SUBURBAN RAIL LOOP EAST

SRL East Draft Structure Plan | Monash

Transport Technical Report

More Homes For Victorians

VICTORIA State Government

Suburban Rail Loop

PREPARED FOR SUBURBAN RAIL LOOP AUTHORITY

SRL EAST DRAFT STRUCTURE PLAN – TRANSPORT TECHNICAL REPORT – MONASH

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222 Exhibition Street
Melbourne VIC 3000
PO Box 23061 Docklands VIC 8012 Australia

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This document is based on the information available, and the assumptions made, as at the date of the document. For further information, please refer to the assumptions, limitations and uncertainties set out in the methodology section of this document.

This document should be read in full and no excerpts are to be taken as representative of the findings.

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Abbreviations and glossary

TERM	DEFINITION
AADT	Annual average daily traffic
ABS	Australian Bureau of Statistics
AJM JV	Aurecon, Jacobs, Mott MacDonald Joint Venture – Technical Advisor to the SRLA
AM peak	The 2-hour peak period between 7am to 9am on a typical weekday
BESS	Built Environment Sustainable Scorecard
BIC	Business and Investment Case
Car free / Car light	Option for a lifestyle that does not require a car to travel in most circumstances
CBD	Central Business District of Greater Melbourne
CASBE	Council of Sustainability in the Built Environment
CoMo UK	Collaborative Mobility UK, A UK charity organisation promoting and advocating for the public benefit of shared transport options
DDA	*Disability Discrimination Act 1992* (Cth)
DTP / DoT	Department of Transport and Planning / Department of Transport (formerly)
EES	Environment Effects Statement for SRL East Rail Project
End-of-trip facilities	Facilities available for people to shower, change clothes or otherwise transition from active transport to work or other activities.
EPR	Environmental Performance Requirements
EV	Electric vehicles
Greater Melbourne	Covers the entirety of suburban Melbourne including as yet unreleased growth areas in outer suburbs, including 31 local government areas.
GTP	Green Travel Plans
IAC	Inquiry and Advisory Committee
LGA	Local government area
LMFP	Last Mile Freight Plan
LUTI	Land Use and Transport Interaction
M&P	Movement and Place – a cross-disciplinary, place-based approach to the planning, design, delivery and operation of transport networks
Micromobility	Transport provided by very light vehicles including bicycles, scooters and skateboards. Often shared and/or electric.
NEIC	Monash National Employment and Innovation Cluster
Off-peak	The off-peak period between 6pm to 7am, and the inter-period between the morning and afternoon peaks between 9am to 3pm on a typical weekday
PFN	Principal Freight Network
Planning Area	The Planning Area declared within Monash by the SRL Minister under the *Suburban Rail Loop Act 2021* (Vic) on 4 December 2023.
PM peak	The 3-hour peak period between 3 pm to 6 pm on a typical weekday
PPTN	Principal Public Transport Network
PSA	Planning Scheme Amendment
PTV	Public Transport Victoria
PUDO	Pick up / Drop off parking spaces
SA2	Statistical Area Level 2
SCC	Strategic cycling corridor
SCO14	Specific Controls Overlay Schedule 14

TERM	DEFINITION
SRL	Suburban Rail Loop is a new orbital rail line from Cheltenham to Werribee and associated development together with planning for the increased intensification and activation of precincts in areas connected to and around the rail line.
SRLA	Suburban Rail Loop Authority
SRL East	The south-east section of SRL from Cheltenham to Box Hill, together with a series of integrated initiatives to create value and improve the precincts around the new stations
SRL East Planning Areas	The SRL East Planning Areas are Cheltenham (CTM), Clayton (CLA), Monash (MSH), Glen Waverley (GWY), Burwood (BUW) and Box Hill (BOX)
SRL East Rail project	Construction and operation of the SRL East rail connection, including tunnels from Cheltenham to Box Hill, six stations and the Southern Stabling and Maintenance Yard
Structure Plan Area	The extent of land within the Planning Area to which the Monash Structure Plan applies.
V/C	Volume over capacity ratio
VISTA	Victorian Integrated Survey of Travel and Activity
VITM	Victorian Integrated Transport Model

Executive summary

As part of the Suburban Rail Loop (SRL) East project, Structure Plans are being prepared for the neighbourhoods surrounding the new underground stations at Cheltenham, Clayton, Monash, Glen Waverley, Burwood and Box Hill.

The Structure Plans will set how the Vision will be delivered in the SRL East Draft Structure Plan (Structure Plan) Areas to guide growth and transformational change, while protecting the character and features that people love about those areas. As the Monash Structure Plan Area develops it will be important to protect and enhance access to, from and within Monash.

Building on the existing high quality arterial road links such as Ferntree Gully Road and Blackburn Road, and connections to 13 bus routes within Monash, SRL East will provide a high capacity and fast connection to the broader metropolitan rail network and nearby state and regional significant activity centres that are currently difficult to reach by public transport. More active and sustainable transport choices will help improve the amenity and liveability of the Structure Plan Area, and the health and wellbeing of individuals. This will help reduce traffic congestion and adverse environmental impacts and provide for more efficient access to key locations including Monash University's Clayton campus.

This report sets out transport recommendations to inform the development of the Monash Structure Plan. The recommendations consider future land use and associated population and employment growth, with the aim to support and encourage sustainable and active and public transport choices in Monash in response to that growth, and to manage car parking, kerbside activities and freight deliveries.

The Monash Structure Plan will identify how the five key themes of Boosting the Economy, Enriching Community, Better Connections, Enhancing Place and Empowering Sustainability will be delivered in the Structure Plan Area, and will set objectives, strategies and actions to achieve the Vision for the area.

The population, job and traffic growth demands associated with the land use changes and Structure Plan will require proactive management to realise the full potential of SRL East. The transport ambition and goals provide the foundations for managing the growth in transport in Monash. These ambitions and goals are summarised in the Figure and Table below.

Transport Ambition for Monash

Managing the growing number of trips through more people choosing to walk, cycle and catch public transport as Monash develops.

GOAL	EXPLANATION
A safe and connected walking and cycling environment	Walking and cycling[1] will serve as the most convenient, safe and enjoyable means of travel in the neighbourhoods around each SRL station.

[1] *Walking and cycling represent the action of moving as a pedestrian or cyclists, whether or not someone is walking or cycling unaided or using any kind of wheeled mobility aid, including cycles, scooters, wheelchairs, mobility scooters, walking frames, prams or buggies.*

GOAL	EXPLANATION
A revitalised bus experience	In line with Victoria's Bus Plan, help change people's perception of buses. Provide a passenger-focused bus service, making road-based public transport a competitive, attractive and convenient choice.
An all-inclusive transport network	Ensure transport is accessible to people of all ages, abilities and genders.
Anchoring sustainable travel services and shared mobility to SRL East	SRL East stations are seamless integrated hubs, allowing quality interchanges between sustainable travel modes.
Prioritising safe and healthy movement	In line with Victoria's Road Safety Strategy 2021-2030, the transport network becomes safer for all, particularly vulnerable users. Uptake in walking and cycling contributes to an increase in daily physical activity.
Smart and efficient use of parking	Parking management needs for all users, with a strong emphasis on providing for the needs of bike and micromobility users. Car parking spaces will be managed and used to maximise their effectiveness while considering impacts on the urban realm.
Enable new and emerging innovative mobility	Neighbourhoods around each SRL station will enable emerging and innovative mobility to provide more and convenient choice, especially for shorter to medium distance trips.

This report is informed by assessing the existing transport conditions in Monash and the SRL East Rail Environment Effects Statement (EES) (2021). It sets out recommendations to support and encourage sustainable and active transport choices, and to manage parking, kerbside activities and freight deliveries.

A Precinct Parking Plan for Monash is attached as Appendix A to this report. The SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash supports the justification of implementing Parking Overlays in Monash.

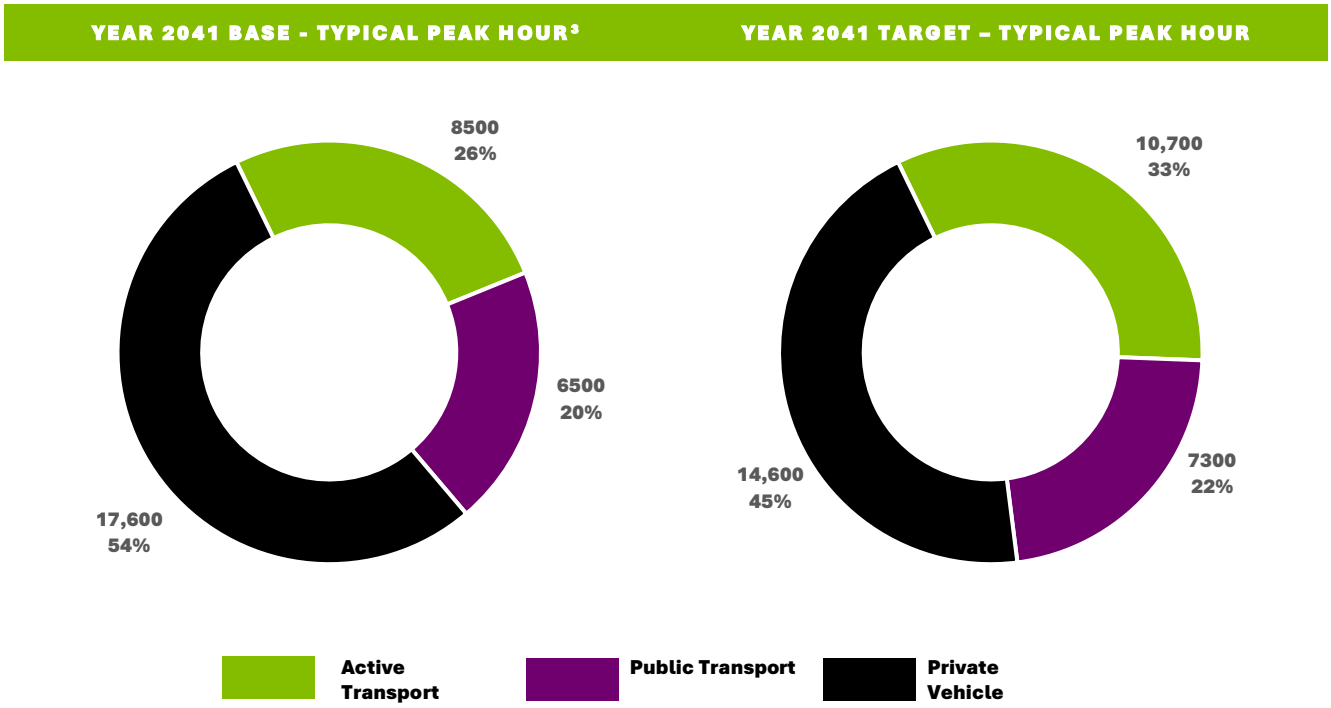
The main transport challenges in Monash are:

- The busy arterial roads (such as Blackburn Road and Ferntree Gully Road), Monash Freeway and large private and industrial and business blocks are barriers for pedestrians and cyclists
- There is limited cycling infrastructure, with very few separated cycling routes serving Monash. Outside of Monash University, parking for cycling and other emerging modes is limited.
- While the southern part of the Structure Plan area is well served by buses at the Monash University bus interchange on Wellington Road, bus services are more limited in the northern part of precinct, will likely continue to be the case until the SRL Station and the proposed bus interchange open in 2035. High parking occupancy levels were observed in several parking areas (off-street and on-street) which mostly included unrestricted parking for industrial and business parks. The high provision of unrestricted parking encourages private vehicle commuter travel
- Parking facilities within Monash University appear to have low occupancy levels outside peak education periods (on weekends and university holidays)
- While the road network is generally within capacity (other than some periods of congestion during peak hours) to support the current private vehicle mode share, maintaining a similar private vehicle mode share into the future will not be sustainable (due to the forecast increase in trips) and will affect the liveability within the Structure Plan Area.

An assessment of how travel patterns within the Structure Plan Area will evolve and change was undertaken, which included setting a mode share target that reflects the broader set of transport choices. The assessment identified that, in the future (with SRL East), about 55 per cent of Monash trips start and/or finish within 5 kilometres of Monash or are along a corridor will be served by a direct rail service to Monash.

The primary focus of the sustainable transport mode share increase is the growth in active transport trips supported by the future mixed land uses and the potential for improved infrastructure and facilities to support short distance trips.

The Figure below shows the future Baseline Scenario (including SRL East) and target mode shares for a typical peak hour for Monash.[2] The target shows an increase in active transport mode share by 26 per cent (an increase of 2200 trips during a typical peak hour) compared to the baseline from 26 per cent to 33 per cent, with public transport mode share increasing by 12 per cent (an increase of 800 trips during a typical peak hour).



Recommendations

Recommendations to improve transport and movement in Monash are divided into infrastructure recommendations, and non-infrastructure recommendations:

- **Infrastructure recommendations** focus on improving strategic and local corridors, with a focus on optimising sustainable active and public transport networks to promote walking, cycling and public transport modes

- **Non-infrastructure recommendations** focus on policies, strategies, guidelines and plans to manage parking in the Structure Plan Area to promote sustainable transport choice and manage kerbside activities

[2] *Analysis is based on the primary mode for trips to, from and within Monash (through trips are not included).*

[3] *Due to limitations in VITM actual active transport mode share may be higher than the baseline (see Section 3.4) forecast due to mixed-used higher density land uses naturally favouring active transport and active transport initiatives from State Government and Local Councils which may occur from now until commencement of SRL East services.*

and freight delivery. Some recommendations are categorised as ‘other opportunities’ to be considered through other pathways and partnerships.

The Table below summarises the types of recommendations and their alignment with the transport goals. The infrastructure and non-infrastructure recommendations will deliver a more connected network and increased travel choice by building upon existing arterial road and rail access and contributing to a shift towards sustainable travel choices across the Monash Structure Plan Area.

TRANSPORT RECOMMENDATIONS	TRANSPORT GOALS						
	A safe and connected walking and cycling environment	A revitalised bus experience	An all-inclusive transport network	Anchoring sustainable travel services and shared mobility to SRL East	Prioritising safe and healthy movement	Smart and efficient use of parking	Enable new and emerging innovative mobility
Infrastructure types							
New and Upgraded Strategic Corridors that enable the Structure Plan with a particular focus on active and public transport upgrades	✓	✓	✓		✓		
Upgraded local Green Streets, with a particular focus on active transport upgrades and support for innovative modes	✓		✓			✓	
New Key Links, focussing on creating active transport permeability and connecting transport corridors	✓		✓	✓			
New and upgraded crossings of busy roads	✓		✓		✓		
Upgrades to public transport interchanges to enhance the services, facilities, and customer experience		✓		✓			
New bicycle hubs to encourage active transport to the SRL station, existing railway station and bus interchange	✓	✓		✓			
Maintaining strategic traffic and freight corridors		✓				✓	
Designating low traffic neighbourhoods	✓		✓		✓		
Non-Infrastructure types							
Development of SRL East Structure Plan Area appropriate parking rates					✓	✓	
Partnering with Council to plan and manage streets through local freight delivery and kerbside management plans						✓	
Supporting travel choices including Green Travel Plans and encourage use of mobility hubs					✓		✓

1 Introduction

This section provides the background to the Suburban Rail Loop (SRL) East project. It sets out the scope and objectives of structure planning, and the purpose and structure of this report. The methodology for the transport technical assessment is explained. Stakeholder consultations undertaken to inform the recommendations in this report are discussed.

1.1 Background

SRL is a transformational project that will help shape Melbourne's growth in the decades ahead. It will better connect Victorians to jobs, retail, education, health services and each other – and help Melbourne evolve into a 'city of centres'.

SRL will deliver a 90-kilometre rail line linking every major train service from the Frankston Line to the Werribee Line via Melbourne Airport.

SRL East from Cheltenham to Box Hill will connect major employment, health, education and retail destinations in Melbourne's east and south east. Twin 26-kilometre tunnels will link priority growth suburbs in the municipalities of Bayside, Kingston, Monash and Whitehorse. The Minister for Planning approved the SRL East rail project in 2022.

SRL East Draft Structure Plan (Structure Plan) Areas will surround the six new underground stations at Cheltenham, Clayton, Monash, Glen Waverley, Burwood and Box Hill.

Construction of the SRL East underground stations is underway at Cheltenham, Clayton, Monash, Glen Waverley, Burwood and Box Hill. SRL East provides an opportunity to enhance the surrounding neighbourhoods.

SRL East will support thriving and sustainable neighbourhoods and communities that offer diverse and affordable housing options, with easy access to jobs, transport networks, open space, and community facilities and services.

A Vision for the Clayton SRL East neighbourhoods has been developed in consultation with the community and stakeholders that sets out the long-term aspirations for the SRL East Structure Plan Areas.

Figure 1.1 shows SRL East in the context of the entire SRL project and Melbourne's rail network.

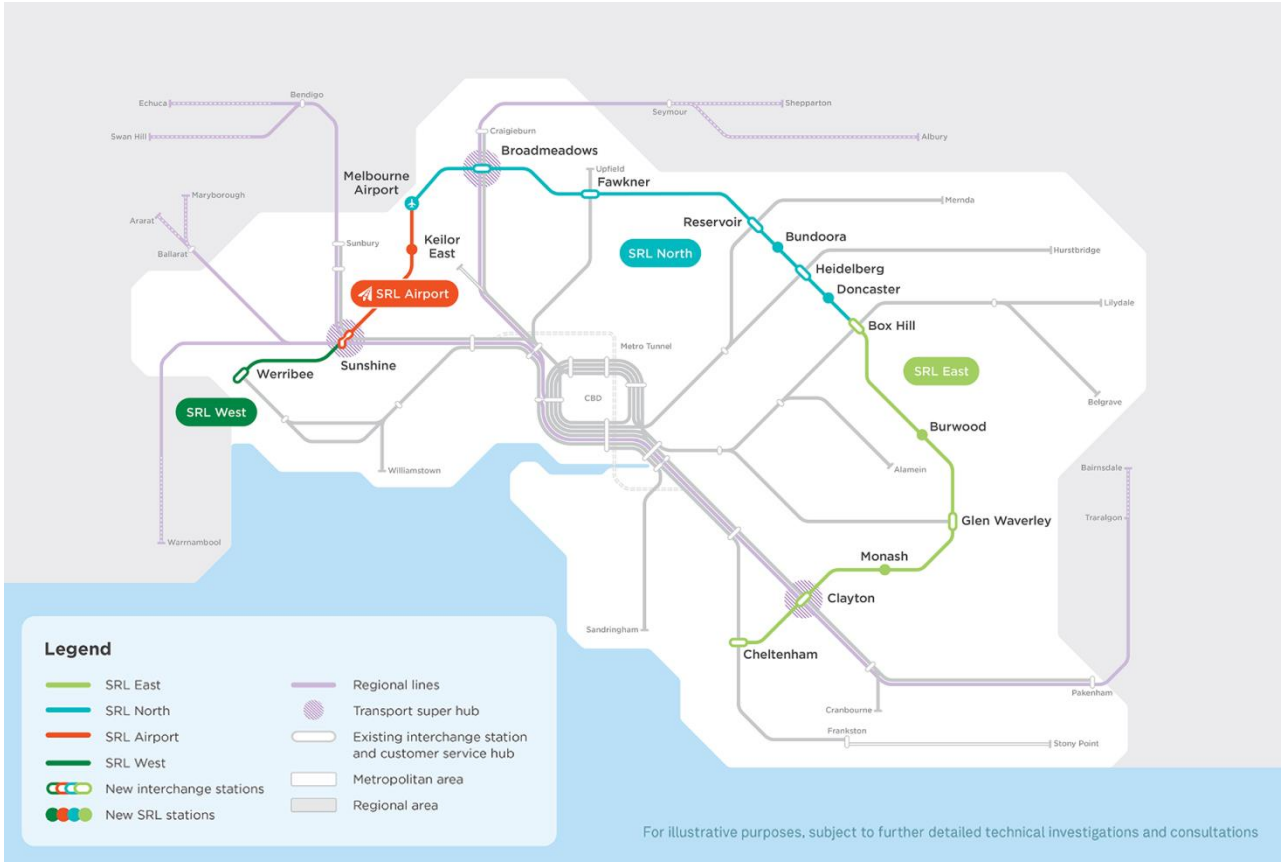


FIGURE 1.1 SRL EAST CONTEXT IN MELBOURNE'S RAIL NETWORK

1.2 Structure planning

Structure Plans are being prepared for defined areas surrounding the SRL East stations to help deliver the vision for each neighbourhood.

The Structure Plans cover defined SRL East Structure Plan Areas. These are the areas immediately surrounding the SRL stations, where the most growth and change will occur These areas cover a walkable catchment that extends from the SRL station entrances. Additional places are included within the Structure Plan Area as required to make planning guidance more robust and effective, and to align with each community's aspirations and current and future needs.

A Structure Plan is a blueprint to guide how an area develops and changes over time. Structure Plans describe how future growth within the area will be managed in an appropriate and sustainable way to achieve social, economic and environmental objectives. Matters covered in a Structure Plan include transport connections and car parking, housing and commercial development, community infrastructure, urban design, open space, water and energy management, climate resilience and sustainability.

By tailoring planning decisions to reflect the needs of a defined area, Structure Plans give effect to the policies and objectives set for these areas and cater for changing community needs. They also provide certainty for residents, businesses and developers by identifying the preferred locations and timing of future land uses, development and infrastructure provision.

Structure Plans take a flexible and responsive approach that enables places to evolve over time.

Planning scheme amendments will be required to implement the Structure Plans into the planning schemes of the cities of Bayside, Kingston, Monash and Whitehorse across the SRL East Structure Plan Areas.

SRL East is the first stage of the wider SRL project, which is an integrated transport and land use project that will extend over 30 years. By integrating and staging transport, planning and infrastructure initiatives, SRL will support urban centres across Melbourne that offer high quality lifestyles, housing and jobs close to public transport, services and other amenities.

This Structure Plan recognises that key planning approvals for SRL East were informed by the Minister's Assessment of the SRL East Environmental Effects Statement (EES) (2021), which was supported by relevant technical documents such the Traffic and Transport Impact Assessment. These approvals, now in place for delivering the rail infrastructure for SRL East, form the foundation for structure planning and this report.

The Structure Plan is the next step towards achieving SRL's integrated transport and land use outcomes and maximising the project's benefits.

1.2.1 PLANNING AREA AND STRUCTURE PLAN AREA

This report also refers to the Planning Area. The Planning Area is a wider area that includes the Structure Plan Area. The Planning Area for Monash was declared by the Minister for the SRL under the *Suburban Rail Loop Act 2021* (Vic) in December 2023. The declaration makes the Suburban Rail Loop Authority (SRLA) a planning authority under the *Planning and Environment Act 1987* for the land in Monash to which the Planning Area applies and has effect.

As transport links connect beyond the Structure Plan Area and people move through it to access activities within the wider Planning Area, this report deliberately discusses transport networks, challenges and trips in the context of the wider Planning Area before focusing in on impacts and actions within the Structure Plan Area.

The Planning Area and the Structure Plan Area for Monash are shown in Figure 1.2. The Monash Planning Area overlaps with the Clayton Planning Area to the south-west.

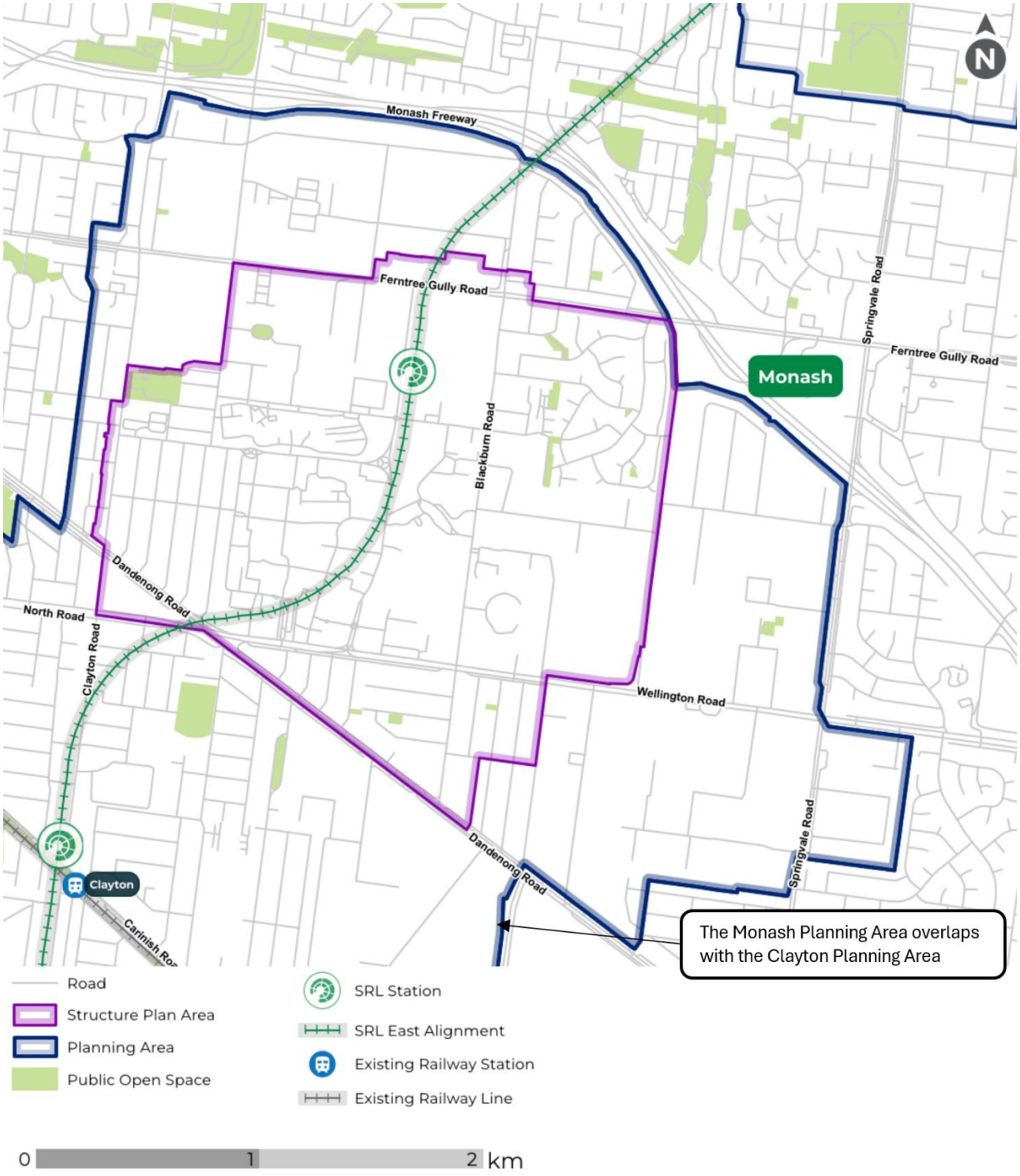


FIGURE 1.2 MONASH PLANNING AREA AND STRUCTURE PLAN AREA

1.3 Purpose and structure of this report

This report sets out transport recommendations to inform the development of the Structure Plan for Monash.

As the Monash Structure Plan Area develops it will be important to support and promote more sustainable modes of transport to, from and within Monash. This will help reduce traffic congestion and adverse environmental impacts and provide for more efficient use of land (instead of over-providing car parking). More active and sustainable transport choices will help improve the amenity and liveability of the Structure Plan Area, and the health and wellbeing of individuals.

The recommendations aim to support and encourage sustainable and active transport choices in Monash, and manage parking, kerbside activities and freight deliveries.

The structure of this report is:

- **Section 1: Introduction** – provides the background and context of the technical assessment
- **Section 2: Existing conditions** – describes the existing transport conditions, gaps and challenges in Monash
- **Section 3: The SRL project** – provides an overview of the project and its expected benefits, and sets out relevant aspects of the Traffic and Transport Impact Assessment delivered for the SRL East Environment Effects Statement (EES) (2021) that informed the Planning Approval
- **Section 4: Transport ambition for Monash** – sets out the transport ambition for Monash and anticipated land use and the implications for transport
- **Section 5: Future transport demands** – discusses travel patterns, including the trips generated and the distribution of where they are going to and from, and presents the target mode shares given the transport ambition
- **Section 6: Infrastructure recommendations** – sets out the aspirational network for each transport mode recommendations to improve transport infrastructure and encourage sustainable travel in the Structure Plan Area
- **Section 7: Non-infrastructure recommendations** – sets out the non-infrastructure recommendations to manage parking, promote active and sustainable transport choices, and manage kerbside activities and local freight deliveries
- **Section 8: Conclusion** – including the considering of the alignment between transport goals and types of recommendations.

The **SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash** attached to Appendix A of this report summarises the context of parking in Monash and outlines parking management tools recommended for the Monash Structure Plan.

1.4 Methodology

This report demonstrates how transport recommendations will cater for the growth in trips as a result of the land use changes and associated transport demand anticipated from the Monash Structure Plan Area.

The Minister's Assessment (discussed further in Section 3.2) supported the finding of the Inquiry and Advisory Committee (IAC) convened to review the environment effects of SRL East; that the transport modelling

completed for the Transport and Traffic Impact Assessment for the SRL East Environment Effects Statement (EES) 2021) was adequate for this phase of the project. This transport modelling underpinned the assessment of operational transport effects and considered land use changes and future travel patterns associated with the operation of the SRL East rail infrastructure and has formed the basis for the preparation of this Transport Technical Report.

A 'vision and validate' approach was applied to respond to the growing transport task to 2041 expected from the land use changes in the Monash Structure Plan Area. The 'vision and validate' approach focuses on defining the desired transport network ('vision') to inform and support the Structure Plan and identifies how the transport recommendations will work towards achieving the desired 'outcome for the transport network ('validate').

The transport recommendations respond to the transport ambition and seek to encourage more sustainable transport demand and reduce car reliance and impacts, while more broadly informing the vision for the Monash Structure Plan Area.

The steps to plan, develop and validate the transport recommendations were:

- **Step 1: Review existing conditions** involved considering the current transport conditions and identifying strengths, challenges, gaps and opportunities.

- **Step 2: Review the baseline** involved understanding the future set in the SRL East EES, including the land use development uplift and the changes to the network.

- **Step 3: Setting the transport ambition and goals** were determined to inform the Monash Vision and the Structure Plan. This forms part of the 'vision' process of the 'vision and validate' approach. The development of the transport goals considered the transport challenges, gaps and opportunities in the Structure Plan Area. Future travel demand was assessed and a mode share target for Monash was set and reviewed against the existing mode shares for other Melbourne suburbs.

- **Step 4: Determine the initial movement network and opportunities** to inform the structure planning process. Given the transport ambition for the Structure Plan Area, how these could be achieved beyond what was outlined in the SRL East EES to achieve the ambitions was considered.
    - » The aspirational strategic and local movement network for all modes in the Structure Plan Area was developed by SRLA in consultation with the Department of Transport and Planning (DTP) and the City of Monash. The network was developed using DTP's Movement and Place (M&P) Framework and applied SRLA's modal principles in response to land use changes proposed in the Structure Plan.
    - » The strategic M&P assessment identified gaps between the current and aspirational performance. Initial transport infrastructure recommendations were developed to address these gaps for consideration during development of the Structure Plan and stakeholder engagement.
    - » Initial non-infrastructure recommendations were developed in response to the transport ambition, including to encourage effective parking management and support sustainable travel choices.

- **Step 5: Iterate the development of the Structure Plan with transport.** Transport networks and recommendations were iteratively developed.

- **Step 6: Validate recommendations** involved checking recommendations against the transport challenges and ambition to cater for the projected changes in land use and associated transport demand in the Structure Plan Area.

Implementation of the recommendations contributes to a shift towards sustainable travel choices beyond that forecast in the SRL East EES.

1.4.1 PEER REVIEW

This technical report has been independently peer reviewed by Tim De Young of Eukai. The peer review report is attached as Appendix B of this report, which sets out the peer reviewer's opinion on the SRL East Draft Structure Plan – Transport Technical Report – Monash.

1.5 Stakeholder consultation

SRLA has developed a comprehensive engagement plan for the overall structure planning program. The engagement plan is shown in Figure 1.3 and includes early engagement to inform the draft Structure Plans through to statutory steps such as exhibition and advisory committee processes. The engagement plan considers community and stakeholder engagement.

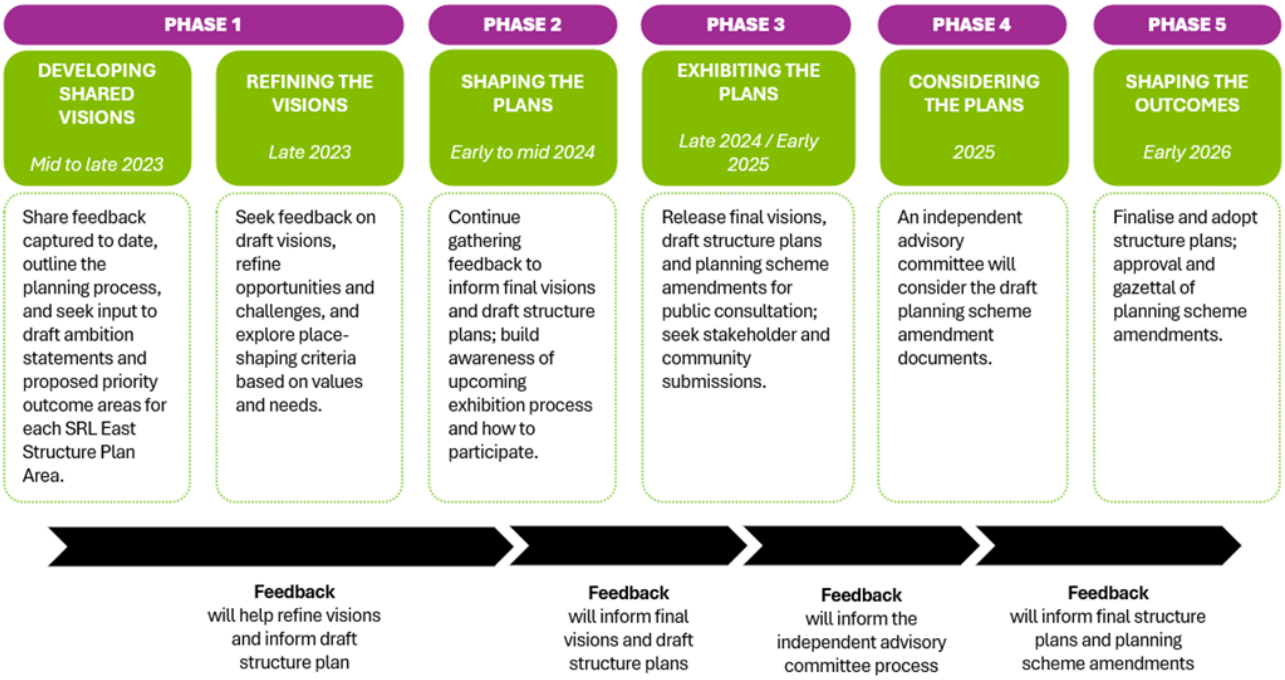


FIGURE 1.3 SRL EAST STRUCTURE PLANNING ENGAGEMENT PLAN

SRLA engaged with the Department of Transport and Planning (DTP) and the City of Monash to inform the development of the transport recommendations.

This included working collaboratively with DTP to gain endorsement of the M&P network for the Monash structure planning.

Workshops with City of Monash officers were held. A Better Connections workshop discussed emerging key directions relating to transport connections. A M&P and parking workshop discussed the M&P transport network (walking, cycling and general traffic classifications) and the parking provision approach.

Feedback from the workshops included:

- Better Connections workshop:
  - » The City of Monash advocated for improving public transport infrastructure to support growth. This report makes recommendations to support improved public transport services
  - » The City of Monash advocated for the Westall Road extension project. This report notes the Westall Road Extension project will support transport outcomes for the Monash Structure Plan Area.

- M&P & parking workshop:
  - » Aligned on the walking hierarchy and strategic cycling corridors – this includes City of Monash support for the active transport corridor on Mile Creek
  - » City of Monash officers queried whether M&P classifications need to be increased on the corridor where there is existing active transport infrastructure.

Separate to these workshops, ongoing engagement with SRLA and City of Monash officers have discussed other relevant matters related to the design of the SRL rail works. Key discussions to date have:

- SRLA Transport worked collaboratively with Council on the design of Normanby Road / Howleys Road intersection to influence Rev E of the reference design
- SRLA Transport worked collaboratively on the location of the Monash Bus interchange to influence Rev E of the reference design.

More information is provided in the SRL Structure Planning Engagement Reports on the SRL website at https://bigbuild.vic.gov.au/library/suburban-rail-loop/reports/engagement-reports/structure-planning-engagement-report.

Consultation with the City of Monash to date is summarised in Table 1.1 and Table 1.2.

TABLE 1.1 STAKEHOLDER TRANSPORT CONSULTATIONS AND CONSULTATION TOPICS

STAKEHOLDER	CONSULTATION TOPIC	TRANSPORT CONSULTATIONS
City of Monash	Structure planning program	• Workshop conducted in May 2024 • Workshop conducted in August 2024.
	SRL rail-related works	Ongoing engagement to comply with rail project environmental approvals

TABLE 1.2 CITY OF MONASH CONSULTATION DISCUSSION POINTS AND RESPONSES

CONSULTATION TOPIC	KEY ISSUES DISCUSSED	STRUCTURE PLAN RESPONSE
Structure planning program	• Precinct key directions • Transport 'Better Connection' themes • M&P classification for the Structure Plan Area (walking, cycling and general traffic classifications) • Development parking provision (suggested zones and rates).	• SRLA has developed infrastructure recommendations to reflect the workshopped 'Better Connection' themes and M&P network classifications • SRLA will continue to work with the City of Monash at project planning and delivery stages to deliver the infrastructure recommendations that reflects the M&P classifications • SRLA has considered the comments received and reviewed and refined the development parking provision, including the Parking Overlay areas and the car parking provision.
SRL rail-related works	In addition to the rail project design issues as noted above, key issues discussed included: • The design of the intersection of Normanby and Howleys Road, including an assessment of pedestrian capacity and connections to the south to and from Scenic Boulevard, and general cyclist connectivity • The locations of the SRL station entry and the location of the new bus interchange and various options that were considered in the design development.	Rail project design subject to its own planning approval process.

2 Existing conditions

This section discusses current transport conditions and challenges in Monash, including the context, active transport, public transport, general traffic and freight, road safety and parking. It outlines the key national, state and local transport policies and strategies relevant to Monash.

2.1 Context

2.1.1 KEY DESTINATIONS

The Monash Structure Plan Area forms part of the strategically significant Monash National Employment and Innovation Cluster (NEIC). It is a major attractor for employment and education trips across the wider region.

The Monash health and education precinct generates trips to the wider area through the provision of health services at the Victorian Heart Hospital, tertiary education at Monash University's Clayton campus, and research opportunities at the CSIRO. The Monash technology precinct also offers diverse employment opportunities with multiple business parks.

The Monash Structure Plan Area currently supports 20,000 jobs,[4] with strengths in technology, health, education and business services.

There are small pockets of residential land use in the north-east and south-west of Monash Structure Plan Area, mostly consisting of detached housing. Monash University's Clayton campus is the leading contributor to arts, culture and sporting facilities for the Monash Structure Plan Area, generating trips from across the wider south-east region.

The Monash Structure Plan Area currently includes limited public open spaces outside of Monash University's Clayton campus, consisting of Carlson Reserve. These are the only significant areas that provide social and recreational functions for the community other than Monash University's Clayton campus, which includes sporting facilities available for public hire and use.

These key destinations and trip generators across Monash Structure Plan Area are shown in Figure 2.1.

[4] *AJM JV, 2025, Economic Profile – Monash*

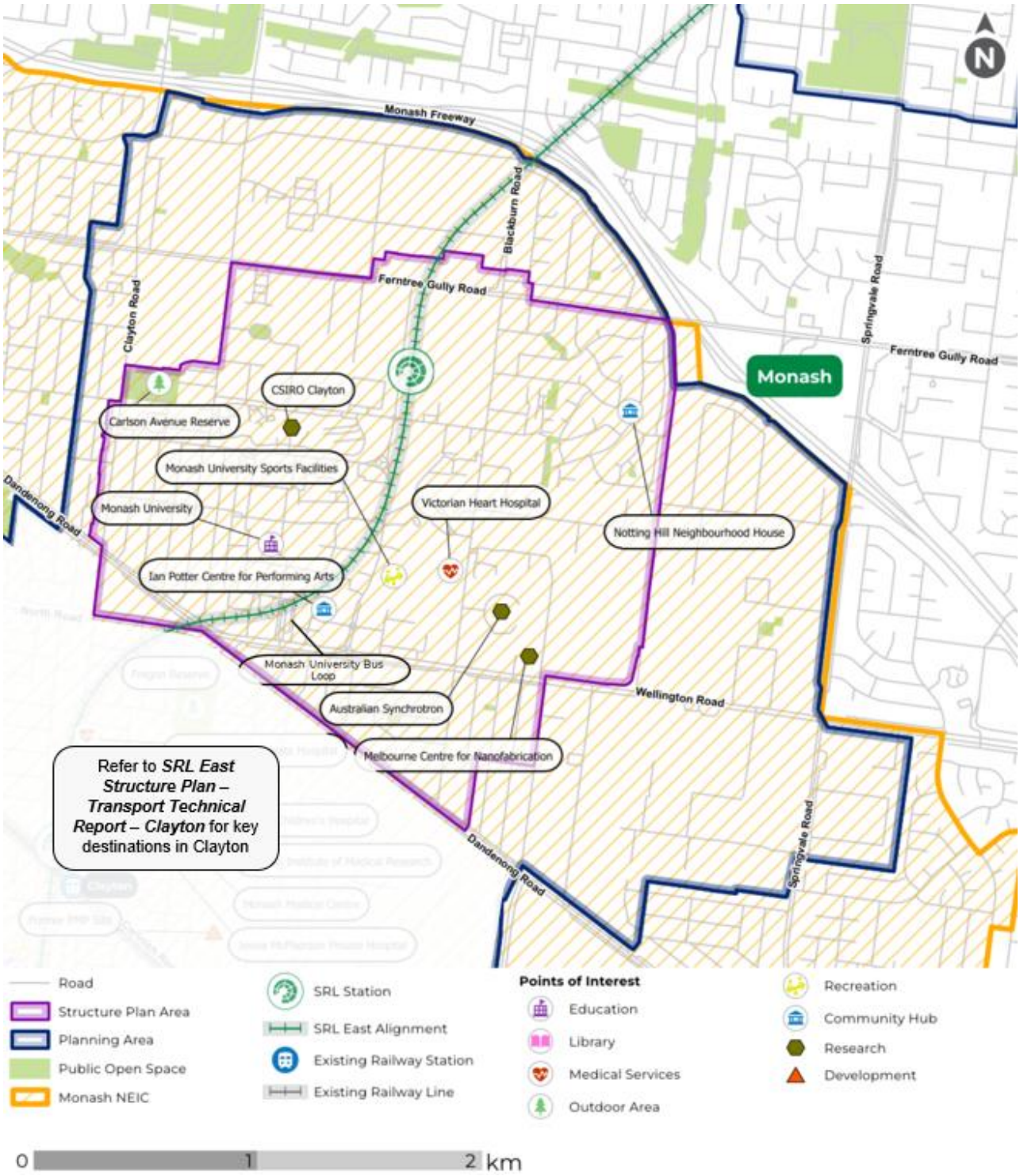


FIGURE 2.1 KEY DESTINATIONS IN MONASH (SOURCE: SRLA 2024)

2.1.2 PUBLIC TRANSPORT AND WALKING ACCESSIBILITY

Figure 2.2 shows the average Transit Score against the average Walk Score for the Monash Structure Plan Area and several areas across metropolitan Melbourne. The data included for the Monash Structure Plan Area include individual location scores (noted within the shaded area), which make up the aggregate score for the Structure Plan Area.

The Transit Score[5] is a 0 to 100 rating tool that measures how well a specific location is serviced by public transport, with 0 being poor public transport access and 100 being great access to public transport. Increased access to public transport service routes and service types result in higher scores.

The Walk Score[6] is a 0 to 100 rating that measures how walkable a specific location is and how accessible it is to nearby amenities. Increased density and diversity of nearby amenities and pedestrian friendliness result in higher scores.

The Monash Structure Plan Area has moderate Walk Scores with an average of 55 which is the lowest score compared to the other areas. The Structure Plan Area has a moderate Transit Score with an average of 55, and it varies from approximately 45 to 67 depending on the location within the Structure Plan Area.

In the future, increased land use density and diversity is expected to increase Monash's Walk Score and the SRL East project and other future public transport upgrades are expected to increase its Transit Score (i.e. shift it to the 'top right' of Figure 2.2). This 'mixed use' development is already evident in most other SRL Stations which are within activity centres which is reflected in their Walk Scores.

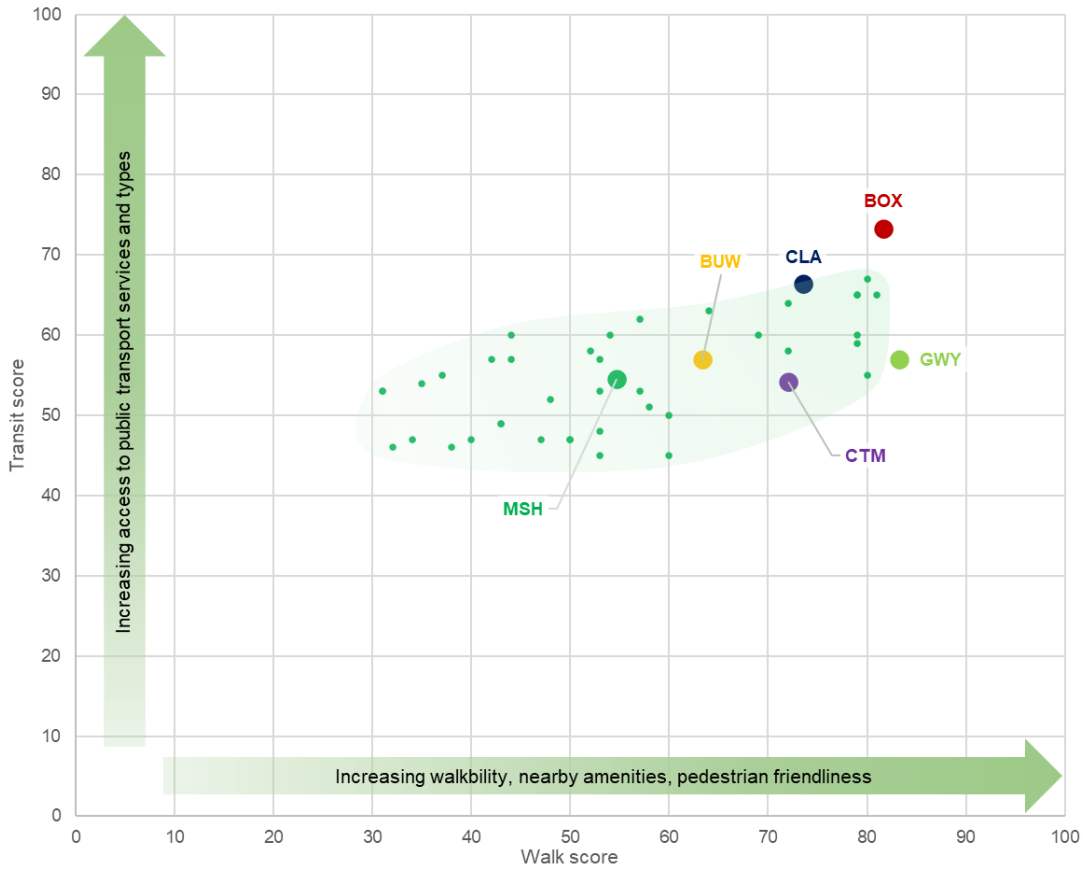


FIGURE 2.2 TRANSIT VS. WALK SCORE FOR THE MONASH STRUCTURE PLAN AREA

[5] *Walk Score, 2024, Transit Score® Methodology, <https://www.walkscore.com/transit-score-methodology.shtml>*

[6] *Walk Score, 2024, Walk Score Methodology, < https://www.walkscore.com/methodology.shtml>*

2.1.3 MODE SHARE AND TRAVEL PATTERNS

In 2018, the majority of trips in the Monash Structure Plan Area were by private vehicle (60 per cent) followed by active transport (26 per cent) and public transport (14 per cent), as shown in Figure 2.3. Trips are those travelling to, from and within Monash, trips passing through Monash are excluded.

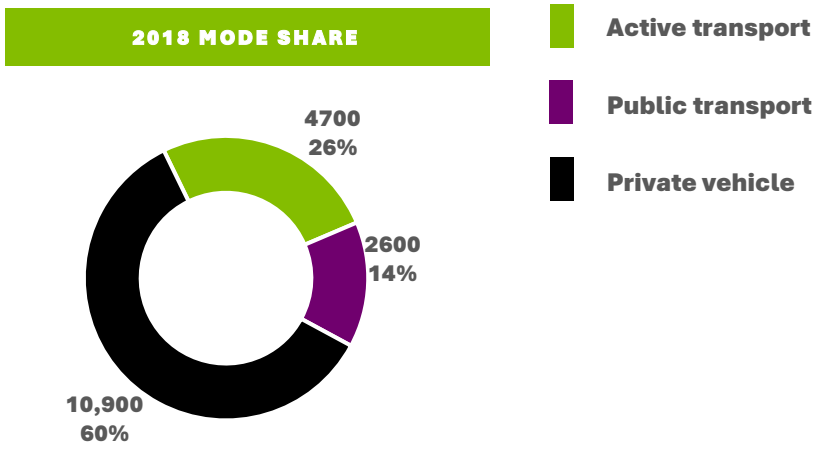


FIGURE 2.3 MONASH 2018 PRIMARY MODE SHARE – WEEKDAY TYPICAL PEAK HOUR (SOURCE: DTP VITM 2018)

As indicated by household travel information from the Victorian Integrated Survey of Travel and Activity (VISTA) data, mode share varies by trip purpose.[7] The mode share is influenced by factors including the availability of effective public transport options, access to private vehicles and travel distance.

Based the ABS Statistical Area 2 (SA2) level VISTA data, the main journey purposes for trips to, from and within Monash include: [8]

- Work (39 per cent)
- Education (17 per cent)
- Accompanying someone (11 per cent)
- Social (9 per cent)
- Shopping (7 per cent).

The remaining trips are distributed across other journey purposes such as for recreation, personal business, picking-up or delivering something and other purposes.

The most common work-related outflow destinations are shown in Figure 2.4.

The areas with the highest outflow are generally areas adjacent to Monash to the east and south-east. Work-related outflow trips were predominately by a vehicle driver (80 per cent), walking (9 per cent) or a vehicle passenger (5 per cent).

[7] *The VISTA data includes data captured all day on a weekday. The data used is from 2012 – 2020.*

[8] *Data source: VISTA (2012 – 2020) for ABS SA2 boundaries of Clayton, Glen Waverley – West, and Mount Waverley – South.*

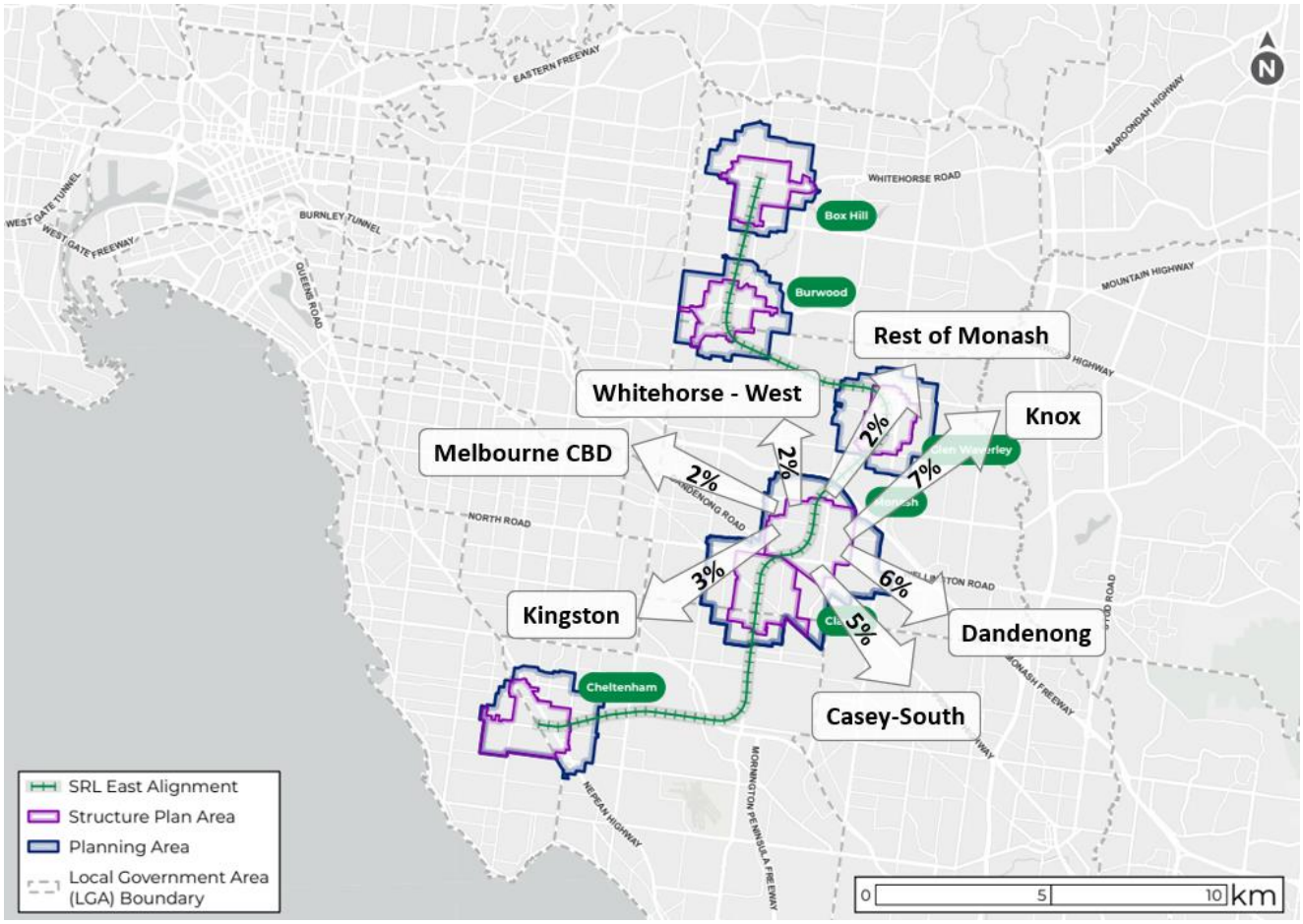


FIGURE 2.4 COMMON WORK DESTINATIONS FROM MONASH (SOURCE: SRLA 2024)[9]

For education-based trips to and within Monash, a larger range of transport mode options were used including vehicle driver (35 per cent), walking (19 per cent), vehicle passenger (17 per cent) and public bus (10 per cent) and train (14 per cent).

Shopping destinations in Monash attract trips from across the south-eastern suburbs, with the main origins being from across Monash, Knox and Dandenong SA2 locations. Shopping-related trips were predominantly by car (68 per cent vehicle driver, 16 per cent vehicle passenger of shopping trips).

2.1.4 RESIDENTIAL CAR OWNERSHIP

The main household type in Monash is 'couples with children', with the main dwelling structure a detached house. There are also more than 3000 residents (including students and staff) living at the Monash University on-campus accommodation in Monash.[10]

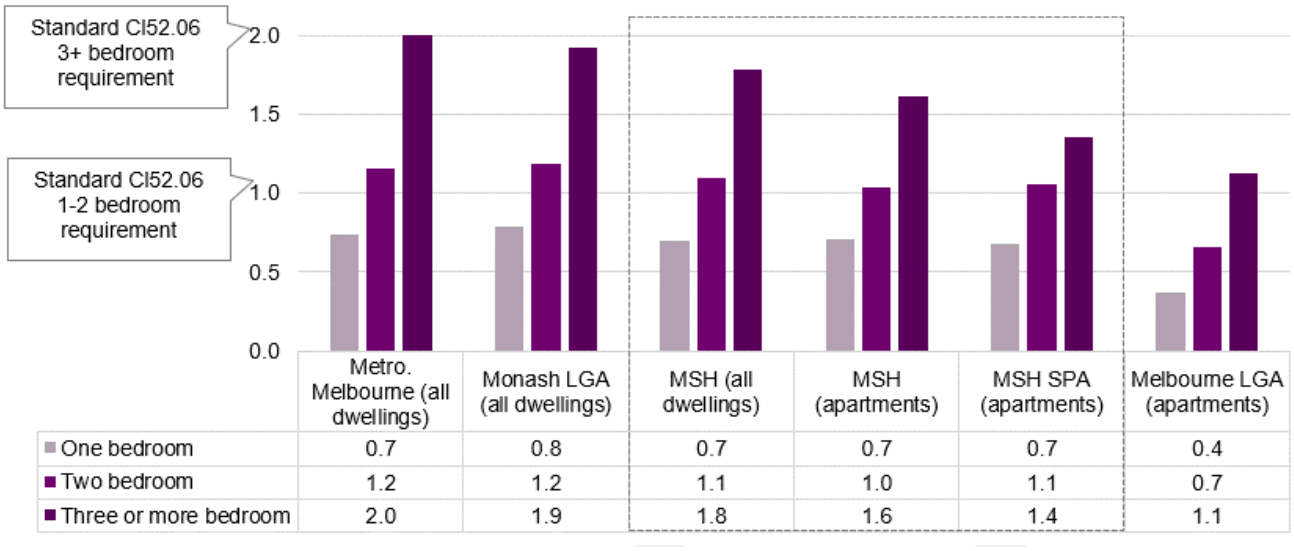
From 2016 to 2021 there was notable growth in medium and high-density dwellings (townhouses, flats and apartments). The employment population in 2021 was around 47,600. More than 30,000 students are enrolled at Monash University's Clayton campus.

Car ownership levels by household type within the area around the proposed SRL station at Monash are shown in Figure 2.5. Across Monash, this varies by dwelling type and size, with slightly lower rates for those living in flats or apartments. Car ownership is notably higher than areas such as the Melbourne LGA, which has significantly higher levels of public transport services and mode share, near significant employment, retail and

[9] *Base map source: SRLA, 2024. Data source: VISTA (2012 – 2020) for ABS SA2 boundaries of Clayton, Glen Waverley – West, and Mount Waverley – South. Common work destinations from Monash in the figure are SA2 locations.*

[10] *Monash University, 2024, About Us, <https://www.monash.edu/accommodation/contact/about-us>*

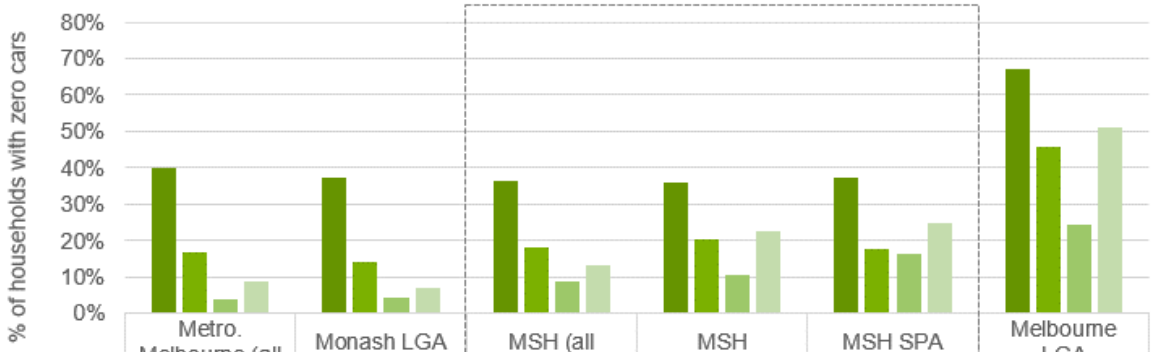
other land uses. Monash has slightly lower car ownership levels for all dwellings compared to all dwellings in Metropolitan Melbourne and the Monash LGA.



	Metro. Melbourne (all dwellings)	Monash LGA (all dwellings)	MSH (all dwellings)	MSH (apartments)	MSH SPA (apartments)	Melbourne LGA (apartments)
One bedroom	0.7	0.8	0.7	0.7	0.7	0.4
Two bedroom	1.2	1.2	1.1	1.0	1.1	0.7
Three or more bedroom	2.0	1.9	1.8	1.6	1.4	1.1

FIGURE 2.5 MONASH AVERAGE CAR OWNERSHIP COMPARISON BY HOUSEHOLD TYPE (SOURCE: ABS 2021)

The zero car ownership levels by household type in Monash are shown in Figure 2.6. This highlights a relatively higher dependence on car ownership and implied use, even compared to the wider Monash LGA.



	Metro. Melbourne (all dwellings)	Monash LGA (all dwellings)	MSH (all dwellings)	MSH (apartments)	MSH SPA (apartments	Melbourne LGA (apartments)
One bedroom	40%	37%	37%	36%	37%	67%
Two bedroom	17%	14%	18%	20%	18%	46%
Three or more bedroom	4%	4%	9%	10%	16%	25%
All dwellings	9%	7%	13%	22%	25%	51%

FIGURE 2.6 MONASH – ZERO CAR OWNERSHIP COMPARISON BY HOUSEHOLD TYPE (SOURCE: ABS 2021)

2.1.5 RESIDENTIAL BICYCLE OWNERSHIP

VISTA includes bicycle ownership data for different household types and sizes.[11] While the sample size is small, the VISTA data provides an indication of bicycle ownership in Monash[12] which is summarised in Figure 2.7 and Figure 2.8.

[11] *The VISTA data used is from 2012 – 2020 and 2022. Note relatively small sample data available for some SRL East Planning Areas and metrics.*

[12] *Approximately 1.6 kilometre-radius around the SRL station at Monash*

The data indicates that Monash[12] currently has relatively low bicycle ownership, particularly for smaller households. However, as household size grows, bicycle ownership increases with two or more people households on average exceeding the bicycle parking requirements suggested by the current Clause 52.34 Planning Scheme rates.

Monash's relatively low VISTA bicycle ownership levels align with the relatively low level of cycling movements recorded in Monash. Aside from Gardiner Road and Bayview Avenue, cycling activity surveyed at key locations surrounding the proposed SRL station at Monash recorded up to 9 cyclists during the weekday peak period and 3 cyclists during the weekend peak period.[13]

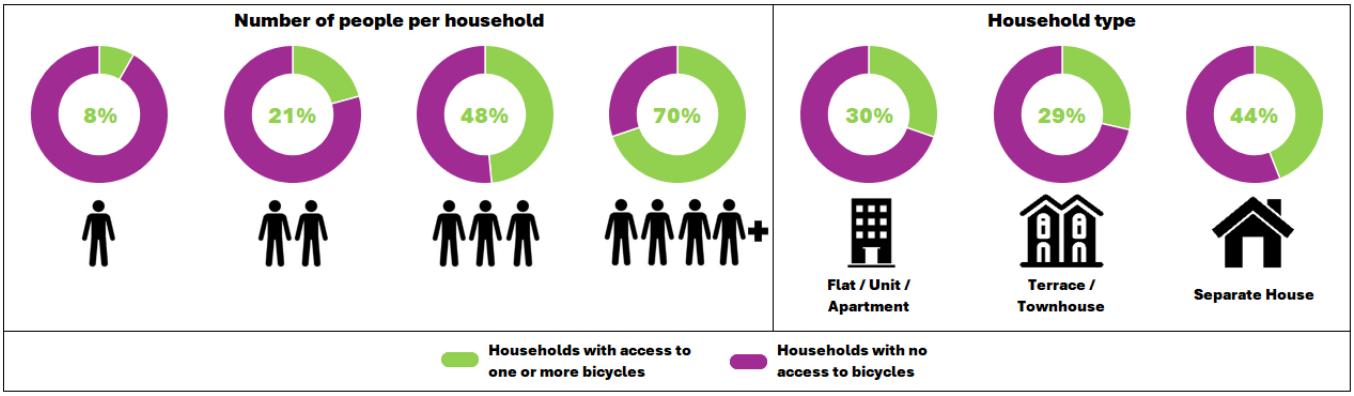


FIGURE 2.7 CURRENT HOUSEHOLDS IN MONASH[12] WITH ACCESS TO AT LEAST ONE BICYCLE (SOURCE: VISTA 2012-2020 AND 2022)

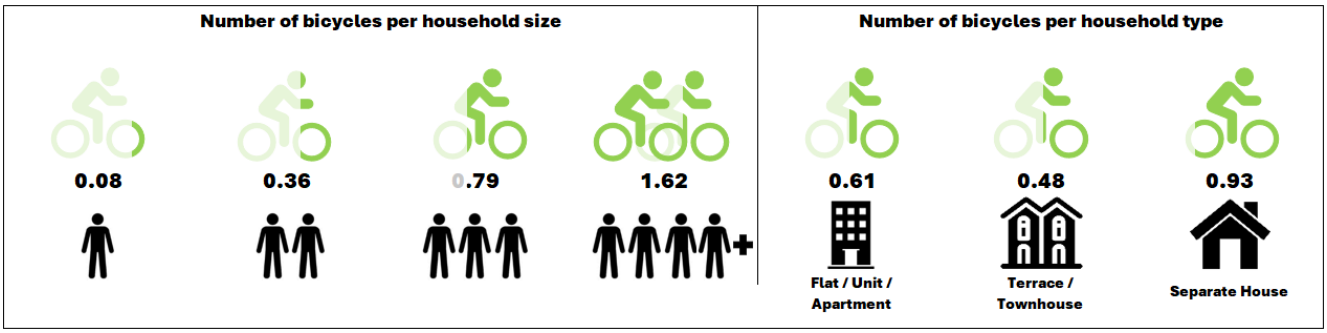


FIGURE 2.8 CURRENT BICYCLE OWNERSHIP PER HOUSEHOLD SIZE AND TYPE IN MONASH[12] (SOURCE: VISTA 2012-2020 AND 2022)

2.2 Transport network

2.2.1 WALKING

The pedestrian network of Monash is shown in Figure 2.9, where the walkable network shown includes footpaths, shared use paths and trails. Many trips in different parts of Monash are made by walking. Most streets in Monash have footpaths on both sides of the road and provide pedestrian access to dwellings, key destinations such as Monash University's Clayton campus, business / industrial parks, and key sites such as the Clayton Activity Centre and Monash Hospital. The key walking corridors to key destinations in Monash include Blackburn Road, Normanby Road, Ferntree Gully Road, Scenic Boulevard, Howleys Road and Gardiners Road.

[13] *Source: SRLA, 2023. Recorded weekday peak period between 9am – 10am and weekend peak period between 11am – 12pm.*

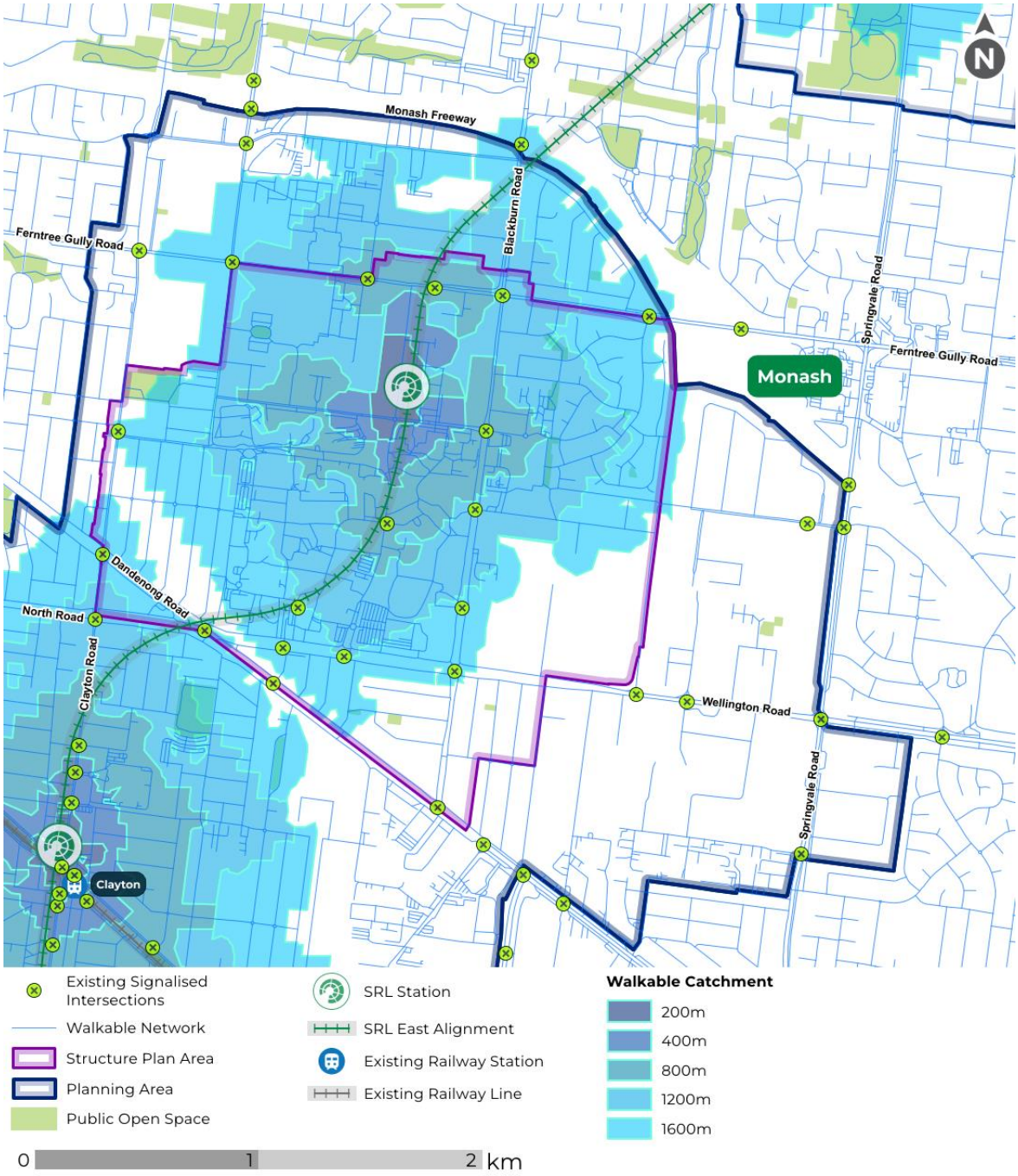


FIGURE 2.9 WALKING CATCHMENT OF THE PROPOSED SRL STATION AT MONASH (SOURCE: SRLA 2024)

The 800-metre walkable catchment from the proposed SRL station at Monash shown in Figure 2.9 is mostly south of Normanby Road, providing access to Monash University's Clayton campus and CSIRO. There is low permeability to the north of Normanby Road due to the limited street network available in this area. The 1600-metre walkable (20-minute walk) catchment generally covers the Structure Plan Area except to the south-east where the Australian Synchrotron and an industrial area is located as well as the residential area south of Blackburn Road and Wellington Road, both likely due to its relatively large block size.

Amenity for pedestrians is of a mixed quality throughout Monash, reflecting the varying land uses in Monash.

Monash University's Clayton campus has an excellent walking network and provides examples of best practice pedestrian environments for an urban context in Melbourne, including 6-metre-wide pedestrian boulevards.

Over the last decade, Monash University has converted numerous roadways and parking areas into pedestrian walks, as shown in Figure 2.10, through a significant coordinated capital works program.

FIGURE 2.10 MONASH UNIVERSITY STREET CONVERSION BEFORE (LEFT) AND AFTER (RIGHT) (SOURCE: SRLA 2022)

Some residential areas in Monash contain streets with a high provision of canopy coverage and vegetation, providing a pleasant and attractive daytime walking environment. However, the residential areas east of Blackburn Road and west of Boundary Road, historically designed for low density suburbs with areas of narrow footpaths and verges. This reduces pedestrian amenity and presents a challenge for landscaping improvements.

Industrial areas particularly north of Monash University's Clayton campus typically have limited pedestrian infrastructure and canopy coverage, offering poor pedestrian experience. For example, Ferntree Place provides access to several industrial buildings / warehouses and while there are many zebra crossings available, the footpaths connected to the crossings are often discontinuous and generally provided in the form of line marking on the road. This means there is no physical separation between pedestrians and vehicles, decreasing safety for pedestrians.

There are currently relatively low levels of pedestrian activity outside of Monash University's Clayton campus, reflective of land use and pedestrian amenity.

Access points to Monash University's Clayton campus and within the industrial area typically see increased pedestrian movements during the afternoon and evening weekday peaks. Pedestrian movement volumes along key roads surveyed at midblock locations in 2023 are presented in Table 2.1.

TABLE 2.1 EXISTING PEDESTRIAN MOVEMENT VOLUMES ALONG KEY ROADS IN THE MONASH STRUCTURE PLAN AREA (SOURCE: SRLA 2023)

STREET	WEEKDAY PEAK 13:00 – 14:00	WEEKEND PEAK 17:00 – 18:00
Blackburn Road (between Ferntree Gully Road and Lionel Road)	110	15
Normanby Road (between Blackburn Road and Howleys Road)	70	50
Research Way (between Gardiner Road and Boundary Road)	45	20
Wellington Road (to and from Monash University's Clayton campus Bus Interchange)	60	45

WALKING CHALLENGES

The walking challenges in the Structure Plan Area are summarised and shown in Figure 2.11.

Location-specific walking challenges:

1. Large industrial and business areas surrounding the proposed SRL station at Monash combined with a local road network that includes multiple industrial cul-de-sacs are barriers to movement. These barriers limit permeability and wayfinding, making it difficult to walk between key destinations within Monash.

2. The lack of safe pedestrian crossing facilities on roads such as Normanby Road, Ferntree Gully Road and Blackburn Road reduces road safety and encourages dangerous pedestrian behaviour. For example, the distance between signalised pedestrian crossings can span more than 700 metres along many busy arterial roads. The infrequent provision of pedestrian crossings can increase travel time for pedestrians travelling in Monash as well as reduce safety.

3. The efficiency of pedestrian movements is hindered by high-volume complex intersections and traffic signal cycle times. For example, intersections at Princes Highway / Dandenong Road and Wellington Road have long crossings distances (90 metres along one section), where people who cannot walk quickly need two traffic signal phases (typically 3 to 4 minutes) to cross. This design is unattractive for pedestrians and the long wait times encourage unsafe pedestrian behaviour.

Structure Plan Area walking challenges:

- Monash is largely dominated by vehicle movements which can make walking feel unpleasant and unsafe. The network of busy arterial roads and wide local streets prioritises access for vehicles at the expense of other transport modes. Spatial separation between the road carriageway and footpaths in some high-speed environments is extremely low, such as Ferntree Gully Road.

- Pedestrian facilities outside of Monash University's Clayton campus, particularly in the industrial areas and residential areas east of Blackburn Road and west of Boundary Road generally are low in quality for pedestrians.

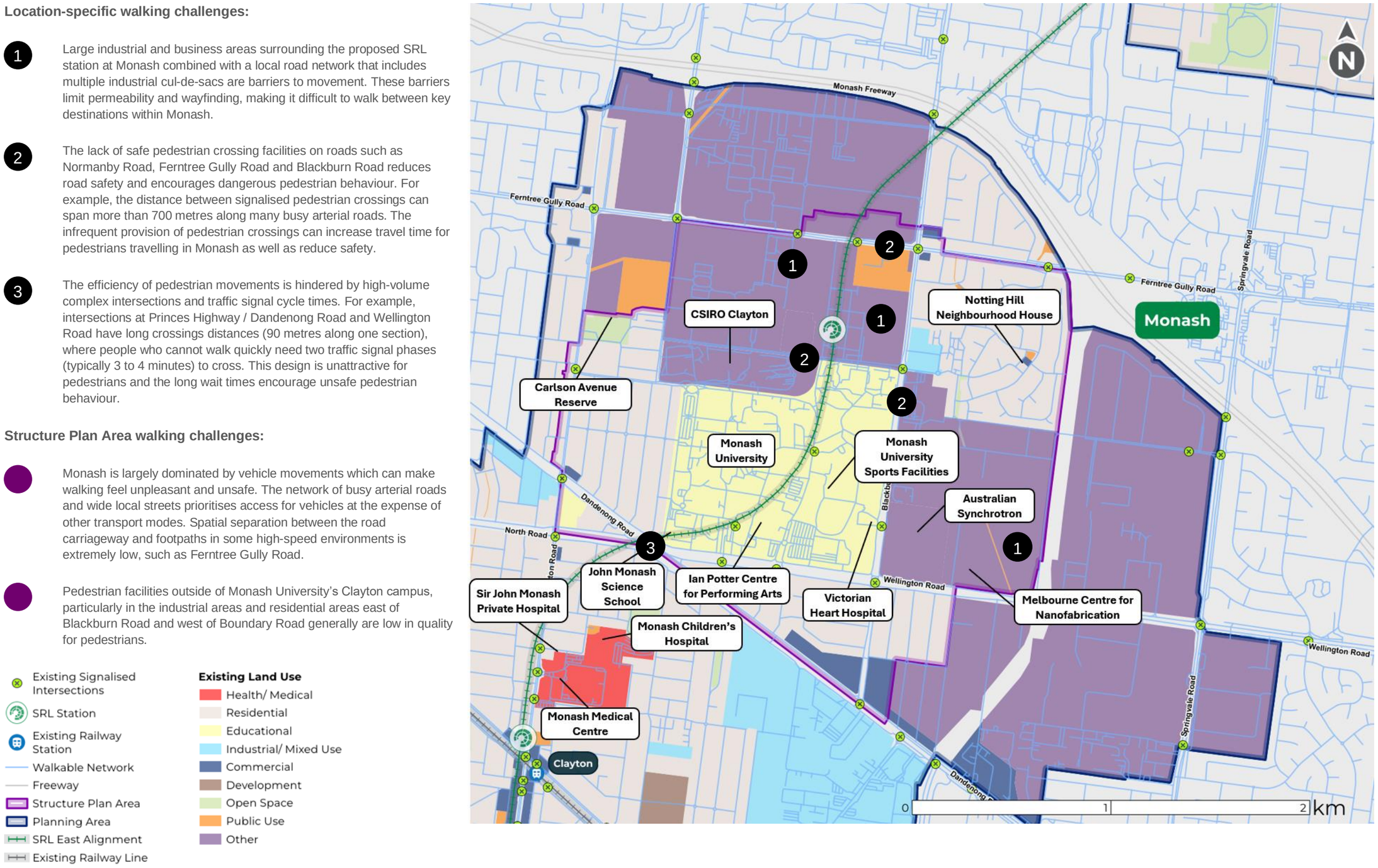


FIGURE 2.11 WALKING CHALLENGES IN THE MONASH STRUCTURE PLAN AREA

2.2.2 CYCLING, INCLUDING MICROMOBILITY

Cycling and micromobility in this section refers to bicycles, scooters and skateboards. E-bikes and e-scooters (share schemes and private ownership) are also captured in this mode as they are currently limited to a maximum speed of 25 km/h and are legally allowed on public low-speed roads, shared use paths, bike paths and on-road lanes in Victoria.

Figure 2.12 shows the existing cycling infrastructure and Strategic Cycling Corridors (SCCs) in Monash. SCCs form part of the DTP aspirational cycling network that aims to support commuter trips and link to destinations that have metropolitan and regional significance, such as employment and activity centres. These corridors can be on and off road, on municipal and state roads and should be designed to provide a safe, lower-stress cycling for transport experience. However, not all SCCs currently have adequate cycling infrastructure to support a safe and low-stress cycling environment.

FIGURE 2.12 MONASH CYCLING NETWORK (SOURCE: SRLA 2024)

Despite the SCC network shown in Figure 2.12, existing cycle connections in Monash are limited.

A shared use path is provided to Monash University's Clayton campus along Gardiner Road directly connecting to the Scotchmans Creek Cycling Trail to the north of Monash and is part of the SCC.

Another notable shared use path in Monash is provided north of Duerdin Street that runs east-west between Normanby Road and Dunlop Road, providing access to adjacent industrial / commercial areas and residential properties. The remaining shared use paths are generally in Monash University's Clayton campus where there are wide cycling paths available. There are also some shared use paths around recreation areas such as Samada Reserve Playground.

Other key cycling facilities include a connection to the Clayton Activity Centre along the SCC via Cobain Street (sharrows) and onto Browns Road (shared use path).

The remainder of the road network in Monash has no or limited cycling infrastructure.

Cycling activity in Monash is generally low except for the Gardiner Road and Bayview Avenue shared use path (towards Monash University's Clayton campus) where up to 40 cyclists per hour were recorded for each shared use path during the morning weekday peak.[14]

End-of-trip facilities in Monash are mostly provided in new buildings that are not open to the public. High-quality end-of-trip facilities (including storage, mechanic, lockers and showers) are provided at Monash University's Clayton campus at the Southern Bike Arrival Station, James Gormley Bike Arrival Station and 211 Wellington Road Bike Cage.

CYCLING AND MICROMOBILITY CHALLENGES

The cycling and micromobility challenges in the Structure Plan Area are summarised and shown in Figure 2.13.

[14] *Source: SRLA 2023. Weekday peak is between 9am – 10am.*

Location-specific cycling challenges:

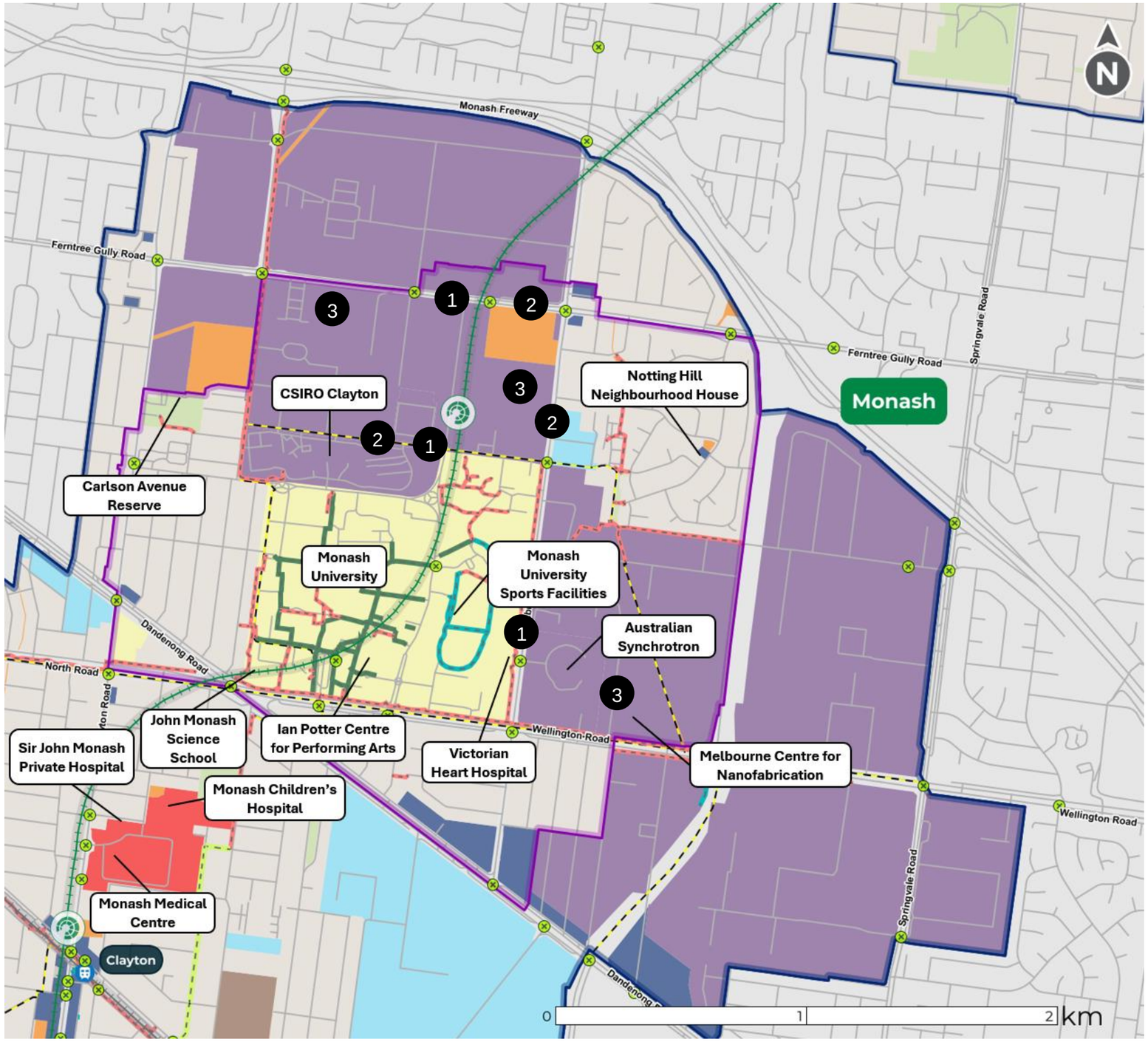
1. The lack of safe crossing facilities across highly trafficked roads such as Normanby Road, Blackburn Road, and Ferntree Gully Road reduces efficient cycle movements in Monash, causing delays to cyclists that are forced to detour to access safe crossing opportunities. For example, the available crossings along Ferntree Gully Road can be up to 600 metres apart. Also, local connector streets such as Normanby Road, Ricketts Road and Gardiner Road currently lack safe crossing facilities along their entire length.

2. While there are some cycling facilities in Monash, access to dedicated cycling links require cyclists to travel along high-volume roads designated for the movement of cars and freight vehicles such as Normanby Road, Blackburn Road, and Ferntree Gully Road.

3. Large employment and industrial areas around the proposed SRL station at Monash have high private car and truck use which limits the ability to cycle safely.

Structure Plan Area cycling challenges:

- There is limited and fragmented safe cycle infrastructure reducing the attractiveness of bicycles for transport. Also, most dedicated cycling links abruptly end which results in lack of safe and continuous cycling connections to key destinations in Monash as well as connections to neighbouring suburbs and residential neighbourhoods.
- Wayfinding for cyclists and micromobility users is limited to basic measures and lacks intuitive customer-focused messaging such as inconsistent cycling line marking and directions to parking.
- Publicly available end-of-trip facilities are limited and cycle parking facilities outside of Monash University's Clayton campus generally provide low amenity outcomes.



Existing Signalised Intersections
SRL Station
Existing Railway Station
Road
Structure Plan Area
Planning Area
SRL East Alignment
Existing Railway Line

Cycling Infrastructure
Pedestrian Street
Undefined Off-road Path
Shared Use Path
Sharrows (Cycle Arrows)

Existing Land Use
Health/ Medical
Residential
Educational
Industrial/ Mixed Use
Commercial
Development
Open Space
Public Use
Other

FIGURE 2.13 CYCLING CHALLENGES IN THE MONASH STRUCTURE PLAN AREA

2.2.3 PUBLIC TRANSPORT

With no train station or tram network in Monash, the current public transport network for Monash is solely bus based, with a bus interchange located at the southern edge of the Monash University's Clayton campus.

Figure 2.14 shows the extent of the current Principal Public Transport Network (PPTN) coverage in Monash. This network identifies high-quality public transport service routes and the land within a 400-metre radius of the route or railway station. The current PPTN coverage in the Structure Plan Area covers around 59 per cent, mainly limited to and adjacent to the Monash University bus interchange, Blackburn Road and Wellington Road. The PPTN coverage as currently outlined in the planning scheme was updated in 2018. The PPTN coverage as currently outlined in the planning scheme was updated in 2018 and therefore does not include SRL East.

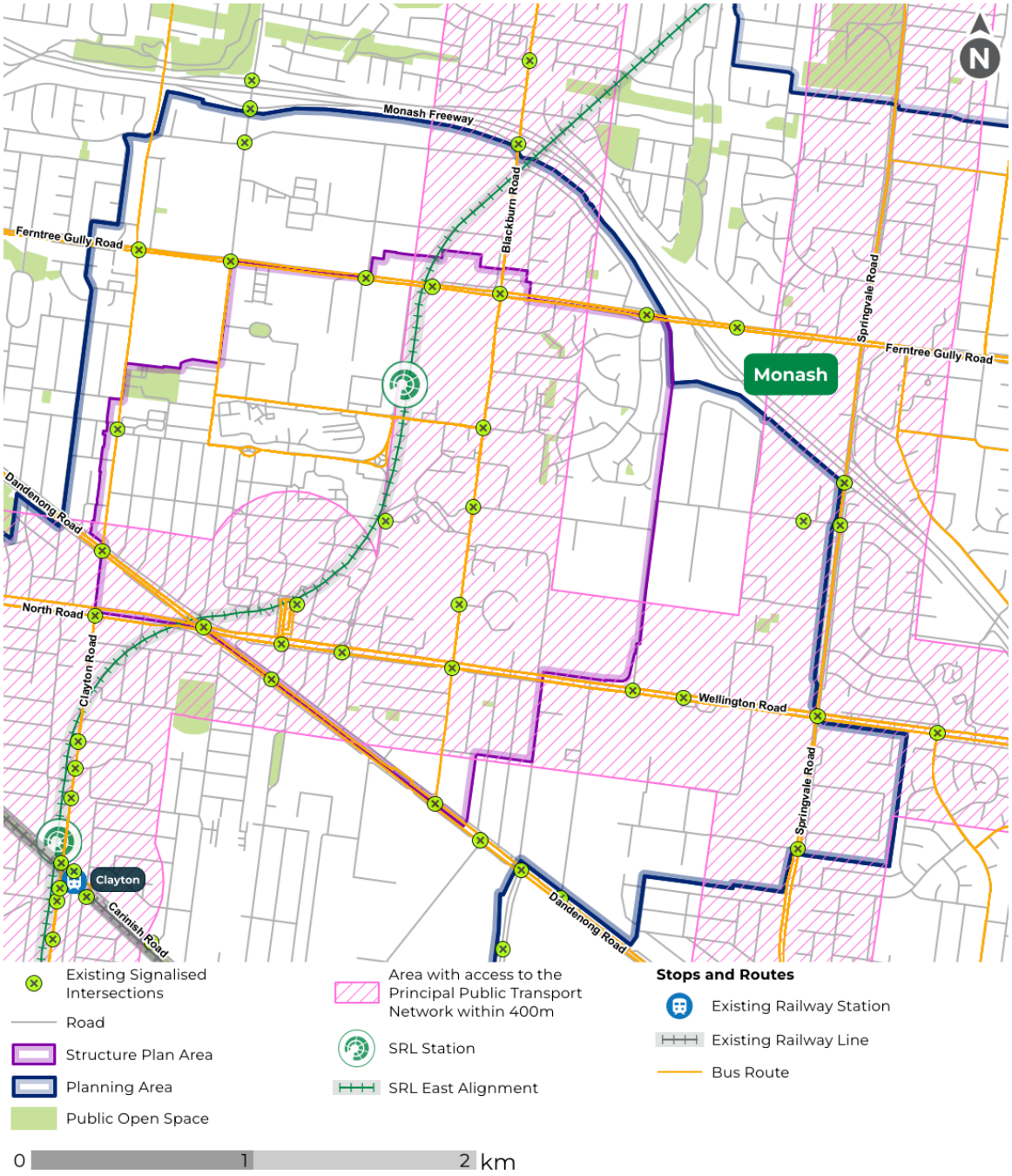


FIGURE 2.14 PUBLIC TRANSPORT NETWORK AND PRINCIPAL PUBLIC TRANSPORT NETWORK COVERAGE (SOURCE: SRLA 2024)

RAIL NETWORK

While there are no train stations located in Monash, bus services provide connections to stations outside of the Structure Plan Area. The two rail services that service the stations outside of Monash include the Cranbourne / Pakenham Line and the Glen Waverley Line.

On the Cranbourne / Pakenham Line, multiple stations are accessible via bus from Monash, with the closest stations from Monash being the existing Clayton Station and Huntingdale Station, located to the south and west of Monash, respectively. Both stations have strong bus connections to Monash with the existing Huntingdale Station including a direct 5-minute shuttle service to Monash University's Clayton campus.

The Glen Waverley Line runs to the north of Monash with the three closest existing stations being Mount Waverley Station, Syndal Station and Glen Waverley Station. Syndal Station and Glen Waverley Station include bus connections that run north-south through Monash to the Monash University bus interchange.

The distance between Monash and the existing stations is summarised in Table 2.2.

TABLE 2.2 DISTANCE BETWEEN MONASH AND THE EXISTING STATIONS

LINE	STATION	DISTANCE FROM THE PROPOSED SRL STATION AT MONASH	SHORTEST DISTANCE TO THE STRUCTURE PLAN AREA	BUS CONNECTIONS
Cranbourne & Pakenham	Clayton	2.6 km	900 m	631, 733 and 703
	Huntingdale	3.2 km	1.6 km	601 Shuttle and 630 and 900
Glen Waverley	Mount Waverley	3.4 km	1.8 km	733
	Syndal	3.3 km	1.7 km	737 and 703
	Glen Waverley	3.5 km	1.9 km	737 and 742

BUS NETWORK

A network of 13 bus routes currently operates through the Monash Structure Plan Area, as shown in Figure 2.15, providing access between residential areas, employment precincts, Monash University's Clayton campus and activity centres.

The bus routes primarily follow a grid of arterials designated as priority bus corridors particularly along Blackburn Road, Wellington Road and Ferntree Gully Road. These priority bus corridors provide access to Monash University's Clayton campus, primarily through the bus interchange on the southern edge of the campus which services 10 routes. This high-quality interchange shown in Figure 2.16 enables efficient access to the campus and ease of transfers for multi-route bus users.

The bus interchange as well as Bus route 800 along Dandenong Road / Princes Highway provides better bus accessibility in the south of Monash than the north with bus routes 693, 742 and 693 being the only routes that service east-west movement north of Monash. Bus route 742 provides access to the northern edge of Monash University's Clayton campus along Normanby Road and traverses closely to the location of the proposed SRL station at Monash, while bus route 693 runs east-west along Ferntree Gully Road between Belgrave and Oakleigh.

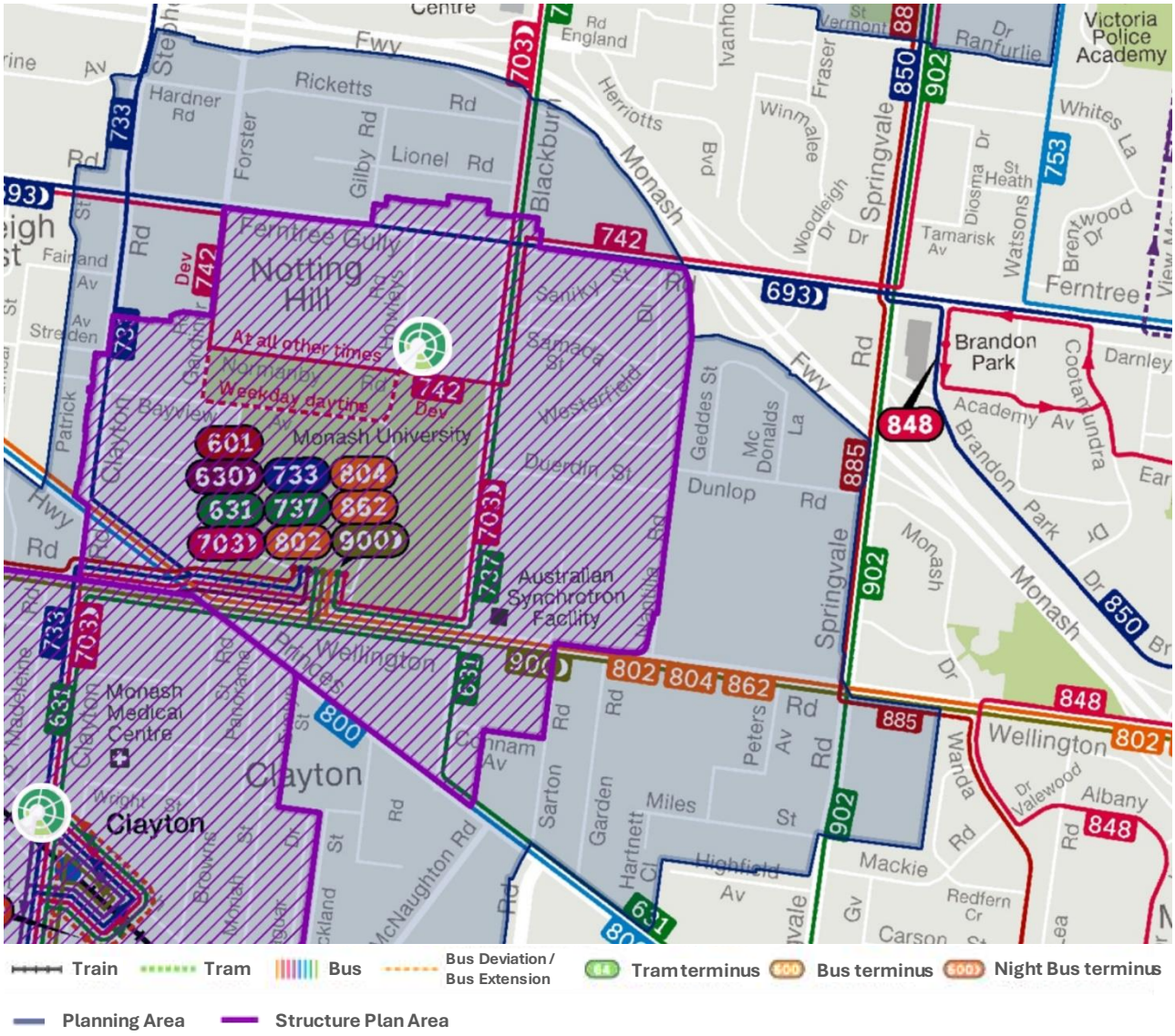


FIGURE 2.15 BUS NETWORK IN THE MONASH (BASE MAP: PTV 2023)

FIGURE 2.16 MONASH UNIVSERSITY BUS INTERCHANGE (SOURCE: MONASH UNIVERSITY)

The bus routes provide connections to broader suburbs across Melbourne's east and south-east including Box Hill, Glen Waverley, Ringwood, Rowville, Dandenong, Cheltenham, Brighton and Chadstone. As indicated previously, some bus routes provide direct connections to nearby stations including Glen Waverley (742,737), Syndal (703, 737), Mount Waverley (733), Huntingdale (601, 900) and Clayton (631, 703 and 733).

Bus routes 630, 693 and 703 are part of the night bus network with day and night services across the week as well as overnight services on Fridays and Saturdays. Bus route 900 (SmartBus) is also part of the night bus network but also provides day services through to around midnight each day.

The frequency of bus services in Monash are considered high compared to other areas in greater Melbourne, largely due to direct connections to Monash University's Clayton campus. Most bus routes serving Monash operate with headways of 20 minutes or less during peak periods. Four routes operate with service frequencies of between 10 to 19 minutes during peak periods including the 703 SmartBus and 900 SmartBus. Additionally, the 601 shuttle bus between the existing Huntingdale Station and Monash University's Clayton campus operates at a very high frequency with services approximately every 5 minutes during peak periods.

There is limited bus priority infrastructure in Monash with bus lanes only provided along North Road as well as queue jump lanes provided along Wellington Road.

Bus stops are of varying quality and accessibility. Many are easily accessible by footpath, and others lack sheltered waiting areas, seating, or tactile surface indicators which limits access for people with a physical disability.

The busiest bus stops in the Monash Structure Plan Area is shown in Table 2.3.

TABLE 2.3 BUS STOP PATRONAGE STATISTICS IN THE MONASH STRUCTURE PLAN AREA (SOURCE: TABLEAU PUBLIC - 2018-19 BUS STOP PATRONAGE MELBOURNE)

BUS STOP LOCATION	AVERAGE WEEKDAY BOARDINGS
Monash University Bus Loop	5950
Princes Highway / North Road	650
Monash University / Wellington Road (east of Scenic Boulevard)	420
Normanby Road / Blackburn Road	240
Monash University / Research Way	70

PUBLIC TRANSPORT CHALLENGES

The public transport challenges in the Structure Plan Area are summarised and shown in Figure 2.17.

Location-specific public transport challenges:

1. The bus network coverage north of Monash University is poor, which includes large residential and employment areas north of Ferntree Gully Road and east of Blackburn Road, as well as the area of the proposed SRL station at Monash.

2. Bus stops are generally located along arterial roads where there are limited crossing opportunities, so the bus stop for the opposite direction may be further away if there is no crossing location nearby. This can increase pedestrian walk times between bus stops and key destinations in Monash. For example, there are generally more southbound bus stops than northbound bus stops along Blackburn Road, meaning that residents returning home from the north may be required to walk further to access a safe crossing point to reach their home.

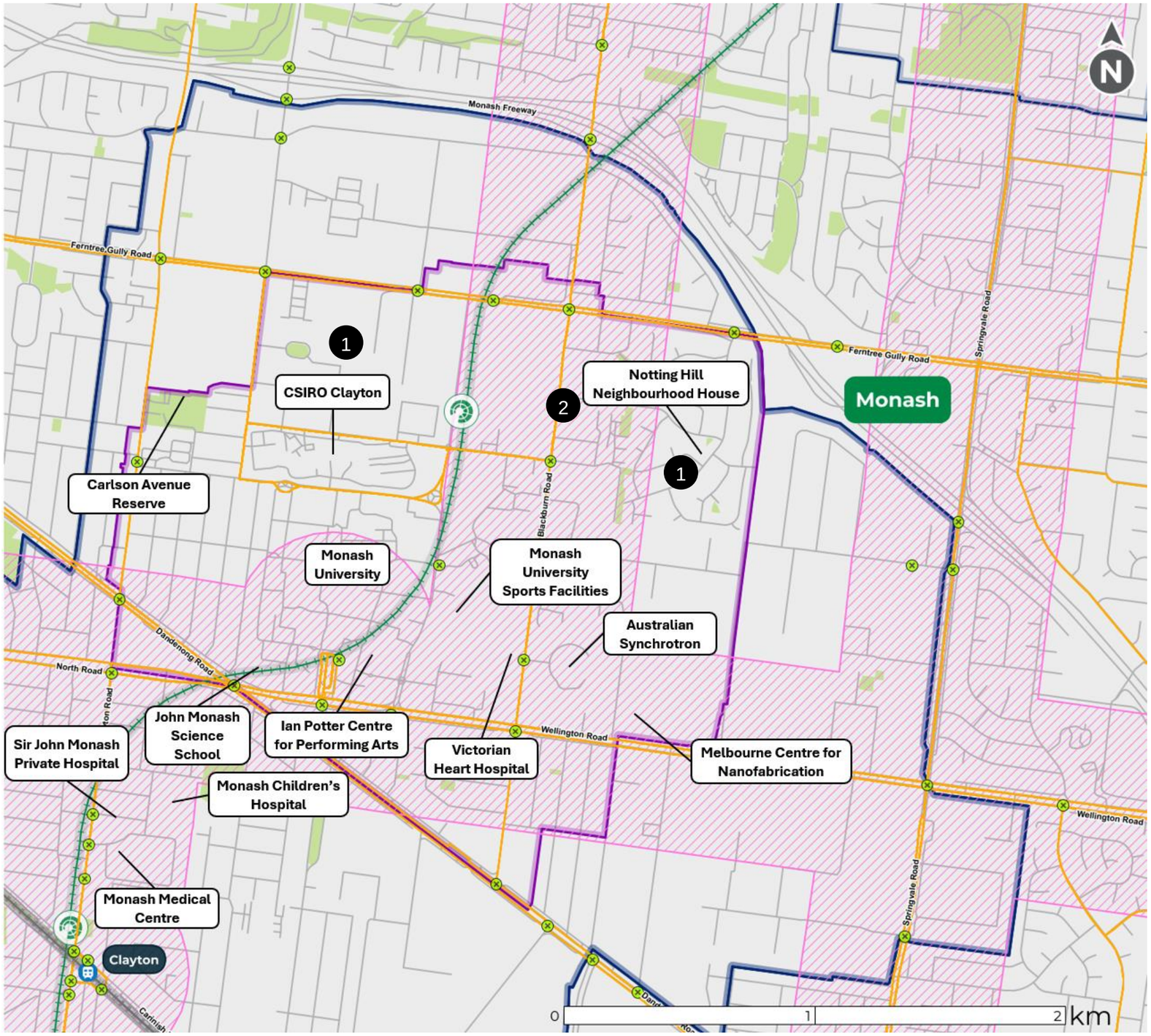
Structure Plan Area public transport challenges:

- The existing bus network is required to support public transport connectivity across Monash (including Monash University) from nearby rail stations and many eastern and south-eastern suburbs. The current bus network and priority levels are not expected to adequately support the increased demand from significant employment growth to the north of Monash University where existing services are more limited.

- There is limited infrastructure for bus priority along roads where bus and traffic volumes are high, resulting in higher bus journey times.

- The quality of bus stops and waiting area infrastructure is inconsistent across Monash. An example of a poor bus stop facility is located on Normanby Road, directly west of the Blackburn Road / Normanby Road intersection where there is only bus stop signage available for both the east and westbound bus stops.

- There are no rail services within a short walk of Monash, with the nearest railway station (the existing Clayton Station) located around 2.6 kilometres away from the proposed SRL station at Monash (and around 900 metres from the southern boundary of the Monash Structure Plan Area).



Existing Signalised Intersections
SRL Station
Road
Structure Plan Area
Planning Area
Public Open Space
SRL East Alignment
Area with access to the Principal Public Transport Network within 400m

Stops and Routes
Existing Railway Station
Existing Railway Line
Bus Route

FIGURE 2.17 PUBLIC TRANSPORT CHALLENGES IN THE MONASH STRUCTURE PLAN AREA

2.2.4 PRIVATE VEHICLES

ROAD NETWORK CHARACTERISTICS

The road network, hierarchy and existing signalised intersections in Monash is shown in Figure 2.18 and features a freeway, a grid of arterial roads and local streets.

The major arterials that run through Monash include Ferntree Gully Road, Blackburn Road, Wellington Road and Princes Highway / Dandenong Road as well as the Monash Freeway. Monash Freeway and Blackburn Road form part of the Principal Freight Network (PFN), supporting significant freight movement through Monash.

Monash Freeway along with Princes Highway / Dandenong Road also provide a high movement function between Melbourne CBD and the outer southeast suburbs, catering for significant traffic volumes throughout the day.

Ferntree Gully Road and Wellington Road serve as main east west routes, predominately providing access to the Monash University Clayton campus and the surrounding freeway network.

Clayton Road and Blackburn Road are the main north south routes, both connecting to Princes Highway / Dandenong Road, Monash Freeway and linking with activity centres such as Box Hill and Glen Waverley to the north of Monash. Forster Road also provides a direct connection to Monash from the north also links with the Monash Freeway.

The network of connectors and local roads are minimal given the relatively small residential areas. Business parks, educational facilities, and industrial areas have internal roads, providing direct access to their buildings.

The car-centric road design in Monash prioritises the efficient flow of vehicles. Monash connects the eastern and southern regions of Melbourne, resulting in significant amounts of through traffic using the arterial road network. Many arterials including Ferntree Gully Road, Blackburn Road, Wellington Road, and Princes Highway / Dandenong Road are three to four lanes wide in each direction. They offer speeds of 70 km/h for vehicles along Ferntree Gully Road and Blackburn Road and 80 km/h for vehicles along Wellington Road and Princes Highway / Dandenong Road.

Mandatory clearways maximise the ability of arterial roads to facilitate efficient journeys through Monash. In addition, given there is currently no station in Monash, there are few existing parking restrictions on local streets which are predominately used by existing businesses and residents.

The Westall Road Extension is a potential future north south freight route proposed to connect directly to the Monash Freeway and to divert longer distance through traffic (including freight) away from the Clayton and the Monash Structure Plan Areas, improving local access and amenity. This extension may result in the removal of the PFN identification on Blackburn Road.

FIGURE 2.18 ROAD NETWORK (SOURCE: SRLA 2024)

ROAD NETWORK CONDITIONS

The traffic volumes for key routes in Monash are outlined in Table 2.4.

Freight traffic typically accounts for 5 to 10 per cent of the total traffic on the main arterial roads per direction, with Blackburn Road and Monash Freeway having the highest percentage of freight traffic compared to the other arterial roads in Monash.

The presence of business and industrial land use in Monash results in large volumes of heavy vehicle traffic along arterial roads. Local streets in industrial precincts are designed to accommodate the movement of larger vehicles approaching from the wider freight network.

TABLE 2.4 TRAFFIC VOLUMES (SOURCE: DTP OPEN DATA, 2023)

ROAD	CLASSIFICATIONS	SPEED LIMIT	DIRECTION	LANES	AM PEAK 2023 [VEH/H]	PM PEAK 2023 [VEH/H]	AADT	% AADT HV
Clayton Road	Arterial Other	60 km/h	Northbound	2	N/A	N/A	11,000	6%
			Southbound	2	N/A	N/A	9000	6%
Blackburn Road	Arterial Other	70 km/h	Northbound	3	1300	1800	17,000	9%
			Southbound	3	1000	1000	12,000	9%
Forster Road	Arterial Other	60 km/h	Northbound	2	N/A	N/A	5500	6%
			Southbound	2	N/A	N/A	5500	6%
Ferntree Gully Road	Arterial Other	70 km/h	Eastbound	3	722	1500	11,000	6%
			Westbound	3	1100	1600	14,000	6%
Wellington Road	Arterial Highway	80 km/h	Eastbound	3	1500	1600	17,000	5%
			Westbound	3	N/A	N/A	19,000	5%
Princes Highway	Arterial Highway	80 km/h	South-east bound	3	2300	1700	22,000	6%
			North-west bound	3	N/A	N/A	23,000	7%
Monash Freeway	Freeway	100 km/h	Eastbound	5 to 6	N/A	N/A	84,000	10%
			Westbound	4	6500	6300	89,000	10%

Notes:

- AM Peak, PM Peak and AADT: A range of traffic volumes have been provided where traffic volumes vary across the road / corridor (where available). Data was last updated on DTP Open Data website on 4/5/2023 at the time of data retrieval but some data may be historic and include traffic conditions during COVID-19 lockdowns.
- 'N/A' – no data available at time of extraction.
- Municipal / Local Roads are council owned, supporting slower speeds and lower traffic volumes compared to arterial roads, freeways and highways.
- Arterial Highways and Arterials (other) have similar functions as both are designed for moderate to high traffic volumes. Arterial roads and highways are typically used for inter-suburban or inter-urban journeys, often linking to freeways. Arterial Highways often support more volumes of traffic with more lanes and higher speeds compared to Arterials (other).
- Freeways are designed to move large numbers of vehicles and freight at higher speeds than arterial roads and are strategic corridors connecting state significant regions.

Figure 2.19 and Figure 2.20 shows the road network conditions in the AM and PM peak at a strategic level. The VITM modelling of Monash indicates that higher levels of volume to capacity (V/C) conditions are experienced along roads providing direct access to Monash University such as Wellington Road, Ferntree Gully Road, Normanby Road and Scenic Boulevard.

A higher V/C ratio indicates there is more congestion on these roads, and they are nearing capacity. It is important to note that typical road network conditions during the peak periods are based on pre-COVID modelling and may not reflect the current conditions of traffic post-COVID.

For example, more university lectures are now online post-COVID and so there may be less trips to Monash University compared to pre-COVID times. Moreover, the VITM is coarse and strategic in nature and the signalisation or any detailed operational parameters of intersections that would ordinarily serve to manage traffic flows are not explicitly coded in the model. The focus of the strategic model is to provide network context.

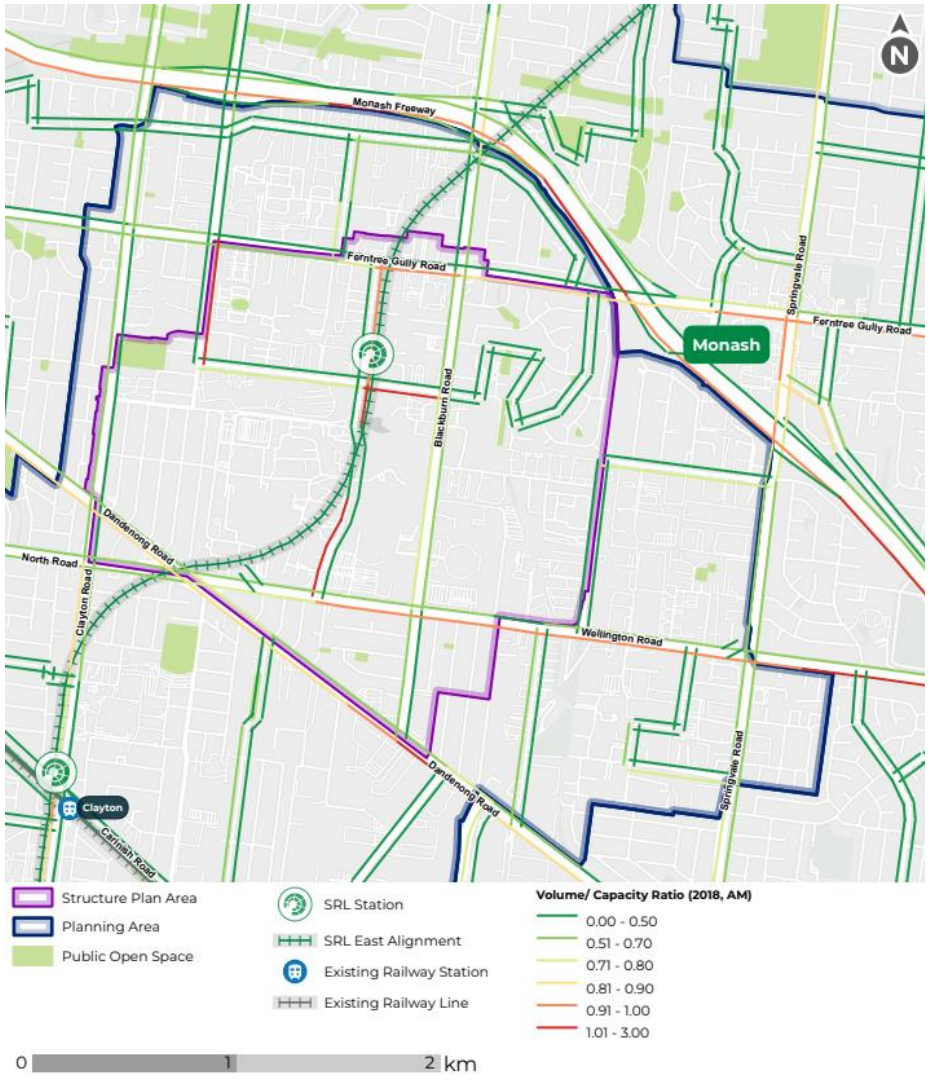


FIGURE 2.19 2018 AM PEAK VOLUME CAPACITY RATIO (7–9 AM) (SOURCE: VITM)

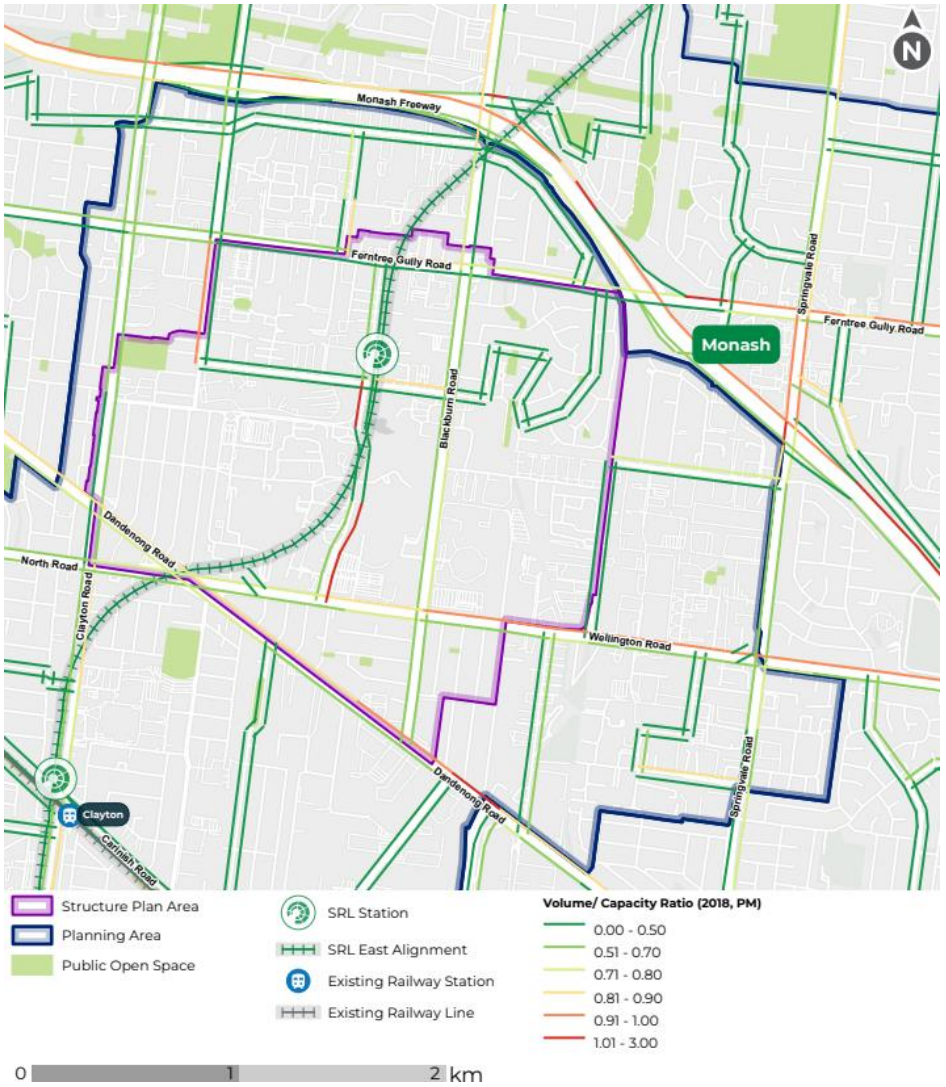


FIGURE 2.20 2018 PM PEAK VOLUME CAPACITY RATIO (3–6 PM) (SOURCE: VITM)

ROAD SAFETY

Crash statistics in Monash indicate there were 199 total crashes between January 2019 and January 2024. Around 35 per cent of the crashes resulted in severe injuries or fatality to road users, with the rest classified as 'other injury' accidents. There were five fatal crashes in Monash, the highest of all SRL East Structure Plan Areas. Four were located along Wellington Road, with some located at intersections adjacent to Scenic Boulevard, Cambro Road, Blackburn Road and North Road. The other fatal crash occurred along Ferntree Gully Road.

Figure 2.21 shows the crash locations across the Structure Plan Area. Locations with a high crash density experienced more than 15 crashes, and low crash density locations are where less than five crashes occurred.

Pedestrians were involved in around 11 per cent of crashes, motorcycles were involved in around 11 per cent of crashes and heavy vehicles were involved in 4 per cent of crashes. Rear-end vehicles (vehicles in same lane) and right-through collisions were the most common incidents, causing around 38 and 8 per cent of the crashes, respectively.

A total 55 per cent of crashes occurred at intersections and 63 per cent of crashes occurred during the day. Intersections and road segments identified as accident hotspots are highlighted in Figure 2.21. The crash hot spots in Monash with the highest number of crashes and associated injury severity are listed in Table 2.5.

TABLE 2.5 CRASH HOT SPOT STATISTICS BETWEEN JANUARY 2019 TO JANUARY 2024 (SOURCE: DATA VIC)

INTERSECTION / LOCATION	OTHER INJURY	SERIOUS INJURY	FATAL	TOTAL
Clayton Road / Princes Highway / Dandenong Road	13	3	0	16
North Road / Wellington Road / Princes Highway / Dandenong Road	19	9	1	29
Ferntree Gully Road / Blackburn Road	10	5	0	15
Blackburn Road / Wellington Road	7	9	1	17
Blackburn Road / Princes Highway / Dandenong Road	11	6	0	17

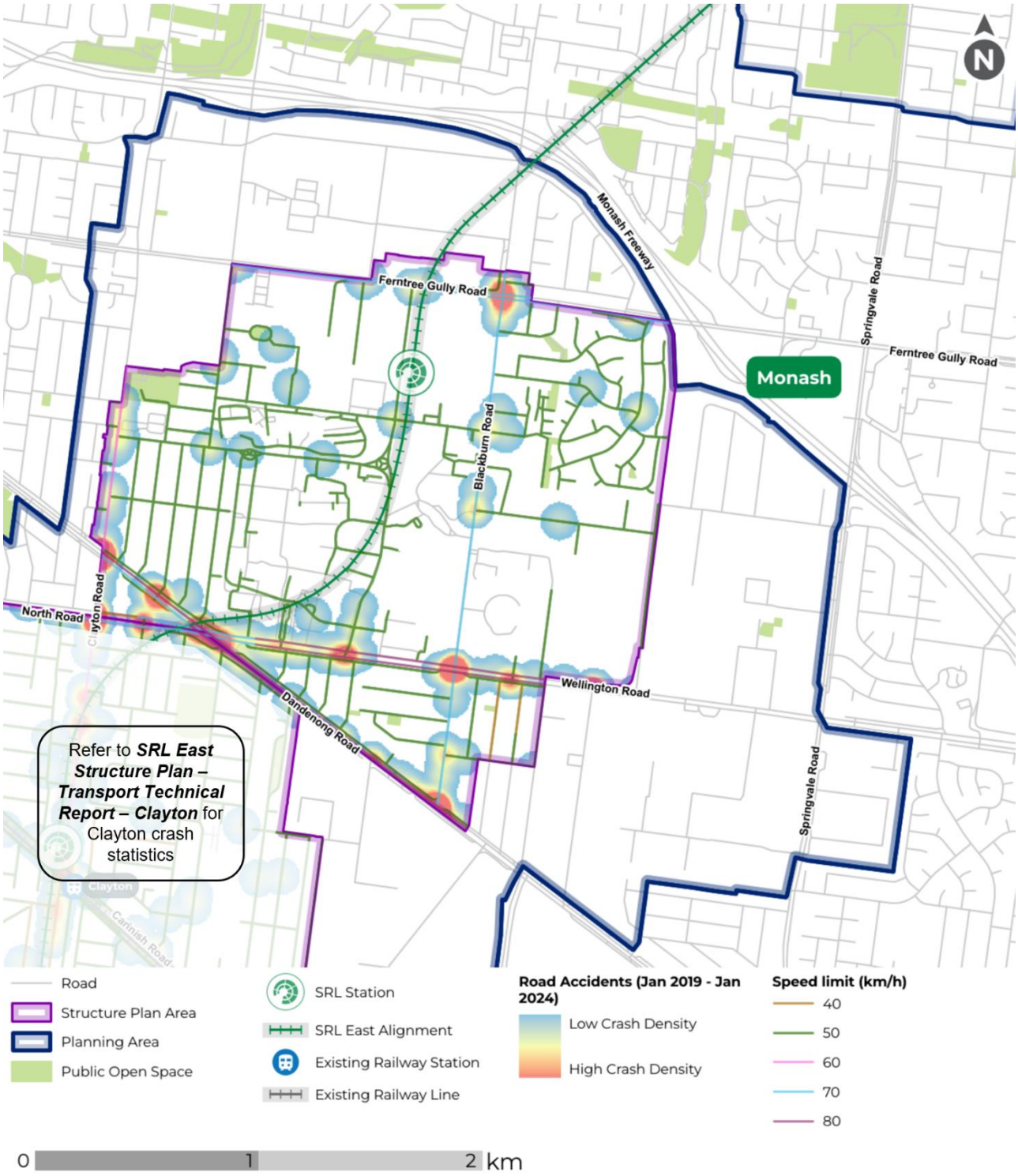


FIGURE 2.21 MONASH CRASH LOCATIONS AND CLUSTERS JANUARY 2019 – JANUARY 2024 (SOURCE: DATA VIC)

GENERAL TRAFFIC AND FREIGHT CHALLENGES

The general traffic and freight challenges in the Structure Plan Area are summarised and shown in Figure 2.22.

Location-specific general traffic and freight challenges:

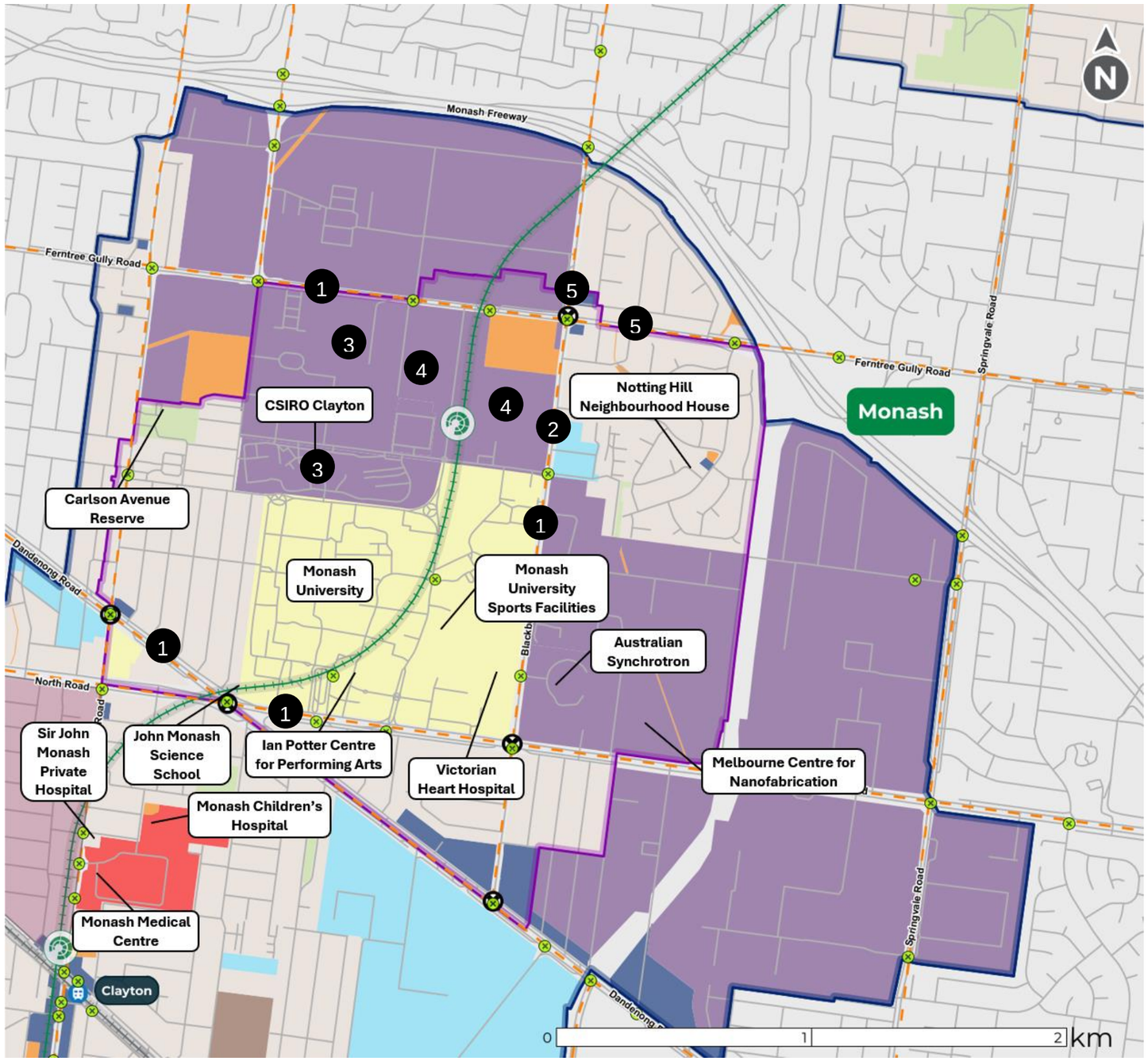
1. The freeway and arterial network cater for high volumes of through, destination, and local traffic and is subject to some peak hour congestion points. This is placing pressure on the local and arterial road network. Relying on the road network to cater for expected growth will not be sustainable.

2. Freight traffic on PFN roads such as Blackburn Road is subject to congestion and delays particularly during peak periods, which can increase journey times and reduce efficiency.

3. The high volumes of heavy vehicles on local streets within industrial sites near the proposed SRL station at Monash and limited protection between pedestrians and cyclists and heavy vehicles can pose as a safety risk to vulnerable road users.

4. The street network at the centre of the Structure Plan Area near the proposed SRL station at Monash is limited and is not expected to be able to support the significant increase in employment.

5. Heavy vehicles entering the arterial network from abutting commercial properties, particularly along Blackburn Road and Ferntree Gully Road may experience delays with limited suitable gaps in traffic to exit the property, increasing safety risks. Similarly, the capacity of the arterial road may be impacted by heavy vehicles that enter the road from adjacent commercial properties and are partially blocking lanes.



Existing Signalised Intersections
Crash Hotspot
SRL Station
Existing Railway Station
Road
Strategic Traffic Route
Heavy vehicle restricted area
Structure Plan Area
Planning Area
SRL East Alignment
Existing Railway Line

Existing Land Use
Health/ Medical
Residential
Educational
Industrial/ Mixed Use
Commercial
Development
Open Space
Public Use
Other

FIGURE 2.22 GENERAL TRAFFIC AND FREIGHT CHALLENGES IN THE MONASH STRUCTURE PLAN AREA

2.2.5 INTEGRATED PARKING

Car parking across the Monash Structure Plan Area is available in the form of on-street and off-street car parking options at key destinations and residential and industrial areas.

OFF-STREET CAR PARKING

There are nearly 12,450 publicly accessible off-street car parking spaces in the Monash Structure Plan Area, distributed across a mixture of at-grade and multi-level car parks. These are shown in Figure 2.23.

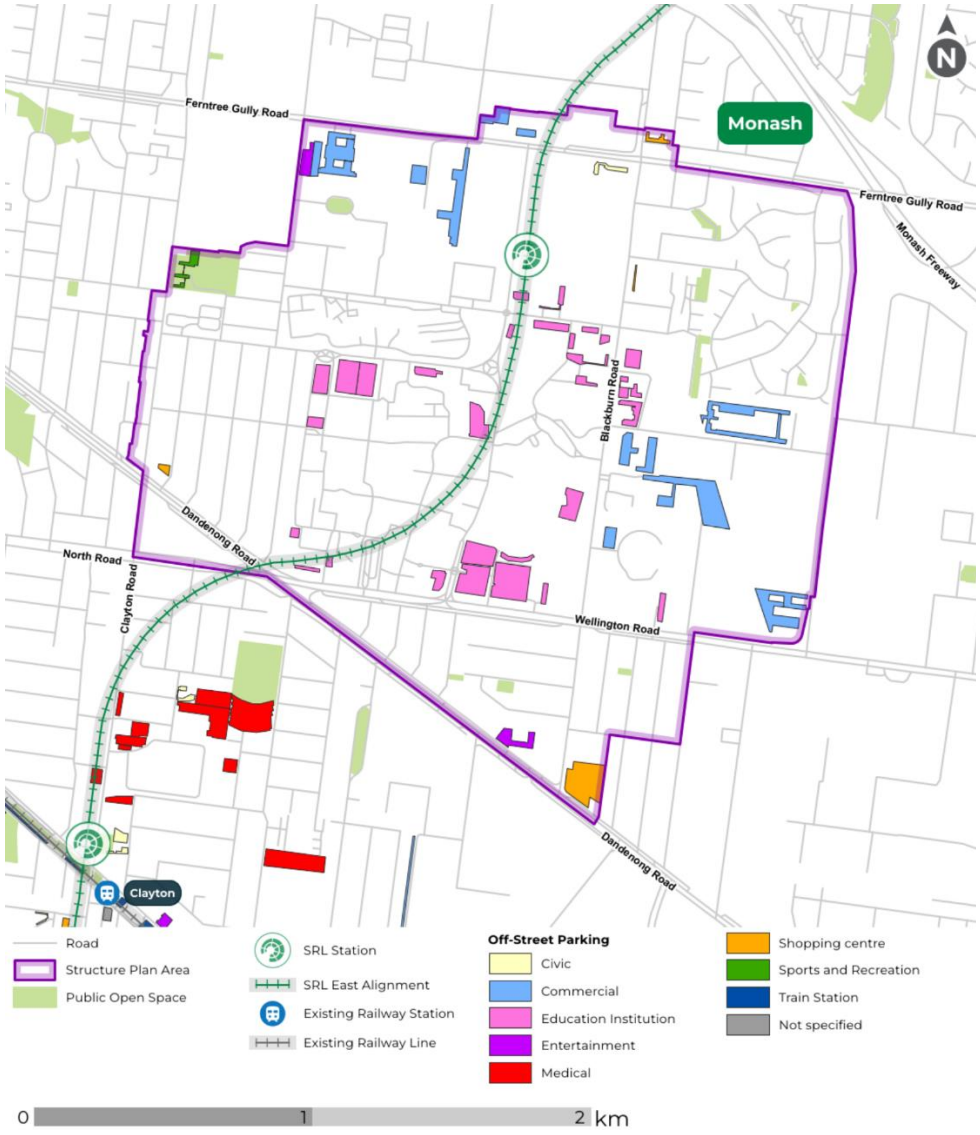
The Monash University Clayton campus provides around 60 per cent of Monash's off-street car parking which is predominately accessed from the Wellington Road, Normanby Road or Bayview Avenue access points. These provide access to the university, on-campus housing and on-site sporting facilities.

There are two electric vehicle (EV) charging stations located at Monash University, with another EV charging station at the Ampol Service Station Mount Waverley. One EV charging station is provided at the Monash City Council Depot and Schneider Electric which are both restricted for employee use only.[15] Thirteen car share scheme spaces are located across different areas of Monash University (operated by GoGet and Flexicar).

While Monash University car parking comprises paid and permit parking, there are generally no parking time restrictions. This encourages the use of private vehicles for university trips.

More information about off-street car parking supply and demand is provided in Section 2.2.2 of the SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash.

[15] *https://www.plugshare.com/*



Off-Street Parking	Count	Restriction Type	Paid Parking?
Civic	**120**		
Notting Hill Community Hall	120	Unrestricted	No
Commercial	**3309**		
371 Ferntree Gully Road Car Park	60	Unrestricted	No
ANZ Business Centre Notting Hill Car Park	350	Staff / Customer Parking	No
Australian Synchotron	138	Unrestricted	No
Ferntree Business Park Car Park	590	Unknown	Yes
Ferntree Place Parking Area	452	Staff and Customer Parking	No
Omnico Business Centre car park	250	Unrestricted	No
Telstra Global Operations Centre	609	Staff Parking	No
Uni Central Business Park car park	360	Unrestricted	No
Unipark - 195 Wellington Road, Mulgrave	500	Unrestricted	No
Education Institution	**7454**		
John Monash Science School	36	Staff Parking	No
Monash University	7369	Varies i.e. Permit, Ticket, Staff, Timed Restrictions	Varies
Melbourne Centre for Nanofabrication	49	Staff Parking	No
Entertainment	**335**		
Monash Hotel car park	200	Unrestricted	No
The Notting Hill Hotel	135	Customer Parking	No
Medical	**81**		
Monash Biomedical Imaging	81	Unrestricted	No
Shopping centre	**1079**		
Glenbrook Avenue car park	34	1P-4P	No
Hampshire Road Shopping Centre Car Park	45	1P-4P	No
M-City Shopping Centre Car Park	1000	2P	No
Sports and Recreation	**62**		
Carlson Avenue Reserve	62	1P-4P	No

FIGURE 2.23 MONASH OFF-STREET CAR PARKING (SOURCE: AJM JV PARKING INVENTORY)

ON-STREET PARKING

A parking inventory of the on-street parking was completed for the Monash Structure Plan Area. On-street parking locations and corresponding parking restrictions around the proposed SRL station at Monash are shown in Figure 2.24, outlining the limited on-street parking currently available within the Structure Plan Area.

Most of the roads in the immediate vicinity of the proposed SRL station at Monash have 'No-stopping' restrictions. Normanby Road has a combination of short-term and unrestricted parking to the west of Howleys Road. Howley Roads currently includes intermittent unrestricted parking, serving industrial and business parks in the surrounding area. There are currently around 4900 unrestricted on-street parking spaces within the Structure Plan Area.

More information about on-street car parking supply and demand is provided in Section 2.2.2 of the SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash.

FIGURE 2.24 ON-STREET PARKING RESTRICTIONS – MONASH (SOURCE: AJM JV PARKING INVENTORY)

BICYCLE AND MICROMOBILITY PARKING

Bicycle parking in the Structure Plan Area is mainly provided at Monash University with more than 850 bicycle parking spaces, with 240 consisting of secure bicycle parking spaces situated in bicycle arrival stations (James Gormley and Southern bike arrival stations).

Outside of Monash University, public bicycle parking is only provided along minor shopping strips along Blackburn Road, and outside a select few buildings in the business parks off Ferntree Gully Road.[16] These bicycle parking locations are uncovered with varying levels of perceived security / safety.

There are currently no dedicated parking facilities for micromobility devices.

More information on bicycle parking locations is provided in Section 2.3 of SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash.

End-of-trip facilities in the Structure Plan Area including secure parking, showers and lockers are provided only in newer developments and at Monash University which are not typically accessible to the public.

The James Gormley and Southern bike arrival stations are high-quality end-of-trip facilities that include a mechanic, lockers and showers. There are currently no dedicated parking facilities for micromobility devices.

INTEGRATED PARKING CHALLENGES

The parking challenges in Monash are summarised and shown in Figure 2.25.

[16] *AJM JV Parking inventory*

Location-specific integrated parking challenges:

1. High levels of dedicated and unrestricted employee car parking in Monash reduces public amenity and encourages private vehicle ownership.

2. It is understood that Monash University has been decreasing their parking supply over a period of time, however there is still a significant supply of parking that generates significant traffic flows.

3. Based on site observations, parking facilities within Monash University appear to have low occupancy levels outside peak education periods (on weekends and university holidays).

Structure Plan Area integrated parking challenges:

- Car parking provision, whether on or off-street, is a key factor that influences people's decision to own and use a car. Continuing to provide car parking in developments in line with the wider area will increase congestion and the inefficient use of space.
- Limited *Disability Discrimination Act 1992* (Cth) (DDA Act)-compliant on-street car parking is provided.
- End-of-trip facilities including secure parking, showers and lockers are provided only in newer developments and are not typically accessible to the public. This does not support and encourage active and sustainable transport trips.
- Secure bicycle parking and storage facilities outside of Monash University is generally limited and 'low quality' with varying levels of perceived security / safety, discouraging cyclists from parking their bicycles during rainy weather and/or in areas with lower perceived security / safety.
- Significant numbers of off-street car parking spaces are provided throughout the Structure Plan Area, with a high concentration within Monash University and the various industrial and business parks.
- There is a significant level of at-grade car parking provided to service existing commercial, educational and employment parking demands, limiting other uses that would likely provide increased economic and social benefits.
- High parking occupancy levels were observed in several parking areas (off-street and on-street) which mostly included unrestricted parking for industrial and business parks. The high provision of unrestricted parking encourages private vehicle commuter travel.

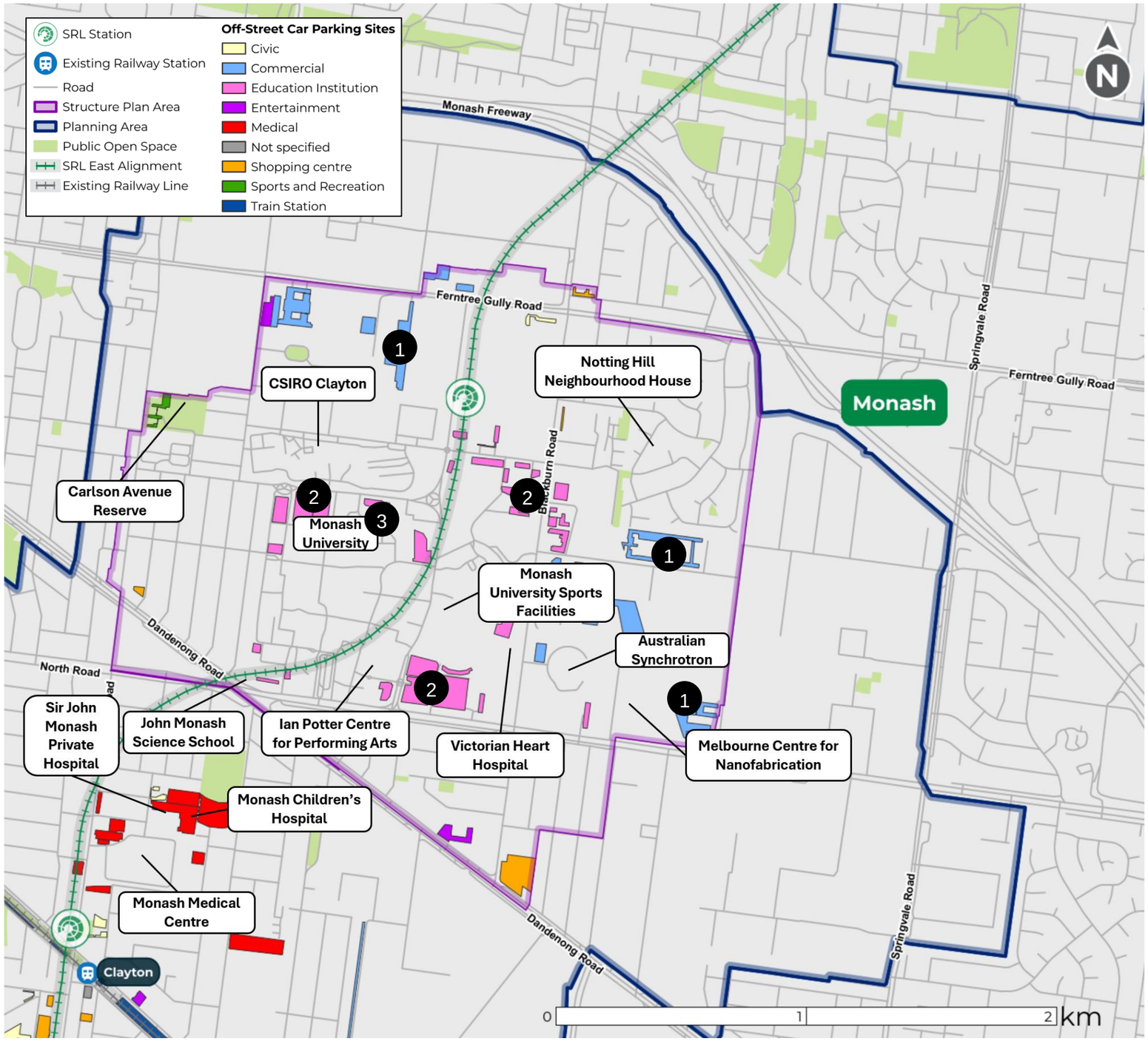


FIGURE 2.25 INTEGRATED PARKING CHALLENGES IN THE MONASH STRUCTURE PLAN AREA

2.3 Relevant policies and strategies

2.3.1 OVERVIEW

Victoria's legislative and policy framework sets a Vision for an integrated transport system that is accessible, inclusive and safe for all Victorians.

A primary aim of the framework is to promote economic, environmental and social prosperity with integrated land use and transport networks. These networks should provide efficient and effective movement of people and goods and minimise transport costs with greater use of active and public transport modes.

2.3.2 LEGISLATION

The legislation that provides the framework for the development of the Monash and other SRL East Structure Plan Areas is summarised in Table 2.6.

TABLE 2.6 TRANSPORT LEGISLATION

LEGISLATION	DESCRIPTION
Planning and Environment Act 1987 (Vic)	This Act establishes Victoria's framework for land use planning, development, and protection in the present and future interests of all Victorians. Planning schemes are subordinate instruments under the Act that apply to local government areas and set out how land may be used and developed.
Transport Integration Act 2010 (Vic)	This Act recognises that land use and transport planning are integrated and sets a vision for an integrated and sustainable transport system that contributes to an inclusive, prosperous, and environmentally responsible Victoria. The Act obligates transport planners and strategic land-use planners to have regard to the land-use impacts of decisions. This includes objectives that relate to social and economic inclusion; economic prosperity; environmental sustainability; efficiency co-ordination; and reliability and safety, health and wellbeing.
Road Safety Act 1986 (Vic)	This Act provides for safe, efficient and equitable road use.
Road Management Act 2004 (Vic)	This Act establishes a statutory framework for the management of the road network which facilitates the coordination of the various uses of road reserves for roadways, pathways, infrastructure and similar purposes.
Local Government Act 2020 (Vic)	This Act gives legislative force to local government powers, including in respect or roads.
Suburban Rail Loop Act 2021 (Vic)	This Act recognises the scale and complexity of planning and delivering a project that encompasses multiple municipalities. The Act establishes the SRLA and provides it with the power to plan, deliver and manage the operation of SRL and development associated with SRL.

2.3.3 POLICIES, STRATEGIES AND PLANS

The evolution of Melbourne from a mono-centric to a poly-centric city has been at the heart of the Victorian Government policy for many years. Strategies such as Plan Melbourne and DTP's strategic plans have been pursuing the need to consider development growth and supporting infrastructure more efficiently.

More recently, recognition of climate change and the harm of private car travel to the environment and health of our communities has led to plans and policies such as the National Electric Vehicle Strategy and Victoria's Road Map to Zero Emissions.

Policies, strategies and plans that informed the transport ambition for Monash are summarised in Table 2.7.

TABLE 2.7 NATIONAL AND STATE POLICIES THAT INFORM THE TRANSPORT AMBITION FOR MONASH

PLANS AND POLICIES	DESCRIPTION
Plan Melbourne 2017–2050 and Plan Melbourne addendum 2019 (DTP, 2017 and 2019)	Sets out a long-term strategic vision for land-use and development in Victoria. Its policies include Melbourne becoming a polycentric city which is sustainable and resilient and which supports vibrant and healthy neighbourhoods where people can meet most daily needs within a 20-minute active or public transport trip from home.
Victoria Infrastructure Strategy 2021—2051 (Infrastructure Victoria, 2021) and Victorian Infrastructure Plan 2021 (Victorian State Government, 2021)	Victoria's Infrastructure Strategy 2021–2051 provides recommendations to the Victorian Government for planned infrastructure in Victoria. The 30-year strategy seeks to address existing infrastructure pressures, demand on existing infrastructure, and assist in planning the timing and location of required and necessary new infrastructure. The Infrastructure Strategy includes strategic opportunities to improve the Victorian rail network, including SRL as an intended rail project. The Victorian Government has responded to the Strategy with the Victorian Infrastructure Plan 2021 that provides government's response to the Strategy.
Public Transport Guidelines for Land Use Development (DTP, 2008)	The Public Transport Guidelines for Land Use and Development aim to assist decision-making on statutory and strategic planning proposals for land use developments that affect public transport planning and delivery. It is intended the Guidelines will assist with site design to facilitate the delivery and use of public transport services. Good design for public transport helps ensure the provision of a sustainable transport network now and for future. The Guidelines assist in addressing the public transport aspects of structure plans and other strategic planning documents for SRL East.
Strategic Plan 2024–28 Thriving Places and Connected Communities (DTP, 2023)	The Strategic Plan sets out the visions for integrating transport and land use to create thriving places and connected communities. Key focus areas of the Strategic Plan relevant to transport and SRL include: • Improving integration across transport, land and planning systems • Setting and implementing a strategy for support jobs, housing, and transport while building on Melbourne's distinctiveness, liveability, and sustainability • Enhancing environmental sustainability through initiatives that create healthy and liveable communities and places • Support access to lower emission modes of transport • Improving social outcomes and liveability for all Victorians • Giving Victorians more transport options and improve access to essential services.
Future Directions (DTP, Nov 2023)	Sets out the six strategic directions that will establish long-term objectives for movement. Directions considered key to SRL East structure planning include: • Enable new travel patterns – planning transport to facilitate new travel patterns that connect more people to more jobs through local movements, public and active transport and increasing vehicle occupancy • Promote transition to environmentally sustainable transport – supports pledges and targets set out Victoria's Climate Change Strategy • Maximise opportunities created by new and evolving technologies – micromobility and new forms of managing travel • Support the many different journeys people take every day and meet a diverse range of needs.
Movement and Place in Victoria (DTP, February 2019)	The Movement and Place (M&P) Framework brings to life the strategic objectives of transport and land use planning in Victoria in the context of road safety and environmental outcomes. The Framework provides a tool to translate the broad transport outcomes the *Transport Integration Act 2010* (Vic) aims to achieve into priority changes to improve link and place performance for communities. The M&P Framework supports how DTP plans the road and transport network, while acknowledging that each street and road will have different roles in supporting place and movement. It translates the broader transport network into a series of aspirations for individual roads, streets and interchanges based on their desired functions in the network as well as balancing the needs of people and communities.
National Electric Vehicle Strategy (Department of Climate Change, Energy, the Environment and Water, 2023	The Electric Vehicle Strategy sets out national aims to increase electric vehicle (EV) demand through affordability and increasing infrastructure.
Victoria's Climate Change Strategy (Department of Climate Change, Energy, the Environment and Water, 2021)	The Climate Change Strategy recognises that transport is the state's second-biggest contributor to greenhouse gas and minimising this will be key to meeting emission targets. The Strategy recognises the role of SRL in increasing 'clean' public transport. It commits to 100% of all Victoria's new buses to be zero emission from 2025; a 25% active transport mode share by 2030; and 50% of all light vehicle sales to be zero emission by 2030.

PLANS AND POLICIES	DESCRIPTION
Victoria's Zero Emissions Vehicle Road Map (Department of Environment, Land, Water and Planning, 2021)	The Zero Emissions Vehicle Road Map signals an intent for the state to transition to net zero emission in road transport by 2050, noting that it will take around 25 years to manage the transition, with a target for half of all new vehicle sales to be zero emissions by 2030.

SRL East will be crucial to achieving the objectives of these plans and strategies. It will address the imbalance between travel choices for suburb to central city trips and getting from one suburban hub to another, providing true modal choice for middle to outer Melbourne orbital movements. SRL East structure planning will adopt a 'live locally' approach based on the *Plan Melbourne* 20-minute neighbourhood principle, where every day needs can be met within a short walk, cycle, or local public transport trip from home. Residents should be able to access local facilities, learning institutions, green spaces, housing, transport interchanges, and job opportunities through a 20-minute journey. This aims to facilitate people living and working with less need to travel by private car. It is expected that appropriate structure planning and the delivery of SRL East will:

- Provide a more efficient public transport network as passengers would not need to travel into the city and then out to their ultimate destination
- Encourage local trips to be made by active and public transport, reducing reliance on private car trips
- Improve the viability of living in the outer and middle suburbs and drive growth and community around the new infrastructure
- Reduce middle to outer Melbourne orbital movements made by private car
- Enable more people to live in the SRL East Structure Plan Areas closer to jobs and activity reducing personal time spent travelling.

2.3.4 LOCAL PLANS AND POLICIES

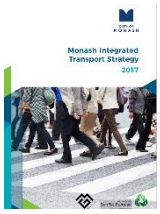
The Monash Planning Area and Structure Plan Area are located in the City of Monash. The statutory framework for the Planning Area will be covered in the Monash Planning Scheme.

The recommendations for Monash Structure Plan Area are influenced by and will support Monash City Council transport policies and will seek to maintain effective transport networks in Monash and the municipality. The key transport themes in Monash City Council policies include:

- The need to move away from private car travel to more sustainable modes of transport, with a road user hierarchy that reflects this shift
- Walking and cycling as the preferred transport choice, particularly for short local trips
- Potential for reducing car parking rates in major activity centres.

Local policies and strategies that informed this report are summarised in Table 2.8. The directions and actions that informed specific Monash recommendations for the Structure Plan Area are identified in the relevant areas of this report.

TABLE 2.8 LOCAL PLANS AND POLICIES CONSIDERED FOR MONASH

DOCUMENT	DESCRIPTION	RELEVANT INSIGHTS
Monash Planning Scheme (last updated Jan 2024)	Establishes the statutory framework for land use and development in the City of Monash. Includes Clause 18 to cover transport. No local policies are included under Clause 18. However, SRL is recognised in transport and settlement clauses of the scheme. Clause 11.01-1R recognises SRL as a key strategy in facilitating substantial growth and change in major employment, health, education and activity centre precincts. *Was SRL considered? Yes*	• Planning to ensure a safe, integrated and sustainable transport system • Creating mixed use neighbourhoods while delivering better access to services and facilities • Significantly lower car spaces for student accommodation and higher bicycle parking rates.
Monash Integrated Transport Strategy 2017 	Provides strategic direction to facilitate travel that is sustainable, convenient, accessible and safe. *Was SRL considered? No*	• A safer network – recognising issues with shared paths and public transport use • A more accessible Monash – reducing the need to travel and increase the viability of transport choice • Promote sustainable transport – improving pedestrian and bicycle network • Support productivity – minimising the impact of freight on safety, amenity and the environment, supporting freight efficiency • Manage car parking – improving the efficiency of kerb space, balancing car parking with safe and accessible street network for pedestrians and cyclists.
Monash Walking and Cycling Strategy 2023 	Aims to establish Monash as a city that is walking and bicycle friendly. Identifies the key issues of unsafe and fragmented pedestrian and cycling network and how it impacts users' likelihood of traveling via active transport modes. *Was SRL considered? No*	• Ensure walking and cycling networks consider the needs of all people • Eliminate barriers and unsafe cycling infrastructure in the greater network • Promote cycling uptake as a recreational activity and transportation mode.
Monash Road Management Plan 2021 	Outlines the road infrastructure managed by Council and the shared responsibilities with other road authorities. *Was SRL considered? No*	• Highlights Council's role in implementing the vision for Monash, especially around road space allocation and management.

In addition to local plans and polices, Monash University has also developed a Sustainability Strategy. Transport forms a key component of the strategy, relevant insights include:

- Encouraging the use of public transport
- Transition the Monash fleet and community to electric vehicles
- Encouraging the use of active transport

2.4 Acknowledging interface with external transport, including SRL. Summary

Table 2.9 summarises the key findings of the existing conditions assessment. The review of key national, state and local transport polices and strategies relevant to Monash informs the development of recommendations for the Monash Structure Plan Area. The recommendations will support key transport policies and strategies and seek to maintain effective transport networks in Monash and the municipality.

TABLE 2.9 EXISTING CONDITIONS SUMMARY BY MODE

MODE	SUMMARY
Active transport	• Most streets in Monash have footpaths on both sides of the road and provide pedestrian access to dwellings, key destinations such as Monash University's Clayton campus, business / industrial parks, and key sites such as Victorian Heart Hospital and CSIRO. • Amenity for pedestrians is of a mixed quality throughout Monash, reflecting the varying land uses in Monash. Areas of high-quality provision is provided in the Monash University's Clayton campus and some residential streets across Monash with a high provision of canopy coverage and vegetation. • There are a few separated cycle routes serving Monash including shared use paths within Monash University's Clayton campus, along Gardiner Road directly connecting to the Scotchmans Creek Cycling Trail and along an east-west link north of Duerdin Street between Normanby Road and Dunlop Road. Other key cycling facilities include a connection to the Clayton Activity Centre along the SCC via Cobain Street (sharrows) and onto Browns Road (shared use path). The remainder of the road network in Monash has no or limited cycling infrastructure. • The busy arterial roads (such as Blackburn Road and Ferntree Gully Road) and large private and industrial and business blocks are barriers for pedestrians and cyclists.
Public transport	• With no train station or tram network in Monash, the current public transport network for Monash is solely bus based, with a bus interchange located at the southern edge of the Monash University's Clayton campus • A network of 13 bus routes operates in Monash, 10 of which pass through the Monash University's Clayton campus bus interchange. As the sole public transport mode in Monash, buses support public transport connectivity between train stations outside of the Structure Plan Area, residential areas, employment precincts, Monash University's Clayton campus and activity centres • A lack of rail transport connections limits accessibility to and from Monash • There is limited infrastructure for bus priority along roads where bus and traffic volumes are high. This increases bus journey times, making them uncompetitive with private vehicles • The quality of bus stops and waiting area infrastructure is inconsistent across Monash.
Private vehicles	• Vehicle access throughout Monash is provided by a freeway, a grid of arterial roads and local streets • Monash Freeway and Blackburn Road form part of the PFN, supporting significant freight movement through Monash • The freeway and arterial network cater for high volumes of through, destination, and local traffic and is subject to routine congestion • The high volumes of heavy vehicles on local streets within industrial sites near the proposed SRL station at Monash and limited protection between pedestrians and cyclists and heavy vehicles can pose as a safety risk to vulnerable road users • While the road network is generally within capacity (other than some peak hour congestion points) to support the current private vehicle mode share, maintaining a similar private vehicle mode share into the future will not be sustainable and will be detrimental to the liveability within the Structure Plan Area.
Integrated parking	• There are more than 12,450 publicly accessible off-street car parking spaces in the Monash Structure Plan Area, distributed across a mixture of at-grade and multi-level car parks. The Monash University's Clayton campus provides around 60 per cent of Monash's off-street car parking • There is currently around 4900 unrestricted on-street car parking spaces within the Structure Plan Area • Public bicycle parking spaces are limited and primarily provided in the Monash University's Clayton campus. Outside of Monash University's Clayton campus, public bicycle parking is only provided along minor shopping strips along Blackburn Road, and outside a select few buildings in the business parks off Ferntree Gully Road • End-of-trip facilities in Monash, including secure parking, showers and lockers, are provided only in newer developments which are not typically accessible to the public • There are currently no dedicated parking facilities for micromobility devices • High parking occupancy levels were observed in several parking areas (off-street and on-street) which mostly included unrestricted parking for industrial and business parks. The high provision of unrestricted parking encourages private vehicle commuter travel • Parking facilities within Monash University appear to have low occupancy levels outside peak education periods (on weekends and university holidays).

3 The SRL project

3.1 Overview

The Monash Planning Area is one of six precincts that form part of SRL East – the first stage of the 90-kilometre orbital loop linking every major rail line between Cheltenham, Melbourne Airport and SRL West (to Werribee) as shown in Figure 3.1. The six stations include **Cheltenham** (located near Southland, between Cheltenham and Highett), **Clayton**, **Monash** (located in Notting Hill, between Clayton and Glen Waverley), **Glen Waverley**, **Burwood** (located between Box Hill South and Ashwood), and **Box Hill**.

SRL will connect major employment, health and education centres in the city's middle suburbs and provide highly accessible nodes that can be used to support Melbourne's growing housing and employment needs in a sustainable manner. To do this, more than just the SRL stations are required. The SRL Precincts will need to foster a new approach to travel and living in these areas.

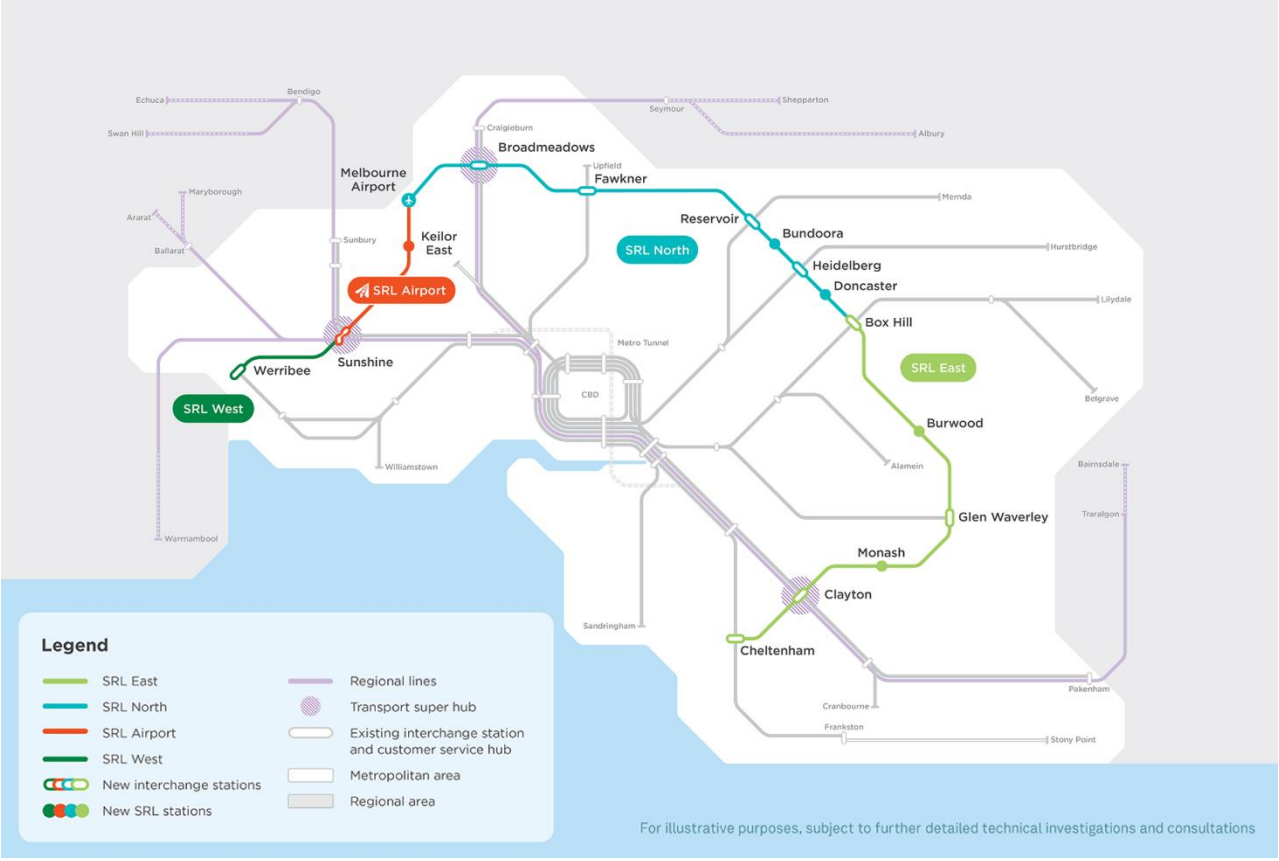


FIGURE 3.1 SRL EAST IN THE CONTEXT OF THE WIDER SRL PROJECT

High population growth on Greater Melbourne's expanding urban fringe has been driving many households further from employment centres, leading to longer commutes, increased congestion and more crowded public transport. This pattern of growth risks entrenching disadvantage, with inequitable access to good jobs, services, affordable housing, amenities and recreational opportunities. There is already significant demand for orbital travel around Melbourne, with many people travelling to work and other destinations by car because there isn't a fast rail option.

SRL addresses these challenges by delivering important cross-suburb travel connections between major employment centres, hospitals, universities and retail, shortening commutes and improving cross-suburb connectivity. While growth in SRL Precincts will give more Victorians access to employment opportunities, affordable housing and services – all within a short walk from a station.

Construction of SRL East from Cheltenham to Box Hill began in June 2022, and SRL East is expected to start operating by 2036.

3.2 SRL East Project Environment Effects Statement and planning approvals

The SRL East Project's Environment Effects Statement (EES) was released in 2021. The EES identified the benefits and potential impacts of the SRL East Project on people and places during its construction and operation and proposed ways to avoid, minimise, offset or manage any effects.

Planning approvals for the SRL East Project were informed by the EES and were granted following the Minister's Assessment in late 2022. These approvals included Planning Scheme Amendment (PSA) GC197 that introduced an Incorporated Document under Specific Controls Overlay Schedule 14 (SCO14) to facilitate delivery of SRL East. Amendment GC197 came into force on 30 September 2022.

A key condition of the Incorporated Document is an Environmental Management Framework containing Environmental Performance Requirements (EPRs) managing the project's design, construction and operation impacts. These included EPRs specifically managing traffic and transport impacts associated with the SRL East Project, some of which refer to impacts on the wider precincts. The Environmental Management Framework was approved by the Minister for Planning on 17 October 2022.

The EES nominated Environmental Performance Requirements (EPR's) were contained within the SRL East Project Environmental Management Framework as approval requirements for the project. There are eight transport EPR's, EPR's T1-T5 relate to detailed project construction and delivery issues (traffic management and coordination, road reinstatement etc) and are not the focus of this section or the TTR. Rather Table 3.1 below highlights sections of EPR's T6-T8 which in addition to actions delivered by the SRL East Project could benefit from relevant commentary and actions within the TTR. The Minister's Assessment of the EES also identified some issues for further assessment which are discussed in Section 3.5 of this report

TABLE 3.1 EPRS RELEVANT TO THIS REPORT[17]

TRANSPORT BASED EPR	TRANSPORT TECHNICAL REPORT CONSIDERATION
T6. Road transport design and operation	
T6-2. Develop and implement street network designs for each affected street within the Project Land in consultation with the relevant road management authorities that includes:	
a) The design of the road network should reflect the aspirational Movement and Place outcomes for each precinct as well as changed demands as a result of the Project	Movement and Place classification reviews and existing level of service gap assessments, and Recommendation to safeguard the M&P modal priorities
b) Maintaining safe operations through the precincts.	Pedestrian and cyclist safety considered in network upgrade recommendations including strategic corridors, green streets and new and upgraded signal crossings
T6-3. Develop and implement a plan for each precinct to manage reinstated parking within the Project Land, in consultation with relevant road management authorities, that:	
a) Minimises the permanent loss of parking where possible and determine the optimal parking provision in the area, including prioritising	The Parking Precinct Plan provides recommendations with respect to parking that may be relevant in responding to this

[17] bigbuild.vic.gov.au/__data/assets/pdf_file/0003/717645/SRL-East-Environmental-Management-Framework.pdf

TRANSPORT BASED EPR	TRANSPORT TECHNICAL REPORT CONSIDERATION
meeting specialised parking needs within the precinct such as emergency services, loading and DDA compliant parking.	EPR requirement, however the focus of the EPR is reinstatement of parking impacted by the SRL project and will be addressed as a project not structure planning issue.
b) Reduces the risk of overflow parking in local streets	
c) Provides alternative locations for station commuter parking impacted during construction identified in consultation with relevant stakeholders. If needed this may be provided outside the Project Land.	
d) Includes recommended Pick Up / Drop Off (PuDo) locations following further assessment during the design phase.	
T6-5 Collaborate with DoT and Councils to manage the operation of the road network in the vicinity of SRL precincts for all road users. This would encourage appropriate mode of access to the station precincts and to discourage through traffic. This should include reviewing the performance of the wider network so that opportunities to re-distribute through traffic away from station precincts can be pursued and sensitivity testing of different precinct development scenarios.	The TTR seeks to address transport movements to, from and within the Structure Plan Area with Section 5.4 explaining the target mode share for the precinct and actions to achieve that mode share explained in Section 6 and 7.
T7. Public transport design and operation	
T7-1. Design the SRL stations and new bus interchanges to ensure integration with existing and planned future uses so they provide connections to key destinations and existing railway stations and bus interchanges and be in accordance with the Urban Design Strategy (UDS). The design should also provide adequate wayfinding to facilitate passenger transfers.	Infrastructure recommendation supporting the planning for new or upgraded bus interchanges
T7-2. Implement measures to address pedestrian congestion at and around station entrances where they interface with the precincts, to the extent practicable, in consultation with relevant road management authorities.	Considered in upgraded strategic corridors providing access to station entrances, to be addressed in design scope beyond the precinct Transport Technical Reports
T8. Active transport design and operation	
T8-3. Provide wayfinding information to enhance connectivity for pedestrians, cyclists and public transport users to move to, from, through and within the interchanges and precincts.	Considered in the SRL East Structure Plan - Urban Design Report - Cheltenham

The remaining transport EPRs are considered to relate specifically to the construction of SRL East and contractors are responsible for the implementation of the measures to address these.

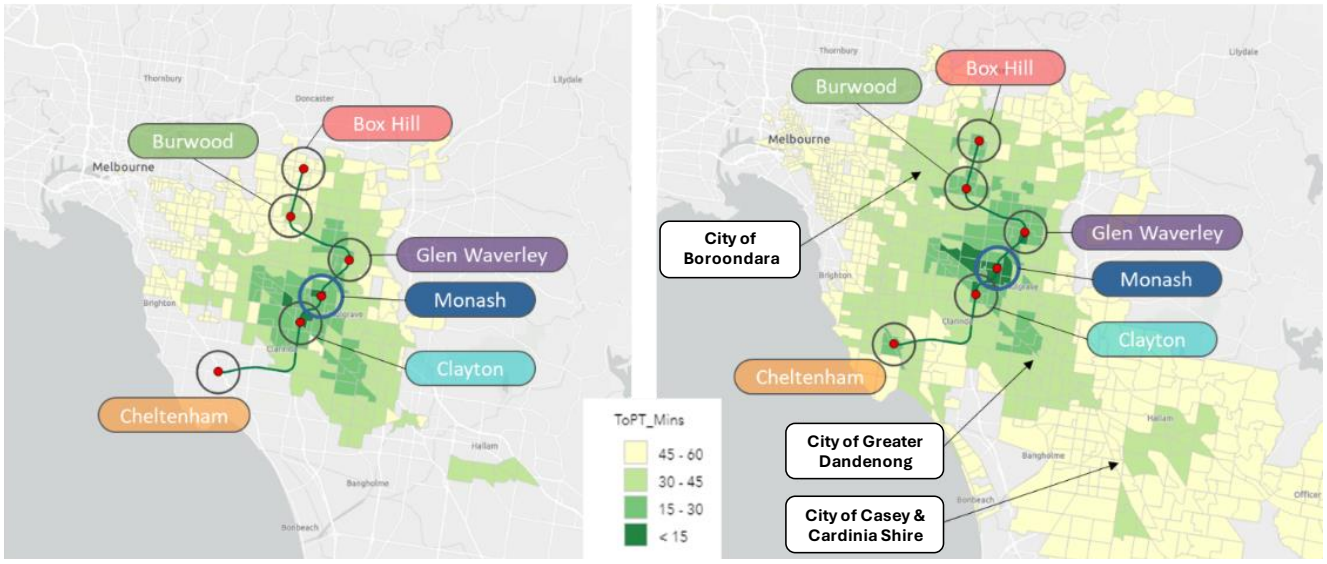
3.3 SRL Monash rail and infrastructure works

This section summarises the SRL East Project's scope being delivered under the SCO14 Incorporated Document and outlined in the Surface and Tunnel Plans approved by the Minister for Planning on 18 October 2022.

The SRL station at Monash will provide a rail network in Monash that is currently primarily accessed by road. The SRL station at Monash is expected to cater for around 12,600 passenger boardings from Monash per weekday in 2041.[18]

The increasing public transport accessibility of Monash is shown in Figure 3.2. Monash residents will be able to access education, work and services near all SRL East stations within 30-minutes or less. Travel times between Monash and many suburbs in the municipalities of Greater Dandenong, Bayside and Kingston will reduce by 15 to 30 minutes. Travel times to significant areas in the municipality of Boroondara to the north-east will reduce by approximately 15 minutes and travel times to the growth areas of Casey and Cardinia Shire will also significantly reduce.

[18] *SRL East – Traffic and Transport Impact Assessment. TA R.2 Transport IA Revision 01, October 2021 (Table 5.4)*



2041 Base Case without SRL - AM Peak PT Travel Time to Monash **2041 Project Case with SRL** - AM Peak PT Travel Time to Monash

FIGURE 3.2 INCREASED PUBLIC TRANSPORT ACCESSIBILITY OF MONASH WITH THE SRL EAST PROJECT[19]

The SRL station at Monash will improve access to world-class education, health and research facilities, delivering important transport connections to the Monash National Employment and Innovation Cluster.

Improvement to walking and cycling, public transport and road connections and infrastructure around the SRL station will provide an accessible, safe and integrated network for travel through and within Monash.

The SRL East Project scope is generally in accordance with the project's reference design, which will be subject to minor changes during the detailed design phase.

The SRL East station at Monash and associated surface transport infrastructure works are summarised and shown in Figure 3.3.

[19] *SRL East – Traffic and Transport Impact Assessment. TA R.2 Transport IA Revision 01, October 2021 (Section 7.2.3)*

1. The SRL station at Monash located on the corner of Howleys Road and Normanby Road, with two station entrances.

2. New streets connecting Howleys Road and Normanby Road improving access around the SRL station, prioritising walking, cycling, and public transport.

3. New signalised intersections along Howleys Road and Normanby Road, providing safe crossing opportunities for pedestrians and cyclists.

4. A new bus interchange along the new East-West Street.

5. Bi-directional, off-road cycle paths on the eastern side of Howleys Road, the North-South Bus Street and the southern side of Normanby Road connecting the new SRL station to Monash University's Clayton campus and surrounding areas.

6. A 560-space cycle parking hub integrated with the SRL station accessed from Howleys Road.

7. *Disability Discrimination Act 1992* (Cth) (DDA)-compliant 'Accessible' pick-up / drop-off areas and taxi bays adjacent to the SRL station entrance.

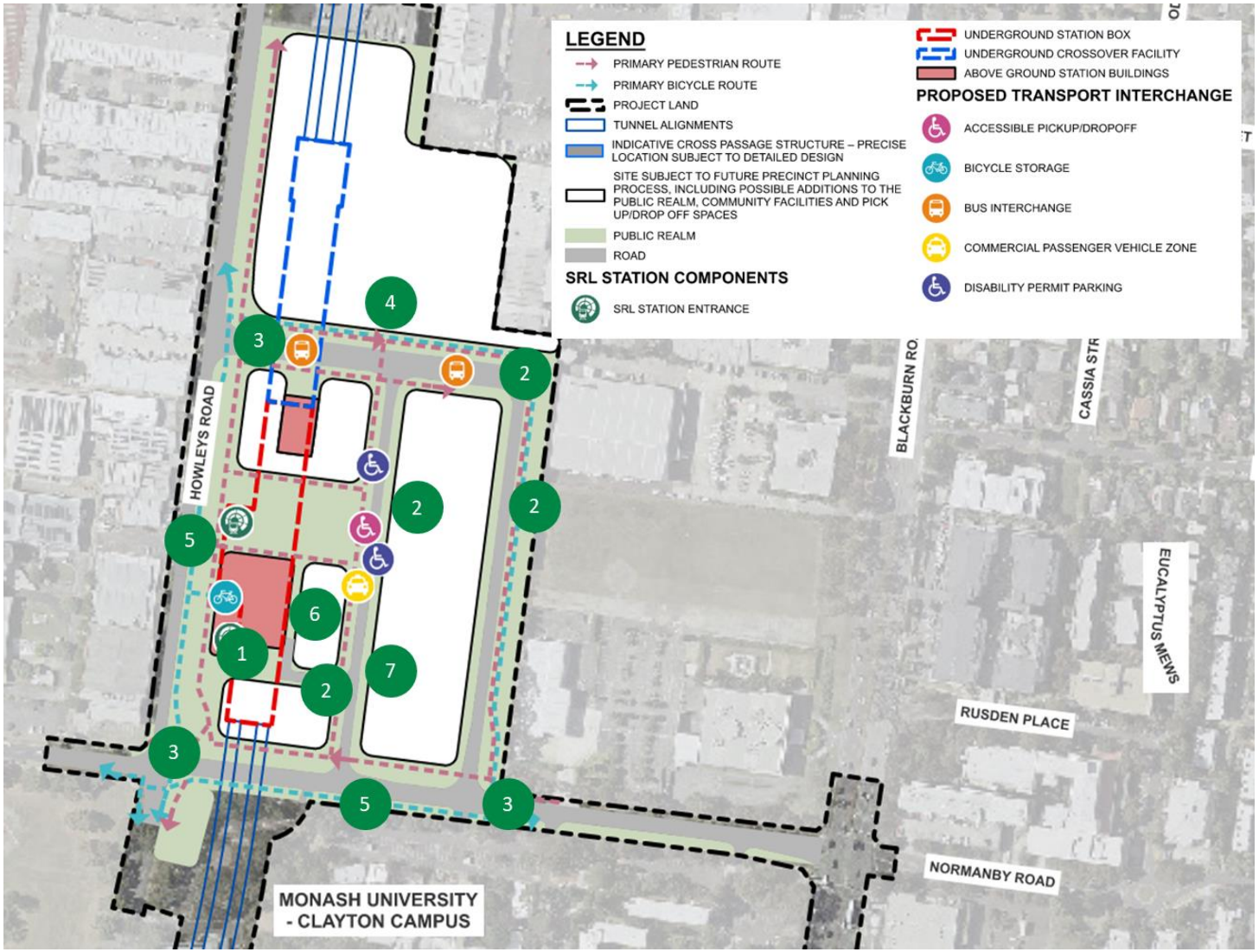


FIGURE 3.3 MAIN SRL EAST AND ASSOCIATE SURFACE TRANSPORT INFRASTRUCTURE IN MONASH (BACKGROUND MAP SOURCE: SURFACE AND TUNNEL PLANS ENDORSED APRIL 2024)

3.4 EES traffic and transport assessment

A Traffic and Transport Impact Assessment was prepared for the SRL East Environment Effects Statement (EES) (2021). The impact assessment outlined the proposed infrastructure to be provided as part of SRL East station works and evaluated the associated traffic impacts and benefits on the transport network for stakeholders and the broader community.

In Monash, the transport assessment focused on the impacts associated with construction and operation of the SRL station at Monash. While the physical impacts were localised within the 'SRL project land' affected by the project works (see Figure 3.4), the impact assessment considered the wider implications on the transport network from the localised works. Figure 3.5 shows an extract of the broader traffic network assessed as part of the EES Traffic and Transport Impact Assessment, which includes the Monash Structure Plan Area.

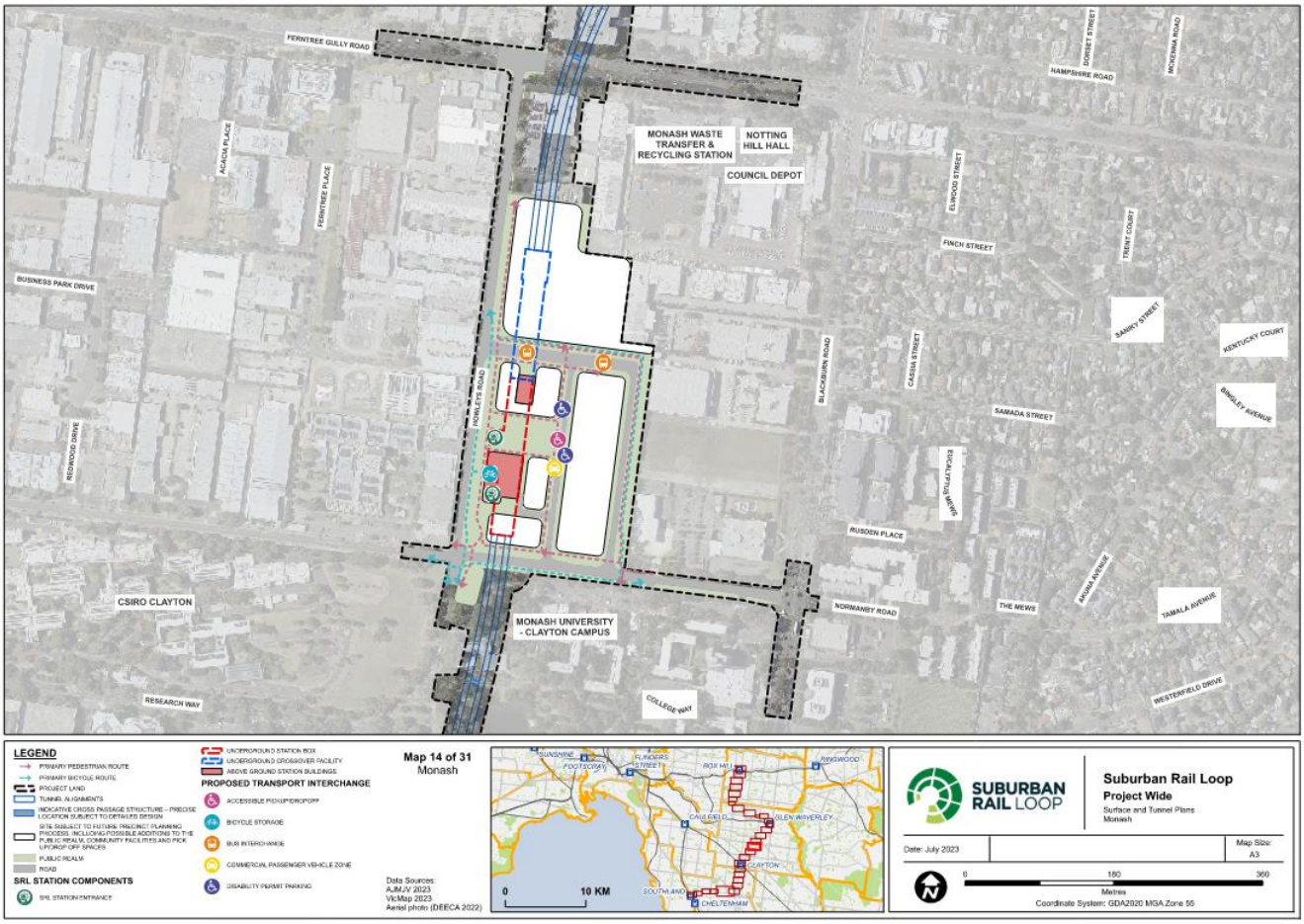


FIGURE 3.4 PROJECT LAND AREA IN MONASH

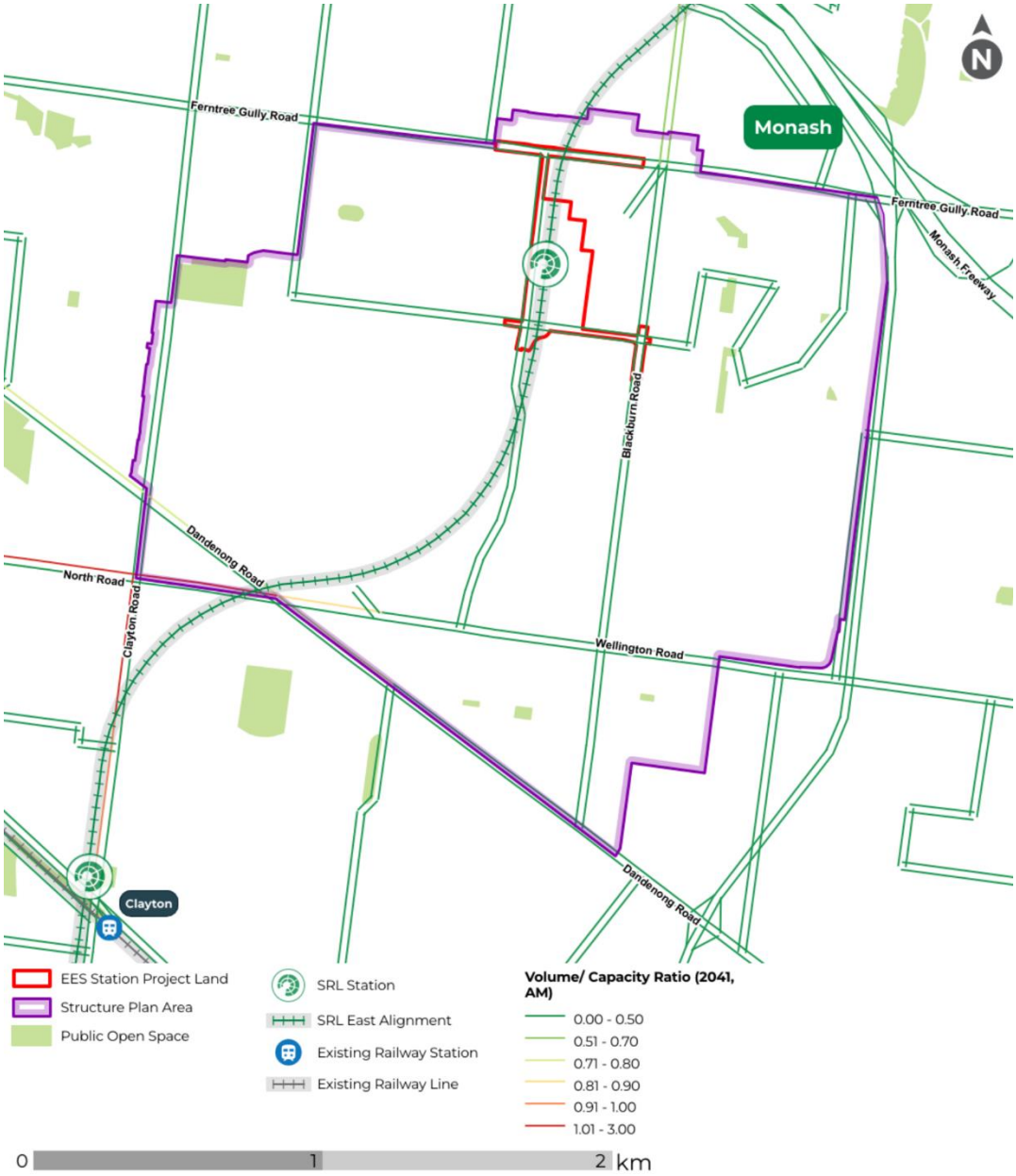


FIGURE 3.5 WIDER TRANSPORT NETWORK MODEL (BASE MAP) ASSESSED BY THE SRL EAST PROJECT'S EES AND MONASH STRUCTURE PLAN AREA

The operational assessment within the EES Traffic and Transport Impact Assessment was undertaken by comparing the future state in 2041 without SRL East (known in that report as the 'Future No Project Case') against the future state with SRL East (known in that report as the 'Project Case').

Each transport mode was assessed considering growth in population, employment and enrolments and the associated change in travel demands in the vicinity of SRL East. The *Future No Project Case* used an existing land use forecast which did not take into account the SRL East Project. The growth in population, employment and enrolments for the *Project Case* was developed specifically for SRL East using CityPlan, a Land Use and Transport Interaction (LUTI) model for Victoria which estimates the land use impacts and shift in demographics as a result of major transport projects like SRL East.

In simplest terms, CityPlan used the existing forecast of land use growth in Victoria developed without SRL East and redistributed land use development (and associated population and employment) across Melbourne including into the SRL East precincts in response to the increased transport accessibility and development capacity proposed through the SRL East Project. The CityPlan model was peer reviewed in the development of

the SRL Business and Investment Case and its use was subsequently tested through the SRL East EES Independent Advisory Committee process.

The transport modelling of the *Project Case* was subject to extensive review through the EES Traffic and Transport Impact Assessment, and the Minister's Assessment ultimately concluded that ***'I support the Independent Advisory Committee's finding that the transport modelling undertaken to underpin the assessment of operational transport effects is adequate for this phase of the project'*** (notwithstanding some areas of further assessment discussed in the following section).[20] Given the outcome of that assessment, the SRL East EES Project Case has been adopted as the foundation or 'Baseline Scenario' for this report's assessment, and including its recommendations which inform the Monash Structure Plan.

Further discussion of the previous EES Traffic and Transport Impact Assessment, including future growth forecasts, in comparison to, as well as their relative suitability for use as part of precinct planning is more in Section 4.3.

3.5 EES further assessment requirements

In addition to the EPR's outlined in Section 3.2, the Minister's Assessment[21] for the EES included additional specific matters for further assessment as part of the planning for the SRL East Project. These matters include those related to the SRL East Project and some related to wider precinct matters.

The key transport-planning related matters for further assessment are summarised in Table 3.2 which identifies how these are being addressed by SRL East.

Note this report is focused on the wider precinct matters that relate to Monash as part of structure planning, not matters related to the SRL East project scope.

TABLE 3.2 MINISTER'S REQUIREMENTS FOR FURTHER CONSIDERATION – MONASH

MATTERS FOR CONSIDERATION	SRL EAST PROJECT SCOPE	WIDER PRECINCT PLANNING (THIS REPORT)
Modelling • Refinements to the EES modelling will be required over time to optimise the benefits of the project including sensitivity testing.	✓	✓
Parking – Monash: • No commuter car parking is considered acceptable. • Consult with relevant road management authorities on reinstating parking impacted as a result of the project works.	✓	
Bus interchange – Monash • Relocation of the bus interchange closer to the station entry.	✓	
Active transport – Monash • Undertake assessment of cycle flows and pedestrian flows into Monash University's Clayton campus to inform need for works in the campus, location of the station entry and design of Normanby Road / Scenic Boulevard / Howleys Road intersection.	✓	

Section 1.5 provides details of the consultation and assessments completed to address the identified areas of further assessment by the Minister, required as part of future precinct planning following the EES.

[20] *Minister for Environment and Climate Action, SRL East Minister's Assessment under Environment Effects Act 1978 (2022) p. 29*

[21] https://www.planning.vic.gov.au/__data/assets/pdf_file/0026/651905/SRL-East-Ministers-assessment.pdf

4 Transport ambition for Monash

4.1 Overview

The areas surrounding the new SRL stations will attract significant investment, creating new local employment and housing opportunities, driving population and employment growth and land use changes.

To support Monash's future role as an attractive place to live, work and/or establish businesses, the structure planning for Monash needs to:

- Support the delivery of housing, jobs, services, and amenities in the right locations for new and existing residents, workers and visitors
- Enable infrastructure investment across transport, education, health, open space and other amenities.

A set of transport ambitions and goals common to all SRL East Structure Plan Areas were developed to help the Vision for each Structure Plan Area and surrounds, and to inform the Structure Plans.

The SRL East Structure Plans will identify how the five key themes of Boosting the Economy, Enriching Community, Better Connections, Enhancing Place and Empowering Sustainability will be delivered in the Structure Plan Area and set objectives, strategies and actions to realise the Vision for the area.

The areas surrounding the new SRL stations will attract significant investment, creating new local employment and housing opportunities, driving population and employment growth and land use changes.

This section also compares the baseline with the Monash Structure Plan's land use.

4.2 Transport ambition and goals

The population, job and traffic growth demands will require proactive management in order to realise the full potential of SRL East. The transport ambition provides a foundation for managing the growth in Monash, as stated below in Figure 4.1.

FIGURE 4.1 TRANSPORT AMBITION FOR MONASH

From the transport ambition, a set of transport goals and modal principles were developed to support the Vision for Monash. The development of these goals and modal principles considered the existing transport challenges, gaps and opportunities.

The transport ambition and goals should be considered with the Vision and themes outlined in the Monash Structure Plan, which address requirements such as those in the Transport Integration Act 2010 (Vic). The development of the Structure Plan and this report has collectively informed the infrastructure and non-infrastructure recommendations to achieve the transport ambition and providing better transport choices.

The transport goals are listed and explained in Table 4.1.

TABLE 4.1 TRANSPORT GOALS

GOAL	EXPLANATION
A safe and connected walking and cycling environment	Walking and cycling[22] will serve as the most convenient, safe and enjoyable means of travel in the neighbourhoods around each SRL station.
A revitalised bus experience	In line with Victoria's Bus Plan, help change people's perception of buses. Provide a passenger-focused bus service, making road-based public transport a competitive, attractive and convenient choice.
An all-inclusive transport network	Ensure transport is accessible to people of all ages, abilities and genders.
Anchoring sustainable travel services and shared mobility to SRL East	SRL East stations are seamless integrated hubs, allowing quality interchanges between sustainable travel modes.
Prioritising safe and healthy movement	In line with Victoria's Road Safety Strategy 2021-2030, the transport network becomes safer for all, particularly vulnerable users. Uptake in walking and cycling contributes to an increase in daily physical activity.
Smart and efficient use of parking	Parking management needs for all users, with a strong emphasis on providing for the needs of bike and micromobility users. Car parking spaces will be managed and used to maximise their effectiveness while considering impacts on the urban realm.
Enable new and emerging innovative mobility	Neighbourhoods around each SRL station will enable emerging and innovative mobility to provide more and convenient choice, especially for shorter to medium distance trips..

4.3 Future population and employment growth

The population and employment forecasts for the Monash Structure Plan Area are shown in Figure 4.2. The resident population is forecast to increase from 10,000 in 2021 to 17,900 residents by 2041. The worker population is forecast to increase from 20,900 to 50,000.[23] With more people living and working in Monash, the SRL station will become a focus point for movement.

FIGURE 4.2 POPULATION AND EMPLOYMENT GROWTH WITHIN THE STRUCTURE PLAN AREA

[22] *Walking and cycling represent the action of moving as a pedestrian or cyclists, whether or not someone is walking or cycling unaided or using any kind of wheeled mobility aid, including cycles, scooters, wheelchairs, mobility scooters, walking frames, prams or buggies.*

[23] *AJM (2025), Economic Profile – Monash*

While the future development projections within the transport model for the Baseline Scenario[24] are consistent with the Structure Plan overall, the Structure Plan has redistributed growth within Monash compared to the model input:

- Greater diversity of land uses near the SRL station at Monash, particularly within the boundaries of Ferntree Gully Road, Blackburn Road, Normanby Road and just west of Howleys Road to support higher density commercial uses, supported by a mixed-use town centre

- Higher concentration of housing along arterial roads, such as Blackburn Road, Wellington Road and Princes Highway, and increased housing intensity in existing residential neighbourhoods east of Blackburn Road, south of Wellington Road and between Clayton Road and Monash University's Clayton campus

- Increased employment intensity, particularly commercial and industrial developments, in areas that benefit from existing commercial functions, particularly within the south-east and north-west of the Structure Plan Area.

The consistency of the input scenarios for the EES and structure planning reaffirms the adoption of the Project Case in the EES Traffic and Transport Impact Assessment as the Baseline Scenario is appropriate.

4.4 Summary and implications

The transport ambition for a growing Monash is to encourage as many of the additional trips expected to be undertaken by active transport or public transport. This includes providing a local transport network to facilitate 20-minute neighbourhoods, and the transport goals have been set towards achieving this ambition.

Monash will need to evolve so that while its people and employment intensity increases, growth is managed through sustainable and active transport, while maintaining car access via the existing arterial road network. The transport network will need to evolve so that residents, workers and visitors have better travel options and experiences on active and public transport to manage increased movements to, from and within Monash.

This vision has set the basis for the development of the transport recommendations as part of the 'vision and validate' approach. A comparison of the Structure Plan's land use forecasts with those in the Baseline Scenario has found it is an appropriate basis to apply the vision and validate approach. This approach allows the transport ambition and goals for Monash to be at the centre of the recommendations in this report, enhancing connectivity and considering benefits to the economy, community, place, and sustainability.

[24] *The Baseline Scenario is based on the EES Traffic and Transport Impact Assessment (2021). See Section 3.4 for more information.*

5 Future transport demands

5.1 Overview

Given the transport ambition to manage the growing number of transport trips by encouraging the use of sustainable transport modes, this section presents the approach to set an appropriate mode share target. It considers the potential for transport choices to better meet the Structure Plan and transport ambition by:

- Determining the number of trips generated given the land use
- Understanding, at a broad level, where these trips started and ended (trip distribution)
- Developing a mode share target by considering which trips could change from one mode to another given land use and travel patterns.

This mode share target was then justified through benchmarking with comparator suburbs. Using the Baseline Scenario as a starting point (see Section 3.4 for more details), this was undertaken by assessing how travel choices and the mode share may further change with improvements to sustainable modes of transport (active and public transport) that address the challenges and gaps.

Analysis is based on the primary mode[25] for trips to, from and within Monash (through-trips are not included).

5.2 Trip generation

The number of trips to and from Monash is primarily influenced by the land use plans and population and employment forecasts. A resident population of 17,900 and a worker population of 50,000 people by 2041 is forecast in the Monash Structure Plan Area. As shown in Figure 5.1, this results in about 30,000 trips in the morning peak hour and 35,000 trips in the evening peak hour beginning, ending, or being entirely within Monash.

There is a greater proportion of trips into Monash (attraction) during the AM peak hour, which is primarily driven by employment land uses. Trips from Monash (production) are lower and driven by residential land uses (see Figure 5.1). Meanwhile, in the PM peak hour, the trip production is higher than attraction, with the main source of trips being people returning home from work. The overall number of trips in the PM peak hour is higher than the AM peak hour due to increased levels of retail and leisure trips in the PM peak hour.

[25] *Refers to the main mode of travel used by an individual traveling to/from Monash. For example, a trip comprising of walking to/from a public transport facility and using public transport would be classed as a public transport trip.*

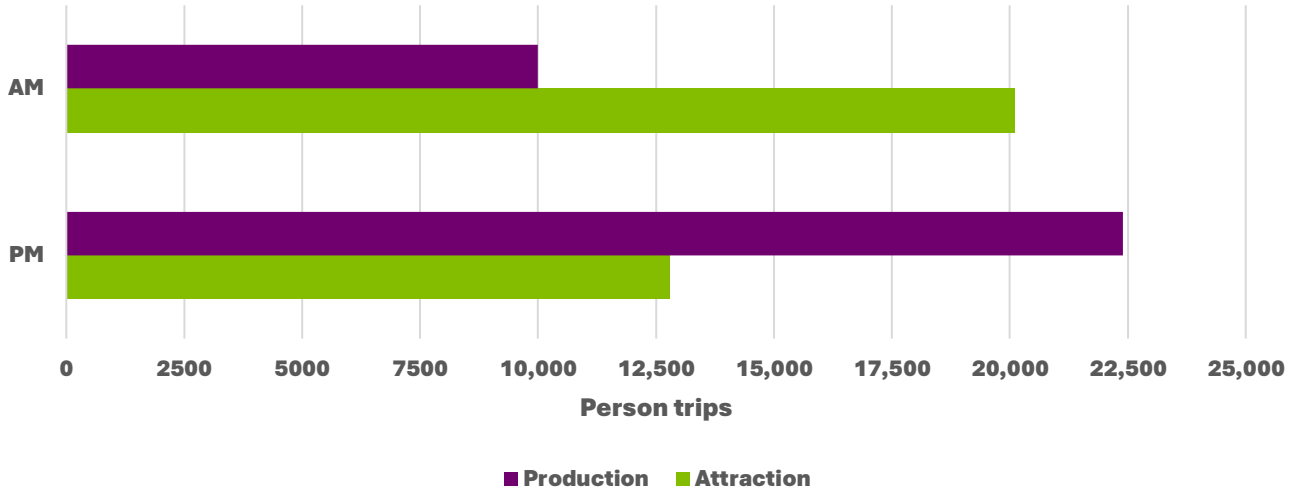


FIGURE 5.1 MONASH TRIP PRODUCTION AND ATTRACTION (AM AND PM PEAK HOUR 2041) (SOURCE: VITM)

5.3 Trip distribution patterns

Trip distribution patterns have been provided based on the AM peak. The general trends for the AM peak are also representative of the PM peak.

The distribution of trips shows the majority of trips to and from Monash are located within the local area or surrounding suburbs (approximately 5 kilometres[26]) amidst a broad catchment that spans the inner and eastern Melbourne Metropolitan area (Figure 5.2).

Surrounding areas which generate and attract notable trips include Mulgrave, Oakleigh East, Glen Waverley, and Deakin University. However, these represent a relatively small proportion of trips compared to internal trips within Monash. Outside Monash and surrounding areas, no individual area appears to generate or attract a substantial share of overall travel demand.

[26] *Qualitative assessment of Figure 5.2 shows the majority of areas with high levels of trips occur within approximately 5 km radius of Monash).*

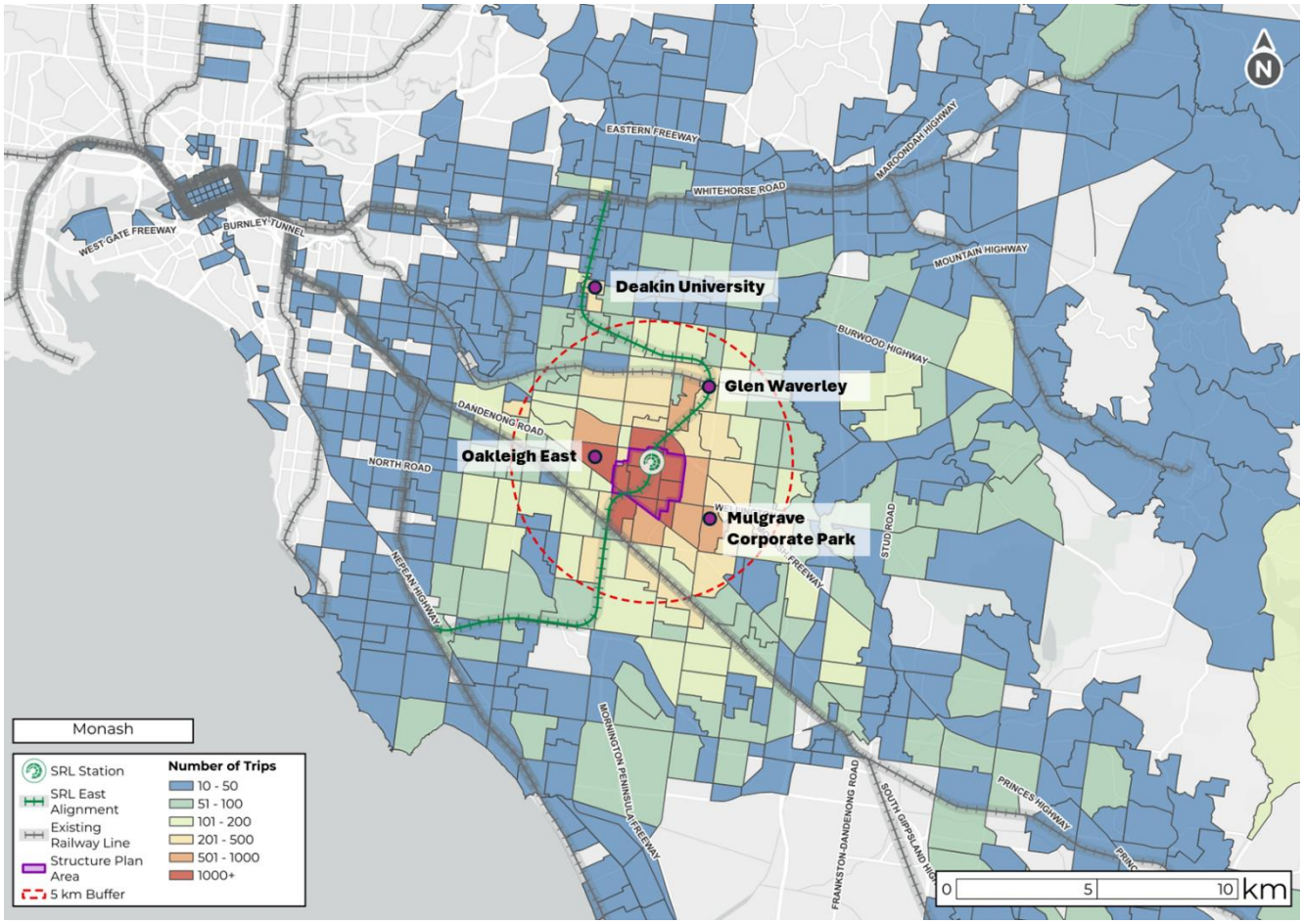


FIGURE 5.2 TRIP DISTRIBUTION – ORIGIN AND DESTINATION OF TRIPS TO AND FROM MONASH (AM PEAK 2041)

Based on the data in Figure 5.2, a summary of key areas and corridors (Figure 5.3) shows that approximately 50 per cent of trips to and from Monash are from within Monash itself and surrounding suburbs. Trips outside Monash and surrounding suburbs which potentially could be undertaken by a single seat trip on the SRL East rail corridor account for a further 5 per cent of trips.[27] The remaining 45 per cent of trips are from elsewhere across Metropolitan Melbourne. The assessment focuses on the 55 per cent of trips in the Structure Plan Area, surrounding suburbs, or along rail corridors as having potential to use public and active transport.

[27] *Based on trips which are potentially within an 800 m walk of a train station. SRL East includes six stations.*

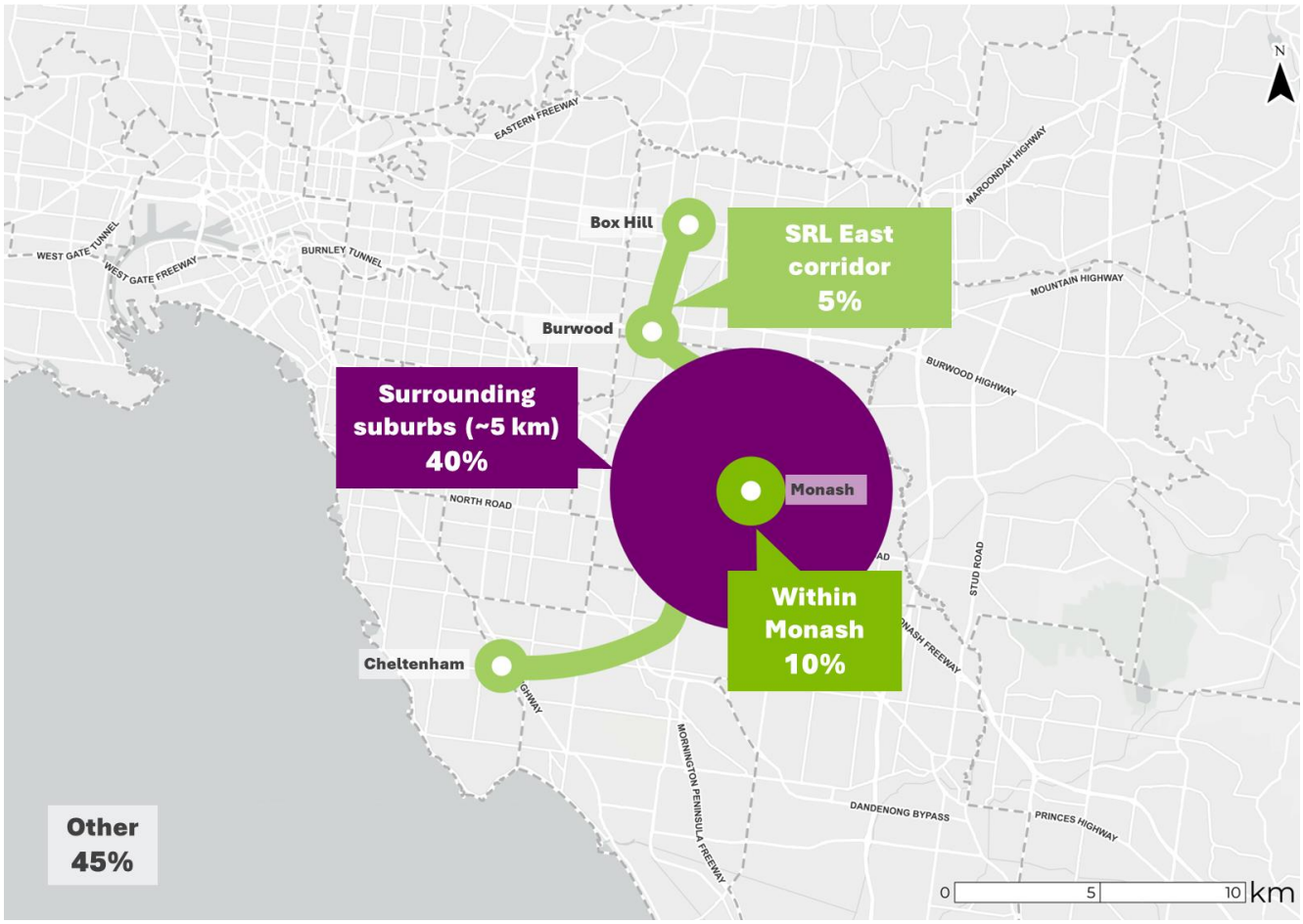


FIGURE 5.3 TRIP DISTRIBUTION – KEY AREAS AND CORRIDORS FOR TRIPS TO AND FROM MONASH (AM PEAK 2041)[28]

The ability to switch trips to sustainable modes will depend on improvements made to those modes, in addition to the shift achieved through increased land use density and road network congestion. For example, for public transport to be used for a wider variety of trips, such as weekend shopping trips, the frequency of services would need to be made sufficiently attractive. For cycling to be a viable option for carrying cargo, bicycle lanes and parking would need to be designed to support larger bicycles. The other 45 per cent of trips may benefit from the recommendations of this report, but have not been assumed in the mode share target given they are likely more reliant on broader public transport changes that are beyond the scope of the SRL East Precinct Structure Planning project.

Assessment of the Baseline Scenario mode share by distance (Figure 5.4) shows the opportunity to increase sustainable transport mode share through the shift of short distance private vehicle trips.

28 For the purpose of understanding strategic trips all percentages have been rounded to the nearest 5 per cent. Where overlap occurs between the 5 km area and rail corridors, trips have been allocated to the 5 km area. Trips along the rail corridors do not account for trips interchanging from other lines (i.e. only direct (single seat) trips have been included).

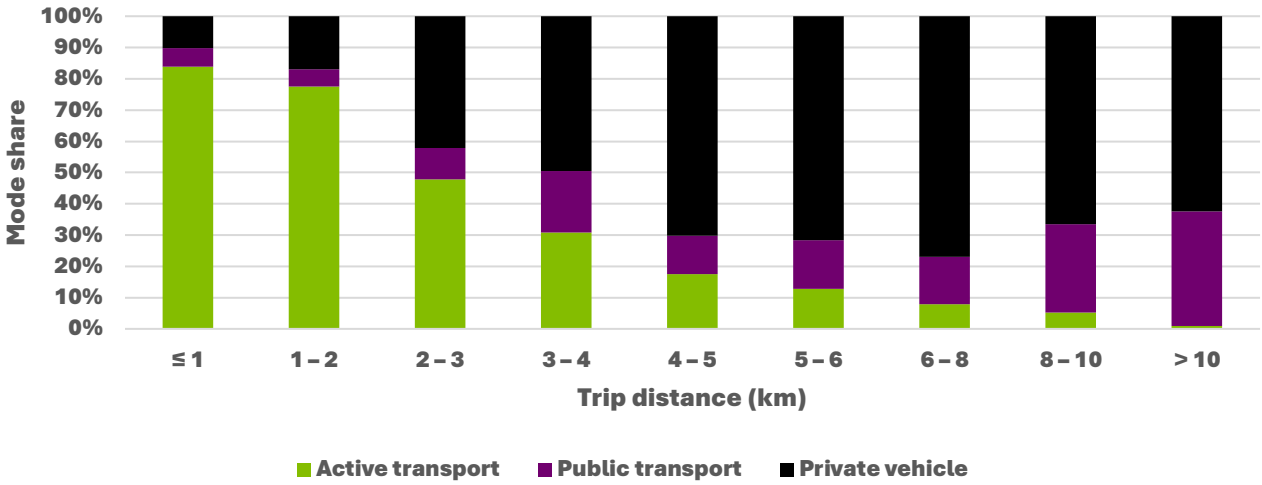


FIGURE 5.4 MODE SHARE BY DISTANCE TO MONASH (BASELINE AM PEAK 2041)

In particular, for trips of 2 to 3 km in distance over 40 per cent are forecast to be undertaken by private vehicle, which could readily be undertaken by active or public transport to the Structure Plan Area. There is also a significant proportion of trips to and from surrounding suburbs (less than 5 kilometres) that could switch to public and active transport.

5.4 Target mode share

Mode shares are a frequently used transport planning metric to provide a broad sense of how people choose to travel in an area. They are typically presented as the share of person trips by private car, public transport and active transport.

Mode shares provide an indication of the relative attractiveness of the transport modes available in the area. When an area with mixed land uses is served by convenient and frequent public transport and provided with safe, direct and comfortable walking and cycling infrastructure, private vehicle usage tends to be lower as people have the choice to travel in other ways.

Setting a mode share target is useful as it:

- Communicates the future vision for the way that people travel, including the level of change expected from today, and compared to the Baseline Scenario and other areas
- Informs the transport recommendations to achieve this level of change
- Can be measured and monitored through existing processes, such as the ABS census
- Suggests how well the transport system meets the travel needs of the community.

Setting a target for increased sustainable transport mode share in Monash reflects the future higher-density, mixed use, transit-oriented development close to high-quality public transport services. In turn, this means there is greater opportunity for active and public transport compared to suburbs with more limited transport alternatives. In addition, mode share targets also consider that private vehicle trips will increase in volume over the life of the Structure Plan. Targeting increased active and public transport mode share for trips to, from, or within Monash will help maintain strategic road corridors for broader traffic functions across Melbourne.

The trip distribution patterns and trip lengths (Section 5.3) suggest there is potential to achieve a greater mode share shift to sustainable modes in Monash than was estimated in the Baseline Scenario. This is possible due to the shifting of short distance trips to more sustainable modes which is supported by the proposed mix of land uses.

A comparison of the land use and transport characteristics of the six precincts has been undertaken to estimate an appropriate modal split target for each precinct. Monash and Burwood have the lowest Walk Scores, with no access to existing railway stations and little recent land use change. Clayton, Cheltenham and Glen Waverley have similar characteristics, each having an existing railway station and adjacent bus interchange near existing activity centres. There is a similar Walk Score for all three precincts. Box Hill has the highest Transit Score and is served by bus, rail and tram services centred around an activity centre that has undergone the largest scale of development uplift in the last 20 years.

Based on the above groupings, the following targets for have been set to increase the sustainable transport mode share compared to the baseline scenario:

- Burwood and Monash have been set an increase of 20 per cent in sustainable transport reflecting the significant potential for change which is expected to occur closer to the opening of the SRL station. Of this 20 per cent, 75 per cent of those changing modes is allocated to active transport and 25 per cent to public transport.

- Clayton, Cheltenham, and Glen Waverley have been set the highest increase of 25 per cent in sustainable transport because they have a more immediate potential for change. Of this 25 per cent, 75 per cent of those changing modes is allocated to active transport and 25 per cent to public transport.

- Box Hill has been set the lowest increase of 15 per cent in sustainable transport as some mode shift has already occurred with development in recent years. Of this 15 per cent, 75 per cent of those changing modes is allocated to active transport and 25 per cent to public transport.

The primary focus of the sustainable transport mode share increase is the growth in active transport trips supported by the future land uses and short distance trips.

Figure 5.5 shows the future Baseline Scenario (including SRL East) and target mode shares for a typical peak hour[29] for Monash. The target shows a 20 per cent increase in sustainable transport made up of a 26 per cent increase in active transport and a 12 per cent increase in public transport. This illustrates the ability of Monash to manage the growing number of transport trips through more people choosing to walk, cycling and catch public transport as Monash develops.

[29] *Typical peak hour represents the average of the AM peak hour and PM peak hour*.

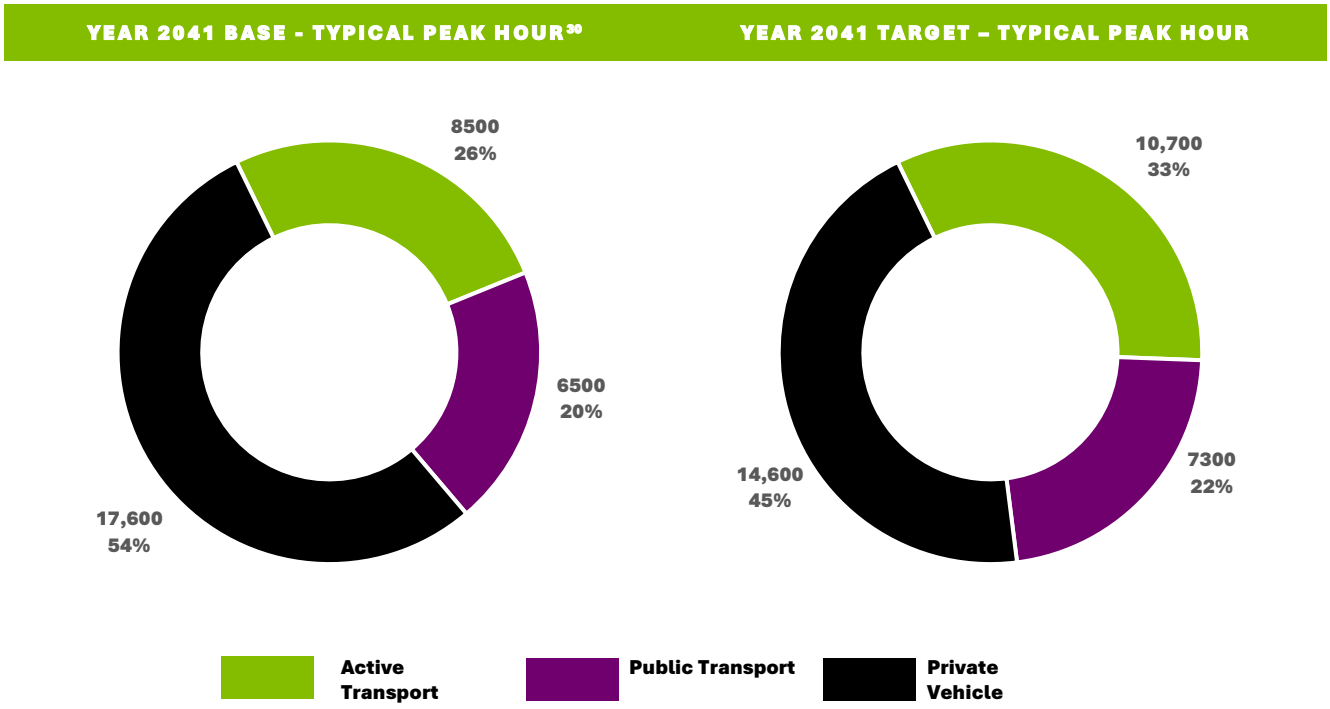


FIGURE 5.5 MONASH MODE SHARES

5.5 Mode share target rationale

To assess the rationale of the mode share target for Monash, the target has been compared to comparator areas in Melbourne.

Assessment of ABS 2016 census data[31] for Greater Melbourne highlights the trend that areas with high population densities (Figure 5.6) typically have lower private vehicle mode shares, driven by factors including the spatial proximity of residential, employment and leisure land uses, as well as assumed or inferred higher degrees of access to public transport services that enable a shift to sustainable travel choices.

Plotting the 2041 Baseline Scenario and target mode share for Monash shows the baseline and target private vehicle mode shares are within the upper and lower bounds of the general trends observed for existing areas with similar residential densities (Figure 5.6).

The mode shares for Monash are shown in Figure 5.6:

- Baseline – upper end of the green bar
- Target – lower end of the green bar
- Purple area indicates the trendline plus the 95 per cent prediction interval.

[30] *Due to limitations in VITM actual active transport mode share may be higher than the baseline forecast due to mixed-used higher density land uses naturally favouring active transport and active transport initiatives from State Government and Local Councils which may occur from now until commencement of SRL East services.*

[31] *2016 ABS Census data considered appropriate for mode share analysis as it is pre-COVID and 2021 is pre-COVID 'normal'. 2021 ABS Census data considered appropriate for car ownership data as on balance 2016 and 2021 data is similar.*

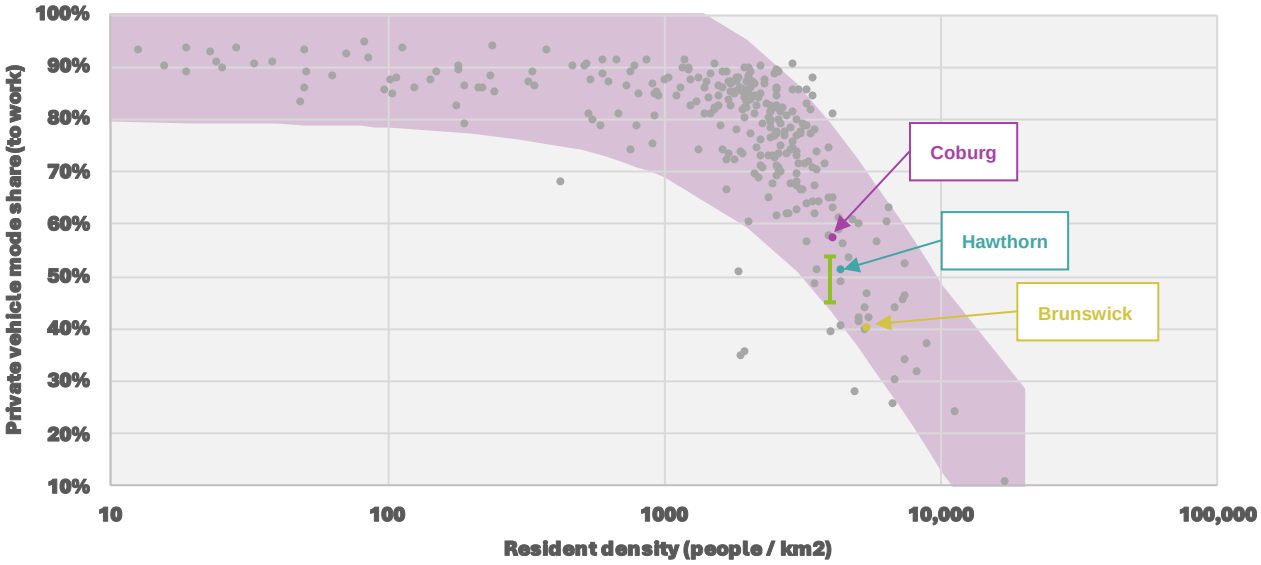


FIGURE 5.6 DISTRIBUTION OF MELBOURNE'S POPULATION DENSITY AND PRIVATE VEHICLE MODE SHARE BY SA2 LEVEL WITH MONASH 2041 MODE SHARE RANGES (SOURCE: ABS CENSUS 2016, JOURNEY TO WORK, PLACE OF USUAL RESIDENCE)

In addition, the future mode shares for Monash have been reviewed against the existing mode shares for various Melbourne areas to understand how they compare against current travel patterns. Areas were selected based on their similar employment and resident density to the Monash of the future identifying potential target mode shares. As shown in Figure 5.7, the private vehicle mode share target for Monash resembles existing mode shares exhibited for areas in Melbourne. These areas reflect an appropriate target given the mix of higher density land uses, range of public transport services available, and quality of the active transport network. It must be noted that the Monash mode target is for 2041 compared to the other areas mode shares surveyed in 2016. It is expected that the comparable areas mode shares will improve by increasing the sustainable transport mode share and therefore decreasing the private car travel in the future.

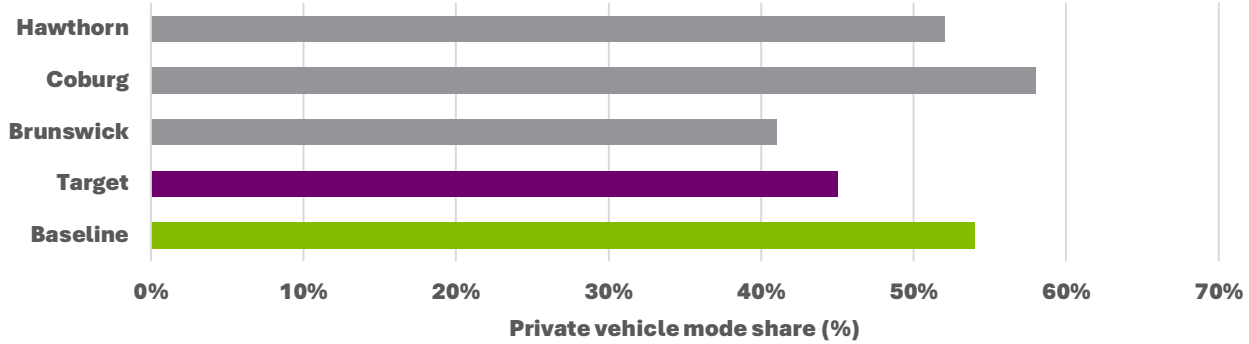


FIGURE 5.7 HIGH-LEVEL BENCHMARKING OF 2041 PRIVATE VEHICLE MODE SHARE TARGETS FOR MONASH (EXISTING AREAS SOURCE: ABS YEAR 2016 JOURNEY TO WORK, PLACE OF USUAL RESIDENCE)

6 Infrastructure recommendations

This section summarises the modal ambitions for the Monash Structure Plan Area, including the modal principles and the corresponding strategic and local modal networks for the Planning Area.

It sets out the transport infrastructure recommendations for the Structure Plan Area for each mode, and details how the recommendations address the transport challenges identified in Section 2, and how they adhere to the modal principles.

6.1 Modal principles and movement networks

6.1.1 OVERVIEW

The modal principles and transport networks that provide the strategic justification to support the future of the Structure Plan Area through the identified infrastructure recommendations are outlined in this section.

GUIDING PRINCIPLES

A set of guiding principles were established for each mode to inform the development of the recommendations which will influence the movement experience throughout Monash. The principles were consolidated from a broader set of network-wide transport principles, which were developed using the DTP-adopted Movement & Place (M&P) classifications. These classifications, which have been specifically applied in the context of the SRL East structure planning, are designed to encourage the use of active and public transport while balancing the competing demands of movement and access in a rapidly evolving urban landscape.

These guiding principles align with the overarching transport ambition and goals set for the SRL East Structure Plan Area. They provided a framework throughout the identification of the proposed infrastructure recommendations, ensuring that the planned developments contribute to a more connected and accessible Monash. By adhering to these principles, the recommendations will help achieve the desired outcomes for mobility, while supporting broader urban planning objectives for Monash. The following sections detail how these principles are applied to achieve an integrated and forward-thinking transport network.

The guiding principles for the SRL East Structure Plan Areas for each mode are provided in the following sections.

MOVEMENT NETWORKS

The DTP-adopted M&P classifications for SRL East structure planning have informed the identification of future strategic and local corridors for each mode.

Strategic corridors connect to destinations with metropolitan and regional significance such as employment and designated activity centres. Strategic modal corridors will provide high-quality connections that prioritise the movement of a particular mode, while still considering the function of other modes along that corridor.

More local links will provide an attractive corridor for moving within Monash and to the precinct core and other local destinations within and around Monash.

The strategic and local walking, cycling, public transport, and general traffic / freight corridors across Monash generally align with M&P classifications in Table 6.1.

TABLE 6.1 STRATEGIC AND LOCAL CORRIDORS AND ASSOCIATED M&P CLASSIFICATIONS

MODE	STRATEGIC	LOCAL
Walking	W1-W2	W3*
Cycling	C1- C2	C3*
Public transport	B1 – B2	B3
Traffic routes	GT1 – GT3 & F1 – F3	GT4*
* Referred to as municipal links or routes in the DTP Movement & Place Technical Appendix (September 2020)		

The strategic and local corridors within the Monash Planning Area for each mode are provided in the following sections.

6.1.2 WALKING

Provide for a vibrant community where walking is the preferred way to get to wherever you need to go locally.

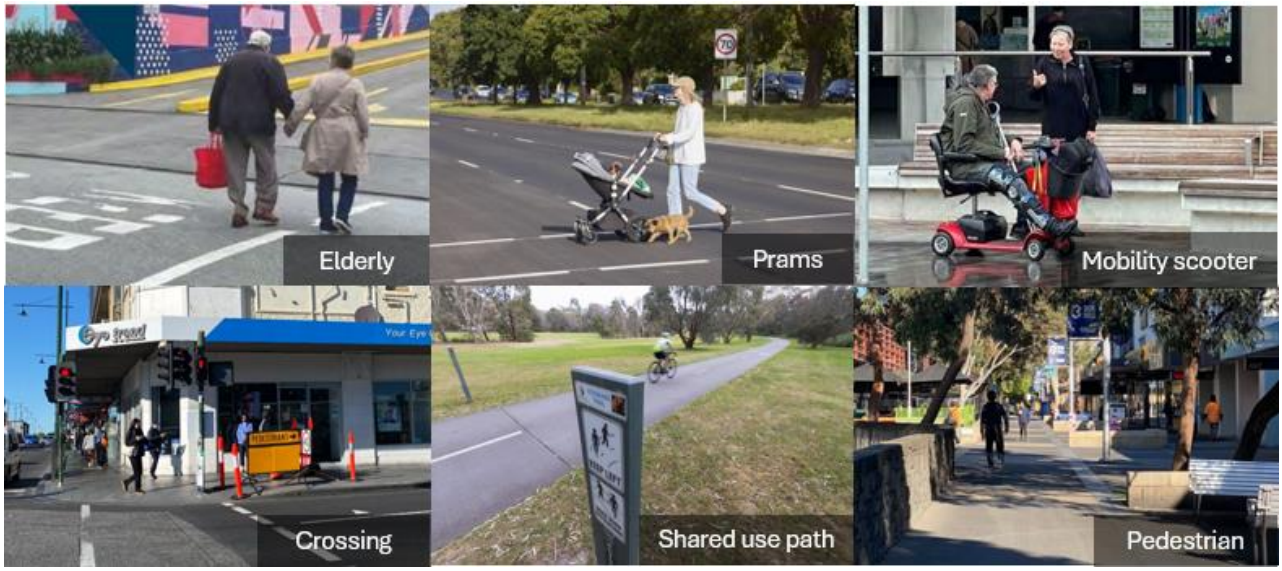


FIGURE 6.1 WALKING USER TYPES AND INFRASTRUCTURE

References to walking in this report include moving as a pedestrian unaided, or using any kind of wheeled mobility aid, such as wheelchairs, mobility scooters, walking frames, prams or buggies as shown in Figure 6.1.

Walking amenity in the Monash Structure Plan Area is of mixed quality. The walking network in Monash University's Clayton campus is excellent and offers wide pedestrian footpaths to walk around safely. However, the arterial roads and footpaths in industrial areas are unattractive to walk on and instead prioritise larger vehicles.

Delivering a desirable pedestrian environment is critical to supporting the sustainability, functionality and liveability of Monash, while offering significant health benefits.

Infrastructure recommendations for corridors that improve priority for walking are provided in Section 6.2.

WALKING PRINCIPLES

As outlined in Section 6.1.1, a set of guiding principles were established to inform the development of the recommendations that will influence the walking experience in Monash. These walking principles are provided in Figure 6.2. These walking principles align with the transport ambition and goals and provided a framework throughout the development of the infrastructure recommendations to ensure walking formed part of the integrated transport network.

FIGURE 6.2 WALKING PRINCIPLES

WALKING CORRIDORS

Strategic walking corridors connecting destinations with metropolitan and regional significance and local walking corridors moving people around Monash as defined in Section 6.1.1 for the Monash Planning Area are shown in Figure 6.3.

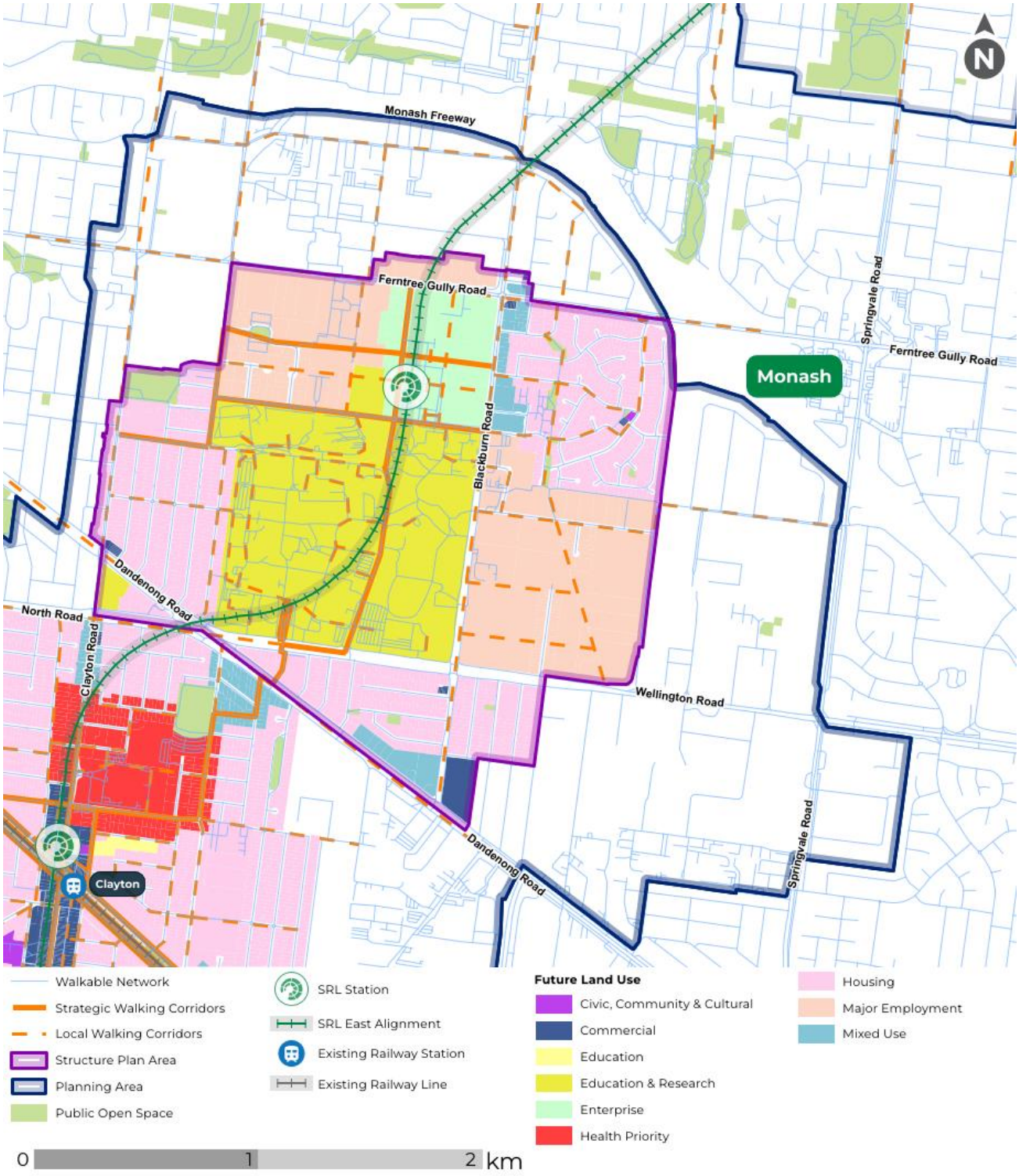


FIGURE 6.3 WALKING CORRIDORS IN THE MONASH PLANNING AREA

6.1.3 CYCLING AND MICROMOBILITY

The SRL East Structure Plan Areas provide world class active transport options. Bikes and other micromobility devices are some of the most attractive options for people to access local shops, schools, workplaces, and public transport facilities for longer journeys.

FIGURE 6.4 CYCLING AND MICROMOBILITY DEVICES

References to cycling in this report include personal mobility devices such as bicycles, scooters and cargo bikes, including electric powered devices.

Cycling connections in Monash largely connect to and within Monash University's Clayton campus, with the James Gormley Bike Arrival Station providing end-of-trip facilities for university attendees. A high-quality shared path along Gardiner Road offers a north-south connection, and a shared path along Blackburn Road between Wellington Road and Normanby Road provides connection to Monash University's Clayton campus. However, outside of this, cycling and micromobility is largely unsupported.

Recommendations for cycling and micromobility aim to support the use of mobility devices of all kinds, allowing everyone to navigate the community safely and sustainably, with the associated health benefits of active transport.

Cycling in the Planning Area will be more available and safer for people of any gender, age, or ability with well-planned and designed on and off road infrastructure which may include provision for cycling separated from other traffic, or providing for cyclists on streets with reduced speeds and with lower traffic volumes, supporting a wider range of devices. Cycling will support an alternative to driving for trips that may be too long for walking and facilitate quick short distance trips.

Micromobility devices such as e-scooters and e-bikes can also be offered as a shared service where anyone can unlock and use a device from a public fleet for a fee. Shared micromobility offers the flexibility and convenience of e-bikes and e-scooters without the need to pay upfront costs or securely store a private device at home or at a destination.

The shared e-scooter trials in the Melbourne, Yarra and Port Phillip municipalities (launched in 2022) have generated significant benefits for the community. The average number of trips per day per e-scooter is 4.3 to 5.5[32] across each quarter of 2023, which is among the highest e-scooter use in the world. For the same 2023 period the average length of e-scooter trips in the trial area ranged from 1.66 to 1.78 kilometres, showing the potential of the mode to assist with modal shift in the 1 to 2-kilometre trip distance bracket identified in Figure 5.4.[32] User surveys have found that around 28 per cent of e-scooter trips in the trial areas replaced a vehicle trip,[33] helping to reduce congestion and contribute to car light living. Despite City of Melbourne's decision to end the trial in their municipality other councils are considering working with the hire scheme operators in the future and private scooter uptake continues to increase in Melbourne. In October 2024, the Victorian Government

[32] https://public.ridereport.com/regions/australia *(Data range captured for each quarter of 2023)*

[33] *Williams, G. (2024, April 4). Making E-scooters Safer [Press release]. https://www.premier.vic.gov.au/sites/default/files/2024-04/240404-Making-E-Scooters-Safer.pdf*

announced that share hire e-scooters will be permanently legalised across Victoria, subject to agreement with councils.[34]

Infrastructure recommendations to improve cycling and micromobility transport in the Structure Plan Area are provided in Section 6.2.

CYCLING PRINCIPLES

As outlined in Section 6.1.1, a set of guiding principles were established to inform the development of the recommendations that will influence the cycling experience in Monash. These cycling principles are provided in Figure 6.5. These cycling principles align with the transport ambition and goals and provided a framework throughout the development of the infrastructure recommendations to ensure cycling formed part of the integrated transport network.

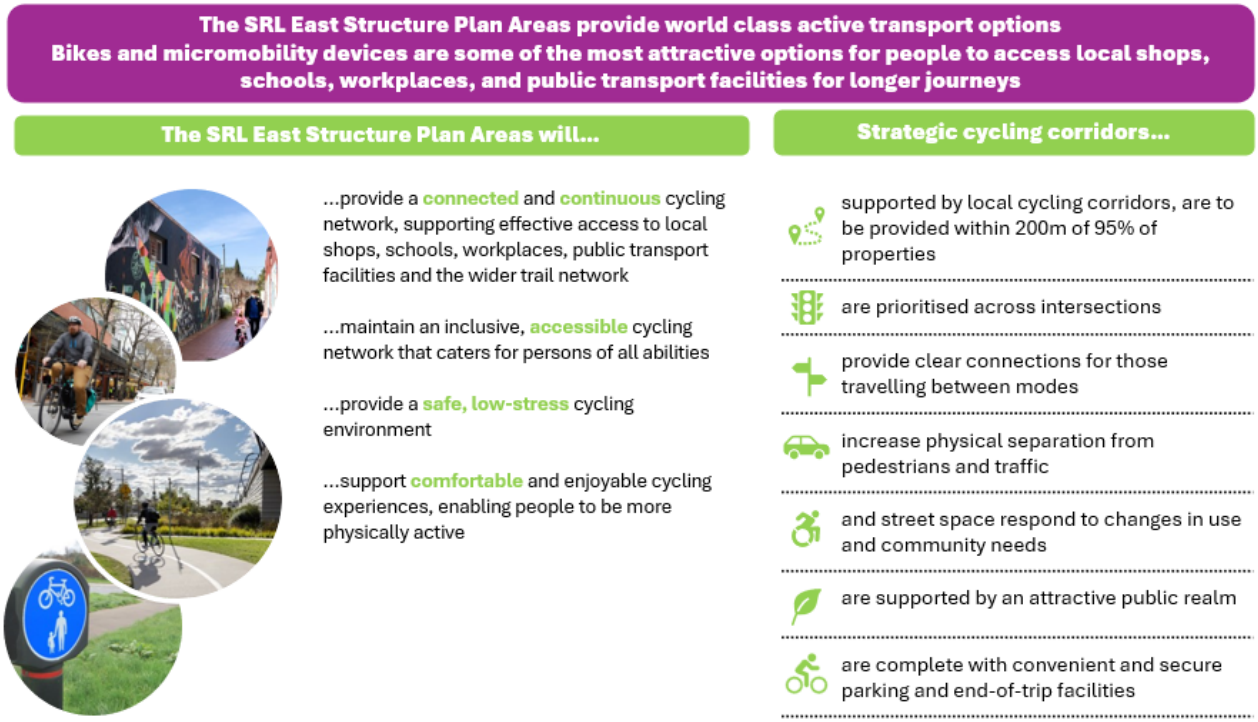


FIGURE 6.5 CYCLING PRINCIPLES

CYCLING CORRIDORS

Strategic cycling corridors connecting destinations with metropolitan and regional significance and local cycling corridors moving people around Monash as defined in Section 6.1.1 for the Monash Planning Area are shown in Figure 6.6.

[34] *Victorian Government (2024). Permanent E-Scooter Rules in Place Across the State. https://www.premier.vic.gov.au/permanent-e-scooter-rules-place-across-state*

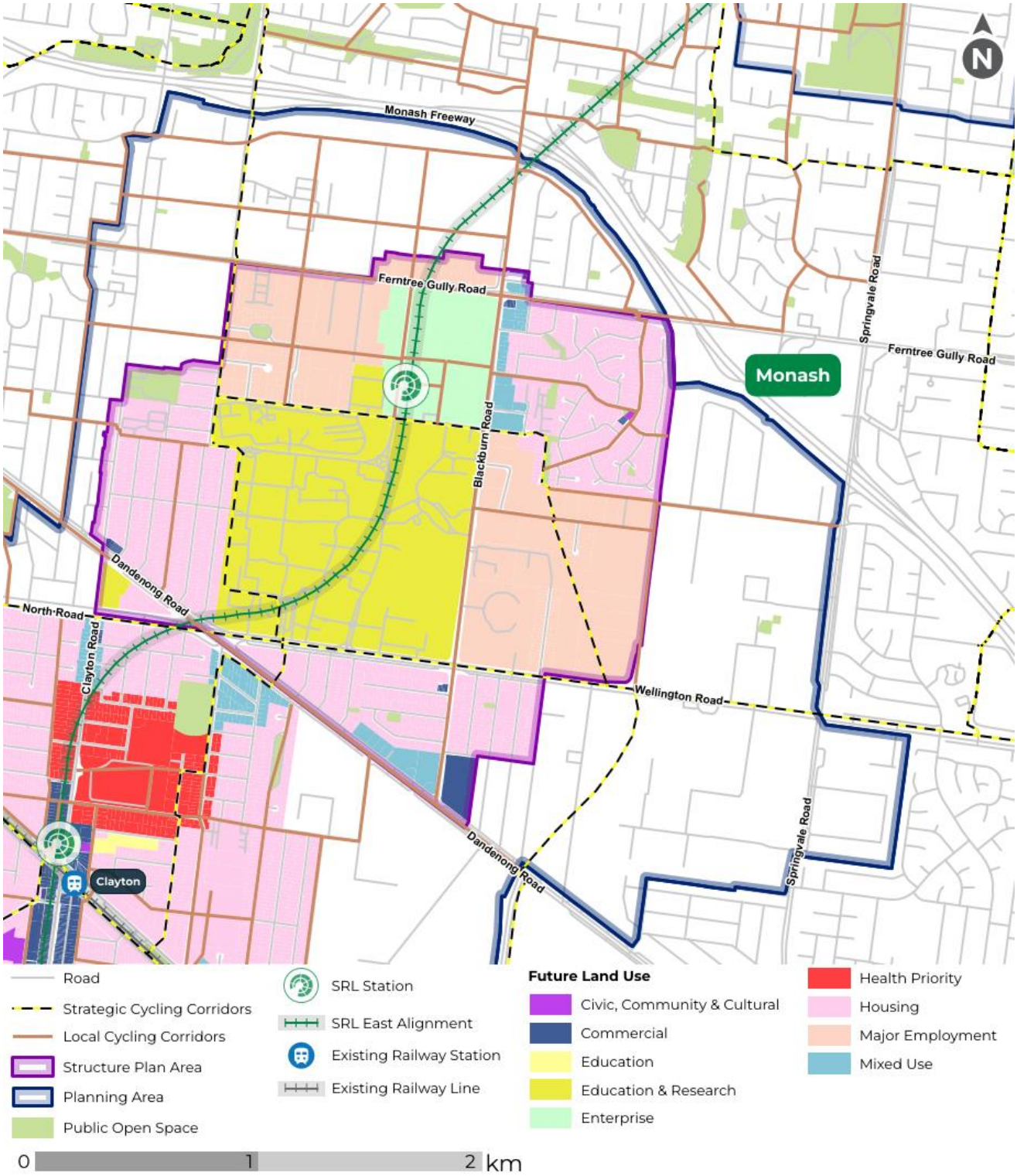


FIGURE 6.6 CYCLING CORRIDORS IN THE MONASH PLANNING AREA

6.1.4 PUBLIC TRANSPORT

Anchored around the new SRL interchanges, public transport is the most attractive option for people to travel distances that are too long to walk, cycle or use other micromobility devices.

FIGURE 6.7 PUBLIC TRANSPORT MODES AT MONASH

Monash is currently serviced by buses with routes that are largely linear with few deviations from arterial roads. Bus routes generally consolidate higher frequency of service along key arterial roads, providing broader metropolitan access to many suburbs across Melbourne's east such as Box Hill, Glen Waverley, Ringwood, Rowville, Dandenong, Cheltenham, Brighton and Chadstone. The bus services also connect to metropolitan railway stations at Glen Waverley on the Glen Waverley line and Clayton on the Pakenham / Cranbourne line. Most bus routes in the area travel through the Monash University Clayton campus Interchange on Wellington Road.

Public transport will be a comfortable and reliable option for travelling when it is not within a comfortable walking distance, is too far to cycle or use micromobility devices, and is an attractive alternative to private vehicle use. In addition to the well-known environmental benefits, public transport is also a good way to increase health benefits through incidental exercise compared to private vehicles, by walking or cycling to stations and stops.

The frequency of bus services within Monash are considered high compared to other areas in greater Melbourne, largely due to direct connections to Monash University's Clayton campus. Most bus routes serving Monash operate with headways of 20 minutes or less during peak periods. Four routes operate with service frequencies of 10 to 19 minutes during peak periods including the 703 SmartBus. Additionally, the 601 shuttle bus between Huntingdale Station and Monash University's Clayton campus operates at a very high frequency with services every 2 to 9 minutes during peak periods.

Bus priority infrastructure is provided on the periphery of the Monash Structure Plan Area including bus-only lanes on each side of North Road, and queue jump lanes at intersections along Wellington Road.

The precinct core will play a vital role for connecting people to all transport services and modes, including the SRL station at Monash. The network of quality public transport corridors will connect across the greater Melbourne metropolitan area.

Infrastructure recommendations to improve public transport corridors are provided in Section 6.2 of this report.

PUBLIC TRANSPORT PRINCIPLES

As outlined in Section 6.1.1, a set of guiding principles were established to inform the development of the recommendations that will influence the public transport experience in Monash. These public transport principles are provided in Figure 6.8. These public transport principles align with the transport ambition and goals and provided a framework throughout the development of the infrastructure recommendations to ensure public transport formed part of the integrated transport network.

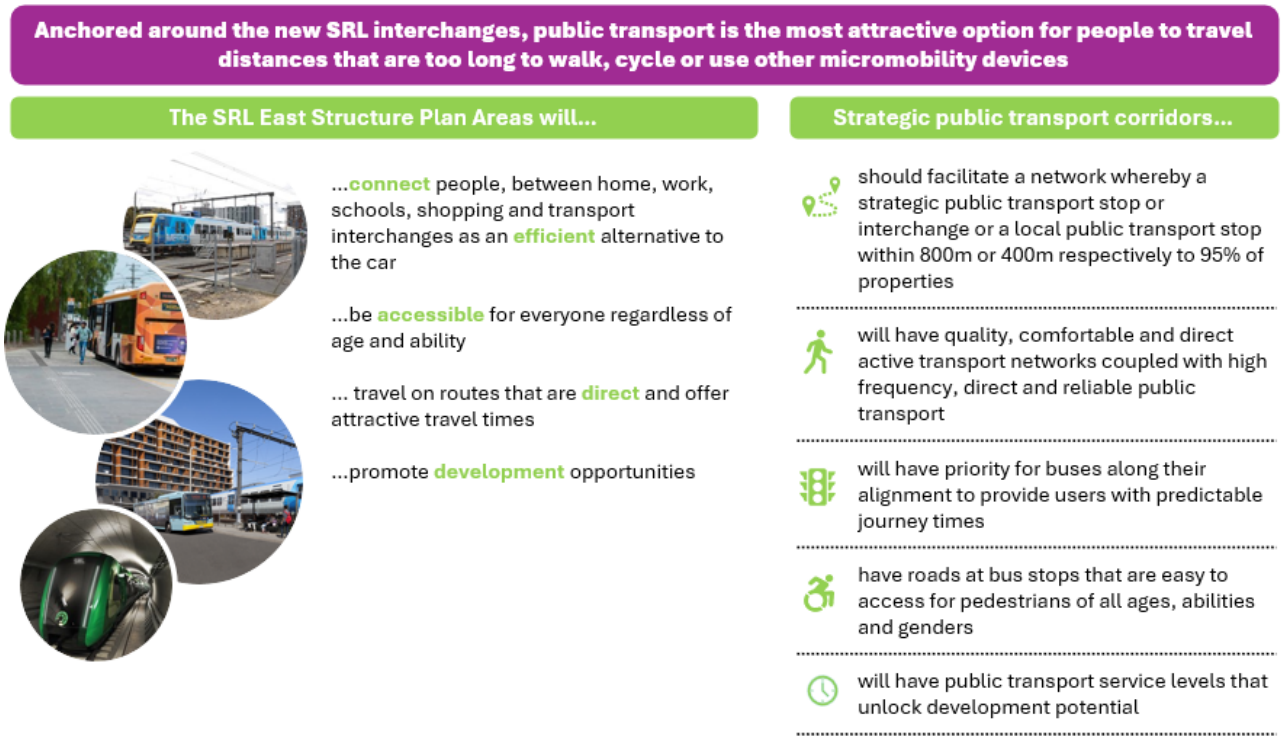


FIGURE 6.8 PUBLIC TRANSPORT PRINCIPLES

PUBLIC TRANSPORT CORRIDORS

Strategic public transport corridors connecting destinations with metropolitan and regional significance and local public transport corridors moving people around Monash are defined in Section 6.1.1 for the Monash Planning Area. SRLA and DTP have worked together to identify these strategic and local bus corridors taking into consideration existing bus routes and the introduction of the new SRLA East Stations. While it is too early to detail specific route changes with the SRLA stations expected to be delivered by 2035.

Figure 6.9 shows the most likely strategic and local corridors identified through this collaboration with DTP.

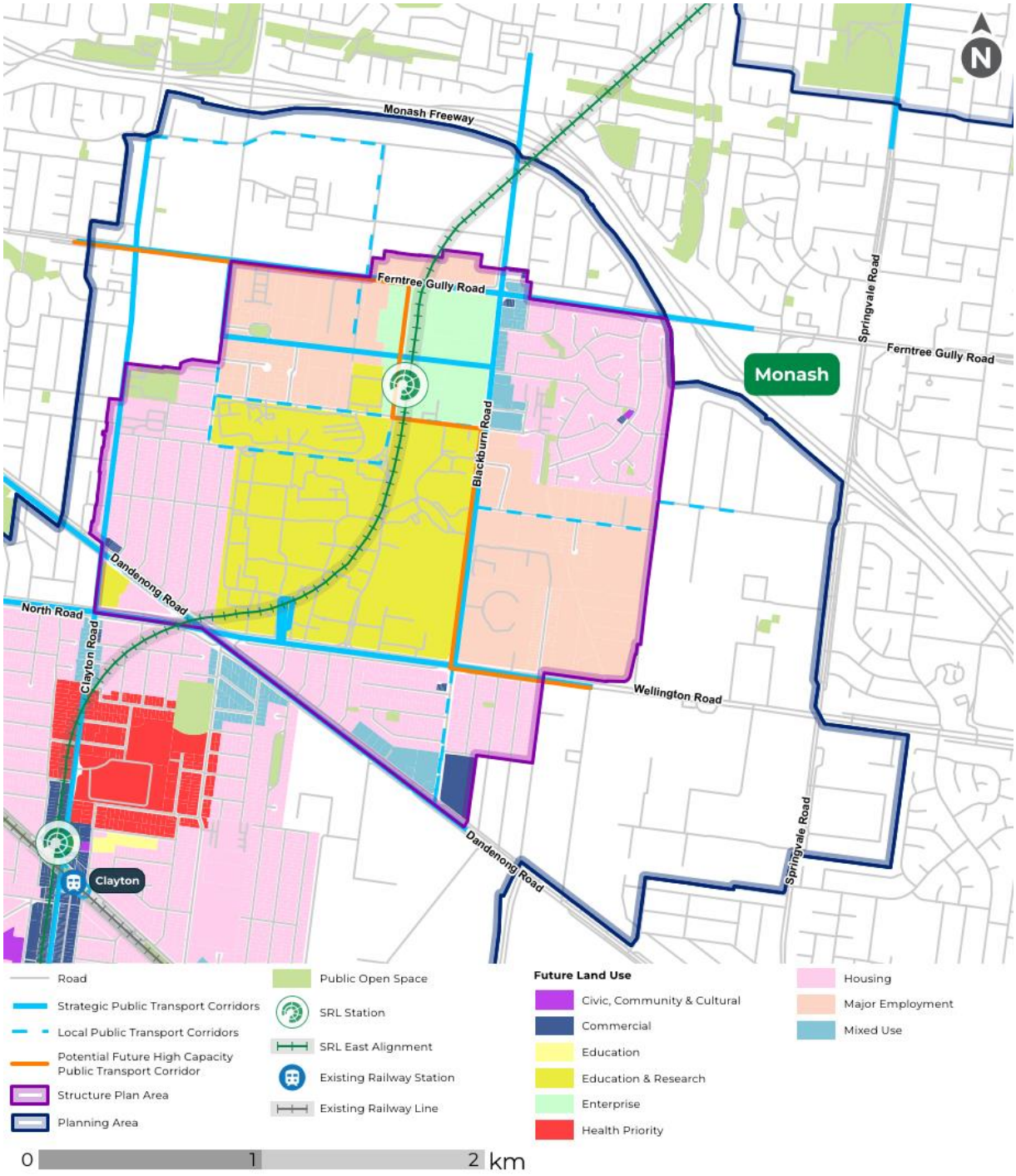


FIGURE 6.9 PUBLIC TRANSPORT CORRIDORS IN THE MONASH PLANNING AREA

6.1.5 GENERAL TRAFFIC AND FREIGHT

A vision of healthy, safe and sustainable communities will be delivered by well-planned strategic access and local neighbourhoods, anchored by the opportunity for people to live car free or car light.

FIGURE 6.10 EXAMPLES OF GENERAL TRAFFIC AND FREIGHT VEHICLES

Monash benefits from access to strategic road routes including Forster Road, Blackburn Road, and Ferntree Gully Road. Protecting arterial road access while increasing priority for other modes particularly in the precinct core will support liveability in Monash for residents, students, workers and visitors. The option of car light living will be achievable in the Structure Plan Area as access to other modes increases and denser mixed land use develops and help to manage congestion on existing road network.

The arterial road network and Monash Freeway are all designated to provide freight access through or to the Structure Plan Area. The Monash Freeway is the primary freight route in the area and forms part of the Principal Freight Network (PFN). Freeway interchanges are located at Forster Road, Blackburn Road and Ferntree Gully Road (west facing), characterising these arterial roads as direct connections into the Structure Plan Area. Blackburn Road is also identified in the PFN as a north-south link.

The extension of Westall Road is interdependent to supporting the transport ambition of Monash and Clayton as it diverts longer distance through traffic (including freight) away from the Clayton and Monash Planning Areas which improves local access and amenity. This extension may result in the removal of the PFN identification on Blackburn Road. Local streets within industrial precincts are designed to accommodate the movement of larger vehicles approaching from the wider freight network.

Freight (including smaller parcels), service and emergency vehicles will need to be appropriately accommodated to support the future growth of Monash. This includes maintaining important freight and emergency access to major land uses within the Monash Health and Education Precinct.

Introducing new freight management practices for the Structure Plan Area through ‘last mile’ policies will impact how new freight tasks are undertaken and influence existing freight tasks for the betterment of businesses and the community.

Providing mobility hubs and implementing Last Mile Freight Plans (discussed in Section 7.2 and Section 7.3) and built form controls will provide measures for managing freight in the Structure Plan Area. Freight management policies prepared in consultation with the City of Monash and partners will introduce new freight management practices and assets to Monash, such as parcel lockers, cargo bikes and small electric vehicle delivery vans to reduce the freight burden on the network and environment.

Infrastructure recommendations that impact general traffic and freight in Monash are provided in Section 6.2 of this report.

GENERAL TRAFFIC AND FREIGHT PRINCIPLES

As outlined in Section 6.1.1, a set of guiding principles were established to inform the development of the recommendations that will influence the general traffic and freight experience in Monash. These general traffic and freight principles are provided in Figure 6.11. These general traffic and freight principles align with the transport ambition and goals and provided a framework throughout the development of the infrastructure recommendations to ensure general traffic and freight formed part of the integrated transport network.

FIGURE 6.11 GENERAL TRAFFIC AND FREIGHT PRINCIPLES

STRATEGIC AND LOCAL TRAFFIC CORRIDORS

Strategic general traffic and freight corridors connecting destinations with metropolitan and regional significance and local general traffic corridors moving people around Monash as defined in Section 6.1.1 for the Monash Planning Area are shown in Figure 6.12.

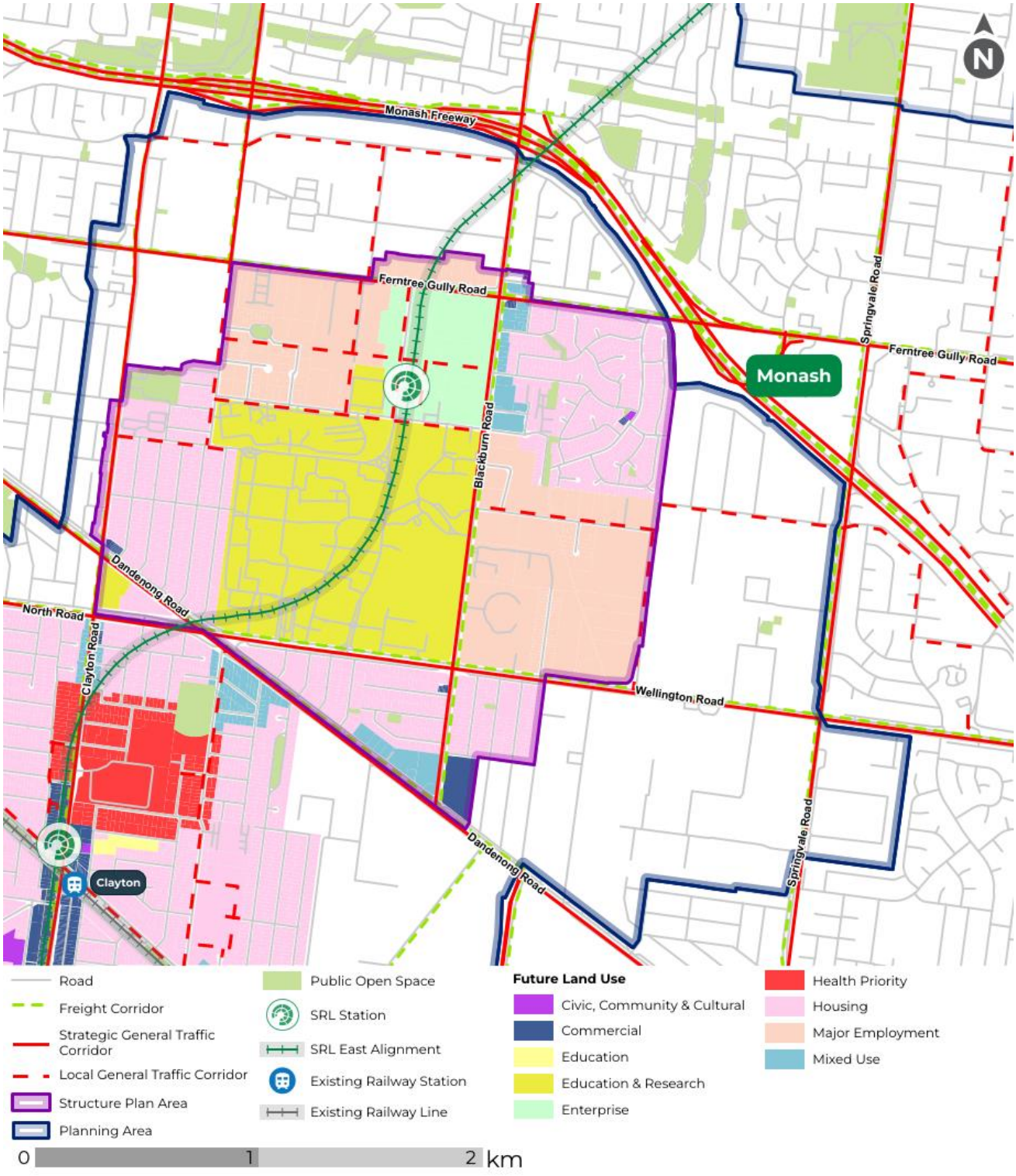


FIGURE 6.12 STRATEGIC TRAFFIC AND LOCAL ACCESS CORRIDORS IN THE MONASH PLANNING AREA

6.2 Infrastructure recommendations summary

6.2.1 OVERVIEW

Infrastructure recommendations have been developed to inform the Structure Plan and help achieve the Monash transport ambition. The sequencing of implementing the recommendations is based on the phases outlined in Figure 6.13 to reflect the anticipated development of the Monash Structure Plan Area.

More details on the timeframes of the delivery of the recommendations are provided in the Monash Structure Plan.

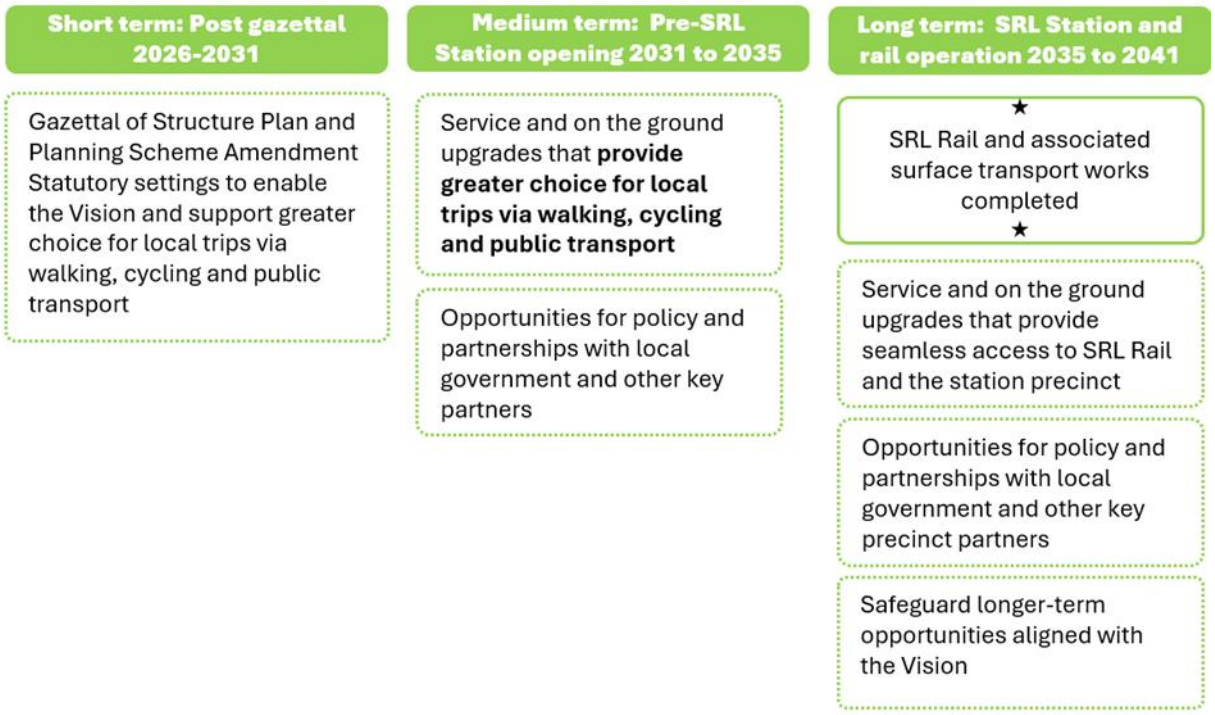


FIGURE 6.13 PHASES OF DEVELOPMENT AND TRANSPORT PLANNING

The infrastructure recommendations focus on upgrades to strategic and local movement corridors that provide the greatest opportunity to provide improvements to facilitate sustainable transport including walking, cycling, public transport and place-making, while maintaining the strategic function of general traffic and freight corridors. These recommendations can be broadly categorised into four groups with recommendation types, as summarised in Table 6.2.

TABLE 6.2 INFRASTRUCTURE RECOMMENDATION TYPES

RECOMMENDATION GROUP	INFRASTRUCTURE RECOMMENDATION TYPES
Setting the priority network	• **New and Upgraded Strategic Corridors** that help achieve the Monash Vision with a particular focus on active and public transport upgrades • Upgraded local **Green Streets**, with a particular focus on general active transport upgrades and support for innovative modes.
Unlocking the priority network	• **New Key Links**, focusing on creating active transport permeability and connecting transport corridors • **Existing streets that require upgrades outside existing road reserves** • **New and upgraded crossings** of busy roads.
Hubs and interchanges integrated with the network	• Upgrades to **public transport interchanges** to enhance the services, facilities, and customer experience • **New bicycle hubs** to encourage active transport to the station.
Enabling the priority network	• Maintaining **strategic traffic and freight corridors** • Designating **low traffic neighbourhoods** • Managing **integrated parking** for all modes.

Figure 6.14 below identifies examples of potential treatments that could be considered when recommendations are progressed into project design and delivery by a delivery agency. Some treatments are particularly relevant to low traffic neighbourhoods (LTN).

FIGURE 6.14 EXAMPLES OF POTENTIAL TREATMENTS

The infrastructure recommendations for Monash have been developed to address the various modal challenges identified across the Structure Plan Area while adhering to the modal principles proposed in this report to ensure the movement network continues to cater for the demand of Monash as it evolves. While responding to some mode-specific challenges, the recommendations intend to facilitate an integrated approach to encouraging a mode shift towards public and active transport whilst maintaining capacity and efficiency for general traffic, particularly on the main roads through Monash.

The infrastructure recommendations for the Monash Structure Plan Area are provided in the following sections.

6.2.2 SETTING THE PRIORITY NETWORK

In setting the priority movement network, identifying specific Upgraded Strategic Corridors and Green Streets is important to providing a network of appropriate and integrated connections through and within Monash to support the transport ambition. The general nature of Upgraded Strategic Corridors and Green Streets are described in Table 6.3.

TABLE 6.3 UPGRADED STRATEGIC CORRIDORS AND GREEN STREET RECOMMENDATION DESCRIPTIONS (SOURCE: SRLA 2024)

RECOMMENDATION TYPE	RECOMMENDATION TYPE DESCRIPTION
Upgraded Strategic Corridors	Upgraded Strategic Corridors are street corridors that require improvements to achieve the transport goals. Changes could include an upgraded active transport corridor and streetscaping, or an upgraded public transport corridor with enhanced priority. Each Upgraded Strategic Corridor is described by an associated infrastructure recommendation that outlines the significant changes to the street cross-section and/or the adjacent land uses.
Green Streets	Green Streets are a collective network of street corridors that are proposed for upgraded pedestrian and cycling connectivity, improved access to important local destinations, and an enhanced tree canopy. The recommended upgrades to Green Streets are high-level, focussing on street typologies rather than unique cross-sections. As such, one infrastructure recommendation covers the upgraded network of Green Streets across Monash.

The identified recommendations for Monash intended to set the priority movement network are detailed in Table 6.4 with the identified corridors and streets in Monash shown in Figure 6.15.

TABLE 6.4 INFRASTRUCTURE RECOMMENDATIONS – SETTING THE PRIORITY NETWORK

REF	SRL EAST RAIL PROJECT APPROVED SCOPE	
1	**Deliver a world class station interchange** Deliver a new world class, integrated station interchange and some local streets that supports the Activity Centre core and prioritises walking, bike and public transport connectivity. *Connected to recommendations 2, 3, 4 and 5*	
REF	**RECOMMENDATION**	**STRATEGIC JUSTIFICATION**
2	**Facilitate the establishment of a new street network** Facilitate the establishment of an urban street network to improve connectivity, prioritise active and public transport, and focus on reducing competing priorities within the pedestrian core. The core of this urban street network is to be delivered by SRL East Rail Project approved scope. *Connected to recommendations 1, 3, 4 and 5*	The current land use at the location of, and the area surrounding the proposed Monash SRL station and precinct core is primarily industrial and business, with little connectivity and permeability for active and public transport modes. The establishment of a new street network in this area will address existing challenges by: • Providing new public transport links to both access the SRL station and provide access to public transport to the area within and around the precinct core • Facilitate land use development potential including providing access to new developments • Prioritising pedestrian and cycling movements and reducing conflict with vehicular traffic on the new street network within and accessing the precinct core • Increasing access and amenity for pedestrians, cyclists and micromobility users to key destinations within the precinct core and the provision of end of trip facilities.
3	**Facilitate Howleys Road upgrades** Facilitate enhancements to Howleys Road as the main multi-modal street with retail, residential community infrastructure and commercial offering. Note, the south section of Howleys Road upgrades is to be delivered by SRL East Rail Project approved scope. *Connected to recommendations 1, 2, 3A, 4 and 5*	Howleys Road will provide a direct connection to the proposed SRL station at Monash and areas surrounding the station The facilitation of upgrades on Howleys Road will address existing challenges by: • Providing new public transport links to both access the SRL station and provide access to public transport to the area within and around the precinct core • Increasing access and amenity for pedestrians, cyclists and micromobility users to key destinations within the precinct core and the provision of end of trip facilities. This recommendation also responds to identified modal principles including to: • Provide access to primary walking destinations.

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
4	**Deliver a new high-quality east-west corridor** Deliver a new high-quality east-west corridor, that is prioritised for active and public transport access, as well as retail and open space opportunities. Note, the central section of this new street is to be delivered by SRL East Rail Project approved scope. *Connected to recommendations 1, 2, 3, 4A and 5*	There are currently significant barriers for active transport and public transport within the industrial and business area between Ferntree Gully Road and Normanby Road to facilitate access to the new precinct core. Enabling the completion of a new east west public and active transport corridor between Gardiner Road through the precinct core to Samada Street at Blackburn Road will address existing challenges by: • Providing an active transport network to facilitate access to and permeability through the precinct core • Providing a high level of safety and amenity for pedestrians and cyclists along the corridor • Facilitating bus service connectivity to the precinct core with high service reliability. This recommendation also responds to identified modal principles including to: • Provide access to primary walking destinations • Provide walking and cycling corridors supported by an inviting public realm, seating, lighting, and trees • Facilitate quality, comfortable and direct active transport networks coupled with high frequency, direct and reliable public transport • Facilitate the provision of a local public transport stop within 400 m of 95% of properties.
5	**Deliver a new north-south active transport corridor** Deliver a new north-south active transport corridor with green space while encouraging key retail uses to activate the street for a vibrant pedestrian core. Note, the south section of this new street is to be delivered by SRL East Rail Project approved scope. *Connected to recommendations 1, 2, 3, 4 and 4A*	There are currently significant barriers for pedestrians and cyclists within the industrial and business area between Ferntree Gully Road and Normanby Road to facilitate access to the new precinct core. Enabling the completion of a new north-south active transport spine through the precinct core will address existing challenges by: • Providing an active transport network to facilitate access to and permeability through the precinct core • Providing a high level of safety and amenity for pedestrians and cyclists along the corridor. This recommendation also responds to identified modal principles including to: • Provide access to primary walking destinations • Provide walking and cycling corridors supported by an inviting public realm, seating, lighting, and trees • Facilitate quality, comfortable and direct active transport networks coupled with high frequency, direct and reliable public transport.

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
6	**Enable upgrades to Blackburn Road and Ferntree Gully Road** Enable upgrades to Blackburn Road and Ferntree Gully Road focused on improved streetscape, pedestrian and bike environment, place, amenity and safety.	Blackburn Road and Ferntree Gully Road form an important part of the strategic bus network and are strategic general traffic and freight corridors, and are expected to form part of the on road high capacity public transport corridor. Whilst functionality for these modes must be maintained, proposed walking and public realm improvements along these corridors will address existing challenges by: • Providing a higher level of safety for pedestrian and other vulnerable street users • Improving the amenity for pedestrians along both corridors and maintaining the connection to the precinct core and public transport hub • Ensuring bus service reliability and performance is maintained. Upgrades along Blackburn Road and Ferntree Gully Road will respond to identified modal principles including to: • Allow walking corridors to be supported by an inviting public realm, seating, lighting, and trees • Provide quality, comfortable and direct active transport networks coupled with high frequency, direct and reliable public transport • Provide priority for buses along their alignment to provide users with predictable journey times • Provide roads at all bus stops that are easy to access for pedestrians of all ages, abilities and genders • Reduce conflict between vehicles and people walking and cycling.
7	**Facilitate north-south active transport links** Facilitate improved north-south connections between Clayton and Monash through direct active transport links.	Princes Highway and Wellington Road currently provides a significant barrier for pedestrians and cyclists between Monash and Clayton Structure Plan Areas, and the key destinations within each. Providing improved north south connections between the precincts will address existing challenges by: • Improving safety and amenity for pedestrians and cyclists crossing between precincts • Increasing accessibility, linking active transport corridors between precincts. This recommendation also responds to identified modal principles including to: • Provide access to primary walking destinations • Walking corridors be supported by an inviting public realm, seating, lighting, and trees • Reduce conflict between vehicles and people walking and cycling.

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
8	**Enable a network of local Green Streets** A broad classification for a collective network of local streets that should be prioritised for improvement due to their significance for sustainable travel and their ability to support pedestrian experience to key destinations (such as recreational facilities, public transport stops and stations and key employment areas), environmental outcomes, and bike and public transport routes.	A network of Green Streets consistent with recommendations in the SRL East Structure Plan - Urban Design Report - Monash will facilitate a low traffic environment with a higher ability to cater for sustainable transport modes. The provision of Green Streets will address existing challenges by: • Improving public amenity to encourage people to walk and cycle the shorter distance trips including to the strategic corridors within Monash • Discouraging general traffic along these streets, contributing to the low traffic neighbourhoods within Monash • Improving local bus stop amenity to be consistent throughout Monash. A network of Green Streets will respond to identified active and public transport modal principles including to: • Reduce conflict between vehicles and people walking and cycling • Allow walking corridors to be supported by an inviting public realm, seating, lighting, and trees • Allow street space to respond to changes in use and community needs • Facilitate the provision of local cycling corridors within 200 m of 95% of properties • Facilitate the provision of a local public transport stop within 400 m or strategic public transport stop or interchange within 800 m of 95% of properties.
9	**Safeguard aspirational modal priorities as per the Movement and Place classifications**	Movement and Place classifications have informed the development of the modal strategic corridors, Green Streets and Strategic Corridors informing a range of the Recommendations in this report. The classifications will also inform future transport assessments and design options as the precinct develops.

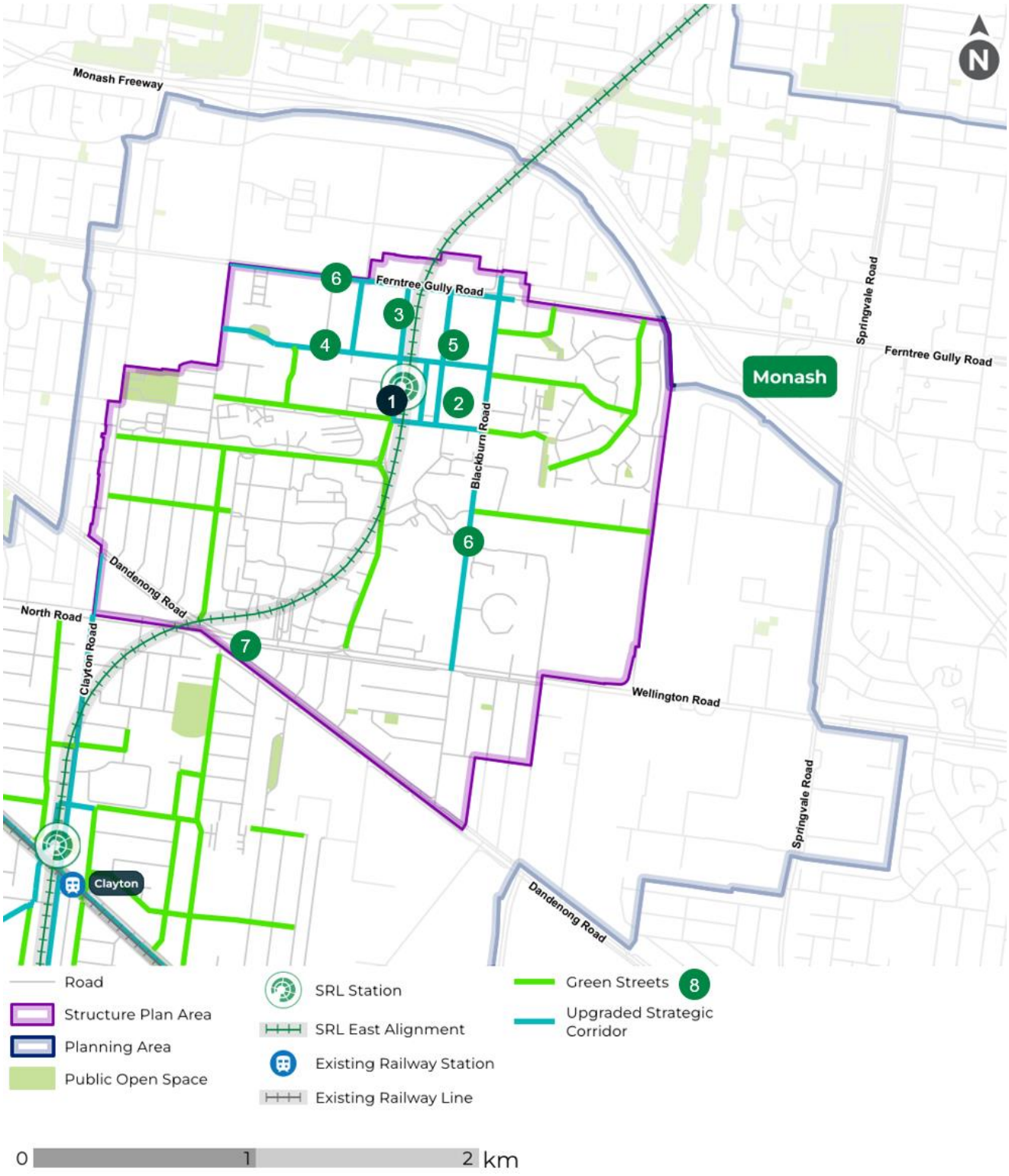


FIGURE 6.15 INFRASTRUCTURE RECOMMENDATIONS – SETTING THE PRIORITY NETWORK

6.2.3 UNLOCKING THE PRIORITY NETWORK

Connectivity through and within Monash is generally hindered by large urban blocks, and major arterial roads. The type of recommendations that aim to address these challenges include the provision of Key Links, upgrading existing roads beyond the existing road reserve, and provision of new and upgraded crossings to enhance active transport connectivity.

KEY LINKS

The increased permeability enabled by Key Links helps to improve the attractiveness of walking by reducing travel times and creating low-stress active transport routes. They also improve the place and amenity value of existing routes. Key Links can be implemented in multiple ways including:

- Fixed Key Link – specific alignment across identified parcels of land requiring access to be created during land development.
- Flexible Key Link – the specific location of the Key Link is flexible and multiple parallel options may be considered. A wider area highlighting the need for increased permeability has been identified.

There are three types of Key Links varied by their importance (critical, important and local). There are only Important and Local Key Links identified in Monash, which can be summarised as:

- **Critical Key Links** are considered essential connections to achieving the Vision for Monash.
- **Important Key Links** provide connection to or between strategic transport corridors.
- **Local Key Links** aim to improve local active transport connections/permeability and place activation.

Critical Transport Projects

For Monash, a network of key important and critical links has been identified as a Critical Transport Project and assessed using the EES road network layout as the base network and building upon it.

An updated assessment of the current EES network was completed which considers the development around the precinct core (bounded by Ferntree Gully Road, Blackburn Road, Normanby Road and Howleys Road) proximate to the SRL station at Monash. This assessment has indicated the EES layout cannot adequately accommodate the additional traffic from the development within the precinct core. Subsequently, further street links will be needed in Monash to support the vision for Monash.

The Critical Transport Project for Monash proposes a grid network of ‘important’ and ‘critical' key streets in addition to the EES layout. This aims to address the shortfalls in multi-modal performance.

Based on the outcomes of the Monash Critical Transport Projects assessment, it is recommended the project is further developed including investigation around bus prioritisation, active transport and with consideration of the On-Road Priority Public Transport corridors. There are also other considerations that aim to support these streets beyond transport including urban design and land use redevelopment.

It is also worth noting this assessment focused on the horizon year of 2041, whereas SRL East is expected to be constructed by the mid-2030s. Therefore, the timing of some of the critical links recommended in this assessment should be in place by the time the SRL station at Monash opens. This will allow for an internal road network to access the station from a multitude of modes such as walking, cycling, buses and general traffic.

As this assessment has not considered any interim years between the existing and 2041, Table 6.5 recommends the timing and justification of each critical link. Further analysis should be undertaken once the land use for the area is confirmed to assist in confirming the timing of each link.

TABLE 6.5 CRITICAL LINK RECOMMENDED TIMING AND JUSTIFICATION

CRITICAL LINK	RECOMMENDED TIMING AND JUSTIFCATION
East-West Street Extension to Blackburn Road / Samada Street	By the opening of the SRL station at Monash to facilitate the movements to/from the new bus interchange
611 Blackburn Road & 352 to 368 Ferntree Gully Road & Partial 16 – 18 Howleys Road	By the opening of the SRL station at Monash to facilitate active transport movements to/from the station from Blackburn Road
North-South Bus Street Extension to Ferntree Gully Road	Early in commencement of development of the areas surrounding the SRL station at Monash
Remainder of 16 –18 Howleys Road	By commencement of development of the areas surrounding the SRL station at Monash

NEW AND UPGRADED PEDESTRIAN AND CYCLE CROSSINGS

Improvements to walking and cycling crossings including new and upgraded intersections and crossings across major arterial roads such as Blackburn Road and Ferntree Gully Road improve priority for active transport users in line with demand, reducing crossing delay. It can also help reduce the frequency of cyclists needing to dismount to cross the road.

Where there is a strong active transport desire line but no crossings across a major road, new crossings in the form of pedestrian-operated signals, cyclist-operated signals, non-signalised crossings, or signalised intersections have been identified.

Similarly, some existing intersections and/or crossings require upgrades to improve active transport connectivity where there is a strong desire line. The upgrades may include minor relocations, public transport integration, improved safety through painted markings or raised wombat crossings, or provision of bicycle lanterns.

The identified recommendations for Monash intended to unlock the priority movement network are detailed in Table 6.6, with the identified links and intersections in Monash shown in Figure 6.16.

TABLE 6.6 INFRASTRUCTURE RECOMMENDATIONS – UNLOCKING THE PRIORITY NETWORK

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
3A	**Critical – Key Links:** Enable delivery of a potential future high-capacity public transport corridor along Normanby Road and Howleys Roads by setting appropriate building setbacks. *Connected to recommendations 3 and 15*	The provision of this critical link will enable strategic public transport connections to the wider NEIC providing access to jobs to the neighbouring suburbs and offering a viable alternative to car travel.
4A	**Critical – Key Links:** Enable delivery of the multi-modal street running east-west, outside of SRL East Rail Project approved scope, by reserving appropriate land to enable the corridor to extend from Samada Street to Gardiner Roads. *Connected to recommendation 4*	The provision of this critical link will enable the completion of the new east west active and public transport corridor between Samada Street to Gardiner Road, with the justification detailed in Recommendation 5.
5A	**Critical – Key Links:** Enable delivery of the Green Street running north-south, outside of SRL East Rail Project approved scope, running by reserving appropriate land to enable the corridor to extend to Ferntree Gully Road. *Connected to recommendation 5*	The provision of this critical link will enable the completion of the new north south active transport corridor with green space between Normanby Road and Ferntree Gulley Road, with the justification detailed in Recommendation 5.
7A	**Critical – Key Links:** Investigate different alignments and design responses to improve north-south pedestrian and bike connections between Clayton and Monash across Wellington Road and Princes Highway/Dandenong Road.	The provision of additional active transport connections across Princes Highway and Wellington Parade will enable the removal of the significant barrier for pedestrians and cyclists between Monash and Clayton Structure Plan Areas, with the justification detailed in Recommendation 7.
10	**Critical – Key Links:** Enable delivery of the urban street network by facilitating landholder-delivery of nominated critical links including transition of Ferntree Place into a public road. *Connected to recommendation 2*	The provision of these critical links including Ferntree Place will help enable the provision of the required urban street network required to support the precinct core, with the justification detailed in Recommendation 2.
11	**Important – Key Links:** Deliver the tools for the responsible authority to facilitate landholder-delivery of Important links. Note, a section of one Important link is to be delivered by SRL East Rail Project approved scope. Refer to Figure 6.16 for Important links (new links and enhanced corridors).	The provision of key links at appropriate locations are primarily intended to increase permeability throughout Monash for pedestrians and cyclists. Providing these **Important key links** will help to address existing challenges by: • Providing more direct access between key destinations or transport corridors for pedestrians and cyclists through larger urban blocks where there is a **higher pedestrian or cycling modal priority.** • Contributing to a better amenity for pedestrians and cyclists • Widening the walkable catchments to public transport nodes and hubs. The provision of **Important key links** will respond to identified modal principles including to: • Improve access to primary walking destinations • Allow walking corridors to be supported by an inviting public realm, seating, lighting, and trees • Reduce conflict between vehicles and people walking and cycling • Facilitate the provision of local cycling corridors within 200 m of 95% of properties • Facilitate the provision of a local public transport stop within 400 m or strategic public transport stop or interchange within 800 m of 95% of properties.
12	**Local – Key Links:** Deliver the tools for the responsible authority to investigate landholder-delivery of Local links. Refer to Figure 6.16 for Local Links (new links and enhanced corridors).	**Local key links** provide a similar function and benefit to the Important key links outlined above albeit at a local level. They may not have the strategic modal priority or demand, however they will address local gaps through the larger urban blocks and facilitate local urban realm improvements and linking open spaces within Monash.

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
		The provision of **Local key links** will respond to the same identified modal principle as the Important key links above.
13	**Facilitate new crossings** Facilitate improved walking and cycling crossings of Blackburn Road, Ferntree Gully Road and Gardiner Road.	There are key roads (Blackburn Road, Ferntree Gulley Road and Gardiner Road) through the Monash Structure Plan Area that provide a high level of strategic access to, from and through Monash, with three requiring improved pedestrian crossings. Providing new or improved crossing facilities at intersections will help address existing challenges by: • Reducing dwell times at crossing points on the arterial roads and hence journey times along pedestrian and cycling corridors • Providing safer pedestrian and cycle access across the busy arterial roads, including to tram stops with improved crossing infrastructure including cycle lanterns • Increasing the walkable and cycle catchments to public transport with more direct and faster access along key active transport corridors. New and improved crossing infrastructure will respond to identified modal principles including to: • Provide safe and convenient crossing locations at intersections and key destinations • Improve access to primary walking destinations • Prioritise cyclists at intersections and increased physical separation from pedestrians and traffic • Reduce conflict between vehicles and people walking and cycling • Provide roads at all bus stops that are easy to access for pedestrians of all ages, abilities and genders.

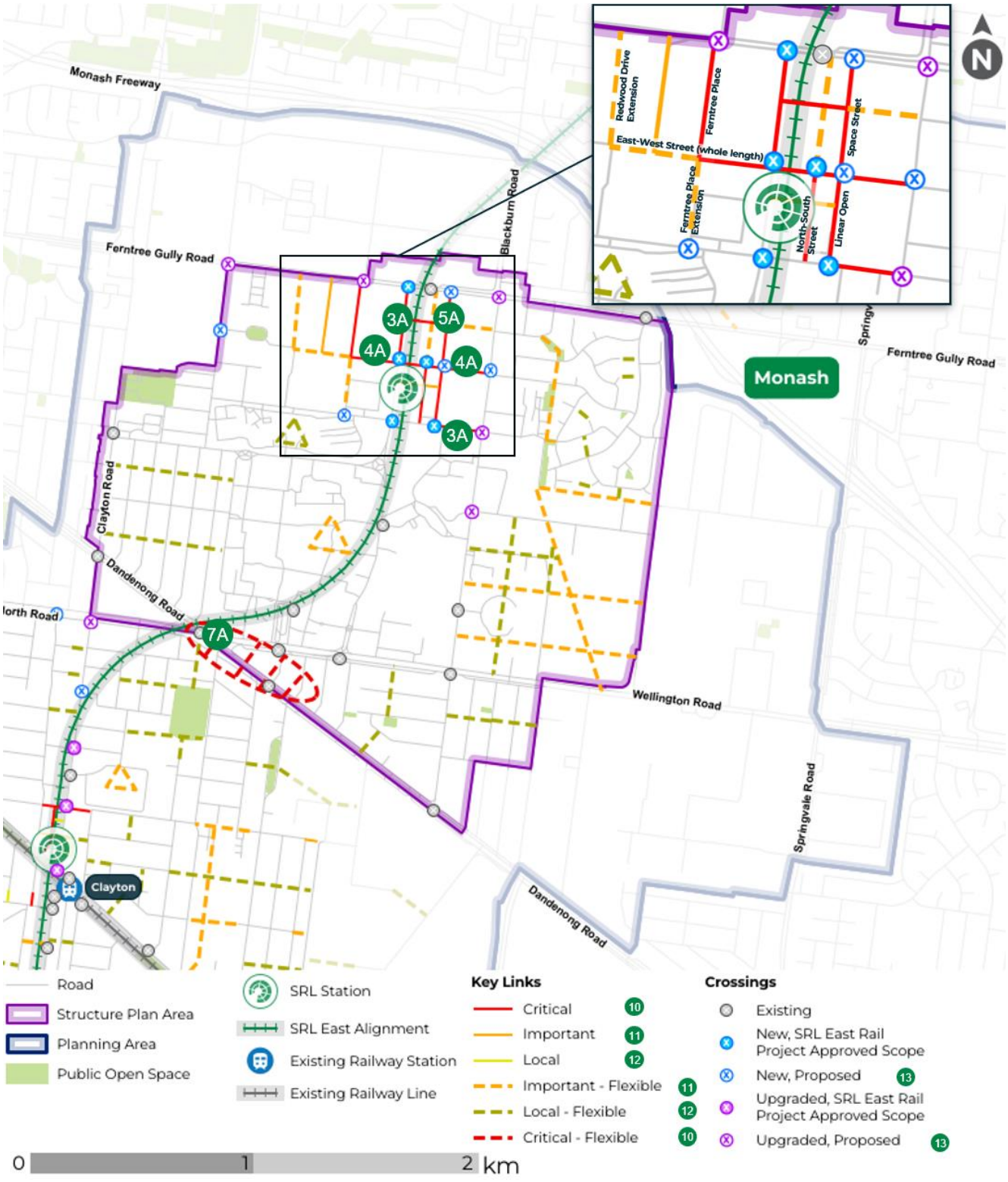


FIGURE 6.16 INFRASTRUCTURE RECOMMENDATIONS – UNLOCKING THE PRIORITY NETWORK

Note: Triangle symbolises link is through significant land holding(s) to be discussed with the land owner.

6.2.4 INTEGRATED INTERCHANGES AND PUBLIC TRANSPORT

Improvements to public transport interchanges provide better accessibility to the public transport network.

In Monash, public transport interchange improvements are the responsibility of the Victorian Government rather than precinct planning include:

- Investigating a potential high-capacity public transport corridor
- Planning for improvements to bus stop infrastructure
- Investigating additional bus priority corridors to support future demand.

Further recommendations that fall under the responsibility of SRL East or the precinct planning include:

- New bicycle hubs are designed to provide users with sustainable transport mode choices for various journey types throughout Monash.

The identified recommendations for Monash intended to integrate hubs and interchanges into the movement network are detailed in Table 6.7, with the identified locations in Monash shown in Figure 6.17.

TABLE 6.7 INFRASTRUCTURE RECOMMENDATIONS – HUBS AND INTERCHANGES INTEGRATED WITH THE NETWORK

REF	SRL EAST RAIL PROJECT APPROVED SCOPE	
14	**Deliver a high-capacity bicycle parking hub at the SRL station** Provide secure parking for 560 bicycles incorporated into the station building to provide convenient interchange with SRL and bus services. Future proof for the bike hub to double in capacity when the demand arises.	
REF	**RECOMMENDATION (OTHER STATE GOVERNMENT AGENCY)**	**STRATEGIC JUSTIFICATION**
15	**Investigate a potential high-capacity public transport corridor** Investigate a potential high-capacity public transport corridor that travels along Ferntree Gully Road, Howleys Road, Normanby Road, Blackburn Road and Wellington Road. *Connected to recommendations 3, 6 and 11A*	The provision of this critical link will enable strategic public transport connections to the wider NEIC providing access to jobs to the neighbouring suburbs and offering a viable alternative to car travel. Ongoing reviews of the public transport network will help to address challenges by: • Improving service reliability and performance on key corridors as demand increases • Identifying potential service efficiency issues with all services through the Monash Structure Plan Area stopping via the SRL station. This recommendation also responds to identified modal principles including to: • Provide priority for public transport along their alignment to provide users with predictable journey times • Provide public transport service levels that unlock development potential.
16	**Plan for a more useable bus network** Plan for the upgrade of bus stop infrastructure, such as reviewing bus stop locations, provision of shelters, hardstands, real time information and wayfinding to provide a quality bus network throughout Monash	Monash is generally well serviced by the current bus network. Upgrading the bus stop infrastructure to provide a high and consistent user experience will help to address existing challenges by: • Improving the existing bus stop waiting areas to prioritising pedestrian safety, DDA compliance, and better amenity • Potentially improving accessibility through the review of bus stop locations and providing better wayfinding towards and at bus stops. This recommendation also responds to identified modal principles including to: • Reduce conflict between vehicles and people walking and cycling • Facilitate the provision of a local public transport stop within 400 m of 95% of properties • Provide public transport service levels that unlock development potential.
17	**Investigate future bus priority** Investigate the need for future additional bus priority corridors as Monash evolves.	Ongoing reviews of the bus network will help to address challenges by: • Improving service reliability and performance on key corridors as demand increases • Identifying potential service efficiency issues with all services through the Monash Structure Plan Area stopping via the bus interchange. This recommendation also responds to identified modal principles including to: • Provide priority for buses along their alignment to provide users with predictable journey times • Provide public transport service levels that unlock development potential.

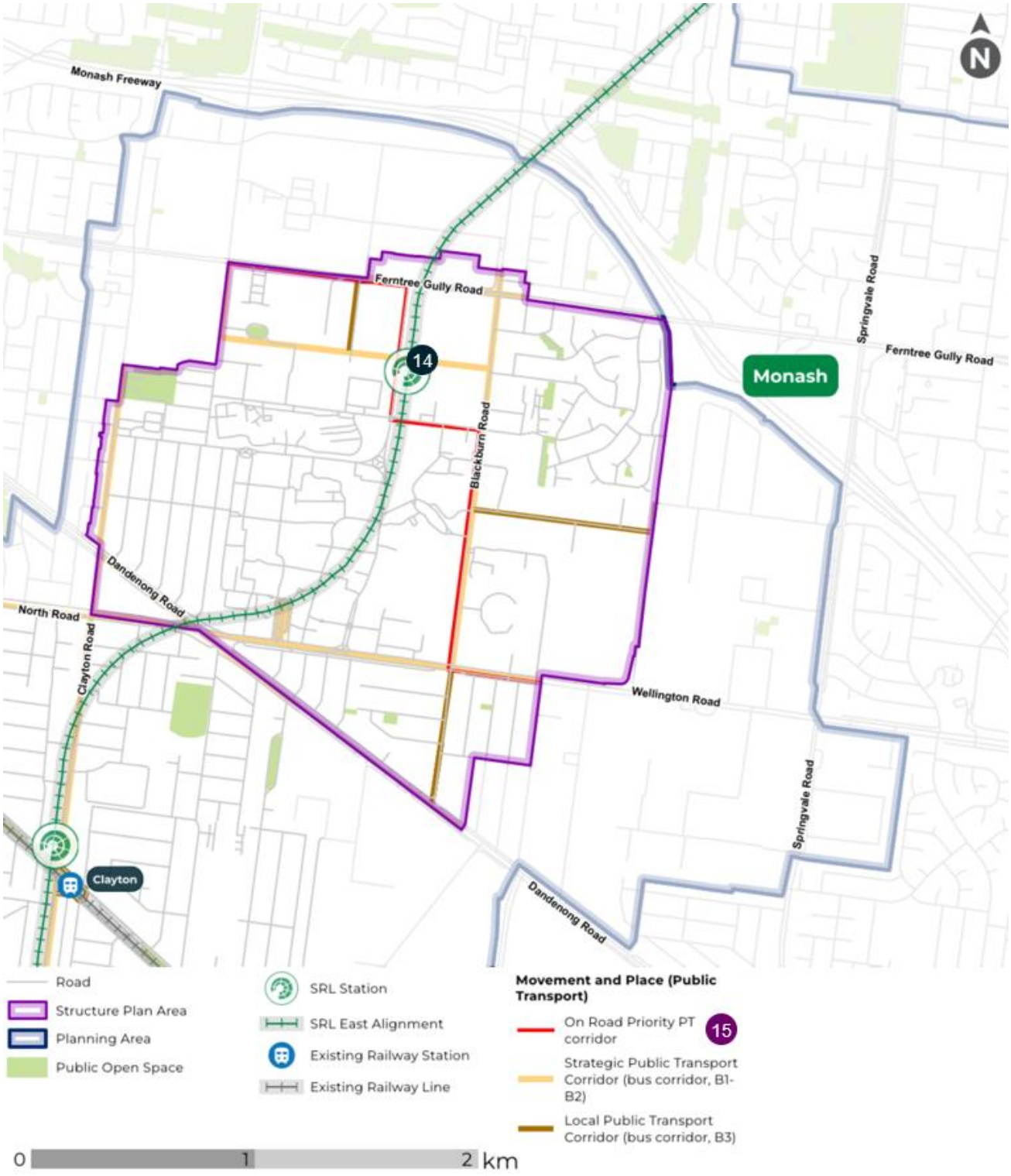


FIGURE 6.17 RECOMMENDATIONS – HUBS AND INTERCHANGES INTEGRATED WITH THE NETWORK

6.2.5 ENABLING PRIORITY MOVEMENT WHILE PROTECTING LOCAL ACCESS

The focus of recommendations which enable the priority network include maintaining existing strategic traffic corridors to allow other corridors to cater for local, more sustainable modes of transport, implementing changes to parking, and providing low-traffic neighbourhoods.

Monash Freeway, Blackburn Road, Ferntree Gully Road, Wellington and North Roads are important traffic corridors that support key bus, general traffic and freight movements through Monash that will be maintained.

Sustainable modes of travels will be prioritised on corridors such as local streets. This is further supported by designated low-traffic neighbourhoods in Monash. Low-traffic neighbourhoods generally refer to a residential area usually within a boundary of arterial corridors where traffic management measures are implemented to reduce general traffic movements, particularly through-traffic. These low-traffic neighbourhoods are located in areas where collector roads and local streets are concentrated. Low-traffic neighbourhoods prioritise the use of sustainable modes of transport including walking, cycling and public transport in a safer low-speed environment where local car access is maintained.

Infrastructure recommendations have been identified and aim to reduce private vehicle trips through the precinct core such as by encouraging car park access via alternative routes off major arterial roads where higher general traffic movements are supported.

The identified recommendations for Monash intended to unlock the priority movement network are detailed in Table 6.8 and shown in Figure 6.18.

TABLE 6.8 INFRASTRUCTURE RECOMMENDATIONS – ENABLING THE PRIORITY NETWORK

REF	RECOMMENDATION	STRATEGIC JUSTIFICATION
18	**Maintain major road functionality** Maintain the strategic bus, traffic and freight function of Monash Freeway, Blackburn Road, Ferntree Gully Road, Wellington and North Roads to enable transformation of streets within the heart of Monash.	The strategic road network allows for a significant number of vehicles to access and pass through Monash. Maintaining the strategic function of these roads will help address identified challenges by: • Keeping strategic traffic, including freight vehicles, off the local roads within Monash, and where traffic is entering the precinct core, ensuring it is via the most direct route to the destination as possible • Maintaining the ability to provide future bus priority measures to continue service reliability • Widening the walkable catchments to public transport nodes and hubs. Maintaining major road functionality will respond to identified modal principles including to: • Provide priority for buses and trams along their alignment to provide users with predictable journey times • Provide for vehicle movements through the SRL East Structure Plan Areas • Limit the impact of cars and service vehicles on high-activity and high-value places.
19	**Facilitate low-traffic neighbourhoods** Facilitate low-traffic neighbourhoods that reduce rat running, improve safety, and make streets a quieter and more enjoyable environment for walking and chatting with neighbours. Low-traffic neighbourhoods to maintain the role of collector roads.	Low traffic neighbourhoods create an environment whereby the impacts of vehicle traffic are minimised, with a higher ability to cater for sustainable transport modes. The provision of low traffic neighbourhoods throughout Monash will address existing challenges by: • Maintain local vehicle access on these streets, while considering safer vehicle speeds to improve safety and amenity for local walking and cycling trips. • Assist in the management of on street parking around key destinations including commuter parking during busy periods. The provision for low traffic neighbourhoods will respond to identified modal principles including to: • Reduce conflict between vehicles and people walking and cycling • Allow street space to respond to changes in use and community needs • Facilitate the provision of local cycling corridors within 200m of 95% of properties.
20	**Facilitate an integrated joint parking strategy** Prepare a precinct parking plan with key institutions.	Key institutions, such as Monash University's Clayton campus and CSIRO are not covered by the SRL East Structure Plan – Appendix A – Precinct Parking Plan – Monash. Therefore, a Precinct Paking Plan will need to be developed in consultation with these institutions to ensure there is adequate access to these services, whilst working towards the Vision of the Structure Plan.
21	**Support implementation of smart transport network** Support implementation of smart network improvements on arterial roads to increase network resilience and facilitate diversion of vehicles to arterial roads with available capacity.	Transport infrastructure and traffic management within Monash will be supported by implementing smart network improvements in order to get the most benefit. Smart transport network improvements will help address identified challenges by: • Ensuring traffic is diverted via the appropriate routes to key destinations, including car parking within and around the precinct core • Minimising traffic congestion on both the strategic and local road network within Monash.

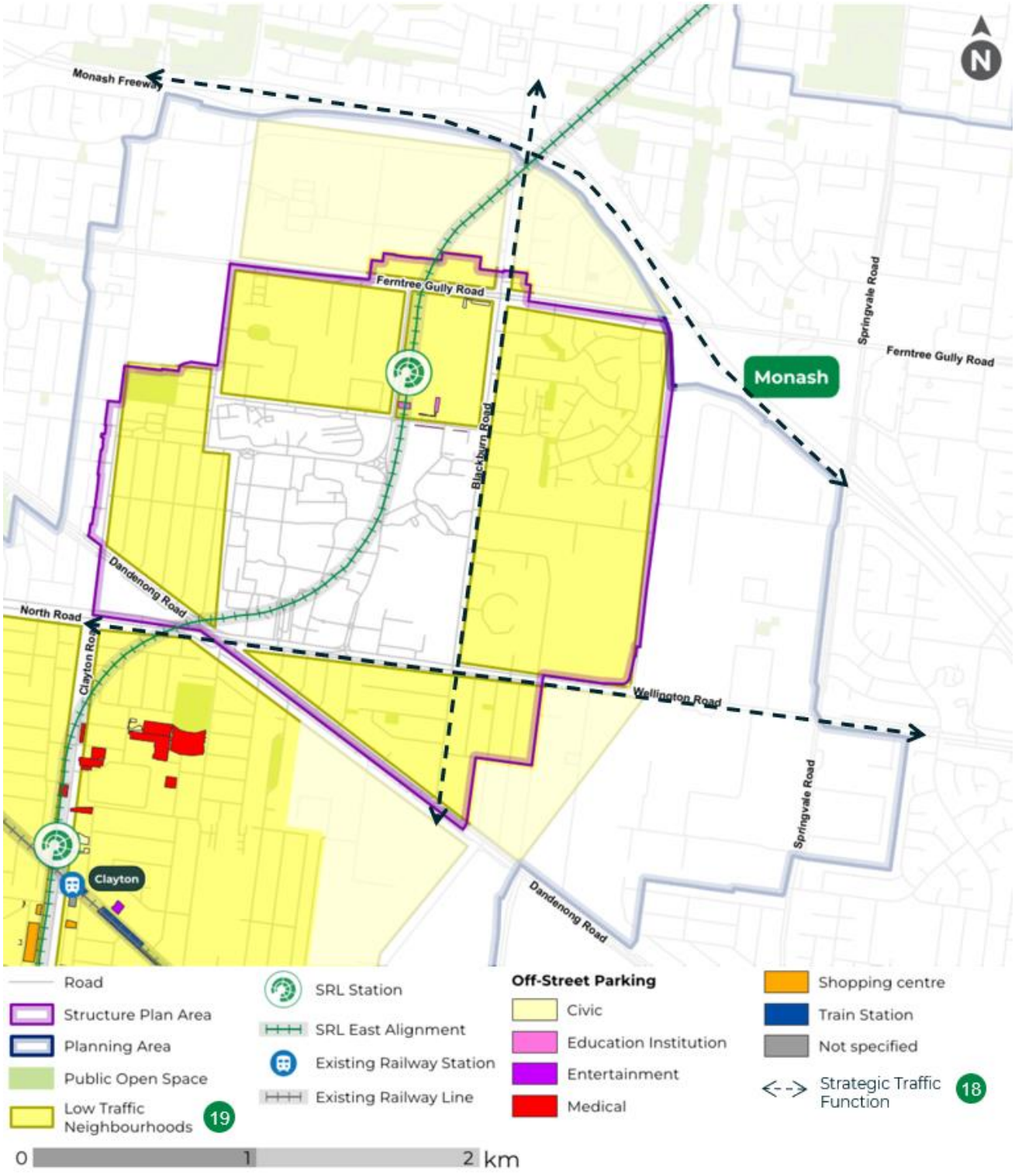


FIGURE 6.18 INFRASTRUCTURE RECOMMENDATIONS – ENABLING THE PRIORITY NETWORK

7 Non-infrastructure recommendations

This section sets out non-infrastructure tools and recommendations to help achieve the traffic and transport ambitions for the Monash Structure Plan Area.

The recommendations may be incorporated as an amendment to the Monash planning scheme or may simply be a supporting opportunity. The non-infrastructure recommendations may be identified as mechanisms in their own right and also to support the infrastructure recommendations to encourage a mode shift to active and public transport modes for local trips to, from and within Monash.

A Precinct Parking Plan was developed alongside this report to inform recommendations including car parking rates and other management tools, and bicycle and micromobility parking rates. The SRL East Structure Plan – Transport Technical Report – Appendix A Precinct Parking Plan – Monash provides an integrated parking response for the Monash Structure Plan Area and is attached as Appendix A to this report.

A more efficient and sustainable use of the kerbside will be important role as activity increases within Monash. Recommendations are provided to guide the management of kerbside activities, property access, waste management, last-mile freight deliveries, and the development of a Kerbside Management Framework to facilitate better use of the kerbside.

Additional recommendations are identified, including well-established initiatives such as Green Travel Plans and car share schemes, and innovative approaches such as mobility hubs are explored.

7.1 Integrated parking

A better paradigm for parking that is smarter and more efficient across all modes towards a more sustainable precinct.

Parking movements are required at the start and end of every journey for a range of travel modes including bikes, micromobility and cars. The common parking types are shown in Figure 7.1.

FIGURE 7.1 EXAMPLES OF PARKING

This section sets out guiding principles for parking and identifies tools to manage integrated parking in Monash. These tools also aim to promote active and sustainable transport choices in the Structure Plan Area.

7.1.1 INTEGRATED PARKING PRINCIPLES

A series of guiding principles have been established to inform the development of the integrated parking experience in the SRL East Structure Plan Areas. These integrated parking principles are shown in Figure 7.2.

These parking principles align with the transport ambition and goals and provided a framework throughout the development of the infrastructure recommendations to ensure walking formed part of the integrated transport network.

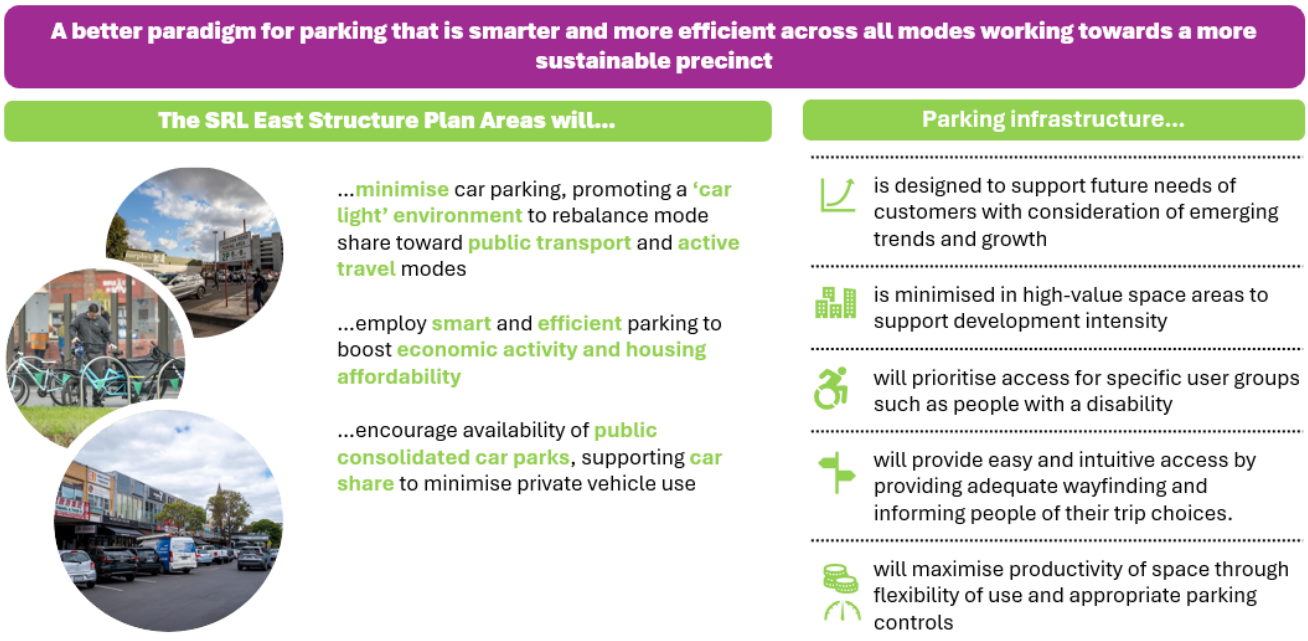


FIGURE 7.2 INTEGRATED PARKING PRINCIPLES

7.1.2 CAR PARKING MANAGEMENT TOOLS

The SRL East Structure Plan –Transport Technical Report – Appendix A Precinct Parking Plan – Monash (Precinct Parking Plan – Monash) discusses car parking management tools to support the development of the Structure Plan Area and help achieve the transport goals and ambition for Monash.

Table 7.1 provides an overview of the recommended car parking management tools proposed in the Precinct Parking Plan – Monash.

TABLE 7.1 CAR PARKING MANAGEMENT TOOLS PROPOSED IN THE PRECINCT PARKING PLAN

CAR PARKING MANAGEMENT TOOLS	DESCRIPTION	PRECINCT PARKING PLAN REFERENCE
Development parking controls – parking rates	The Precinct Parking Plan – Monash proposes a mix of maximum and minimum-maximum parking rates for land uses, including specific nominated rates for residential (multi-dwelling developments), office and retail land uses. These maximum parking rates are based on a review of policy, standards, guidelines empirical data and examples of car parking management in other locations.	Section 5.1 of the Precinct Parking Plan – Monash
On-street parking management	On-street parking management techniques include parking restrictions, paid parking schemes and monitoring / enforcement tailored to support various goals such as pick-up / drop-off areas, short to long-term visitor parking and residential / commuter needs, while considering pedestrian safety and place-making activities through guidance to local governments.	Section 5.4 of the Precinct Parking Plan – Monash
Consolidated parking	Consolidated parking is shared parking that is generally provided off-site from the end destination and can reduce the total amount of parking provided in a precinct by allowing the same space to be used by different people at different times.	Section 5.5 of the Precinct Parking Plan – Monash
Unbundled parking (decoupled parking)	Unbundled parking separates parking costs from development costs, allowing occupants to pay only for the parking they need, which may change over time, promoting efficiency and fairness.	Section 5.6 of the Precinct Parking Plan – Monash
Repurposing car parking	Designing parking spaces with flexibility and adaptability in mind, such as with suitable heights and flat floors, enables their adaptation for other purposes, optimising space utilisation.	Section 5.8 of the Precinct Parking Plan – Monash

7.1.3 PARKING FOR CYCLING AND MICROMOBILITY

The Precinct Parking Plan – Monash also identifies the need for appropriate provision and range of bicycle and micromobility parking to improve the experience of cycling and micromobility trips, encouraging an increase to mode share for cycling and micromobility.

Some cycling and micromobility trips also require end-of-trip facilities, allowing users to change and shower, while offering security and weather protection for cyclists and their devices.

Section 5.2 of the Precinct Parking Plan – Monash discusses the recommended minimum bicycle parking rates and recommended bicycle parking supporting facilities respectively.

7.2 Better use of kerbside

The kerbside is the space between the road carriageway and footpath as shown in Figure 7.3. The kerbside can be a contested space with various competing uses. These competing uses include priority lanes for buses or bikes, providing driveway access to properties and businesses, and providing pick-up / drop-off space for people and goods. The kerbside also supports place-making activities such as outdoor dining and landscaping such as trees to provide canopy cover.

FIGURE 7.3 KERBSIDE SPACE IN THE CONTEXT OF THE STREET CROSS SECTION

The layout of different streets can influence how people travel and influence the attractiveness of a place. Some streets will have a different balance of modes and changes to the public realm, which may require a street's cross section to change. As travel behaviours in Monash shift to using active and public transport, there is the opportunity to change the focus of the kerbside from primarily supporting car trips with parking and property access to a more balanced approach. These changes can range from minor enhancements to more transformative changes similar to those seen in inner Melbourne and some suburban activity centres over the last 30 years where more trees, wider footpaths, safe bike lanes and public transport priority have been implemented alongside growth in central city activity.

Ambitions for a better public realm will require better management of the kerbside space to support features such as improved landscaping, tree canopy coverage and place making opportunities like outdoor dining. Examples of different kerbside uses are shown in Figure 7.4.

FIGURE 7.4 DIFFERENT KERBSIDE USES

7.2.1 KERBSIDE MANAGEMENT FRAMEWORK

The Monash Structure Plan provides an opportunity to embrace a more efficient and diverse kerbside. Parking will continue to be provided depending on the street, surrounding properties and street activity. However, other uses such as landscaping, dining, bicycle / shared micromobility parking within mobility hubs or travel lanes may be a better fit in some places. Where parking is an appropriate use, parking controls will be adopted that direct space for different users and support the wider private vehicle parking aims and ambitions.

Applying road user hierarchies and considering place to develop a Kerbside Management Framework is a transparent way of identifying when and where different users of the street have priority in the kerbside. Table 7.2 shows a suggested kerb use hierarchy for different area types include the activity centre, residential area and industrial area. These priorities will need to be further developed and aligned to key street typologies to support different goals and aspirations for Monash.

The City of Monash will be encouraged to develop the Kerbside Management Framework to guide controls and restrictions across streets where proactive management of the kerbside is required.

TABLE 7.2 SUGGESTED KERB USE HIERARCHY FOR DIFFERENT AREAS

	ACTIVITY CENTRE	RESIDENTIAL AREA	INDUSTRIAL AREA
Landscaping opportunities	High	High	Medium
Public transport	High	High on bus routes	High on bus routes
Emergency services	Case by case, but if required High	Case by case, but if required High	Case by case, but if required High
Car share	High	High	Medium
Taxi & rideshare	High	Low	Low
Electric vehicle charging	Medium	Medium	Medium
Parklets	High	Medium	Low
Micromobility and bicycle parking	High	Medium	Low
Food deliveries	High	Low	Low
Deliveries	High	Low	High
Accessible	High	Medium	High
Pick up / drop off (PUDO)	High	High around schools and community activity areas	Low
Car parking for residents	Low	Medium	Low
Car parking for local workers	Low	Medium	Medium
Car parking for customers	Medium	Low	Medium
Commuter car parking	Not an acceptable kerb space use	Low	Low
Car parking for construction workers	Case by case	Case by case	Case by case

7.2.2 ACCESS TO PROPERTIES

Providing driveway access to properties is an important function of roads that requires the management of conflicts between vehicles turning into properties and other traffic such as pedestrians and cyclists. This impacts the space that can be used for place-making that can contribute to better people-focused environments.

Better outcomes can be achieved by providing access into new developments away from frontages with high movement or place-making functions (strategic walking and/or cycling corridors) to locations such as rear laneways or reducing or consolidating the number of access points. Minimising vehicle crossovers in strategic locations along Upgraded Strategic Corridors and Green Streets as well as arterial roads where significant increase in land use intensification is proposed can support safer movements and better amenity for pedestrian and cyclists.

A broad set of property access guidelines have been developed considering the M&P classifications and are listed in Table 7.3.

TABLE 7.3 BROAD SET OF PROPERTY ACCESS GUIDELINES

	PROPERTY ACCESS GUIDELINES
General considerations	• Consider the land use and property access requirements, whether primarily residential, commercial, and whether the property is in the Structure Plan Area core, along busy arterial corridors or within surrounding residential areas. • All new property development or redevelopment should consider the appropriate statutory and design guidance and specifications set out in: » Austroads, *Guide to Traffic Management Part 5 – Road Management*

	PROPERTY ACCESS GUIDELINES
	» Municipal Planning Scheme requirements » Australian Standards (AS2890.1 – Parking Facilities).
Properties with multiple street frontages	• Where access via a laneway to the side or rear of a property is available, provide appropriate space to facilitate on-site car park access, delivery vehicle and waste removal vehicles • Properties with multiple frontages to provide car park access along the frontage that is neither an Upgraded Strategic Corridor nor Green Street, or the lesser M&P classification. Existing access crossovers should be consolidated to provide a single crossover where possible • Should both property frontages share the same street type such as a Green Street or Upgraded Strategic Corridor, and M&P classifications, consider additional factors including traffic (all modes) volumes, adjacent property characteristics and other relevant factors.
Properties with single street frontages	• Where the property frontage has a M&P classification of 3 or less and is neither a Green Street nor Upgraded Strategic Corridor, provide a single point of access to the property • Where the property frontage is on a street whereby the M&P classifications for general traffic, public transport, freight and cycling are 3 or less and on an Upgraded Strategic Corridor, provide a single point of access to the property • Where the property frontage is on a street whereby the M&P classifications for walking, cycling, and place are 3 or less and on a green street, provide a single point of access to the property • Where the property frontage is on a street whereby the respective M&P classifications are greater than 3, and a Green Street or Upgraded Strategic Corridor, provide a single point of access to the property. Integrate appropriate kerbside/ access management measures to minimise the impact on the street frontage.

7.2.3 WASTE MANAGEMENT

Waste management is an integral part of city life, albeit a 'back of house' function, associated with waste removal.

Large developments often have on-site loading and waste facilities due to the size of land block, scale of the task, type of vehicle and/or the need to store goods on-site due to high shelf turnover.

Some shops with street frontages may lack alternative access and often cannot facilitate larger storage areas and so rely on the local street interface, generally using smaller vehicles.

Residential development has traditionally not included service areas but as density increases the need to facilitate more frequent turnover of residents, family size households and higher waste management means these tasks are less suitable for the kerb space, as shown in Figure 7.5.

FIGURE 7.5 APARTMENT BINS BLOCKING PAVEMENT

7.2.4 LOCAL FREIGHT DELIVERIES

The *Victorian Freight Plan 2018–2050, Delivering the Goods* predicted the freight movement task for Victoria will increase two to three-fold from 2014 levels by 2050. Since this prediction, as with many aspects of daily life, the COVID pandemic has potentially changed the trajectory of freight growth and potentially the type of freight vehicle, with COVID travel restrictions introducing the benefit of online shopping to new markets. While the need to shop from home has diminished, the benefits of online shopping for customers and retailers means this market continues to grow.

While online retailing has the potential to reduce personal travel and car trips, the overall implications for the road network can be significant as more people need individual freight deliveries more frequently, particularly smaller parcels. It is not uncommon to observe multiple freight-based trips occurring on local streets associated with the delivery of orders and parcels.

There is opportunity in the SRL East Structure Plan Areas to work with developers, local governments, community and businesses to harness new practices and options for freight to reduce the impact of these trips on the local network by managing freight, so the right vehicle type is used for the right delivery.

The Victorian Freight Plan was developed in consultation with local governments and the freight industry to consider the future of freight in the state. This 'freight future' includes recognition of more personal freight delivery, and opportunities for smaller lighter and more efficient forms of freight delivery, particularly in the last mile first mile space.

The Freight Plan sets out five priorities to support the freight and logistics system to improve how goods are moved to their local, interstate and overseas markets. How the Freight Plan should be reflected in the SRL East structure planning is summarised in Figure 7.6.

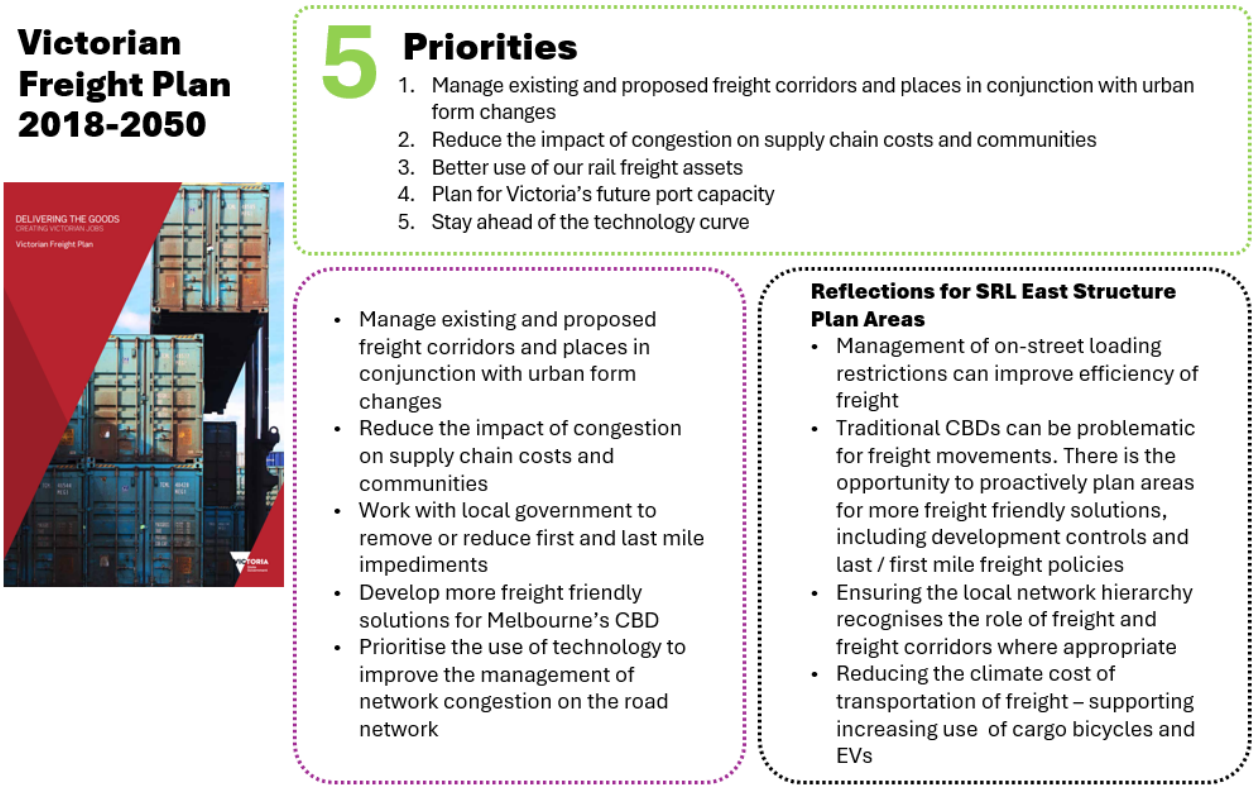


FIGURE 7.6 VICTORIAN FREIGHT PLAN AND HOW THIS CAN BE REFLECTED IN SRL EAST STRUCTURE PLANNING

Managing the 'first and last mile' of freight tasks will be key in ensuring balance between the needs of people and freight in the SRL East Structure Plan Areas. The City of Melbourne and Transport for NSW have both recognised the potential for managing this part of the freight task for network efficiency and improved urban amenity with the former releasing a Last Kilometre Freight Plan[35] and the latter a Last Mile Freight Toolkit.[36]

A Last Mile Freight Plan (LMFP) is recommended to be developed for the Structure Plan Area, particularly with smaller parcels and deliveries. The Freight Plan will guide new and existing developments in adopting emerging and more sustainable modes for local deliveries.

The Freight Plan will likely include the use of cargo bikes, smaller electric delivery vehicles, and freight and mobility hubs. This could include community delivery boxes, such as the Australia Post Parcel Lockers shown in Figure 7.7 which are becoming more common and will continue to evolve. These sustainable last mile freight delivery options and parcel lockers can also be integrated into mobility hubs to improve access and reduce unnecessary trips as recipients can collect their parcels during an existing trip. There is also an opportunity to encourage alternative freight modes and approaches that improve convenience and sustainability for the delivery of take-away food and groceries.

FIGURE 7.7 COMMUNITY DELIVERY BOX EXAMPLE (SOURCE: AUSTRALIA POST PARCEL LOCKER[37])

Other potential Last Mile Freight Plan considerations are summarised in Table 7.4.

TABLE 7.4 LAST MILE FREIGHT PLAN CONSIDERATIONS

Potential for consolidating delivery and servicing facilities between different properties	Potential for the role of precinct freight consolidation hubs. Identify redundant space with the potential to support consolidation of delivery tasks. This could range from Freight Consolidation Centres (FCCs) through to community delivery parcel drop off sites that allow multiple personal deliveries in one trip rather than through multiple trips. Integration of freight into mobility hubs.
Development of a freight journey planner and freight access maps for use by businesses and logistics companies servicing properties	
Development of principles for allowing out of hours deliveries, to reduce freight traffic during peak activity periods and opportunities to use redundant out of hours space	Special loading permit zones and spaces for more efficient and low impact / low emission vehicles

[35] *City of Melbourne, June 2016, Last Kilometre Freight Plan, <https://www.melbourne.vic.gov.au/sitecollectiondocuments/last-kilometre-freight-plan-june-2016.pdf>*

[36] *Transport for NSW, November 2020, Freight and Servicing Last Mile Toolkit – A guide to planning the urban freight task, <https://www.mysydney.nsw.gov.au/sites/default/files/2023-05/Freight%20and%20Servicing%20Last%20Mile%20Toolkit%20Master%20Document(1)-compressed-1.pdf>*

[37] *https://auspost.com.au/receiving/collection-points/use-a-247-parcel-locker*

Encouragement for local businesses to invest in and utilise cargo bikes to manage local delivery tasks	Monitor the use of street loading spaces so that local government can timely respond to overuse and under use of loading spaces
Stakeholder engagement including potential for the development of precinct freight portals to share and promote more efficient freight options and new and advancing technological options and experiences	Pilot studies to inform businesses of opportunities to change practices and support change
Identify opportunities to use local traffic management during construction projects to encourage more sustainable freight choices - for example, partial road closures could still allow cargo bikes and other two wheeled vehicle passage	Development of last mile toolkit to assist business, developers, and residents in understanding and implementing more sustainable last mile practices
Out of hours loading in the street scape when demands for other purpose is minimal (for example, bus lanes or pedestrian areas between midnight and 6am)	

It is recognised that some of the last mile freight initiatives are likely to be new to businesses in Monash. As such, there may be benefits in working with existing business to develop pilot schemes that can trial and/or showcase different approaches to managing last mile freight use.

As the roll out of electric vehicles (EVs) continues it may also be prudent to plan for the potential to provide EV charging associated with loading facilities.

Finally, it is recognised the period where the densification of Monash and the delivery of the SRL station is likely to result in periods and locations of disruption. Implementing Last Mile Freight Plans may provide a tool that will help SRLA, the City of Monash and the local community manage deliveries during these periods. This will take advantage of the opportunities these periods produce to do things differently, which may then continue post construction if they are successful.

There is an opportunity to showcase these evolving freight management approaches in Monash, providing a benchmark for managing freight in Melbourne's middle to outer centres.

7.3 Supporting travel choices

Enabling greater choice for how you would like to get around wherever you are in Monash.

Approaches to supporting travel choices will complement recommendations for all transport modes and parking. Supporting travel choices will contribute to achieving the transport goals and ambitions with an integrated transport approach. These include measures such as Green Travel Plans, car share schemes, mobility hubs, and street layouts that support a greater diversity of travel choices and activity.

7.3.1 GREEN TRAVEL PLANS

A Green Travel Plan sets out ways that occupants or visitors to an existing or new commercial or residential building can adopt more sustainable transport such as walking, cycling public transport or car-pooling.

Green Travel Plans can be a significant contributor to achieving more sustainable mode share targets. United Kingdom studies cited in a City of Sydney guideline indicate that providing Green Travel Plans can achieve significant reductions in commuter car trips, averaging 18 per cent and as high as 50 per cent.[38] Green Travel Plans are most effective when they include regular monitoring.

[38] *UK Department for Transport, March 2008, Essential Guide to Travel Planning, < https://webarchive.nationalarchives.gov.uk/ukgwa/20101213165120/http://www.dft.gov.uk/pgr/sustainable/travelplans/work/>*

Green Travel Plans can be prepared by or on behalf of developers, tenants, owners, body corporate, businesses, education and leisure occupiers and facility / property managers. Green Travel Plans prepared by developers will be passed on to the tenants or other occupants allowing for specific business or property manager incentive commitments to be incorporated to meet the needs of the users. These incentives can range from providing towels and hairdryers as part of end-of-trip facilities, cycle-to-work incentives and supporting walking, cycling and car share groups, through to financial incentives such as travel vouchers, MYKI cards, subsidised bicycle hire, or low-interest rate loans to help purchase equipment or bicycle insurance.[39]

When prepared at the development planning application stage, Green Travel Plans can contribute to evidence for Green Star ratings and/or Built Environment Sustainable Scorecard (BESS) alignment. A well prepared Green Travel Plan can form part of the marketing for new developments to demonstrate to potential occupiers its sustainable access and the need for less parking.

Effective Green Travel Plans include enforcement, regular monitoring and updating to understand the changing gap between aspirational mode share and actual mode share.

The need to require Green Travel Plans is being incorporated into more planning schemes across Victoria. However, the trigger for mandating these travel behaviour tools varies.

Using Green Travel Plan requirements and triggers examples from Victoria and NSW as well as internationally, the Green Travel Plan triggers listed in Table 7.5 are recommended to be captured in the Monash and Kingston Planning Schemes by means of an appropriate Schedule to the relevant zone.

TABLE 7.5 RECOMMENDED GREEN TRAVEL PLAN TRIGGERS AND APPROACH

USE	GREEN TRAVEL PLAN TRIGGER [1]	EXCEPTIONS
Residential	≥ 10 dwellings or if not known: > 1000 m^2 GFA	-
Office	> 1000 m^2 GFA	-
Retail premises	> 1000 m^2 GFA	-
Education	All	Except for schools where student requirements may make Green Travel Plans irrelevant
Leisure	> 1000 m^2 GFA	Except where movement generated < 50 trips per hour
Industrial	> 5000 m^2 GFA	Except where movement generated < 50 trips per hour
[1] Green Travel Plan development size trigger intended to ensure requirements imposed on developments over a nominated size.		

For existing major uses in the SRL East Structure Plan Areas, it is recommended that SRLA should work with these land holders to develop or update Green Travel Plans to recognise the increasing accessibility of Monash that will be delivered as part of the SRL works.

7.3.2 CAR SHARE SCHEMES

Car share schemes provide access to shared vehicles, reducing the need for private car ownership optimising the utilisation of space. When integrated with high quality local public transport and active travel options, car

[39] *Examples of incentives in existing Melbourne and international GTPs: La Trobe University Sports Park Partner Precinct GTP; Northumberland Street office development, Collingwood; Barratt and Darwin Green residential development, Cambridge UK*

share schemes can significantly decrease car ownership and use, with research suggesting that a single car share vehicle can replace 7 to 10 privately owned cars.[40]

Car share scheme spaces should be encouraged in on-street car parking areas and within off-street development sites and supported by the development of car share policies and/or guidelines in consultation with Council and building and strengthening relationships between key stakeholders and car share operators. This is discussed in detail in Section 5.3 of the Precinct Parking Plan – Monash.

7.3.3 MOBILITY HUBS

Mobility hubs provide a space designed specifically to offer access to various sustainable transport modes with enhanced facilities that enable integrated travel choices.[41] They provide users with one location for all travel choices and facilitates investment in better facilities rather than choices and facilities spread across an area.

The hubs are often located near community services, co-working places, or an Activity Centre, and are connected to strategic cycling corridors. The hub provides space for mobility, place and logistics functions:

- The mobility function includes the co-location of transport modes, including conventional public transport, e-scooter and bike hire, car share and sustainable private transport modes
- The place function could include facilities to improve convenience and comfort such as bathrooms, water fountains, shaded areas and vending machines
- The logistics function includes the integration of parcel lockers or micro-delivery centres.

The mobility hub functions and conceptual network are shown in Figure 7.8.

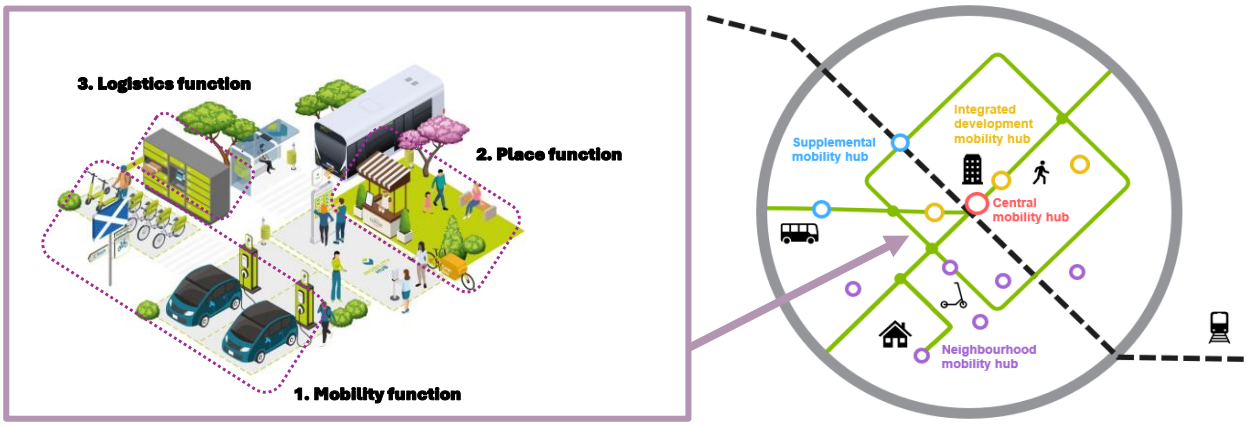


FIGURE 7.8 MOBILITY HUB FUNCTIONS AND CONCEPTUAL NETWORK (SOURCE: COMOUK[42])

The benefits that mobility hubs generate for the wider community include improved access to sustainable transport, especially for first and last mile trips, convenient transfer between transport modes, land use integration, improved public realm, and reduced street clutter. Mobility hubs also provide an opportunity to reduce car parking demand within Monash.

[40] *Shaheen, S.A. & Cohen, A.P. (2013), Carsharing and Personal Vehicle Services: Worldwide Market Developments and Emerging Trends,* International Journal of Sustainable Transportation, *Volume 7, (Issue 1), https://www.researchgate.net/publication/241730570_Carsharing_and_Personal_Vehicle_Services_Worldwide_Market_Developments_and_Emerging_Trends*

[41] *Collaborative Mobility UK (CoMoUK), 2023, What are mobility hubs?, <https://www.como.org.uk/mobility-hubs/overview-and-benefits>*

[42] *Collaborative Mobility UK (CoMoUK), 2023, What are mobility hubs? <https://www.como.org.uk/mobility-hubs/overview-and-benefits>*

7.4 Non-infrastructure recommendations summary

A set of non-infrastructure recommendations to manage parking and provide better active and sustainable transport choices have been developed, along with recommendations to manage kerbside activities and local freight deliveries. A pragmatic approach to car parking is adopted, recognising the growing opportunities and viability other travel options, including bicycle and micromobility, for trips to, from and within Monash.

The full list of non-infrastructure recommendations and opportunities is provided in

Table 7.6 and is based on the analysis undertaken for this report and the Precinct Parking Plan – Monash attached as Appendix A to this report.

Table 7.6 also identifies where the non-infrastructure recommendations and opportunities strongly support the infrastructure recommendations discussed in Section 6.

TABLE 7.6 NON-INFRASTRUCTURE RECOMMENDATIONS

REF	NON-INFRASTRUCTURE RECOMMENDATION / OTHER OPPORTUNITY		SUPPORTED INFRASTUCTURE RECOMMENDATION(S)
INTEGRATED PARKING			
MNTP 1*	Implement increased minimum bicycle parking and end-of-trip facility requirements to support sustainable modes and reflecting the change in cycling usage within "living locally" based neighbourhoods and over time.	Recommendation	• Deliver a world class station interchange (Ref. 1) • Facilitate the establishment of a new street network (Ref. 2) • Facilitate Howleys Road upgrades (Ref. 3) • Deliver a new high-quality east-west corridor (Ref. 4) • Deliver a new north-south active transport corridor (Ref. 5) • Enable upgrades to Blackburn Road and Ferntree Gully Road (Ref. 6) • Facilitate north-south active transport links (Ref. 7) • Enable a network of local Green Streets (Ref. 8) • Critical – Key Links (Ref. 4A, 5A, 7A) • Important – Key Links (Ref. 11) • Local – Key Links (Ref. 12) • Deliver a high-capacity bicycle parking hub at the SRL station (Ref. 14)
MNTP 2*	Develop public realm cycling and micromobility end-of-trip policy and guidelines.	Opportunity	
MNTP 3*	Implement development parking controls, limiting new development parking provisions.	Recommendation	• Facilitate low-traffic neighbourhoods (Ref. 19)
MNTP 4*	Support major landholders to explore reducing existing parking supply and adopting alternative uses for the land as accessibility and density in the Structure Plan Area increase.	Opportunity	
MNTP 5*	Encourage adoption of an unbundled car parking model for on-site car parking provision and management.	Recommendation	
MNTP 6*	Encourage the provision of consolidated car parking options which could be used to manage accessibility changes over time and reduce reliance on on-site parking.	Recommendation	
MNTP 7*	Implement adaptable building design requirements for new above-ground car parking facilities that enable their use for other purposes as parking demand reduces over time.	Recommendation	

REF	NON-INFRASTRUCTURE RECOMMENDATION / OTHER OPPORTUNITY		SUPPORTED INFRASTUCTURE RECOMMENDATION(S)
	Require developers to have an Adaptable Parking Plan which outlines future options for the use of on-site parking.		
MNTP 8*	Encourage Council to further develop and update the on-street parking management policy that supports the significant changes in land use density, diversity and accessibility levels in the Structure Plan Area over time.	Opportunity	
GREEN TRAVEL PLANS			
MNTP 9	Implement Green Travel Plan requirements for applicable new developments to help guide occupant travel behaviour, including monitoring commitment and program.	Recommendation	• Facilitate the establishment of a new street network (Ref. 2) • Facilitate Howleys Road upgrades (Ref. 3) • Deliver a new high-quality east-west corridor (Ref. 4) • Deliver a new north-south active transport corridor (Ref. 5) • Enable upgrades to Blackburn Road and Ferntree Gully Road (Ref. 6) • Facilitate north-south active transport links (Ref. 7) • Enable a network of local Green Streets (Ref. 8) • Critical – Key Links (Ref. 4A, 5A, 7A) • Important – Key Links (Ref. 11) • Local – Key Links (Ref. 12) • Deliver a high-capacity bicycle parking hub at the SRL station (Ref. 14)
MNTP 10	Encourage Council to develop an improved Green Travel Plan Framework in the short term to guide and influence travel behaviours of occupants and visitors to new and existing buildings. This may include providing best practice templates, tools and strategies and incorporation of monitoring and review requirements.	Opportunity	
MNTP 11	Support preparation of Green Travel Plans for existing major employers and land holders, including local education facilities to help influence existing travel behaviours to major destinations as accessibility increases.	Opportunity	
CAR SHARE SCHEMES			
MNTP 12*	Encourage Council to develop policy and guidelines for car share schemes in public areas and new developments that include electric vehicle charging facilities, by • Facilitating stronger relationships between developers and car share operators • Recognising electric vehicle charging for car share schemes in Green Travel Plans • Encouraging on-site car share scheme parking with electric vehicle charge points.	Opportunity	• Facilitate low-traffic neighbourhoods (Ref. 19)
MOBILITY HUBS			
MNTP 13	Encourage the development of a network of new mobility hubs in strategic locations across the Structure Plan Area.	Recommendation	• Facilitate the establishment of a new street network (Ref. 2) • Facilitate Howleys Road upgrades (Ref. 3) • Deliver a new high-quality east-west corridor (Ref. 4) • Deliver a new north-south active transport corridor (Ref. 5) • Enable upgrades to Blackburn Road and Ferntree Gully Road (Ref. 6) • Facilitate north-south active transport links (Ref. 7) • Enable a network of local Green Streets (Ref. 8) • Critical – Key Links (Ref. 4A, 5A, 7A) • Important – Key Links (Ref. 11)
MNTP 14	Develop a mobility hub strategy and implementation framework with key stakeholders and partners, considering private and public sites, including: • Investigate partnerships with shared micromobility operators and Council and explore potential to undertake trials within the Structure Plan Area • Delivery of a central mobility hub with Council and land-owners in the centre of the Structure Plan Area • Facilitate or contribute to the provision of integrated development mobility hubs • Consultation and delivery of supplementary mobility hubs that can be tied to other public transport interfaces and peripheral parking areas	Opportunity	

REF	NON-INFRASTRUCTURE RECOMMENDATION / OTHER OPPORTUNITY		SUPPORTED INFRASTUCTURE RECOMMENDATION(S)
	• Investigate possible neighbourhood mobility hub land options and partnerships with Council.		• Local – Key Links (Ref. 12) • Deliver a high-capacity bicycle parking hub at the SRL station (Ref. 14)
LOCAL FREIGHT DELIVERIES AND WASTE MANAGEMENT			
MNTP 15	Encourage centralisation and sharing of loading, waste and freight management facilities to reduce the number of access points and kerbside demands during peak community activity periods.	Recommendation	• Maintain the strategic road network (Ref. 18)
MNTP 16	Support adoption of alternative freight vehicle and freight delivery models within the Structure Plan Area to reduce vehicle emissions associated with these trips, including development of a Last Mile Freight Plan in association with Council.	Opportunity	
BETTER USE OF THE KERBSIDE			
MNTP 17	Encourage Council to develop a suite of policies and plans with Council to manage the function and needs that interface with the kerbside, which may include: • A Kerbside and Access Management Framework based on use hierarchy principles which supports urban cooling, sustainable transport modes and reduced private car trips, and on-street parking demands • A Kerbside Management Plan to inform access, freight and waste management and kerbside use in the Structure Plan Area	Opportunity	• Facilitate the establishment of a new street network (Ref. 2) • Facilitate Howleys Road upgrades (Ref. 3) • Deliver a new high-quality east-west corridor (Ref. 4) • Deliver a new north-south active transport corridor (Ref. 5) • Enable upgrades to Blackburn Road and Ferntree Gully Road (Ref. 6) • Facilitate north-south active transport links (Ref. 7) • Enable a network of local Green Streets (Ref. 8) • Critical – Key Links (Ref. 4A, 5A, 7A) • Important – Key Links (Ref. 11) • Local – Key Links (Ref. 12) • Investigate a potential high-capacity public transport corridor (Ref. 15) • Investigate future bus priority (Ref. 17)
MNTP 18	Implement controls to respond to design recommendations for: • Access of secondary roads where possible (lane ways, side streets) • Access discouraged from Upgraded Strategic Corridors and/or Green Streets, high activity pedestrian and cyclist links • Encouraging on-site waste and freight management facilities.	Recommendation	• Facilitate the establishment of a new street network (Ref. 2) • Facilitate Howleys Road upgrades (Ref. 3) • Deliver a new high-quality east-west corridor (Ref. 4) • Deliver a new north-south active transport corridor (Ref. 5) • Enable upgrades to Blackburn Road and Ferntree Gully Road (Ref. 6) • Enable a network of local Green Streets (Ref. 8) • Facilitate low-traffic neighbourhoods (Ref. 19)
MNTP 19	Implement loading and waste management requirements for new developments including requirement for loading to be entirely on-site for key land uses (such as large residential, large retail, industrial).	Recommendation	• Maintain the strategic road network (Ref. 18) • Facilitate low-traffic neighbourhoods (Ref. 19)

REF	NON-INFRASTRUCTURE RECOMMENDATION / OTHER OPPORTUNITY		SUPPORTED INFRASTUCTURE RECOMMENDATION(S)
MNTP 20*	Encourage shared parking arrangements in developments to enable efficient and overall lower parking provisions.	Recommendation	• Facilitate low-traffic neighbourhoods (Ref. 19)
MNTP 21*	Encourage car share scheme parking spaces in developments.	Recommendation	
* Item included in the Precinct Parking Plan – Monash			

8 Conclusion

SRL East will improve access to and from Monash and to nearby state and regional significant activity centres.

More active and sustainable transport choices will help improve the amenity and liveability of the Structure Plan Area. Compared to the Baseline Scenario, this will reduce traffic congestion, better manage parking and provide for more efficient use of land. The mode share target shows an increase in active transport mode share by 26 per cent (an increase of 2200 trips during a typical peak hour) compared to the baseline from 26 per cent to 33 per cent, with public transport mode share increasing by 12 per cent (an increase of 800 trips during a typical peak hour).

Table 8.1 summarises the types of recommendations that have been developed and their alignment with the transport goals. The infrastructure and non-infrastructure recommendations will deliver a more connected network and increased travel choice by building on existing arterial road and rail access and contributing to a modal shift towards sustainable travel choice across the Monash Structure Plan Area.

In doing so, these recommendations will support achieving the vision for the Monash Structure Plan Area and provide a framework to guide growth and change, while protecting and preserving the character and features that people love about them now.

TABLE 8.1 TYPES OF TRANSPORT IMPROVEMENTS AND ALIGNMENT WITH THE TRANSPORT GOALS

TRANSPORT RECOMMENDATIONS	TRANSPORT GOALS						
	A safe and connected walking and cycling environment	A revitalised bus experience	An all-inclusive transport network	Anchoring sustainable travel services and shared mobility to SRL East	Prioritising safe and healthy movement	Smart and efficient use of parking	Enable new and emerging innovative mobility
Infrastructure types							
New and Upgraded Strategic Corridors that enable the Structure Plan with a particular focus on active and public transport upgrades	✓	✓	✓		✓		
Upgraded local Green Streets, with a particular focus on active transport upgrades and support for innovative modes	✓		✓			✓	
New Key Links, focusing on creating active transport permeability and connecting transport corridors	✓		✓	✓			
New and upgraded crossings of busy roads	✓		✓		✓		
Upgrades to public transport interchanges to enhance the services, facilities, and customer experience		✓		✓			
New bicycle hubs to encourage active transport to the SRL station, existing railway station and bus interchange	✓	✓		✓			
Maintaining strategic traffic and freight corridors		✓				✓	
Designating low traffic neighbourhoods	✓		✓		✓		
Non-Infrastructure types							
Development of SRL East Structure Plan Area appropriate parking rates					✓	✓	
Partnering with Council to plan and manage streets through local freight delivery and kerbside management plans						✓	
Supporting travel choices including Green Travel Plans and encourage use of mobility hubs					✓		✓

AJM
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Appendix A

SRL East Draft Structure Plan – Transport Technical Report - Appendix A Precinct Parking Plan – Monash

AJM
Joint Venture

Appendix B

Peer Review Report

eukai

18 February 2025

Suburban Rail Loop East Structure Planning Transport Peer Review Report – Monash

To:	Tim Power (Partner), White & Case
Cc:	Sallyanne Everett (Partner), Clayton Utz
From:	Tim De Young (Director), Eukai
Date:	18 February 2025

Subject: Suburban Rail Loop East Structure Planning Transport Peer Review Report – Monash

1. Introduction

1.1. Background

The Suburban Rail Loop East project (**SRL East**) will deliver six underground rail stations between Cheltenham and Box Hill and connect major employment, health, education and retail destinations in Melbourne's east and southeast. The Minister for Planning approved the SRL East rail project in 2022 and it is expected to be completed by approximately 2035.

In December 2023, the Minister for the Suburban Rail Loop declared a Suburban Rail Loop Planning Area for SRL East (**SRL East Planning Area**) under section 65(1) of the *Suburban Rail Loop Act 2021*. The Suburban Rail Loop Authority (**SRLA**) is the planning authority under the *Planning and Environment Act 1987* for this area.

SRLA has defined boundaries for the preparation of structure plans (**Structure Plan Areas**) within the SRL East Planning Area and is in the process of preparing structure plans and draft planning scheme amendments (**PSAs**) for each Structure Plan Area.

AJM Joint Venture (**AJM**) was engaged by SRLA to prepare a Transport Technical Report (**TTR**), inclusive of a Precinct Parking Plan (**PPP**), for each Structure Plan Area. The TTRs set out transport responses and recommendations that have informed the development of the Structure Plans.

1.2. Instructions

In November 2024, I was instructed by Clayton Utz (refer to letter at Attachment A) to undertake a peer review of the Monash TTR and prepare a peer review report that addresses the following matters:

> *"(a) the scope of your role in reviewing the Technical Report;*
>
> *(b) the appropriateness of the methodology, assumptions and limitations in the Technical Report;*
>
> *(c) whether the findings, assessment outcomes and recommendations in the Technical Report are appropriate in the context of the structure planning process for the Monash Structure Plan Area."*

I have set out a response to these three matters in Sections 2 to 4 of this memo, respectively.

1.3. Reference Documents

In undertaking this peer review and preparing this memo, I focussed my review on the following documents:

- "SRL East Draft Structure Plan – Transport Technical Report – Monash" prepared by AJM, Revision 01 dated February 2025 (**'TTR'**)
- "SRL East Draft Structure Plan – Appendix A – Precinct Parking Plan – Monash" prepared by AJM, Revision 01 dated February 2025 (**'PPP'**)

In addition, I note that I was also provided with various additional information from SRLA in response to clarifications requested by me in undertaking my peer review. This information was issued to me in December 2024 and January 2025 in response to queries raised by me to assist me prepare this memo. This additional information is discussed further in Section 2.2 of this memo.

Finally, I also note that whilst I was provided with the "SRL East Draft Structure Plan - Monash Draft Implementation Plan" prepared by SRLA dated 7 February 2025 (**'the Implementation Plan'**), I have not undertaken a detailed review of this plan as part of my peer review. I also confirm that I have not reviewed the Parking Overlay recommended in the PPP.

2. Scope of my role

2.1. Duration of peer review

I have provided peer review advice associated with the SRL East Structure Planning process via two engagements:

1. From May to July 2024, I was engaged as a sub-consultant to Stantec, who had been engaged by White & Case (acting on behalf of SRLA) to provide peer review advice in relation to the TTRs for all six station precincts. The Stantec team at that time was led by John Kiriakidis and my role was that of "co-lead". This entailed me attending meetings with Stantec Subject Matter Experts (SMEs) and liaising directly with White & Case to provide advice on behalf of the broader team. During this initial engagement, the focus of the review was the TTR for the Glen Waverley precinct only, as other TTRs were yet to be issued to Stantec for review.

2. Since August 2024, I have been engaged directly by Clayton Utz and White & Case (acting on behalf of SRLA) to provide peer review advice in relation to the TTRs for Glen Waverley, Monash and Clayton station precincts. During this period, I have principally been assisted by two colleagues – Will Fooks (Eukai Director) and Hans Gao (Eukai Senior Consultant)[1]. I also note that I have provided advice during this period in parallel with Hilary Marshall of Ratio who I understand was engaged by Clayton Utz (acting on behalf of SRLA) to provide peer review advice in relation to the TTRs for the Box Hill, Burwood and Cheltenham station precincts.

[1] Will Fooks' assistance was provided between September and October 2024. He principally assisted me by reviewing the draft TTR documentation, identifying potential areas for enhancement, and liaising with SRLA to clarify our advice. Hans Gao's assistance was provided between November 2024 and the date of this peer review memo. He principally assisted me by reviewing the final TTR documentation, analysis clarifications provided to me by SRLA, and drafting this peer review memo. I note that Hans was also a member of the Stantec team, assisting John Kiriakidis, between May and July 2024.

2.2. Nature of peer review advice

During both engagement periods, my peer review role entailed undertaking reviews of draft TTR reports prepared by AJM for the station precincts and providing advice to steer the development of those reports for exhibition in early 2025.

The principal tasks completed by me included:

- Undertaking site inspections to understand existing transport conditions at the Glen Waverley, Monash and Clayton precincts.
- Undertaking research into technical transport reports and parking overlays prepared to support land use and transport changes in other activity centres in metropolitan Melbourne. This research included, but was not limited to, consideration of other precincts that I have recently been involved in providing transport and parking advice, such as Preston Market, Box Hill Central North, and Victoria Gardens.
- Reviewing draft versions of the draft TTR documentation (including the accompany draft PPPs) for the Glen Waverley, Monash and Clayton precincts.
- Attending workshops to provide guidance in relation to the draft TTR documentation with the primary aims of:
    - Aligning the structure and content of the TTRs with relevant policies, guidelines and practice notes;
    - Enhancing the robustness of the justification presented in the TTRs with respect to the recommended transport responses;
    - Providing guidance on technical matters, such as car parking rates including the areas to which those rates apply; and
    - Providing comment on matters that can be addressed as part of the subsequent stages of the structure planning process.
- Liaising with the team via telephone and email to reconfirm and further discuss advice shared at the workshops.

As a part of my peer review, I note that I also requested and subsequently received various clarifications from SRLA on matters that informed the preparation of the TTR. The clarifications predominately related to the following:

- The VITM modelling used to inform the trip demand estimates referenced in the TTR including the consistency of the land use yields that informed that modelling with the land use yields envisaged in the Monash Structure Plan Area.
- The deliverability of important active travel connections that are proposed in the TTR, including the level of planning that had been completed by SRLA to confirm matters such as the extent of any required land to facilitate their provision.
- The extent of future year bus network planning completed by the Department of Transport and Planning (DTP) for the Monash Structure Plan Area.

The provision of these clarifications has assisted me form the conclusions outlined in this peer review memo as it provides me with high amount of confidence that a significant body of work has been completed by SRLA to inform the TTR and enable the delivery of its recommendations. These clarifications are discussed in further detail in the body of this peer review as appropriate.

The following limitations are noted with respect to my peer review:

- I have largely confined my review to the documents outlined In Section 1.3 of this memo which I note does not include the Parking Overlay recommended in the PPP within the TTR.
- I directed greatest effort to investigating the transport responses and/or sections of the TTRs that I consider to be the most critical in terms of overall impact on the Structure Plan Area and proposed transport changes. In this context, I note that it is possible that my peer review has not identified every possible transport issue or implication of the TTRs.
- I have not reviewed the detail of proposed active travel improvements, such as their exact alignment or configuration. Notwithstanding, as outlined above, I did receive clarifications from SRLA in preparing this memo which gives me confidence that appropriate investigations have been completed by SRLA for these improvements.
- I have focussed my review on the likely effects of the recommendations related to the Structure Planning rather than effects and/or impacts associated with the approved SRL East rail project including its surface-level transport improvements to active travel and public transport infrastructure and services. I note that details of the SRL East rail project can be found in its approved Environment Effects Statement and the Minister for Environment and Climate Action's assessment of that Statement.
- I have not undertaken a forensic assessment of the VITM modelling which informed the trip demand estimates presented in the TTR, as it is beyond the scope of this peer review. Notwithstanding, following a review of the clarifying material provided to me by SRLA, I am not aware of any matter which causes me concern regarding the accuracy of the trip demand estimates, particularly given they are presented as ‘estimates only’ and the purpose for their inclusion in the TTR is principally to guide the ”vision and validate” methodology and the subsequent focus on increasing the use of sustainable transport modes. This methodology is discussed further below.
- I have not undertaken a detailed review of the accuracy of existing transport conditions in the precincts such as existing levels of transport accessibility, car parking restrictions, supply or demand on streets, and the like.
- I have focused on matters directly relevant to transport and have not considered matters such as, but not limited to, cost, urban design and noise implications of transport. The latter matters sit outside of my area of expertise.

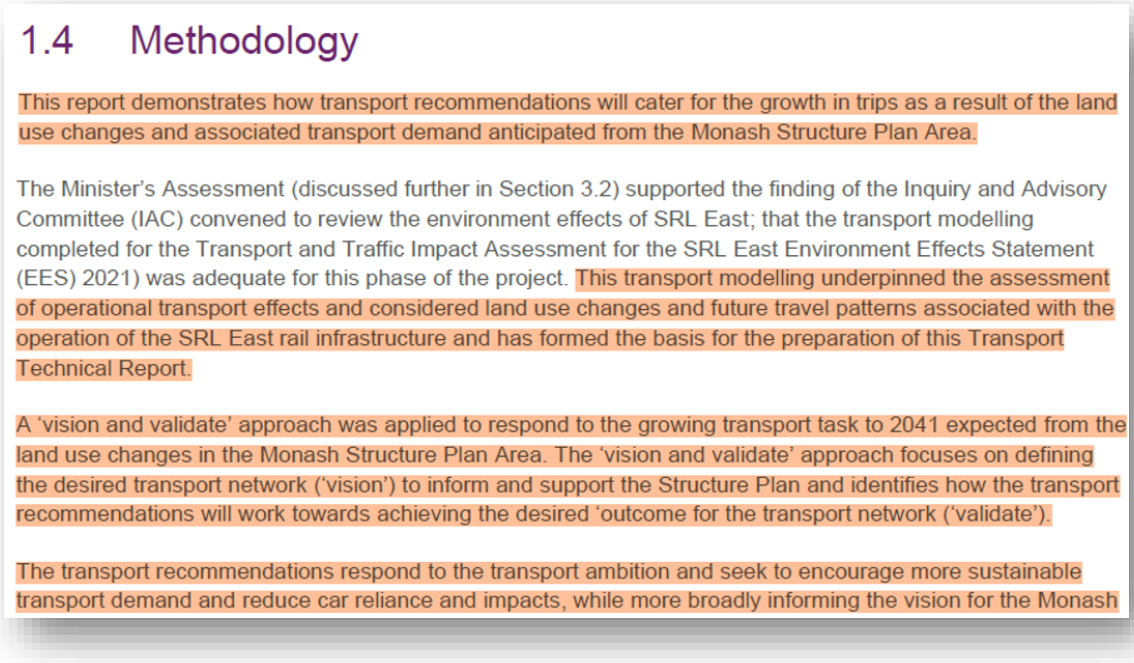
I consider these limitations to be appropriate for a peer review role, particularly given the peer review is being completed as an early stage of the Structure Planning process. This process is discussed in further detail in Section 4 of this report.

3. TTR methodology, assumptions and limitations

3.1. Methodology

The TTR methodology is outlined in detail in Section 1.4 of the Monash TTR.

For reference, I have reproduced important text from this section of the TTR in the below extract (noting that the highlighting has been added by me to emphasise key items).



1.4 Methodology

This report demonstrates how transport recommendations will cater for the growth in trips as a result of the land use changes and associated transport demand anticipated from the Monash Structure Plan Area.

The Minister's Assessment (discussed further in Section 3.2) supported the finding of the Inquiry and Advisory Committee (IAC) convened to review the environment effects of SRL East; that the transport modelling completed for the Transport and Traffic Impact Assessment for the SRL East Environment Effects Statement (EES) 2021) was adequate for this phase of the project. This transport modelling underpinned the assessment of operational transport effects and considered land use changes and future travel patterns associated with the operation of the SRL East rail infrastructure and has formed the basis for the preparation of this Transport Technical Report.

A 'vision and validate' approach was applied to respond to the growing transport task to 2041 expected from the land use changes in the Monash Structure Plan Area. The 'vision and validate' approach focuses on defining the desired transport network ('vision') to inform and support the Structure Plan and identifies how the transport recommendations will work towards achieving the desired 'outcome for the transport network ('validate').

The transport recommendations respond to the transport ambition and seek to encourage more sustainable transport demand and reduce car reliance and impacts, while more broadly informing the vision for the Monash

I consider this methodology to be appropriate for the TTR, noting the following:

- I consider it appropriate that the TTR seeks to demonstrate how its transport recommendations will cater for the growth in trips as a result of the land use change and associated transport demand anticipated from the Monash Structure Plan Area.

  I hold the view that this overarching objective is consistent with the directions and requirements of the Transport Integration Act 2010[2] and specifically Section 11 which states :*"the transport system and land use should be aligned, complementary and supportive and ensure that—*

  (a) transport decisions are made having regard to the current and future impact on land use;
  (b) land use decisions are made having regard for the current and future development and operation of the transport system;
  (c) transport infrastructure and services are provided in a timely manner to support changing land use and associated transport demand."

- I consider it appropriate that the TTR leverages the previous work completed for the SRL East EES, including – but not limited to – the associated transport modelling that was considered

[2] Compliance with the Transport Integration Act is a decision guideline outlined in Planning Practice Note 46 (Strategic Assessment Guideline)

"adequate for this phase of the project", as noted in the Minister's assessment of the SRL East EES.

I agree that the TTR ought not be required to reconfirm the appropriateness of the SRL East project or seek to define its associated ground level transport infrastructure given it was subject to its own and very extensive assessment. Rather, I hold the view that the TTR should assume that the SRL East rail project is approved, and will be constructed by circa 2035, and thus the focus of the TTR should be on the additional transport recommendations that ought to be completed as the Structure Plan Area develops to further reduce the reliance on private motor vehicle and thereby extend the anticipated benefits of SRL East.

- I consider it appropriate that the TTR adopts a "vision and validate" approach which seeks to encourage more sustainable transport use.

  I note that the adoption of this approach is consistent with contemporary transport planning practice, as well as various State and local government policies, and I consider it appropriate for adoption within the TTR given:

  - The SRL East project will substantially alter how people travel to/from the precinct, leading to a significant uplift in sustainable transport trips; and
  - The transport recommendations outlined in the TTR will further support the use of sustainable transport modes for travel within the precinct (both by encouraging these modes and discouraging the continued reliance on private vehicles).

  In contrast, I note that the adoption of the historic 'Predict & Provide' approach would typically focus on expanding infrastructure for private vehicles through (for example) the provision of larger intersections, wider roads and/or abundant car parking. This approach is known to encourage the cycle of car dependence, whilst also reducing the attractiveness of other modes and the 'place' of the redeveloped precincts. I consider that such an approach would be inappropriate if it were adopted (which I note is not the case in the TTR).

I also note that Section 1.4 of the TTR outlines a six-step process for the planning, development and validation of its transport recommendations. These steps are:

1. *"Review the existing conditions*
2. *Review the future baseline (i.e., the future as proposed in the SRL East EES, including the land use development uplift and the changes to the network.)*
3. *Setting the transport ambition and goals*
4. *Determine the movement network and opportunities to inform the structure planning process*
5. *Iterate the development of the Structure Plan with transport infrastructure input.*
6. *Validate the TTR transport recommendations against the transport challenges and ambition to cater for the projected changes in land use and associated transport demand."*

In my view, the steps outlined above align with the adopted methodology and are consistent with typical practice for the preparation of TTRs for major urban renewal precincts. As such, I also consider the steps outlined in the TTR to be appropriate. In this context, I also confirm my support for the transport ambition outlined in the TTR i.e., managing the growing number of trips expected to and from Monash in the future by encouraging people to walk, cycle and catch public transport.

3.2. Assumptions

I consider the most influential assumptions that have informed the TTR are:

1. The assumptions relating to future land use yields for the Structure Planning Area, coupled with the resultant trip demand estimates as sourced from the Victorian Integrated Transport Model (VITM) based on these yields.

   Specifically, I note the following in this regard:

   - Section 4.3 of the TTR presents the land use yield predictions, as summarised in the below extract. The source of this data is referenced as "AJM (2025), Economic Profile – Monash".

FIGURE 4.2 POPULATION AND EMPLOYMENT GROWTH WITHIN THE STRUCTURE PLAN AREA

   - Section 5.4 of the TTR presents the future trip generation estimates for the Year 2041 'base' scenario (i.e., with SRL East), as shown in the graph on the left in the extract below. This figure anticipates a future trip generation of approximately 32,600 person trips to/ from the Structure Plan Area in a typical peak hour. TTR footnote #24 outlines that this estimate is sourced from the VITM modelling completed for the EES.

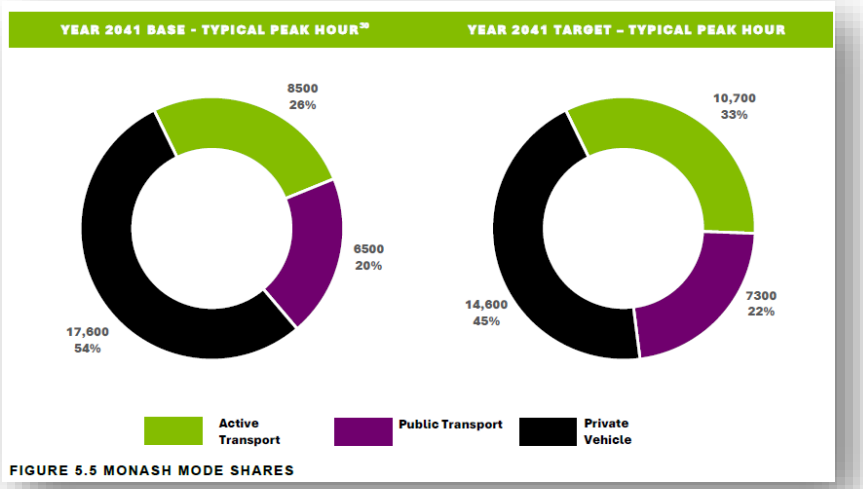


FIGURE 5.5 MONASH MODE SHARES

   In light of the significant scale of the future development in the Structure Plan Area, I consider it appropriate to estimate future trip demands using VITM modelling and I note that I have adopted this approach for the assessment of other major urban renewal precincts. I also consider it reasonable to source this estimate from the VITM modelling completed for the EES as I understand that the EES modelling was based on future land use yields in the Structure Plan Area that remain broadly consistent with those land uses yields now proposed. This consistency is discussed on page 60 of the TTR.

2. The assumptions used to estimate the mode shares and resultant trip estimate for the future Year 2041 “target” scenario.

   Specifically, I note the following in this regard to this assumption:

   - Section 5.4 of the TTR (refer to text on page 66) outlines that the target Year 2041 trip estimates assume a 20% increase in sustainable transport use, with a corresponding decrease in private vehicle use, compared to the base scenario.
   - Section 5.4 of the TTR (refer to text on page 66) outlines that of the 20% increase in sustainable transport modes, 75% of the trip demand increase is assumed to change to active transport modes with the remaining 25% assumed to change to public transport modes.
   - The resultant target Year 2041 trip demand estimate is shown on the right of Figure 5.5, which is the figure presented above.
   - The TTR outlines a range of factors that informed its assumptions in this regard, including analysis of trip mode by trip length sourced from the VITM modelling for the Year 2041 base scenario. The analysis indicates:
     - Approximately 50% of the estimated 32,600 person trips to/from the Structure Plan Area in the future Year 2041 conditions are expected to occur within a 5km radius of the SRL station. This is shown in Figure 5.3 of the TTR.
     - With the exception of trips less than 2km in length (which predominantly favours active transport modes), there is a strong bias towards the use of private vehicle for all other trip lengths. This bias is shown in Figure 5.4 of the TTR, reproduced below, which highlights (for example) that approximately 40% and 50% of trips of a length of 2-3km and 3-4km respectively are expected to be completed by private vehicle.

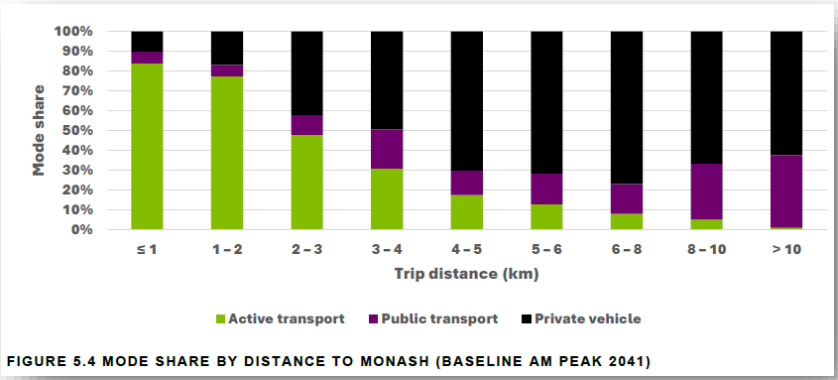


FIGURE 5.4 MODE SHARE BY DISTANCE TO MONASH (BASELINE AM PEAK 2041)

I agree with the opinion stated in the TTR that this analysis confirms there is a clear opportunity to achieve a greater quantum of sustainable transport trips than is assumed in the Year 2041 baseline estimate. I also agree with the TTR that the increased use of sustainable transport is likely to occur as the density of the area increases in the future due to its development.

In this context, I consider the assumptions used in the TTR to estimate the target trip demands to be reasonable.

3.3. Limitations

In my view, some limitations of the TTR include:

1. The TTR does not seek to determine or quantify the extent of future bus service enhancements that are being planned by Government and are expected to be delivered across Melbourne, including but not limited to the Structure Plan Area, over the coming decades. Based on the additional material provided to me by SRLA in response to my requested clarifications, I understand that an extensive body of bus network planning has been progressed by DTP, in collaboration with SRLA, which outlines that additional routes and frequency improvements are under investigation for the Structure Plan Area in the lead up to the opening of SRL East. In my view, future bus network planning is beyond the reasonable remit of a Structure Planning process and I therefore consider it acceptable this level of detail is not included within the TTR.

2. The TTR estimates future trip demands based on VITM modelling outputs (as described above) noting that VITM is known to have limitations in accurately forecasting active travel and public transport trips. Despite this limitation, I consider it appropriate to estimate future trip demands using VITM, noting that this limitation is also mitigated in the TTR via the adoption of the "vision and validate" approach and inclusion of target mode shares. By setting these target mode shares and reducing car reliance and private vehicle use, the TTR effectively seeks to reduce future traffic congestion in the Structure Plan Area below the levels previously assessed (and accepted) as part of the EES.

3. The TTR does not specify the timing of its transport recommendations, other than as specified in Section 6 of the PPP. Rather, this detail is included in the separate Monash Draft Implementation Plan. I consider this approach to be acceptable as I understand that the TTR and Implementation Plan will be available to be reviewed at the same time.

Overall, I consider the limitations of the TTR are acceptable, noting my view that the purpose of the TTR ought not be to determine every potential transport infrastructure project in detail but rather outline the key transport recommendations, including those that may require further investigation, for implementation over time.

3.4. Summary of Opinion

Overall, I consider the TTR's methodology, assumptions and limitations to be appropriate. Most notably, I consider that the methodology aligns with the directions and requirements of the Transport Integration Act, and therefore also Planning Practice Note 46.

4. TTR Findings, Assessment Outcomes & Recommendations

4.1. Structure Planning Process

This section addresses my views on whether the findings, assessment outcomes and recommendations in the TTR are appropriate in the context of the structure planning process for the Monash Structure Plan Area.

In providing views on this matter, I consider it necessary to first outline the key steps for the SRL structure planning process. These steps are advised on the Victorian Government's "Big Build" website[3] and are reproduced at **Table 1**.

Table 1: Key steps for SRL East structure planning

Step	Timeframe	Key outcomes
Developing shared visions	Mid to late 2023	• Share feedback captured to date • Outline the structure planning process and timeline • Seek input on ambition statements and proposed priority outcomes for each SRL East Precinct
Refining the visions	Late 2023	• Seek feedback on draft precinct visions • Refine opportunities and challenges • Explore place-shaping criteria and values and needs for each area
Shaping the plans	Early to mid-2024	• Continue gathering feedback to inform final precinct visions and draft structure plans • Build awareness of upcoming exhibition process • Encourage continued feedback and participation
Exhibiting the plans	Late 2024/early 2025	• Release final visions, draft structure plans and planning scheme amendments • Exhibit structure planning documents for public review and comment • Seek stakeholder and community submissions
Public hearing	2025	• An independent advisory committee is convened • Structure planning documents are considered by the committee • A public hearing is held by the advisory committee
Sharing the outcomes	2026	• Structure plans are finalised • Planning scheme amendments are approved and gazetted • Structure plans are applied to all development within SRL East precincts

At the time of preparing this memo (February 2025), I note that SRLA is at the 'Shaping the plans' step and nearing the exhibition of the plans (including associated technical reporting) after having finalised the visions in late 2024. Importantly, I also understand that the Structure Plan to be exhibited will be issued as a draft and will be subject to refinement as part of the subsequent 'Public hearing' and 'Sharing the outcomes' steps.

[3] https://bigbuild.vic.gov.au/projects/suburban-rail-loop/planning/srl-east-precinct-planning

4.2. Summary of Opinion

I hold the view that the TTR findings, assessment outcomes and recommendations are appropriate for the current 'Shaping the plans' stage of the structure planning process for the following reasons:

- I consider that the TTR contains a comprehensive list of transport recommendations which I expect will likely be sufficient to achieve the target mode share change outlined in the TTR.
- I understand that the list of transport recommendations has been developed with the benefit of consultation with relevant stakeholders including – but not limited to – the Department of Transport & Planning (DTP) and Monash City Council.
- I note that the Structure Plan will be exhibited to seek public review and comment and that the transport recommendations included within it may therefore be subject to refinement as part of the structure planning process.

From a technical perspective, I also support the transport recommendations within the TTR, particularly:

1. The proposed enhancements to sustainable transport connections / infrastructure within the Structure Plan Area to help facilitate a shift away from private motor vehicle for short-trips. These recommendations include – but are not limited to – the following:
    - Facilitating the establishment of an urban street network to improve connectivity, prioritise active and public transport, and focus on reducing competing priorities within the pedestrian core.
    - Facilitating enhancements to Howleys Road as the main multi-modal street with retail, residential community infrastructure and commercial offering.
    - Delivering a new high-quality east-west corridor, that is prioritised for active and public transport access, as well as retail and open space opportunities.
    - Delivering a new north-south active transport corridor with green space while encouraging key retail uses to activate the street for a vibrant pedestrian core
    - Enabling upgrades to Blackburn Road and Ferntree Gully Road focused on improved streetscape, pedestrian and bike environment, place, amenity and safety.
    - Enabling the creation of new active travel links, defined in the TTR as 'Critical Key Links', 'Important Key Links' and 'Local Key Links', to unlock a new north-south active transport corridor, improve access to primary walking destinations, reduce conflict between vehicles and pedestrians and cyclists, and help improve accessibility to public transport stops.
    - Facilitating improved walking and cycling crossings of Blackburn Road, Ferntree Gully Road and Gardiner Road.

    The majority of these recommendations are illustrated in Figures 6.15 and 6.16 of the TTR, as reproduced on the following pages.
2. The investigation into public transport enhancements in the precinct, which I understand are to be completed by the DTP in the future, such as future bus priority measures, upgrades to bus infrastructure and a potential high-capacity public transport corridor that travels along Ferntree Gully Road, Howleys Road, Normanby Road, Blackburn Road and Wellington Road.
3. The proposed introduction of maximum car parking rates and minimum bicycle parking rates to encourage sustainable transport use for new development.

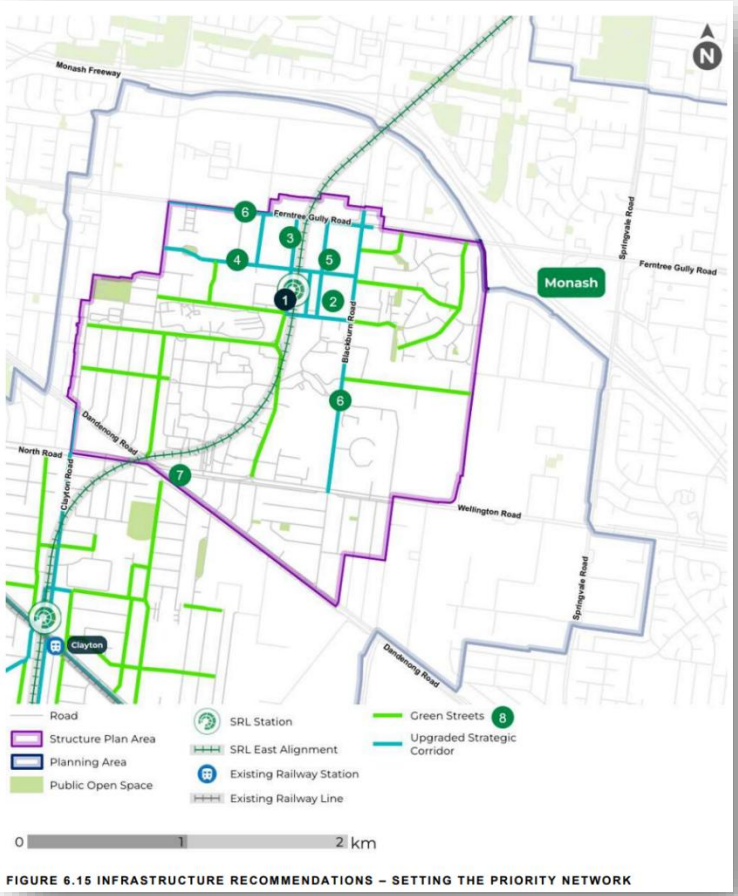


FIGURE 6.15 INFRASTRUCTURE RECOMMENDATIONS – SETTING THE PRIORITY NETWORK

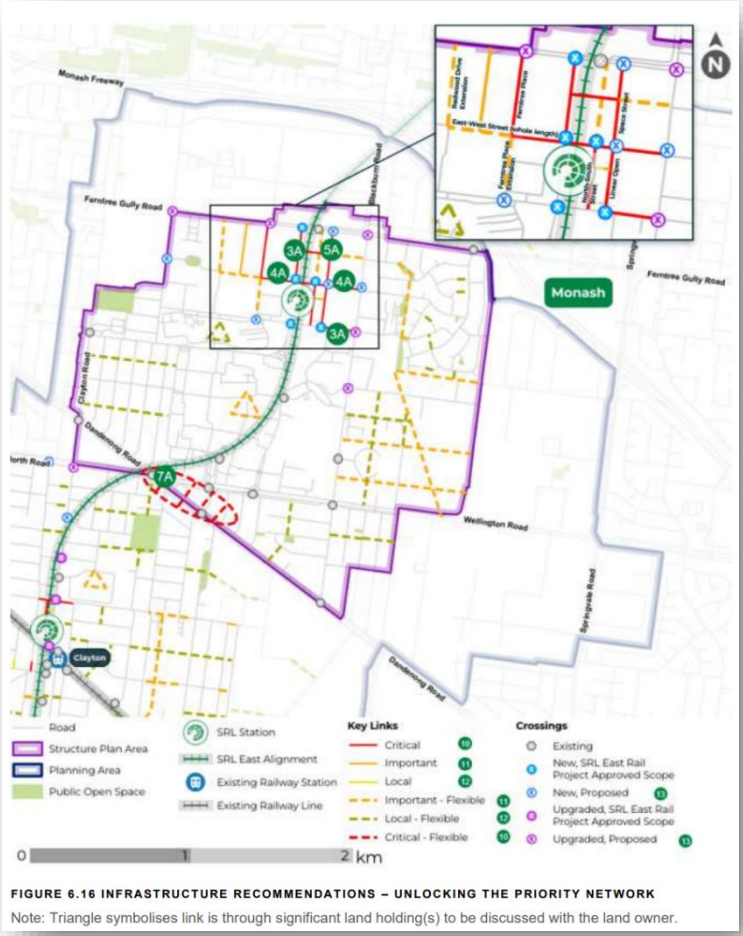
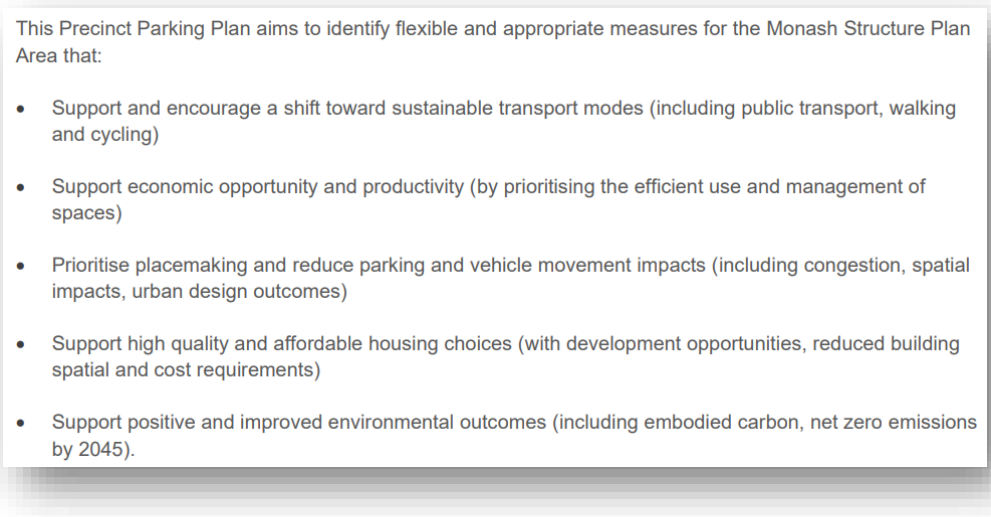


FIGURE 6.16 INFRASTRUCTURE RECOMMENDATIONS – UNLOCKING THE PRIORITY NETWORK

Note: Triangle symbolises link is through significant land holding(s) to be discussed with the land owner.

With specific regard to car parking matters outlined in the PPP (contained as an appendix to the TTR), I further note the following:

- I support the objectives outlined in the PPP, as reproduced in the extract below.



This Precinct Parking Plan aims to identify flexible and appropriate measures for the Monash Structure Plan Area that:

- Support and encourage a shift toward sustainable transport modes (including public transport, walking and cycling)
- Support economic opportunity and productivity (by prioritising the efficient use and management of spaces)
- Prioritise placemaking and reduce parking and vehicle movement impacts (including congestion, spatial impacts, urban design outcomes)
- Support high quality and affordable housing choices (with development opportunities, reduced building spatial and cost requirements)
- Support positive and improved environmental outcomes (including embodied carbon, net zero emissions by 2045).

  In my view, these objectives align with the broader ambition outlined in the TTR (i.e., to manage the growing number of trips expected to and from Monash in the future by encouraging people to walk, cycle and catch public transport), whilst also appropriately seeking to achieve other non-transport benefits such as supporting affordable housing choices and improving environmental outcomes.

- I support the approach of establishing two different zones for the car parking controls (as shown in the extract below), including:
  - 'Area A' covering the anticipated high-density core of the precinct which is best serviced by public transport service and is already well managed by car parking controls that generally precludes long-term on-street car parking.
  - 'Area B' covering the remaining Structure Plan Area (which I note is largely within the Principal Public Transport Network).

  In addition, I support the approach of setting different car parking rates for these different zones, as follows:
  - For Area A - maximum car parking rates for all land uses, and
  - For Area B – maximum rate for residential building (student accommodation), minimum and maximum rates for dwellings and maintaining minimum car parking rates for all other land uses.

  In my view, the adoption of different car parking rates in these different areas has appropriate regard for the differences in the existing transport conditions of each area, including their proximity to public transport services and extent of existing car parking management controls. In this context, I consider the proposed PPP approach aligns with Planning Practice Note 57 (The Parking Overlay) which dictates that new car parking rates are to be substantiated based on the local conditions.

FIGURE 5.1 MONASH RECOMMENDED PARKING OVERLAY ZONES

- I support the car parking rates identified in the PPP, as reproduced in the extract below, as I consider they are in the “right order of magnitude” for the key land uses and have appropriate regard to local conditions including the availability of public transport that will exist in the area up to the delivery of SRL East in circa 2035. Specifically, I note:
    - The proposed maximum rates for the dwelling use for both Areas A and B are generally aligned with ABS car ownership census data for the area. In this respect, I do not consider the rates represent a “suppression” of resident car parking provision. I also note that reduced resident car parking provisions are being sought for other non-transport reasons, as outlined in the objectives above.
    - The proposed supermarket and retail maximum rates for Area A are consistent with empirical rates often applied for such land uses in activity centres. I consider the rates will likely encourage a reduction in car parking supply while allowing developers to deliver car parking consistent with market demands if required. The adoption of a lesser minimum supermarket rate in Area B, compared to the existing statutory rate, will also encourage reduced car parking provision aligned with the empirical evidence whilst protecting against under provision which may adversely affect surrounding residential areas.
    - The maximum office rate in Area A generally aligns with rates commonly adopted in activity centres, such as Moonee Ponds (maximum rate of 2 spaces per 100sqm) and Footscray (rate between 1.5 and 2 spaces per 100sqm). Notwithstanding this, I expect this maximum office car parking rate will likely reduce over time, particularly following the delivery of SRL East in circa 2035.
    - For all other land uses, the PPP proposes the Clause 52.06 'Column B' rates as the maximum and minimum rates in Area A and Area B, respectively. For Area A, I consider

the adoption of the Column B rates as maximums to be appropriate and I note that it aligns with the Parking Overlays for other major activity centres, including Fishermans Bend and Victoria Gardens. For Area B, I consider it appropriate to adopt Column B rates as minimums given the majority of the land in this area is located within the PPTN at present and I consider that the balance of the land not currently within the PPTN will benefit from the active and public transport projects recommended in the TTR.

TABLE 5.2 MONASH RECOMMENDED PARKING OVERLAY RATES

USE	EXISTING MINIMUM RATES [1]	AREA A (MAXIMUM)	AREA B	UNIT/ MEASURE
Dwelling	1	0.7	0.5 min – 1 max	1 bedroom/studio
		1	0.7 min – 1 max	2 bedrooms
	2	1.4	1.4 min – 2 max	3+ bedrooms
Residential building (student accommodation)	0.3-0.4 (min) [2]	0.3 (maximum)		bed
Supermarket	5	3.5	3.5 min	100 m2 LFA
Retail premises, including Shop	4	3	Retail – N/A Shop – Clause 52.06 'Column B' rates (minimum)	100 m2 LFA
Office	3.5	3		100 m2 NFA
Other		Clause 52.06 'Column B' rates (maximum)		

[1] Clause 52.06-5 Table 1 Column A rates, includes residential visitor rates not shown here, [2] Monash local policy 16.01-1L-02

- I support the PPP recommendation that "SRLA develop a suite of documents in consultation with the City of Monash to effectively manage the function and needs of the kerbside and on-street parking" (PPP page 53) and expect this will include additional parking restriction in the surrounding streets within and potentially adjacent to the Structure Plan Area.
- I support the principles and objectives outlined in the PPP in relation to the consolidation, sharing, and unbundling of car parking, as well as the adaptive design of car parking structures. I have been advised that more detail regarding these matters will be contained in the Parking Overlay recommended in the PPP.

5. Summary

I am satisfied that the Monash TTR dated February 2025 is appropriate for exhibition as part of Structure Planning process outlined in this memo.

Naturally, should you have any questions relating to the opinions outlined in this memo, please do not hesitate to contact me.

Kind regards,

Tim De Young
Director, Eukai Pty Ltd

BEng (Civ), BCom, MBA | CPEng, FIEAust, NER

Attachment A –
Clayton Utz Letter of Instruction dated 13 November 2024

Confidential and subject to legal professional privilege

Email: tim.deyoung@eukai.com.au

13 November 2024

Tim de Young
Eukai
Level 22,
8 Exhibition Street,
Melbourne, VIC, 3000

Dear Tim

Suburban Rail Loop East Precinct Planning
Instructions to peer review Monash Transport Technical Report

Clayton Utz (ABN 35 740 217 343) (**Clayton Utz**) together with White & Case continue to act as legal advisors to the Suburban Rail Loop Authority (**SRLA**) in relation to the precinct planning process for the Suburban Rail Loop (**SRL**) East precincts.

This letter sets out your instructions to undertake a peer review and provide peer review report of your opinions, for the purposes of Clayton Utz and/or White & Case providing legal advice to SRLA.

In December 2023, the Minister for the Suburban Rail Loop declared a Suburban Rail Loop planning area for SRL East (**SRL East Planning Area**) under section 65(1) of the *Suburban Rail Loop Act 2021*. It is in respect of this area that SRLA is a planning authority under the *Planning and Environment Act 1987*.

SRLA has defined boundaries for the preparation of structure plans (**Structure Plan Areas**) within the SRL East Planning Area and is in the process of preparing structure plans and draft planning scheme amendments (**PSAs**) for each Structure Plan Area located around the SRL East stations at Box Hill, Burwood, Glen Waverley, Monash, Clayton and Cheltenham (**SRL East Precincts**). The boundaries of the Structure Plan Area for Monash are shown here: https://bigbuild.vic.gov.au/__data/assets/pdf_file/0006/859596/SRL-Monash-Structure-Planning-Boundary-map.pdf

The Monash Transport Technical Report (**Technical Report**) has been prepared to inform preparation of the structure plan and draft PSA for the Monash Structure Plan Area. A copy of the Technical Report was separately provided to you earlier today.

1. **Instructions**

This letter sets out instructions for you to undertake a peer review of the Technical Report and prepare a peer review report.

Your peer review report should address the following matters:

(a) the scope of your role in reviewing the Technical Report;

(b) the appropriateness of the methodology, assumptions and limitations in the Technical Report;

(c) whether the findings, assessment outcomes and recommendations in the Technical Report are appropriate in the context of the structure planning process for the Monash Structure Plan Area.

Tim de Young, Eukai 13 November 2024

2. **Conflict of interest**

It is important that you remain free from any possible conflict of interest in providing your advice. You should ensure that you have no connection with any potential party to this matter which could preclude you from providing your opinion in an objective and independent manner.

3. **Confidentiality**

This letter is confidential, and may only be disclosed at the sole discretion of Clayton Utz or White & Case. Any reports or advice prepared pursuant to these instructions are confidential, and may only be disclosed at the discretion of Clayton Utz or White & Case.

If anyone other than Clayton Utz or White & Case contacts you about this letter or your instructions, you must contact Clayton Utz or White & Case immediately.

If you have any questions about this letter or require any additional information, please contact us.

Yours sincerely

Sallyanne Everett, Partner
+61 3 9286 6965
severett@claytonutz.com

Joint Venture
222 Exhibition Street
Melbourne VIC 3000

PO Box 23061 Docklands
VIC 8012 Australia

contact@srla.vic.gov.au | 1800 105 105 (call anytime)
suburbanrailloop.vic.gov.au

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SUBURBAN RAIL LOOP AUTHORITY

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