

6. Commuter and Recreational Cycling

6.1 Preamble

The purpose of this section of the strategy is to review the existing commuter and recreational cycling network and identify the facilities that are required to have a continuous cycling network throughout Greater Shepparton.

This builds on what has been installed and proposed within the previous Cycling Strategy, VicRoads Municipal Bicycle Network (MBN) for Shepparton and the latest development plans for the growth corridors, with the identification of commonalities and high priority facilities to help guide development of the network over the next five years, including the preparation of an updated MBN for Shepparton.

In this regard, investigations and identification of facilities have been undertaken in the following order:

- catchments of major trip generators
- within and connecting growth corridors
- within the major townships
- between the major townships
- rail trails and other regional facilities.

Consideration has also been given to bicycle parking and route signage facilities, with discussion and recommendations also presented in this section.

6.2 Catchments of Major Trip Generators

Bicycle catchments are areas around trip generators (be they the source or destination of a trip) that are likely to be accessed by cyclists. The size of the area is dependent on the following:

- trip generator (land use)
- types of users accessing the trip generator
- facilities connecting the users to the trip generator
- level of traffic congestion in the area
- ability to conveniently access the trip generator by alternative modes of transport.

While the above indicates that the bicycle catchment area can vary significantly between trip generators, it is common practice to base staff and student (and other trip types that consist of a destination activity lasting longer than four hours at a given trip generator) catchments on a travel time of 30 minutes. For shorter-term trips, such as for customers or visitors, a catchment of 10 minutes is typical.

Based on these travel times, the catchments for long-term trips are up to 10km (5km for primary schools) and 3km for short-term trips in an urban environment. Given that Shepparton is approximately 12km north-to-south and 6km east-to-west, a significant number of cycling trips would fall within catchments as long as there are suitable facilities accessing them.

For shopping centres and other commercial developments, customers can be difficult to encourage to cycle, as they come in groups, need to transport their purchased goods and there is an abundant supply

of convenient parking. As such, the user group that is typically easier to get to cycle are those relating to staff (long-term) trips.

With retail developments, staff parking demands typically consist of between 15% and 25% of peak demands (generally the larger the development, the lower the percentage of staff). These users could be targeted through green travel plans, behavioural change programmes and improved facilities servicing associated sites (including connecting paths and lanes, as well as end-of-trip facilities).

The following sections provide discussion and recommendations of facilities for a sample of major trip generators within Shepparton.

6.2.1 Shepparton Marketplace

Shepparton Marketplace is a shopping centre located on the south side of Benalla Road, opposite Florence Street. Current bicycle facilities accessing the site consist of on-road kerbside bicycle lanes on Benalla Road between Florence Street and Archer Street to the west. There are also on-road bicycle lanes on Archer Street extending south from Benalla Road.

Beyond these on-road facilities, there are no dedicated bicycle facilities. The existing short-term (customer) catchment for the Shepparton Marketplace exists to the west along Benalla Road to Archer Street (approx. 1.2km), south down Archer Street to its intersection with Wilmot Road and Popular Avenue (approx. 1.8km) and into any of the intersecting local roads where the traffic volumes and speed are suitable for mixed traffic conditions.

More confident cyclists may be able to utilise some of the other roads to access the site, but as outlined in Section 5.2 of the strategy, these cyclists make up a small proportion of the community and do not service the majority that could potentially access the site by bicycle. Even the on-road bicycle facilities along Benalla Road are likely to only be viable for the confident and capable cyclists.

The following facilities are proposed to improve the accessibility to the site and increase its catchment:

- continuation of the on-road kerbside lanes along Benalla Road to the west between Archer Street and the railway line
- bicycle only paths between the service roads on the south side of Benalla Road to the east of Archer Street. Along the service roads, mixed traffic conditions in the westbound direction and a contra-flow lane in the eastbound direction
- on-road bicycle lanes along Florence Street between Benalla Road and Old Dookie Road
- on-road kerbside lanes on Old Dookie Road, between Florence Street and the existing cycle lane to the west.
- on-road kerbside lanes on Andrew Fairley Avenue, between Old Dookie Road and Railway Parade
- shared path within the railway corridor, on the southeast side of the line for the majority of its length, especially in close proximity to the adjacent roundabouts on the northwest side of the line. The facility can also double as a service vehicle path for railway maintenance.

6.2.2 Riverside Plaza

Riverside Plaza is a shopping centre located on the west side of Goulburn Valley Highway, to the north of Riverview Drive. Current bicycle facilities accessing the site consist of on-road kerbside bicycle lanes on Goulburn Valley Highway between Gash Court in the south to Hayes Street in the north, with intersecting on-road bicycle lanes on Kialla Lakes Drive and Wilmot Road. There is also a shared path along the west side of Goulburn Valley Highway between Balmoral Street and the Broken River, which accommodates a shared path along its northern banks. These current on and off-road facilities broadly cover the short-term (customer) catchment for the site, and the mix of on and off-road facilities accessing the site provides facilities for a wide range of current and potential users.

Again, however, it can be difficult to encourage customers to cycle to shopping centres; therefore a focus should be given to the staff (long-term) trips, especially from the surrounding residential areas.

In this regard, the following facilities are proposed to improve the accessibility to the site and increase its catchment:

- continuation of the on -road kerbside bicycle lanes along Archer Road to the south between Adams Road and drain easement
- continuation of the on -road kerbside bicycle lanes along Goulburn Valley Highway to the south between Gash Court and the Shepparton Airport access
- continuation of the off-road shared path along the west side of Goulburn Valley Highway to the south between Raftery Road and Broken River
- continuation of the off-road shared path along the west side of Goulburn Valley Highway to the north between Lincoln Drive and Hayes Street
- on-road bicycle lanes on Riverview Drive between Goulburn Valley Highway and Forest Drive
- off-road shared path on the south side of Raftery Road between Goulburn Valley Highway and Sevens Creek
- kerbside bicycle lanes on Raftery Road between Goulburn Valley Highway and Sevens Creek
- on-road bicycle lanes along the entire length of Gordon Drive
- off-road recreational path on the south side of Waranga Drive between Goulburn Valley Highway and the rail line
- off-road shared path on the south side of the Goulburn River between Rocklands Crescent and the shared path crossing point to the north of Brewster Crescent
- continuation of the shared path to the north from Forest Drive to the Goulburn River
- off-road recreational path on the south side of Waranga Drive between Goulburn Valley Highway and the rail line
- on-road bicycle lanes along Guthrie Street between Goulburn Valley Highway and Hassett Street
- on-road bicycle lanes along Hassett Street between Lincoln Drive and Longstaff Street
- on-road bicycle lanes along Longstaff Street between Abernethy Street and Goulburn Valley Highway
- shared path within the railway corridor, on the southeast side of the line to the northeast of Longstaff Street.

6.2.3 Fairley's IGA

Fairley's IGA is a supermarket located on the north side of Hawkins Street, to the east of Numurkah Road. Current bicycle facilities accessing the site consist of on-road kerbside bicycle lanes on Numurkah Road between Balaclava Road and Ford Street, with intersecting on-road bicycle lanes on Brauman Street and Balaclava Road. There are also shared paths within the public reserves on the east side of Numurkah Road and north of Brauman Street.

These current on and off-road facilities broadly cover the short-term (customer) catchment for the site, but have a number of discontinuities, that if overcome, would provide a more continuous network in all directions of the site, especially to the east and the existing facilities along Verney Road.

In this regard, the following facilities are proposed to improve the accessibility to the site and increase its catchment:

- shared path on the south side of Hawkins Street between Numurkah Road and Verney Road
- exclusive bicycle lanes along Wyndham Street between Balaclava Road and Knight Street once the Shepparton Bypass is built and through volumes reduce
- bicycle only paths between the service roads on the east side of Numurkah Road between Balaclava Road and Ford Street. Along the service roads, mixed traffic conditions in the southbound direction and a contra-flow lane in the northbound direction
- shared path on the north side of Ford Road between Numurkah Road and Verney Road
- continuation of the shared path on the north side of Balaclava Road between Packham Street and Numurkah Road
- shared path on the west side of Packham Street between Balaclava Road and where the carriageway becomes divided
- on-road bicycle lanes along east of Packham Street over the length to the south of Brauman Street where the carriageway is divided
- connect the recreational path sections through the public reserves west of Numurkah Road and north of Brauman Street
- recreational path along the south side of Pine Road between Numurkah Road and the existing section within the flood easement to the east.

6.2.4 Primary Schools

In terms of primary schools, these provide a significant opportunity to encourage bicycle use to access them as trip destinations, given that there was a large latent demand of potential users identified within the Greater Shepparton BikeScope survey 2011 (refer to Section 2.1.4), and that students generally live within the identified catchment of 5km of them.

However, as mentioned in Section 5.2 of the strategy, primary school students are likely to be averse to traffic and require almost completely segregated facilities for their entire trip to be able to cycle to school by themselves. As such, formalised off-road cycling facilities are generally perceived as being safe and should be provided.

They do not have to extend to each student's doorstep or road, but if they are able to extend within a short distance of their homes, or the main commuter road their parents take to work, they can be taken part of way to school by their parents and use dedicated facilities the rest of the way. Combining such facilities and access approach with targeted behaviour change programs, such as cycling school buses and catchment and facility maps, more primary school students could be encouraged to cycle to school on a regular basis.

While the above is an overview of the overall approach that should be applied to all schools within Greater Shepparton, it is noted that in some instances it is difficult to provide segregated facilities, typically due to primary schools being located within existing built-up urban environments with limited road reserves widths, to retro-fit them with shared path facilities, and roads that do not have sufficient spare capacity to redistribute capacity towards cyclists without a significant loss of car parking.

Also affecting the level of children cycling to school is the perceived low level of passive surveillance, which commonly raises concerns from parents in relation to 'stranger danger' and bullying, even though statistically these treats are low when travelling to and from school.

However, it should be noted that children under the age of 12 are permitted to cycle on footpaths. They can also be accompanied by an adult on a bicycle as well. This law does not seem to be well known, or well utilised. It is thus recommended that catchments around primary schools be identified, mapped and signposted as potential bicycle access routes. The facilities, be they segregated cycle lanes or footpaths, should connect the school to major residential areas and commuter roads used to access major employment areas. The signage should at least direct users to the associated schools, and if it is along a footpath, it should also indicate that children under 12 years of age can cycle along this facility with or without a parent.

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Cycling to primary schools has significant benefits in terms of reducing childhood obesity, reducing the number of vehicles dropping off and picking up children at the schools, as well as getting children into a regular habit of exercise from an early age.

6.3 New Residential Developments

Within Greater Shepparton there are a number of new residential developments. The following latest growth corridor development plans have been provided for review in terms of the proposed bicycle facilities:

- Shepparton North – boarded by Goulburn valley Highway, Verney Road and Ford Street.
- Shepparton North-East – boarded by Verney Road, Ford Road, railway corridor and existing drain to the north of New Dookie Road.
- Shepparton South East – boarded by Benalla Road, Doyles Road, Broken River and existing residential development to the west.
- Shepparton South – boarded by Goulburn Valley Highway, Seven Creeks and existing residential development south of Raftery Road.
- Mooroopna West – boarded by Excelsior Road (Shepparton Bypass), Cornish Road, Echuca Road and existing residential development to the east, and Midland Highway.

Each development plan consists mainly of low-density residential developments, with some retail, schools and parklands. Historically, development of this nature has been very car originated, with little consideration given to the current or future provision of facilities for alternative modes of transport. This is beginning to change, especially with the identification of future bus routes, but the initial identification of bicycle facilities is still limited.

However, through the bicycle design framework presented in Section 5.2.3, and namely the associated bicycle facilities recommended to be provided in conjunction with the road network in Table 5.3, a comprehensive and connected bicycle network should be able to be provided from the outset.

In terms of applying such a design framework as part of new residential developments, there are limitations associated with the accuracy of the estimated traffic generation and its distribution throughout large developments, as it is not a precise science. Also, there are roads that may continue for long distances with traffic volumes that can vary significantly, so to swap and change facility types is not user friendly or feasible. Generally, this is an issue with connector roads, and it is recommended that where practical, both on-road bicycle lanes and off-road shared paths (on at least one-side of the road) be provided. Moreover, property access to the side of a connector street on which the shared path is proposed should occur via a lower order road where possible to minimise the potential for conflicts.

Given the above, the following is recommended for each of the latest growth corridor development plans.

6.3.1 Shepparton North

- Proposed shared paths are appropriate.
- Provide shared paths along the Verney Road, Goulburn Valley Highway and Ford Street frontages.
- Provide a shared path along one side of the northern collector road and minimise the number of properties accessed to that side.
- Provide on-road bicycle lanes along the two east-west collector roads.

6.3.2 Shepparton North-East

- Provide a shared path along the Ford Road frontage.

- Provide a shared path along the Grahamvale Road frontage.
- Provide a shared path along the north-south public space / wetland drainage area.
- Provide on-road bicycle lanes and shared paths on at least one side of north-south and east-west collector roads.

6.3.3 Shepparton South-East

- Proposed regional bike trails between Broken River and Channel Road are appropriate.
- Proposed bicycle network north of Channel Road is not intuitive, convenient or clear as to what facilities are being provided. Where sufficient carriage way width is provided for on-road bicycle lanes, these can be provided on the local roads. However, for the collector and arterials roads the following recommendations should be incorporated.
- Provide a shared path along the Benalla Road / Midland Highway frontage.
- Provide a shared path on west side of Doyles Road frontage.
- Provide a shared path on the north side of Channel Road.
- Provide a shared path on the south side of Popular Avenue.
- Provide a shared path on at least one side of Zurcas Lane (north-south main boulevard) and on-road bicycle lanes with a speed limit of 50km/h or less. Consideration could be given to segregated bicycle lanes if the abutting land uses are likely to generate high pedestrian volumes and make the required shared path width unable to be accommodated (refer to VicRoads Cycle Note 21 – Widths of Off-Road Shared Use Paths, October 2010¹¹ for shared path width and user volume guidance).
- Provide on-road bicycle lanes on Channel Road and Popular Avenue.
- Provide shared path facilities between the proposed school and shared path facilities on Doyles Road and Popular Avenue, and resulting bicycle facilities on Zurcas Lane.

6.3.4 Shepparton South

- Proposed shared paths are appropriate.
- Provide a shared path along the Goulburn Valley Highway frontage.
- Provide a shared path along one side of the northern collector road.
- Provide on-road bicycle lanes on the east-west collector roads.

6.3.5 Mooroopna West

- It is assumed that a shared path is being provided along one side of Excelsior Road (Shepparton Bypass).
- Provide a shared path along the Echuca Road frontage.
- Provide a shared path along the Cornish Road frontage.
- Provide on-road bicycle lanes on the north-south road.
- Provide a recreational path between Cornish Road and Midland Highway through floodway's.
- Provide east-west connecting recreational paths between the floodway's path and the existing parks between MacIsaac Road and Knight Street.
- Provide a shared path on at least one side and on-road bicycle lanes along Mac Isaac Road.

¹¹ It is noted that this is a draft document and, whilst it is considered to be a useful reference and may not change, it is yet to be finalised.

6.4 Within Townships

The development of complete and continuous commuter and recreational bicycle networks within each of the townships that are within Greater Shepparton should be the long term goal. Consideration of such facilities has been undertaken for Shepparton and ten other townships.

It should be noted that due to funding limitations and the retrospective nature that these facilities are being provided within the existing built environment, these will not be able to all be implemented as part of the strategy, but form an on-going blue print for Greater Shepparton and enable potential synergies with other developments and on-going maintenance (such as the inclusion of on-road bicycle lanes when annually marking or re-surfacing occurs), as well as ensuring that developments do not inhibit the opportunity to provide the proposed facilities in the future.

The identification of the most feasible facilities has been undertaken based on a review of the following:

- existing bicycle network facility maps for Shepparton, Mooroopna, Murchison and Tatura
- VicRoads MBN
- relevant structure and development plans, including those for the growth areas
- previously identified facility recommendations within the strategy
- findings from the consultation and feedback from Council
- aerial photography
- site visits.

6.4.1 Shepparton

Shepparton is the largest township within Greater Shepparton and as such, the bicycle network facility maps have been divided into two (north and south), and specific discussion given to the Shepparton CBD. Each of the two facility maps covering Shepparton and discussion about the Shepparton CBD are considered separately as follows.

Shepparton North

The proposed Shepparton North bicycle network facility map is presented in Figure 6.1. Identified facility recommendations have been indicated with dashed lines within Figure 6.1 and summarised in Table 6.1

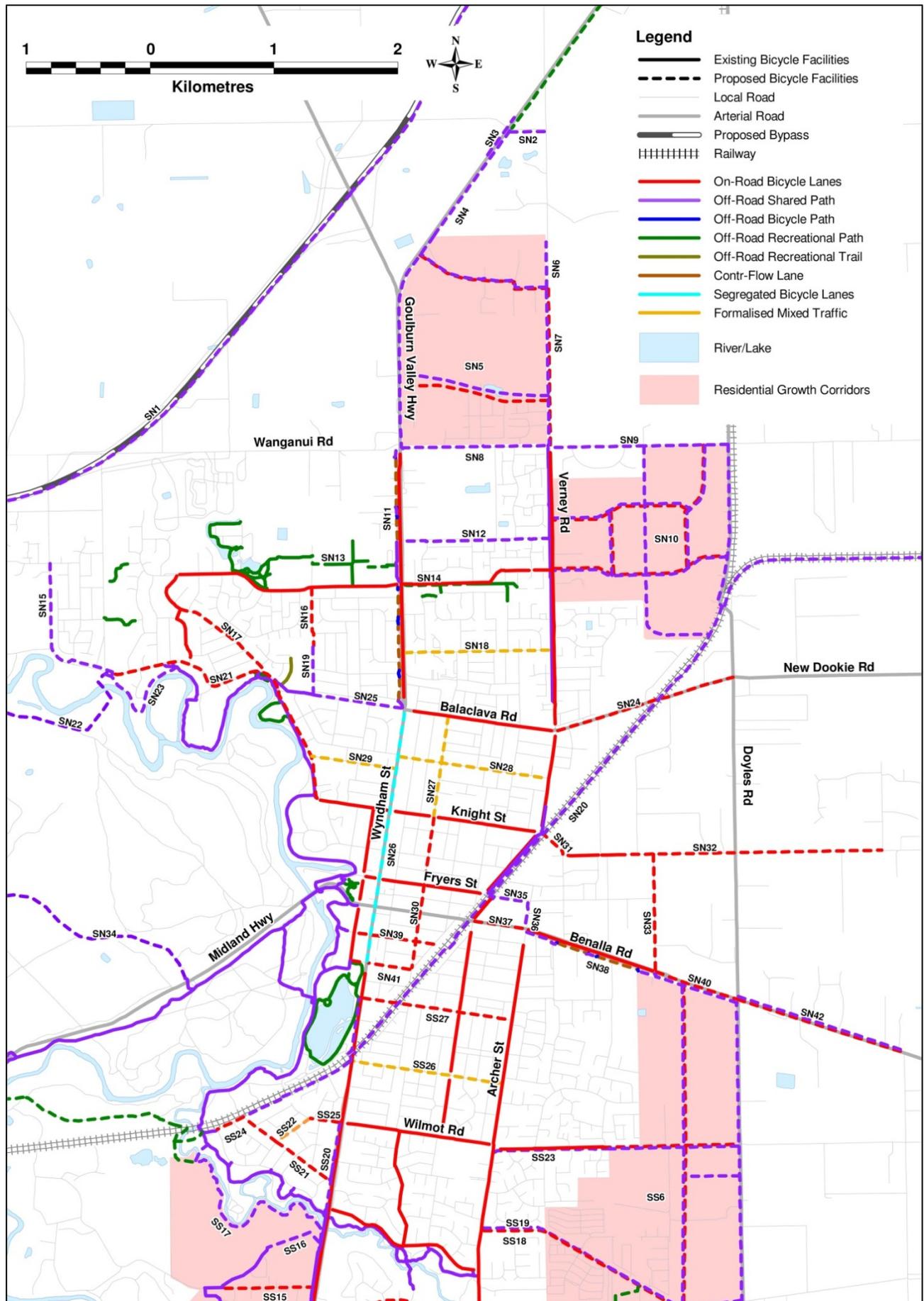
ACTION 10

Table 6.1: Shepparton North Proposed Facility

ID	Location	Facility type	Length (m)
SN1	Shepparton Bypass	Shared path	-
SN2	Grace Rd - south side btw Goulburn Valley Hwy & Verney Rd	Shared path	1,200
SN3	Goulburn Valley Hwy - northwest side btw Grace Rd & School Entrance	Shared path	370
SN4	Goulburn Valley Hwy - east side btw Grace Rd & Ford Rd	Shared path	2,950
SN5	Shepparton North Growth Corridor	Various	-
SN6	Verney Rd - west side btw Ford Rd & GM Water Drain	Shared path	1,670
SN7	Verney Rd - btw Ford Rd & Trinity Dr	On-road bicycle lane	1,280
SN8	Ford St - North side btw Numurkah Rd & Verney Rd	Shared path	1,190
SN9	Ford St - south side btw Verney Rd & Railway Line	Shared path	1,430
SN10	Shepparton North-East Growth Corridor	Various	-
SN11	Numurkah Rd - east side btw Balaclava Rd & Ford St	Bicycle path, mixed traffic, contraflow lane	2,130
SN12	Hawkins St - south side btw Numurkah Rd & Verney Rd	Shared path	1,190
SN13	John McEwen Reserve - btw Packham St & Numurkah Rd	Recreational path	720
SN14	Pine St - south side btw Numurkah Rd & Verney Rd	Recreational path	1,240
SN15	The Boulevard - north / east side btw Northcote Ave & Golf Dr	Shared path	1,400
SN16	Packham St - btw Tilton St & Brauman St	On-road bicycle lanes	460
SN17	Batman Ave - btw Dampler Ave & The Boulevard	On-road bicycle lanes	770
SN18	Graham St - btw Numurkah Rd & Verney Rd	Formalised mixed traffic	1,190
SN19	Packham St - west side btw Balaclava Rd & Tilton St	Shared path	410
SN20	Railway Corridor - btw Dookie & Longstaff St (Length represents urban section only)	Shared path	5,360
SN21	The Boulevard - btw Northcote Ave & Knight St	On-road bicycle lanes	2,320
SN22	Native Flora & Fauna Res – btw The Boulevard & Macfarlane Rd	Shared path	2,690
SN23	Goulburn River - north side btw Howitt Rd & Kittles Rd	Shared path	1,000
SN24	New Dookie Rd - btw Verney Rd & Doyles Rd	On-road bicycle lanes	1,460
SN25	Balaclava Rd - north side btw Packham St & Numurkah Rd	Shared path	710
SN26	Wyndham St - btw Balaclava Rd & Sobraon St	Exclusive bicycle lanes	2,150
SN27	Corio St - btw Balaclava Rd and Knight St	Formalised mixed traffic	820
SN28	Rea St btw Wyndham St & Hawdon St	Formalised mixed traffic	1,230
SN29	Mason St - btw Wyndham St & The Boulevard	Formalised mixed traffic	670
SN30	Corio St - btw Knight St & Sobraon St	On-road bicycle lanes	1,250
SN31	Andrew Fairley Ave - btw Old Dookie Rd & railway line	On-road bicycle lanes	250
SN32	Old Dookie Rd - btw Mitchell St & Dobson Rd	On-road bicycle lanes	2,220
SN33	Florence St - btw Benalla Rd & Old Dookie Rd	On-road bicycle lanes	940
SN34	Native Flora & Fauna Res – btw Midland Hwy & Macfarlane Rd	Shared path	2,050
SN35	Thompson St - south side btw Archer St & Fryers St	Shared path	290
SN36	Archer St - west side btw Benalla Rd & Thompson St	Shared path	190
SN37	Benalla Rd - btw Archer St & Railway Line	On-road bicycle lanes	470
SN38	Benalla Rd - south side btw Doyles Rd & Archer St	Bicycle path, mixed traffic, contraflow lane	1,800
SN39	Vaughan St – btw Wyndham St & Hoskin St	On-road bicycle lanes	630
SN40	Benalla Rd - btw Florence St & Orrvale Rd	On-road bicycle lanes	710
SN41	Sobraon St - btw Welstford St & Corio St	On-road bicycle lanes	480
SN42	Benalla Rd - north side btw Doyles Rd & Orrvale Rd	Shared path	1,410

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Figure 6.1: Shepparton North Existing and Proposed Facilities



Shepparton South

The proposed South Shepparton bicycle network facility map is presented in Figure 6.2. Identified facility recommendations have been indicated with dashed lines within Figure 6.2 and summarised in Table 6.2.

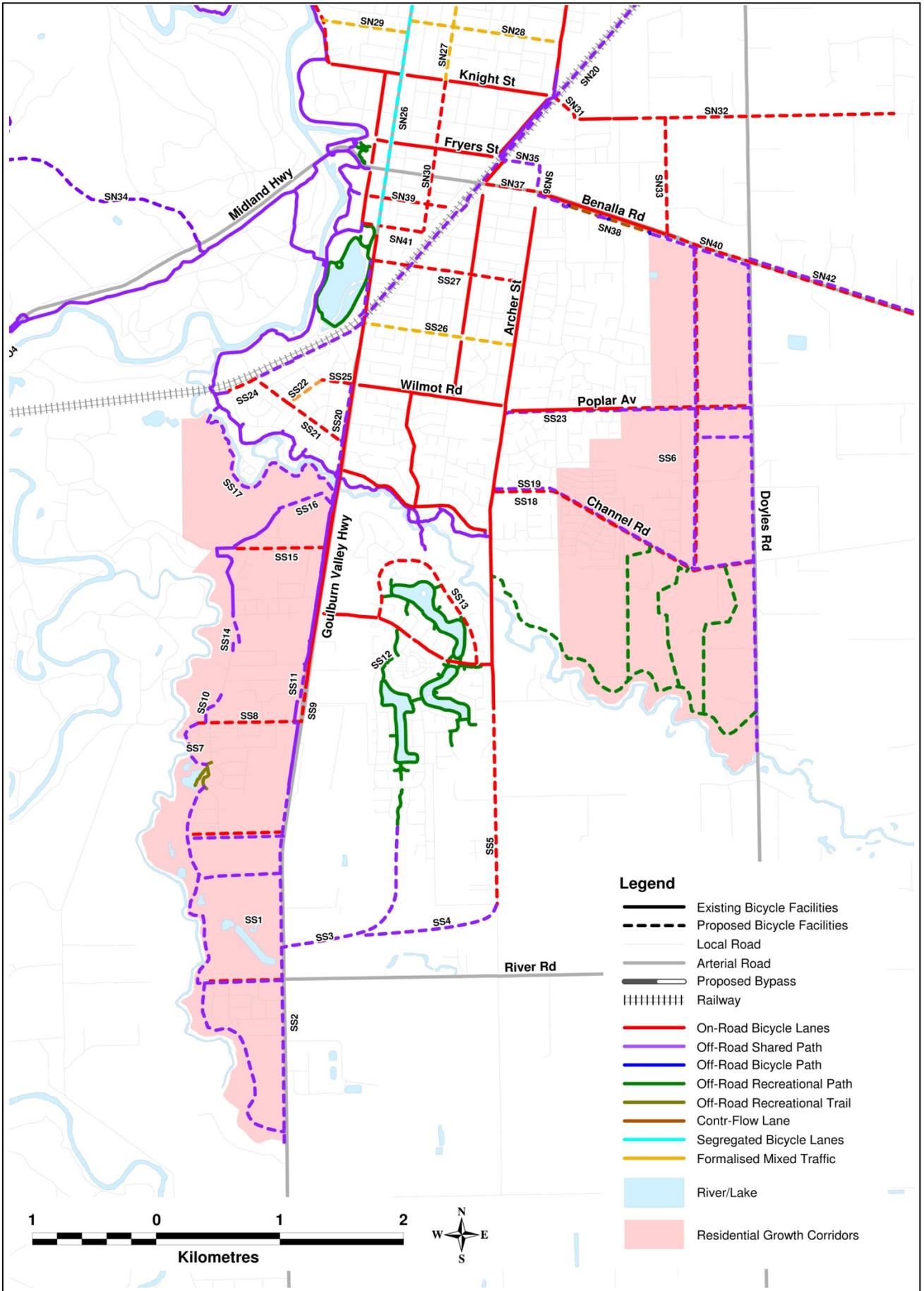
ACTION 11

Table 6.2: Shepparton South Proposed Facility

ID	Location	Facility type	Length (m)
SS1	Shepparton South Growth Corridor	Various	-
SS2	Goulburn Valley Hwy – west side btw Raftery Rd & Sevens Creek	Shared path	3,500
SS3	Lane reserve - btw Wendouree Dr & Goulburn Valley Hwy	Shared path	1,680
SS4	Lane reserve - btw Archer Rd & Goulburn Valley Hwy	Shared path	1,710
SS5	Archer Rd - btw drain easement & Adams Rd	On-road bicycle lanes	1,675
SS6	Shepparton South East Growth Corridor	Various	-
SS7	Btw Raftery Rd & Seven Creek Dr	Shared path	450
SS8	Raftery Rd - btw Goulburn Valley Hwy & Seven Creeks	On-road bicycle lanes	900
SS9	Goulburn Valley Hwy - btw Gash Ct & Raftery Rd	On-road bicycle lanes	1,044
SS10	Lane reserve - btw Furphy Ave & Raftery Rd	Shared path	300
SS11	Goulburn Valley Hwy - west side btw Balmoral St & Kialla Park	Shared path	460
SS12	Waranga Dr - south side btw Rocklands Cres & crossing to the north of Brewster Cres	Recreational path	110
SS13	Gordon Dr - entire length	On-road bicycle lanes	1,720
SS14	Lane reserve - btw Settlers Dr & Furphy Ave	Shared path	300
SS15	Riverview Dr - btw Goulburn Valley Hwy & Forest Dr	On-road bicycle lanes	710
SS16	Lane reserve - btw Forest Dr & Goulburn Valley Hwy	Shared path	480
SS17	Broken River - south side btw Rail Line and Goulburn Valley Hwy	Shared path	1,870
SS18	Channel Rd - btw Archer St & McPhees Rd	On-road bicycle lanes	1,140
SS19	Channel Rd - north side btw Archer St & McPhees Rd	Shared path	1,140
SS20	Goulburn Valley Hwy - west side btw Lincoln Dr & Wilmot St	Shared path	720
SS21	Guthrie St - btw Goulburn Valley Hwy & Hassett St	On-road bicycle lanes	860
SS22	Abernethy St - btw Guthrie St & Longstaff St	Formalised mixed traffic	330
SS23	Poplar Ave - south side btw Archer St & Growth Corridor	Shared path	860
SS24	Hassett St - btw Lincoln Dr & Longstaff St	On-road bicycle lanes	630
SS25	Longstaff St - btw Abernethy St & Goulburn Valley Hwy	On-road bicycle lanes	230
SS26	Macintosh St - btw Goulburn Valley Hwy & Archer St	Formalised mixed traffic	1,210
SS27	Hayes St - btw Goulburn Valley Hwy & Archer St	On-road bicycle lanes	1,210

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Figure 6.2: Shepparton South Existing and Proposed Facilities



Shepparton CBD

While bicycle facilities recommended within the Shepparton CBD have been presented within Figure 6.1 and Figure 6.2, it is noted that traffic volumes are expected to be significantly higher within the CBD than the surrounding predominately residential areas. As such, on-road bicycle lanes or mixed traffic conditions may not be suitable to encourage the majority of potential users, and given that there are no segregated facilities (i.e. shared paths or reserves) that can be utilised to access the centre of the CBD by bicycle, consideration must be given to segregated bicycle lanes within the existing road corridors. At this time, this is proposed along Wyndham Street, once the Shepparton Bypass has been constructed and traffic volumes travelling through the CBD reduce, as this would require one traffic lane in each direction to be removed along the length of Wyndham Street.

If, however, the demand for a facility along Wyndham Street is warranted before the Shepparton Bypass is completed, then the removal of kerbside car parking and the maintaining of two traffic lanes in each direction are recommended. The traffic lanes would need to be reduced in width by as much as 0.3m to accommodate 2.0m wide bicycle lanes in each direction with a 0.6m wide physical separation from motorised vehicles, but this is considered suitable given the low current operating speed in this area.

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6.4.2 Mooroopna

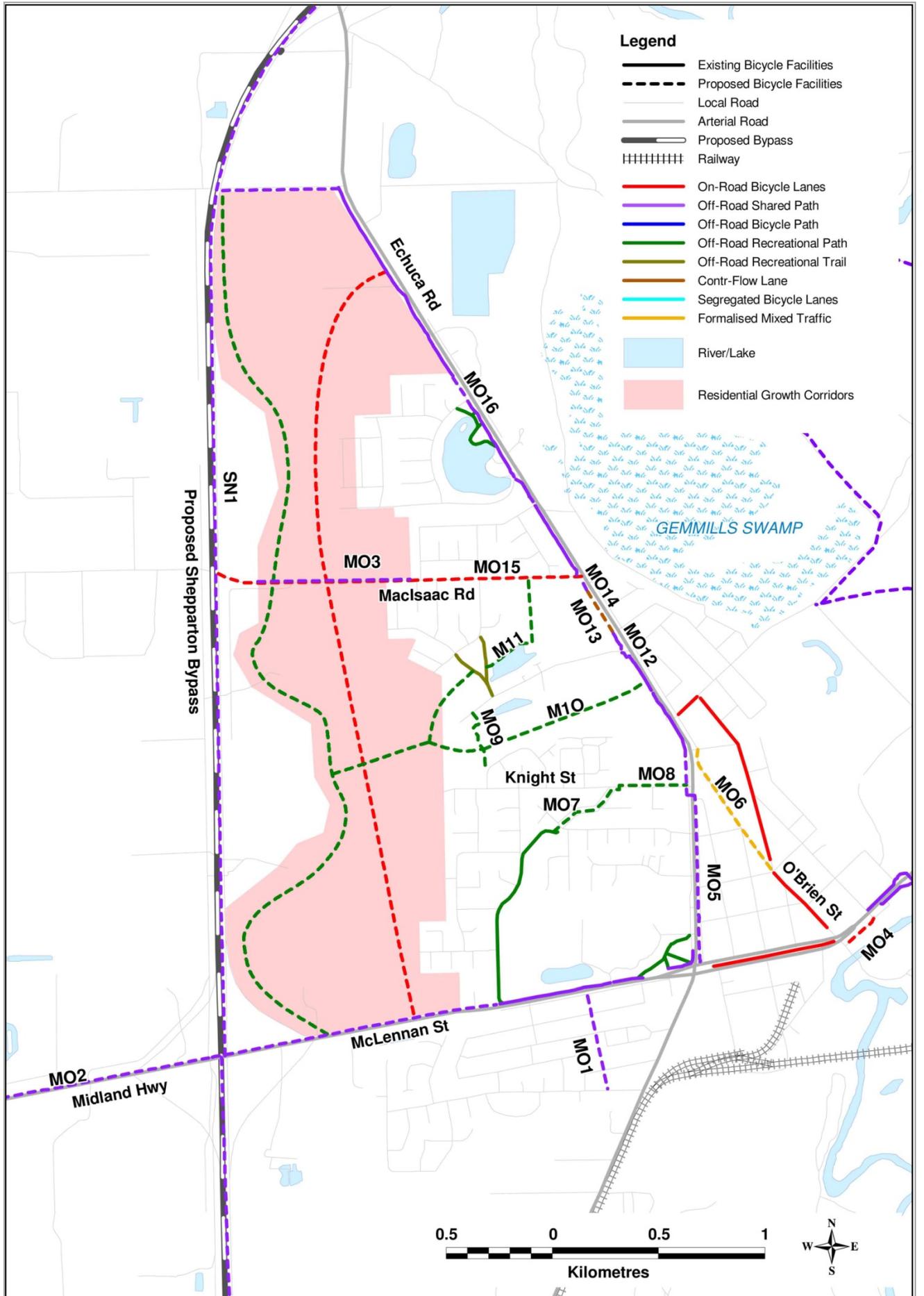
The proposed Mooroopna bicycle network facility map is presented in Figure 6.3. Identified facility recommendations have been indicated with dashed lines within Figure 6.3 and summarised in Table 6.3.

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Table 6.3: Mooroopna Proposed Facility

ID	Location	Facility type	Length (m)
MO1	Land reserve - btw McLennan St & Lenne St	Shared path	430
MO2	Midland Hwy – north side btw Elsie James Dr & caravan park access	Shared Path	2,250
MO3	Within Mooroopna West Growth Corridor	Various	-
MO4	McLennan St – btw Watts Rd & Elizabeth St	On-road bicycle lanes	170
MO5	Echuca Rd - east side btw Midland Hwy & Northgate St	Shared path	730
MO6	Obrien St - btw Treacy St & Midland Hwy	On-road bicycle lanes	1,060
MO7	Rodney Park Ave - central median btw Goulburn Cross & Knight St	Recreational path	290
MO8	Knight St - north side btw Rodney Park Ave & Echuca Rd	Recreational path	300
MO9	Land reserve - btw Westview Dr & Homewood Dr	Recreational path	280
MO10	Land reserve - btw growth corridor & Echuca Rd	Recreational path	1,030
MO11	Land reserve - btw growth corridor & Maclsaac Rd	Recreational path	860
MO12	Echuca Rd - southwest side btw Homewood Dr & Carr Cres	Shared path	80
MO13	Echuca Rd – entire length of service road	Contraflow lane	240
MO14	Echuca Rd - southwest side btw service road & Maclsaac Rd	Shared path	50
MO15	Maclsaac Rd - btw Echuca Rd & Excelsior Ave	On-road bicycle lanes	1,700
MO16	Echuca Rd - southwest side btw Craigmuir Dr & existing path	Shared path	120

Figure 6.3: Mooroopna Existing and Proposed Facilities



6.4.3 Murchison

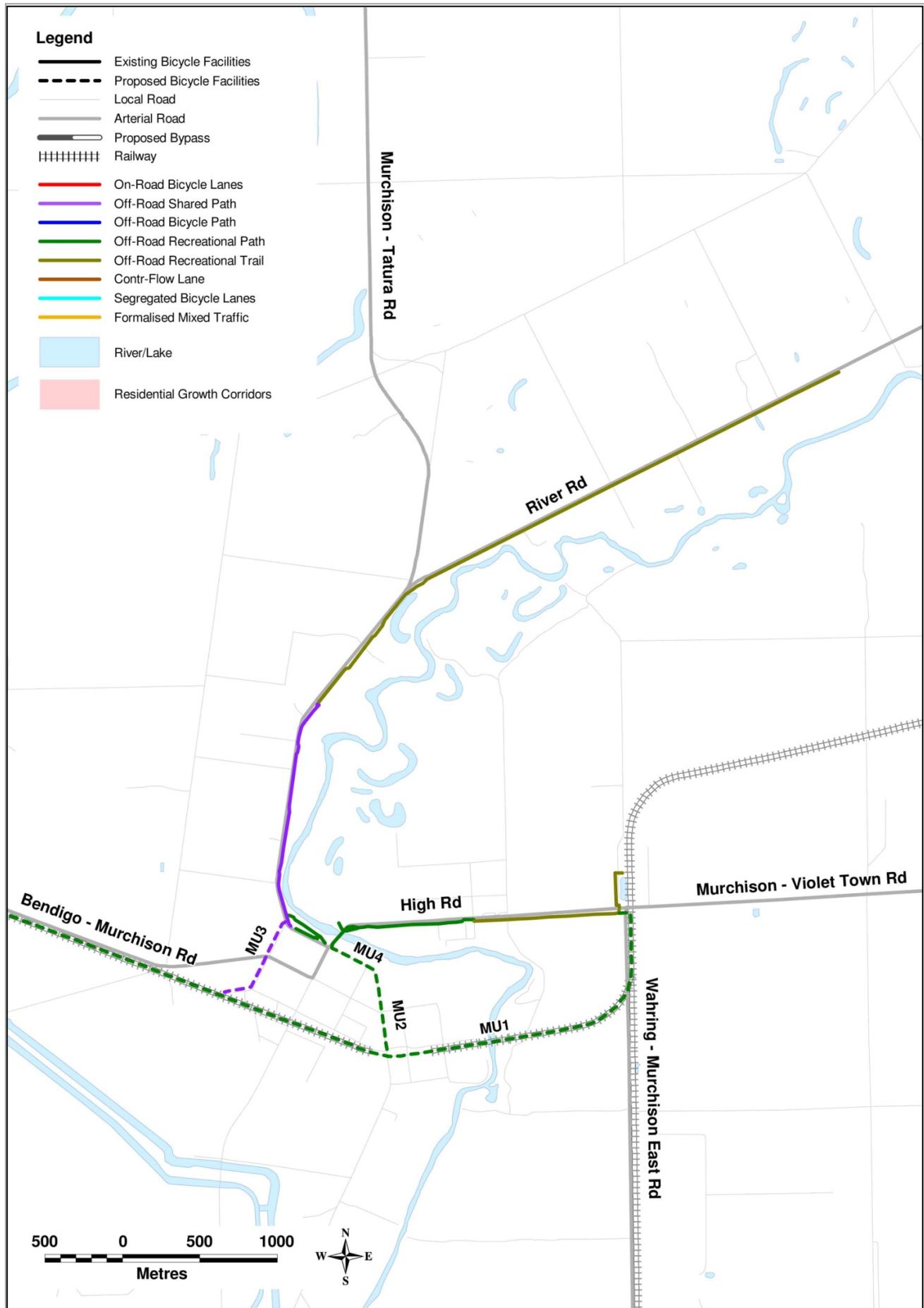
The proposed Murchison bicycle network facility map is presented in Figure 6.4. Identified facility recommendations have been indicated with dashed lines within Figure 6.4 and summarised in Table 6.4.

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Table 6.4: Murchison Proposed Facility

ID	Location	Facility type	Length (m)
MU1	Train corridor - btw Bendigo-Murchison Rd & Channel Inlet Rd	Recreational path	10,880
MU3	Willoughby St - east side btw train corridor & Mckenzie St	Recreational path	620
MU2	Impey St - west side btw train corridor & Stevenson St	Shared path	600
MU4	Stevenson St - north side btw High Rd & Mckenzie St	Recreational path	260

Figure 6.4: Murchison Existing and Proposed Facilities



6.4.4 Tatura

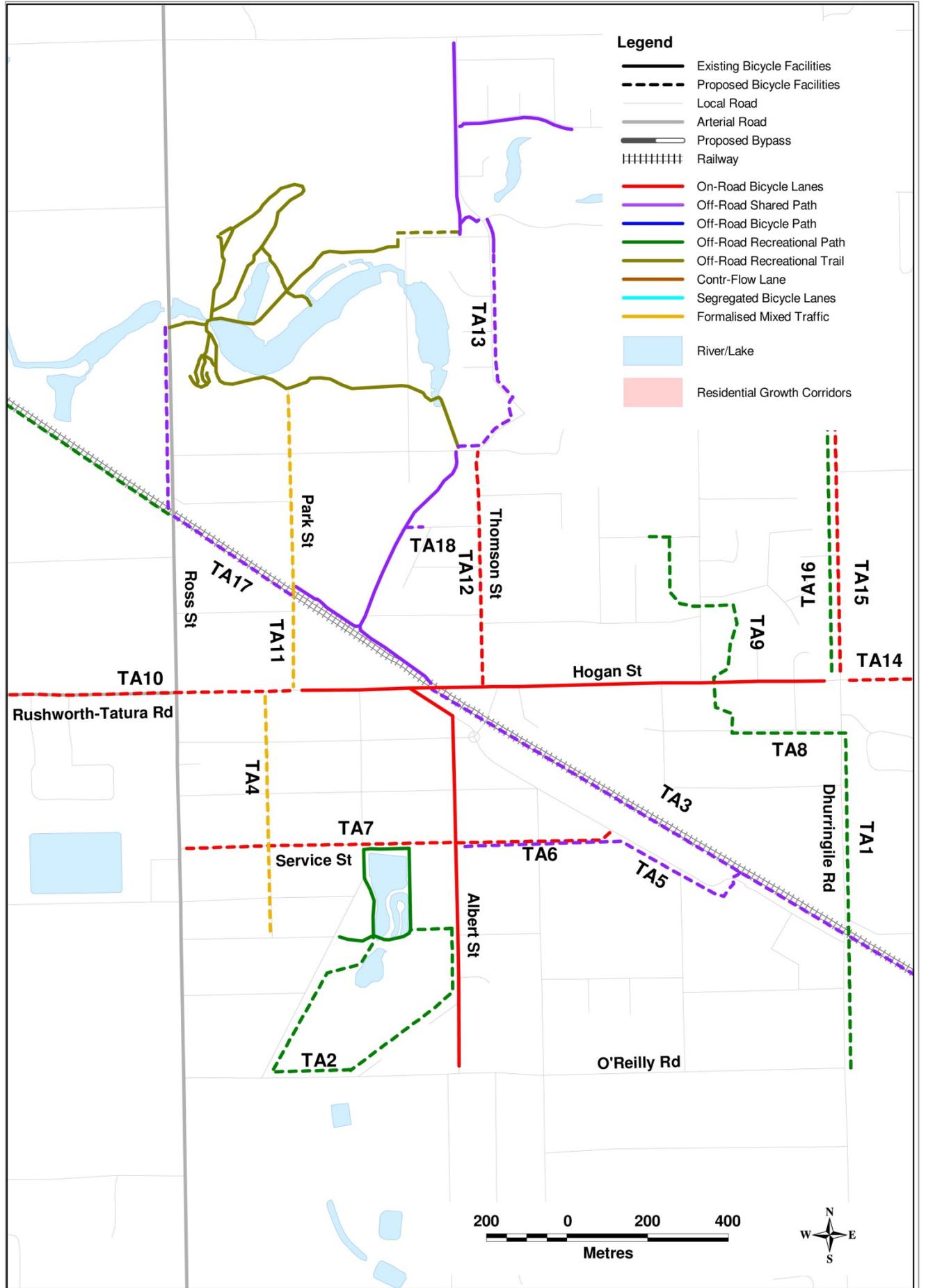
The proposed Tatura bicycle network facility map is presented in Figure 6.5. Identified facility recommendations have been indicated with dashed lines within Figure 6.5 and summarised in Table 6.5.

ACTION 15

Table 6.5: Tatura Proposed Facility

ID	Location	Facility type	Length (m)
TA1	Dhurringile Rd - east side btw O'Reilly Rd & Moyola Dr	Recreational path	880
TA2	Around Charlie Taylor Park	Recreational path	1,720
TA3	Railway line - southwest side btw Dhurringile Rd & Hogan St	Shared path	1,190
TA4	Fraser St - btw O'Toole St & Hogan St	Formalised mixed traffic	600
TA5	Brown St - southwest side btw Service St until railway line	Shared path	330
TA6	Service St - south side btw Albert St & Brown St	Shared path	400
TA7	Service Rd - btw Brown St & Ross St	On-road bicycle lanes	1,100
TA8	Barron St - south side btw Dhurringile Rd & recreational reserve	Recreational path	270
TA9	Through parks - btw Barron St & Slims Ct / Brooks Ct	Recreational path	700
TA10	Hogan St - btw Park St & Joe Ford Dr	On-road bicycle lanes	650
TA11	Park St - btw Hogan St & railway line	Formalised mixed traffic	240
TA12	Thompson St - btw Hogan St & William St	On-road bicycle lanes	580
TA13	Thompson St - east side btw William St & Brookwater Cres	Recreational path	750
TA14	Ferguson Rd - btw Dhurringile Rd and Dollar Cr	On-road bicycle lanes	700
TA15	Dhurringile Rd - btw Hogan St and end and residential development	On-road bicycle lanes	800
TA16	Dhurringile Rd - btw Hogan St and end and residential development	Recreational path	800
TA17	Ross St / rail reserve - btw Park St and Cussen Park	Shared path	800

Figure 6.5: Tatura Existing and Proposed Facilities

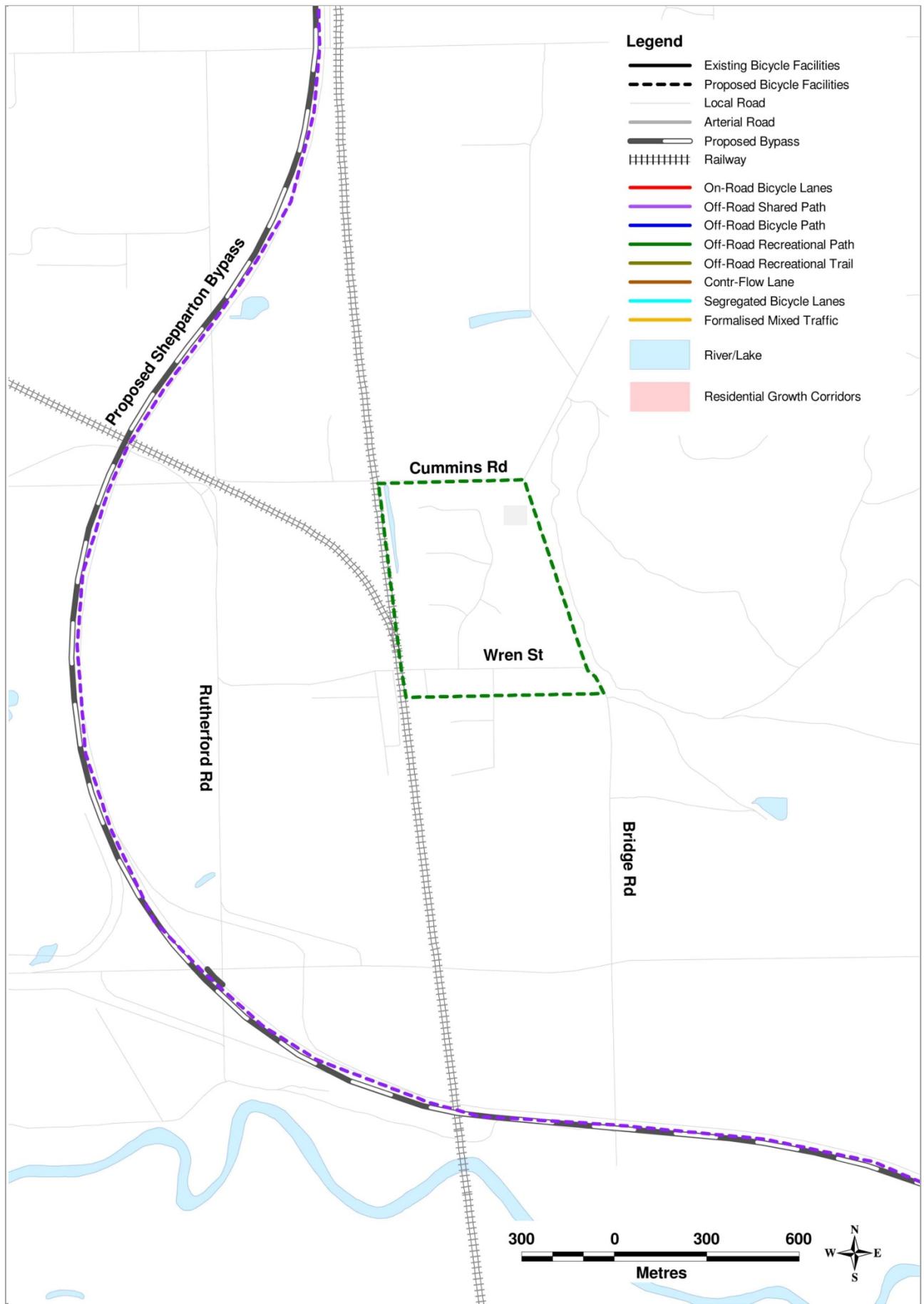


6.4.5 Toolamba

There are currently no dedicated bicycle facilities provided in the township of Toolamba. This is in part to its size and limited number of trip generators. However, there is opportunity to provide a 2.6km recreational loop that also accesses the local school and sports grounds. The recommended recreational loop is shown in Figure 6.6.

ACTION 16

Figure 6.6: Toolamba Proposed Facilities

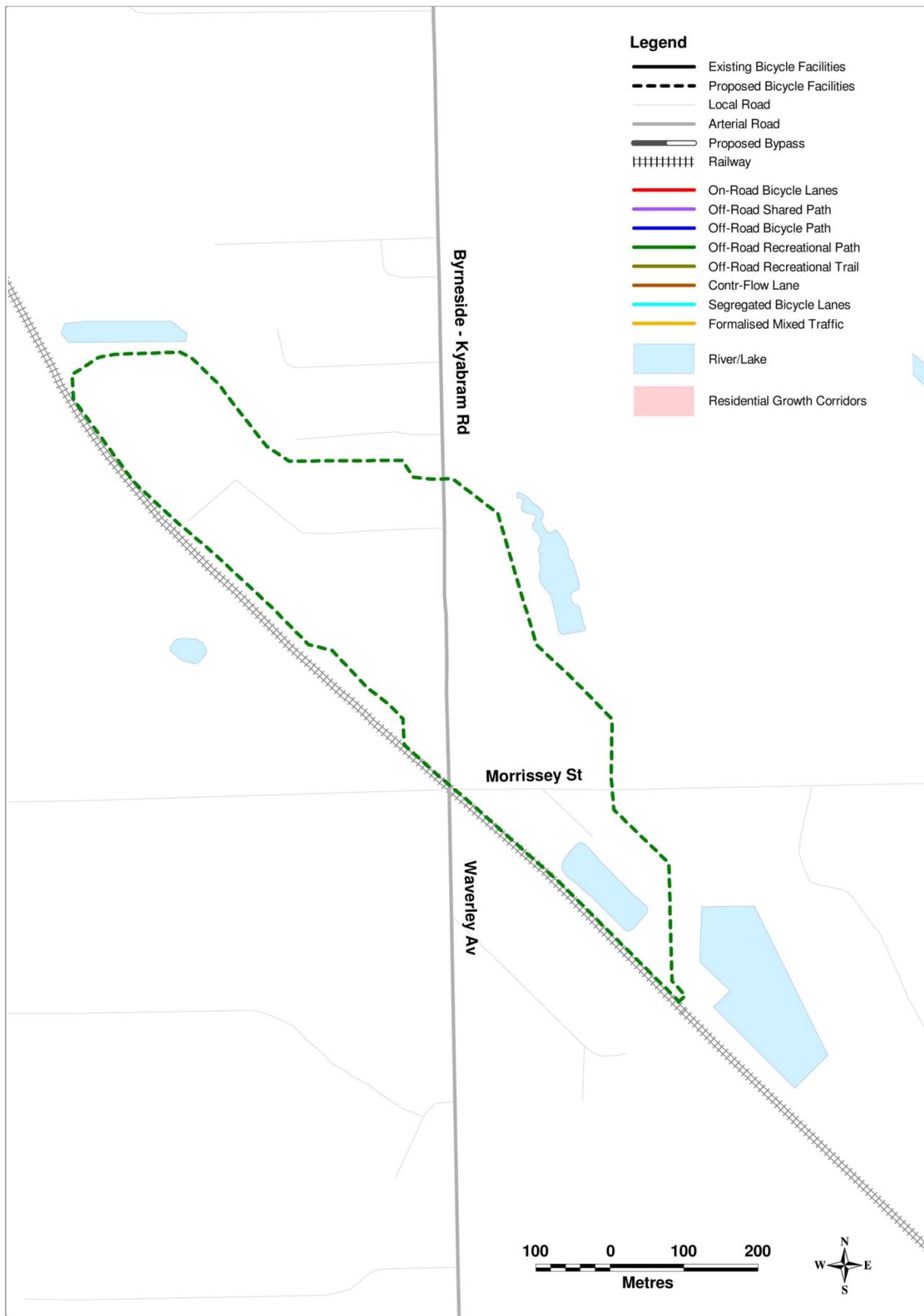


6.4.6 Merrigum

There are currently no dedicated bicycle facilities provided in the township of Merrigum. A 2.7km recreational loop that accesses the local school, sports grounds and swimming pool has been identified. The recommended recreational loop is shown in Figure 6.7.

ACTION 17

Figure 6.7: Merrigum Proposed Facilities



6.4.7 Dookie

There currently is a recreational path along the railway corridor to the northeast of the local station and pub. It is recommended that a shared path facility between Mary Street and the sports grounds along the west side of Marie Street to be provided, as well as an extension of the recreational path to the southwest. It is noted that the recreational path to the southwest is proposed to link with the Cosgrove Golf course as part of Stage 2 of the Dookie Rail Trail, with further investigation to be undertaken in eventually connecting to Shepparton. The recommended shared path facility is shown Figure 6.8.

ACTION 18



Figure 6.8: Dookie Proposed Facilities



6.4.8 Undera, Katandra West, Tallygaroopna & Shepparton East

There are currently no dedicated bicycle facilities provided in the townships of Undera, Katandra West, Tallygaroopna and Shepparton East and, given their sizes, there are limited benefits in providing such facilities. Currently, most residents live within walking distance of all major trip generators within these townships. As such, extension of the footpath networks would be considered to be more appropriate at this time, until sufficient growth occurs.

6.5 Between Townships

It is recommended that bicycle facilities between townships be segregated from the traffic as the roads connecting the townships in Greater Shepparton have high speeds. It is noted that road cyclists currently use these roads, but in terms of providing a suitable facility for the majority of potential users, mixing with vehicles travelling 80km/h and above is not desired and is likely to deter them.

Currently there are off-road shared paths connecting Shepparton and Mooroopna along Midland Highway. Given the distances and population differences between the townships, it is recommended, in the first instance, to provide facilities between Shepparton and each of the surrounding townships. The percentage of potential cycling trips from the surrounding townships that wouldn't be serviced by facilities connecting them to Shepparton would be small.

The exception to this would be along nature-based focused facilities that either follow the river system or rail network in Greater Shepparton. Such facilities are gaining a lot of traction with individuals looking to undertake active holidays or weekends away from metropolitan areas, which has the potential to generate significant tourism related income for the area.

Specifically, facilities within rail corridors typically provide users with a high level of service, as they are relatively flat with limited intersections with other transport corridors. As such, investigations into the use of railway corridors should not only be to connect townships for nature-based tourism, but for commuter purposes, especially within Shepparton, where the railway corridor extends along the west side of the CBD and could provide an entry point to it. As such, it is recommended that a shared path along the trail line within the urban boundary of Shepparton be provided.

Facilities of this nature are already being implemented within Greater Shepparton, such as the Murchison-Rushworth Rail Trail, which is part of the Waranga Trail, which is expected to connect Shepparton, Murchison, Rushworth, Heathcote and Bendigo (approx. 110km). There is also the shared path facilities between Shepparton and Mooroopna proposed within Shepparton Regional Park, beyond those already existing along Midland Highway, by the River Connect committee.

On the above basis, Figure 6.9 has been prepared to outline that the existing river system, railway network and road network, generally has Shepparton as its centre and that the majority of potential inter-township trips can be provided for by following these features. Moreover, Figure 6.9 identifies an opportunity to extend the proposed Waranga Recreation Trail to Dookie, which is proposed. In addition, at Toolamba, a branch of the railway network extends off to Tatura and Merrigum, which could also connect to Kyabram and even Echuca.

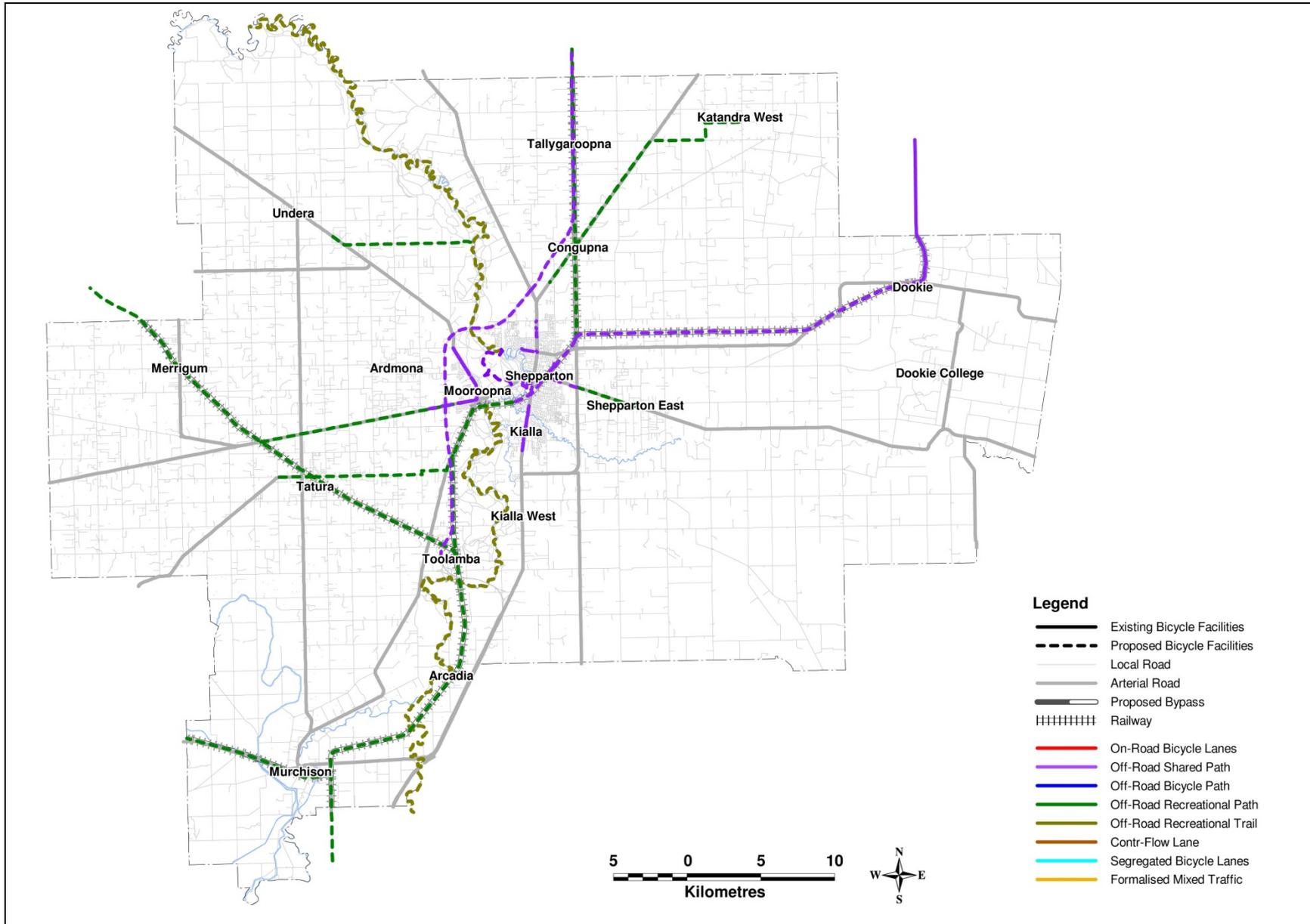
ACTION 19

While specific scoping of these potential facilities has not been undertaken as part of the strategy, it is recommended that these be considered in conjunction with facilities being proposed by the neighbouring municipalities and Hume Region as a whole. They will generally be targeting the recreational cyclists and be able to generate significant levels of tourism if suitable facilities and

advertising is undertaken, as discussed further in Section 8 of the strategy, and being considered by Goulburn River Valley Tourism, who are currently developing their Cycling Strategy.

Commuter and Recreational Cycling

Figure 6.9: Connections between Townships



6.6 End of Trip Facilities

Publicly available bicycle parking is currently provided at a number of locations throughout Greater Shepparton. A summary of the provision of these facilities is provided in Table 6.6, noting that specific locations of publicly available bicycle parking are indicated on the existing Bicycle Network facility maps.

Table 6.6: Summary of Existing Bicycle Parking Facilities

Location		Bicycle Parking Capacity
Shepparton CBD		258 spaces
Shepparton neighbourhood shops	Colliver Rd	15 spaces
	Dunkirk Ave	8 spaces
	King St	12 spaces
	McIntosh St	8 spaces
	St Georges Rd	18 spaces
	Guthrie St	9 spaces
Activity Centres	Municipal offices	12 spaces + 8 employee bike boxes
	Aquamoves gym & swimming pools	24 spaces
	Library	6 spaces
Shepparton Other		37 spaces
Mooroopna	Swimming Pool	20 spaces
	Other	38 spaces
Tatura	Swimming Pool	20 spaces
	Other	50 spaces
Dookie		8 spaces
Merrigum		2 spaces
Toolamba		2 spaces
Murchison		6 spaces
Total		541 spaces

These generally consist of one or two rails next to parks, reserves and on some street corners within the Shepparton CBD. Bicycle parking facilities of this nature service short-term users, as long-term users prefer more secure facilities. Long-term secure facilities should be provided as part of developments, much as car parking is provided.

In addition to these existing bicycle parking facilities, it is understood that there are some additional more informal, and sometimes temporary, bicycle parking facilities provided at cafes and bike stores, especially on weekends when increased levels of recreational cycling occurs.

Figure 6.10 shows an example of such a facility outside one of the bike stores in Shepparton. The hanging rail bicycle parking facility looks to maximise the number of bicycles able to be parked through sacrificing the ability to securely lock the bike up. However, as these facilities are directed at short-term users and are typically located in an area of high passive surveillance, if not being able to be seen by the owner throughout their stay at the associated destination, this trade-off is considered acceptable, and should be promoted at other similar locations.

Figure 6.10: Bicycle Parking Hanging Rail



While there is a reasonable level of bicycle parking facilities already provided in Greater Shepparton, there is considered to be more required. The lack of bicycle parking and other end-of-trip facilities, such as showers and change rooms, has long been a major barrier to individuals cycling to work or for recreational purposes. Reducing this barrier through the provision of suitable facilities can go a long way to making cycling a viable option for individuals.

Clause 52.34 of the Greater Shepparton Planning Scheme seeks to encourage cycling as a mode of transport with the provision of secure, accessible and convenient bicycle parking spaces and associated shower and change facilities.

It makes providing such facilities a statutory requirement with any town planning application. Table 1 to Clause 52.34-3 sets out the standard requirement for the provision of bicycle spaces for a range of land uses. A selection of the most common land uses is provided in Table 6.7.

Table 6.7: Statutory Requirements for Bicycle Facilities

Use	Statutory Rate	
	Employee/ Resident	Visitor/Shopper/ Student
Convenience restaurant	1 space / 25sqm	2 spaces
Residential building of 4+ storeys	1 space / 10 rooms	1 space / 10 rooms
Industrial	1space / 1,000sqm	None
Office	1 space / 300sqm	1 space / 1,000sqm
Restaurant	1 space / 100sqm	2 + 1 space / 200sqm
Retail	1 space / 300sqm	1 space / 500sqm
Schools	1 space / 20 employees	1 space / 5 pupils over year 4
Shop	1 space / 600sqm	1 space / 500sqm

In addition to the requirements for bicycle parking facilities, Clause 52.34-3 of the Greater Shepparton Planning Scheme requires one shower for the first five employee bicycle parking spaces and one shower for each subsequent ten employee bicycle parking spaces if five or more employee bicycle parking spaces are required. Further, each shower must have access to a change room. Clause 52.34-5 also requires signage to direct cyclists to the required facilities.

Given the above it could be expected that as new development occurs that end-of-trip facilities will be provided and is recommended that these facilities be enforced by Council, expect where there is clearly

no ability to access the site by bicycle or for some retail uses, such as bulky goods retailers, where customers are not likely to be able to cycle with the goods they have purchased.

Additionally, higher bicycle parking requirements should be enforced on new developments that have excellent access to cycling facilities. This is especially the case for developments that are the source of trips (i.e. residential), as approximately 60% of all Australians own or have access to a bike. So ensuring there is sufficient bicycle parking and not having people leaving their bike in a closet or storage cage, where it is difficult to access, helps reduce individual's barriers to cycling. Furthermore, should additional end-of-trip facilities be provided, along with other initiatives that are likely to result in a significant increase in the use of alternate modes of transport, then reductions in the minimum number of car parking spaces required to be provided should be offered. It is recommended that this ability, along with suitable decision guidelines, be included within any Parking Overlay for the Shepparton CBD. ACTION 20

Broadly speaking, the statutory rates for the end-of-trip facilities are based on an approximately bicycle mode share of 10%. As such, to reduce minimum car parking rates the required increase in bicycle parking should be at least proportional.

Also, Council should review what bicycle parking is provided at existing public transport nodes and off-street car parks and provide a quantum of bicycle parking spaces that equates to at least 10% of the car parking spaces within commercial areas and 10% of demand in others. These should be a mix of short-term highly accessible spaces, as well as long-term secure bicycle spaces. ACTION 21

For example, Table 6.6 indicates that there are a total of 258 bicycle parking spaces within the Shepparton CBD. From the Parking in Shepparton's Central Business District Discussion Paper (2011), there are an estimated 4,580 publically available on and off-street car parking spaces. As such, the current publicly available bicycle parking supply equates to 5.6% of the current publicly available car parking supply in the Shepparton CBD, and thus there should be approximately 200 additional publicly available bicycle parking spaces provided.

It is also noted that, from the limited number of responses from schools consulted with in Greater Shepparton, the provision of bicycle parking at schools is generally below the statutory rate. As a minimum, schools should provide the statutory requirements, and where the schools are willing to engage in behavioural change programs to get more children cycling, higher levels of bicycle parking should be provided. ACTION 22

6.7 Bicycle Route Signing

This section looks broadly at the processes and recommends a methodology for signing bicycle routes.

Why Sign Networks?

People must find their way through our complex urban environments and along recreational trails. Visitors, tourists, residents and workers have different wayfinding needs. People are all different and they need different levels of information to navigate to and from their destinations, tourist attractions, day or night life, retail choices, errands, amenities and homes.

When people understand where they are they feel safer and more comfortable cycling, and more likely to cycle to accessible destinations. A successful system instils confidence in a wide variety of users, and encourages cycling for transport and recreation.

How to Sign

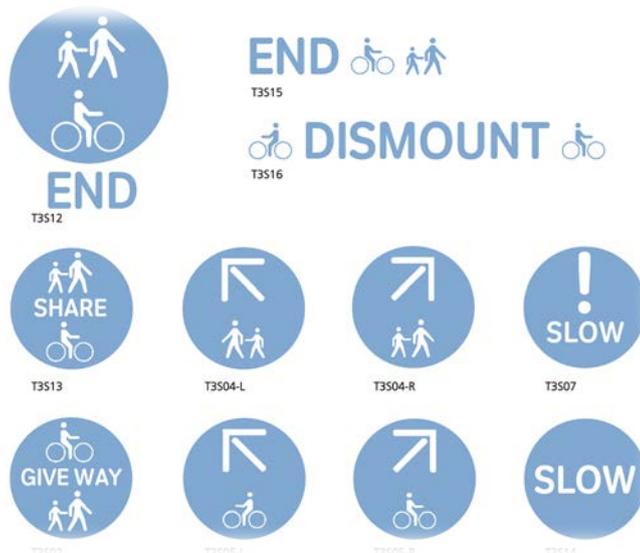
An effective signage system creates clear paths. This can be done through the use of visual, verbal and/or auditory clues such as materials, patterns, signs, maps, landmarks and other signals – it is not limited to street signs but the overall facility design, with a clear crossing point or surface treatment of a bicycle path distinguishing its use as a bicycle facility that enables individuals to easily and conveniently transport themselves between locations.

As such, the signage system should work with the bicycle facilities and not only be coherent but easily recognisable, consistent and timely (i.e. at each entry and decision point, as well as repeatedly throughout). The development of a Greater Shepparton or route based cycling branded signage scheme is recommended, so users can identify the facility before they read the information.

In this regard, reference is made to the City of Sydney’s shared path pavement guidance markers. A sample of these is presented in Figure 6.11.

They provide a 'soft' guidance option and the ability to convey key path information in a highly visible, recurrent fashion. It should also be noted that these signs, symbols and markings are promotional of good behaviour rather than regulatory towards bad behaviour.

Figure 6.11: Route Signage – Pavement Marking Examples



In addition to this guidance signage, directional and information street blades are recommended. These should provide the direction to and name of key trip generators, as well as providing the trip distance along the given bicycle route or connecting facilities. Examples of these are provided in Figure 6.12.

Figure 6.12: Destination and Distance Examples



With the key trip generators, these should be divided up into primary, secondary and tertiary destinations, where the level of detail and destination naming becoming more generic as you move down the list (i.e. specific name of a train station or main sports ground for primary destinations and generic names such as primary school, medical clinic or park for tertiary destinations).

In terms of providing the distance to major trip generators, it is recommended that these be to the nearest 100m. Motorised vehicle signage typically goes to the nearest kilometre, but given the travel speeds and distances cyclists travel it is appropriate to provide this higher level of detail.

Consideration can be given to indicating travel time to trip destinations, but this is considered more appropriate for pedestrians, as they have a smaller travel speed spread and there is a lack of perception in what people's walking speeds are, so distance can be less relevant.

Other considerations that need to be undertaken regarding the development of a signage system include:

- Sign placement
- Sign frequency
- Coordination with other signing systems
- Detours.

For further guidance on how to sign bicycle routes and networks the following documents are recommended to help develop a suitable level of bicycle route signing:

VicRoads Cycle Note No. 11 - Directional signing for off-road paths, July 2002.

- Department of Transport and Main Roads, A guide to signing cycle networks, July 2009
- City of Sydney, Cycle network directional signage design guidelines, 2010
- City of Oakland, Design guidelines for bicycle wayfinding signage, July 2009.

It is noted that a wayfinding signage plan is about to be developed for the Shepparton CBD. As part of this, it is expected that the design and development of bicycle route and network signage will be integrated and that the above information used as a basis for such facilities. ACTION 23

6.8 Updating VicRoads Municipal Bicycle Network (MBN)

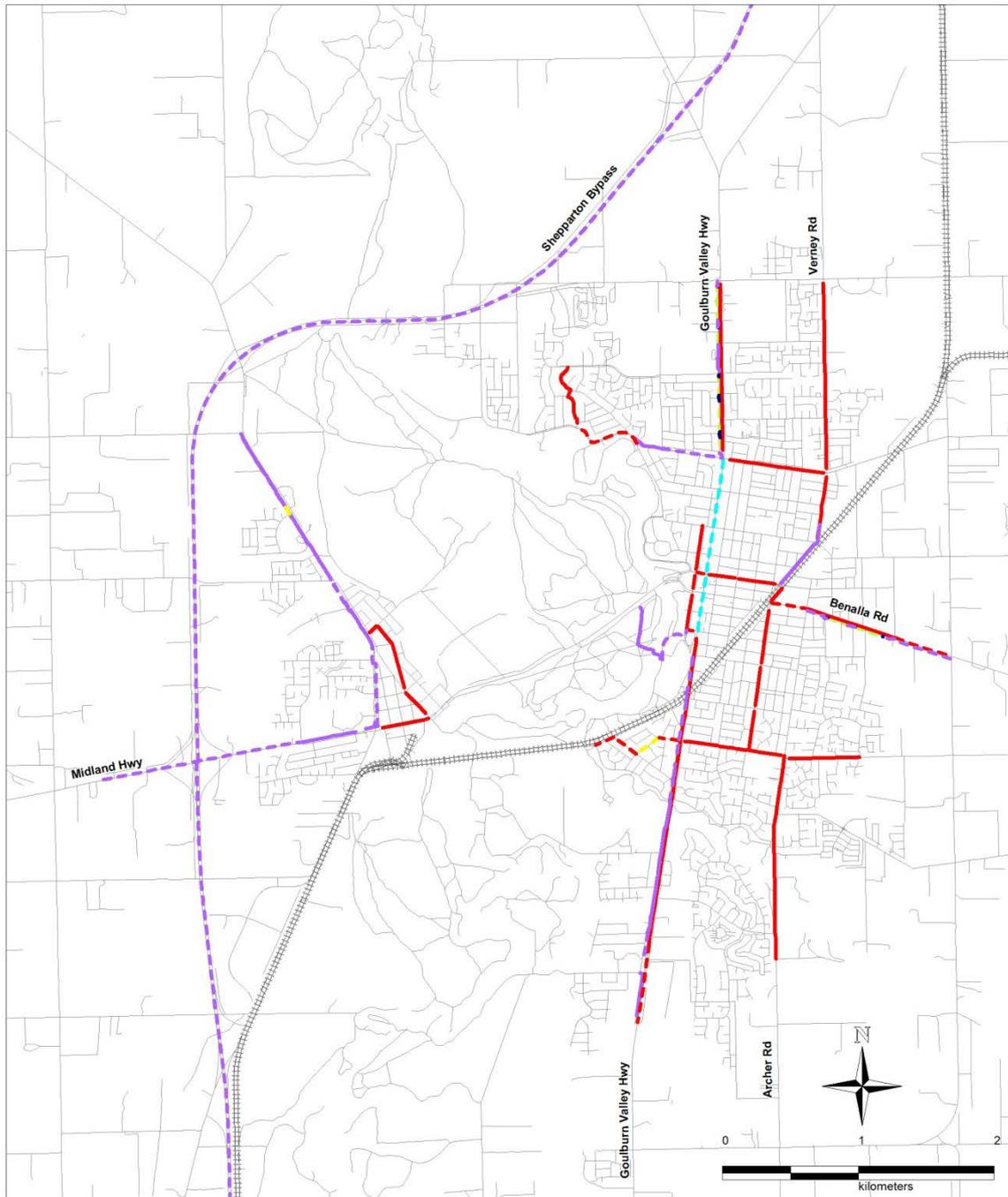
Given the work undertaken of identifying existing and proposed bicycle facilities within the North and South Shepparton and Mooroopna areas, as summarised within Table 6.1, Table 6.2 and Table 6.3 respectively, it is considered that this provides a good opportunity to review and update the current VicRoads MBN for Shepparton, which was prepared in June 2005.

In this regard, the proposed facilities within the MBN that have now been implemented and those proposed as part of the strategy are presented within Figure 6.13. The majority of the proposed facilities are local routes, with the only priority ones listed as follows:

- segregated bicycle lanes on Wyndham Street
- extension of the shared path on the east side of Goulburn Valley Highway
- extension of the on-road bicycle lanes on Goulburn Valley Highway
- shared path on the east side of Numurkah Road
- extension of the on-road bicycle lanes on Benalla Road
- exclusive bicycle facility along the south side of Benalla Road that utilises the service road
- shared path on the east side of Echuca Road
- shared path provided as part of the Shepparton Bypass.

This update to the VicRoads MBN for Shepparton should be provided to and discussed with VicRoads to gain their buy-in for the long-term development of the MBN in Shepparton. ACTION 24

Figure 6.13: Update to VicRoads MBN for Shepparton



LEGEND

 Existing Bicycle Facilities	 On-Road Bicycle Lanes	 Off-Road Shared Path
 Proposed Bicycle Facilities	 Formalised Mixed Traffic	 Segregated Bicycle Lanes
 Road Network	 Contr-Flow Lane	 Off-Road Bicycle Path
 Train Network		

7. Sports Cycling

7.1 Preamble

Cycling as a sport has many forms and requires specific facilities for each. In this regard, investigation and discussion is provided in this section of the strategy regarding those cycling sports that are currently provided for in Greater Shepparton and those that are suited to Greater Shepparton, with a review of facilities, identification of improvements and initiatives to get more people taking up cycling as a sport.

7.2 Types of Cycling Sports

As mentioned, there are many cycling sports. A list of the main types, with a brief description, is provided as follows:

- Road cycling – sport that travels on paved roads, generally traveling at speeds of at least 25km/h and over distances of 30km or more.
- Track cycling – sport that travels on specially banked tracks, at high speeds and typically over short distances.
- BMX cycling - sport that travels on specially contoured tracks, at moderate speeds and typically over short distances.
- Mountain biking – sport that travels off-road over rough terrain, generally at speeds of at least 10km/h and over distances of 10km or more.

Within each of the above main types of sports cycling, there are many sub-types, but essentially, they occur on roads, tracks or off-road.

For each of the main types of sports cycling, the existing facilities in Greater Shepparton are discussed with potential improvements identified in the following sections of the strategy.

7.3 Road Cycling

Road cycling generally occurs on public roads, which requires cyclists to mix with traffic. As such, there are no purpose built facilities, rather, circuits or routes are identified for training or closed off to traffic to accommodate races. Within Greater Shepparton there are four 'training routes' that are advertised through the Council website¹², with organised groups that typically cycle from 6.00am or 6.00pm Monday to Friday, with some also occurring in the weekends. They cater for beginners, casual and those wanting more structured sessions for specific cycle training. These groups are advertised to travel distances of between 20km and 55km at average speeds of between 30 and 40km/h.

These training routes are proximate to Shepparton and generally consist of a loop ranging in distance between 11km and 55km. The roads that make up the training route loops consist of a mix of urban and rural roads. Along the rural sections of the routes, cyclists training route signs (W6-V11) are provided to help raise awareness to motorists of road cyclists using these roads for training purposes, which is

¹² Refer to http://www.greatershepparton.com.au/residents/recreation/cycling/#training_route_loops

consistent with VicRoads Cycle Notes No. 6 (April 2000). Also, these rural roads are generally not major roads or highways with low traffic volumes but high traffic speeds.

However, road cycling is not restricted to these training routes. Rather, these have been identified and organised to provide individuals with the opportunity to meet other road cyclists of similar abilities, hence the indicated length and average speeds. As such, road cycling occurs beyond these training routes, both in terms of road cycling events and training, which can occur over much longer distances, with some events and training road cyclists travelling 200km or more in a day. The 'Cycle in Greater Shepparton – A Cycling Guide to Greater Shepparton', which can be requested or read online¹³, indicates further recommended road training and touring route options between townships, such as Shepparton, Tatura, Murchison and Dookie.

In general, road cyclists:

- Want smooth safe roads that are well maintained and signed.
- Do not require or desire the separation from traffic if it restricts their ability to ride as a pack and/or pass slower riders.
- Are more concerned with maintaining speeds and travelling long uninterrupted distances.
- Will ride in the traffic lane if the alternate facilities within the road corridor slow them down.
- Will cycle in a certain direction round a training loop or use an alternate route to minimise the likelihood of having to stop at intersections, or undertake difficult turns (i.e. right turns).
- Generally try and minimise the amount of riding within urban environments and during peak traffic periods.
- Generally utilise rural roads with a limited number of opposing intersections and low volumes of traffic, especially heavy vehicle volumes.

In addition, with regard to routes used by road cyclists:

- The most popular routes typically have some scenic value along the route and/or destination.
- Sections with varying terrain commonly become focal points, with colloquial naming given to them by riders, as well as comparison of times on such web sites as 'map my ride'¹⁴.
- Start, mid and/or end points of group rides are commonly linked with bicycle friendly cafés, parking, toilets and other supporting facilities.

With consideration of the above discussion, the current advertised training routes provide convenient short to medium length trips for introductory cyclists and those wanting to supplement training during the weekdays. Introductory cyclists are likely to desire the routes that have very low traffic volumes and carriageway widths that enable passing motorists to pass well clear of them. This combination is not frequently provided, but can be somewhat overcome through the perceived safety of riding in a pack and at times when traffic volumes are at their lowest. As such, the existing training routes are considered to provide an important function, especially in conjunction with organised rides and events, and should be further supported through the following actions:

ACTION 25

- Provide a cycling group specific to beginners – no more than 30km in length or speeds above 25km/h and on the weekends starting at 7.00am or 8.00am, with informational brochures

¹³ Refer to http://www.greatershepparton.com.au/visitors/conferences/events_rgscg/

¹⁴ Refer to <http://www.mapmyride.com/>

- and tips on buying the right bikes, maintenance and on-the-road repairs (punctures, gear slipping, putting a chain back on, etc.).
- Regularly review any anecdotal responses and recorded cycling related accident history to develop road cycling safety advertisements and targeted signage to improve both motorist and cyclist behaviour along the current and future training routes.
 - Work with the road safety committee and the cycling advisory committee to continue to pursue other safe cycling initiatives that educate and improve the behaviour of drivers and cyclists to achieve better road harmony.
 - Increase the level of awareness of motorists that the associated roads are used as training routes, with a review of cyclists training route signs (W6-V11), ensuring they are at the beginning of the rural road sections, as well as at all intersections with other rural roads, where other vehicles can enter the training routes. Consideration should also be given to targeted behavioural change signage, such as 'share the road', 'one metre matters' and images that link to current road cycling safety advertisements that are being used.
 - Undertake regular street sweeping at intersections and bends to remove loose gravel that has been propelled onto the sealed carriageway by errant vehicle wheels that have run into unsealed shoulders.
 - Review sightlines and intersection controls along routes, and where appropriate trim vegetation to maximise sightlines and change priorities to the given training route.
 - During resurfacing of roads, utilise the smallest appropriate aggregate size to maximise pavement smoothness.
 - Give consideration to lowering the speed limit and widening the sealed carriageway to provide 2.0m to 2.5m wide shoulders beyond 3.5m wide traffic lanes (no need to mark shoulders as a cycle lane and definitely do not mark if traffic and bicycle lanes are substandard – better to force motorists to cross the centreline when passing cyclists, rather than motorists staying in their lane and passing at a very close distance).
 - Develop a training route specific road maintenance schedule as part of undertaking regular maintenance along the road training routes.

In terms of additional facilities, there is considered to be significant opportunity to identify road cycling routes that take in some of the nature based scenery in the area, such as in Murchison, Tatura, Toolamba and Mount Major, as well as coordinating with bordering municipalities to develop routes to such nature based destinations as Waranga Basin, Rushworth Forest and the many other lakes and forests that can be accessed along the river system. Also, Council should work with cafés, accommodation providers and other potential commercial ventures in Shepparton and the surrounding townships of Dookie and Mooroopna to provide cycle friendly facilities, such as bike racks, water taps and toilets, as well as information boards to advertise rides, groups and events, to help further develop cycle tourism, rider camaraderie and making cycling use more of a social norm in Greater Shepparton.

Additional routes have not been able to be identified at this time, but such a task would be a good initial project for a cycling advisory committee with further targeted consultation on the matter with clubs and organisations, as well as existing and potential road cyclists. As a first point of call, these additional routes could be, or consist of, the road sections that are used in the current road racing events. The improvement of these road sections would not only provide cyclists training for the races with an opportunity to train on the same roads as they race on, but would potentially help in reducing traffic management cost and implementation time associated with road cycling events. ACTION 26

7.4 Track Cycling

In Shepparton there is the velodrome complex located on Packham Street, to the west of John McEwen Reserve, which has a 333m outdoor concrete surfaced velodrome. Supporting the use of the velodrome is a double storey club house with club rooms and amenities up stairs, with a canteen, office, toilets and store rooms downstairs. There is also grandstand seating for over 200 people and national event standard lighting.

The velodrome complex has been the home of the Shepparton Cycling Club since it was constructed in 1983, and holds a number of events each year, with the most well-known being the Shepparton Cycling Club's Christmas Carnival, which has been held there since its opening in 1983.

The facility is a great asset to the local community and the Shepparton Cycling Club has indicated that they would like to see it used to promote cycling as much as possible. The Shepparton Cycling Club itself has produced an Olympic gold medallist and numerous Australian representatives whose careers began on the Shepparton velodrome.

The track is able to be used by track and road bikes and provides a great opportunity to support and grow the existing cycle club, and more generally the road cycling community, especially in terms of providing an initial way to introduce people to cycling in what is a very safe environment.

The quality of this facility is reflected in its ability to develop and attract professional cyclists. However, the development and continued improvement of the track and supporting facilities is required to maintain this level of appeal. In this regard and in conjunction with the Shepparton Cycling Club, the following actions have been identified to maintain its attractiveness and support the growth in the cycling clubs membership and cycling in general:

- Resurface the velodrome, as it is almost 30 years old.
- Upgrade the public grandstand seating, especially on the northern side, as it is currently in a poor state.
- Support the Shepparton Cycling Club in developing and running criterium races within the overall Shepparton Sports Precinct.

It is recommended that the above actions be prioritised and appropriately planned as part of an overall Shepparton Sports Precinct Plan to ensure it continues to be a leading regional and potentially national facility.

ACTION 27

7.5 BMX Cycling

Adjacent to the Shepparton Velodrome is the UCI accredited Shepparton BMX Track (one of only two in Australia) that was designed by the same person that designed the 2008 and 2012 Olympic facilities. The Australian titles in 2010 and Victorian titles in 2011 were held there (refer to Figure 7.1) and, as part of Cycling Victoria's BMX Strategic Plan that has recently been finalised (road, track and mountain bike Strategic Plans are also currently being prepared), it is expected that the facility will continue to be used for a range of championships. It has also been noted by Cycling Victoria that they are looking to develop regional academies that will travel to a number of facilities to experience different tracks. As such, this provides a good opportunity for the local Shepparton club to be the home of one of these regional academies, or at least be one of the tracks they routinely visit.

Figure 7.1: BMX Track and Surrounds – Nationals 2010



In this regard, it is recommended that continued consultation be undertaken with Cycling Victoria, as well as with other BMX clubs in the region to help develop relationships and pull resources in making the Shepparton BMX track a major attraction for events and training. **ACTION 28**

At the local level, the Shepparton BMX club is looking to continue to recruit new members and provide services that can accommodate all abilities, including gear for people to have an initial try at the sport. In addition, they have a number of desired improvements that are listed below:

- Install lighting at the track to enable activities to occur in the evenings during the winter.
- Install an 8.0m standing start (currently 6.0m), which would make the facility comparable to the best facilities in Australia.
- Aim to secure an annual two-day national BMX event and potentially the National titles on a two or four year basis, given that there is already a two year arrangement for it to be held at the Sleeman Sport Complex in Brisbane.

In addition, consideration should be given to informal facilities that the general public can use at their own convenience. Much like a skateboard park, such a facility should help encourage the introduction of the sport to potential users, especially given that informal use of the BMX Track by non-club members can only occur under the supervision of an appropriately qualified person, of which there is only one person in Shepparton at the moment.

It is recommended that the above actions be prioritised and appropriately planned as part of an overall Shepparton Sports Precinct Plan to ensure it retains its current international UCI accreditation and continues to be one of the premier facilities of its type in the country. **ACTION 30**

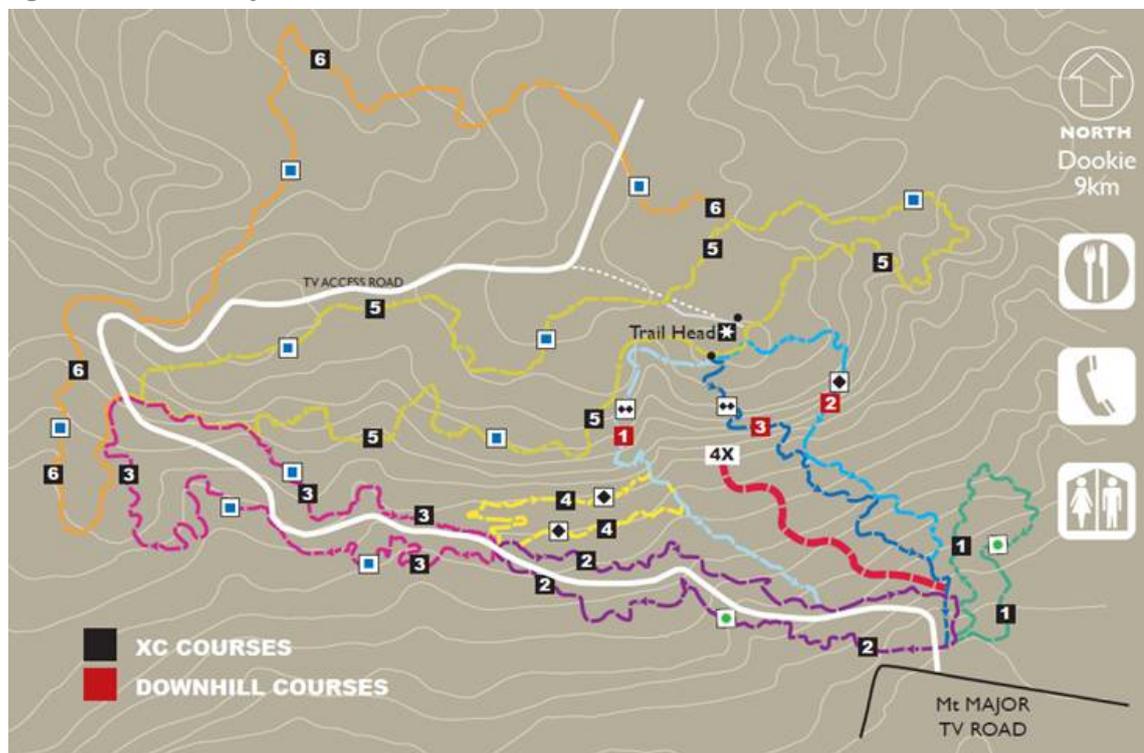
7.6 Mountain Biking

Mountain biking can generally be described as any off-road cycling not involving specialised uniform tracks. However, there are still quite specific mountain biking facilities required for its many forms, with the majority requiring undulating terrain. In this regard, Mount Major to the south of Dookie accommodates a mountain bike park accommodating a number of these facilities. Currently the facilities consist of the following:

- Cross-country trails with varying difficulty and terrain, including rock gardens.
- Three downhill trails from the top of Mount Major.

All of these facilities are presented within the Mount Major Bike Park site plan, which is reproduced in Figure 7.2.

Figure 7.2: Mount Major Mountain Bike Park Site Plan



The mountain bike park was used for the 2011 Australian titles and is expected to host a number of additional championships in the future. There is an active club that helps manage the mountain bike park, with support from Council, the University of Melbourne and the local Dookie community. The level of support is critical to the on-going management and development of such facilities, which are prone to fatigue due to use and weather.

The use of club and community trail days, along with mountain bike hire and sale stores, is becoming more common to help maintain and fund additional facilities. These arrangements should not be restricted or isolated to Mount Major in Greater Shepparton. It is recommended that mountain bike facilities be developed along the river network throughout Greater Shepparton, especially in close proximity to Shepparton, where there are supporting facilities, such as toilets, car parking, accommodation, equipment, food and drink, and potentially bike hire and sales stores.

A specific requirement to enable the development of such facilities and ability for club and community trail days to occur is recommended to be implemented through the preparation of management plans that involve, amongst other things, consultation and gaining of permission from the current land managers along the river network (Council, Parks Victoria, etc.) to use, develop and maintain mountain bike facilities in a sustainable manner. ACTION 31

A similar process has already been successfully undertaken for the existing mountain bike facilities at Mount Major, which through the current masterplan, has identified additional supporting facilities, such as car parking, storage, shelter, toilets, walking trails, a shared path to Dookie and a skills park, to be implemented.

Given the above, it is recommended that, in conjunction with the Goulburn Valley Mountain Bike Club and Melbourne University, the identified additional supporting facilities within the Mount Major Mountain Bike Park facility master plan be prioritised and appropriately planned, including the encouragement of junior and beginner mountain bikers. ACTION 32

8. Tourism Cycling

8.1 Preamble

Tourism cycling is any recreational cycling undertaken in a person's 'spare' time (i.e. holidays, weekends and or day trips) and beyond their home, be it as part of a sporting event or training, or a way to experience and interact with a given environment, scenic or otherwise. As such, tourism cycling covers a wide range of cycling trips, and while commuter cycling generally has a cost saving to the individual and the community, recreational cycling can generate income and employment opportunities, as noted in Section 5.4 of the strategy, where average daily spending of visitors to the Murray to the Mountains Trail is approximately \$250.

With bicycle use on the rise in Australia, its use as part of an individual's recreational activities is also increasing. This growing market provides opportunity to attract locals and visitors to engage in such activities and generate additional income and employment for the region. Greater Shepparton is well placed to attract recreational cyclists given its numerous tourism cycling activities and events that are already in place.

This section of the strategy outlines the types of tourism cycling, existing activities, events and constraints, and potential initiatives that can be used to further develop Greater Shepparton as a tourism cycling destination.

8.2 Types of Tourism Cycling

Tourism cycling involves the use, or part thereof, of a bicycle for recreational purposes beyond one's home. In this regard, there are considered to be the following two main types:

- cycling events or festivals
- touring or cycle trekking.

Further discussion is provided below regarding each of the above.

8.2.1 Cycling Events or Festivals

Cycling events typically consist of specific races, such as those relating to the forms of sports cycling outlined in Section 7 of the strategy, or as part of other multi-discipline sporting activities, such as triathlons, but they can also be events such as wine tours, scavenger hunts and sightseeing tours. They simply relate to organised events in which the bicycles are a form of transport, or a critical part of undertaking the associated activity. When a number of these events are grouped together they can be considered to be a festival.

An example of a cycling festival is the Evandale Village Fair and National Penny Farthing Championships, which occur each year in the Tasmanian town of Evandale, which has a population of approximately 1,000²⁵. Typically, the festival only attracts 40 to 50 cyclists, but approximately 8,000 spectators during the many events over the weekend in which it occurs.

²⁵ Data sourced from Cycle Tourism in Australia, an investigation into its size and scope, CRC for Sustainable Tourism, 2007.

Another bicycle festival undertaken in Australia is the Harvest Cycle, which combines a number of cycling events and community rides with food and wine activities.

For locations that require participants and spectators to travel, consideration needs to be given to how to make the event or festival significant enough. This can be through the associated challenge, reward, uniqueness and/or combination of attractions linked to the event(s).

8.2.2 Touring or Cycling Trekking

Touring or cycle trekking can be undertaken over part, one or multiple days, where one or groups of cyclists travel along roads (touring) or off-road facilities (trekking), such as rail trails or shared paths around a park or reserve. This type of cycling tourism is usually seasonal and along scenic routes, but can be developed as a more informal family / group activity or an easy and convenient way to experience towns, parks and other tourist attractions.

The majority of touring and cycle trekking trip lengths are up to a day, with data from the Victoria Trails Strategy (2005-2010) indicating that approximately 90% of all trail tips occur over a time period of four hours or less. Also of note is that in Germany, which is estimated to generate an annual cycle tourism turnover of nine billion euros (more than the total of all tourism activities generated in Denmark – i.e. not just for cycling), seven out of eight cycle tourists are one-day cyclists¹⁶. In the United States, the most popular outdoor activities are hiking (60%), cycling (36%) and camping (20%), with more Americans participating in outdoor activities than have dogs, garden or participate in sports¹⁷.

Given Shepparton's distance from Melbourne and distance to other surrounding rural centres, it has the potential to be a major starting, end or stop-over point. However, there is a requirement to provide scenic routes that connect Shepparton to other destinations, and within parks and reserves, over suitable distances (i.e. within 30 to 80km along crushed aggregate facilities and 50 to 150km along sealed facilities) and bicycle friendly parking, cafés and accommodation, including car parking and bike rentals at the start and end points of half and day long rides.

8.3 Existing Tourism Cycling

The majority of the existing cycling tourism activities and events in Greater Shepparton are associated with cycling events.

Currently there are the following annual cycling events:

- Toaster Recreational Ride - January
- Goulburn Valley Veterans Cycle Club Open - February
- Australasian Schools Cycling Cup (BMX, Track, Road and Mountain Bike) - March
- Scott Peoples Cycling Festival (Race and Recreational ride) - April
- GV BMX Classic - May
- Valley to the Vines recreation charity ride - May
- Shepparton Junior Cycling tour (Road Race and Time Trial) - June
- Lake Criterion Series

¹⁶ Sourced from page 150 of the Danish Collection of Cycle Concepts 2012

¹⁷ Cycling Tourism by Peter Saabye Simonsen, Birgitte Jorgensen & Derek Robbins, Unit of Tourism Research at Research Centre of Bernholm, December 1998.

- Shepparton Fruit Loop recreation charity ride - September
- Shepparton 70.3 ironman triathlon (part of the Campbell's Ironman 70.3 Shepparton Triathlon Festival) - November
- Kids Go Tri Triathlon - November
- Tatura 200 recreation charity ride - November
- Xmas track Carnival – December
- Victorian Downhill Series (hosted by the Goulbourn Valley Mountain Bike Club) - varies each year
- Victorian Cross Country Series (hosted by the Goulbourn Valley Mountain Bike Club) - varies each year

In addition, there are a number of state and national events that host rights are vied for, with the following being successfully hosted in Greater Shepparton between 2010 and 2012:

- 2010 BMX Nationals Championships (1400 competitors)
- 2010 Great Victorian Bike Ride (5000 participants)
- 2010 Australian Mountain Bike Series National Round (750 competitors)
- 2011 Oceania Road and Mountain Bike Championships (800 competitors)
- 2011 Australian Mountain Bike Series National Round (450 competitors)
- 2011 Under 15 National Road Championships (200 competitors)
- 2011 Under 17 National Road Championships (200 competitors)
- 2011 BMX Victorian State Championships (800 competitors)
- 2012 Under 19 National Road Championships (150 competitors)

Based on the event participant industry standard data released by Tourism Victorian, it has been identified that during 2010 /11/12 Greater Shepparton hosted a total of 59 significant cycling events. These events attracted over 27,000 participants and officials along with additional family, friends and spectators and equated to over 90 days of activities. The events provided an estimated economic impact of \$26 million for the region.

On the above basis, it can be seen that there is already a wide range of events and festivals generating a significant level of cycle tourism in Greater Shepparton. At this time, there is at least one major annual event held each month (except July), and up to four events occurring in November, without even giving consideration to the state and national events that have been regularly hosted over the last few years. Moreover, it should be the end goal to enter into host rights contracts for these state and national events to enable long-term planning and investment to occur.

In addition to helping develop the regular cycling events, in 2010 Greater Shepparton City Council produced the 'Cycle in Greater Shepparton Cycle Guide', which is a 64 page pocket size booklet that promotes the area as a friendly cycling destination. The booklet is considered to be the ultimate guide to cycling in the region, with tips and information on safety, extensive details on the shared path network, parks and gardens, mountain bike trails, annual events, cycling club details and more. The guide offers riders of all fitness levels the opportunity to discover the region and contains details on 21 cycling routes, with detailed maps and important key tips and information on routes ranging from 20km to 100km +. There were 10,000 booklets printed and these have been distributed to various cycling enthusiasts from all around Australia by different means.

Given the good feedback on the booklet it is considered paramount that an undated 'Cycle in Greater Shepparton Cycle Guide' (in both print and online) be produced for it to continue to be a key marketing tool in promoting Greater Shepparton as a cycle friendly destination for all levels and abilities of cyclists. ACTION 33

Other cycling initiatives undertaken by Greater Shepparton City Council have included various trade show exhibitions promoting cycling in Greater Shepparton, including the Go Bike Expo as part of the Around the Bay, which has some 15,000 participate, and the Melbourne Cycling Festival, Ausbike Expo, Great Victorian Bike Ride and World BMX Championships. There has also been a sponsorship in place with the 2009 and 2011 Jayco Herald Sun Cycling Tour - Most Aggressive rider jersey competition that has helped promote cycling in Greater Shepparton on a national and world scale.

8.4 Existing Constraints

The main issues currently facing tourism cycling in Greater Shepparton are considered to be related to the on-going management and development of the existing sport cycling activities and the development of non-sport related cycling events.

Currently there are a significant number of cycling sports events and training activities generating tourism within Greater Shepparton. Maintaining the level of interest and participant numbers should be the first focus, with consideration also given to the development of more activities and ability to accommodate higher numbers.

However, at this time there are only a limited number non-sport related activities generating cycle tourism within Greater Shepparton. As such, there should be a focus to develop events and facilities that are associated with these activities.

Beyond this, there needs to be buy-in from the community that these activities are positive and provide a net improvement to their lives in Greater Shepparton. As such, the identification of the cost and return relating to these activities should be recorded and widely published, along with the more general benefits gained through the encouragement of cycling. Working with the private commercial sector to identify how they can capitalise on the additional recreational cyclists in the area should also be undertaken on a regular basis. ACTION 34

The identification of what does and does not make Greater Shepparton an attractive location for recreational cyclists should be researched further, through specific questionnaires to event participants and ability for general users to provide feedback. ACTION 35

On-going consultation with the State, adjacent Municipalities, cycling bodies and tourism groups is also considered to be key in achieving the full potential of cycling tourism in the area. ACTION 36

8.5 New Facilities and Initiatives

With Greater Shepparton already providing a number of tourism cycling events and festivals, there is a good opportunity to build on these and address the above constraints, as outlined through the following proposed facilities and initiatives.

8.5.1 Branding

An important aspect with any development and selling of a product is the branding. Greater Shepparton should look to identify their point of difference to other potential cycle tourism locations and try and unify each of the existing events and facilities to provide a consistent message. The aim of this is to pool resources and build collective momentum for tourism cycling in Greater Shepparton, rather than being divided due to the type of cycling, location, club, etc.

This collective branding approach is considered to be possible within Greater Shepparton given that facilities and clubs have already been established for each of the main sports cycling disciplines and are supported by Council. An example of where such a collective approach has been successful is in the 'Cycle in Greater Shepparton Cycle Guide', which could be significantly improved through further collective investment to make it a regular publication with supporting route / facility apps that can be downloaded to gain the latest cycling information.

Furthermore, there is an ability to link to existing and well established brands, such as those relating to nature based and sustainable tourism, noting that cycling tourism is already supported by Tourism Victoria, who have acknowledged cycling tourism as part of their focus with the development of the Victorian Cycle Tourism Action Plan (2011-2015). Also, it is noted that the Goulburn River Valley Tourism Cycling Strategy is currently being developed. As such, the inclusion of the tourism related actions from this strategy in to the Goulburn River Valley Tourism Cycling Strategy, or at least the development of a relationship, would help ensure the full potential of cycling tourism in Greater Shepparton is achieved. ACTION 37

8.5.2 Information Hub

The development of a central information hub on all things relating to tourism cycling in Greater Shepparton can provide a great platform for the overall tourism branding and understanding to potential visitors of what is available. Furthermore, it can provide a link to the supporting services and businesses, such as those associated with providing accommodation, equipment, food and drink.

Council has two websites which currently promote cycle tourism – Discover Shepparton and Greater Shepparton City Council. As such, it is recommended that the Discover Shepparton site be the only site used for consistency, and that this also links to supporting facility providers and other relevant websites, such as those of Tourism Victoria and Goulburn River Valley Tourism. ACTION 38

8.5.3 Connecting to Relevant Audiences

Following on from developing an overall branding for tourism cycling in Greater Shepparton, it is important to get the information and advertising material to the right audience. Given the number and type of events already occurring in Greater Shepparton, utilisation of the contact details of past participants and distributing the information and advertising material to them will help to get them to return and potentially bring others.

Also, the following mediums of advertising are recommended for further investigation: ACTION 39

- At high profile cycling events, such as UCI events and other national and international cycling events held in Australia
- In cycling and nature-based tourism magazines and internet sites

- On television at times when cycling events are being televised and during or part of a tourism program.
- Including flyers within race packs of other events in Greater Shepparton, Victoria, Australia and even potentially New Zealand
- On websites that cyclists use to get information, write blogs, etc.

8.5.4 Events and Programs

Greater Shepparton should look to continue to hold national and state championships, and where possible, make them annual events to help with planning and securing investment, as well as public events that are challenging, rewarding, unique and/or in combination with other tourism attractions specific to Greater Shepparton.

The continued development of multi-event cycling festivals that showcase all of the facilities available in Greater Shepparton is recommended, as it can generate critical mass and exposure to a wider community than at a single event.

A detailed review of the current events should be undertaken to understand what type of event it is and what section of the cycling community it is targeting. This not only helps with who and where to position marketing material for the events but identifies the types of cycling events that are not currently being provided, especially those not specifically related to sports cycling that could work in combination with other events and provide opportunities for the whole family to cycle over part of a day or weekend.

This could be achieved through the development of a four year major cycle event plan / schedule. A plan / schedule developed over such a length of time would be expected to ensure there is an even spread of regional, state, national and international cycling events across the many recreational cycling disciplines (Mountain Bike, BMX, Triathlon, Road, Track, Touring and Cycle Trekking). It would also be appropriate to develop a consistent framework to identify what facilities and capabilities are required to host such events, especially for the local clubs and community groups that currently, or want to, organise such activities.

Also, the development and/or hosting of training programs for entry, intermediate and advanced cyclists should be considered, as it can help bring all levels of cyclists to the area, as well as the potential for professional/elite cyclists to visit and raise the profile of the region. ACTION 40

8.5.5 Transport Connections

A common issue with cycling tourism is the ability to gain access to the associated facilities, especially when there are long distances that are required to be travelled just to reach them. Part of the attraction for a cycle tourist is that they don't require their private motor vehicle at all. As such, continued consultation with public transport providers about the ways that bicycles can be accommodated when connecting to and within Greater Shepparton should be undertaken.

It is understood that efforts are currently being made in this regard, however, limited desire and recognition of there being a need for such facilities has been the typical response. This is not uncommon, especially given that the role of public transport providers is to maximise the number of people they can move and that accommodating a bicycle within a train or bus can significantly reduce this ability. While there are some public transport providers that provide bike racks on buses (such as in

Sydney, ACT and Adelaide) or permit folding bikes on trams and trains (such as in metropolitan Melbourne), this is limited and currently not directly beneficial to tourism in Greater Shepparton.

As such, developing suitable ways of transporting bikes on public transport, even if it's restricted to out-of-peak passenger periods, or within bike bags with free assembly provided to event participants, is considered to be required to help promote cycling tourism, especially on regional train services and bus services between townships and accessing Melbourne. In addition, consideration needs to be given to providing specific public transport services to significant facilities, such as Mount Major, as well as between exit points along the proposed rail and river facilities. ACTION 41

8.5.6 Facilities

The core to all this is the provision of facilities. Without leading facilities it is difficult to sell events and other cycling tourism opportunities, especially given the number of other locations providing similar facilities. As such, as a minimum, the existing facilities should be maintained, improved and developed at other locations to keep pace with facility improvements and latest design approaches.

In terms of additional facilities, the strategy has highlighted the need to develop more scenic routes that utilise the road, rail and river networks to support the many recreational cycling disciplines. These should be targeted towards both the sports and non-sports event related recreational cyclists.

In addition, development of the supporting facilities, such as accommodation, transport, car parking, toilets, etc., should also be a focus to ensure visiting cyclists have a positive experience, because if they feel comfortable, stay for a while and / or come again with others, they will spend more money and maximise the return on the investment.

In terms of the sports event related cyclists, the strategy has identified a number of improvements to existing facilities and development of new facilities for both events and training. Specific to providing a positive experience for sports event participants, continually providing a higher level of race result information and recording is considered advantageous. The ability today of being able to record splits, have GPS tracking, video recording and take photographs on course can all help in an individual's experience, as well as provide a discussion point between participants and goal setting for future events.

In terms of the non-sports event related cyclists, it has been identified that there are currently limited facilities and that they should be targeted at the one or part day cyclists, as they typically make up the majority. As such, the development of half and full day loops with an ability to hire suitable bikes for the associated terrain should be the priority, with consideration of multiple day facilities, that are coordinated with adjacent municipalities, as the 'jewel in the cycling tourism crown' that can be marketed to grab potential tourists' attention and work up to. ACTION 42