Mildura CBD Integrated Transport Strategy

Policy and Data Analysis

October 2020

Institute for Sensible Transport

Prepared by

Dr Elliot Fishman, Stewart Saunders, Vaughn Allan, Gary Tong and Liam Davies.

Institute for Sensible Transport

ABN 78 504 466 884
102/1 Silver Street Collingwood
Melbourne, Australia VIC 3066
E: info@sensibletransport.org.au
www.sensibletransport.org.au

Contents

List of figures

List of tables

1. Introduction

This *Policy and Data Analysis Report* has been prepared as part of a project commissioned by Mildura Rural City Council to improve transport and car parking outcomes in the Mildura CBD. To enable Mildura to reach its full potential as the hub of the Sunraysia region, an integrated approach to active transport and car parking management is required for the CBD.

1.1 Context and project area

Mildura has a very high level of car use, and a strong perception exists that there is not enough car parking. Council understands the potential benefits of creating a more sustainable set of transport options. These include:

- A more vibrant town centre
- More efficient land use
- Healthier community, with more incidental physical activity
- More cost effective, affordable transport options.

As will be described in the policy review, the *CBD Plan* provides a clear direction for this project. In particular, the 2035 targets set out in the CBD Plan include a:

- 25% increase in active travel movements in the CBD
- 15% increase in bus patronage
- 15% reduction in private car use.

Many of the cultural attitudes regarding transport and car parking are deeply entrenched in Mildura, both from the general, and business community.

The Review of the *CBD Plan 2007* received feedback that recommended the commissioning of an *Active Transit and Car Parking Strategy*. Car parking is generally free, including all day parking options. As with many regional towns, while parking occupancy may be low for much of the year, there are high demand times during festivals and other special events in Mildura.

One of the most important and challenging areas for public policy in Mildura concerns health and wellbeing. Health data shows that the Mildura community suffers from poorer health than the State average. Active transport has a very important role to play in providing much needed physical activity, as well as exposure to sun light which can help to boost Vitamin D.

Mildura is the centre of the Sunraysia region of north western Victoria and straddles the NSW border. Many people commute between states.

In many cases, the car represents the most convenient and culturally engrained transport option. For most people, public and active transport maybe seen as slower, less convenient, and unsafe. This project is designed to create a more compelling value proposition for these modes of transport, to provide better transport options for the Mildura community.

While Mildura is very flat, it can also be extremely hot in summer, and relatively cold and windy in the winter. This, along with large expanses of car parking, can act as a barrier to sustainable transport.

Figure 1 provides an overview of the Study Area. Many people that work and visit this area begin their trip beyond the CBD border. This report will also assess the quality of active and public transport options outside of the Study Area, in order to provide a more comprehensive analysis of barriers and opportunities to more sustainable, less car dependent transport options.

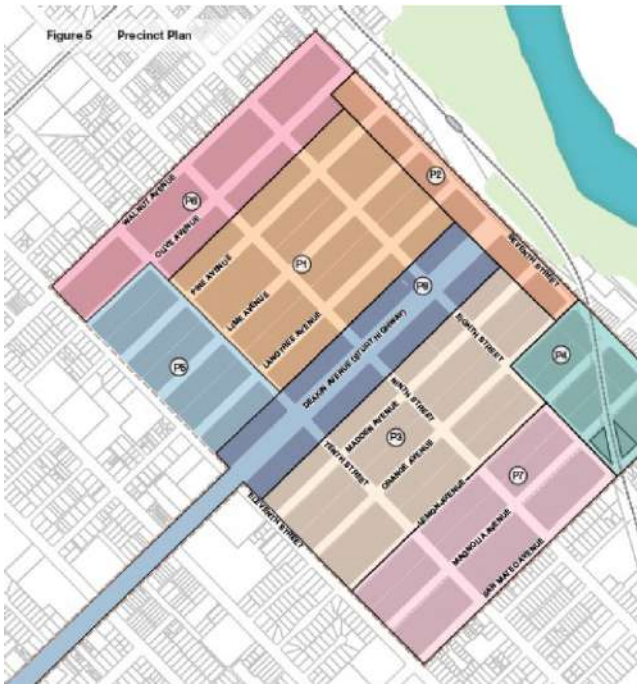

Figure 1 Study Area

Source: Mildura Rural City Council

1.2 Structure of this report

This report contains analysis and review material on the following topics:

1. Policy review: A review of relevant local government policies and strategies that are pertinent to transport issues within the CBD. An important requirement of this project is to align Council's transport investment and decision making with Council's wider strategic objective and adopted Plans (such as the CBD Plan).
2. Data analysis: An examination of available Census and Council data regarding travel behaviour, transport infrastructure and services is an essential component of both this report and the wider project. This examination underpins evidence based decisions that will be undertaken in further components of this project, especially in relation to recommendations.
3. Next steps: The final section of this report will outline immediate next steps that will be undertaken as part of the development of the *Mildura CBD Integrated Transport Strategy*.

2. Policy Review

This policy review provides an analysis of policies, strategies, ordinance and plans that are relevant to understanding the current aims and ideals of the Council that guide future changes to transport and land uses, including the *Mildura Active Transit and Car Parking Strategy*.

2.1.1 Draft Mildura CBD Plan 2020 – 2035

The Draft *Mildura CBD Plan* was adopted by Council in June, 2020 and is Council's most recent strategy outlining the future direction of land-use and transport within the CBD area. This project is a direct result of the work undertaken in the Mildura CBD Plan. The Plan is an update to the 2007 Plan, reflecting changing demographic, economic, and strategic policy changes that have occurred since then.

The 2020 Plan highlights many of the current challenges facing the Mildura CBD and the opportunities to transition the CBD towards a more attractive, social, and economically vibrant destination within the Sunraysia region.

The Plan states a new vision for the CBD to guide change across the next 15 years; *'Mildura's CBD will be a responsive, resilient, and people-oriented centre for community life, drawing inspiration from the Murray River experience.'*

***'Mildura's CBD will be a responsive, resilient, and people-oriented centre for community life, drawing inspiration from the Murray River experience.'* – Draft CBD Plan, 2020**

The CBD Plan includes eight key objectives, which are:

1. Deliver on a shared vision
2. Create an accessible, liveable and prosperous centre
3. Cultivate active streets
4. Be at the forefront of innovation
5. Stimulate authentic experiences
6. Grow a seasonal planted oasis
7. Champion a committed community agenda
8. Unlock future potential.

The most pertinent objectives from the CBD Plan for the current project are objectives 2 and 3, however as this project progresses, each of the eight objectives will be considered.

The *six strategic directions* captured in the CBD Plan are also important for the development of the *CBD Integrated Transport Strategy*. These strategic directions are accompanied by targets and those with more direct relevance to transport will be elaborated upon. These strategic directions include:

1. A distinct and dynamic activity hub
    a. 1C Encourage healthy and active communities
    b. 1D Promote CBD living
2. A connected and compact CBD, including the following 2035 targets[1]:
    a. 25% increase in active travel movements in the CBD
    b. Establish planned priority active transport network
    c. 15% increase in number of bus patrons, and expansion of current bus services
    d. 15% reduction in private car use

[1] Given that ~90% of trips are currently by car, a 15% reduction in these trips will result in a much larger increase in active and public transport than what has been included in the targets. Our initial view is to keep the 15% reduction target for car use, which would result in a ~500% increase in active travel (off a very low base).

e. 2C Improve places and journeys: This outcome is directly relevant to transport in the CBD and it calls for a variety of specific actions that align with enhancing the sustainability and liveability of the CBD, including:

   i. Cultivate a network of 'active' streets and public open spaces that connects key destinations within the CBD

   ii. Provide further pedestrian links to better connect the CBD and reduce block sizes, and enhance mobility for the community through safe and comfortable spaces

   iii. Improve the level of safety and connectivity (actual and perceived) between the CBD and the Riverfront, across Seventh Street

   iv. Improve streetscape amenity through planting and other treatments, as a visual and physical cue to reduce traffic speeds

   v. Continue streetscape improvements to provide ample seasonal shade and comfort, especially between car parks and key service destinations

   vi. Advocate for full completion and enforcement of the VicRoads alternative freight vehicle bypass via Benetook Avenue, to remove heavy vehicle traffic and improve user amenity along Deakin Avenue

   vii. Prioritise off-road cycle paths along Deakin Avenue and Seventh Street.

f. 2D Enrich urban form and wayfinding

   i. Encourage strong urban form and art installations that acknowledges and celebrates the region's indigenous and European cultural heritage

   ii. Promote high quality and climate responsive new development, setting new benchmarks, according to the CBD living guidelines

   iii. Provide high quality and consistent wayfinding, directional and street signage, which is easily distinguishable by locals and visitors

g. 2E Promote sustainable transport modes

   i. Make travel to the CBD more accessible, practical and inviting for everyone.

   ii. Improve the quality, safety and amenity of networks and facilities within the CBD, for public transport users and cyclists

   iii. Continue to advocate for re-instatement of a passenger rail service and airport link to Mildura's CBD.

   iv. Establish a bus interchange within a central location of the CBD.

   v. Re-think the relationship with cars in the CBD and Council's parking policy, to suitably regulate on street parking and ensure more available short term parking in convenient locations[2]

   vi. Re-examine the modal hierarchy[3], DDA access and right-of-way provision for pedestrians within the CBD, to ensure convenient and safe and efficient walking and cycling routes are provided.

   vii. Consider car share and prioritised parking spaces for people with disabilities and parents with prams.

The key *actions* included under Direction 2 of the CBD Plan are directly relevant to the CBD Integrated Transport Strategy and include:

1. Implement precinct controls[4]
2. Regional freight and passenger services

[2] This direction is vague and it is unclear what specific actions might arise.

[3] Is there an established modal hierarchy for the CBD?

[4] This is contingent on the completion of a *CBD Economic Feasibility Study*

3. Seventh Street upgrade
4. Design competition – Mildura arrival statements (a gateway feature project)
5. CBD wayfinding and signage roll out
6. New bus interchange
7. Upgrade bus and taxi shelters
8. Improve bus services
9. Active CBD intersection upgrades
10. Active Transit and Parking Strategy (this project).

2.1.2 Active Transit and Parking Strategy

As highlighted earlier, the Draft CBD Plan specifically identifies the need to develop an 'Active Transit and Parking Strategy'. The areas of focus it recommends includes:

1. Traffic, pedestrian and cyclist volumes, including the current modal split
2. Walkability assessment, including recreational trails
3. Cycling infrastructure and parking
4. Current parking supply, occupancy, current time limits, to inform recommended changes
5. Identify opportunities for multi-storey car parking in accessible locations.
6. Level crossing solutions (i.e. grade separation needs over the rail line and Seventh Street, including at Orange Avenue, Lemon Avenue, Magnolia and San Mateo Avenue)
7. Opportunities for car share and other on-demand transport options
8. Emerging trends in relation to peer-to-peer transport models, public and private transport modes
9. Electric vehicle parking and charging stations, and
10. Confirm transport related actions/design guidelines of the CBD Plan, particularly the proposed intersection/roundabout upgrades, active transport routes, location of bus interchange and multi-storey carpark.

Overall, the content provided in the Draft CBD Plan provides a strong platform upon which to embark on the current project. The site assessment team will be cognisant of the transport related actions in the CBD Plan as they conduct their site assessment in late November.

2.2 Mildura Planning Scheme Clause 11, 15.01 and 18

The Mildura Planning Scheme is a high-level document which brings together Local and State Government regulations and objectives regarding planning and land use management. Relevant topics covered include planning for urban growth, developing healthy suburbs and integrating transport with land use.

2.2.1 Clause 11

Clause 11 provides governing ideas on managing growth. This clause suggests Mildura's position as a regional centre should be expanded through developing connections with neighbouring settlements and by facilitating consolidation of Mildura's Central Business District (which is generally consistent with the Draft CBD Plan). Growth that will negatively impact the capacity of the Mildura Airport should be avoided. It states that access to jobs, services, infrastructure and community facilities should be readily available and that density and urban form should facilitate sustainable transport.

2.2.2 Clause 15.01

Clause 15 is concerned with ensuring health is promoted through quality urban development. Specifically, development should respond to local context, character and climate. Walking, cycling and public transport should be supported and facilitated for people of all abilities. These are important not just for ensuring a high-quality and safe public realm but also ensuring healthy neighbourhoods. Encouraging easy and safe connections for walking, cycling and public

transport, in all seasons, is important to ensuring healthy suburbs, both physically and socially.

2.2.3 Clause 18

Clause 18 is particularly relevant to the Integrated Transport Strategy as it regards the goals and guidelines for the provision of transport. A recurring theme in the *Planning Scheme* is ensuring roads provide for all modes of transport.

The Clause states that transport infrastructure should strengthen connections to jobs, services and leisure facilities. Access to a range of modes must be equitable and should support the development and redevelopment of urban areas. To this point Local Governments are required to facilitate all modes as part of any major new road project.

Incorporating the provision of public transport, cycling and walking infrastructure in all major new state and local government road projects is a requirement.

Public transport should be used to connect activity centres, job concentrations and outer suburban areas. Regarding car parking, efficient design and use should be pursued to minimise parking's negative affect on amenity and safety of an area. Particularly the design of safe access for pedestrians and public transport.

A strong theme within the *Mildura Planning Scheme* is the intention for transport to be easily accessible to everyone and should not be limited to any one mode.

A strong theme within the *Mildura Planning Scheme* is the intention for transport to be easily accessible to everyone and should not be limited to any one mode. Urban consolidation rather than expansion should be the priority. New transport infrastructure needs to be implemented early to facilitate development of existing urban areas.

A key aim of the Mildura Planning Scheme is to 'limit urban sprawl and direct growth into existing settlements'.

2.3 Community and Council Plan 2017 – 2021

This plan outlines Council's position on how they are going to make a liveable and '*people-friendly community*'. Whilst transport is not specifically mentioned other than a call for more walking and cycling infrastructure, there is a focus on how to make streets safer and how to improve amenity. Two key projects include the *Deakin Avenue Master Plan* as a major city renewal project and the *Public Lighting Strategy* to improve safety through standardising lighting provision.

Recent Council Capital Works expenditure is also outlined. Between 2016 and 2020, $3,292,000 was budgeted for footpaths and cycling infrastructure which equates to approximately $25 per person per year. A further $468,000 is budgeted for the 2020/2021 financial year. This equates to $14 per person being budgeted on walking and cycling infrastructure in the 2020/2021 financial year. Expenditure per person has been calculated by dividing the *Mildura Urban Centre and Locality* population recorded in the 2016 Australian Bureau of Statistics Census - 33,444 people.

The Council and Community Plan is short on specifics regarding public, and active transport but it does signpost other relevant documents and the relationships between them and the timelines of each document. An interesting outline of key Mildura characteristics is shown in Figure 2.

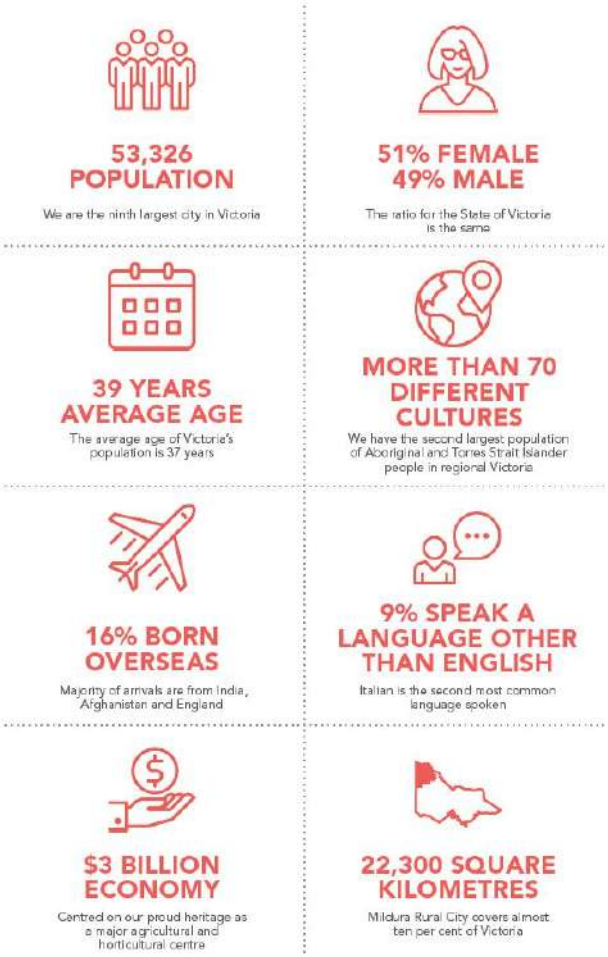

Figure 2 A summary of key characteristics about Mildura as chosen by the Council.

Source: Community and Council Plan 2017 – 2021

2.4 Community Engagement Strategy 2020 – 2024

Council uses the *International Model for Public Participation (IPA2)* as the model for structuring and guiding community engagement. Figure 3 provides an outline of IPA2 model for community engagement.

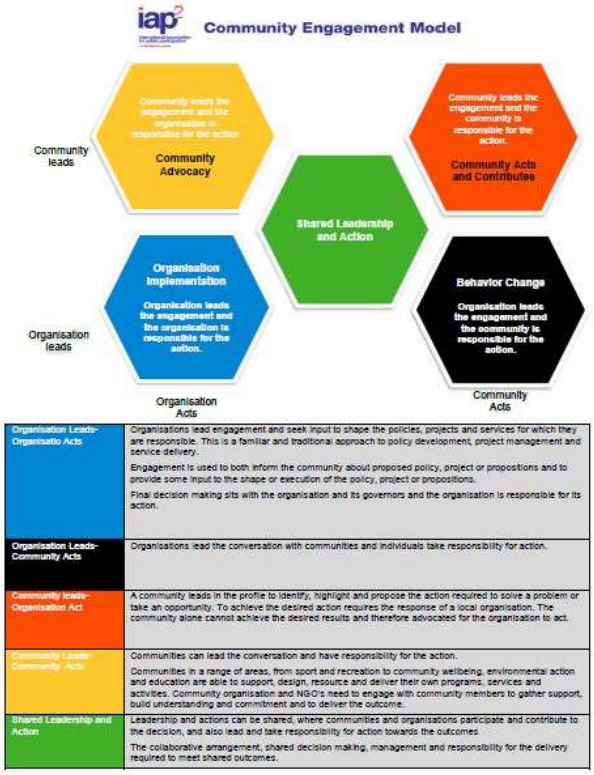

Figure 3 IAP2 Community Engagement Model

Source: Community Engagement Strategy 2020 – 2024

2.5 Community Health and Wellbeing Plan 2017 – 2021

This is a high-level plan intended to coordinate a set of goals and priorities to protect, improve and promote health and wellbeing within the Mildura community. The core goals are:

- Healthy and well
- Safe and secure
- Capabilities to participate
- Connected to culture and community
- Liveable.

These goals are derived from the *Victorian Public Health and Wellbeing Outcomes Framework*.

The Plan was informed by a variety of sources including government surveys, and local action groups. The organisations and resources which contributed to the Plan are shown in Figure 4.

Figure 4 Organisations and resources that contributed, informed and shaped the plan.

Source: Community Health and Wellbeing Plan 2017 – 2021.

Safety is cited as a concern in the community. In 2015, only 47.5% of people surveyed felt safe walking alone at night compared to 56.1% previously (p. 23). *Ride and Stride Zones* are cited as a key success of the previous Community Health and Wellbeing Plan 2013 – 2017. Ride and Stride Zones are a policy to set up healthy walking and cycling habits by encouraging walking and cycling to primary schools.

This Plan, whilst short on relevant specifics, does outline the Mildura Rural City Council's current approach to the current health issues facing the municipality and how they are going to deal with them.

2.6 Community Safety Plan 2015 – 2020

Council sees perception of safety as an important indicator of community health and wellbeing. The Plan identifies that people are more likely to engage in activities outside of their house if they perceive the local area as safe. Relevant for this project is the desire to make '*safe, active and well-maintained public spaces*'. Key indicators which influence the perception of safe public space include good lighting and quality spaces that are properly maintained and good passive surveillance. Whilst this document does not specifically mention active or sustainable transport, the coverage on public space and lighting gives clear indications of elements and context which need to be incorporated in any changes to public space proposed. It is also clear that if new infrastructure is well lit then it is more likely to be successful.

2.7 Environmental Sustainability Report 2018 – 2019

This report outlines Council's progress on matching various environmental and energy policies which are designed to reduce the Council's impact on the environment. Council regularly produces this report to assert its influence, as a community leader, to encourage other businesses and entities to enhance their environmental performance.

Figure 5 illustrates Mildura's current approach to reducing emissions. The first preference is to avoid emissions entirely if possible, and this has an obvious implication for future transport investment.

Figure 5 Mildura's approach to reducing current and avoiding new emissions

Source: Environmental Sustainability Report 2018 – 2019.

As will be demonstrated in subsequent components of this project, transport accounts for around 17 – 20% of greenhouse gas emissions, and

therefore any attempt to address climate change needs to have a significant transport element.

2.8 Mildura Tracks and Trails Strategy, 2012

This Strategy outlines Council's position on improving infrastructure for walking and cycling, both on and off road, for people of all ages and abilities. It states that residents and key stakeholders in the City are eager for more trails and infrastructure to be developed.

At the time of writing Deakin Avenue, Eleventh Street, Fifteenth Street and Walnut Avenue were the most used on-road bike lanes, while the off-road trails at king Billabong and Merbein Common were the most used of their kind. The Strategy highlights interest in developing more infrastructure, particularly long trails which can become tourist attractions and more cross-town infrastructure to facilitate local cycling. Eleventh Street, Fourteenth Street (both east west), Deakin and San Mateo Avenue (both north south) are earmarked in the strategy to become on-road cycling corridors. Pedestrian routes were suggested to use Eighth and Ninth streets (east west).

Other suggestions include connecting Mildura to neighbouring settlements including Nichols Point, Irymple, Red Cliffs, Merbein, Kings Billabong and cross-council link to Wentworth Shire, using the railway easement for a new off-road trail.

The Strategy recognises that key to encouraging a general shift to active travel, new infrastructure needs to be of a high quality, well maintained and facilities need to be provided along the routes including end-of-trip, seating, picnic-tables, signage provision, water and shade. Reducing the real and perceived danger of active transport will further encourage broad adoption for short journeys. Interlinking active transport with quality public transport will ensure the mode shift does not revert to cars in extreme weather and it will also encourage medium length trips to be done without cars, according to the Strategy. Figure 6 is a re-produced map of the bike network, based on information contained in the Tracks and Trails Strategy, from 2012.

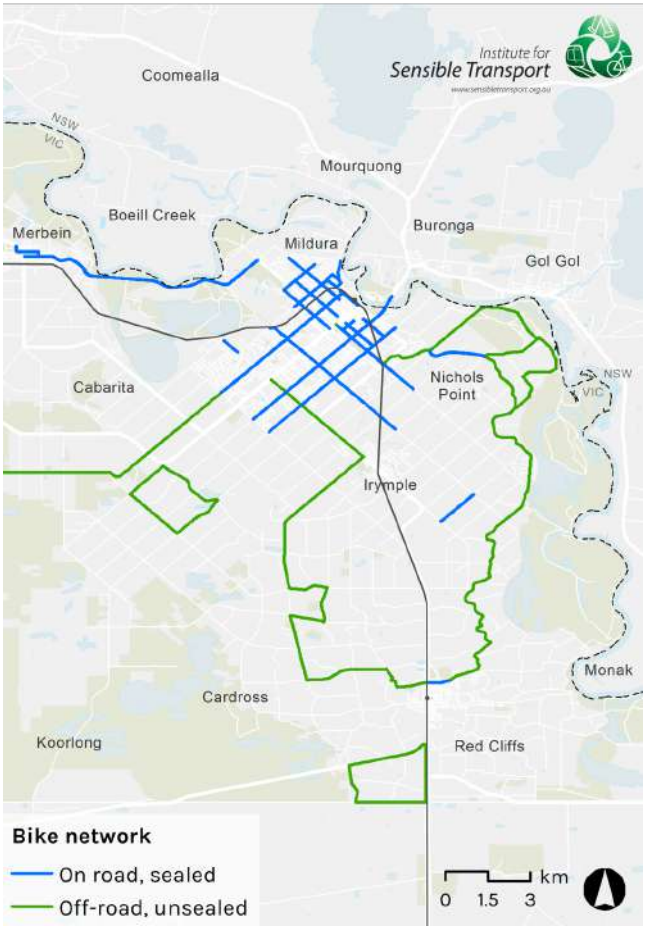

Figure 6 Current on-road and off-road cycling network.

Source: Adapted from Tracks and Trails Strategy 2012

2.9 Municipal Public Road Register, 2016

This document provides information on the state of the road network within Mildura, as of 2016. It is useful for outlining the road hierarchy and condition in the area. Roads which are used by busses are also identified. This document will be a useful resource for informing the choice of appropriate roads for new active or public transport infrastructure, particularly as it highlights which roads are part of the Declared Road network.

2.10 Municipal Road Management plan, 2017

The *Municipal Road Management Plan* lays out Council's position on managing roads under its jurisdiction. It gathers together all relevant standards which need to be considered when implementing changes to the road network; for instance, ensuring that bus stops are accessible for all as the *Disability Standards for Accessible Public Transport (2002)* requires.

2.11 Recreation Strategy and Action Plan, 2008 – 2018

This Strategy investigated the recreational habits of the Mildura community and planned to increase participation. Males between 15 and 54 were found to be the most well provided for demographic. Women and other age groups were not offered the same recreational opportunities. Encouraging older members of the community to keep active was considered an important objective of the Strategy. It also recognises the need to provide a range of recreational activities as a lifestyle selling point to attract new residents. Casual walking and cycling are identified as pursuits that Council should encourage further. Table 1 identifies the top 12 recreational activities undertaken in Mildura. Cycling was more widely participated in than tennis, cricket, and netball.

Particular actions the Strategy identified as needing to be done to increase participation included the completion of a *Trails and Trails Strategy* to connect Mildura's residents to key places within the local community, surrounding communities and to regional sites of significance.

Table 1 Most frequent physical activities in past year

Rank	Activity	Total Respondents	Females	Males
1	Causal Walking	33% (99)	43%	20%
2	Golf	13% (40)	7%	22%
3	Swimming (Indoor)	12% (35)	16%	6%
4	Australian Rules Football	11% (32)	7%	16%
5	Fishing	7% (22)	2%	14%
6	Gym/Fitness Classes	7% (21)	10%	2%
7	Bike Riding	7% (20)	2%	13%
8	Tennis (Outdoor)	6% (18)	3%	9%
9	Cricket	5% (16)	2%	10%
10	Netball (Outdoor)	5% (15)	9%	0%
11	Swimming (Outdoor)	5% (14)	4%	6%
12	Basketball	3.9% (11)	3%	6%

Sourced from Recreation Strategy 2008 – 2018

2.12 Road Safety Strategy 2018 – 2022

This Strategy outlines Council's approach to implementing the *Safe Systems* approach to minimise road trauma and to support the Victorian Government's *Towards Zero* strategy. The Council sees implementing Safe Systems (see Figure 7) as an integral component of making the City "*Australia's most liveable city*". Safe Systems is an approach that applies to *all* road users including those who walk and cycle. This Strategy commits the Council to a 30% reduction in fatalities and serious injuries, within their jurisdiction, by 2022.

Figure 7 Safe Systems Graphic.

Source: Road Safety Strategy 2018 - 2022

Figure 8 shows the Councils current and predicted number of crashes . As can be seen crashes steadily climbed before beginning to drop again in the years immediately prior to this strategy. The Council's previous strategy ran between 2010 and 2017. This strategy oversaw the removal of a number of 'blackspots' within the network, leading to significant safety improvements. The new Strategy will use crash data and community feedback to identify locations with high rates of minor crashes, where users feel particularly vulnerable, or where near misses, which are not normally recorded occur. These locations will be targeted for improvement if physical improvements are seen as the best option.

Figure 8 Shows the current crash trend within Mildura and the target trend to 2021.

Source: Road Safety Strategy 2018 - 2022

The Strategy highlights that pedestrian crashes, particularly in the CBD where speeds are 50 and 60 km/h, seem to be on the increase. The Strategy suggests investigating measures to better protect pedestrians and cyclists particularly in activity centres.

2.13 State of Mildura Rural City report 2018

This is a '*State of Health*' report for Mildura compiled using data from a variety of sources. The categories covered were chosen through community and stakeholder engagement with council and experts. Of particular interest are the following points:

- Participation in non-organised physical activity, (i.e. walking and cycling) is 68.7% compared to the state average of 70.5% (VicHealth Indicators Survey 2015)
- Proportion of adults that feel safe walking down their street at night is 60% compared to the state average of 61%. (Victorian Population Health Survey 2014, findings report 2017)
- Around 9 in ten children and young people perceive it to be safe walking alone during the day, compared to 92.5% for the state average (VicHealth Indicators Survey 2015)
- Just under half (47%) of children and young people perceive it to be safe walking alone at night compared to the state average of 55%. (VicHealth Indicators Survey 2015).

3. Data Analysis

This section will provide an analysis of data relevant to transport patterns and demographics in Mildura. We have drawn on a range of sources, including ABS Census, population forecasts, and Council-provided data.

3.1 Population

Figure 9 show the age profile of those residing in Mildura (suburb), compared to the Victorian average. Parents and homebuilders (those aged 35-49 years) make up around 18% of Mildura's population. Mildura's population is ageing, and this has implications for the design of streets and the transport system, to help ensure senior members of the community are able to maintain independent mobility.

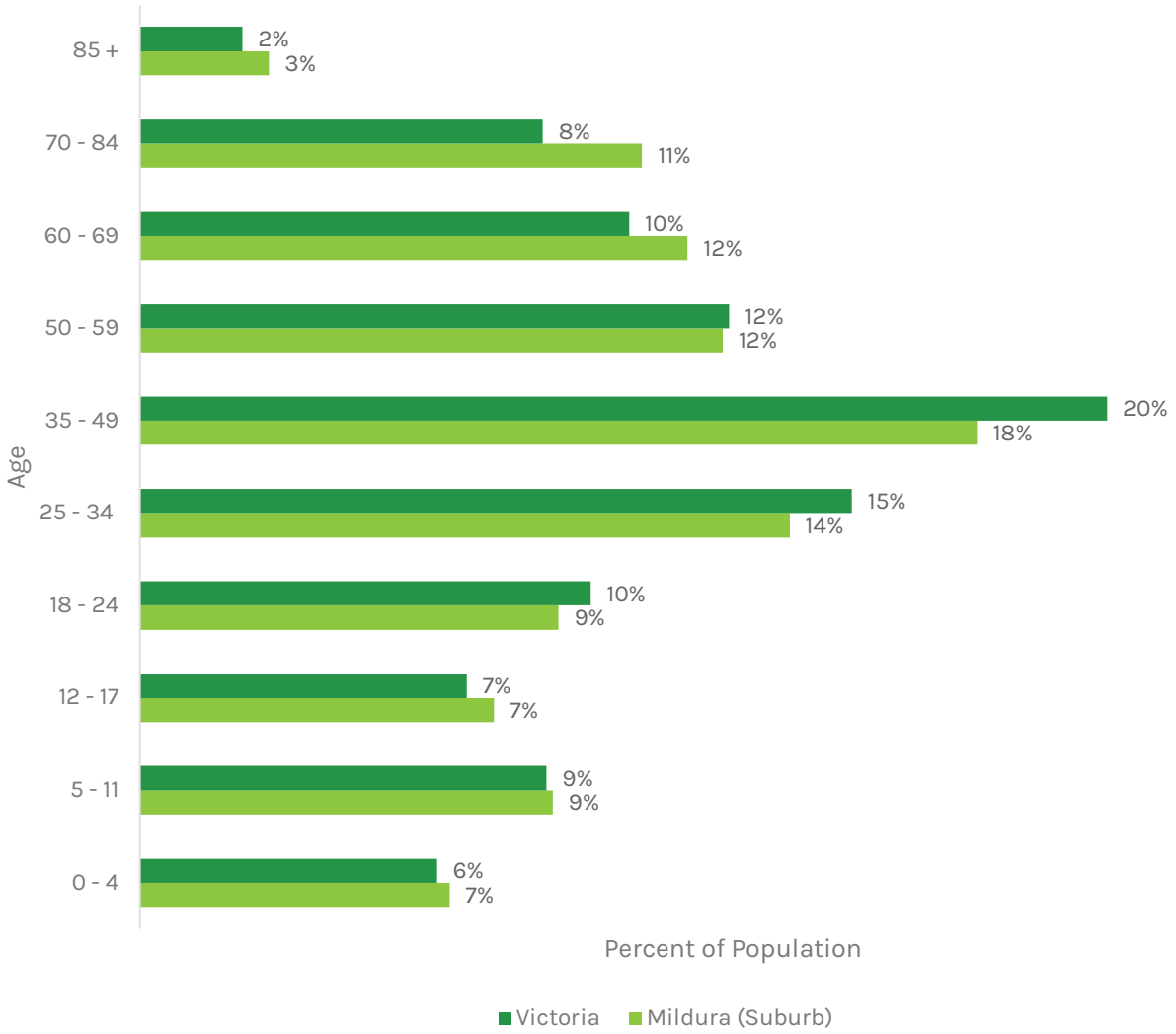

Figure 9 Population by age group as percentage in 2016

Source: Australian Bureau of Statistics (2017)

While limited population forecast information is available, *Regional Development Victoria* predict that the population of Mildura will increase by 0.68% per annum between 2016 and 2036. This equates to a growth in the total population of 12% between 2019 and 2036. Figure 10 illustrates this growth between 2019 and 2036, totalling 7,000 new residents. Note that these figures were produced in 2019. As such, the long-term effects that COVID-19 will have on population and migration patterns is not yet known.

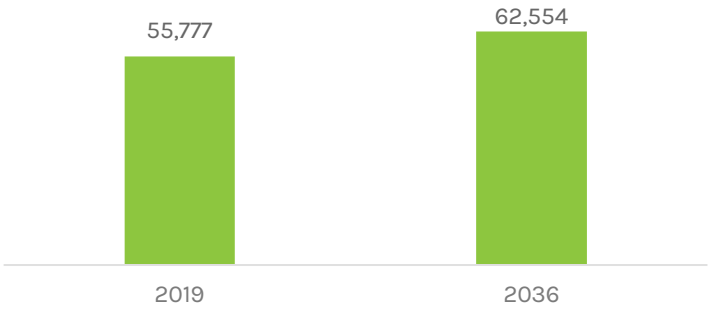

Figure 10 Population forecast, Mildura LGA

Source: Regional Development Victoria

Figure 11 shows where people in Mildura live. It illustrates a relatively contained urban environment from Sixteenth Street in the south towards the CBD. The CBD itself, and the industrial precinct to the east of the CBD having markedly lower population density. This spatial view shows the extent that Mildura conforms to being a 20-minute city, with most people living within a 20-minute walk or bike ride to work, shops, and services. This is a feature of regional cities that highlights their potential to be leaders in sustainable transport, and will be drawn upon in future stages of this project.

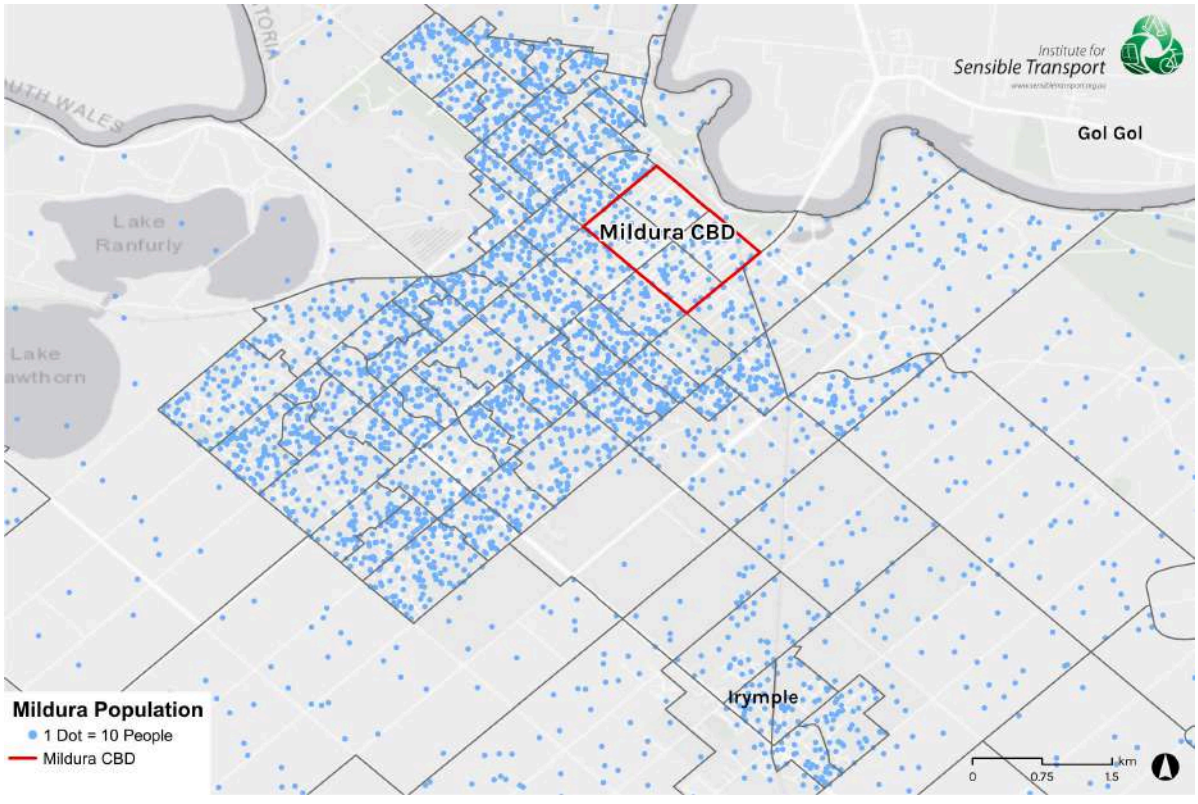

Figure 11 Population of Mildura

Source: ABS Census

Figure 12 shows where young adults in Mildura live. The density of young people is relatively spread across the Mildura urban area. The difference between the maps in Figure 11 and Figure 12 highlight the relatively low proportion of people in Mildura aged 18 – 35.

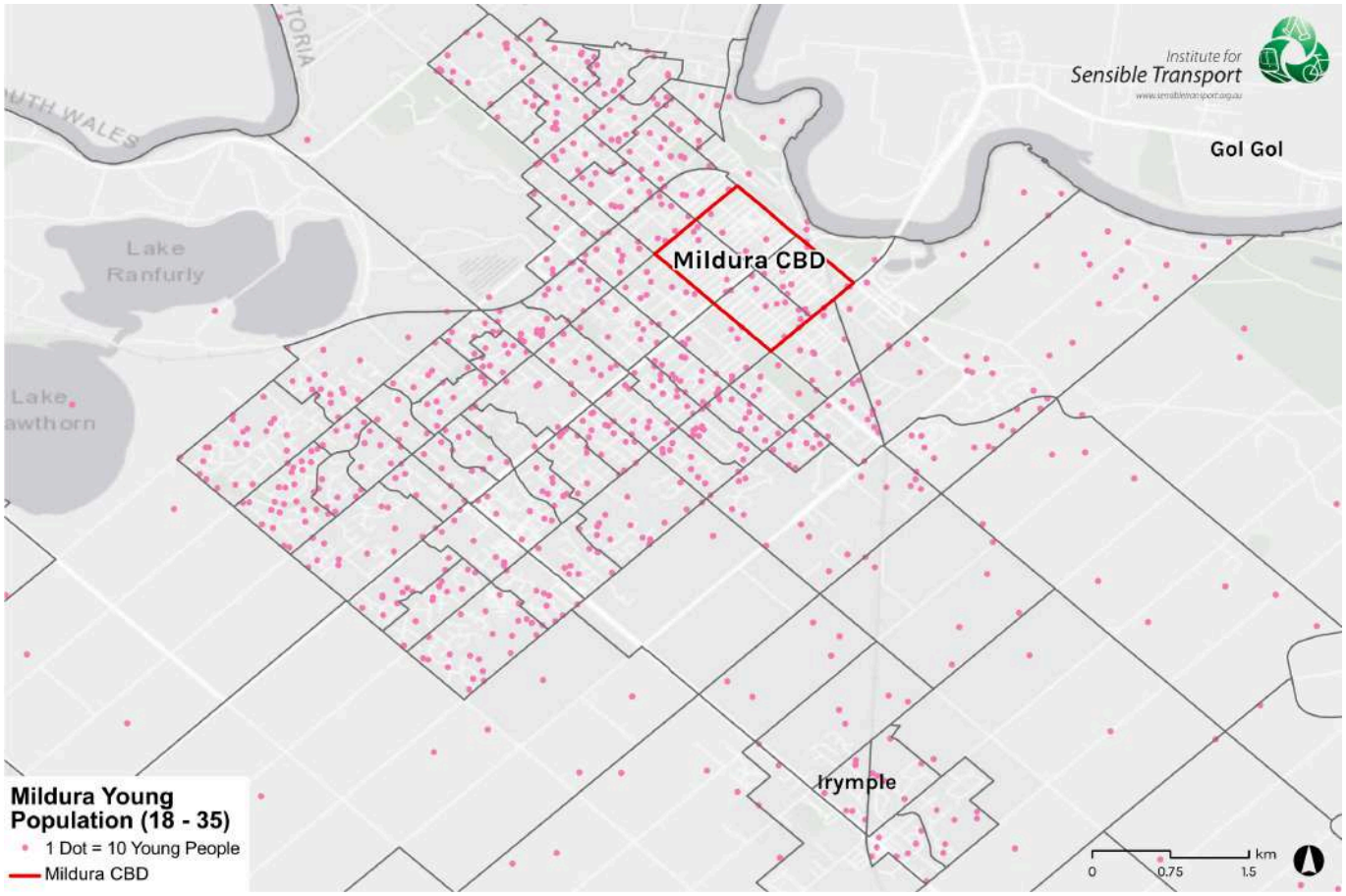

Figure 12 Young People in Mildura

Source: ABS Census

3.2 Journey to work

Figure 13 shows the mode share for journeys to work within Mildura in 2016. Work commutes mirror most other places in Victoria (and Australia), with the vast majority of trips undertaken by private car. Just over 90% of commutes are by car, while 5.1% of journeys are accomplished through active transport. It shows that walking is around four times as common as cycling. Bus is the least-used mode of travel to work. The motor bike symbol represents '*other*' (e.g. truck, motor bike etc).

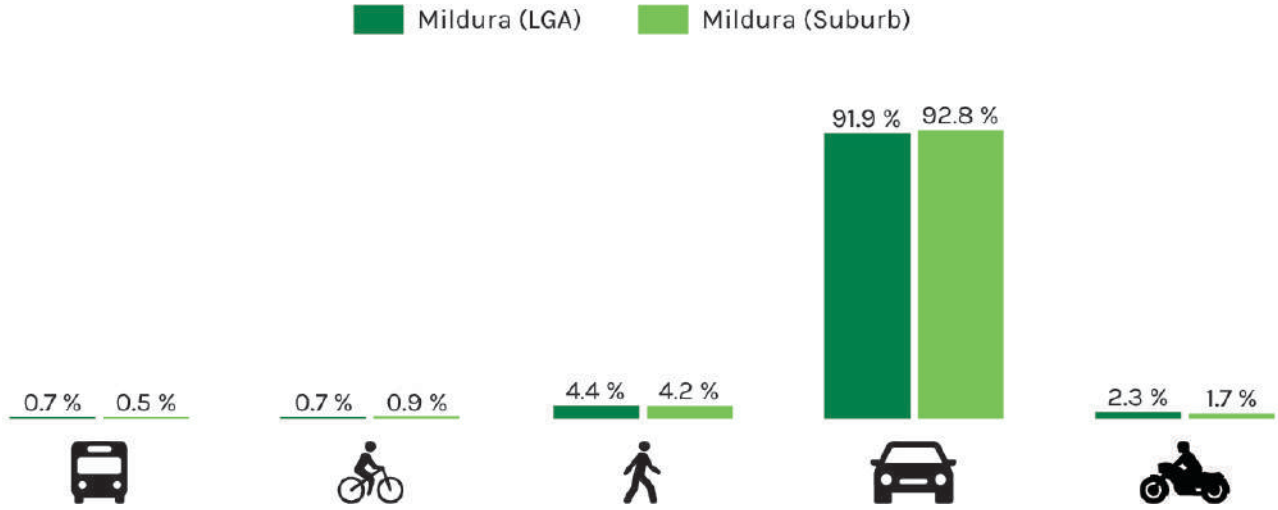

Figure 13 Mode share in Mildura in 2016

Source: Australia Bureau of Statistics (2017)

3.2.1 Mildura area

In this subsection, an analysis was undertaken of how mode share varies in Mildura and adjoining suburbs, as well as fringe suburbs. Figure 14 provides an overview of the different areas of Mildura illustrated in the subsequent graphs.

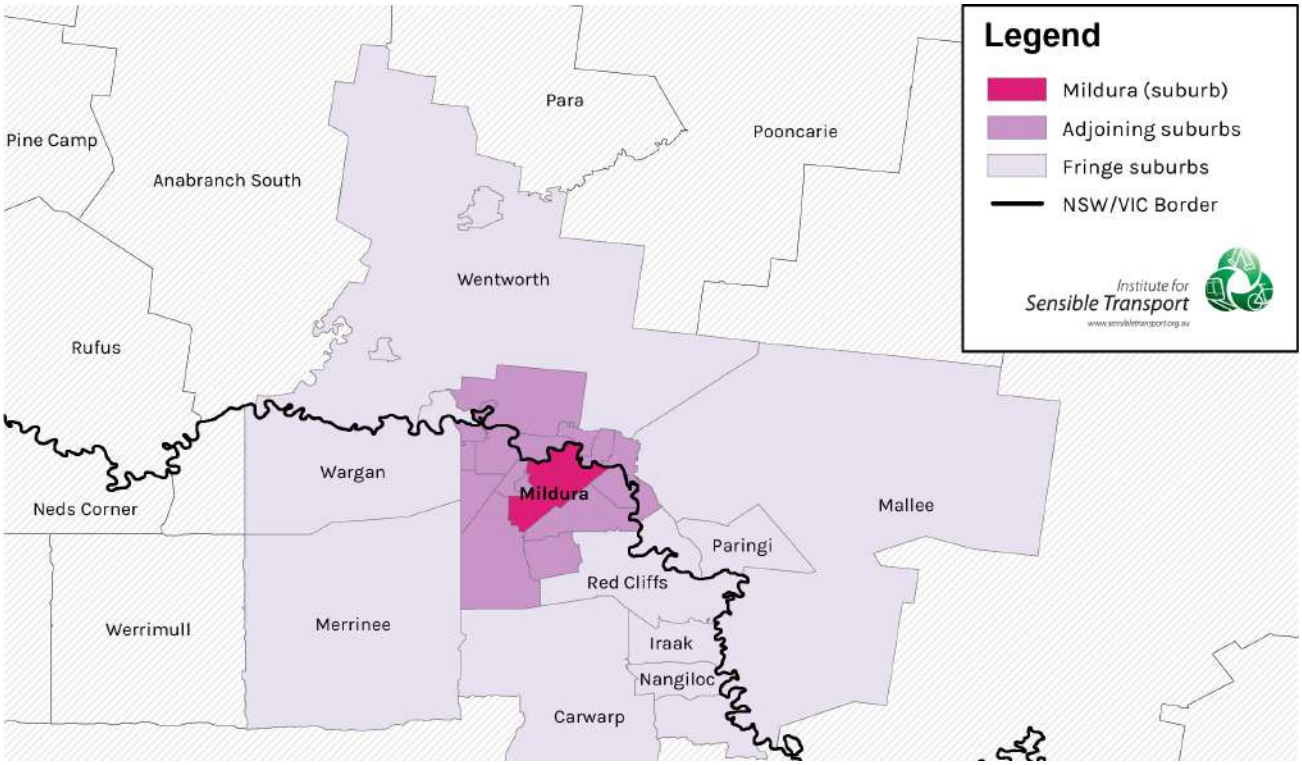

Figure 14 Map of Mildura and surrounding suburbs

Figure 15 shows the mode of travel for those working in Mildura North. The car continues to be the dominant mode of transport regardless of the origin. Surprisingly, those from fringe areas have higher rates of walking and less car use than those with shorter trip distances.

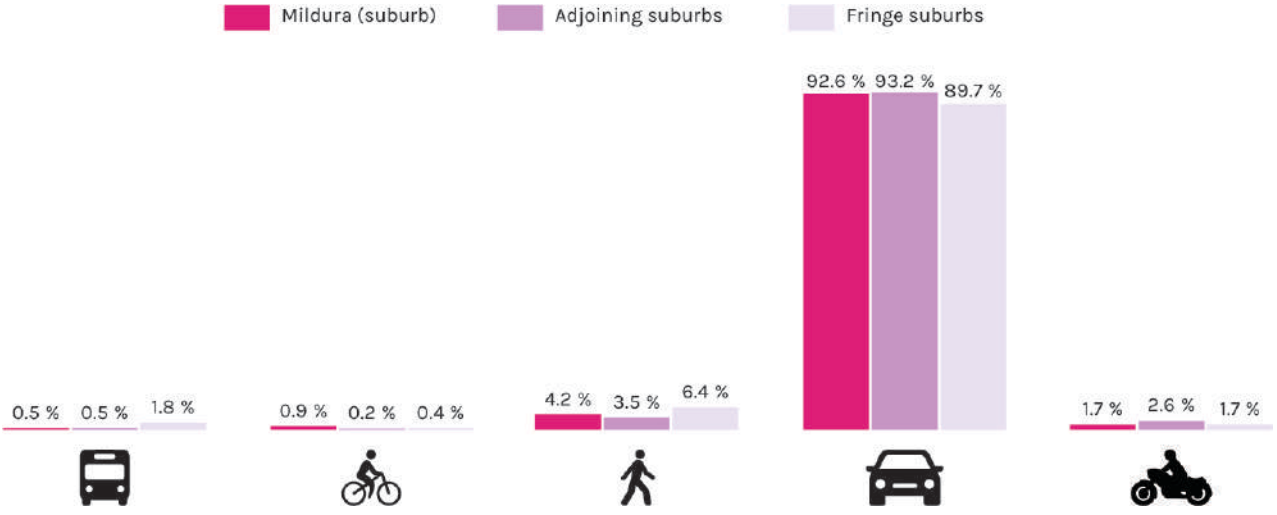

Figure 15 Mode of travel to Mildura North SA2

Source: Australia Bureau of Statistics (2017)

3.2.2 To the CBD

Figure 16 offers a spatial analysis on where commuters in Mildura's key destination zone are travelling from. Each dot on the map represents 10 commuters, with the colour of the dot denoting the mode used, and the location of the dot indicating where they start their journey to work. Some 65% of workers who work in the Mildura CBD live in the suburb of Mildura, indicating generally short distance trips (i.e. less than 4km in most instances). Some 9% of workers live and work within the destination zone itself (i.e. trips of ~1km). Overall, only 16% of CBD workers live more than 10km from the Mildura CBD.

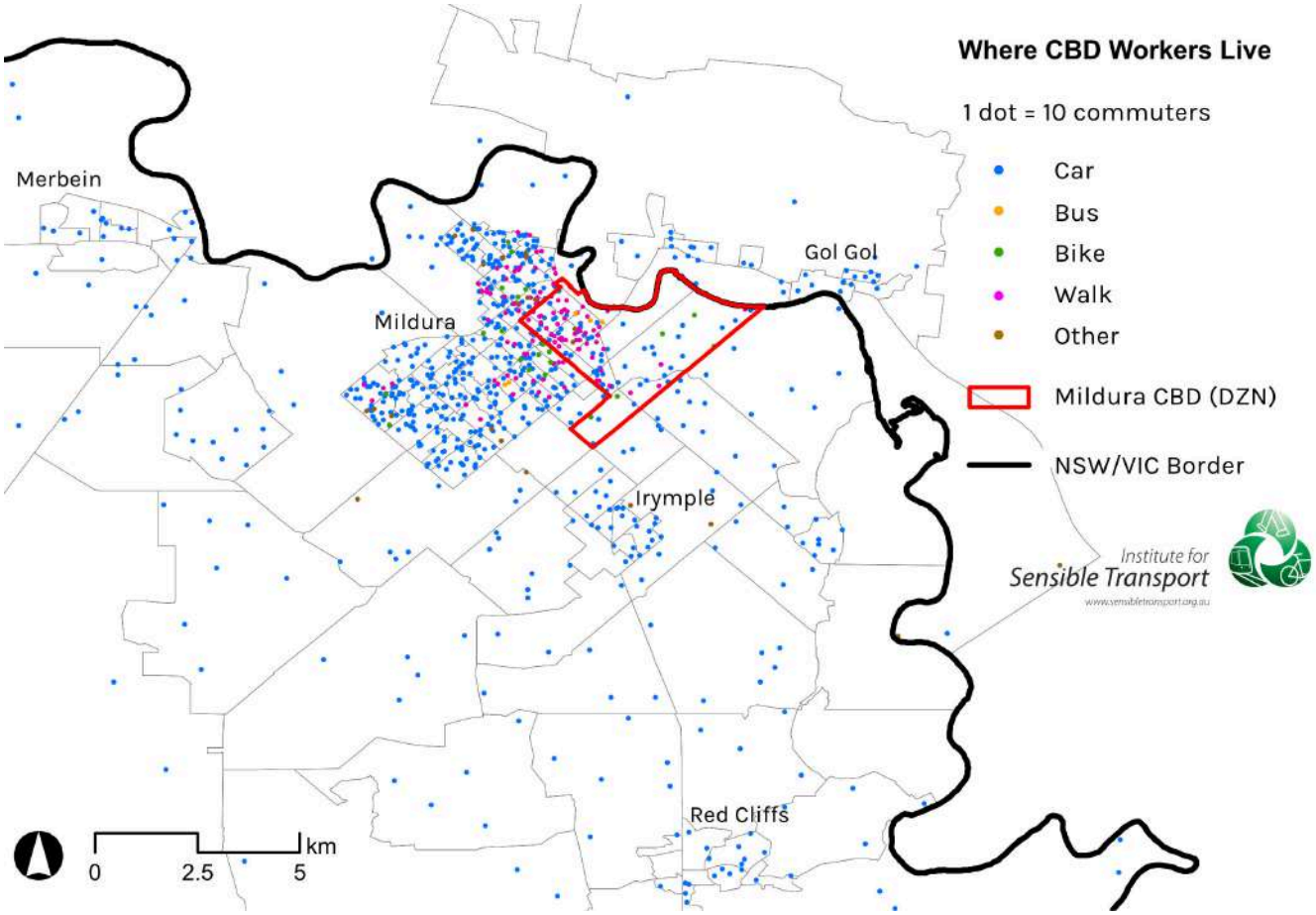

Figure 16 Where people who work in the Mildura CBD live

Source: Australia Bureau of Statistics (2017)

3.2.3 Distance to work

Figure 17 shows the cumulative distance to work to the Mildura CBD. It shows that 20% of all trips are less than 2km, 43% are 4km or less, and half of all trips are under 6km. This shows that the largest proportion of Mildura CBD workers live within the township itself or an adjoining suburb. While many work commutes to the Mildura CBD will continue to be car-based into the future, these results do indicate that a sizable proportion are within a comfortable distance to walk or cycle, should the conditions support such a choice.

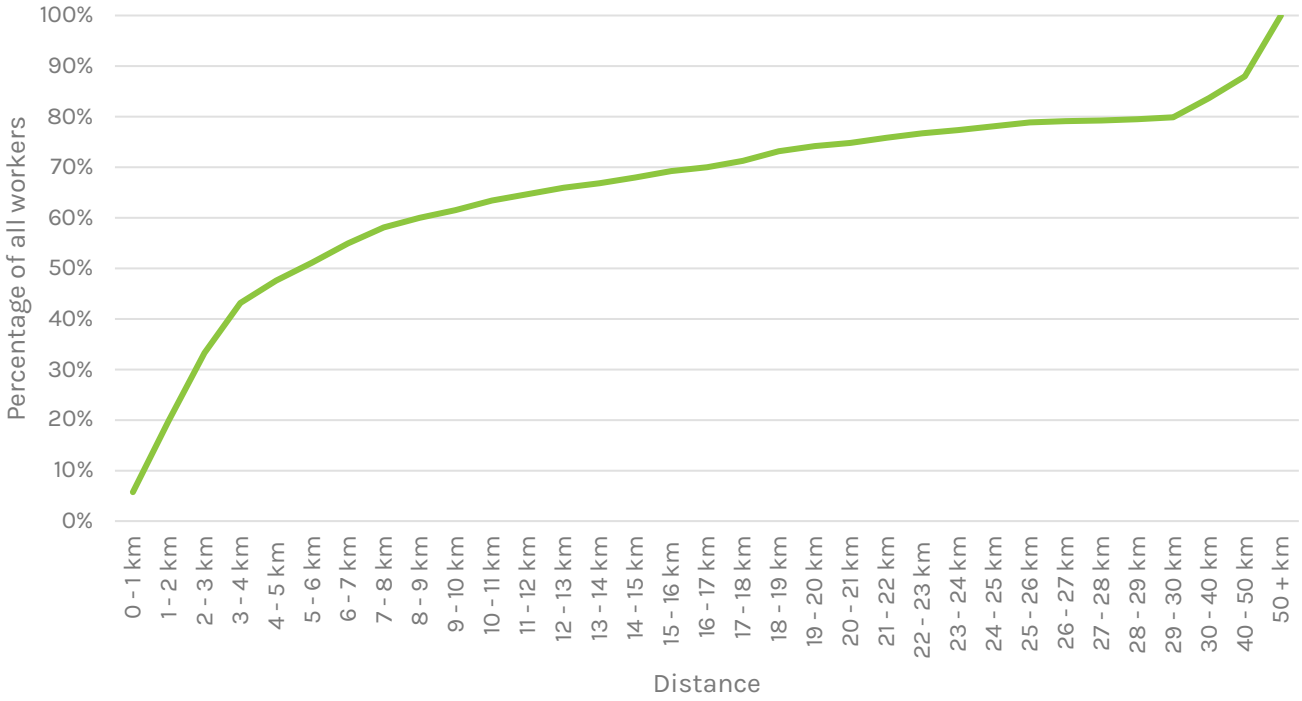

Figure 17 Cumulative Distance to Work to Mildura CBD

Source: Australia Bureau of Statistics (2017)

Census data reveals 20% of all trips to work in the Mildura CBD are less than 2km, 43% are 4km or less, and half of all trips to work are less than 6km

3.3 Motor vehicle ownership

Figure 18 illustrates the total number of vehicles by SA1[5]. The Mildura CBD has variation on the spatial distribution of car ownership, possibly reflecting residential densities, whereas the suburb of Mildura has a more uniform distribution. In most cases, this dot density map of car ownership acts as a proxy for residential density.

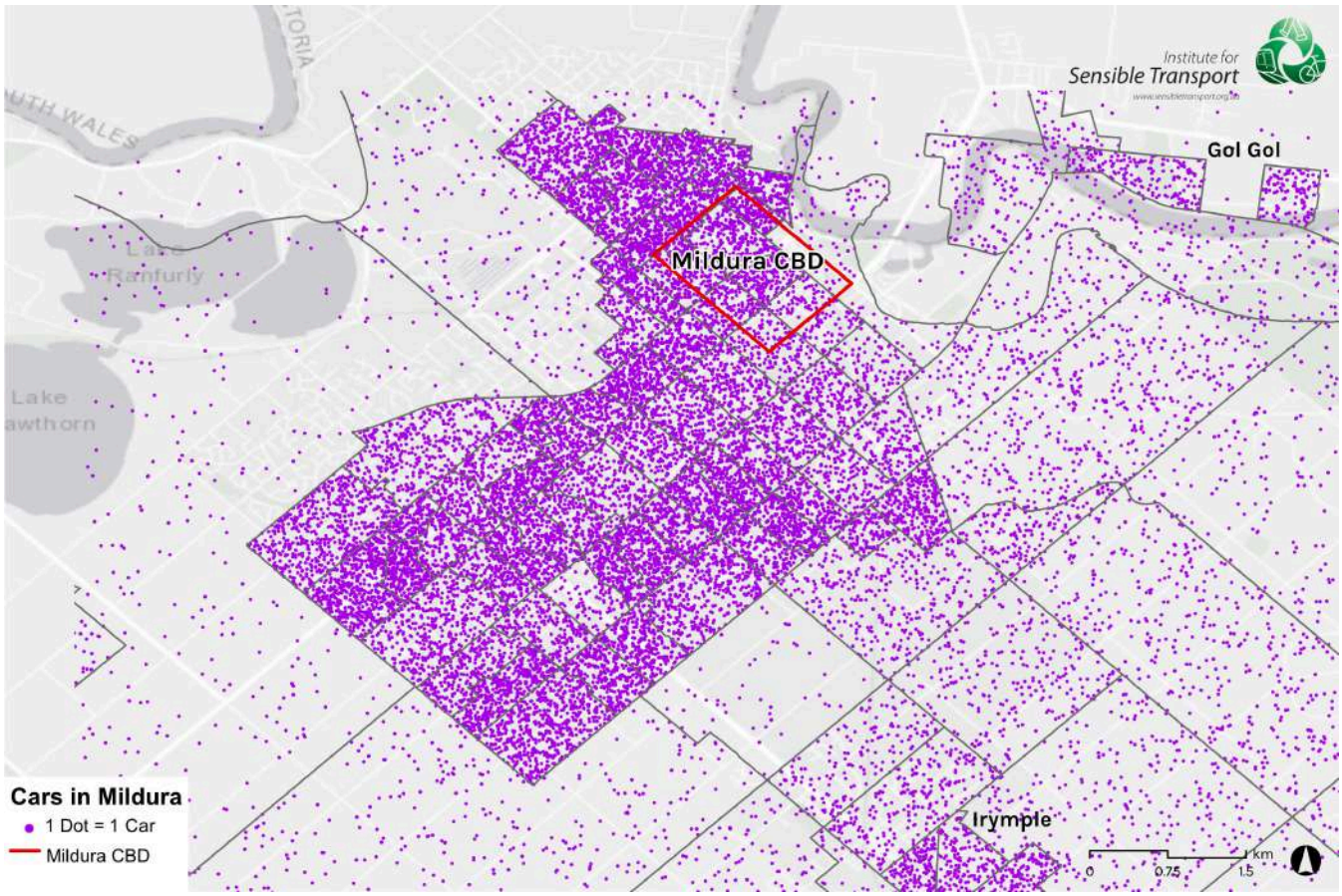

Figure 18 Vehicle ownership total at SA1 level

Source: Australia Bureau of Statistics (2017)

5https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Statistical%20Area%20Level%201%20(SA1)~10013

While there may be a large volume of cars within the Mildura Urban area, there remain many households that are 'low car' households (zero to one vehicles). Figure 19 shows the extent that low or no car households exist within Mildura. Many of these households are more likely to use different modes of transport to undertake everyday trips.

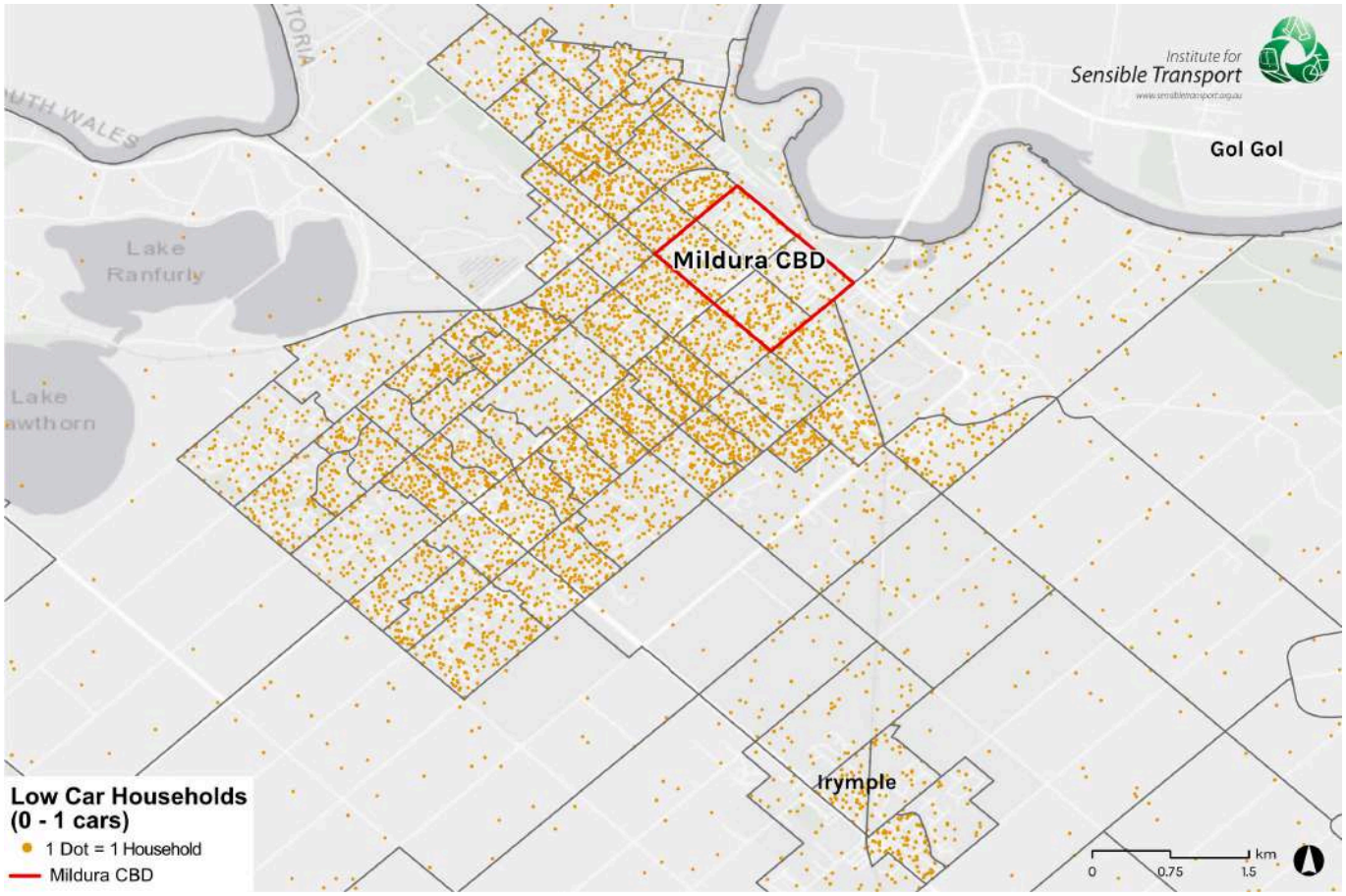

Figure 19 Low-car households (0 - 1 cars)

Source: Australia Bureau of Statistics (2017)

The average number of vehicles per household can be summarised in Figure 20. The average vehicle ownership per dwelling is 2.05 vehicles. The suburb of Mildura has an average of 1.79 vehicles, while areas situated further from the CBD have an increase in vehicle ownership.

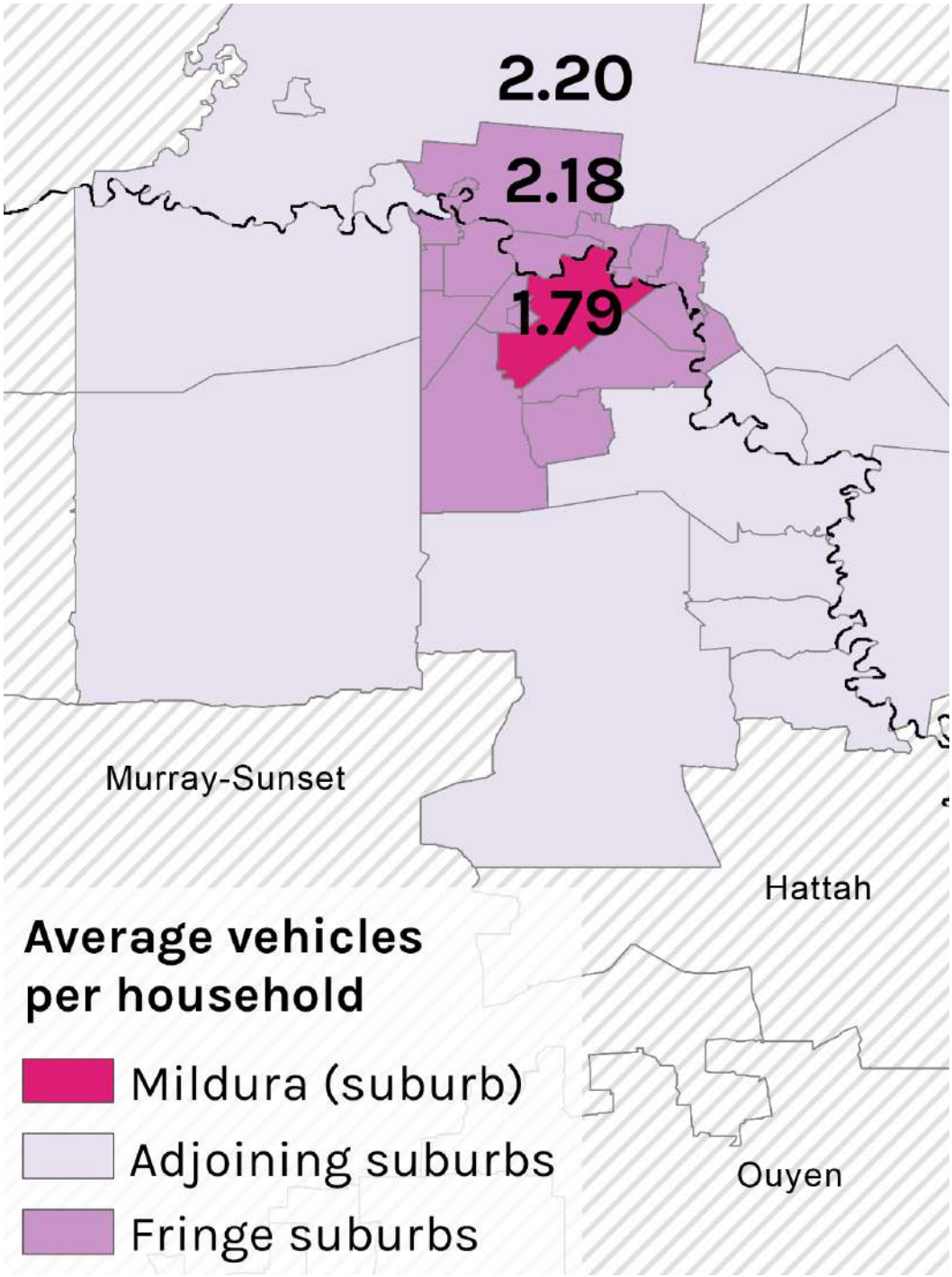

Figure 20 Average vehicles per household

Source: Australia Bureau of Statistics (2017)

3.4 Speed and traffic volumes

3.4.1 Speed

Figure 21 shows the posted speed limit on Mildura streets. It shows a general trend towards higher speed limits on arterial roads, with lower speed limits on residential and CBD streets. There appears to be a somewhat ad-hoc application of posted speed limit for some residential and CBD streets, between 40 and 50 km/h. Recommendations on speed limits will be delivered as part of the *Integrated Transport Strategy*.

Figure 21 Speed Limit of Mildura streets

Source: Department of Transport

3.4.2 Traffic Volumes

Figure 22 shows the average daily traffic volumes and percentage of truck traffic for arterial roads in Mildura. These figures have been taken from the Victorian Department of Transport. These data are either calculated from in-ground loop detectors or via estimates deduced from traffic modelling. Fifteenth Street carries the most vehicles per day (20,000), while Deakin Avenue carries slightly less (19,000). Benetook Avenue, the alternative truck route, carries between 8-11,000 vehicles per day. It also has the highest proportion of truck traffic as it turns onto Seventh Street, at close to 20%.

The *Mildura CBD Plan Review* identified the need for a freight bypass around the CBD. Sturt Highway (Deakin Avenue) currently runs through the centre of the CBD, terminating at the riverfront. Future components of this project will identify potential alternative freight routes, which will be developed as part of the *Draft Mildura CBD Integrated Transport Strategy*, involving engagement with the State Government and other stakeholders.

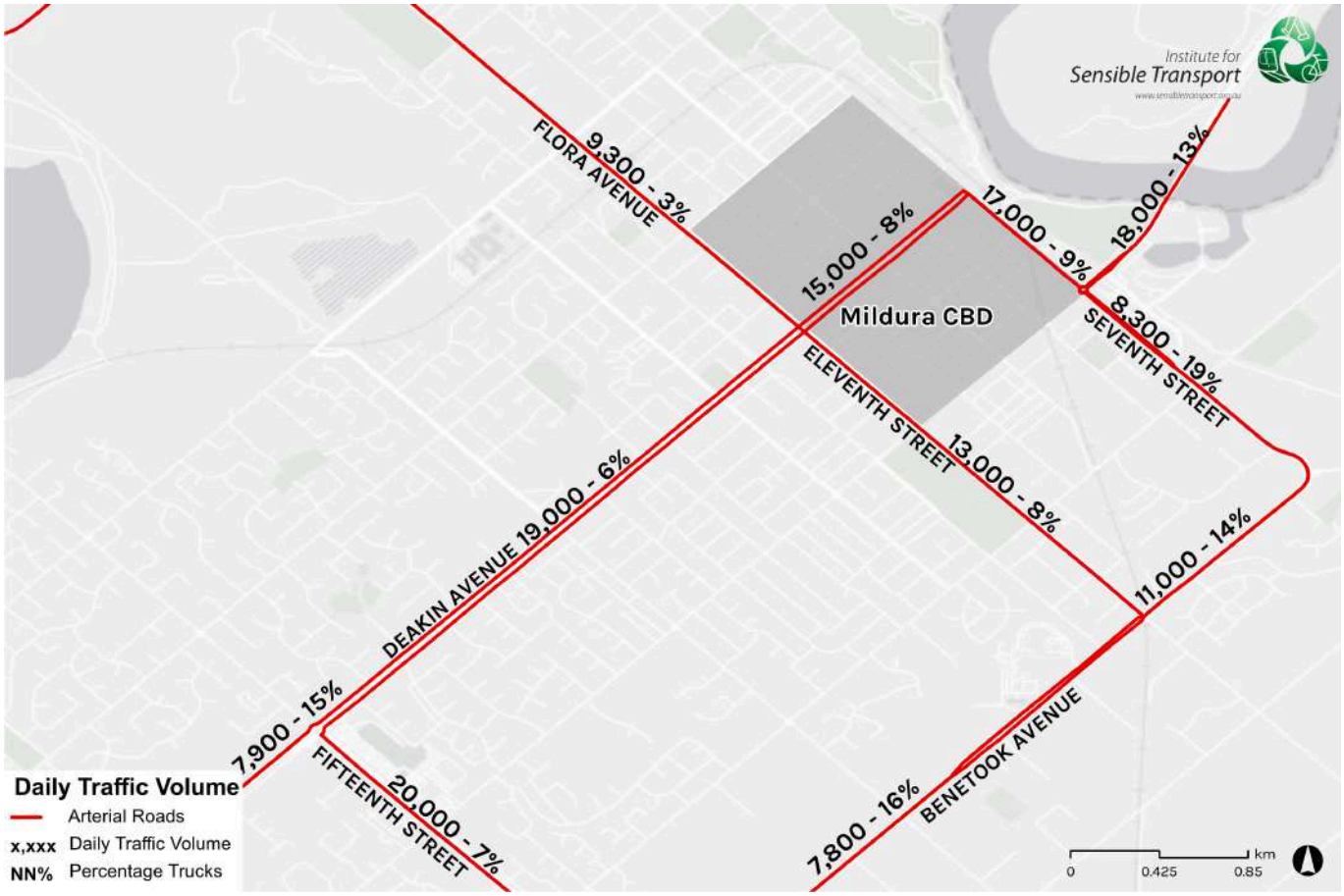

Figure 22 Daily Traffic and Truck Volumes

Source: Victorian Department of Transport

3.5 Road safety

The data shown in Figure 23 provides an overview of police reported crashes in the Mildura LGA over the previous five years, by mode of transport. It shows that pedestrians, people on bikes, and motor bikes are over-represented in crash data (relative to their mode split). For instance, cycling constitutes less than 1% of trips to work, but 4% of crashes. Walking constitutes 12.5% of crashes, but only 4% of trips to work. Future components of this project will seek to address this imbalance, to help make the sustainable choice a safer choice.

As with all crash statistics, it can be expected that many minor collisions may go unreported to police, and therefore not shown in the following set of graphs. Similarly, *near misses* are not reported but may indicate a higher level of risk, even if not demonstrated in the data.

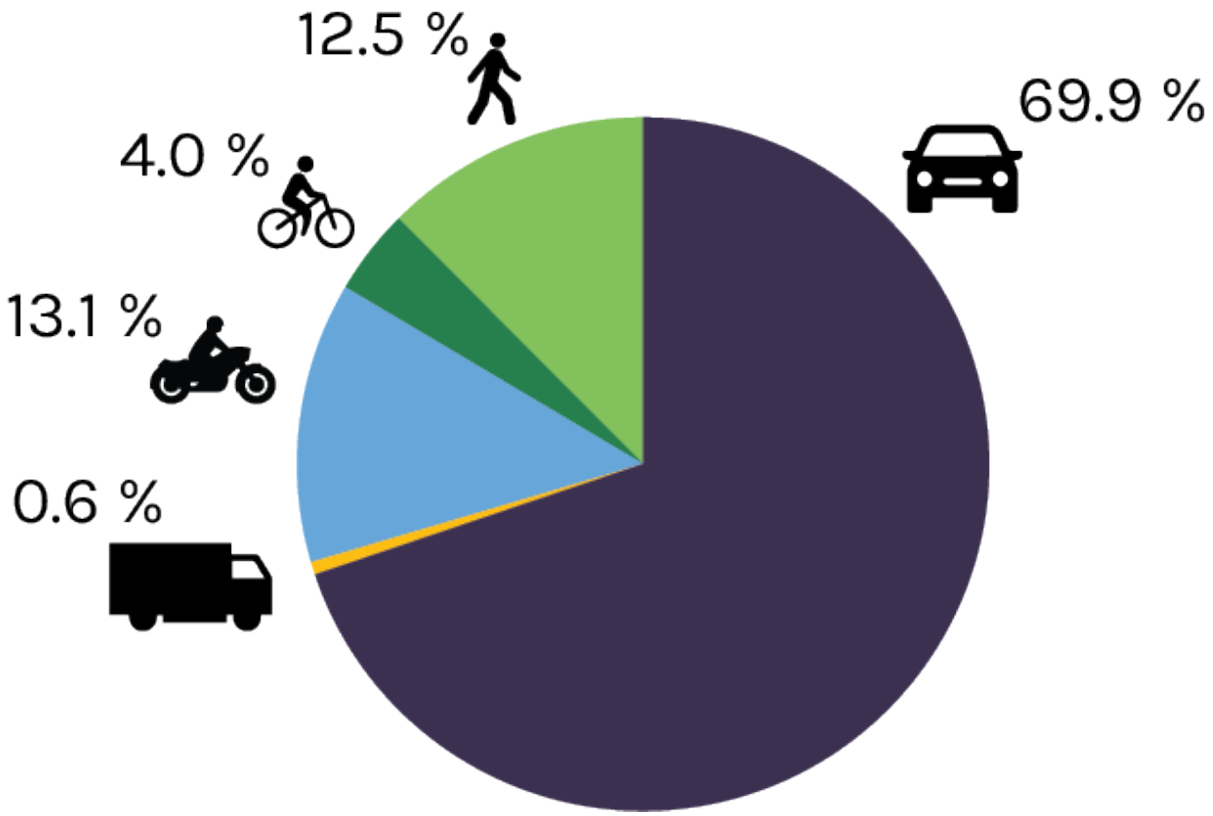

Figure 23 Crashes by Mode of Transport in the Mildura LGA

Source: Victorian Department of Transport

Figure 24 provides an indication of where crashes reported to police have occurred within the suburb of Mildura over the last five years, differentiated by the mode involved in the crash. It shows the central core of the CBD has a higher crash representation.

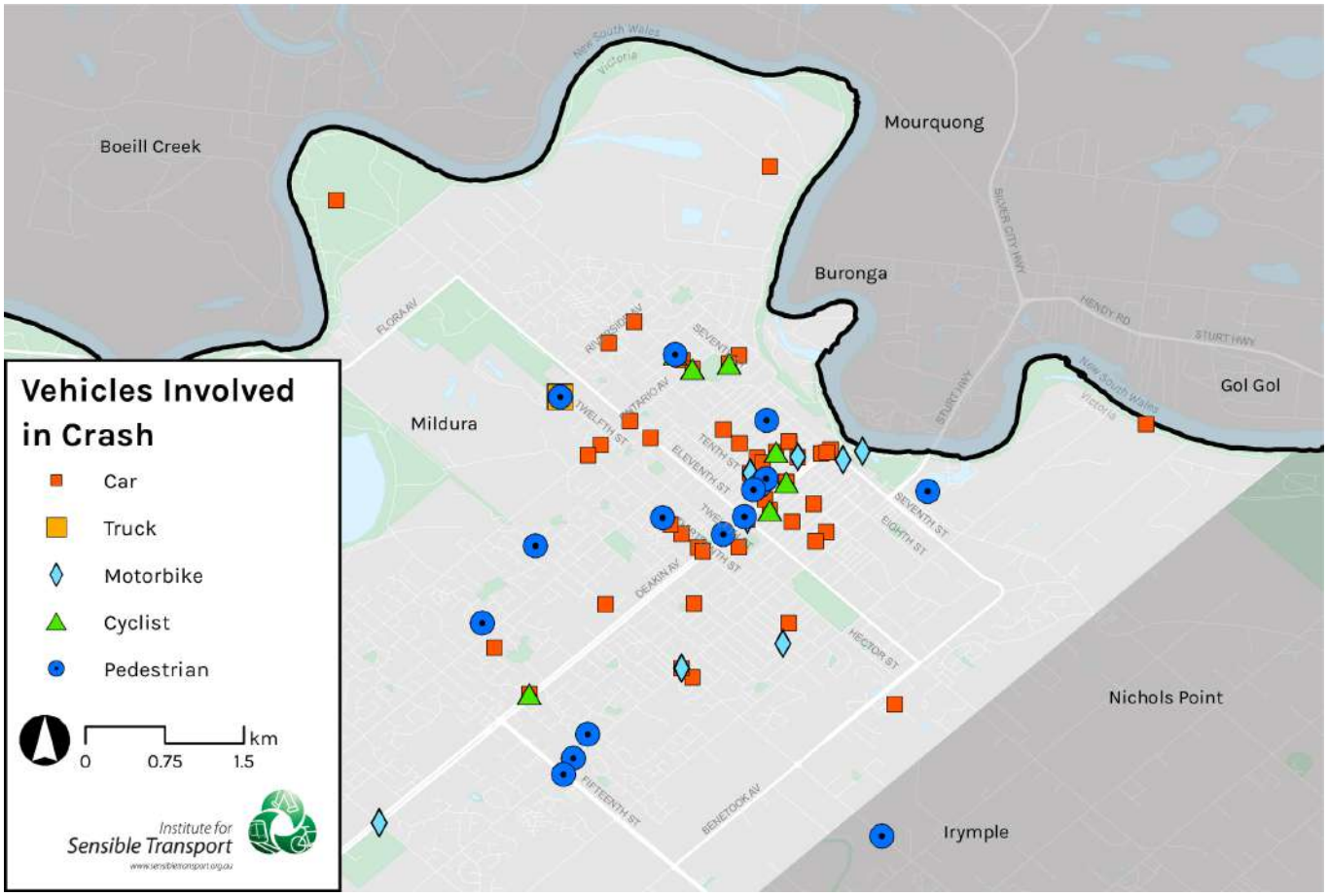

Figure 24 Crashes by Mode

Source: Victorian Department of Transport

Figure 25 illustrates crashes by *severity* over the last five years within the suburb of Mildura. It shows that there are a greater number of '*other injury*' than '*serious injury*', with the greatest concentration within the CBD.

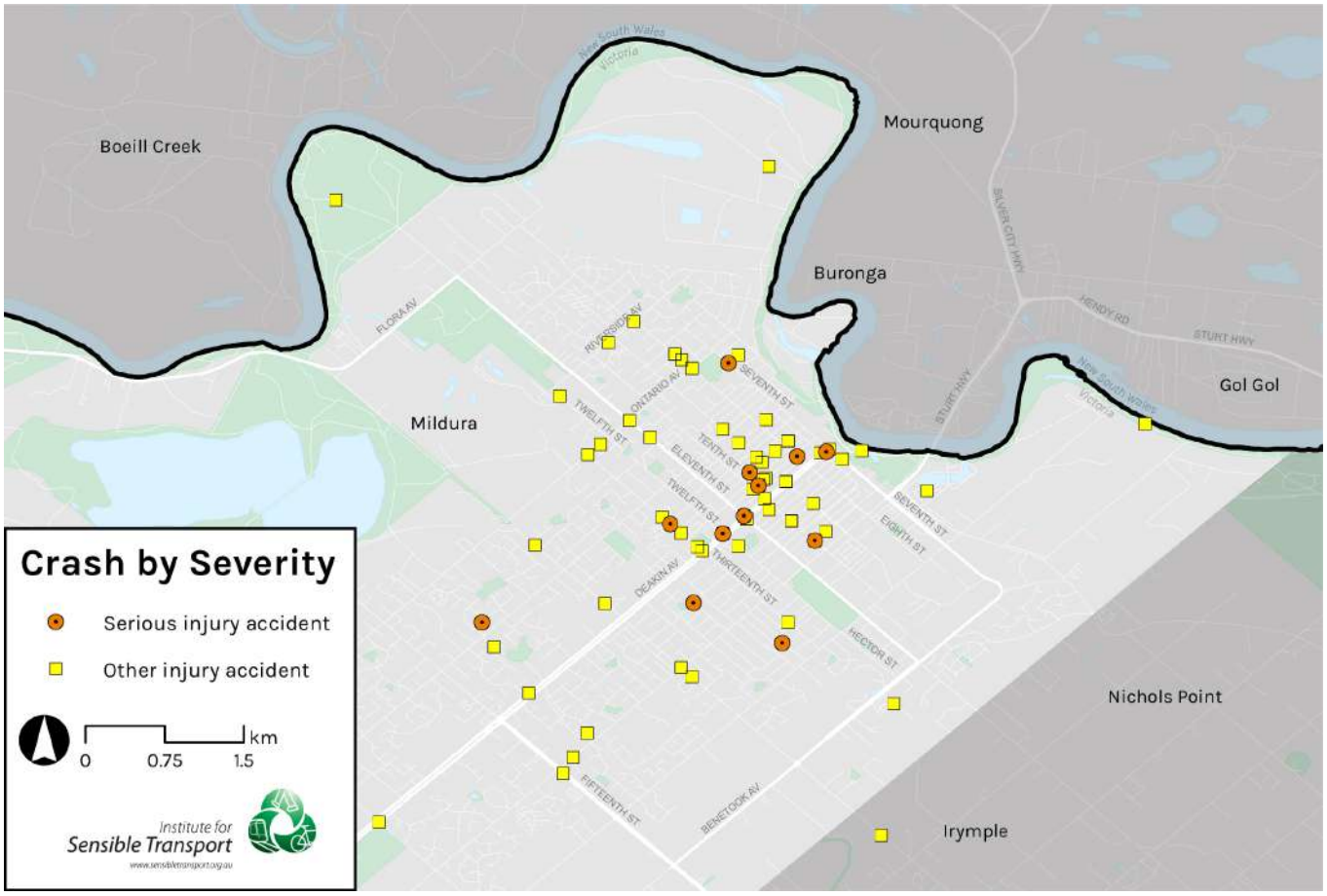

Figure 25 Crashes by severity

Source: Victorian Department of Transport

Table 2 shows the breakdown of crashes by travel mode for the Mildura Suburb and LGA, by the total number of crashes in the area and the percentage of crashes for each mode. In both the Mildura Suburb and Mildura LGA, cars constitute the majority of recorded crashes. In this data, 'car' crashes refer to *car only* or *car to car* crashes. Cars are likely to also contribute (or be the cause of) crashes for other modes, particularly for pedestrian and cycling crashes[6]. The high percentage of motorbike, cyclist, and pedestrian crashes, relative to their low travel mode share, highlights the risks faced by vulnerable transport modes within Mildura.

Table 2 Crashes by Mode of Transport in the Mildura Suburb and LGA

	Mildura Suburb	%	Mildura LGA	%
Car	107	77.0%	123	69.9%
Truck	1	0.7%	1	0.6%
Motorbike	8	5.8%	23	13.1%
Cyclist	7	5.0%	7	4.0%
Pedestrian	16	11.5%	22	12.5%

Source: Victorian Department of Transport

An important component of this project and a key objective of the *Mildura CBD Integrated Transport Strategy* will be the development of measures to enhance safety outcomes for all road users, consistent with the *Safe Systems* approach.

[6] https://www.theage.com.au/national/victoria/cycling-safety-the-statistics-20140818-105erb.html

3.6 Bike Use Propensity Index

The Institute for Sensible Transport, using data collected from Mildura residents during the Census, have developed a series of maps that offer an indication of latent demand for cycling. This section provides an overview of the method used to create the Index and the associated mapping products.

3.6.1 Methodology

The *Bike Use Propensity Index* combines eight variables, all of which are collected as part of the ABS Census. The statistical basis for the Index was developed through the collection of data on riding behaviour and demographic factors. This data was analysed using binary logistic regression in SPSS and STATA (statistical software packages). The results, published in the journal *Transportation Research Part A* (see Fishman, Washington, Haworth, & Watson, 2015) revealed that there are some statistically significant factors that are predictive of future bike use.

The following data sets have been derived from the Census and form the fundamental inputs for the development of the Index:

1. Residential population density, measured as people per hectare
2. Employment density measured as number of people working per hectare.
3. Density of young adults measured as number of people aged 18 - 34 per hectare.
4. Low motor vehicle ownership measured as number of households with zero or one cars per hectare.
5. Bicycle use - origin measured as number of people riding to work per hectare, based on their origin.
6. Bicycle use – destination measured as number of people riding to work per hectare, based on their destination.
7. City-based employment – people who work within the Mildura CBD, per hectare.
8. Short car trips– destination measured as number of people driving to work between 0 and 5 km per hectare.

The *Bike Use Propensity Index* has been designed to show the variation in the relative propensity to cycle, at the highest possible level of spatial detail.

Geographic areas that rank in the bottom quintile receive a score of 0.2 for that attribute, while those in the top quintile receive 1.0, as shown in Table 3. The mapped values are aggregates of the attributes' scores.

Table 3 Ranking system and Index categories

Quintile	Index Score
5	1.0
4	0.8
3	0.6
2	0.4
1	0.2

It is also important to recognise that SA1's that receive very high Index scores will have scored highly across all the variables included in the Index. In almost all cases, an SA1 that scores above 4.5 (out of 5) will have been in the top quintile in at least five variables.

3.6.2 Index Creation - Maps

ArcGIS has been used to create individual maps. Each of these maps provide a visual illustration of variation in propensity to cycle, based on each of the eight factors identified above.

In each of these maps, the Propensity Index has been recalculated. This means that in each map, SA1's can only be compared to other SA1, *in that map.* It cannot be compared to other Propensity Index maps created for other cities.

3.6.3 Result

Figure 26 shows the results of the *Mildura Bike Use Propensity Index.* The areas that show the highest propensity for bike use include the suburb to the immediate north-west of the CBD, the south-eastern corner of the CBD, and the industrial precinct (east of the railway line). The centre of the CBD itself scored moderately high, though the relatively low (or in some cases no) population pulled down the final score.

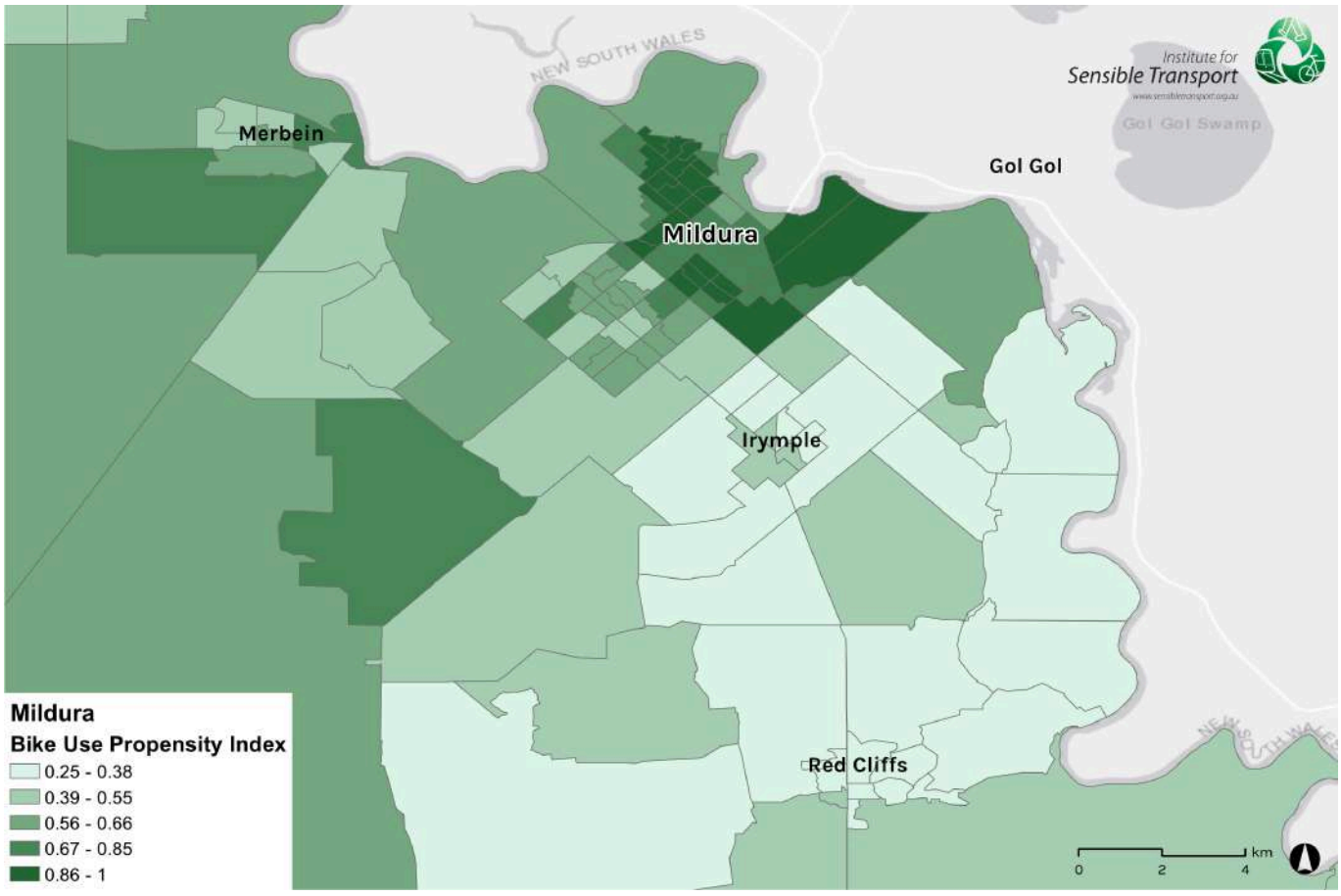

Figure 26 Mildura Bike Use Propensity Index

3.7 Bike riding

The Policy Review highlighted that it is Council's strategic ambition to increase the role walking and cycling play in Mildura's transport mix. As discussed in the Policy Review, active transport hold a number of important benefits for Mildura, including:

- Congestion and parking demand reduction
- Healthier, more active communities
- Enhance street amenity and urban vibrancy
- Lower transport emissions and costs.

This data analysis will focus on Mildura's existing bike network. A full assessment of walking and bike riding conditions will be provided in the *Site Assessment Report* that will be delivered in subsequent stages of this project. Mildura, including the CBD, has an under-developed bike infrastructure network. This mostly consists of painted on-road bike lanes, between the parking lane and vehicle travel lane. Figure 27 provides a zoomed in look at this network within and connecting to the CBD.

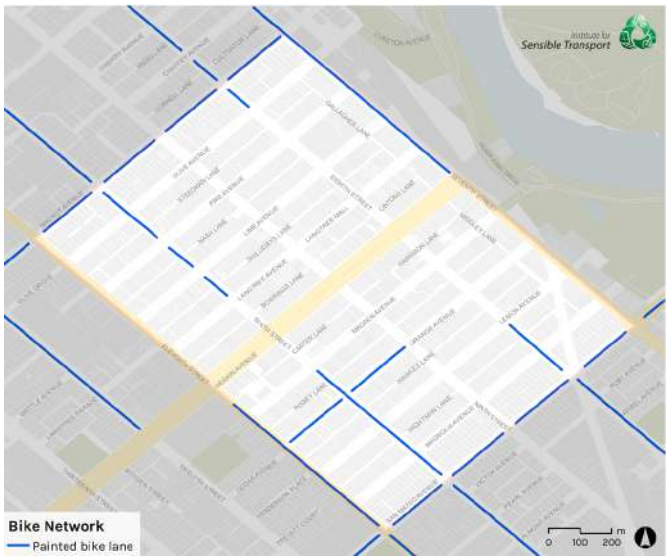

Figure 27 Cycling Network in inner Mildura
Source: Council data

The large number of roundabouts within the Mildura CBD is a threat to cycling safety, as roundabouts have been shown to present a danger to people on bikes. An attempt has been made to reduce risk to cyclists at roundabouts via the use of 'sharrows' (painted road symbols of bikes to indicate that bikes are to use the traffic lane to traverse roundabouts). This is a suitable solution when approach speeds are 30km/h or less and when motor vehicle volumes are low. Much of the CBD west of Deakin Avenue is a declared Local Traffic Area with a 40km/h speed limit. Similar road markings are used when Painted Lanes end at some non-roundabout intersections in the CBD. These markings encourage cyclists to join the main traffic lane to navigate the intersection. Whilst these are useful markings for confident riders, crossing a road, particularly a divided road on a bike in the traffic lane, is not an undertaking an inexperienced or cautious rider would feel safe doing. Given the low levels of cycling currently in Mildura, the future network will need to be designed with the needs of novice cyclists in mind, and this will usually require greater levels of separation from motor vehicles.

East of Deakin Avenue the on-road cycling infrastructure is spread more thinly resulting in poor connectivity. In this area, the cycling network mainly caters to travel along San Mateo Avenue with the exception of short spurs of between one and two blocks. San Mateo Avenue holds what is referred to as a 'Wide Kerbside Lane', which means that while there are bike symbols in the lane, it has a dual use function, allowing for car parking. When a car is parked parallel to the kerbside, the cyclist is forced into the general traffic lane. While this type of lane was common in the early – mid 1990s, they have fallen out of favour, due to their higher collision risk (from both car doors and passing motorists), as well as their limited ability to attract people to cycling, as most people do not consider it safe (CDM Research & ASDF Research, 2017).

Figure 28 identifies some existing barriers to cycling within central Mildura. These and other issues will be examined for possible enhancements to the bicycle infrastructure network in subsequent components of this project.

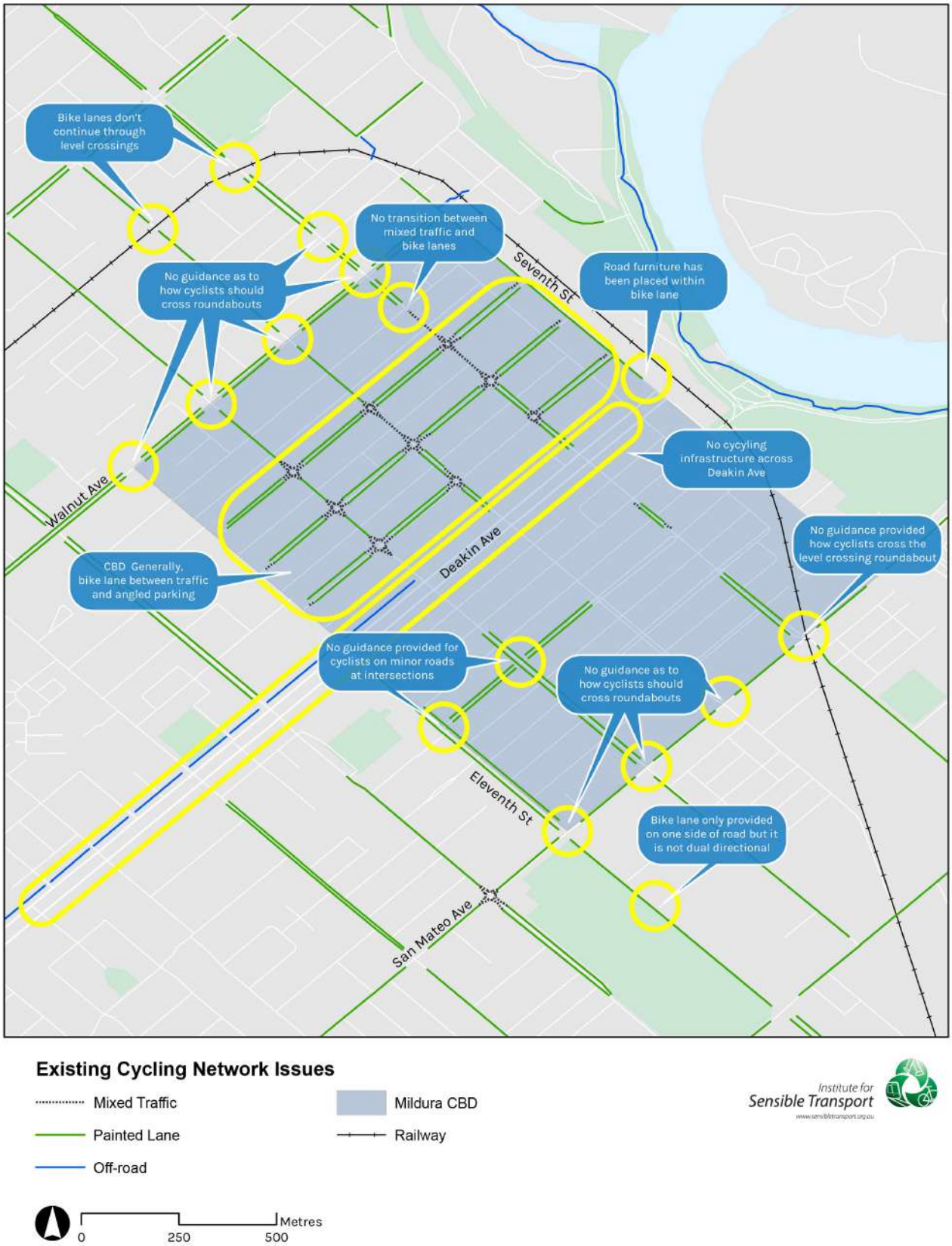

Figure 28 Issues identified in the aerial survey of the inner Mildura cycling network.

A number of reoccurring issues were identified within the current inner Mildura cycling network. Many issues relate to a lack of guidance for cyclists when confronted with intersections, particularly for those on the minor road. Of particular issue is the disconnect between the east and west halves of the CBD as there are no links across Deakin Avenue. This is a major obstacle for encouraging more cycling trips to the CBD as it is not possible to reach the whole CBD safely using the current cycling network. At many points in the network, cycling infrastructure ends without warning. This requires cyclists to join the main traffic lanes or to use the footpaths. Forcing cyclists out of their own lane is out of step with best practice design guidelines. Vehicles suddenly have to become more aware of unexpectedly merging cyclists, pedestrians have to dodge cyclists on the footpaths and cyclists are forced into unexpected and uncomfortable situations. This situation discourages people who might otherwise view cycling as a transport option.

Other issues identified as briefly identified below:

1. Road furniture has strayed into bike lanes. This forces cyclists unexpectedly to have to merge into the main traffic lane. This forced merge creates risk as drivers might not expect cyclists to suddenly need to merge. Figure 29 is an example of this situation. Where these instances are unavoidable, better signage and lower speed limits may be required.

Figure 29 Road Furniture in the bike lane

Source: Google Maps

2. When bike lanes reach intersections there is a lack of guidance as to how the intersection should be traversed. This is particularly an issue when minor roads intersect major roads. In these situations, there is a clear need for cyclists on the minor road to stop but no guidance for where to cross the major road if they need to. This affects cyclists and drivers because cyclists don't know where to cross and drivers have no indication where cyclists will choose to cross.

   This problem is not limited to cross-roads and T-intersections as it also occurs at roundabouts as well.

Figure 30 Difficulty crossing at unsignalised intersections

Source: Nearmap.com

3. To maximise parking capacity in the CBD many streets use angled parking (see Figure 31). This becomes a problem when a bike lane is placed between the parking and the traffic lane. Angled parking poses visibility challenges, with poor sight lines for reversing drivers. Even a slow reversing car can cause an unwary cyclist to become seriously injured because they are either hit or thrown off their bike while braking. In such situations, it is advised that the cycling lane be between the car parking and the footpath, consistent with the *Safe Systems* approach, and best practice bicycle infrastructure design guidelines.

Similar issues face parallel parking even though it has considerably better sightlines for drivers. Again, placing the bike lanes between the footpath and parking is advisable.

Figure 31 Poor line of site for vehicles reversing
Source: Nearmap.com

3.8 Public Transport

Since the cessation of rail services in 1993, buses are the only form of public transport in Mildura. The nearest rail head is Swan Hill.

3.8.1 Regional Bus Network

Regional services are provided by V/Line who operates coaches to Ballarat via Ouyen and Donald, and to Swan Hill via Manangatang or Boundary Bend. From Swan Hill, the V/Line train network has routes to Melbourne via Bendigo. The Swan Hill bound coach runs three times a day all week, with four services on Fridays. The Mildura bound coach runs three times a day all week with four services on Thursdays. The Mildura - Ballarat service leaves Mildura once daily Sunday to Friday. The Ballarat - Mildura service runs once daily Sunday to Friday too.

3.8.2 Local Bus Network

Mildura's local bus service is run by Sunraysia Bus Lines. Much of the network is focused on serving Mildura however numerous satellite towns, all located in Victoria, are also linked into the network. This structure helps support Mildura's position as the main provider of services and facilities for its surrounding region.

The local Mildura bus network is comprised of seven different routes. All routes service Mildura's two principal commercial hubs, the Mildura CBD and Mildura Central. Mildura CBD is the historical centre while Mildura Central is more recent suburban shopping centre about 3km south west of the CBD. Key satellite regions which are served include Merbein to the west, Irymple to the south east and Red Cliffs to the south, as shown in Figure 32. Buronga and Gol Gol are notable dense localities which are not served by the current bus network, most likely because they are located in News South Wales.

Few bus routes are operated as loops with most operated as trunk routes. That being said these trunk routes have a tendency to cross over themselves, jump between parallel streets or, on side branches, to back track over themselves. These tendencies increase coverage but reduce speed and convenience, not to mention make for a confusing and indirect network for the user. The routes which service the satellite towns tend to be better planned and operate as trunk routes which make a short, direct loop of the satellite town before returning to Mildura.

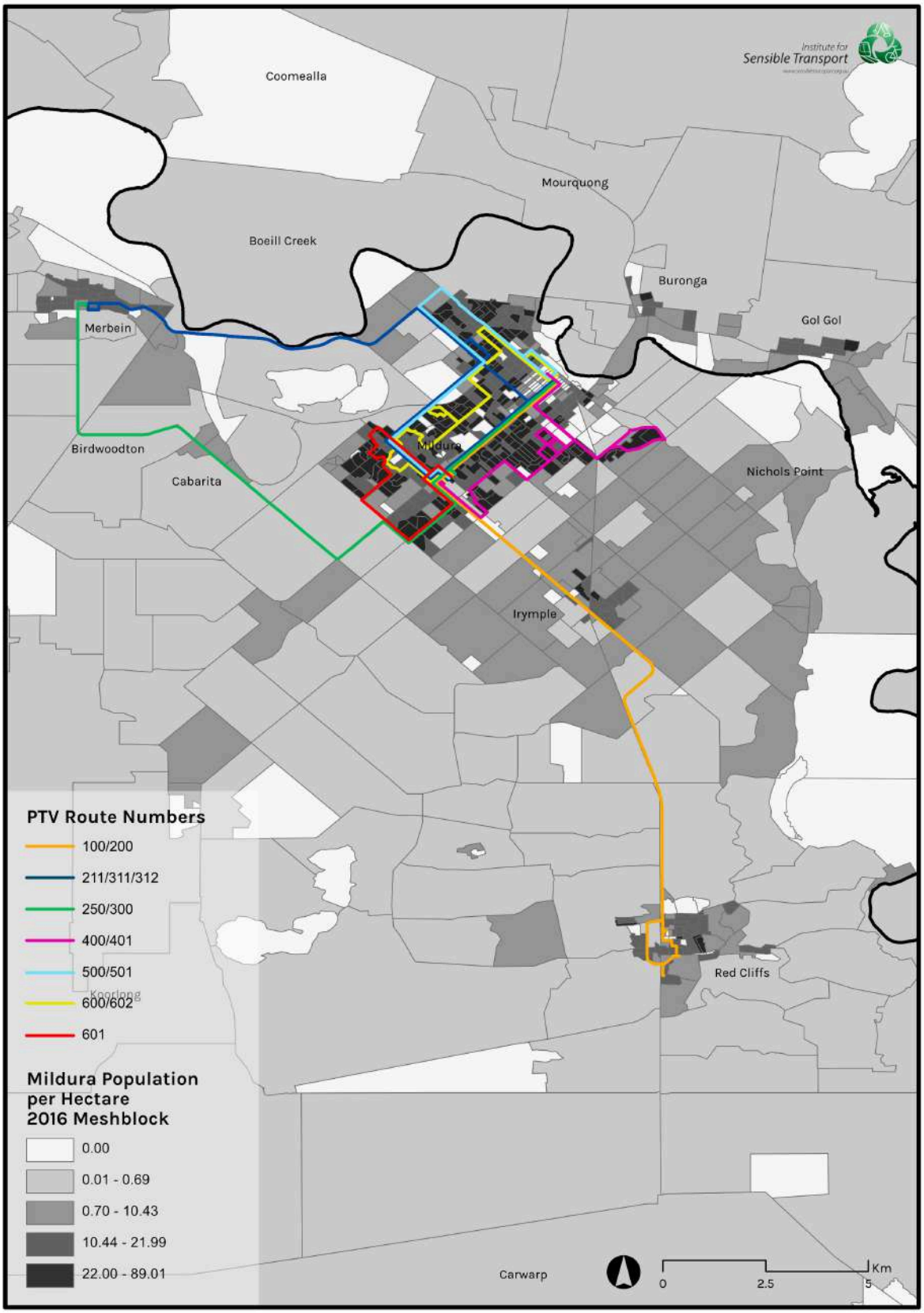

Figure 32 Mildura's local bus network

3.8.2.1 Bus Stop Catchments

Mildura is well covered by bus routes with 43% of dwellings within 200m of a bus stop and 75% within 400m of a bus stop (Table 4). However, this good coverage is let down by most routes running at more than 1 hourly intervals and the direct nature of routes previously identified. Mildura's bus routes are outlined in **Error! Reference source not found.**. Red Cliff (route 100/200) has the most frequent service with 15 frequencies, each way on weekdays. This results in roughly a 1 hour spacing hour services run at smaller intervals in the morning and afternoon. The extra Friday night service is a useful feature which provides flexibility and reasonable travel options which are not available on other nights. Route 100/200 also has the best weekend service with 9 and 4 services on Saturday and Sunday respectively.

Table 4 Bus Stop Catchments

Proximity to bus stop	Number of Residential Properties	Percentage of all Residential properties
Within 200m	17738	43%
200m to 400m	12982	32%
400m to 600m	4296	10%
600m to 800m	2137	5%
+800m	4037	10%
Total	41190	100%

Weekend services in Mildura tend to operate in the late morning and early afternoon. This can make travel in the morning and late afternoon/evening travel impossible by bus. This makes it unlikely people will chose to use a weekend bus due to the limited services that are available.

Some routes do not provide a late afternoon/evening weekday service as many routes stop running between 3 and 5pm. This means that afternoon school rush is catered for but a potential 5pm commuter peak is poorly catered.

The choice to link nearly every route to both commercial centres does reduce the need for passengers to change buses. However, it comes at the cost of route directness and speed which makes buses less competitive with the convenience offered by cars.

A successful bus network needs to be direct and speedy to compete with the convenience of the private car. Direct routes not only reduce travel time, but also make for a more intuitive understanding of the bus service. If the route results in a confusing map, potential passengers as less likely to think it is fast and efficient. The system also needs to have good coverage, so people don't need to walk far from their place of origin or home. This is particularly important in Mildura which experiences very hot summer weather.

3.8.2.2 Bus services in the Mildura CBD

Bus routes and stops are generally well placed in the Mildura CBD. Most routes are contained on Deakin Ave. This has three benefits:

1. Deakin Ave is centrally placed in the CBD allowing routes to attract shoppers, to the north, and workers, to the south, equally.
2. Having all routes stop near each other makes it easier for passengers to interchange between different routes.
3. Deakin Ave is a wide street highly suitable for buses because its design and limited parking results in reduced likelihood of crashes between buses and pedestrians or cars.

Routes 500/501 and 600/602 are less suitably placed. This is because they run along Eighth St which has a considerable amount of on road parking and, between Olive Ave and Deakin Ave, Eighth St is a very active retail area with lots of foot traffic. In addition, in this same area cyclists are directed to use the main traffic lane. Whilst the speed limit in the area is relatively slow (40km/h), the presence of a large number of vehicles parking,

many pedestrians crossing and cyclists using the road increase the risk of long vehicles like buses being involved in crashes.

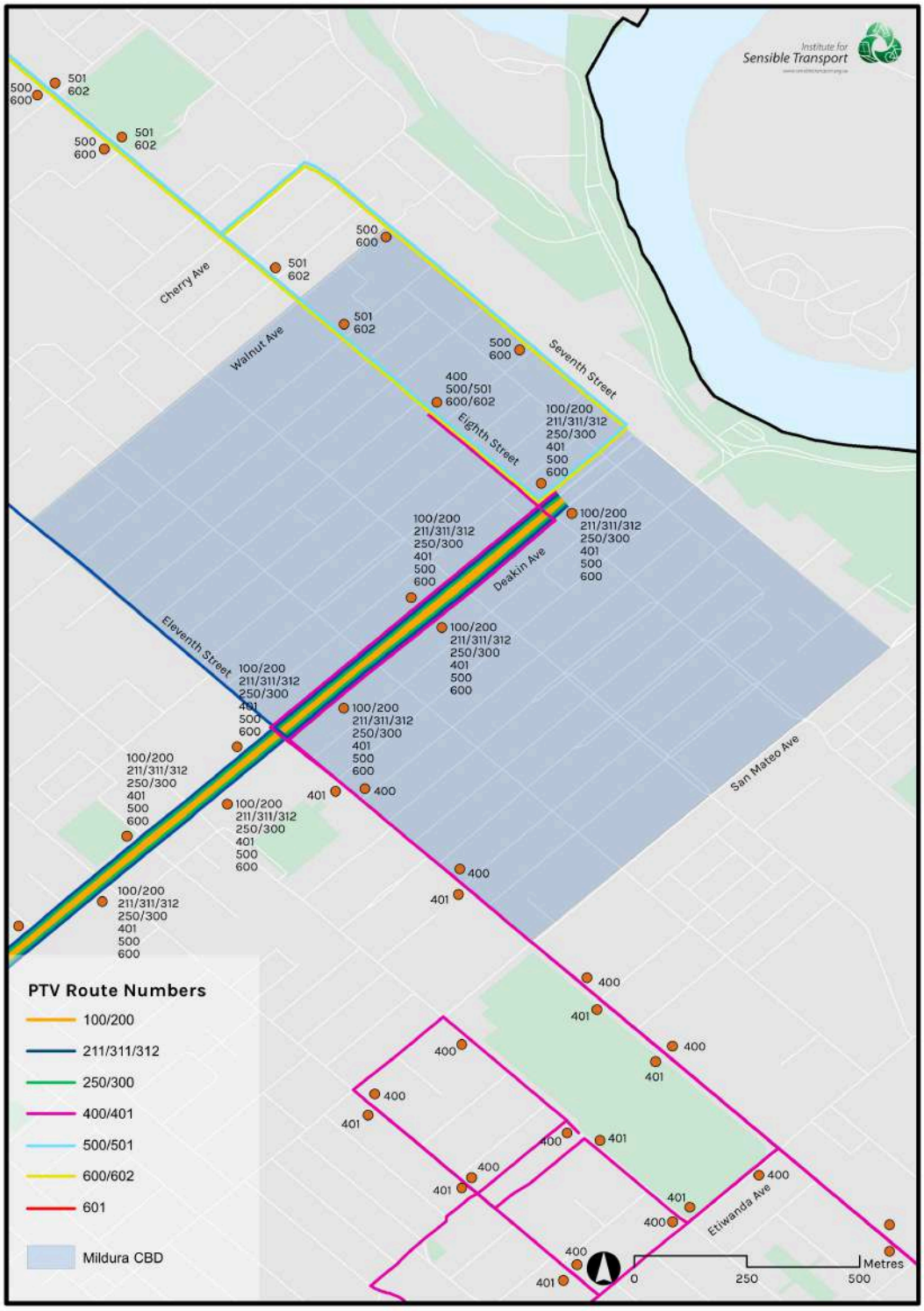

Figure 33 Bus Routes and Stops in Mildura CBD

Table 5 Mildura Bus Routes

Route	End to End	Weekday	Notes	Saturday	Sunday	Notes
100/200	Mildura City – Red Cliffs	15 each way	2 extra services on Friday nights, each direction	9 each way	4 each way	Saturday services run later than Sunday Service available between 8.30am and 6pm
211/311/312	Mildura City - Merbein via Eleventh St	4 to Merbein 5 to Mildura	No services either way after 4:30pm. Last service of day is direct between Merbein and Mildura, Mildura Central not served. 8:15am service (Mildura bound) school days only	1 each way	2 each way	Service available between 9.15am and 2pm
250/300	Mildura City – Merbein via Seventeenth St	9 to Merbein 10 to Mildura	7:45am service (Merbein bound) school days only 4:30pm service (Mildura bound) school days only	3 each way	2 each way	Service available between 11.25am and 4.25pm
400/401	Mildura City – Mildura Central via East Mildura	7 each way	No services after 6pm	3 each way	2 each way	Service available between 9.45am and 4.25pm.
500/501	Mildura City – Mildura Central via West Mildura	7 each way	No services after 6pm	3 each way	2 each way	Service available between 10.15am and 4pm
600/602	Mildura City – Mildura Central via Walnut Ave	7 each way	No services after 5pm Does not serve Mildura CBD	-	-	No weekend service
601	Mildura Central – Mildura Central	7 each way	No services after 5pm Does not serve Mildura CBD	-	-	No weekend service

3.9 Car Parking

This section provides a discussion of current parking in the CBD. This was completed via a desktop analysis, using high-quality aerial photography, to identify the number of parking bays within the CBD and the occupancy of those bays on Friday 30th August, 2019. This was undertaken to avoid the distortive impact of COVID-19 on parking demand.

The Mildura CBD has a relatively large amount of car parking. There are approximately 5,685 publicly available parking bays in the CBD. Of those, 3459 are on-street and 2003 are in off-street parking lots. Figure 34 shows the distribution of parking bays across the CBD.

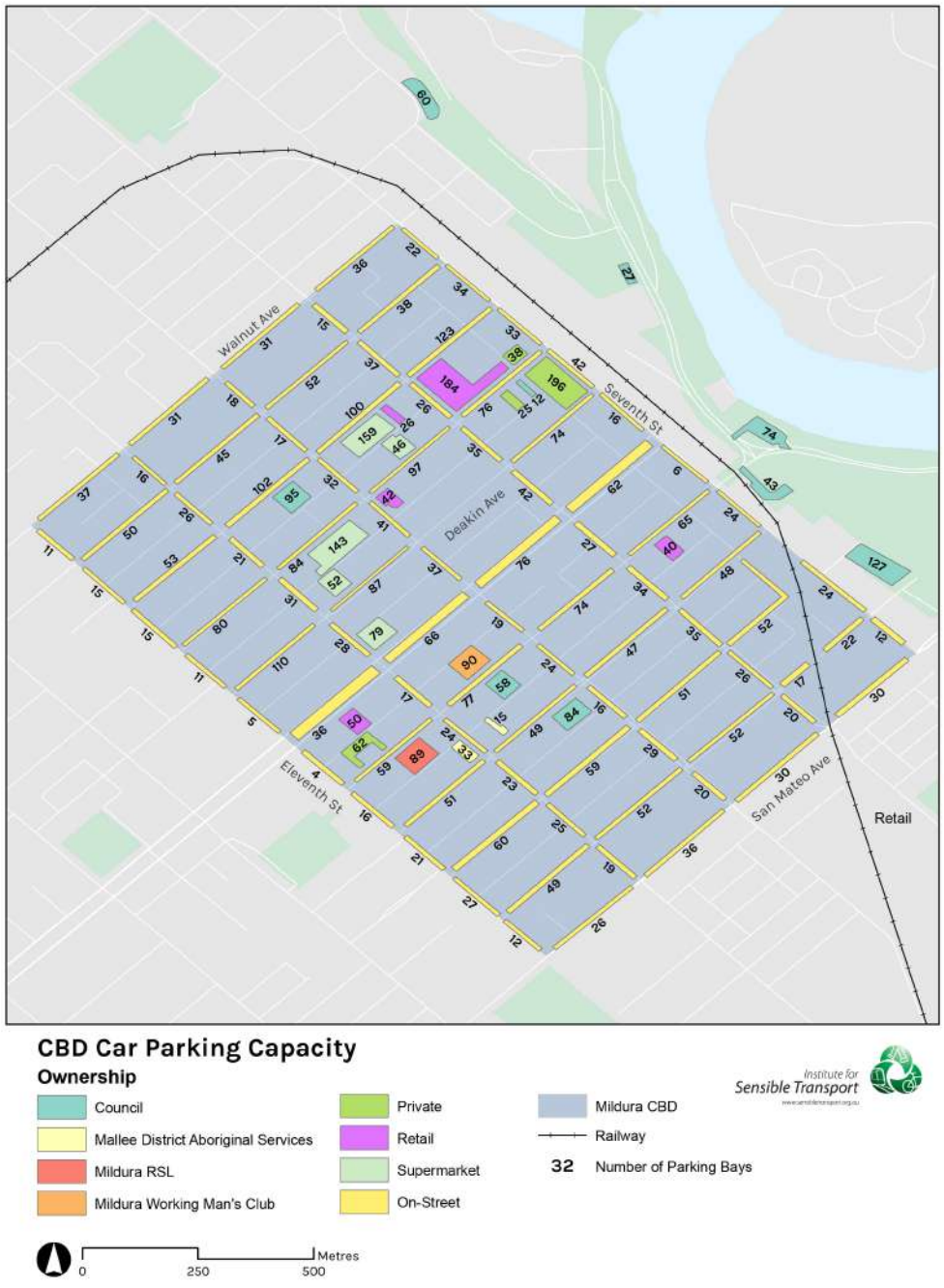

Figure 34 Capacity of car parking in Mildura CBD and neighbouring public car parks.

Off-street car parks form three distinct clusters. First are the four Council car parks which are associated with the parkland along the edge of the Murray River. Second is the grouping west of Deakin Avenue. These are mostly owned by Council or retailers and are associated with shopping in the CBD. Five are owned by supermarkets while five are privately owned and three are owned by other retailers. Last there is the cluster east of Deakin Ave which tend to be owned by community services and lifestyle businesses rather than general retail. Mildura RSL, Mallee District Aboriginal Services and Mildura Working Man's Club are prime examples. Figure 35 provides an illustration of occupancy rates.

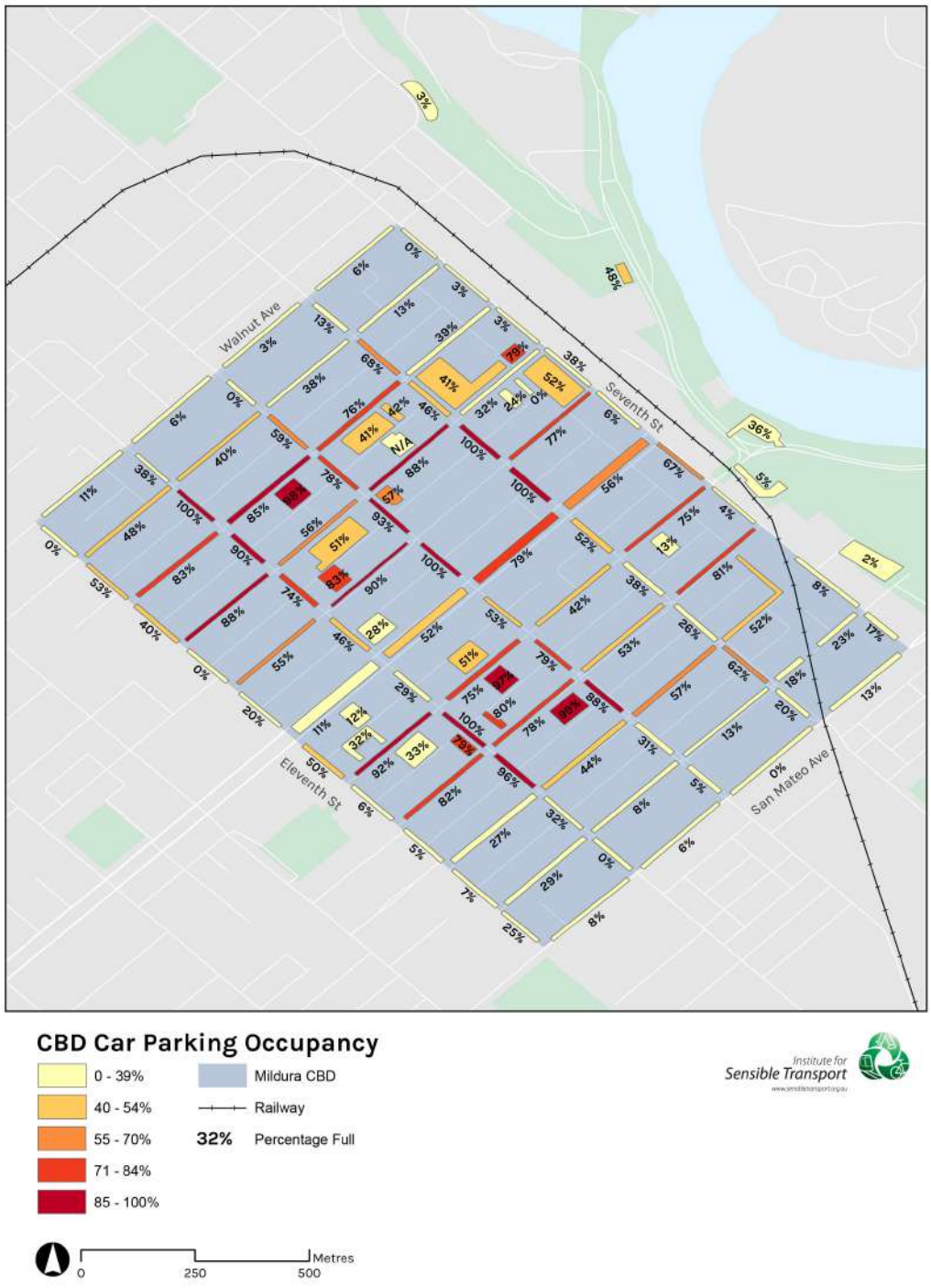

Figure 35 Occupancy rate of car parking in Mildura on Friday 30th August 2019.

To understand car park usage patterns in the CBD (represented in Figure 35), we calculated the occupancy percentage for each car park on a Friday (typically one of the busier days of the week). This was done using Nearmap.com aerial imagery from Friday, 30th of August. By counting the capacity of the car parks and the number of cars in each car park we were able to determine the parking occupancy of each street and off-street car park. Some large off-street car parks have erected awnings over parking bays thus limiting the accuracy for some sites, specifically the Kmart, Woolworths and Coles car parks.

On the Friday studied, 49% of the 5,685 parking bays identified were in use. Broken down, 51% of on-street parking and 45% of off-street parking was in use. Parking is generally more occupied west of Deakin Avenue. The highest occupancies are located at either end of Langtree Mall and around the intersection of Tenth St and Pine Ave. These areas correspond to the main shopping and office areas in the CBD. On-street parking is generally more highly occupied than off-Street parking, which is typical for most CBDs. According to the *2016 CBD Parking Plan*, most street parking in the CBD is limited to 2-hour parking. This suggest either trips to the CBD take less than 2-hours or people are willing to keep moving their cars.

Other notable hotspots occur east of Deakin Ave in the vicinity of Tenth St between Madden Ave and Lemon Ave. This parking varies between 2-hour and unrestricted. This area is identified by Council as being predominately offices. Although a number of services such as the Mallee District Aboriginal Services and Council offices are located in this area and are likely to draw a large number of visitors during the day.

The three Council off-street car parks are over 80% occupied and contributing to this fact is their lack of time restriction, as well as their location near areas predominately filled with offices and businesses. It is likely a large proportion of the cars parked in this area are staff employed in business nearby.

There is only one off-street car park in Mildura which is metered (a large site between Lime Ave and Langtree Ave accessed via Seventh St). It offers 24/7 parking and is roughly 60% occupied at the time of the study.

3.9.1 Land dedicated to parking in the CBD

As shown previously there is a large supply of car parking within the CBD. Car parking has an effect on the urban environment. In total, some 13 hectares of land in the CBD is dedicated to parking. Interestingly, Table 6 shows that on-street and off-street car parking in the CBD take up roughly the same amount of land as each other.

Table 6: Area of Parking in Mildura CBD

Location	Area
Area of Mildura CBD	121.7 Ha
Total Area of Car Parking	13.6 Ha
Total Area of on-street Car Parking	6.9 Ha
Total Area of off-street Car Parking	6.7 Ha
On-street Car Parking Area as a	5.6%
Off-street Car Parking Area as a	5.5%

Visually, if all on-street and off-street car parking was compiled into one parking lot each, the land of two city blocks would be required as shown in Figure 36.

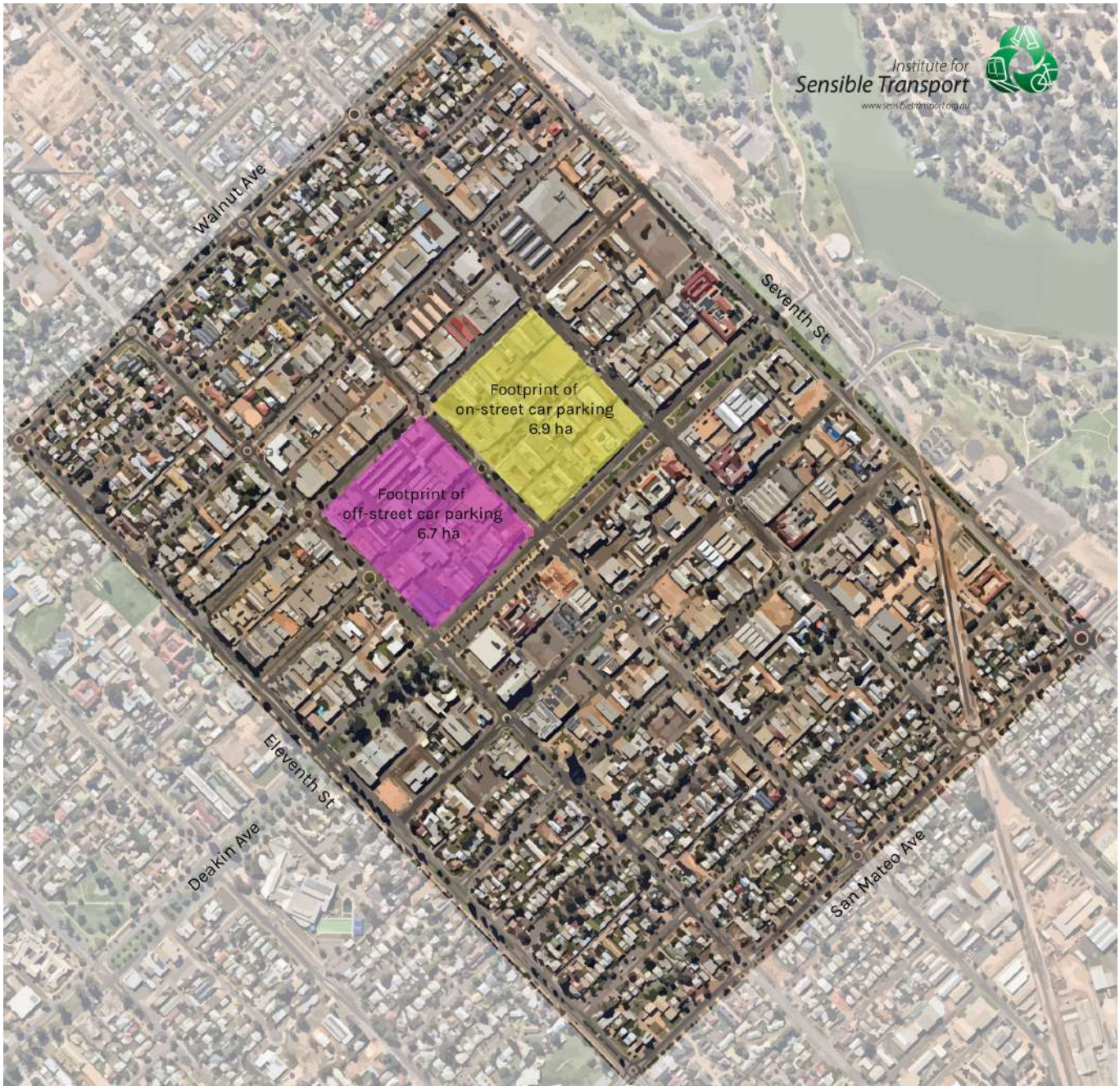

Figure 36 Conceptual example of how much land car parking takes up in Mildura CBD

4. Next Steps

4.1 Site Assessment

Due to COVID-19 restrictions, it has not been possible to conduct a site assessment at the time of writing. However, the easing of restrictions in mid-October has meant that the Institute for Sensible Transport is now able to travel from Melbourne.

On the 26th – 29th October, two members of Institute for Sensible Transport will conduct a multi-day site assessment of the Mildura CBD and surrounding area. A separate *Site Assessment Report* will highlight key findings and implications, and begin the process of developing a set of actions to be considered for the *Draft Mildura CBD Integrated Transport Strategy*.

4.2 Stakeholder Engagement

As previously identified, COVID-19 has altered the activities able to be conducted as part of the stakeholder engagement component of this project.

Stakeholder engagement conducted for this project thus far has involved two principal forms:

1. Professional stakeholder engagement, via a series of video conference workshops.
2. Online survey, open to all members of the community with access to the Internet.

The key themes to emerge from these two engagement activities will be captured in a separate *Engagement Report*.

Institute for Sensible Transport
102/1 Silver Street, Collingwood
Melbourne, Australia VIC 3066
E: info@sensibletransport.org.au
www.sensibletransport.org.au

Institute for
Sensible Transport