.5m
128	Cessnock	Vincent Street West	Footpath is lacking connectivity between Bunnings Warehouse and Car Wash business.	High	Connectivity of footpaths along Vincent Street is incomplete.	CCC	M	$200 per m2	30	$6,000	1644	20m x 1.5m
129	Cessnock	Vincent Street East	No kerb ramp is present from from Railway Street South connection with Vincent Street East footpath. Footpath quality is poor and trip hazards are present.	High	Path extension and installation of formal kerb ramp improves accessibiliy and will remove trip hazard.	CCC	H	$200 per m2 $5,000 per item	6 1	$6,200	1645	4m extension to footpath (4m x 1.5m)
130	Cessnock	Vincent Street	Road pavement is extremely damaged and presents a serious trip hazard to pedestrians crossing the road. Pedestrian refuge is missing a hazard marker.	High	Likelihood of incident is severe. Road surface needs urgent treatment.	RMS	H	$150 per m2	3	450	1646	Road Repair
140	Cessnock	Cessnock Plaza Shopping Centre	Conditions of alleyway between "Rouge" and camping store.	High	Bollards to be added to reduce the possibility of vehicular access to the alleyway at the back of the shops.	CCC	L	$500 per item	2	$1,000	1657	
145	Cessnock	Cessnock Plaza Shopping Centre	No wheel stops in parking spaces adjacent to pedestrian footpath. Operational width of the footpath is reduced by overhanging vehicles.	High	Wheel stops to be installed. Contact the owner.	Owner	M				1662	
148	Cessnock	Cessnock Plaza Shopping Centre	Conditions of pedestrian crossing and access. Wheel stops only present on every third parking space, leaving vehicles to overhang the footpath and reduce the operatonal width of the footpath.	High	Wheelstops to be installed in all parking spaces, not every third parking space. Contact the owner	Owner	M				1665	
151	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian crossing signs are non compliant colour.	High	Replace existing pedestrian crossing signs with updated pedestrian crossing signs. Contact owner.	Owner	L				1668	
152	Cessnock	Cessnock Plaza Shopping Centre	Trip hazard is present at northern access to pedestrian bridge from Wollombi Road towards shopping centre.	High	Grind elevated concrete in level with the rest of the footpath.	CCC	M	$25 per item	1	$25	1669	
153	Cessnock	Cessnock Plaza Shopping Centre	Uneven and cracked footpath pavement and kerb ramp presents trip hazard.	High	Repair of existing footpath/kerb ramp	CCC	M	$183 per m2	5	$913	1670	
156	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian crossing is faded, lacking any signage and is located at a low point that water puddles in. The crossing is unsafe and causes pedestrians to take a different path that may be more dangerous.	High	Re marking of pedestrian crossing lines and installation of pedestrian crossing signs are a minimum treatment. Possibility of relocation of pedestrian crossing due to safety concerns.	CCC	H	$1,000 per item	1	$1,000	1673	
157	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian access is across a speed hump. The uneven path is dangerous for less accessible pedestrians and confusing for vehicles and pedestrians as to who has right of way.	High	Accessible pedestrian path should not be of a curved nature. Re modelling the speed hump to have a flat stop will achieve the desired outcomes. Contact the owner	Owner	H				1674	
158	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian access is across a speed hump. The uneven path is dangerous for less accessible pedestrians and confusing for vehicles and pedestrians as to who has right of way.	High	Accessible pedestrian path should not be of a curved nature. Re modelling the speed hump to have a flat stop will achieve the desired outcomes. Contact the owner	Owner	H				1675	
160	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian access is across a speed hump. The uneven path is dangerous for less accessible pedestrians and confusing for vehicles and pedestrians as to who has right of way.	High	Accessible pedestrian path should not be of a curved nature. Re modelling the speed hump to have a flat stop will achieve the desired outcomes. Contact the owner	Owner	H				1677	
161	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian access is across a speed hump. The uneven path is dangerous for less accessible pedestrians and confusing for vehicles and pedestrians as to who has right of way.	High	Accessible pedestrian path should not be of a curved nature. Re modelling the speed hump to have a flat stop will achieve the desired outcomes. Contact the owner	Owner	H				1678	
162	Cessnock	Cessnock Plaza Shopping Centre	Pedestrian crossing line marking is faded severly causing confusion between pedestrians and motorists as to who has priority.	High	Line marking to be re marked as existing lines are almost non existant. Likelihood of incident is high. Contact the owner	Owner	M				1679	
169	Cessnock	Cessnock Plaza Shopping Centre	Stop line faded across exit from shopping centre onto Wollombi Road. Creates potential for vehicles to approach footpath at higher speeds increasing the changes of incidents.	High	Re mark stop line	Owner	H				1686	
174	Cessnock	Charlton Street near Cessnock Plaza Shopping Centre	Pedestrian crossing line markings are faded and existing signs are non compliant.	High	Re mark faded pedestrian crossing lines and replace existing pedestrian crossing signs with updated pedestrian crossing signs	CCC	H	$200 per item $1,000 per item	2 1	$1,400	1691	
175	Cessnock	Cessnock Plaza Shopping Centre	Footpath ends with no kerb ramp infrastructure, creating a large trip hazard. The footpath is non accessible.	High	Kerb ramp installation will provide accessble access and reduce the high trip incident likelihood.	CCC	H	$5,000 per item	1	$5,000	1692	
184	Cessnock	Darwin Street East	Uneven surface creates trip hazard across pedestrian refuge crossing. Hazard markers are faded.	High	Hazard markers should also be replaced. Repair road surface	CCC	H	$75 per item 183 per m2	2 10	$1,976	1701	Repair faded hazard markings Creating a level surface
		Hall Street North	Kerb ramp on south side of Hall Street has no connectivity to footpath. The footpath and kerb ramp that join with the western side of Darwin Street leads straight into a blister and therefore renders the access inaccessible.	High	Add small footpath and kerb ramp. Remove exisitng kerb ramp that is blocked by the on-road blister.	CCC	M	$400 per item	1			Removal of kerb
187	Cessnock							$200 per m2 $5,000 per item	6 1	 $6,565	 1704	footpath connection (4m x 1.5m) Adding kerb
196	Cessnock	BIG W Car Park	No wheel stops in parking spaces adjacent to pedestrian footpath. Operational width of the footpath is reduced by overhanging vehicles.	High	Install required wheelstops in all parking spaces requiring wheel stops. Contact the owner.	Owner	M				1713	
197	Cessnock	Darwin Street West	Pedestrian crossing signs are non compliant colour. Hazard marking in pedestrian refuge is damaged.	High	Replace existing pedestrian crossing signs with updated pedestrian crossing signs	CCC	L	$200 per item	2	$400	1714	
199	Cessnock	Wollombi Road South	Pedestrian refuge does not lead to a kerb ramp in front of ALDI. This may cause pedestrians to alter their course and increase the risk of conflict with vehicles. Hazard markers are faded.	High	Install formal kerb ramp to align with existing pedestrian refuge. Hazard markers can be replaced.	RMS	M	$75 per item $400 per item $5,000 per item	2 1 1	$5,550	1716	repair faded hazard markings remove existing unaligned kerb ramp install new aligned kerb ramp
201	Cessnock	Miller Street East	Footpath is deteriorated and uneven in sections presenting trip hazards and difficulty for less accessible pedestrians.	High	Footpath to be replaced between shown driveway and kerb ramp.	CCC	H	$200 per m2	22.5	$4,500	1718	15m x 1.5m
202	Cessnock	St Patricks Primary School Access North	No footpath is provided along a narrow road within very close proximity to the schoo entry. High possibility of conflict between vehicles and pedestrians.	High	Footpath access between existing footpath along Miller Street East and at entrance to St Patricks Primary School would create a safe route for families and students.	CCC	H	$200 per m2	97.5	$19,500	1719	65m x 1.5m

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
207	Cessnock	West Avenue North	No footpaths along either side of Tinkerbark Street from North Avenue to provide access to Cessnock Masonic Village.	High	Footpath access to Masonic Village will provide connectivity for elderly residents to Cessnock Shopping Centre along North Avenue.	CCC	M	$200 per m2	120	$24,000	1724	new footpath link into village area (80m x 1.5m)
208	Cessnock	Wollombi Road South	Pedestrian crossing signs for crossing across Percy Street are non compliant colour.	High	Replace existing pedestrian crossing signs with updated pedestrian crossing signs	RMS	L	$200 per item	2	$400	1725	
209	Cessnock	Wollombi Road South	Pedestrian crossing signs facing North East are non compliant colour. Pedestrian crossing is faded.	High	Replace existing pedestrian crossing signs facing North East with updated pedestrian crossing signs and remark pedestrian crossing	RMS	L	$200 per item $1,000 per item	2 1	$1,400	1726	replace signs remark pedestrian crossing
210	Cessnock	Wollombi Road South	Intersection lines at signalised intersection with Alexander Street have been removed and not replaced in large sections. These lines mark pedestrian crossing areas. May lead to increased risk of conflict between vehicles and pedestrians.	High	Re mark intersection stop line and intersection pedestrian crossing lines.	RMS	M	$1,000 per item	1	$1,000	1727	
211	Cessnock	Wollombi Road South	Intersection lines at signalised intersection with Alexander Street have been removed and not replaced in large sections. These lines mark pedestrian crossing areas. May lead to increased risk of conflict between vehicles and pedestrians.	High	Re mark intersection pedestrian crossing lines.	RMS	M	$1,000 per item	1	$1,000	1728	
212	Cessnock	Wollombi Road South	Pedestrian crossing signs for crossing across Campbell Street are non compliant colour. Line makrkings look to be too narrow in width (600mm width required). Crossing located within a very close proximity to the intersection which may cause conflict between pedestrians and vehicles.	High	Replace existing pedestrian crossing signs facing North East with updated pedestrian crossing signs. Move pedestrian crossing further away from Wollombi Road and remark pedestrian markings	RMS	M	$200 per item $1,000 per item	2 1	$1,400	1730	new crossing signs re-alignment and remarking of pedestrian crossing
217	Cessnock	Alfred Street North	School crossing does not have any associated landings, footpaths and kerb ramps creating a non accessible crossing. The line markings are faded with a confusing mix of new and old line markings in the vacinity of the crossing	High	Kerb ramps and landings to be installed on both sides of the school crossing (similar to Item #90). Re marking the crossing and stop lines will assist in performance of the crossing also.	CCC	H	$12,000 per item	1	$12,000	1733	Lollipop Crossing
221	Cessnock	Wollombi Road South	Pedestrian refuge across West Avenue is missing hazard markers.	High	Hazard markers and signage are required to be installed on refuge island.	RMS	M	$800 per item	1	$800	1738	Install pedestrian hazard marking / signs
223	Cessnock	Wollombi Road North	Damaged footpath paving presents serious trip hazard	High	Repair damaged footpath	RMS	M	$200 per m2	4	$800	1740	Replace demaged section of footpath
226	Cessnock	Wollombi Road North	Intersection lines at signalised intersection with Allandale Road have been removed and not replaced in large sections. These lines mark pedestrian crossing areas. May lead to increased risk of conflict between vehicles and pedestrians.	High	Re mark intersection stop line and intersection pedestrian crossing lines.	RMS	M	$1,000 per item	1	$1,000	1743	
227	Cessnock	Wollombi Road North	Intersection lines at signalised intersection with Allandale Road have been removed and not replaced in large sections. These lines mark pedestrian crossing areas. May lead to increased risk of conflict between vehicles and pedestrians.	High	Re mark intersection pedestrian crossing lines.	RMS	M	$1,000 per item	1	$1,000	1744	
228	Cessnock	Edward Street	Pedestrian crossing signs for crossing across Edward Street are non compliant colour.	High	Replace existing pedestrian crossing signs facing North East with updated pedestrian crossing signs.	CCC	L	$200 per item	2	$400	1745	
247	Cessnock	Vincent Street East	Intersection lines at signalised intersection with Aberdare Road have been removed and not replaced in large sections. These lines mark pedestrian crossing areas. May lead to increased risk of conflict between vehicles and pedestrians.	High	Re mark intersection stop line and intersection pedestrian crossing lines.	RMS	M	$1,000 per item	1	$1,000	1767	
248	Cessnock	Mount View Road South	Pedestrian access between Cessnock Showground and formal footpath to the west along Mount View Road is unpaved.	High	Connectivity is improved between Cessnock Showground, Stonebridge Golf Club, Mount View High School and Big 4 Hunter Valley.	CCC	M	$200 per m2	105	$21,000	1768	70m x 1.5m
252	Cessnock	Leonard Street West	Kerb ramps on either side of access across McGrane Street direct pedestrians towards the middle of the intersection. This can cause pedestrians to alter their path and increase the risk of conflict with vehicles. The pedestrian designated area in the middle of McGrane Street is bordered by the intersection with Leonard Street rather than in the middle of the blister island. This exposes the pedestrians to a higher risk having an accident with a vehicle.	High	Existing crossing provisions are unsafe. Crossing provisions should be re designed to create a pedestrian refuge to specification with aligned kerb ramps.	CCC	M	$400 per item $13,000 per item	2 1	$13,800	1772	Remove kerb ramps Ped. Refuge
253	Cessnock	McGrane Street South	Bus stop on the southern and northern side of McGrane Street have no infrastructure or hardstop to aid pedestrians boarding buses. Bus stop located on southern side has stormwater drain between sign and roadside and no footpath access on either side. Bus stop on northern side is located on an inclined plane with no footpath access on either side.	High	Existing bus stop design has high levels of access restrictions which restricts the amount of people who can use the bus stop. To improve accessibility a minimum of a hardstand and footpath connectivity to the footpath along the Leonard Street should be installed.	CCC	M	$200 per m2 $5,000 per item	22.5 1	$9,500	1773	foot path connection (15m x 1.5m) Minimum bus stop requirements. TGSI included
257	Cessnock	Kendall Street East	Footpath ends between two intersection points of Kendall Street East and Brook Street with no connectivity. Worn path exists in the grass between the end of the footpath and the footpath on Wollombi Road.	High	A footpath to connect the existing footpath along Kendall Street North and the footpath along Wollombi Road North provides pedestrian connectivity for Bellbird Public School to Wollombi Road.	CCC	M	$200 per m^2	195	$39,000	1777	130*1.5
115	Cessnock	Melbourne Street North (Abermain Public School)	No pedestrian access to parking spaces.	Moderate	A footpath connecting the parking spaces and existing footpath along Goulburn Street East could be installed.	CCC	M	$200 per m^2	45	$9,000	1631	30*1.5
119	Cessnock	Old Maitland Road North	No pedestrian access to parking spaces. Path is worn through the grass between the footpath and the parking spaces.	Moderate	A footpath connecting the parking spaces and existing footpath along Old Maitland Road North could be installed.	CCC	M	$200 per m2	27	$5,400	1635	Replace existing damaged Asphalt footpath with concrete (18m x 1.5m)

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
125	Cessnock	Rawson Street	Pedestrian refuge across Rawson street is lacking signage and hazard markers. Kerb ramp on northern side of Rawson Street is not connected to any footpaths.	Moderate	No hazard markers presents risks to pedestrians and should be installed.	CCC	M	$200 per m^2	7.5	$2,300	1641	Footpath 5*1.5
								$800 per item	1			Pedestrian hazard markers / signs
186	Cessnock	Hall Street North	No connectivity between footpath and Chalton Street. Path is worn in the grass by pedestrians.	Moderate	Pedestrian connectivity between Charton Street to Cessnock Shopping Centre does not exist currently (Aberdare Road and South Avenue/Darwin Street do not have footpaths). This small section of footpath will create good connectivity for the southern section of Charlton Street.	CCC	L	$200 per item	55.5	$11,100	1703	new connection (37m x 1.5m)
192	Cessnock	South Avenue East	Footpath leads straight onto the roadway with no kerb ramp or other method of warning.	Moderate	New crossing and warning provisions to be put in place to reduce risk of incident between pedestrian and vehicle.	CCC	H	$13,000 per item	1	$13,000	1709	Ped. Refuge
195	Cessnock	Don Schofield Way East	Cracked and uneven concrete sections with overgrown areas present a trip hazard.	Moderate	Likelihood of trip incedent is low, howevere it is also likely to be a busy footpath.	CCC	L	$200 per m2	4	$800	1712	replace damged footpath area
198	Cessnock	Darwin Street West	Bus stop on the eastern side of Darwin Street with no infrastructure or hardstop to aid pedestrians boarding buses.	Moderate	Upgrade bus stop to meet DDA requirements.	CCC	M	$5,000 per item	1	$5,000	1715	Minimum bus stop requirements installation. TGSI included
206	Cessnock	West Avenue North	No keep left signs or pedestrian crossing signs are present at pedestrian refuge.	Moderate	Install keep left signage on either end of the pedestrian refuge and pedestrian crossings at both kerb ramps.	CCC	M	$200 per item	4	$800	1723	
232	Cessnock	Victoria Street West	Hazard markers on pedestrian refuge across Victoria Street are faded.	Moderate	Repair faded hazard markings.	CCC	L	$75 per item	2	$150	1750	Repair faded hazard markings
250	Cessnock	Mount View Road South	Pedestrian refuge across Mount View Road is missing a hazard marker.	Moderate	Hazard markers should be installed.	CCC	M	$800 per item	1	$800	1770	Install pedestrian hazard marking / signs
255	Cessnock	Buckland Avenue West	Kerb ramp leads to road way with no connectivity across Buckland Aveneue towards View Street. Footpath on view street does not connect to roadway. A pedestrian path worn into the grass is visible from Buckland Avenue along View Street to the beginning of the footpath.	Moderate	A kerb ramp to connect the existing footpath along View Street North and the kerb ramp and footpath along Buckland Avenue West can be installed.	CCC	M	$5,000 per item	1	$6,500	1775	Install kerb ramp
								$200 per m2	7.5			Footpath connection (5m x 1.5m)
262	Cessnock	Cessnock Street North	Heavy worn pedestrian path in grass along Cessnock Street North between the Railway Hotel and provided parking spaces.	Moderate	A footpath connecting the Railway Hotel to the provided parking area may suffice demand.	CCC	L	$200 per m2	57	$11,400	1782	Foot path connection (38m x 1.5m)
116	Cessnock	Cessnock Road North	Service location covers raised and present trip hazard (outside Hotel Denman)	Low	Likelihood of trip incident is low	CCC	L	$182.62 per m^2	1	$183	1632	repair around the trip hazard (Griding not viable)
155	Cessnock	Cessnock Plaza Shopping Centre	Service location covers are not flush with footpath paving and present trip hazard.	Low	Likelihood of trip hazard is low. Contact owner	Owner	L				1672	Grinding required
167	Cessnock	Cessnock Plaza Shopping Centre	Uneven footpath presents trip hazards. No kerb ramp from footpath into shopping centre and footpath along Wollombi Road South.	Low	Footpath on the other side of the vehicular entrance to the shopping centre car park provides good access.	RMS	M	$5,000 per item	1	$5,000	1684	New kerb ramp required
171	Cessnock	Cessnock Plaza Shopping Centre	Kerb ramps does not lead to kerb ramp on the other side of the road. The kerb ramp is very close to a steep down ramp, visibility is heavily reduced for both pedestrians and vehicles.	Low	Existing conditions are sufficient and crossing at this point should not be encouraged. Contact owner	Owner	L				1688	Remove kerb ramp
	Cessnock	Cessnock Plaza Shopping Centre	Trollies blocking footpaths. Hazard to pedestrians	Low	Contact owner to recommend more trolly bays or a differenet system that will limi trollies blocking footpaths	Owner	M				411	relocation of trollies required
191	Cessnock	South Avenue East	Kerb ramp has no connectivity to other pedestrian infrastructure or facilities.	Low	Existing conditions are sufficient	CCC	L	$182.62 per m2	1	$182.62	1708	remove ramp
214	Cessnock	Campbell Street East	Kerb ramp from Alfred Street North does not align with the pedestrian refuge or kerb ramp on the southern side of Alfred Street. Pedestrians may be forced to alter	Low	New Ramp + hazard markers	CCC	L	$200 per item	6	$6,200	1731	signs
								$5,000 per item	1			New ramp
215	Cessnock	Alfred Street North	Foootpath is damaged and uneven presenting a trip hazard.	Low	Likelihood of trip incident is low	CCC	L	$25 per item	1	$25	1732	Griding
222	Cessnock	Wollombi Road North	Old kerb ramp still exists which may confuse pedestrians or encourage use. Unever and cracked concrete presents trip hazard. One hazard marker in pedestrian refuge across Mount View Road is faded.	Low	Remove Kerb Ramp	RMS		$182.68 per m2	1	$182.68	1739	
225	Cessnock	Wollombi Road North	Uneven and cracked footpath paving presents serious trip hazard	Low	Llikelihood of a trip incident is low	RMS	L	$182.68 per m2	1	$182.68	1742	
234	Cessnock	Victoria Street East	No kerb ramps for predestrians crossing the accessway into the East Cessnock Bowling Club.	Low	New Kerb Ramp	CCC	L	$5,000 per item	1	$5,000	1753	
244	Cessnock	Performing Arts Centre Car Park	Pedestrian crossing signs are non compliant colour.	Low	Replace existing pedestrian crossing signs with updated pedestrian crossing signs	CCC	L	$200.00 per item	4	$800.00	1764	replace existing signs ($200 per pole)
Route Costings												
C2	Cessnock	Mills Crescent	Missing path along the north-eastern side of Mills Crescent	M	New link connecting existing pathways along the north-eastern side of Mills Crescent	CCC	M	$200 per m2	192	$38,400		128m
C3	Cessnock	Buckland Avenue	Missing path along the western side of Buckland Avenue	M	New link connecting existing pathways along the western side of Buckland Avenue	CCC	M	$200 per m2	117	$23,400		78m
C4	Cessnock	Maclean Street	New path along northern side of Maclean Street and eastern side of Scott Street.	M	New link connecting exisintg pathways from Maclean Street/View Street intersection to Scott Street. Kerb ramps required.	CCC	M	$200 per m2	286.5	$72,300		191m
								$5,000 per item	3			new kerb ramps
C5	Cessnock	McGrane Street	New path along northern side of McGrane Street	M	New link connecting existing pathways from Leonard Street to Allandale Road	CCC	M	$200 per m2	483	$126,600		322m
								$5,000 per item	6			new kerb ramps
C6	Cessnock	Anstey Street	Missing path along the western side of Anstey Street	L	New link connecting existing pathways from Anstey Street/Maitland Road intersection to Anzac Avenue	CCC	L	$200 per m2	690	$158,000		460m
								$5,000 per item	4			new kerb ramps
C8	Cessnock	Sergeant Street	New path along the northern side of Sergeant Street	L	New link connecting existing pathway on Ivan Street to Bus Stops on Sergeant Street. Kerb ramps required.	CCC	L	$200 per m2	696	$169,200		464m
								$5,000 per item	6			new kerb ramps
C9	Cessnock	Stephen Street	New path along wester side of Stephen Street	L	New link connecting Cessnock Showground Ivan Street existing pathway	CCC	L	$200 per m2	603	$120,600		402m
C10	Cessnock	Alfred Street	Missing path along the western side of Alfred Street	M	New link connecting existing pathways from Alfred Street/Hutton Street intersectio to West Avenue. Kerb ramps required.	CCC	M	$200 per m2	319.5	$68,900		213m
								$5,000 per item	1			new kerb ramps
C11	Cessnock	Dudley Street	New path along northern side of Dudley Street	M	New link connecting existing pathways to the Multipurpose Childcare Centre	CCC	M	$200 per m2	133.5	$26,700		89m
C12	Cessnock	Koree Street	Missing path along the western side of Koree Street	M	New link connecting existing pathways from Korre Street/Maitland Road intersection to Neath Street crossing	CCC	M	$200 per m2	346.5	$69,300		231m

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
C13	Cessnock	Maitland Road	New path along the southern side of Maitland Road	M	New link connecting existing pathway from Gallagher Street/Maitland Road intersection to Quarry Street intersection. Treatment required at culvert.	RMS	M	$200 per m2	1050	$210,000		700m
C14	Cessnock	Maitland Road	New path along the southern side of Maitland Road	M	New link connecting from Quarry Street/Maitland Road intersection to Tunnel Road intersection. Culvert extensions required	RMS	M	$6,000 per item	3	$307,800		culvert extensions
								$200 per m2	1449			966m
C15	Cessnock	Maitland Road/Cessnock Road	New path along the southern side of Maitland Road/Cessnock Road	M	New link connecting from Tunnel Road/Maitland Road intersection to Colliery Street/Cessnock Road intersection.	RMS	M	$13,000 per item	1	$381,100		Ped. Refuge
								$200 per m2	1840.5			1227m
C16	Cessnock	Wollombi Road	New path along the south-eastern side of Wollombi Road	L	New link extending existing pathway from Francis Street/Wollombi Road intersection to O'Neil Street. Kerb ramps required.	CCC	L	$200 per m2	634.5	$149,900		423m
								$13,000 per item	1			Ped. Refuge
								$5,000 per item	2			new kerb ramps
C17	Cessnock	Wollombi Road	New path along the south-eastern side of Wollombi Road	L	New link extending pathway from O'Neil Street/Wollombi Road intersection to Lochinvar Street . Kerb ramps required.	CCC	L	$200 per m2	684	$146,800		456m
								$5,000 per item	2			new kerb ramps
C18	Cessnock	Wollombi Road	New path along the south-eastern side of Wollombi Road	L	New link extending pathway from Lochinvar Street/Wollombi Road intersection to Keelendi Road . Kerb ramps required.	CCC	L	$200 per m2	810	$172,000		540m
								$5,000 per item	2			new kerb ramps
C19	Cessnock	Wollombi Road	New path along the south-eastern side of Wollombi Road	L	New link extending pathway from Keelendi Road/Wollombi Road intersection to existing pathway at Cox Street. Kerb ramps required.	CCC	L	$200 per m2	892.5	$211,500		595m
								$13,000 per item	1			Ped. Refuge
								$5,000 per item	4			new kerb ramps
C20	Cessnock	Wollombi Road	New path along the north-western side of Wollombi Road	L	New link extending existing pathway from south-west of Wangi Avenue/Wollombi Road intersection to Victoria Street. Kerb ramp required.	CCC	L	$200 per m2	909	$186,800		606m
								$5,000 per item	1			new kerb ramps
C21	Cessnock	Wollombi Road	New path along the north-western side of Wollombi Road	L	New link extending pathway from Victoria Street/Wollombi Road intersection to exisitng pathway at Abbotsford Street. Kerb ramps required.	CCC	L	$200 per m2	1231.5	$286,300		821m
								$5,000 per item	8			new kerb ramps
C22	Cessnock	Charlton Street	New path connecting shopping centre carparks and alleyways	L	New link providing connectivity between Vincent Street alleyways and carparks around Charlton Street. Kerb ramps required.	CCC	L	$200 per m2	489	$107,800		326m
								$5,000 per item	2			new kerb ramps
C23	Cessnock	Victoria Street	New path along the north-eastern side of Victoria Street.	H	New link connecting the crossing at Koree Street to exisitng kerb ramp at Victoria Street/Quarrybylong Street intersection.	CCC	H	$200 per m2	451.5	$90,300		301m
C24	Cessnock	Quarrybylong Street	New path along western side of Quarrybylong Street	H	New link extending pathway from Victoria Street/Quarrybylong Street intersection to Cooper Street. Kerb ramp required.	CCC	H	$200 per m2	480	$101,000		320m
								$5,000 per item	1			new kerb ramps
C25	Cessnock	Cooper Street	New path along southern side of Cooper Street	H	New link extending pathway from Cooper Street/Regent Street intersection to Quarrybylong Street. Kerb ramps required.	CCC	H	$200 per m2	484.5	$136,900		323m
								$5,000 per item	8			new kerb ramps
C26	Cessnock	Melbourne Street	New path along southern side of Melbourn Street	M	New link extending pathway from proposed pedestrian refuge near Cooper Street/Quarrybylong Street intersection to Curry Street/Melbourne Street intersection. Kerb ramps required.	CCC	M	$200 per m2	709.5	$169,900		473m
								$13,000 per item	1			Ped. Refuge
								$5,000 per item	3			new kerb ramps
C27	Cessnock	Melbourne Street	New path along southern side of Melbourn Street	M	New link extending pathway from Curry Street/Melbourne Street intersection to Pokolbin Street. Kerb ramps required.	CCC	M	$200 per m2	862.5	$192,500		575m
								$5,000 per item	4			new kerb ramps
C28	Cessnock	Quarrybylong Street	New path along western side of Quarrybylong Street	H	New link extending pathway from Cooper Street/Quarrybylong Street intersection to Hall Street. Kerb ramp required.	CCC	H	$200 per m2	309	$66,800		206m
								$5,000 per item	1			new kerb ramps
C29	Cessnock	Melbourne Street	New path along southern side of Melbourn Street	L	New link extending pathway from Pokolbin Street/Melbourne Street intersection to Colliery Street. Culvert extension and kerb ramps required.	CCC	L	$200 per m2	993	$229,600		662m
								$6,000 per item	1			culvert extensions
								$5,000 per item	5			new kerb ramps
C30	Cessnock	Pokolbin Street	New path along western side of Pokolbin Street	M	New link extending pathway from Pokolbin Street/Melbourne Street intersection to Northcote Street. Kerb ramps required.	CCC	M	$200 per m2	352.5	$85,500		235m
								$5,000 per item	3			new kerb ramps
C31	Cessnock	Colliery Street	New path along western side of Colliery Street	L	New link extending pathway from Melbourne Street/Colliery Street intersection to Northcote Street. Kerb ramps required.	CCC	L	$200 per m2	361.5	$93,300		241m
								$6,000 per item	1			culvert extensions
								$5,000 per item	3			new kerb ramps
C32	Cessnock	South Avenue	New path along the south-wester side of South Avenue.	H	New link connecting existing path from near North Avenue/South Avenue intersection to existing path opposite Darwin Street intersection.	CCC	H	$200 per m2	445.5	$89,100		297m
C33	Cessnock	South Avenue	New path along north-eastern side of South Avenue.	H	New link extending from North Street/South Street intersection to Charlton Street. Kerb ramps required.	CCC	H	$200 per m2	526.5	$125,300		351m
								$5,000 per item	4			new kerb ramps
C34	Cessnock	Darwin Street	New path along the eastern side of Darwin Street.	H	New link connecting existing path from Hall Street/Darwin Street intersection to South Avenue.	CCC	H	$200 per m2	282	$56,400		188m
C35	Cessnock	Snape Street	New path along southern side of Snape Street.	H	New link connecting existing pathways along Snape Street. Kerb ramps required.	CCC	H	$200 per m2	198	$49,600		132m
								$5,000 per item	2			new kerb ramps
C36	Cessnock	Snape Street	New path along Northern side of Snape Street.	H	New link connecting existing pathway from Vincent Street to Charlton Street. Kerb ramp replacement required.	CCC	H	$200 per m2	109.5	$26,900		73m
								$5,000 per item	1			new kerb ramps
C37	Cessnock	Charlton Street	New path along the western side of Darwin Street.	L	New link connecting pathways from Snape Street/Charlton Street intersection to Hall Street.	CCC	L	$200 per m2	334.5	$66,900		223m
C38	Cessnock	Vincent Street (Alleyway)	New path between "The Advertiser" and "CDH"	H	New link connecting to the "Reject Shop" foot path from the Vincent Street alleyway.	CCC	H	$200 per m2	139.5	$27,900		93m
C39	Cessnock	Vincent Street (Alleyway)	New path behind "mama's" on Vincent Street	H	New link creating carpark connectivity .	CCC	H	$200 per m2	90	$18,000		60m
C40	Cessnock	Cumberland Street	New path along eastern side of Cumberland Street	H	New link connecting pathways from Cumberland Street/Cooper Street intersection to Hall Street intersection.	CCC	L	$200 per m2	201	$40,200		134m
C41	Cessnock	Cumberland Street	New path along eastern side of Cumberland Street.	H	New link connecting existing pathways from Hall Street/Cumberland Street intersection to Snape Street. Kerb ramps required.	CCC	H	$200 per m2	310.5	$72,100		207m
								$5,000 per item	2			new kerb ramps
C42	Cessnock	Quarrybylong Street	New path along western side of Quarrybylong Street.	H	New link extending pathways from Hall Street/Quarrybylong Street intersection to Aberdare Road. Kerb ramp required.	CCC	H	$200 per m2	378	$80,600		252m
								$5,000 per item	1			new kerb ramps
C43	Cessnock	Aberdare Road	New path along southern side of Aberdare Road.	H	New link extending pathways from Hall Street/Quarrybylong Street intersection to Aberdare Road. Kerb ramp required.	RMS	H	$200 per m2	700.5	$150,100		467m
								$5,000 per item	2			new kerb ramps
C44	Cessnock	Quarrybylong Street	New path along eastern side of Quarrybylong Street	H	New link connecting pathways from Tennis Courts to exisintg footpath.	CCC	H	$200 per m2	168	$33,600		112m

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
C45	Cessnock	Northcote Street	New path along northern side of Northcote Street.	M	New link extending pathways from Hall Street/Quarrybylong Street intersection to Aberdare Road. Kerb ramp required.	CCC	M	$200 per m2	1062	$242,400		708m
								$5,000 per item	6			new kerb ramps
C46	Cessnock	Northcote Street	New path along northern side of Northcote Street.	L	New link extending pathways from Pokolbin Street/Northcote Street intersection to Colliery Street. Kerb ramps required.	CCC	L	$200 per m2	978	$225,600		652m
								$5,000 per item	6			new kerb ramps
C47	Cessnock	Colliery Street	New path along western side of Colliery Street.	L	New link extending pathways from Northcote Street/Colliery Street intersection to Aberdare Road. Kerb ramps required.	CCC	L	$200 per m2	351	$90,200		234m
								$5,000 per item	4			new kerb ramps
C48	Cessnock	Pokolbin Street	New path along western side of Pokolbin Street.	M	New link extending pathways from Northcote Street/Pokolbin Street intersection to Aberdare Road. Kerb ramps required.	CCC	M	$200 per m2	355.5	$99,100		237m
								$13,000 per item	1			Ped. Refuge
								$5,000 per item	3			new kerb ramps
C49	Cessnock	Aberdare Road	New path along southern side of Colliery Street.	L	New link extending pathways from Colliery Street/Aberdare Road intersection to near Pokolbin Street. Kerb ramps required.	RMS	L	$200 per m2	801	$185,200		534m
								$5,000 per item	5			new kerb ramps
C50	Cessnock	Mulbring Street	New path along western side of Mulbring Street.	H	New link extending pathways from Aberdare Road/Mulbring Street intersection to existing path.	CCC	H	$200 per m2	387	$77,400		258m
C51	Cessnock	Rawson Street/Brandis Street/Northcote Street/Quarrybylong Street	New path around the perimeter of the block.	H	New links providing connections to the school. Kerb ramps and crossings required.	CCC	H	$200 per m2	951	$229,200		634m
								$13,000 per item	3			Ped. Refuge
C52	Cessnock	Quarrybylong Street	New path along eastern side of Quarrybylong Street.	M	New link extending pathway from existing pathway to Gardon Avenue/Quarrybylong Street intersection. Refer to Council Project No. CRL-2017-005 for proposed crossing.	CCC	M	$200 per m2	375	$75,000		250m
C53	Cessnock	Gordan Avenue	New path along southern side of Gordan Avenue.	M	New link extending pathways from Gordan Avenue/Quarrybylong Street intersection to Oliver Street. Kerb ramp and culvert extension required.	CCC	M	$200 per m2	300	$76,000		200m
								$6,000 per item	1			culvert extensions
								$5,000 per item	2			new kerb ramps
C54	Cessnock	Oliver Street/McFarlane Street	New path along northern side of McFarlane Street and western side of Oliver Street.	M	New link extending pathways from Oliver Street/Gordan Avenue intersection to Vincent Street. Kerb ramps required.	CCC	M	$200 per m2	706.5	$156,300		471m
								$5,000 per item	3			new kerb ramps
C55	Cessnock	Edgeworth Street	New path along southern side of Edgeworth Street.	L	New link extending pathway to bus stop.	CCC	L	$200 per m2	75	$15,000		50m
									Total Cost :	$6,784,285		

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
Audit Costings												
8	Kurri Kurri	Mitchell Avenue	Pedestrian refuge indicating infrastruture is missing from island. Reduces the safety for crossing predestrians.	High	Infrastructure required at pedestrian refuge for safe vehicle and pedestrian interactions	RMS	H	$800 per item	1	$800	1523	Pedestrian hazard markers/signs
10	Kurri Kurri	Mitchell Avenue East	No footpath along Mitchell Avenue East from pedestrian refuge to bus stop. Bus stop is not accessible.	High	To create connectivity and an accessible route from public transport facilities to the centre of town.	RMS	H	$200 per m^2	66.75	$13,350	1525	Path 44.5m x 1.5m
18	Kurri Kurri	Lang Street	No pedestrian infrastructure to cross Lang Street, east of the roundabout intersection with Mitchell Avenue.	High	With limited footpath facilities on the northern side of Lang Street, pedestrian provisions to cross Lang Street to footpath facilities are required.	RMS	H	$13,000 per item	1	$13,000	1533	Ped. Refuge
20	Kurri Kurri	Lang Street South	No kerb present on eastern side of intersection with Greta Street along Lang Street South.	High	Kerb Ramp facilities are required for safety along main pedestrian route for safety and accessibility	RMS	H	$5,000 per Item	1	$5,000	1535	Kerb
21	Kurri Kurri	Lang Street South	No kerb present on eastern side of intersection with Stanford Street along Lang Street South. Footpath becomes dirt and gravel for a approximately 2m before intersection.	High	Kerb Ramp facilities are required for safety along main pedestrian route for safety and accessibility	RMS	H	$5,000 per Item	1	$5,000	1536	Kerb
25	Kurri Kurri	Merthyr Street East	No footpath present along Merthyr Street East from Lang Street South towards Holy Spirit Primary School.	High	Accessibility route between main pedestrian route (along Lang Street) and Holy Spirit Primary School is a priority for safety of children and families travelling to and from school	CCC	L	$200 per m^2	169.5	$33,900	1540	Path 113m x 1.5m
26	Kurri Kurri	Merthyr Street West	Access to car park on Merthyr Street West has potential for trip hazard. Footpath is incomplete.	High	Likelihood of trip incident is high and accessibility between car park and footpath/shops is heavily reduced.	Owner					1541	
31	Kurri Kurri	Victoria Street East	Footpath overgrown with weeds and in poor condition.	High	Condition of the existing footpath is extremely poor.	RMS	L	$183 per m^2	6	$1,096	1546	Replace / Repair existing path 4*1.5
32	Kurri Kurri	Victoria Street East	Footpath overgrown with weeds and in poor condition. Driveway pavements also in poor conditions across footpath.	High	Condition of the existing footpath is extremely poor.	RMS	L	$183 per m^2	6	$1,096	1547	Replace / Repair existing path 4*1.5
36	Kurri Kurri	Victoria Street West	Kerb Ramp not present on southern side of intersection with Coronation Street (out the front of Station Hotel)	High	No accessible path across Coronation Street. Kerb Ramp to be installed.	RMS	H	$5,000 per Item	1	$5,000	1551	Kerb
38	Kurri Kurri	Victoria Street West	Footpath ends before roundabout intersection with Railway Street.	High	No connectivity between footpaths on either side of Victoria Street or pedestrian crossing provisions. No connectivity between footpaths on either side of Railway Street along Victoria Street or pedestrian crossing provisions.	RMS	H	$200 per m2 $13,000 per item	63 1	$25,600	1553	Path 42m x 1.5m Ped. Refuge
39	Kurri Kurri	Victoria Street West	No pedestrian refuge to provide safe crossing across Victoria Street, north of roundabout intersection with Railway Street.	High	No connectivity between footpaths on either side of Railway Street along Victoria Street or pedestrian crossing provisions.	RMS	H	$13,000 per item	1	$13,000	1554	Ped. Refuge
40	Kurri Kurri	Victoria Street West	No pedestrian refuge to provide safe crossing across Railway Street, west of roundabout intersection with Victoria Street.	High	No connectivity between footpaths on either side of Railway Street along Victoria Street or pedestrian crossing provisions.	RMS	H	$13,000 per item	1	$13,000	1555	Ped. Refuge
1	Kurri Kurri	Allworth Street West	No footpath along Allworth Street West and well worn path from pedestrians using route.	Moderate	Worn path in grass suggests heavy pedestrian usage	CCC	L	$200 per m^2	67.5	$13,500	1516	45m x 1.5m
37	Kurri Kurri	Victoria Street West	Damaged footpath presents uneven ground and trip hazard.	Moderate	Likelihood of trip incident is medium	CCC	L	$25 per item	1	$25	1552	Griding
60	Kurri Kurri	Lang Street South	Kerb Ramps are steep and may present difficulties for less able pedestrians	Moderate	Likelihood of incident is low	CCC	L	$25 per item	1	$25	1576	Griding
62	Kurri Kurri	Lang Street North	Kerb Ramps are steep and may present difficulties for less able pedestrians	Moderate	Likelihood of incident is low	CCC	L	$25 per item	1	$25	1578	Griding
63	Kurri Kurri	Barton Street South	Damaged footpath presents uneven ground and trip hazard.	Moderate	Likelihood of trip incident is medium	CCC	L	$200 per m^2	94.5	$18,900	1579	27*3.5 replace damaged asphalt footpath with concrete
3	Kurri Kurri	Allworth Street East	Footpath is obstructed by plants which restricts the width of operational footpath.	Low	Landscape maintenance issue	CCC	L	$25 each	3	$75	1519	remove vegitation
7	Kurri Kurri	Lang Street North	Damaged concrete service location cover and raised surface location covers. Presents trip hazard.	Low	Likelihood of trip incident is low	CCC	L	$25 each	1	$25	1522	Griding
11	Kurri Kurri	Mitchell Avenue East	Raised service location cover. Presents trip hazard.	Low	Likelihood of trip incident is low	CCC	L	$25 each	1	$25	1526	Griding
23	Kurri Kurri	Lang Street South	Service location covers raised and present trip hazard.	Low	Likelihood of trip incident is low	CCC	L	$25 each	1	$25	1538	Griding
30	Kurri Kurri	Barton Street South	Staircase along Victoria Street East leads onto Barton Street, as does the footpath, with no kerb infrastructure.	Low	Path operates as a viable pedestrian route, repair road	CCC	L	$182.62 per m^2	75	$13,697	1545	Path repair 15m x 1.5m
34	Kurri Kurri	Victoria Street West	Footpath is obstructed by plants which restricts the width of operational footpath.	Low	Landscape maintenance issue	CCC	L	$25 each	1	$25	1549	remove vegitation
41	Kurri Kurri	Tarro Street West	Kerb Ramp in footpath blocked by sediments from stormwater flow. Presents hazard for less mobilr pedestrians.	Low	Likelihood of trip incident is low	CCC	L	$183 per m2	1	$183	1556	repair existing path
43	Kurri Kurri	Tarro Street East	Footpath ends just south of Mcdonald's restaurant.	Moderate	Connectivity between exisiting footpath along Tarro Street East and through park is possible.	RMS	L	$200 per m^2	45	$9,000	1558	footpath connecting to existing path in park 30m x 1.5m
49	Kurri Kurri	Railway Street South	Kerb Ramp leads into the roundabout and not across Railway Street. No pedestrian crossing provisions or infrastructure are present, such as a refuge.	Low	Function of kerb Ramp is not compromised. Pedestrian refuge required to connect to new proposed path (K37)	CCC	H	$13,000 per item	1	$13,000	1565	Ped. Refuge
55	Kurri Kurri	Barton Street South	Kerb Ramp from Barton Street South has no connectivity to pedestrian infrastructure on the other side of Barton Street.	Low	Connectivity across Barton Street exists on western side of intersection with Hampden Street.	CCC	M	$200 per m2 $5,000 per item	15 1	$5,000	1571	New Path kerb Ramp
57	Kurri Kurri	Hampden Street West	No footpath along Hampden Street allowing access to community facility.	Low	Access provided to community facility from parking spaces along Hampden Street and from Barton Street	CCC	M	$200 per m2 $5,000 per item	150 3	$15,000	1573	New path
58	Kurri Kurri	Hampden Street West	Conditions of footpath into community facility are poor with many trip hazards.	Low	Access provided to community facility from parking spaces along Hampden Street and from Barton Street	Owner					1574	

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
Route Costings												
K1	Kurri Kurri	Northcote Street	Missing footpath / existing footpath is in a poor condition	Moderate	New footpath between Appleton Avenue and Boundary Street	RMS	M	$13,000 per unit	1	$70,000		Ped. Refuge
								$200 per m^2	285			190m
K2	Kurri Kurri	Northcote Street	No footpath between Alexandra Street and Boundary Street	Low	New footpath between Alexandra Street and Boundary Street	RMS	L	$13,000 per unit	1	$142,000		Ped. Refuge
								$200 per m^2	645			430m
K3	Kurri Kurri	Northcote Street	No footpath between Alexandra Street and Mitchell Ave	Low	New footpath between Alexandra Street and Mitchell Ave	RMS	L	$5,000 per unit	6	$234,000		Ramp
								$200 per m^2	1020			680m
K4	Kurri Kurri	Northcote Street	No footpath between Standford Street and Mitchell Avenue	Low	New footpath between Standford Street and Mitchell Avenue	CCC	L	$5,000 per unit	4	$155,000		Ramp
								$200 per m^2	675			450m
K5	Kurri Kurri	Northcote Street	Missing footpath between Alexandra Street and Heddon Street	Low	New footpath between Alexandra Street and Heddon Street	CCC	L	$5,000 per unit	1	$74,000		Ramp
								$200 per m^2	345			230m
K6	Kurri Kurri	Boundary Street	Missing footpath between Kurri Kurri Aquatics Centre and Aberdare Street	Moderate	New footpath between Kurri Kurri Aquatics Centre and Aberdare Street	CCC	M	$5,000 per unit	1	$68,000		Ramp
								$200 per m^2	315			210m
K7	Kurri Kurri	Alexandra Street	No footpath between Northcote Street and Aberdare Street	Low	New footpath between Northcote Street and Aberdare Street	CCC	L	$5,000 per unit	3	$144,000		Ramp
								$200 per m^2	645			430m
K8	Kurri Kurri	Mitchell Avenue	No footpath between Northcote Street and Aberdare Street	Low	New footpath between Northcote Street and Aberdare Street	RMS	L	$13,000 per unit	1	$124,000		Ped. Refuge
								$200 per m^2	555			370m
K9	Kurri Kurri	Stanford Street	No footpath between Northcote Street and Aberdare Street	Moderate	New footpath between Northcote Street and Aberdare Street	CCC	M	$5,000 per unit	1	$134,000		Ramp
								$200 per m^2	645			430m
K10	Kurri Kurri	Heddon Street	No footpath between Northcote Street and Aberdare Street	Low	New footpath between Northcote Street and Aberdare Street	CCC	L	$5,000 per unit	1	$134,000		Ramp
								$200 per m^2	645			430m
K11	Kurri Kurri	Aberdare Street	Missing footpath between Alexandra Street and Boundary Street	Moderate	New footpath between Alexandra Street and Boundary Street	CCC	M	$5,000 per unit	1	$119,000		Ramp
								$200 per m^2	570			380m
K12	Kurri Kurri	Aberdare Street	No footpath between Alexandra Street and Mitchell Ave	Moderate	New footpath between Alexandra Street and Mitchell Ave	CCC	M	$5,000 per unit	4	$235,500		Ramp
								$13,000 per unit	1			Ped. Refuge
								$200 per m^2	1012.5			675m
K13	Kurri Kurri	Aberdare Street	No footpath between Standford Street and Mitchell Avenue	Moderate	New footpath between Standford Street and Mitchell Avenue	CCC	M	$5,000 per unit	2	$143,500		Ramp
								$200 per m^2	667.5			445m
K14	Kurri Kurri	Aberdare Street	No footpath between Alexandra Street and Heddon Street	Low	New footpath between Alexandra Street and Heddon Street	CCC	L	$5,000 per unit	6	$165,000		Ramp
								$200 per m^2	675			450m
K15	Kurri Kurri	Boundary Street	No footpath between Aderdare Street and Lang Street	Moderate	New footpath between Aderdare Street and Lang Street	CCC	M	$5,000 per unit	2	$133,000		Ramp (portion over bridge may require widening)
								$200 per m^2	615			410m
K16	Kurri Kurri	Mitchell Avenue	No footpath between Aderdare Street and Lang Street	High	New footpath between Aderdare Street and Lang Street	RMS	H	$5,000 per unit	3	$82,500		Ramp
								$200 per m^2	337.5			225m
K17	Kurri Kurri	Standord Street	No footpath between Aderdare Street and Lang Street	Moderate	New footpath between Aderdare Street and Lang Street	CCC	M	$5,000 per unit	4	$98,000		Ramp
								$200 per m^2	390			260m
K18	Kurri Kurri	Heddon Street	No footpath between Aderdare Street and Lang Street	Low	New footpath between Aderdare Street and Lang Street	CCC	L	$5,000 per unit	3	$93,000		Ramp
								$200 per m^2	390			260m
K19	Kurri Kurri	Standord Street	No Footpath between lang Street and Barton Street	Moderate	New Footpath between lang Street and Barton Street	CCC	M	$5,000 per unit	4	$56,000		Ramp
								$200 per m^2	180			120m
K20	Kurri Kurri	Lang Street	No footpath between Alexandra Street and Heddon Street	Moderate	New footpath between Alexandra Street and Heddon Street	RMS	M	$5,000 per unit	4	$155,000		Ramp
								$200 per m^2	675			450m
K21	Kurri Kurri	Barton Street	Missing part of footpath between Hampden Street and Victoria Street	High	New footpath between Hampden Street and Victoria Street	CCC	H	$200 per m^2	30	$6,000		20m
K22	Kurri Kurri	Barton Street	Missing part of footpath between Hampden Street and Victoria Street	High	New footpath between Hampden Street and Victoria Street	CCC	H	$200 per m^2	82.5	$16,500		55m
K23	Kurri Kurri	Barton Street	No footpath between Merthyr Street and Stanford Street	Moderate	New footpath between Merthyr Street and Stanford Street	CCC	M	$5,000 per unit	2	$76,000		Ramp
								$200 per m^2	330			220m
K24	Kurri Kurri	Barton Street	No footpath between Alexandra Street and Heddon Street	Moderate	New footpath between Alexandra Street and Heddon Street	CCC	M	$5,000 per unit	4	$155,000		Ramp
								$200 per m^2	675			450m
K25	Kurri Kurri	Heddon Street	No Path between Lang Street and Brooks Street	Low	New footpath between Alexandra Street and Heddon Street	CCC	L	$5,000 per unit	2	$60,500		Ramp
								$13,000 per unit	1			Ped. Refuge
								$200 per m^2	187.5			125m
K26	Kurri Kurri	Boundary Street	No Path Between Lang Street and Mulbring Street	Low	New Path Between Lang Street and Mulbring Street	CCC	L	$5,000 per unit	2	$46,000		Ramp
								$200 per m^2	180			120m

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comments
K27	Kurri Kurri	Stanford Street	No Path between Hopetoun Street and Barton Street	Low	New Path between Hopetoun Street and Barton Street	RMS	L	$5,000 per unit	2	$88,000		Ramp
								$200 per m^2	390			260m
K28	Kurri Kurri	Heddon Street	No Path between Hopetoun Street and Barton Street	Low	New Path between Hopetoun Street and Barton Street	CCC	L	$5,000 per unit	3	$96,000		Ramp
								$200 per m^2	405			270m
K29	Kurri Kurri	Hopetoun Street	No Path between Allworth Street and Victoria Street	Moderate	New Path between Allworth Street and Victoria Street	CCC	M	$5,000 per unit	3	$144,000		Ramp
								$200 per m^2	645			430m
K30	Kurri Kurri	Hopetoun Street	No Path between Stanford Street and Victoria Street	Low	New Path between Staford Street and Victoria Street	CCC	L	$5,000 per unit	4	$152,000		Ramp
								$200 per m^2	660			440m
K31	Kurri Kurri	Hopetoun Street	No Path between Stanford Street and Heddon Street	Low	New Path between Stanford Street and Heddon Street	CCC	L	$5,000 per unit	4	$153,500		Ramp
								$200 per m^2	667.5			445m
K32	Kurri Kurri	Mulbring Street	No Path between Boundary Street and Stanford Street	Low	New Path between Boundary Street and Stanford Street	CCC	L	$5,000 per unit	1	$185,000		Ramp
								$200 per m^2	900			600m
K34	Kurri Kurri	Railway Street	No Path between Mulbring Sreet and Victoria Street	Low	New Path between Mulbring Sreet and Victoria Street	CCC	L	$5,000 per unit	5	$157,000		Ramp
								$200 per m^2	660			440m
K35	Kurri Kurri	Railway Street	No Path Between Victoira Street and Coliery Street	Low	New Path Between Victoira Street and Coliery Street	CCC	L	$5,000 per unit	1	$284,000		Ramp
								$200 per m^2	1395			930m
K36	Kurri Kurri	Stanford Street	No Path between Bebburn Street and log of Knowledge Park	Low	New Path between Bebburn Street and log of Knowledge Park	CCC	L	$200 per m^2	352.5	$70,500		235m
K37	Kurri Kurri	Victoria Street	No path between Railway Street and Maitland Street	Low	New path between Railway Street and Maitland Street	RMS	L	$5,000 per unit	3	$45,000		Ramp
								$200 per m^2	150			100m
K38	Kurri Kurri	Main Street	No Path on Main Street	Moderate	New Path on Main Street	RMS	M	$5,000 per unit	7	$263,000		Ramp
								$200 per m^2	1140			760m
K39	Kurri Kurri	Victoria Street	No Path between Rawson Street and Duddly Street East side with signs of heavy use	Moderate	New Path between Rawson Street and Duddly Street East side	RMS	M	$5,000 per unit	6	$210,000		Ramp
								$200 per m^2	900			600m
K40	Kurri Kurri	Deakin Street	No Path between Mitchell and Boundary Street	Moderate	New Path between Mitchell and Boundary Street North Side	CCC	M	$5,000 per unit	4	$149,000		Ramp
								$200 per m^2	645			430m
K41	Kurri Kurri	Deakin Street	No Path between Mitchell and Boundary Street	Moderate	New Path between Mitchell and Boundary Street North Side	CCC	M	$5,000 per unit	8	$234,000		Ramp
								$200 per m^2	1020			680m
									Total Cost	$5,368,871		

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comment
Audit Costings												
72	Weston	First Street South	Conditions of footpath including where the section ends and overgrown sections presenting trip hazards	High	No current pedestrian connectivity between Weston and Kurri Kurri. Overgrown sections are a landscape maintenance issue.	RMS	L	$1.10 per m^2	52	$ 57	1588	
78	Weston	Station Street West	Kerb ramp leads onto road and adjoining footpath is severely deteriorated.	High	Footpath paving is severely deteriorated and almost non existant. Kerb ramp operation is sufficient.	CCC	M	$200 per m^2	12	$ 2,400	1594	Path 8m x 1.5m
94	Weston	First Street South	Kerb ramp and pedestrian refuge across Cessnock Road are not aligned. This can cause undue risk to pedestrians crossing.	High	Pedestrians are caused to take a longer route than necessary through busy intersection.	RMS	H	$5,000 per Item	2	$ 10,000	1610	new kerb ramps
96	Weston	Cessnock Road East / Northcote Street South	Footpath on southern side of Northcote Street has no kerb ramp and continues onto road way with no change of grade or warning.	High	Lack of formal kerb ramp creates unsafe warning and entrance to a very busy intersection for pedestrians. Likelihood of incident is high.	RMS	H	$5,000 per unit	1	$ 5,000	1612	Kerb Ramp
101	Weston	Northcote Street South	Uneven footpath surface presents trip hazard. No safety barrier between footpath and vehicles across bridge.	High	Lack of safety barrier creates a high risk of incident. Likelihood of trip incident is low	RMS	H	$161 per m	42	$ 6,787	1617	Safety Barrier
								$25 per item	1			Griding
102	Weston	Northcote Street South	Uneven footpath surface presents trip hazard. No safety barrier between footpath and vehicles across bridge.	High	Lack of safety barrier creates a high risk of incident. Likelihood of trip incident is medium	RMS	L	$25 per item	1	$ 25	1618	Griding
103	Weston	Northcote Street South	Uneven footpath surface presents trip hazard. No safety barrier between footpath and vehicles across bridge.	High	Lack of safety barrier creates a high risk of incident. Likelihood of trip incident is low	RMS	L	$25 per item	1	$ 25	1619	Griding
104	Weston	Northcote Street South	Uneven footpath surface presents trip hazard.	High	Likelihood of trip incident is medium	RMS	M	$150 per item	140	$ 21,000	1620	70m x 2m asphalt footpath
105	Weston	Northcote Street South	Footpaths on either side of the intersection with Appleton Avenue are of poor quality and uneven. No distinction between footpath and road as no kerb ramps are present.	High	Lack of formal kerb ramp creates unsafe warning and entrance to intersection for pedestrians along potentially busy route.	RMS	H	$150 per item	112.5	$ 16,875	1621	Replace existing Asphalt footpath on eastern side
						RMS	H	$5,000 per Item	2	$ 10,000		Kerb ramps
79	Weston	Station Street West	Footpath is deteriorated and uneven in sections presenting trip hazards and difficulty for less accessible pedestrians.	Moderate	Operational width of footpath is reduced in areas and due to deterioration. Likelihood of trip incident is low	CCC	H	$150 per item	82.5	$ 12,375	1595	Replace existing Asphalt footpath 1.5m x 55m
80	Weston	Station Street West	Footpath is deteriorated and uneven in sections presenting trip hazards and difficulty for less accessible pedestrians.	Moderate	Operational width of footpath is reduced in areas and due to deterioration. Likelihood of trip incident is low	CCC	H	$150 per item	7.5	$ 1,125	1596	1.5*5 (clarificaion required on location)
81	Weston	Swanson Street South	No kerb ramp is present from parking area to footpath.	Moderate	Access is possible in current condition, formal kerb ramp will improve access.	CCC	H	$5,000 per Item	1	$ 5,000	1597	Kerb Ramp
82	Weston	Swanson Street	Pedestrian refuge has kerb ramps but not adjoining footpaths on both sides of the road. Infrastructure is faded, reducing pedestrian safety.	Moderate	Worn path in grass adjoining kerb ramps not present, reducing the need for footpaths. Faded hazard markers presents risks to pedestrians and should be replaced.	CCC	H	$200 per m^2	15	$ 3,000	1598	New path 10m x 1.5m
84	Weston	Swanson Street	Pedestrian refuge has kerb ramps but not adjoining footpaths on both sides of the road. Infrastructure is faded, reducing pedestrian safety.	Moderate	Worn path in grass adjoining kerb ramps not present, reducing the need for footpaths. Faded hazard markers presents risks to pedestrians and should be replaced.	CCC	H	$200 per m^2	15	$ 3,000	1600	New path 10m x 1.5m
85	Weston	Swanson Street	Faded pedestrian refuge infrastructure.	Moderate	Faded hazard markers presents risks to pedestrians and should be replaced.	CCC	L	$75 per item	2	$ 150	1601	repair hazard marking
86	Weston	Swanson Street	Pedestrian refuge has kerb ramps but not adjoining footpaths on both sides of the road. Infrastructure is faded, reducing pedestrian safety.	Moderate	Worn path in grass adjoining kerb ramps not present, reducing the need for footpaths. Faded hazard markers presents risks to pedestrians and should be replaced.	CCC	H	$200 per m^2	495	$ 99,000	1602	New path 33m x 1.5m
92	Weston	Cessnock Road North / Hall Street West	Damaged and worn pavement causes uneven surface and trip hazard.	Moderate	Likelihood of trip incident is medium	CCC	L	$25 per item	1	$ 25	1608	Griding
76	Weston	Second Street North	Footpath ends and no pedestrian access is provided to the parking spaces.	Low	New Path connecting to park	CCC	L	$200 per m^2	45	$ 9,000	1592	30m

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Photo ID	Comment
Route Costings												
W1	Weston	Cessnock Road	No Path connecting Cessnock and Weston	Moderate	New Path Between Colliery Street and Fisher Street	RMS	M	$5,000 per unit	1	$ 287,000	-	ramps
								$200 per m^2	1410			940m
W2	Weston	Cessnock Road	No Path connecting Cessnock and Weston	Moderate	New Path Between Rawson Street and Northumberland Street	RMS	M	$5,000 per unit	1	$ 65,000	-	ramps
								$200 per m^2	300			200m
W3	Weston	Cessnock Road	No Path connecting Cessnock and Weston	Moderate	New Path Between Turner Street and Northumberland Street	RMS	M	$5,000 per unit	1	$ 65,000	-	ramps
								$200 per m^2	300			200m
W4	Weston	Cessnock Road	No Path connecting Cessnock and Weston	Moderate	New Path Between Northumberland Street and Forbes Street	RMS	M	$6,000 per Item	3	$ 448,000	-	Culvert extention
								$5,000 per unit	2			ramps
								$200 per m^2	2100			1400m
W5	Weston	Cessnock Road	Missing Section of path	Low	New path between Elizabeth Street and Alfred Street	RMS	L	$5,000 per unit	1	$ 104,000	-	ramps
								$200 per m^2	495			330m
W6	Weston	Cessnock Road	Missing Section of path	Low	New Path Between existing path and Date Ave	RMS	L	$5,000 per unit	1	$ 65,000	-	ramps
								$200 per m^2	300			200m
W7	Weston	Cessnock Road	Missing Section of path	Low	New Path Between Cessnock Road and existing path	CCC	L	$5,000 per unit	1	$ 35,000	-	ramps
								$200 per m^2	150			100m
W8	Weston	Cessnock Road	Missing Section of path	Low	New Connecting Path	CCC	L	$200 per m^2	30	$ 6,000	-	20m
W9	Weston	Kline Road	Missing Section of path	Low	New Path Between Cessnock Road and Third Street	CCC	L	$5,000 per unit	5	$ 115,000	-	ramps
								$200 per m^2	450			300m
W10	Weston	First Street	Missing Section of path	Low	New Path on North Side of First Street	RMS	L	$200 per m^2	400	$ 95,000	-	400m
								$5,000 per unit	3			Kerb ramps required for section
W11	Weston	Government Road	No Path Connecting to Weston Park	Moderate	New Path and pedestrian refuge	CCC	M	$12,000 per Item	1	$ 51,000	-	Ped. Refuge
								$5,000 per unit	3			ramps
								$200 per m^2	120			80m
W12	Weston	First Street	Missing Section of path	Low	New Path on South Side of First Street	RMS	L	$200 per m^2	400	$ 95,000	-	400m
								$5,000 per unit	3			Kerb ramps required for section
W13	Weston	Cessnock Road	Missing Section of path	Moderate	New Path Between Cessnock Road and First Street	CCC	M	$5,000 per unit	2	$ 88,000	-	ramps
								$200 per m^2	390			260m
W14	Weston	Webb Street	No Path	Moderate	New Path Between Simpson Road and Appleton Ave	CCC	M	$5,000 per unit	3	$ 57,000	-	ramps
								$200 per m^2	210			140m
W15	Weston	Applton Avenue	No Path	Moderate	New Path Between Webb Street and Parker Street	CCC	M	$5,000 per unit	2	$ 100,000	-	ramps
								$200 per m^2	450			300m
W16	Weston	Parker Avenue	No Path	Moderate	New Path Between Apple Ave and Hospital Road	CCC	M	$5,000 per unit	2	$ 35,500	-	ramps
								$200 per m^2	127.5			85m
W17	Weston	Hospital Road	No Path	Moderate	New Path Between Parker Street and Lang Street	CCC	M	$5,000 per unit	2	$ 83,000	-	ramps
								$13,000 per Item	1			Ped. Refuge
								$200 per m^2	300			200m
									Total Cost :	$ 1,999,344		

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Comment
Route Costings											
B1	Branxton	Dalwood Road	No path Between Wyndham Street to Preston Close	L	New Between Wyndham Street to Preston Close South Side	CCC	L	$5,000 per unit	11	$ 445,000	ramps
								$200 per m^2	1950		New Path 1.3km
B2	Branxton	Cessnock Road	No Path on parts of Cessnock Road between St John's Church and New England Highway	M	New Path on parts of Cessnock Road between St John's Church and New England Highway East Side	CCC	M	$200 per m^2	97.5	$ 19,500	65m
B3	Branxton	Drinan Street	No Path on northern side between Bowen Street and Clift Street	L	New Path on northern side between Bowen Street and Clift Street North Side	CCC	L	$5,000 per unit	2	$ 52,000	ramps
								$200 per m^2	210		140m
B4	Branxton	Drinan Street	No Path on northern side between Clift Street and Bridge Street	M	New Path on northern side between Clift Street and Bridge Street North Side	RMS	M	$5,000 per unit	1	$ 26,000	ramps
								$200 per m^2	105		70m
B5	Branxton	Drinan Street	No Path between Bridge Street and Cessnock Road	L	New Path between Bridge Street and Cessnock Road North Side	CCC	L	$5,000 per unit	1	$ 45,000	ramps
								$13,000 per unit	1		Ped. Refuge
								$200 per m^2	135		90m
B6	Branxton	Cessnock Road	No Path between St John's Church and Fleet Street	M	New Path between St John's Church and Fleet Street East Side	CCC	M	$5,000 per unit	1	$ 120,500	ramps
								$200 per m^2	385.5		257
B7	Branxton	Bowen Street	No path between Drinan Street and King Street East Side	L	New path between Drinan Street and King Street East Side	CCC	L	$5,000 per unit	2	$ 35,500	ramps
								$200 per m^2	127.5		85m
B8	Branxton	Bridge Street	No Path between Drinan Street and King Street West Side	M	New Path between Drinan Street and King Street West Side	RMS	M	$5,000 per unit	2	$ 35,500	ramps
								$200 per m^2	127.5		85m
B9	Branxton	Station Street	No Path between Rosary Park Catholic School and Fleet Street	M	New Path between Rosary Park Catholic School and Fleet Street	CCC	M	$5,000 per unit	1	$ 69,500	ramps
								$200 per m^2	322.5		215m
B10	Branxton	Bowen Street	No Path between King Street and Queen Street East Side	L	New Path between King Street and Queen Street East Side	CCC	L	$5,000 per unit	2	$ 37,000	ramps
								$200 per m^2	135		90m
B11	Branxton	Bridge Street	No Path between King Street and Queen Street East Side	M	New Path between King Street and Queen Street East Side	RMS	M	$5,000 per unit	2	$ 35,500	ramps
								$200 per m^2	127.5		85m
B12	Branxton	Bowen Street	No Path between Queen Street and Fleet Street	L	New Path between Queen Street and Fleet Street East Side	CCC	L	$5,000 per unit	1	$ 35,000	ramps
								$200 per m^2	150		100m
B13	Branxton	Fleet Street	No Path between Station Street and Bowen Street	L	New Path between Station Street and Bowen Street North Side	CCC	L	$200 per m^2	450	$ 90,000	300m
B14	Branxton	Station Street	No Path between Fleet Street and Russell Street	M	New Path between Fleet Street and Russell Street East Side	CCC	M	$5,000 per unit	2	$ 29,500	ramps
								$200 per m^2	97.5		65m
B15	Branxton	Bowen Street	No Path between Fleet Street and Russell Street	L	New Path between Fleet Street and Russell Street East Side	CCC	L	$5,000 per unit	2	$ 41,500	ramps
								$200 per m^2	157.5		105m
B16	Branxton	Cessnock Road	No Path between Fleet Street and Russell Street	L	New Path between Fleet Street and Russell Street East Side	CCC	L	$5,000 per unit	2	$ 43,000	ramps
								$200 per m^2	165		110m
B17	Branxton	Station Street	No Path between Russell Street and Railway Street	M	New Path between Russell Street and Railway Street East Side	CCC	M	$5,000 per unit	2	$ 40,000	ramps
								$200 per m^2	150		100m
B18	Branxton	Bowen Street	No Path between Russell Street and Railway Street	L	New Path between Russell Street and Railway Street East Side	CCC	L	$5,000 per unit	2	$ 40,000	ramps
								$200 per m^2	150		100m
B19	Branxton	Cessnock Road	No Path between Russell Street and Railway Street	L	New Path between Russell Street and Railway Street East Side	CCC	L	$5,000 per unit	2	$ 43,000	ramps
								$200 per m^2	165		110m
B20	Branxton	Railway Street	No Path between Station Street Street and Short Street	M	No Path between Station Street Street and Short Street North Side	CCC	M	$5,000 per unit	1	$ 53,000	ramps
								$200 per m^2	240		160m
B21	Branxton	Railway Street	No Path between Short Street and Bowen Street	M	New Path between Short Street and Bowen Street North Side	CCC	M	$5,000 per unit	2	$ 41,800	ramps
								$200 per m^2	159		106m
B22	Branxton	Railway Street	No Path between Bowen Street and Bridge Street	M	No Path between Bowen Street and Bridge Street North Side	CCC	M	$5,000 per unit	1	$ 60,500	ramps
								$200 per m^2	277.5		185m
B23	Branxton	Railway Street	No Path between Bridge Street and Cessnock Road	L	No Path between Bridge Street and Cessnock Road South Side	CCC	L	$5,000 per unit	1	$ 47,000	ramps
								$200 per m^2	210		140m
B24	Branxton	Bowen Street	No Path between New England Highway and Drinan Street	L	New Path between New England Highway and Drinan Street	CCC	L	$5,000 per unit	1	$ 32,000	ramps
								$200 per m^2	135		90m
B25	Branxton	Bowen Street	No Path between New England Highway and Drinan Street	L	New Path between New England Highway and Drinan Street	CCC	L	$5,000 per unit	4	$ 53,000	ramps
								$200 per m^2	165		110m
B26	Branxton	New England Highway	No Path between New England Highway and Wine Country Drive	L	New Path between New England Highway and Wine Country Drive	RMS	L	$200 per m	1380	$ 282,000	920m
								$6,000 per unit	1		Culvert extention
B27	Branxton	Cessnock Road	No Path between St John's Church and Fleet Street	L	New Path between St John's Church and Fleet Street East Side	CCC	L	$5,000 per unit	1	$ 120,500	ramps
								$200 per m^2	192		128m
								Total Cost :	$1,972,800		

Item	Suburb	Location	Issue	Priority	Action	Works Authority	Works Priority	Unit Cost	Quantity	Indicative Cost	Comment
Route Costings											
G1	Greta	New England Highway	No path Between Wine Country Drive to West Street	L	New path Between Wine Country Drive to West Street	RMS	L	$5,000 per unit	2	$ 729,500	ramps
								$6,000 per unit	2		Culvert Extension
								$13,000 per unit	1		Ped. Refuge
								$200 per m^2	3472.5		2.315km
G2	Greta	West Street / High Street	No Path on northern side of west street and High Street fronting the Petrol Station	L	New Path on northern side of west street and High Street fronting the Petrol Station	CCC	L	$5,000 per unit	2	$ 70,000	ramps
								$200 per m^2	300		200m
G3	Greta	Water Street	No Path on southern side of Water Street and part of the northern side	L	New Path on southern side of Water Street and part of the northern side	CCC	L	$5,000 per unit	4	$ 98,000	ramps
								$200 per m^2	390		260m
G4	Greta	Evans Street / Nelson Street	No Path on western side of Evans Streetand part of the northern side of Nelson Street	L	New Path on northern side between Clift Street and Bridge Street North Side	CCC	L	$5,000 per unit	6	$ 318,000	ramps
								$200 per m^2	1440		960m
G5	Greta	Wyndham Street / Sale Street	No Path on southern sid eof Wyndham Street and eastern side of Sale Street	L	New Path on southern sid eof Wyndham Street and eastern side of Sale Street	CCC	L	$5,000 per unit	3	$ 135,000	ramps
								$6,000 per unit	1		Culvert Extension
								$200 per m^2	570		380m
G6	Greta	Sale Street	No Path along eastern side of Sale Street between Hunter Street and Nelson Street	L	New Path along eastern side of Sale Street	CCC	L	$5,000 per unit	6	$ 133,500	ramps
								$200 per m^2	517.5		345m
G7	Greta	Nelson Street	No path along between Branxton Street and High Street	L	New path along Northern side of Nelson Street	CCC	L	$5,000 per unit	3	$ 79,200	ramps
								$200 per m^2	321		214m
G8	Greta	Nelson Street	No Path along norther side of Nelson Street between High Street and Sale Street	M	New Path along norther side of Nelson Street	CCC	M	$5,000 per unit	2	$ 116,500	ramps
								$200 per m^2	532.5		355m
G9	Greta	Nelson Street	No Path between Sale Street and Mansfield Street	M	New Path along southern side of Nelson Street	CCC	M	$5,000 per unit	8	$ 241,000	ramps
								$200 per m^2	1005		670m
G10	Greta	Mansfield Street	No Path along western side of Mansfield Street	L	New Path along western side of Mansfield Street	CCC	L	$5,000 per unit	2	$ 134,500	ramps
								Not Costed	1		Bridge Path
								$200 per m^2	622.5		415m
G11	Greta	Mansfield Street	No Path between Usher Street and Camp Road	L	New Path between along western side of Mansfield Street	CCC	L	$5,000 per unit	2	$ 262,000	ramps
								$200 per m^2	1260		840m
								Total Cost :	$2,317,200		

APPENDIX E

LOCATION OF AUDIT FINDINGS AND NEW LINK ID'S

Issues Identified
By Type

- Missing Link
- Footpath Maintenance
- Kerb/ Pram Ramp
- Missing/ Damaged Crossing
- Signage
- Road Maintenance
- Other

By Priority

- High
- Medium
- Low

WOLLOMBI RD
EDWARD ST
DARWIN ST
KEENE ST
CHARLTON ST
VINCENT ST
CUMBERLAND ST
KING ST
COOPER ST
NORTH AVE
HALL ST

Cessnock PAMP
Identified Pedestrian Infrastucture Issues
Cessnock CBD

Issues Identified
By Type

- Missing Link
- Footpath Maintenance
- Kerb/ Pram Ramp
- Missing/ Damaged Crossing
- Signage
- Road Maintenance
- Other

By Priority

- High
- Medium
- Low

MAVIS ST
MACKELLAR ST
BROWN ST
BURNETT ST
MILLS CRES
MOUNT VIEW RD
LEONARD ST
ANN ST
LOVE ST
ALLANDALE RD
CHURCH ST
WESTCOTT ST
FERGUSON ST
ANZAC AVE
ANSTEY ST
STANLEY ST
CARROLL AVE
SUBIACO AVE
YILGARN AVE
OLD MAITLAND RD
MAITLAND RD
HALCYON ST
YANGO ST
NEATH ST
DAVID ST
GALLAGHER ST
MILLFIELD ST
CHAPMAN ST
COOPER ST
KING ST
REGENT ST
HIGH ST
HALL ST
BRANDIS ST
BRIDGE ST
ABERDARE RD
CURRY ST
MULBRING ST
POKOLBIN ST
MELBOURNE ST
CONGEWAI ST
NORTHCOTE ST
RAWSON ST
ABERDARE RD
GRETA ST
CESSNOCK ST
COLLIERY ST
PENNIMENT ST
BARRETT AVE
SHEDDON ST
WEST AVE
DARWIN ST
CHARLTON ST
RAILWAY ST
EDGEWORTH ST
GORDON AVE
QUARRYBYLONG ST
VINCENT ST
FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
EVANS ST
DESMOND ST
HICKEY ST
CHIDGEY ST
STEPHEN ST
MACQUARIE AVE
EDITH ST
WOLLOMBI RD
CATHERINE ST
MARGARET ST
DANIEL ST
O'BRIEN ST
JAMES ST
CLARE ST

Cessnock PAMP
Identified Pedestrian Infrastucture Issues
Cessnock

Issues Identified
By Type

- Missing Link
- Footpath Maintenance
- Kerb/ Pram Ramp
- Missing/ Damaged Crossing
- Signage
- Road Maintenance
- Other

By Priority

- High
- Medium
- Low

NINTH ST
EIGHTH ST
SEVENTH ST
SIXTH ST
FIFTH ST
FOURTH ST
THIRD ST
SECOND ST
FIRST ST
SWANSON ST
KLINE ST
CLARK ST
SCOTT ST
CESSNOCK RD
HOSPITAL RD
LANG ST
JOHNSON AVE
RAILWAY PDE
MITCHELL AVE
NORTHCOTE ST
WERMOL ST
MAITLAND ST
BRUNKER ST
LANG ST
RAWSON ST
DEAKIN ST
ABERDARE ST
MAITLAND ST
LANG ST
BARTON St
RAWSON ST
HOPETOUN ST
HEDDON ST
HAMPDEN ST
ALLWORTH ST
ALEXANDRA ST
BOUNDARY ST
GILLIES ST
VICTORIA ST
MERTHYR ST
STANFORD ST
EDWARD ST
CORONATION ST
RAILWAY ST
DUDLEY ST
POKOLBIN ST
MAITLAND ST
WALLSEND ST
MULBRING ST

Cessnock PAMP
Identified Pedestrian Infrastucture Issues
Kurri Kurri

Issues Identified
By Type

- Missing Link
- Footpath Maintenance
- Kerb/ Pram Ramp
- Missing/ Damaged Crossing
- Signage
- Road Maintenance
- Other

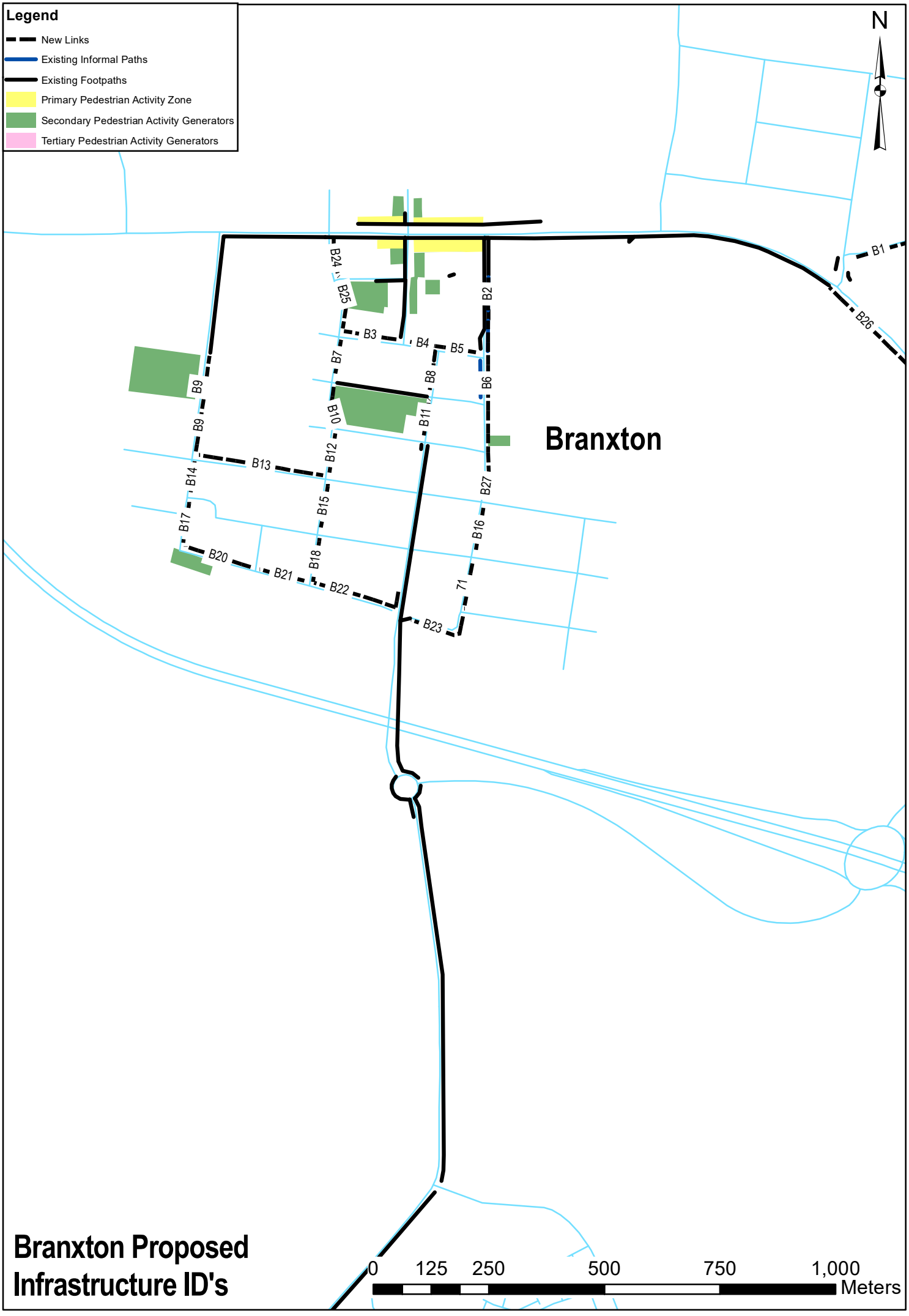
By Priority

- High
- Medium
- Low

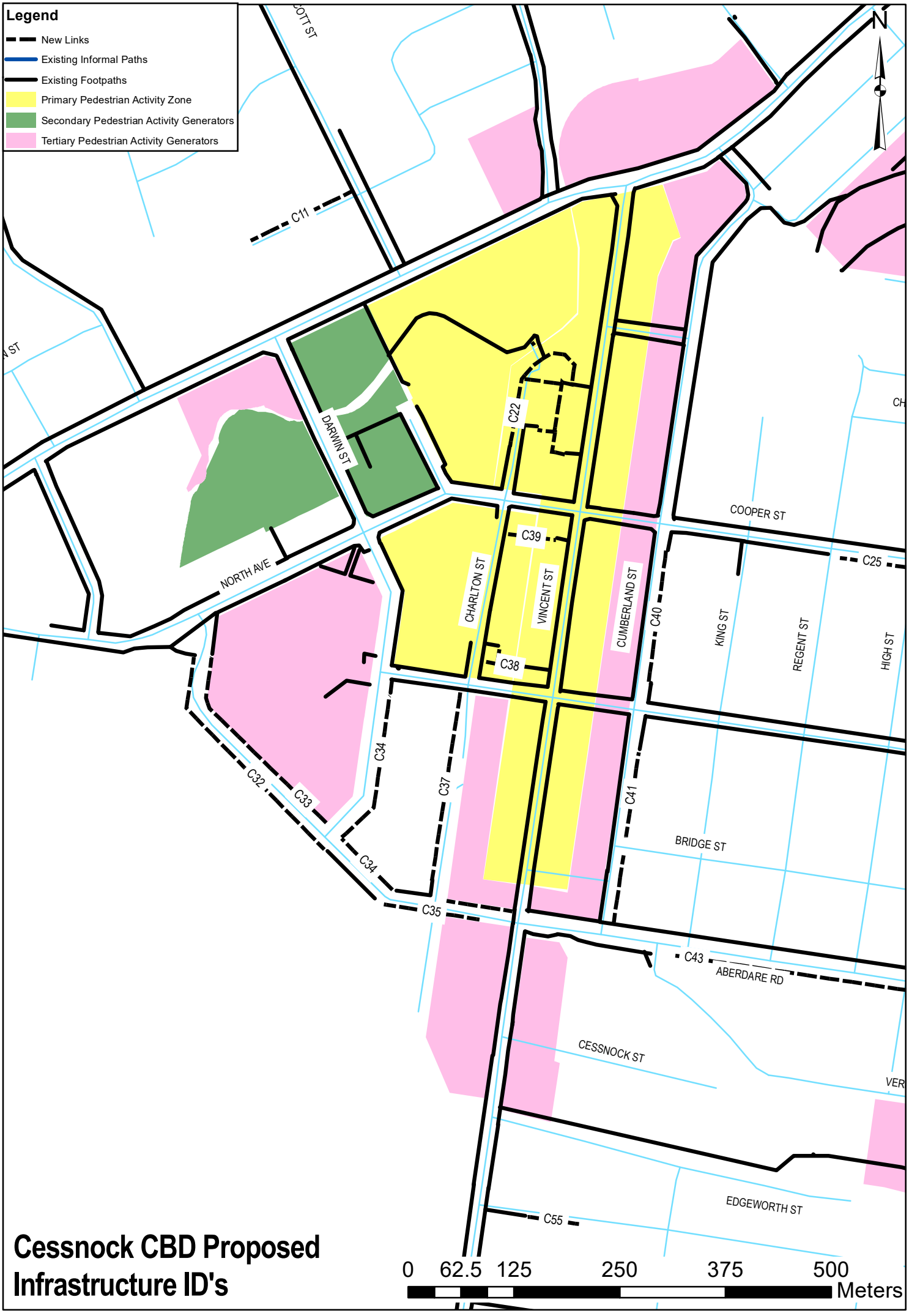
BATHURST ST
FRAME DRIVE
BAILEYS LANE
CHURCH ST
SILVERSTEM LANE
BLUEBELL CLOSE
GREY GUM DRIVE
GOVERNMENT RD
LISMORE ST
TAMWORTH ST
ARMIDALE ST
MAITLAND ST
MAITLAND ST
DUBBO ST
COOMA ST
HAY ST
FORBES ST
MELBOURNE ST
ABERMAIN ST
HARLE ST
CESSNOCK RD
CHARLES ST
WILLIAM ST
CESSNOCK RD
Ridley St
HEBBURN RD
TENTH ST
NINTH ST
EIGHTH ST
SEVENTH ST
SIXTH ST
FIFTH ST
FOURTH ST
EIGHTH ST
SEVENTH ST
SIXTH ST
FIFTH ST
KLINE ST
SWANSON ST
THIRD ST
SECOND ST
FIRST ST
SCOTT ST
RAWSON ST
TON ST
CESSNOCK RD
ELFORD AVE
APPLETON AVE
HOSPITAL RD

87 86 85 82 81
89
90
78 79 77
76
71 73 72 109
12 10
91 92
106 107 105 96
95 93 94 97 98
99 103 104
13
114 15 116

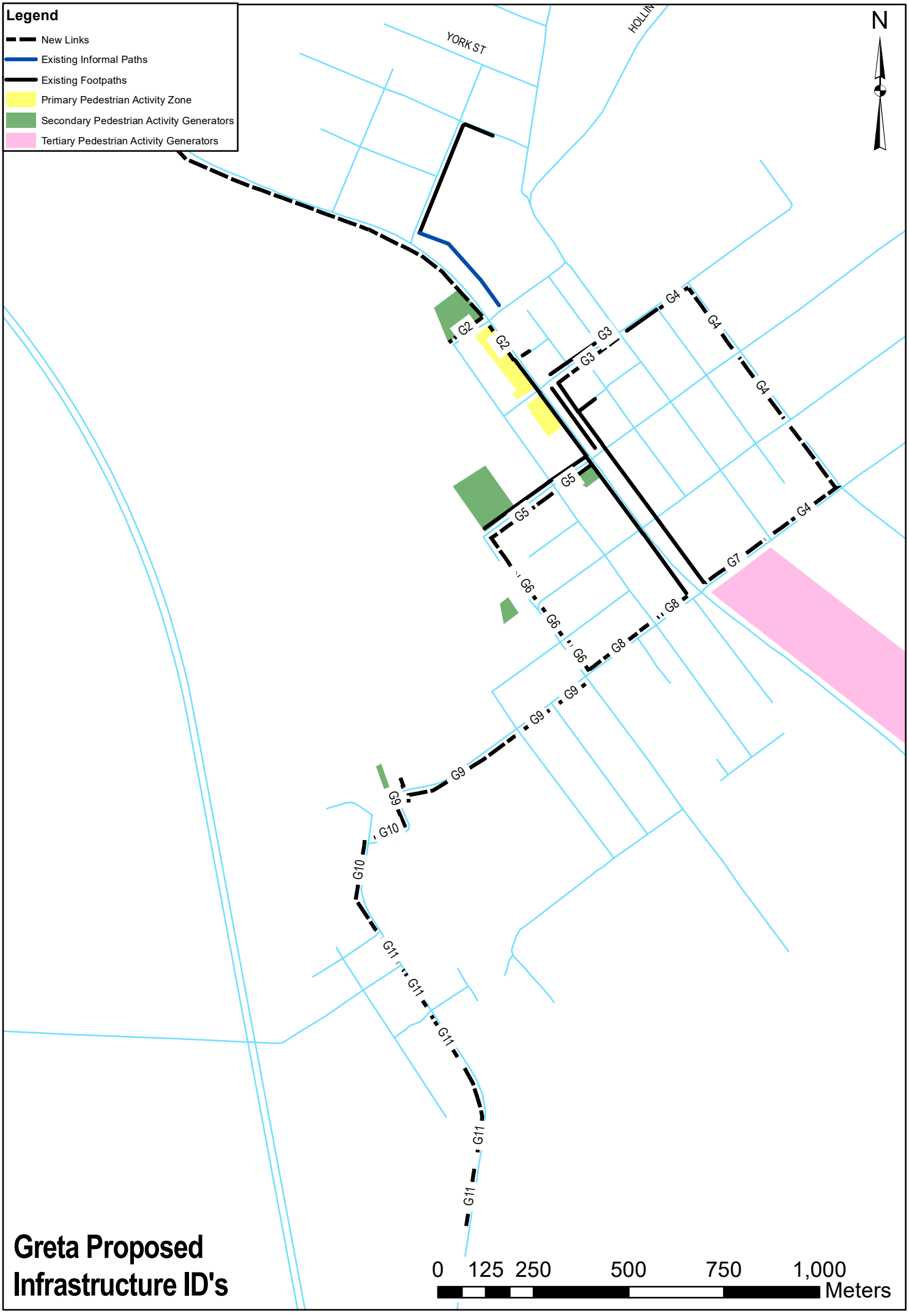
Cessnock PAMP
Identified Pedestrian Infrastucture Issues
Weston

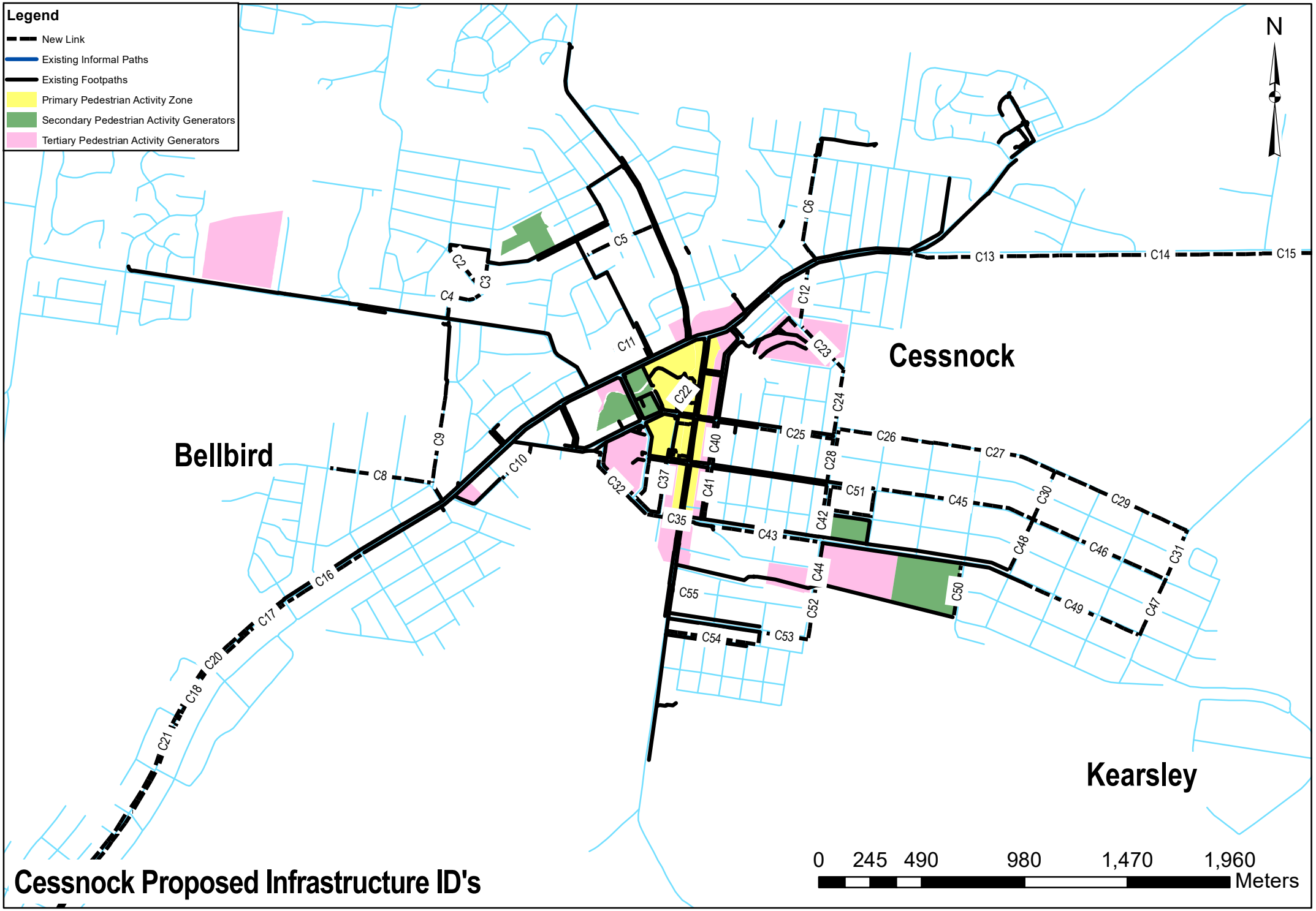


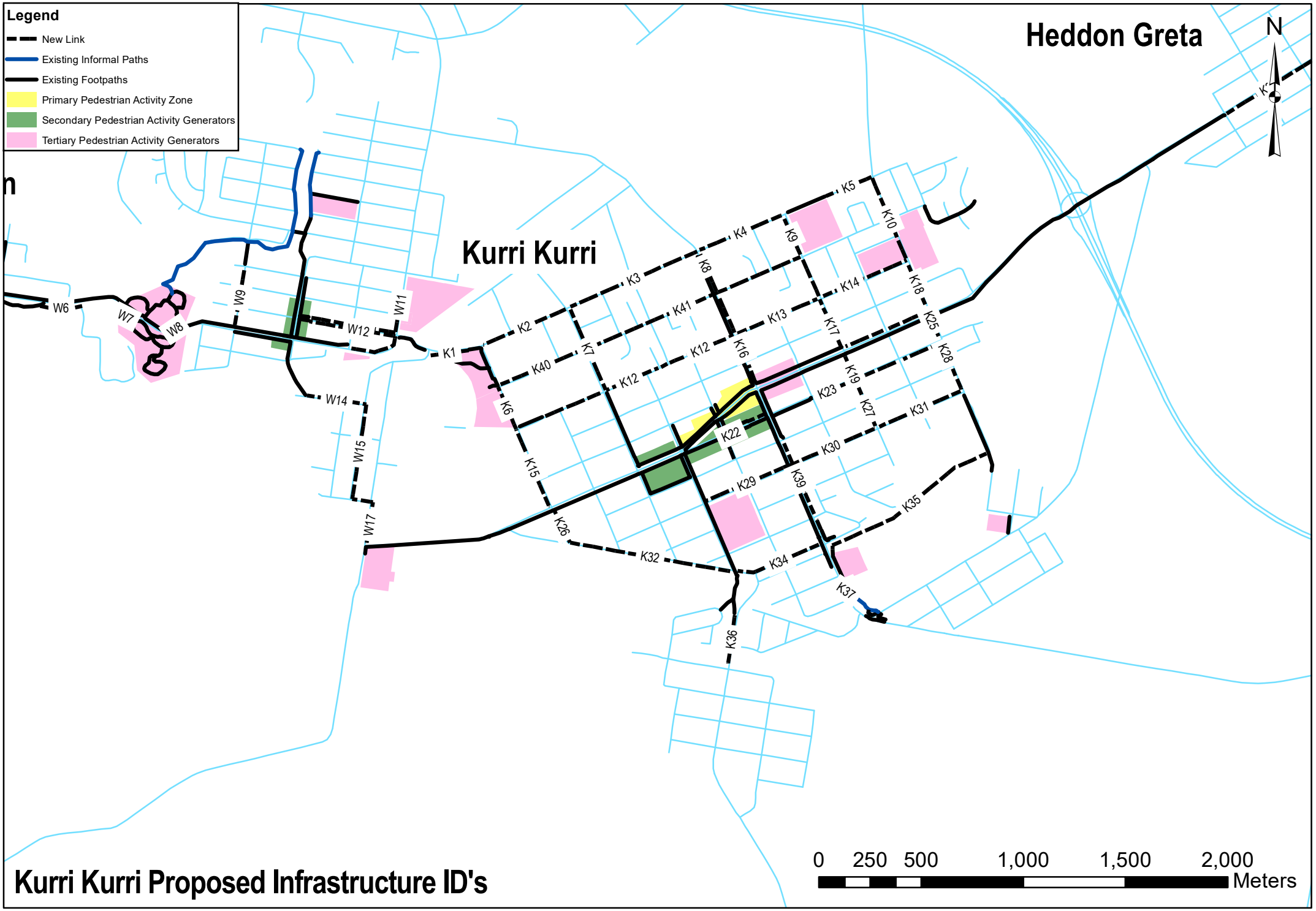
Branxton Proposed Infrastructure ID's



Cessnock CBD Proposed Infrastructure ID's


Legend
New Links
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
YORK ST
HOLLIN
G2
G3
G4
G5
G6
G7
G8
G9
G10
G11
0 125 250 500 750 1,000
Meters
Greta Proposed Infrastructure ID's


Legend
New Link
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
Cessnock
Bellbird
Kearsley
C2
C3
C4
C5
C6
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C20
C21
C22
C23
C24
C25
C26
C27
C28
C29
C30
C31
C32
C35
C37
C40
C41
C42
C43
C44
C45
C46
C47
C48
C49
C50
C51
C52
C53
C54
C55
0 245 490 980 1,470 1,960
Meters
Cessnock Proposed Infrastructure ID's


Legend
New Link
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
Heddon Greta
Kurri Kurri
N
W6
W7
W8
W9
W11
W12
W14
W15
W17
K1
K2
K3
K4
K5
K6
K7
K8
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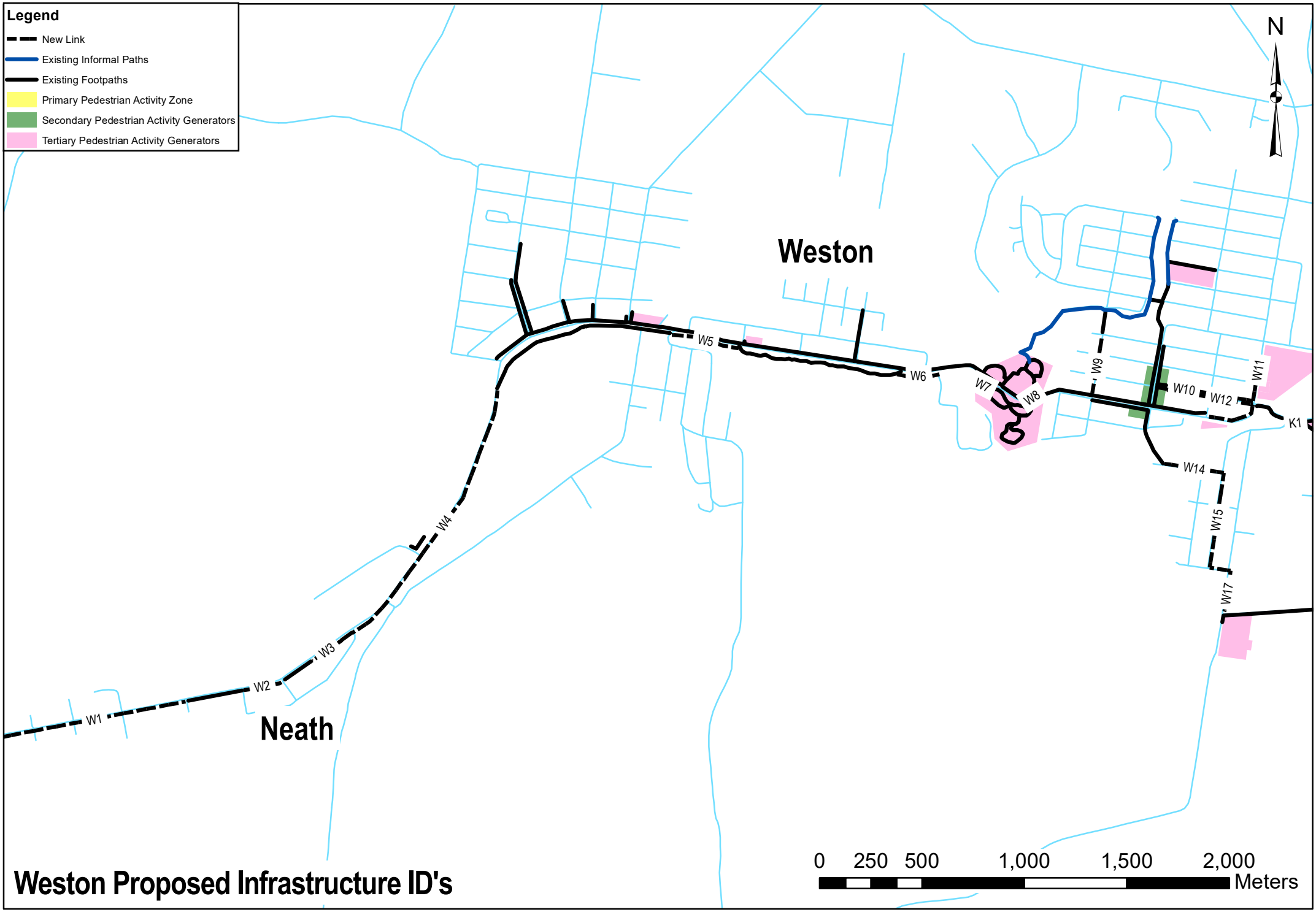
K23
K25
K26
K27
K28
K29
K30
K31
K32
K34
K35
K36
K37
K39
K40
K41
0 250 500 1,000 1,500 2,000
Meters
Kurri Kurri Proposed Infrastructure ID's


Legend
New Link
Existing Informal Paths
Existing Footpaths
Primary Pedestrian Activity Zone
Secondary Pedestrian Activity Generators
Tertiary Pedestrian Activity Generators
N
Weston
Neath
W1
W2
W3
W4
W5
W6
W7
W8
W9
W10
W11
W12
K1
W14
W15
W17
0 250 500 1,000 1,500 2,000
Meters
Weston Proposed Infrastructure ID's