



Melton Town Centre Revitalisation Plan

Traffic, Transport and Car parking
Assessment

May 2022

Institute for
Sensible Transport



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Executive Summary



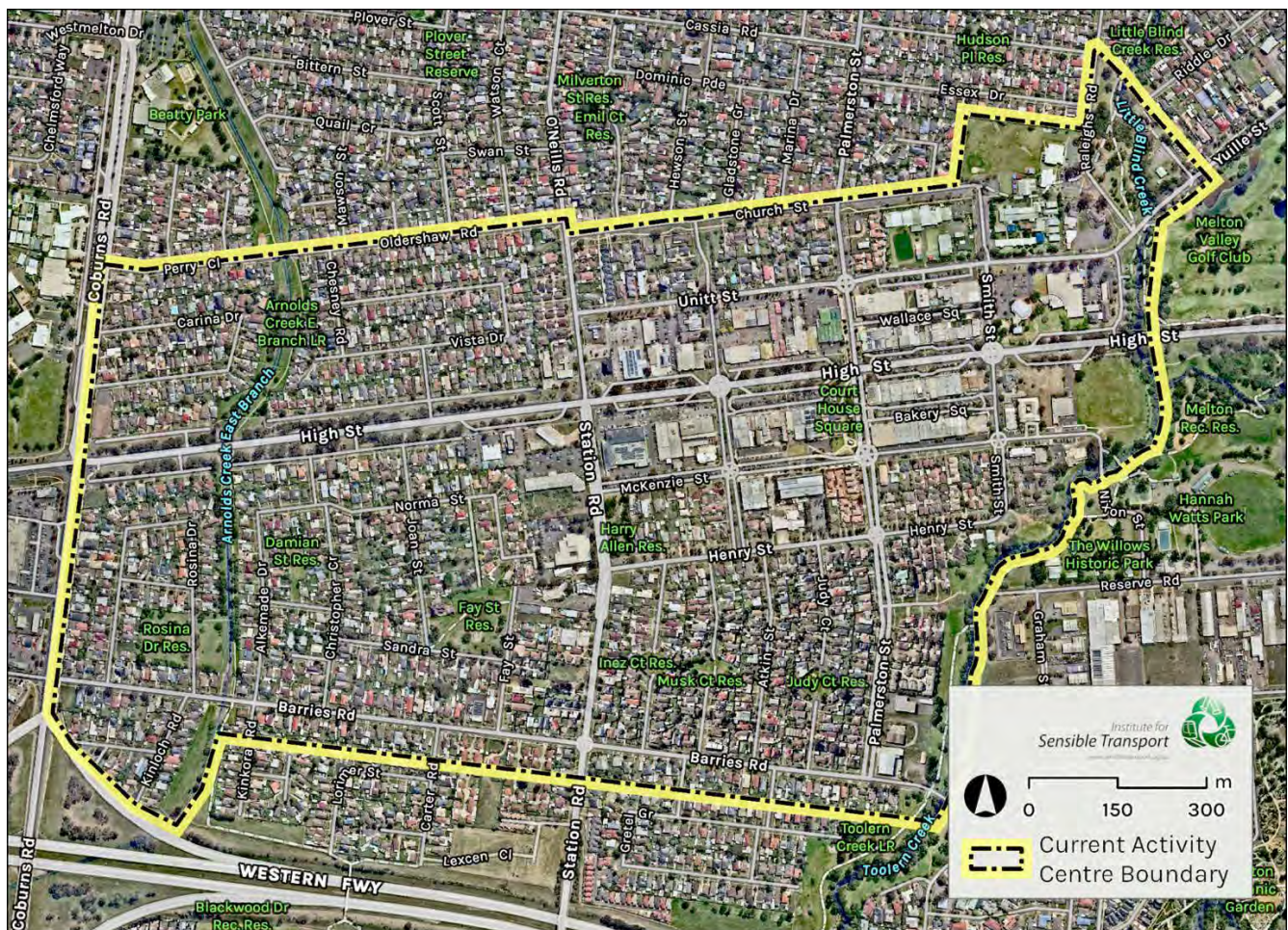
This report provides an assessment of traffic, transport and car parking within the Melton Town Centre. This forms part of a larger body of work developing a Revitalisation Plan for the Melton Town Centre.

This report covers a range of important topics and subject areas, including:

- Key introductory concepts in transport planning. This helps provide a foundation for the approach taken throughout this report.
- Policy review, of relevant local and state government planning, strategic and transport documents.
- An assessment of Melton's transport networks and usage patterns, across all modes of transport.

- *Movement and Place* assessment, to gain a better understanding for the potential of Melton's streets to actively support sustainable transport and recognise the quality of *place* and people focused design.
- Demographic and built form considerations related to transport.
- Car parking analysis and recommendations to guide consistency, evidence-based decision making regarding reform of car parking management.
- Reimagining High Street, using the existing street width to propose three conceptual design options that attempt to better align the allocation of space with Council's ambition for the Town Centre.

The study area is shown below.



Melton Town Centre Study Area

Key findings

- High Street's existing design prioritises motor vehicle traffic, to the detriment of other road users. Current design also limits the attractiveness of the urban realm.
- Car use is the dominant mode of transport, responsible for 84% of all trips to work. Within the Melton Town Centre itself, this drops to 76%, with almost 19% choosing public transport and 5% walking.
- Many car trips are short in Melton and almost 20% of the households in the Melton Town Centre have zero cars. Some 50% of all trips (i.e. not just trips to work) start and finish within Melton.
- Melton's pedestrian environment suffers from limited safe crossing points at key locations, high motor vehicle speed, discontinuity, and a lack of permeability.
- The cycling network is disconnected and no safe cycling infrastructure is offered within the core of the Melton Town Centre (High Street). See Figure 14 for a map of existing cycling infrastructure and Figure 26 for a map of latent demand for future cycling.
- Public transport could be made more attractive through more frequent, direct routes between the Town Centre and the Railway Station. Routing changes to provide more stops within the Town Centre can enhance the quality of the service.
- Car parking supply is higher than demand and significant opportunities exist to better manage car parking to support Council's wider strategic objectives and the principles of the *2019 Parking Study*. See Figure 30 for a map that shows parking occupancy levels in Melton's Town Centre.



Issues and opportunities

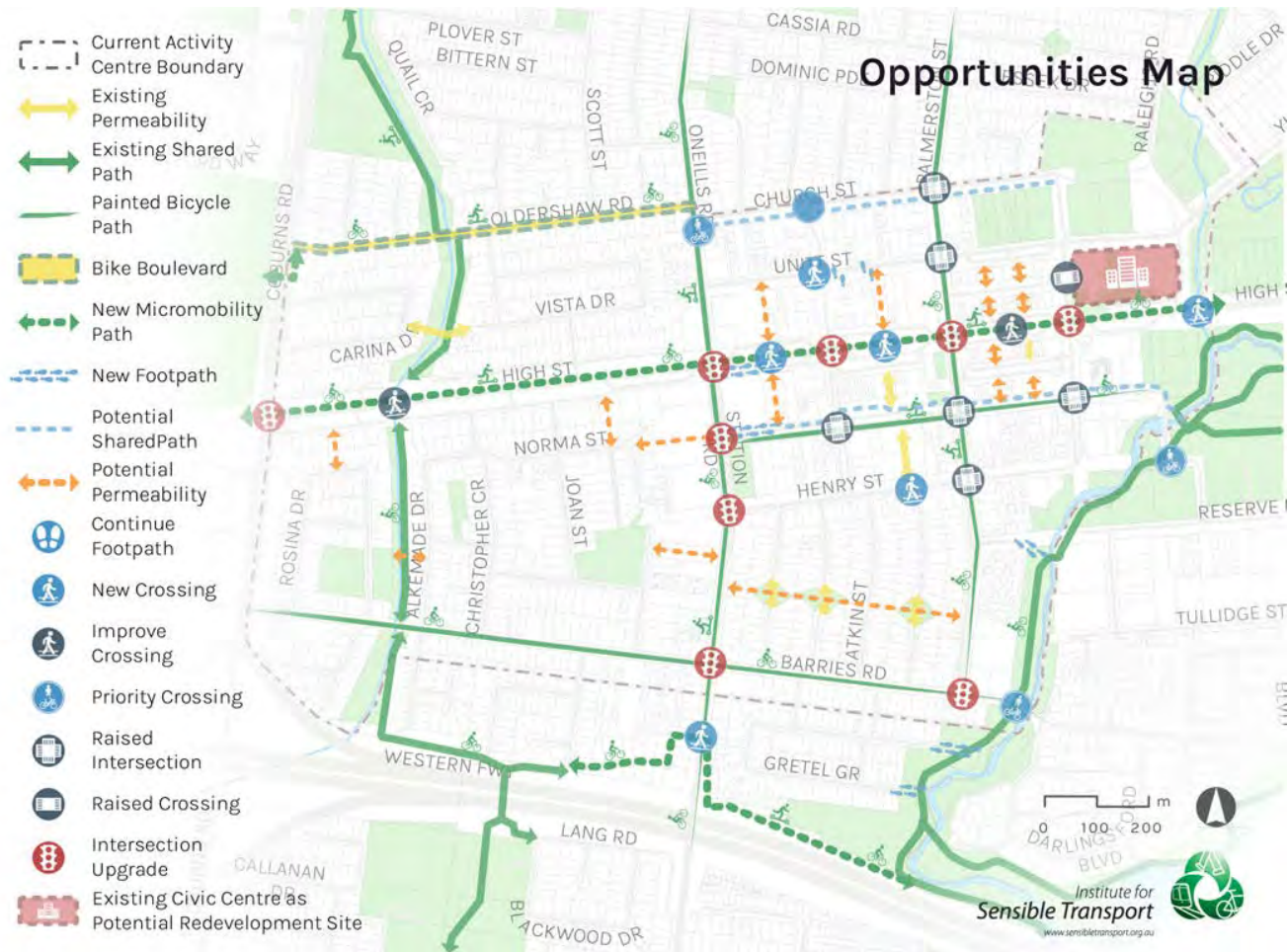
The figure below offers a synthesis of the key *issues/barriers*, as well as the *opportunities* identified. This covers a spectrum of topics, including all modes of transport, as well as considerations of the public realm and urban vibrancy. This report elaborates on each of the issues and opportunities identified below.

Topic	Issues / barriers		Opportunities
Public realm and vibrancy	<div>Excessive at grade car parking detracting from the public realm</div> <div>Lack of shelter and shade</div>	<div>Low Melton Town Centre residential population</div> <div>Poor passive surveillance</div>	<div>Improve the public realm through development in the Town Centre</div> <div>Create more pedestrainised zones and village squares</div> <div>Create more people focused streets</div>
Traffic circulation	<div>Unsafe intersections</div> <div>High Street is a barrier</div>	<div>Fast speed limits</div> <div>Poor legibility for preferred traffic routes</div>	<div>Safer speed limits</div> <div>Redesign intersections to be safe for all users</div> <div>Encourage traffic to the periphery of the Town Centre</div>
Parking	<div>A mismatch between parking supply and demand across the Town Centre</div>	<div>Inconsistent time restrictions</div>	<div>Developing a coordinated, consistent and strategic car parking management framework</div> <div>Create clear visitor and employee parking zones that best meet peoples needs</div> <div>Real time parking availability</div>
Public Transport	<div>Distance between Town Centre and railway line a barrier</div> <div>Inconsistent experience catching the bus to the railway station</div>	<div>Limited bus connection to surrounding region</div>	<div>Advocate for consistent bus routes to railway station</div> <div>Advocate for an increase in bus route coverage in surrounding region</div> <div>Advocate for higher frequency for buses</div> <div>Advocate for more bus stops in the Town Centre</div>
Cycling and micro-mobility	<div>Cycling infrastructure ends before Town Centre</div> <div>Shared paths not properly signed to use legally</div>	<div>Unsafe speeds for vulnerable road users</div>	<div>Protected micromobility lanes into and within Melton Town Centre</div> <div>Sign existing shared paths so they can be used legally</div>
Walking	<div>Unsafe intersections reducing pedestrain comfort/safety</div> <div>High Street is a barrier to pedestrains and cyclists</div>	<div>Poor permeability throughout the Town Centre</div>	<div>Prioritised pedestrain crossings</div> <div>Safer speed limits</div> <div>Enhance pedestrain permeability</div> <div>Redesign High Street into a high-quality public space</div>

Issues and Opportunities

Mapping the opportunities

The map below identifies the location in which opportunities have been recommended. Increasing sustainable mobility options, enhancing safety outcomes and improving urban vibrancy are the overarching objectives that define our selection of these opportunities.



Overall opportunities map

Reimagining High Street

Three conceptional designs have been developed for High Street, discussed further in Section 12 and shown below. The first image is of the existing cross section.



Existing cross-section of High Street, Melton

Nb. This is a representative image of how space on High Street is allocated. Dimensions and allocations alter across the entirety of the street.

The three alternative, conceptual options for High Street are shown below, and discussed further in Section 12.2.



High Street reallocation idea, option 1

Nb. This is a representative image of how space on High Street is allocated. Dimensions and allocations alter across the entirety of the street.



High Street reallocation idea, option 2

Nb. This is a representative image of how space on High Street is allocated. Dimensions and allocations alter across the entirety of the street.



High Street reallocation idea, option 3

Nb. This is a representative image of how space on High Street is allocated. Dimensions and allocations alter across the entirety of the street.

Proposed changes to parking restrictions

The final element of this report proposes changes to parking restrictions. These recommended changes are summarised in the map shown below, and elaborated upon in Section 13.8.



Proposed parking restrictions for visitors and employees

1. Introduction



1 MINUTE VIA LANEWAY



Toilets

1 MINUTE



Amphitheatre

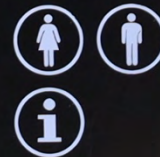
2 MINUTES

Taxi Rank

2 MINUTES

Former Melton
Courthouse

2 MINUTES



Bus
Interchange

4 MINUTES

Since the 2007 Melton Structure Plan, several changes state policy, the expansion of the urban growth boundary and competition from new activity centres has impacted activity in the Melton Town Centre. A new plan is required to revitalise the town centre, to which this document provides a background report that focuses on the transport component of the activity centre.

This report includes the following:

- A review of recent State and Local policies and strategies pertinent to Melton Town Centre.
- A review of transport related data, including existing infrastructure networks and travel patterns.
- Identification of existing access and movement networks in the Revitalisation Plan area (walking, cycling, bus service, and road-based transport – both private motor vehicles and freight).
- Application of the *Movement and Place* framework to guide current and future road network development.
- A review of existing car parking, including the distinction between public and privately owned parking and the time limit (if any). This will inform a Car Parking Strategy to be implemented as part of the forthcoming Structure Plan.
- A vehicle origin-destination survey of car parking within the study area to better understand where people begin their journey when visiting the Melton town centre.
- A site assessment based on in-person observations across the study area.
- A synthesis of the current transport challenges facing Melton Town Centre
- A series of recommended actions to improve transport choice to the activity centre and to support Melton Town Centre's revitalisation.

Figure 1 provides an outline of the study area for this project.

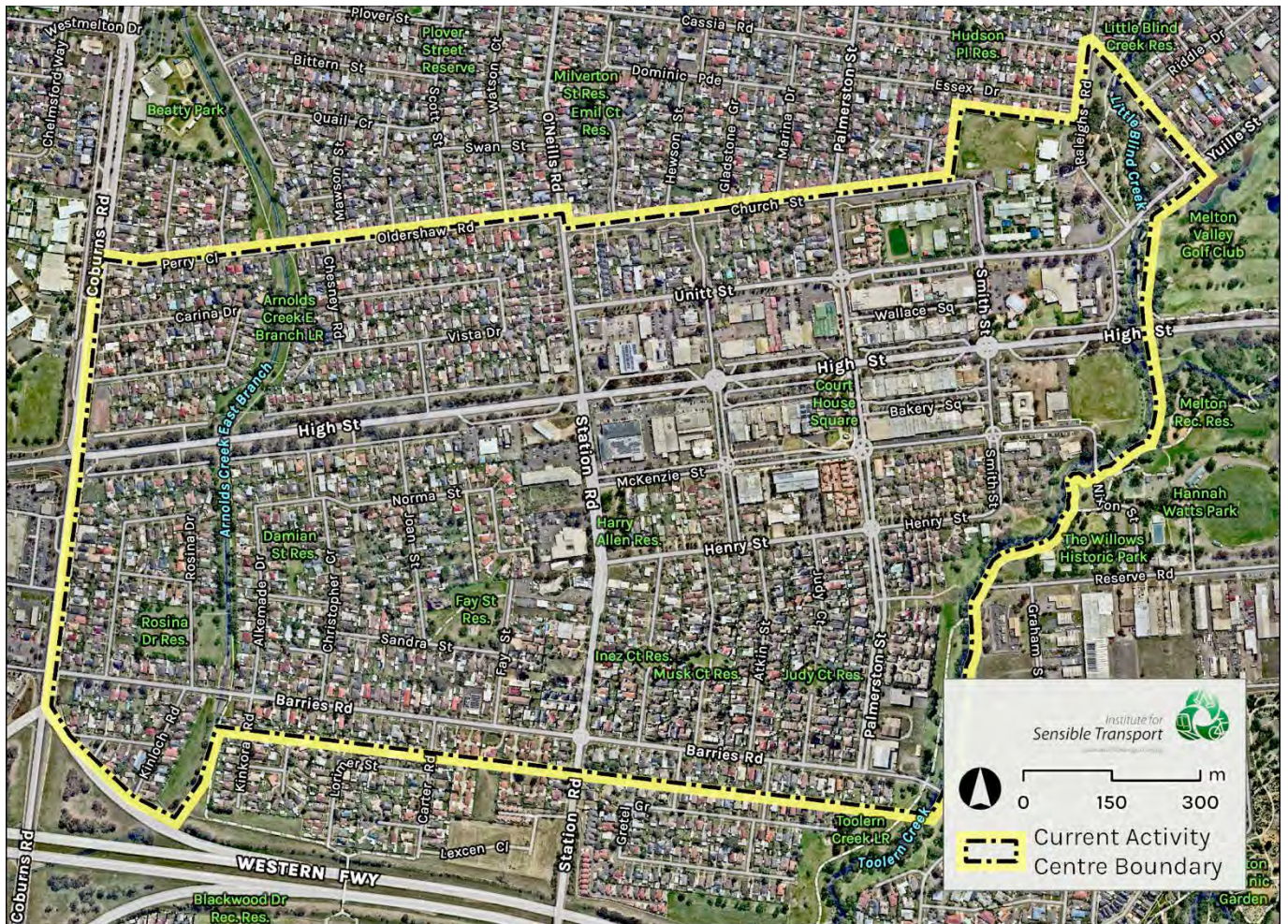
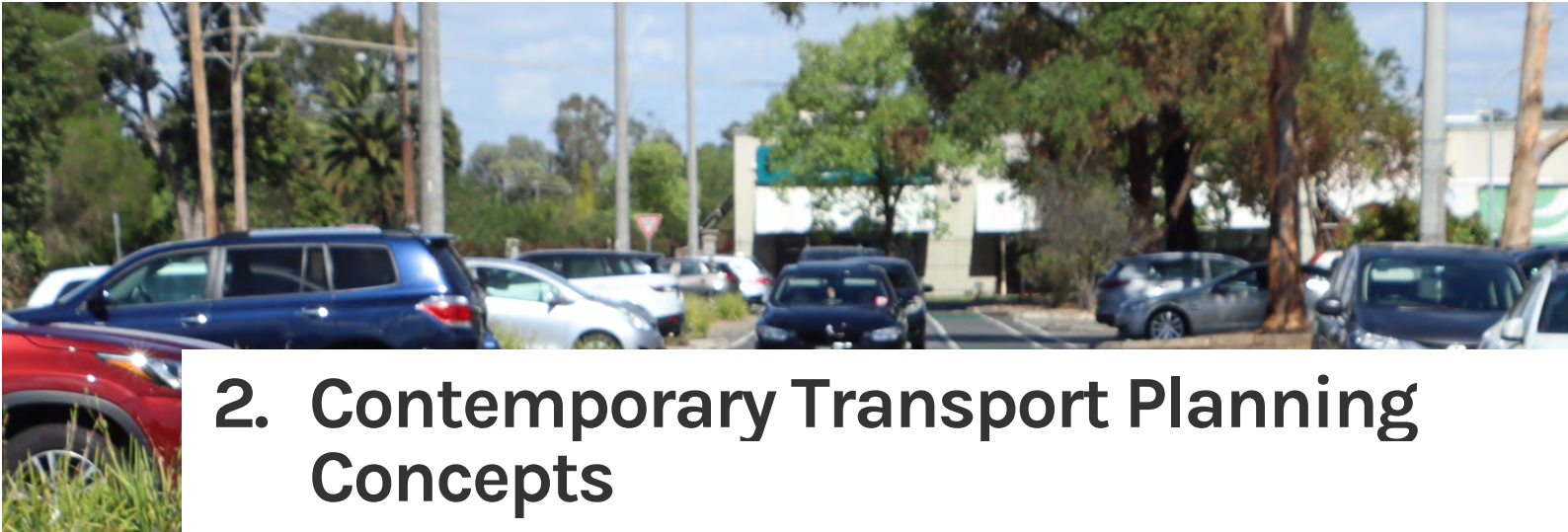


Figure 1 Melton Town Centre Study Area



2. Contemporary Transport Planning Concepts



This section describes some important concepts in transport planning of relevance to the Melton Town Centre Revitalisation Plan.

2.1 Evolving from *‘predict and provide’* to *‘debate and decide’*

In the decades following WWII, the conventional approach to transport planning was to forecast population and economic growth, increases in car ownership and then determine the road-based infrastructure required to accommodate the forecast scenario. The road building constructed under the predict and provide mentality have resulted in a narrow set of transport options that can limit sustainable transport options.

The growing realisation of the limitations of predict and provide transport planning and the negative impacts of heavy car use have led to the emergence of a fundamentally different approach to transport planning, known as debate and decide¹. ‘Debate and decide’ involves a discussion and analysis on what city and transport system is desirable in the future and develops a strategic plan to achieve that goal. Typically, this process would include an analysis of evidence-based transport policy; looking at what has and has not worked in the past, both in the geographic area in question, as well as in other cities. Mode share targets and strategies designed to achieve these targets are very often a core component of the debate and decide approach to transport planning and tend to offer a wider range of policy tools beyond infrastructure, including pricing strategies, behaviour change principles and other Travel Demand Management techniques.

Box 1 provides a summary of the Marchetti Constant, which helps in understanding travel time budgets that influence mobility choices.

Marchetti Constant

The Marchetti constant (Marchetti, 1994) describes the phenomenon that regardless of the speed of transport, humans have, throughout history, exhibited a tendency to travel for about 30 minutes to work each way. As human travel has evolved over centuries, from almost entirely pedestrian, to horse and cart, rail, and car, daily travel time has remained fairly constant. The reason this is an important concept for the Melton Town Centre Revitalisation Plan is because it helps to inform the community and policy makers on the limitations of building additional road capacity to ‘speed up’ traffic. The evidence suggests this simply increases travel distance rather than reduce travel time. Road building exercises, especially duplications of existing roads, whilst initially presenting a tempting policy option, tend to induce traffic, which erodes any travel time saving that initially motivated the duplication, as well as causing congestion in other areas of the road network¹.

Box 1 Understanding travel time budgets

2.2 Pedestrian orientated development

Pedestrian oriented development relates to the design and presentation of public spaces, and the provision for associated facilities to encourage walking and cycling. The intensification of developments and improving the public realm experience along transit corridors makes it possible to reduce trips made by private motorised vehicle. It is essential to apply the principles of Transit Oriented Development (TOD) and Pedestrian Oriented Design (POD) to ensure optimal results. This is achieved through these key principles:

- Fostering human scaled development that emphasises the pedestrian and cyclist rather than vehicular prioritisation.

¹ Schiller, P., Bruun, E., & Kenworthy, J. (2010). An Introduction to Sustainable Transportation: Policy, Planning and Implementation. London: Earthscan.

- Promoting pedestrian oriented buildings, pedestrian amenities and landscaping that contribute positively to an appealing streetscape.
- Promoting an environment where developed areas, recreational areas and pedestrian/ bike paths are accessible to all.
- Promote pedestrian safety by increasing the visibility and vitality of pedestrian areas.
- Providing a connected network of footpaths and multi-purposed paths.
- Encouraging street activity to support liveable neighbourhoods and vital commercial areas.
- Encourage designs that reduce crime (e.g. passive surveillance), personal and community safety.

2.3 Transit orientated development

Transit Oriented Development (TOD) is the functional integration of land use and transit through the creation of compact, walkable, mixed-use communities within walking distance of transit corridors or nodes. TOD brings together people, jobs, and services and is designed in a way that makes it efficient, safe, convenient, and attractive to travel on public transport in a sustainable way. This is achieved through these key principles:

- Creating compact development in easily walkable radius of 400-800m easy walk of public transit.
- Ensuring improved access to and cross connections with transit routes at regular intervals.
- Attracting redevelopment on key sites along and around transit routes and transit stops to capture increased land values.
- Ensuring compatibility and connectivity with surrounding neighbourhoods.
- Including quality civic spaces as organizing features within neighbourhoods.
- Encouraging a variety of housing types with higher densities near transit facilities.
- Incorporating a vertical use mix of retail and offices at ground level (active street frontages) with housing above.

- Extending transit services to new and existing high-density residential developments, major employment areas and major concentrations of health services, shops and education.

The Melton Town Centre offers potential as a TOD location, and opportunities for a mixed residential and commercial development above or next to the main road can be pursued as an example of TOD developments.

2.4 Complete streets

A complete street is one that provides a high level of service to multiple modes of transport, often with an emphasis on a high-quality pedestrian environment. The concept of 'Complete streets' originated in North America, however the concept of reallocating road space to ensure high levels of amenity and safety for pedestrians, cyclists, and public transport users, has been popular in Dutch and Danish cities since at least the 1980s. These designs emerged in response to heavily trafficked arterial road networks that failed to produce vibrant, safe streetscapes that serve a multitude of roles (e.g. transport commercial, social, environmental). Several Australian states have begun developing their own Complete Streets design guides.

In addition to the appreciation of modes of transport other than private motorised vehicles, complete streets also recognise the social and retail dimensions of streets and seek to build in features that encourage people to linger, such as shade trees, active street frontages, wider footpaths, textured pavements, seating and street designs that reduce traffic speeds (Figure 2 offers a conceptual example).



Figure 2 A typical 'complete streets' design

Source: <http://completestreetsprince.org/>

The San Francisco Municipal Transportation Agency² highlight some of the elements that make up a complete street, including:

- Curb extensions, to minimise crossing distance for pedestrians.
- Mid-block crossings, to increase opportunities for pedestrians to cross at a formal crossing. This would typically include surface treatments to increase visibility.
- Raised crossings to increase the profile of the pedestrian while crossing, and to act as a speed bump to lower vehicle speeds.
- Paved surfaces in replacement of asphalt, to increase audibility for motorised vehicles, helping to “design in” safer speeds.
- Planter boxes and shade trees and other foot path landscaping.
- Facilitation of temporary use activities, such as markets and street fairs.
- Reductions in curb radii, encouraging vehicles to travel at safer speeds, increasing pedestrian visibility and reducing the pedestrian cross distance.
- Footpath parklets, on street bike parking, and street furniture, even when it involves reclaiming street space previously used for motor vehicle storage.

High Street, Melton offers high levels of potential as a future complete street. Subsequent stages of this project will put forward alternative visions for our High Street can serve to enhance transport choice and promote urban vibrancy.

2.5 Movement and Place

The Victorian government have developed the *Movement and Place* framework. This will be discussed with application to the Melton Town Centre streets in Section 10 however it is useful to provide a brief introduction to the concept here. Movement and Place (M&P) frameworks are becoming increasingly common across several states in Australia. They function to enable state and local government to understand the dual role that streets perform in terms of being a movement

corridor and a place in itself. Streets provide for movement of people and goods, but also serve as places in their own right.

2.6 Safe Systems

The *Safe Systems* approach refers to a transport planning/road safety theory in which the fallibility of the road user is acknowledged, with the intention of designing a system that is forgiving. Such an approach has received widespread policy approval in terms of its ability to reduce the risk of road traffic injury and has now been adopted by all Australian road authorities, including by the Victorian government. The Safe Systems approach is highly complementary to Vision Zero – in which any fatality or serious injury is unacceptable, and road agencies aim to bring road death and serious injury to zero. The underlying philosophy behind these approaches and the practical policy implications of this will be embedded in the subsequent stages of this project.

The Victorian government has adopted the Victorian Road Safety Strategy 2021 – 2030, which aims to halve road deaths and reduce serious injuries by 2030 and eliminate road deaths by 2050.

The Victorian government aims to eliminate deaths on our roads by 2050.

² San Francisco Municipal Transportation Agency. (2015). SF Betterstreets: A guide to making street

improvements in San Francisco. Retrieved from <http://www.sfbetterstreets.org/>

2.7 Active transport and intersections

Traditional roundabouts are generally considered to have poor safety outcomes for pedestrians and cyclists, compared to other types of intersections. This is because roundabouts are mostly designed to improve vehicle flow, thus maintaining vehicle priority through the intersection.

Newer roundabout designs, particularly those in local street or activity centre settings, now feature elements that improve the safety and comfort of vulnerable road users, such as pedestrians and people on bikes. Some of these elements are already evident in Melton, such as the raised zebra crossings at the Patterson / McKenzie Streets roundabout. This provides priority to pedestrians at the crossing points.

Other examples exist elsewhere in Melbourne that also provide safety enhancements to cyclists. Figure 3 is one example on Moray Street, South Melbourne. This design also gives priority for cyclists, as well as pedestrians. This design is a variation of a common roundabout design found in The Netherlands.



Figure 3 Protected roundabout, South Melbourne

An example of a typical Dutch roundabout is shown below in Figure 4. It has higher comfort for cyclists than the South Melbourne example as the circular

track allows for a smoother turning movement through the intersection.



Figure 4 Dutch roundabout

These examples offer improved pedestrian and cyclist safety and comfort improvements while maintaining the structure of a roundabout. They would be applicable for roundabouts in Melton that are one lane in each direction. Roundabouts with two lanes, such as the existing ones on High Street, are not suitable. Should High Street continue to function as two lanes in each direction, conversion to signalised intersections may be more appropriate.

2.7.1.1 Signalised intersections

Improvements to safety can also be made at signalised intersections. Figure 5 shows an example from Whittlesea, where the intersection has been made into a raised platform. The crossing legs also have medians that extend beyond the pedestrian path, providing an extra level of protection against drivers turning right over the pedestrian crossing leg.



Figure 5 Safer signalised intersection

3. Policy Review



This section provides a synthesis of policies pertinent to the Melton Town Centre Structure Plan. It focused on policies that have both a direct and indirect relationship to transport and includes both state and local government policies.

3.1 Plan Melbourne 2017 – 2050

Plan Melbourne 2017-2050 is the Victorian State Government's metropolitan strategy for Melbourne. It seeks to 'plan to manage growth in the city and suburbs to the year 2050' and 'to integrate long-term land use, infrastructure and transport planning, and, in doing so, meet the city's future environmental, population, housing and employment needs.'

Plan Melbourne 2017-2050 identifies Melton as a major activity centre which are 'suburban centres that provide access to a wide range of goods and services'. There are 121 major activity centres across greater Melbourne, fulfilling regional roles.

Direction 1.2 sees activity centres as central to growth of employment options across Melbourne, with a focus on jobs outside the city centre. These centres should be connected by transport links, creating increased opportunity. Further, development of *20-minute neighbourhoods* is key to successful activity centres. These should be a key consideration for the Melton Activity Centre structure plan.

While *Plan Melbourne 2017-2050* has no transport projects specific to Melton, many transport objectives are relevant to Melton. Outcome 3 of *Plan Melbourne 2017-2050* is for Melbourne to have an integrated transport system connecting people with jobs and facilitating commerce. This Outcome supports Infrastructure Victoria's 30-year strategy, and envisages an integrated, multimodal transport system, which also melds land use and transport.

Outcome 3 of *Plan Melbourne 2017-2050* is for Melbourne to have an integrated transport system.

Direction 3.3 outlines the policy of the 20-minute neighbourhood. This aims to create neighbourhoods which contain all necessary services, recreation, and social activities, as well as personal business and education.

The 20-minute neighbourhood aims to create neighbourhoods which contain all necessary services, recreation, and social activities, as well as personal business and education.

20-minute neighbourhoods increase travel choice as most local needs are within a walkable or cyclable distance. The creation of areas which are pedestrian friendly, with a network of cycling links, and have transport choice is critical to achieving 20-minute neighbourhoods.

3.2 Planning Policy Framework

A state-wide Planning Policy Framework for transport is included in the Planning Scheme as Victorian Planning Provision 18. This Clause has an overarching set of principles that '*planning should ensure a safe, integrated and sustainable transport system that:*

- *Provides access to social and economic opportunities to support individual and community wellbeing.*
- *Facilitates economic prosperity.*
- *Actively contributes to environmental sustainability.*
- *Facilitates network-wide efficient, coordinated and reliable movements of people and goods.*
- *Supports health and wellbeing.*

‘Planning should ensure a safe, integrated and sustainable transport system.’

As such, a broad view of transport is taken, recognising that transport and land use are linked, that the planning of both should be integrated. The Clause aims to plan and develop an integrated, state-wide, transport system which increases transport choice, and embodies 20-minute neighbourhood concepts and the *Movement and Place in Victoria* framework.

A sustainable and safe transport system is envisaged, which supports transport choice and health and wellbeing. This includes responding to climate change, supporting active transport, increasing legibility, and increasing transport safety, in line with the *Victorian Road Safety Strategy 2021-2030*.

A sustainable and safe transport system is envisaged, which supports transport choice and health and wellbeing.

Movement networks are identified, including ports, and airports. Strategies for the implementation of movement networks are provided, assisting in the planning of an integrated transport network.

There is an objective under walking *‘to facilitate an efficient and safe walking network and increase the proportion of trips made by walking’*. To support this, strategies call for the planning and development of a walking network which is *‘safe, direct and comfortable’*, while being accessible to all. Walking should connect to activity centres, to public transport and other key areas. Amenity should be improved through shade provided by canopy trees, verandas or other structures.

There is an objective under cycling *‘to facilitate an efficient and safe bicycle network and increase the proportion of trips made by cycling’*. This is supported by strategies to provide *‘safe,*

comfortable, low-stress and well connected’ routes, which increase choice and allow people to cycle rather than drive. Central to this is development of the *Strategic Cycling Corridors*, which should be supported by end of trip facilities like bike parking.

For public transport, there is an objective *‘to facilitate an efficient and safe public transport network and increase the proportion of trips made by public transport’*. There are strategies for public transport to connect to activity centres and employment areas, integrating multiple forms of public transport, allowing people to rely less on cars.

Planning for roads has the objective *‘to facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure’*. This views the road network as having a role beyond the movement of private cars and include strategies to *‘facilitate the use of public transport, cycling and walking’*. Further, road space should be designed *‘to complement land use and meet business and community needs through the provision of wider footpaths, bicycle lanes, transit lanes... and freight routes, in line with the designated role of the road’*. Car parking planning considerations include the surrounding road network, protection of urban amenity, and requirements for car parking.

Related to road planning is freight planning, which has the objective *‘to facilitate an efficient, coordinated, safe and sustainable freight and logistics system that enhances Victoria’s economic prosperity and liveability’*. This is supported by a principal freight network, which should be protected and developed, to minimise negative impacts freight has on urban amenity.

These planning objectives and considerations support planning and development of an integrated transport system which provides the choice for people to leave the car at home. This is important for the Melton Structure Plan. There is scope to enhance the village feel of Melton with 20-minute neighbourhood design principles.

3.2.1 Planning Practice Note 94

Planning Practice Note 94 provides guidance on land use and transport integration, consistent with the *Transport Integration Act 2010*. The note articulates that the transport system comprises

multiple networks, outlined in Clause 18 and shown in Figure 6.

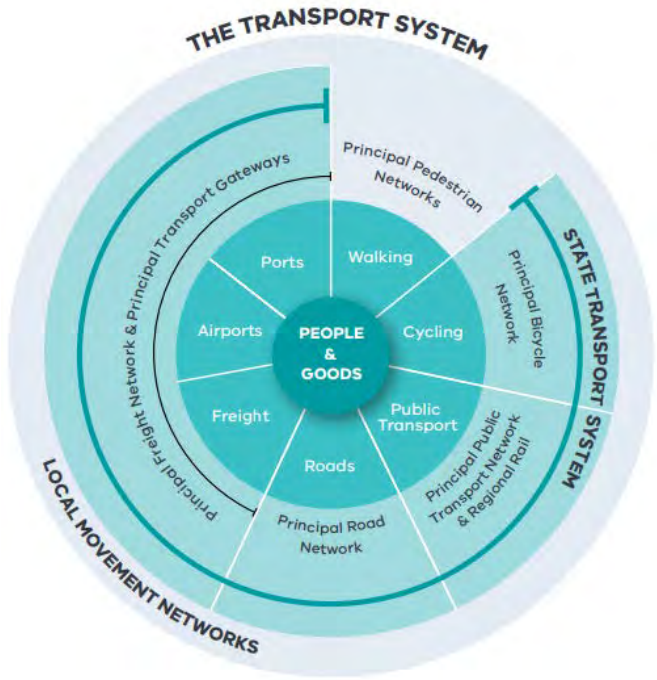


Figure 6 The Victorian transport system
Source: Planning Practice Note 94

For each component, there are state and local networks. State transport network comprises the parts of the transport system of state significance, while the local movement networks link smaller areas, providing local roads, cycling, and walking links, and last mile freight. For example, the Principal Bicycle Network is the state cycling network, which is supported by LGA based local cycling networks.

The note explains the implementation of Clause 18 at various stages in the planning process, creating categories of infrastructure, as shown in Figure 7. Council has a role across the spectrum in assisting in delivering state and local transport infrastructure. Further, Councils should include local movement networks within their own policies, ensuring development of an integrated transport system at state and local levels.

	<div> <div>←</div> <div>Most certain</div> <div>Least certain</div> <div>→</div> </div>			
Category	Existing infrastructure	Infrastructure in delivery	Planned infrastructure	Potential infrastructure
Term	Existing infrastructure	Under construction Planning controls in place to support delivery	Planned Land is reserved by a Public Acquisition Overlay or other statutory tool for a public purpose	Identify as needed Future or potential infrastructure identified as required in an approved State policy or strategy Eventually will be statutorily identified as an Area of interest
Planning response	Protect and improve		Don't compromise	Maintain opportunity

Figure 7 Transport infrastructure categories
Source: Planning Practice Note 94

3.3 Local Planning Policy Framework

Melton Planning Scheme compliments VPP 18 with Local Planning Policy Framework 21.10. The policy recognises Melton as a growth area which requires an integrated transport system. Issues for Melton include the need to:

- provide active transport to a wide range of people, through a complete network which offers protection from road traffic where possible
- manage growth in a sustainable way, and the need to reduce car dependency and travel time.

To address these issues and provide an integrated transport network which is consistent with Council’s *Moving Melton 2015 Integrated Transport Strategy*, four objectives are set identified:

1. To develop efficient and integrated transport infrastructure in a sustainable way to meet the needs of existing and future populations.
2. To encourage and promote walking and cycling by creating a safe and connected active transport network.
3. To provide a reliable, safe, affordable and simple to use public transport system that is accessible to all with frequent well-connected services to the places residents want to go.
4. To provide a reliable, safe, affordable, and simple to use road system that will contribute to the liveability, environmental sustainability and economic prosperity of the City of Melton.

The local policy further identifies the need to review the Melton Structure Plan 2007, as it applies to

High St, to assist in the ‘*revitalisation of this important centre and provide enhanced amenities to local residents to help reduce the need to travel for services*’. This report assists in the revitalisation of High Street and enhancement of Melton by identifying key opportunities to improve vibrancy, amenity, and transport choice, while also meeting Council’s broader transport objectives.

This report assists in the revitalisation of High Street and enhancement of Melton by identifying key opportunities to improve vibrancy, amenity, and transport choice.

3.4 High Street Town Centre Structure Plan 2007

The *High Street Town Centre Structure Plan 2007* outlines a high-level framework that aims to direct the growth of the core activity centre in the Melton township.

The plan identifies High Street as central to the Melton area and requires significant activation through integrating public spaces that facilitate a vibrant retail hub with a strong civic presence and sense of place that can support a growing population.

The plan sees the activation of High Street through the provision of high-quality networks for active modes of travel and public transport. To enable these changes, the plan provides a transport strategy that identifies objectives to maintain and enhance safe and more frequent connections to High Street by establishing the town centre as a primary transport interchange complemented with an extensive pedestrian and bicycle network. Some actions identified include more mid-block crossings and replacing roundabouts with signalised interactions.

There is also a need to enhance the retail presence of High Street through consolidation and intensification of the built form and increasing mixed-use development that will deliver local

economic benefits and improved social connectivity. In conjunction, revitalisation of the civic precinct should support a greater sense of place.

The plan specifies that urban design should be attractive and sensitive to improve the amenity of the town centre; however, preservation of the semi-country feel, and historical elements of High Street requires more clearly specified in-depth design considerations.

In addition, the plan introduces a proposal to reinforce the High Street Boulevard concept with a 20-metre-wide median strip. The proposal could improve pedestrian amenity and go some way to addressing the north-south divide of High Street but has several drawbacks. The proposed 20-metre width involves significant works and costs that overlook the protection of existing character elements of the town centre, including the removal of the rows of established trees and reinforcing the extensive bluestone guttering.

At a reduced width, the boulevard is viable through reconfiguring the existing roads and parking allocations, maintaining the ‘gateway experience’ to the Melton township and existing character elements. Utilising the additional road space for other purposes can generate wider benefits, such as increasing transport choice through establishing protected cycling lanes and widening footpaths or increasing amenity with landscaping, planters, and street furniture.

Although now outdated, this structure plan laid the groundwork for improving travel movements to High Street and across the town centre of Melton, improving the productivity and amenity of the area and aligns with Moving Melton, the Council’s *Integrated Transport Strategy*.

The 2007 Structure Plan lays the groundwork for improving travel movements to High Street and across the town centre of Melton, improving the productivity and amenity of the area and aligns with Moving Melton, the Council's Integrated Transport Strategy.

3.5 Moving Melton 2015 (Melton City Council's Integrated Transport Strategy)

Moving Melton 2015 aims to provide an integrated approach to the provision of transport. It attempts to respond to Melton's challenges in relation to car dependency, limited transport options and population growth pressures.

The strategy seeks to identify where investment, education and regulation are required to develop an integrated transport system and enable Melton to realise its vision of a sustainable, integrated transport network that meets the city's needs now and in the future. *Moving Melton* provides strategic direction for the actions required to improve access to jobs, education, healthcare, shopping, leisure, and services within the City of Melton and links to beyond the municipality.

To enhance liveability and economic prosperity in Melton, the strategy outlines the following principles to deliver on the vision:

- Improved, resilient and sustainable mode choices.
- Easy to use, safe, reliable, and frequent transport network and facilities.
- Connected transport network—Connecting the communities of the City of Melton to each other and beyond.
- A transport system to develop City of Melton as a centre for employment, services, and recreation to provide social and economic opportunities.

Moving Melton also identifies five policy areas to deliver the vision and principles of the Strategy:

1. Active Transport
2. Public Transport
3. Roads
4. Land Use and Development
5. Education and Partnerships

An action plan underpins each policy and includes timelines for implementation in the short, medium and long term. However, actions outlined within these plans primarily focus on *advocacy*. Although advocacy is intrinsic to facilitating change, future revisions of the strategy and its action plans should focus on implementing each action. The strategy identifies the need to develop a high-level programme to allow annual review on the progress of each action.

Moving Melton provides strategic direction towards developing a sustainable transport network that makes alternative transport choices more widely available and accessible to connect people to places and opportunities. This strategy aligns with several policies, including *Plan Melbourne*, *West Growth Corridor Plan*, *Sunbury/Diggers Rest Growth Corridor Plan*, State Government transport strategies and plans and Precinct Structure Plans.

Moving Melton provides strategic direction towards developing a sustainable transport network that makes alternative transport choices more widely available and accessible to connect people to places and opportunities.

3.6 Car Parking Study: Melton Town Centre, 2019

Car Parking Study: Melton Town Centre 2019 studies the use of existing car parking supply within the activity centre. Improving management of parking supply and access, and address conflicting

demands of motorists for parking whilst the activity centre develops is the focus of the study.

The study introduces the *Car Parking Management Framework* and identifies several objectives:

- Provide a framework to manage parking to respond to the needs of the community.
- Promote a safe, accessible and sustainable road environment for all users.
- Provide equitable access to on-street parking, and safe access for all road users.
- Facilitate access to commercial activities and other community facilities while balancing the needs of other users.
- Ensure parking improves community safety, amenity and economic activity.
- Promote walking, cycling and use of public transport.
- Provide a transparent process for consultation and decision making.

The *parking demand surveys*, and *duration of stay surveys* indicate there is a sufficient supply of parking in the Melton township *as a whole* to meet peak parking demands. Some 66% of parking spaces are occupied at peak, meaning that one in three spaces are empty at peak times. This is significantly lower than 85%, the occupancy benchmark recognised as a best practice approach to the management of on-street parking.

The *parking demand surveys*, and *duration of stay surveys* indicate there is a sufficient supply of parking in the Melton township.

When considered against the breakdown of parking restrictions within the town centre (*very short-term parking, short-term parking, medium-term parking and long-term parking*), the study reveals an over-supply of short-term parking and an under-supply of medium-term parking.

To address the conflicting demands of motorists, the study examines the range of parking

restrictions available and seeks to improve the equitable allocation of parking spaces. The study makes two key recommendations:

1. Extend short-term parking restrictions time periods for parking spaces in high activity sections (e.g., changing 1P spaces to 2P parking).
2. Introduce additional medium-term parking by converting primarily short-term parking spaces and some long-term parking spaces to medium-term parking.

These recommendations can alleviate frustration for motorists seeking medium-term parking and reduce the tendency for vehicles to overstay signed parking restrictions. However, there is the potential to align parking reform more closely with the *Car Parking Management Framework*. For example, some of the kerbside parking space can be allocated for strategic active transport corridors, thereby responding directly to *promoting walking, cycling, use of public transport and providing equitable access to on-street parking, and safe access for all users and promoting a safe, accessible and sustainable road environment for all users*.

Additionally, the conversion of short-term parking to medium-term parking may be inconsistent with the local business mix and discourage turnover. The study itself identifies the issue that many of those using the medium-term parking may in-fact be staff that require all-day parking.

In response to meeting future growth of the Melton Township, the study identifies potential sites to increase parking supply along Yuille Street, between Unitt Street and High Street and on vacant land to the rear of 350-370A High Street.

Although these recommendations are tentative, additional parking spaces along Yuille Street are unlikely to alleviate parking demand given its considerable distance from the town centre.

This study assists in the enhancement of the Melton town centre by improving availability of parking through altering parking restrictions, and in doing so, improving access to the town centre and productivity of local businesses. The study complements the Car Parking Strategy and inserts

an implementation and advocacy strategy to roll out changes more effectively.

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3.7 City of Melton Retail and Activity Centres Strategy 2014

The *Melton Retail and Activity Centres Strategy* seeks to provide a ‘robust policy framework to support the long-term integrated land use planning and delivery of a hierarchy of retail and activities areas across the municipality’.

The activity centre hierarchy outlines the range of services and jobs delivered to Melton residents, with the Metropolitan Activity Centre in Toolern (Cobblebank) expected to eventually be the largest centre for the municipality, providing all the goods and services found in other centres.

The Activity Centre hierarchy has the following structure:

- Metropolitan Activity Centre
- Neighbourhood Activity Centres
- Bulky Goods Precinct
- Local Activity Centres.

The main objective of the strategy is to introduce a network strategy that organises a planned network of activity centres in locations that encourage substantial investments, improves viability of individual activities and provides fair access to services for all transport modes.

The strategy guides development to ensure residents have equitable access to services and to increase local job opportunities, allowing Melton to regain vibrancy in its activity centres.

The strategy details the significance of providing a variety of transport options that connect residents

to activity centres. This includes developing a network of footpaths and bike trails, as well as improving access to public transport. The strategy identifies that most people in an activity centre catchment should be able to walk to access a wide array of services. This aligns with the *20-minute neighbourhood* concept introduced earlier.

In order to achieve an environment in which people are able to easily use active transport to access their activity centre, density will need to increase.

The strategy makes the following recommendations to be included within any revised Municipal Strategic Statement:

- Ensure residents have access to a range of fresh food and convenience goods and services within a reasonable distance of their homes (and preferably within walking distance).
- Ensure activity centres in Melton provide high quality urban environments including providing highly permeable and legible street and pedestrian path networks, and prioritising pedestrian movements and amenity.
- Ensuring activity centres are accessible to all and the availability and integration of public transport and active transport networks is considered when establishing new activity centres.
- Update existing or undertake development of new structure plans for all existing Activity Centres and as a priority for the Melton South Neighbourhood Centre.

Whilst the strategy addresses the need to improve access to individual activity centres, there are significant opportunities to improve connections between activity centres and increase access for residents to jobs and services within the City of Melton.

This strategy provides a framework to direct development of retail and activity centres that make the most of existing transport infrastructure and to ensure services are more easily accessible by walking and cycling. This strategy should be reviewed against Melton City Council’s Integrated Transport Strategy, Moving Melton 2015, to consolidate Council efforts to increase transport options to jobs and services across the whole of Melton.

4. Transport Networks



Melton's road network is car-dominated, reflecting the suburb's development as a satellite city in the 1970s. A comprehensive arterial road network connects with freeways and collector roads. High Street forms of the core street of the Melton Town Centre, with a wide central boulevard, and on street car parking. Transport networks catering to modes of transport other than motor vehicles are not as well established or prioritised.

4.1 Motor vehicles

Melton grew significantly from the 1970s, after being designated as a satellite city. The road network that was planned as part of the suburb's expansion follows a typical car-oriented form. It has

a defined network of arterial roads, based somewhat on the one-mile grid layout.

For instance, Bulmans and Coburns Roads are exactly one mile (1.6km) apart. Melton, east of Coburns Road, has a more traditional grid layout for the internal local streets, while the western half takes on a more circuitous local road network, including winding boulevards with many cul-de-sacs.

Figure 8 shows how the road network hierarchy functions today. Coburns Road, High Street, Station Rd (south of High Street), Melton Highway, and Federation Drive all form part of the arterial road network. Other streets, such as Centenary Avenue, O'Neills Road, and Palmerston Street function as collector roads. However, Centenary Avenue, due to its road design and length, is likely to grow in traffic volume and form a stronger part of the arterial road network.

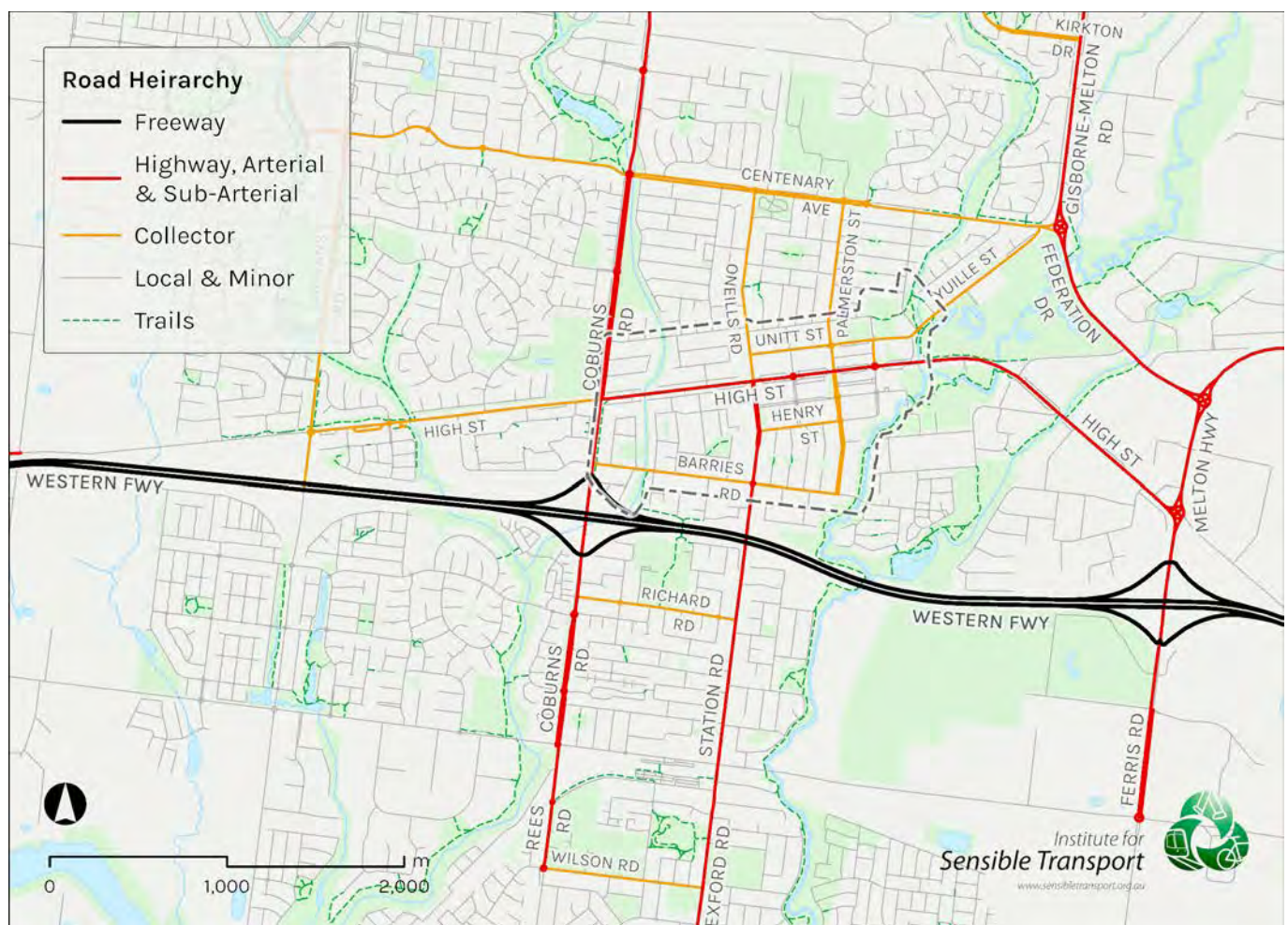


Figure 8 Road hierarchy

4.1.1 Declared roads

Figure 9 shows the State-managed roads within the study area.

4.1.1.1 High Street and the Western Highway

The section of High Street between Harkness Road and Coburns Road is managed by Council. It is also not zoned for transport like the other sections of road to the east and west. Of note, the more recent section of the Western Freeway is not zoned for transport, while the old Western Highway section (that now connects to Bacchus Marsh) retains the original transport zoning. This may require an amendment by DOT to bring the transport zoning in-line with the reset of the gazetted road network.

Looking at historical satellite imagery, it is possible to see the old configuration of High Street, where the western end turned at Harkness Road, with no connection to the Western Freeway. This was in place since the construction of the Melton Bypass for the Western Freeway in 1987-88. Prior to this, High Street formed part of the main road to Ballarat. Between 1988 and 2011 (the Anthony's Cutting realignment), High Street served as a low-traffic local road with no major through-traffic function beyond the built-up area of Melton.

The realignment prompted a reconnection of High Street as a through-route, joining it back to the Western Highway and back to its original configuration prior to 1987.



Figure 9 State-managed roads

Source: DOT

4.1.2 Speed

Figure 10 shows the speed limits within the study area. High Street has a mix of speed limits within Melton. Outside the urban extent, the speed limit is 80km/h. Within the built-up area, the speed limit drops to 60km/h. It drops again to 50km/h between O’Neills Road and Yuille Street. All the service roads along High Street are 50km/h.

Coburns Road, O’Neills Road, and Palmerston Street are all 60km/h. Most other streets in the built-up area are the default 50km/h.

Several 40km/h speed limits exist near local schools, including:

- Unitt Street (Yuille Street to Palmerston Street)
- Yuille Street
- Raleighs Road (Unitt Street to Frobisher Street)
- Church Street (Palmerston Street to Smith Street).

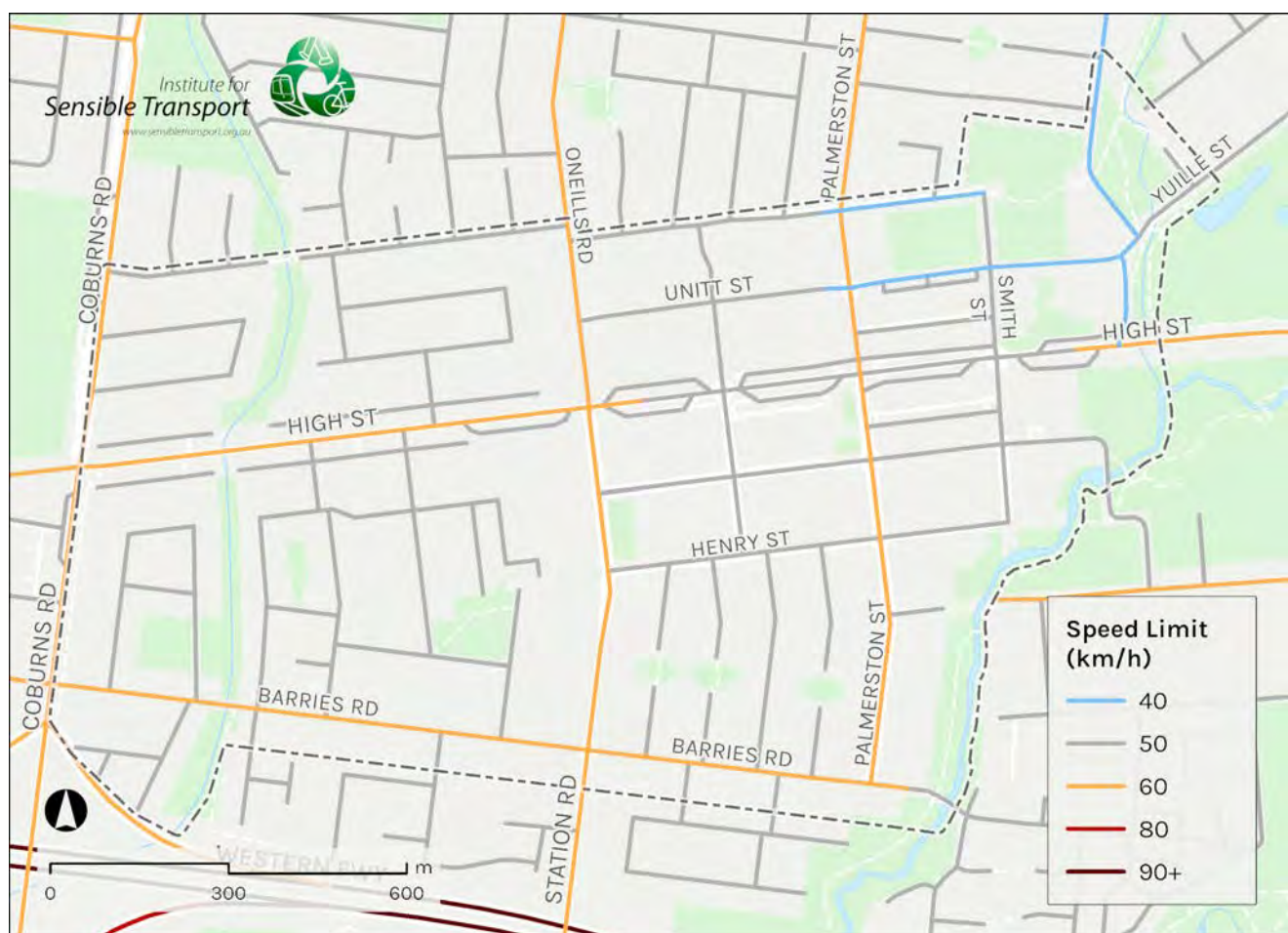


Figure 10 Speed limits

Source: DOT

4.1.3 Freight

High Street and Coburns Road forms part of the gazetted heavy vehicle network in Melton for B-Doubles and PBS Class 1 Vehicles. This allows heavy vehicle operators to travel along these roads without requiring a permit from the road manager, which in this instance would be the Department of Transport.

Oddly, the PBS Class 1 network does not include High Street between Coburns Road westward to Harkness Road. It is unknown whether vehicles wishing to travel this route use NHVR permits to complete their trip or whether this break in the gazetted network encourages those vehicles to use the Western Freeway.

The freight network is shown in Figure 11.

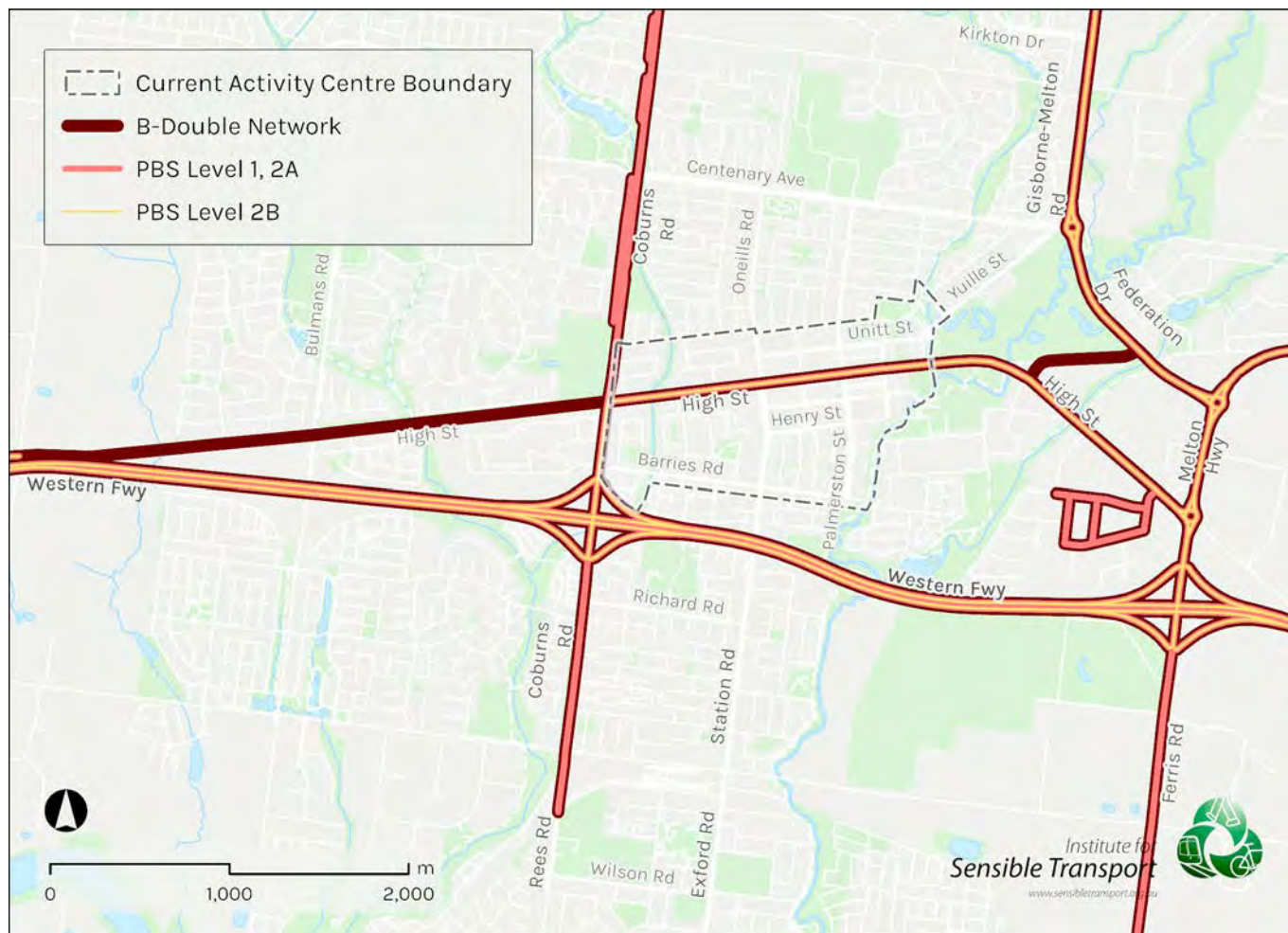


Figure 11 Freight Network

Source: DoT

4.2 Public transport

There are seven local bus routes that service the broader Melton area, in addition to the Flexiride

Melton South service, shown in Figure 12 and Figure 13. The area is also serviced by the Ararat / Maryborough V/Line service, with Melton Railway Station 2km south of the Melton Town Centre.

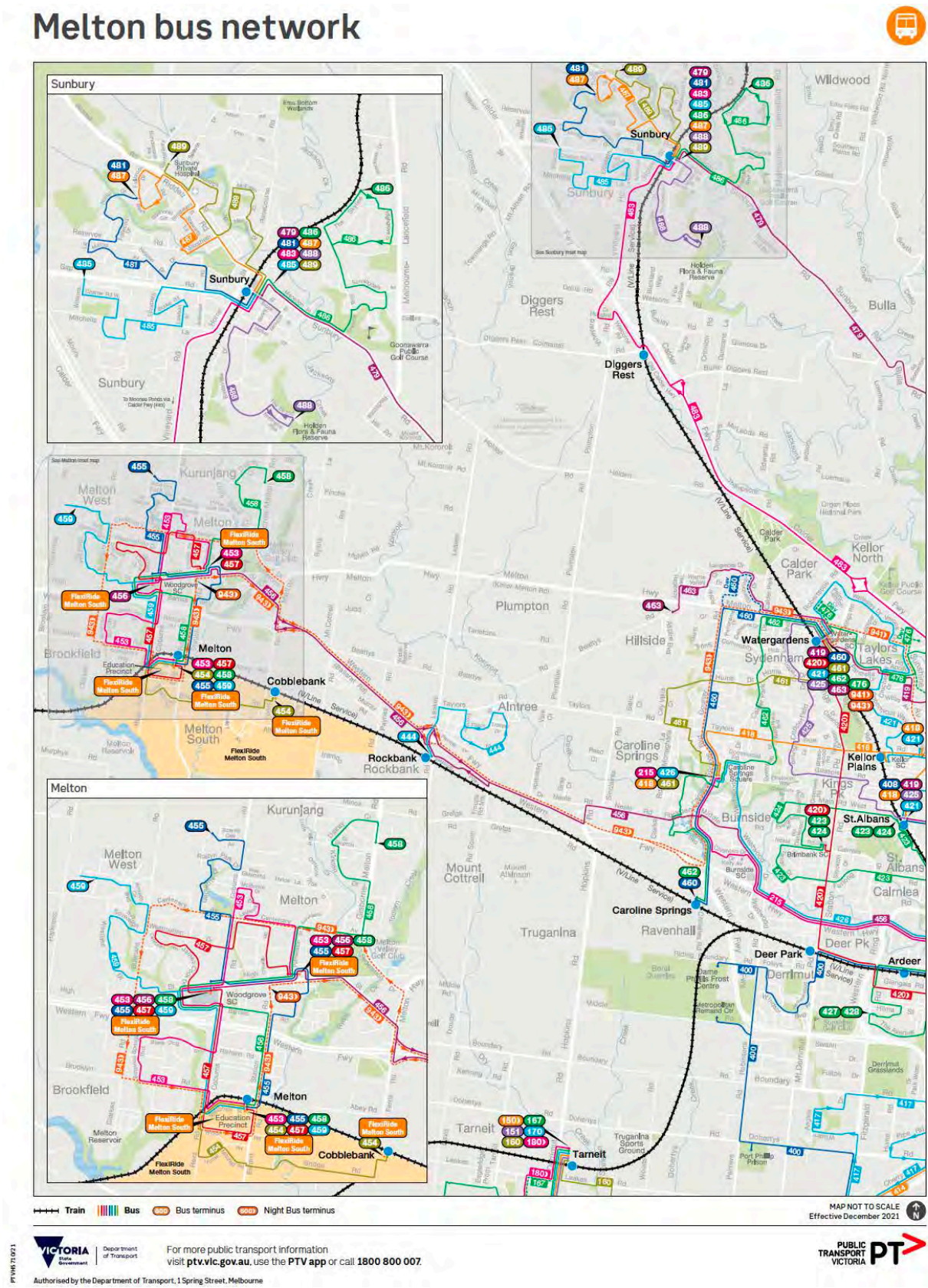


Figure 12 Melton and Sunbury LAM

Source: PTV

Melton

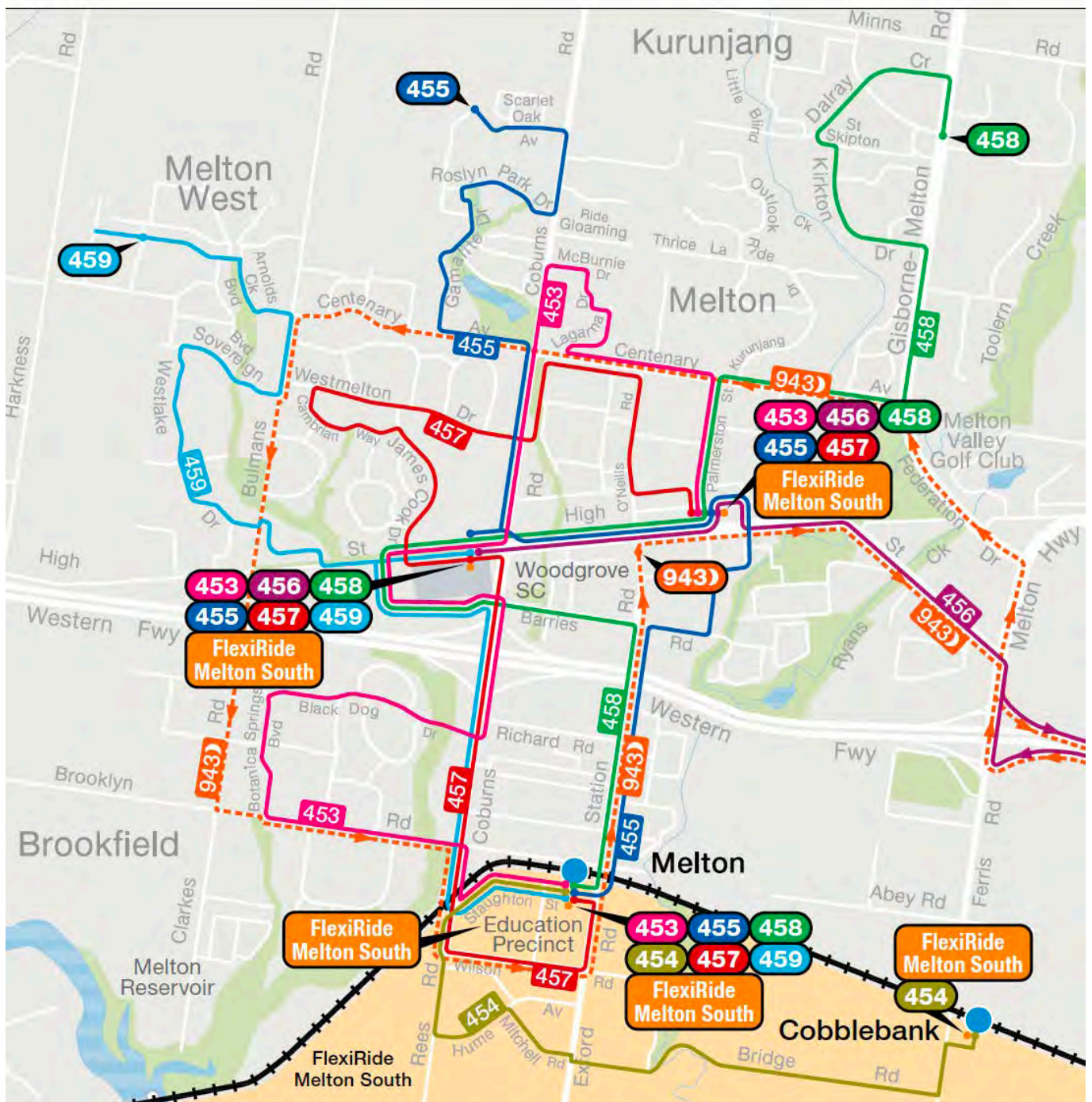


Figure 13 Melton insert of LAM

Source: PTV

There are five local bus routes that service the Melton Activity Centre, in addition to the Flexiride Melton South service, shown in Table 1. All routes have daytime frequency of roughly hourly, or better. All routes also run seven days a week, covering a broad period, generally before 6am until after 9pm on weekdays and around 9am to 9pm on weekends.

The span of operation provides an acceptable level of service from a user perspective, allowing for

commuting as well as personal business, shopping and recreational or social trips. However, the frequency may be a disincentive in some cases, with waits of up to an hour, reducing usability.

While the routes connect with the surrounding areas, coverage begins to reduce outside of the core of the activity centre. There is a lack of direct route connection to the emerging metropolitan activity centre in Toolern (Cobblebank). Two routes, 453 and

455, terminate at the interchange, while the remaining three regular routes pass through. All but one route (456) connects to Melton Railway Station to the south. The 456 bus is the only route that extends beyond Melton, terminating at Sunshine Railway Station.

Table 1 Bus routes servicing the study area

Route	Description	Mon			Daytime frequency
		- Fri	Sat	Sun	
453	Melton to Melton Station, via Woodgrove SC and Brookfield*	16	15	14	Roughly hourly
455	Micasa Rise to Melton Station, via Woodgrove SC and Melton	16	15	14	Roughly hourly
456	Sunshine Station to Melton (Woodgrove SC), via Caroline Springs and Melton	26	23	20	Roughly half-hourly
457	Melton to Melton Station, via Melton West and Woodgrove SC*	29	15	14	Roughly half-hourly
458	Kurunjang to Melton Station, via Melton and Woodgrove SC	29	15	14	Roughly half-hourly
	FlexiRide Melton South				
Night bus 943	Watergardens Station to Melton Station, via Caroline Springs and Melton				

* Indicates the service terminates at Melton Interchange

While four routes connect Melton to Melton Station, only one, route 455, does so directly and this route runs hourly. Routes 453, 457 and 458 all travel to Melton station via Woodgrove SC and other parts of western Melton, which increases travel distance and more importantly, *time*. This means that while route 455 takes 11 minutes to travel between Melton Interchange and Melton Station, routes 453, 457 and 458 take 29 minutes, 25 minutes and 15 minutes respectively. Here passengers must trade off frequency with travel time. There is scope to increase connectivity by reviewing bus routes and

decreasing travel time between Melton Interchange and Melton Station.

The routes that terminate both come in from the north along Palmerston Street. Wallace Square is used by some buses to access the interchange, and likely to facilitate 'round-the-block' termination. Having a larger loop would allow for more bus stops within the Melton Town Centre area, which would increase the internal catchment of buses, potentially encouraging use at a low cost.

4.3 Walking

Melton has an established footpath network within the study area. Footpaths are provided on both sides of the street; they are sufficiently wide and in good condition. There are several gaps in the footpath network however, such as:

- McKenzie Street, western end.
- Along High Street, east of Station St, southern carriage.

Many paths are wide enough to be shared paths, however, are not signed as shared paths. Nevertheless, on-site operation reveals that many of these footpaths function as shared paths, with people riding bikes regularly observed on the footpath. This indicates that the rideability of the road network does not offer the level of comfort required to attract cyclists.

There are limited pedestrian crossings outside the activity centre of Melton, except at several school crossing points. Most intersections have pram ramps. However these intersections prioritise people in cars rather than people on foot.

Recent upgrades within the activity centre have provided high-quality pedestrian crossings. These include:

- McKenzie Street (near the library)
- Palmerston Street (Unitt Street to McKenzie Street)
- Bakery Square.

These pedestrian crossing designs are useful templates for improving pedestrian accessibility and safety to and within the Melton Activity Centre.

4.4 Cycling

There are several sections of cycling infrastructure within the study area. This includes the Little Blind Creek / Toolern Creek shared path and the Arnolds Creek East Branch path. Figure 14 provides an overview of existing cycling infrastructure.

As mentioned earlier, there are several paths that are designed like shared paths, though due to the lack of signage, are technically not legally able to be ridden on. These streets include Unitt Street.

Taken together, this off-road network provides a solid foundation for movement around the perimeter of the Melton Activity Centre.

The on-street cycling network is less-complete, and in some instances, is unlikely to be used by people beyond 'confident riders'.

Several streets have painted bike lanes, including McKenzie Street and Smith Street (McKenzie Street to Henry Street).

Other streets have shared bike lane / parking lane layouts. This includes:

- Palmerston St (south of McKenzie St)
- Barries Road
- Station Road (south of Police Station)
- O'Neills Road (north of Unitt St)
- Unitt St (eastbound travel lane only).

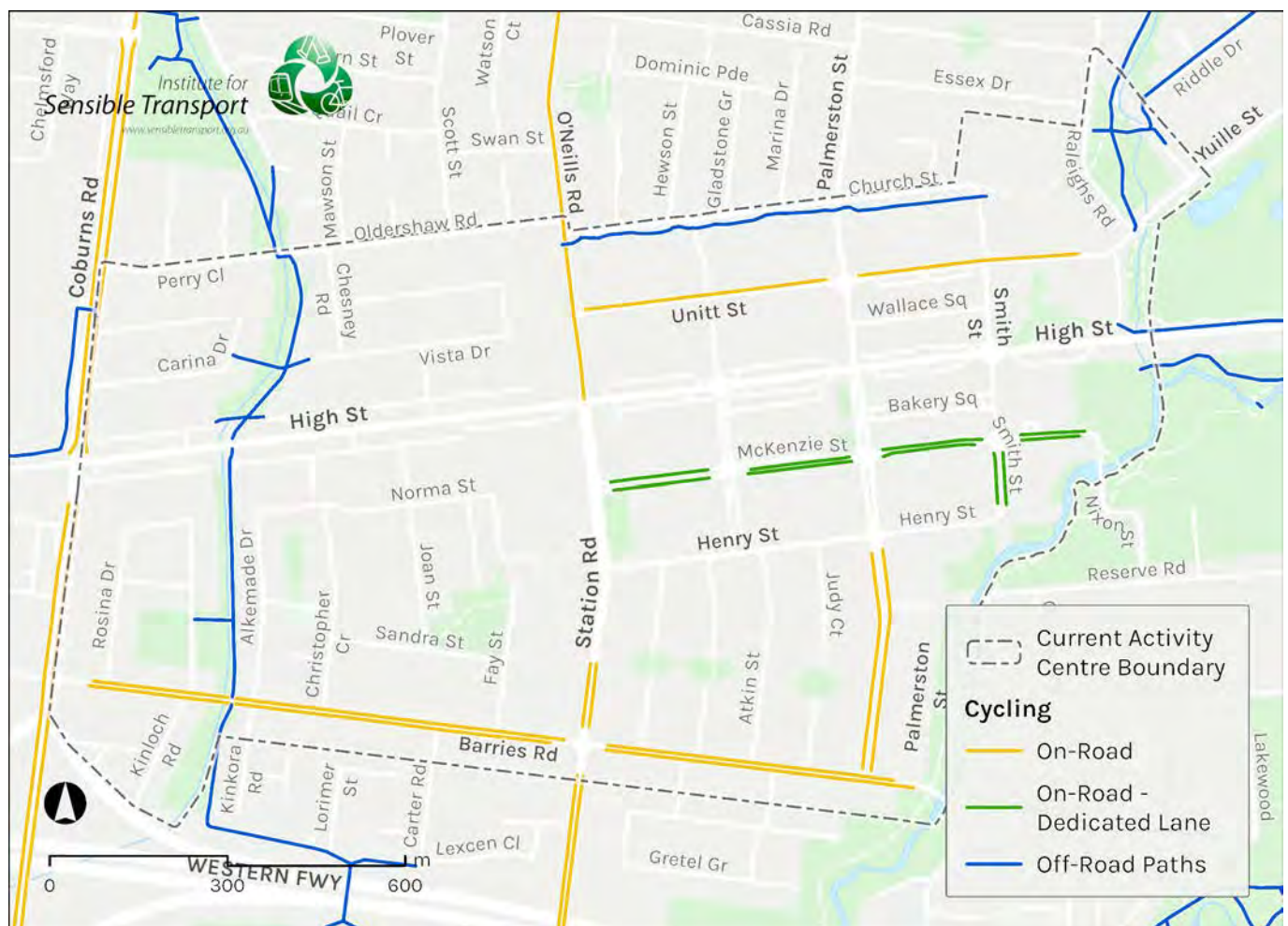


Figure 14 Cycling Infrastructure

Source: OpenStreetMap, Google Maps, DELWP

In practice, however, these lanes are unlikely to be used by cyclists if any cars are parked in the lane. These links are unlikely to encourage non-confident riders to consider riding for short trips. Given the clear direction contained in many of Melton's strategic documents, as well as wider state government policy to encourage cycling, enhancements to the cycling network are required. Please see Section 2.7 for more general information on cycling network design.

Cycling infrastructure in Melton generally terminates prior to an intersection. Barries and Station Roads is an example where cycling infrastructure on all four legs end approximately 20m before the roundabout. In some instances, bike sharrows³ are provided prior to the intersection. Crashes involving cyclists are most common at intersections.

The proposed cycling network includes the Strategic Cycling Corridors (SCCs).⁴ The SCC describe high quality cycling infrastructure of state significance (existing and proposed). In the study area, High Street (Bulmans Road to Melton Highway) and Coburns Road (entire length) form part of the SCC network. Outside the study area, there are proposed paths along the railway line, eastwards from the railway station, Melton Highway / Ferris Road, and an alignment along the Western Freeway, east from Melton Highway. Apart from High Street, the remainder of the SCC network will boost the connectivity of the areas surrounding Melton. This leaves the municipal network as the primary opportunity for improving connectivity to the activity centre. These SCC links are required to be fully separated from traffic, via protected bike lanes or off-road paths.

However, the level of infrastructure provided for cyclists at intersections is often less than what is provided mid-block. Focusing on making intersections safer and more comfortable for cyclists is often the most effective intervention governments can make for increasing cycling participation.

Crashes involving cyclists are most common at intersections.

³ Sharrows are shared lane markings, typically made up of 2 arrow heads indicating the direction and a bicycle.

⁴

<https://discover.data.vic.gov.au/dataset/strategic-cycling-corridors-scc>

5. Transport Patterns



This section provides an overview of existing travel data, highlighting how people get around Melton, and current demand on the transport network. As with previous sections, the data indicates that the car is the dominant form of transport and accounts for most trips, even those of a short (less than 5km) distance.

5.1 Traffic volumes

VicRoads / DOT provide traffic volume data for much of the arterial road network. Figure 15 identifies the estimated average daily traffic volumes (for both directions) on roads within Melton.

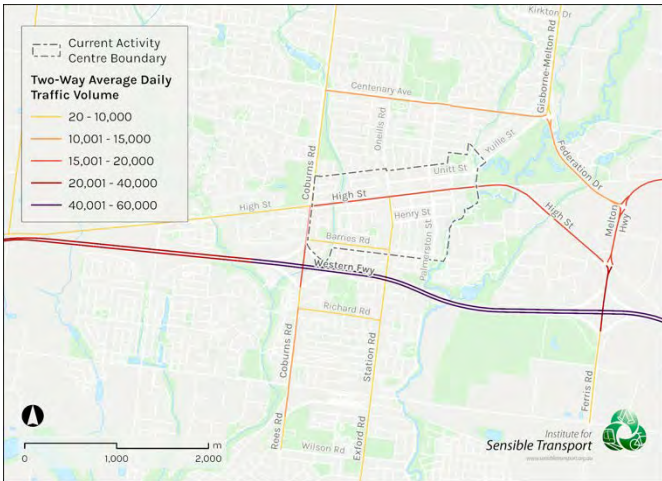


Figure 15 Traffic volume on declared roads

Source: DoT

Table 2 identifies the traffic volume on key streets in Melton.

Table 2 Traffic volumes

Road section	Traffic volume
Coburns Road	20,000
Centenary Avenue	11,000
Station Road	4,200
Richard Road	2,600
Melton Highway (immediately north of the Western Freeway)	22,000
Harkness Road	5,000

Source: DOT

5.1.1.1 Historic traffic volumes on High Street

This section looks at traffic volumes for High Street in Melton. A traffic count 150m west of Station Street was conducted in 2008. It recorded 18,300 Annual Average Daily Traffic (AADT) vehicle movements, which included 630 trucks. In 2013, a traffic count out the front of Hannah Watts Park recorded 18,800, of which 1,050 were trucks. Of note, Woodgrove SC opened in 2013, though it is not known whether this count captures trips to the shopping centre. High Street has a current estimated 18,000 vehicles per day for both directions of travel, 1,100 of which are heavy vehicles. In comparison, the Western Freeway has an estimated 54,000 vehicles per day for the equivalent section.

The above analysis indicates that reconnecting High Street back to the Western Highway made little difference to overall traffic volumes, though heavy vehicle movements appear to have almost doubled.

Several observations can be made from this. Firstly, as traffic levels have remained relatively stable following reconnection of High Street with the Western Highway, it is likely that most traffic on High Street is local. Reducing road space is unlikely to adversely affect longer distance road users, who are already likely to be using the Western Highway. As such, there may be limited scope to reduce traffic along High Street by redirecting through traffic to the Western Highway.

it is likely that most traffic on High Street is local.

However, as most traffic is likely to be local, there is scope to decrease traffic via more effective traffic management which creates an *inner circulation plan*. Further, increasing active and public transport options has the potential to reduce unnecessary car use in the Melton Town Centre, and therefore traffic along High Street.

5.2 SCATS assessment: High Street and Station / O’Neills Road

Intersections with traffic signals all have in-ground loop detectors that count the volume of vehicles that pass through the intersection. This data is captured in 15-minute intervals. The intersection of High Street and Station / O’Neills Road is both signalised and within the study area. To assess the peak vehicle volumes for this intersection, we selected the date of analysis of the 16th September 2019. This was the latest data available that was not impacted by COVID-19 restrictions or school holidays.

Table 3 shows the results of this analysis. Across the 24-hour period, a total of 24,238 vehicles per day moved through the intersection. Of those, 16,138 travelled along High Street, with another 8,100 using Station / O’Neills Road. Peak use of the road was found for vehicles heading south and east between 8:45 – 9:00. Afternoon peaks were 3:15-3:30 for Station Road heading north, and High Street heading east (4:30-4:45). These time periods indicate that trips to school may have a notable impact on local traffic.

Table 3 SCATS volumes, High Street and Station / O’Neills Road

Intersection leg	Total volume (24 hours)	Max 15-min	Max 15-min time
Station Road (Northbound)	3,929	113	15:15 - 15:30
O’Neills Road (Southbound)	4,171	129	08:45 - 09:00
High Street (Westbound)	7,908	210	16:30 - 16:45
High Street (Eastbound)	8,230	234	08:45 - 09:00

Source: DOT

Under NACTO5 guidelines, a single private vehicle lane has the capacity for 150-400 vehicles per 15-minute period. All intersection legs are at the lower end of this scale.

It is noteworthy that Albert Street in East Melbourne carries approximately 20,000 vehicles per day. This road has a protected bike lane on both sides of the road, one full-time travel lane, and one parking lane that becomes a second travel lane during peak-hour. This demonstrates that there is scope to reduce road space to provide increased amenity on High Street, while still providing an adequate level of service to motor vehicles.

5.3 Heavy Vehicle movement analysis

Heavy vehicle movements across the road network in Melton can be seen below in Figure 16. It shows that most heavy vehicle movements occur on the Western Freeway. Trips within the study area are also recorded in Figure 16. These may likely be providing supplies to local businesses or development activities. Some may also be using the local road network to travel beyond the Town Centre.

Trips from the industrial area to the east of the Town Centre may travel westwards to access the Western Freeway, or to travel farther afield, rather than travel eastwards to access the principal freight network. These types of trips are not desirable, as excess heavy vehicles in the Town Centre add unnecessary noise pollution and network congestion.

⁵ National Association of City Transportation Officials

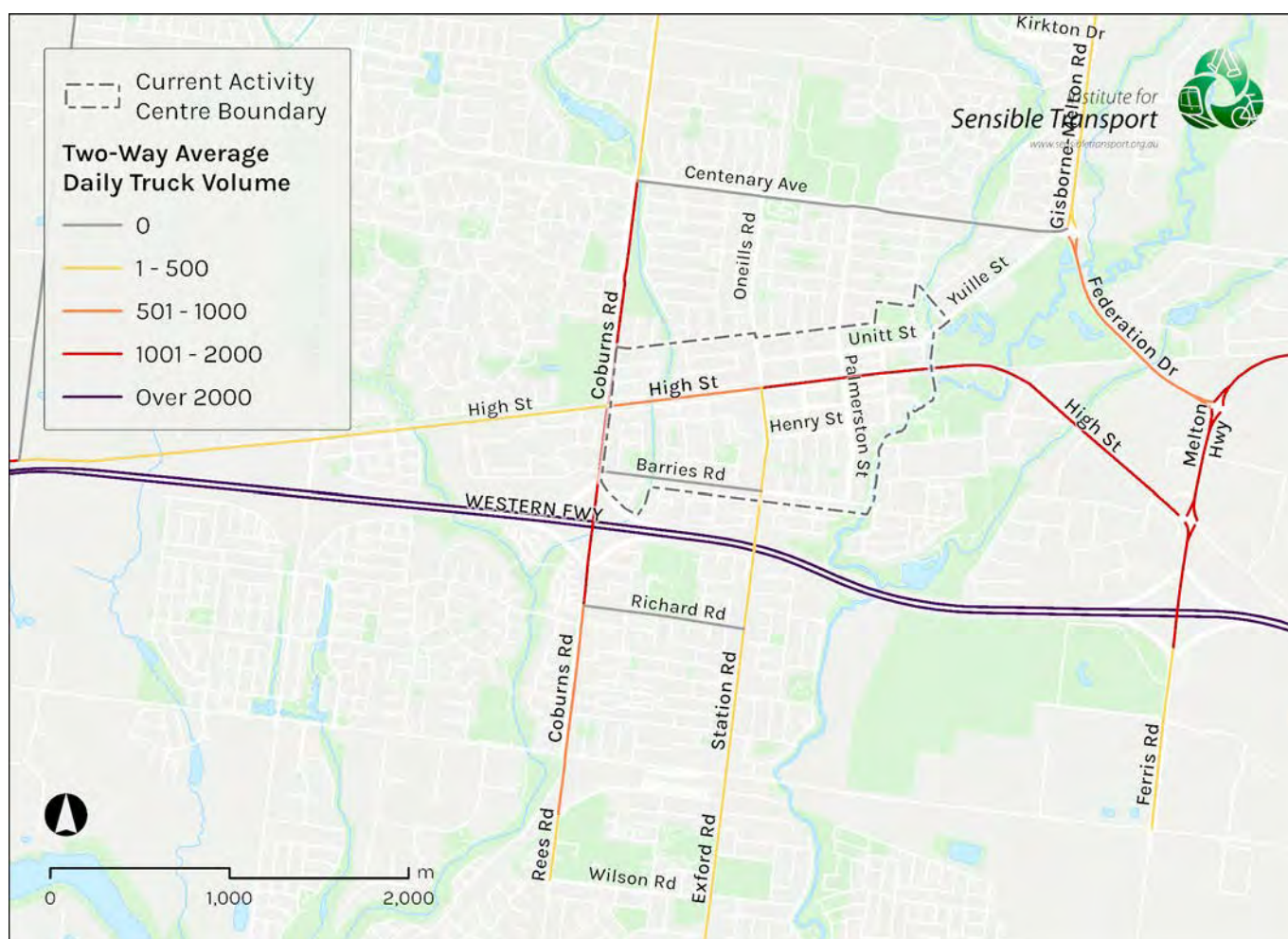


Figure 16 Traffic volume on declared roads - trucks only

Source: DoT

Freight Australia provides snapshot data on the origin and destination of heavy vehicle trips across Australia, based on local government area.

Figure 17 shows where heavy vehicle trips starting in Melton end. A concentration of trips end north-east north east of Melton, towards Albury, Canberra, and Sydney.

Heavy vehicle trips that end in Melton are shown in Figure 18 and illustrate a stronger link west towards Adelaide as well as across Victoria more generally.

Heavy vehicle trips that use non-approved roads are required to apply for a permit through the National Heavy Vehicle Regulator (NHVR). According to NHVR reporting, Melton approves between 150-200 NHVR permits per quarter for access to non-gazetted roads. A heatmap of the streets that had these permits granted on is available to Council via the NHVR portal.

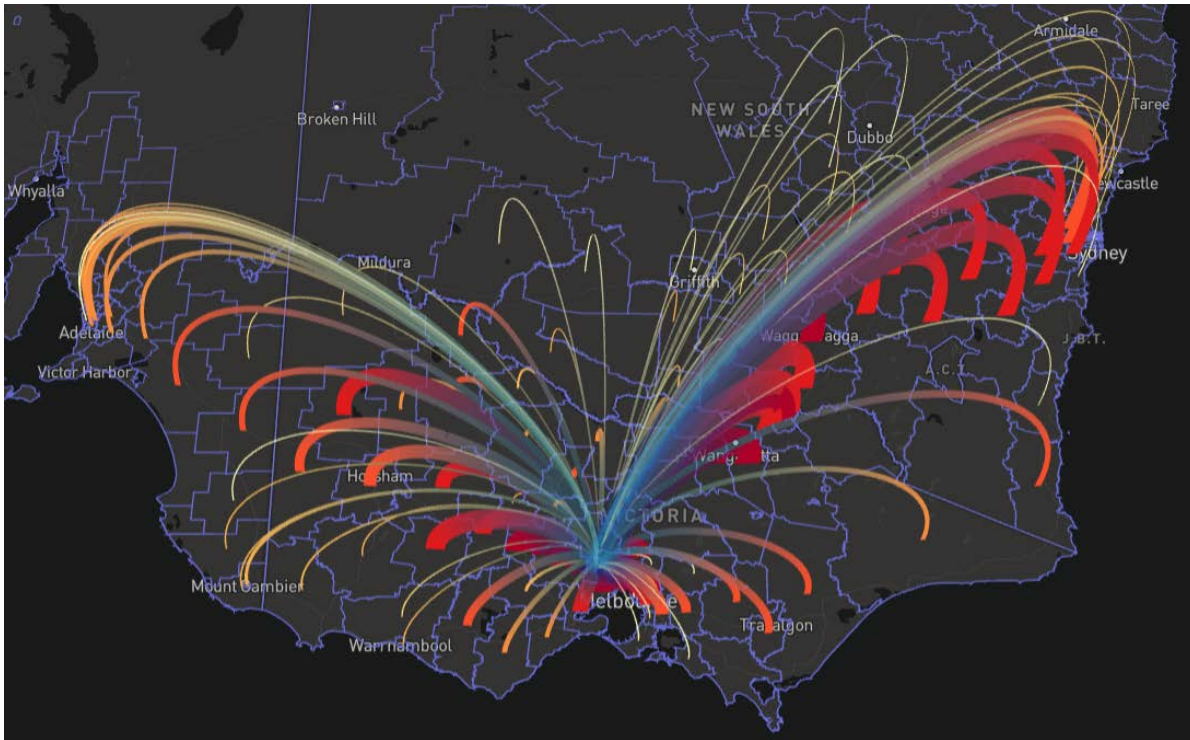


Figure 17 Heavy vehicle trips from Melton

Source: Freight Australia

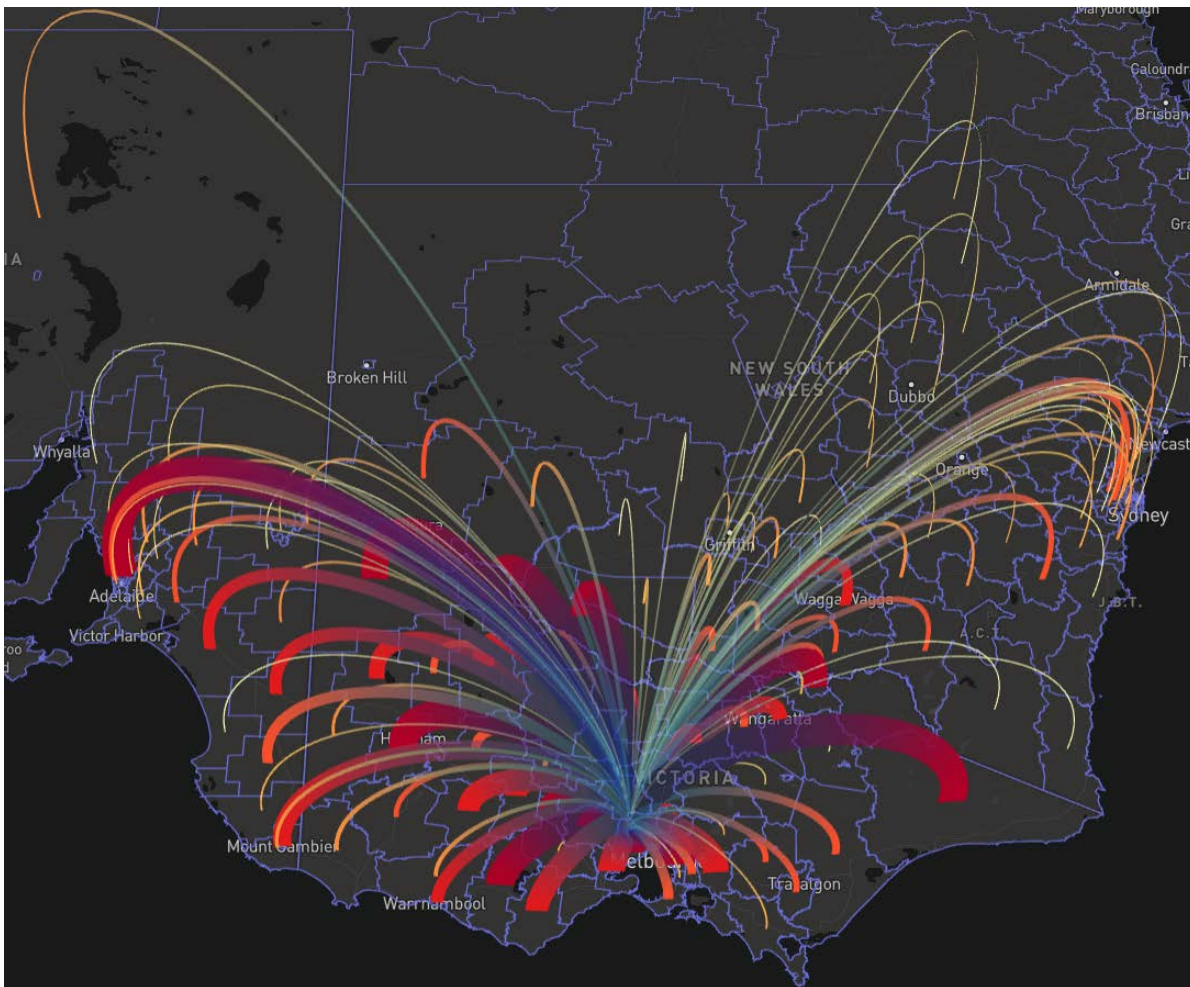


Figure 18 Heavy vehicle trips to Melton

Source: Freight Australia

5.4 ABS Journey to work

ABS Census data shows the mode of transport workers use to commute to work. This data can be analysed by smaller areas, revealing travel behaviour within an area. An analysis of journey to work data is shown in Table 4. For this analysis, SA1s⁶ have been grouped into areas within the study, as shown in Figure 19. This assists in granular analysis.

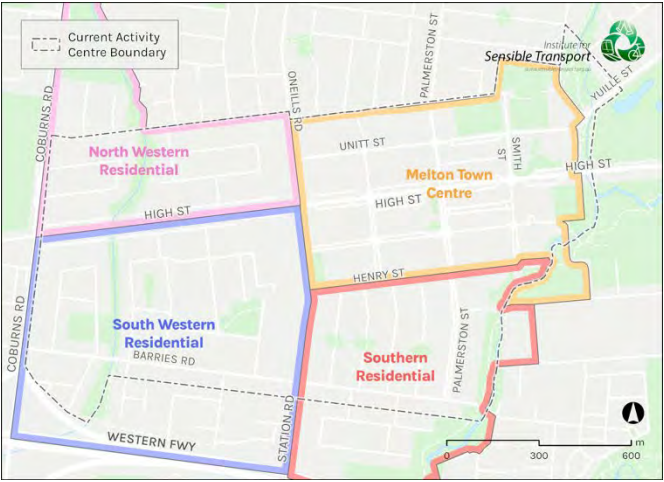


Figure 19 Study area groupings

Across the study area, 84% of journeys to work are by car. This varies depending on area, with 76% of residents within the Melton Town Centre area using a car to get to work, and 88.7% of residents in the area south of the core using a car to get to work. Similarly, more residents in the Melton Town Centre area use public transport, at 18.7%, compared to 10.6% across the whole area.

18.7% of residents in the Melton Town Centre area use public transport to get to work

There are low levels of active transport journeys to work. On average, 3.5% of journeys to work are walked, but this rises to 5.3% in the core area and north-western residential area. Conversely, there were zero recorded walks to work in the southern

residential area. Bicycle use was low, with the only recorded use in the south-western residential area.

Across the study area, 84% of work trips are by car.

This analysis shows that while car use is high across the area, there is differentiation. More people use public transport in the core area which is best served by public transport. Similarly, more people walk and bicycle in the core and western areas.

Table 4 Mode of journey to work by area, 2016

	Car	Public Transport	Bicycle	Walk	Other
Melton Town Centre	76.0%	18.7%	0.0%	5.3%	0.0%
Southern Residential	88.7%	11.3%	0.0%	0.0%	0.0%
South Western Residential	81.7%	10.4%	0.9%	4.6%	2.4%
North Western Residential	84.6%	7.5%	0.0%	5.3%	2.6%
Total	84.0%	10.6%	0.3%	3.5%	1.6%

Source: ABS 2017

5.5 Victorian Integrated Survey of Travel and Activity

The Victorian Integrated Survey of Travel and Activity (VISTA) is a travel diary survey, which captures all trip types, not just the journey to work. This is important, given that trips to/from work only account for around 20% of trips. The VISTA data can be analysed to better understand the characteristics of different trip types.

There are 3,895 trips recorded in VISTA related to Melton. Of these, 1,956 (50%) start and finish within Melton, 969 (25%) start in Melton and finish

⁶ SA1, or Statistical Area level 1, is the smallest reliable data source for this analysis. While Mesh Blocks are

smaller, random adjustments to small numbers decreases reliability.

outside Melton, and 970 (25%) start outside Melton and finish inside Melton, as shown in Figure 20. The mode share of all trips, based on where they start and finish is shown in Table 5.

50% of all trips start and finish within Melton

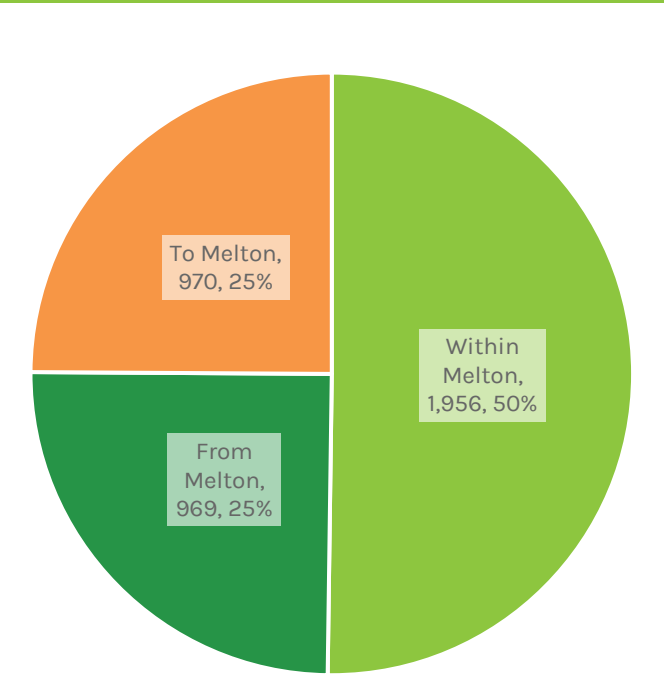


Figure 20 VISTA recorded trips in Melton

Source: VISTA

Trips totally within Melton are less likely to be by car (75%) and more likely to be by active transport (22% walked and 0.7% bicycle). Conversely, trips which start or end outside Melton are far more likely to be by car (93%). There is a higher proportion of trips which start or finish outside Melton taken on public transport (3.6% to 3.9%) than trips solely within Melton (1.4%).

22% of trips which start and finish in Melton are walked

Table 5 Mode share of all trips, by trip profile, in Melton

	Car	Public transport	Bicycle	Walk	Other
Within Melton	75.4%	1.4%	0.7%	22.1%	0.4%
From Melton	93.0%	3.9%	0.2%	2.0%	0.9%
To Melton	93.3%	3.6%	0.2%	2.4%	0.5%
Total	84.2%	2.6%	0.5%	12.2%	0.6%

Source: VISTA

The distance profile of trips within, from and to Melton is shown in Figure 21 as a box and whisker chart. This style of chart represents the middle 50% as the ‘box’ which the top and bottom 25% brackets are the ‘whiskers’ which extend from the ‘box’. This shows that trips within Melton are all less than 27km, while half are between 1.1km and 3.6km, and a quarter are below 1.1km. The range of trips which start or finish outside of Melton is larger, with 25% of trips over 35km and less than 25% below 8km.

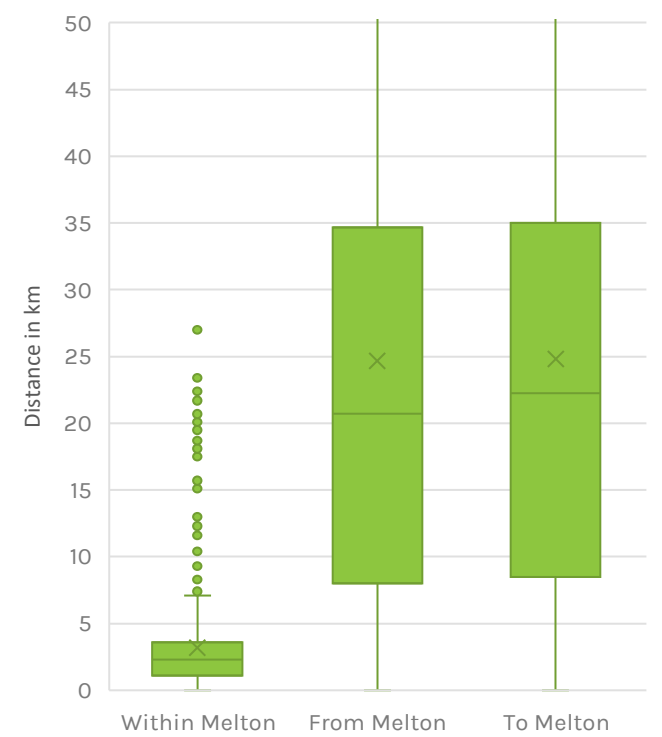


Figure 21 Trip distance profile of trips within, from and to Melton

Source: VISTA

The cumulative trips per distance, for all modes and all trip purpose is shown in Figure 22. Of the

trips which are totally within Melton, 89% are under 5km. Indeed, of all trips within, from or to Melton, 50% are less than 5km. It is only when looking at trips which start or finish outside that distance start to become larger, with 80% of these trips being over 7km.

89% of trips that start and finish in Melton are under 5km.

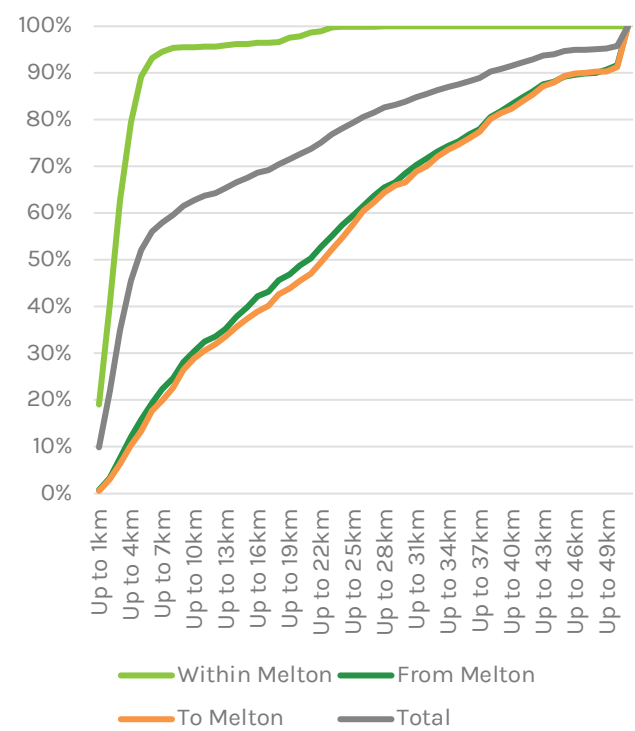


Figure 22 Cumulative trips per distance in Melton, by trip profile
Source: VISTA

Figure 23 shows a box and whisker plot of trip distance by mode. The average and mean trip distances are shown as bars in each box. This shows that the median vehicle trip is 7.3km, meaning that 50% of all vehicle trips are below 7.3km. Trains and motorcycles are both the modes which are generally longest; in the case of trains this is likely commuting to further places for work such as the CBD (notably, the median train trip is 37km, the distance between Melton Station and the CBD). There are only four recorded trips by motorcycle, as such, the data may be unreliable.

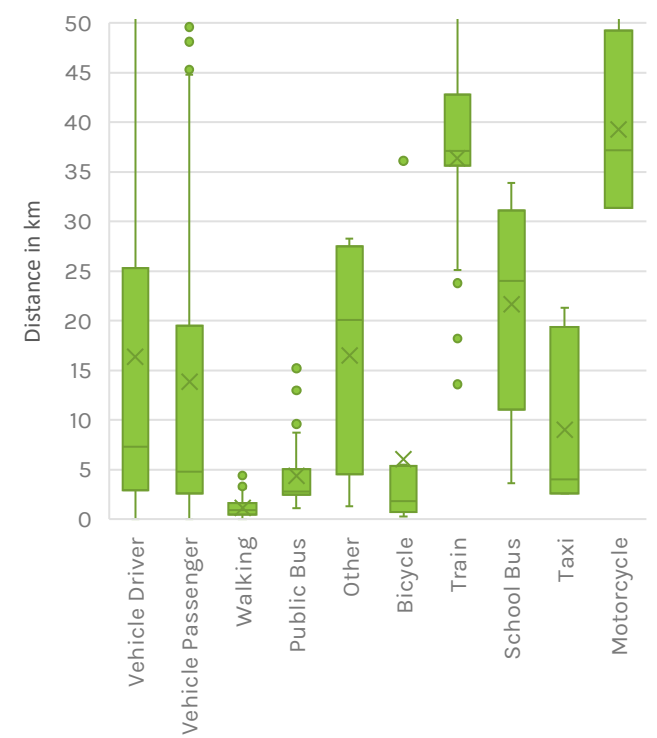


Figure 23 Trip distance profile of trips in Melton by mode
Source: VISTA

50% of all vehicle trips are below 7.3km

Analysis of travel data from ABS Census and VISTA shows that there is a variation in mode share depending on location, and that many trips are short. The implication of these findings for the future of transport in Melton is that there is considerable ‘*low hanging fruit*’ in which to convert many of the short car trips to active travel. This will help to relieve car parking pressure and congestion on the road network, as well as support Council’s ambition to become a more sustainable, vibrant township.

5.6 Cycling

5.6.1 Strava

Strava is a fitness app that allows users to track their running or cycling trips. Strava have made the cycling trip data available to governments via the Strava Metro portal. This provides a heatmap of cycling activity, helping better understand how some cyclists use the road network. As the main userbase is fitness-oriented cycling, there are limitations to the data. Overall, however, it helps provide a general sense of cycling patterns in a given area. Figure 24 shows a relative heat map of Strava activity in Melton. There is little fitness cycling activity happening in the study area, with only High Street, Station / O’Neills Road, Coburns Road, and Yuille Street registering more than one cyclist a day.

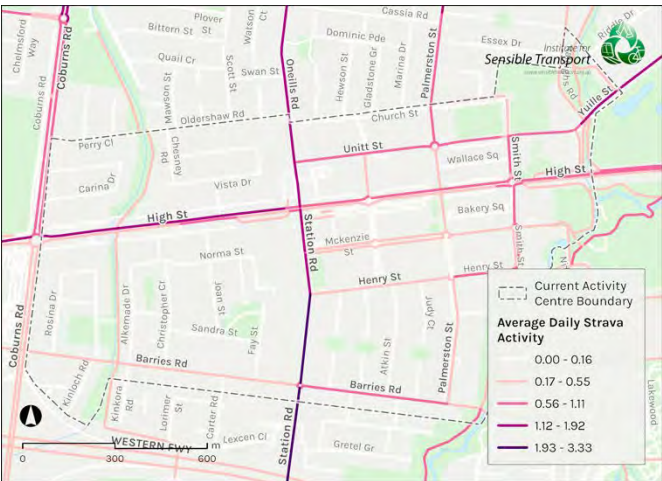


Figure 24 Strava activity

5.6.2 Super Tuesday

Super Tuesday is an annual count of bicycle activity across Australia, organised by Bicycle Network. The count is done by volunteers between 7-9am. Councils pay Bicycle Network to take part in Super Tuesday and select the sites they wish to gather data on. Melton has taken part in Super Tuesday. Figure 25 shows the most recent results, from 2015.

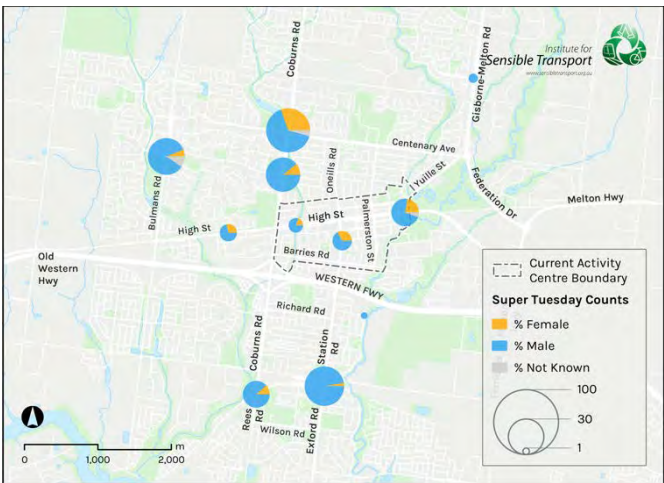


Figure 25 Super Tuesday counts broken down by observed sex of cyclists

Source: Bicycle Network

5.6.3 Bike Use Propensity Index

High quality bicycle infrastructure can be expensive and government budgets are limited. It is therefore important, when planning a future cycling network to determine spatial variation in the *latent demand* for cycling. Through peer reviewed research (Fishman, Washington, Haworth, & Mazzei, 2014), a number of Census collected variables have been isolated, in order to provide a heat map of latent demand for cycling, known as the *Bike Use Propensity Index*.

The Index is based on seven Census collected variables that are statistically significant predictors of bike use. In sum, these maps provide a clear illustration of the spatial variation in latent demand for cycling in the Melton Town Centre.

The Propensity Index can help guide areas for future investment in cycling infrastructure by identifying the areas where the greatest uptake in cycling is likely to occur. Actions focusing on high propensity areas are likely to include infrastructure projects but should also consider behaviour change initiatives and other support programs to encourage greater cycling uptake. This exercise is particularly useful for the Melton Town Centre, which has fragmented bicycle infrastructure, very low levels of cycling (even compared to some other parts of Melbourne) and a high number of car trips within a cyclable distance.

5.6.3.1 Methodology

The *Bike Use Propensity Index* combines seven 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.

The data that forms the basis of the Index is collected from the following variables, derived directly from the 2016 Census:

- Residential population density, measured as people per hectare (SA1)
- Density of young adults measured as number of people aged 18 – 34 per hectare. (SA1)
- Low motor vehicle ownership measured as number of households with zero or one cars per hectare. (SA1)
- Bicycle use - origin measured as number of people riding to work per hectare. (SA1)
- Employment density measured as number of people working per hectare. (DZN)
- Bicycle use – destination measured as number of people riding to work per hectare (DZN)
- Short car trips– destination measured as number of people driving to work between 0 and 5 km per hectare. (DZN)

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.

The Index contains more residential-oriented variables than it does employment, or destination, variables. To ensure that employment rich areas that have comparatively lower residential populations are not undervalued, the employment variables in the index are weighted the same as residential factors. Doing this helps ensure important bike destinations, such as employment hubs, are adequately considered in the Index.

Geographic areas are given an absolute score, of between 0 and ~ 5 for each of the variables. These scores are then averaged to reveal an overall bike use propensity score of between 0 and ~ 5. A score close to 0 indicates a low propensity to cycle, while a score of 5 indicates a high propensity to cycle. The

mapped values are aggregates of the attributes' scores.

SA1s 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 will have been highest scoring in most variables. The maps used in this report have been colour-scaled to be comparable within the study area. However, the score is relative to all other areas in Australia (for example, the Melbourne and Sydney CBDs have areas with scores above 4.5).

5.6.3.2 Results

This section shows the results of the Bike Use Propensity Index.

Figure 26 shows the overall score for Melton, with the existing bike infrastructure overlaid. It shows that the propensity for bike use varies across the

suburb, with Woodgrove Shopping Centre the most likely place for daily transport trips using bikes. Other areas, such as north-east of the Town Centre, and immediately south-west of Station Road, also scored high. Connecting these areas to shops, schools, services, and railway stations is likely to provide the biggest uplift in bike use, relative to other areas within Melton.



Figure 26 Melton Bike Use Propensity Index

6. Demographic and built form considerations



Demographics and built form can significantly influence transport patterns and behaviours. In this section, we look at some key demographic factors; household composition, dwelling structure, and car ownership. It shows that the demographics within the Melton Town Centre are conducive to walking and cycling trips.

Table 6 show the population in each residential area as of 2016. The same areas as shown in Figure 19 are used for this analysis. The Melton Town Centre has the smallest population, with 355 residents, with the other three areas ranging between 750 and 1,200 people. In total, there were approx. 3,202 living in the study area in 2016.

Table 6 Population of the study area, 2016

	Population
Melton Town Centre	355
Southern Residential	910
South Western Residential	1,188
North Western Residential	749
Total	3,202

Source: ABS 2017

6.1 Household composition

Household composition looks at different types of family structure. This includes whether people live by themselves, in a share house, or in a family unit. Table 7 shows the results for each of the residential areas in Melton. In total, 37% of households have children, 20% are other family structures, and 33% live by themselves. Group households and ‘other’ (potentially retirement living or aged care) comprise around 10%.

There is variation within the study area. Over half of all people in the Melton Town Centre live alone, compared with 26% to 34% in the other areas. Similarly, 16% live in an ‘other’ arrangement, compared with 3% to 7% in the other areas. The more residential south and west of the town centre have more similar household compositions, with about 40% being families with children (either as a couple or single parents) and another 17-20% families without children, or with other family structures. households.

Over half of all people in the Melton Town Centre live alone, compared with 26% to 34% in the other areas.

Table 7 Family composition of households in the study area, 2016

	Couple without children	Couple with children	Single parent with children	Other family	Lone person	Group household	Other
Melton Town Centre	13%	11%	5%	2%	52%	2%	16%
Southern Residential	20%	21%	18%	0%	34%	4%	3%
South Western Residential	21%	19%	20%	2%	29%	3%	6%
North Western Residential	17%	25%	18%	1%	26%	5%	7%
Total	19%	20%	17%	1%	33%	4%	7%

Source: ABS 2017

Table 8 looks at the number of people in a household for each residential area. Like Table 7, this shows that Melton Town Centre (the area marked as such in Figure 19) is the standout area compared to the rest, with 60% of households having one person. This is roughly double the rate of all the other areas, where two person households are most common. Across the entire study area, roughly one third of households have one person, one third have two peoples, and one third have three or more. This reflects the family composition data shown in Table 7, revealing that there is a diversity of household types, which means a diversity in household sizes (though gaps in housing diversity may still exist).

6.2 Dwelling structure

Table 9 shows the dwelling structure for the study area. Across the entire area, 73% of housing is separated, with only 27% being semi-detached, townhouses, or similar. There are no flats or apartments in the study area. This reflects heritage of the area, which saw intensified planning and

development from the 1970s, relative to the level of development prior to this period. As is the case with other demographic and built form characteristics, there is a difference between the Melton Town Centre and adjacent residential areas. Only 24% of dwellings in Melton Town Centre are separate. With most being single story semi-detached, townhouse or similar. This higher density living is likely supported by smaller households shown in Table 7 and Table 8.

It is notable that those living within the Melton Town Centre are significantly more likely to walk or catch public transport for work (see Table 4). This is likely to be the same for all transport trips. There is also better provision of public transport and walking and cycling infrastructure, which helps create more transport choice. This is an important consideration in planning for the study area, demonstrating that car dependency can be lessened in Melton through greater provision of transport choice, and supporting a greater variety of household sizes and types.

Table 8 Residents per dwelling in the study area, 2016

	One person	Two persons	Three persons	Four persons	Five persons	Six or more persons
Melton Town Centre	60.7%	21.3%	10.0%	4.7%	0.0%	3.3%
Southern Residential	36.1%	29.6%	15.5%	9.9%	4.5%	4.5%
South Western Residential	31.5%	34.5%	18.8%	11.0%	3.6%	0.6%
North Western Residential	27.2%	32.6%	19.6%	10.9%	6.9%	2.9%
Total	35.3%	31.1%	17.0%	9.9%	4.1%	2.6%

Source: ABS 2017

Table 9 Dwelling structure in the study area, 2016

	Separate house	Semi-detached, row or terrace house, townhouse etc. with one storey	Semi-detached, row or terrace house, townhouse etc. with two or more storeys
Melton Town Centre	24%	69%	7%
Southern Residential	72%	20%	8%
South Western Residential	81%	19%	0%
North Western Residential	90%	10%	0%
Total	73%	24%	3%

Source: ABS 2017

6.3 Car ownership

The average number of cars per dwelling for the study area is shown in Table 10. There is variation in cars per dwelling, with 1.1 cars being owned per dwelling inside the Melton Town Centre, and between 1.4 and 1.6 cars per dwelling outside. Across the entire area there are 1.4 cars per dwelling. This is lower than the average of 2 cars per dwelling for the LGA of Melton, or the average of 1.7 for Greater Melbourne.

Table 10 Average cars per dwelling for areas within the study area, 2016

	Average cars per dwelling
Melton Town Centre	1.1
Southern Residential	1.5
South Western Residential	1.4
North Western Residential	1.6
Total	1.4

Source: ABS 2017

The lower levels of car ownership per dwelling in Melton Town Centre could be partly explained by smaller households, but that cannot explain all of the decreased car ownership. Figure 27 shows the percentage of dwellings which own zero, one, or two or more cars for areas of the study area. This shows that around 19% of dwellings inside the Melton Town Centre do not have a car, while only 22% have two or more. This compares with around 10% of dwellings in the adjacent areas have zero cars, and around 40% or more having two or more cars.

19% of dwellings inside the Melton Town Centre do not have a car.

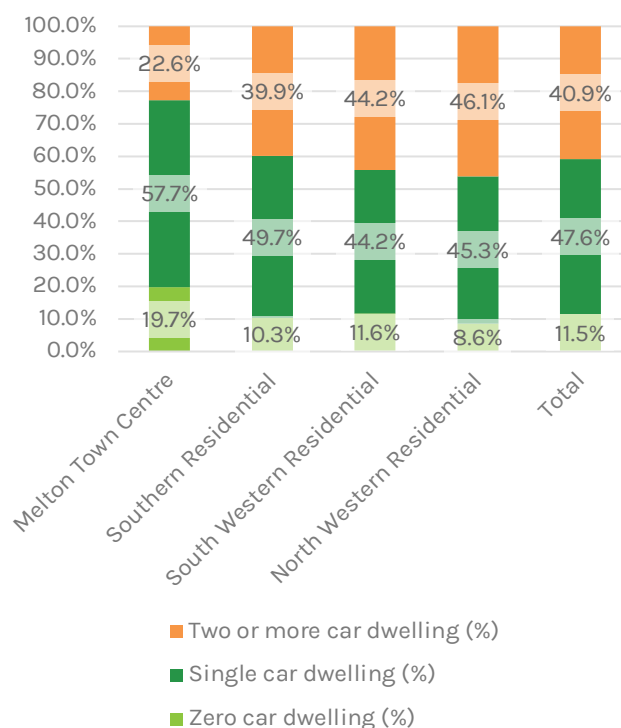


Figure 27 Car ownership levels for areas within the study area, percentage of dwellings, 2016

Source: ABS 2017

There are likely to be multiple factors affecting car ownership rates. However, it is clear that many households do not rely purely on the car, and that this is more the case where more transport choice is provided, such as the Melton Town Centre. This has important implications for the future development of the Melton Town Centre. There is a lower level of car ownership, which means that reductions in parking requirements below Victorian Planning Provision Clause 52.06 are likely to better match new supply of parking with demand. Avoiding an over-supply of car parking in new residential developments could also reduce housing costs as the overall size of land required for a new dwelling is reduced.

7. Car parking analysis



An analysis of parking has been undertaken to understand supply, demand, constraints, and opportunities for reform.

A desktop survey was conducted to gauge the balance of private versus public parking ownership, as well as occupancy rates. The study area was within the current activity centre boundary, reduced to the areas connected to commercial activity. The survey included both marked on-street and off-street parking assets for Council, State government and private businesses.

7.1 Parking supply

A total of 2,992 parking lots were counted for the survey. Council manages and owns 62.4% of the parking lots counted in the Town Centre, with Private ownership the largest for off-street parking (shown in Figure 28). Off-street parking makes up 52.5% of the total parking offered in the area, however, there are more offerings (unmarked) within the residential area.

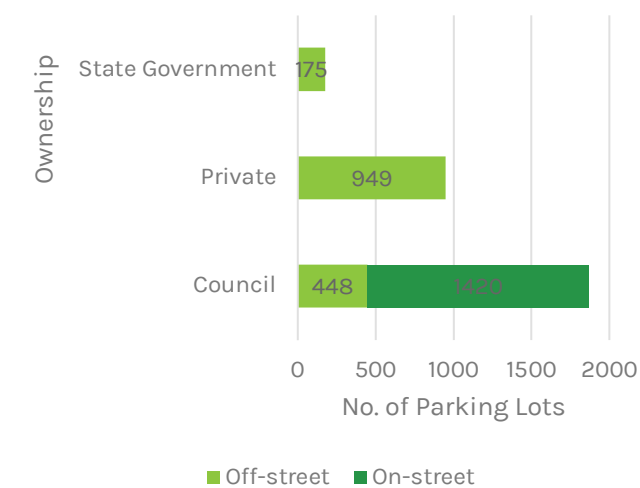


Figure 28 Share of car parking ownership

Most of Council’s off-street carparks are located on the eastern and southern sides of Melton Town Centre (see Figure 29). Private off-street parking is found on the western side of the Town Centre, with Aldi and Melton Medical & Dental Centre each contributing just over one hundred parking lots. Most of Council’s on-street parking are concentrated around Wallace Sq and Bakery Sq.

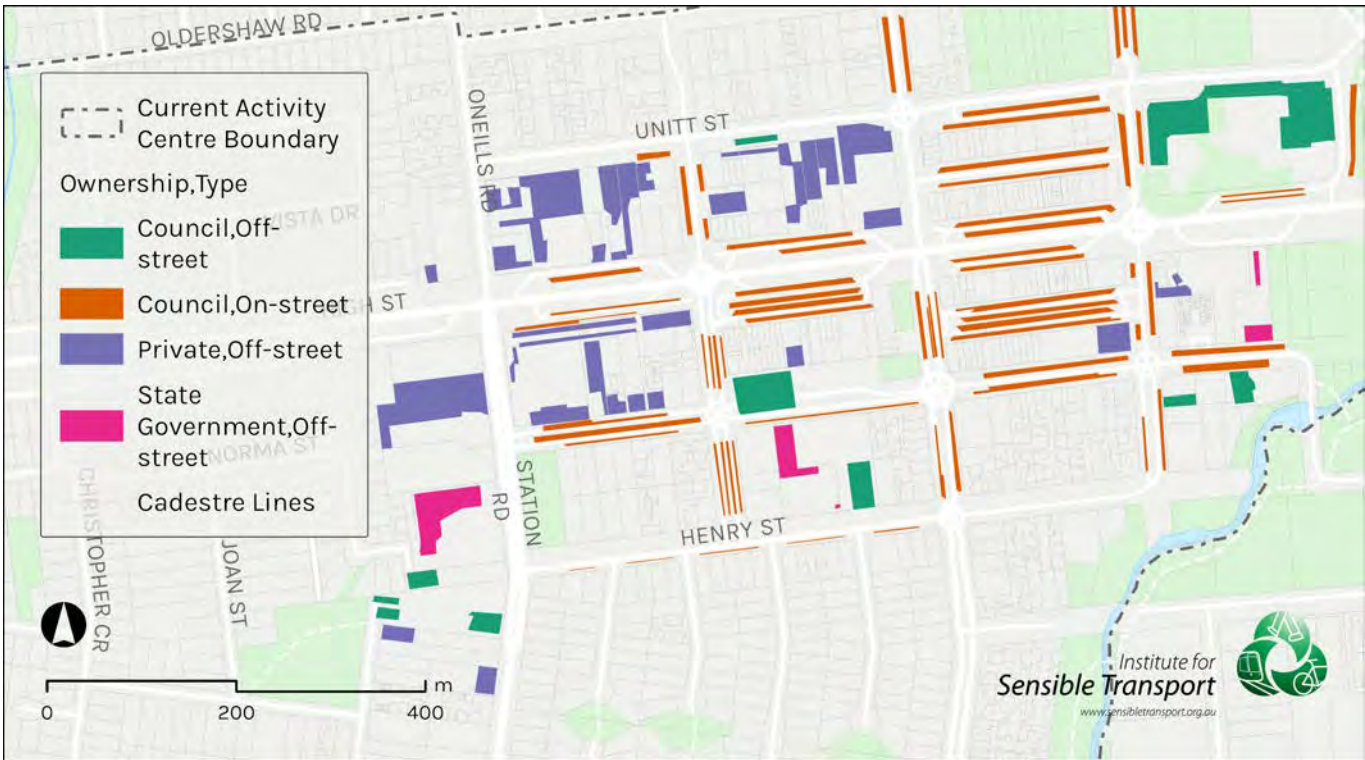


Figure 29 Ownership of parking supply in Melton Town Centre

Source: Nearmap image from Tue Oct 1, 2019 2:53PM

7.2 Parking occupancy

A parking occupancy survey was conducted using high resolution aerial images taken just before 3pm on the 1st October, 2019 (prior to COVID-19). Of the car parks within the study area, 1,621 (54.2%) were occupied during the period of analysis. As shown in Figure 30, on-street parking occupancy was highest around Bakery Sq. The average occupancy rates for Council's off-street parking

were 72.6%, while off-street parking was at 55.6% occupancy. Carparks at Melton City Council, Melton Library and Learning Hub had occupancies over 83%, suggesting high staff parking at the former and high visitation for the latter. Private carparks in the study area generally had low occupancy rates, with notable exceptions such as NDIS - Brotherhood of St Laurence (93.8% occupancy), 138 McKenzie St (83.3% occupancy) and Melton Medical & Dental Centre (78.8% occupancy).

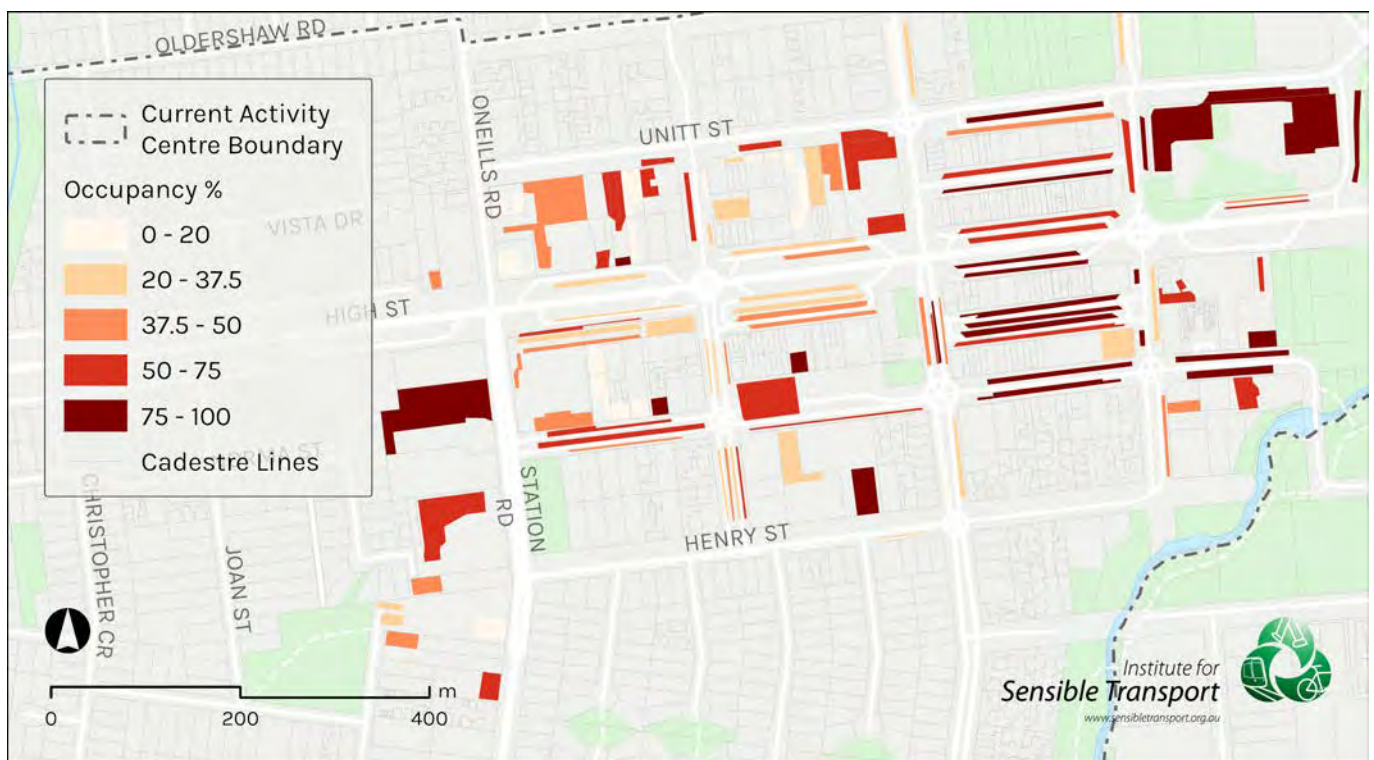


Figure 30 Parking occupancy rates in Melton Town Centre

Source: Nearmap image from Tue Oct 1, 2019 2:53PM

7.3 Number plate analysis

This section will be provided at a later date once the necessary data is made available by DOT.

8. Crash Analysis



Road crashes remain a major cause of death, serious injuries and trauma. The repercussions of road crashes are multi-faceted and cause social, economic and environmental harms.

Crash statistics are recorded by the State Government, with the last five years of data made publicly available. The following analysis looks at crash records beginning in July 2015 and captures five years of records in Melton.

8.1 Crash analysis

Figure 31 shows the year-to-year crash trend between 2015-2020 for the Melton LGA. Prior to the COVID-19 pandemic, a slight downward trend in crashes between 2015/16 and 2018/19 was recorded; however, crashes increased to 301 in 2019/2020 and surpassed crashes in in 2015/16.

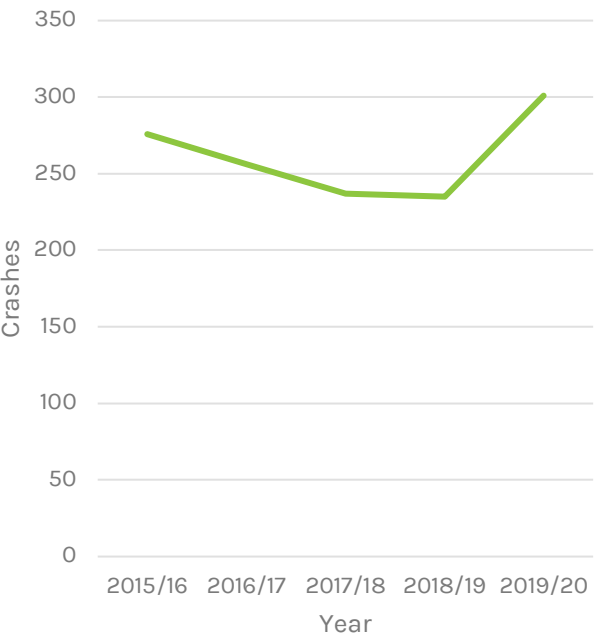


Figure 31 Crashes per year, Melton LGA

Source: Victorian Government

Table 11 shows the crashes by their location within the road network.

Table 11 Crashes by location

Location	Number of crashes
Off-road	4
Mid-block	55
Intersection	65
Other	124

The cause of crashes recorded in MTC are listed in Table 12 and includes a breakdown of the mode of travel involved. The crash causes are listed by the most to least common cause.

The most common cause of crash incidents in the MTC area are *rear-end collisions between two vehicles in the same lane*, with 84 crashed recorded in the five years between 2015-2020.

The next most common cause of crashes in MTC are *right through crashes*, where a driver is turning right and crashes into a vehicle from the opposing direction. This is the cause of 58 crashes in MTC in 2015-2020. The third most common cause are cross traffic crashes and involves *two vehicles colliding at 90 degrees at an intersection*, with 24 crash events recorded.

Some 30 crashes were recorded at intersections. Eighteen were a result of right near crashes, where a driver is turning into an intersection and another vehicle is coming from the right. Ten were left near crashes. Two right turning crashes were also recorded, where one vehicle is turning right into an intersection and another vehicle coming from the right is also turning right.

Table 12 Crashes by cause

Crash cause	Pedestrian	Bicycle	Motorcycle	Car/truck	Total
Rear end (vehicles in same lane)	0	0	0	84	84
Right through	0	0	1	57	58
Cross traffic (intersections only)	0	0	1	23	24
Ped near side. Ped hit by vehicle from the right	9	0	0	9	18
Right near (intersections only)	0	1	0	17	18
Off end of road/T-intersection	0	0	2	8	10
Left near (intersections only)	0	1	0	9	10
Veh strikes ped on footpath/median/traffic island	6	0	0	3	9
Vehicle strikes another veh while emerging from driveway	0	1	0	7	8
Left off carriageway into object/parked vehicle	0	0	0	7	7
U-turn	0	0	0	6	6
Other manoeuvring not included in DCAs 140-148	2	0	1	3	6
Off carriageway to left	0	0	0	5	5
Leaving parking	0	0	0	5	5
Head on (not overtaking)	0	0	0	4	4
Right off carriageway into object/parked vehicle	0	0	0	4	4
Out of control on carriageway (on straight)	0	0	3	1	4
Ped struck walking to/from or boarding/alighting vehicle	2	0	0	2	4
Any manoeuvre involving ped not included in DCAs 100-108	2	0	0	1	3
Lane change right (not overtaking)	0	0	0	3	3
Left through	0	0	0	3	3
Other same direction-maneuvres not included in DCAs 130-137	0	0	1	2	3
Right rear	0	0	0	3	3
Right turn sideswipe	0	0	0	3	3
Vehicle off footpath strikes veh on carriageway	0	1	0	2	3
Off left bend into object/parked vehicle	0	0	0	1	1
Two right turning (intersections only)	0	0	0	2	2
Lane side swipe (vehicles in parallel lines)	0	0	1	1	2
Far side. Ped hit by vehicle from the left	1	0	0	1	2
Ped on footpath struck by vehicle entering/leaving driveway	1	0	0	1	2
Ped playing/lying/working/standing on carriageway	1	0	0	1	2
Vehicle collides with vehicle parked on left of road	0	0	0	2	2
Off right bend into object/parked vehicle	0	0	0	1	1
Other accidents- off straight not included in DCAs 170-175	0	0	0	1	1
Total	24	4	10	282	320

8.2 Crashes by severity

Table 13 provides the recorded crashes in Melton Town Centre in 2015-2020. A total of 157 crashes were recorded within the MTC boundary and just outside its perimeter (primarily on Coburns Road and the Western Freeway). One crash involving a fatality was recorded on Coburns Road near the Western Freeway ramp. Other recorded crashes resulted in 33 serious injuries (requiring hospitalisation) and 123 'other' injuries.

Table 13 Crashes by severity

Severity	Number of injuries
Fatal	1
Serious injury	33
Other injury	123
Total	157

Figure 32 shows the recorded crashes in MTC in 2015-2020, broken down by the severity of the crash.

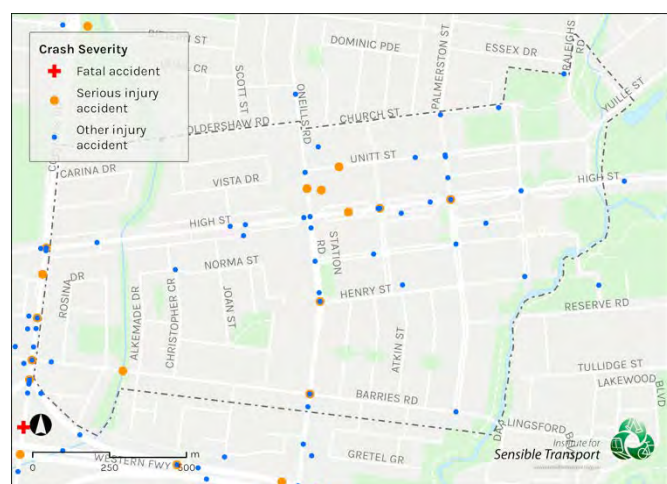


Figure 32 Crashes by severity, 2015-2020

Source: Department of Transport

8.3 Crashes by mode

Table 14 shows the breakdown of recorded crashes in MTC by mode of travel. It shows that while cars and trucks comprise most of the crashes, cyclists are disproportionately represented compared to the amount of cycling in Melton.

Table 14 Crashes by mode

Mode	Number of crashes	Crashes (%)
Pedestrian	24	7.5%
Bicycle	4	1.3%
Motorcycle	10	3.1%
Car/Truck	282	88.1%
Total	320	

Figure 33 shows the recorded crashes in MTC in 2015-2020, broken down by the transport mode involved in the crash.

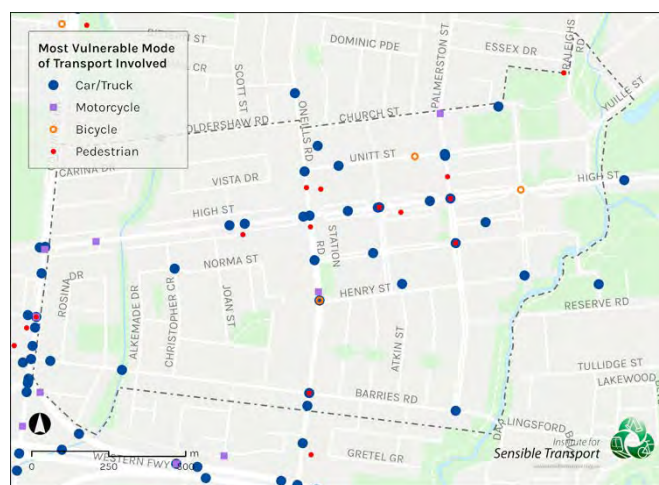


Figure 33 Crashes by travel mode, 2015-2020

Source: Department of Transport

As seen in Figure 32 and Figure 33, there is a high concentration of crashes recorded off the Western Freeway ramp on Coburns Road. These crashes primarily involved cars/trucks, with 3 crashes involving pedestrians and 3 crashes involving motorcyclists, where one crash resulted in a loss of life.

The concentrated cluster of crashes recorded where the Western Freeway ramp meets Coburns Road and the first intersection off the Western Freeway (at Barriers Road and Coburns Road) suggest the road network and driving conditions here are

unsafe. For example, motorists are entering/exiting the Western Freeway ramp at high speeds whilst turning/merging onto Coburns Road.

The distribution of road crashes has been estimated using a Kernel Density Estimation algorithm. This function creates a grid of cells and predicts the probability of a crash occurring at that point, based on the number, density, and distribution of nearby existing crashes. To reflect true travelling distances, the search distance of 800 metres for nearby crashes was constrained to a buffer of the transport network. As this is a statistical prediction, the numbers estimated reflect a relative heatmap of crash locations.

Figure 34 shows a heatmap of all crashes within the study area. Coburns Road, just outside the study area, has the highest concentration of crashes, at High Street, Barriers Road, and the entrance to the Western Freeway.

Inside the study area, Palmerston and High Streets intersection was found to have the highest density of crashes.

Figure 35 shows the density of crashes that involve a *pedestrian*. The Palmerston and High Street intersection is found to have a high number of pedestrian crashes within the Town Centre.



Figure 35 Heatmap of crashes involving pedestrians



Figure 34 Heatmap of all crashes

9. Site assessment



A site analysis was undertaken across multiple days. The transport network and street environment in the Melton Town Centre was assessed, based on its ability to support a high-quality environment for walking, cycling, bus use, car parking, traffic circulation, and built form. This section identifies challenges and future opportunities to enhance transport and urban vibrancy in the Town Centre.

9.1 Walking

The footpath network and walking experience was found to be varied across the study area. In some areas, the width and surrounding environment were high-quality, making the walking environment pleasant and attractive.

Examples of high-quality walking spaces include the area outside the library along McKenzie Street and the Court House Square. In these spaces, the footpaths were wide, with pavers, crossings were raised zebras that aligned with natural desire lines, and the built form surrounding these spots was varied and filled with greenery.

Other areas, such as Bakery Square and Wallace Square, had many of the same features, however, the interface with shops was varied. Many shops fronting these squares were double fronted with High Street or the street behind. Of these, only a small number were fully open at both entrances. Most focused on only one entrance, with the less-used exit either shuttered or left inactive with blinds or other materials. This created an atmosphere where the squares felt isolated and under-used. This was exacerbated by long blocks of building with no opportunity to 'cut-through' to the more active side. Where this did occur, it was often through an unattractive laneway or arcade.

There were several instances where the footpath dropped off suddenly. One example is the northern side of McKenzie Street near Station Road. Here, the footpath ends into a car park that blends into the street. This forces people to walk into the car park.

In other instances, the footpath changes in width and paving material. This is likely due to the organic way that development and changes to

Melton have occurred over the years. These haphazard changes create a sense of disconnectedness. The northern side of High Street, between Station Road and Palmerston Street, is one example. Here, the footpath juts out in the middle to accommodate the Motor Inn. Then, approaching the BWS, the footpath falls away and pedestrians are directed across the large crossover towards the intersection.

Another example is the southern side of Unitt Street, along the same block as above. Here, the footpath starts closer to the road before cutting closer to the property line within the large nature strip. Then, upon reaching the Melton Saddlery, the footpath turns sharply back into the block (at a blind corner), before pushing back out at the end of that row of shops.

Intersections also differ in their level of protection for pedestrians. Some intersections, like Palmerston Street and McKenzie Street, which has raised zebras on two of the crossing legs. Most intersections are roundabouts with no priority to pedestrians. Signalised intersections exist across High Street at Palmerston Street and Station Road. For both, we found the central medians to be of insufficient width necessary for safe crossing. There was no protection for pedestrians in the median from turning vehicles. Creating more space in the medians would help elderly people, and those with a disability, to cross safely.

Station Street was found to be difficult to cross, south of High Street. Several important trip attractors exist along the western side of Station Road, including a medical centre, police station, kindergarten, and community centre. However, there are no safe crossing points between the activity centre and these destinations.

9.2 Cycling / micro mobility

A number of cyclists were observed during the site visit, all of whom appeared to be taking a utilitarian rather than recreational trip, without special clothing. Of these cyclists, none chose to ride on the road, instead sticking to the footpath.

Off-road paths near the study area were found to be of good quality, such as the Toolern Creek path and Church Street. Here, the paths were sufficiently wide and had smooth surfaces. Some bike signage

and wayfinding were evident too. However, some paths were not sufficiently signed as shared paths, meaning that cycling was technically not permitted. Further, while the paths themselves were good, many of the foot/cycle bridges were narrow and likely to cause conflicts between users in some instances.

The on-street cycling network was piecemeal and disconnected. Some newer links, such as the buffered bike lane on McKenzie Street and Palmerston Street, while good, fell away at the intersection and did not connect to other sections of cycling infrastructure.

The bike lanes in which parking is also permitted (known in the 1990s and early 2000s as a 'wide kerbside lane') are unusable and offer no benefit to people seeking to ride in a safe environment. One particular example is found on Coburns Road (Figure 36), where signage indicates that it is a bike only lane but was occupied by parked cars.



Figure 36 Bike only lane, Coburns Road

Another is Unitt Street, where a one-way cycling lane on the northern side of the street exists, though was found to have parking along it. The lack of a corresponding bike lane on the other side of the street further reduced the viability of Unitt Street for cycling.

Coburns Road did have some innovative designs for people seeking to ride, particularly south of the freeway. The example at Coburns Road and Ayesha Ave directs cyclists off the road before the intersection, providing them with a raised priority crossing (on the eastern side), before directing them back to the painted bike lane, shown in Figure

37. While not best practice, this design does provide increased safety compared to a standard roundabout.



Figure 37 Coburns Road bike intersection

9.3 Bus

Melton is serviced by five fixed bus routes and one FlexiRide service. Many of the routes have stops within the study area in addition to the bus interchange stop on Palmerston Street, immediately north of High Street.

The bus interchange itself provides seating and shade at each bus bay. Bus totem poles provide basic route map and timetable information. The raised intersection has a zebra crossing over two of the three crossing legs. While the surrounding area on Palmerston Street is in reasonable condition, the guttering between the travel lanes and bus bays needs repair.

During the site visit, few passengers waiting for a bus were observed, though this could be due to the visit occurring during an off-peak time. Several groups were observed using the bus seating as a social space.

One oddity with bus movements was observed where buses used Wallace Square for bus turnaround movements.

9.4 Traffic circulation

Overall, the level of traffic within the study area was relatively low, especially compared to the capacity of the road network. This means that most streets have excess capacity. This includes wide travel lanes (Palmerston Street), separate turn lanes (Henry Street), or second travel lanes (Station Road, High Street).

Some attempts to reduce excessive travel lanes is evident, such as Smith Street south of High Street.

Some streets were found to carry more traffic than the street design or role in the street network may appear. Unitt Street was one example where relatively higher traffic volumes were observed.

9.5 Car parking

Melton Town Centre was found to have a large supply of car parking. Occupancy was visibly higher along High Street, with other on-street and off-street parking noticeably less occupied. See Section 7 for more information.

High Street, between Smith and Palmerston Street was observed to have the highest occupancy during the site visit. Many of those on the southern side of the street in this section appeared to be visiting VicRoads. Outside of these areas, parking was observed to be low.

The short-term and long-term (unrestricted) parking areas were well located, with shorter-term near high demand areas and long-term parking farther away. However, with the short-term parking, there was a mix of time limits ranging between 1/2P to 2P. Without prior knowledge of the parking areas, this made locating a parking spot more time consuming than it need be.

The design of some car parking layouts led to less efficient outcomes. For instance, the parking layout on Unitt Street, opposite St Dominic's Primary School has two entry and exit points. At the eastern end it has a two-way crossover. Then a middle entry point and a western exit point. This creates a confusing layout for drivers. In addition, the middle entry point could be converted to additional parking spaces with no impacts on accessing the car parking. Similar changes could be made to the parking fronting the row of businesses that include Melton Saddlery.

9.6 Built form

Melton Town Centre has a mixture of fine-grain retail buildings and large format retail. The eastern end of the Town Centre has a stronger concentration of the traditional shopping strip retail footprint, with narrow shop frontages creating a fine grain and diverse retail offering. This continues on the southern side of High Street, west of Palmerston Street. The northern side of this section, while maintaining a mostly consistent street frontage, contains larger format retail. Crossovers into individual sites are evident here, though less prominent than the western blocks.

The two western blocks have a built form that does not reference the surrounding sites, with each building having its own parking and footpath network that only services its own building.

The complexity of the crossovers is most evident in the most north-western block, where an Indian restaurant, Aldi, and the car wash create a challenging environment, not only for pedestrians, but for drivers as well. Permeability for pedestrians is only available by walking through private car parks.

Several sites along High Street show the remains of the old layout of the road, where service lanes likely connected directly across intersections rather than merging back to the centre carriageway. These sites, such as outside Professionals Real Estate, has only one loading zone, but takes up approximately 130m² of unused space.

Where Council has converted these spaces, they have been done to a very high-quality. Court House Square and the outdoor dining for the Golden Fleece Hotel show that the remaining spaces could be converted to public space in a way that enhances the Town Centre.

The current Council office site was also found to be a potential catalyst sites for driving change in the Town Centre. Should Council offices relocate in the future, the site could be used as a demonstration project for affordable apartments within a high-quality pedestrian environment, right in the heart of the Centre. This could increase residential numbers within a walking distance to the shops and stimulate further development activity. This is expanded further in Section 11.2 of the report.

10. Movement and Place



A Movement and Place Assessment was undertaken. This included observations of the quality of the street (place function) and the movement along these streets.

10.1 Methodology

The Movement and Place (M&P) Framework, developed jointly by VicRoads and Transport for Victoria enables Council and the community to understand the dual role that streets perform in terms of being a movement corridor and a place in itself. Streets provide for movement of people and goods, and also serve as places for people to recreate, socialise, shop etc. There is a natural tension between these two functions, therefore careful consideration is required to determine a street's level of priority, from movement and place perspective.

The M&P Framework consists of four broad modules, of which the first two are on a strategic level and the third and fourth module on a project or local level. This project has included a high-level assessment of the M&P Network Classifications and Aspirations; the first module. Subsequent work will need to be completed by Council and Transport for Victoria, including the three other modules:

- Module 2: Performance Assessment
- Module 3: Toolbox & Design Guides
- Module 4: Options Assessment

Module 1, Network Classification Matrix, outlines that each transport network section be given both Movement and Place classifications. For movement, the five classifications are:

- **M1** Mass movement of people and/or goods on routes with a state or national-level movement function or provides primary access to state-level places.
- **M2** Significant movement of people and/or goods on routes connecting across multiple municipalities or provides primary access to regional-level places.
- **M3** Moderate movement of people and/or goods on routes connecting municipalities or provides primary access to municipal-level places.

- **M4** Movement of people and/or goods within a municipality.
- **M5** Local movement.

For place, the five classifications are:

- **P1** Place of state or national significance.
- **P2** Place of regional significance.
- **P3** Place of municipal significance .
- **P4** Place of neighbourhood significance.
- **P5** Place of local significance.

By giving each transport network section these two classifications, its role in the overall network can be identified as one of six types. Figure 38 shows the street type relevant to each Movement and Place rating.



Figure 38 Movement and Place Framework

Source: Department of Transport

This highlights that instead of only viewing roads through a prism of movement, we can consider a matrix of 25 cells, each one with a specific movement designation and a specific place designation. We can use this matrix to compare and contrast the way streets are performing today to how we would like them to perform in the future.

10.2 Existing Movement and Place Classification

10.2.1 Movement Classification

The current movement classifications for streets within the Melton Activity Centre are shown in Figure 39. Within the area of study, High Street, Station Road, O’Neills Road and Palmerston Road between Unitt and High Streets have an M3

movement classification, reflecting their roles in providing access to Melton town centre as a municipal hub. Most other streets within the core shopping area have an M4 classification, providing movement to specific destinations and around Melton Town Centre. Other streets providing movement within the municipality such as Yuille Street, the rest of Palmerston Road, and Barries Road also received an M4 classification. The remaining streets cater to local movement, making them an M5.

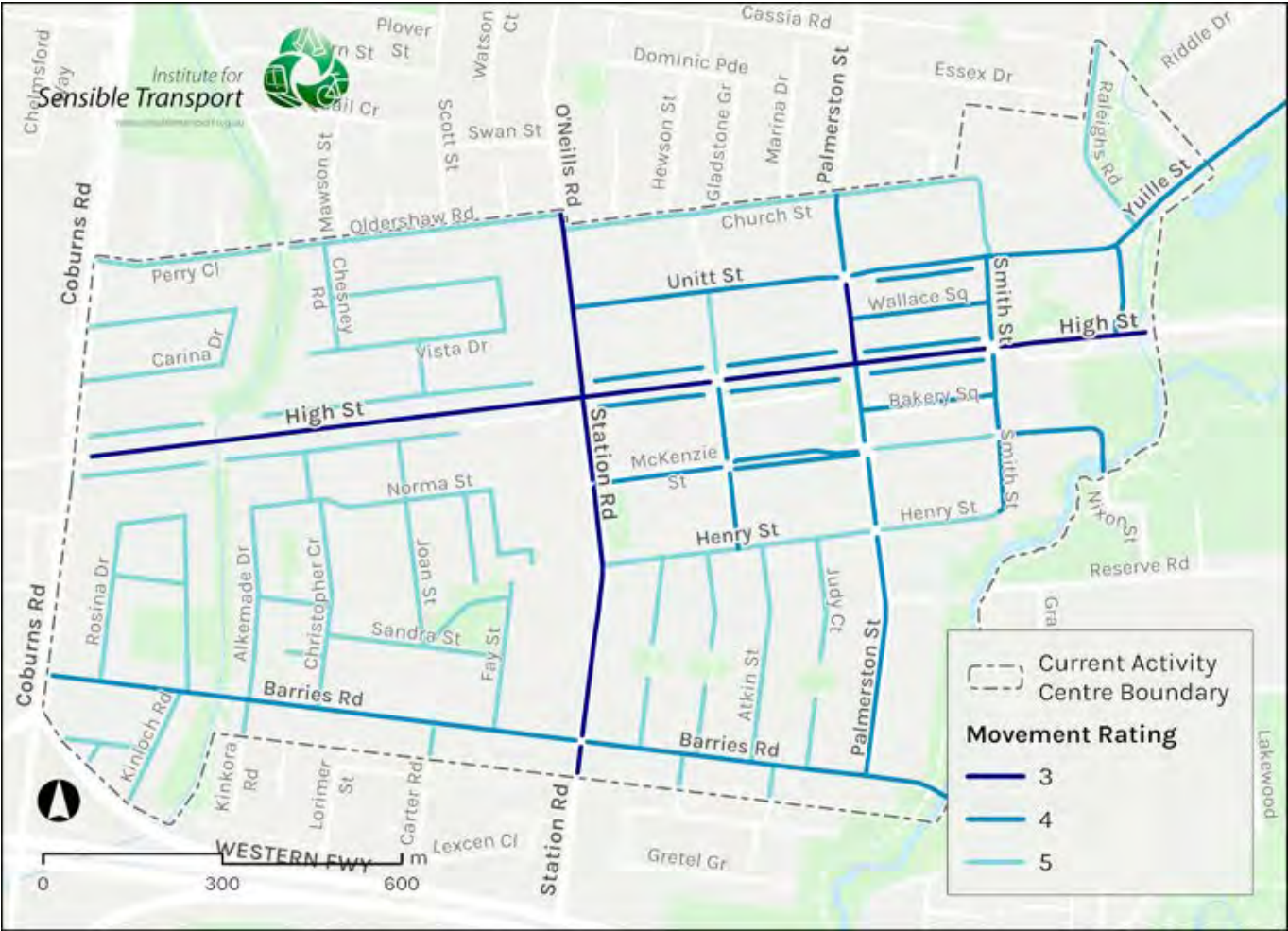


Figure 39 Existing Movement Classifications

10.2.2 Place Classifications

The current place classifications are shown in Figure 40. Streets with municipal significance were scored as P3, including the High Street service roads between Alexandra and Smith, Palmerston Street, and McKenzie Street due to access to shops

and hospitality venues, and/or high-quality design elements providing placemaking qualities at ‘Town Hall Square’ and Melton Library. Other streets within the core town centre have a P4 classification. All streets outside the town centre are places of local significance, with a P5 classification.

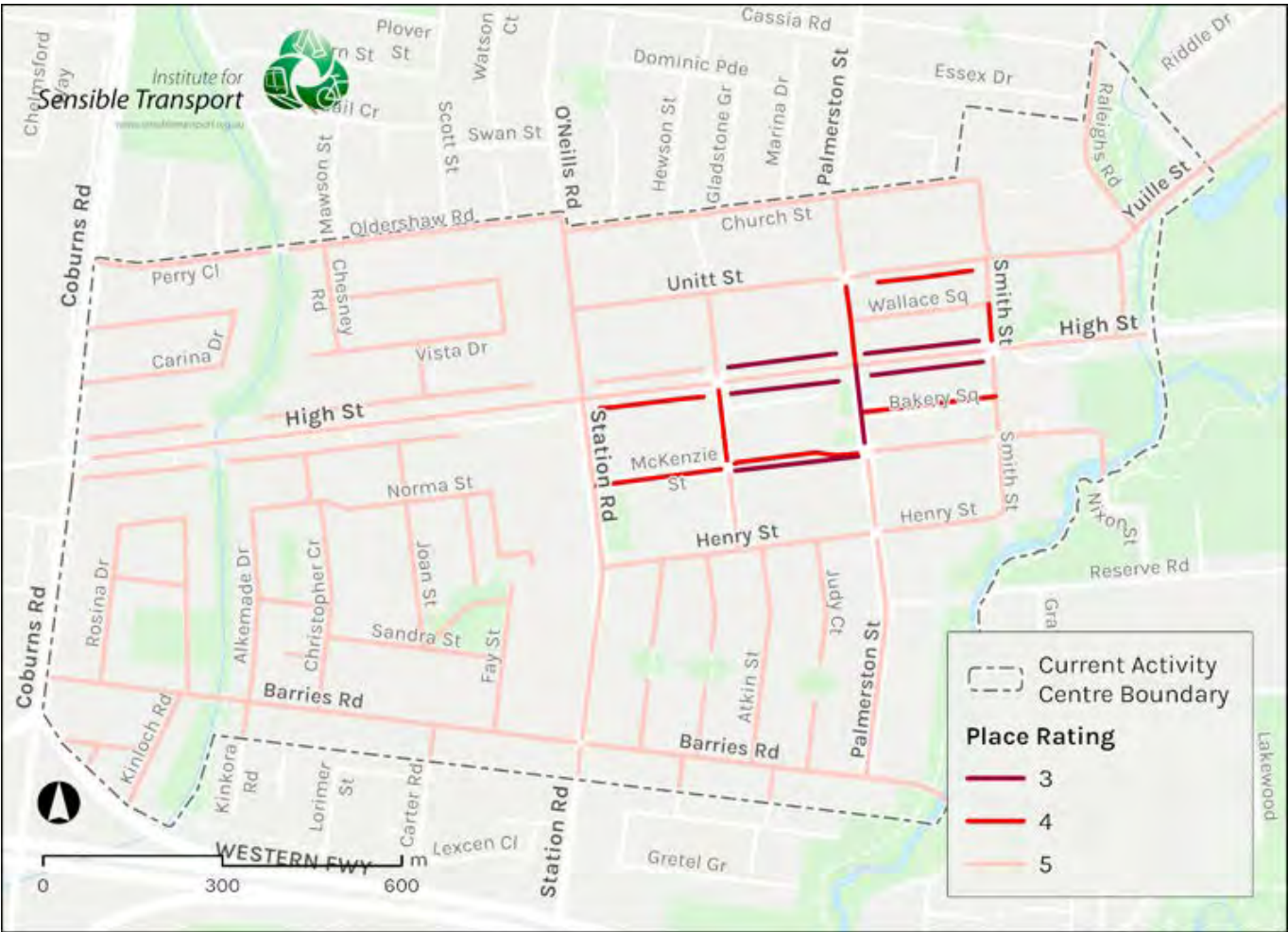


Figure 40 Existing Place Scores

10.2.3 Street Types

Based on the individual Movement and Place classifications, the Street Type can be seen in Figure 41. High Street, Station Road and O’Neills

Road function as connectors, while Palmerston Street the High Street service roads adjacent to Palmerston, and the library section of McKenzie Street are Activity Streets. The remainder of streets in the Activity Centre are Local Streets.

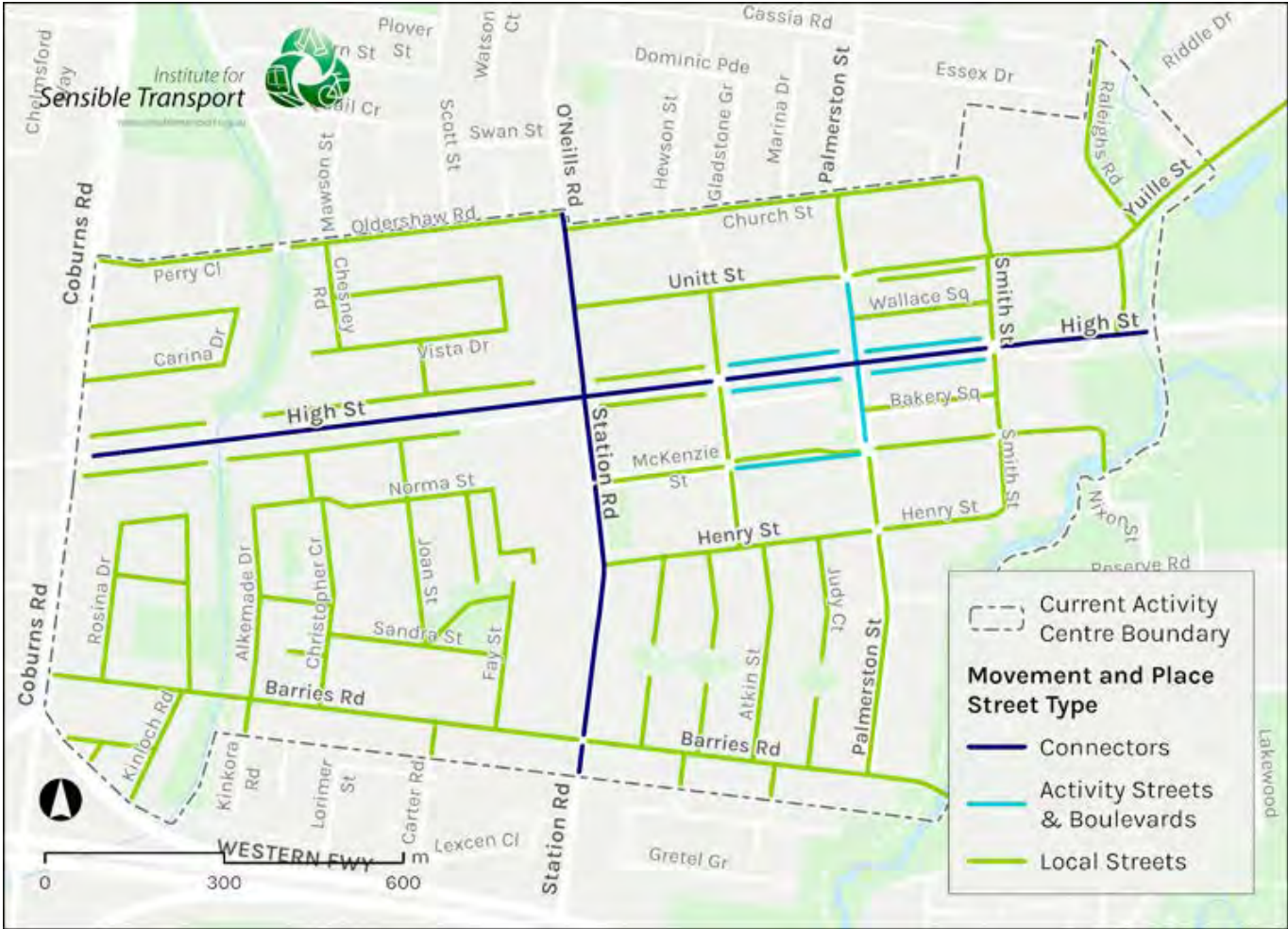


Figure 41 Existing Movement and Place Street Types

10.3 Proposed Movement and Place

Figure 42 shows the proposed Movement and Place Street Types for Melton Town Centre. Here, the importance of place will be increased along High Street, between Station Road and Smith Street, along with the section of McKenzie Street out the

front of the library. The place function of Palmerston Street, between McKenzie and Unitt Streets is also proposed to increase. These axes will reinforce their central role to making Melton Town Centre a vibrant activity centre.

The movement function of High Street within the activity centre boundary is proposed to *decrease*.

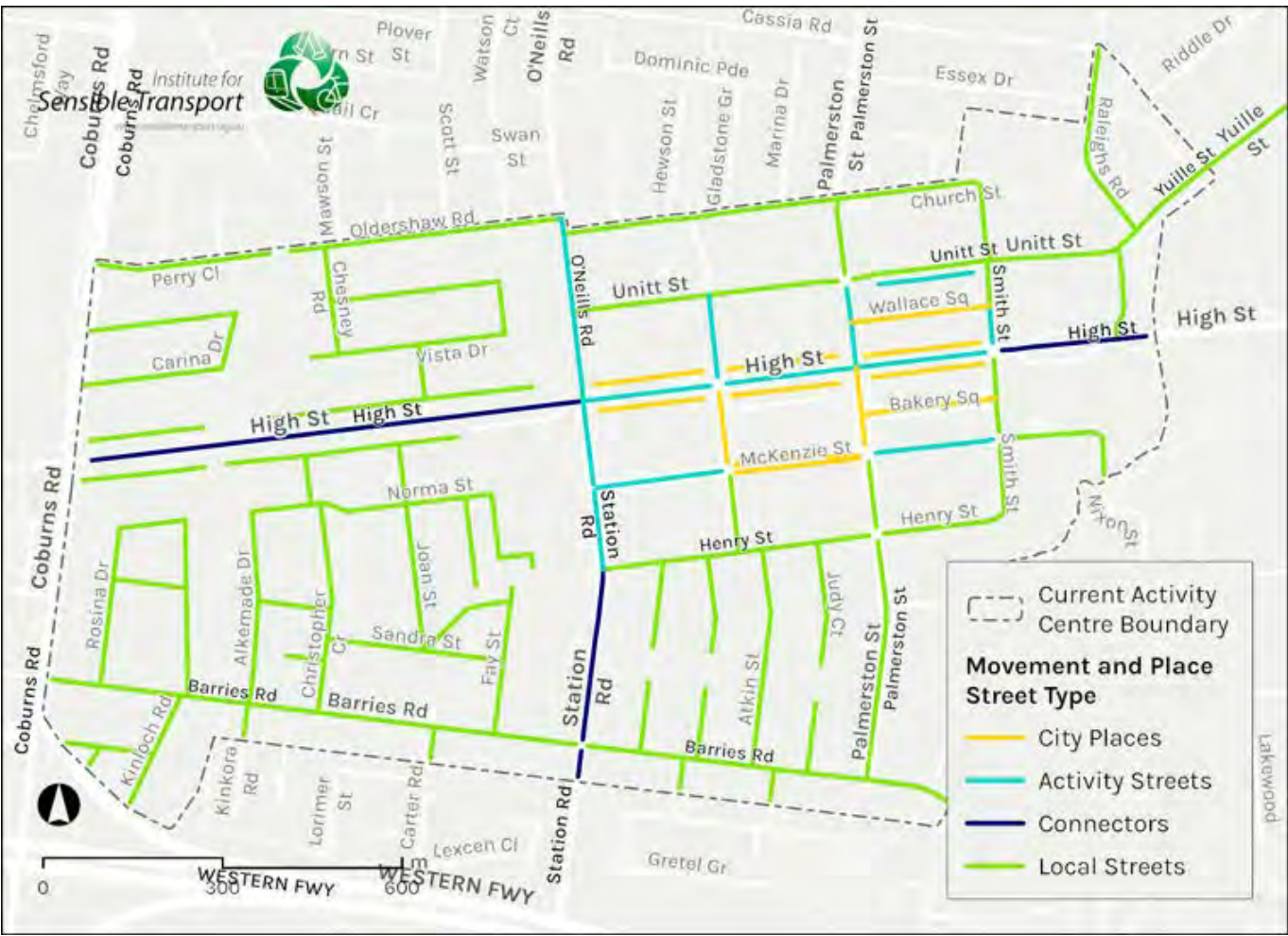


Figure 42 Proposed Movement and Place Street Types

11. Issues and Opportunities



The previous analysis has been condensed into a summary of the key issues and opportunities for enhancing the vibrancy and mobility options within the Melton Town Centre.

Figure 43 provides a synthesis of the issues and opportunities identified by the Institute for Sensible Transport. These issues and opportunities have been identified through a comprehensive policy review, detailed data analysis, and multiple-day site assessment. Each topic is connected to a set of *issues/barriers*, and a number of *opportunities* designed to address the issue/s.

Topic	Issues / barriers		Opportunities
Public realm and vibrancy	Excessive at grade car parking detracting from the public realm Lack of shelter and shade	Low Melton Town Centre residential population Poor passive surveillance	Improve the public realm through development in the Town Centre Create more pedestrianised zones and village squares Create more people focused streets
Traffic circulation	Unsafe intersections High Street is a barrier	Fast speed limits Poor legibility for preferred traffic routes	Safer speed limits Redesign intersections to be safe for all users Encourage traffic to the periphery of the Town Centre
Parking	A mismatch between parking supply and demand across the Town Centre	Inconsistent time restrictions	Developing a coordinated, consistent and strategic car parking management framework Create clear visitor and employee parking zones that best meet peoples needs Real time parking availability
Public Transport	Distance between Town Centre and railway line a barrier Inconsistent experience catching the bus to the railway station	Limited bus connection to surrounding region	Advocate for consistent bus routes to railway station Advocate for an increase in bus route coverage in surrounding region Advocate for higher frequency for buses Advocate for more bus stops in the Town Centre
Cycling and micro-mobility	Cycling infrastructure ends before Town Centre Shared paths not properly signed to use legally	Unsafe speeds for vulnerable road users	Protected micromobility lanes into and within Melton Town Centre Sign existing shared paths so they can be used legally
Walking	Unsafe intersections reducing pedestrian comfort/safety High Street is a barrier to pedestrians and cyclists	Poor permeability throughout the Town Centre	Prioritised pedestrian crossings Safer speed limits Enhance pedestrian permeability Redesign High Street into a high-quality public space

Figure 43 Issues and Opportunities

Figure 44 shows an overview of the existing conditions within Melton Town Centre. While there are some painted bike lanes to and within the Town Centre, these were found to be mostly used for car parking. Council has several high-quality off-road paths to the east and west of the study area. However, these paths do not provide access into the Town Centre. Where these paths cross major roads, there are often no crossing infrastructure, such as a refuge island, to support safe crossings.

There are several good paths through residential areas and within the town centre, however, many other areas are barriers that restrict permeability. This includes the long building blocks with no cut-throughs, such as trying to access High Street shops from Wallace Square. The lack of crossing points over High Street, and the width of the street itself, makes it difficult to travel along and across the street on foot.

Missing sections of footpath were identified along High Street and the western end of McKenzie Street.

Unitt Street (near Melton Saddlery) is one example of a narrow footpath and uncomfortable walking environment. Accessing shops along the western end of High Street was also difficult for pedestrians; most had no footpath connection between each shop, requiring navigation through each shops' car park.

Several intersections were found to have an unsafe design, such as unprioritised crossing legs at roundabouts and unprotected crossing medians at signalised intersections. Pedestrian safety at signalised intersections along High Street was poor, with narrow medians and no protection from turning traffic. The multi-lane roundabouts along High Street are difficult to traverse safely, even for able-bodied people. Crossing Station Road is also difficult, with limited crossing opportunities between McKenzie Street and Henry Street across to the civic services on the western side of the street. Crossing points near the schools in the north also don't provide priority to students.



Figure 44 Existing conditions map

Figure 45 identifies the overall opportunities related to enhancing transport options, increasing safety and urban vibrancy in the Melton Town Centre. These proposed changes will enhance transport choice for those visiting or working in the Town Centre. It includes new shared paths and protected bike lanes / micro-mobility lanes that connect the off-road shared path and surrounding residential areas to the Town Centre. Providing safe and convenient links from the surrounding residential areas to the Town Centre will give more transport choice for people to reach their everyday needs. The proposed bike boulevard along Oldershaw Road would link the high school and aquatic centre with the Town Centre via the Church Street shared path.

New links designed to enhance permeability through the activity centre, as well as the surrounding residential areas, will improve the walking experience to and within the Town Centre. Creating new pedestrian links between street blocks will make it easier for people to get to their destination from off-street parking lots.

Safer crossings will also improve the pedestrian experience, making it safer and quicker to get around the Town Centre on foot. Converting the roundabouts on High Street to signalised intersections will improve safety. Having raised zebra crossing legs, similar to those already stating

to be seen in Melton, at all other roundabouts will improve pedestrian safety and amenity. Installing pedestrian refuge islands across Station Road, at McKenzie and Henry Streets, will link the civic services (police station, kindergarten, Djerriwarrh Community & Education Services) to the rest of the Centre and all-day parking areas.

Implementing a consistent approach to car parking, and incorporating the use of parking detectors and real-time signage, would ensure people who need to drive and quickly and conveniently find an available parking space. Key off-street parking lots, such as Wallace and Bakery Squares, are recommended for parking detectors. Implementing the actions from the 2019 Car Parking Study, as well as the implementation of the car parking decision-making framework, will ensure a consistent approach to managing existing car parking bays and responding to any future issues about parking.

Advocating to the State Government for improvements to the local bus network would improve access to the Town Centre from the surrounding residential areas and new suburbs, such as Cobblebank. Increasing the catchment of the bus network beyond the Melton suburb would also increase the reach of the Town Centre, supporting local businesses and employees.

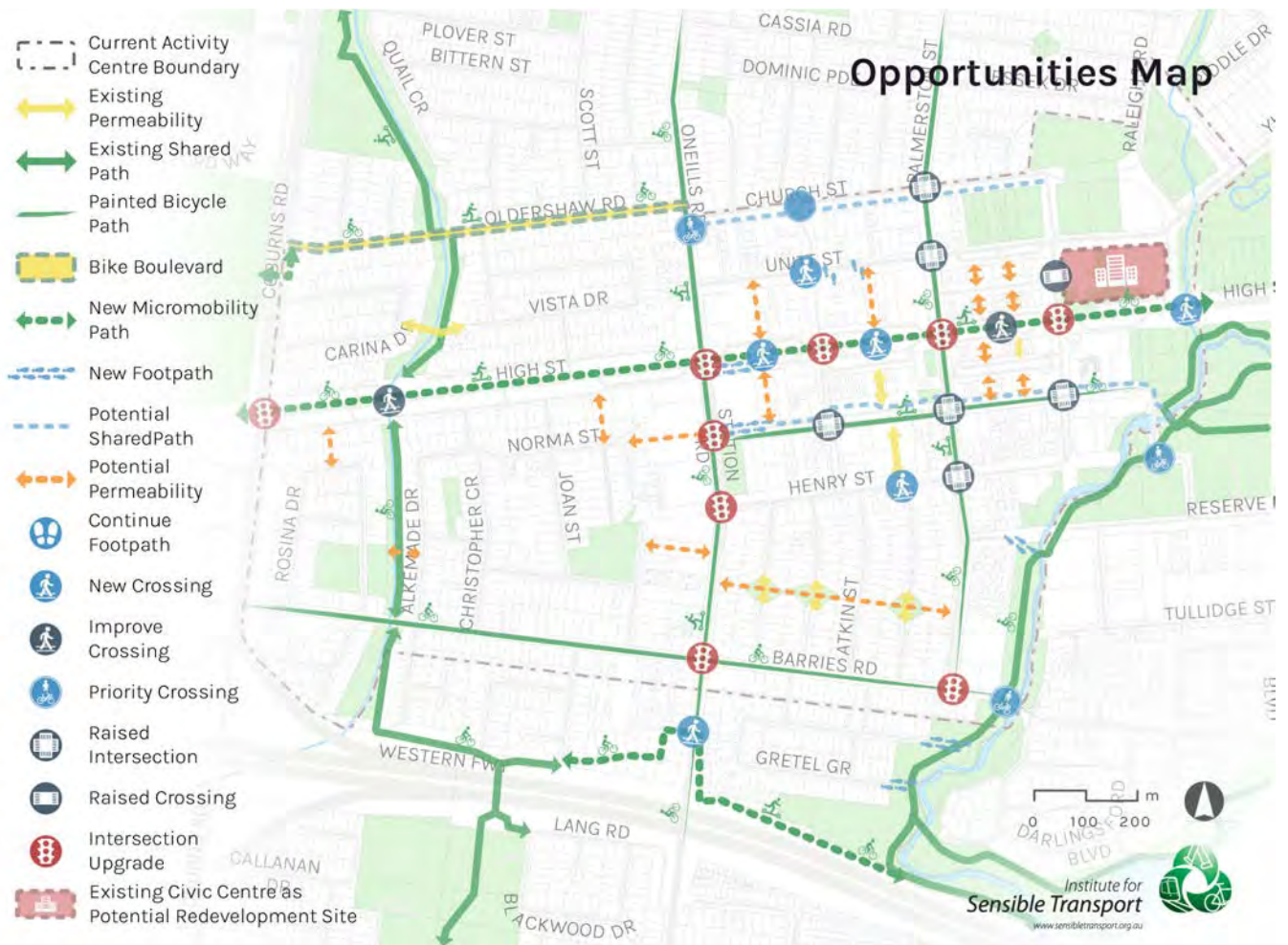


Figure 45 Overall opportunities map

This section outlines the transport network options to support the revitalisation of the Melton Town Centre.

11.1.1 Walking

A safe and comfortable walking environment will continue to be critical to a revitalised Melton Town Centre. All visitors to the Town Centre become pedestrians for the start and end of their visits, regardless of their main mode of transport. Safer crossings, wide and attractive paths, and shorter walking distances will make walking a more compelling option.

Specifically, the following changes are recommended:

- Improve permeability through (through and/or between buildings to connect with zebra crossings).
- Make school crossings at Unitt Street and Church Street raised zebra crossings. This would ensure safe crossing for children outside crossing guard hours.
- Implement cut-through east-west connecting diamond parks in southern residential area.
- Work with DOT to construct raised signalised intersections along High Street at Alexandra and Smith Street.
- Work with DOT to upgrade Palmerston Street / High Street intersection to a raised intersection with enhanced pedestrian crossing protection.
- Work with DOT to upgrade Station Road / High Street intersection to provide enhanced pedestrian crossing protection, including zebra crossings at slip lanes.
- Raised crossings (multiple sites, including Henry St, west leg of T with Judy Ct).⁷
- Add pram ramps / refuge island crossing at Station Road, aligning with the northern side of McKenzie Street.

- Relocate school crossing on O'Neills Road to be immediately south of Church Street, in line with the shared path.
- Construct raised zebra crossings at all legs of all other roundabouts within the study area.

11.1.2 Cycling

Melton has a number of high-quality shared paths in the area. Connecting these existing paths to key destinations in the Melton Town Centre and to surrounding schools will increase transport choice for the local community.

The following actions are recommended:

- Formalise the existing shared path network with correct signage.
- Install separated cycling infrastructure along High Street within the Town Centre, in coordination with wider plan to re-vitalise High Street.
- Improve cycle lanes along Palmerston Street and Station Road.
- Turn Perry Close / Oldershaw Road into a bike boulevard.
- Install plain, standardised, stainless steel bike parking hoops across the Melton Town Centre.
- Improve road space allocation for people on bikes at roundabouts, either with sharrows into the intersection, or separated like the examples in Figure 4 and Figure 37.
- Extend the shared path along the Western Freeway from Lexcen Close, across Station Road, to the Toolern Creek Path.
- Install protected bike lane along Station Road, between Lang Road and Lexcen Close. This stretch of road has a wide painted bike lane. However, due to the high speed and high traffic volume, as well as the sparse surrounding environment, riding along this stretch of road is exposing and unsafe. A protective barrier between the bike lane and the car lane could be installed quickly and cheaply using fast-build pin-down orca kerbing. It could also be done

• ⁷ McKenzie and Palmerston Street a good example for pedestrian-priority intersections; raised zebras on all four legs.

without any impact to parking. The barrier would also improve pedestrian safety perceptions, as the existing kerbing for the footpath is semi-mountable.

11.1.3 Public transport

The Melton Town Centre is an important interchange for bus patrons, connection to Melton Railway Station, and to Sunshine. While Council is limited in what they can action directly, the following advocacy actions are recommended:

- Alter Bus 453 and 457 so that they loop around Melton Town Centre, increasing the number of stops and service coverage. The Loop could take Palmerston, McKenzie and Alexandra (this could include a stop at the library).
- A direct bus route that connects to new developments in Cobblebank.
- Restrict bus movements along Wallace Square.

11.1.4 Roads

The road network dominates and in many cases, diminishes the quality of public space in the Melton Town Centre. High speed limits, over-spec road design, and traffic movements degrade the vibrancy of the activity centre. The following actions are proposed that reduce the negative effects of the road network without negatively impacting on traffic circulation.

- Create a traffic circulation plan which directs traffic away from High Street.
- Blanket 40 km/h across the study area.
- Remove slip turn lanes at High Street and Station Road. Or at the very least, add raised zebras at those slip lanes.
- Implement one of the three concept plans for High Street (see Section 12 for more information).
- Make Alexandra Street one-way northbound from High Street. Add the extra space to the sides, with wider footpaths, seating, and trees.
- Remove slip turn lane from Station Road, southbound onto Henry Street.
- Consolidate exit turns to one lane at Henry Street and Station Road.
- Work with the State Government to have High Street transferred to Council for management.

11.1.5 Heavy Vehicles

While most heavy vehicle movements use the Western Freeway, traffic volume data shows that many heavy vehicles continue to use High Street. While some will continue to be necessary to support local businesses, other trips could be avoided with changes to the street design and approval along the gazetted heavy vehicle network.

The following actions are proposed to minimise unnecessary heavy vehicle movements within the core of the activity centre:

- Reduce the speed limit along High Street to 40km/h within the Town Centre.
- Remove High Street from the gazetted heavy vehicle network.
- Review NHVR permit practices to discourage heavy vehicles from using High Street for through traffic purposes.

11.1.6 Building a sense of place

There are opportunities to build on the successes already evident in the Melton Town Centre. Public spaces such as Court House Square, the consistent fine-grain shop fronts along the east of High Street, Wallace and Bakery Squares are the most prominent high-quality urban environments.

The following actions are recommended to further enhance the Melton Town Centre:

- Ensure all mature trees in Melton Town Centre are retained.
- Encourage developments along High Street to build out to the property boundary, with parking accessed from the rear.
- Increase open space from the service lane out the front of Pho Hoa Melton, Professionals Real Estate, Stone Bar and Grill, and Subway
- Support redevelopment of commercial areas with increased density. The overall approach should be to shift away from open lot car parks; design principles should prefer rear-loading; where multi-story, preference should be for sleeved, basement, or elevated parking with undercroft strongly discouraged.

11.2 Leveraging Council's site as a strategic redevelopment opportunity

Council's offices in Melton Town Centre could be a catalyst site for redevelopment. Under Council stewardship, the site could be a showcase of best-practice design, incorporating mixed-use development within a pedestrian-oriented site with social and affordable housing.

The site could be a template for the type of development that Council wants to see in the Town Centre. A multi-storey development with housing above a ground floor retail and community uses. This would showcase the possibility and the desirability of these types of development to the private sector.

Such a redevelopment could also include increased pedestrian permeability through the site, with pedestrian only links between building footprints. This would also highlight the benefits of permeability for the rest of the blocks within the Town Centre.

The redevelopment could also be partnered with the community housing sector and the State Government. Several funding mechanisms exist to deliver such schemes, such as the Victorian Big Build, Social Housing Growth Fund, and Victorian Property Fund.

12. Reimagining High Street – 3 concept design options



High Street is the principal commercial street in the Melton Town Centre. High Street's current design reflects the priorities of previous decades, in which the needs of the motor vehicle was at the top of a road user hierarchy, to the detriment of all other modes. Contemporary aspirations for a more people focused, vibrant public realm will require a reimagining of High Street's design.

Road space allocation changes, favouring walking, cycling and public transport, as well as place based urban realm improvements will help to make High Street the centrepiece for a Melton Town Centre that attracts residents, visitors, workers, and businesses.

12.1 Existing High Street cross section

Figure 46 is a cross-section illustrating the existing road space layout at one section of High Street. The street ranges between 60 and 90 metres wide, with a 60m section shown in Figure 46.

In the centre is a dual carriageway separated by a centre median. Another median separates the service lane on each side. There is angled parking on both sides of the service lane. Mid-block and at each end of the block, the medians widen to provide increased greenery and shorter space for crossing the street.

The width of High Street, and the dominance of cars in the streetscape, are a barrier for moving between the two sides of the street.



Figure 46 Existing cross-section of High Street, Melton

12.2 Reimagining High Street – 3 conceptual options

We have developed three concept options that reimagine what High Street could look like. These options seek to:

- increase the tree canopy and green space
- make it easier to walk and cycle
- better connect both sides of the street
- encourage people to spend more time in the street and at local businesses.

These options would stitch both sides of High Street together and create a green spine that is the heart of the Melton Town Centre. In all three examples, a reduction in on-street parking and travel lanes is recommended.

As part of our concept plans, we have ensured that all existing mature trees are retained. The concepts

have been developed with the principal of not removing existing green space and only consider what can be changed within the bitumen areas of the street, to minimise disruption and capital cost.

12.2.1 Option 1

Option 1 for High Street is shown in Figure 47. The main change is removing the angled parking adjacent to the footpaths, being replaced with increased green spaces and new tree plantings. Bidirectional bike lanes would be provided here on both sides of the road. Due to the width of the street, having the option for bike riders to ride both ways is recommended as many will likely want to stick to one side of the street to travel up and down. Parallel parking would then be provided in the left lane of High Street, to compensate for the removal of angled parking. This parallel parking could include clearways at peak times to accommodate peak hour traffic.



Figure 47 High Street reallocation idea, option 1

12.2.2 Option 2

Option 2 is shown in Figure 48. In this option, the angled parking adjacent to the footpaths is converted to parallel, with the extra space this creates converted to additional green space and trees. It could also be used for on-street dining / park benches. A bidirectional bike lane is proposed in the centre by converting one half of the dual carriageway. This would also include increased green space and tree planting. One of the two lanes in the remaining carriageway would then be reversed to maintain two-way access along High Street.



Figure 48 High Street reallocation idea, option 2

12.2.3 Option 3

Figure 49 illustrates the cross section for Option 3. Option 2 and 3 have the same proposed change to the service lane and parking. Option 3 however proposes a different layout for bike lanes and the centre carriageways. In Option 3, the outside lane in each carriageway is converted to a protected bike lane, with additional verges separating bikes from cars.



Figure 49 High Street reallocation idea, option 3

13. Car Parking Strategic Options



As highlighted earlier, the urban realm in the Melton Town Centre is dominated by parking. The majority of parking areas within the Melton Town Centre have relatively low (i.e. <65%) parking occupancy at peak times. While there are sites in which parking occupancy is high (i.e. >85%), these are the exception, and considerable opportunity assists to rationalise parking without diminishing the ability of people to drive and park within the activity centre. This section outlines actions Council can take to better manage parking.

This section will first include an overview of existing parking conditions. Second, it will outline the principles for managing parking in the Melton Town Centre, including redevelopment considerations. Then it will outline the broad actions required for transforming the management of car parking across the Melton Town Centre, focusing on the three different parking types:

- Public on-street
- Public off-street
- Private off-street.

We will then consider the three different use types:

- Visitor parking (short-term)
- Staff parking (long-term)
- Special use (disabled, loading, mail, drop-off).

A decision-making framework has been developed, design to assist Council in making future changes to parking.

13.1 Existing conditions

The Melton Town Centre has over 2,600 car parking spaces for staff and visitors. These are located across a range of public on-street, public off-street, and private off-street car parking areas.

Approximately 1,000 parking bays are unrestricted, with another 800 short-term (1-2P). A smaller number of very short (1/4-1/2P) and medium-term (3-4P) parking exists. Special use parking, such as disabled, loading, and mail zone bays are also evident across the site.

Figure 50 shows a general map of existing time limits for car parks within Melton Town Centre. It shows that much of the existing time limits aligns with the principle of locating short term parking near high demand locations, with longer-term parking located farther away.

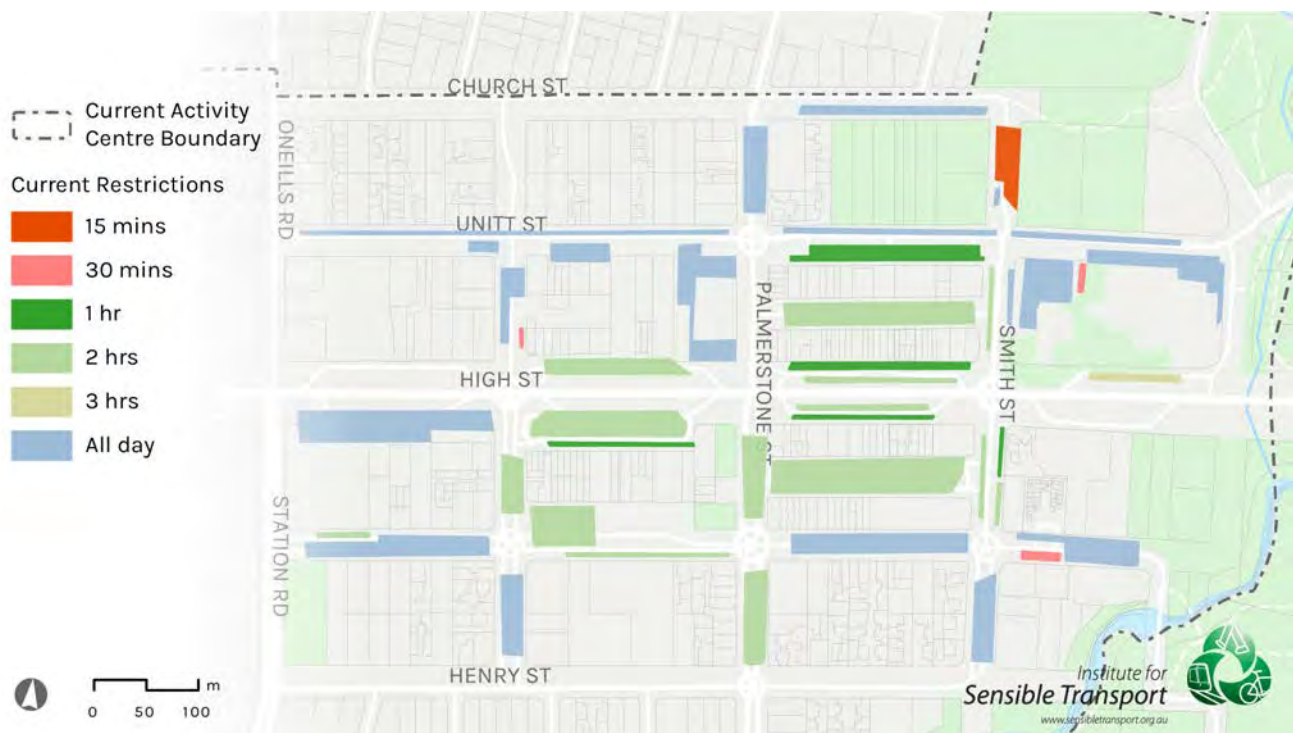


Figure 50 Map of parking restrictions

13.2 Objectives

This section outlines the overarching objectives for managing car parking in Melton Town Centre. They broadly align to those outlined in the 2019 Parking Study.

- Manage parking to respond to the needs of the community.
- Promote a safe, accessible, and sustainable road environment for all users.
- Create a consistent and fair parking environment
- Facilitate access to commercial activities and other community facilities while balancing the needs of other users.
- Ensure parking improves community safety, amenity and economic activity.
- Promote walking, cycling and use of public transport.
- Provide a transparent process for consultation and decision making.

13.3 Decision-making framework

Councils often receive requests from the community to make changes to existing parking restrictions. A car parking decision-making framework can be a helpful tool for analysing and making changes to parking in a fair and consistent manner. Figure 51 provides one way that Council may wish to act on parking requests.

This framework begins with capturing the relevant data to determine the extent that the stated parking issue exists. For it to be effective, and fair, clearly outlined metrics for parking should be in place prior to using the framework. For instance, setting an occupancy threshold metric (i.e., 85% occupancy) that can be measured against.

If a parking issue is found to exist, the first option looks at nudging parking behaviour first. This could be talking with the community about the parking issue and what type of behaviour is causing it. For example, if staff are parking out the front of the shop and forcing visitors to park farther away, working with those businesses to locate appropriate all day staff parking will likely resolve the visitor parking shortage. Or it could include a program that encourages people to leave the car at home and use sustainable transport modes instead.

Once all possible avenues have been exhausted with influencing parking behaviour, it is then recommended to consider making changes to the parking restrictions. This may include changing time limits, redesigning existing parking layouts, installing parking overstay detectors, and / or increasing enforcement.

Only after all options to improve existing parking management has been exhausted, should Council then consider options to increase the amount of parking.

Car Parking Decision-making Framework

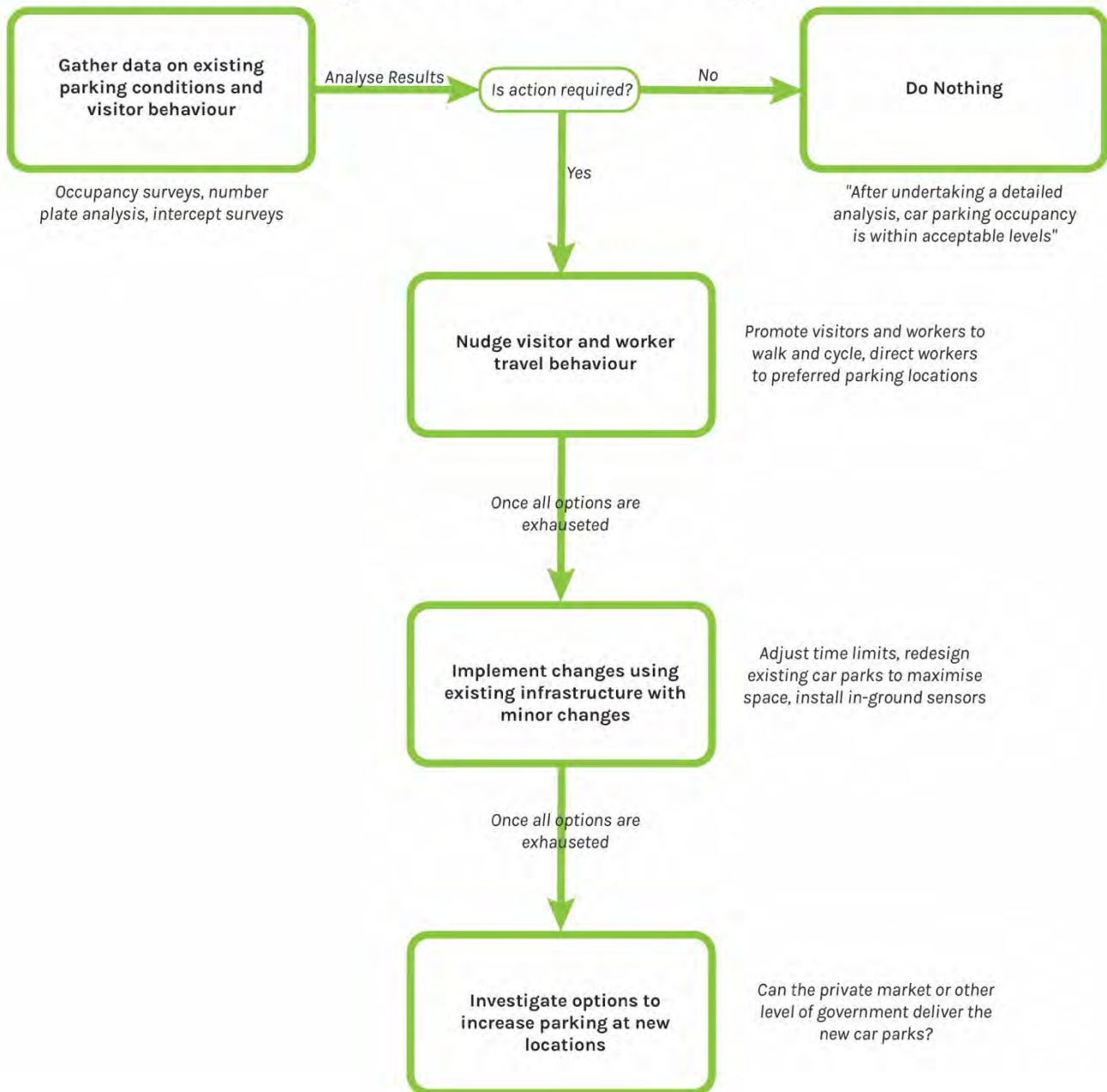


Figure 51 Car parking decision-making framework

13.4 Council-controlled parking

This section considers all parking, on-street and off-street, managed by Council.

The *2019 Parking Study* outlined a comprehensive analysis of parking occupancy for different uses. Overall, while some specific areas were found to have high demand, most parking was well below the preferred benchmark of optimal occupancy of 85% full.

In order to create a consistent and fair parking experience, the following changes are proposed, unless specific circumstances are called for to deviate:

- Implement visitor zone parking areas (The time limit should match typical visit length, for example two hours is likely to meet most people's needs).
- Implement employee zone parking areas (The time limit should match a typical working day, plus extra time to allow for additional trips at the start and or end of the workday).
- Implement a consistent approach for special use parking.

- Reallocate car parking to other uses where doing so provides increased benefit to the Town Centre.

13.4.1.1 Unrestricted versus 10P parking

Time-based restrictions are recommended for employee parking within Melton Town Centre. As the Town Centre is subjected to residential growth over time, ensuring that new residential developments do not rely on on-street parking as their primary vehicle storage area will ensure that employees in the area will still have space to park and that off-street parking provided for new developments is used. 10P parking is recommended as the most appropriate parking time limit for these areas. This allows an employee to park, walk to their place of work, and undertake any errands / trips before or after work without exceeding the time limit. It also allow visitors to the Town Centre, or to a nearby house, to use the parking without exceeding the time limit. This would also ensure that multi-day parking does not occur on-street, though overnight parking would be able to occur without disruption.

A consistent approach to special use parking.

Figure 52 outlines a generalised approach for the siting of special use parking. It provides an example for parallel and for angled parking bays. Siting accessible parking and loading zone parking at the same locations for each block of parking bays creates a consistent parking experience for those using loading zones or accessible parking. It also allows for kerb cuts to be used at each end of the parking bay, with extra space available at the end of the parking row.

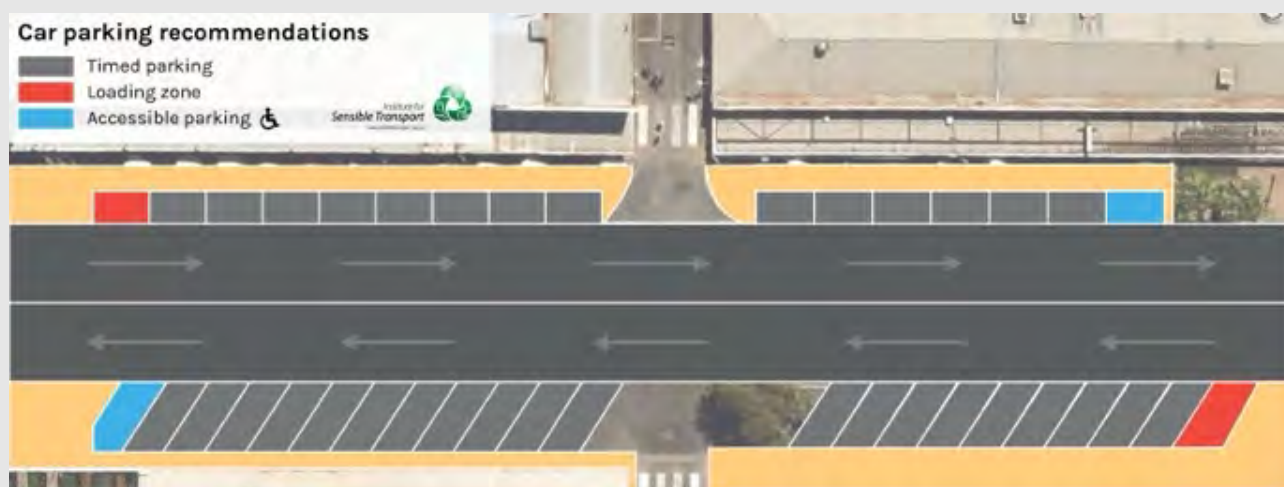


Figure 52 Special use parking locations

13.5 Incorporating new parking technology

New parking technology exists that could help Melton better manage parking. Parking Overstay Detectors (PODS), when matched with real-time display signage, can better direct people to available car parks. This reduces unnecessary car movements to find a space and reduces frustration associated with parking.

PODS are sensors that sit below the ground in a car parking bay that monitor whether the space is occupied or not. These sensors are managed by a central software system that can provide real-time data via online dashboards or via signage in the public realm. It may also be used by parking enforcement officers to manage compliance.

Real-time display signage can be differentiated by the time restriction, helping people find spaces available that match their needs. Figure 53 provides an example from Manly, NSW.



Figure 53 Real-time display signage

13.6 Private off-street parking

A number of sites within the Melton Town Centre include parking owned and managed by private landowners. These are mostly associated with large format retail located to the west of Palmerston Street, north of High Street, and west of Alexandra Street, south of High Street. Council have limited control over parking restrictions on these sites, unless those landowners enter into an agreement to enforce parking on the site.

However, Council have more power over private car parking when a site is being redeveloped. This is via the controls available through the Victorian Planning Scheme. This may include the number of spaces provided for a given use as well as the location of crossovers.

13.6.1 Planning Scheme and parking

Controls relating to car parking in the Victorian Planning Scheme mostly fall under Clause 52.06. This Clause applies a standard parking rate for different uses, based on the size of the proposed development. Two rates (column A and column B) are provided, depending on whether the site falls within the Principal Public Transport Network zone, or whether a Parking Overlay (PO) for the site applies column B rates.

A PO may also stipulate a different rate altogether, including changing the minimum parking rate to a maximum parking rate. This is done where increases to the amount of parking in a given area are not needed or are not desirable. For instance, a maximum parking rate may be provided to ensure traffic generation rates to or from the development do not exceed capacity for the local road network. A PO may also be appropriate where no parking on a given site is preferred, such as where lots front onto Barkley or Wallace Squares.

As highlighted in Section 11.1.6, encouraging increased density and making decisions on the following principles will assist Council in transforming Melton into a more vibrant town centre:

- Aim to shift away from open lot car parks;
- Preference for rear-loading
- Where multi-story, preference for sleeved, basement, or elevated parking.
- Undercroft parking strongly discouraged.

13.7 Public EV Charging

Public charging facilities are one of the most important steps governments can take to lower barriers to the adoption of EVs. A 2019 NRMA survey that found 89% of motorists want fast charging adjacent to motorways and 94% would be more likely to use an EV for a road trip if a charging network was in place. Moreover, the presence of EV

charging can increase the time and money people spend in commercial districts, which can have a positive economic outcome for nearby shops/services.

Installing EV charging sites within Melton Town Centre will help the local community transition to electric vehicles and help visitors choose to spend time within Melton’s core.

13.8 Implementing change

Figure 54 shows the recommended changes to parking in Melton Town Centre. It focuses on broad level parking zones based on the preferred parking use for that area. For instance, high demand areas are prioritised for short-term visitor parking (green) while areas with less demand will have longer-term parking (blue).

Drop-off parking is recommended to remain, in order to service the schools in the north of the activity centre.

Public EV charging bays are recommended for Wallace Square, Bakery Square, and the off-street parking lot opposite the library.

Parking Overstay Detectors are recommended to be installed in the parking areas with dashed orange outlines. Signage, similar to that shown in Figure 53 is recommended to be installed at the locations shown along High Street.

Special use parking, such as loading or accessible parking, should be considered based on specific user needs. However, it is recommended to follow consistent placement guidelines, as shown in Figure 52.



Figure 54 Proposed parking restrictions for visitors and employees

13.9 Impacts on business

To realise the proposed plans for revitalising Melton Town Centre, changes to parking will be required. Managing this change with the community is important; to ensure disruptions are minimised and the full benefits of the proposed plan are realised.

As highlighted earlier, while some areas within the Melton Town Centre have high demand for parking, most areas have occupancy rates below the 85% threshold. The high demand areas likely contain both visitors looking for a park and staff looking for a space close to their business. Shifting some staff parking to the areas with less visitor parking demand will free up space in the Town Centre for extra visitor parking. Where particular areas may benefit from a transformation to another, non-parking related use, this too should be considered, in line with the principles of the 2019 Melton Parking Study.

Our analysis, and the 2019 Melton Parking Study, concluded that there is sufficient parking supply to support strategic reallocations of parking bays to other uses. This can be done without negatively impacting on the economic success of the Melton Town Centre.

We have undertaken an assessment to ensure that sufficient visitor and worker parking supply remains after the proposed changes are made. Using the 2019 Parking Study as a guide, 40% of the unrestricted parking bays (400 bays) in the Town Centre remained un-occupied. Approximately 25% of short-term visitor parking (200 bays) also remained un-occupied at peak times.

Assuming employment and business activity returns to pre-COVID levels, there is sufficient available parking to ensure that modest changes to parking do not negatively impact businesses.

13.9.1 Our methodology – in brief

To begin with, we estimated the number of jobs in the Study area. The ABS classifies the area as DZN 213561554 and 513561556. The following steps highlight our process for determining the number

of parking spaces required to accommodate workers.

- Total number of people in labour force within study area: 2,196.
- Total number of people who went to work by car on Census day 2016: 1,675 (1,550 when excluding school staff).
- Total parking spaces within study area: 2,682.
- Publicly accessible parking lots (usually unsigned, but generally places that allow parking even if not visiting the private business): 2,398
- Private car parks only for staff and customers: 284
- St Dominic's Primary School and Melton Primary School have a total of 125 staff members⁸.
- Applying highest car parking rate for patrons of 0.4 to total parking spaces, total staff parking only spaces available is 170
- Balance of staff parking spaces required in the study area: 1,505
- Car parking spaces available for customers only: 893
- More than 55% of customer parking is available along High Street. Between Smith St and Station St, yet over 20% of the parking lots were found to be unoccupied.
- There are 499 publicly accessible car parking spaces available on High St between Smith St and Station St.

Table 15 identifies the total number of lots and the occupancy rates on sections of High Street.

⁸ According to myschool.edu.au

13.10 Implications

Our analysis has found that there is a high level of parking occupancy within Melton Town Centre. Strategic removal of some parking bays could improve the amenity of the Town Centre without impacting parking demand for the area. Undertaking a range of transport infrastructure upgrades, such as the walking and cycling projects outlined above, would further decrease parking demand.

This can help better meet Council’s wider strategic ambitions and allow the Town Centre to prosper in the face of competition with newer activity centres.

Table 15 Total parking lots and occupancy on sections of High Street

High St between	No. of parking lots	% Of on-street parking	% Owned by council	Occupancy during survey (%)
Smith St & Station St	499	78.4	78.4	47.1
Smith St & Palmerstone St	129	100	100	76.7
Palmerstone St & Alexandra St	201	100	100	37.3
Alexandra St & Station St	169	36.1	36.1	36.1

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