

Creamery Road Movement and Place Classification

Final report

Prepared for
City of Greater Geelong

Prepared by
PMP Urbanists, Melbourne, Australia

Acknowledgement of Country

PMP Urbanists acknowledge the Australian Aboriginal and Torres Strait Islander peoples of this nation. We acknowledge the traditional custodians of the lands on which our company is located and where we conduct our business. We pay our respects to ancestors and Elders, past and present. PMP Urbanists are committed to honouring Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to the land, waters and seas and their rich contribution to society.

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I Introduction

PMP Urbanists is assisting the City of Greater Geelong (the City) as it develops the Creamery Road Precinct Structure Plan (PSP). Specifically, PMP Urbanists have contributed to the development of the Creamery Road PSP street and movement network and a suite of street typologies to be applied in the precinct.

Following agency consultation on the draft Creamery Road PSP, the Department of Transport (DoT) requested Movement and Place classification mapping be undertaken and a response to the updated Clause 18 of the Victorian Planning Provisions (VPP) be provided. On this basis, this report presents a Movement and Place assessment of the Creamery Road precinct and outlines how the precinct aligns with VPP Clause 18.

This report is structured as follows:

- Section 2** provides an overview of the Victorian Movement and Place framework.
 - Section 3** outlines our methodology for undertaking the movement and place assessment of the Creamery Road PSP.
 - Section 4** outlines our selection of network classifications for the precinct.
 - Section 5** summarises our assessment of how the proposed street types satisfy DoT's Movement and Place target levels of service and performance indicators.
 - Section 6** outlines the alignment between the requirements of Clause 18 of the Victorian Planning Provisions and the design of the precinct's movement and street network.
 - Section 7** summarises the findings and recommendations of this assessment.
-
- Appendix A** presents maps of the proposed network classifications applied to the precinct
 - Appendix B** presents DoT's detailed Movement and Place classification criteria
 - Appendix C** presents tabulates our detailed assessment of each street typology.

2 Movement and Place in Victoria

Streets and roads have competing functions as conduits for moving people and goods, and destinations where people live, work and play. Victoria's Movement and Place framework aims to provide State Government, councils and practitioners a common language for planning, designing and monitoring the performance of the network in a way that recognises the need to balance these functions. Further, it aims to resolve the strategic intents of streets and roads across the transport network, provide a consistent methodology to measure success, and help assess the trade-offs between design solutions that impact different modes of transport and place.

Movement and Place builds upon the SmartRoads framework, and covers four themes: **movement**, **place**, **safety** and **environment**. These themes are covered in four modules:

- **Module 1 - Network classification** establishes the aspirational vision for the networks (the future strategic vision for the network)
- **Module 2 - Network performance** compares current performance against the aspirational vision, using performance indicators for each of the four themes.
- **Module 3 - Options development** guides the development of solutions to improve network performance.
- **Module 4 – Options assessment** provides a tool to compare options against network aspirations.

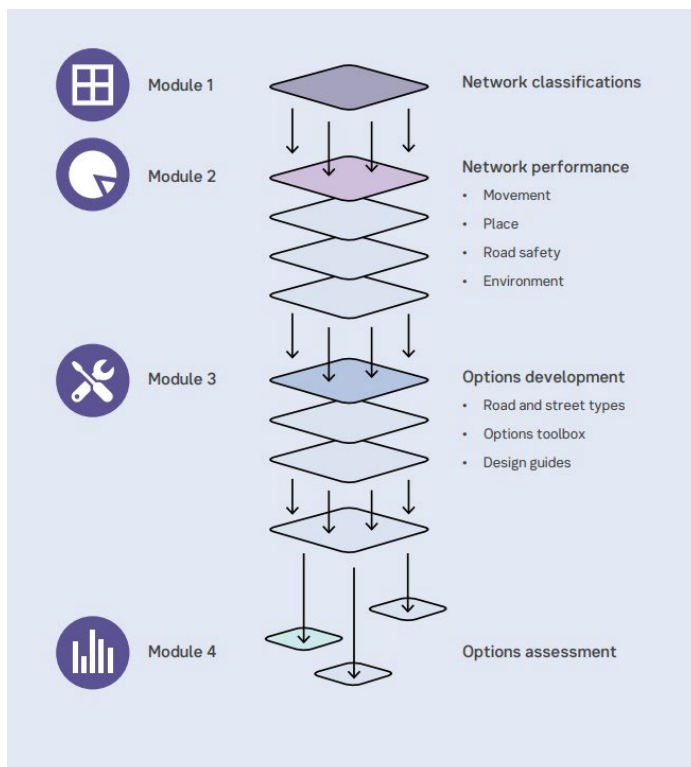


Figure 1: Four modules of Movement and Place in Victoria

3 Methodology for M&P Assessment

3.1 Key reference material

This assessment is informed by a range of material provided by the Victorian Department of Transport as part of its formal Movement and Place training (as attended by PMP Urbanists staff).

As shown in Figure 2, this material includes:

- *Movement and Place in Victoria*, which provides an overview of the intended use of the framework and the purpose of its four modules.
- The *Movement and Place User Guide* provides instructions on how practitioners from State Government, councils and consultants can use the framework to classify, assess and plan improvements to the street and road network.
- The *Movement and Place Technical Appendix* compiles all necessary criteria for classifying networks, identifying target levels of services, and measuring performance indicators.
- *Movement and Place Practice Notes* provide additional guidance for assessing specific modes where required.



Figure 2: Movement and Place classifications have been selected in accordance with DoT training material

3.2 Assessment process

3.2.1 Step 1: Apply classifications

The Movement and Place framework assigns network classifications for all themes (movement, place, safety and environment). The network classifications help to define the strategic vision for that link by informing the application of target levels of service and corresponding performance indicators. There are five levels of network classification that generally apply to all four themes, as shown in Table 1.

Table 1: Network classifications

Classification Level	Classification Definition
Classification Level 1	- Mass movement of people and/or goods on routes with a State or National level movement function or primary access to a State level place. - Associated with Place of State or National significance and associated.
Classification Level 2	- Significant movement of people and/or goods on routes connecting across multiple municipalities or primary access to Regional level places. - Associated with Place of Regional significance
Classification Level 3	- Moderate movement of people and/or goods on routes connecting municipalities or primary access to Municipal level places. - Associated with Place of Municipal significance
Classification Level 4	- Movement of people and/or goods within a municipality - Associated with Place of Neighbourhood importance
Classification Level 5	- Local movement - Associated with Place of Local importance

The Movement and Place Technical Appendix outlines criteria for applying network classifications to each theme. The criteria are different for each theme, and may consider land use zoning and proximity to major destinations (place), service frequency (public transport) or connectivity (general traffic).

3.2.2 Step 2: Identify target levels of service

The Movement and Place framework specifies target minimum performance levels based on the interaction between place and the network classifications for each theme. The target minimum levels of service are defined at a link level for each theme to inform the assessment of existing or proposed street environments. The targets specified in the framework are minimum performance targets, and where possible, higher performance levels should be sought.

Target minimum performance levels are read from a series of matrices provided within the *Movement and Place Technical Appendix*.

3.2.3 Step 3: Identify performance indicators

The Movement and Place framework provides performance indicators to assess the level of service achieved for each theme using an A to E scoring system. The performance indicators can be used to determine which themes are falling short of, satisfying or exceeding the target minimum performance levels of service established in Step 2. Performance indicators are tabulated in the *Movement and Place Technical Appendix*.

As shown in Figure 3 and Figure 4, separate performance indicators are provided for *network performance indicators* (which are used to gain an appreciation of performance across the wider network) and *project performance indicators* (which take into account localised conditions).

The *Movement and Place Technical Appendix* Figure suggests that while project performance indicators provide for a more detailed assessment and understanding of performance using more localised data, projects should also incorporate relevant network performance indicators so that the contribution that impacts from a wider network level frame of reference are also considered. On this basis, both network and project performance indicators have been considered for the purposes of this assessment.

In addition to DoT's specified network and project performance indicators, PMP Urbanists have contributed additional performance indicators to guide high quality place outcomes in local residential streets with unique place aspirations. These additional indicators have been applied to the Micro Street and Pedestrian Street typologies, and are intended to expand upon, rather than replace, the existing place performance indicators provided by DoT. This guidance articulates further requirements for residential streets to go beyond minimum standards and achieve best practice residential place outcomes.

Theme	Indicator	Description of Level of Service
Movement	Travel Speed	A-E score considering operating speed and signed speed. Scores are reported for General Traffic, Buses, Trams and Freight.
	Cycling	A-E score based on level of traffic stress faced by cyclists as determined by infrastructure and speed limits.
	Walking	A-E score based on the likely delays faced by pedestrians at crossings.
Place	Accessibility	A-E score measuring distance of segment from public transport.
	Safety and Comfort	A-E score measuring whether the environment supports on street activity through the sense of safety and comfort it offers pedestrians.
Road Safety	Crash History	A-E score based on the number of crashes occurring on the segment relative to other segments.
Environment	Greenhouse Gas Emissions	A-E score considering whether vehicles (generally traffic and heavy vehicles) on the road are operating at the speeds at which they are most energy efficient.
	Noise	A-E score based on estimated noise emitted by traffic.

Figure 3: Network Performance Indicators

Theme	Indicator	Description of Level of Service
Movement	General Traffic Freight	A-E score considering operating speed and travel time reliability
	Tram Bus	A-E score considering operating speed, movement in traffic and travel time reliability
	Cycling	A-E score based on level of traffic stress faced by cyclists as determined by infrastructure and speed limits
	Walking	A-E score based on the likely delays faced by pedestrians at crossings
	Interchanges	A-E score considering proximity to changeover of modes and infrastructure available that ensures an efficient, safe and comfortable changeover
Place	Activity	A-E score considering the safety and comfort, walkability and identity of an area
	User Experience	A-E score based on ease of orientation, being visually interesting and context sensitivity
Road Safety	Road Safety Risk	A-E score based on IRAP star rating of road
Environment	Biodiversity	A-E score based on biodiversity
	Water	A-E score based on-site water management
	Public Health	A-E score based on air quality, noise and tree canopy

Figure 4: Project Performance Indicators

3.2.4 Step 4: Assess street types against M&P guidance

Using the performance indicators assembled in Step 3, PMP Urbanists have provided an assessment of all street typologies applicable to the Creamery Road precinct. The assessment articulates which performance indicators have been satisfied, and how the proposed designs manage the trade-offs between the needs of different users.

4 Creamery Road FUS M&P Network Classifications

4.1 Overview of the FUS

The Creamery Road Future Urban Structure (FUS) defines the key elements of the transport network within the Creamery Road precinct. This includes the Clever and Creative Corridor (CCC), the arterial road network, connector streets, key local streets, and key off-street and shared paths. The FUS is shown in Figure 5.



Figure 5: Creamery Road Future Urban Structure

Street typologies have been developed for the Creamery Road precinct based on standard VPA cross sections, and aim to improve sustainable transport priority within the same land take as equivalent VPA designs. Proposed designs have also been developed for existing arterial roads bordering the site. The following typologies have been developed for the Creamery Road precinct:

- The Clever and Creative Corridor
- The Clever and Creative Corridor (Activity Centre)
- Geelong Ballan Road
- Evans Road
- Connector Street (Suburban)
- Connector Street (Urban)
- Connector Street (Modified Urban)
- Key Local Access Street
- Conservation Interface Street
- Local Access Street
- Parking Street
- Micro Street
- Pedestrian Street
- Laneway

As requested by DoT, PMP Urbanists have undertaken a Movement and Place assessment of the FUS and identified network classifications for all relevant themes outlined in the Movement and Place framework.

This section outlines the selection of network classifications for the following themes:

- Place
- General traffic
- Public transport – bus
- Freight
- Cycling
- Walking
- Environment (biodiversity)

Additionally, the Movement and Place framework adopts a blanket Safety classification of SI across the entire network. The framework also includes classifications of public transport interchanges, however insufficient information is currently available regarding the location and operation of bus stops and interchanges to permit an assessment of interchange classifications at this time.

The identification of network classifications has been informed by the potential Principal Public Transport Network (Figure 6), and the potential Principal Pedestrian Network and Principal Bike networks (both shown in Figure 7). The proposed networks have been developed in collaboration with the City throughout the development of the Creamery Road FUS, and while they are not formally endorsed by the City or DoT, they offer a sound basis to inform the development of M&P network classifications for this assessment.

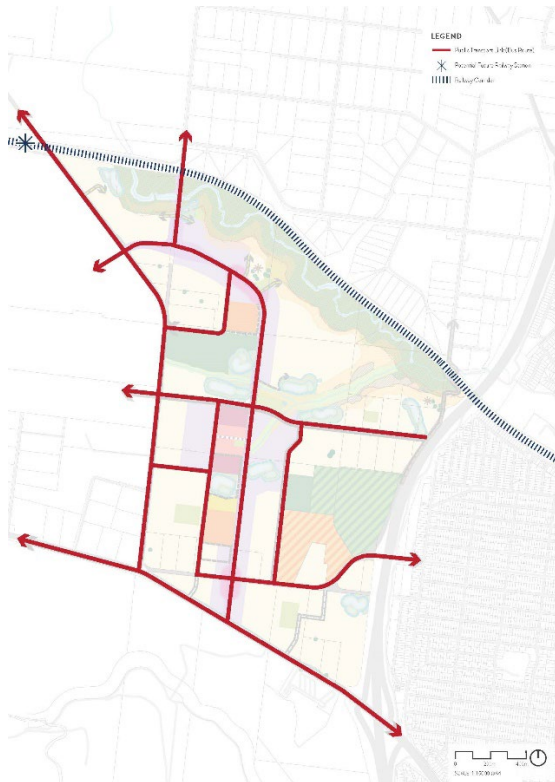
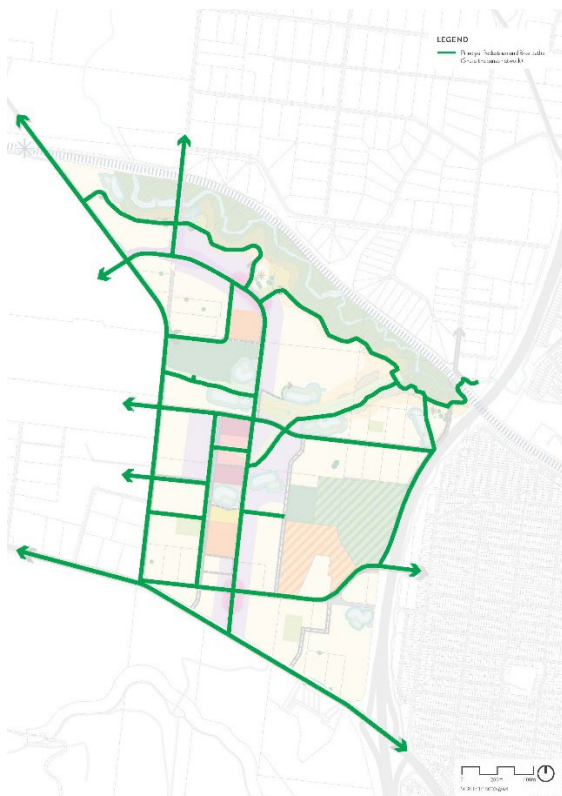


Figure 6: Creamery Road precinct Principal Public Transport Network*



*The PPN and PBN share the same streets and paths

Figure 7: Creamery Road precinct Principal Pedestrian and Bike networks

4.2 Network Classifications

This section summarises the application of network classifications to the precinct. Network classification maps are provided in Appendix A.

Detailed network classification criteria provided by DoT is provided in Appendix B.

4.2.1 Place

Detailed network classification criteria for places of street activity are provided in Appendix B. Using these criteria, place classifications for streets within the Creamery Road precinct have been adopted as described in Table 2.

Table 2: Application of place classification criteria

Classification	Applicable streets	Rationale
PA1	None	Applies to state significant places such as the Geelong CBD. As such, no streets within the precinct has been applied a PA1 classification
PA2	None	Applies to regionally significant places such as the centres of regional cities such as Shepparton. As such, no streets within the precinct have been applied a PA2 classification.
PA3	Clever and Creative Corridor (within 500m of NAC) Clever and Creative Corridor (Activity Centre) Connector Street (Urban) (within 500m of NAC) Connector Street (Modified Urban) (within 500m of NAC)	Municipal level of place significance. Applied to urban streets within 500m of activity centres and urban localities. The vision for the precinct and the Clever and Creative Corridor is expected promote visitation to the NAC from throughout the City of Greater Geelong (not just the immediate neighbourhood). A PA3 classification has been applied to urban streets within 500m of the NAC.
PA4	Remaining Clever and Creative Corridor Remaining Connector Streets (Urban) Connector Street (Suburban) (within 500m of a school)	Neighbourhood level of place significance. Applies to streets with a range of commercial or mixed used zoning and adjacent to major public facilities such as schools. A PA4 classification has been applied to urban streets with Integrated Development Area zoning and connector streets within 500m of schools.
PA5	Midland Highway Geelong Ballan Road Evans Road Remaining Connector Streets (Suburban) Conservation Interface Street Key Local Access Street Local Access Street Parking Street Micro Street Pedestrian Street Laneway	Local place significance. Applied to all other streets.

4.2.2 Movement

The overall movement classification of streets is based on the combination of modal classification for each link. These criteria are provided in Appendix B. Using these criteria, overall movement classifications for streets within the Creamery Road precinct have been adopted as described in Table 3.

Table 3: Application of place classification criteria

Classification	Applicable streets
M1	None
M2	Midland Highway Clever and Creative Corridor Clever and Creative Corridor (Activity Centre)
M3	Geelong Ballan Road Evans Road Connector Street (Suburban) Connector Street (Urban) Connector Street (Modified Urban)
M4	None
M5	Conservation Interface Street Key Local Access Street Local Access Street Parking Street Micro Street Pedestrian Street Laneway

4.2.3 General traffic

Detailed network classification criteria for general traffic are provided in Appendix B. Using these criteria, general traffic classifications for streets within the Creamery Road precinct have been adopted as described in Table 4. In addition, Geelong-Ballan Road has been identified as a Motorcycling Touring Route 1 (MTR1).

Table 4: Application of general traffic classification criteria

Classification	Applicable streets	Rationale
GT1	Geelong Ring Road	Applies to State or National level of significance routes that provide for mass movement of people and goods. Geelong Ring Road is currently classified as a GT1 route.
GT2	Midland Highway	Applies to significant routes that connect multiple municipalities or regional level places (PA2). The Midland Highway is currently classified as a GT2.

Classification	Applicable streets	Rationale
GT3	Geelong-Ballan Road Evans Road	Applies to arterial routes that connect municipalities and municipal level places (PA3). Geelong-Ballan Road is currently classified as a GT3. While traffic is expected to increase in the future, Geelong-Ballan Road is expected to perform the same function within the network in the future.
GT4	The Clever and Creative Corridor Connector Street (Urban) Connector Street (Modified Urban) Connector Street (Suburban)	Movement of vehicles within the municipality and to neighbourhood level places (PA4), including arterial connections in regional areas. Applied to the Clever and Creative Corridor (outside the activity centre) and all connector streets.
GT5	Conservation Interface Street Key Local Access Street Local Access Street Parking Street Micro Street Laneway	Local movement by private vehicles. Applies to all local streets that permit public vehicle access.
NA	Pedestrian Street The Clever and Creative Corridor (Activity Centre)	These streets do not cater to general traffic.

4.2.4 Public transport – bus

Detailed network classification criteria for buses are provided in Appendix B. Using these criteria, bus classifications for streets within the Creamery Road precinct have been adopted as described in Table 5.

Table 5: Application of bus classification criteria

Classification	Applicable streets	Rationale
B1	None	B1 relates to the mass movement of people to and through state significant places, with frequencies of 2 minutes or better. This does not apply to any street in the precinct.
B2	Midland Highway Clever and Creative Corridor Clever and Creative Corridor (Activity Centre)	B2 relates to movement of people by high frequency (2-6 min) services to higher order places. While the Clever and Creative Corridor is intended to cater to service frequencies of around 10 min, the intent of the corridor is to provide a premium turn up and go quality of service with separated bus lanes that is considered to be consistent with a B2 classification in a growth area context. Furthermore, the Midland Highway has an existing B2 classification, which further supports a B2 classification for the CCC for consistency.

Classification	Applicable streets	Rationale
B3	Geelong-Ballan Road Connector Street (Suburban) on the PPTN Connector Street (Urban) on the PPTN Evans Road	B3 reflects the movement of people by moderate frequency bus services (6-15 min). This is consistent with the vision for regular frequent routes that will operate on Geelong-Ballan Road and connector streets on the PPTN within the precinct.
B4	None	B4 relates to the movement of people by lower frequency local bus services. Regular bus services in the precinct will target higher frequencies.
B5	Connector Street (Modified Urban) Key Local Access Streets Conservation Interface Streets	B5 relates to the movement of people by low-irregular frequency buses. This has been applied to bus-capable streets that have not been identified as part of the public bus network, but may cater to future requirements or school bus services.
N/A	Non-bus capable local streets	These streets do not accommodate buses.

4.2.5 Freight

Detailed network classification criteria for freight are provided in Appendix B. Using these criteria, freight classifications for streets within the Creamery Road precinct have been adopted as described in Table 6.

Table 6: Application of freight classification criteria

Classification	Applicable streets	Rationale
F1	Geelong Ring Road	F1 applies to all freeways and national significant routes. Geelong Ring Road is identified as an existing F1 classified routed by DoT.
F2	Midland Highway	F2 applies to arterial routes on the Principal Freight Network. The Midland Highway is identified as an existing F2 classified routed by DoT.
F3	Geelong-Ballan Road	F3 applies to other freight routes on the arterial network. Geelong-Ballan Road is identified as an existing F3 classified routed by DoT, however it is understood that it may be upgraded to an F2 in the future if it is added to the Principal Freight Network.
NA	All other streets	

4.2.6 Cycling

Detailed network classification criteria for cycling are provided in Appendix B. Using these criteria, cycling classifications for streets within the Creamery Road precinct have been adopted as described in Table 7.

Table 7: Application of cycling classification criteria

Classification	Applicable streets	Rationale
C1	None	C1 routes apply to strategic cycling corridor that connect to state significant places (e.g. MACs, NEICs, etc). This does not apply to any street in the precinct.
C2	The Midland Highway Geelong-Ballan Road Evans Road The Clever and Creative Corridor The Clever and Creative Corridor (Activity Centre) Connector Street (Urban) Connector Street (Modified Urban)	C2 routes are main routes on strategic cycling corridors and connect regionally significant destinations, activity centres, schools and railway stations (in regional areas). The Midland Highway, Geelong-Ballan Road and Evans Road are identified as existing Strategic Cycling Corridors and C2 routes by DoT. In addition, the Clever and Creative Corridor and urban connector streets in the vicinity of the NAC and schools are proposed PBN connections that are considered appropriate for a C2 classification. Bluestone Bridge Road between Avonlea Road and the Geelong Ring Road shared path has also been identified as a C2 route.
C3	Connector (Suburban) Conservation Interface Streets on the PBN	C3 routes are municipal cycling connections that mostly support short journeys to activity centres and other destinations. C3 routes are generally secondary connections on the PBN. C3 classifications have been applied to Connector Streets (Suburban) and Conservation Interface Streets on the proposed PBN.
C4	Key Local Access Street Local Access Street Parking Street Micro Street Pedestrian Street Laneway Shared paths and trails	C4 routes are neighbourhood and local connections that make up the balance of the cycleable road network. All local streets in the precinct are intended to encourage cycling trips and form important local connections for riders, and have therefore been assigned a C4 classification. Shared paths that provide short connections to activity centres and schools have also been designated as C4 routes.
CD	None	CD routes are more direct alternative routes for more confident riders. This has not been applied within the precinct.
CH	None	High stress routes make up the balance of the cycleable arterial network. This has not been applied within the precinct.
CT	None	Training routes are designated routes used for training and sports cycling. No training routes have been identified in the precinct.
CR	Remaining Conservation Interface Streets Shared paths and trails	Recreational routes are quieter connections that usually run beside rivers, creeks and rail lines. CR routes have been applied to Conservation Interface Streets and shared paths

Classification	Applicable streets	Rationale
		and trails identified in the Creamery Road FUS that connect to Cowies Creek and the drainage corridor.

4.2.7 Walking

Detailed network classification criteria for walking are provided in Appendix B. Using these criteria, walking classifications for streets within the Creamery Road precinct have been adopted as described in Table 8.

Table 8: Application of walking classification criteria

Classification	Applicable streets	Rationale
W1	None	W1 routes are state significant walking connections, generally within the Melbourne CBD. No W1 routes are identified in the precinct.
W2	Clever and Creative Corridor Clever and Creative Corridor (Activity Centre) Connector Street (Urban) Connector Street (Modified Urban) Connector Street (Suburban) (within 400m of schools)	W2 routes are regionally significant PPN connections near activity centres, shopping areas, educational institutions, stations and employment precincts. On this basis, W2 classifications are appropriate for streets that access the NAC and IDA areas, and connector streets that are within 400m of schools. These connections are considered distinctly more significant than existing W3 routes on the Midland Highway and Geelong-Ballan Road.
W3	Midland Highway Geelong-Ballan Road Evans Road Remaining Connector Streets (Suburban) Shared paths and trails on the PPN	W3 routes make up the remainder of the Principal Pedestrian Network, and support municipal connections to destinations in support of 20-minute neighbourhoods. The Midland Highway and Geelong-Ballan Road are existing W3 connections identified by DoT. Connector Streets (Suburban) are also considered consistent with the intent of W3 routes. Shared paths on the PPN have also been classified as W3 connections.
W4	Conservation Interface Street Key Local Access Street Local Access Street Parking Street Micro Street Pedestrian Street Shared paths and trails	W4 routes provide local and neighbourhood connections to the PPN. W4 classifications have been applied to all local streets (other than laneways). W4 classifications have also been applied to shared paths that connect to activity centres and schools.
W5	Laneway	W5 routes cover the balance of the pedestrian network and minor local connections. Laneways provide useful cut-throughs and local permeability improvements but may nonetheless

		be less attractive as primary walking choices for the community. As such, a W5 classification has been applied.
WR	Shared paths and trails	Recreational routes are generally located beside rivers, creeks and rail lines and may be shared with cyclists. WR routes have been applied to shared paths and trails that connect to Cowies Creek and the drainage corridor.

4.2.8 Environment (biodiversity)

Detailed network classification criteria for biodiversity are provided in Appendix B, including a Biodiversity Classification Tool developed by DoT to further guide the selection of suitable biodiversity classifications.

Based on guidance from the City of Greater Geelong, these criteria have informed the selection of biodiversity classifications as outlined in Table 9.

Table 9: Application of biodiversity classification criteria

Classification	Applicable streets
BD1	Conservation Interface Streets
BD2	All streets fronting the drainage corridor identified on the FUS
BD3	None
BD4	All remaining streets

5 Street Types: Movement & Place response

This section expands upon the network classifications determined in Section 4 to outline how the designs of each street typology used in the precinct respond to M&P requirements. This is done by outlining the following for each typology:

- Translating network classifications to level of service targets for each M&P theme
- Outlining the performance indicators that correspond to the minimum levels of service
- Describing how the street designs align with the requirements of the M&P framework.

We note that DoT's Movement and Place framework utilises both *network performance indicators* and *project performance indicators*. Network performance indicators provide a high-level appreciation of performance across the wider networks, while project performance indicators provide a more detailed assessment that considers localised data and conditions. Consistent with advice provided within the *Movement and Place Technical Appendix*, our assessment has utilised both network and project performance to ensure the analysis provides a thorough assessment of future conditions.

An overview of the movement and place classifications and target levels of service for all streets comprising the Creamery Road FUS is provided in Table 10. A summary of how each street typology responds to the aspirations of the Movement and Place framework follows, while our detailed analysis of each street is tabulated in Appendix C.

As outlined in this section, targeted place performance is regularly not satisfied for arterial roads, while walking requirements are frequently not satisfied across the network. The most common issues limiting walking levels of service are delays at intersections and potentially absent mid-block crossing opportunities. In contrast, general traffic performance is generally satisfied across most of the network. If not addressed, these issues may discourage walking trips and lead to more short car trips through, to and within the precinct, leading to increased traffic congestion and poorer place outcomes for main streets and activity centres. We note that Movement and Place performance indicators accept longer delays for general traffic than Austroads guidance for signalised intersections and in many cases accept that multiple signal cycles may be necessary to clear intersections. At the same time, the framework is sensitive to short delays imparted on pedestrians. As such, the design of the network, particularly intersections, should consciously trade-off delays to general traffic in order to provide compact intersections with pedestrian-oriented signal phasing in order to maximise walking levels of service.

Table 10: Overview of movement and place classifications and target levels of service

Street	Place		Movement	General Traffic		Bus		Freight		Cycling		Walking		Biodiversity	
	Class.	Target Los			Class.	Target Los	Class.	Target Los	Class.	Target Los	Class.	Target Los	Class.	Target Los	Class.
Clever & Creative Corridor	P3	B	M2	GT4	D	B2	B			C2	A	W2	B	BD4	D
Clever & Creative Corridor (AC)	P3	B	M2			B2	B			C2	A	W2	B	BD4	D
Midland Hwy	P5	B	M2	GT2	B	B2	B	F2	B	C2	B	W3	C	BD4	D
Geelong Ballan Rd	P5	C	M3	GT3	C	B3	B	F3	C	C2	B	W3	C	BD4	D
Evans Rd	P5	C	M3	GT3	C	B3	B			C2	B	W3	C	BD4	D
Connector St (Suburban)	P5	C	M3	GT4	D	B3	B			C3	B	W3	C	BD4	D
Connector St (Urban)	P4	B	M3	GT4	D	B3	C			C2	A	W2	B	BD4	D
Connector St (Mod. Urban)	P3	B	M3	GT4	D	B3	C			C2	A	W2	B	BD4	D
Key Access Local St	P5	D	M5	GT5	D	B5	C			C4	B	W4	C	BD4	D
Conservation St	P5	D	M5	GT5	D	B5	C			CR	B	W4	C	BD1	A
Local Access St	P5	D	M5	GT5	D					C4	B	W4	C	BD4	D
Parking St	P5	D	M5	GT5	D					C4	B	W4	C	BD4	D
Micro St	P5	D	M5	GT5	D					C4	B	W4	C	BD4	D
Pedestrian St	P5	D	M5							C4	B	W4	C	BD4	D
Laneway	P5	D	M5	GT5	D					C4	B	W5	C	BD4	D

5.1 Clever and Creative Corridor

The Clever and Creative Corridor is the flagship element of the place and movement network and provides backbone cycling and transit connections through the Creamery Road precinct and the NAC. The CCC forms part of the proposed Principal Public Transport Network, Principal Bike Network and Principal Pedestrian Network, however is not intended to cater to long-distance through traffic for private vehicles. It is also expected to be a place of significant social interaction. The design of the Clever and Creative Corridor typology is shown in Figure 8.

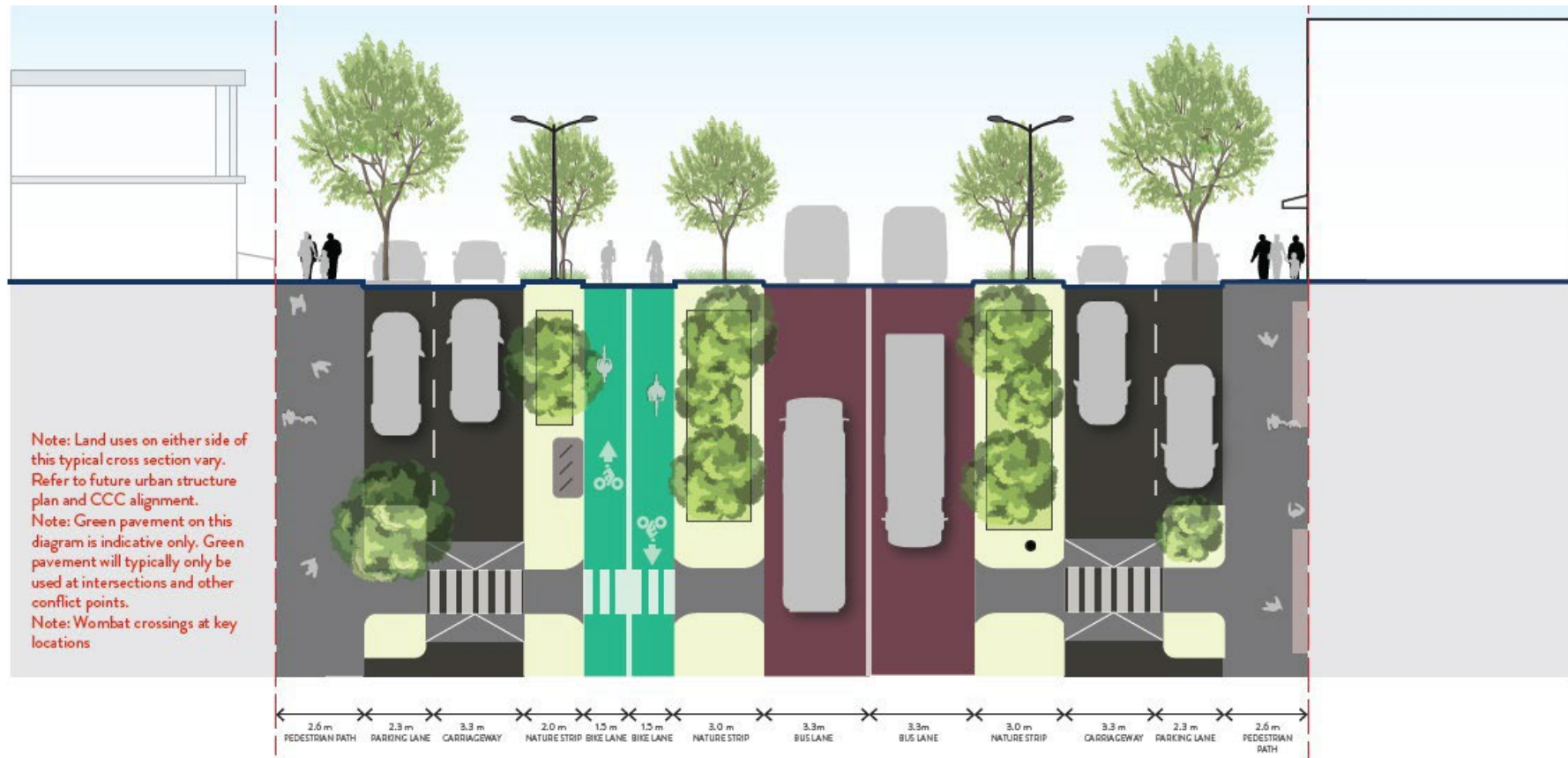


Figure 8: Cross section of the Clever and Creative Corridor (34m)

Table 11 summarises the Clever and Creative Corridor network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 11: Overview of M&P assessment - Clever and Creative Corridor

Network	Classification	Target Minimum Performance	Outcome
Place	P3	B	Generally meets or exceeds the target minimum performance indicators for place.
Movement	M2		
General Traffic	GT4	D	Generally meets or exceeds the target minimum performance indicators.
Bus	B2	B	Generally exceeds the target minimum performance indicators for buses.
Cycling	C2	A	Generally meets or exceeds the target minimum performance indicators for cycling.
Walking	W2	B	May meet target minimum performance indicators for walking.

As shown in Table 11, the M&P framework prioritises place, bus, walking and cycling themes highly (minimum LoS of A or B), while accepting congestion and delays for general traffic (minimum LoS of D). The proposed design generally satisfies or exceeds the aspirations for all themes, however there is a risk that the provisions for walking will fall short of the target minimum performance. Meeting performance targets for walking will largely hinge on future intersection design and mid-block crossing provisions, which influence the spacing of crossing opportunities and crossing times. Similarly, mid-block bus and cycling provisions are excellent (with dedicated bus lanes and a separated cycleway), however further detail on intersection design and signal phasing is required to confirm that delays are within the limits of the M&P guidance for riders and public transport users.

The M&P framework supports traffic signal phasing at intersections that minimise pedestrian, cyclist and bus passenger delay, even if this imparts delays and queuing for general traffic. The framework explicitly accepts general traffic congestion and vehicle queues that may take two signal cycles to clear intersections, and we recommended that intersection designs accept these trade-offs if comfort, safety and/or speed can be improved for sustainable travel modes.

The CCC includes a range of provisions to satisfy the place aspirations of the street, including avenues of street trees and wide footpaths, however many place performance indicators will require additional detail at later stages to assess place performance.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Location of kerb extensions and parklets to create place for rest and social interaction
 - Landscaping and placemaking befitting the place aspirations of the CCC
 - Street furniture
- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - The locations and spacing of wombat crossings to help riders access the median located bike facility.
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings).

Recommendations:

- Consider amending the Precinct Structure Plan to limit traffic volumes to 8,000 vpd or less to satisfy the target LoS for place.
- Include a requirement in the Precinct Structure Plan to provide formal crossing opportunities at spacings consistent with the M&P performance indicators for walking.
- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- The M&P framework accepts significantly higher delays for general traffic than buses and pedestrians on the CCC. Signal designs should ensure bus services, and the delays imparted on active and public transport modes are minimal, even if delays to general traffic are significant.

5.2 Clever and Creative Corridor (Activity Centre)

The design of the Clever and Creative Corridor through the Activity Centre is shown in Figure 9 below.

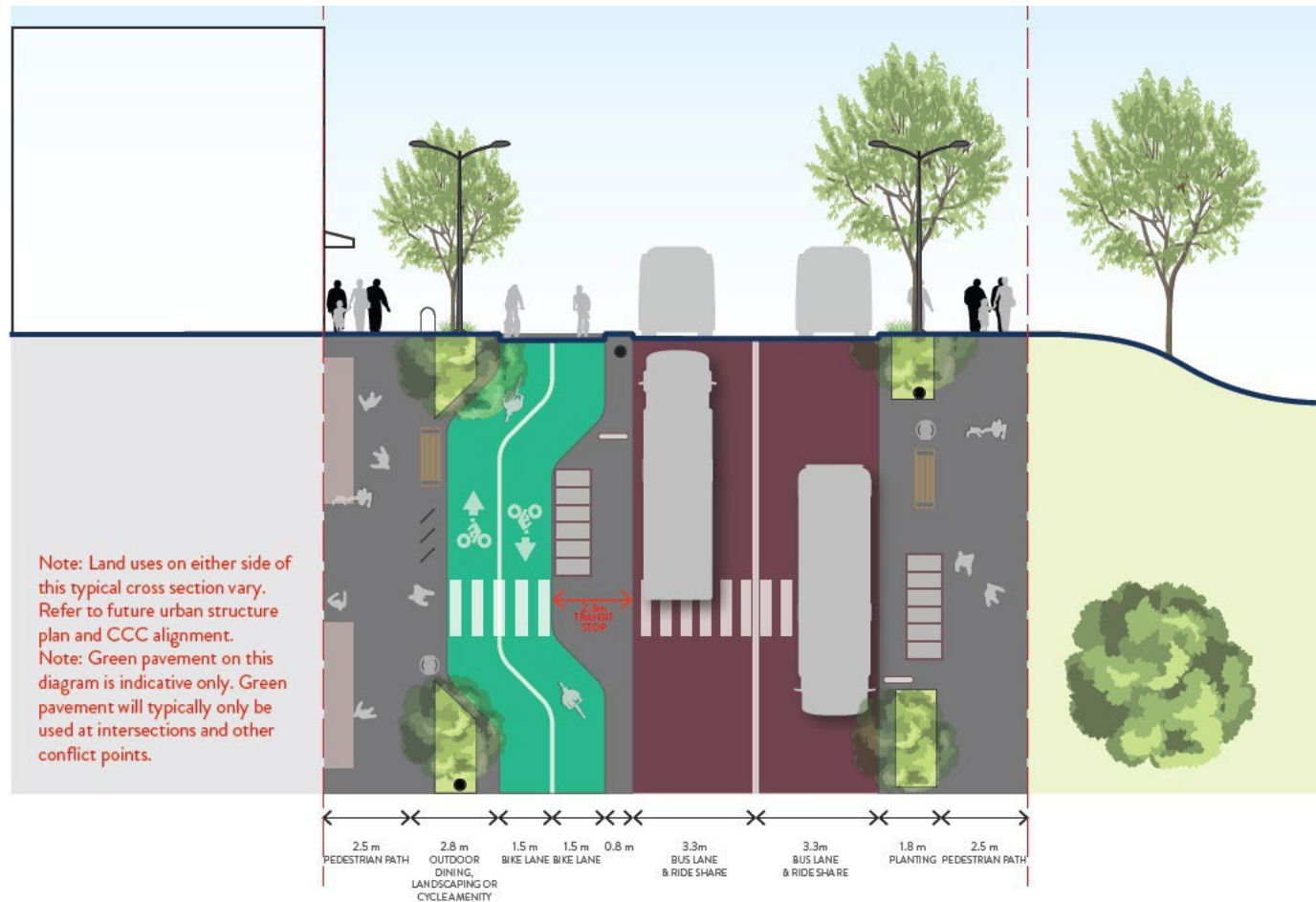


Figure 9: Cross section of the Clever and Creative Corridor (Activity Centre) (20m)

Table 12 summarises the Clever and Creative Corridor (Activity Centre) network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 12: Overview of M&P assessment – Clever and Creative Corridor (Activity Centre)

Network	Classification	Target Minimum Performance	Outcome
Place	P3	B	Generally meets or exceeds the target minimum performance indicators for place.
Movement	M2		
Bus	B2	B	Generally meets the target minimum performance indicators for buses.
Cycling	C2	A	Generally meets or exceeds the target minimum performance indicators for cycling.
Walking	W2	B	Generally meets minimum performance indicators for walking.

The M&P framework prioritises cycling (minimum LoS A) followed by place, bus and walking themes (minimum Los B), and the streetscape does not permit freight or general traffic. The proposed design generally satisfies or exceeds the aspirations for all themes, however many place performance indicators will require additional detail at later stages to fully assess place performance.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Landscaping and placemaking befitting the place aspirations of the CCC
 - Street furniture
- **Buses:**
 - SIDRA intersection analysis is required to determine signal design, layout and performance to ensure delays to buses are minimized.
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.

5.3 Midland Highway

The proposed design of the Midland Highway is shown in Figure 11 below, noting that the ultimate design will be determined by DoT in consultation with the City.

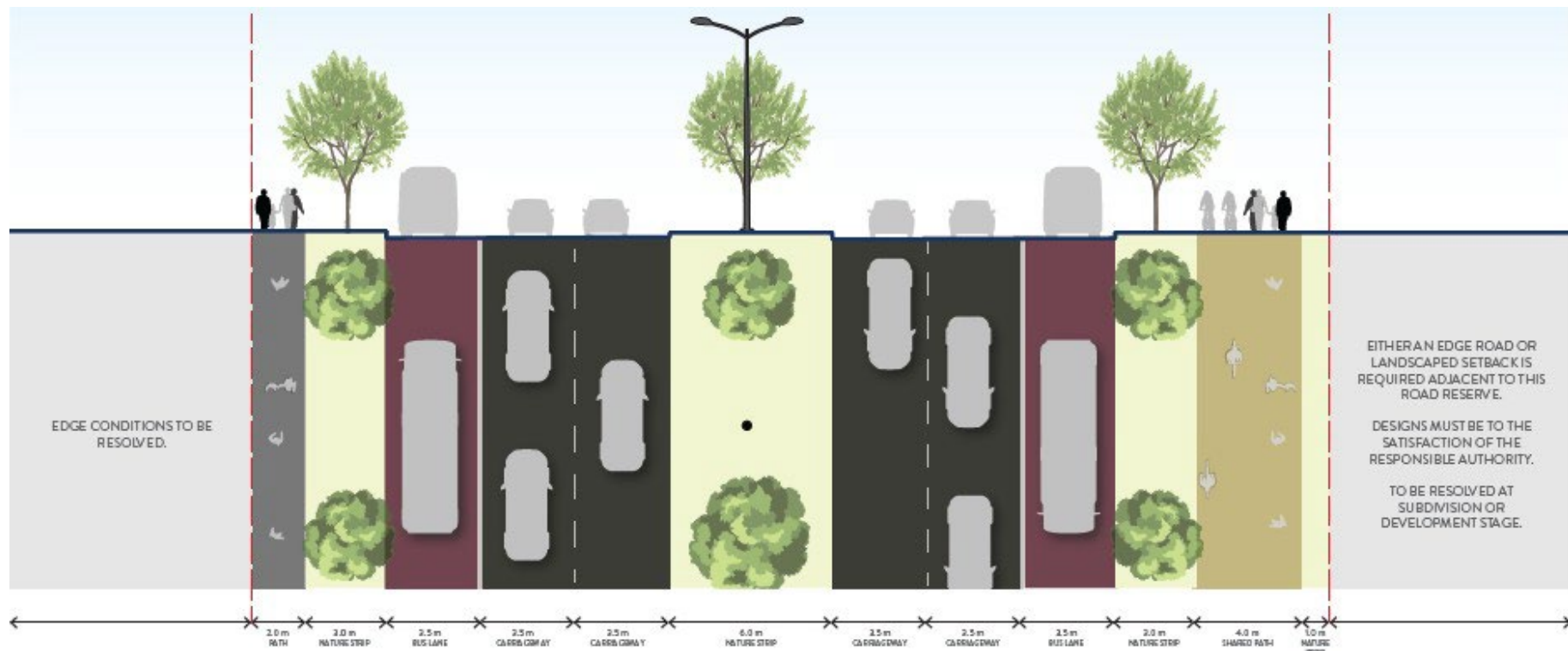


Figure 10: Cross section of the Midland Highway (40m)

Table 13 summarises the Midland Highway network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 13: Overview of M&P assessment – Midland Highway

Network	Classification	Target Minimum Performance	Outcome
Place	P5	B	Does not meet DoT's target minimum level of service for place.
Movement	M2		
General Traffic	GT2	B	May meet the target minimum performance indicators for general traffic.
Bus	B2	B	Generally satisfies the target minimum performance indicators for buses.
Freight	F2	B	May meet the target minimum performance indicators for freight.
Cycling	C2	B	Generally meets the target minimum performance indicators for cycling.
Walking	W3	C	Unlikely to meet target minimum performance indicators for walking.

The Movement and Place framework targets equally high levels of performance for most modes (LoS B), however assigns a slightly lower performance target for walking (LoS C). While the proposed design is expected to satisfy performance aspirations for cycling and buses, place and walking aspirations are not satisfied, while general traffic and freight aspirations are also unlikely to be satisfied.

Place performance is fundamentally limited by the high traffic volumes and speeds on the Midland Highway, while walking performance is limited by potentially long crossing times and limited cross opportunities. Similarly, general traffic and freight performance may be limited by congestion and delays at intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Street furniture

- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - Priority crossing treatments for shared path users at intersections
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.

5.4 Geelong Ballan Road

Geelong-Ballan Road will provide a preferred arterial route flanking the western boundary of the precinct. Geelong-Ballan Road is also identified as a Motorcycle Touring Route by the Department of Transport. The design of Geelong Ballan Road is show in Figure 11 below.

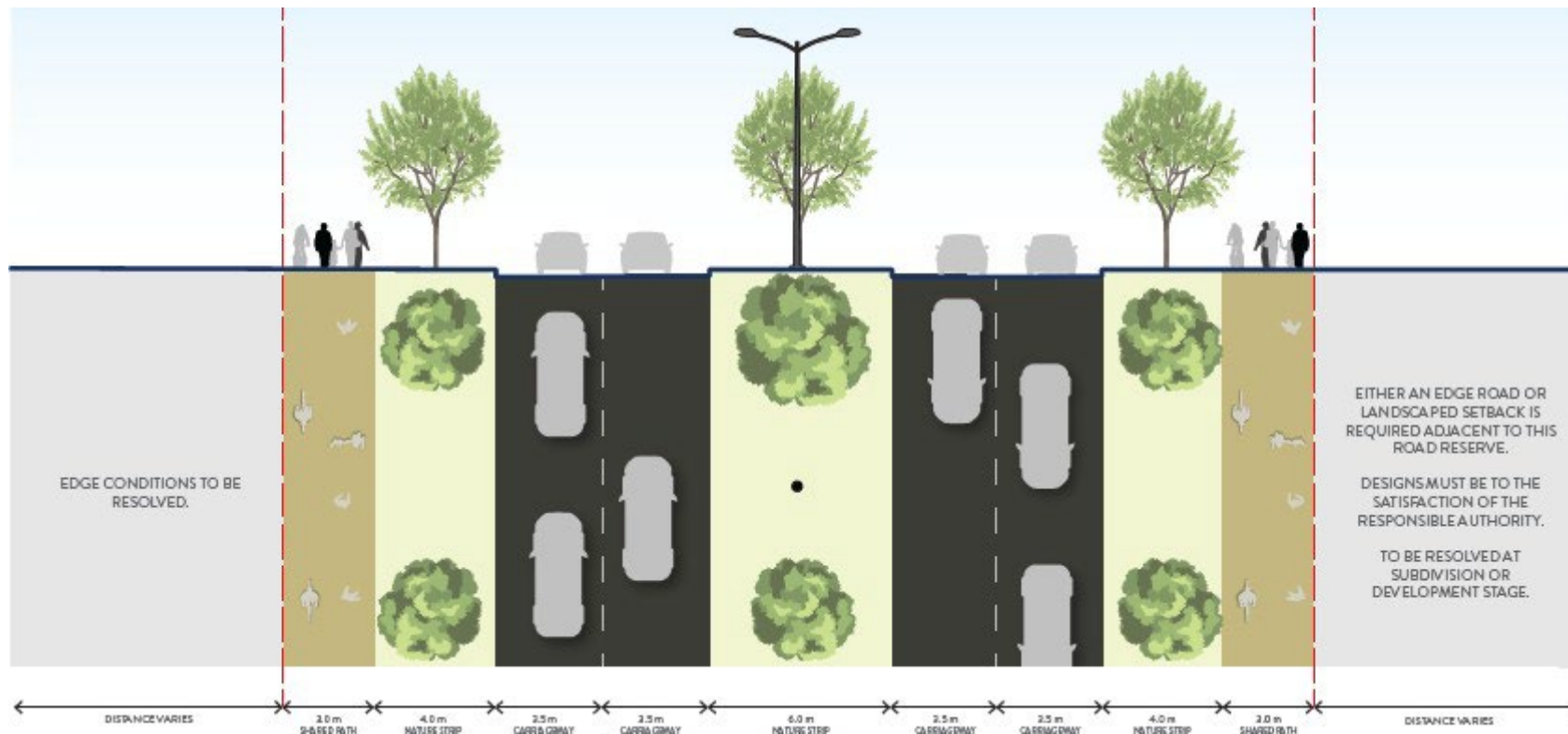


Figure 11: Cross section of Geelong Ballan Road (34m)

Table 14 summarises the Geelong-Ballan Road network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 14: Overview of M&P assessment– Geelong Ballan Road

Network	Classification	Target Minimum Performance	Outcome
Place	P5	C	Satisfies the intent of some target minimum performance indicators for place.
Movement	M3		
General Traffic	GT3	C	Generally meets the target minimum performance indicators for general traffic.
Bus	B3	B	May satisfy the target minimum performance indicators for buses.
Freight	F3	C	Generally meets or exceeds the target minimum performance indicators for freight.
Cycling	C2	B	Generally meets the target minimum performance indicators for cycling.
Walking	W3	C	May meet target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for buses and cycling (LoS B), and slightly lower performance for remaining themes (LoS C). While the proposed design is expected to satisfy performance aspirations for general traffic, freight and cycling; place, bus and walking aspirations may not be satisfied.

Place performance is limited by the high traffic volumes and speeds on the Geelong-Ballan Road, while walking performance is limited by potentially long crossing times and limited cross opportunities. Similarly, bus performance is limited by congestion imparted by mixing with general traffic and potential delays at intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Street furniture

- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - Priority crossing treatments for shared path users at intersections
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.

Recommendations:

- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- Given that generally traffic performance is generally satisfactory, signal phasing should aim to limit pedestrian delay as much as practicable to improve walking performance in line with M&P aspirations.
- Intersection designs should consider bus priority measures to improve bus performance.

5.5 Evans Road

Evans Road is an important public transport and traffic connection between the Creamery Road precinct and the Northern Growth Area.

The future Evans Road cross section accommodates public transport services within two travel lanes shared with general traffic, and features an off-street bidirectional bike path separated from traffic and pedestrians. Evans Road also provides a trunk active travel link to Cowies Creek.

The design of Evans Road is show in Figure 12 below.

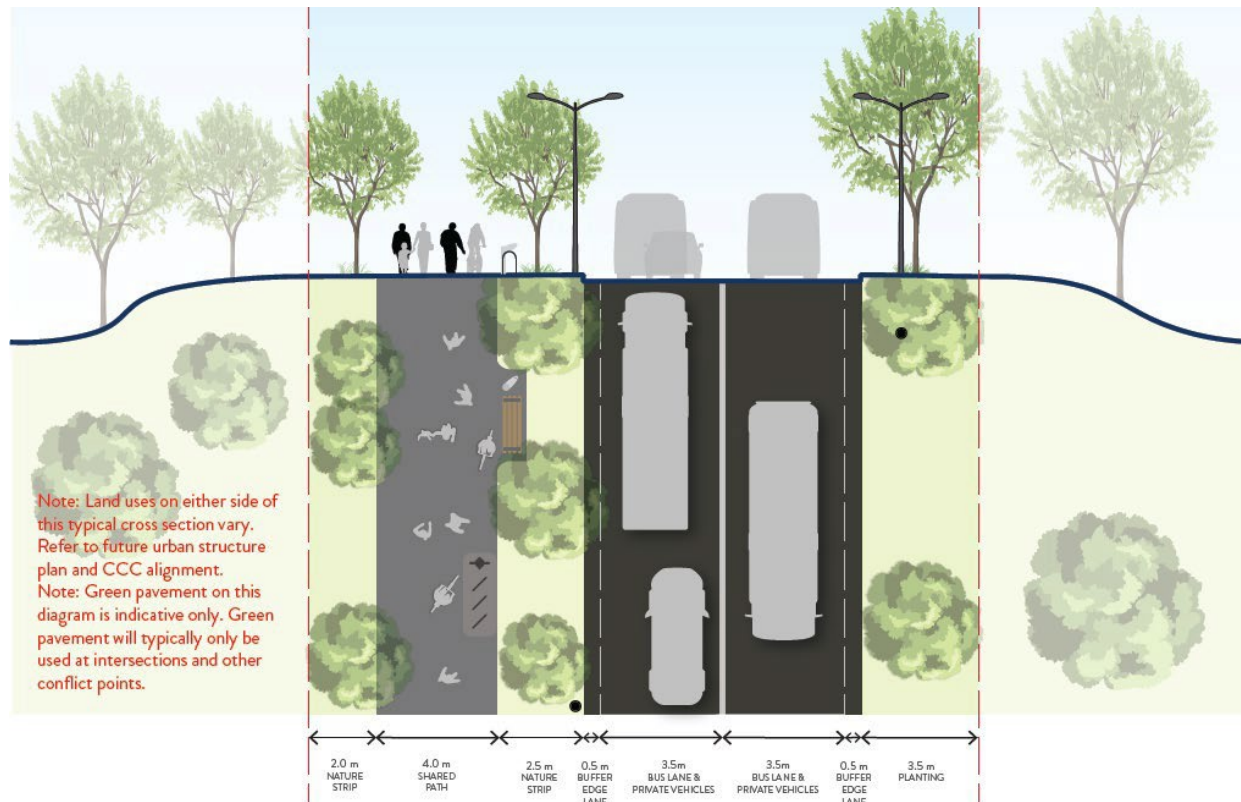


Figure 12: Cross section of Evans Road (20m)

Table 15 summarises the Evans Road network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 15: Overview of M&P assessment – Evans Road

Network	Classification	Target Minimum Performance	Outcome
Place	P5	C	Satisfies the intent of some target minimum performance indicators for place.
Movement	M3		
General Traffic	GT3	C	Generally meets the target minimum performance indicators for general traffic.
Bus	B3	B	May satisfy the target minimum performance indicators for buses.
Cycling	C2	B	Generally meets the target minimum performance indicators for cycling.
Walking	W3	C	May meet target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for buses and cycling (LoS B), and slightly lower performance for remaining themes (LoS C). While the proposed design is expected to satisfy performance aspirations for general traffic and cycling; place, bus and walking aspirations may not be satisfied.

Place performance is limited by the high traffic volumes and speeds on Evans Road, while walking performance is limited by potentially long crossing times and limited cross opportunities. Similarly, bus performance is limited by congestion imparted by mixing with general traffic and potential delays at intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Street furniture

- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - Priority crossing treatments for shared path users at intersections
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.

Recommendations:

- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- Given that generally traffic performance is generally satisfactory, signal phasing should aim to limit pedestrian delay as much as practicable to improve walking performance in line with M&P aspirations.
- Intersection designs should consider bus priority measures to improve bus performance.

5.6 Connector Street (Suburban)

The Suburban Connector Street provides a connection between local streets and key neighbourhood destinations for people walking, riding, taking public transport, or driving. The design of the Connector Street (Suburban) typology is shown in Figure 13 below.

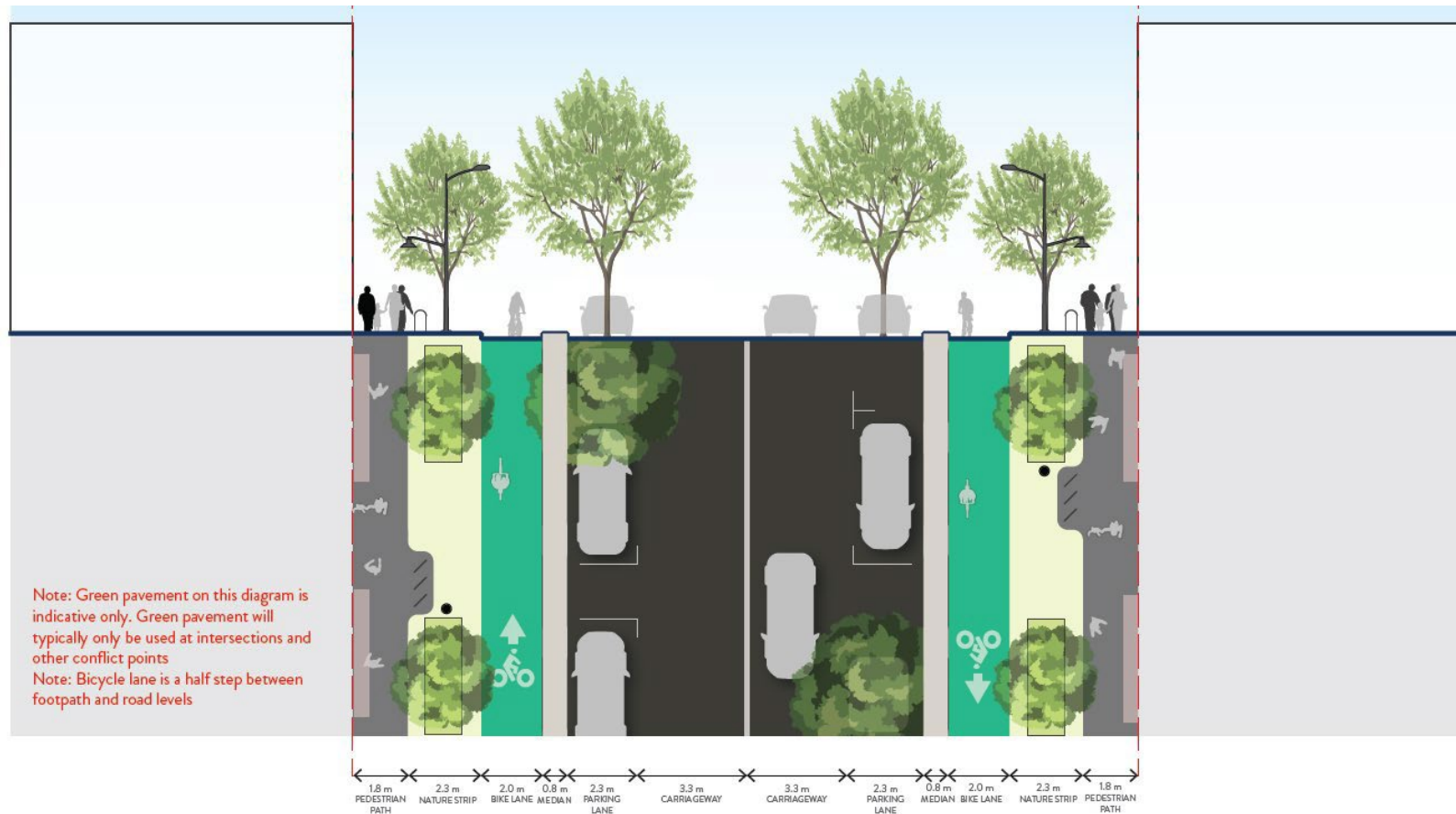


Figure 13: Cross section of the Connector Street (Suburban) (25m)

Table 16 summarises the Connector Street (Suburban) network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 16: Overview of M&P assessment - Connector Street (Suburban)

Network	Classification	Target Minimum Performance	Outcome
Place	P5	C	Generally meets the target minimum performance indicators for place.
Movement	M3		
General Traffic	GT4	D	Generally meets or exceeds the target minimum performance indicators for general traffic.
Bus	B3 (if located on the future public transport network)	B	Generally meets the target minimum performance indicators for buses.
Cycling	C3	B	Generally meets or exceeds the target minimum performance indicators for cycling.
Walking	W3	C	May satisfy target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for buses and cycling (LoS B), moderate performance for place and walking (LoS C) and lower performance for general traffic (LoS D). The proposed design is expected to satisfy performance aspirations for all modes, however further detail is required to assess walking performance, which may be limited by the spacing of crossing opportunities and potential delays at signalised intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Street furniture

- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - Provisions to maintain low stress riding environments at intersections.
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings).

Recommendations:

- Include a requirement in the Precinct Structure Plan to provide formal crossing opportunities at spacings consistent with the M&P performance indicators for walking.
- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- The M&P framework accepts significantly higher delays for general traffic than buses and pedestrians on Connector Streets. Signal designs should ensure the delays imparted on active and public transport modes are minimal, even if delays to general traffic are significant.

5.7 Connector Street (Urban)

The Urban Connector Street provides connections between local streets and key neighbourhood destinations for people walking, riding, taking public transport, or driving in a similar fashion to the Suburban Connector Street, however it includes fully paved verges that respond to the place needs of urban centres (such as opportunities for outdoor dining). The design of the Connector Street (Urban) typology is shown in Figure 14 below.

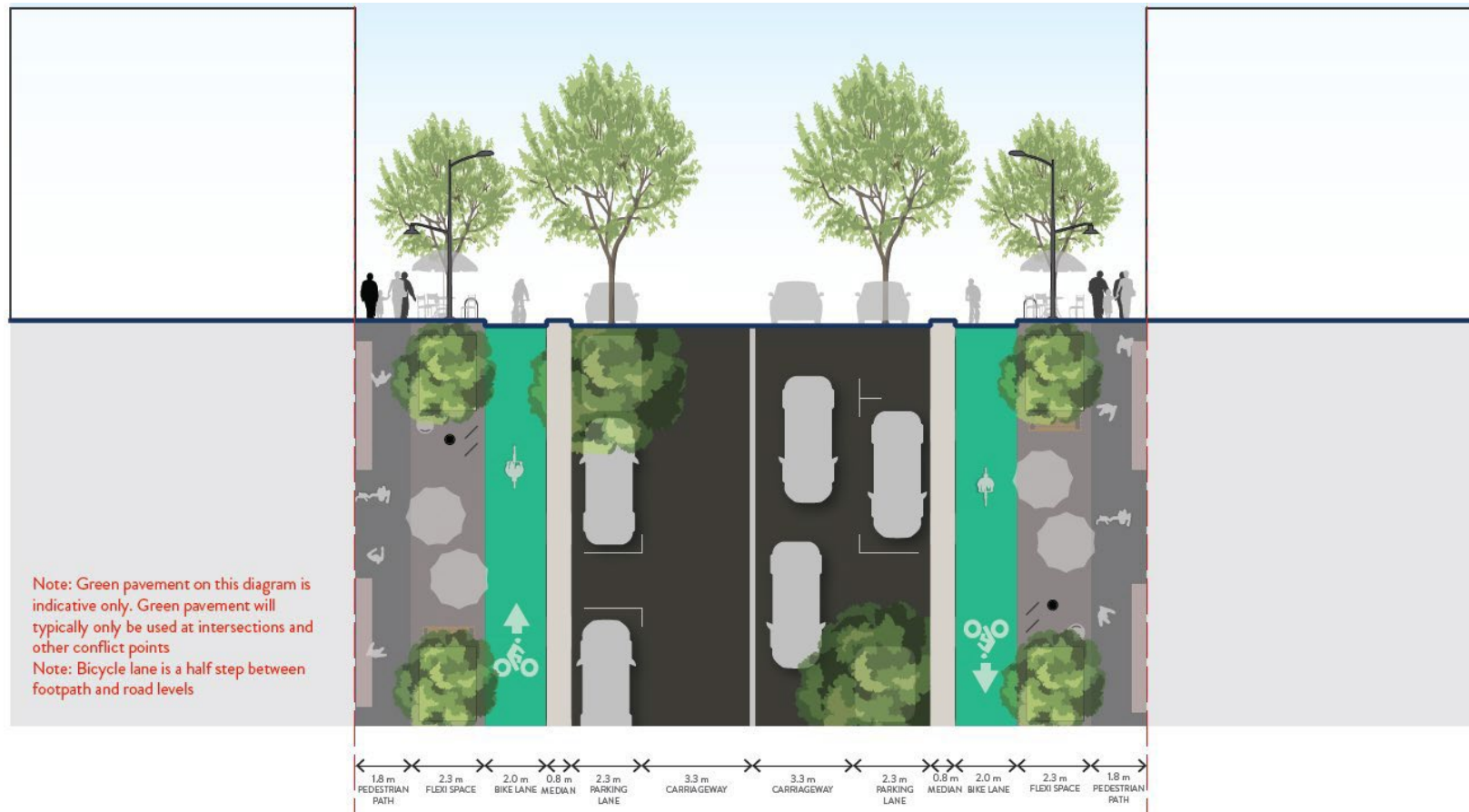


Figure 14: Cross section of the Connector Street (Urban) (25m)

Table 17 summarises the Connector Street (Urban) network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 17: Overview of M&P assessment – Connector Street (Urban)

Network	Classification	Target Minimum Performance	Outcome
Place	P3 (within 500m of NAC)	B	Generally meets the target minimum performance indicators for place.
Movement	M3		
General Traffic	GT4	D	Generally meets or exceeds the target minimum performance indicators for general traffic.
Bus	B3 (if located on the future public transport network)	C	Generally meets the target minimum performance indicators for buses.
Cycling	C2	A	Generally meets or exceeds the target minimum performance indicators for cycling.
Walking	W2	B	May satisfy target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for cycling, walking and place, with lower performance targets for buses and general traffic. The proposed design is expected to satisfy performance aspirations for all modes, however further detail is required to assess walking performance, which may be limited by the spacing of crossing opportunities and potential delays at signalised intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Street furniture
- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Buses:**
 - SIDRA intersection analysis to assess delays for bus traffic.
- **Cycling:**
 - Provisions to maintain low stress riding environments at intersections.
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings).

Recommendations:

- Include a requirement in the Precinct Structure Plan to provide formal crossing opportunities at spacings consistent with the M&P performance indicators for walking.
- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- The M&P framework accepts significantly higher delays for general traffic than buses and pedestrians on Connector Streets. Signal designs should ensure the delays imparted on active and public transport modes are minimal, even if delays to general traffic are significant.

5.8 Connector Street (Modified Urban)

The Modified Urban Connector Street provides a genuine main street experience for central activity centre locations. This street typology removes on-street parking to provide a more compact and human scale streetscape that encourages pedestrian engagement with frontages on both sides of the street.

The design of the Connector Street (Modified Urban) typology is shown in Figure 15 below.

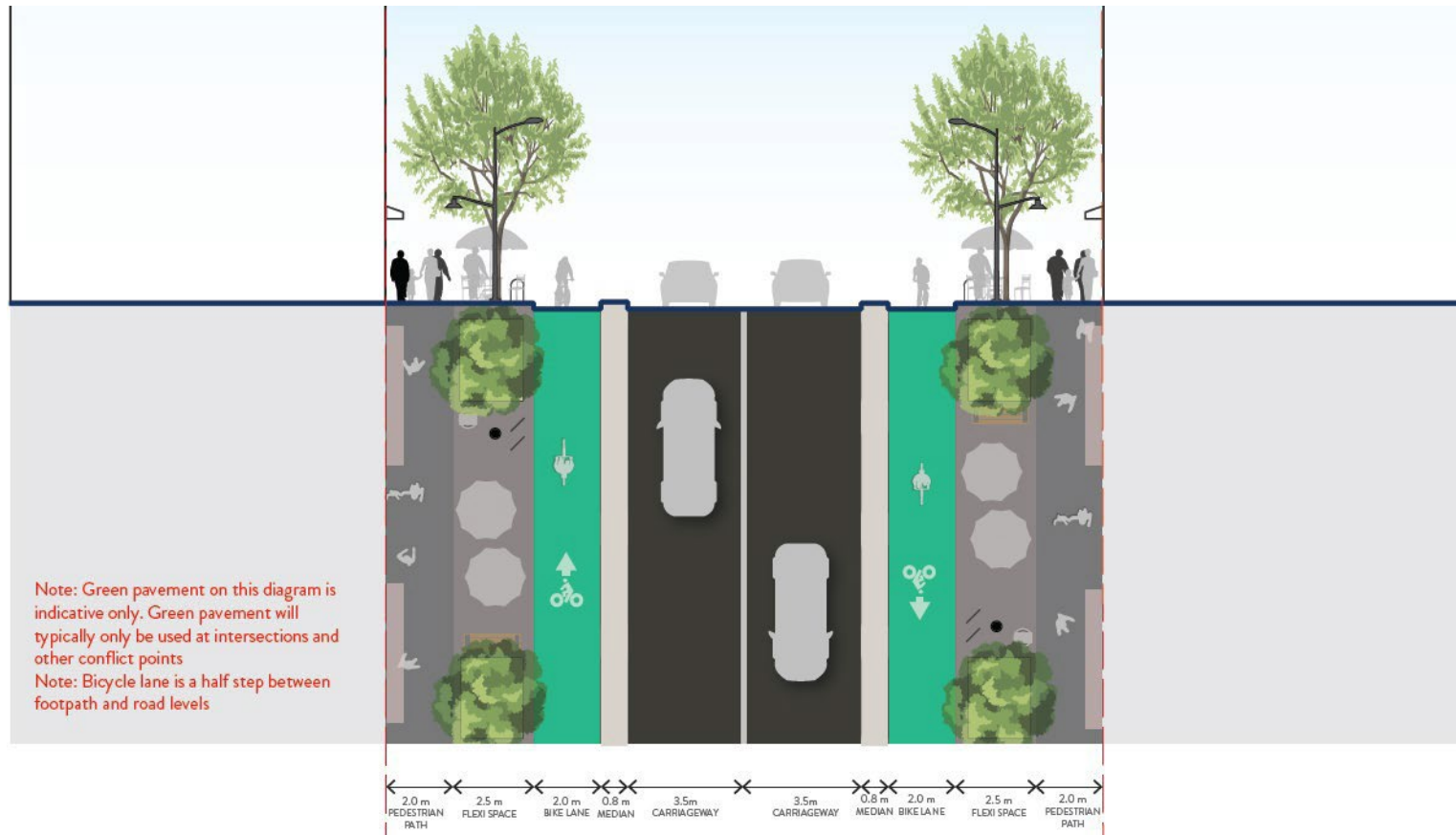


Figure 15: Cross section of the Connector Street (Modified Urban) (21.6m)

Table 18 summarises the Connector Street (Modified Urban) network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 18: Overview of M&P assessment – Connector Street (Modified Urban)

Network	Classification	Target Minimum Performance	Outcome
Place	P3	B	Generally meets the target minimum performance indicators for place.
Movement	M3		
General Traffic	GT4	D	Generally meets or exceeds the target minimum performance indicators for general traffic.
Bus	B5	C	Generally meets the target minimum performance indicators for buses..
Cycling	C2	A	Generally meets or exceeds the target minimum performance indicators for cycling.
Walking	W2	B	May satisfy target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for cycling, walking and place, with lower performance targets for buses and general traffic. The proposed design is expected to satisfy performance aspirations for all modes, however further detail is required to assess walking performance, which may be limited by the spacing of crossing opportunities and potential delays at signalised intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Street lighting
 - Signage and wayfinding
 - Street furniture
- **General traffic:**
 - Intersection layout, signal phasing and performance (including assessment of queuing, delay and stop rate using SIDRA software).
- **Cycling:**
 - Provisions to maintain low stress riding environments at intersections.

- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings).

Recommendations:

- Include a requirement in the Precinct Structure Plan to provide formal crossing opportunities at spacings consistent with the M&P performance indicators for walking.
- M&P level of service measures for intersection delay differ from Austroads guidance (M&P generally accepts significantly longer delays for general traffic at intersections on the CCC than Austroads). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework, rather than Austroads guidelines.
- The M&P framework accepts significantly higher delays for general traffic than pedestrians on Connector Streets. Signal designs should ensure the delays imparted on active and public transport modes are minimal, even if delays to general traffic are significant.

5.9 Key Local Access Street

The Key Local Access Street has a similar purpose to the Local Access Street, however is provided with additional width to accommodate local bus services. Additional width provides two lanes of travel that removes the need for opposing traffic to negotiate passing opportunities. People on bike share space with general traffic.

The design of the Key Local Access Street typology is shown in Figure 16 below.

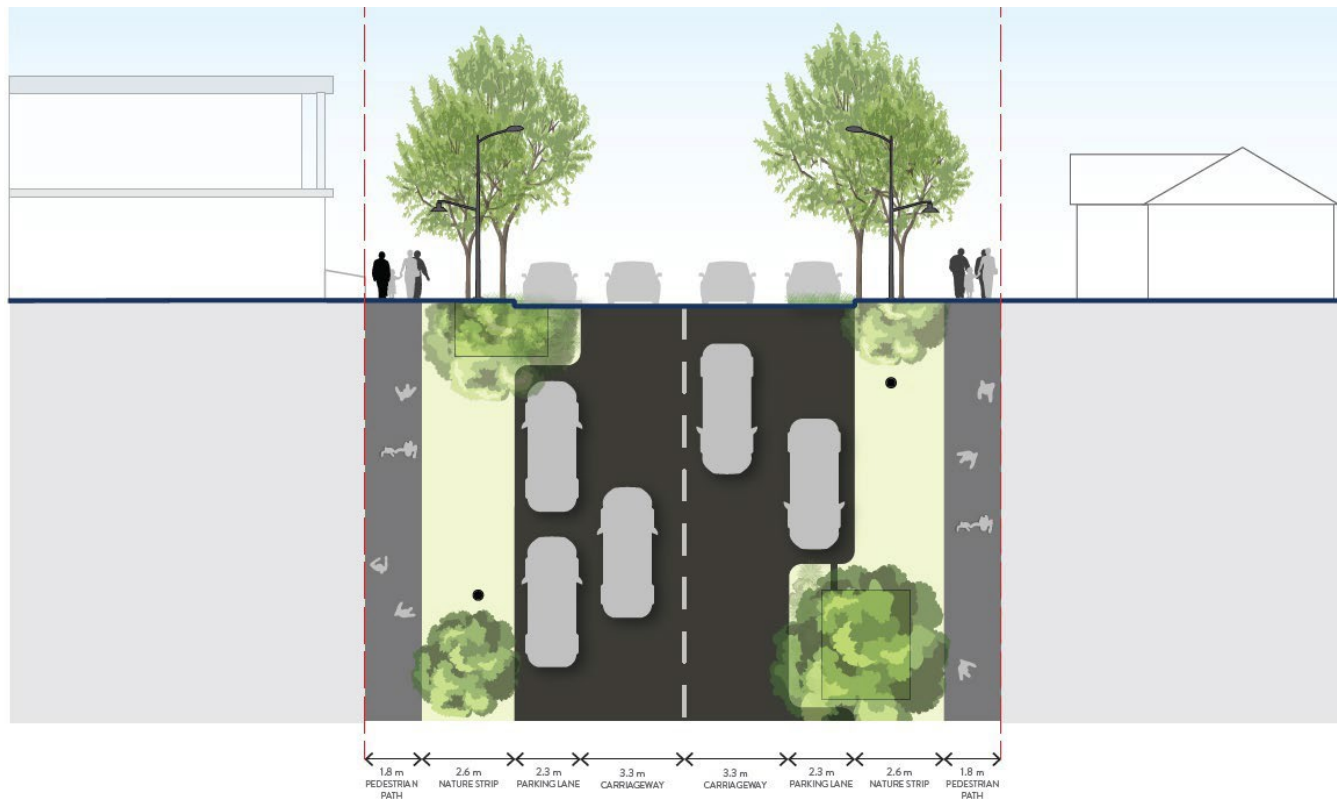


Figure 16: Cross section of the Key Local Access Street (20m)

Table 19 summarises the Key Local Access Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 19: Overview of M&P assessment – Key Local Access Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Generally meets the target minimum performance indicators for place.
Movement	M5		
General Traffic	GT5	D	Generally meets or exceeds the target minimum performance indicators for general traffic.
Bus	B5	C	Generally meets the target minimum performance indicators for buses.
Cycling	C4	B	Generally satisfies the target minimum performance indicators for cycling.
Walking	W4	C	May satisfy target minimum performance indicators for walking.

The Key Local Access Street typology is expected to satisfy the M&P aspirations for all travel modes, however the following details may require further attention to ensure performance indicators for each theme are fully assessed:

- **Cycling:**
 - Forecast general traffic volumes and the impact on cyclists riding in mixed traffic
 - Vehicle speed management provisions
- **Walking:**
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings)

Recommendations:

- Local Access Streets should include streetscape and local area traffic management tools to ensure traffic volumes and speeds are consistently low.
- Wombat crossings should be provided at 200m spacings at mid-block locations or intersections.

5.10 Conservation Interface Street

The Conservation Interface Street provides amenable access to conservation areas and invites active transport participation for both recreation and transport via a generous 4m off-street shared path within a 20m road reserve.

The design of the Conservation Interface Street typology is shown in Figure 17 below.

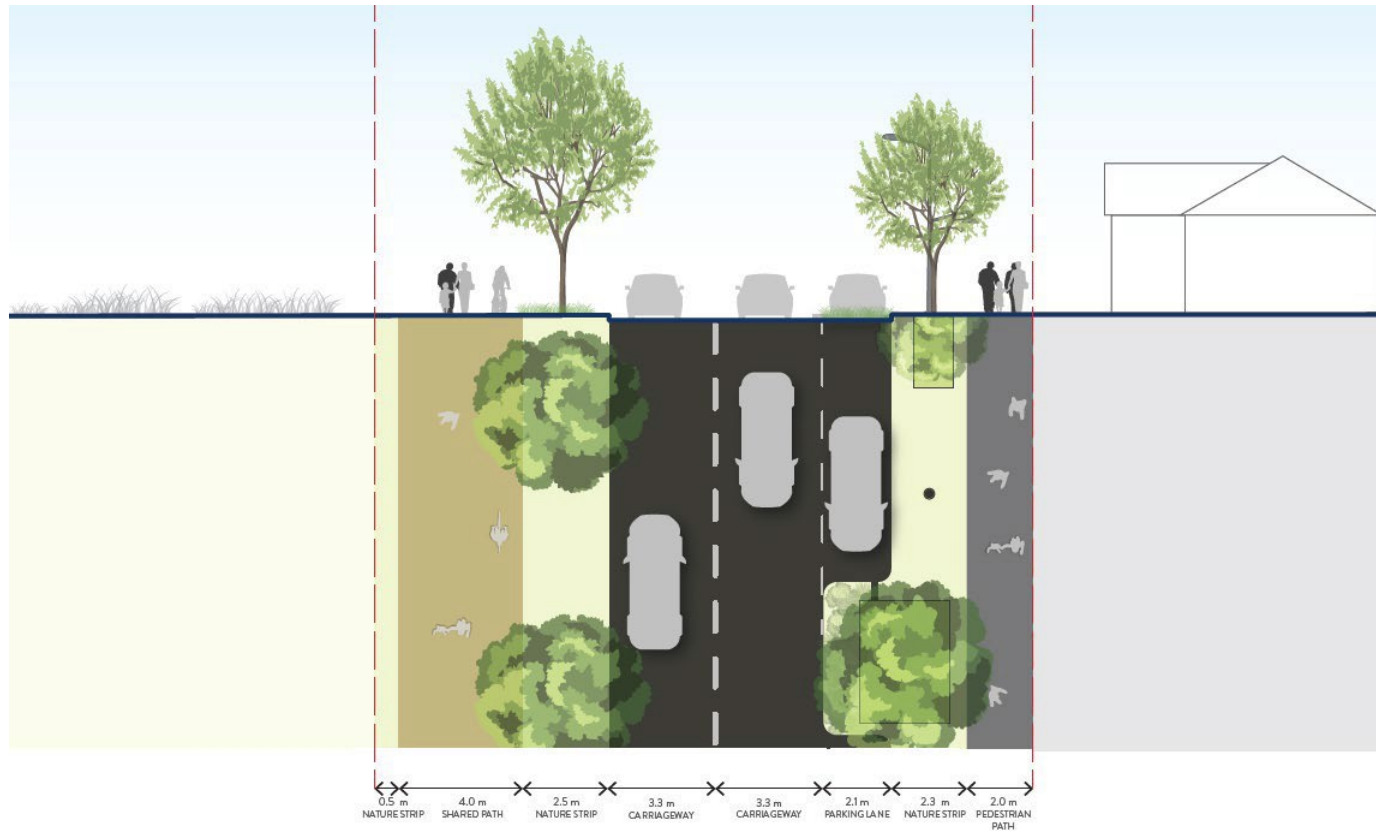


Figure 17: Cross section of the Conservation Interface Street (20m)

Table 20 summarises the Conservation Interface Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 20: Overview of M&P assessment – Conservation Interface Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Generally meets the target minimum performance indicators for place
Movement	M5		
General Traffic	GT5	D	Generally meets or exceeds the target minimum performance indicators for general traffic.
Bus	B5	C	Generally meets the target minimum performance indicators for buses.
Cycling	CR	B	Generally satisfies the target minimum performance indicators for cycling.
Walking	W4	C	Generally satisfies target minimum performance indicators for walking.

The Local Access Street typology is expected to satisfy the M&P aspirations for all travel modes, however the following details may require further attention to ensure performance indicators for each theme are fully assessed:

- **Cycling:**
 - Forecast general traffic volumes and the impact on cyclists riding in mixed traffic
 - Vehicle speed management provisions
 - Provision of priority crossings where shared paths intersect with side streets
- **Walking:**
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings)

Recommendations:

- Local Access Streets should include streetscape and local area traffic management tools to ensure traffic volumes and speeds are consistently low.
- Wombat crossings should be provided at 200m spacings at mid-block locations or intersections.
- Raised priority crossings should be provided where shared path intersects with side streets.

5.11 Local Access Street

The Local Access Street serves to provide direct property access for local residences within a comfortable and amenable living street environment.

The design of the Local Access Street typology is shown in Figure 18 below.

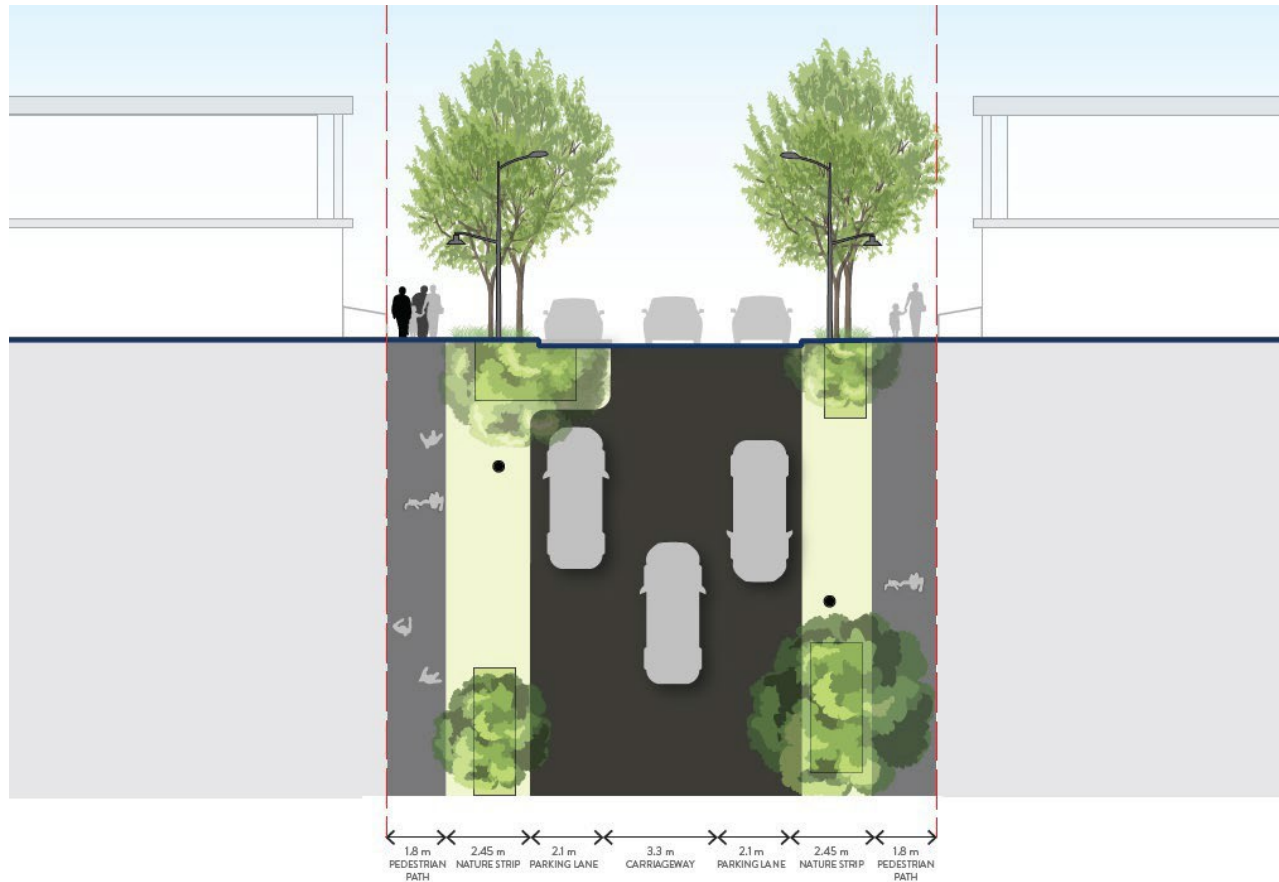


Figure 18: Cross section of the Local Access Street (16m)

Table 21 summarises the Local Access Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 21: Overview of M&P assessment – Local Access Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Generally meets the target minimum performance indicators for place.
Movement	M5		
General Traffic	GT5	D	Satisfies the target minimum performance indicators for general traffic.
Cycling	C4	B	Generally satisfies the target minimum performance indicators for cycling.
Walking	W4	C	Satisfies target minimum performance indicators for walking.

The Local Access Street typology is expected to satisfy the M&P aspirations for all travel modes, however the following details may require further attention to ensure performance indicators for each theme are fully assessed:

- **Cycling:**
 - Forecast general traffic volumes and the impact on cyclists riding in mixed traffic
 - Vehicle speed management provisions
- **Walking:**
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings)

Recommendations:

- Local Access Streets should include streetscape and local area traffic management tools to ensure traffic volumes and speeds are consistently low.
- Wombat crossings should be provided at 200m spacings at mid-block locations or intersections.

5.12 Parking Street

Parking streets provide consolidated on-street parking opportunities to meet the visitor and overflow parking needs of residents of Micro Streets and Pedestrian Streets. The design of the Parking Street typology is shown in Figure 19 below.

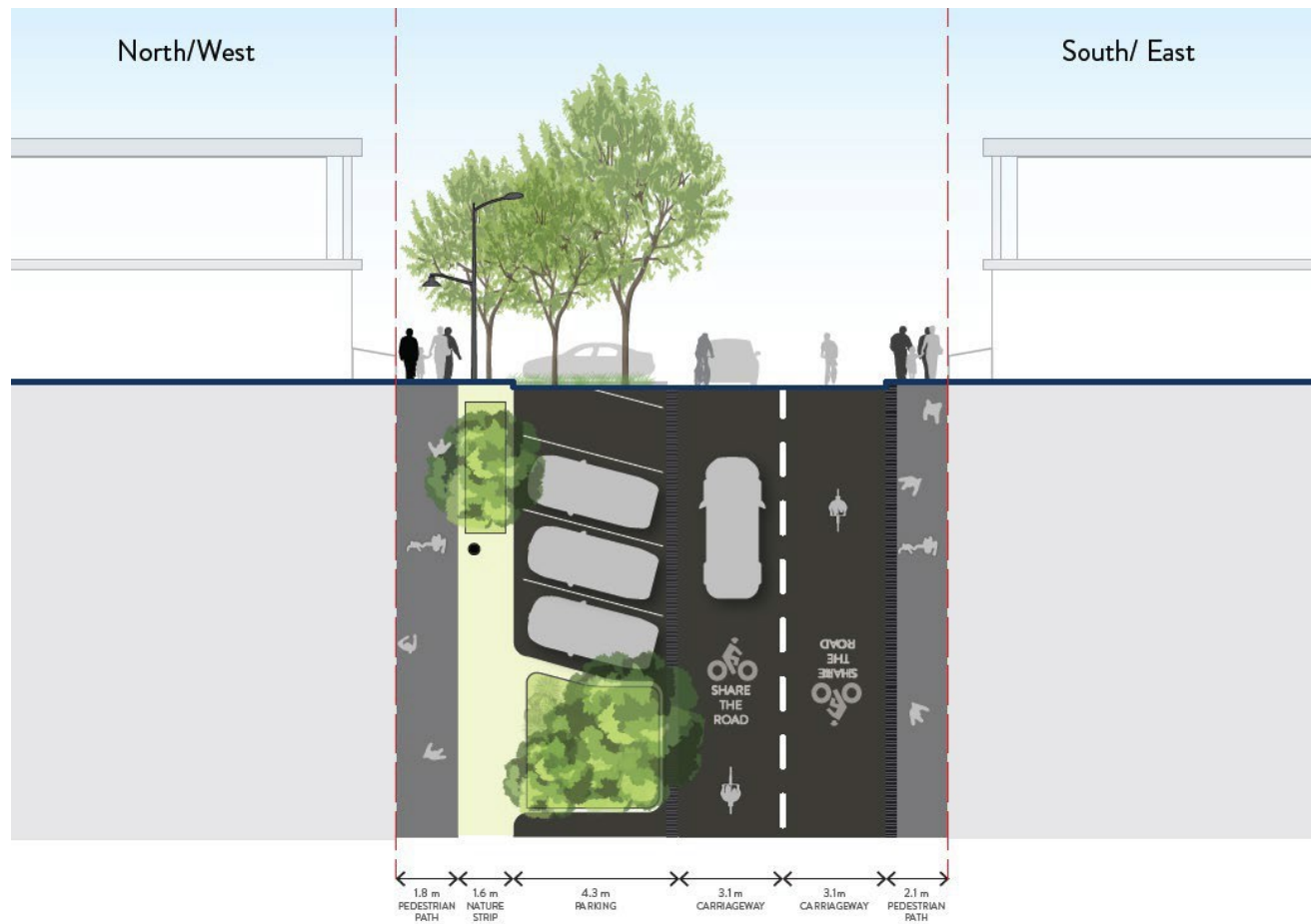


Figure 19: Cross section of the Parking Street (16m)

Table 22 summarises the Parking Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 22: Overview of M&P assessment – Parking Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Generally meets the target minimum performance indicators for place.
Movement	M5		
General Traffic	GT5	D	Satisfies the target minimum performance indicators for general traffic.
Cycling	C4	B	Generally satisfies the target minimum performance indicators for cycling.
Walking	W4	C	Generally satisfies target minimum performance indicators for walking.

The Parking Street typology is expected to satisfy the M&P aspirations for all travel modes provided vehicle speeds are low and slow.

The M&P framework identifies cycling as the highest priority theme, and the street environment is expected to be comfortable for most riders in the ‘interested but concerned’ cohort, however additional information may need to be sought from development proponents to demonstrate how vehicle speeds and volumes will be effectively controlled. Similarly, the provision of angled parking may limit drivers’ view of oncoming cyclists, streetscape tools should be used help people riding bikes safely and comfortably ‘claim the lane’, rather than riding in the conflict zone immediately behind parked cars. The Streetscape Toolkit should be referenced and used to guide the selection of appropriate design tools for this purpose.

Details that may require further information in order to be fully assessed are:

- **Cycling:**
 - Forecast general traffic volumes and the impact on cyclists riding in mixed traffic
 - Vehicle speed management provisions
- **Walking:**
 - Spacing of mid-block crossing opportunities (e.g. wombat crossings)

Recommendations:

- We recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments to limit travel speeds and encourage riders to claim the lane.
- Council may include a PSP requirement to demonstrate that proposed Parking Street designs are generally in accordance with the Streetscape Toolkit guidelines.
- Wombat crossings should be provided at 200m spacings at mid-block locations or intersections.

5.13 Micro Street

Micro Streets provide limited access to vehicles in a shared streetscape oriented strongly towards providing flexible public open space for improvised play and other residential land use aligned place activity. Direct vehicle access to properties fronting Micro Streets is provided by rear access laneways, creating additional opportunities for Micro Streets to prioritise high quality place outcomes.

The design of the Micro Street typology is shown in Figure 20 below.

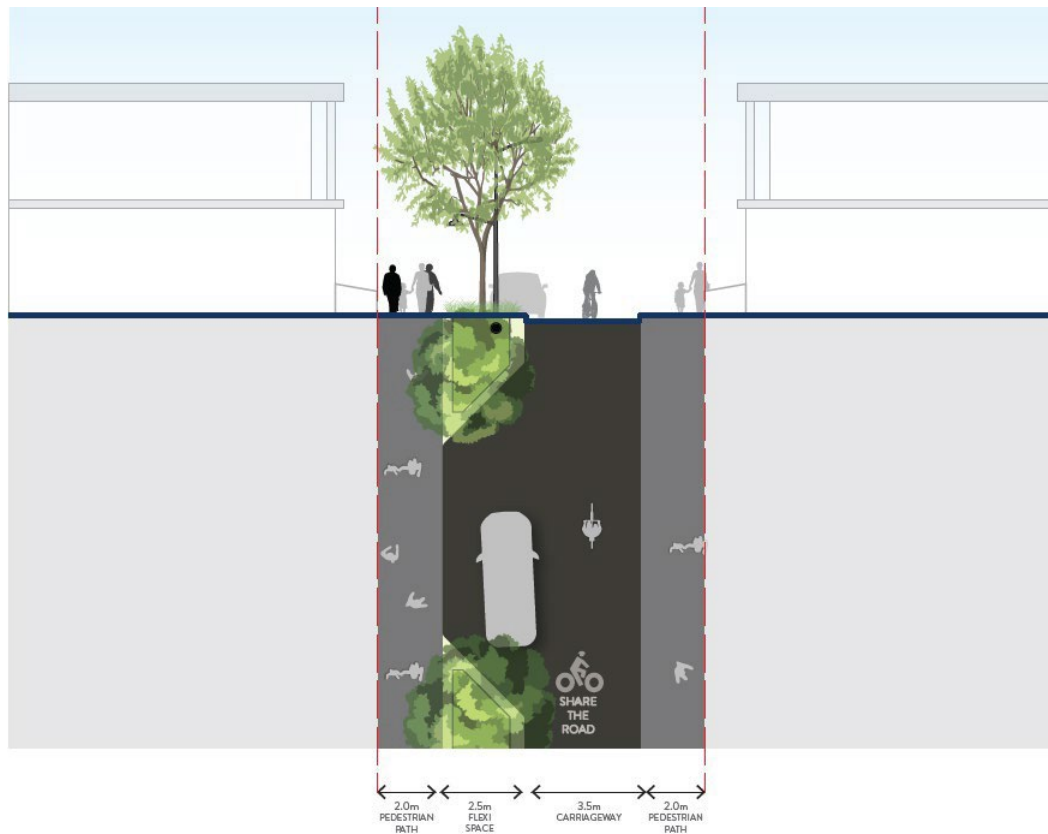


Figure 20: Cross section of the Micro Street (10m)

Table 23 summarises the Micro Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 23: Overview of M&P assessment – Micro Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Exceeds the target minimum performance indicators for place.
Movement	M5		
General Traffic	GT5	D	Satisfies the target minimum performance indicators for general traffic.
Cycling	C4	B	Satisfies the target minimum performance indicators for cycling.
Walking	W4	C	Exceeds target minimum performance indicators for walking.

The Micro Street typology is a shared street option that is expected to satisfy all place and movement aspirations of the M&P framework. While we note the low (LoS D) place aspirations of the street using the M&P framework, we recognise that residential streets serve an important place function for residents and that streets with minimal vehicular intrusion have a unique opportunity to maximise their place potential. As such, we suggest that Pedestrian Streets should aspire to satisfy the following additional place performance measures:

- Space for programmed play: the street may include equipment specifically designed for play (e.g. swings, soccer goals, etc) at a scale that contributes but does not dominate the streetscape.
- Unprogrammed or improvised play: the street includes open space, landscaping and street furniture that invite improvised play (e.g. climbing, exploring, space to kick a ball).
- Space for sitting, reflection and respite: the street has good solar access (in many cases better than private backyards) and provides a mix of shaded and sunny places to sit
- Social and gathering: the street may include spaces for household and multi-household groups to meet and socialise (e.g. public tables, BBQs).
- Active citizenship: The street provides spaces that invite active curation from the community (e.g. community gardening).

The Micro Street typology is expected to satisfy most of these additional place requirements, however limited space is available for programmed play treatments. Further information should be sought from development proponents to understand how these place requirements will be addressed in their designs, however we recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments to guide

developers. Council may then include a PSP requirement to demonstrate that proposed Micro Street designs are generally in accordance with the Streetscape Toolkit guidelines.

Recommendations:

- Council may include a PSP requirement to demonstrate that proposed Micro Street designs are generally in accordance with the Streetscape Toolkit guidelines.

5.14 Pedestrian Street

Pedestrian Streets provide an entirely car-free environment dedicated to residential place activity, play space and public backyard space. The design of the Pedestrian Street typology is shown in Figure 21 below.



Figure 21: Cross section of the Pedestrian Street narrow (10m, left) and wide (16m, right)

Table 24 summarises the Pedestrian Street network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 24: Overview of M&P assessment – Pedestrian Street

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Exceeds the target minimum performance indicators for place.
Movement	M5		
Cycling	C4	B	Satisfies the target minimum performance indicators for cycling.
Walking	W4	C	Exceeds target minimum performance indicators for walking.

The Pedestrian Street typology is a car-free option that is expected to satisfy the place, cycling and walking aspirations of the Movement and Place framework. A 3.5m shared path provides a safe and comfortable riding environment free of traffic stress for all riding cohorts, while the absence of car traffic permits pedestrians to walk and cross unencumbered across the entire length of the street.

While we note that the place aspirations of the street are low using the Movement and Place framework, the Pedestrian Street typology offers a unique opportunity to pursue high quality place outcomes specifically tailored to the needs of residential places. In support of this, we suggest that Pedestrian Streets should aspire to satisfy the following additional place performance measures:

- Space for programmed play: the street may include equipment specifically designed for play (e.g. swings, soccer goals, etc) at a scale that contributes but does not dominate the streetscape.
- Unprogrammed or improvised play: the street includes open space, landscaping and street furniture that invite improvised play (e.g. climbing, exploring, space to kick a ball).
- Space for sitting, reflection and respite: the street has good solar access (in many cases better than private backyards) and provides a mix of shaded and sunny places to sit
- Social and gathering: the street may include spaces for household and multi-household groups to meet and socialise (e.g. public tables, BBQs).
- Active citizenship: The street provides spaces that invite active curation from the community (e.g. community gardening).

The Pedestrian Street design is expected to satisfy these additional place requirements, however further support may be required to guide development. On this basis, we recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments. Council may then include a PSP requirement to demonstrate that proposed Pedestrian Street designs are generally in accordance with the Streetscape Toolkit guidelines.

Recommendations:

- Council may include a PSP requirement to demonstrate that proposed Pedestrian Street designs are generally in accordance with the Streetscape Toolkit guidelines.

5.15 Laneway

Laneways serve to provide direct property access to lots fronting streets with limited or no driveway access, such as Pedestrian Streets, Micro Streets, Parking Streets and the Clever and Creative Corridor. Laneways enable higher quality walking environments and place outcomes to be achieved on frontage streets by consolidating vehicle access in a compact dedicated space. Laneways are not primary walking or cycling connections, but may improve the permeability of the local street network.

The design of the Laneway typology is shown in Figure 22 below.

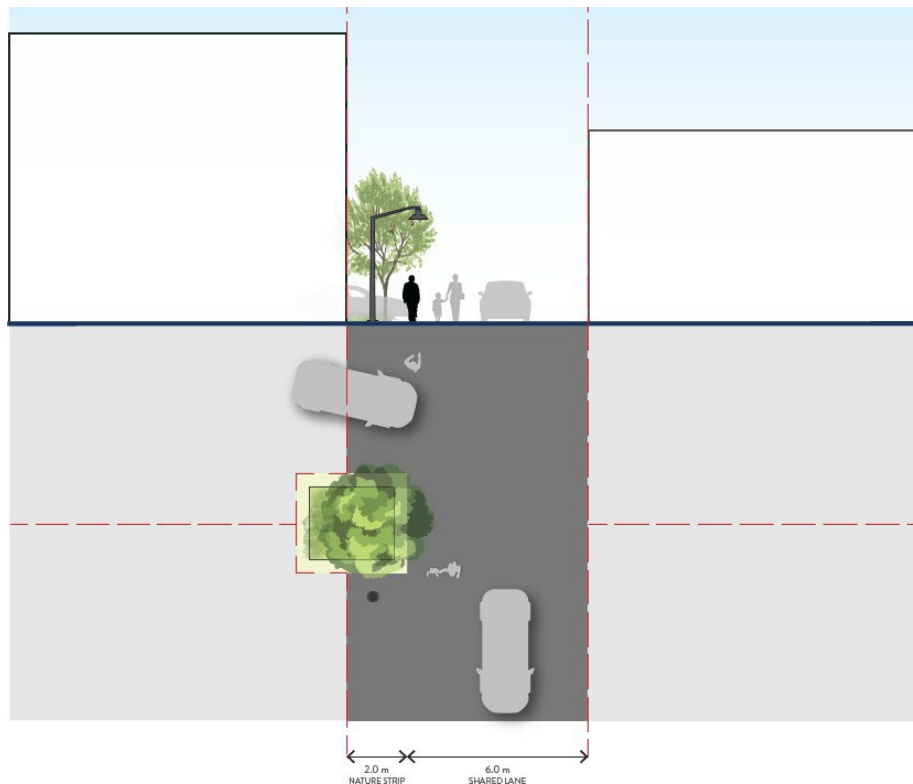


Figure 22: Cross section of the Laneway (8m)

Table 25 summarises the Laneway network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

Table 25: Overview of M&P assessment - Laneway

Network	Classification	Target Minimum Performance	Outcome
Place	P5	D	Generally meets the target minimum performance indicators for place.
Movement	M5		
General Traffic	GT5	D	Satisfies the target minimum performance indicators for general traffic.
Cycling	C4	B	Satisfies the target minimum performance indicators for cycling.
Walking	W5	C	Exceeds target minimum performance indicators for walking.

The laneway typology is expected to satisfy the M&P aspirations for all travel modes within a single shared space, providing vehicle speeds are low and slow.

While the primary function of the laneway typology is to provide back of lot property access for vehicles, the Movement and Place framework recognises that laneways must nonetheless be safe and comfortable places to walk and ride. As such, the framework assigns higher performance targets to walking and cycling (LoS C and B, respectively) than general traffic and place (LoS D). While it is expected that people walking and riding will be able to share the street safely and comfortably with general traffic, further information may be necessary when assessing development applications to ensure proponents can demonstrate how vehicle speeds and volumes will be kept within the limits set out by the Precinct Structure Plan requirements and guidelines.

While laneways are generally not expected to be spaces that invite high levels of social interaction, they can be occupied as spaces for improvised play, and must not become place detractors that feel unsafe or antisocial. While place performance is a lower priority within the M&P framework for laneways, we expect landscaping and lighting to be included to support a minimum standard of place quality consistent with the M&P framework's performance indicators.

A summary of additional details that may be required to fully assess relevant performance indicators are provided below:

- **Place:**
 - Landscaping details, including street tree species and spacing
 - Street lighting plans
 -
- **Walking and Cycling:**
 - Forecast traffic volumes.
 - Vehicle speed management provisions.

6 Alignment with Updated Victorian Planning Provisions

Clause 18 of the Victorian Planning Provisions (VPP) outline requirements for the planning of transport networks. Table 26 outlines how the design of Creamery Road FUS responds to the requirements of VPP Clause 18.

Table 26: Creamery Road FUS - Overview of VPP Clause 18 response

Clause	Amendment	Creamery Road FUS response
18 Transport	Planning should ensure a safe, integrated and sustainable transport systems 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	- The FUS actively contributes to environmental sustainability by planning for a significant public and active transport network throughout the FUS. - Active transport networks within the FUS promote better health and wellbeing outcomes. Specific key elements include: - The Clever and Creative Corridor, including the central cycleway - Protected kerbside bike lanes on all connector streets. - Protected intersections for people on bikes at intersecting connector streets. - The CCC busway provides efficient and reliable movement of people - CCC alignment provides direct and efficient corridor for active and sustainable modes.
18.01-IS Land use and transport integration	Objective To facilitate access to social, cultural and economic opportunities by effectively integrating land use and transport. Strategies Plan and develop a transport system that facilitates: - Social and economic inclusion for all people and builds community wellbeing. - The best use of existing social and economic infrastructure - A reduction in the distances people have to travel to access jobs and services - Better access to, and greater mobility within, local communities	- The FUS considers provisions for future connections to adjacent growth areas and precincts (e.g. CCC extensions to Batesford North and Evans Road to the Northern Geelong Growth Area). - The NAC is centrally located within the precinct adjacent the CCC to maximise accessibility to the NAC by active and public transport modes. - The FUS has been informed by Movement and Place assessment of current and future networks, and traffic modelling undertaken by Stantec. - Key networks, including future bus routes, have been discussed in detail with DoT. Planned bus routes deliver access to bus stops within 400m of most residents within the precinct. - The FUS plan, through its wide use of active and public transport infrastructure provides greater mobility choice to the community.

Clause	Amendment	Creamery Road FUS response
	- Network-wide efficiency and coordinated operation. Plan land use and development to: - Protect existing transport infrastructure from encroachment or detriment that would impact deliverability or future operation Plan land use and development to allow for the ongoing improvement and development of the State Transport System in the short and long term. Plan networks and adjoining land uses to minimise disruption to residential communities and their amenity Plan the timely delivery of transport infrastructure and services to support changing land use and associated transport demands. Plan improvements to public transport, walking and cycling networks to coordinate with the ongoing development and redevelopment of urban areas. Plan the use of land adjacent to the transport system having regard to the current and future development and operation of the transport system. Reserve land for strategic transport infrastructure to ensure the transport system can be developed efficiently to meet changing transport demands. Support urban development that makes jobs and services more accessible: - In accordance with forecast demand - By taking advantage of all modes of transport. Protect existing and facilitate new walking and cycling access to public transport. Locate major government and private sector investments in regional cities and centres on major transport corridors to maximise the access and mobility of communities. Design neighbourhoods to:	- The FUS aims to increase community amenity by reducing the dependency on private vehicle movements and by providing quality active and public transport infrastructure. - The FUS provides public and active transport connections to schools.

Clause	Amendment	Creamery Road FUS response
	- Better support active living - Increase the share of trips using sustainable transport modes - Respond to the safety needs of all users Design the transport system and adjoining areas to achieve visual outcomes that are responsible to local context with particular reference to: - Landscaping - The placement of signs - Providing buffer zones and resting places Policy Documents Consider as relevant: - Movement and Place in Victoria - Delivering the Goods, Creating Victorian Jobs: Victorian Freight Plan	
18.01-2S Transport System	Objective To facilitate the efficient, coordinated and reliable movement of people and goods by developing an integrated and efficient transport system. Strategies Plan and develop a transport system integrated across all movement networks that: - Facilitates the efficient, coordinated and reliable movement of people and goods at all times - Optimises transport systems capacity - Improves connectivity and facilitates the growth and development of regional Victoria - Improves connectivity between Victoria's regional cities and metropolitan Melbourne	- The FUS maintains existing strategic freight corridors where the movement of goods in high volumes are concentrated (e.g. along the Midland Highway and Geelong-Ballan Rd) - The FUS maintains existing arterial road corridors (e.g. the Midland Highway and Geelong-Ballan Rd) - All links within the street and road network of the FUS have been classified using DoT's Movement and Place framework - The future Principal Public Transport network has been identified and mapped - The future Principal Pedestrian and Principal Bike networks have been identified and mapped. - The 20-minute neighbourhoods will be supported by the mix of accessible active and public transport networks designed within the FUS.

Clause	Amendment	Creamery Road FUS response
	- Ensures sufficient capacity for the movement of passengers into and out of Victoria at Principal Transport Gateways - Improves how goods are moved to local, interstate and overseas markets - Maximises access to residential areas, employment, markets, services and recreation - Improves local transport options to support 20-minute neighbourhoods in Melbourne's suburbs and Victoria's regional cities and towns - Is legible and enables easy access and movement between modes. Plan movement networks that share the same space to do so in a way that balances the needs of different users of the transport system. Plan and develop the State Transport System comprising of the following: - Principal Bicycle Network: Existing and future high quality cycling routes that provide access to major destinations and facilitate cycling for transport, sport, recreation and fitness - Principal Public Transport Network: Existing and future high quality public transport routes in the Melbourne metropolitan area. - Regional Rail Network: Existing and future passenger rail routes in regional Victoria. - Principal Road Network: Declared arterial roads and freeways under the Road Management Act 2004. - Principal Freight Network: Existing and future freight corridors and precincts where the movement of high volumes of freight are concentrated or are of strategic value - Principal Transport Gateways: Existing and future ports, airports and interstate terminals that serve as key locations for moving passengers and freight into, out of and around Victoria Facilitate delivery of:	

Clause	Amendment	Creamery Road FUS response
	- Declared major transport projects and their ancillary projects that are of economic, social or environmental significance to the state of Victoria - Transport projects that improve the State Transport System. Policy documents Consider as relevant: - Movement and Place in Victoria	
18.02-IS Walking	Objective To facilitate an efficient and safe walking network and increase the proportion of trips made by walking. Strategies Plan and develop walking networks to: - Provide pedestrian routes that are safe, direct and comfortable to use. - Enable walking as a part of everyday life - Enable people to meet more of their needs locally and rely less on their cars - Be accessible to vehicles that use footpaths, including wheelchairs, prams and scooters - Accommodate emerging forms of low-emission, low-speed personal transport. Develop principal pedestrian networks for local areas that link with the transport system. Provide walking infrastructure in all major transport projects Design walking routes to be comfortable by providing shelter from the sun through canopy trees, verandahs and other structures.	- The FUS aims to facilitate an efficient and safe walking network that aims to increase the proportion of trips made by walking. - The FUS provides direct and safe pedestrian routes along the Clever and Creative Corridor which aim to enable walking as a part of everyday life. - The FUS is designed to be accessible to other vehicles including wheelchairs, prams and scooters. - The FUS outlines pedestrian networks within local areas that will link with the transport system. - The Principal Pedestrian Network has been identified and mapped as part of the complete movement and place classification process. - All footpaths within the precinct enable people using prams and wheelchairs to pass freely. - Street typologies include large street trees to shade footpaths. - Streets and paths have been designed to minimise conflicts between pedestrians and cyclists.

Clause	Amendment	Creamery Road FUS response
	Design direct, comfortable and connected walking infrastructure to and between key destinations including activity centres, public transport interchanges, employment areas, urban renewal precincts and major attractions. Policy documents Consider as relevant: Guidelines for developing Principal Pedestrian Networks	
18.02-2S Cycling	Objective To facilitate an efficient and safe bicycle network and increase the proportion of cycling. Strategies Plan and develop cycling networks to: - Provide routes that are safe, comfortable, low-stress and well connected - Enable cycling as part of everyday life - Enable people to meet more of their needs locally by cycling and to rely less on their cars - Accommodate emerging forms of low emission, low and moderate speed personal transport. Protect and develop the Principal Bicycle Network to provide high-quality cycling routes that are direct and connected, to and between key destinations including activity centres, public transport interchanges, employment areas, urban renewal precincts and major attractions. Develop Strategic Cycling Corridors by:	- The FUS facilitates efficient and safe bicycle networks throughout the Clever and Creative Corridor, connector streets and local streets. - The FUS protects and enhances Strategic Cycling Corridors on Evans Road, Geelong-Ballan Road, the Midland Highway and along Cowies Creek. - The FUS develops the Principal Bicycle Network within the Creamery Road precinct and provides cycling paths that are direct and connected to activity centres and schools. - Protected bike lanes are provided on the Clever and Creative Corridor and all connector streets. - Wide shared paths are provided on Strategic Cycling Corridor links on the Midland Highway, Geelong-Ballan Road, Bluestone Bridge Road (north of Avonlea Road) and Evans Road. - The CCC and connector streets include protected bike treatments at major intersections.

Clause	Amendment	Creamery Road FUS response
	- Integrating them with stations and other major interchanges on the public transport network that serve places of state significance - Integrating them with the central city, national employment and innovation clusters, major activity centres and other destinations of metropolitan or state significance - Facilitating safer, lower stress and more direct journeys using a combination of cycleways, cycle paths and shared streets. - Providing the most direct route practical - Designing transport corridors to prioritise cycling links and cyclists. Protect Strategic Cycling Corridors from encroachment by development and incompatible interface treatments such as cross overs. Support increased cycling by providing: - Cycling routes and cycling infrastructure early in new developments and in all major transport projects - Cycle parking and related end of trip facilities to meet demand at education, recreation, transport, shopping, commercial, public transport interchanges and community facilities, significant trip generating developments and other major attractions. - Facilities for cyclists, particularly storage, at public transport interchanges and rail stations - Vegetation to shade cycling routes. Policy documents Consider as relevant: - Principal Bicycle Network (2012) - Victorian Cycling Strategy 2018-28	

18.02-3S Public transport	Objective To facilitate an efficient and safe public transport network and increase the proportion of trips made by public transport. Strategies Plan and develop public transport to: • Connect activity centres, job rich areas and other suburban areas • Enable people to not have to rely on cars for personal transport • Integrate bus and tram networks and stops and public transport interchanges in new development areas, including new urban renewal precincts and outer-urban areas • Integrate with land use and development in outer suburban and growth areas. Protect and develop the Principal Public Transport Network and Regional Rail Network to facilitate: • High quality public transport services that support increased diversity and density of development, particularly at interchanges, activity centres and where Principal Public Transport Network routes intersect • Modern commuter-style transport services that link Melbourne with the regional growth areas of Geelong, Bendigo, Ballarat, Seymour and Traralgon • Service improvements to other regional and rural areas • A metro-style rail system that provides a very high frequency of service in the Melbourne metropolitan area • A new high quality orbital rail (Suburban Rail Loop) through Melbourne's middle suburbs • A balance between rail usage needs of public transport and freight. Facilitate public transport infrastructure in all major transport projects.	• The Clever and Creative Corridor within the FUS provides a public transport corridor that connects the precinct with activity centres, jobs, and other destinations throughout Greater Geelong. • The Principal Bus Network has been designed to provide the majority of households in the precinct access to a bus stop within 400m. • The Clever and Creative Corridor provides a dedicated busway that will connect to adjacent PSPs and the central Geelong via the Midland Highway.
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	Allocate adequate land and infrastructure to support public transport provision in activity centres, transport interchanges and major commercial, retail and community facilities. Locate higher density and increased development on or close to the Principal Public Transport Network in a way that does not compromise the efficiency of the Principal Public Transport Network. Support development that facilitates the delivery and operation of public transport services. Policy documents Consider as relevant: • Principal Public Transport Network, 2017 • VicTrack Rail development interface guidelines, 2019 • Public Transport Guidelines for Land Use Development 2008.	
18.02-4S Roads	Objective To facilitate an efficient and safe road network that integrates all movement networks and makes best use of existing infrastructure. Strategies Plan and develop the road network to: • Ensure people are on and around roads • Improve people's perceptions of safety on and around roads • Improve road connections for all road users • Facilitate the use of public transport, cycling and walking • Integrate new and emerging technologies into road design, including the increasing connectivity and automation of vehicles • Accommodate the expansion of the High Productivity Freight vehicle Network, and oversize and overmass vehicles Protect and develop the Principal Road Network:	• The Clever and Creative Corridor has been designed to provide direct and reliable public and active transport to reduce the need for car travel. • The road network has been design to promote orbital travel around, rather than through, the precinct using the arterial network (Geelong-Ballan Road and the Midland Highway) • Evans Road has been designed to provide a direct link to the Northern Geelong Growth Area to limit short trips on the Geelong Ring Road. • The road network throughout the FUS has been designed so that the safe movement of people and goods can exist alongside high amenity place centres within the pedestrian realm like activity centres, schools and community facilities. • There is strong focus to promote better public and active transport alternatives to reduce the dependency on car parking within the FUS, which protects the role and function of the road network for longer trips. • The FUS utilises a range of street types that have been designed to promote safe travel speeds.

	• Provide high mobility for through traffic and the efficient movement of freight by facilitating adequate movement capacity and speeds • Improve cross-town arterial links in outer suburbs, growth areas, including circumferential and radial movement to facilitate access to jobs and services • Limit access points to high-volume, high-speed roads by utilising urban design techniques such as service roads and internal connector roads • Improve high capacity on-road public transport. Develop declared freeways to: • Link Melbourne with major regional cities, major interstate locations and other key locations important to the economy along major national and state transport corridors • Connect and provide access to Principal Transport Gateways and freight generating areas • Improve connections to national employment and innovation clusters • Connect dispersed major residential areas with key destinations and lower density employment areas • Avoid private access, except for service centres. Provide for grade separation at railway crossings, except with the approval of the minister for Transport. Improve Melbourne's distinctive, established boulevards by developing a connected, contemporary network of boulevards within the urban growth boundary. Design road space to complement land use and meet business and community needs through the provision of wider footpaths, bicycle lanes, transit lanes (for buses and commercial passenger vehicles) and freight routes, in line with the designated role of the road.	
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	Design roads to facilitate the safe movement of people and goods while providing places for people to interact and gather in high pedestrian areas like activity centres, around schools and community facilities. Plan an adequate supply of car parking that is designed and located to: • Protect the role and function of nearby roads • Enable the efficient movement and delivery of goods • Facilitate the use of public transport • Maintain journey times and the reliability of the on-road public transport network • Protect residential areas from the effects of road congestion created by on-street parking • Enable easy and efficient use • Achieve a high standard of urban design • Protect the amenity of the locality, including the amenity of pedestrians and other road users • Create a safe environment, particularly at night Allocate land for car parking considering: • The existing and potential modes of access including public transport • The demand for off-street parking • Road capacity • The potential for demand-management of car parking Consolidate car parking facilities to improve efficiency. Design public car parking facilities to incorporate electric charging facilities to support the use of low emission vehicles. Policy documents Consider as relevant: • Victorian Road safety Strategy 2021-2030 • Movement and Place in Victoria	
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7 Summary

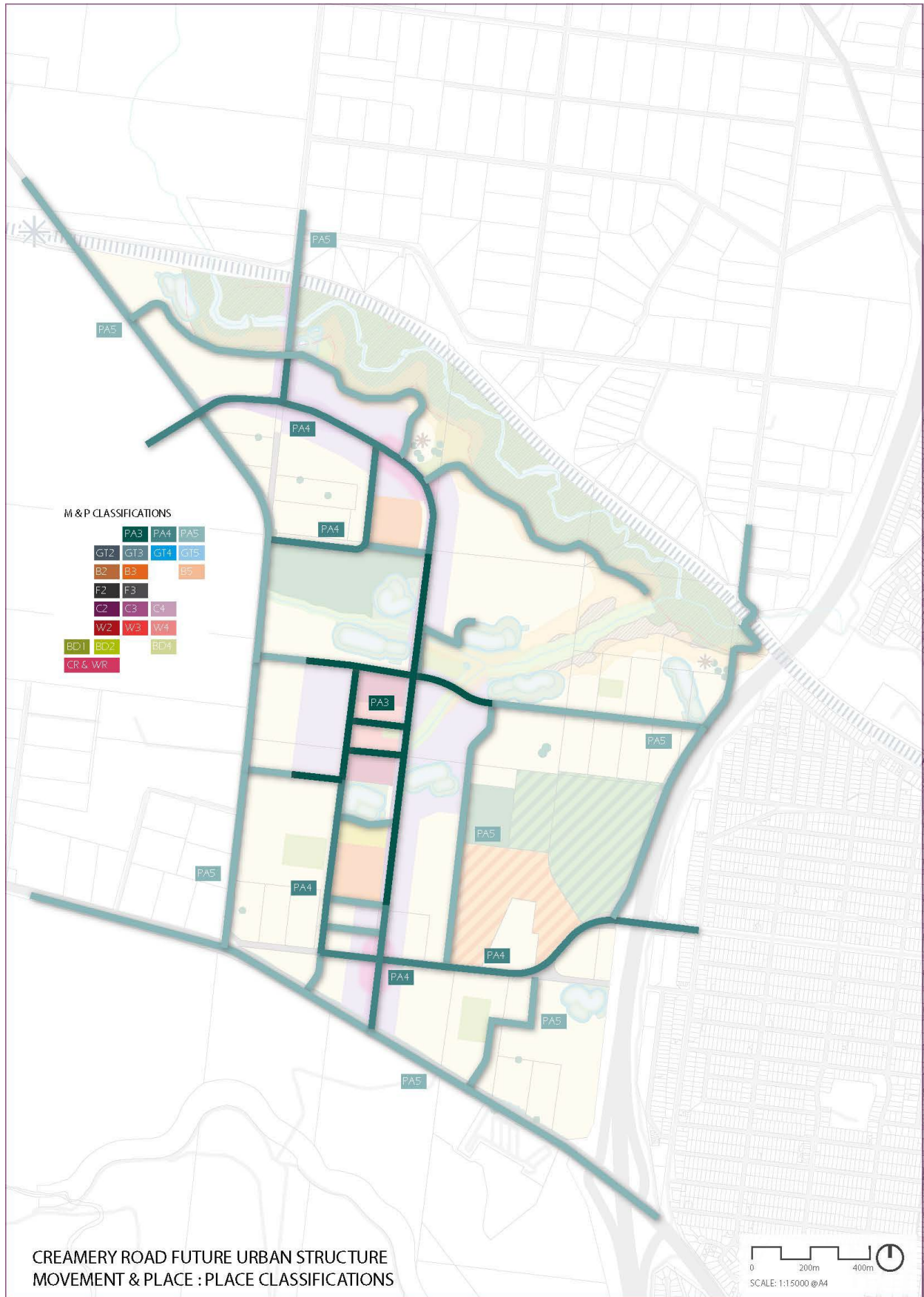
This report details a Movement and Place assessment of the Creamery Road precinct Future Urban Structure. Key outcomes include:

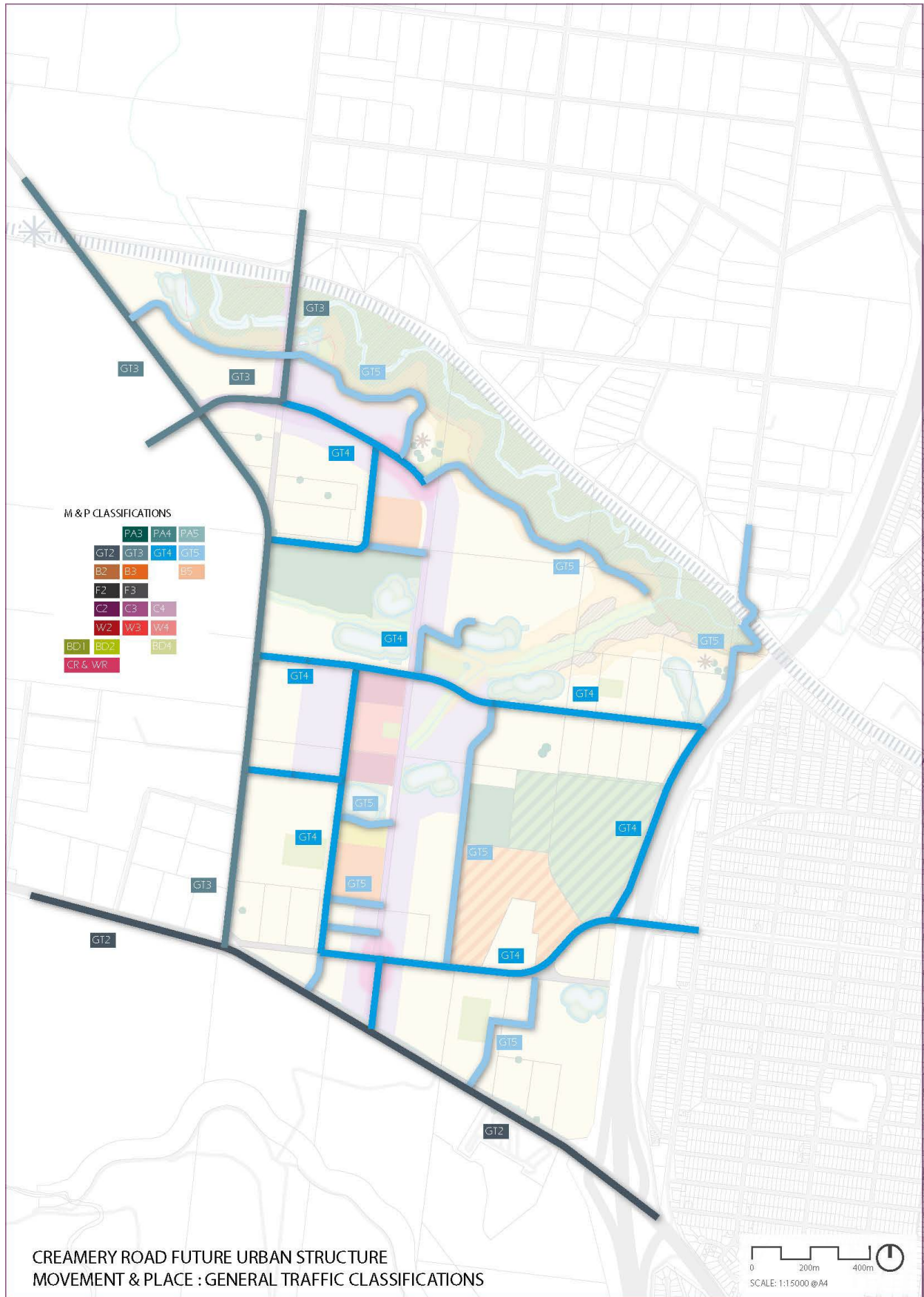
- Network classifications for all key themes in the Movement and Place framework have been determined and mapped. Network classification maps are provided in Appendix A.
- Target levels of service have been determined for all streets detailed on the Future Urban Structure and all typical street typologies applied in the precinct.
- Street typologies have been assessed against performance indicators corresponding with the target levels of service for each theme
- Additional place performance indicators have been discussed for premium residential streets (e.g. Micro Streets and Pedestrian Streets)
- The requirements of VPP Clause 18 have been addressed in relation to the design of the Creamery Road precinct.
- We recommend Council amends the PSP requirements to ensure:
 - The design of streets within the precinct are consistent with Movement and Place target levels of service
 - Intersection analysis and design considers Movement and Place minimum levels of service
 - Premium residential streets include additional place performance indicators, and are delivered in accordance with guidance provided in the Streetscapes Toolkit.
- Council may require further details from development proponents on a range of issues in order to provide a fulsome assessment of all Movement and Place themes. Additional information required is outlined in Section 5.
- Walking performance aspirations are generally highly prioritised but frequently not satisfied across the network, while lower priority general traffic performance targets are mostly met. Intersection designs and signal phasing should not exceed general traffic performance targets where pedestrian requirements are not met. In many cases, this will involve accepting that general traffic may require multiple signal phases to clear intersections on local streets, connectors streets and the Clever and Creative Corridor in order to reduce delays to people walking. While this may diverge from typical industry practice, this is supported by the Movement and Place network classification aspirations.

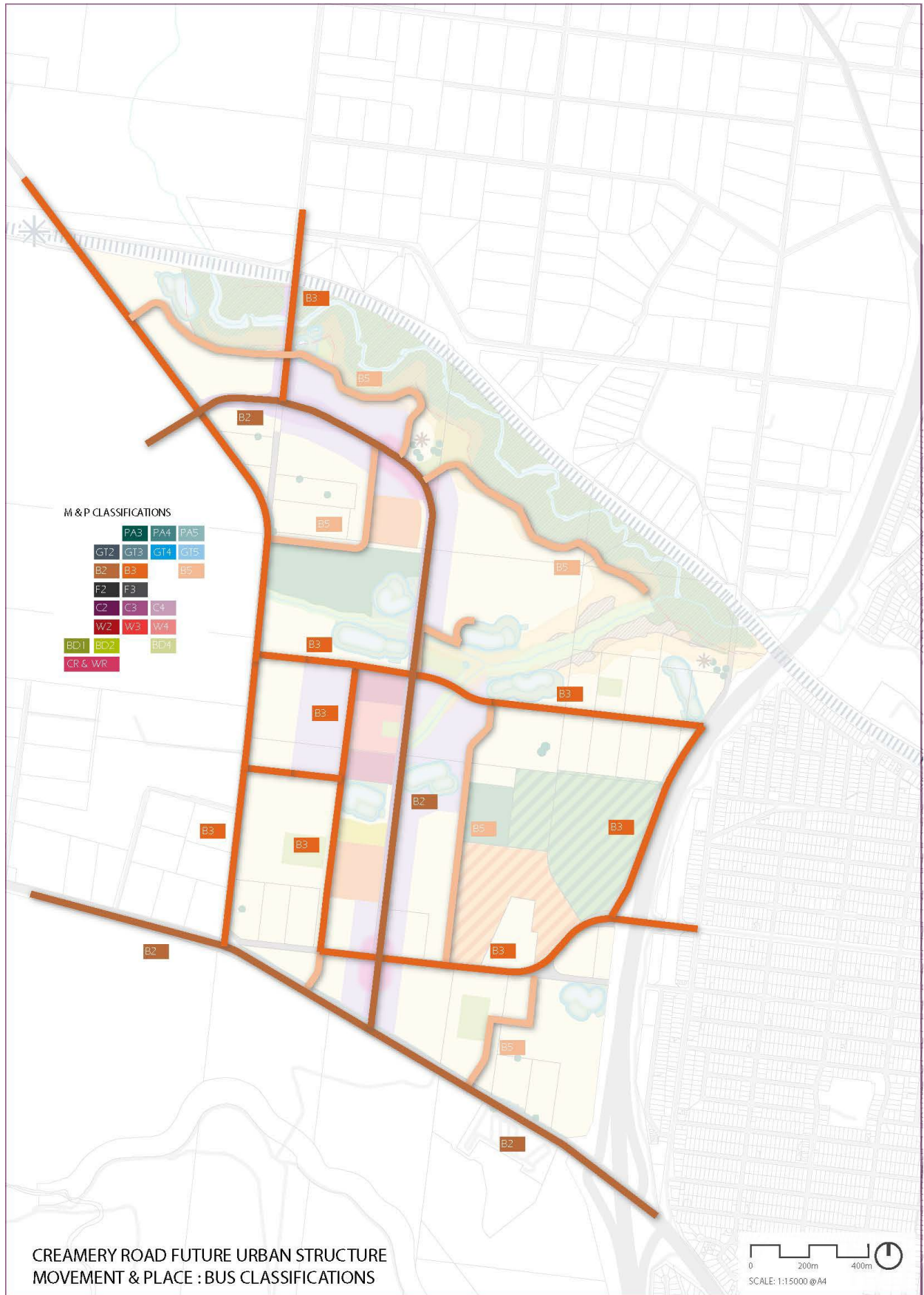
Appendix A

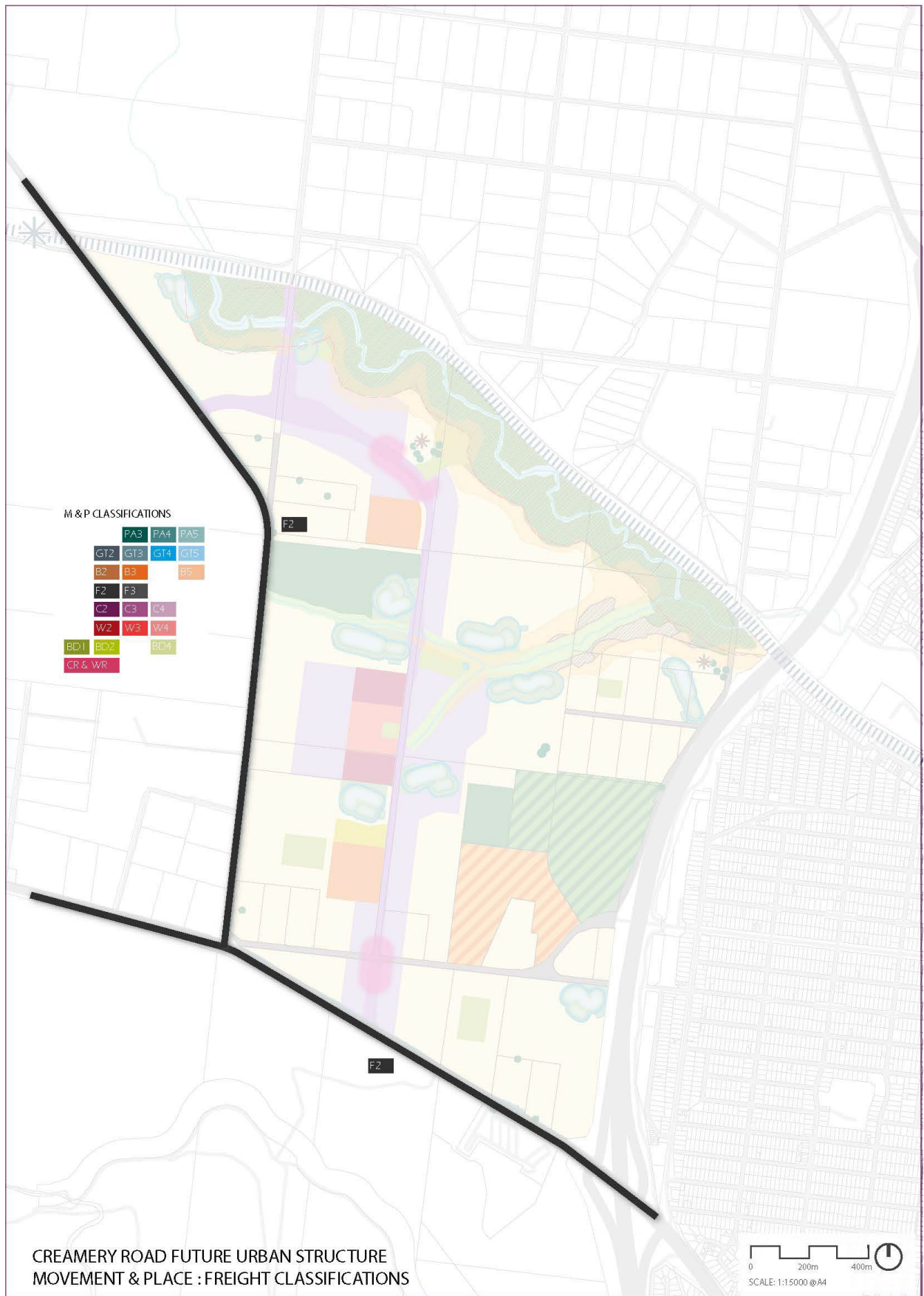
Movement and Place Classification Maps

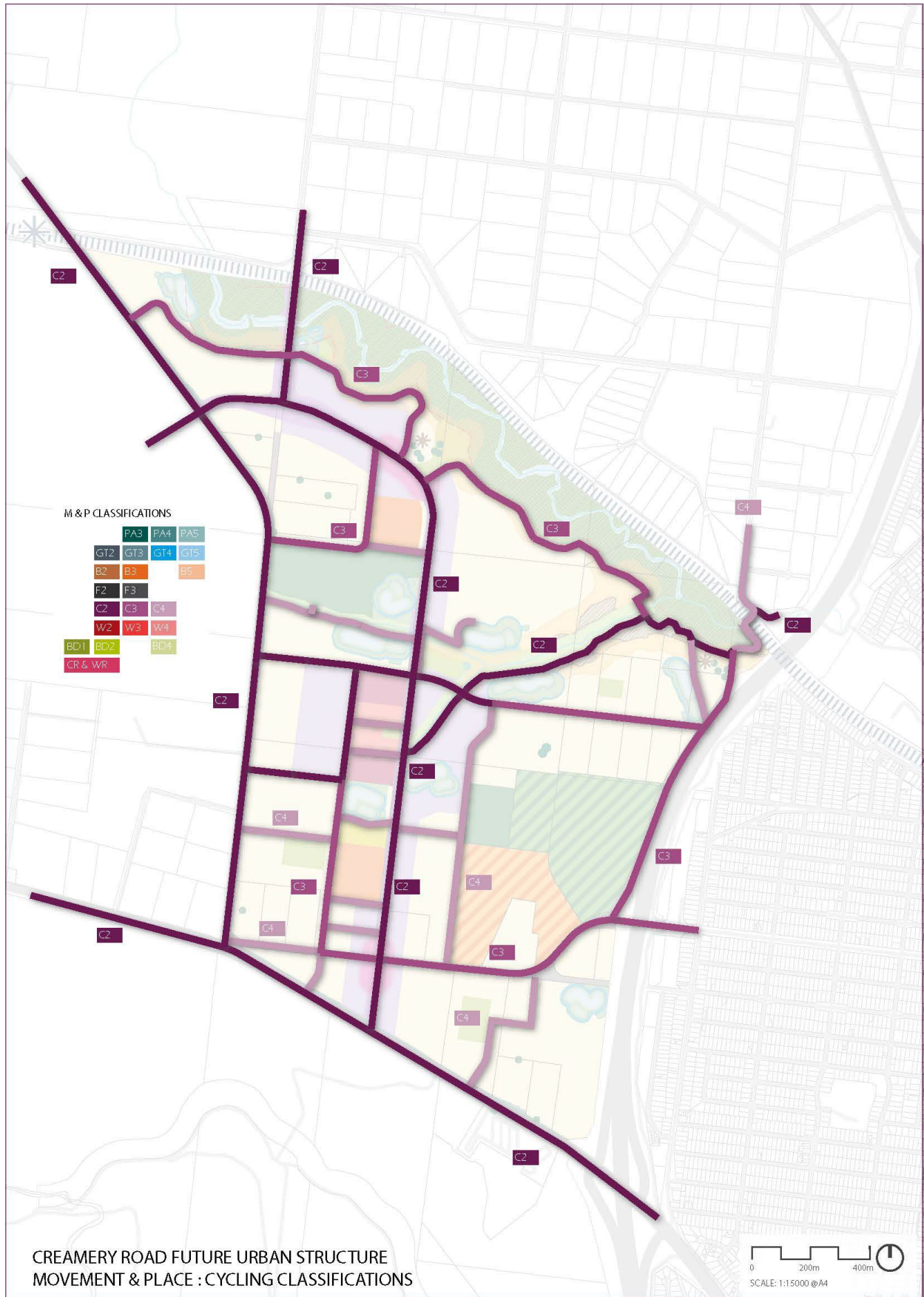
(Prepared by PMP Urbanists
and CoGG)

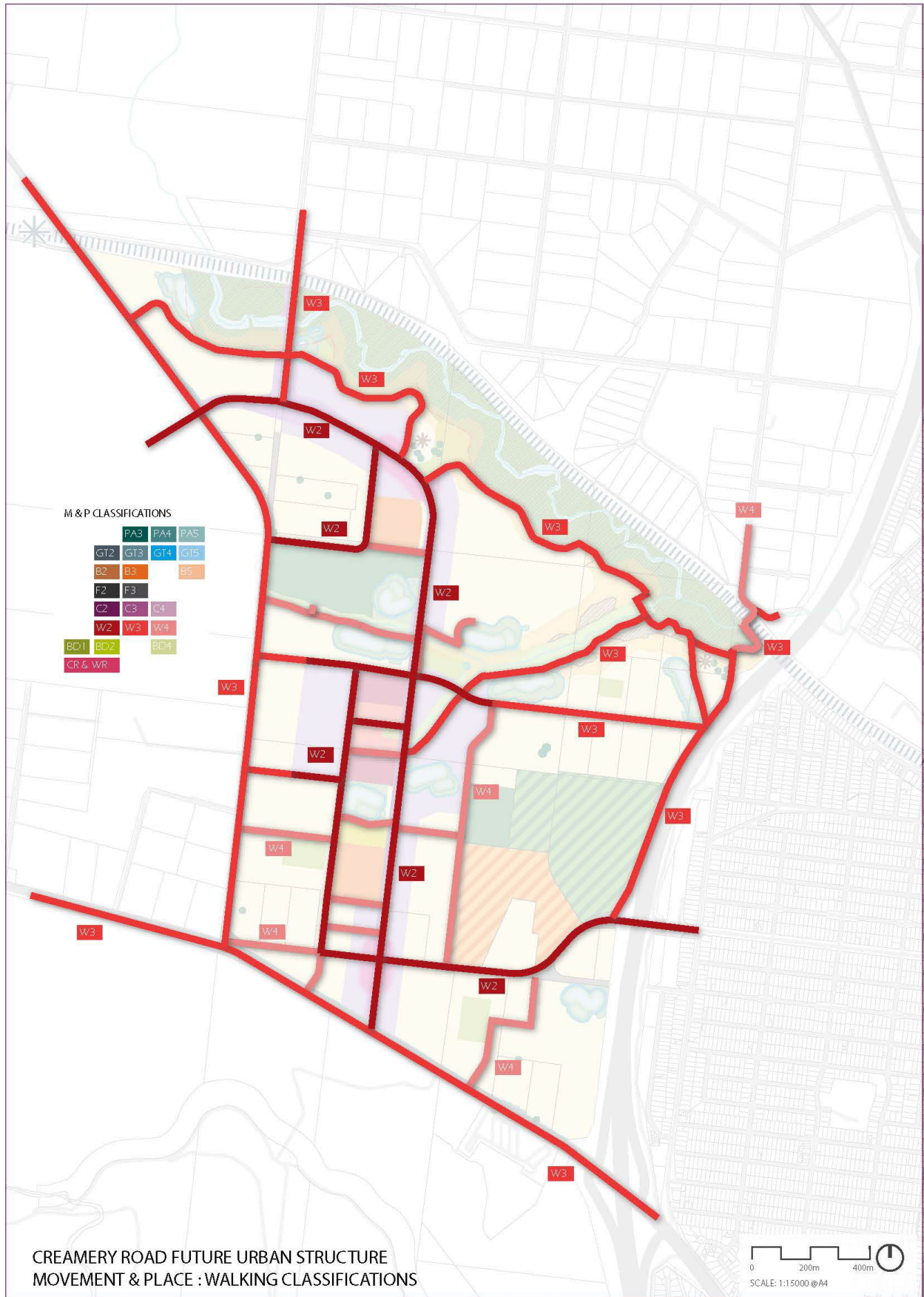


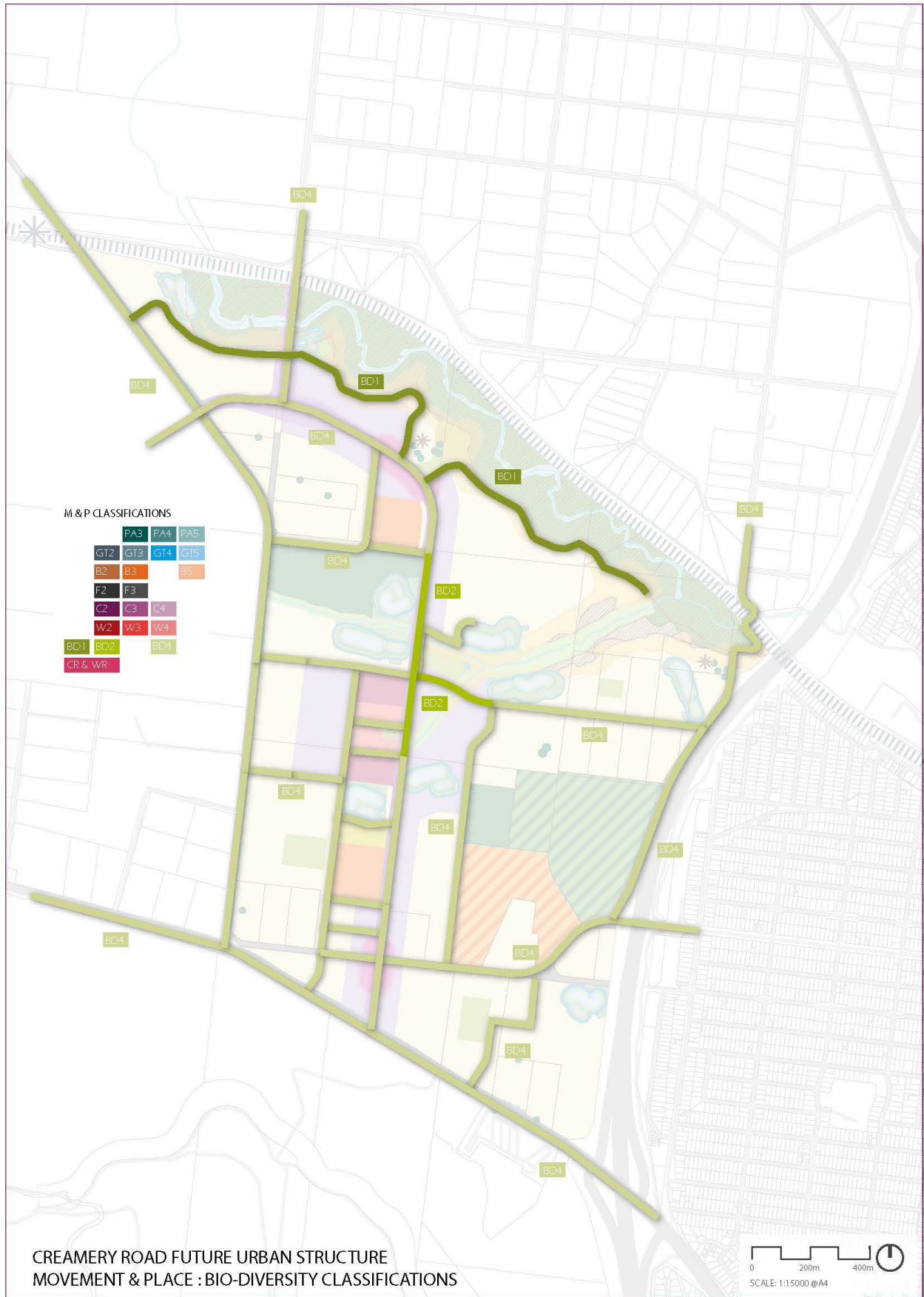












Appendix B

Movement and Place Classification Criteria

(Developed by DoT)

Place classification criteria – regional places

Places of Street Activity	Definition	Mapping	
		Planning Scheme Zone	Geographical Boundary
PA1	State significant place of activity. People travel from across the country and state to experience and use the place. The place has a very large number of on-street staying activities e.g. shops and alfresco dining.	Activity Centre Zone (ACZ), Commercial 1 Zone (C1Z), Mixed Use Zone (MUZ), Comprehensive Development Zone (CDZ), Priority Development Zone (PDZ), Residential Growth Zone (RGZ), Public Use Zone Schedule 2 (PUZ2) (Education), Public Use Zone Schedule 3 (PUZ3) (Health & Community), Public Park & Recreation Zone (PPRZ) with CCZ & DZ zoned areas	In Centre (1km Radius) of Urban Locality of Geelong, Bendigo and Ballarat
PA2	Regionally significant place of activity. People travel from adjoining municipalities to experience and use the place. The place has a large number of on-street staying activities e.g. shops and alfresco dining.	Activity Centre Zone (ACZ), Commercial 1 Zone (C1Z), Mixed Use Zone (MUZ), Special Use Zone (SUZ), Comprehensive Development Zone (CDZ), Priority Development Zone (PDZ), Residential Growth Zone (RGZ), Public Use Zone Schedule 2 (PUZ2) (Education), Public Use Zone Schedule 3 (PUZ3) (Health & Community), Public Use Zone (PUZ7) (Other Public Use), Public Park & Recreation Zone (PPRZ)	In Centre (500m Radius) of Urban Locality of Shepparton, Albury-Wodonga (Wodonga part), Mildura-Buronga (Mildura Part), Warrnambool, Traralgon, Wangaratta, Morwell
PA3	Municipal level of significant place of activity. People travel from across the municipality to experience and use the place. The place has visible on-street staying activities such as public seating and alfresco dining.	Activity Centre Zone (ACZ) (Schedule 1-3), Commercial 1 Zone (C1Z), Mixed Use Zone (MUZ), Special Use Zone (SUZ), Comprehensive Development Zone (CDZ), Priority Development Zone (PDZ), Residential Growth Zone (RGZ), Public Use Zone Schedule 2 (PUZ2) (Education), Public Use Zone Schedule 3 (PUZ3) (Health & Community), Public Use Zone (PUZ7) (Other Public Use) Public Park & Recreation Zone (PPRZ)	In Centre (500m Radius) of Urban Locality of Ocean Grove-Barwon Heads, Bacchus Marsh, Torquay-Jan Juc, Horsham, Moe-Newborough, Warragul, Sale, Lara, Bairnsdale, Echuca-Moama (Echuca Part), Drysdale-Clifton Springs, Colac, Drouin, Leopold, Swan Hill, Portland, Castlemaine, Gisborne, Benalla, Hamilton, Wallan, Healesville, Wonthaggi, Yarrawonga-Mulwala (Yarrawonga Part), Maryborough, Kilmore, Ararat, Portarlington-St. Leonards, Lakes Entrance, Kyabram, Seymour, Stawell, Cobram, Leongatha, Inverloch

Places of Street Activity	Definition	Mapping	
		Planning Scheme Zone	Geographical Boundary
PA4	Neighbourhood level of significant place of activity, serving people from immediate neighbourhoods, e.g. milk bars and local shops.	Commercial 1 Zone (C1Z), Commercial 2 Zone (C2Z), Mixed Use Zone (MUZ), Comprehensive Development Zone (CDZ), Priority Development Zone (PDZ), Regional Growth Zone (RGZ), Public Use Zone Schedule 2 (PUZ2) (Education), Public Use Zone Schedule 3 (PUZ3) (Health & Community)	All remaining zoning areas outside of P1, P2 and P3 areas.
PA5	Local level of significant place of activity. Places are generally quiet and a destination for people accessing residential/rural properties.	Urban Growth Zone (UGZ), Rural Activity Zone (RAZ), General Resident Zone (GRZ), Neighbourhood Residential Zone (NRZ), Low Density Residential Zone (LDRZ), Rural Living Zone (RLZ), Green Wedge Zone (GWZ), Green Wedge A Zone (GWAZ), Rural Conservation Zone (RCZ), Farming Zone (FZ), Residential Activity Zone (RAZ), Public Use Zone – Schedule 5 (Cemetery/Crematorium) Public Use Zone – Schedule 6 (PUZ6) (Local Government), Public Use Zone – Schedule 7 (Other Public Use), Public Park & Recreation Zone (PPRZ)	All other areas

Overall movement classification criteria

Movement	Definition	Modal Classifications
M1	Mass movement of people &/or goods on routes with a State or National level movement function or primary access to a State level place.	GT1, R1, T1, B1, F1
M2	Significant movement of people &/or goods on routes connecting across multiple municipalities or primary access to Regional level places.	GT2, T2, B2, F2
M3	Moderate movement of people &/or goods on routes connecting municipalities or primary access to Municipal level places.	GT3, T3, B3, F3, C1, W1
M4	Movement of people &/or goods within a municipality	GT4, B4, F3, FS, C2, W2
M5	Local movement	GT5, C3-5, B5, W3-5

General traffic classification criteria (regional)

General traffic	Definition	Mapping
GT1	Mass movement of people by private vehicles on routes with a State or National level movement function or providing primary access to State level places (P1)	High Level Connectivity – Functional Classification
GT2	Significant movement of people by private vehicle on routes connecting multiple municipalities or providing primary access to Regional level places (P2)	Good Connectivity Functional Classification
GT3	Moderate movement of people by private vehicle on routes connecting municipalities or providing primary access to Municipal level places (P3)	Moderate Connectivity Functional Classification
GT4	Movement of people by private vehicle within a municipality or providing primary access to Neighbourhood level places (P4)	Arterial Connectivity Functional Classification
GT5	Local people movement by private vehicle	All remaining roads

Bus classification criteria

Bus	Definition	Mapping Indicative capacity and service frequency by bus type
B1	Mass movement of people by bus to and through state significant places	Capacity: 1,800 per hour Buses / hr: • 25+ buses/hr (freq 2 mins or better)
B2	Movement of people by higher frequency bus to access higher order places	Capacity: 750 – 1,800 per hour Buses/hr: • 11 – 25 (freq 2 – 6 mins)
B3	Movement of people by moderate frequency bus	Capacity: 250 – 750 per hour Buses/hr: • 4 – 10 buses (freq 6 – 15 mins)
B4	Movement of people by lower frequency local bus	Capacity: 125 – 250 Buses/hr: • 2 – 3 buses (freq 20 – 30 mins)
B5	Movement of people by low/irregular frequency bus	Capacity: 0 – 125 Buses/hr: • 1 bus (freq 40 mins or less)

Freight classification criteria

Freight	Definition	Mapping
F1	Mass movement of goods at high speed	All freeways and nationally significant routes on the PFN
F2	Routes that facilitate significant movement of goods where higher speeds are not achievable due to a constrained operating environment	Arterial roads on the PFN
F3	Freight access routes where provision for freight vehicles is important however freight is not a priority movement	Arterial network. Local B Double and HML network

Cycling classification criteria

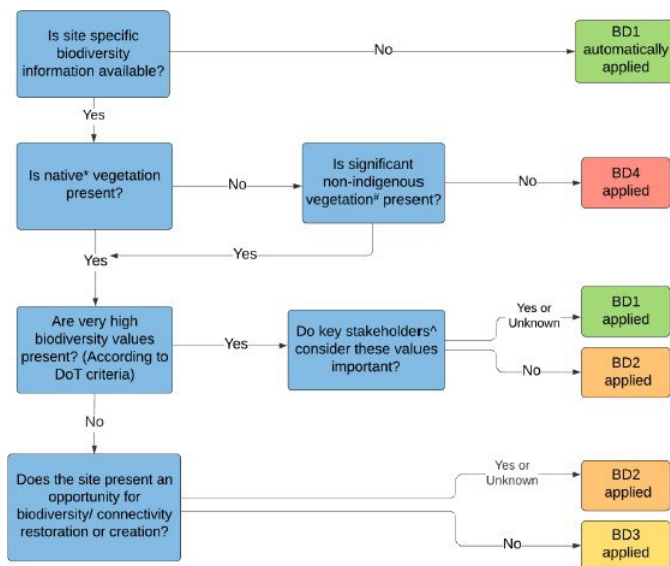
Cycling	Definition	Mapping
C1	Primary routes provide a core network of Strategic Cycling Corridors that connect places of state significance – the central city, Metropolitan Activity Centres (MACs) and National Employment and Innovation Centres (NEICs) within metropolitan Melbourne.	Principal based mapping Strategic Cycling Corridor
C2	Main routes are Strategic Cycling Corridors that provide additional connections to state significant destinations, as well as connections to major activity centres and key railway stations within metropolitan Melbourne. In regional towns, main routes provide the SCC network that connects to destinations of regional importance including activity areas, school and railway stations.	Principal based mapping Strategic Cycling Corridor
C3	Municipal routes support mostly local, short trips to activity centres, including important links to stations and other interchanges. They also feed to C1 and C2 routes (SCCs).	Principal based mapping Municipal Cycling Plan Proxy C3 links are designated as PBN segments that are on the local road (GT4-5) network and not already mapped as a C1 or C2.
C4	Neighbourhood and local links that make up the balance of the cyclable road network and provide short connections to C1-C3 routes and nearby activity centres.	C4 links are designated as the balance of the cyclable network excluding C1-3s and specialised cycling classifications.
Specialised classifications		
CD	Direct cycling routes provide a more direct alternative route to C1-C2 routes. These routes are expected to be used by cyclists who are comfortable riding in higher traffic stress environments.	TBD in consultation with LGAs
CH	High traffic stress routes make up the balance of the legally cyclable arterial road network (GT1-3).	GT1-3 segments that are not C1, C2 or CD
CT	Training routes are designated routes used for training and sports cycling, mostly longer distances and at high speeds	TBD (e.g. Popular Strava routes)
CR	Recreational routes provide a quieter environment cycling for recreation and tourism. Routes usually run beside rivers, creeks and rail lines	Off Road paths excluding C1-3s

Walking classification criteria

Walking	Definition	Principle mapping definition	Proxy mapping rules
W1	State significant walking movements with the highest concentration of pedestrian activity, mainly within the CBD.	Highest volume Principal Pedestrian Network (PPN) routes (both existing and potential volumes)	- All streets within Hoddle Grid 200m radius around all CBD railway stations
W2	Regionally significant walking links in close proximity to key activity generators with existing and/or potential demand. This includes strip shopping, educational institutions, railway stations and employment precincts.	PPN routes typically around 400m of primary walking destinations including all stations and other I1-I3 interchanges, and P1- P3 destinations including educational institutions, strip shopping and other major trip generators such as employment precincts and hospitals	Routes providing access to all railway stations and I1-I3 (2051) bus and tram stops, and P1-P3 places within 400m that are NOT 'freeways', NOT part of off-road links like railway, cycling, tram, NOT have movement GT classification = 'GT5', NOT already assigned a walking classification.
W3	Municipal walking links that support pedestrian movements to and around activity generators such as activity centres, schools and transport interchanges. These routes capture the complete Principal Pedestrian Network and support Plan Melbourne's 20-minute neighbourhood principle.	All other PPN routes, including routes to all interchanges, educational institutions, strip shopping and major trip generators such as employment precincts and hospitals. This covers all key walking routes within the 20-minute neighbourhood principle.	Routes providing access to all I classifications and P1-P4 places within 2km that are NOT 'freeways', NOT part of off-road links like railway, cycling, tram, NOT have movement GT classification = 'GT5', NOT already assigned a walking classification
W4	Neighbourhood walking links, providing important connections to the Principal Pedestrian Network, supporting the complete walking journey. These links are mainly residential streets.	Balance of pedestrian network (i.e. all routes within a PPN catchment that are not identified as PPN)	GT5 and local roads within 2km of P1-P5; NOT already assigned a walking classification
W5	The balance of the pedestrian network, covering all local walking links.	All other walkable routes outside of PPN catchment (i.e. greater than 2km from activity), providing a minimum pedestrian requirement.	All other roads that are NOT 'freeways'; NOT already have a walking classification assigned
WR	Routes identified for walking for recreation. Routes usually located beside rivers, creeks and rail lines – often shared facilities with cyclists.	Routes usually located beside rivers, creeks and rail lines – mainly shared facilities with cyclists.	

Biodiversity classification criteria

Biodiversity	Definition
BD1	Very High Biodiversity values of significant strategic importance or site values and strategic importance not known.
BD2	Very High biodiversity values with no particular strategic importance or site with significant non-indigenous vegetation or indigenous vegetation with strategically important rehabilitation potential.
BD3	No very high biodiversity values (including significant non-indigenous vegetation); site not strategically important for creating additional biodiversity values.
BD4	No native vegetation or no significant non-indigenous vegetation.



* Native vegetation = plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses, including dead trees.

Significant non-native vegetation can include trees, shrubs, herbs and grasses that provide important habitat or resources for native fauna species.

^ Examples of key stakeholders includes DELWP representatives, councils, CMAs and/or subject matter experts. Traditional Owners must be invited to contribute if they express an interest to do so. Community groups and community members should be consulted at this stage.

Biodiversity Classification Tool

Appendix C

Detailed Assessment of Street Types

(Prepared by PMP Urbanists)

M&P Summary – Clever and Creative Corridor

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Place	P3 (within 500m of the NAC)	B	Network Indicator – Safety and Comfort: <u>Meets 3 criteria:</u> • Walking LoS of C or better • Travel speed of 40 km/h or lower • Traffic volumes of less than 8,000 vehicles per day • Truck count of 360 or less per day. Network Indicator – Accessibility: • Located within 400m of a bus or tram stop and within 800m of a train station. Project Indicator – Activity: • Low-moderate vehicular traffic volumes • Vehicle speeds <50km/h • Few large trucks (~5% of total traffic) • Footbaths are lit at night and have some passive surveillance. • Clean with minimal graffiti • Streets have trees with some shade • Little crossing delay for pedestrians (<30 seconds) • Walkways allow free two-way flow of foot traffic • Easy access public transport with frequency services • A place with quality street furniture • A place with moderate-high levels of social interaction. Project Indicator - User Experience: • A place where you can orientate yourself through road names/signs, built forms and some distinguishable features that include planting/sculptures/views	<i>Generally meets or exceeds the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: • We expect all four Safety and Comfort network indicators to be satisfied along the Clever and Creative Corridor ◦ While bus lanes are planned to operate at higher speeds, the target speed for general traffic is 40 km/h ◦ The Creamery Road Precinct Structure Plan specifies maximum traffic volumes of up to 15,000 vpd for the Clever and Creative Corridor, however modelling undertaken by Stantec indicates that the CCC is generally expected to carry less than 8,000 vpd. The City may consider amending the Precinct Structure Plan to reflect a lower traffic capacity for the CCC consistent with the M&P place performance indicators (i.e. 8,000 vpd or less). • The public transport network has been designed to ensure the precinct is

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
			Landscaping and rest opportunities exist and the road design is somewhat responsive and sensitive to the local land context.	predominately within 400m of a bus stop with frequent services. 2.6m footpaths enable people to walk comfortably in groups and for people using prams and wheelchairs to pass freely. - Wide verges accommodate large trees, seating, bus stops and other street furniture. - Five rows of avenue tree plantings provide a consistent canopy that provides shade to footpaths, the cycleway and bus stops. - As a primary public transport, cycling and walking corridor, the CCC will be an important place of social interaction within the precinct.
Movement	M2			
General Traffic	GT4	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
				- M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays at signalised intersections of >80 seconds are characterised as a Level of Service F per Austroads, M&P accepts multiple signal cycles to clear intersections (in many cases this may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austroads Levels of Service (which are reflected in SIDRA output). - Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Bus	B2	B	Network Indicator: - Operating speed is 60%-80% of signposted speed Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times). - Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. - Good travel time reliability with less than 2 minute variation from timetable.	<i>Generally exceeds the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Dedicated central bus lanes provide unimpeded free flow services at high frequencies. - Unsignalised intersections along the CCC must be limited to left-in / left-out movement to remove uncontrolled conflicts with buses. - Dedicated bus lanes deliver excellent reliability.
Cycling	C2	A	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group and includes low to no conflicts with pedestrians.	<i>Meets or exceeds the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Median cycleway provides dedicated space for riding that is physically separated from vehicles and pedestrians. - Protected signalised intersections maintain low-stress environment at cross streets. - Vehicles are not permitted to cross the CCC at unsignalised intersections, however permeability and priority is provided for walking and cycling movements.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
				- Median located cycleway minimises the number of conflict points between riders and turning vehicles. - Avenue street tree plantings provide consistent shade for riders. - Kerb extensions and wombat crossings limit exposure to traffic for cyclists accessing the cycleway or crossing the CCC.
Walking	W2	B	Network Indicator: - Pedestrian delay of 10-30 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is less than 30 seconds - Crossing opportunities are within 50m of demand	<i>May meet target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - The width of the corridor increases total crossing time, however a single general traffic lane in each direction and the provision of multiple planted medians limits a pedestrians exposure to traffic when crossing. - Spacing of crossing opportunities will depend on development applications, but will require mid-block crossings (e.g. wombat crossings) to achieve crossing spacings in the order of 50m.

M&P Summary – Clever and Creative Corridor (Activity Centre)

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Place	P3 (within 500m of the NAC)	B	Network Indicator – Safety and Comfort: <u>Meets 3 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 400m of a bus or tram stop and within 800m of a train station. Project Indicator – Activity: - Low-moderate vehicular traffic volumes - Vehicle speeds <50km/h - Few large trucks (~5% of total traffic) - Footpaths are lit at night and have some passive surveillance. - Clean with minimal graffiti - Streets have trees with some shade - Little crossing delay for pedestrians (<30 seconds) - Walkways allow free two-way flow of foot traffic - Easy access public transport with frequency services - A place with quality street furniture - A place with moderate-high levels of social interaction. Project Indicator - User Experience: - A place where you can orientate yourself through road names/signs, built forms and some distinguishable features that include planting/sculptures/views	<i>Generally meets or exceeds the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - We expect all four Safety and Comfort network indicators to be satisfied along the Clever and Creative Corridor - General traffic is not permitted on the CCC through the activity centre, and buses will operate at reduced speeds. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Wide footpaths provide comfortable places to walk in groups, as well as places to stop and dwell. Footpaths invite opportunities for businesses to activate the street (e.g. on-street dining). - Street trees provide shade and mitigate heat. - Footpaths accommodate a range of street furniture and landscaping. - The CCC (activity centre) is expected to be one of the premiere places of social interaction within the precinct.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
			Landscaping and rest opportunities exist and the road design is somewhat responsive and sensitive to the local land context.	
Movement	M2			
Bus	B2	B	Network Indicator: - Operating speed is 60%-80% of signposted speed Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times). - Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. - Good travel time reliability with less than 2-minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: Buses operate in slow speed streetscape without mixing with general traffic, albeit with closer proximity to pedestrians and main street activity. Travel speeds expected to be slow but consistent.
Cycling	C2	A	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group and includes low to no conflicts with pedestrians.	<i>Generally meets or exceeds the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Dedicated bi-directional maintained through activity centre to limit conflicts with pedestrians - Protected signalised intersections provided at the entrances to the activity centre.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Walking	W2	B	Network Indicator: - Pedestrian delay of 10-30 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is less than 30 seconds - Crossing opportunities are within 50m of demand	<i>Generally meets target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Narrower cross section improves permeability and ease of crossing for people walking in the activity centre - Signalised intersections shown on the FUS provide formal crossings in the activity, however the absence of general traffic is intended to promote a permeable streetscape that enables people to cross informally in midblock locations.

M&P Summary – Midland Highway

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Place	P5	B	Network Indicator – Safety and Comfort: <u>Meets 3 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 400m of a bus or tram stop and within 800m of a train station. Project Indicator – Activity: - Low-moderate vehicular traffic volumes - Vehicle speeds <50km/h - Few large trucks (~5% of total traffic) - Footbaths are lit at night and have some passive surveillance. - Clean with minimal graffiti - Streets have trees with some shade - Little crossing delay for pedestrians (<30 seconds) - Walkways allow free two-way flow of foot traffic - Easy access public transport with frequency services - A place with quality street furniture - A place with moderate-high levels of social interaction. Project Indicator - User Experience:	<i>Does not meet DoT's target minimum level of service for place.</i> Key outcomes include: - Network indicators for safety and comfort are generally not satisfied: - Modelling completed by Stantec indicates the Midland Highway is likely to carry far in excess of 8,000 vpd - The posted speed limit on the Midland Highway will be greater than 40 km/h. - The Midland Highway is on the Principal Freight Route and will continue to carry significant truck volumes. - The Midland Highway is unlikely to achieve a Walking LoS of C. - Based on the requirements of the Precinct Structure Plan we expect the accessibility network indicator to be generally satisfied. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Further information is required to assess project indicators in detail, but the Midland Highway will accommodate wide footpaths, lighting, and street trees. - Given the speed and volume of traffic forecast on the Midland Highway, we do not expect the Midland Highway to achieve provide an environment conducive to appreciable social interaction.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
			- A place where you can orientate yourself through road names/signs, built forms and some distinguishable features that include planting/sculptures/views - Landscaping and rest opportunities exist and the road design is somewhat responsive and sensitive to the local land context.	
Movement	M2			
General Traffic	GT2	B	Network Indicator: - Operating speed is 60-80% of signposted speed Project Indicators: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed. - Manoeuvring in the traffic stream is only slightly restricted and intersection delays are low. - Good travel time reliability with 5-10% variation from the median for that day-of-week and time-of-day.	<i>May meet the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - The six-lane arterial cross section for the Midland Highway is expected to be sufficient to accommodate forecast traffic volumes, however delays may occur during peak periods. - Intersection analysis is required to determine whether general traffic indicators are satisfied.
Bus	B2	B	Network Indicator: - Operating speed is 60%-80% of signposted speed Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times).	<i>Generally satisfies the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: Proposed six-lane arterial cross section includes full-time dedicated bus lanes in line with City objectives for sustainable transport. Bus lanes

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
			• Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. • Good travel time reliability with less than 2 minute variation from timetable.	are expected to limit impedance to free movement for buses on the corridor. • Intersection analysis is required to determine whether bus indicators are satisfied. • Bus priority measures at signalised intersections may be required to satisfy travel time reliability targets.
Freight	F2	B	Network Indicator: • Operating speed is 60-80% of signposted speed Project Indicators: • Relatively unimpeded flow with operating speed between 60-80% of the free flow speed. • Manoeuvring in the traffic stream is only slightly restricted and intersection delays are low. • Good travel time reliability with 5-10% variation from the median for that day-of-week and time-of-day.	<i>May meet the target minimum performance indicators for freight based on DoT's Movement and Place framework.</i> Key outcomes include: • The six-lane arterial cross section for the Midland Highway is expected to be sufficient to accommodate freight movement, however delays may occur during peak periods. • Intersection analysis is required to determine whether freight indicators are satisfied.
Cycling	C2	B	Network and Project Indicator: • Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally meets the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: • Off-street shared path provides low stress cycling environment for all cycling cohorts. • Restricted driveway access limits conflict points between vehicles and riders on the shared path.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
				Intersections must ensure safe and comfortable provisions are included for riders using the shared path.
Walking	W3	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>Unlikely to meet target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Signalised intersections indicated on the FUS will provide limited crossing opportunities along the Midland Highway. - Intersection analysis is required to determine average delay for pedestrians.

M&P Summary – Geelong Ballan Road

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Place	P5	C	Network Indicator – Safety and Comfort: <u>Meets 2 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from two of the following: tram stop, bus stop and/or train station. Project Indicator – Activity: - Moderate vehicular traffic volumes - Moderate vehicle speeds <60km/h - Moderate number of large trucks (10%) - Footpaths are lit at night - Reasonably clean and minimal graffiti - Streets have some trees - Moderate crossing delay for pedestrians (30-60 seconds) - Walkways allow two-way flow of foot traffic during peak periods - Easy access to public transport with moderate frequency services - A place with street furniture - A place with moderate levels of social interaction. Project Indicator - User Experience:	<i>Satisfies the intent of some target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Network indicators for safety and comfort are generally not satisfied: - Modelling completed by Stantec indicates Geelong-Ballan Road is likely to carry significantly more than 8,000 vpd - The posted speed limit on Geelong-Ballan is expected to be greater than 40 km/h. - Geelong-Ballan Road is a declared freight route and is expected to carry more than 360 vpd. - Parts of Geelong-Ballan Road may achieve a walking LoS of C depending on signal designs. - Based on the requirements of the Precinct Structure Plan we expect the accessibility network indicator to be generally satisfied. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Further information is required to assess project indicators in detail, but Geelong-Ballan Road should accommodate wide footpaths, lighting, street trees and appropriate street furniture. 4m verges accommodate street tree plantings and water sensitive urban design treatments.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
			- An experience where you can, but with difficulty, orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features may exist but there will not be many to help orientate yourself. - The soft landscaping is somewhat vegetated and there are few appropriate opportunities to stop to rest and recuperate.	
Movement	M3			
General Traffic	GT3	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicators: - Stable operating conditions but with manoeuvring becoming more restricted and motorists experience appreciable tension in driving. - Operating speeds are between 40-60% of the free flow speed. - At signalised intersections, vehicles generally have to stop in a queue but clear the intersection in 1 signal cycle. - Moderate travel time reliability with 10-20% variation from the median for that day-of-week and time-of-day.	<i>Generally meets the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - The four-lane arterial cross section for Geelong-Ballan Road has a potential mid-block capacity of up to 40,000 – well in excess of forecast traffic based on Stantec modelling. - Intersection analysis is required to determine whether general traffic indicators are satisfied.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Bus	B3	B	Network Indicator: - Operating speed is 60%-80% of signposted speed Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times). - Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. - Good travel time reliability with less than 2 minute variation from timetable.	<i>May satisfy the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - The four-lane arterial cross section for Geelong-Ballan Road is expected to be sufficient to accommodate buses in mixed traffic with limited impedance to free movement. - Intersection analysis is required to determine whether bus indicators are satisfied. - Bus priority measures at signalised intersections may be required to satisfy travel time reliability targets.
Freight	F3	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicators: - Stable operating conditions but with manoeuvring becoming more restricted and motorists experience appreciable tension in driving. - Operating speeds are between 40-60% of the free flow speed. - At signalised intersections, vehicles generally have to stop in a queue but clear the intersection in 1 signal cycle. - Moderate travel time reliability with 10-20% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for freight based on DoT's Movement and Place framework.</i> Key outcomes include: - The four-lane arterial cross section for Geelong-Ballan Road is expected to be sufficient to accommodate freight movement. - Intersection analysis is required to determine whether freight indicators are satisfied.

Network	Classification	Target Minimum Performance	Target Performance Indicators	Outcome
Cycling	C2	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally meets the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Off-street shared path provides low stress cycling environment for all cycling cohorts. - Restricted driveway access limits conflict points between vehicles and riders on the shared path. - Intersections must ensure safe and comfortable provisions are included for riders using the shared path.
Walking	W3	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>May meet target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Signalised intersections indicated on the FUS will provide crossing opportunities within 100m of demand for significant parts of Geelong-Ballan Road. - Intersection analysis is required to determine average delay for pedestrians.

M&P Summary – Evans Road

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	C	Network Indicator – Safety and Comfort: <u>Meets 2 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from two of the following: tram stop, bus stop and/or train station. Project Indicator – Activity: - Moderate vehicular traffic volumes - Moderate vehicle speeds <60km/h - Moderate number of large trucks (10%) - Footpaths are lit at night - Reasonably clean and minimal graffiti - Streets have some trees - Moderate crossing delay for pedestrians (30-60 seconds) - Walkways allow two-way flow of foot traffic during peak periods - Easy access to public transport with moderate frequency services - A place with street furniture - A place with moderate levels of social interaction. Project Indicator - User Experience:	<i>Satisfies the intent of some target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Network indicators for safety and comfort are generally not satisfied: - Modelling completed by Stantec indicates Evans Road is likely to carry significantly more than 8,000 vpd - The posted speed limit on Evans Road is expected to be greater than 40 km/h. - Given the forecast levels of general traffic, Evans Road is expected to carry more than 360 truck per day. - Parts of Evans Road may achieve a walking LoS of C depending on signal designs (e.g. adjacent Geelong-Ballan Road and the CCC). - Based on the requirements of the Precinct Structure Plan we expect the accessibility network indicator to be generally satisfied. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Further information is required to assess project indicators in detail, but Evans Road should accommodate lighting, street trees and appropriate street furniture.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where you can, but with difficulty, orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features may exist but there will not be many to help orientate yourself. - The soft landscaping is somewhat vegetated and there are few appropriate opportunities to stop to rest and recuperate.	
Movement	M3			
General Traffic	GT3	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicators: - Stable operating conditions but with manoeuvring becoming more restricted and motorists experience appreciable tension in driving. - Operating speeds are between 40-60% of the free flow speed. - At signalised intersections, vehicles generally have to stop in a queue but clear the intersection in 1 signal cycle. - Moderate travel time reliability with 10-20% variation from the median for that day-of-week and time-of-day.	<i>Generally meets the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - The two-lane Evans Road cross section for has a potential mid-block capacity of up to 20,000 – well in excess of forecast traffic based on Stantec modelling. - Intersection analysis is required to determine whether general traffic indicators are satisfied.
Bus	B3	B	Network Indicator: Operating speed is 60%-80% of signposted speed	<i>May satisfy the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i>

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times). - Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. - Good travel time reliability with less than 2 minute variation from timetable.	Key outcomes include: - The two-lane arterial cross section for Evans Road is expected to be sufficient to accommodate buses in mixed traffic with limited impedance to free movement, particularly given the limited property access and side streets present. - Intersection analysis is required to determine whether bus indicators are satisfied. - Bus priority measures at signalised intersections may be required to satisfy travel time reliability targets.
Cycling	C2	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally meets the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Off-street shared path provides low stress cycling environment for all cycling cohorts. - Restricted driveway access limits conflict points between vehicles and riders on the shared path. - Intersections must ensure safe and comfortable provisions are included for riders using the shared path.
Walking	W3	C	Network Indicator: Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator:	<i>May meet target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			• Average delay before being able to safely cross is 30-60 seconds • Crossing opportunities are within 100m of demand	• Signalised intersections indicated on the FUS will provide crossing opportunities within 100m of demand for significant parts of Geelong-Ballan Road. • Intersection analysis is required to determine average delay for pedestrians.

M&P Summary – Connector Street (Suburban)

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	C	Network Indicator – Safety and Comfort: <u>Meets 2 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from two of the following: tram stop, bus stop and/or train station. Project Indicator – Activity: - Moderate vehicular traffic volumes - Moderate vehicle speeds <60km/h - Moderate number of large trucks (10%) - Footpaths are lit at night - Reasonably clean and minimal graffiti - Streets have some trees - Moderate crossing delay for pedestrians (30-60 seconds) - Walkways allow two-way flow of foot traffic during peak periods - Easy access to public transport with moderate frequency services - A place with street furniture - A place with moderate levels of social interaction. Project Indicator - User Experience:	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Connector Streets are expected to carry less than 8,000 vpd, and likely less than 360 trucks per day. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths allow two wheeled devices (e.g. prams, wheelchairs, etc) to pass comfortably. - Verges accommodate street lighting, furniture (e.g. seating) and street trees - Additional street trees accommodated within parking lane - Posted speed limit is 50 km/h. - Some Connector Streets form part of the principal pedestrian and bike networks and will likely become places of moderate social interaction.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where you can, but with difficulty, orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features may exist but there will not be many to help orientate yourself. - The soft landscaping is somewhat vegetated and there are few appropriate opportunities to stop to rest and recuperate.	
Movement	M3			
General Traffic	GT4	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance. - M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				at signalised intersections of >80 seconds are characterised as a Level of Service F per Austroads, M&P accepts multiple signal cycles to clear intersections (in many cases this may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austroads Levels of Service (which are reflected in SIDRA output). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.
Bus	B3 (if located on the future public transport network)	B	Network Indicator: - Operating speed is 60%-80% of signposted speed Project Indicator: - Relatively unimpeded flow with operating speed between 60-80% of the free flow speed (excluding boarding times). - Movement in mixed traffic is only marginally restricted and intersection delays and variability is low. - Good travel time reliability with less than 2-minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Mixed traffic operation is expected to operate with marginal mid-block congestion. - SIDRA intersection modelling is needed to confirm intersection delay and variability. - Bus priority measures at signalised intersections may be required to satisfy travel time reliability targets.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Cycling	C3	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally meets or exceeds the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Protected kerbside bike lanes provide a safe and low stress environment for cycling. - Protected intersections should be provided to provide a consistent network. 2.0m protected bike lanes provide sufficient space for cyclists to pass/overtake. 800mm buffer between the cycling lane and parking lane enables passenger to disembark vehicles without encroaching on the bike lane.
Walking	W3	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>May satisfy target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Spacing of crossing opportunities will depend on development applications, but should include treatments such as kerb extensions or wombat crossings at spacings of 200m to satisfy M&P performance indicators. - Footpaths on either side provide comfortable walking environment free from vehicles. - Footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				• Wide footpaths include additional space for dwelling and footpath activity. • Intersections with other Connector Streets should feature formal pedestrian crossings (signalised or zebra crossings) on all approaches.

M&P Summary – Connector Street (Urban)

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P3 (within 500m of NAC)	B	Network Indicator – Safety and Comfort: <u>Meets 3 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 400m of a bus or tram stop and within 800m of a train station. Project Indicator – Activity: - Low-moderate vehicular traffic volumes - Vehicle speeds <50km/h - Few large trucks (~5% of total traffic) - Footpaths are lit at night and have some passive surveillance. - Clean with minimal graffiti - Streets have trees with some shade - Little crossing delay for pedestrians (<30 seconds) - Walkways allow free two-way flow of foot traffic - Easy access public transport with frequency services - A place with quality street furniture - A place with moderate-high levels of social interaction. Project Indicator – User Experience: - A place where you can orientate yourself through road names/signs, built forms and some distinguishable features that include planting/sculptures/views	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Connector Streets are expected to carry less than 8,000 vpd, and likely less than 360 trucks per day. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths allow two wheeled devices (e.g. prams, wheelchairs, etc.) to pass comfortably. - Footpaths provide additional flexi-space to accommodate a range of on-street activities (e.g. on-street dining) and invite adjoining commercial land use to engage with and activate the street. - Footpaths accommodate street lighting, furniture (e.g. seating) and street trees - Additional street trees accommodated within parking lane - The target speed is 40 km/h (refer to attribute table within the Precinct Structure Plan). - Connector Streets (Urban) will become local meeting places that foster social interaction given their mixed land use and significant role in the active and public transport networks.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			Landscaping and rest opportunities exist and the road design is somewhat responsive and sensitive to the local land context.	
Movement	M3			
General Traffic	GT4	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance. - M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays at signalised intersections of >80 seconds are characterised as a Level of Service F per Austroads, M&P accepts multiple signal cycles to clear intersections (in many cases

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				this may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austroads Levels of Service (which are reflected in SIDRA output). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.
Bus	B3 (if located on the future public transport network)	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicator: - Other vehicles have an impact on bus operation. - Operating speeds are between 40-60% of the free flow speed (excluding boarding times) - At signalised intersections, buses generally have to stop in a queue but clear the intersection in 1 signal cycle (if boarding time is excluded). - Moderate travel time reliability with 2-3 minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Mixed traffic operation is expected to operate with low-moderate mid-block congestion. - SIDRA intersection modelling is needed to confirm intersection delay and variability. - Bus priority measures at signalised intersections may be required to satisfy travel time reliability targets.
Cycling	C2	A	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is	<i>Generally meets or exceeds the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			experienced by the Interested but Concerned cycling group and includes low to no conflicts with pedestrians.	- Protected kerbside bike lanes provide a safe and low stress environment for cycling. - Protected intersections should be provided to provide a consistent network. 2.0m protected bike lanes provide sufficient space for cyclists to pass/overtake. 800mm buffer between the cycling lane and parking lane enables passenger to disembark vehicles without encroaching on the bike lane.
Walking	V2	B	Network Indicator: - Pedestrian delay of 10-30 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is less than 30 seconds - Crossing opportunities are within 50m of demand	<i>May satisfy target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Spacing of crossing opportunities will depend on development applications, but should include treatments such as signalised or wombat crossings at spacings of 100m to satisfy M&P performance indicators. - Footpaths on either side provide comfortable walking environment free from vehicles. - Footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Wide footpaths include additional space for dwelling and footpath activity. - Intersections with other Connector Streets should feature formal pedestrian crossings (signalised or zebra crossings) on all approaches.

M&P Summary – Connector Street (Modified Urban)

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P3	B	Network Indicator – Safety and Comfort: <u>Meets 3 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 400m of a bus or tram stop and within 800m of a train station. Project Indicator – Activity: - Low-moderate vehicular traffic volumes - Vehicle speeds <50km/h - Few large trucks (~5% of total traffic) - Footpaths are lit at night and have some passive surveillance. - Clean with minimal graffiti - Streets have trees with some shade - Little crossing delay for pedestrians (<30 seconds) - Walkways allow free two-way flow of foot traffic - Easy access public transport with frequency services - A place with quality street furniture - A place with moderate-high levels of social interaction. Project Indicator - User Experience: - A place where you can orientate yourself through road names/signs, built forms and some distinguishable features that include planting/sculptures/views	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Connector Streets are expected to carry less than 8,000 vpd, and likely less than 360 trucks per day. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths allow two wheeled devices (e.g. prams, wheelchairs, etc.) to pass comfortably. - Footpaths provide additional flexi-space to accommodate a range of on-street activities (e.g. on-street dining) and invite adjoining commercial land use to engage with and activate the street. - Absence of on-street parking creates a narrower street environment with fewer barriers between each side of the street. This is expected to support greater social interaction by allowing people walking to cross more easily and interact with both sides of the street. - Footpaths accommodate street lighting, furniture (e.g. seating) and street trees. - The target speed and posted speed is 40 km/h (refer to attribute table within the Precinct Structure Plan).

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			Landscaping and rest opportunities exist and the road design is somewhat responsive and sensitive to the local land context.	
Movement	M3			
General Traffic	GT4	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance. - M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays at signalised intersections of >80 seconds are characterised as a Level of Service F per Austroads, M&P accepts multiple signal cycles to clear intersections (in many cases this

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austroads Levels of Service (which are reflected in SIDRA output). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.
Bus	B5	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicator: - Other vehicles have an impact on bus operation. - Operating speeds are between 40-60% of the free flow speed (excluding boarding times) - At signalised intersections, buses generally have to stop in a queue but clear the intersection in 1 signal cycle (if boarding time is excluded). - Moderate travel time reliability with 2-3 minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Mixed traffic operation is expected to operate with marginal mid-block congestion. - SIDRA intersection modelling is needed to confirm intersection delay and variability.
Cycling	C2	A	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced	<i>Generally meets or exceeds the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			by the Interested but Concerned cycling group and includes low to no conflicts with pedestrians .	- Protected kerbside bike lanes provide a safe and low stress environment for cycling. - Protected intersections should be provided to provide a consistent network. 2.0m protected bike lanes provide sufficient space for cyclists to pass/overtake.
Walking	W2	B	Network Indicator: - Pedestrian delay of 10-30 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is less than 30 seconds - Crossing opportunities are within 50m of demand	<i>May satisfy target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Spacing of crossing opportunities will depend on development applications, but should include treatments such as wombat or signalised crossings at spacings of 100m to satisfy M&P performance indicators. - Footpaths on either side provide comfortable walking environment free from vehicles. - Footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Wide footpaths include additional space for dwelling and footpath activity. - Intersections with other Connector Streets should feature formal pedestrian crossings (signalised or zebra crossings) on all approaches.

M&P Summary – Key Local Access Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets I criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from I tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator - User Experience: - An experience where it is very difficult to orientate yourself geographically through road names, suburbs,	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Key Local Access streets are expected to carry in the order of 2,000-3,000 vpd and less than 10% truck traffic. - Key Local Access Streets are bus capable and may accommodate local bus services. The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths allow two wheeled devices (e.g. prams, wheelchairs, etc) to pass comfortably. - Verges accommodate street lighting and street trees. Footpaths are expected to be lit at night. - Additional planting and rest opportunities (including seating) accommodated by mid-block kerb extensions (i.e. by utilizing space in the parking lanes). - Posted speed limit is 50 km/h, however speeds of 30 km/h are targeted. - Key Local Access Streets will provide walking links to local destinations and schools and will be places of some social interaction.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			distances to place names etc. Built forms, landmarks or distinguishable features are very limited. The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance. - M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays at signalised intersections of >80 seconds are characterised as a Level of Service F per Austroads, M&P accepts multiple signal

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				cycles to clear intersections (in many cases this may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austroads Levels of Service (which are reflected in SIDRA output). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.
Bus	B5	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicator: - Other vehicles have an impact on bus operation. - Operating speeds are between 40-60% of the free flow speed (excluding boarding times) - At signalised intersections, buses generally have to stop in a queue but clear the intersection in 1 signal cycle (if boarding time is excluded). - Moderate travel time reliability with 2-3 minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Key Local Access Streets are bus capable and may accommodate local services. - Mixed traffic operation is expected to operate with marginal mid-block congestion. - SIDRA intersection modelling is needed to confirm intersection delay and variability.
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure	<i>Generally satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	- Key Local Access Street accommodate bikes in mixed traffic. - Quiet local streets are generally preferred locations to cycle for riders seeking a low traffic stress environment. - Given that Key Local Access Streets carry up to 3,000 vpd (potentially including buses) at speeds of up to 50 km/h, the street environment is approaching the upper threshold for safe and comfortable mixing of bikes and general traffic. - Key Local Access Streets should include streetscape and local area traffic management tools to ensure traffic speeds and volumes are controlled and riders can safely and comfortably mix with traffic.
Walking	W4	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>May satisfy target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Spacing of crossing opportunities will depend on development applications, but should include treatments such as kerb extensions or wombat crossings at spacings of 200m to satisfy M&P performance indicators. - Footpaths on either side provide comfortable walking environment free from vehicles. 1.8m footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				• Intersections with other local streets should include suitable pedestrian crossing treatments (e.g. compact roundabouts with zebra crossings).

M&P Summary – Conservation Interface Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets 1 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from 1 tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator - User Experience:	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Conservation Interface Streets are expected to carry in the order of 2,000-3,000 vpd and less than 10% truck traffic. - Conservation Interface Streets are bus capable and may accommodate local bus services The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpath allows two wheeled devices (e.g. prams, wheelchairs, etc) to pass comfortably. 4.0m shared path accommodates cyclists and people walking in groups. - Verges accommodate street lighting and street trees. - Footpaths may be lit at night. - Additional planting and rest opportunities (including seating) accommodated by mid-block kerb extensions (i.e. by utilizing space in the parking lanes). - A range of street furniture (seating, bins, signage) expected to support recreational use of shared path. - Posted speed limit is 50 km/h, however speeds of 30 km/h are targeted. - Conservation Interface Streets will provide walking links to local destinations and will be

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where it is very difficult to orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features are very limited. - The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	important recreational links. These will become important places of local social interaction.
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Generally meets or exceeds the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Based on traffic modelling undertaken by Stantec, forecast mid-block traffic volumes are generally within practical capacity. - SIDRA intersection analysis is required to determine signal design, layout and performance. - M&P framework supports compact intersections that permit significant delays, poor travel time reliability and queuing for general traffic on this street typology in order to prioritise better performance in other areas. This should include prioritising the performance of higher order intersecting streets (e.g. the CCC), and the creation of safe and comfortable pedestrian and bike crossings. - The M&P performance indicators may accept longer delays for general traffic than Austroads guidance for signalised intersections. While delays at signalised intersections of >80 seconds are characterised as a Level of Service F per

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				Austrroads, M&P accepts multiple signal cycles to clear intersections (in many cases this may impart longer delays than 80 sec) for this street typology. Intersection design and analysis should consider the differences in M&P performance indicators and Austrroads Levels of Service (which are reflected in SIDRA output). Council may consider including a requirement or guideline within the Precinct Structure Plan requiring intersection design to demonstrate consistency with the Movement and Place framework.
Bus	B5	C	Network Indicator: - Operating speed is 40-60% of signposted speed Project Indicator: - Other vehicles have an impact on bus operation. - Operating speeds are between 40-60% of the free flow speed (excluding boarding times) - At signalised intersections, buses generally have to stop in a queue but clear the intersection in 1 signal cycle (if boarding time is excluded). - Moderate travel time reliability with 2-3 minute variation from timetable.	<i>Generally meets the target minimum performance indicators for buses based on DoT's Movement and Place framework.</i> Key outcomes include: - Conservation Interface Streets are bus capable and may accommodate local services. - Mixed traffic operation is expected to operate with marginal mid-block congestion. - SIDRA intersection modelling is needed to confirm intersection delay and variability.
Cycling	CR	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is	<i>Generally satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			experienced by the Interested but Concerned cycling group.	- Conservation Interface Streets accommodate bikes on generous 4.0m shared path. - Shared path width permits low stress mixing of bikes and pedestrians for riders of all ages.
Walking	W4	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>Generally satisfies target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Shared path provides recreational walking opportunity 4.0m width allows people walking and riding to share the space comfortably - Spacing of crossing opportunities will depend on development applications, but should include treatments such as kerb extensions or wombat crossings at spacings of 200m to satisfy M&P performance indicators. - Footpaths on either side provide comfortable walking environment free from vehicles. 1.8m footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Intersections with other local streets should include suitable pedestrian crossing treatments (e.g. compact roundabouts with zebra crossings).

M&P Summary – Local Access Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets I criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from I tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator – User Experience: - An experience where it is very difficult to orientate yourself geographically through road names, suburbs,	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Local Access Streets are expected to carry between 1-2,000 vpd and fewer than 360 trucks per day. - Local Access Streets have a posted speed limited of 40 km/h and a target speed of 30 km/h. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths (1.8m min) enable people to walk side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Verge accommodates street lighting - Large street trees accommodated within verge and parking lane provide shade to both footpaths.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			distances to place names etc. Built forms, landmarks or distinguishable features are very limited. The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Satisfies the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Local Access Streets will cater to low volumes (<2,000 vpd) of traffic at low speed (40 km/h posted speed limit with a 30 km/h target speed) - No appreciable congestion or delay is expected.
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: - Local Access Street accommodates bikes in mixed traffic. - Quiet local streets are generally a preferred location to cycle for riders seeking a low traffic stress environment.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				- Given that Local Access Streets carry less than 2,000 vpd at speeds of up approximately 30 km/h, the street environment should be comfortable for most riders in the Interested but Concerned cohort. - Local Access Streets should include streetscape and local area traffic management tools to ensure traffic volumes and speeds are consistently low.
Walking	W4	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>Satisfies target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Spacing of crossing opportunities will depend on development applications, but should include treatments such as kerb extensions or wombat crossings at spacings of 200m to satisfy M&P performance indicators. 1.8m footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Intersections with other local streets should include suitable pedestrian crossing treatments (e.g. compact roundabouts with zebra crossings).

M&P Summary – Parking Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets I criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from I tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator – User Experience:	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Parking Streets are expected to carry between 1-2,000 vpd fewer than 360 trucks per day. - Parking Streets have a posted speed limited of 40 km/h and a target speed of 30 km/h. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Footpaths (1.8m min) enable people to walk side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Verge accommodates street lighting - Large street trees accommodated within verge and parking lane provide shade to both footpaths. - Large, landscaped areas provided between clusters of on-street parking.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where it is very difficult to orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features are very limited. - The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Satisfies the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Parking Streets will cater to low volumes of traffic (<2,000vpd) at low speed (40 km/h posted limit). - Direct property access is permitted on one side. - No appreciable congestion or delay is expected. - Parking Streets provide consolidated on-street parking to meet the needs of adjacent Pedestrian and Micro Streets.
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Generally satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: Parking Street accommodates bikes in mixed traffic.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
				• Quiet local streets are generally preferred locations to cycle for riders seeking a low traffic stress environment. • Given that Parking Streets carry less than 2,000 vpd at speeds of up approximately 30 km/h, the street environment should be comfortable for most riders in the Interested but Concerned cohort. • Parking Streets should include streetscape and local area traffic management tools to ensure traffic volumes and speeds are consistently low. • Angled parking reduces drivers' vision of oncoming cyclists, however the low turnover of residential parking reduces the associated risk. In addition, streetscape tools should be used help people riding bikes safely and comfortably 'claim the lane', rather than riding in the conflict zone immediately behind parked cars. • <i>We recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments to guide suitable streetscape treatments. Council may include a PSP requirement to demonstrate that proposed Parking Street designs are generally in accordance with the Streetscape Toolkit guidelines.</i>
Walking	W4	C	Network Indicator: • Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator:	<i>Generally satisfies target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	- Spacing of crossing opportunities will depend on development applications, but should include treatments such as kerb extensions or wombat crossings at spacings of 200m to satisfy M&P performance indicators. This should be reflected in the Precinct Structure Plan requirements or guidelines. - Intersections with other local streets should include suitable pedestrian crossing treatments (e.g. compact roundabouts with zebra crossings).

M&P Summary – Micro Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets 1 criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from 1 tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator – User Experience:	<i>Exceeds the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - The Micro Street permits vehicle access in a shared environment. Travel speeds (~10 km/h) and volumes (<1,000 vpd) are very low. 2.0m footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Shared street environment allows pedestrians to walk and cross freely across the entire length of the street. - Street is lit at night - Flexi-space provides space for landscaping and generous street trees that provide a consistent canopy over both footpaths. - Flexi-space provides space for seating, wayfinding signage and other street furniture. - Micro Streets will be places of local social interaction between local households. Street environment encourages people to walk and occupy the street for a range of activities, including children's' improvised play. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where it is very difficult to orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features are very limited. - The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
			Expanded advice (PMP Urbanists) <i>The Micro Street typology offers a premium streetscape choice that aims to deliver a very high level of place quality. The streetscape is intended to be tailored specifically to the place needs of the adjacent land use and respond to the place behaviours that users of the street will value.</i> <i>Good residential streets are hyper-local public places that augment the private spaces (e.g. backyards) of the immediate residences. They offer semi-private ‘public backyard’ spaces that are more accessible than local parks, larger than typical backyards, and are suitable for unsupervised free play for children.</i> <i>Additional land-use specific place indicators that further support the guidance from the M&P framework are provided below and represent our views of what a high place value residential street should deliver:</i> <u>Additional place indicators: Residential Micro Streets</u> Space for programmed play: the street may include equipment specifically designed for play (e.g. swings,	- The flexi-space provides space for landscaping and street furniture elements to invite interpretive play such as climbing and exploring. - The flexi-space accommodates respite spaces (e.g. places to sit) with appropriate street furniture - Flexi-space provides limited opportunities for curation by residents. - Shared street provides some opportunity for improvised play that requires open space (e.g. ball sports). - We recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments to guide developers. Council may include a PSP requirement to demonstrate that proposed Micro Street designs are generally in accordance with the Streetscape Toolkit guidelines.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			soccer goals, etc) at a scale that contributes but does not dominate the streetscape. - Unprogrammed or improvised play: the street includes open space, landscaping and street furniture that invite improvised play (e.g. climbing, exploring, space to kick a ball). - Space for sitting, reflection and respite: the street has good solar access (in many cases better than private backyards) and provides a mix of shaded and sunny places to sit - Social and gathering: the street may include spaces for household and multi-household groups to meet and socialise (e.g. public tables, BBQs). - Active citizenship: The street provide spaces that invite active curation from the community (e.g. community gardening)	
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection.	Satisfies the target minimum performance indicators for general traffic based on DoT's Movement and Place framework. Key outcomes include: - Micro Streets will cater to low volumes of traffic at low speed travelling in one direction. - Direct property access is not permitted - No appreciable congestion or delay is expected, and the streetscape is considered appropriate for infrequent vehicle access for pick-up / drop-offs, etc.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	<i>Satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include: Shared street environment provides low-stress environment for riders and allows riders to mix with low levels of traffic (<1,000 vpd) at slow speeds (<20 km/h) comfortably.
Walking	W4	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>Exceeds target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Shared street environment allows pedestrians to walk and cross unencumbered across the entire length of the street with minimal delay. - Footpaths on either side provide comfortable walking environment free from vehicles. 2.0m footpaths enable people to walk comfortably side by side, and permits people using wheeled devices (prams, wheelchairs, etc) to pass freely. - Intersections with other local streets should include suitable pedestrian crossing treatments (e.g. compact roundabouts with zebra crossings).

M&P Summary – Pedestrian Street

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets I criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from I tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator – User Experience: - An experience where it is very difficult to orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features are very limited.	<i>Exceeds the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - The Pedestrian Street does not have public access for cars or trucks. - Wide shared path provides space for people to walk in groups and pass comfortably. - Car-free street environment allows pedestrians to walk and cross unencumbered across the entire length of the street. - Shared paths are lit at night - Central green space provides space for landscaping and generous street trees that shade the footpath and shared path. - Central green spaces provides space for seating, wayfinding signage and other street furniture. - Pedestrian Streets will be places of significant local social interaction. They will be local spaces for play and gathering, and may provide important local links in the walking and cycling networks. - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
			Expanded advice (PMP Urbanists) <i>The Pedestrian Street typology offers a premium streetscape choice that aims to maximise the place quality of the street. The streetscape is intended to be tailored specifically to the place needs of the adjacent land use and respond to the place behaviours that users of the street will value.</i> <i>Good residential streets are hyper-local public places that augment the private spaces (e.g. backyards) of the immediate residences. They offer semi-private ‘public backyard’ spaces that are more accessible than local parks, larger than typical backyards, and are suitable for unsupervised free play for children.</i> <i>Additional land-use specific place indicators that further support the guidance from the M&P framework are provided below and represent our views of what a high place value residential street should deliver:</i> <u><i>Additional place indicators: Residential Pedestrian Streets</i></u> <i>Space for programmed play: the street may include equipment specifically designed for play (e.g. swings, soccer goals, etc) at a scale that contributes but does not dominate the streetscape.</i> <i>Unprogrammed or improvised play: the street includes open space, landscaping and street furniture that invite improvised play (e.g. climbing, exploring, space to kick a ball).</i> <i>Space for sitting, reflection and respite: the street has good solar access (in many cases better than private backyards) and provides a mix of shaded and sunny places to sit</i> <i>Social and gathering: the street may include spaces for household and multi-household groups to meet and socialise (e.g. public tables, BBQs).</i>	<i>The 3.0m central green space (in the narrow Pedestrian Street configuration) provides space for landscaping and street furniture elements to invite interpretive play such as climbing and exploring.</i> <i>The 10.5m central green space (in the wide Pedestrian Street configuration) provides space for programmed play equipment and larger scale improvised play (e.g. space to kick a ball).</i> <i>Both configurations accommodate respite spaces (e.g. places to sit) with appropriate street furniture</i> <i>Central green space may accommodate plantings and curation by the community where appropriate</i> <i>We recommend that the NWGGA Streetscape Toolkit include precedent images, inspiration and generally supported treatments to guide developers. Council may include a PSP requirement to demonstrate that proposed Pedestrian Street designs are generally in accordance with the Streetscape Toolkit guidelines.</i>

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			Active citizenship: The street provide spaces that invite active curation from the community (e.g. community gardening)	
Movement	M5			
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	Satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework. Key outcomes include: 3.5m shared path provides low-stress environment for riders - Conflicts with pedestrians are expected to be relatively low given that Pedestrian Streets will generally provide local connections in the active transport network
Walking	W4	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	Exceeds target minimum performance indicators for walking based on DoT's Movement and Place framework. Key outcomes include: Car-free street environment allows pedestrians to walk and cross unencumbered across the entire length of the street with no delay.

M&P Summary – Laneway

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
Place	P5	D	Network Indicator – Safety and Comfort: <u>Meets I criteria:</u> - Walking LoS of C or better - Travel speed of 40 km/h or lower - Traffic volumes of less than 8,000 vehicles per day - Truck count of 360 or less per day. Network Indicator – Accessibility: - Located within 800m from I tram stop, bus stop or train station. Project Indicator – Activity: - Moderate-high vehicular traffic volumes - Vehicle speeds of 60km/h or greater - Moderate-high number of large trucks (greater than 10%) - Some footpaths not lit at night - May feel unclean and have some graffiti - Streets have few trees - Significant crossing delay for pedestrians (more than 60 seconds) - Narrow walkways - Limited access to frequent public transport - A place with minimal street furniture - A place with limited social interaction. Project Indicator – User Experience:	<i>Generally meets the target minimum performance indicators for place based on DoT's Movement and Place framework.</i> Key outcomes include: - Laneways will carry very low vehicle volumes at very low speeds (<20 km/h) - The public transport network has been designed to ensure the precinct is predominately within 400m of a bus stop with frequent services. - Laneway provides shared street environment that allows people to walk and ride freely. Wheeled devices (e.g. prams, wheelchairs, etc.), bikes, and groups of people walking can pass comfortably. - Laneways will be lit at night - Laneways include regular landscaping to soften the predominately sparse paved space. - Laneways will generally be places with little social interaction, however may attract some improvised play given the low levels of vehicle intrusion.

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			- An experience where it is very difficult to orientate yourself geographically through road names, suburbs, distances to place names etc. Built forms, landmarks or distinguishable features are very limited. - The soft landscaping is sparse and there are few or no appropriate opportunities to stop to rest and recuperate.	
Movement	M5			
General Traffic	GT5	D	Network Indicator: - Operating speed is 20-40% of signposted speed Project Indicators: - Small increases in traffic volume can significantly increase delay. - Operating speeds are between 20-40% of the free flow speed. - At signalised intersections, vehicles always join the back of an existing queue and take about 2 signal cycles to clear the intersection. - Poor travel time reliability with 20-30% variation from the median for that day-of-week and time-of-day.	<i>Satisfies the target minimum performance indicators for general traffic based on DoT's Movement and Place framework.</i> Key outcomes include: - Laneways will cater to low volumes of traffic at low speed. - No appreciable congestion or delay is expected, and the streetscape is considered appropriate for the purpose of the laneway typology.
Cycling	C4	B	Network and Project Indicator: Cycle segment, including intersections and crossings, is fully comprised of infrastructure consistent with the	<i>Satisfies the target minimum performance indicators for cycling based on DoT's Movement and Place framework.</i> Key outcomes include:

Network	Classification	Target Minimum Performance	Target Performance Indicator	Outcome
			three key cycling infrastructure typologies such that no traffic stress is experienced by the Interested but Concerned cycling group.	- Laneways accommodate bikes in very low volumes of mixed traffic moving at slow speeds. - Low volumes and speeds create safe and comfortable environment for riders, and trafficable width provides ample space for drivers to pass bikes without intimidating riders. - Laneways are unlikely to provide preferred routes for riders, but provide safe access to homes and other destinations.
Walking	W5	C	Network Indicator: - Pedestrian delay of 30-60 seconds at signalised crossings Project Indicator: - Average delay before being able to safely cross is 30-60 seconds - Crossing opportunities are within 100m of demand	<i>Exceed target minimum performance indicators for walking based on DoT's Movement and Place framework.</i> Key outcomes include: - Shared environment allows people to walk and cross freely without delay. - Laneways provide useful cut-throughs and local permeability improvements but may nonetheless be less attractive as primary walking choices for the community.

APPENDIX D

The City has prepared this appendix to the Movement and Place Report that was originally prepared by PMP Urbanists for the Creamery Road Precinct Structure Plan.

ALTERNATE CCC – CCC LOCAL LOOP ROADS

The Clever and Creative Corridor (CCC) is the lead element of the place a movement network and provides the backbone for active transport connections through the Creamery Road Precinct. The CCC forms part of the proposed Principle Public transport Network, Principal Bike Network and the Principal Pedestrian Network.

This variation of the CCC, like the Neighbourhood Activity Centre (NAC) variation, allows bike and buses to have a clear through movement within the precinct. To allow for vehicle access to adjunct residential areas loop roads (local access streets) can be staggered adjacent to the CCC. The design of the Clever and Creative Corridor typology is shown in Figure 23.



FIGURE 23 - ALTERNATE CCC – CCC LOCAL LOOP ROADS

Table 27 summarises the Alternate CCC network classifications, target minimum performance levels and whether the proposed designs generally satisfies performance indicators for each theme.

TABLE 27: OVERVIEW OF M&P ASSESSMENT – ALTERNATE CCC

NETWORK	CLASSIFICATION	TARGET MINIMUM PERFORMANCE	OUTCOME
PLACE	P3	B	Generally, meets or exceeds the target minimum performance indicators for place.
MOVEMENT	M2		
BUS	B2	B	Generally, meets the target minimum performance indicators for buses.
CYCLING	C2	A	Generally, meets or exceeds the target minimum performance indicators for cycling.
WALKING	W2	B	Generally, meets minimum performance indicators for walking.

The M&P framework prioritises cycling (minimum LoS A) followed by place, bus and walking themes (minimum LoS B), and the streetscape does not permit freight or general traffic. The proposed design generally satisfies or exceeds the aspirations for all themes; however, many place performance indicators will require additional detail at later stages to fully assess place performance.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Landscaping and placemaking befitting the place aspirations of the CCC.
 - Street furniture
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.

BLUESTONE BRIDGE ROAD

Bluestone Bridge Road provides an important traffic connection on the eastern boundary of the Creamery Road precinct and connection to the Northern Growth Area, via an alternate route to Evans Road.

The future Bluestone Bridge Road cross section accommodates two general traffic lanes, protected bike lanes and a separated pedestrian path. This cross section has been designed to be 17 metres to fit within the existing road reserve, to minimise any impacts on existing dwellings.

The design of Bluestone Bridge Road cross section is highlighted below in figure 24.

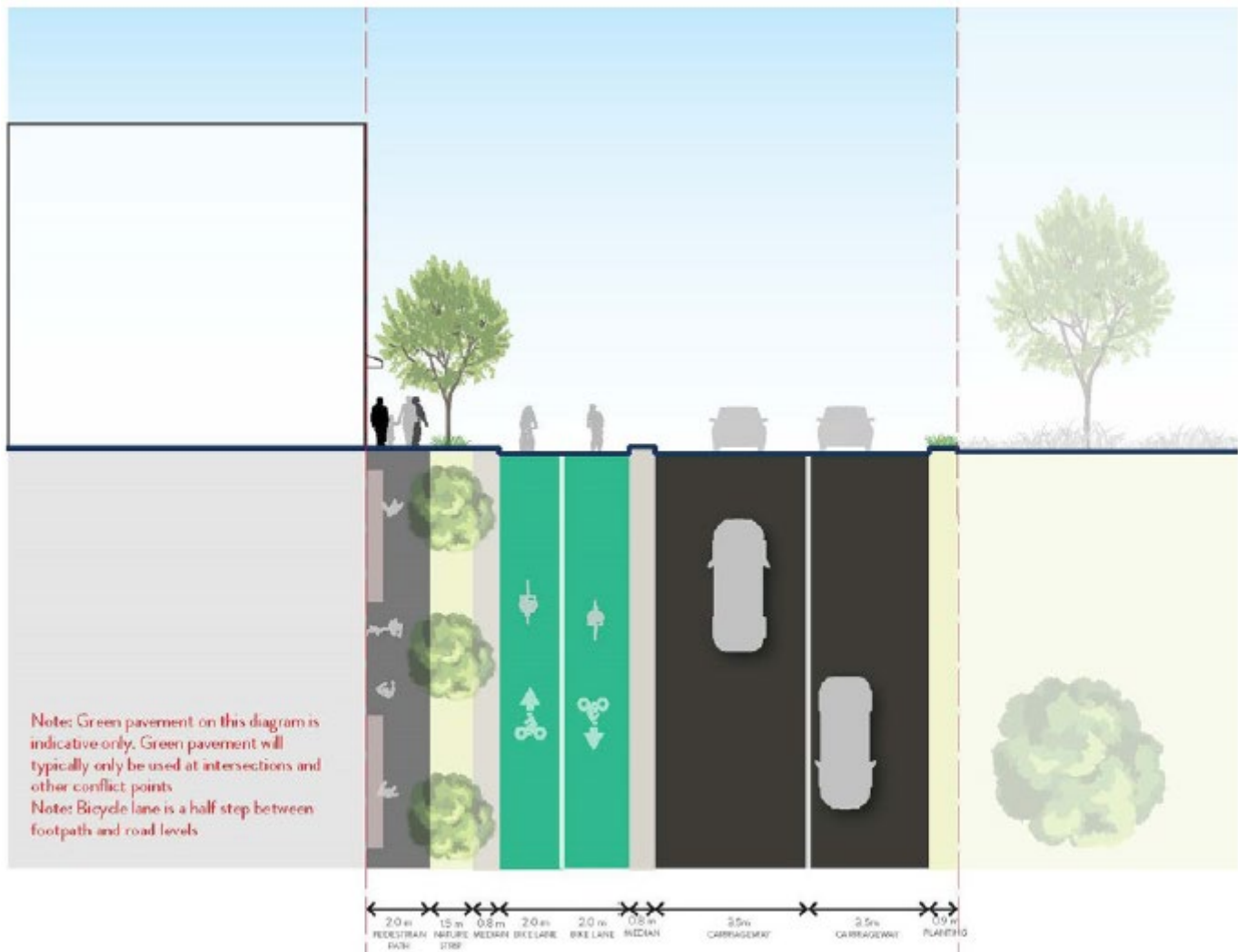


FIGURE 24 – BLUESTONE BRIDGE ROAD

Table 28 summarises the Bluestone Bridge Road network classifications, target minimum performance levels, and whether the proposed design generally satisfies performance indicators for each theme.

TABLE 28: OVERVIEW OF M&P ASSESSMENT – BLUESTONE BRIDGE ROAD

NETWORK	CLASSIFICATION	TARGET MINIMUM PERFORMANCE	OUTCOME
PLACE	P5	D	Generally, meets the target minimum performance indicators for place.

NETWORK	CLASSIFICATION	TARGET MINIMUM PERFORMANCE	OUTCOME
MOVEMENT	M3		
GENERAL TRAFFIC	GT4	D	Generally, meets or exceeds the target minimum performance indicators for general traffic.
BUS	B5	C	Generally, meets the target minimum performance indicators for buses.
CYCLING	C2	A	Generally, meets or exceeds the target minimum performance indicators for cycling.
WALKING	W2	B	May satisfy target minimum performance indicators for walking.

The Movement and Place framework targets high levels of performance for cycling and walking, with lower performance targets for buses and general traffic and place. The proposed design is expected to satisfy performance aspirations for all modes, however further detail is required to assess walking performance, which may be limited by the spacing of crossing opportunities and potential delays at signalised intersections.

The following details will need to be resolved at later stages to ensure performance indicators for each theme are fully assessed:

- **Place:**
 - Street tree species and spacing
 - Location of bus stops (in order to provide access to PT within 400m)
 - Street lighting
 - Signage and wayfinding
 - Landscaping and placemaking befitting the place aspirations of the CCC.
 - Street furniture
- **Walking:**
 - Signal timing at signalised intersections and the impact on pedestrian delays and crossing times.