SUBURBAN RAIL LOOP EAST

SRL East Draft Structure Plan – Monash

Urban Design Report

More Homes For Victorians

VICTORIA State Government

SRL East Draft Structure Plan

Urban Design Report

Monash

Technical Report R.3

Rev 01 February 2025

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SUBURBAN RAIL LOOP

AJM Joint Venture

Document Control Record

AJM Joint Venture

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DOCUMENT CONTROL			
Project Title	**Suburban Rail Loop**		
Document Title	**SRL East Draft Structure Plan – Urban Design Report – Monash**		
Document ID	**Technical Report R.3**		
Rev	**Date**	**Revision details/status**	**Author**
01	February 2025	For Exhibition	Mark Sheppard
Current revision	01		

Contents

This document is to be read in conjunction with:

SRL East Structure Plan – Urban Design Report – Attachment A: Supporting Research

SRL East Structure Plan – Urban Design Report – Attachment B: Gehl Public Space and Life study

SRL East Structure Plan – Urban Design Report – Attachment C: Assessment of Solar Access to the Public Realm

Executive summary

Suburban Rail Loop (SRL) East is a city and state-shaping project that will transform Victoria's public transport system and support vibrant suburbs across Melbourne. Realised over decades, SRL will deliver sustained job creation and investment in Melbourne's already thriving middle suburbs, leading to increased demand for floorspace.

Draft Structure Plans (Structure Plans) are being prepared for the neighbourhoods surrounding the new underground stations at Box Hill, Burwood, Glen Waverley, Monash, Clayton and Cheltenham.

The Structure Plans will set a Vision and framework to guide growth and change in each neighbourhood, while preserving valued existing character attributes and ensuring high-quality environments.

This Urban Design Report will inform the development of the Structure Plan for Monash.

Recommendations

This report sets out recommendations relating to urban design to consider when developing the Structure Plans, with the objective to achieve the Vision for Monash and the SRL Urban Design Principles and Objectives. This includes reconciling the provision of growth with the creation of high quality amenity, defining the attributes of each neighbourhood that will deliver diverse opportunities, and identifying the public realm interventions necessary to create a well connected, comfortable and welcoming public realm.

The recommendations are organised around three major urban design components - public realm, urban form and built form.

A set of eight design directions were developed to guide the recommendations:

- Design Direction 1: Ensure streets are inviting places that support community life
- Design Direction 2: Promote active transport access
- Design Direction 3: Foster resilient urban environments
- Design Direction 4: Facilitate outdoor recreation
- Design Direction 5: Provide for growth in a form that delivers high amenity environments
- Design Direction 6: Establish diverse, liveable and productive neighbourhoods
- Design Direction 7: Support an inviting public realm
- Design Direction 8: Ensure high quality and responsive built form.

Each design direction provides a set of strategies to inform how the design directions can be achieved in the Structure Plan Area.

The **public realm strategies** seek to deliver an environment which invites people to walk, particularly to key destinations such as public transport, activity centres, major employment areas and large open spaces, and which provides outdoor amenity to support higher-density living and working. The initiatives include new links where there is a gap in walkability or general permeability, and new open spaces where a gap in provision has been identified. Additionally, the strategies advocate for a street and open space system with an enhanced environmental performance, creating climate resilient streets and spaces.

The **urban form strategies** seek to deliver higher-density and high-quality development for living and working in response to the increased accessibility brought about by the SRL, while also contributing to a high-quality public realm. The Structure Plan Area comprises a collection of places, each of which has distinct attributes and a distinct desired land use function. The strategies promote different forms of development in each place that will capitalise on its attributes and support its desired land use function, reinforcing their diversity and individual identity and sense of place.

The different place types include:

- A central core of well-spaced towers providing for high-density mixed-use activity, complemented by pedestrian-favoured promenades and urban spaces that support street life and events
- Grand boulevards and avenues with moderately-tall and uniform built form to capitalise on their public transport accessibility and to create a well-framed public realm, complemented by broad footpaths and formal rows of mature trees
- Mixed-use areas comprising medium-rise, adaptable buildings that create a continuous, activated street wall behind small, landscaped setbacks
- Residential neighbourhoods developed with low-medium rise apartment buildings in garden settings and leafy streets, and dissected by 'green streets' that connect them to key destinations.

(These places differ from the Structure Plan neighbourhoods, which are informed by a broader range of considerations.)

The **built form strategies** seek to deliver a vibrant public realm, a high standard of on-site amenity and environmentally responsive built form. A 'mid-rise' scale of development is generally recommended because it provides for growth in a form that delivers high-amenity environments by maintaining a relatively-open streetscape and a sense of openness between buildings, enabling solar access and sky views. Mid-rise buildings also represent best practice across a range of functional, contextual, social and environmental criteria. The varied forms of mid-rise development recommended will deliver a diverse range of accommodation types, suitable for the anticipated land uses and household types, and a diverse visual experience. Building setbacks are recommended to enable increased tree canopy cover, which will help to mitigate the urban heat island effect, offer access to nature, bolster biodiversity and facilitate natural stormwater management.

The Vision for Monash outlines the long-term aspiration for the precinct including the Structure Plan Area.

The Vision for Monash:

Monash will be an international destination for scientific knowledge, research and discovery – generating new jobs and playing a critical role in Melbourne's future economy.

Figure A: Victorian Heart Hospital, Monash. Photo by Peter Bennetts

Public realm outcomes

Applying the public realm design directions and strategies in this report will achieve the public realm outcomes shown in Figure B.

Monash's public realm is recommended to be anchored by a fine-grain street network around the SRL station, with high-quality public realm connections and activated street frontages.

Industrial land north of Monash University is envisaged to be transformed to create a network of green streets, with enhancements for improved walking and cycling connections and a platform for future development across the Structure Plan Area.

A comprehensive description of the design directions and strategies is provided in Section 3.

Urban form and built form outcomes

Applying the urban form and built form design directions and strategies in this report will achieve the urban form outcomes shown in Figure C.

The catchment around the SRL station is envisaged to provide the greatest accessibility to jobs and services and is where the level of intensification and provision of jobs and services should be highest. This urban form character is extended up to Ferntree Gully Road along Howleys Road, which serves as the major axis of the future street-oriented town centre, connecting the SRL station, the Monash University and the broader Structure Plan Area.

Urban form is recommended to respond to the existing structure of Monash along Blackburn Road and Dandenong Road/ Wellington Road which offer a high level of accessibility to jobs and services. Therefore, they are an appropriate location for a higher level of intensification and mixed use to contribute to a new 'boulevard' character.

A comprehensive description of the design directions and strategies, is provided in Section 4.

Figure B: Public realm outcomes

Legend

- SRL station
- Structure Plan Area
- Pedestrian oriented urban core with fine-grain street network
- Permeable and green campus environment
- Green biodiverse links for habitat connectivity
- Linear park and open space network
- Mile Creek linear green link
- Pedestrian linkages for campus and station connectivity
- Key pedestrian crossings to Clayton Structure Plan Area
- Tree lined avenues and Boulevards

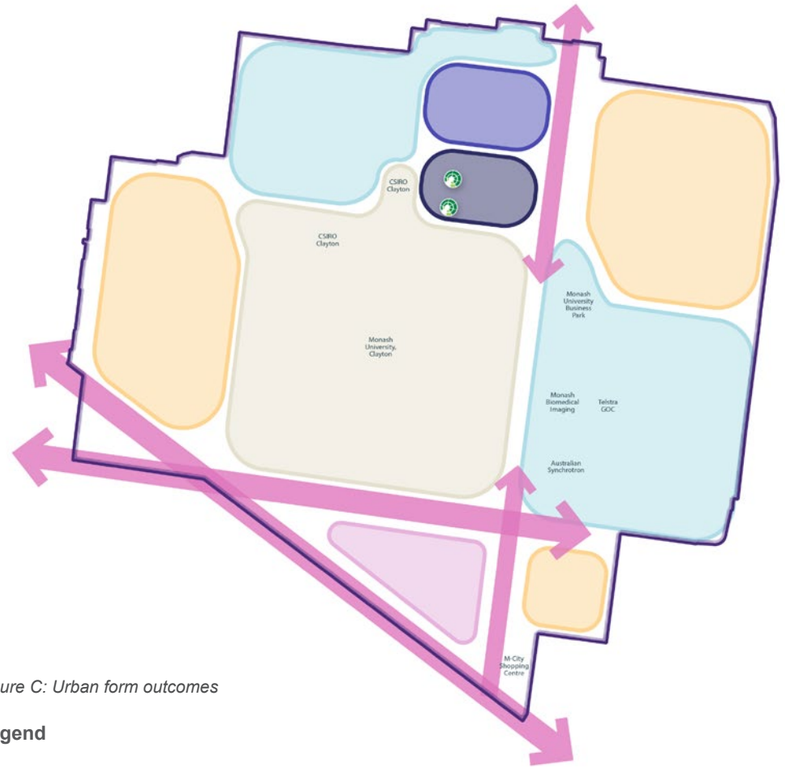

Figure C: Urban form outcomes

Legend

- SRL station
- Structure Plan Area
- Central Core
- Central Core Flanks
- Key Movement Corridors
- Urban Neighbourhood
- Residential Neighbourhood
- Employment Growth
- Universities and Australian Government statutory authorities

1 Introduction

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1.1 Introduction

Suburban Rail Loop (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.

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

1.2 Purpose of this report

This report will inform the development of the Draft Structure Plan (Structure Plan) to guide land use planning and development in the Monash SRL neighbourhood.

It describes the existing public realm and urban design character of the Structure Plan Area, and identifies issues and opportunities relating to its development.

Recommendations to consider when developing the Structure Plans are made, with the objective to avoid, minimise or manage potential negative impacts of change, and to maximise potential for positive change.

1.3 Structure planning

Structure Plans have been prepared for defined areas surrounding the new SRL East stations to help deliver the vision developed for each SRL East neighbourhood.

The Structure Plans cover defined Structure Plan Areas that can support the most growth and change. These areas cover a walkable catchment that extends from the SRL station entrances. Additional places are included within each defined 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 a period of 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. The plans cover a wide range of matters, such as 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.

1.4 Structure Plan Area

The Structure Plan Area is the area subject to structure planning, that will undergo development to accommodate the projected population and jobs growth for the Monash Structure Plan Area by 2041.

The Monash Structure Plan Area is generally bordered by Ferntree Gully Road to the north, Dandenong Road to the south, Clayton Road to the west and Nantilla Road to the east.

It is focused around the future SRL station north of Normanby Road and the adjacent business parks which is envisaged to be an area for greater transformation.

The Monash Structure Plan Area is shown in Figure 1.2.

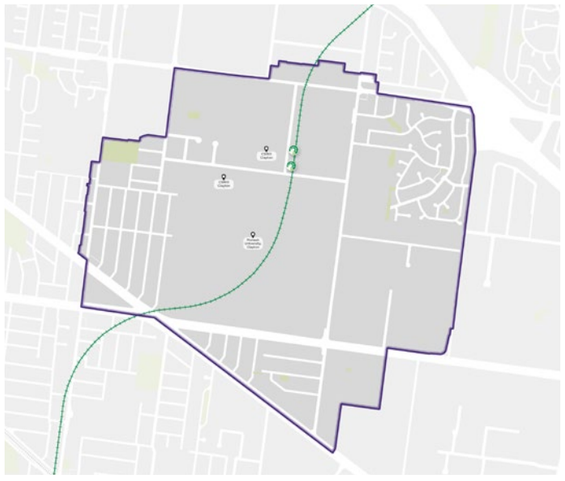


Figure 1.2: Monash Structure Plan Area

Figure 1.1: Background reference documents

1.5 Methodology

The methodology for the urban design assessment involved the following steps:

- A Study Area for the assessment was identified. For this assessment, the Study Area comprised the SRL Monash Structure Plan Area, surrounding the station where the most change and development will occur
- Legislation, polices and other documents relevant to the assessment were reviewed. This included:
  - National, state and local government policies, legislation, strategies and guidelines relevant to the affected area
  - SRL East policy and strategies including: SRL East Precinct Visions, SRL East Urban Design Framework, SRL Precinct Development Framework, and SRL East Urban Design Strategy*
  - The community and stakeholder engagement
  - Technical assessments undertaken, including studies on housing, land use, economics, housing, retail, transport, open space, community infrastructure, flooding and water management, aviation, ecology and arboriculture, sustainability and climate response
- Research was conducted into forms of higher-density development and designs for streets and open spaces in higher-density environments
- Urban design context and background analysis, and the identification of issues and opportunities. This included a desk top review and site visits
- Testing of solar access in the public realm and private properties adjoining development.
- Based on the assessment, recommendations were developed for public realm, urban form and built form.
- Consideration of previous consultation undertaken for the feasibility, design development and environmental and planning approval phases of the SRL project, and engagement undertaken through the development of the Structure Plans
- The urban design peer review and advice was sought on the recommendations made in this report.

** While the SRL East Urban Design Strategy was only developed to guide the use and development of the SRL Rail and Infrastructure project, this document seeks to ensure that the urban design strategies for the broader Structure Plan Area align, respond and build-on the SRL East Urban Design Strategy.*

1.6 Recommendations

The report outlines the basis for the recommended urban design strategies and initiatives. These are organised around:

A **Public Realm Framework**, **design Directions** and **strategies** that seek to deliver an environment which invites people to walk, particularly to key destinations such as public transport, activity centres and major open space areas, and which provides outdoor amenity to support higher-density living and working. This includes recommendations for:

- New streets, lanes and pedestrian links to provide convenient walking routes throughout the Structure Plan Area
- Improvements to existing streets, lanes and pedestrian links based on their role in the movement network, to support their appeal and safety for pedestrians, and social activity
- New and upgraded open spaces to provide for the recreation needs of the future community.

An **Urban Form Framework, design directions and strategies** that seek to deliver create a range of distinct, higher-density neighbourhoods and high-quality development for living and working in response to the increased accessibility brought about by the SRL and the land uses sought in each area, while also contributing to a high quality public realm. This includes recommendations for:

- The types, and forms intensity and land use of new buildings in each part of the Structure Plan Area
- Specific locations within each area where greater or lesser building scale is appropriate. The further design of key interfaces between built form and public realm.

A **Built Form Framework, design Directions and strategies** that seek to ensure high quality development for living and working, and to contribute to high quality public realm amenity. This includes recommendations for:

- The design of buildings where they address the public realm
- The massing of built form at its interface with neighbouring properties
- On-site landscaping.

Outcomes that illustrate how the public realm, urban form and built form strategies can be delivered in each Place Type within the Structure Plan Area.

1.7 Report structure

Section 1. Introduction
Provides a brief overview of SRL and the purpose, method, recommendations, scope and structure of the Structure Plan Urban Design Report.

Section 2. Context
Outlines the context for the urban design recommendations, including the strategic context, SRL urban design principles and objectives, the urban context of the Structure Plan Area and the Vision.

Section 3. Public realm
Sets out a Public Realm Framework to support the achievement of the Vision, including a summary of the underpinning public realm analysis, and proposed future public realm and open space network.

Section 4. Urban form
Sets out an Urban Form Framework to support the achievement of the Vision, including a summary of the underpinning analysis and proposed future urban form pattern.

Section 5. Built form
Sets out a Built Form Framework that identifies the recommended built form outcomes.

Section 6. Outcomes
Brings together and elaborates on the public realm and built form outcomes recommended by the Public Realm, Urban Form and Built Form Frameworks for individual places within the Structure Plan Area.

Section 7. Recommendations summary
Summarises the urban design initiatives recommended to be incorporated in the Structure Plan.

Appendices
Appendix A. *Provides an analysis of the existing public realm and urban design characteristics in the Structure Plan Area.*

Appendix B. *Provides an analysis of development conditions in the Structure Plan Area.*

Appendix C. *Provides an analysis of the street network and public realm quality.*

Supporting Documents

Attachment A: Urban Design Supporting Research
Summarises the research undertaken on:

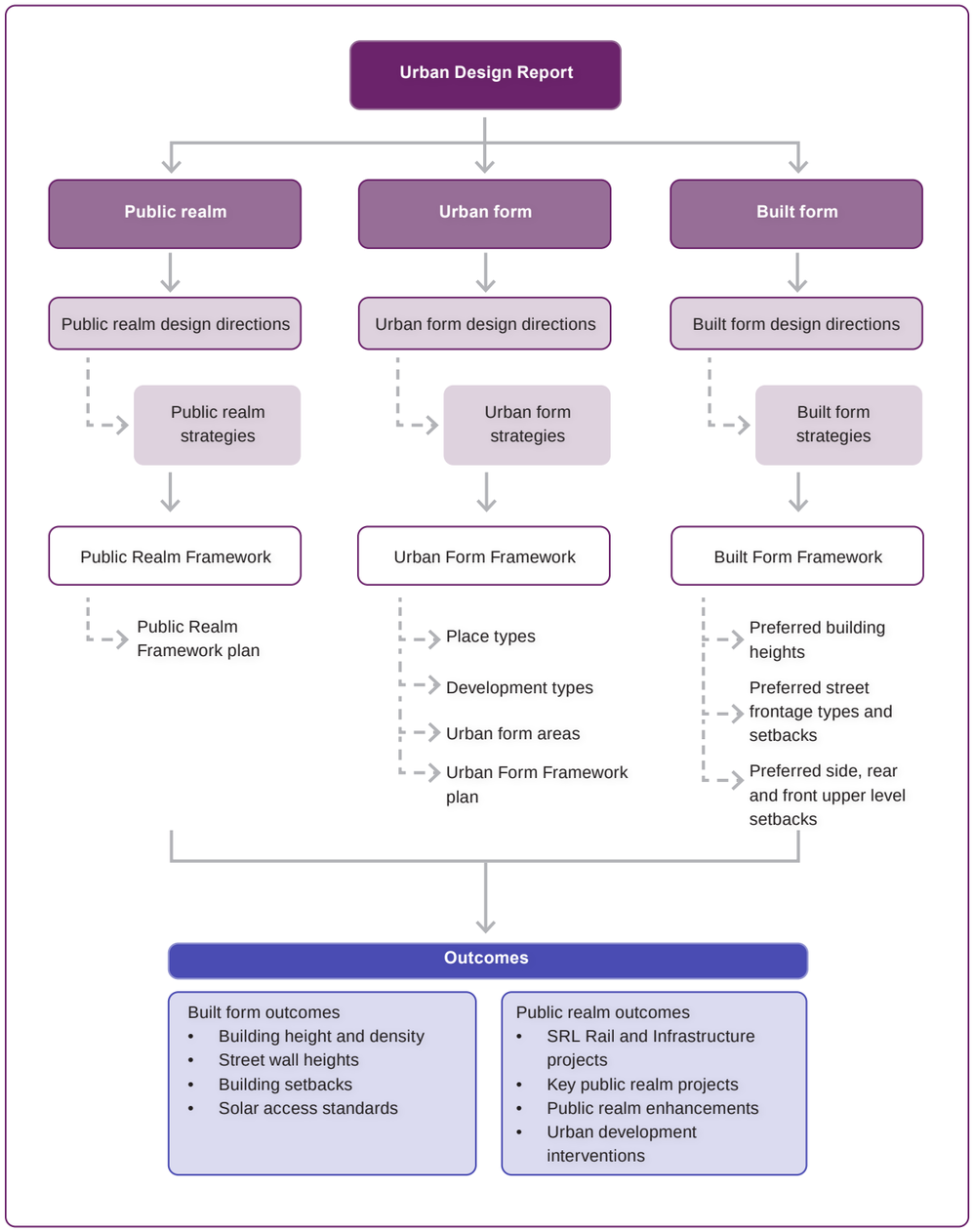
Part 01. *Urban development typologies*

Part 02. *Public realm typologies*

Attachment B: Gehl Public space and Life Study
Supporting urban design research, containing the Public Space and Life Study produced by Gehl.

Attachment C: Assessment of solar access to public realm
Summarises the testing undertaken of solar access in the public realm.

1.8 How to use this report



1.9 What is urban design?

Urban design is the practice of shaping the built environment to improve the quality of design and overall liveability, productivity and connectivity of cities. While built form is a key contributor, urban design is about more than just the appearance of the built environment. Urban design also relates to functional, environmental, economic and social outcomes of a project.

Urban design operates at a variety of scales, from precinct and neighbourhood planning to the design of a station forecourt or public park.

Achieving high-quality urban design requires good processes and guidance that optimise outcomes and value for money. High-quality design is authentic, contextual and site-specific.

Density Done Well

Density can mean different things, in different places. Each location requires consideration of the scale of density appropriate to its specific local context and future role. Different scales of density bring different benefits and present different challenges. Good urban design can help address these challenges, to improve:

- Functionality, character and spirit of public places for individuals and communities
- Levels of comfort, accessibility, safety and inclusiveness of places
- Expression of social and cultural values associated with places and people
- Socio-economic composition, diversity and economic vibrancy of urban areas
- Ecological systems, sustainability and the resilience of urban environments
- Community connectedness, health and wellbeing, and pride of place.

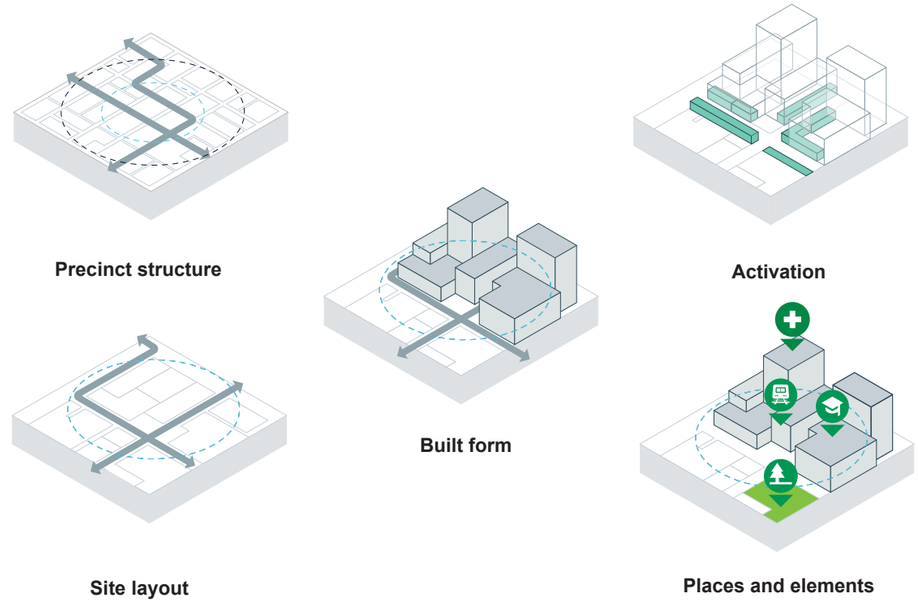


Figure 1.3: How urban design works across different scales of a project

2 Context

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2.1 Policy context

Plan Melbourne 2017–2050

Plan Melbourne is the Victorian Government's long-term planning strategy for the future development of Melbourne, providing the strategic basis for the planned growth of the city in response to key challenges and opportunities facing Melbourne for the next 30 years. These include a growing population; remaining competitive in a changing economy; housing that is affordable and accessible; keeping up with the growing transport needs; and the need for climate mitigation and adaptation.

Plan Melbourne 2017-2050: Addendum 2019 updates the growth projections for Melbourne and identifies the need for: an additional 1.8 million jobs and 1.6 million dwellings to support Melbourne's growth by 2051; and a transport network able to cope with an extra 11.8 million trips per day by 2050.

The Addendum recognises that Melbourne's public transport network needs to develop to support the distribution of population and employment in line with growth estimates, stating that: '*Melbourne needs a huge, well-planned investment that enables the city to grow while meeting these transport challenges*'.

SRL is recognised as providing opportunity to create a direct rail connection between Melbourne's major employment, health and education precincts and activity centres outside the CBD. The role of 20-minute neighbourhoods in making Melbourne a city of inclusive, vibrant and healthy neighbourhoods is recognised.

The focus of Plan Melbourne is delivering more homes near transport, jobs and essential services in vibrant liveable and sustainable neighbourhoods.

Victoria's Housing Statement 2024–2034

Victoria's Housing Statement 2024–2034 sets an ambitious goal for addressing Victoria's housing needs.

The overall target is to increase housing delivery from 54,000 homes a year to 80,000 homes a year (equivalent to 800,000 homes over the next decade), with 70 per cent provided in established areas and 30 per cent in growth areas.

The Housing Statement focuses on five key areas to achieve these targets and other housing aspirations:

1. ***Good decisions, made faster***
   The Victorian Government is reforming Victoria's planning system to boost housing supply across the state – clearing the backlog and giving builders, buyers and renovators certainty about how long approvals will take.
2. ***Cheaper housing, closer to work***
   The Victorian Government is making it easier to build more homes, with the best design standards, where Victorians want to live – that means going up and out, not just out.
3. ***More social housing***
   The Victorian Government is building more social and affordable homes across Victoria – launching Australia's biggest urban renewal project on top of the Big Housing Build.
4. ***A long-term housing plan***
   We know our state will keep growing – and we know we'll need a plan to manage that growth in the decades ahead.

Planning Policy Framework

The Victorian Planning Provisions (VPPs) are established under Victoria's Planning and Environment Act 1987 as a state-wide reference document or template that a municipal planning scheme or planning scheme provision must be based on.

The VPPs set out state and regional planning policies relating to settlement, environmental values and risks, natural resource management, built environment and heritage, housing, economic development, transport and infrastructure.

The VPPs specifically reference SRL in:

Clause 11.01-1R (Settlement) – The strategy seeks to 'develop the Suburban Rail Loop through Melbourne's middle suburbs to facilitate substantial growth and change in major employment, health and education precincts and activity centres beyond the central city at an appropriate scale to address the needs of Melbourne's rapidly growing population'.

Clause 72.08 (Background Documents) includes Plan Melbourne 2017-2050: Addendum 2019 as a reference document

Figure 2.1: Strategic planning documents

Victoria's Infrastructure Strategy 2021–2051

Victoria Infrastructure Strategy 2021–2051 provides a practical roadmap for action over the next 30 years across a broad range of public policy areas including housing, energy, transport and social infrastructure.

The strategy seeks to address existing infrastructure pressures, demand on existing infrastructure, and assist with planning the timing and location of required and necessary new infrastructure.

Strong emphasis is placed on improving public and active transport connections in established areas by improving pedestrian, tram, bus and train infrastructure.

Recommendations focus on improving the connection and integration between these nodes of travel.

SRL will address will help achieve the objectives of the strategy, connecting activity centres, providing economic growth and housing opportunities, and improving access to jobs and services.

Victorian Infrastructure Plan 2021

The Victorian Infrastructure Plan 2021 lays out the infrastructure priorities of the Victorian Government.

The priorities include providing transport infrastructure to better connect people in Melbourne and regional areas to health, education and employment centres via public transport.

Urban Design Guidelines for Victoria 2017

The Urban Design Guidelines for Victoria 2017 support the delivery of functional and enjoyable places for people to live, work, and spend leisure time.

SRL aims to create neighbourhoods that foster community interaction and make it easy for people of all ages and abilities to live healthy lifestyles and engage in regular physical activity.

Better Apartment Design Standards for Victoria 2017

The Better Apartment Design Standards 2017 provide guidance for applicants, architects, building designers and planners for designing and assessing apartment developments to ensure their quality and functionality benefits the health and well-being of residents, and improves the environmental performance of apartment buildings.

SRL aims to deliver apartments that provide diverse, well-designed housing options to meet the long-term needs of Monash's growing community.

2.2 The Vision for Monash

The Vision for Monash outlines the long-term aspiration for the precinct including the Structure Plan Area.

The Vision for Monash states:

An international destination for scientific knowledge, research and discovery – generating new jobs and playing a critical role in Melbourne's future economy.

Monash is already home to globally-recognised education and research institutions and will grow as Melbourne's epicentre for innovation in health, medicine, materials and manufacturing. Its role as a knowledge-intensive business destination of state, national and global significance will be strengthened, bringing together multinational enterprises and young entrepreneurs from mature and emerging sectors. These will be the jobs and industries essential to Melbourne's future competitiveness and prosperity.

With a strong emphasis on sustainability and working partnerships between government, institutions, industry and business, Monash will be acknowledged for its leadership role, showcasing the strong connection between world-class research discoveries, new technologies and economic growth.

In the streets, squares and public spaces around the SRL underground station, a new centre of activity will unfold transforming and enhancing the local character of the area and connecting to the open and recreational spaces of the university. A dynamic mix of social, cultural and commercial experiences will create opportunities for people to connect, collaborate and share their ideas. It will have an eclectic feel, where new buildings sit alongside spaces that have been adapted for businesses to grow. Cafes, small bars, eateries, retail and entertainment options will support vibrant public life that spills out to the streets.

Over time, Monash will have increased housing diversity for all kinds of people – providing more homes for students, researchers, academics and entrepreneurs in Monash's smart, sustainable neighbourhoods. People will be able to mingle with visitors from all over the world. Improved walking and cycling infrastructure will complement high frequency public transport to reduce reliance on cars and create a walkable community.

At Monash, SRL East will unlock a knowledge and innovation precinct of global impact.

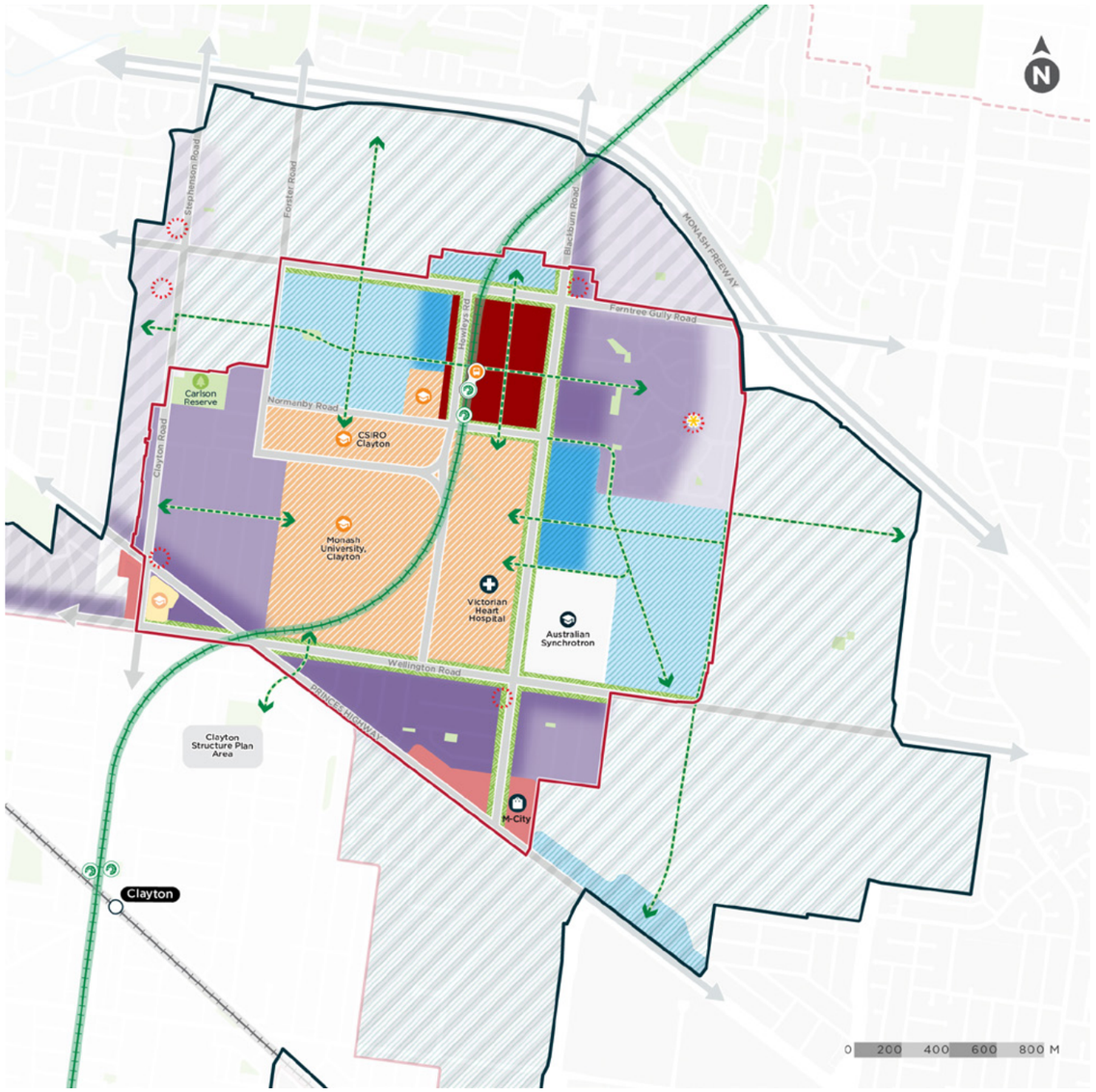


Figure 2.2: Monash Conceptual Precinct Plan

2.3 SRL urban design principles and objectives

The SRL Urban Design Strategy sets out what the project must achieve design-wise.

It seeks to provide consistently high-quality urban design so that SRL neighbourhoods continue to be great places for people to live, work and visit as development and density in them increases..

The SRL Urban Design Strategy sets out three core objectives of ‘productivity’, ‘connectivity’ and ‘liveability’, with a supporting set of principles and objectives to guide an integrated approach to urban design.

The SRL objectives and supporting principles and objectives are set out below.

Productivity

To support population growth and a focus on jobs and investment closer to where people live; strengthen access to, and investment in regional Victoria

Principle 1
Enduring

Places that are functional now and for generations to come

- **Objective 1.1 Legacy**
  Create a design that is enduring and functional for generations to come, is easy to maintain and manage, is adaptable to changing uses with minimal reconstruction, and will age gracefully in concept and detail.
- **Objective 1.2 Future ready**
  Ensure the design catalyses urban renewal, encouraging the evolution of the precincts and changing uses over time.
- **Objective 1.3 Resilient**
  Ensure the infrastructure, buildings and places can survive, adapt and thrive when subjected to stresses and acute shocks such as changes in climate and technology, and extreme events.
- **Objective 1.4 Environmentally sustainable**
  Optimise environmental performance and embed sustainability initiatives into the design response of the infrastructure project and surrounding precinct.

Principle 2
Diverse

Places that are inclusive and offer a diverse range of experiences.

- **Objective 2.1 Strategic alignment**
  Facilitate integrated land use and transport solutions that respond to the precinct ambition and strategic transport and land use planning.
- **Objective 2.2 Functional urban structure**
  Create an urban structure that ensures the adequate provision of public spaces that support a complementary mix of activities.
- **Objective 2.3 Integration with context**
  Ensure new works accommodate travel routes and activities that connect to, integrate with and complement those in the wider precinct.
- **Objective 2.4 Welcoming**
  Design places and movement networks that are welcoming, inclusive and pleasant for the whole community and encourage diverse social and cultural interaction within public spaces.

Connectivity

To support the development of an integrated transport network that increases travel options and access to places, and enhances the passenger experience

Principle 3
Connected

Places that are connected physically and spatially

- **Objective 3.1 Linkages**
  Improve people’s ability to walk, cycle and access public transport within a permeable urban structure that offers safe and efficient links and reduces barriers to movement.
- **Objective 3.2 Transport integration**
  Facilitate seamless intermodal transfers prioritising public transport, walking and cycling networks, and design movement networks for safe interactions between transport modes.
- **Objective 3.3 Legible**
  Reflect walking and cycling desire lines, promote intuitive wayfinding, reduce reliance on signage and minimise visual clutter and obstructions to key views.
- **Objective 3.4 Green network**
  Facilitate green networks that link public and private open space and support urban ecology, biodiversity and cooling.

Principle 4
Accessible

Places that are socially connected, enjoyable and easy to walk and wheel around

- **Objective 4.1 Universally inclusive**
  Enable all people to access, understand, use and enjoy spaces across the project area and surrounding precincts regardless of their age, size, ability or disability. To the greatest extent possible, move beyond baseline accessibility compliance towards support for genuine dignity, equity, social inclusion and independent mobility in the use of public places.
- **Objective 4.2 Twenty-minute neighbourhoods**
  Support and enhance convenient and desirable access to everyday services, facilities and key destinations within a 20-minute walking distance from home.
- **Objective 4.3 Active transport**
  Encourage walking and cycling for transport and recreation with integrated active transport infrastructure that can accommodate future growth and connects seamlessly with surrounding networks and with existing and proposed infrastructure.
- **Objective 4.4 Safer Design**
  Design places that feel safe for the community using them. Increase passive surveillance and decrease barriers to participation in public space by acknowledging and accommodating the specific needs and experiences of all population groups within the community.

Liveability

To create more sustainable and resilient precincts in Melbourne’s suburbs to generate new social and economic opportunities.

Principle 5
Enhancing

Places that enhance the local environment and community

- **Objective 5.1 Heritage**
  Celebrate, respect and respond to Indigenous and non-indigenous cultural heritage, values and local history.
- **Objective 5.2 Responsive**
  Design to respond, connect and build on the unique and valued social, cultural, physical and economic aspects of the precinct.
- **Objective 5.3 Sensitive**
  Sensitively enhance landscape and urban realm outcomes; and minimise negative physical and visual impacts associated with the new infrastructure.
- **Objective 5.4 Healthy**
  Design infrastructure and green networks, spaces and places that support active lifestyles, and encourage social interaction to improve physical and mental health.
- **Objective 5.5 Quality design**
  Create a high-quality design that makes a positive contribution to the local built and natural environment.

Principle 6
Liveable

Places that are comfortable and welcoming

- **Objective 6.1 Amenity**
  Improve urban amenity by realising site specific opportunities to enhance environmental comfort and create pleasant and attractive places that feel safe and are safe for people to move through and spend time in.
- **Objective 6.2 Landscape values**
  Create a coherent and engaging landscape response that embraces natural qualities and community and cultural values.
- **Objective 6.3 User experience**
  Enhance the journey and precinct experience for local communities, visitors and transport users.
- **Objective 6.4 Places for people**
  Create inviting, people-friendly streets, open spaces and public places, and maximise the opportunities to create green places.
- **Objective 6.5 Activation**
  Create activated, memorable and diverse places in the short and long term; manage interfaces and encourage a range of activities to deliver vibrant mixed-use neighbourhoods.

2.4 Urban context

Regional context

The Monash Structure Plan Area is located 18km south-east of Melbourne's CBD, within the local government area of the City of Monash. It lies adjacent to the Monash Freeway, with access via Forster Road and Blackburn Road, but does not currently benefit from rail access.

The Monash Structure Plan Area is directly adjacent to the Clayton Structure Plan Area to the south, forming a substantial proportion of the Monash National Employment and Innovation Centre (NEIC), and so the two are strategically linked.

The Monash NEIC is a globally-significant concentration of health, education and research institutions, with associated business opportunities. It is the largest concentration of jobs in Victoria outside central Melbourne.

The Clayton and Brandon Park Major Activity Centres (MAC) lie close to the Monash Structure Plan Area to the south and east, with the Glen Waverley MAC further to the north-east.

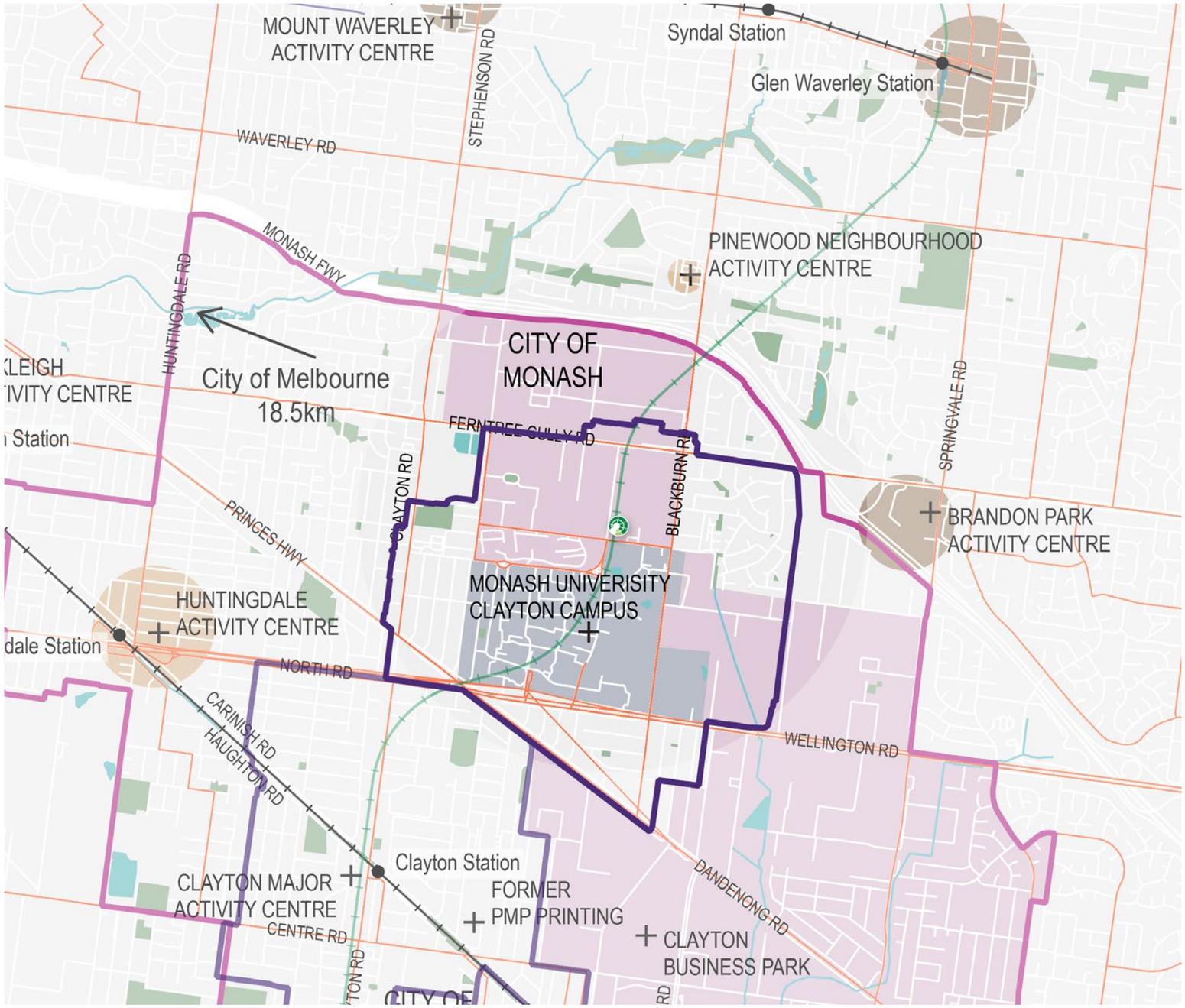


Figure 2.3: Regional context

2.5 Summary of existing conditions

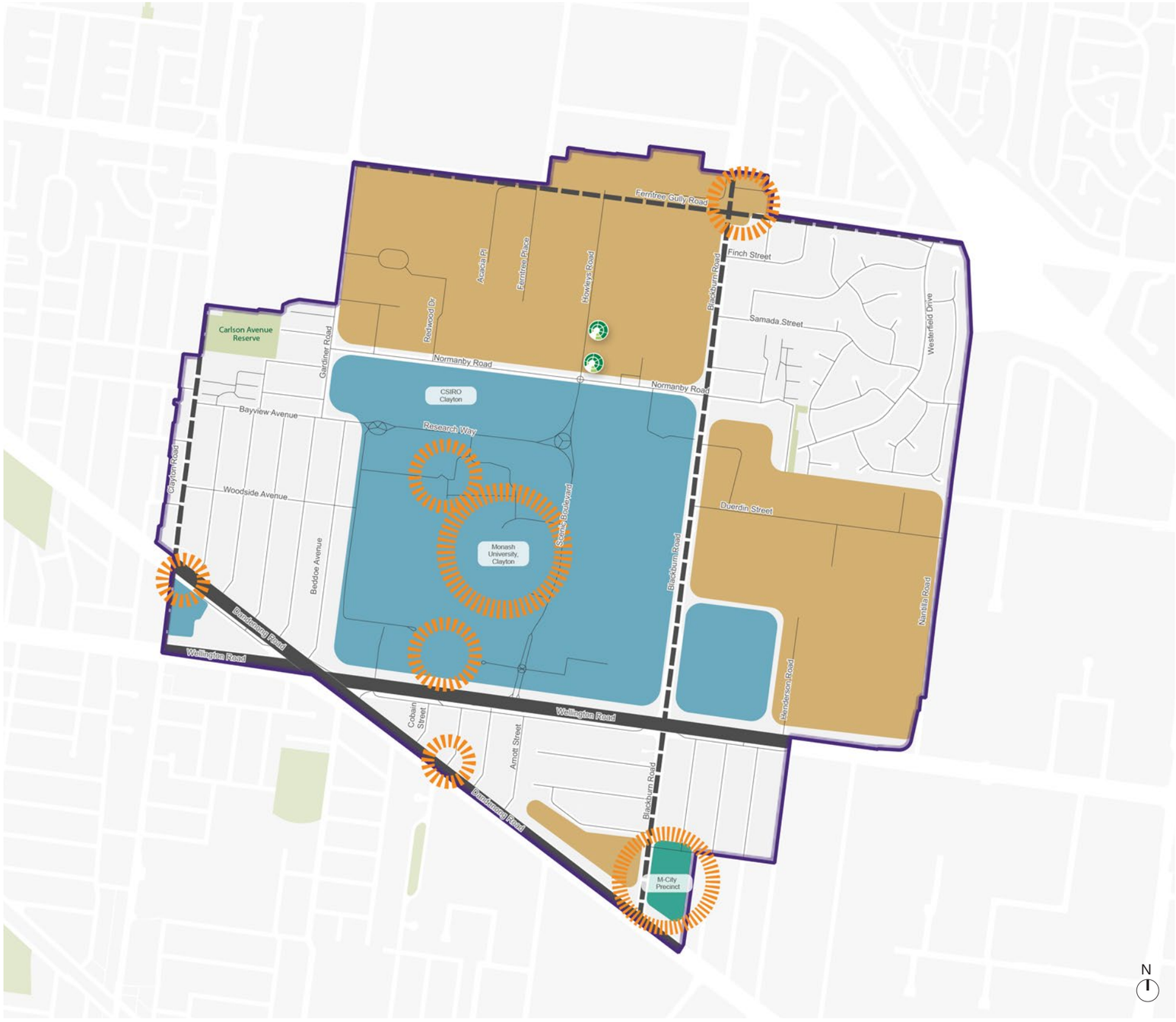
Urban structure

The Monash Structure Plan Area is delineated by a network of major roads, namely Clayton Road, Ferntree Gully Road, Blackburn Road, Wellington Road and Dandenong Road. These roads form the principal framework of the area, shaping the current land uses.

Generating significant vibrancy at its centre, Monash University forms the major anchor of the Structure Plan Area. Student housing clusters around the north-eastern side of the university which generate further pedestrian activity, in contrast with the areas to the north and east which are dominated by vehicle-oriented industrial and business estates. Pockets of low-rise residential dwellings are concentrated to the north-east, west, and south of the Structure Plan Area.

Provision of open space within the Structure Plan Area is limited. Carlson Reserve on Clayton Road stands as the sole significant open space. Smaller open spaces are dispersed throughout the residential neighbourhoods. The employment areas lack readily accessible green spaces.

The M-City Precinct at the southern boundary of the Structure Plan Area features a large indoor shopping complex.



Legend

- SRL station
- Structure Plan Area
- Activity Node - place of high pedestrian activity and attraction
- Highway
- Key Street/Arterial Road
- Open space
- Commercial/retail
- Civic, education and health
- Employment

Figure 2.4: Urban structure

Movement and access

The street network of the Monash Structure Plan Area extends from Dandenong Road, a primary street, to arterial streets including Ferntree Gully Road, Blackburn Road, Wellington Road and Clayton Road, as well as residential streets and local industrial and business park streets.

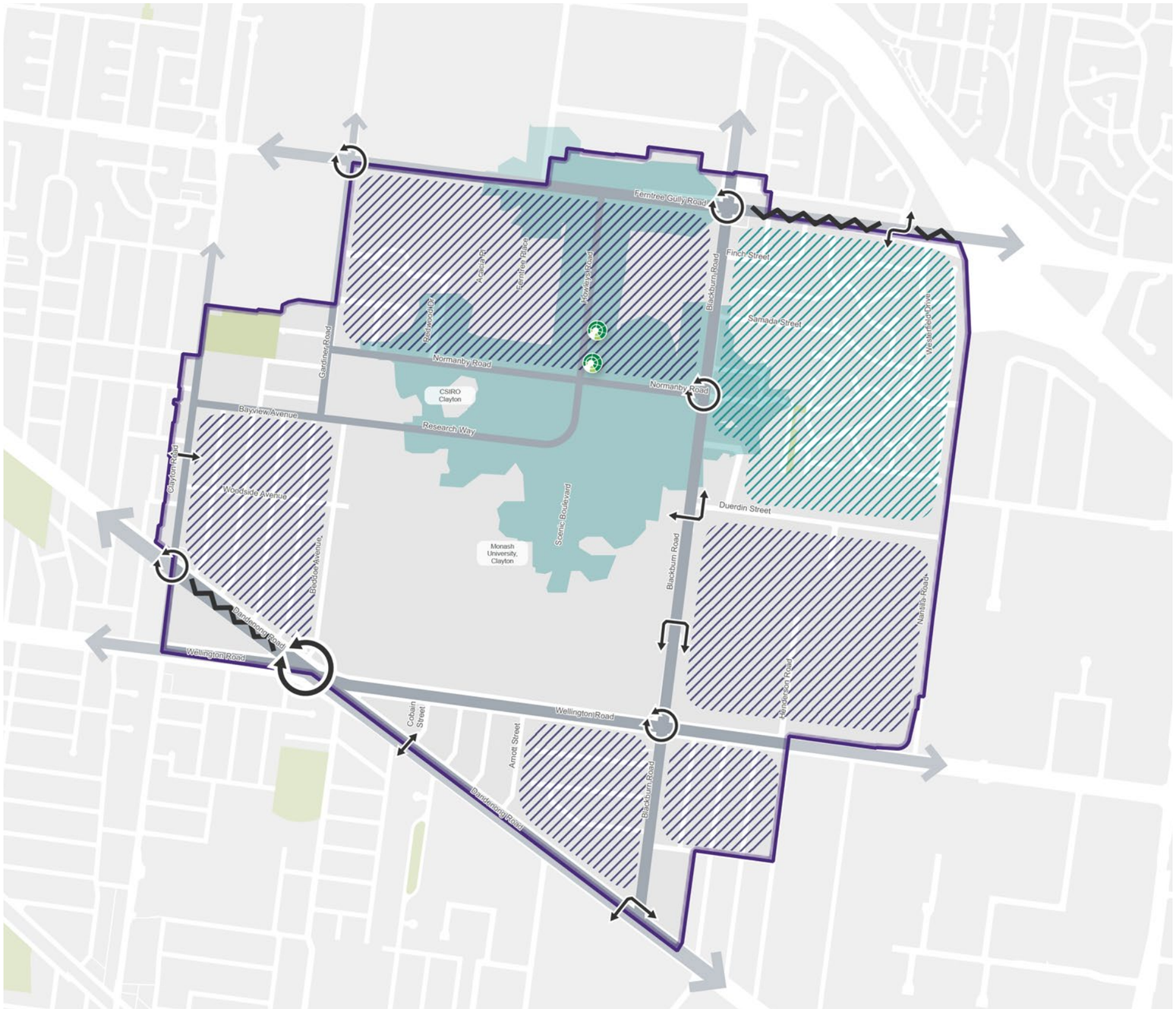
Lower-order streets throughout the Structure Plan Area are arranged in both a regular grid pattern and cul-de-sac networks. The regular grid provides ease of movement in all directions, while the cul-de-sac precincts hinder efficient movement.

Dandenong Road and Wellington Road provide efficient movement for a large volume of vehicles in the Structure Plan Area. However, the size of these roads (4 to 5 lanes in each direction) creates a significant barrier for pedestrians and cyclists, particularly those trying to cross north-south to access the Monash Health Precinct.

Signalised intersections or pedestrian crossings are provided at locations along primary and secondary roads. However, there are often large distances between crossings, making it difficult for pedestrians to cross.

The education facilities relating to Monash University create large, inward-facing blocks. Although there are connections through the Clayton campus, they are not perceived to be welcoming to the wider community.

The business parks and industrial areas along Ferntree Gully Road, Blackburn Road, Normanby Road, Howleys Road and Wellington Road are also large inward-facing blocks, with no through-block connections.



Legend

- SRL station
- Structure Plan Area
- Clusters of large blocks
- Cul-de-sac network cluster
- 800 metres walkable catchment from SRL station entrances
- Open space
- Key road connection
- At-grade pedestrian crossing point
- Barrier

Figure 2.5: Movement and access

Built form

The Monash Structure Plan Area is generally characterised by low-rise built form, with a small number of pockets of taller buildings. The buildings are varied in age and architectural style, with pockets of original housing still present in some streets.

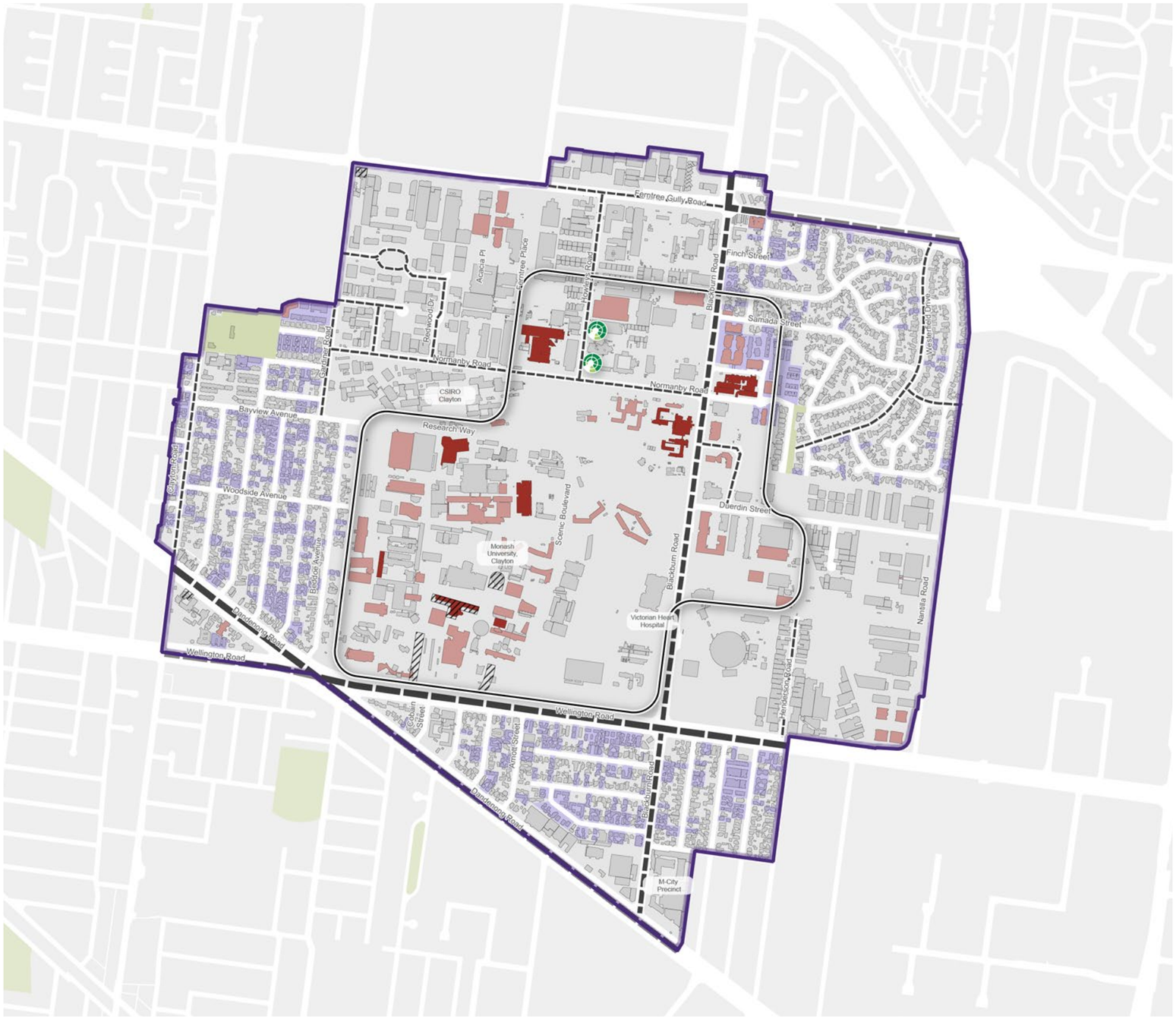
The business parks and industrial areas are generally characterised by low-rise 1 to 3-storey buildings, with a variety of building footprint sizes. These building styles are often tilt up concrete slab construction, while some of the older industrial buildings brick veneer.

The Victorian Heart Hospital has a significant presence at the eastern side of Monash University on Blackburn Road.

Within residential areas, the built form is a mix of original 1960s housing styles, with contemporary infill and multi-unit developments dispersed throughout.

The M-City Precinct is approximately 12 storeys high, and the student housing on Rusden Place, opposite Monash University is approximately 6 storeys. These buildings provide a highly contrasting built form typology, within the low-scale residential and industrial/business areas.

The Structure Plan Area exhibits a variation in road widths. Major arterials, designed for high-volume traffic flow, exceed 40 metres in width, including Dandenong Road and Wellington Road. Arterial and connector routes, including Blackburn Road and Ferntree Gully Road, range from 30 to 40 metres, facilitating district connections. Local streets within industrial and employment areas are at least 20 metres wide to accommodate larger vehicles, while residential areas feature narrower streets, approximately 15 metres wide.



Legend

- SRL station
- Structure Plan Area
- Residential strata titled lots
- High-rise buildings
- Mid-rise buildings
- Low-rise buildings
- Heritage
- Open space
- Area with predominantly mid to high rise buildings.
- Road width greater than 40 metres
- Road width 30-40 metres
- Road width 20-30 metres

Figure 2.6: Existing built form

Topography and vegetation

The topography and natural features subtly contribute to the character of the Monash Structure Plan Area. There are 2 low-lying valleys within the area and a number of high points which enhance views to the surrounding neighbourhoods and in some locations, provide long range views.

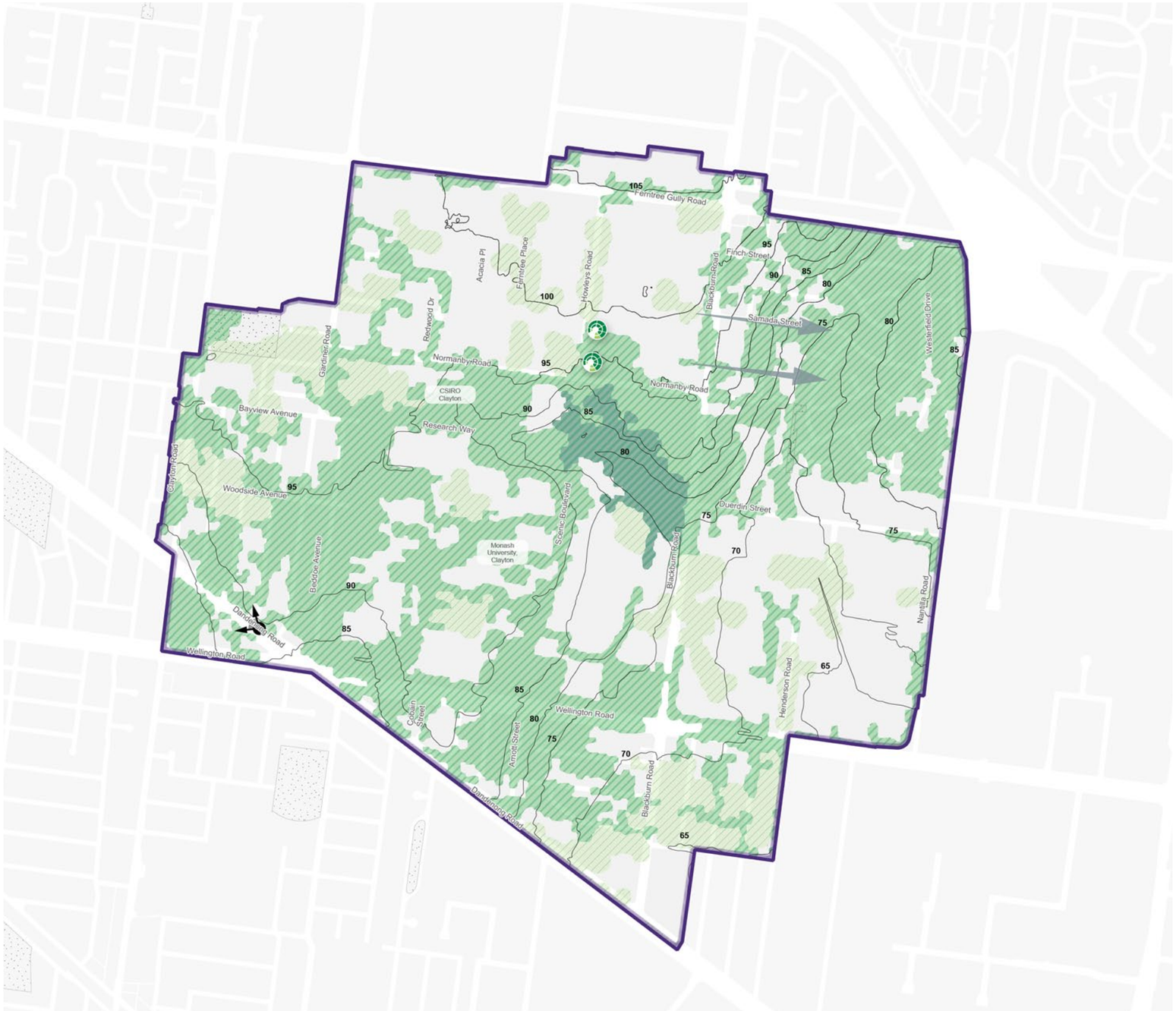
In the east, a low-lying valley with an existing drainage corridor creates valley views and undulating terrain. The character within the valley is framed by vegetation, with short-range views and undulating streets.

Monash University is sited across gently sloping topography, with occasional outlooks to the nearby context. The north-east corner of the campus has undulating terrain, vegetation coverage and lakes which contribute to a different landscape character to the remainder of the campus.

The Monash Structure Plan Area has a relatively good level of tree canopy cover, reinforcing the ‘Garden City Character’ encouraged by Council policy. Pockets of the area are more landscaped than others, creating variation across the Structure Plan Area.

The ‘Garden City Character’ consists of leafy, low-rise suburbs with well landscaped private gardens and wide streets with tall street trees. This character also features throughout the industrial areas and business parks as sought through local government planning overlays, although the canopy is often a feature of the street, rather than on private property. In contrast, the pockets with a higher built form site coverage, and more recent subdivisions, tend to have a slightly decreased canopy cover.

Monash University features significant tree canopy coverage and a leafy character, while the residential areas tend to have a reduced canopy cover, with many streets featuring small canopy trees.



Legend

- SRL station
- Structure Plan Area
- High tree density
- Medium tree density
- Low tree density
- Open space
- Viewpoint to CBD
- Key views
- Contours every 5 metres

Figure 2.7: Topography and vegetation

Land use

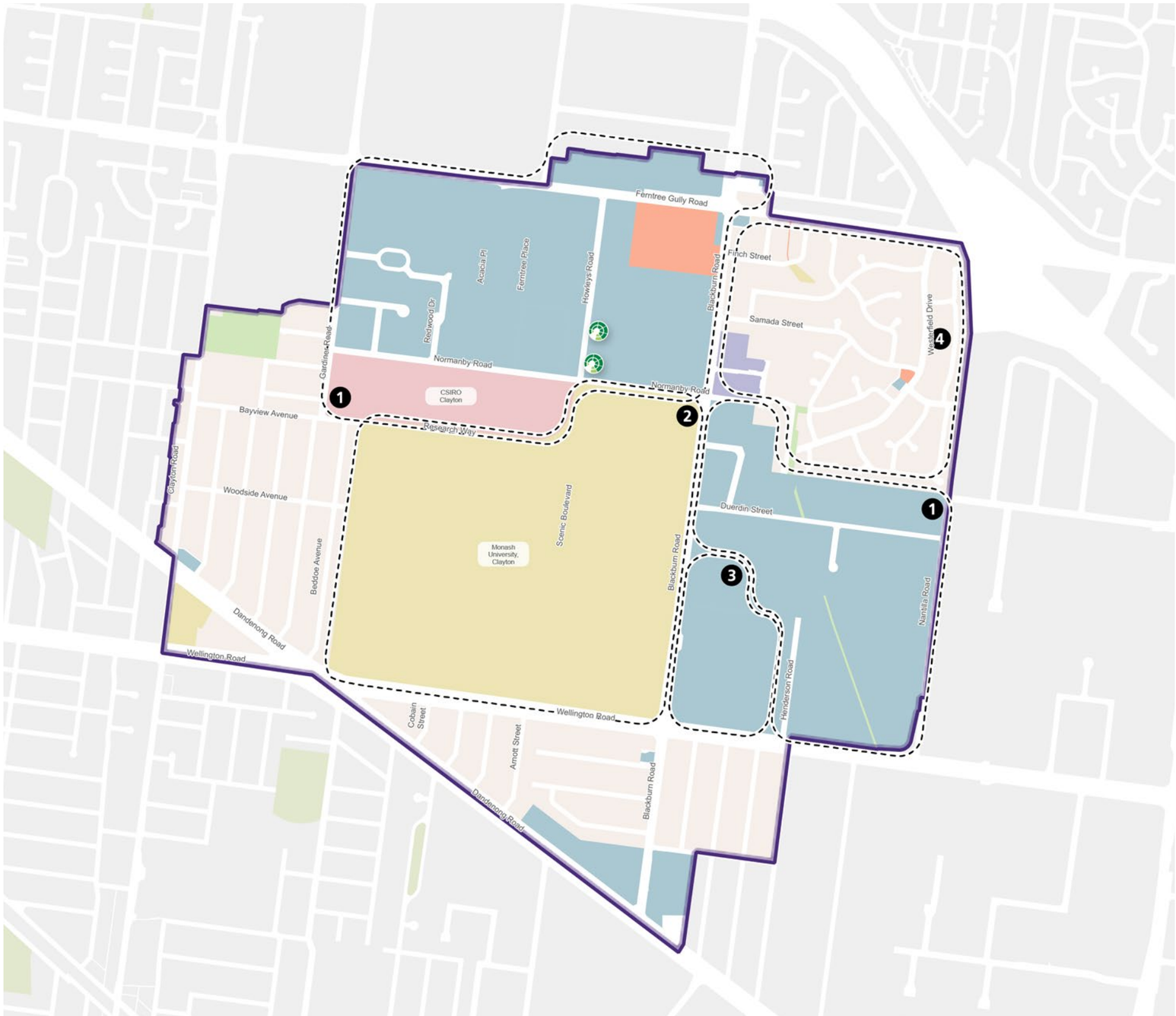
Land use within the Monash Structure Plan Area is predominantly educational institutions and commercial/industrial uses. Monash University itself constitutes a substantial portion of the educational facilities, and also provides services typically found in commercial areas, creating a self-contained environment that caters to the daily needs of students and staff.

Residential areas are characterised by low-density development, with a significant portion consisting of 1 to 2-storey detached houses and suburban streetscapes. However, a localised pocket of higher-density residential development featuring more compact housing options and denser built form is situated near the university.

Extensive employment zones are located to the north and east of Monash University. These zones are characterised by a mix of lot sizes and typically feature 1 to 2-storey buildings with large floor plates.

The Monash Structure Plan Area currently lacks a dedicated activity centre within close proximity to the SRL station at Monash. While Monash University offers some amenities, attractions, and services, these are primarily concentrated within the core of the university campus, limiting their accessibility to the broader community.

The Structure Plan Area is particularly deficient in public open space, especially when excluding the green spaces located within the confines of Monash University.



Legend

- SRL station
- Structure Plan Area
- Residential
- Commercial/retail
- Education
- Research
- Mixed-use
- Open space
- Public use

Land use clusters

1. Employment area
2. Monash University Campus
3. Research Precinct
4. Cul-de-sac Village

Figure 2.8: Existing land use

1:15,000 0 150 300 450 600M

3 Public realm

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3.1 Introduction

This section outlines a Public Realm Framework to achieve the Vision for Monash. It summarises the analysis that underpins the framework, and sets out design directions and strategies.

The Public Realm Framework builds upon strategies and background documentation developed by SRLA and the Victorian Government, as well as the City of Melbourne. These include:

- **Suburban Rail Loop East** – **Urban Design Strategy** (Suburban Rail Loop Authority 2022)
- **Open Space Assessment** (prepared by AJM Joint Venture for Suburban Rail Loop Authority 2024)
  Aboriginal Cultural Heritage Technical Report – **SRL East Structure Plan** (2023)
- **Flooding and Water Management Technical Report** – **SRL East Structure Plan** (2023)
- **Trees for Cooler and Greener Streetscapes:** Guidelines for streetscape planning and Design (Department of Environment, Land, Water and Planning 2019)
- **Future Streets Framework:** To guide the design and Delivery of Streets in the Hoddle Grid (City of Melbourne 2023)
- **Nature in the city:** Thriving Biodiversity and Healthy Ecosystems (City of Melbourne 2017)
- **Living Melbourne:** Our metropolitan urban forest (The Nature Conservancy and Resilient Melbourne, Melbourne 2019)
- **Movement and Place Framework** (Victorian State Government, Department of Transport)
- **Open Space for Everyone** (Victorian State Government, Department of Transport)
- **SRL Public Space and Public Life Study Report** (Gehl, 2023) (see Attachment B)
- **SRL East Transport Technical Report** (Suburban Rail Loop Authority, 2024).

An analysis of the existing public realm in the Structure Plan Area was undertaken (see Appendix A), along with extensive research of best practice public realm typologies and mechanisms to deliver successful high-density places (see SRL East Structure Plan - Urban Design Supporting Research - Attachment A).

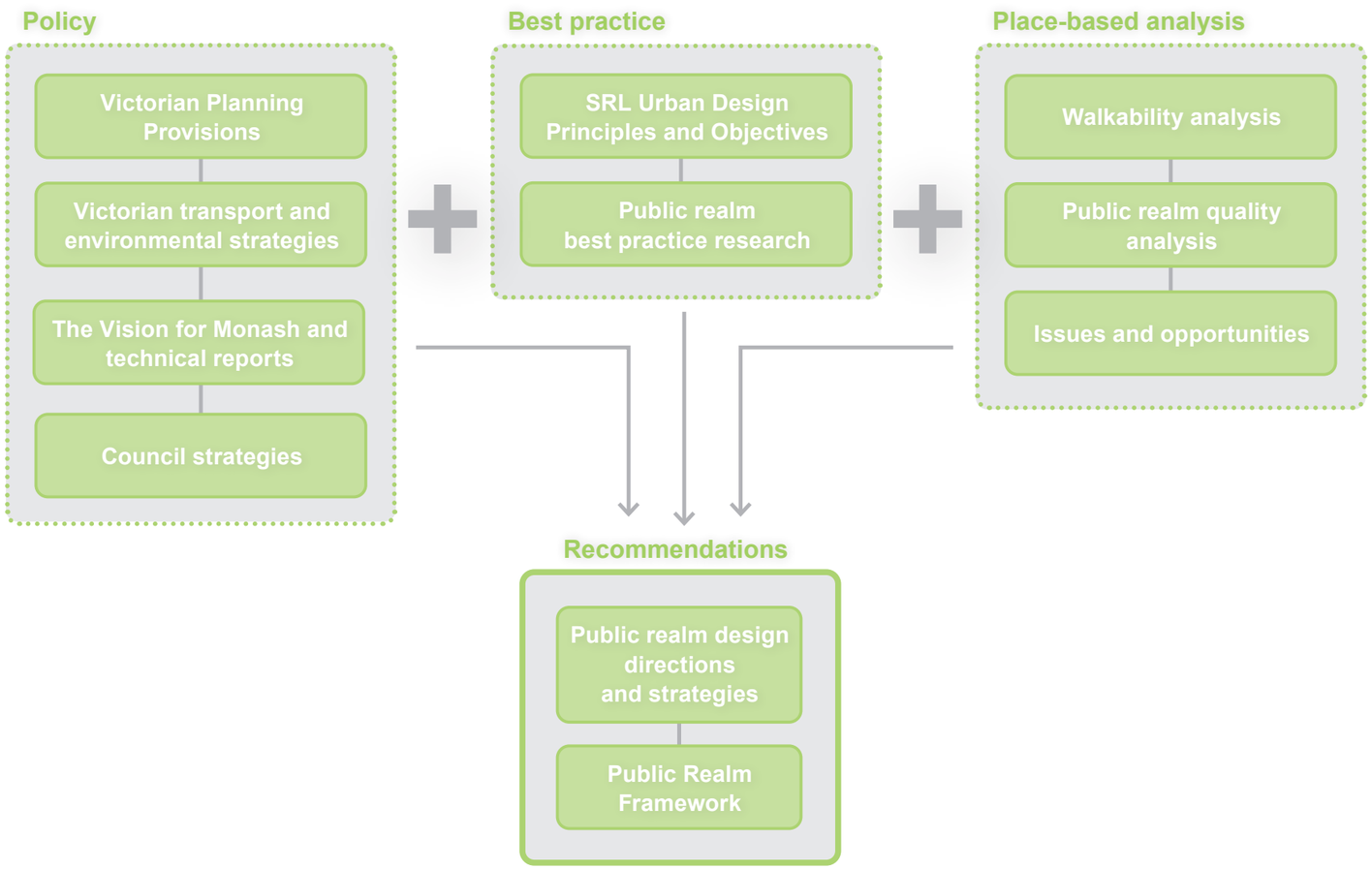

Figure 3.1: Public Realm Framework methodology summary

3.2 Summary of analysis

Extensive analysis was undertaken to identify the issues and opportunities in delivering a public realm that supports the Vision for the SRL neighbourhood at Monash.

This Section summarises the analysis. It focuses on the structural elements that must be addressed to deliver a public realm that encourages active and public transport, catering for the projected development growth in the Structure Plan Area. These elements include walkability, permeability and open space access and distribution.

The Gehl 'Public Space and Public Life Study' uses a similar method and has similar findings. For more details of this study refer to Attachment B.

Open space distribution and walkable access

There are 19 separate public open spaces with a combined area of approximately 190,000 square metres in the Monash Structure Plan Area. These parks are primarily owned and/or managed by Monash City Council, and include Pocket, Neighbourhood, and Community catchment parks. The Monash area has a relatively low amount of public open space and large gap areas, predominantly due to the size of the Monash University campus and industrial/employment estates. While the Monash University campus has extensive green outdoor spaces, this open space is restricted as it is not available at all times to the public. There are a number of parks within walking distance of residential areas but major roads act as barriers to access.

Figure 3.2 provides an overview of the public open space in the Structure Plan Area and the gaps in access to open space. These gaps may be addressed by improving access or providing new open space.

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Community park
- Landscape park
- Linear park
- Sports park
- Gap in 400 metres walkable access to public space

Note: Categorisation of open space sourced from Draft SRL Open Space Assessment.

Note: This analysis does not include planned or proposed open spaces. Refer Public Realm Framework plan in 3.4 for proposed open space.

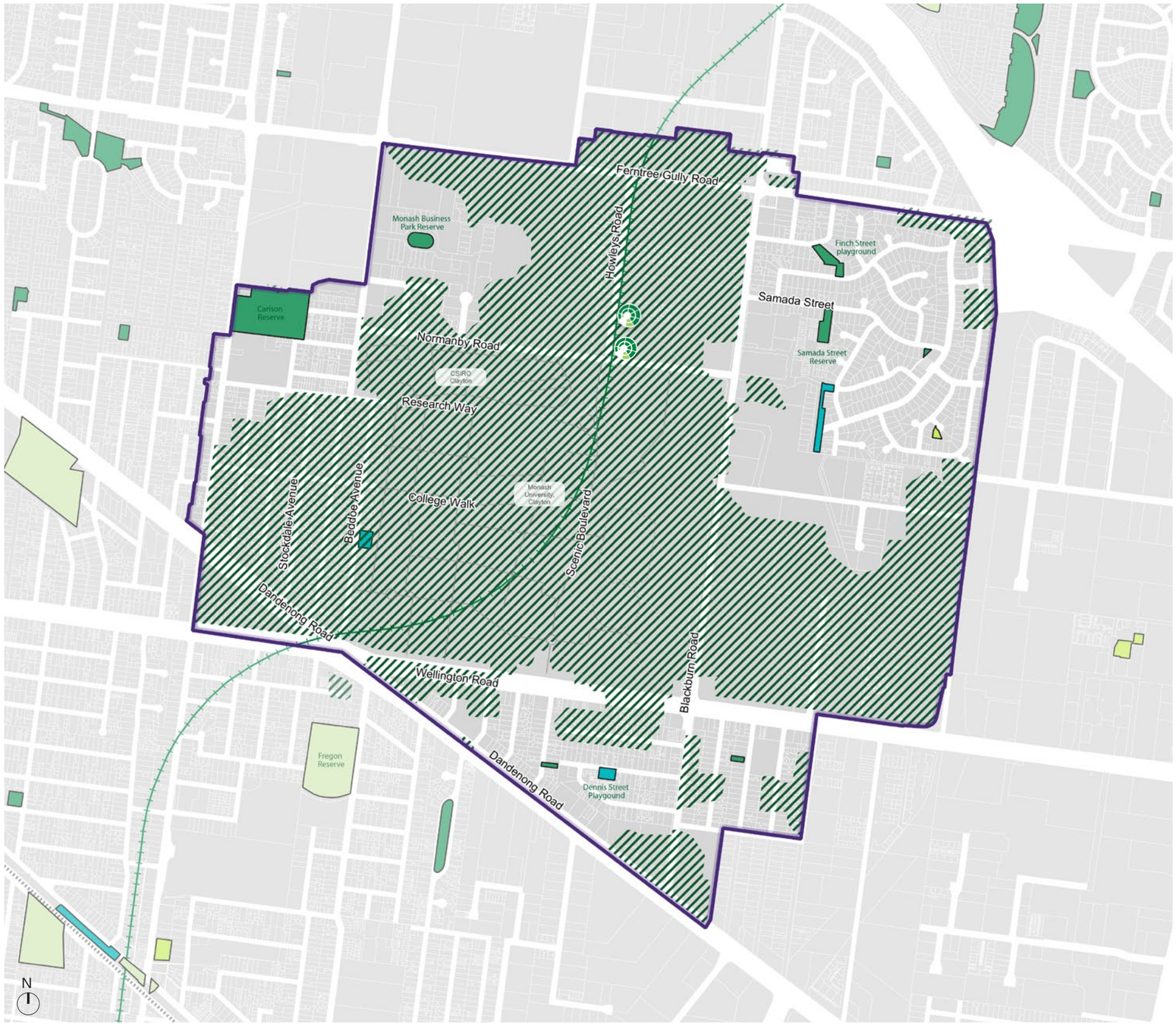

Figure 3.2: Gaps in walking access to open spaces in the Structure Plan Area

Walkability and strategic linkages

Figure 3.3: Walkability analysis

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- 400 metres radial catchment from SRL station
- 800 metres walkable catchment from SRL station entries
- 800 metres radial catchment from SRL station
- Gaps in 400 metres walkable catchment to open space
- Missing strategic linkage to SRL station

Good pedestrian connectivity to public transport (including the SRL station) and public open spaces will be critical in achieving the Vision and unlocking the development potential of the Structure Plan Area.

The walkable catchment analysis identifies the areas with poor pedestrian access to the SRL station, gaps in the walkable catchment to public open spaces and the indicative location of strategic linkages required to address these issues.

Local permeability and optimal block sizes

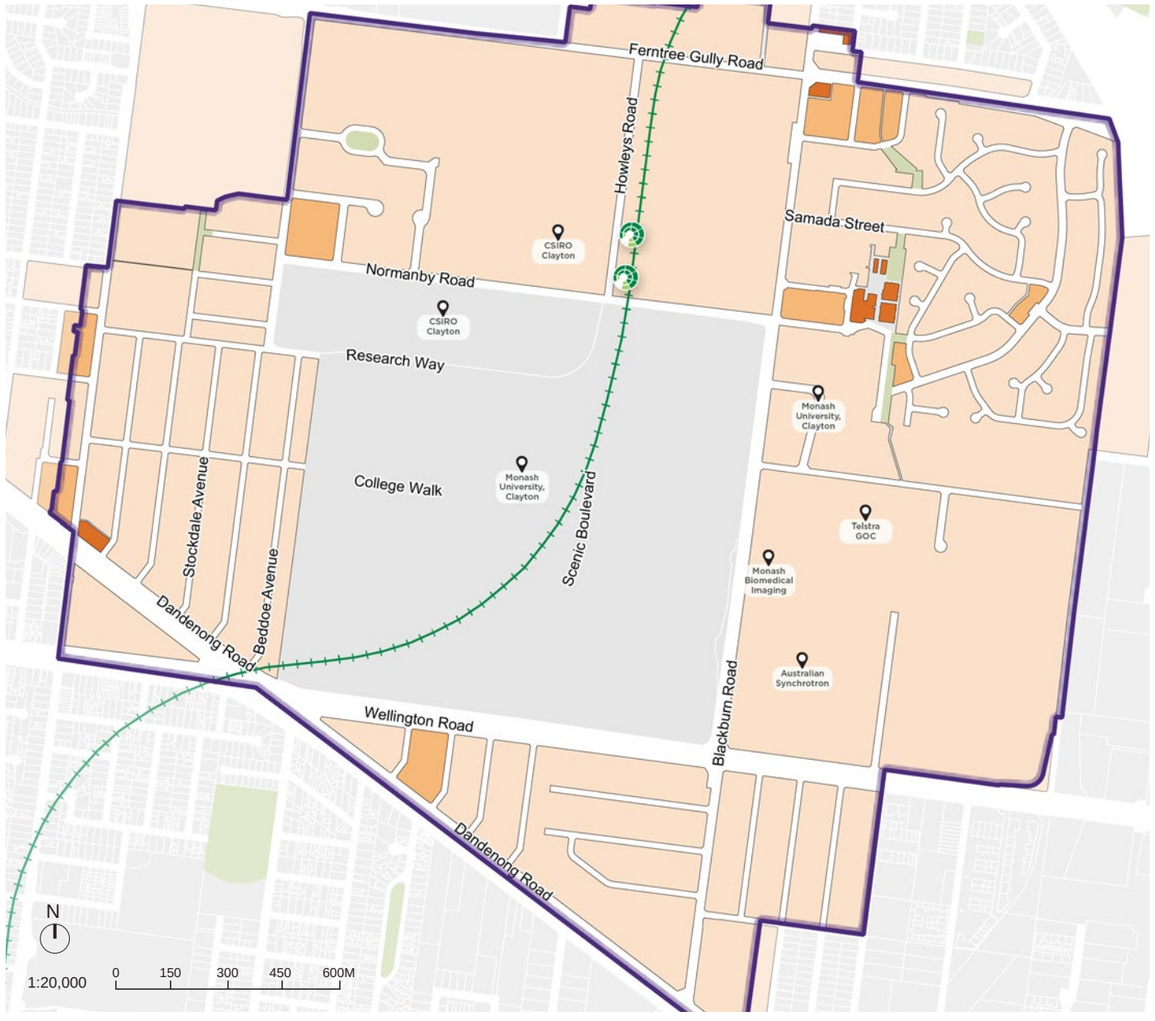

Figure 3.4: Permeability analysis

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Existing Open Space
- Block length <100 metres
- Block length 100-180 metres
- Block length >180 metres

Good permeability supports active transport and access to public transport within the Monash Structure Plan Area. Appropriate standards of permeability are outlined in Section 3.3: Public Realm Strategies, under Design Direction 2: Promote active transport.

To achieve good permeability, the commercial/retail core should have a maximum block length of 100 metres. All other areas should have a maximum block length of 180 metres. The permeability analysis identifies blocks that do not achieve these standards, and therefore through-block links should be considered.

Public realm quality

The quality of all streets in the Structure Plan Area were assessed in terms of the pedestrian experience. Figure 3.5 summarises the findings of the assessment. It shows a general indication of the public realm quality in the area, and the variation between streets.

However, it should be noted the assessment is qualitative and does not reflect the role of each street in the Public Realm Framework. More work is required before street improvement requirements can be determined.

More detail about the public realm quality assessment is provided in Attachment B.

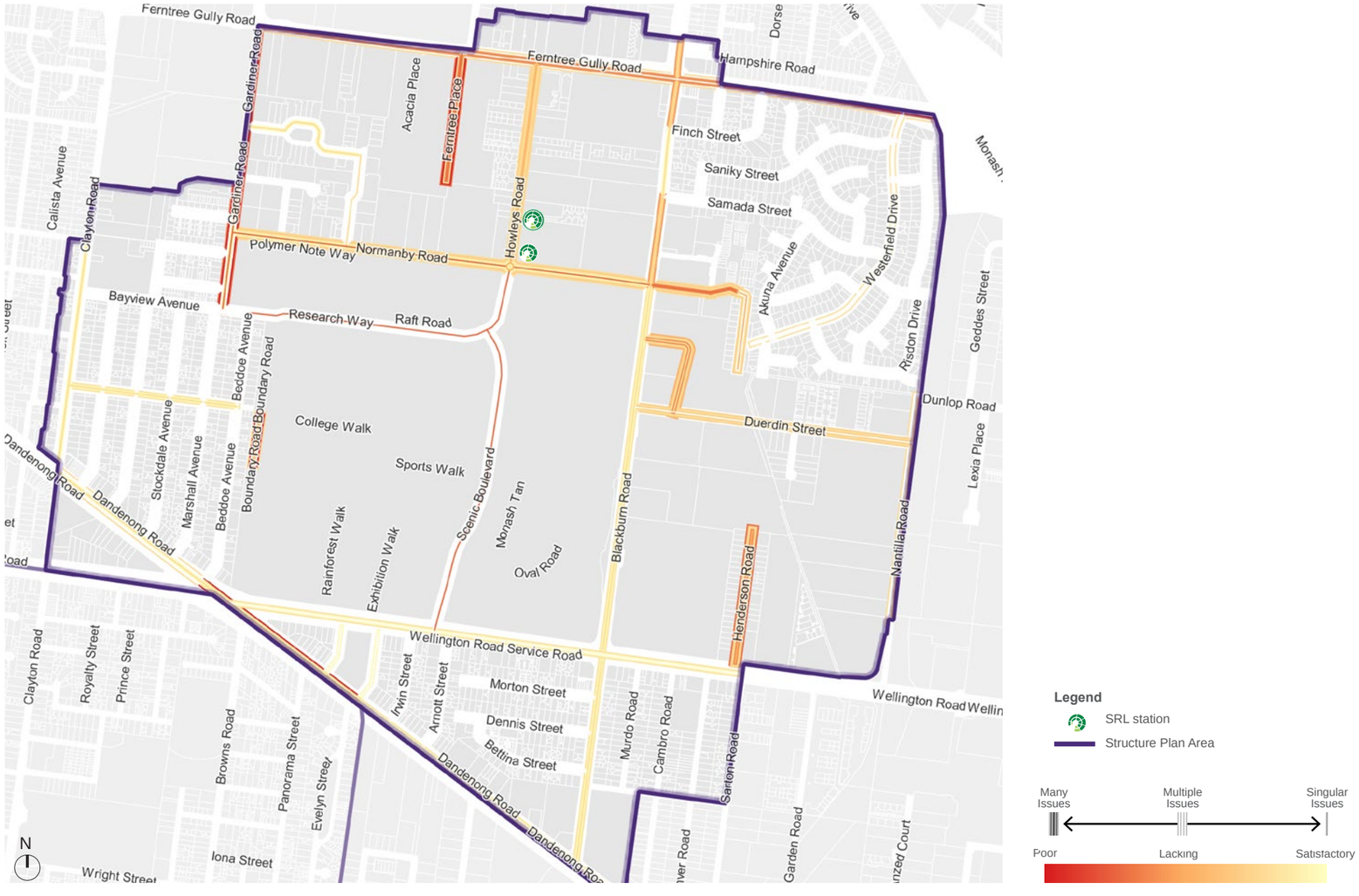

Figure 3.5: Streets quality assessment summary

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Issues and Opportunities

Figure 3.6 shows the key issues and opportunities the public realm analysis identified in the Monash Structure Plan Area.

These key issues and opportunities include:

- Increase fine-grain connectivity to areas with poor permeability.
- Overcome Blackburn Road, Dandenong Road, Wellington Road as barriers and improve pedestrian amenity and landscape quality along the corridor.
- Improve connectivity between the SRL station, retail core and surrounding area.
- Improve quality of public realm or activation in localised areas.
- Improvements to Mile Creek linear green link.

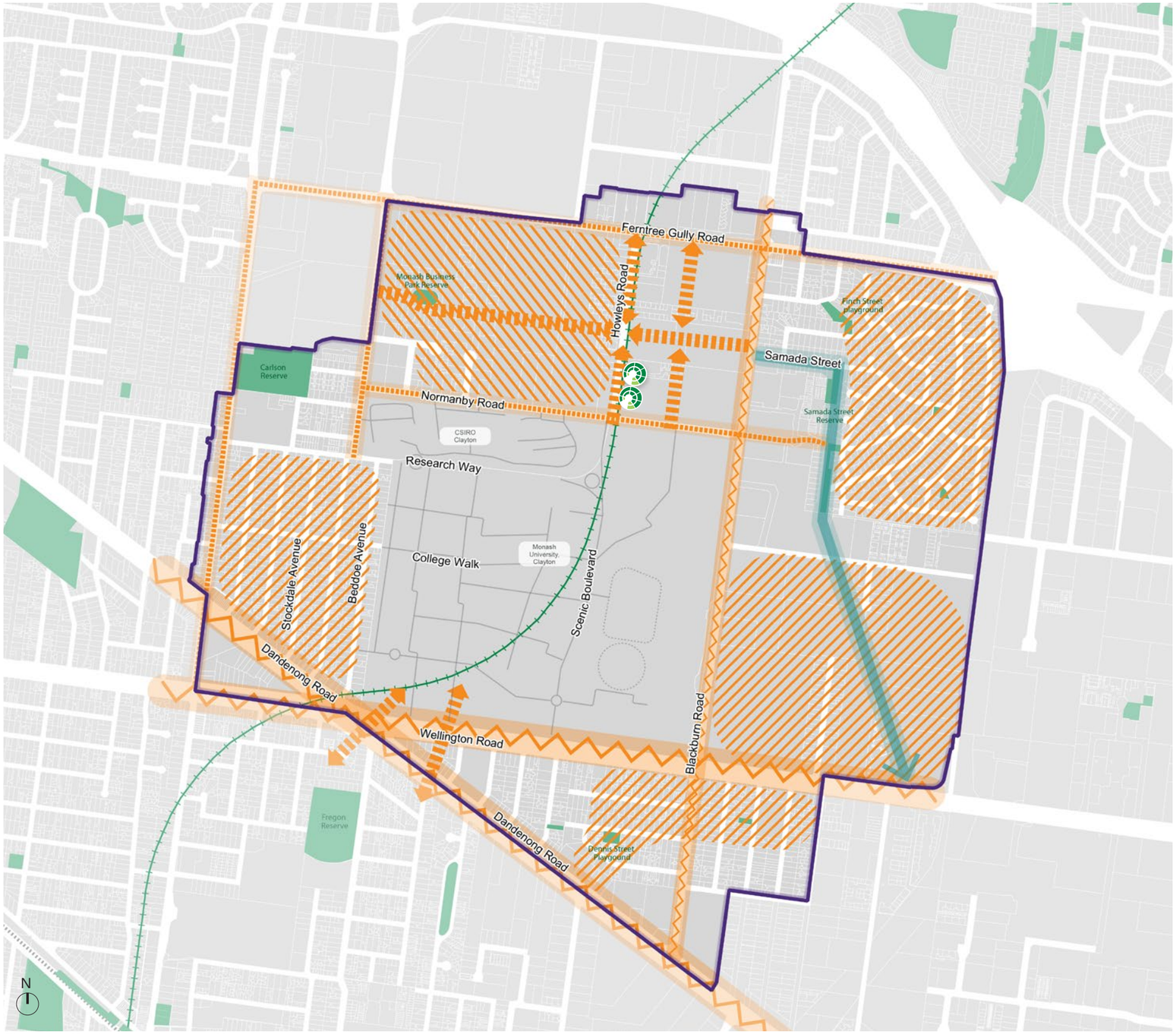


Figure 3.6: Key issues and opportunities

3.3 Public realm design directions

The public realm design directions are proposed to achieve the Vision for Monash.

The design directions informed the development of the Public Realm Framework in Section 3.4 and the public realm outcomes identified in Section 6.

The order of the design directions does not imply an order of priority.

Design Direction 1: Ensure streets are inviting places that support community life

Why is this important?

Attractive streets are important for a thriving public life and to encourage healthy active lifestyles – and to draw residents, workers, visitors, businesses, developers and investors to the Structure Plan Area.

People are more likely to inhabit the public realm and choose to cycle or walk if streets are welcoming, safe, attractive and comfortable. A well inhabited public realm is self-reinforcing, with the presence of people further contributing to its appeal, and the success of commercial enterprises.

Streets also provide the address and setting for development, so their quality influences the appeal of the area to attract investors and developers. Again, this is self-reinforcing – as density increases, so does public realm use and footfall, which in-turn further increase the attractiveness for development to locate to the area.

Safety

In order for streets to be inviting for walking and social life, they need to be safe and provide a feeling of safety. Safeguarding pedestrian safety includes ensuring pedestrians are protected from traffic movement and have safe and convenient opportunities to cross streets. Pedestrians also need to have a perception of safety from crime and antisocial behaviour during the day and night.

Street experience

Streets not only provide a means to travel to a destination, they also provide for a social and experiential journey. The opportunity for social interaction and an interesting experience is part of the attraction of a successful urban area, and reinforces the appeal of walking over other travel modes. This includes space for people to stand and linger, sit or gather, and an engaging sensory experience.

Distinct streetscapes

Distinct streetscapes are more memorable. This supports the legibility and appeal of a successful urban area for pedestrians and cyclists.

A memorable and appealing street has a range of qualities which may include:

- A human scale
- Street trees and landscaping
- Protection from sun in summer, rain and wind
- Clean and well maintained surfaces and street furniture
- A pleasant sensory experience.

Alignment with SRL Urban Design Framework:

Design Direction 1 will help to achieve the following SRL urban design objectives (see Section 2.3):

- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD2.3 Integration with context
- Objective UD2.4 Welcoming
- Objective UD3.1 Linkages
- Objective UD4.1 Universally inclusive
- Objective UD4.4 Safer design
- Objective UD5.1 Heritage
- Objective UD5.2 Responsive
- Objective UD5.4 Healthy
- Objective UD5.5 Quality design
- Objective UD6.1 Amenity
- Objective UD6.4 Places for people
- Objective UD6.5 Activation

What is happening now in Monash?

The location of the SRL station is within a light industrial area which lacks public realm activation and pedestrian activity. Monash University provides attractions, amenity and some services to the wider community, although these are generally located within the core of the university.

Many of the existing streets do not provide the level of pedestrian, cycle or public transport priority, or place function desired. In particular:

- Ferntree Gully Road, Blackburn Road and Wellington Road are dominated by vehicle traffic, reducing pedestrian amenity and comfort
- The southern end of Howleys Road and part of Normanby Road need upgrading to support their role close to the SRL station
- The local streets do not provide pedestrian amenity along routes to key destinations such as the SRL station and Monash University.

"Scenic boulevard is predominantly designed for cars and not very attractive to walk along." - SRL Public Space and Public Life Study Report (Gehl, 2023)

How can this direction be achieved in Monash?

Strategy PR1. Street hierarchy and identity

Establish a street hierarchy which supports each street's movement and place function, and place identity.

Strategy PR2. Boulevards and Avenues

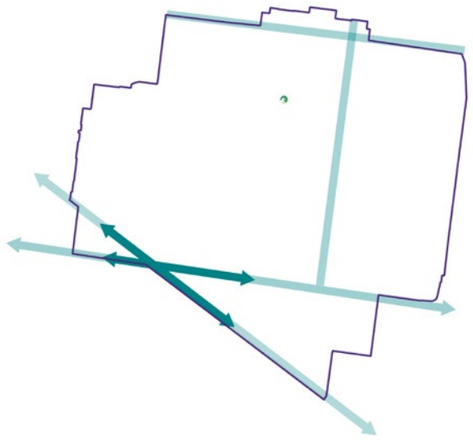
Optimise main roads for pedestrian movement and amenity while maintaining access by other travel modes, ensuring distinct and attractive setting for public life and development.

Strategy PR3. Activity Streets

Prioritise pedestrian movement and activity in streets and lanes within the commercial/retail core, and ensure they provide distinctive and attractive places for public life.

Strategy PR4. Green Streets

Provide a network of safe and inviting leafy streets for walking and cycling into the commercial and retail centres and to other key destinations.



Strategy PR5. Streets

Establish a minimum standard for all streets to ensure they provide a safe and inviting environment which is appropriate for the future needs of the community.

All streets within the Structure Plan Area should provide a minimum level of amenity to respond to the significant increase in population and their role and function. For example, they should have footpaths on both sides of the road, appropriate lighting and canopy tree planting wherever possible.

Design Direction 2: Promote active transport access

Why is this important?

An inviting environment for walking, wheeling and cycling is critical to a successful urban area.

Key factors for encouraging walking, wheeling and cycling include direct connections to major destinations and key places of employment, general permeability to support everyday movement by foot and bike, and a safe and inviting public realm. The quality of the public realm is addressed by Design Direction 1: Ensure streets are inviting places that support community life.

Missing links to key destinations

The street network should provide legible, safe and convenient links to key destinations, including public transport nodes, activity nodes, employment areas, health and education facilities, key open spaces and community areas. Where areas lack such links, they should be introduced.

Connections to existing open space

In order to improve the liveability of neighbourhoods with poor access to open space, new links to existing open spaces should be created. The Public Realm Framework in Section 3.4 identifies where new links are recommended.

Permeability

Addressing barriers to active transport involves enhancing the permeability of the existing block structure. The appropriate standard of permeability in an activity centre is generally defined by block lengths no greater than 100 metres — for example, City of Melbourne DDO1 and DDO61. In higher-density urban areas outside activity centres, a maximum block length of 180 metres is considered appropriate. This is the mid-point of the range of block lengths promoted by the Urban Design Guidelines for Victoria (120 to 240 metres), approximately mid-way between the 100 metre block length for activity centres identified above and the maximum 240 metres required by Clause 56 of the Victorian Planning Provisions for typical subdivisions, and consistent with the maximum block length recommended by the NSW Movement and Place – Network Planning in Precincts Guide.

Links created by private development

Private development that incorporates new links should be designed to provide direct, attractive and well-lit public connections. They should be safe and free of entrapment areas, and be located at ground level. Passive surveillance should be maximised from both ground floor and upper levels. Consideration should be given to the function of the link and it's implementation to maintain safety and amenity.

Public realm quality

A successful walking, wheeling and cycling network also depends on the quality of the connections. Connections should be safe, attractive and designed for the specific purpose, as outlined in Design Direction 1: Ensure streets are inviting places that support community life.

What is happening now in Monash?

Within the Structure Plan Area, walking, wheeling and cycling access is indirect, inconvenient and unsafe from some areas to key destinations including Monash University, M-City Shopping Centre, the Australian Synchrotron and movement south to Clayton.

While Blackburn Road, Ferntree Gully Road, Princes Highway and Wellington Road provide efficient movement for vehicles moving through the Structure Plan Area, the scale of the roads present significant barriers to pedestrian and cyclist movements.

The business and industrial area to the north and west of the SRL station have large block sizes resulting in poor walkability in the employment area which is reliant on private vehicle usage.

Lower-order streets throughout the Structure Plan Area are arranged in both a regular grid pattern and cul-de-sac networks. The regular grid provides ease of movement in all directions, while the cul-de-sac precincts hinder efficient movement

Alignment with SRL Urban Design Framework:

Design Direction 2 will help to achieve the following SRL urban design objectives (see Section 2.3):

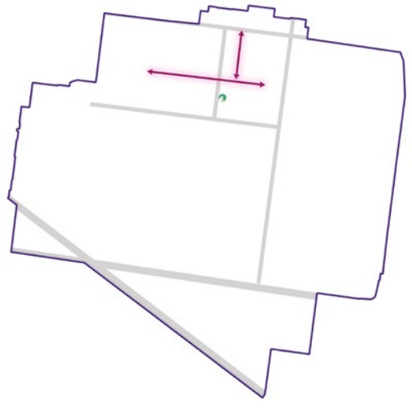
- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD1.3 Resilient
- Objective UD1.4 Environmentally sustainable
- Objective UD2.1 Strategic alignment
- Objective UD2.3 Integration with context
- Objective UD3.1 Linkages
- Objective UD3.2 Transport integration
- Objective UD3.3 Legible
- Objective UD3.4 Green network
- Objective UD4.2 Twenty-minute neighbourhoods
- Objective UD4.3 Active transport

How can this direction be achieved in Monash?

Strategy PR6. Critical and important links

Create new links to improve access to key destinations.

Critical and important links should be designed to provide direct, attractive, well-lit public connections, be safe and free of entrapment areas, reduce barriers to movement, and be located at ground level. Consideration should be given to the function and implementation of the link to support user safety and amenity.



Strategy PR7. Local links

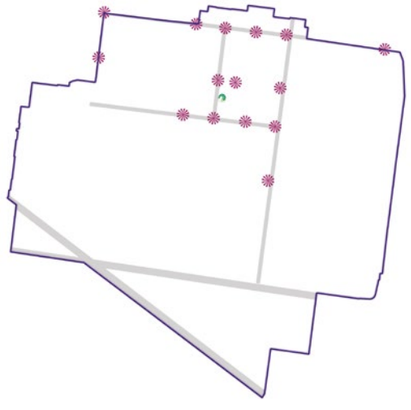
Require the provision of new mid-block links to enhance pedestrian permeability.

Local links should be designed to provide direct, attractive, well-lit public connections, be safe and free of entrapment areas, reduce barriers to movement, and be located at ground level. Consideration should be given to the function and implementation of the link to support user safety and amenity.

Strategy PR8. Pedestrian crossings

Introduce new controlled pedestrian crossings and improve existing crossings where needed to support walking, wheeling and cycling.

Opportunities to enhance pedestrian crossings or provide new crossings should be explored to reduce barriers to movement and create a convenient, safe and accessible active transport network.



Street network - Central Core area and Monash Employment Growth

By 2056, Monash is projected to become home to the largest employment hub along the SRL East Corridor, requiring 1.76 to 2.16 million square metres of employment space (excluding retail). The north section of the Monash Structure Plan Area, bordered by Blackburn Road, Ferntree Gully Road, Gardiner Road and Normanby Road is identified in the Structure Plan as the ideal location for this employment growth.

The SRL station at Monash will be located east of Howleys Road in the core of the Structure Plan Area, with a mix of employment, retail, residential and community spaces with a high-quality environment to attract businesses. The area west of Howleys Road is planned to accommodate higher intensity knowledge-based businesses, such as technology and advanced manufacturing act as the employment hub of the precinct (Monash Employment).

The current urban structure falls short in supporting the expected level of transformation due to its impermeable urban fabric with substantial block sizes and large footprint buildings, lack of land use diversity, limited public transport access, and fragmented cycling facilities. Therefore, it is imperative to make substantial changes to the existing street network to enable the anticipated employment growth and provide a sustainable and livable community for the future.

Figure 3.7 shows how this area could evolve with a indicative street network based on the following principles:

- Introduce new streets along property boundaries to improve connectivity, prioritise active travel and enhance public transport accessibility to connect people and businesses
- Retain and extend existing streets where possible to increase connectivity
- Enable connections to the surrounding areas: new streets to link into the existing street network where possible
- Size urban blocks to support a permeable walking network with mid-block laneways dissecting long blocks. (The diagram illustrates laneways with a preferred alignment, indicating that their positioning can adapt to accommodate future development)
- Anticipate a range of building typologies that can be effectively accommodated into the proposed street grid structure
- Space north-south corridors evenly throughout the entire area
- Ensure a main east-west corridor across the area.

The various street typologies envisaged for the new street network are further described in section 3.4.

Figure 3.7: Indicative street network concept

Design Direction 3: Foster resilient urban environments

Why is this important?

A healthy ecosystem is a critical component of healthy, liveable and resilient urban environments.

The street and open space system presents an opportunity to improve the environmental performance of the Structure Plan Area by thinking about it as part of the broader eco-system. This includes:

- Increased tree canopy and vegetation cover to reduce the urban heat island effect
- Landscaping to provide habitat and wildlife corridors and/or support urban biodiversity
- Water sensitive urban design treatments to sustainably treat and re-use water and to improve health of trees and vegetation
- Strengthening the metropolitan Melbourne open space network.

As urbanised environments are densified, urban forests play a critical role in mitigating the urban heat island effect, and contribute valuable ecological amenity such as water filtration, shade and habitat value. The SRL East Climate Response Plan has identified a tree canopy cover target of 30 per cent. Street tree planting is valuable in defining a sense of place and identity as well as providing thermal comfort for human and non-human communities. The management and conservation of trees in urban settings creates healthy and resilient ecosystems for a changing climate.

Alignment with SRL Urban Design Framework:

Design Direction 3 will help to achieve the following SRL Urban design objectives (see Section 2.3):

- Objective UD1.3 Resilient
- Objective UD1.4 Environmentally sustainable
- Objective UD3.4 Green network
- Objective UD5.2 Responsive
- Objective UD5.4 Healthy
- Objective UD6.2 Landscape values

Corridors of diverse flora and fauna are essential to biodiversity. Protecting, enhancing and providing habitat in existing and new corridors can foster connection between people, plants and animals, and prevent habitat fragmentation. Biodiversity Sensitive Urban Design principles should be integrated within the network of streetscapes and open spaces to provide for diverse animal species, including shelter (such as dense, protective shrubs), food (such as flowers, fruits, seeds, pollen, nectar), nesting sites (such as tree cavities), and water.

Water Sensitive Urban Design (WSUD) works to mitigate the impact of urbanisation on the surrounding environment and waterways. WSUD strategies treat and reduce stormwater flows, improve cooling, reduce potable water demand, increase soil moisture, and passively irrigate planting in urban environments. Embedding water sensitive design strategies across all public realm scales and typologies is critical to reducing flood risk, stormwater runoff, reducing the urban heat island effect, and improving the health and performance of trees and vegetation.

There is also opportunity in the Structure Plan Area to strengthen the metropolitan Melbourne open space network as critical green infrastructure. These open spaces provide a network of natural systems that support urban ecosystems across a broader area, while mitigating the impacts of urban heat.

Increasing canopy coverage within the private realm is discussed in Design Direction 8.

What is happening now in Monash?

Although the large front setbacks and wide nature strips provide mature tree canopy cover in the business parks and industrial areas, overall there is a low canopy coverage in the Monash Structure Plan Area mainly due to the large industrial land-uses to the north.

Monash University has soft and hard landscaping and a variety of open spaces and recreation spaces, as well as good mature tree canopy coverage.

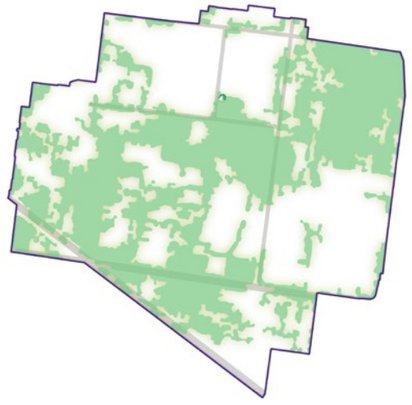
The residential areas tend to have a reduced canopy cover, with many streets featuring small canopy trees of exotic species. In many cases, this can be attributed to overhead power-lines, causing smaller tree species to be planted.

How can this direction be achieved in Monash?

Strategy PR9. Public realm landscaping

Optimising tree canopy cover and other planting in streets and public open spaces that support cooling, greening and urban biodiversity.

The existing leafy streetscape character should be maintained and enhanced, particularly in areas which are a further distance from the SRL station at Monash. Streets and public open space should contribute to a broader ecosystem while providing local amenity and urban heat island relief.



Strategy PR10. Water sensitive urban design

Incorporate water sensitive urban design treatments into streets and public open spaces to optimise sustainable water management outcomes.

Streets and public open spaces should contribute to treating and reducing stormwater flows, improving cooling, reducing potable water demand, increasing soil moisture, and passively irrigating urban planting.

Design Direction 4: Facilitate outdoor recreation

Why is this important?

Access to distinctive and high quality open space increases the attractiveness of the Structure Plan Area to live and work.

A collection of diverse open spaces is required to fulfill the full range of human and environmental needs in the Structure Plan Area. This includes provision for recreation, social engagement, connectivity, biodiversity, habitat and integrated water management. In denser urban areas such as this, it is important to optimise the functionality of open spaces. This includes consideration of multi-purpose spaces.

The quality of open space enhances amenity and recreational opportunities. The programming, amenities and facilities provided by open spaces serve different people with the community with higher quality spaces supporting a large proportion of community need. Therefore, existing open spaces should be optimised to ensure they are providing the amenity and recreational needs required for the existing and future population.

When connected into a network, the value of a collection of public open spaces is greater than the sum of its parts, offering increased public realm opportunities and benefits than those provided by the spaces in isolation. A holistic network provides a diversity of experiences, landscape opportunities and outcomes which ensures that the public realm serves as many purposes as possible.

What is happening now in Monash?

The Structure Plan Area has small parks and playgrounds scattered throughout the residential areas, although it lacks large public open spaces and recreation facilities.

While Monash University features a number of sports and recreation facilities, and open space, it is generally not available for use by the surrounding community.

The SRL Open Space Assessment (2024) identifies that the Structure Plan Area has relatively low amount of public open space and large areas that do not have walkable (400 metres) proximity to public open space, This is illustrated in Section 3.2: Summary of Public Realm Analysis.

"The precinct has a small number of disconnected public spaces, supplemented with a diverse range of semi-public spaces at Monash University." - SRL Public Space and Public Life Study Report (Gehl, 2023)

How can this direction be achieved in Monash?

Strategy PR11. Enhance existing open spaces

Enhance the functionality, character and safety of existing public open spaces.

Open spaces should service and cater for the diverse needs of the existing and future community. These open spaces should have improved safety through passive surveillance, activation and lighting.

Strategy PR12. Connections to open space

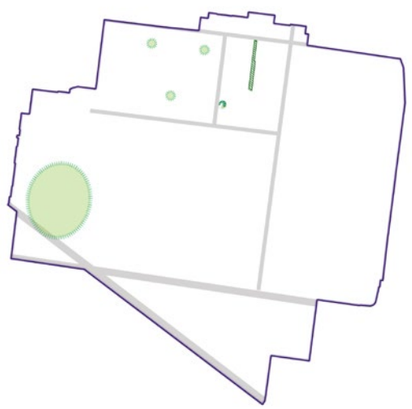
Create new connections that improve accessibility to open space and create a network of spaces.

Opportunities for new connections through redevelopment of abutting properties should be explored.

Strategy PR13. New open spaces

Introduce new open spaces where required.

New open spaces should provide suitable opportunities for the community and address identified gap areas.



Alignment with SRL Urban Design Framework:

Design Direction 4 will help to achieve the following SRL Urban design objectives:

- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD1.4 Environmentally sustainable
- Objective UD2.1 Strategic alignment
- Objective UD2.2 Functional urban structure
- Objective UD2.4 Welcoming
- Objective UD3.4 Green network
- Objective UD4.1 Universally inclusive
- Objective UD4.2 Twenty-minute neighbourhoods
- Objective UD4.4 Safer design
- Objective UD5.2 Responsive
- Objective UD5.4 Healthy
- Objective UD5.5 Quality design
- Objective UD6.1 Amenity
- Objective UD6.2 Landscape values
- Objective UD6.4 Places for people
- Objective UD6.5 Activation

3.4 Public Realm Framework

The Public Realm Framework has been developed by applying the relevant public realm design directions presented in Section 3.3. The key features of the framework are outlined below.

Public realm outcomes

Figure 3.8 outlines the broad strategic intent behind the public realm strategies proposed in this report. These are further detailed in the Public Realm Framework plan, Figure 3.9.

The actions needed to realise these strategies are detailed within Section 6.

Some of the key moves to enhance and integrate the public realm in the Structure Plan Area are outlined below.

- Establish a fine-grain street network with SRL at the centre to create an urbanised core, with high-quality public realm and activated street frontages
- Industrial land north of Monash University will be transformed to create a network of green streets, with enhancements for improved walking and cycling connections and a platform for future development
- High-quality public realm connections and spaces in the core will support a vibrant commercial environment
- Transformative major active transport links along Dandenong Road/Wellington Road will improve pedestrian and cycling crossing
- Legible routes and improved connections along the Mile Creek linear green link.

Figure 3.8: Public realm outcomes

The following indicative sections illustrate the street typologies envisaged in the Public Realm Framework. Precedent case studies for each typology is provided in the SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

Sections are typical and indicative only to communicate intended outcomes and to establish a hierarchy of streets. The final arrangement and design of the streets and associated infrastructure (such as carparking, paths, landscaping) would be subject to further resolution that would consider the local context, site constraints, and other technical and relevant authority requirements.

Boulevard

Wide, generous primary road and public transport corridor that serves multiple uses and provides strong landscape and pedestrian outcomes including canopy trees and pedestrian crossing opportunities.

Figure 3.9: Indicative section, Boulevard

- Canopy tree planting and expanded understorey planting.
- Pedestrian pathways, refuge and crossing points.
- Potential threshold zones that promote pedestrian crossing / land use relationships.
- Multi-modal transport opportunities.
- Opportunities for public art.
- High quality furniture zones at regular intervals for pedestrians to pause and rest.

Avenue

Wide and tree-lined ‘connector’ street that accommodates active and/or public transport with nodes of pedestrian amenity to create places for people to move and dwell.

Figure 3.10: Indicative section, Avenue

- Public transport connectivity (bus stops / waiting zones)
- High amenity public transport waiting facilities for users
- Potential active transport link
- Streetscape and landscape outcomes
- Generous pedestrian zones
- Wayfinding, regular seating points and leafy shade

Activity Street

Highly urbanised street that supports public life and provides an attractive and comfortable pedestrian experience, with generous pedestrian circulation space, streetscape treatments that encourage activation of street frontages and provide durable, high quality materials.

Figure 3.11: Indicative section, Activity Street - Type A

- High quality paving
- Street trees
- Expanded areas for outdoor dining and activity
- Awnings, shelter and lighting
- Understorey planting and rain gardens
- Public street infrastructure (such as seating, lighting, drinking fountains, signage, creative and interpretive elements)
- PTV shelters and seating
- Micro mobility infrastructure storage (such as bicycle hoops)

Green Street

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.

Indicative Section, Green Street Section- Type C - Cycling

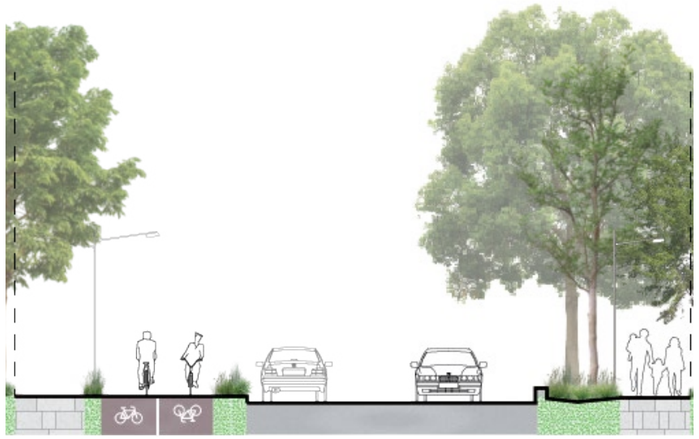


Figure 3.12: Indicative section, Green Street section- Type C - Cycling

- Street trees and biodiverse understorey planting WSUD initiatives
- Active transport (walking and cycling) paths and connections
- Activity nodes and pause points with seating
- Street lighting to one side to light the full street
- Separation between transport modes
- Micro mobility infrastructure storage (such as bicycle hoops)
- Bus stop shelters and seating
- Indented parking for pick-up and drop off

Key Links

New or improved links that provide connections to key destinations, or through large urban blocks or impermeable corridors (such as railway lines or arterial roads). These links typically have limited or no vehicular access, may include provision for cycling and seek to prioritise pedestrian circulation.

Critical links: connections that provide direct pedestrian access to the SRL station.

Important links: connections that reduce gaps in walking access to key destinations such as areas of employment or major open spaces and may support a biodiversity corridor.

Local links: connections that generally improve permeability and local walking access, particularly where there are long blocks or barriers preventing through movement.

Key links in the Public Realm Framework plan can be either ‘fixed’ or ‘flexible’.

Fixed key links are where the location of the link has been established and it is unlikely to change. Whereas for flexible key links the exact location is still to be determined and may adjust to respond to an opportunity or circumstance, provided the link delivers on the intended outcome – whether to connect to a key destination (critical or important link) or to improve general permeability and walkability (local link).

Figure 3.13: Indicative section Pedestrian link- Type A - Urban amenity

Figure 3.14: Indicative section Pedestrian link Type C - Shared path

- CPTED, clear sight lines, lighting and wayfinding.
- Generous pedestrian and shared-use paths.
- Support activation through outdoor dining and urban furniture.
- WSUD and biodiverse vegetation.

Public Realm Framework

The Public Realm Framework shows the key elements of the public realm strategy.

Figure 3.16 shows the recommended new and improve pedestrian links and crossings in the Structure Plan Area, along with proposed new open spaces.

Legend

- SRL station
- Structure Plan Area
- Boulevard
- Avenue
- Activity Street
- Green Street
- Green Street (new) - Flexible
- *Work with land manager / owner to improve links and access through site*
- Important Key Link (improved) - Fixed
- Important Key Link (new) - Flexible
- Local Key Link (new) – Fixed
- Local Key Link (new) – Flexible
- Existing open space
- Open space (new) - SRL East
- Open space (new) - planned or proposed
- Open space (new) – investigation area
- Pedestrian crossings (new or upgraded)
- Pedestrian crossings (new or upgraded) - SRL East
- Building set back to support widened public realm

Transport legend*

- Upgraded strategic corridor
- Active transport - C1, C2, C3
- Major active transport link

**Refer to Structure Plan Transport Plan for more details*

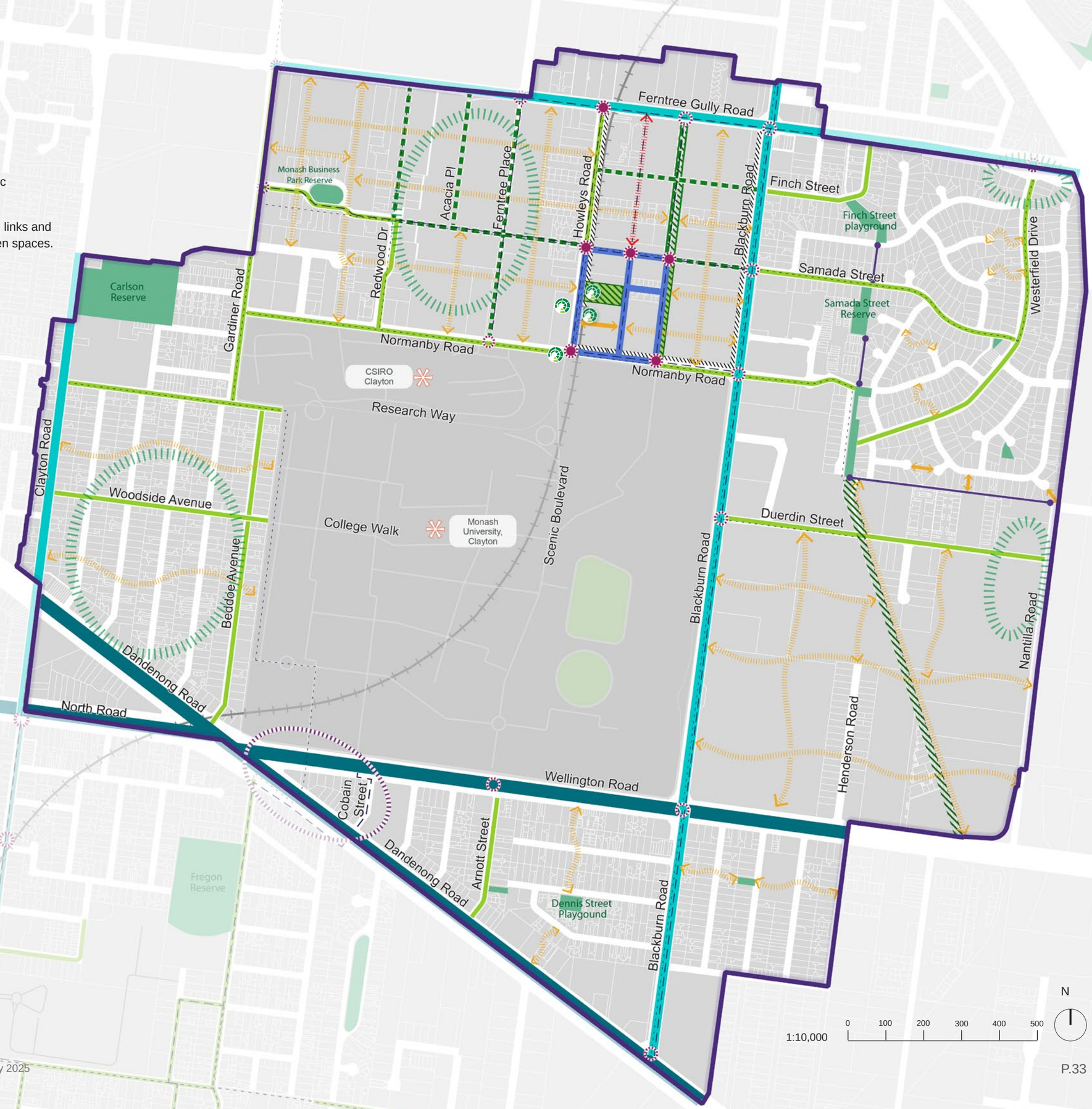


Figure 3.15: Public realm framework

4 Urban form

AJM
Joint Venture

4.1 Introduction

This section outlines an Urban Form Framework to achieve the Vision for Monash. It summarises the analysis that underpins the framework, and sets out design directions and strategies.

The design directions, strategies and Urban Form Framework was informed by the SRL Urban Design Framework and the Vision for Monash. This was supplemented by an analysis of the existing development conditions (see Appendix A) and extensive research into best practice urban development typologies provided in SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

The Urban Form Framework was developed concurrently with the Public Realm Framework, and Built Form Framework and each informs the other.

The methodology for developing the Urban Form Framework is summarised in Figure 4.1.

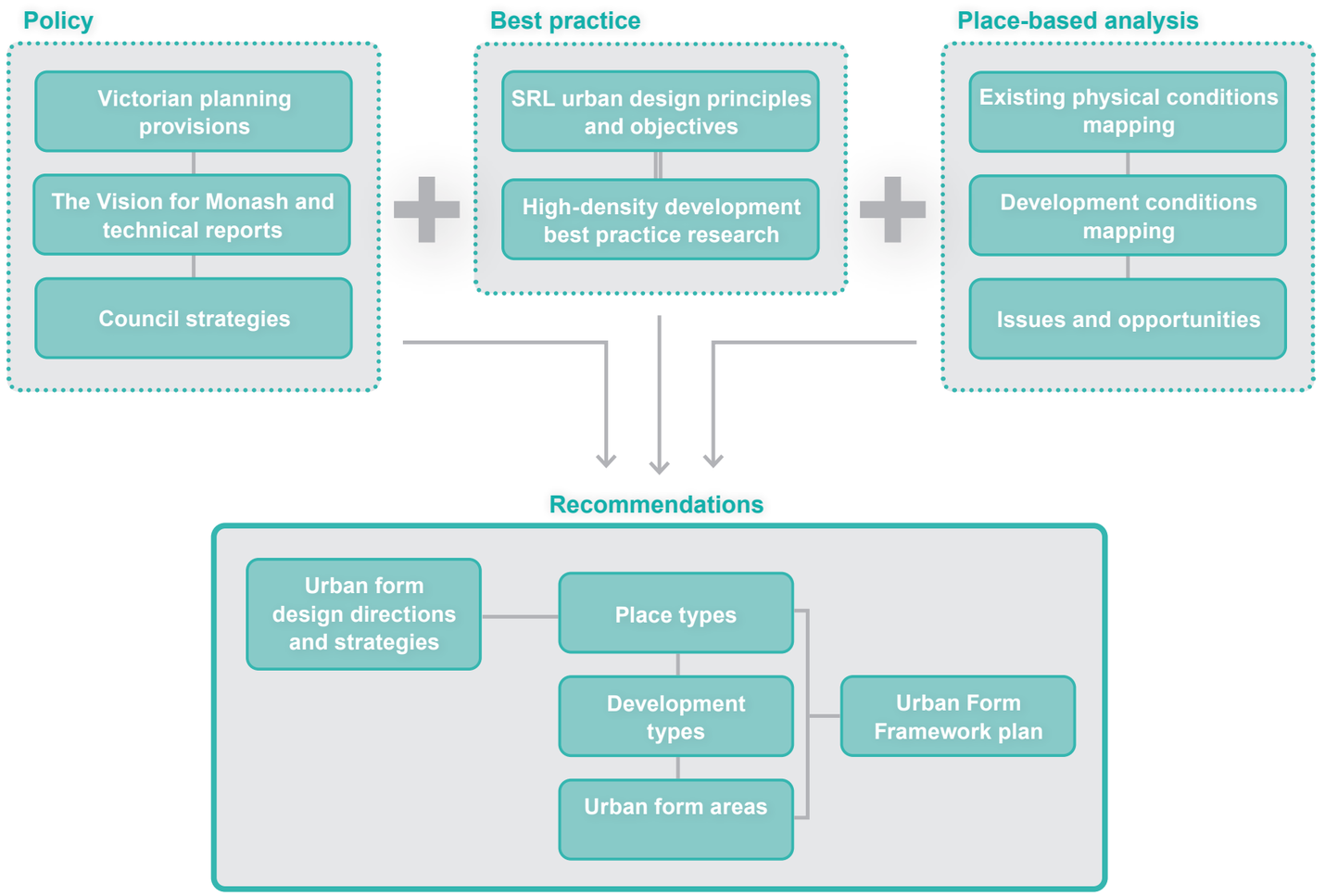


Figure 4.1: Urban Form Framework methodology summary

4.2 Summary of analysis

Extensive analysis was undertaken to identify opportunities and constraints in achieving an urban form that supports the Vision for Monash.

Opportunities

Figure 4.2 shows the key opportunities the urban form analysis identified in the Monash Structure Plan Area.

These key issues and opportunities include:

- 1 Monash University and CSIRO: major research and education institutions, med tech, research and knowledge-intensive uses to the area
- 2 Large employment lots to accommodate significant employment and innovation growth
- 3 Australian Synchrotron and Melbourne Centre for Nanofabrication: key technology institutions attracting national and international interest
- Area with an established landscape character and moderate tree density
- Open spaces within close proximity to employment and education uses
- Low rise residential area with lot sizes suitable to mid-rise building typologies, including apartments on amalgamated lots and townhouses on single lots

Wide roads, which can accommodate mid-high density development and enhanced pedestrian infrastructure:

- Road width greater than 40 metres
- Road width 30 to 40 metres
- Road width 20 to 30 metres

- Heritage buildings which strengthen the place identity.

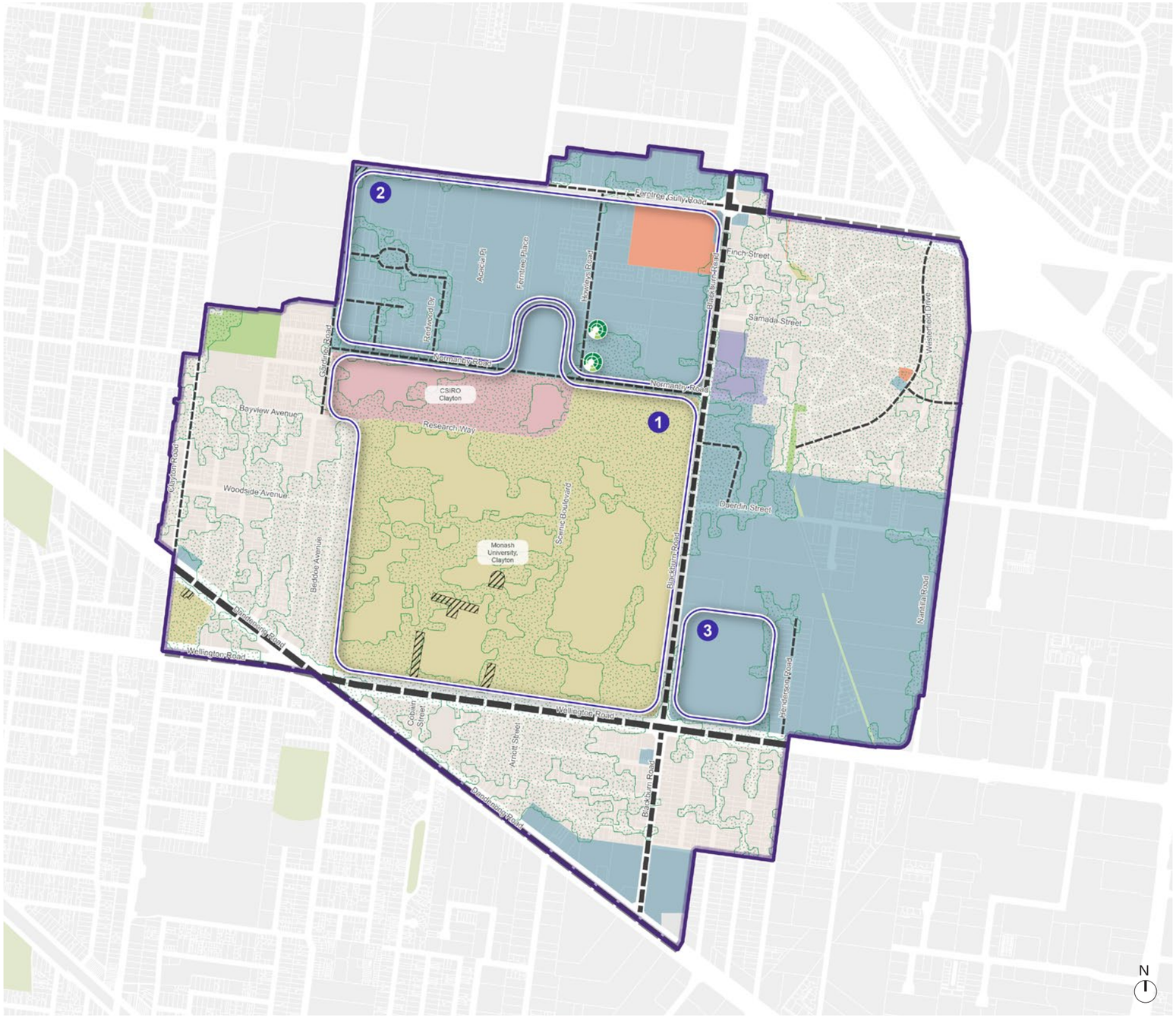


Figure 4.2: Opportunities for urban form

Legend

- SRL station
- Structure Plan Area

Constraints

Constraints to change in urban form character may relate to the lot pattern, lot ownership, existing development height or age, or character overlays associated with a specific property or group of properties within the Structure Plan Area. Combined, these constraints play a substantial role in shaping the feasibility, nature of development and built form character that can be achieved within the Structure Plan Area.

For this assessment constraints to change in urban form character have been categorised in order of significance (low to high) within the following groups:

- Lot size and ownership
- Building heights
- Recently developed buildings.

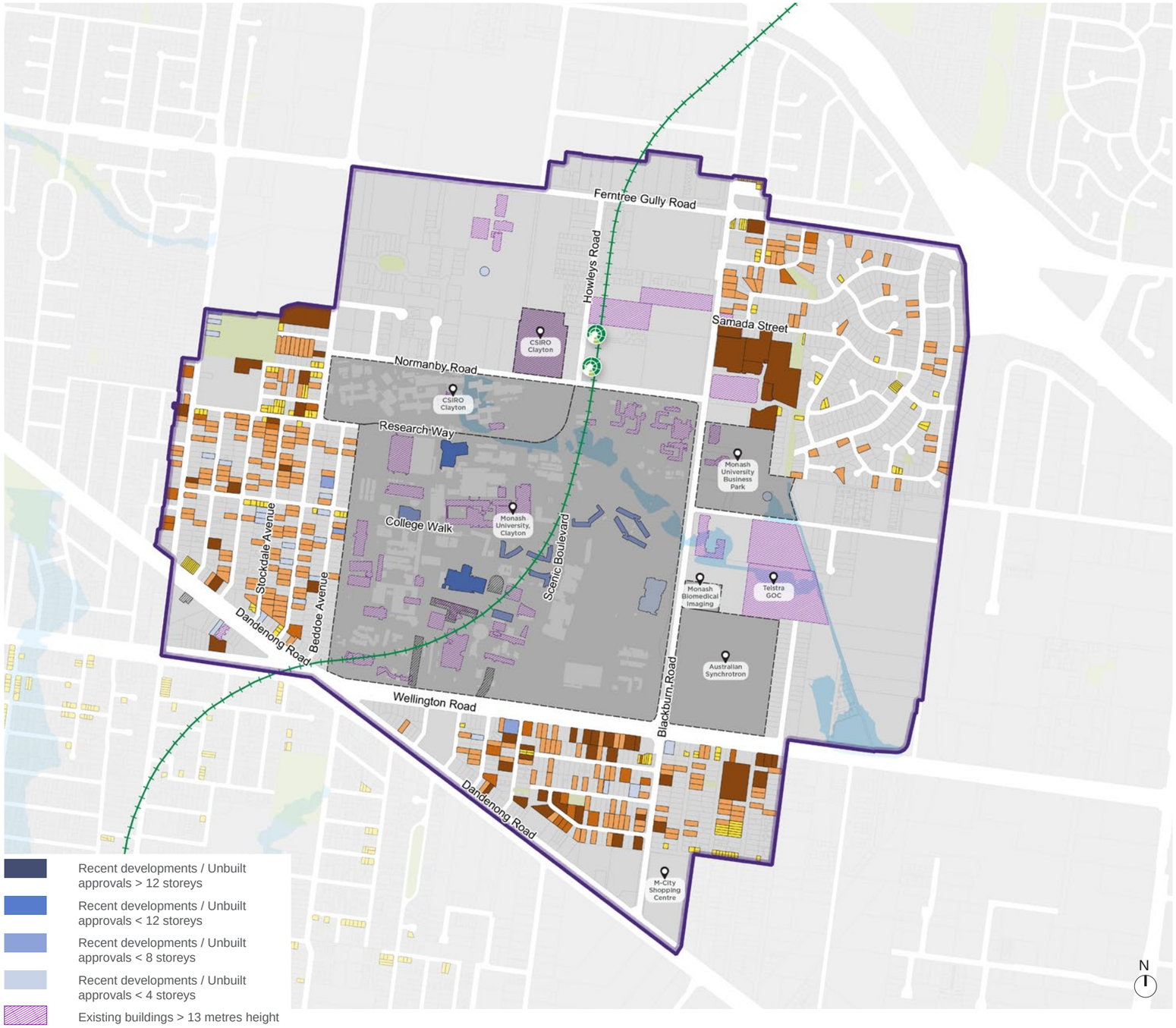
The Monash Structure Plan Area includes a number large and substantial landholdings, including Monash University's Clayton campus and associated research facilities, in addition to the Australian Synchrotron and CSIRO headquarters. The continued presence of these institutions in their current configuration may therefore pose a high constraint on potential changes in urban character.

At the northern boundary of the Structure Plan Area, change to the character of large industrial and business parks is constrained by residential strata titling and the presence of existing buildings which exceed a height of 13 meters.

East of Blackburn Road, there are also several large lots featuring 6+ residential strata titles and tall buildings.

Residential areas in the west and south of the Structure plan area feature a large number of strata titles which contrasts with the Notting Hill residential neighbourhood which to the east, which has few constraints.

Note: A range of constraints were identified across the Structure Plan Area. The more development constraints have been included on this page. Where a property is affected by multiple constraints, only the greater constraint is shown here. Further detail on the development constraints identified can be found in Appendix B.



Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Heritage Overlay
- Victorian Heritage Register
- Large landholders
- Large landholders - Health, education and research land use
- Small lots (0-400 square metres)
- Flooding
- Residential strata title 2-3
- Residential strata title 4-5
- Residential strata title 6+

Figure 4.3: Constraints to change in urban form character in Structure Plan Area

4.3 Urban form design directions

This section outlines the urban form design directions to achieve the Vision for Monash.

The design directions informed the development of the Urban Form Framework in Section 4.4 and the built form outcomes identified in Section 6.

The order of the design directions does not imply an order of priority.

Design Direction 5: Provide for growth in a form that delivers high amenity environments

Why is this important?

Substantial change

SRL will significantly amplify accessibility to employment, services, education and community facilities across Melbourne. Therefore, a substantial increase in residential development is warranted to enable more people to have good access to jobs and services. A significant increase in employment, health and/or education facilities close to the SRL station is also merited to improve accessibility to jobs and services for people elsewhere on Melbourne's rail network, further reinforcing the justification for increased residential density within the Structure Plan Area.

Denser areas with a mix of uses have an improved environmental performance, because they reduce travel distances and encourage sustainable modes of travel. They also increase support for local businesses, and make better use of existing infrastructure.

Increased residential density helps to create 20-minute neighbourhoods with local services within walking distance, supporting liveability and better health (as sought by Plan Melbourne 2017-2050). Denser areas offer a more vibrant environment and a more diverse range of opportunities for cultural and recreational experiences.

A significant increase in employment, health and education uses within the Structure Plan Area is supported by Clause 11.01-1R of the Monash City Council Planning Scheme, which states that 'the Suburban Rail Loop will facilitate substantial growth and change in major employment, health and education precincts and activity centres beyond the central city at an appropriate scale to address the needs of Melbourne's rapidly growing population'.

The level of growth envisaged in the Structure Plan Area represents a transformative change in character. A significant uplift in development potential is also necessary to stimulate redevelopment.

Therefore, in general, existing character should not act as a constraint on the level of growth proposed. However, the built form design directions outlined in Section 5 seek to manage the transition over time between the existing and proposed future characters.

Development capacity

Demand for additional dwellings and jobs within the Structure Plan Area has been forecast to 2041. Consistent with orderly planning, the Structure Plan should provide for at least this level of growth, subject to acceptable amenity outcomes.

More specifically, the development capacity provided for by the Structure Plan should not be limited to the need to accommodate these forecasts for the following reasons:

- Demand is likely to continue to grow after 2041. If the Structure Plan sets built form parameters which limit growth to that needed to accommodate the forecast growth to 2041, it may not be possible to accommodate further demand given the likely predominance of strata-titled buildings that are difficult to redevelop
- Demand forecasting is an imperfect science - past experience indicates that the actual demand may be greater than forecast
- There is uncertainty about the rate of redevelopment and number of properties that will occur between now and 2024. If the Structure Plan relies on all properties being redeveloped to provide for the forecast demand but this does not occur, the demand will not be able to be accommodated
- It is State planning policy to encourage intensification close to public transport, jobs and other services to promote public transport and active transport over car dependency for a range of environmental, economic and social reasons.

Building scale

Given the Structure Plan Area's very high level of accessibility to education, jobs and public transport, and the benefits of urban density, it should generally have a level of intensification greater than that intended for the surrounding residential hinterland or close to most other passenger stations or activity centres within Melbourne (other than Central Melbourne and the other SRL Structure Plan Areas), which are less well served by jobs and public transport.

Residential zones generally support building heights of 2 to 4 storeys, and phase 2 of the *Future Homes* initiative is planned to support heights of 5 storeys in the General Residential Zone within 800 metres of a passenger station or any activity centre. Therefore, in general, building heights within the Structure Plan Area should be at least 6 storeys to capitalise on the planned accessibility to jobs and public transport. Exceptions to this may include areas with heritage values, an identified special character, areas relatively distant or disconnected from the SRL station, or where development is relatively constrained.

Building form

As noted above, greater density has a range of benefits. However, if designed poorly, it can adversely affect the public and private amenity of an area, and therefore its attractiveness as a place to live, work and play. Tall buildings cause longer shadows and tend to have greater wind effects. Bulky buildings reduce access to daylight and sky views. These effects are increased in relatively narrow streets.

Therefore, higher-density development needs to be shaped to ensure a high standard of amenity.

What is happening now in Monash?

The Monash Structure Plan Area has a low-rise character, with the majority of buildings being 1 to 2-storey dwellings in residential areas, and 2 to 3-storey commercial buildings in business parks and industrial areas.

Monash University has a number of taller buildings including the recently completed Victorian Heart Hospital at approximately 11-storeys, student housing ranging from 4 to 6-storeys and the Menzies building built to 12-storeys.

M-City Shopping Centre features 2 residential towers with the tallest tower rising to 13-storeys.

Alignment with SRL Urban Design Framework:

Design Direction 5 will help to achieve the following SRL Urban Design Objectives (see Section 2.3):

- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD1.3 Resilient
- Objective UD1.4 Environmentally sustainable
- Objective UD5.2 Responsive
- Objective UD5.3 Sensitive
- Objective UD5.5 Quality design

How can this direction be achieved in Monash?

Strategy UF1: Substantial change

Provide for higher-density development throughout the Structure Plan Area, except in isolated, sensitive or constrained areas.

Strategy UF2: Mid-rise development

Promote mid-rise development throughout the Structure Plan Area, except immediately around the SRL station where high-rise buildings are preferred.

Higher-density development within the Structure Plan Area will deliver growth in this extremely well-serviced location, and the environmental, economic, liveability and health benefits of urban density.

In order to reflect the greater accessibility of this location to jobs and services, building heights should be generally greater than 5 storeys. However, a lower height may be appropriate in isolated, sensitive or constrained areas as follows:

1. Isolated areas are those more than approximately 10 minutes by foot or local public transport from a train station or major employment, health or education campus, which are considered to have lesser accessibility to public transport or jobs, and therefore less suitability for intensification. Exceptions to this include properties:
   - Fronting a large open space, whose amenity benefits should be capitalised upon
   - Large enough to form a distinct character pocket.
2. Sensitive areas are pockets of land with particular sensitivities that limit the appropriateness of greater height, including:
   - On the north side of a narrow open space
   - Affected by a Heritage Overlay and in the outer parts of the Structure Plan Area
   - Affected by a Neighbourhood Character Overlay
   - Adjacent to properties zoned GRZ or NRZ outside the Structure Plan Area.
3. Constrained areas are those where comprehensive redevelopment is relatively unlikely due to a high proportion of:
   - Properties with more than 3 strata-titled lots
   - Small or narrow lots.

Most streets within the Structure Plan Area are 15 to 20 metres wide (road reserve width), and typical lot sizes are 15 to 20 metres wide and 30 to 45 metres deep. Mid-rise buildings (those between 5 and 12 storeys) are the most appropriate way to provide for substantial growth in these circumstances because they can deliver higher densities while maintaining good public realm and internal amenity.

In particular, the typical street widths and lot sizes can accommodate mid-rise buildings without unreasonable shadow, visual and wind impacts[1]. Mid-rise buildings can also be sited and shaped in a way that manages their impact on the existing character of low-rise areas[2,3].

Mid-rise buildings have a range of other attributes that would complement the opportunities provided by higher-rise and lower-rise buildings. These include:

- Research indicates that mid-rise residential buildings have positive outcomes in terms of social connectedness and well-being[4,5]
- Mid-rise buildings are said to be suitable for families, because parents are able to supervise children's outdoor play[6]
- Mid-rise development is less expensive to build than taller buildings per square metre of sellable or leaseable area, likely because of the lesser requirements for structure and services[7]
- Mid-rise residential development is more likely to be owner-occupier standard than speculative investor-grade housing
- Mid-rise apartments offer a distinctly different housing choice, compared with high-rise buildings and townhouses[8,9]
- Fewer properties need to be amalgamated to create a mid-rise development site than a high-rise development site
- The same number of dwellings is spread across more mid-rise than high-rise buildings, increasing competition between developers and choice for purchasers and renters
- There is a greater number of developers and builders who can create mid-rise than high-rise buildings, increasing the capacity of the industry to deliver the desired number of dwellings and increasing competition between them.

Adopting a mid-rise development pattern across the Structure Plan Area would result in the same amount of growth being spread over a larger area. Given that the factors listed above are strongest for residential buildings, and commercial buildings have a stronger need to be close to the SRL station and activity centre, the mid-rise preference is not recommended to be applied in the vicinity of the SRL station.

Mid-rise buildings range from 5 to 12 storeys. Therefore, a general preference for this form of development does not preclude the potential for distinct characters within the Structure Plan Area.

Mid-rise precedents

1. *Ewing, R., & Cervero, R. (2010). Travel and the Built Environment: A Meta-Analysis. Journal of the American Planning Association, 76(3), 265-294*
2. *SRL Housing Recommendations Report*
3. *Congress for the New Urbanism. (2001). Charter of the New Urbanism. McGraw-Hill*
4. *Gehl, J. (2010). Cities for People. Island Press.*
5. *Gifford, R. (2007). The Consequences of Living in High-Rise Buildings. Architectural Science Review, 50(1), 2-17*
6. *Heenan, Dr R. (2017). Healthy Higher Density Living for Kids. NSW Government & City of Parramatta*
7. *Urban Land Institute. (2013). The Economics of Mid-Rise versus High-Rise Construction.*
8. *SRL Housing Needs Assessment*
9. *Glaeser, E. L. (2011). Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier. Penguin Press*

Design Direction 6: Establish diverse, liveable and productive neighbourhoods

Why is this important?

Clusters of buildings with similar scale and massing contribute to distinct place identities. The variation between these identities enhances the experience and legibility of the broader urban area. Varied building types also contributes to a diverse range of housing and business accommodation types, creating a more mixed and balanced community.

As noted in Strategy UF2: Mid-rise development, mid-rise buildings generally range from 5 to 12 storeys and are no greater than 15 storeys. Therefore, a general preference for this form of development need not result in uniform character outside the area around the SRL station. Distinct characters can be created by adopting a more specific height range within the mid-range scale, along with particular building siting and setback parameters (and land use mixes).

These built form choices should be based on the particular characteristics of the area and factors such as:

- Accessibility to public transport, jobs and services
- Housing choice, affordability and diversity
- Desired land use, including an aspiration to connect distinct activity nodes
- Accessibility to parkland
- Valued existing character including urban structure and topography.

In summary, specific built form attributes should be promoted in different parts of the Structure Plan Area, to create places with distinct identities, contribute to legibility, facilitate housing and business accommodation diversity across the whole area, and to support the land use and transport aspirations for those urban form areas.

Main streets

Although the aspiration to accommodate growth generally outweighs that to maintain the existing character, activity centres featuring fine-grain main streets are an exception. This is because their narrow lots present a particular challenge for viable floorplates, disincentivising redevelopment compared with other locations. Their fine-grain subdivision pattern also creates a distinctive character of small tenancies that support local, independent retailers. This character contributes to a more engaging public realm and is generally highly valued by local communities.

Existing small retail strips have a different character and present an opportunity to be comprehensively redeveloped due to their relatively small size. Therefore, these areas are proposed to have bespoke outcomes that complement their surrounding retail character.

The challenges of redeveloping narrow lots mean that it is likely that many such lots in a strip will remain undeveloped for the foreseeable future. Therefore, the form of development that is promoted in such areas should complement the existing fine-grain, low-rise character.

Public transport oriented development

Denser development supports greater use of public transport that is within easy reach. However it can also change the character of an area and the amenity its public realm and private spaces.

In each part of the Structure Plan Area, there is a need to strike a balance between providing for growth and moderating change to amenity and character. This balance should be weighted towards growth in the central core and SRL station environs, where access to jobs and services is greatest, and the need for sensitivity to existing character within and immediately outside the Structure Plan Area is least.

In contrast, it should be weighted towards maintaining the existing amenity and complementing the existing character towards the edges of the Structure Plan Area (without ignoring the need for growth). The areas between the core and edge should have a more balanced weighting.

This pattern creates the classic cone form of increasing building scale towards the centre of the Structure Plan Area, which contributes to the legibility of the broader area. The gradient of this cone should respond to the scale of public transport, jobs and services in the core, such as reaching taller buildings in centres with more than one rail line and/or a particularly significant number of jobs, such as Box Hill / Monash / Clayton and lower buildings in centres with only one rail line and/or a lesser number of jobs, such as Burwood.

Main roads generally carry public transport and are wider than local streets. Public transport provides a high level of accessibility to jobs and services. Greater width enables taller buildings to be accommodated without overwhelming the street. Therefore, denser buildings should be provided for along main roads. A mix of commercial and residential uses is appropriate to capitalise on the higher level of accessibility, along with adaptable buildings able to respond to changes in market demand for different uses. Denser, mixed-use buildings will contribute to a distinct 'boulevard' character.

Land use facilitation

Different forms of development facilitate different land use outcomes. For example:

- Taller buildings contribute to more vibrant environments, suited to commercial uses, and lower buildings support quieter places with higher environmental amenity, suited to residential uses
- Larger floorplates support commercial uses and narrower floorplates support residential uses
- Some industrial uses require large to very large floorplates with generous loading areas
- Buildings that are built close to the street frontage support commercial uses (notably those forming a continuous street wall for retail uses) and those that are set back from the street and freestanding provide more privacy and amenity for residential uses.

There is a desire to establish a stronger connection between the Box Hill Hospital and surrounding associated uses, and the commercial / retail core.

Demand for different uses varies over time, and is not possible to predict with any accuracy. Designing adaptable buildings that can accommodate a land use change over time is one possible solution. Adaptable buildings facilitate changes in use without the need for redevelopment, which is environmentally and financially costly. Adaptability is supported by a modest street setback, ground floor facades oriented towards the street, generous floor-to-floor dimensions to support commercial uses, and relatively shallow floorplates to provide good internal residential amenity.

Areas immediately adjacent to the commercial / retail core with an existing medium-density character are most suited to accommodate mixed-use and adaptable buildings, because they are contiguous with existing commercial activity and because the change in built form character is less abrupt than it would be in lower-density areas.

Diversity of housing

As discussed in Design Direction 5, residential typologies need to provide a diversity of housing options, allowing for future residents to have access to suitable 'right sized' and affordable accommodation. Accommodating for these diverse housing options will result in different areas requiring a different place identity.

Employment neighbourhoods

Areas with a high concentration of employment uses require careful consideration of the ambitions and expectations of these industries to ensure the built form and public realm support them. To attract and foster technology-led life science, health and education sectors, these neighbourhoods need to be sustainable, connected and desirable places. These areas need to support the needs of all-hour workers by ensuring a safe and attractive public realm at night and day. The public realm and built form should also foster incidental social connections and transfer of knowledge between workers.

Alignment with SRL Urban Design Framework:

Design Direction 6 will help to achieve the following SRL Urban Design Objectives (see Section 2.3):

- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD1.4 Environmentally sustainable
- Objective UD2.1 Strategic alignment
- Objective UD2.2 Functional urban structure
- Objective UD2.3 Integration with context
- Objective UD2.4 Welcoming
- Objective UD3.1 Linkages
- Objective UD3.2 Transport integration
- Objective UD3.3 Legible
- Objective UD3.4 Green network
- Objective UD4.2 Twenty-minute neighbourhoods
- Objective UD5.2 Responsive
- Objective UD6.1 Amenity
- Objective UD6.3 User experience
- Objective UD6.5 Activation

What is happening now in Monash?

While the Monash Structure Plan Area is predominantly educational and commercial/industrial, residential uses throughout the Structure Plan Area are characterised by lower-density, largely 1 to 2-storey detached houses set in suburban streets.

A pocket of more intense residential development exists where sites have been developed to accommodate more compact homes and denser built forms in proximity to the university.

Monash University accounts for a significant portion of education facilities within the core of the area. The campus contains services found in commercial precincts, creating a self sufficient environment for students and teachers fulfilling their daily needs.

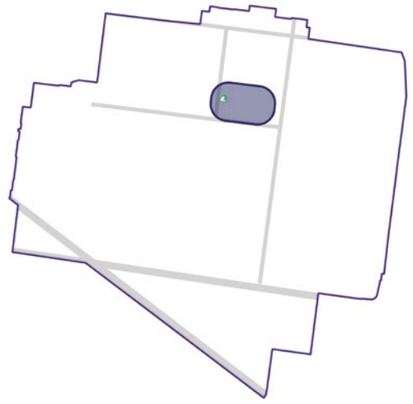
To the north and east of Monash University, extensive employment uses are present, with varied lot sizes and typically 1 and 2-storey large floor plate buildings.

How can this direction be achieved in Monash?

Strategy UF3. Vibrant core

Promote higher-density mixed-use development in the Structure Plan Area core.

Taller built form should be facilitated within the commercial / retail core to complement the existing and desired built form intensity of the area, while supporting a range of land use types.

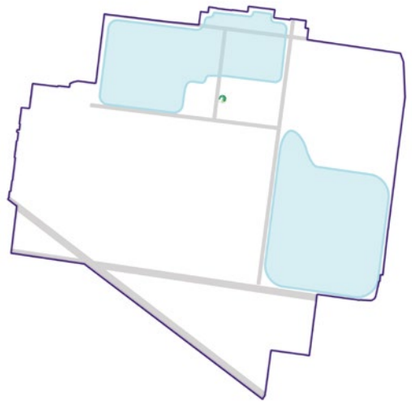


High-rise precedents

Strategy UF4. Employment growth

Provide for fine-grain and large lot employment growth in a highly adaptable mix of employment land uses.

The employment growth neighbourhood should support the intensification of jobs growth, which supports med tech, research, knowledge-intensive, commercial and office uses. The landscape character and street level activation of this area should be enhanced.

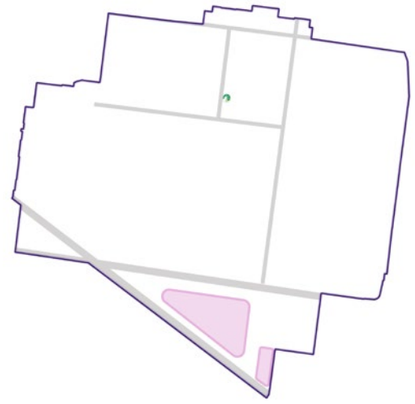


Employment growth precedents

Strategy UF5. Mixed-use neighbourhoods

Facilitate mid-rise mixed-use neighbourhoods adjacent to the urban core or nearby transport nodes.

An adaptable building typology which can accommodate a range of land uses and has a commercial-capable ground floor design should be provided in mixed-use neighbourhoods.

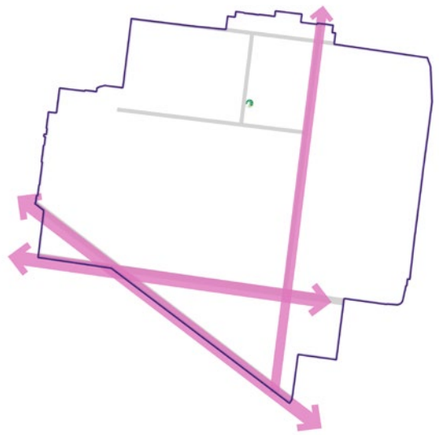


Mixed-use precedents

Strategy UF6. Boulevards and Avenues

Facilitate continuous, mixed-use, mid-rise built form along main roads.

Buildings should strongly frame the wide roads, and provide an adaptable building typology with commercial-capable ground floors.

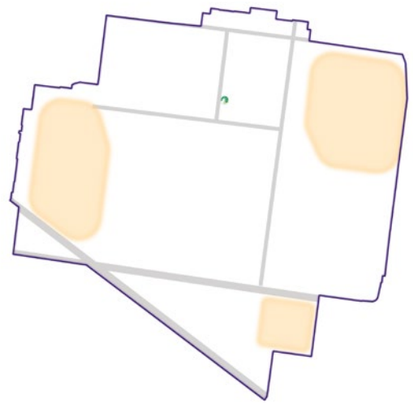


Mixed-use precedents

Strategy UF7. Residential neighbourhoods

Promote low to mid-rise apartment buildings and townhouses in a garden setting in most residential neighbourhoods.

Buildings should promote the existing garden setting and feature front, side and rear landscape setbacks.

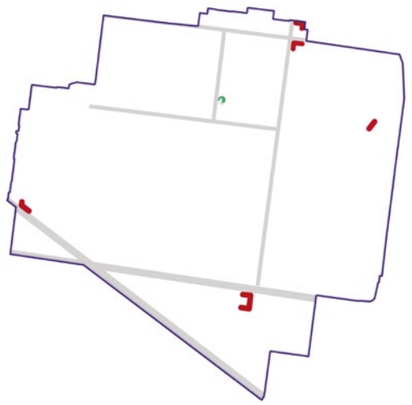


Residential precedents

Strategy UF8: Main streets and existing small retail strips

Complement the fine-grain, low-rise character of local shopping strips.

Buildings located within existing small retail strips should complement the existing scale and rhythm of the streetscape, maintain amenity to the public realm and support a retail ground floor.

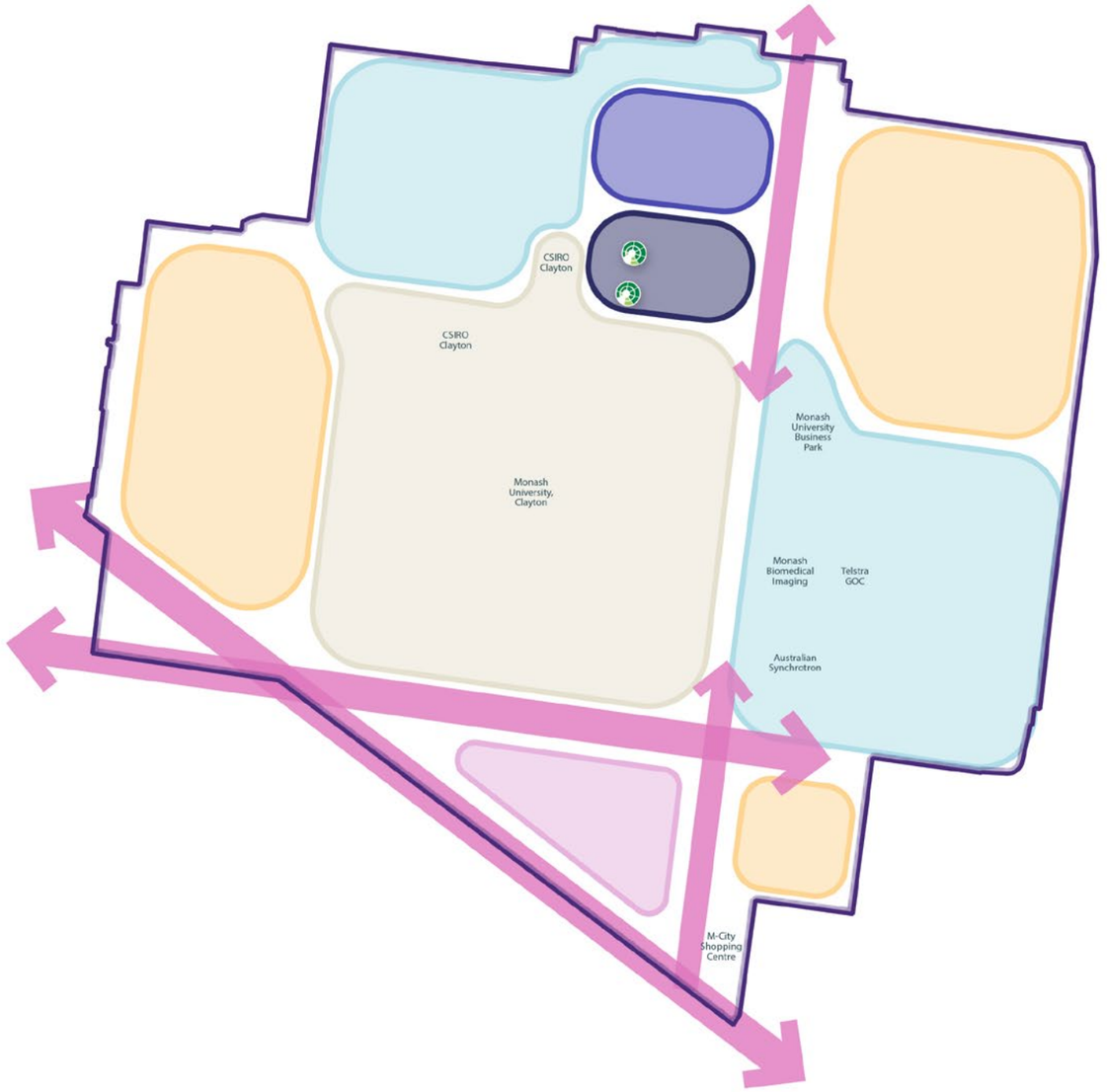


Main streets and existing small retail strips precedents

Place types

As a result of the urban form design directions and strategies, a pattern of distinct place types has emerged within the Structure Plan Area.

Each place type represents a different urban form outcome which capitalises on its existing attributes and supports its desired land use function, reinforcing their collective diversity, individual identity and sense of place.



Legend

- SRL station
- Structure Plan Area
- Central Core
- Central Core Flanks
- Key Movement Corridors
- Employment Growth
- Urban Neighbourhood
- Residential Neighbourhood
- Universities and Australian Government statutory authorities

Figure 4.4: Place Types

Development types

A range of development types was explored for each place type based on their specific opportunities and constraints, and desired land use outcomes.

While the development types were employed to develop the Urban Form Framework for the Structure Plan Area, the proposed typologies are indicative and, in reality, a range of built form outcomes is likely to occur.

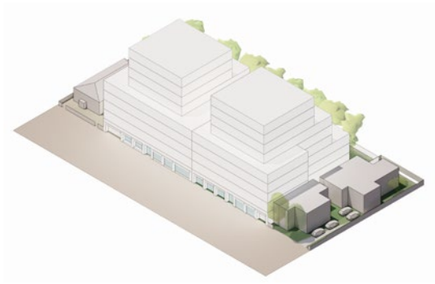
The development types were informed by research into best practice development typologies, contained in SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

Place type: Central Core

The development type recommended in the Central Core is the high-rise podium-tower. Medium-high rise towers in the form of podium-tower buildings can deliver the level of intensification envisaged for the Central Core. Smaller lots will require lot amalgamation to enable the development of podium-tower buildings.

Provided it is appropriately-scaled, the podium provides a street-edge form that facilitates good public realm amenity in terms of human scale, sky views, sun and wind conditions, and complements the existing character, which generally comprises low-rise street walls. Best practice podium-tower design includes active street facades with any above-ground car parking ‘sleeved’ behind other uses, and well-separated towers with generous setbacks.

A mix of uses is necessary to deliver the desired vibrancy and activation. The podium-tower format enables a range of retail types in the podium and office and/or residential uses above.



Place type: Central Flanks

The development type recommended in the Central Flanks is the mid-rise podium-tower. It delivers high density while maintaining good solar provision to the public realm. This type typically requires a large lot or lot amalgamation.

The zero front setback and lack of side setbacks at the base of the building ensure a highly-activated and strongly-framed public realm. This will complement the prevailing existing character of low-rise buildings.

The strong relationship with the street also supports commercial uses at ground and potentially upper levels to provide the desired vibrancy and activation. Best practice design provides for car parking in a basement or ‘sleeved’ behind other uses.

Behind the street wall, the base of the building is set back from the side and rear boundary to provide space for tree planting. This typology provides a 5 to 10 per cent deep soil area at the sides and rear of the lot.

Above the street wall, the upper levels are setback from all sides to maintain sunlight, sky views and a sense of openness in the public realm. These setbacks also maintain good internal amenity and equitable development opportunities on neighbouring properties.

Place type: Residential Neighbourhoods

The development types recommended in the Residential Neighbourhoods are the garden apartments, which are apartments on amalgamated lots, generally equal or greater than 24 metres in width, and townhouses on single lots, generally less than 24 metres in width.

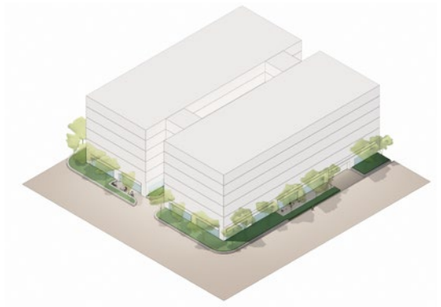
The garden apartment development type provides for the same type of development on amalgamated lots as proposed in Phase 2 of the Future Homes program or, going back further, the art deco apartment boom of the 1920s and 30s, but with a slightly increased density, which is considered appropriate because these areas are within walking distance of a higher order (SRL) station. However, the density is limited to mediate the transition in character and provide a different housing choice than that offered in other urban form areas. In particular, approximately 20 per cent of the apartments will have generous ground level gardens, making them suitable for families.

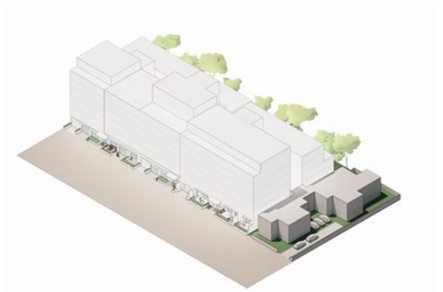
The development of 4 to 6-storey garden apartments rely on the amalgamation of two typical lots, generally equal or greater than 24 metres in width, which is necessary to deliver higher-density while providing good-quality internal amenity and providing a well-landscaped perimeter.

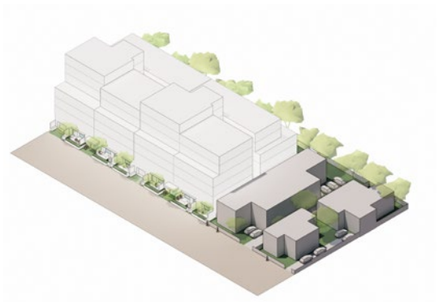
Importantly, lot amalgamation enables generous side and rear setbacks which will provide for high-quality on-site amenity and significant contribution to tree canopy cover. This typology provides a 35 per cent deep soil area across the front, sides and rear of the lot.

The substantial provision for canopy trees in front, side and rear setbacks will retain and strengthen the leafy character that predominates in these areas. These trees will significantly mitigate the visual presence of taller buildings on the existing streetscape and backyard character of these areas

The development of 3-storey townhouses with lesser side setbacks are appropriate on typical single lots, generally less than 24 metres in width. Low front fences and front doors and windows facing the street will provide passive surveillance of the street.







Place type: Employment Growth

The development type recommended in Employment Growth are the freestanding ‘campus’ buildings. This development type provides the large floor plates typically required for employment uses. Its moderate building height contributes to memorable, well-framed spaces with good amenity.

The larger lot sizes in these areas provide opportunities for larger footprint buildings and generous tree planting. This typology provides a 25 per cent deep soil area in the front setback and consolidated garden areas.

Place type: Key Movement Corridors and Urban Neighbourhoods

The development type recommended in the Key Movement Corridors and Urban Neighborhoods is urban infill 1 and 2. These highly adaptable buildings are able to accommodate commercial and / or residential uses. They deliver moderately high density along main roads, in accordance with Strategy UF6: Boulevards and Avenues, without the potentially adverse impacts of taller buildings on local character and amenity. Importantly, this development type can be developed on the vast majority of the lots found in these urban form areas without the need for lot amalgamation.

Urban infill development provides a vibrant and memorable urban character, good private amenity and protection of neighbouring amenity to the rear, adaptability for mixed and changing uses, and reasonable space for tree canopy cover. The minimal front setback and lack of side setbacks ensure a well-activated and strongly-framed public realm. The strong relationship with the street also supports commercial uses at ground or upper levels where desired.

The primary orientation of accommodation to the street and middle of the block enables differing uses to comfortably exist side-by-side where relevant. Generous rear setbacks ensure good amenity for accommodation facing towards the middle of the block, including adjacent properties to the rear, and space for tree planting.

As the Key Movement Corridors and Urban Neighbourhoods evolve through new urban infill development, they will experience a substantial change in character. As noted in Design Direction 5, this is considered to be an inevitable outcome of the vision for transformational change. This kind of transition in character is consistent with other transforming areas such as Brunswick Activity Centre, Cremorne and Box Hill between Whitehorse Road and the hospital. Low-rise dwellings will no longer represent the preferred character, and will increasingly become anomalies.

The sheer on-boundary side walls of urban infill development will change the amenity of any neighbouring low-rise dwellings to the side However, the lack of side setbacks is necessary to enable viable development of appropriate density on single lots and avoid constraining development on neighbouring properties to the side, in accordance with Strategy BF11: Building orientation. The introduction of side setbacks to protect the existing amenity and character would mean that lot amalgamation is required to achieve a viable floorplate, and greater height is needed to maintain the density envisaged by Strategies UF5: Mixed-use neighbourhoods and UF6: Boulevards and Avenues.

The majority of lots in this place type are occupied by detached dwellings whose primary orientation is towards the street and a rear garden, rather than towards side boundaries. Therefore, the impact of sheer on-boundary side walls will be generally limited to the secondary rooms that face side boundaries.

Urban Infill development is proposed to have a generous rear setback, which will limit its impact on the amenity and equitable development of neighbouring rear gardens. The rear setbacks of existing and future development will ultimately combine to form a large green space in the middle of the block.

The building height and upper level street setbacks vary based on street width to ensure an appropriate balance between openness and enclosure in the street, along with reasonable solar access. In the Key Movement Corridors, urban infill provides a taller street wall, with upper levels maintaining a 1:1 ratio with the street. In the Urban Neighbourhoods, it provides a street wall equal to the street width, with upper levels setback to maintain an open character.

This development type includes a landscaped front setback as well as a generous, landscaped rear setback, resulting in a combined 10 to 15 per cent deep soil area.

The proposed use-mix varies with the role and function of the urban form area.

Place type: Strategic Sites

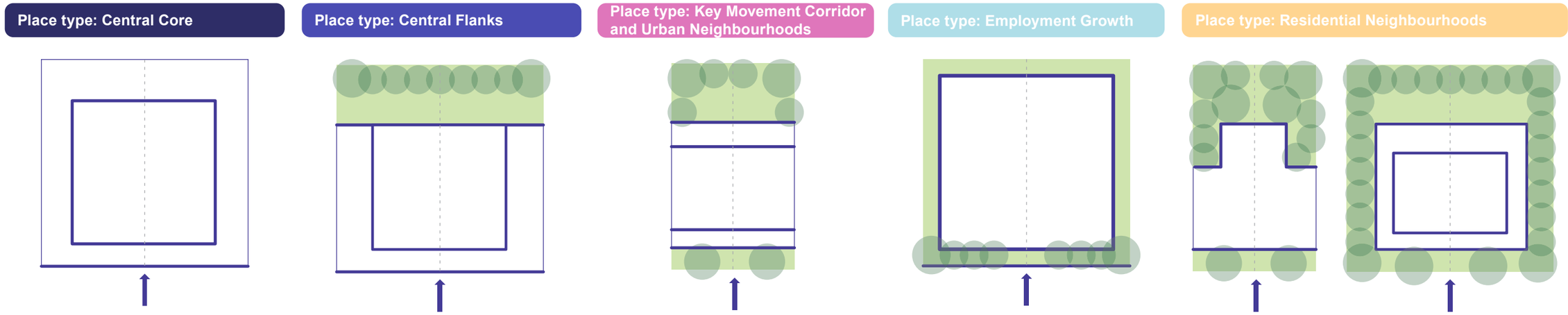
Strategic Sites are those that have increased capacity for intensification and strong potential to deliver SRLA policy objectives and/or public benefit outcomes.

These are large sites which will have a varied built form and public realm outcome. These sites require additional design testing and resolution beyond the role of this report. Initial design direction for these site is provided in Section 6.7.

These sites will require the application of bespoke planning controls to provide direction on their future development.

Development type outcomes

The following diagram provides a comparison of the general outcomes achieved by each development typology.



Height	15+ storeys	8 to 15 storeys	6 to 8 storeys	6 to 8 storeys	2 to 3 storeys	4 to 6 storeys
Density	6+:1	4-7:1	3-4:1	3.5:1	1.2:1	2:1
Deep soil area and canopy trees	0 per cent	5-10 per cent	10-15 per cent	25 per cent	20-25 per cent	35 per cent
Use mix	Mixed-Use	Mixed-Use	Mixed-Use	Mixed-use	Residential	Residential
Application	Commercial/retail core / SRL station area	Outer Core	Mixed-use or Higher-Density Area	Employment	Residential Area Single Lot	Residential Area 2 Lots

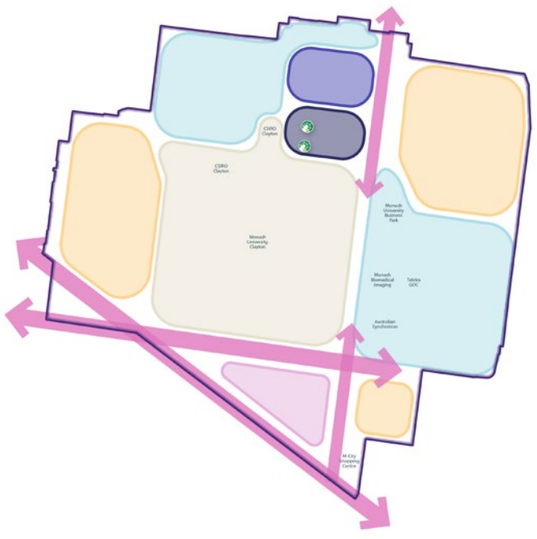
4.4 Future Urban Form Framework

The Urban Form Framework outlines the future urban form and land use attributes for the Structure Plan Area. It has been developed by refining the pattern of place types into collections of more precise urban form areas within the Structure Plan Area based on:

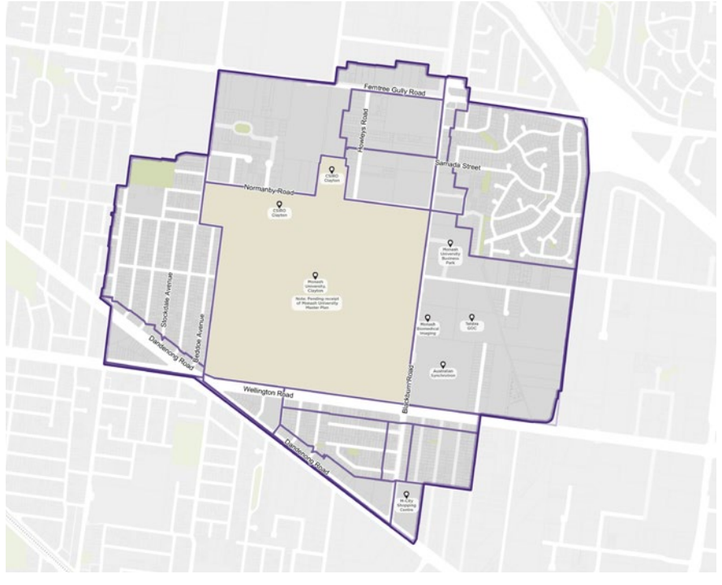
- Existing urban structure such as key movement corridors, barriers and key anchors (see Section 2.5)
- Existing character attributes
- Areas with a similar level of constraints to urban form change (see Figure 4.3)
- Existing land use pattern
- The Vision for Monash
- Land use directions.

The urban form areas are outlined on the following pages.

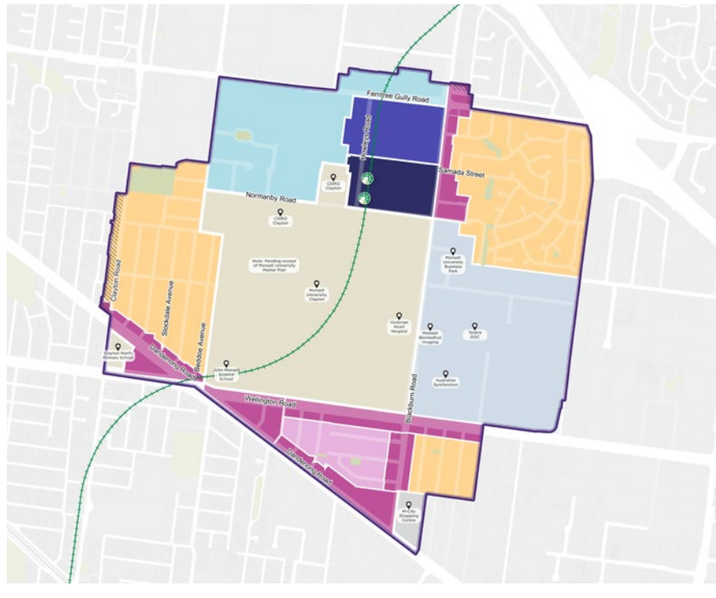
Place types



Urban form areas



Urban Form Framework plan



4.5 Urban form areas

Figure 4.5 identifies the future urban form areas and the following pages describe their attributes, grouped by place types.

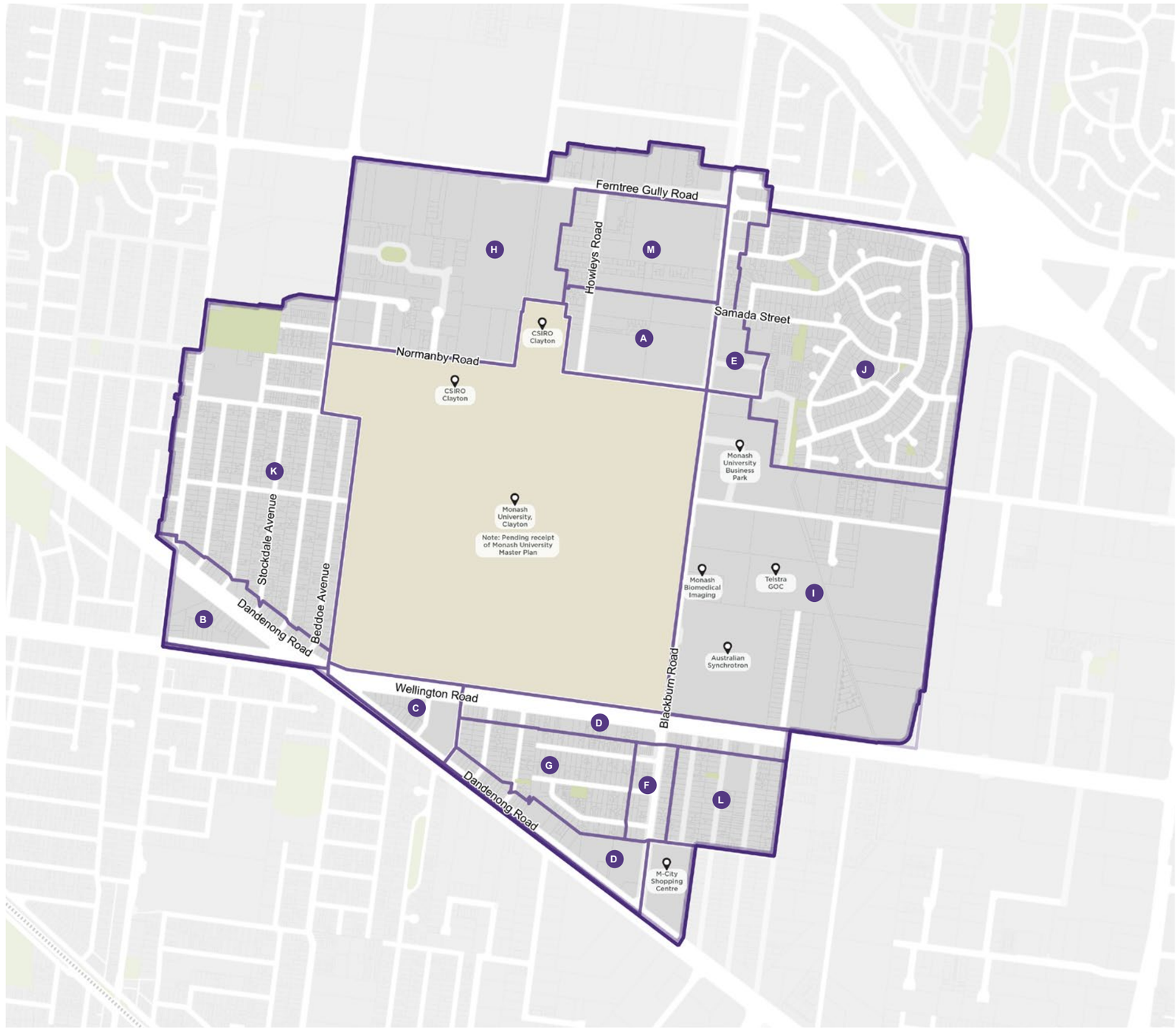


Figure 4.5: Future urban form Areas

Place type: Central Core

The Urban Form Areas within the Central Core are the most accessible and contain the SRL station and the majority of the centre's retail uses. To continue to provide for high-density employment and retail uses,and capitalise on the high level of accessibility and services available, a podium-tower development type is recommended.

A Core Area

The Core Area, largely comprising the block surrounding the SRL station and the Station Development Areas (Strategic Sites) at Monash, is the most accessible part of the Structure Plan Area. It is bound by Blackburn Road to the east, Normanby Road to the south, and extends to the western side of Howleys Road and to the north reaching Samada Street on the east side of Blackburn Road. The area is characterised by a wide range of industrial and commercial buildings of varied sizes. Many of the properties are strata titled. However, the change of use and uplift warranted by the SRL station are likely to facilitate wholesale character change through widespread redevelopment. The Core Area is currently zoned SUZ.

Place type: Central Flanks

The Urban Form Areas within the Central Flanks are highly accessible and comprise health, education, commercial, and residential land uses. To continue to provide for mid-density employment and retail uses, a mid-rise podium-tower development type is recommended. This form also supports pedestrian-favoured streets with good amenity and street life.

M Town Centre North

Town Centre North is an employment area immediately north of the Core Area, bound by the Ferntree Gully Road corridor to the north and Core Area to the south, and Howleys Road to the west and Blackburn Road to the east. It includes the Monash Waste Transfer Station. It is currently characterised by a range of industrial and commercial buildings of varied sizes. Many of the properties are strata titled. However, the uplift warranted by proximity to the SRL station is likely to facilitate wholesale character change through widespread redevelopment. The area is currently zoned SUZ, except the waste transfer station which is zoned PUZ.

Place type: Key Movement Corridors

The Urban Form Areas within Key Movement Corridors have varying degrees of accessibility, and comprise a mix of low-rise commercial development and detached residential dwellings set along grand Boulevards and avenues. To frame the public realm and provide adaptable buildings, the urban infill development type is recommended.

B Heritage School Junction

Heritage School Junction is a triangular block on the west side of the prominent intersection of Dandenong Road and North Road. It contains the Clayton North Primary School, which has a building of heritage value, an aged care home, student housing, a McDonalds restaurant and a small number of houses. The student housing is strata titled. Otherwise, the land is relatively free of development constraints. This area's prominent location, its accessibility via by public transport, and the character and width of surrounding roads create a distinct opportunity for taller buildings to enable a new, higher-density character to be established. This area is currently zoned a mix of PUZ and GRZ.

C Highway Gateway

Highway Gateway is a triangular area on the east side of the prominent intersection of Dandenong Road and North Road. It contains a collection of detached dwellings in garden settings in the corner block and Mannix College to the east. The houses have few development constraints. The gateway nature of the Urban Form Area, its strategic position between the Monash and Clayton Structure Plan Areas—and Monash University and the Monash Health Precinct in particular, and the public transport, width and exposure of the surrounding roads, creates a distinct opportunity for taller buildings to enable a new, higher-density character to be established. This area is currently zoned a mix of RGZ and GRZ.

D Wellington Road/ Dandenong Road

This area comprises 2 rows of properties, fronting the south side of Wellington Road, and the north side of Dandenong Road, between their intersection and Blackburn Road. The land along Wellington Road is characterised by a mix of detached dwellings in garden settings and residential units. The strata-titled nature of the units will constrain redevelopment. However, the proximity of Monash University, public transport, width and exposure of Wellington Road creates a distinct opportunity for taller buildings. These properties are zoned RGZ.

The properties fronting Dandenong Road are largely detached dwellings in the west and commercial properties in the east, both of which have few development constraints. The proximity of Monash University, public transport, width and exposure of Dandenong Road create a distinct opportunity for taller buildings. The residential properties are currently zoned GRZ and the commercial properties are zoned C2Z.

E Blackburn Road North

Blackburn Road North comprises properties fronting the east side of Blackburn Road north of Normanby Road. It is currently characterised by retail buildings at the intersection with Ferntree Gully Road, low-rise residential units in the middle and medium-rise apartment buildings in the south. The main road character of Blackburn Road presents the potential for the retail buildings and residential units to be redeveloped to an increased scale, to create a more consistent medium-rise character. The small retail lots and strata-titled units present some constraint to development. The proximity of the future SRL station and activity centre however may be enough to overcome these constraints. The area is currently zoned GRZ and MUZ.

F Blackburn Road South

Blackburn Road South comprises properties fronting Blackburn Road between Dandenong Road and Wellington Road. This area is currently characterised by low-rise residential units. The main road character of Blackburn Road presents the potential for an increase in scale, although the strata-titling presents some constraint to development. This area is currently zoned GRZ..

Place type: Urban Neighbourhoods

The Urban Form Areas within Urban Neighbourhoods are residential-focused, mixed-use neighbourhoods close to the commercial/retail core and/or public transport. To create a continuous, activated street wall which complements the scale of the street, with a landscape setback and mid-rise building form, the urban infill development type is recommended.

G Residential South

Residential South is a residential neighbourhood between Wellington Road, Dandenong Road and Blackburn Road. It is currently characterised by a mix of residential units and detached dwellings. The area's strategic position between the Monash and Clayton Structure Plan Areas—and Monash University and the Monash Health Precinct in particular, present the opportunity for redevelopment to contribute to the integration of the 2 Structure Plan Areas through higher-density, mixed-use buildings that would support related activities and a vibrant public realm. The area is currently zoned RGZ3.

Place type: Employment Growth

The Urban Form Areas within Employment Growth are comprised of a range of industrial and commercial buildings of varied sizes on large lots. To provide for intensification of jobs, with a high-quality public realm the freestanding 'campus' development type is recommended.

H Monash Employment North

Monash Employment North is an employment area immediately west of the Core Area, bound by the Ferntree Gully Road corridor to the north and CSIRO to the south, and Howleys Road to the east. It includes a property that forms part of CSIRO on Commonwealth Land not controlled by the Victorian Planning Provisions. It is currently characterised by a range of industrial and commercial buildings of varied sizes. Many of the properties are strata titled. However, the uplift warranted by proximity to the SRL station is likely to facilitate wholesale character change through widespread redevelopment. The area is currently zoned SUZ.

I Monash Employment East

Employment East is an employment area towards the southeast of the Structure Plan Area, across Blackburn Road from Monash University. It includes the Australian Synchrotron and a range of other high-tech and commercial buildings. Many of the properties are strata titled. However, the uplift warranted by proximity to the SRL station and Monash University is likely to facilitate wholesale character change through widespread redevelopment. The area is currently zoned SUZ and PUZ. The Urban Form Area also includes an industrial land between Henderson Road until the Mile Creek to the west, and Wellington Road to the south. There is a lack of development constraints, presenting an opportunity for redevelopment for higher-order employment uses. The area is currently zoned SUZ.

Place type: Residential Neighbourhoods

The Urban Form Areas within Residential Neighbourhoods are comprised of low-rise residential areas in the outer parts of the Structure Plan Area. To maintain the 'leafy' character while providing for increased residential density, the garden apartment development type is recommended. In places with specific character attributes requiring protection, or at the edge of the Structure Plan Area, a 4-storey Garden Apartment development type is recommended.

J Notting Hill

Notting Hill is a residential neighbourhood in the north-east of the Structure Plan Area, east of Blackburn Road and bounded by Ferntree Gully Road in the north, land reserved for a future extension of Westall Road to the east, and industrial uses to the south. The area is currently characterised by detached dwellings in a garden setting. It has relatively little unit development or other development constraints. This presents the opportunity for wholesale character change through widespread redevelopment in response to the proximity of the SRL station and associated activity centre. The area is currently largely zoned GRZ

K Residential West

Residential West is a residential neighbourhood between Clayton Road and Monash University, bounded by Princes Highway to the south and the Notting Hill Service Reservoir to the north. It includes Carlson Reserve in its north-west corner. The area is currently characterised by a mix of residential units and detached dwellings in a garden setting. The detached dwellings have few development constraints, presenting the opportunity for redevelopment to create a more consistent medium-density character. The area is currently zoned a mix of GRZ and RGZ.

L Residential South-eastern

The Residential South-eastern area is situated to the south of Melbourne. Its boundaries are delineated by Wellington Road to the north, Blackburn Road to the west, the M-City Precinct to the south, and an industrial area to the east. Presently, the character of the area is defined by a mixture of residential units and detached dwellings in a garden setting.

Detached dwellings have few development constraints, and present an opportunity for redevelopment, creating a medium-density residential neighbourhood. A recent development on Renver Road exemplifies this approach, with residential units constructed to a height of four storeys. The current zoning for the area is GRZ6 and RGZ1.

Urban Form Framework plan

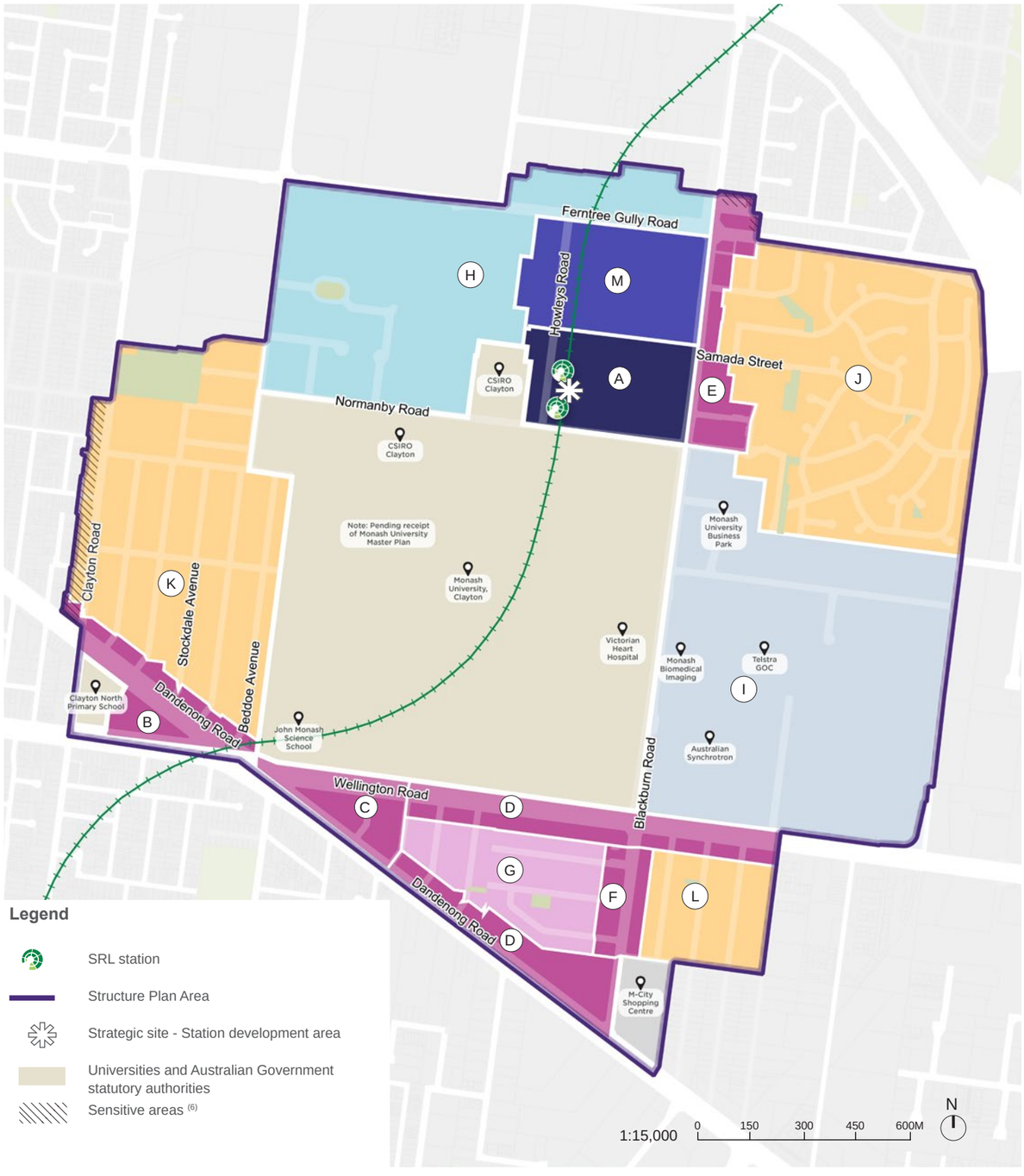


Figure 4.6: Urban Form Framework

Legend	Place type	Urban form area	Indicative density (1)	Indicative building height (2)	Land use priority (3)
	Central Core	A - Core Area	FAR 11 (4)	21 to 25 storeys (84 metres)	Enterprise
	Central Flanks	M - Town Centre North	FAR 7	15 to 17 storeys (59 metres)	Enterprise
	Key Movement Corridors	B - Heritage School Junction	FAR 3.5	7 to 8 storeys (27 metres)	Mixed-use (predominantly residential)
		C - Highway Gateway			
		D - Wellington Road/ Dandenong Road			
		E - Blackburn Road North			
		F - Blackburn Road South			
	Urban Neighbourhoods	G - Residential South	FAR 3	6 to 7 storeys (24 metres)	Residential
	Employment Growth	H - Monash Employment North	FAR 3.8 (5)	8 to 10 storeys (41 metres)	Major employment
		I - Monash Employment East	FAR 3.1 (5)	7 to 8 storeys (33 metres)	Major employment
	Residential Neighbourhoods	J - Notting Hill	Garden Apart. FAR 2	Garden Apartments 4 to 6 storeys (21 metres)	Residential
		K - Residential West	Townhouses FAR 1.2	Townhouses 2 to 3 storeys (11 metres)	
		L - Residential Southeastern			

Figure 4.7: Urban Form Framework table

1. *Indicative densities, which may vary based on specific circumstances. Densities are provided to indicate the intensity of development, not because they are proposed to be translated into planning controls.*
2. *Indicative heights, which may vary based on specific circumstances. Refer to Section 5.3 for preferred building heights.*
3. *Based on the land use scenario and capacity analysis work.*
4. *Central core FAR based on allowance of 30 per cent of the site area for internal roads and open space*
5. *Employment Growth FAR based on an allowance of 30 per cent of the site area for internal roads and open space.*
6. *These area are described in Strategy UF1: Substantial change.*

5 Built form

AJM
Joint Venture

5.1 Introduction

This section sets out a Built Form Framework to achieve the Vision for Monash, and summarises the design directions and strategies.

The Built Form Framework and strategies were informed by the SRL Urban Design Framework and the Vision for Monash. This was supplemented by an analysis of the existing development conditions (see Appendix A) and extensive research into best-practice urban development typologies provided in SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

The Built Form Framework was developed concurrently with the Public Realm Framework and each informs the other.

The methodology for developing the Built Form Framework is summarised in Figure 5.1.

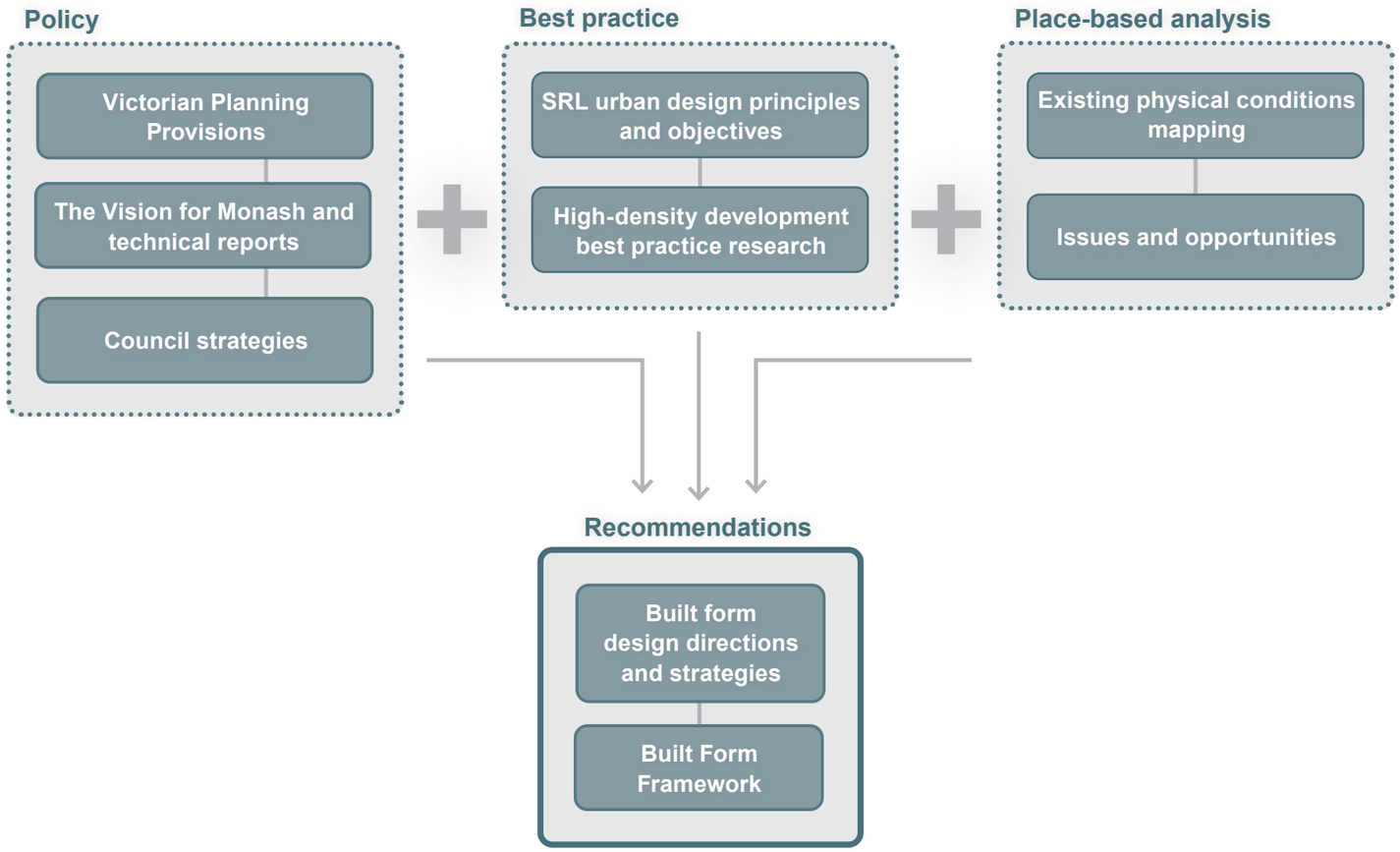


Figure 5.1: Methodology for developing the Built Form Framework

5.2 Built form design directions

This section outlines the urban form design directions proposed to achieve the Vision for Monash.

The design directions informed the development of the Built Form Framework in Section 5.3 and the built form outcomes in Section 6.

The order of the design directions does not imply an order of priority.

Design Direction 7: Support an inviting public realm

Why is this important?

Built form should support an inviting and engaging public realm through the distribution of its mass and street edge detail.

Distribution of mass

Development shapes the public realm and strongly influences its amenity. The siting, height and massing of buildings can positively influence the amenity of the adjoining public realm by:

- Framing streets and open spaces, which makes them more memorable
- Maintaining a sense of openness including sky views
- Maintaining solar access to pedestrian spaces.

Continuous street walls provide a more engaging street wall.

Where taller buildings are needed to deliver the desired density, a sense of openness and reasonable access to daylight and sunlight should be achieved.

Engaging facades

Lower-level building facades should contain detail that is visually engaging to enhance the pedestrian experience.

Active building frontages are also key to an inviting and safe public realm. The level of activation that is appropriate varies between employment areas and residential areas.

This includes consideration of:

- Building alignment
- Building massing and composition including rhythm and grain
- Design detail and building facade materials.

Buildings in high pedestrian activity areas should have the highest level of activation, given their pedestrian density.

Employment areas tend to have lower levels of pedestrian activity, so a lesser level of activation is acceptable. However consideration should be given to employment areas needing to support 24-hour workers.

Residential areas benefit from a quieter environment. However, it is important that they provide passive surveillance to contribute to the safety of the public realm. Back-of-house uses such as car parking and car park entries, building services cabinets and loading areas should be positioned away from the primary frontage.

Solar access in the public realm

Sunshine is an important component of people's attraction to and enjoyment of public space[1,2,] as well as their health and wellbeing[3]. It is essential for plants, enabling sunny open spaces to contribute to cooling, greening and biodiversity in accordance with Strategy PR9 - Public realm landscaping[4]. Sunshine is also said to boost local business by attracting more foot traffic[5].

An increase in urban density reduces people's access to sun in their private spaces. Therefore, it is important to complement this with good solar access to key public open spaces in higher density areas.

However, maintaining sunlight in the public realm imposes a limit on the potential for taller buildings to provide for growth. Therefore, a balance needs to be struck between these two aspirations, partly by targeting solar access protection to places and times where it is most important.

The different types of public realm, and the importance of solar access in each of them, are as follows:

- **Primary public open space(s) in the Central Core:** This category of spaces includes the centrally located space(s) that will provide the primary forum for public events such as festivals, performances, parades, markets, and so on. Year-round sunshine is important to ensure that the primary open space(s) in the Central Core attract people to support events and informal public activity
- **Activity Streets:** These streets generally lie within the Central Core and are where the highest level of public life is sought. Sunshine is important in the pedestrian areas in Activity Streets to support public life
- **Main Street footpaths:** Main Street footpaths are the primary streets within the Main Street place type. These streets are intensively used by pedestrians walking to shops and services, window-shopping and outdoor dining
- **Medium-large parks (>1ha):** Medium-large parks are those greater than 1ha. These have a District or Community catchment classification. Sunlight is important in these spaces as they provide an important year-round recreation function, including for sports activities
- **Small open spaces in Central Flanks:** These spaces are the secondary open spaces within the central area. These spaces provide an important, year-round recreation role for workers (at lunchtime) and residents (particularly on weekends)
- **Small and narrow parks outside the Central Core and Central Flanks:** This category includes a large number of open spaces smaller than 1ha, mainly in residential neighbourhoods. As Community Parks, they provide an important year-round recreation role for residents (particularly smaller children and their parents/ carers).

What is happening now in Monash?

Most of the Monash Structure Plan Area is characterised by low-density suburban detached housing of 1 to 2 storeys. This type of built form is generally set back significantly from the street, providing a small degree of passive surveillance to the street and a low level of street activation. Its contribution to the public realm is through architectural style and vegetation, rather than framing the streets.

Low-rise dwellings along Wellington Road generally have tall front fences which limits interactions between dwellings and the street.

Wellington Road and Princess Highway are 60 metres wide at their widest point, while Ferntree Gully Road and Blackburn Road range from 25-30 metres wide. These roads feature low-rise commercial or residential buildings giving them an increased sense of openness and limited human scale.

Low-rise commercial and industrial buildings typically have large street setbacks, often with car parking between the building and the street. This creates an inactive frontage and limits interactions between building inhabitants and street users.

Alignment with SRL Urban Design Framework:

Design Direction 7 will help to achieve the following SRL urban design objectives:

- Objective UD2.4 Welcoming
- Objective UD4.4 Safer design
- Objective UD5.1 Heritage
- Objective UD5.5 Quality design
- Objective UD6.1 Amenity
- Objective UD6.3 User experience
- Objective UD6.4 Places for people
- Objective UD6.5 Activation

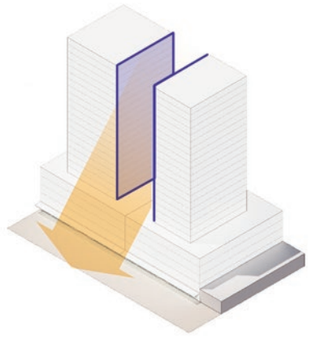
1. *Urban Studies Journal (2015): "The Impact of Sunlight on Social Interaction in Public Spaces: A Case Study of Urban Squares."*
2. *Journal of Urban Design (2016): "Sunlight and Place-making: Enhancing the Aesthetic Appeal of Urban Squares."*
3. *Journal of Environmental Psychology (2013): "The Role of Urban Green Spaces in Enhancing Human Health and Well-being: Effects of Sunlight Exposure on Vitamin D Levels."*
4. *Landscape and Urban Planning Journal (2015): "Sunlight and Urban Green Spaces: Enhancing Biodiversity and Ecological Sustainability."*
5. *International Journal of Retail & Distribution Management (2018): "The Economic Benefits of Sunlit Public Spaces: A Study of Foot Traffic and Retail Sales."*

How can this direction be achieved in Monash?

Strategy BF1: Tower separation A

Provide sky views and access to daylight in the public realm through setbacks to and gaps between towers in high-rise areas.

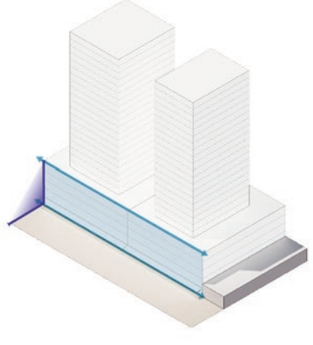
Towers should be set back and separated to support an attractive public realm, allowing for daylight, sky views and shafts of sunlight.



Strategy BF2: Podiums

Create a well-defined urban space in high-rise areas by providing continuous street wall of podium facades.

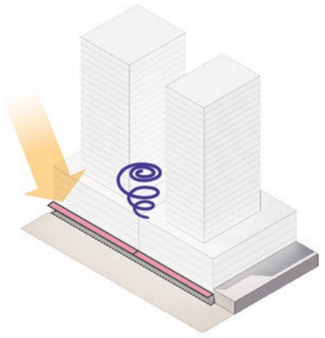
Podiums should be set on the front boundary and extend to both side boundaries to clearly frame the public realm and maximise passive surveillance and activation, with podium car parking ‘sleeved’ behind active land uses.



Strategy BF3: Weather protection

Podium facades should support pedestrian comfort by providing protection from rain, wind and summer sun.

Where appropriate, rain, wind and summer sun impacts should be minimised through the appropriate design of awnings, architectural articulation and building massing.

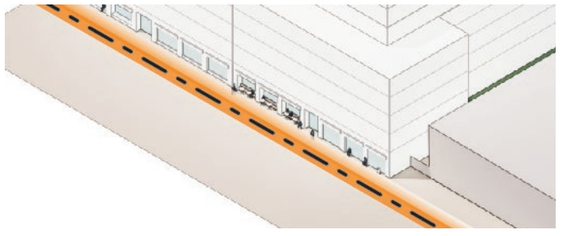


The Wind Technical Report (August 2024) found that when compared to today, the overall wind speeds in the highly-developed future scenario of Structure Plan Area will be reduced and overall wind comfort conditions improved. While some localised unsafe wind conditions were also found in this scenario, these conditions are proposed to be managed through building design at planning permit stage.

Strategy BF4: Footpath widening

Ensure buildings are set back from the street edge to widen the footpath where needed.

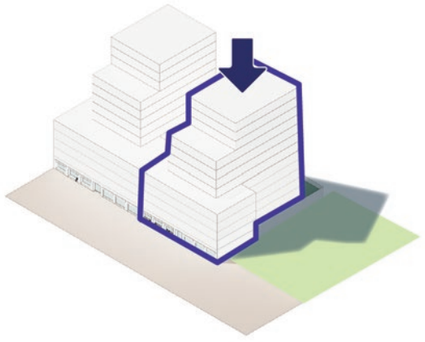
Where a wider footpath is sought, buildings should help to achieve the desired outcome by setting back from the street edge.



Strategy BF5: Sunlight to public realm

Require development to maintain reasonable solar access to key streets and open spaces.

Key streets and open spaces in the Central Core, Central Flanks and Main Streets, and residential parks, should be appropriately protected from overshadowing to support public life and outdoor recreation. A set of solar access standards have been developed which seek to balance the provision of solar access and growth for each type of street and open space. These are informed by recently introduced solar access planning provisions in Victoria, related studies and Planning Panel reports, and site-specific testing (see Attachment C - Assessment of Solar Access to the Public Realm).



Type of space	Recommended standard
Primary public open space(s) in Central Core	50 per cent of the open space for a minimum of 3 hours at mid-winter
Footpaths in Activity Streets	50 per cent of southern, eastern and western footpaths for a minimum of 3 hours at the spring equinox
Main Street footpaths	100 per cent of southern, eastern and western footpaths for a minimum of 3 hours at the spring equinox
Medium-large parks	70 per cent of the open space for a minimum of 3 hours at mid-winter
Small open spaces in Central Flanks	75 per cent of the open space for a minimum of 3 hours at the spring equinox
Small and narrow parks outside Central Core and Central Flanks	50 per cent of the open space for a minimum of 3 hours at the mid-winter

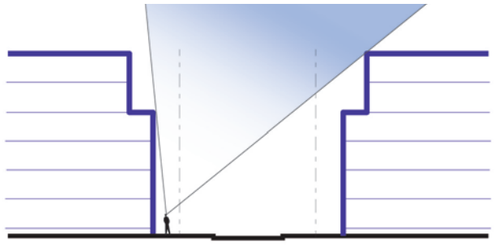
These standards are varied in specific circumstances where the size or configuration of the open space or street, and/or the scale of development envisaged around it, warrant a different solar access outcome.

Strategy BF6: Street scale

Balance street definition and openness outside the precinct core.

Buildings should be appropriately massed to define the street, and upper levels should allow for wider sky views. Upper-level setbacks should contribute to a legible composition, rather than adopting a profile that follows minimum setback requirements which can result in unattractive outcomes.

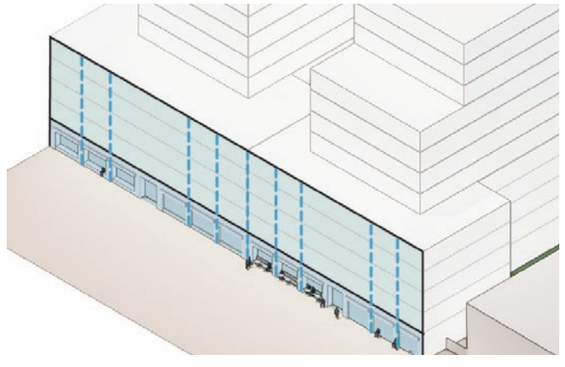
Street walls should be designed to minimise the impact of taller buildings on the public realm, and contribute a sense of enclosure.



Strategy BF7: Engaging facades

Ensure street walls provide visual interest at a pedestrian scale and pace.

Design detail of street walls should balance transparency and solid elements, create a fine-grain vertical rhythm and provide a level of depth, detail and texture to enhance the pedestrian experience.

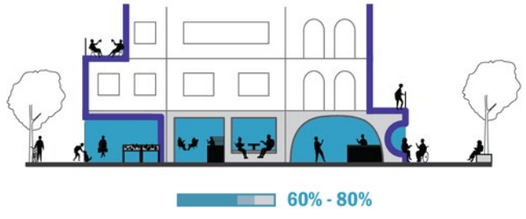


Strategy BF8: Active frontages

Ensure buildings contain active facades in commercial and Mixed-use areas, to provide interest and activity through visual engagement between the street and the building, and to ensure pedestrian links support safety and user experience.

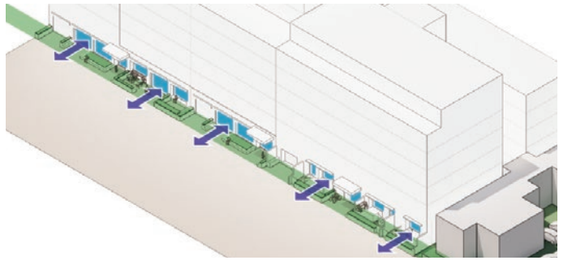
A **highly active frontage** should be provided in the commercial/retail core, main streets and existing small retail strips. This type of frontage should incorporate:

- Building frontages which are set on or within 0.4 metres of the public realm boundary except where an activated front setback is specified (such as outdoor dining or public realm widening)
- Primary ground floor functions that are relevant to passing pedestrians, such as shops and food and beverage outlets (retail, hospitality and entertainment uses)
- An at-grade connection between ground-level tenancies and the street- transitions in floor levels should not rely on external ramps and stairs in the public realm
- 60 to 80 per cent of the combined length of the ground-level interfaces of a building to streets and laneways as a pedestrian entry or clear glazing with regularly spaced solid elements to avoid a predominately glazed appearance along frontages
- A continuous fixed canopy that provides shelter from the rain and summer sun and maintains exposure to the winter sun
- Upper level uses that are active for the majority of the day and evening.



A **moderately active frontage** should be provided in the primary street interfaces of Mixed-use and employment areas. This type of frontage aims to improve the use, safety and experience of the public realm and ensure a high-quality interface between buildings and the street at ground level, which promotes pedestrian amenity and further activation as the precinct evolves. This type of frontage should incorporate:

- A minimum of 40 per cent of the combined length of the ground-level interfaces of a building to streets and laneways as a pedestrian entry or clear glazing
- A floor-to-floor height of at least 4 metres on the ground floor to allow for the adaptation of building uses over time
- Reduced number of vehicular access points to prioritise the experience and safety of pedestrians
- Provide an at-grade connection between usable space within ground-level tenancies and the street. Transitions in floor levels should not rely on external ramps and stairs in the public realm.



Strategy BF9: Residential frontages

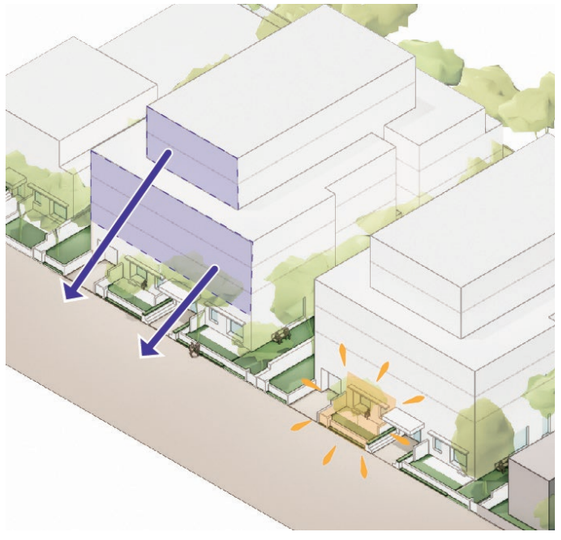
Ensure development within the Residential Neighbourhoods balances sense of address, passive surveillance and privacy, and contributes to street greening.

Residential frontages should enhance the street edge by:

- Orientating balconies and habitable rooms to the street
- Ensuring building facades identify individual dwellings
- Providing low front fences
- Providing ground floor entrances to individual ground floor dwellings facing the street
- Providing canopy trees and understorey planting to green the street and enhance privacy of ground floor dwellings.

Residential frontages should enhance pedestrian links by:

- Orientating balconies and habitable rooms to pedestrian links
- Providing ground floor entrances to individual ground floor dwellings facing the link where appropriate.



Design Direction 8: Ensure high quality and responsive built form

Why is this important?

Building orientation, solar access and set backs

Built form can strongly influence internal amenity and the amenity of neighbouring properties. The siting, height and massing of buildings can adversely affect amenity in terms of:

- Access to sunlight
- Access to daylight
- Visual bulk
- Overlooking.

In residential areas, setbacks are typically required from common boundaries with adjoining properties to avoid unreasonable impacts on their amenity and future development potential. Clause 55 of the Victorian Planning Provisions provides setback standards for buildings up to 4 storeys high.

In higher-density areas, apartments facing side or rear boundaries often have relatively poor internal amenity due to the need for privacy screen and limited access to daylight. Mid-rise buildings can also have a significant effect on the amenity of neighbouring properties in terms of sunlight, daylight and outlook, and on their future development potential.

Clause 58 of the Victorian Planning Provisions provide internal amenity standards, however it doesn't provide prescriptive set back guidance.

Therefore, strategies are needed to ensure good internal amenity for development and its neighbours.

Scale transition

Increased building heights can create inappropriate visual bulk at interfaces with lower-rise areas, either inside or outside the Structure Plan Area. Care is needed to manage these transitions.

Increasing tree canopy cover

Landscaping associated with new development can contribute to environmental performance, amenity, health and character outcomes. In particular:

- Increased tree canopy cover can reduce the urban heat island effect
- Landscaping can provide wildlife habitat and stormwater infiltration
- Trees can provide building shading and resident amenity
- Nature supports mental health
- Trees can complement the existing character of leafy areas and help to integrate new, denser development.

Achieving these objectives will rely on forms of development that contribute to tree canopy cover, not only trees in the public realm.

Clause 58 of the Victorian Planning Provisions contains requirements for deep soil planting. However, this is not sufficient to achieve the tree canopy cover target, nor does it apply to non-residential development.

What is happening now in Monash?

Within the Monash Structure Plan Area, low-rise areas provide dwellings with a high internal amenity and good tree canopy cover.

Medium-density built form around Rusden Place provides a variety of housing choices with well-oriented buildings that allow good solar access .

The existing buildings throughout the employment area contribute to low streetscape amenity and tree canopy cover.

Alignment with SRL Urban Design Framework:

Design Direction 8 will help to achieve the following SRL urban design objectives:

- Objective UD1.1 Legacy
- Objective UD1.2 Future ready
- Objective UD1.3 Resilient
- Objective UD1.4 Environmentally sustainable
- Objective UD5.2 Responsive
- Objective UD5.3 Sensitive
- Objective UD5.5 Quality design

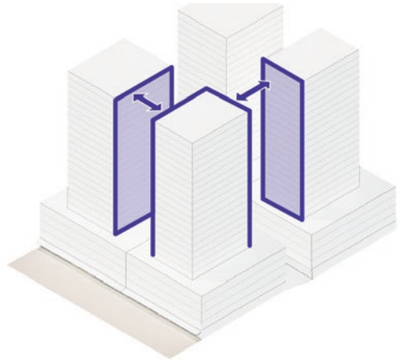
How can this direction be achieved in Monash?

Strategy BF10. Tower separation B

Ensure reasonable internal amenity and equitable development opportunities through side and rear tower setbacks.

Maintaining good internal amenity in towers requires consideration of access to daylight, outlook and overlooking. Ensuring appropriate upper level setbacks will help to achieve good internal amenity while maintaining equitable development opportunities of neighbouring lots.

Towers should be separated to avoid the need for privacy screening, and to ensure reasonable visual amenity and daylight. This separation should increase with the height of the towers.



Strategy BF11. Building orientation

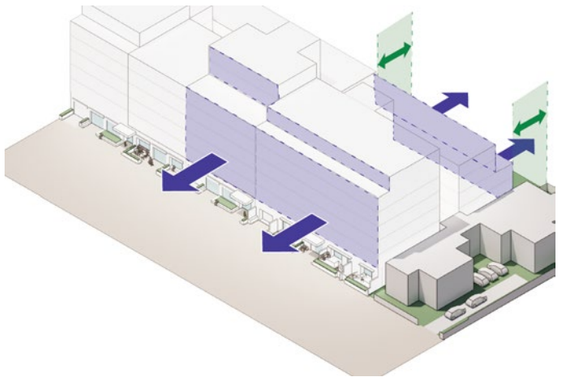
Encourage development to face the street and the rear of the property, and require generous rear setbacks.

In order to maximise internal amenity including access to daylight, outlook and privacy, habitable rooms (living, kitchen, dining, primary bedroom) should be orientated to the street or rear, and incorporate generous rear setbacks.

This helps to optimise development, as a wall without a window or balcony can be built to the side boundaries.

Additionally, to maximise internal amenity and maintain equitable development, the primary outlook of a dwelling should be adequately setback from the side boundary. A primary outlook is defined as a balcony or habitable room window.

Where lower rise residential building typologies are envisaged, buildings should be designed to provide appropriate space between dwellings in order to maximise internal amenity while providing for density within a landscaped setting. However, apartments and townhouses should still maximise primary orientation towards the street and rear boundary.



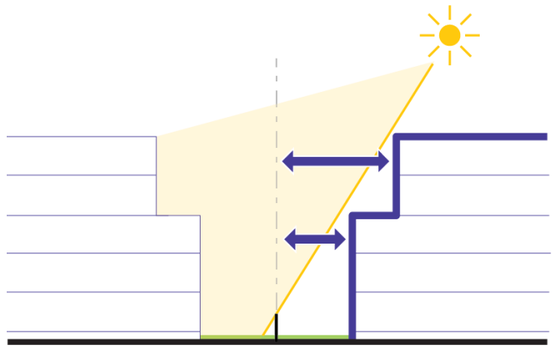
Strategy BF12. Rear amenity plane

Require rear setbacks to maintain good amenity in neighbouring properties.

Upper level setbacks should be established which ensure the appropriate protection of sunlight and daylight access and limit visual bulk to neighbouring properties.

The number of hours on the September equinox during which solar access to private open space is provided, should be consistent with Clause 55 of the Victorian Planning Provisions where the affected property is outside the Structure Plan Area (5 hours), gradually reducing as development increases in density towards the centre, to reflect the different balance between intensification and environmental amenity.

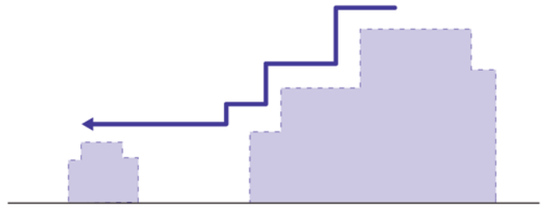
In contrast, upper levels should only be required to be set back from side boundaries in Residential Neighbourhoods sufficiently to maintain reasonable daylight, and solar access to neighbouring ground floor dwellings or recessed terraces at the desired side setback in Garden Apartment buildings. This reflects the proposed urban morphology in which primary open spaces are generally sited at the rear of lots, rather than to the side, to enable efficient development of single lots.



Strategy BF13. Transition

Transition building heights at the interface between taller and lower built form areas.

Buildings heights should step down from a higher area to a lower area to manage amenity impacts.

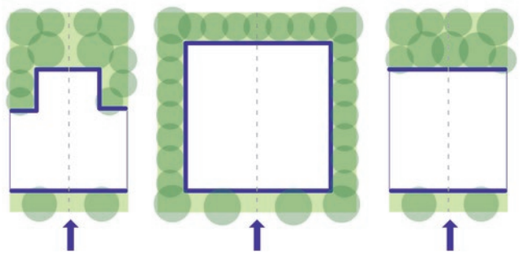


Strategy BF14. On-site landscaping

Encourage landscaping and canopy trees as part of new development, outside the Central Core.

Landscaping and canopy trees should be encouraged across all non-core areas, to enhance canopy cover, buffer built form transitions and contribute to outlook from dwellings.

However, the provision of on-site open space for trees is in competition with the aspiration for intensification, particularly given the preference for mid-rise development types. Therefore, the greatest opportunity for tree canopy cover is in the outer areas of the Structure Plan Area, where there is less aspiration for intensification.

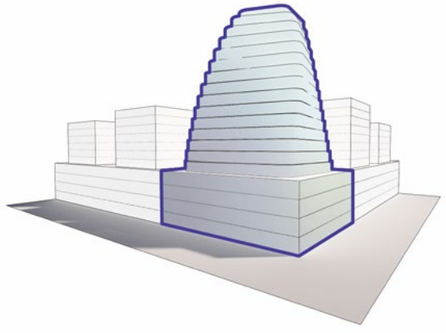


Strategy BF15. Landmark buildings

Encourage taller buildings to mark key locations in the urban structure.

Landmarks are natural or built elements that stand out from their surroundings. They contribute to the legibility of an area by creating memorable incidents on a journey through it. Built landmarks can be formed by a particularly notable use, such as a library, a distinctive design, or greater height than their surroundings.

In order to reinforce the legibility of the precinct, landmark buildings should be encouraged at key points in the urban structure, such as station entries, major intersections and gateways or entries to key places. In the absence of a notable use, landmarks can be created by greater height and lesser setbacks than those of the surrounding buildings. However, greater height should be complemented by a higher level of design excellence.



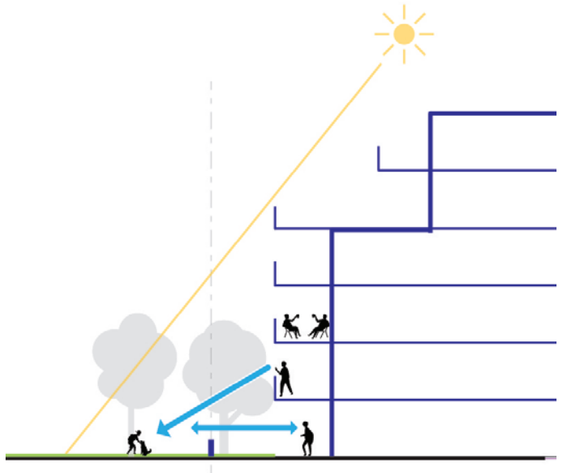
Strategy BF16: Public open space interface

Ensure buildings with an interface to public open space provide passive surveillance and a well-designed building profile.

Building facades facing public open space, including those abutting a public open space on a rear or side boundary, should balance privacy and activation through a generous, landscaped setback combined with windows and balconies.

These interfaces should be designed to maximise passive surveillance on the open space without privatising it and avoid unreasonable overshadowing of the open space. This includes orienting ground-floor active uses, communal spaces, habitable rooms and balconies towards the open space, ensuring fence design and height retain visual links to the open space, and providing a gate to access the open space.

Building facades facing open space are highly visible from the public realm. Therefore, it is important that they have visual appeal and a legible composition. For example, by avoiding multiple setbacks of the upper levels (e.g. a ‘wedding cake’ effect) and avoiding visible blank exposed walls.



5.3 Built Form Framework

Preferred building heights

This plan illustrates the distribution of preferred maximum heights and street wall heights across the Structure Plan Area.

These heights have been developed by applying the preferred form of development to each urban form area and considering specific interface conditions. They are further explained in Section 6.

SRL station

SRL East alignment

Structure Plan Area

Open space - existing and planned/proposed

Indicative new street

Potential landmark building

Landmark buildings, which may exceed the maximum height by 20 per cent, and have lesser or no tower street setbacks, provided wind effects are managed and they achieve design excellence as supported by independent design review or a design competition that endorses the proposed design.

Preferred maximum building heights

- 84 metres (21 to 25 storeys)
- 59 metres (15 to 17 storeys)
- 41 metres (10 storeys)
- 33 metres (7 to 8 storeys)
- 27 metres (7 to 8 storeys)
- 24 metres (6 to 7 storeys)
- 21 metres (5-6 storeys)
- 14 metres (4 storeys)

Preferred Maximum Street Wall Heights

- 25 metres (6 storeys)
- 21 metres (5-6 storeys)
- 17 metres (4 storeys)
- 14 metres (4 storeys)
- 11 metres (3 storeys)

In addition to the preferred heights and setbacks, surrounding development should consider solar access to public realm. Refer to overshadowing guidelines in Section 6

Note: Heights are expressed in metres for clarity. The number of storeys that may be possible within these heights is provided for illustrative purposes only, and expressed as a range to reflect the different floor-to-floor heights of different uses.

Note: Street wall heights in Employment Growth neighbourhood still to be determined, pending future detailed planning.

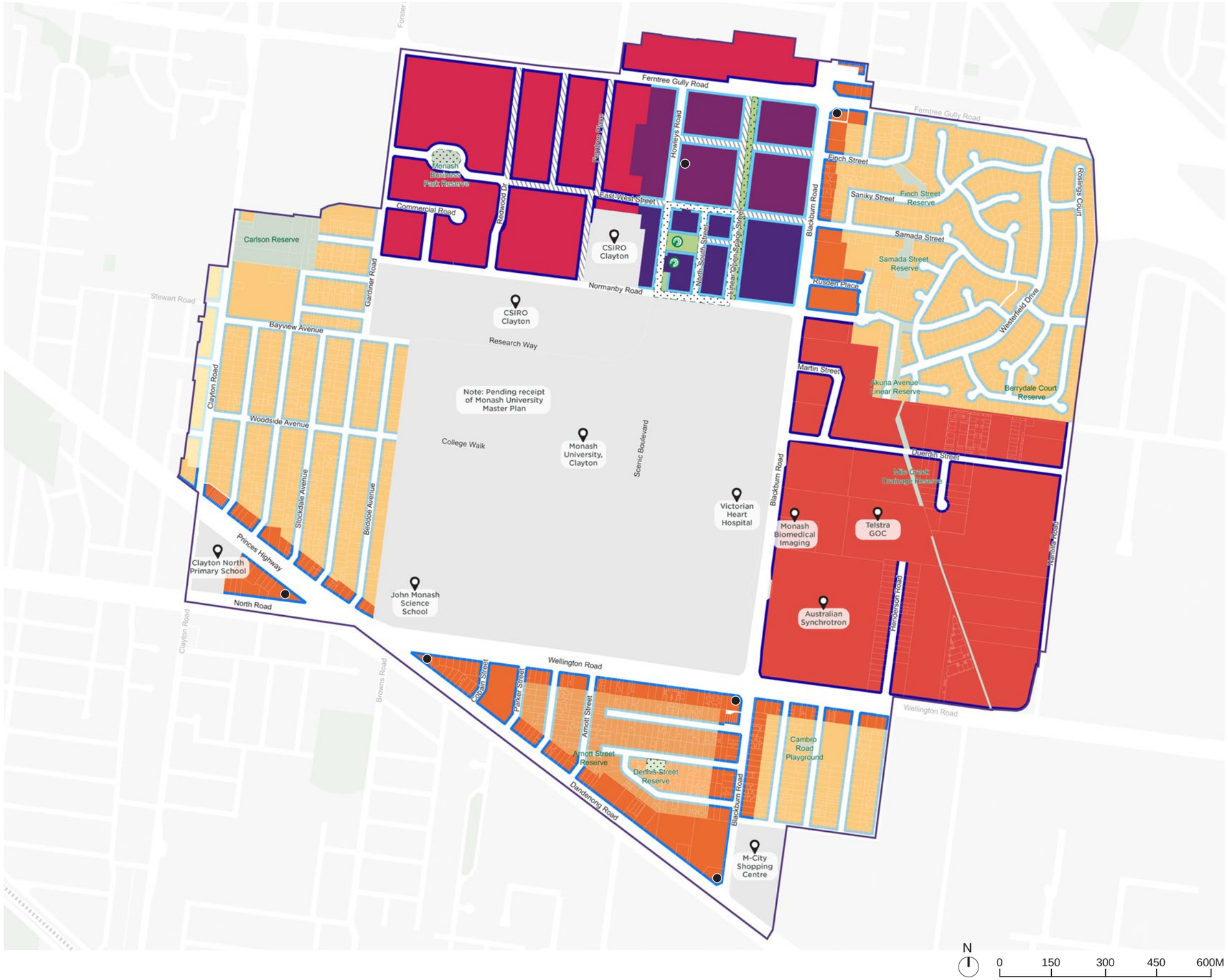
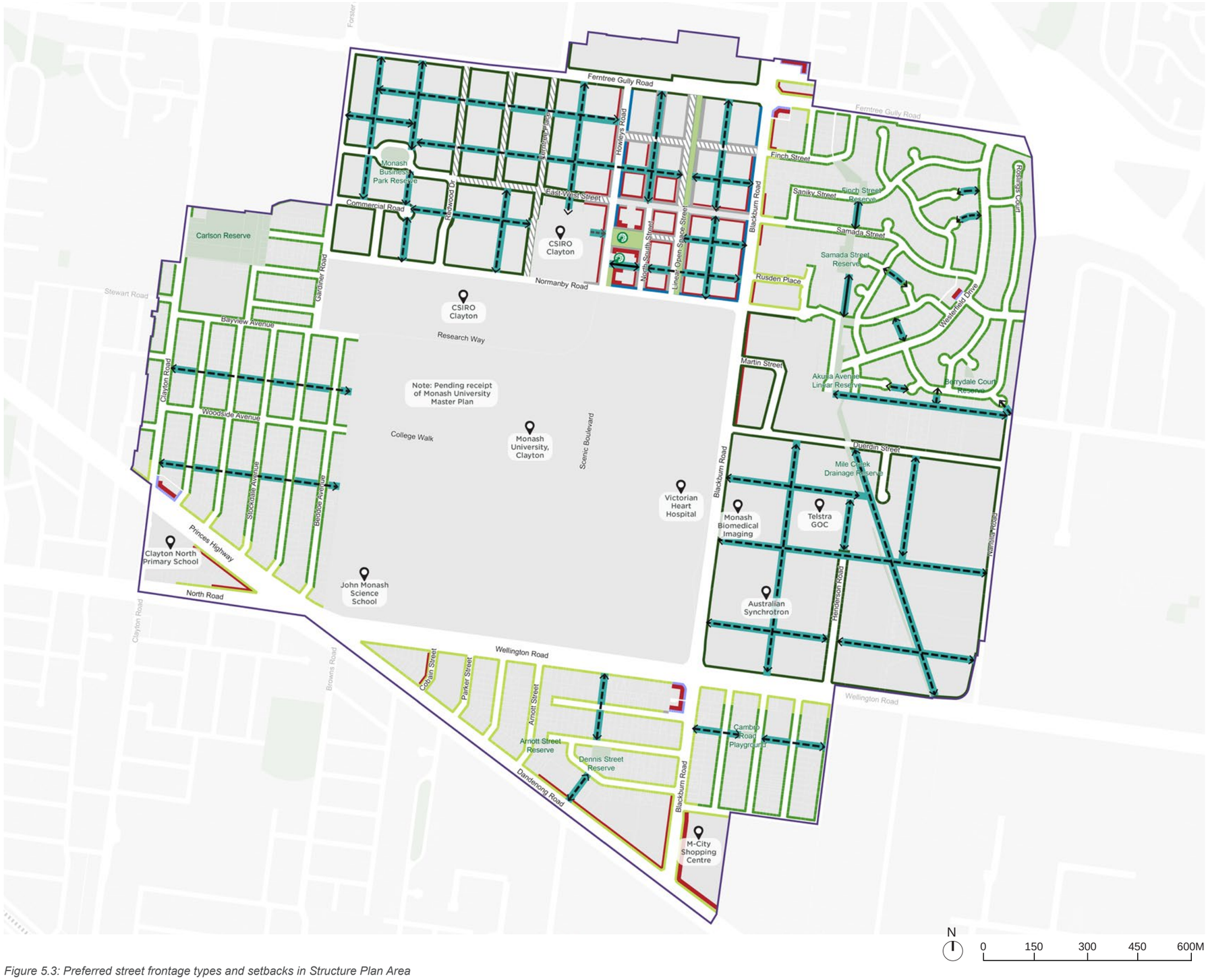


Figure 5.2: Preferred building heights in Structure Plan Area

Preferred street frontage types and setbacks

This plan illustrates the preferred street frontage types and setbacks throughout the Structure Plan Area.

These were developed by applying the built form strategies to each street, taking account of the desired role and function of each urban form area. They are further explained in Section 6.



Note: Where a building abuts an open space, additional setback controls apply. See chapter 6 for further information

Figure 5.3: Preferred street frontage types and setbacks in Structure Plan Area

Preferred side, rear and front upper level setbacks

This plan illustrates the distribution of side, rear and front upper level setbacks throughout the Structure Plan Area.

These have been developed by applying the preferred forms of development and built form strategies to each urban form area. They are explained in Section 6.

In addition to the setbacks summarised below, overshadowing provisions are proposed to protect solar access to neighbouring properties. These are outlined in Section 6.

Setbacks

Front - upper level	5 metres from podium facade up to a height of 66 metres 7.5 metres from podium facade above a height of 66 metres
Side and rear - podium	0 or 4.5 metres (primary outlook) [1]
Side and rear - tower	4.5 metres for towers up to a height of 27 metres 6 metres for towers up to a height of 41 metres 7.5 metres for towers up to a height of 66 metres 10 metres for towers higher than 66 metres
Front - upper level	3 metres + 0.6 metres per metre of height above 33 metres, except 0.8 metres per metre of height above 23 metres on the north side of east-west streets.
Side - podium	0 metres or 4.5 metres (primary outlook) [1]
Side - tower	4.5 metres for towers up to a height of 27 metres 6 metres for towers up to a height of 41 metres 7.5 metres for towers higher than 41 metres
Rear- podium and tower	6 metres, landscaped
Front - upper level	6 metres from the podium facade
Side & rear	6 metres, landscaped + 0.6 metres per metre of height above 13 metres adjacent to property where dwellings are orientated
Front - upper level	4 metres from podium facade
Side	Zero or 4.5 metres (primary outlook)[1][2]
Rear	6 metres landscaped, plus 0.7 metres per metre of height above 11 metres [2]
Front - upper level	Setback above 14 metres to remain below 45 degree plane from opposite street boundary
Side	Zero or 4.5 metres (primary outlook) [1]
Rear	6 metres landscaped, plus 0.7 metres per metre of height above 11 metres
Front - upper level	0.5 metres per metre of height above the street wall from the podium facade
Side - lots equal or greater than 24m wide	4.5 metres, plus 0.8 metres per metre of height above 14 metres [2]
Side - lots less than 24m wide, front half of site	Zero metres up to a height of 6.9 metres 2 metres above heights of 6.9 metres [2]
Side - lots less than 24m wide, rear half of site	2 metres plus 1 metre per metre of height above 6.9 metres [2]
Rear	6 metres landscaped, plus 0.7 metres per metre of height above 11 metres [2]

1. 4.5 metres applies to the parts of the building that provide a primary outlook to the rear and side boundaries. If interfacing with side/rear service lanes, the 4.5 setback is measured from the centre of the laneway.

2. Setback standard does not apply to existing small retail strips in this area - refer to Section 6 for existing small retail strips setbacks.

3. Where a building abuts an open space, additional setback controls apply. See Section 6 for further information.

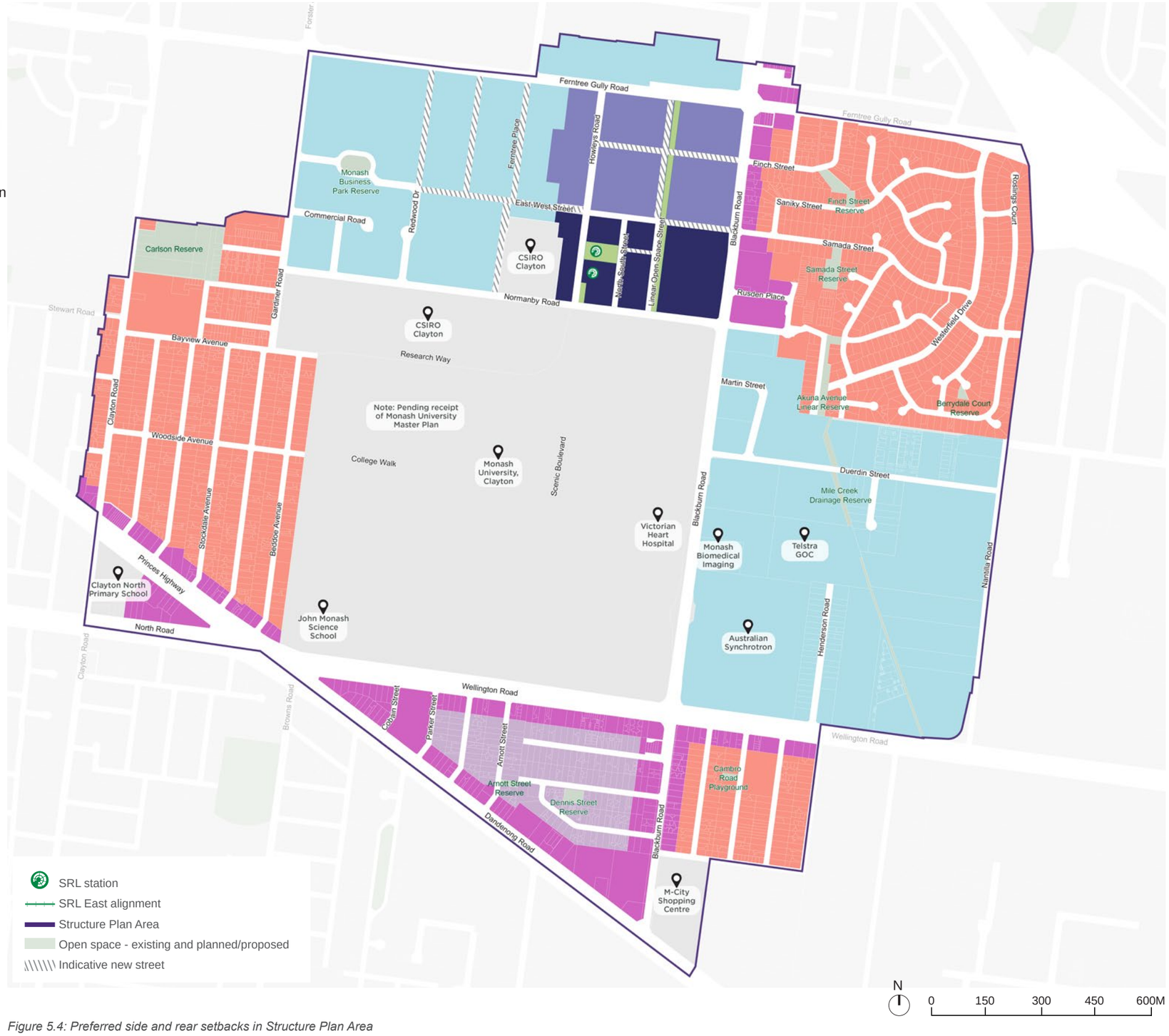


Figure 5.4: Preferred side and rear setbacks in Structure Plan Area

6 Outcomes

AJM
Joint Venture

6.1 Introduction

This section sets out urban form and public realm initiatives to achieve the Vision for the SRL neighbourhood at Monash.

Initiatives are set out for each place type. An examination of each place interface is provided, and the urban development typology testing method is summarised.

The urban form and public realm initiatives are informed by the analysis provided in the Appendices, and the best practice urban development and public realm typologies research in SRL East Structure Plan - Urban Design Supporting Research - Attachment A

Place types

Place types have been derived by grouping urban form areas, as described in Section 4, into six categories as shown in Figure 6.1.

Preferred development has been identified for each place type, based on the urban form strategies. The place types are illustrated here and explored more in sections 6.2 to 6.10.

For each place type, this section presents:

- Existing conditions and key drivers
- A summary of the built form and public realm outcomes
- Cross-sections combining the typical building and public realm profile
- Cross-sections of specific places, particularly where there is a variation to the standard development type proposed to achieve the desired public realm outcome.

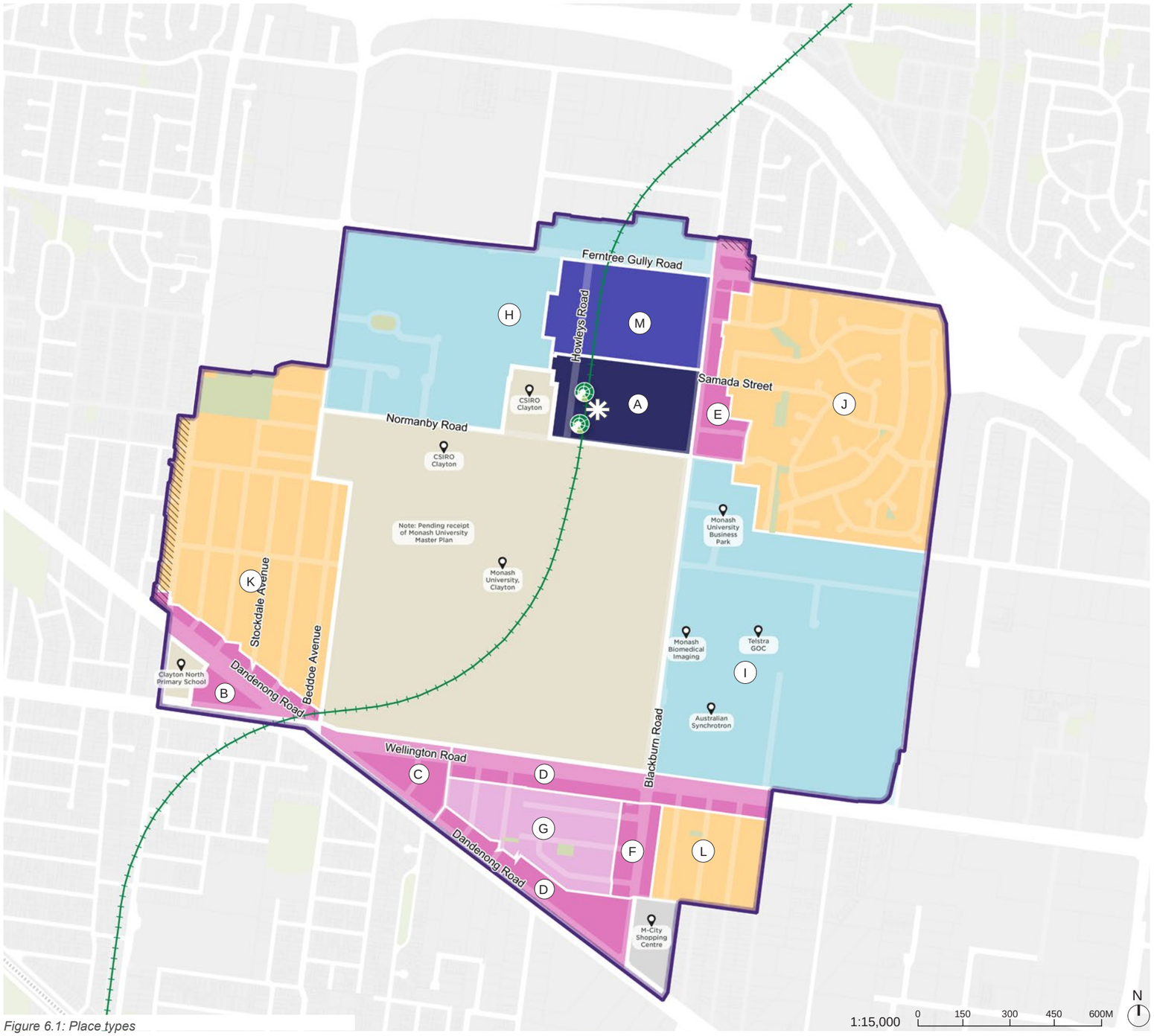


Figure 6.1: Place types

6.2 Central Core

The core of the precinct

The Urban Form Areas identified as belonging to this place type include:

- A - Core Area

Refer to Section 4.5 for a detailed description of this Urban Form Area.

Figure 6.2: Key map - Central Core

Future role and function

Substantial change of built form, delivering mixed-use neighbourhoods which provide space for jobs growth and local services

The Central Core will provide the greatest accessibility to jobs and services from the SRL catchment. Therefore, it is where the level of intensification and provision of jobs and services should be highest.

Some residential floorspace should be provided to ensure that the Central Core is vibrant outside business hours.

Future drivers

High level of activation to the street

The Central Core is where the highest level of pedestrian activity will occur as a result of its intensity of development and people accessing public transport, jobs and services. This includes activity in the evening and weekends. Therefore, it is critical that a high level of activation is provided to ensure safety, consistent with the SRL Urban Design objectives *Activation* and *Safer design*.

Maintain solar amenity to key public spaces

Solar access remains important in the Central Core. However, the desire for intensification means that solar access is only prioritised to the key public spaces.

Future urban form

The Central Core will form a clear, street-oriented town centre, with Howleys Road proposed to be the major axis of the future street-oriented town centre that connects the SRL station, Monash University and the broader precinct. A new central public space near the SRL station entrance will be a focal point for the town centre, and a generous linear open space will extend north from Normanby Road through the Central Core. A fine-grain network of highly pedestrianised Activity Streets and pedestrian links optimise permeability around the SRL station entries, and support retail and hospitality activities.

The Central Core will provide retail activity, along with high-density employment and housing in the form of high-rise buildings, while maintaining an activated and continuous street wall. Built form will be setback to the north of Normanby Road (between Howleys Road and Blackburn Road) and to the east of Howleys Road (between Ferntree Gully Road and Normanby Road) to create a widened public realm to support pedestrians and cyclists. Footpath widening and streetscape enhancements will encourage activity along the western side of Blackburn Road. Towers will be set back above the street wall and well separated from each other to ensure good amenity in the public realm and neighbouring buildings.

Figure 6.3: Examples of the form of development envisaged for the Central Core.

Built form outcomes

The development type recommended in the Central Core is the Podium-Tower. Medium to high-rise towers in the form of podium-tower buildings can deliver the substantial level of intensification envisaged for the activity centre. Smaller lots will require lot amalgamation to enable the development of podium-tower buildings.

Provided it is well designed, the podium-tower format provides for a street-edge scale that facilitates good public realm amenity in terms of human scale, sky views, sun and wind conditions, and complements the existing character. Best practice podium-tower design includes active street facades, with any above-ground car parking 'sleeved' behind other uses, and well-separated towers with generous setbacks.

A mix of uses is necessary to deliver the desired vibrancy and activation. The podium-tower format enables a range of retail types in the podium and office and/or residential uses above.

Building height and density

The maximum building height has been determined based on:

- The importance of the Central Core in terms of its envisaged provision of jobs and retail floorspace, which should be expressed by building scale
- Proximity to sensitive interfaces, such as Urban or Residential Neighbourhoods, which should temper heights
- The width of abutting roads, which influence the capacity of the public realm to accommodate height without unreasonable amenity impacts.

The Central Core comprises the SRL Rail and Infrastructure Project and surrounding industrial land. It should contain the greatest heights and densities given the area's prime accessibility to public transport.

Given the proposed street widths, it is envisaged that buildings of 84 metres (20 to 25 storeys) will be possible while ensuring reasonable amenity outcomes through appropriate setbacks. This will deliver an average density of approximately 11:1 per development site. After provisions have been made for roads and open spaces, density will be approximately 6:1 in the Central Core area.

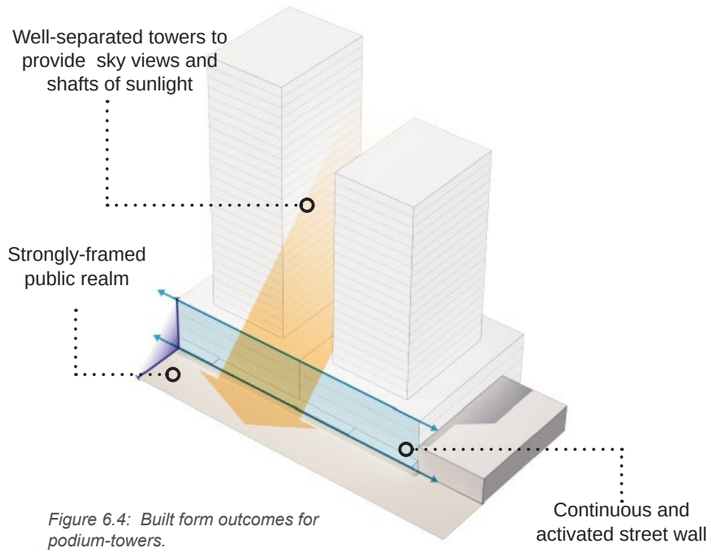


Figure 6.4: Built form outcomes for podium-towers.

Street wall height

A minimum street wall height of 12 metres (3 storeys) is proposed to ensure that the public realm is well framed. A maximum street wall height 17 metres (4 storeys) is proposed to maintain a reasonable level of openness and solar access in the public realm in accordance with Strategy BF2. Podiums.

Building setbacks

The following minimum setbacks are proposed:

Street:

- Built form will be set back to the north of Normanby Road (between Howleys Road and Blackburn Road) to create a widened public realm to support pedestrians and cyclists
- Built form will be set back to the east of Howleys Road (between Ferntree Gully Road and Normanby Road) to contribute to the creation of a consistent street wall edge
- Built form will be set back to the west of Blackburn Road to support pedestrian movement and public life.

Podium

- A zero street setback to frame the public realm and support public realm activation, in accordance with Strategies BF2. Podiums and BF7. Engaging Facades
- Zero side and rear setbacks where there is no primary outlook
- A 4.5 metres side and rear setback where there is a primary outlook. Wherever applicable, side and rear setbacks should be measured from the centreline of an adjoining laneway.

Tower

- Front setbacks above the podium of:
  - 5 metres up to a height of 66 metres (17 to 20 storeys); and
  - 7.5 metres above a height of 66 metres
- Front tower setbacks are designed to distinguish towers from the street wall, maintain a sense of openness and manage wind effects, in accordance with Strategies BF2. Podiums and BF3. Weather Protection. This may be relaxed on the intersection of 2 major streets to express the urban structure, provided wind effects are managed
- Side and rear setbacks of:
  - 4.5 metres for towers up to a height of 27 metres
  - 6 metres for towers up to a height of 41 metres
  - 7.5 metres for towers up to a height of 66 metres
  - 10 metres for towers up to a height of 100 metres
  - 12.5 metres for towers higher than 100 metres
  - Side and rear setbacks are designed to maintain a sense of openness and sky views, allow solar access to the public realm, ensure reasonable amenity for tower occupants and to maintain equitable development opportunities for neighbouring properties, in accordance with Strategies BF1.Tower Separation and BF2. Podiums
- For all floor levels above the height of the street wall where the building exceeds a height of 41m, a maximum tower floorplate of 900 square metres for residential uses and 1,350 square metres for office uses.

Building separation

Within a site, buildings should be separated by a minimum of:

- 20 metres for towers up to a height of 100 metres.

Overshadowing

The SRL Station new central public space lies at the heart of the Central Core Area, so it will be overshadowed by new development to its north, west and east. As a key gathering space for the precinct, this open space warrants the highest level of solar access protection, in accordance with Strategy BF5: Sunlight to Public Realm. However, protecting solar access to this open space competes with the high-rise urban form aspirations for the Central Core. Therefore, it is proposed that solar access to 50 per cent of the open space for a minimum of 3 hours at the spring equinox.

Activity Streets are intended to support the highest level of street life. However, they are also where development is most intense, in response to the accessibility created by the SRL station. A balance needs to be struck between ensuring solar access and providing for growth. In response, it is proposed that development should maintain solar access to 50 per cent of the southern, eastern or western footpaths of Activity Streets for a minimum of 3 hours at the spring equinox.

The SRL Station new linear open space through the middle of this Urban Form Area will play an important passive recreation role. Therefore, a solar access standard of 30 per cent of the open space for a minimum of 3 hours at the spring equinox is recommended.

Summary of built form outcomes

The built form outcomes for the podium-tower development type are summarised below.

Building height and density	
Maximum height	84 metres (20 to 25 storeys)
Maximum density	11:1
Street Wall	
Minimum height	12 metres (3 storeys)
Maximum height	17 metres (4 storeys)
Activation	High
Building setbacks	
Minimum street	0 metres
Minimum street: • Eastern side of Howleys Road (between Normanby Road and Ferntree Gully Road) • Northern side of Normanby Road (between Howleys Road and Blackburn Road) • Western side of Blackburn Road (between Normanby Road and Ferntree Gully Road)	Building setback to create an enhanced widened public realm to support pedestrians and cyclist movement
Minimum above podium facade	• 5 metres from podium facade up to a height of 66 metres • 7.5 metres from podium facade higher than 66 metres
Minimum side and rear - podium (non-primary outlook)	0
Minimum side and rear - podium (primary outlook)	4.5 metres
Side and rear - tower	• 4.5 metres for towers up to a height of 27 metres • 6 metres for towers up to a height of 41 metres • 7.5 metres for towers up to a height of 66 metres • 10 metres for towers higher than 66 metres
Building separation	20 metres for towers up to a height of 100 metres.
Maximum tower floor plate area	
All floor levels above the height of the street wall where the building exceeds a height of 41m	• 900 square metres for residential uses • 1350 square metres for office uses

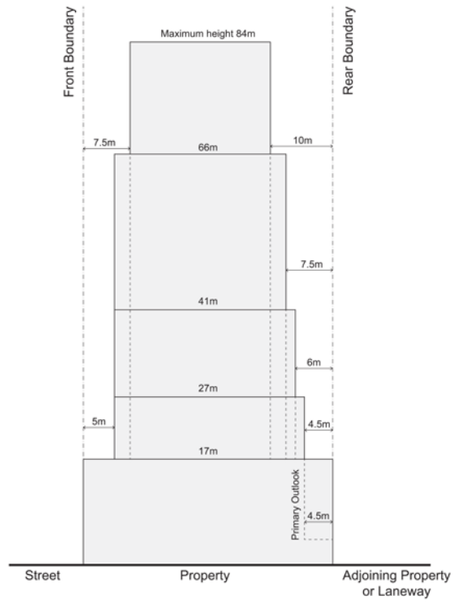


Figure 6.5: Built form outcomes section - front to rear

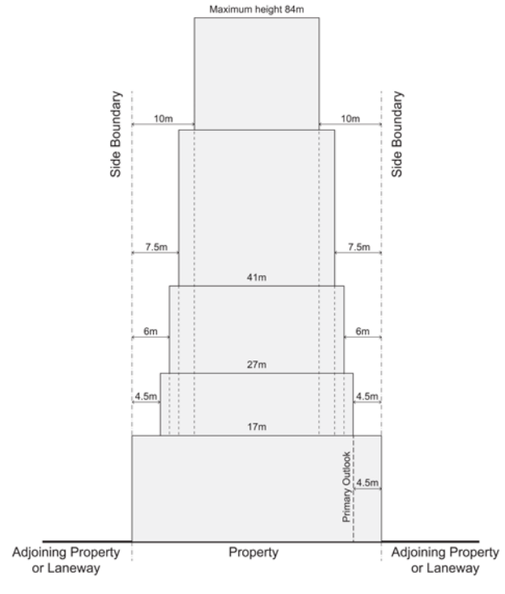


Figure 6.6: Built form outcomes section - side to side

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in the Central Core. Achieving this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

SRL Rail and Infrastructure

Public realm elements within the SRL Rail and Infrastructure Project.

- Open space (new) - SRL Rail and Infrastructure Project
- Pedestrian crossings (new or upgraded) - SRL Rail and Infrastructure Project
- Activity Streets

Development

Development features that are key to creating an accessible and permeable Central Core, as part of Design Direction 2: Promote active transport access.

- Local Key Link (new) - Fixed
- Local Key Link (new) - Flexible
- Green Street - New
- Building setback to support widened public realm

Public realm enhancements

Enhancements to be considered to deliver Design Direction 1: Ensure streets are inviting places that support community life.

- Pedestrian crossings (new or upgraded)
- Blackburn Road - Avenue
- Green Street

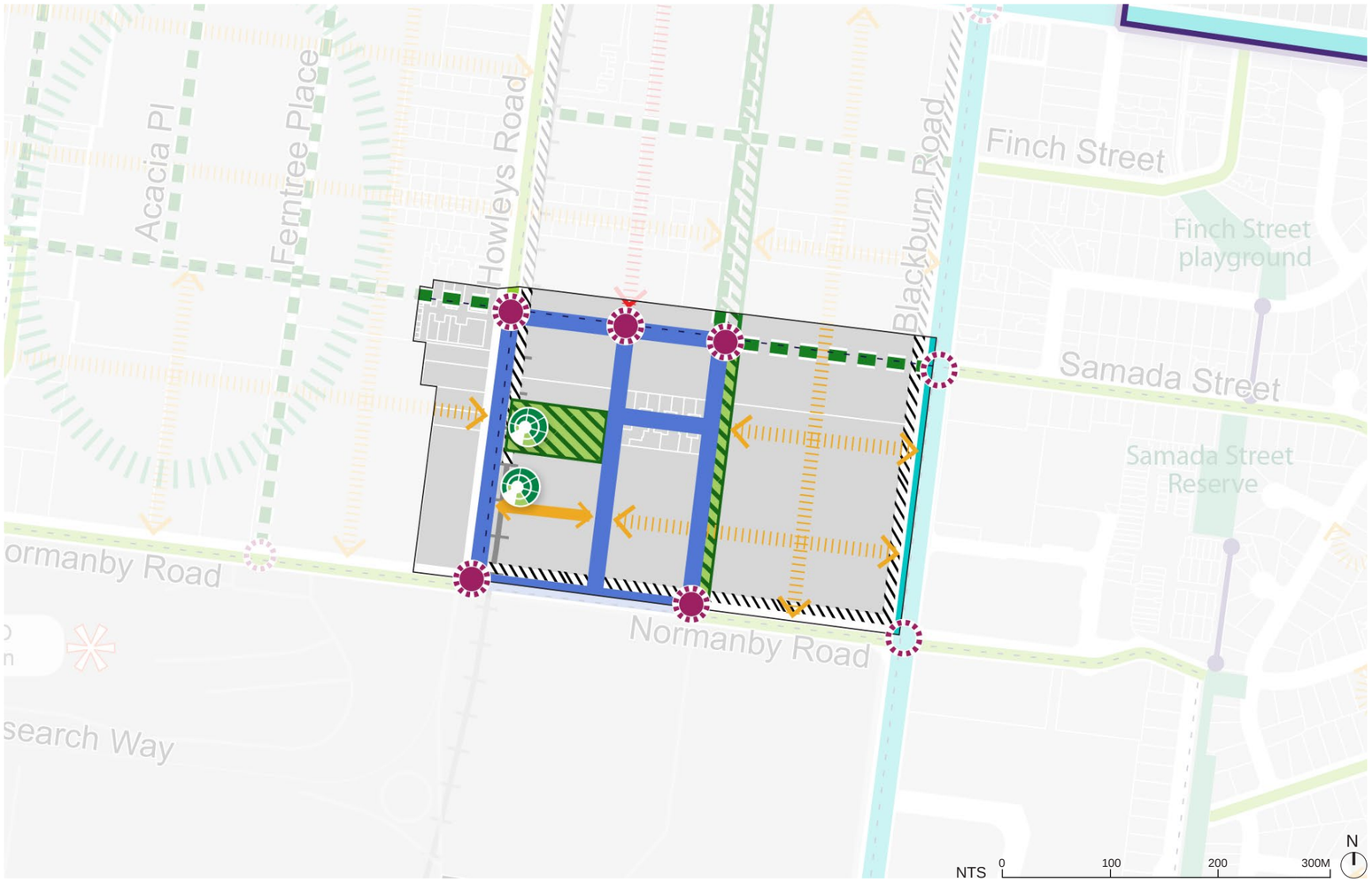


Figure 6.7: Central Core public realm outcomes

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Urban Form Area Boundary

Typical building and public realm profile

This cross-section shows a typical podium tower building with an Activity Street to provide an illustration of the potential future built form interface with the public realm.

Figure 6.8: Potential section - Activity Street

6.3 Central Flanks

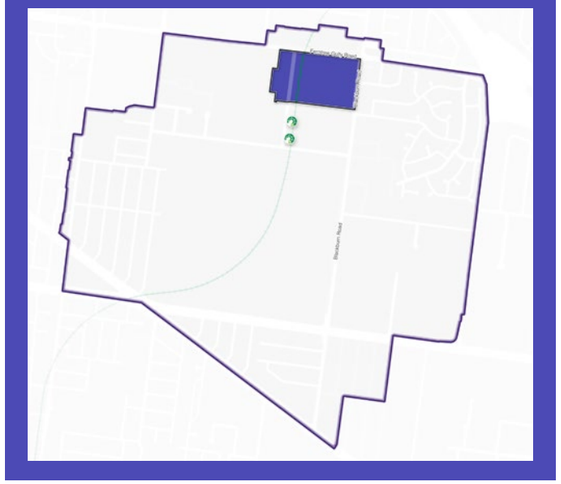
The remainder of the central areas beyond the Core

The Urban Form Areas identified as belonging to this place type include:

- M - Town Centre North

Refer to Section 4.5 for a detailed description of this Urban Form Area.

Figure 6.9: Key map - Central Flanks



Future role and function

Substantial change of built form providing space for jobs growth, local services and housing surrounding the core

This Urban Form Areas will provide a high level of accessibility to jobs and services within the Central Core, and the next highest level of accessibility to jobs from the SRL catchment after the Central Core. They should provide for substantial growth of jobs and dwellings. However, some of them also lie adjacent to areas of lower intensity. Therefore, they should have a more moderated level of intensification than the Central Core.

Future drivers

High level of activation to the street

There will be a high level of pedestrian activity in this Urban Form Areas as a result of its intensity of development and people accessing public transport, jobs and services in the Central Core. This includes activity in the evening and weekends. It is critical that a high level of activation is provided to ensure safety, consistent with SRL Urban Design objectives *Activation and Safer design*.

Maintain sunlight amenity to the public realm

A reduced focus on intensification compared with the Central Core allows for a greater focus on ensuring sunlight for the majority of the public realm, consistent with the SRL Urban Design Objective of *Amenity*.

Future urban form

The Town Centre North will extend the urban form character of the Centre Core up to Ferntree Gully Road. Howleys Road serves as the major axis of the future street-oriented town centre, connecting the SRL station, the Monash University and the broader precinct. A new linear open space between Samada Street and Ferntree Gully Road will extend the linear space provided by the SRL Rail and Infrastructure project. A fine-grain network of Green Streets and pedestrian links will optimise permeability, and support commercial activities.

The Central Flanks will provide high-density employment in the form of mid-rise buildings. These buildings will respond to the emerging mid-rise urban development character, and maintain an activated and continuous street wall. Built form will be set back to the east of Howleys Road (between Ferntree Gully Road and Samada Street) to create a widened public realm to support pedestrians and cyclists. Footpath widening and streetscape enhancements will encourage activity along the western side of Blackburn Road. Upper level built form will be setback from the street wall to protect sunlight access to the public realm and neighbouring properties. A zero street setback at podium level will frame the public realm and will support its activation.

Figure 6.10: Examples of the form of development envisaged for Central Flanks.

Built form outcomes

The development type recommended in the Central Flanks is the mid-rise podium-tower. This development type delivers high-density while maintaining good solar provision to the public realm. This type typically requires a large lot or lot amalgamation.

The zero front setback and lack of side setbacks at the base of the building ensure a highly-activated and strongly-framed public realm. The strong relationship with the street also supports commercial uses at ground and potentially upper levels to provide the desired vibrancy and activation. Best practice design provides for car parking in a basement or 'sleeved' behind other uses. Built form along Howleys Road (between Ferntree Gully Road and Samada Street) will be set back on eastern side to allow for a widened public realm and to ensure the building line along the street is consistent with the SRL Station.

Behind the street wall, the base of the building is set back from the side and rear boundary to provide space for tree planting. This typology provides a 5 to 10 per cent deep soil area at the sides and rear of the lot.

Above the street wall, the upper levels are setback from all sides to maintain sunlight, sky views and a sense of openness in the public realm. These setbacks also maintain good internal amenity and equitable development opportunities on neighbouring properties.

Building height and density

Building heights are determined by the application of a September equinox solar plane to protect sunlight access to the footpath on the opposite side of the street, in accordance with Strategy BF5. Sunlight to Public Realm.

Based on testing of typical property sizes within this place type, it is envisaged that heights of 59 metres (15 storeys) and a density of approximately 7:1 can be achieved. Testing of Mid-rise podium-tower development in typical Central Flanks lots is illustrated in the SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

Landmark buildings, which may exceed the maximum height by 20 per cent, and have lesser or no tower street setbacks, provided wind effects are managed and they achieve design excellence as supported by independent design review or a design competition that endorses the proposed design (see Strategy BF15: Landmark buildings).

Street wall height

A minimum street wall height of 13 metres (3 storeys) is proposed to ensure the public realm is well framed, in accordance with Strategy BF2: Podiums. The maximum street wall height of 17 metres (4 storeys) is proposed to balance spatial definition and a sense of openness, and to maintain solar access in the streets.

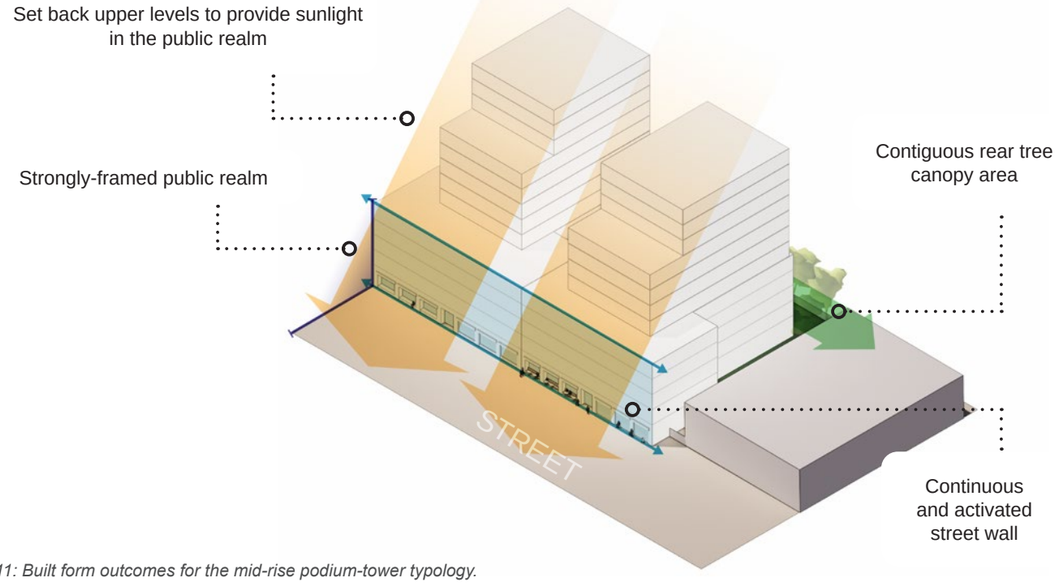


Figure 6.11: Built form outcomes for the mid-rise podium-tower typology.

Building setbacks

The following minimum setbacks are proposed:

Street:

- Built form along Howleys Road (between Ferntree Gully Road and Samada Street) will be set back on eastern side to allow for a widened public realm and to contribute to the creation of a consistent street wall edge
- A 6 metre setback along Ferntree Gully Road (between Howleys Road and Blackburn Road) to provide a consistent street profile adjacent to Employment Growth
- Built form will be set back to the west of Blackburn Road to support pedestrian movement and public life.

Podium

- A zero street setback to frame the public realm and support public realm activation, in accordance with Strategies BF7. Engaging Facades
- Zero side setback where there is no primary outlook
- A 4.5 metres side setback where there is a primary outlook. Wherever applicable, side setbacks should be measured from the centreline of an adjoining laneway
- A rear setback of 6 metres to provide for canopy trees, in accordance with Strategy BF14. On-site Landscaping. It is envisaged these rear setbacks will combine to create a green spine along the rear of all lots in this place type, establishing valuable habitat and potentially communal amenity.

Tower

- A 3 metres setback front setback from the podium facade, to distinguish towers from the street wall, maintain a sense of openness and manage wind effects, in accordance with Strategies BF2. Podiums and BF3. Weather Protection
- An additional front setback of 0.6 metres per metre of height above 33 metres, except 0.8 metres per metre of height above 23 metres on the north side of east-west streets, to maintain a sense of openness and solar access to the opposite footpath
- Side setbacks of:
  - 4.5 metres for towers up to a height of 27 metres
  - 6 metres for towers up to a height of 41 metres
  - 7.5 metres for towers higher than 41 metres
- A rear setback of 6 metres, aligned with podium rear setback
- Where adjacent to the rear boundary of land in a Key Movement Corridor or Urban Neighbourhood, a rear setback of 6 metres plus 0.6 metres per metre of height above 17 metres.

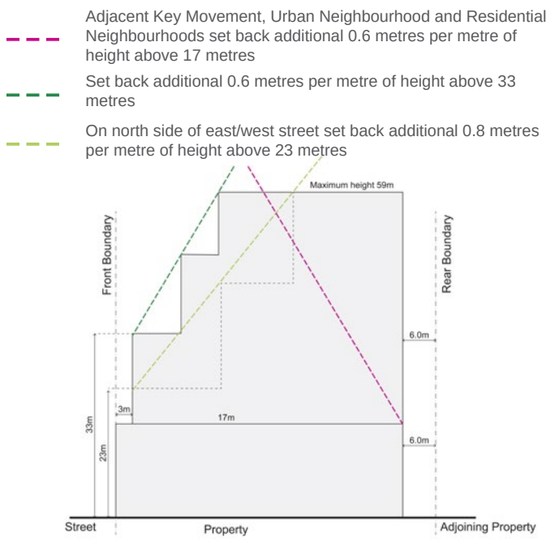


Figure 6.12: Built form outcomes section - front to rear

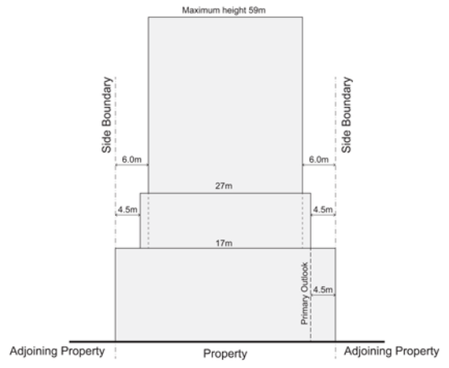


Figure 6.13: Built form outcomes section - side to side

Building separation

Within a site, buildings should be separated by a minimum of:

- 15 metres for towers up to a height of 66 metres.

Overshadowing

The recommended building scale and massing will achieve the recommended solar access standard to ensure good amenity in the public realm and to complement the existing character of typical streets. The solar access standard recommended will maintain sunlight to southern, eastern and western footpaths in typical streets at the September equinox. This is considered to strike an appropriate balance between solar access and providing for growth.

Summary of built form outcomes

The built form outcomes for the mid-rise podium-tower development type are summarised below.

Building height and density	
Maximum height	59 metres (15 storeys)
Maximum density	7:1
Activation	High
Street Wall	
Minimum height	13 metres (3 storeys)
Maximum height	17 metres (4 storeys)
Building setbacks	
Minimum street	0 metres
Minimum street: • Eastern side of Howleys Road (between Normanby Road and Ferntree Gully Road) • Western side of Blackburn Road (between Normanby Road and Ferntree Gully Road)	Building setback to create an enhanced widened public realm to support pedestrians and cyclist movement
Minimum Street - southern side of Ferntree Gully Road (between Howleys Road and Blackburn Road)	6 metres
Minimum above podium facade	3 metres + 0.6 metres per metre of height above 33 metres, except 0.8 metres per metre of height above 23 metres on the north side of east-west streets.
Minimum side and rear - podium (non-primary outlook)	0 metres
Minimum side and rear - podium (primary outlook)	4.5 metres
Minimum side – tower	4.5 metres for towers up to a height of 27 metres 6 metres for towers up to a height of 41 metres 7.5 metres for towers higher than 41 metres
Minimum rear - podium and tower	6 metres, landscaped
Building separation	15 metres for towers up to a height of 66 metres

** 4.5 metres applies to the parts of the building that provide a primary outlook (to the rear and side boundaries). If interfacing with side/rear service lanes, the 4.5 metres setback is measured from the centre of the laneway*

Figure 6.14: Indicative streetscape typical only

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in the Central Flanks. Realising this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

SRL Rail and Infrastructure

Public realm elements within the SRL Rail and Infrastructure Project.

- Pedestrian crossings (new or upgraded) - SRL Rail and Infrastructure Project

Development

Development features that are key to creating an accessible and permeable Central Flanks, as part of Design Direction 2: Promote active transport access.

- Critical Key Link (new) - Flexible
- Local Key Link (new) - Flexible
- Open space (new) - investigation area
- Green Street - New
- Building setback to support widened public realm

Key public realm projects

Key projects to create an accessible and permeable Central Flanks, as part of Design Direction 4: Facilitate outdoor recreation.

- Open space (new linear open space) - planned / proposed

Public realm enhancements

Enhancements to be considered to deliver Design Direction 1: Ensure streets are inviting places that support community life.

- Pedestrian crossings (new or upgraded)
- Blackburn Road - Avenue
- Green Street

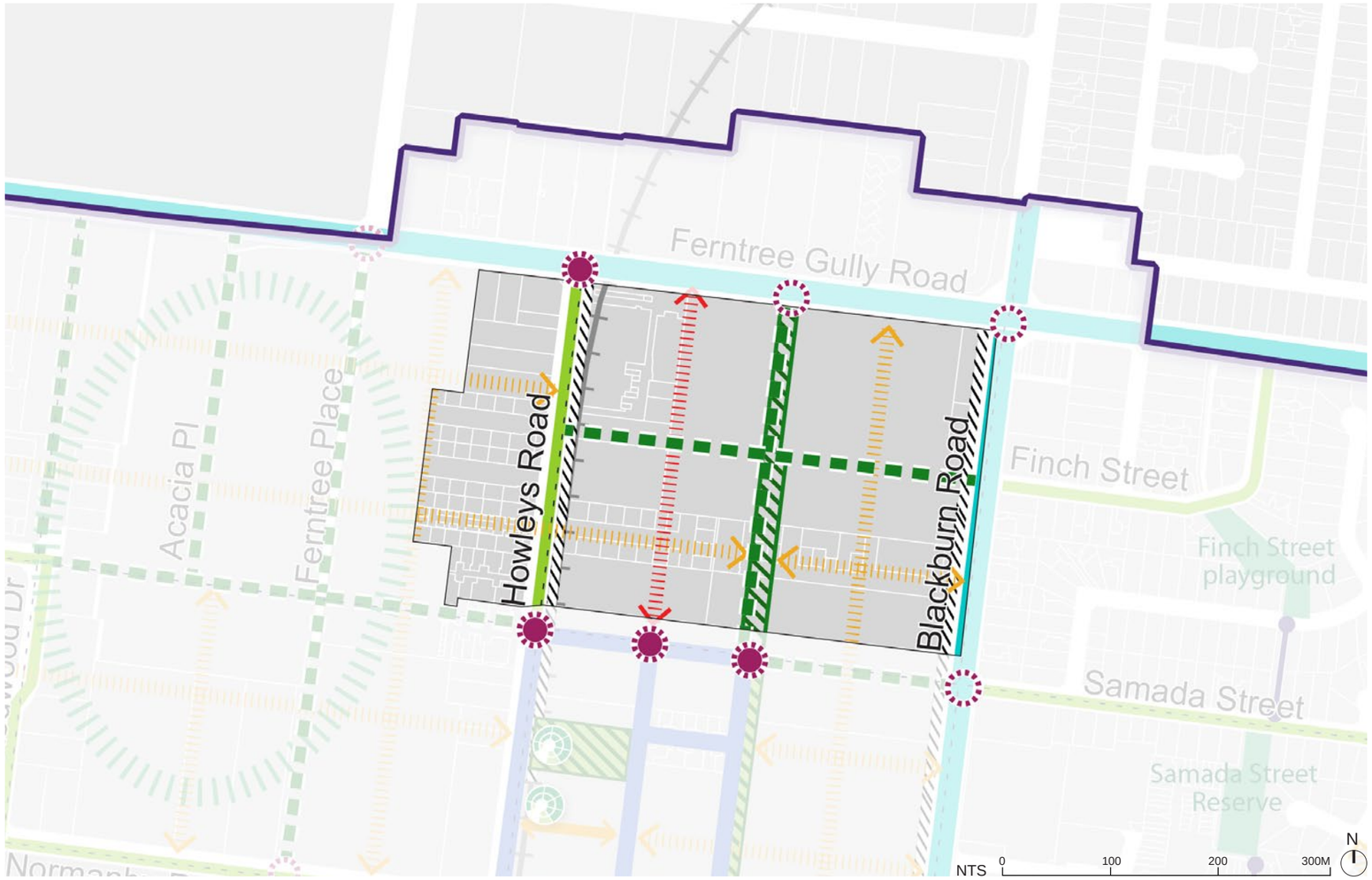


Figure 6.15: Central Flanks public realm outcomes

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Urban Form Area Boundary

Typical building and public realm profile

This cross-section shows a mid-rise podium tower building interfacing with a green street to provide an illustration of the future potential built form and public realm outcomes for this area.

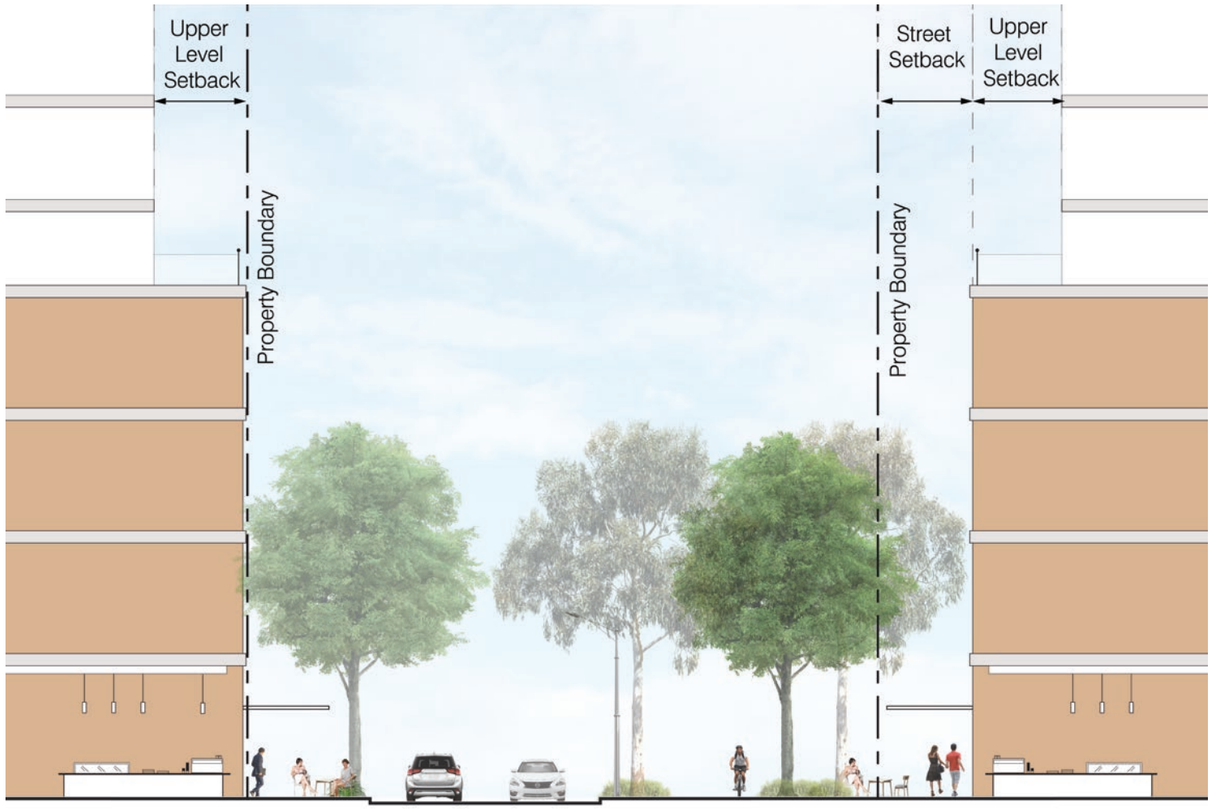


Figure 6.16: Potential section - Green Street

6.4 Key Movement Corridors

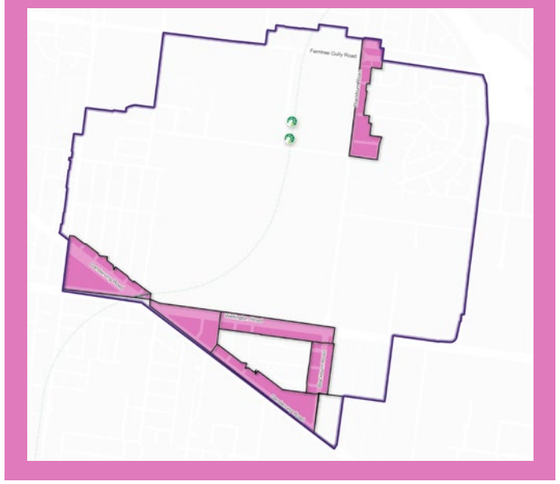
Main roads

The Urban Form Areas which have been identified as belonging to this place type include:

- B - Heritage School Junction
- C - Highway Gateway
- D - Wellington Road/Dandenong Road
- E - Blackburn Road North
- F - Blackburn Road South

Refer to Section 4.5 for a detailed description of these Urban Form Areas.

Figure 6.17: Key map - Key Movement Corridors



Future role and function

Substantial change of built form providing space for jobs growth, local services and housing along Key Movement Corridors

These streets are the key street-based movement corridors, being main roads carrying public transport. They offer a high level of accessibility to jobs and services. Therefore, they are an appropriate location for a higher level of intensification and mixed-use to contribute to a new 'boulevard' character.

Future drivers

Balance between openness and enclosure of the street

These urban form areas are outside the core of the Structure Plan Area and generally border the residential hinterland. Their development should seek to deliver moderate growth in a form that gives consideration to amenity and character

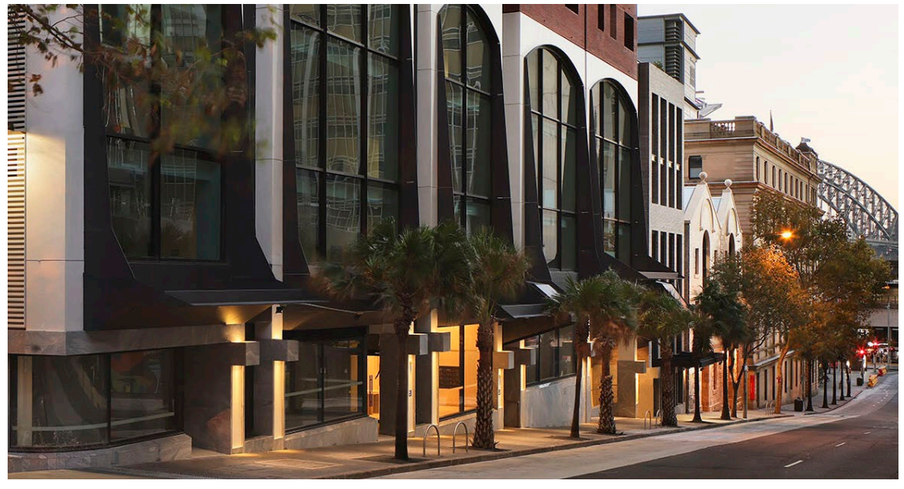
Future urban form

Dandenong Road and North/Wellington Road are proposed to be enhanced as tree-lined Boulevards, which will have public transport and activated pedestrian zones supported by place-making outcomes, and substantial tree canopy. Pedestrian and cycling crossing of Dandenong Road / Wellington Road will be improved (near Panorama and Cobain Streets) to enhance north-south connectivity.

Blackburn Road will have improved east-west connectivity through proposed crossings and Green Street connections, as well as a treatment transformation to an Avenue: a wide and tree-lined 'connector' street that accommodates active and/or public transport with nodes of pedestrian amenity.

The Key Movement Corridors will be lined with mid-rise apartment buildings with pockets of mixed-use. Upper levels will be setback from the street wall to maintain solar access and a sense of openness in the public realm, while rear setbacks will minimise shadow and visual bulk impacts on neighbouring properties. A modest street setback will maintain definition and activation of the public realm, and provide privacy for ground floor dwellings.

Figure 6.18: Examples of the form of development envisaged for Key Movement Corridors.



Built form outcomes

The development type recommended in the Key Movement Corridors is the urban infill. This is a traditional form of development that delivers highly adaptable buildings able to accommodate commercial and/or residential uses.

This development type delivers moderately high density along main roads, in accordance with Strategy UF6. Boulevards and Avenues, without the potentially adverse impacts of taller buildings. Importantly, it can be developed on the vast majority of the lots found in these places without the need for lot amalgamation (see Best Practice Urban Development Typologies report in SRL East Structure Plan - Urban Design Supporting Research - Attachment A).

This development type provides a vibrant and memorable urban character, good private amenity and protection of neighbouring amenity to the rear, adaptability for mixed and changing uses, and reasonable space for tree canopy cover. The minimal front setback and lack of side setbacks ensure a well-activated and strongly-framed public realm. The strong relationship with the street also supports commercial uses at ground or upper levels where desired. Fine-grain character around existing small retail strips will be retained.

The primary orientation of accommodation to the street and middle of the block enables differing uses to comfortably exist side-by-side where relevant. Generous rear setbacks ensure good amenity for accommodation facing towards the middle of the block, including adjacent properties to the rear, and space for tree planting.

As the Key Movement Corridors evolve through new urban infill development, they will experience a substantial change in character. As noted in Design Direction 5, this is considered to be an inevitable outcome of the vision for transformational change. This kind of transition in character is consistent with other transforming areas such as Brunswick Activity Centre, Cremorne and Box Hill between Whitehorse Road and the hospital. Low-rise dwellings will no longer represent the preferred character, and will increasingly become anomalies.

The sheer on-boundary side walls of urban infill development will change the amenity of any neighbouring low-rise dwellings to the side However, the lack of side setbacks is necessary to enable viable development of appropriate density on single lots and avoid constraining development on neighbouring properties to the side, in accordance with Strategy BF11: Building Orientation. The introduction of side setbacks to protect the existing amenity and character would mean that lot amalgamation is required to achieve a viable floorplate, and greater height is needed to maintain the density envisaged by Strategies UF5: Mixed-use neighbourhoods and UF6: Boulevards and Avenues.

The majority of lots in this place type are occupied by detached dwellings whose primary orientation is towards the street and a rear garden, rather than towards side boundaries. Therefore, the impact of sheer on-boundary side walls will be generally limited to the secondary rooms that face side boundaries.

Urban Infill development is proposed to have a generous rear setback, which will limit its impact on the amenity and equitable development of neighbouring rear gardens. The rear setbacks of existing and future development will ultimately combine to form a large green space in the middle of the block.

The building height and upper level street setbacks vary based on street width to ensure an appropriate balance between openness and enclosure in the street, along with reasonable solar access. In the Key Movement Corridors, urban infill provides a taller street wall, with upper levels maintaining a 1:1 ratio with the street. In the Urban Neighbourhoods a building height of 24 metres with a 4-storey street wall and upper level setback is proposed to maintain an open character.

This development type includes a landscaped front setback as well as a generous rear setback, resulting in a combined 10 to 15 per cent deep soil area across the front and rear of the lot.

The proposed use-mix varies with the role and function of the urban form area.

Building height and density

Building heights are proposed to be determined by the street width and lot depth, up to a maximum of 8 storeys. In order to balance spatial definition and a sense of openness, building form is proposed to be limited by two variables:

- A 45° plane from the opposite street boundary, in accordance with Strategy BF6: Human-scale streets
- An angled plane at the rear to or limit visual bulk impacts to neighbouring properties, while enabling taller buildings on deeper lots, and to avoid unreasonable shadow impacts on neighbouring properties in accordance with Strategy BF12: Rear amenity plane.

Based on testing of typical property sizes in each urban form area within this place type, it is envisaged that heights of 27 metres (7 to 8 storeys) can be achieved, resulting in a density of approximately 3:1. Testing of urban infill development in typical Key Movement Corridors is illustrated in SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

In sensitive areas, a maximum building height of 21 metres (5 to 6 storeys) is proposed. Sensitive areas are shown in Figure 6.1.

Street wall height

A minimum street wall height of 14 metres (3 to 4 storeys) is proposed to ensure the public realm is well framed, in accordance with Strategy BF6: Street Scale. A maximum street wall height of 21 metres (5 to 6 storeys) is proposed to maintain a reasonable level of openness and solar access in the public realm in accordance with Strategy BF6: Human-scale streets.

Adaptability

A minimum floor-to-floor dimension of 4 metres is proposed at ground floor level to ensure it can be used for commercial purposes.

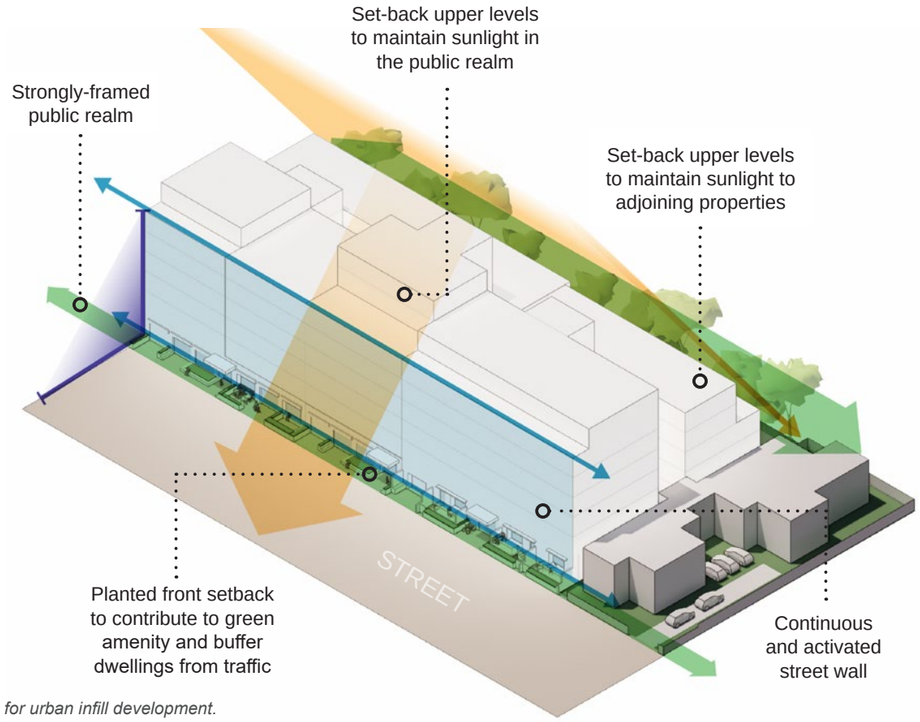


Figure 6.19: Built form outcomes for urban infill development.

Building setbacks

The following minimum setbacks are proposed:

- A 3 metre street setback to balance spatial definition and public realm engagement with the privacy of ground floor dwellings in accordance with Strategies BF8. Active Frontage and BF9. Residential Frontage
- In existing small retail strips the street setback should match the prevailing building line in accordance with Strategy BF8: Active frontages - see Figure 5.3 Preferred street frontages and setbacks plan. These include:
    - Ferntree Gully Road / Blackburn Road small retail strip (local centre at the corner of Ferntree Gully Road and Blackburn Road)
    - Dandenong Road / Glenbrook Avenue small retail strip (Dandenong Road between Clayton Road and Glenbrook Avenue)
    - Morton Street / Blackburn Road small retail strip
    - Hampshire Road / Blackburn Road small retail strip
- An additional 4 metres setback above 21 metres to maintain a sense of openness and solar access
- Side setbacks of zero where there is no primary outlook, to enable the development of single lots with buildings that face the street and the rear of the lot - this will also maintain equitable development opportunities for neighbouring properties, in accordance with Strategy BF11. Building Orientation
- Side setbacks of 4.5 metres where there is a primary outlook to an adjacent private property. Where applicable, side setbacks should be measured from the centreline of an adjoining laneway
- Side setback of 3m where abutting public open space
- A rear setback of 6 metres to provide for deep soil planting, in accordance with Strategy BF14. On-Site Landscaping - it is envisaged that these rear setbacks will combine to create a green spine along the rear of all lots in this place type, establishing valuable habitat and potentially communal amenity. This does not apply at ground floor in existing small retail strips
- Additional rear setbacks of 0.7 metres per metre of additional height above 11 metres, or above 14 metres where abutting public open space to manage visual bulk impacts.

Building separation

Within a site, buildings should be separated by a minimum of 9 metres.

Overshadowing

The recommended building scale and massing will achieve the recommended solar access standard to ensure good amenity in the public realm and to complement the existing character of typical streets. The solar access standard recommended will maintain sunlight to southern, eastern and western footpaths in typical streets at the September equinox. This is considered to strike an appropriate balance between solar access and providing for growth.

The building scale and massing will also limit additional shadow to private open space in the rear setbacks of properties in Urban Neighbourhoods and Residential Neighbourhoods.

Summary of built form outcomes

The built form outcomes for the urban infill development type are summarised below.

Building height and density		
Maximum height	27 metres (7 to 8 storeys)	
Maximum height-sensitive areas	21 metres (5 to 6 storeys)	
Indicative density	3.5:1	
Street Wall		
Minimum height	14 metres (3 to 4 storeys)	
Maximum height	21 metres (5 to 6 storeys)	
Activation	Moderate	
Building setbacks		
Street - general	3 metres landscaped, 7 metres above 21 metres	
Street - existing small retail strips	Match the prevailing building line plus 4 metres above a height of 21 metres	
Rear - general	6 metres landscaped + 0.7 metres per metre of height above 11 metres, or above 14 metres where abutting public open space	
Rear - existing small retail strips	6 metres above ground floor + 0.7 metres per metre of height above 11 metres	
Side - non-primary outlook	0 metres	
Side - primary outlook	4.5 metres	
Side - abutting public open space	3 metres	
Building separation	9 metres minimum	
Overshadowing		
Place type of neighbouring property	**Number of hours between 9am and 3pm at the September equinox during additional shadow is to be avoided**	**Minimum area of open space to which additional shadow is to be avoided**
Key movement corridor, Urban neighbourhood	3 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residential neighbourhood	4 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Adaptability		
Minimum ground level floor-to-floor height	4 metres	

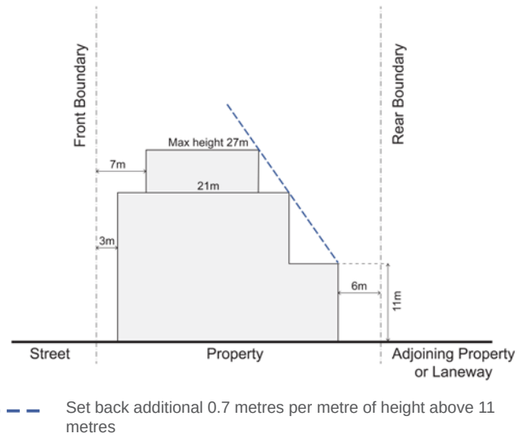


Figure 6.20: Built form outcomes section - front to rear

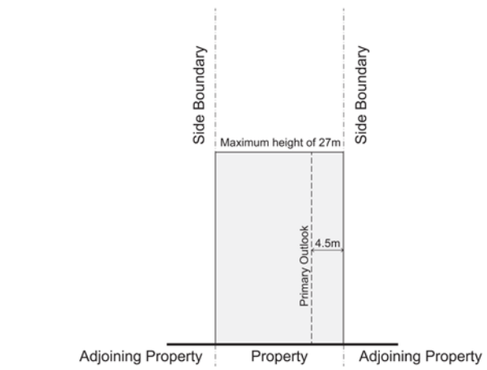


Figure 6.21: Built form outcomes section - side to side

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in the Key Movement Corridors. Achieving this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

Development

Development features and permeable Key Movement Corridors, as part of Design Direction 4: Facilitate outdoor recreation.

- Open space (new) - investigation area

Public realm enhancements

Streets to be considered for enhancements to deliver Strategy Design Direction 1: Ensure streets are inviting places that support community life.

- Wellington Road and Dandenong Road upgrades – Boulevard
- Ferntree Gully Road and Blackburn Road upgrades – Avenue
- Improvements to Green Streets
- Major active transport link
- Pedestrian crossings (new or upgraded)

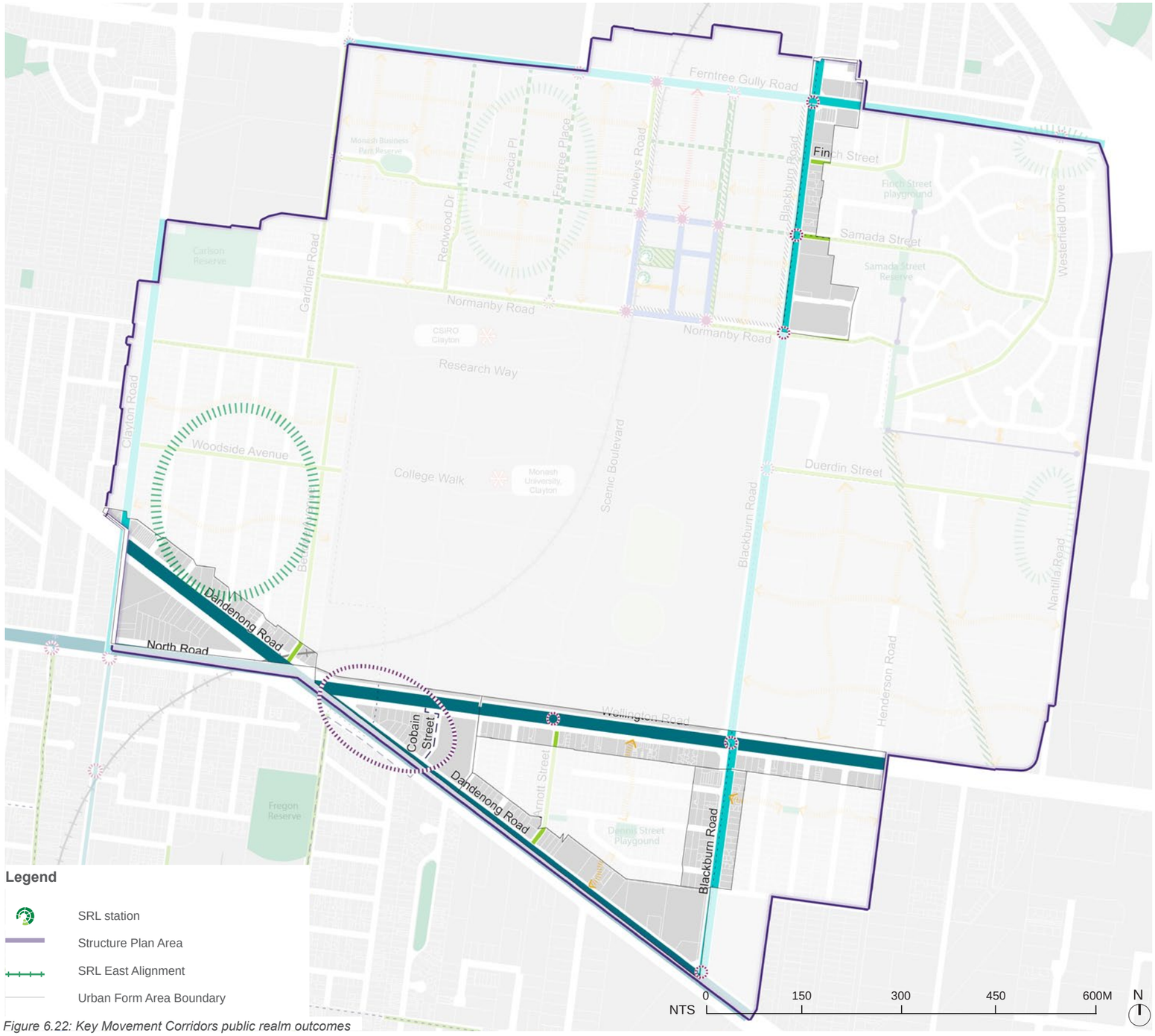


Figure 6.22: Key Movement Corridors public realm outcomes

Typical building and public realm profile

This cross-section shows an urban infill building with an Avenue to provide an illustration of the future built form and public realm outcomes for this area.

Figure 6.23: Potential section - Avenue

6.5 Urban Neighbourhoods

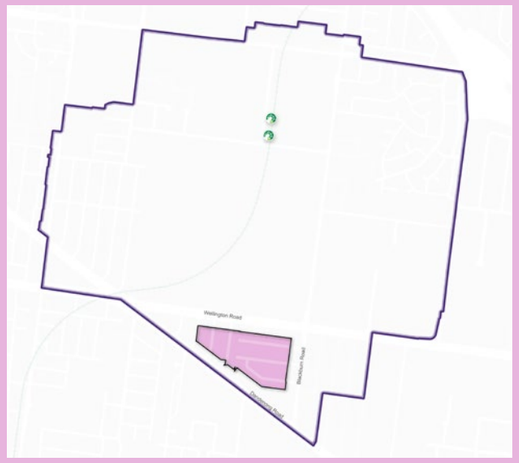
Well-served residential areas

The Urban Form Areas identified as belonging to this place type include:

- G - Residential South

Refer to Section 4.5 for a detailed description of this Urban Form Area.

Figure 6.24: Key map - Urban Neighbourhoods



Future role and function

Substantial change of built form providing space for jobs growth, local services and housing surrounding the core

This Urban Form Area lies at the intersection of the Monash and Clayton precincts. It has an important role to play in contributing to their seamless integration, to link medical and allied health facilities in Clayton with medical research and education in Monash. Therefore, it is an appropriate location for a higher level of intensification and mixed-use to provide a vibrant environment for those moving between the 2 precincts.

Future drivers

Balance between openness and enclosure of the street

This Urban Form Area is outside the Central Core of the Structure Plan Area and borders the residential hinterland. Therefore, the level of intensification should be balanced with amenity and character considerations.

Enhance landscape character and amenity within the street

In Urban Form Areas where ground floor commercial activity is not sought, development should contribute to the amenity of the street through a landscaped front setback.

Future urban form

The Urban Neighbourhood will have a permeable street network with Green Streets to enhance urban biodiversity and provide inviting pedestrian routes to improve connectivity between the Clayton and Monash Structure Plan Areas. The Urban Neighbourhood will be developed into mid-rise apartment and mixed-use buildings which maintain solar access and a sense of openness in the public realm. A continuous street wall will frame the public realm, while a modest street setback will maintain spatial definition and public realm engagement, while providing privacy to ground floor dwellings. Built form will be setback from the rear to minimise shadow and visual bulk impacts on neighbouring properties.

Figure 6.25: Examples of the form of development envisaged for the Urban Neighbourhoods.

Built form outcomes

The development type recommended in the Urban Neighbourhoods is the urban infill. This is a traditional form of development that delivers highly adaptable buildings able to accommodate commercial and/or residential uses.

This development type delivers moderately high density along main roads, in accordance with Strategy UF6. Boulevards and Avenues, without the potentially adverse impacts of taller buildings. Importantly, it can be developed on the vast majority of the lots found in these places without the need for lot amalgamation (see Best Practice Urban Development Typologies report in SRL East Structure Plan - Urban Design Supporting Research - Attachment A).

This development type provides a vibrant and memorable urban character, good private amenity and protection of neighbouring amenity to the rear, adaptability for mixed and changing uses, and reasonable space for tree canopy cover. The minimal front setback and lack of side setbacks ensure a well-activated and strongly-framed public realm. The strong relationship with the street also supports commercial uses at ground or upper levels where desired.

The primary orientation of accommodation to the street and middle of the block enables differing uses to comfortably exist side-by-side where relevant. Generous rear setbacks ensure good amenity for accommodation facing towards the middle of the block, including adjacent properties to the rear, and space for tree planting.

As the Urban Neighbourhoods evolve through new urban infill development, they will experience a substantial change in character. As noted in Design Direction 5, this is considered to be an inevitable outcome of the vision for transformational change. This kind of transition in character is consistent with other transforming areas such as Brunswick Activity Centre, Cremorne and Box Hill between Whitehorse Road and the hospital. Low-rise dwellings will no longer represent the preferred character, and will increasingly become anomalies.

The sheer on-boundary side walls of urban infill development will change the amenity of any neighbouring low-rise dwellings to the side However, the lack of side setbacks is necessary to enable viable development of appropriate density on single lots and avoid constraining development on neighbouring properties to the side, in accordance with Strategy BF11: Building Orientation. The introduction of side setbacks to protect the existing amenity and character would mean that lot amalgamation is required to achieve a viable floorplate, and greater height is needed to maintain the density envisaged by Strategies UF5: Mixed-use neighbourhoods and UF6: Boulevards and Avenues.

The majority of lots in this place type are occupied by detached dwellings whose primary orientation is towards the street and a rear garden, rather than towards side boundaries. Therefore, the impact of sheer on-boundary side walls will be generally limited to the secondary rooms that face side boundaries.

Urban Infill development is proposed to have a generous rear setback, which will limit its impact on the amenity and equitable development of neighbouring rear gardens. The rear setbacks of existing and future development will ultimately combine to form a large green space in the middle of the block.

The building height and upper level street setbacks vary based on street width to ensure an appropriate balance between openness and enclosure in the street, along with reasonable solar access. In the Key Movement Corridors, urban infill provides a taller street wall, with upper levels maintaining a 1:1 ratio with the street. In the Urban Neighbourhoods a building height of 24 metres with a 4-storey street wall and upper level setback is proposed to maintain an open character.

This development type includes a landscaped front setback as well as a generous rear setback, resulting in a combined 10 to 15 per cent deep soil area across the front and rear of the lot.

The proposed use-mix varies with the role and function of the urban form area.

Building height and density

Building heights are proposed to be determined by the street width and lot depth. In order to balance spatial definition and a sense of openness, building form is proposed to be limited by two variables:

- A 45° plane from the opposite street boundary, in accordance with Strategy BF5: Sunlight to public realm
- A September equinox solar plane from the top of a typical rear boundary fence to avoid unreasonable impacts on neighbouring residential properties, in accordance with Strategy BF12. Rear amenity plane. This will limit visual bulk impacts to neighbouring properties at the rear, while enabling taller buildings on deeper lots.

Based on testing of typical property sizes in each urban form areas within this place type, it is envisaged that heights of 24 metres (6 to 7 storeys) can be achieved, resulting in a density of approximately 3:1. Testing of urban infill development in typical Urban Neighbourhoods is illustrated in SRL East Structure Plan - Urban Design Supporting Research - Attachment A.

In sensitive areas, a maximum building height of 21 metres (5 to 6 storeys) is proposed. Sensitive areas are shown in Figure 6.1.

Street wall height

A minimum street wall height of 11 metres (3 storeys) is proposed to ensure the public realm is well framed, in accordance with Strategy BF6. Street Scale. The maximum street wall height is proposed to be 14 metres (4 storeys), to complement the existing lower-rise buildings in these areas.

Adaptability

A minimum floor-to-floor dimension of 4 metres is proposed at ground floor level to ensure it can be used for commercial purposes.

Building setbacks

The following minimum setbacks are proposed:

- A 3 metres street setback to balance spatial definition and public realm engagement with the privacy of ground floor dwellings in accordance with Strategies BF8: Active Frontages and BF9: Residential Frontages
- An additional street setback above 14 metres of 2 metres or that required to remain below a 45º plane from the opposite street boundary, whichever is greater to maintain a sense of openness and solar access
- Side setbacks of zero where there is no primary outlook - this is designed to enable the development of single lots with buildings that face the street and the rear of the lot. It will also maintain equitable development opportunities for neighbouring properties, in accordance with Strategy BF11. Building Orientation
- Side setbacks of 4.5 metres where there is a primary outlook to an adjacent private property. Wherever applicable, side setbacks should be measured from the centreline of an adjoining laneway

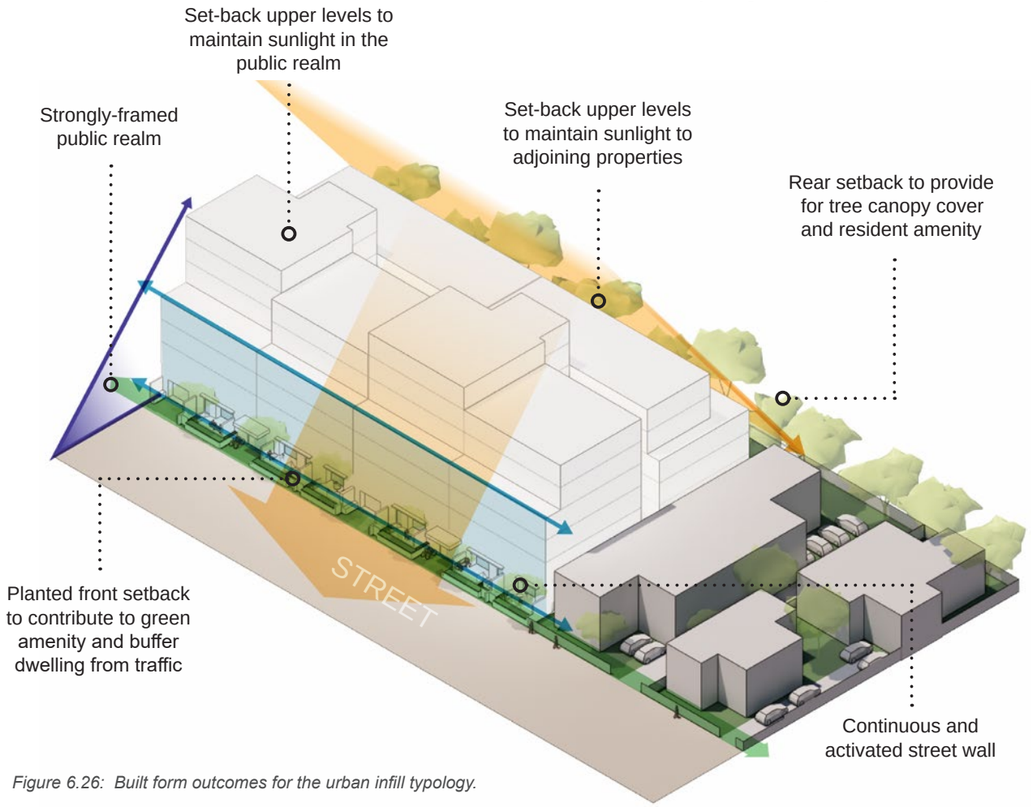


Figure 6.26: Built form outcomes for the urban infill typology.

- Side setback of 3 metres where abutting public open space
- A rear setback of 6 metres to provide for deep soil planting, in accordance with Strategy BF14: On site landscaping - it is envisaged that these rear setbacks will combine to create a green spine along the rear of all lots in this place type, establishing valuable habitat and potentially communal amenity
- Additional rear setbacks of 0.7 metres per metre of additional height above 11 metres, or above 14 metres where abutting public open space, to manage visual bulk impacts.

Building separation

Within a site, buildings should be separated by a minimum of 9 metres.

Overshadowing

The recommended building scale and massing will achieve the recommended solar access standard to ensure good amenity in the public realm and to complement the existing character of typical streets. The solar access standard recommended will maintain sunlight to southern, eastern and western footpaths in typical streets at the September equinox. This is considered to strike an appropriate balance between solar access and providing for growth.

The building scale and massing recommended at the edges of Dennis Street Playground will maintain solar access to 50 per cent of the open space for a minimum of 3 hours at mid-winter (also achieving 75% at spring equinox).

No solar access standard is recommended for Arnott Street Reserve as this will unreasonably reduce the provision for growth, due to the virtue of their configuration. Additionally, Dennis Street is a sunny space available nearby.

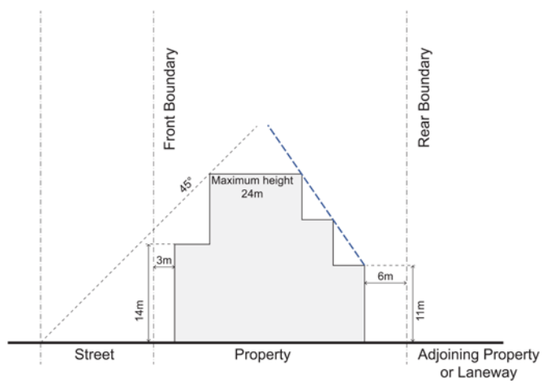
The building scale and massing will also limit additional shadow to private open space in the rear setbacks of properties in Key Movement Corridors.

Summary of built form outcomes

The built form outcomes for the urban infill development type are summarised below.

Building height and density		
Maximum height	24 metres (6 to 7 storeys)	
Maximum density	3-4:1	
Street Wall		
Minimum height	11 metres (3 storeys)	
Maximum height	14 metres (4 storeys)	
Activation	Moderate	
Building setbacks		
Street	3 metres landscaped, additional setback above 14 metres of 2 metres or that required to remain below 45° plane from opposite street boundary, whichever is greater	
Rear	6 metres, landscaped, + 0.7 metres per metre of height above 11 metres, or above 14 metres where abutting public open space	
Side - non-primary outlook	0 metres	
Side - primary outlook	4.5 metres	
Side - abutting public open space	3 metres	
Building separation	9 metres minimum	
Overshadowing		
Place type of neighbouring property	**Number of hours between 9am and 3pm at the September equinox during additional shadow is to be avoided**	**Minimum area of open space to which additional shadow is to be avoided**
Key movement corridor, Urban neighbourhood	3 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residential neighbourhood	4 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Adaptability		
Minimum ground level floor-to-floor height	4 metres	

Figure 6.27: Indicative streetscape typical only



Set back additional 0.7 metres per metre of height above 11 metres

Figure 6.28: Built form outcomes section - front to rear

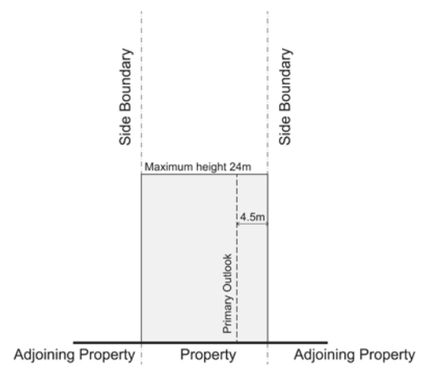


Figure 6.29: Built form outcomes section - side to side

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in the Urban Neighbourhoods. Achieving this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

Public realm enhancements

Streets to be considered for enhancements to deliver Design Direction 2: Promote active transport access.

- Improvements to Green Streets
- Local Key Link (new) - Flexible
- Active frontages to open space

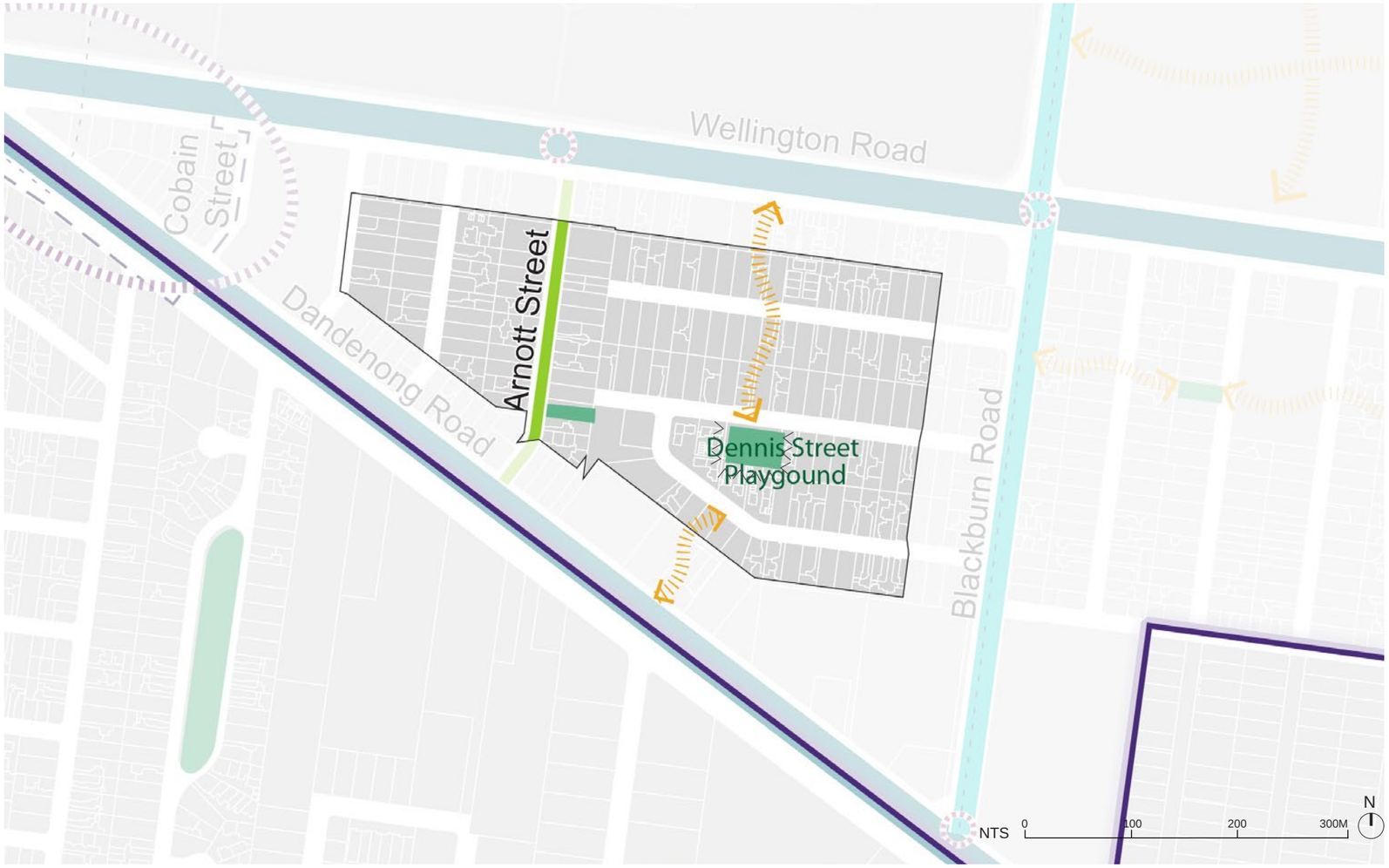


Figure 6.31: Urban Neighbourhoods public realm outcomes

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Urban Form Area Boundary

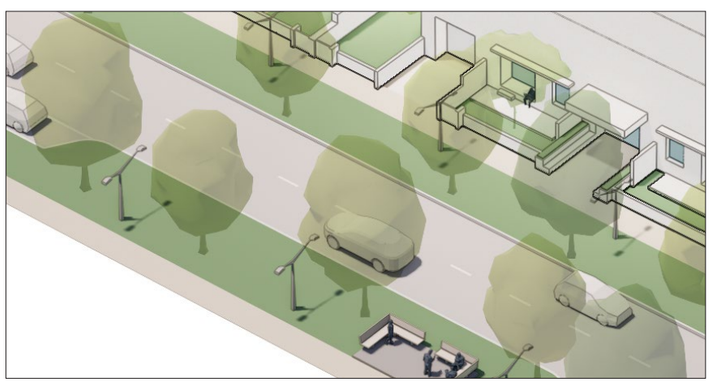


Figure 6.30: Indicative illustration showing a Green Street within the Urban Neighbourhoods

Typical building and public realm profile

This cross-section shows an urban infill building with a Local Street to provide an illustration of the future built form and public realm outcomes for this area.

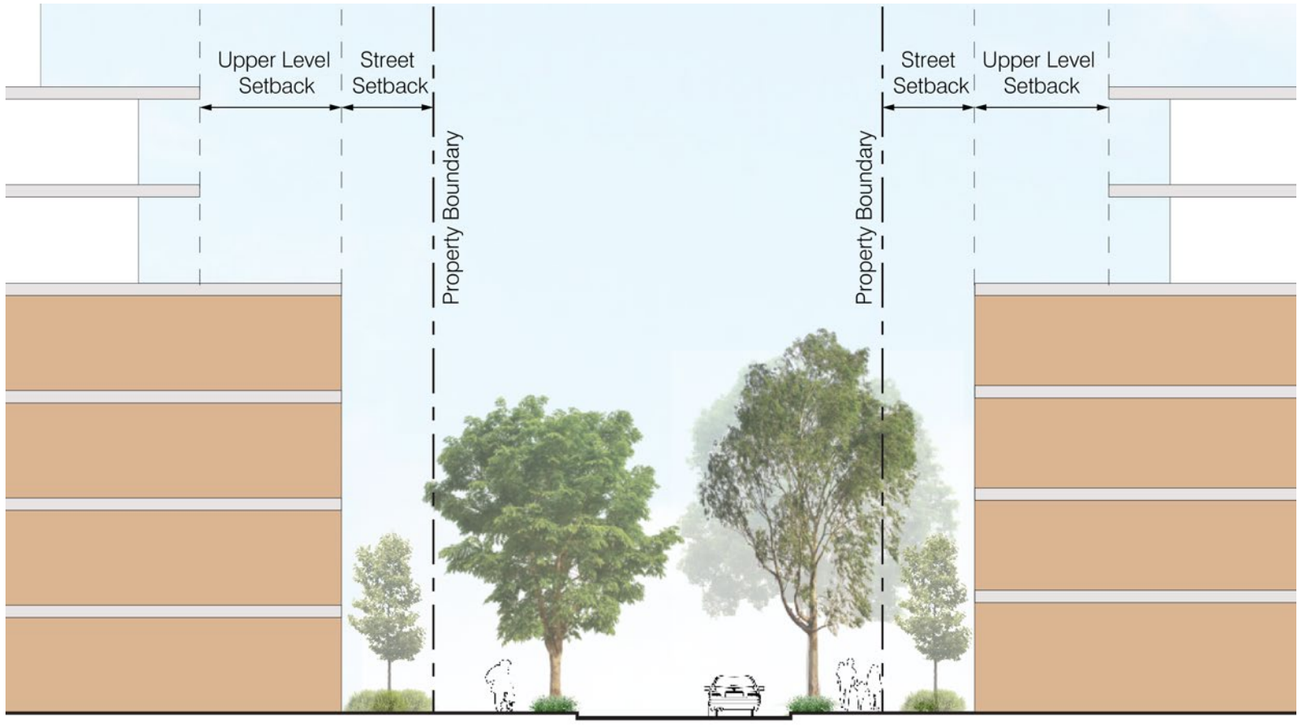


Figure 6.32: Potential section - Local Street

6.6 Employment Growth

Education or employment areas with a focus on research, innovation and/or manufacturing uses

The Urban Form Areas identified as belonging to this place type is:

- H - Monash Employment North
- I - Monash Employment East

Refer to Section 4.5 for a detailed description of this Urban Form Area.

Figure 6.33: Key map - Employment Growth Sites

Future role and function

Moderate intensification of built form providing space for education, innovation and advanced manufacturing uses

These uses tend to require low-moderate height buildings. However, there are opportunities for intensification to provide for jobs growth through the redevelopment of low-rise structures into mid-rise buildings.

Future drivers

Enhance landscape character and amenity

These Urban Form Areas provides an opportunity to upgrade the appearance and amenity of the streetscape through a landscaped front setback. Additionally, there is an opportunity for a moderate level of tree canopy cover to contribute to the areas environmental performance and local amenity.

Moderate level of activation to the street

There will be a high level of pedestrian activity in this Urban Form Area as a result of people walking around the campus and to/from the station. It is critical that a good level of street activation is provided to ensure safety, consistent with SRL urban design objectives *Activation* and *Safer design*.

Future urban form

The Employment Growth area is proposed to incorporate a network of new “Green Streets” and pedestrian links. This aims to enhance biodiversity, and encourage walking and cycling within the area, by increasing permeability.

The Employment Growth sites will be developed into a mid-rise character with buildings approximately 8 to 10 storeys, within a landscape setting. Street walls should balance spatial definition, sense of openness and solar access to the street. Street and side setbacks should be wide to provide for canopy trees and reasonable amenity of abutting properties.

Figure 6.34: Examples of the form of development envisaged for the Employment Growth areas.

Built form outcomes

The development type recommended in the Employment Growth areas is large freestanding building. This development type provides the large floorplates typically required for education or employment uses. Its moderate building height contributes to memorable, well-framed spaces with good amenity.

The large area of these provides opportunities for these larger footprint buildings and generous tree planting.

Through Site Links

Employment Growth sites are typically large, and form barriers in the local movement network. Therefore, their development should incorporate new links to repair the network, as shown in the Public Realm Framework in Section 3.4 and in accordance with Design Direction 2: Promote active transport access.

Building height and density

Buildings of 33 metres-41 metres (8 to 10 storeys) (with large floorplates) are appropriate given the intended innovation, research, institutional and advanced manufacturing uses.

This range of heights would deliver a density in the order of 4.5:1. This reduces to approximately 3.1 to 3.8:1 after a provision has been made for additional internal thoroughfares and open space.

Street wall height

The maximum street wall height is proposed to be 25 metres, to balance spatial definition and a sense of openness, and to maintain solar access in the streets, while allowing for variation, in accordance with Strategy BF6: Street scale.

Building setbacks

The following indicative minimum setbacks are proposed:

Street:

- A 6 metres street setback to the street walls, to provide for canopy trees, in accordance with Strategy BF14: On-site landscaping
- A 6 metres setback from any directly abutting properties, to provide for canopy trees, in accordance with Strategy BF14: On-site landscaping, and to ensure reasonable amenity for building occupants and to maintain equitable development opportunities for neighbouring properties.

Podium:

- An additional 6 metres above the street wall to maintain a sense of openness and solar access
- Adjacent to property where dwellings are orientated set back additional 0.6 metres per metre of height above 13 metres to minimise impacts of visual bulk.

Overshadowing

The recommended building scale and massing will achieve the recommended solar access standard to ensure good amenity in the public realm and to complement the existing character of typical streets. The solar access standard recommended will maintain sunlight to southern, eastern and western footpaths in typical streets at the September equinox. This is considered to strike an appropriate balance between solar access and providing for growth.

The building scale and massing recommended at the edges of Monash Business Park Reserve will maintain solar access to 50 per cent of the open space for a minimum of 3 hours at the spring equinox.

Summary of built form outcomes

The built form outcomes for large freestanding building development type are summarised below.

Building height and density		
Maximum height	33 metres-41 metres (8 to 10 storeys)	
Maximum density	4.5:1 (reducing to 3.8:1 after provisions for internal roads and open space)	
Street Wall		
Maximum height	25 metres (6 storeys)	
Building setbacks		
Street - minimum	6 metres landscaped + 6 metres above the street wall	
Side and rear	6 metres, landscaped + 0.6 metres per metre of height above 13 metres adjacent to property where dwellings are orientated	
Overshadowing		
Place type of neighbouring property	**Number of hours between 9am and 3pm at the September equinox during additional shadow is to be avoided**	**Minimum area of open space to which additional shadow is to be avoided**
Key movement corridor, Urban neighbourhood	3 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residential neighbourhood	4 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residentially zoned properties outside the Structure Plan Area	5 hours	40 square metres or 75 per cent of secluded private open space, whichever is the lesser

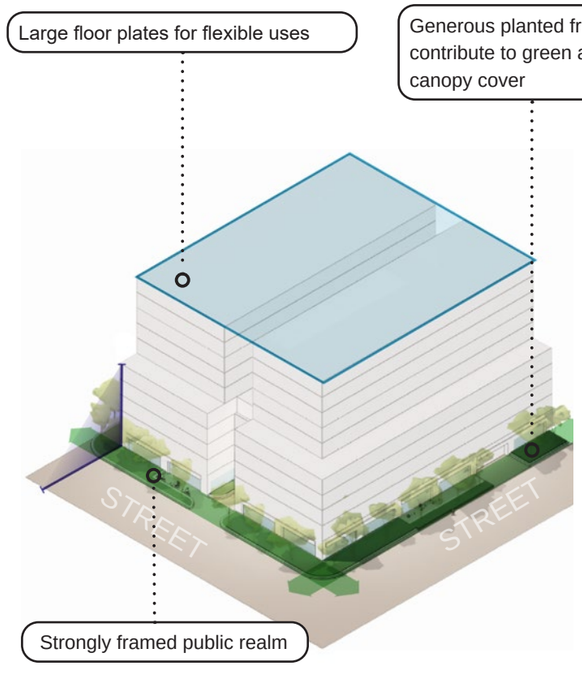


Figure 6.35: Urban form outcomes for large freestanding building typology

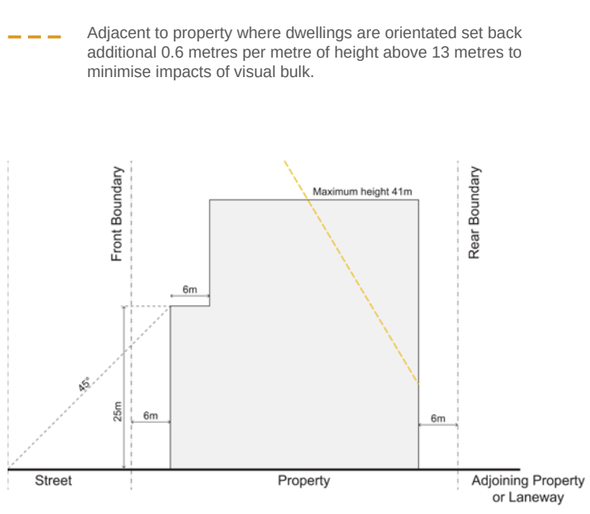


Figure 6.36: Built form outcomes section - front to rear

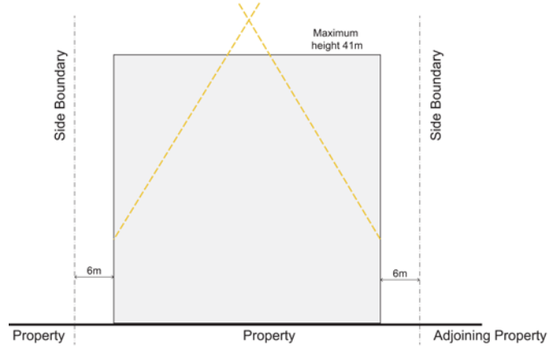


Figure 6.37: Built form outcomes section - side to side

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in the Employment Growth sites. Achieving this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

Development

Development features that are key to creating an accessible and permeable Employment Growth, as part of Design direction 2: Promote active transport access.

- Critical Key Link (new) - Flexible
- Local Key Link (new) – Fixed
- Local Key Link (new) – Flexible
- Open space (new) - investigation area
- Network of new Green Streets
- Proposed Mile Creek corridor linear green corridor

Public realm enhancements

Streets enhanced to deliver Direction 1: Ensure streets are inviting places that support community life.

- Ferntree Gully Road and Blackburn Road upgrades – Avenue
- Improvements to Green Streets
- Pedestrian crossings (new or upgraded)
- Pedestrian crossings (new or upgraded)
  - SRL Rail and Infrastructure Project

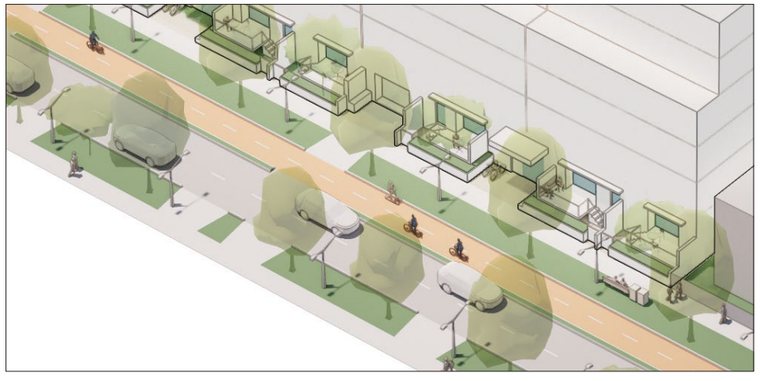


Figure 6.38: Indicative illustration showing a Green Street within Employment Growth

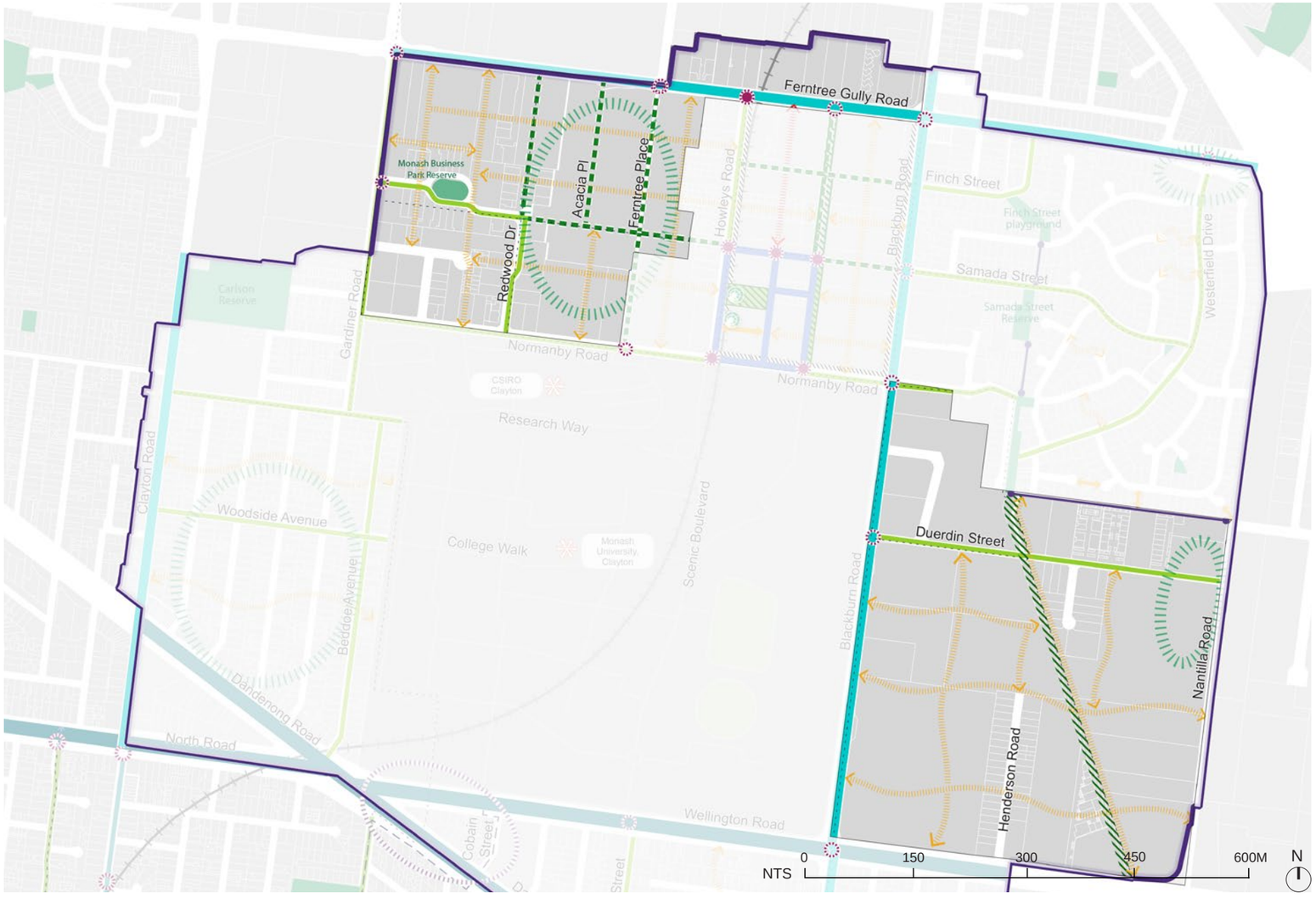


Figure 6.39: Employment Growth public realm outcomes

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Urban Form Area Boundary

Typical building and public realm profile

This cross-section shows a large freestanding building with a Green Street to provide an illustration of the future built form and public realm outcomes for this area.

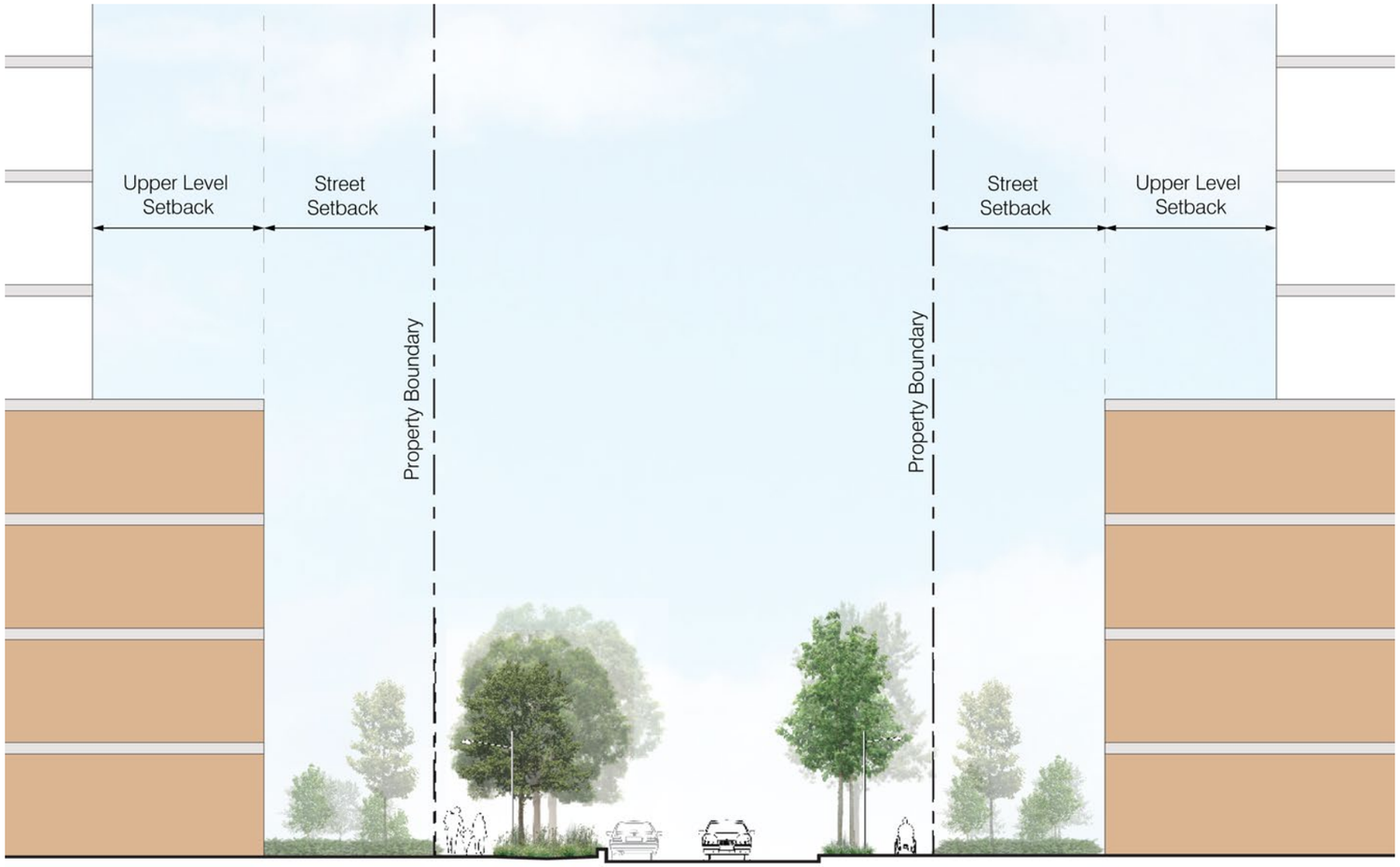


Figure 6.40: Potential section - Green Street

6.7 Residential Neighbourhoods

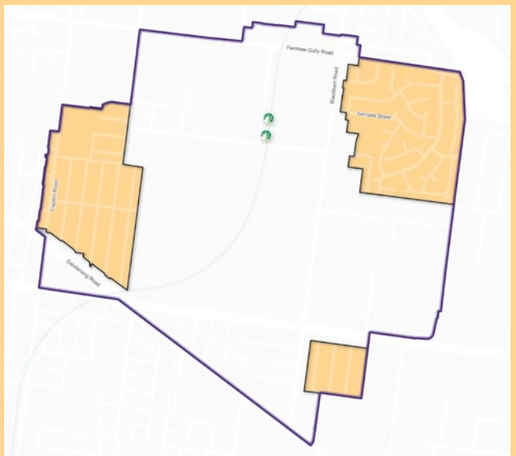
Low-rise neighbourhoods

The Urban Form Areas identified as belonging to this place type include:

- J - Notting Hill
- K - Residential West

Refer to Section 4.5 for a detailed description of this Urban Form Area.

Figure 6.41: Key map - Residential Neighbourhoods



Future role and function

Moderate intensification of built form providing space for more housing

These Urban Form Areas lie further from the Core, so have the least accessibility to jobs and services within the Monash Structure Plan Area. They have a low-rise residential character, and also are adjacent to lower-rise residential hinterland. Therefore, only a moderate level of intensification is sought to balance aspirations for growth with responsiveness to existing character, consistent with the SRL Urban Design Objective Responsiveness.

Future drivers

Maintain sense of openness in the street

These Urban Form Areas generally lie towards the edge of the Structure Plan Area and have a low-rise existing character. Therefore, future development should maintain a sense of openness in the street to mediate the transition in character.

Retain garden setting

These Urban Form Areas are characterised by detached dwellings in a garden setting. This delivers high quality amenity and tree canopy cover, and manages the impact of dwellings on neighbouring amenity. Therefore, new development in these Urban Form Areas should retain the garden setting attribute to maintain these outcomes.

Future urban form

The Residential Neighbourhoods will have a permeable street network with a number of Green Streets to enhance urban biodiversity network and provide inviting pedestrian routes to key destinations including open spaces. A number of local new pedestrian links are proposed to enhance pedestrian permeability where there are long blocks

The Residential Neighbourhoods will be developed into a mix of mid-rise apartment buildings and low-rise townhouses within a garden setting. Generous building setbacks and landscaping will manage the change in scale from the existing built form. The built form will be set back from the street to provide for canopy trees, while the upper levels will be set back to lessen their visual impact on the public realm. Fine-grain character around existing small retail strips will be retained. Rear setbacks and side setbacks of apartment buildings will provide for canopy trees and lessen the visual and shadow impact of the upper levels on neighbouring properties.

Figure 6.42: Examples of the form of development envisaged for Residential Neighbourhoods.

Built form outcomes

The development types recommended in the Residential Neighbourhoods are the garden apartments on amalgamated lots and townhouses on single lots.

Garden apartments provide for the same type of development on amalgamated lots as proposed in phase 2 of the Future Homes program, or, going back further, the art deco apartment boom of the 1920s and 30s, but with a slightly increased density, which is considered appropriate because these areas are within walking distance of a higher-order (SRL) station. However, the density is limited to mediate the transition in character and provide a different housing choice than that offered in other urban form areas. In particular, approximately 20 per cent of the apartments will have generous ground level gardens, making them suitable for families.

The development of 4 to 6-storey garden apartments rely on the amalgamation of two typical lots, which is necessary to deliver higher density while providing good-quality internal amenity, and providing a well-landscaped perimeter (see Urban Development Typologies in SRL East Structure Plan - Urban Design Supporting Research - Attachment A).

Importantly, lot amalgamation enables generous side and rear setbacks which will provide for high-quality on-site amenity and significant contribution to tree canopy cover. This typology provides a 35 per cent deep soil area across the front, sides and rear of the lot.

The substantial provision for canopy trees in front, side and rear setbacks will retain and strengthen the leafy character that predominates in these areas. These trees will significantly mitigate the visual presence of taller buildings on the existing streetscape and backyard of these areas.

The landscaped setbacks from all boundaries will also offset the impacts of taller built form on the amenity of neighbouring properties.

Garden apartments are proposed to be limited to 4 storeys in sensitive areas, in accordance with Strategy UF1: Substantial change.

The development of 3-storey townhouses with lesser side setbacks are appropriate on typical single lots.

Low front fences and front doors and windows facing the street will provide passive surveillance of the street.

Building height and density

The height of garden apartments in most parts of Residential Neighbourhoods is determined by solar planes intended to protect the amenity of neighbouring properties, resulting in an indicative maximum height of 6 storeys. Although this substantially exceeds the existing building heights, generous landscaped setbacks are proposed to manage this change in character and limit amenity impacts. The proposed maximum height and minimum setbacks delivers a density of approximately 2:1.

In sensitive areas, garden apartments are proposed to be limited to 4 storeys for the reasons outlined in Strategy UF1: Substantial change. The areas where garden apartments are proposed to be limited to 4 storeys are shown in Figure 4.6 in Section 4. Where appropriate, the boundaries between areas of 4 or 6 storeys have been adjusted to maintain coherent character areas. This delivers a density of approximately 1.5:1.

Lots less than 24 metres wide (most single lots) are not able to accommodate the proposed side setbacks. Therefore, lesser side setbacks are allowed on these lots. However, they are limited to a height of 3 storeys to manage the impacts of those modest side setbacks. This delivers a density of approximately 1.2:1, which is hoped to incentivise lot amalgamation to enable higher amenity and greening outcomes.

Street wall height

The maximum street wall height is proposed to be 14 metres (4 storeys) for garden apartments, except 11 metres (3 storeys) in sensitive areas and for Townhouses, to complement the existing lower-rise buildings in these areas.

Building setbacks

The following minimum setbacks are proposed:

- A 4-metre street setback, to provide for canopy trees, in accordance with Strategy BF14: On-site landscaping
- An additional setback above the street wall of 0.5 metres per metre of height to lessen the visual impact of the upper form
- A rear setback of 6 metres to provide for canopy trees, in accordance with Strategy BF14: On-site landscaping
- Additional rear setbacks of 0.7 metres per metre of additional height above 11 metres, or above 14 metres where abutting public open space to manage visual bulk impacts.

Lots equal or greater than 24 metres in width (including where abutting public open space) :

- A 4.5-metre side setback to provide for canopy trees, in accordance with Strategy BF14: On-site landscaping
- For buildings higher than 14 metres, a further side setback of 0.8 metres per metre of height to lessen the visual and shadow impact of the upper form.

Lots less than 24 metres in width, front half of the site:

- Zero side setback for buildings up to a height of 6.9 metres
- A 2-metre side setback for buildings higher than 6.9 metres to lessen the visual and shadow impact of the upper form
- Side setback of 2m where abutting public open space.

Lots less than 24 metres in width, rear half of the site (including where abutting public open space):

- A 2-metre side setback for buildings up to a height of 6.9 metres
- For buildings higher than 6.9 metres, a further side setback of 1m per metre of height to lessen the visual and shadow impact of the upper form.

Side street

- A 4-metre setback for lots equal or greater than 24 metres in width, to provide for canopy trees
- A 2-metre setback for lots less than 24 metres in width, to provide for canopy trees.

Existing small retail strips

- In the existing small retail strip located at Westerfield Drive small retail strip, the street setback should match the prevailing building line, in accordance with Strategy BF8: Active frontages
- Zero side setback for buildings up to a height of 6.9 metres to maintain the existing commercial function
- For buildings up to a height of 11 metres, a 2-metre side setback above a height of 6.9 metres to provide good internal amenity in accordance with Strategy BF11: Building orientation
- For buildings higher than 11 metres, a 4.5-metre side setback above a height of 6.9 metre and a further side setback of 0.8 metres per metre of height above 14 metres to provide for good internal amenity and equitable development, in accordance with Strategy BF11: Building orientation.

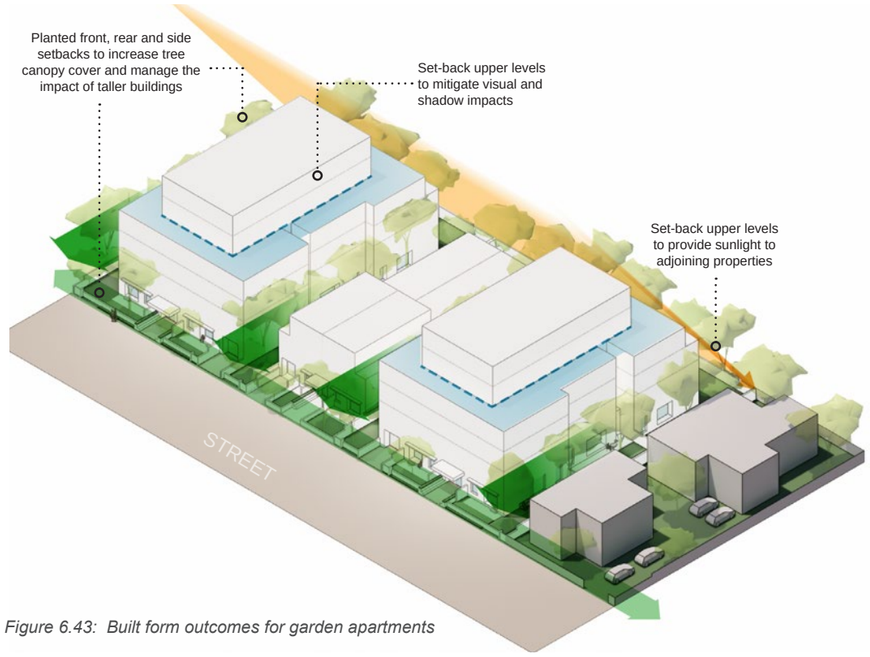


Figure 6.43: Built form outcomes for garden apartments

Building separation

Within a site, buildings should be separated by a minimum of 9 metres.

Overshadowing

The recommended building scale and massing will achieve the recommended solar access standard to ensure good amenity in the public realm and to complement the existing character of typical streets. The solar access standard recommended will maintain sunlight to southern, eastern and western footpaths in typical streets at the September equinox. This is considered to strike an appropriate balance between solar access and providing for growth.

The building scale and massing recommended at the edges of:

- Carlson Avenue Reserve will maintain 70 per cent solar access to these spaces for a minimum of 3 hours at mid-winter
- Samada Street Reserve, Berrydale Court Reserve, Finch Street Playground and Westerfield Drive Reserve will maintain solar access to 50 per cent of the open space for a minimum of 3 hours at mid-winter.

No solar access standard is recommended for Cambro Road Playground and Akuna Avenue Linear Reserve as this will unreasonably reduce the provision for growth, due to the virtue of their configuration, relationship with surrounding development and nearby sunny spaces.

The building scale and massing will also limit additional shadow to private open space in the rear setbacks of properties in Key Movement Corridors.

Summary of built form outcomes

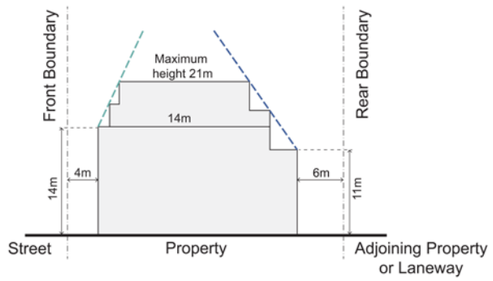
The built form outcomes for are summarised below.

Lots equal to or greater than 24 metres in width (garden apartments)	
Building height and density	
• Maximum height • Maximum height - sensitive areas	• 21 metres (6 storeys) • 14 metres (3 to 4 storeys)
• Maximum density • Maximum density - sensitive areas	• 2:1 • 1.5:1
Street wall - street and side street	
• Maximum height • Maximum height - sensitive areas	• 14 metres (4 storeys) • 11 metres (3 storeys)
Activation	Passive surveillance
Building setbacks	
Street - general	4 metres landscaped
Street - existing small retail strips	Match the prevailing building line
Side street - general	4 metres landscaped
Side street - existing small retail strips	Match the prevailing building line
Above street wall	Additional 0.5 metres per metre of height above the street wall
Side - general (including where abutting public open space)	4.5 metres landscaped plus 0.8 metres per metre of height above 14 metres
Side - existing small retail strips	Zero metres up to a height of 6.9 metres, above that 4.5 metres plus 0.8 metres per metre of height above 14 metres
Rear - general, adjacent to developable property	6 metres landscaped plus 0.7 metres per metre of height above 11 metres
Rear - abutting public open space	6 metres landscaped plus 0.7 metres per metre of height above 14 metres
Rear - existing small retail strips	6 metres above ground floor plus 0.7 metres per metre of height above 11 metres

Lots less than 24 metres in width (townhouses)	
Building height and density	
Maximum height	11 metres (3 storeys)
Maximum density	1.2:1
Street wall - street and side street	
Maximum height	11 metres (3 storeys)
Activation	Passive surveillance
Building setbacks	
Street - general	4 metres landscaped
Street - existing small retail strips	Match the prevailing building line
Side street - general	2 metres landscaped
Side street - existing small retail strips	Match the prevailing building line
Side - Front half of the site adjacent to developable property	Zero metres up to a height of 6.9 metres, 2 metres above heights of 6.9 metres
Side - Front half of the site abutting public open space	2 metres
Side - Rear half of the site (including where abutting public open space)	2 metres plus 1 metre per metre of height above 6.9 metres
Side - existing small retail strips	Zero metres up to a height of 6.9 metres, 2 metres above a height of 6.9 metres
Rear - general, adjacent to developable property	6 metres landscaped plus 0.7 metres per metre of height above 11 metres
Rear - general, abutting public open space	6 metres landscaped plus 0.7 metres per metre of height above 14 metres
Rear - existing small retail strips	6 metres above ground floor

All lots		
Building separation		
Minimum building separation	9 metres	
Overshadowing		
Key movement corridor, Urban neighbourhood	3 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residential neighbourhood	4 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residentially-zoned properties outside the Structure Plan Area	5 hours	40 square metres or 75 per cent of secluded private open space, whichever is the lesser
Residential neighbourhood	4 hours	40 square metres or 75 per cent of any open space in a rear setback, whichever is the lesser.
Residentially zoned properties outside the Structure Plan Area	5 hours	40 square metres or 75 per cent of secluded private open space, whichever is the lesser

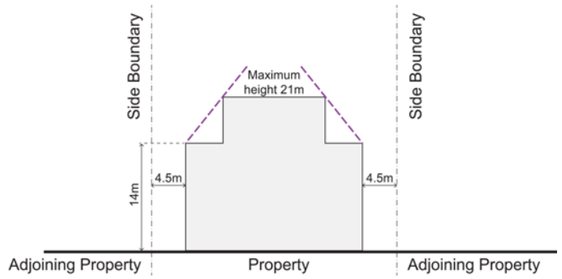
Garden apartments



Set back additional 0.7 metres per metre of height above 11 metres

Set back additional 0.5 metres per metre of height above 14 metres

Figure 6.45: Garden Apartment section front and rear



Set back additional 0.8 metres per metre of height above 14 metres

Figure 6.46: Garden Apartment section sides

Townhouses

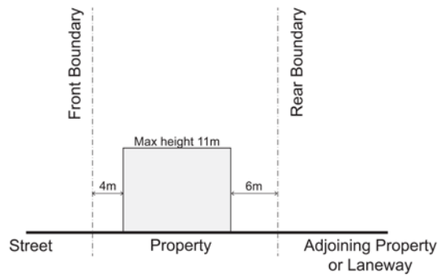


Figure 6.47: Townhouse section front and rear

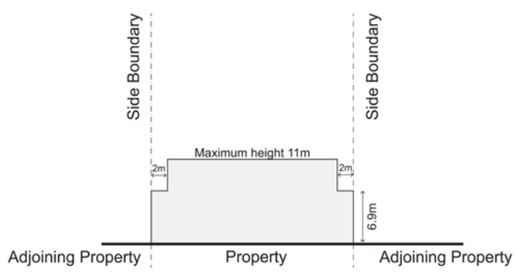


Figure 6.48: Townhouse section side interfaces in the front half of the site

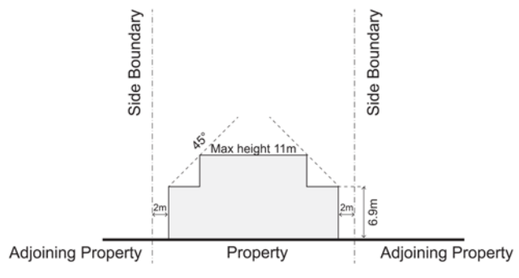


Figure 6.49: Townhouse section side interfaces in the rear half of the site

Figure 6.44: The illustration is typical only

Public realm outcomes

The Public Realm Framework identifies the future aspiration for the public realm in Residential Neighbourhoods. Achieving this aspiration relies on development and public realm projects that vary in scale and importance as outlined below.

Development

Development features that are key to creating an accessible and permeable Residential Neighbourhoods, as part of Design direction 2: Promote active transport access.

- Local Key Link (new) – Flexible
- Open space (new) - investigation area
- Active frontages to open space

Public realm enhancements

For enhancements to deliver Design Direction 1: Ensure streets are inviting places that support community life.

- Improvements to Green Streets

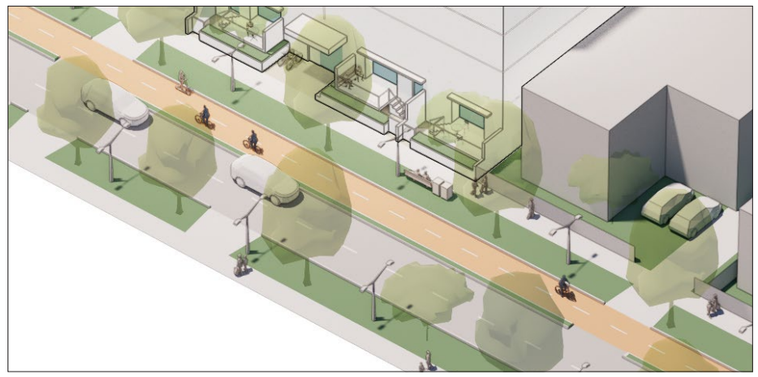


Figure 6.50: Indicative illustration showing an Activity Street within the Residential Neighbourhoods

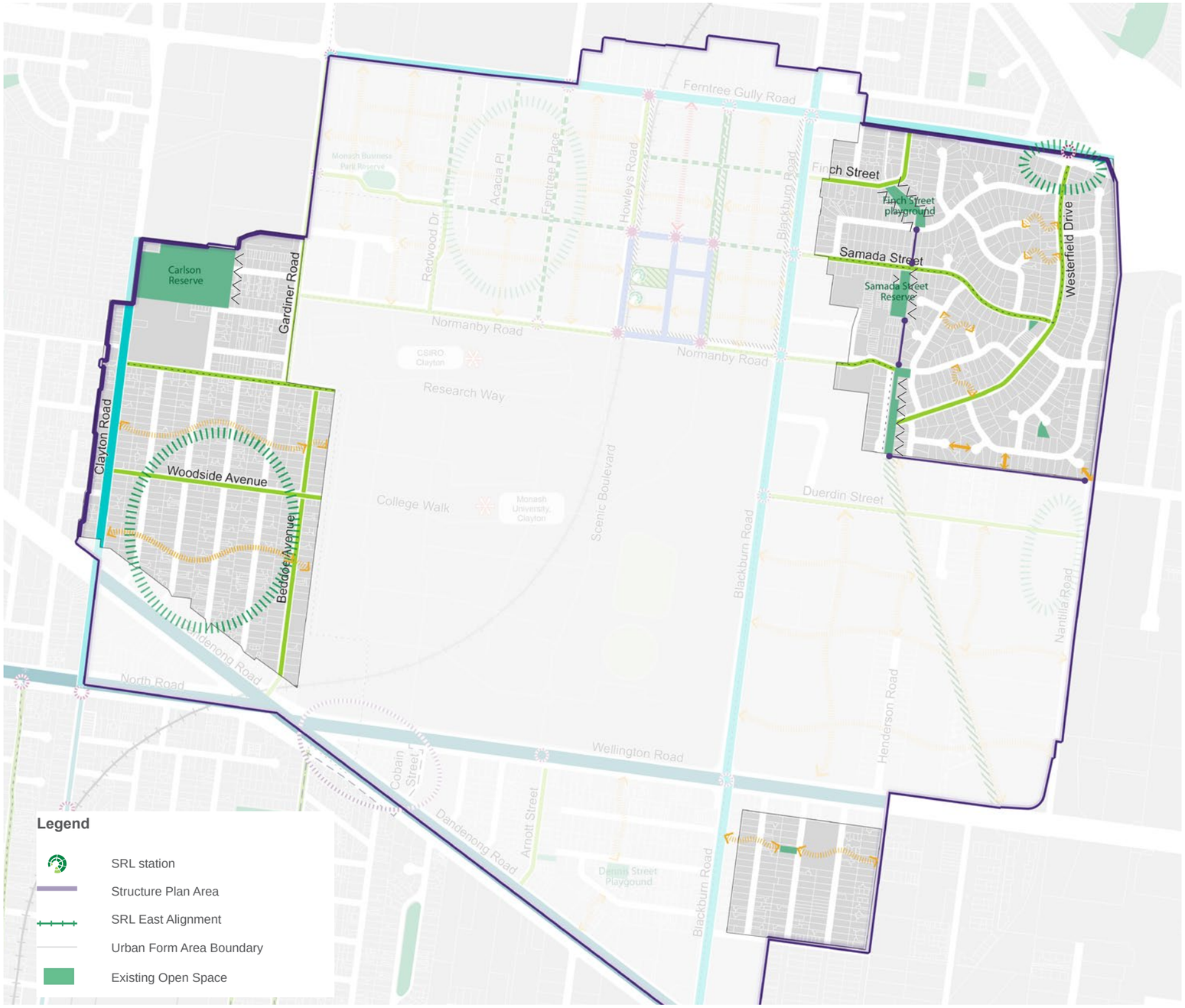


Figure 6.51: Residential Neighbourhoods public realm outcomes

Typical building and public realm profile

This cross-section shows a garden apartment building with a Local Street to provide an illustration of the future built form and public realm outcomes for this area.

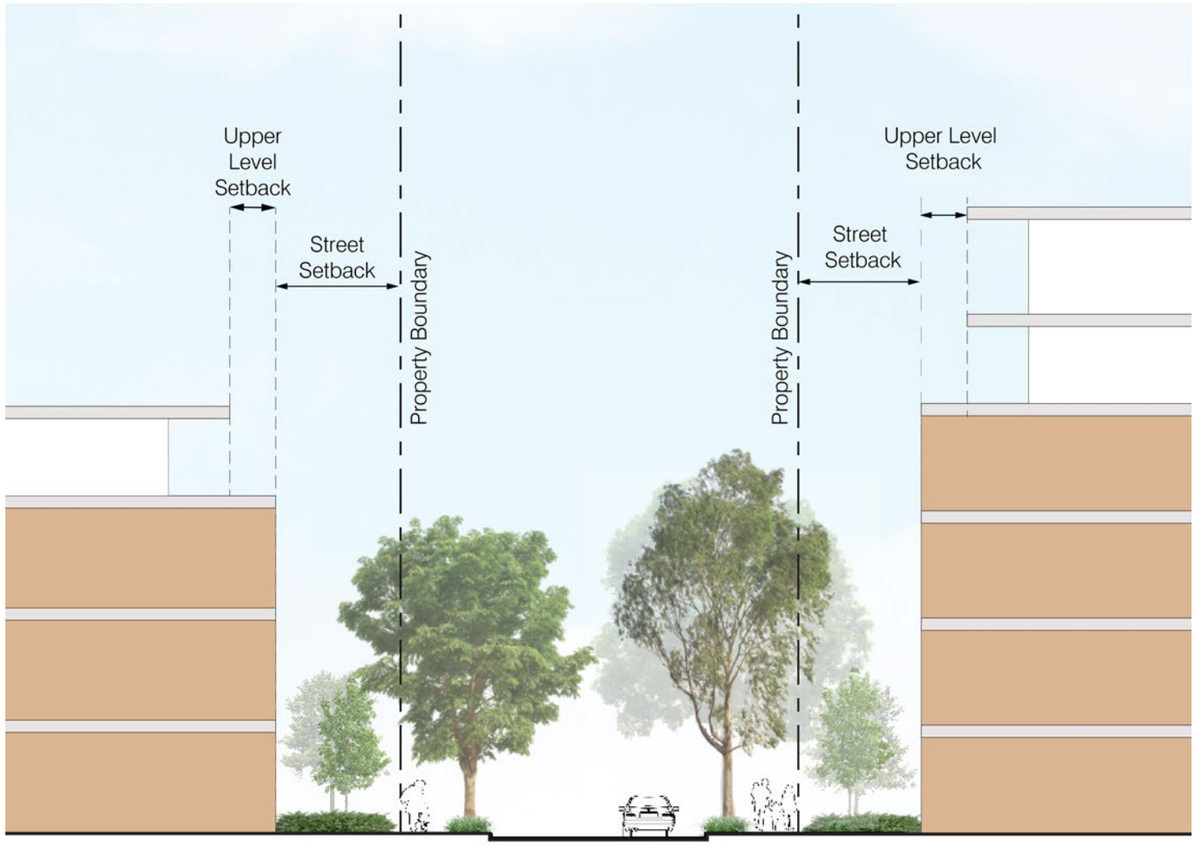


Figure 6.52: Potential section - Local Street

6.8 Strategic Sites

Strategic Sites have increased capacity for intensification and strong potential to deliver SRLA policy objectives and/or public benefit outcomes.

The Strategic Sites in Monash:

- Station development area

These sites are shown on the Urban Form Framework plan in Section 4.5

What is a Strategic Site?

Strategic Sites have increased capacity for intensification and strong potential to deliver SRLA policy objectives and/or public benefit outcomes.

A Strategic Site should meet at least 2 of the below criteria:

- Complexity of issues to resolve including land use, built form, movement that require a bespoke planning control or process to achieve desired outcomes
- Opportunity for strategic public benefit (including significant contribution towards housing or employment growth) and/or support Victorian Government policy outcomes, that would be lost if the site was not clearly identified as strategic
- Capacity and scale – ability for significant investment or benefit to be unlocked within the lifespan of the Structure Plan (for example, by 2041).

Strategic Sites that meet the criteria and require the application of bespoke planning controls to provide direction on their future development and are as follows:

- Station development area.

Station Development Areas

These are sites where future development is proposed on land surplus to SRL East operations in the core of the Structure Plan Area. These sites will include adjacent or over SRL stations and station buildings that leverage the high level of accessibility and services available by directing intensified built form closest to the SRL station.

6.9 Urban development typology testing

Calculating floor area ratio (FAR)

An indicative floor area ratio (FAR) was calculated for each urban development type based on 3D modeling on typical lot sizes within the relevant Urban Form Area.

The FAR was determined by calculating the total gross floor area (GFA) of a building above ground level, measured from the outside of external walls, and includes all roofed areas (in accordance with GFA definition at Clause 73.01 of the VPP) divided by the area of the site.

The envelope includes:

- All enclosed areas
- Covered balconies
- Services
- Voids associated with lifts, car-stackers and similar service elements (considered as multiple floors of same height as adjacent floors).

The envelope does not include:

- Basements
- Any uncovered communal outdoor areas.

This is consistent with the approach taken in the City of Melbourne.

As this report is focused on urban design outcomes, it seeks to understand the overall building volume that may be possible with each development type, and makes no assumptions about the degree to which this volume may be occupied by car parking.

Any calculation of useable residential or commercial floor areas would need to make appropriate adjustments to allow for car parking.

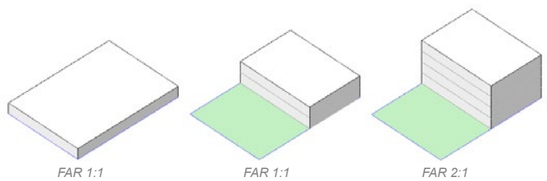
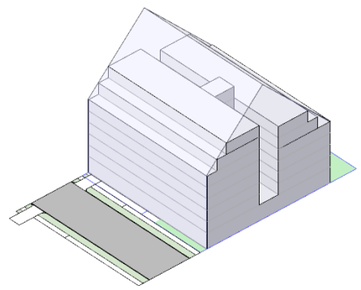


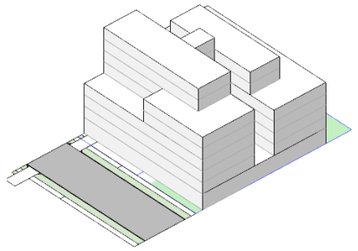
Figure 6.53: Floor area ratio (FAR) principle

Architectural articulation efficiency

A likely building volume was modeled within the maximum permissible envelope on each site based on the proposed maximum height and minimum setbacks, and the floor-to-floor height assumptions. Thereafter, 10 per cent of that FAR was deducted to allow for further architectural design flexibility and massing articulation, such as reducing the number of upper-level setbacks or adaption to specific site conditions.



Permissible building envelope



Architectural articulation reduces yield by 10 per cent

Figure 6.54: Architectural articulation principle

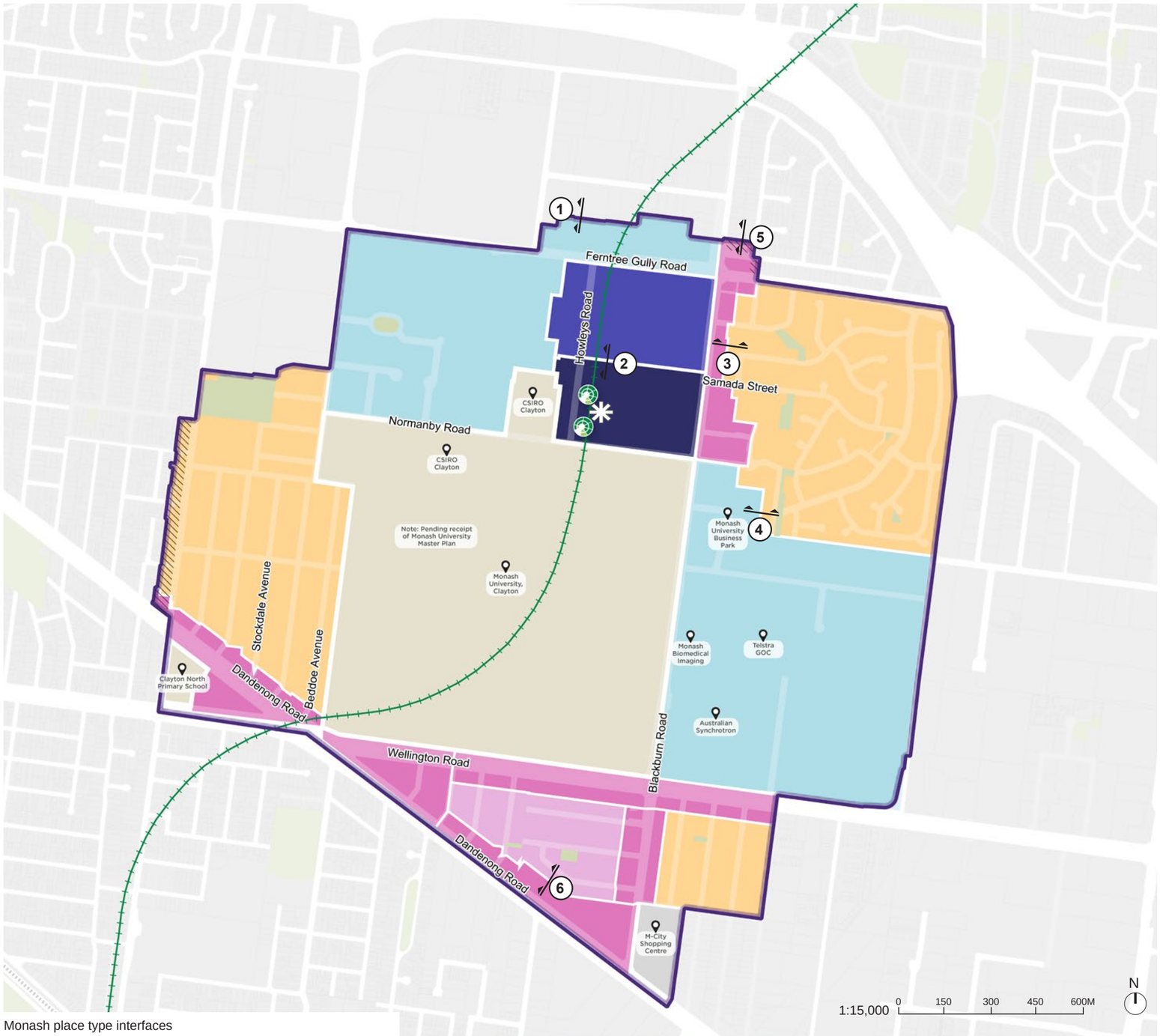
Floor height assumptions

The development types were defined according to current best-practice and compatibility with Clause 58 as a minimum standard.

Building floor-to-floor height	
Residential levels	3.2 metres
Residential ground floor (raised floor or high ceilings for adaptability)	4 metres
Commercial ground floor	4.5 metres
Commercial upper floor	3.8 metres (4 metres in purely commercial buildings)

Place type interfaces

This section illustrates the built form interfaces between different Place Types through a series of section drawings. The plan on this page indicates the location of each section.



Monash place type interfaces

Legend

- SRL station
- Structure Plan Area
- SRL East Alignment
- Strategic site - Station development area
- Universities and Australian Government statutory authorities

Place types

- Central Core
- Central Flanks
- Key Movement Corridors
- Urban Neighbourhoods
- Employment Growth
- Residential Neighbourhoods

1 Employment Growth to industrial land outside the Structure Plan Area

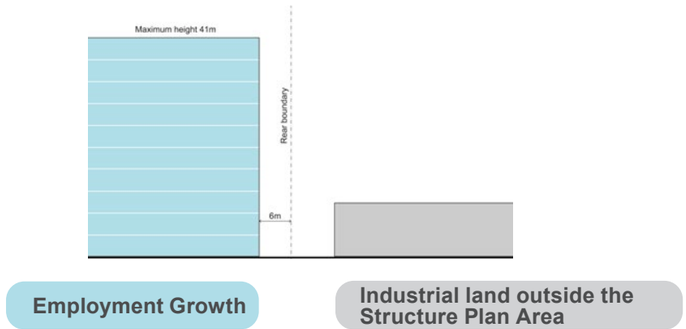
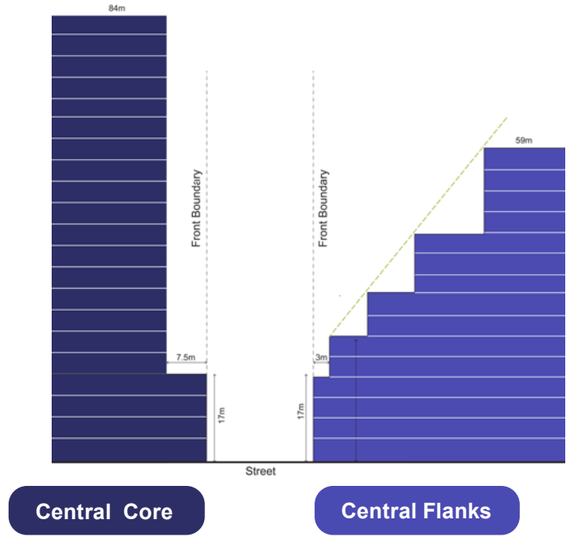


Figure 6.55: Interface section 1. Typical interface section indicative only.

2 Central Core to Central Flanks



Legend

Envelope controls

On north side of east/west street set back additional 0.8 metres per metre of height above 23 metres

Set back additional 0.7 metres per metre of height above 11 metres

Adjacent to property where dwellings are orientated set back additional 0.6 metres per metre of height above 13 metres to minimise impacts of visual bulk.

Figure 6.56: Interface section 2. Typical interface section indicative only.

3 Key Movement Corridor to Residential Neighbourhoods

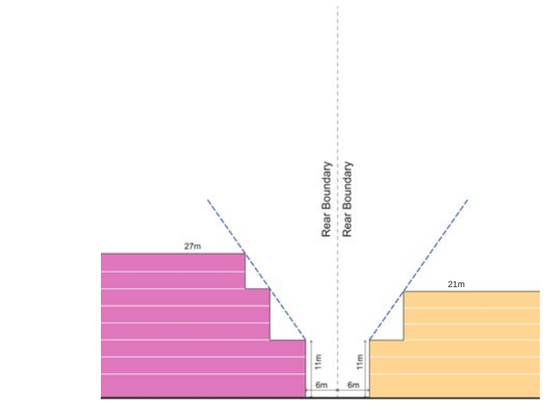


Figure 6.57: Interface section 3. Typical interface section indicative only.

4 Employment Growth to Residential Neighbourhoods

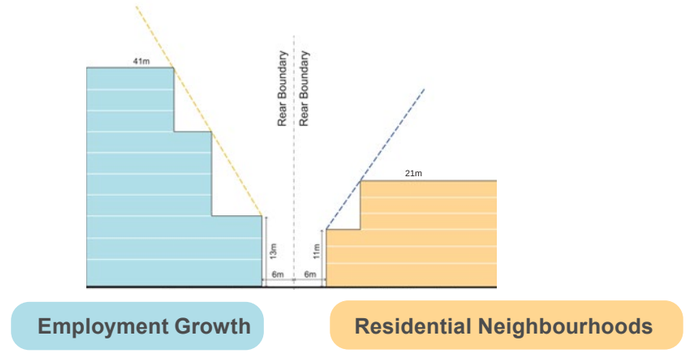


Figure 6.58: Interface section 4. Typical interface section indicative only.

5 **Key Movement Corridor to Residential Neighbourhoods outside the Structure Plan Area**

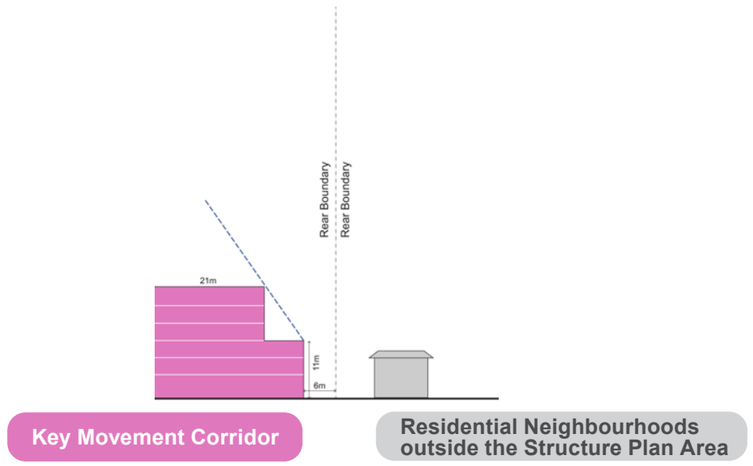


Figure 6.59: Interface section 5. Typical interface section indicative only.

6 **Key Movement Corridor to Urban Neighbourhood**

Legend

Envelope controls

Set back additional 0.7 metres per metre of height above 11 metres

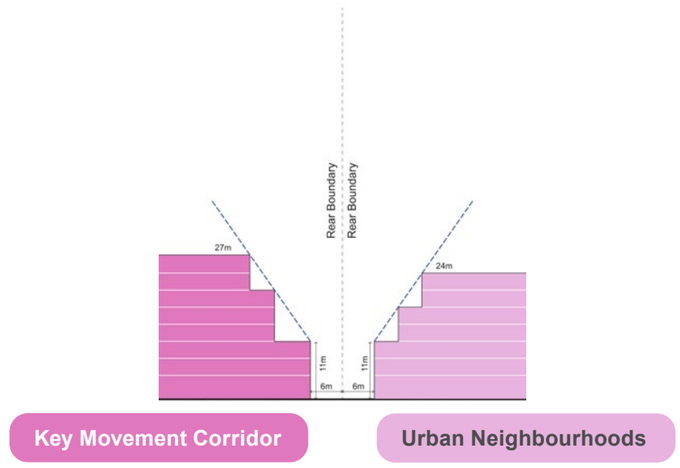


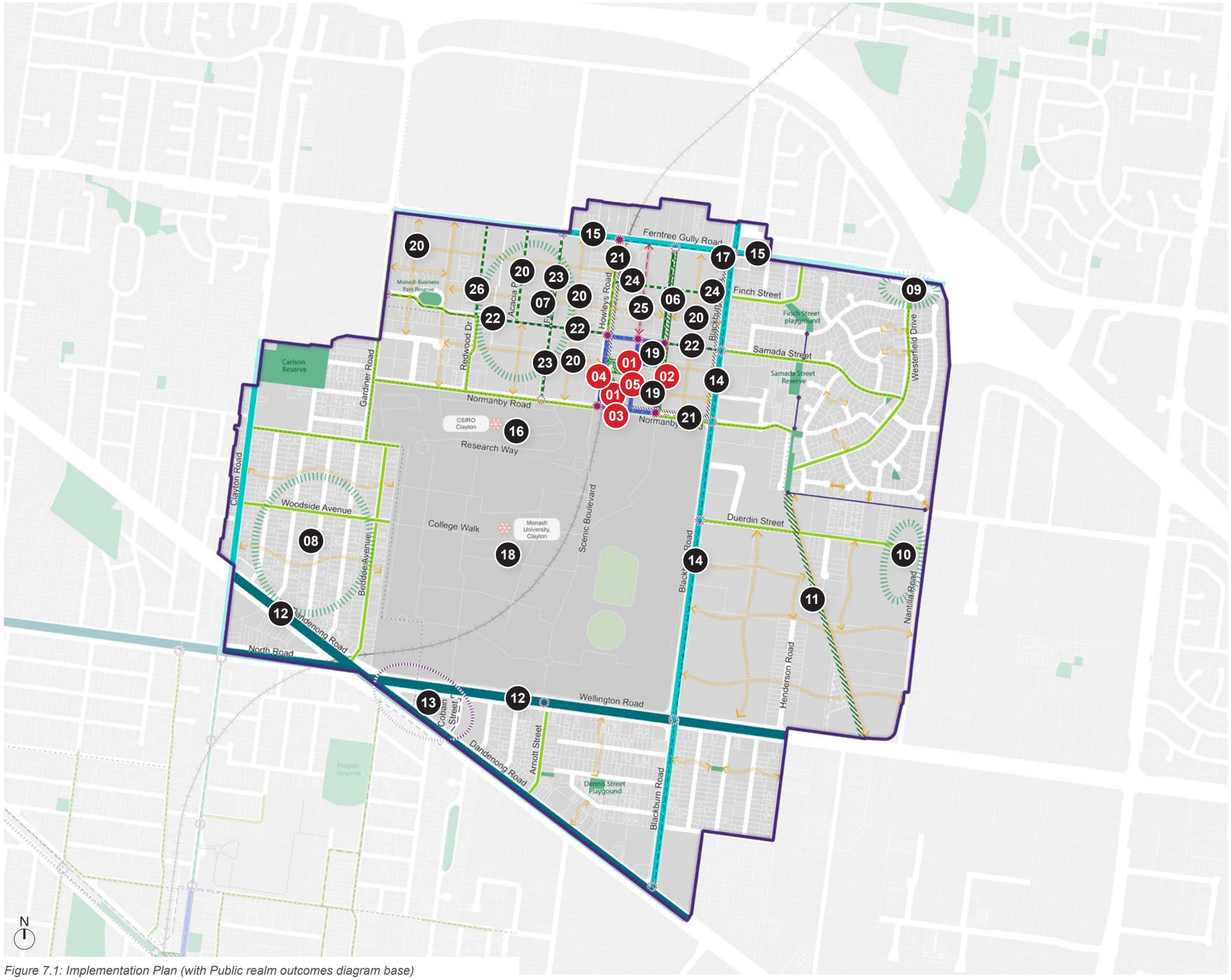
Figure 6.60: Interface section 6. Typical interface section indicative only.

7 Recommendations summary

Joint Venture

This report recommends a range of urban design initiatives to be incorporated within the Monash Structure Plan. These initiatives will deliver a permeable and inviting public realm that promotes walking and street life, and a series of new urban character areas that will deliver the level of growth and diversity appropriate for this highly accessible and jobs-rich location.

The urban design initiatives are summarised below.



- SRL Rail Scope
- Structure Planning Scope Initiative / Recommendation
- SRL station
- Structure Plan Area
- Boulevard
- Avenue
- Activity Street
- Green Street
- Green Street - New
- *Work with land manager / owner to improve links and access through site*
- Critical new pedestrian link - Fixed
- Important new pedestrian link - Flexible
- Local new pedestrian link - Fixed
- Local new pedestrian link - Flexible

Figure 7.1: Implementation Plan (with Public realm outcomes diagram base)

Ref.	Urban Design Initiatives / Recommendations
01.	**New central public space at SRL station** Deliver a new central public open space near the SRL station entrance as part of the approved SRL station development.
02.	**SRL station new green link and open space** Deliver a linear open space and green link as part of the approved SRL station development that extends between Normanby Road and Samada St.
03.	**Normanby Road upgrades within the SRL station environs** Deliver upgrades to Normanby Road as part of the approved SRL station development as a high amenity space for pedestrians.
04.	**Re-design Howleys Road** Deliver a design that establishes Howleys Road as the major axis within a new, street-oriented town centre, that is well-integrated with Scenic Boulevard to facilitate integration of Monash University, the SRL station environs and the broader precinct.
05.	**Activity streets at the SRL station environs** Deliver a street network at the SRL station core with generous pedestrian circulation space, street trees and high-quality materials that supports public life and activity and provides an attractive and comfortable pedestrian experience.
06.	**New Green Street and linear open space between Samada Street and Ferntree Gully Road** Facilitate provision of a new linear open space and local 'Green Street' that extends north-south between Samada Street and Ferntree Gully Road and connects to the SRL station green link linear open space.
07.	**New open space(s) to 'close the gap' to north-west** Facilitate provision of a new high-quality open space/s around Acacia Place to address gaps in 400 metres open space walkable access.
08.	**New open space to 'close the gap' to south-west** Facilitate a new high-quality open space in the area around Beddoe Ave, Stockdale Ave and Marshall Ave (ideally street to street or corner site) to address the gap in 400 metres open space walkable access.
09.	**New open space to 'close the gap' to north-east** Facilitate a new high-quality open space between Ferntree Gully Road and Redwood Drive to address the gap in 400 metres open space walkable access.
10.	**New open space to 'close the gap' to east** Facilitate a new high-quality open space in the area around Nantilla Road and Duerdin Street to address the gap in 400 metres open space walkable access.
11.	**Mile Creek corridor linear green corridor** Investigate enhancements to the drainage corridor to naturalise and enhance as a new publicly accessible linear park to connect the broader eastern precinct and address the gap in 400 metres open space walkable access.
12.	**Wellington Road, North Road and Dandenong Road upgrades** Plan for Wellington Road, North Road and Dandenong Road upgrades to reinforces their roles as a public transport corridor, and to improve landscape and pedestrian outcomes.
13.	**Wellington Road and Dandenong Road upgrades** Plan for Wellington Road and Dandenong Road upgrades to reinforces their roles as a public transport corridor, and to improve landscape and pedestrian outcomes.
14.	**Blackburn Road upgrades** Enable Blackburn Road as an enhanced tree-lined street that accommodates active and/or public transport, with multiple crossings and pedestrian amenity to be attractive for people to move and dwell.
15.	**Ferntree Gully Road upgrades** Enable upgrades to Ferntree Gully Road as an enhanced tree-lined street that accommodates active and/or public transport and pedestrian amenity to be attractive for people to move and dwell.

Ref.	Urban Design Initiatives / Recommendations
16.	**CSIRO** Investigate public realm improvements including pedestrian links through the site the CSIRO at 36 Gardiner Road to better connect with the surrounding areas.
17.	**Monash Waste Transfer Station** Investigate opportunities to help develop places that contribute to the high-amenity aspirations of the Precinct
18.	**Monash University and Victoria Heart Hospital** Investigate improved pedestrian links, the creation of positive interfaces with the wider area, and opportunities for mixed-use, higher-density development of Monash University land between Scenic Blvd and Blackburn Road.
19.	**Activity streets at the SRL adjacent and over-station development sites** Provide high-quality east-west 'Activity Streets' through the adjacent and over-station development sites to support public life, connectivity and activity between Howleys Road and the new linear open space.
20.	**Monash street network** Facilitate an improved street network (building on SRL station Activity Streets and proposed new Green Streets) at the precinct core and the adjacent employment areas, bound by the Ferntree Gully Road to the north and CSIRO to the south, and Blackburn Road to the east.
21.	**Streetscapes upgrades of Normanby Road east and Howleys Road north** Enable delivery of streetscape upgrades to create a high-quality walking and cycling environment and to support potential future public transport corridor along Normanby Road east and Howleys Road north.
22.	**New Green Street, Samada Street extension (East-West Street)** Deliver new local east-west 'Green Street' between Blackburn Road and Business Park Dr extending Samada Street (East-West Street).
23.	**New Green Street, Ferntree Place extension** Deliver new local north-south' Green Street' between Normanby Road and E Street extension extending Ferntree Place (Ferntree Place Extension).
24.	**New Green Street, Finch Street extension** Deliver new local east-west 'Green Street' between Blackburn Road and Howleys Road (extending Finch St).
25.	**New pedestrian link between Samada Street and Ferntree Gully Road** Deliver a new pedestrian link (Critical Key Link) to extend the new SRL station street network north-south between Samada St and Ferntree Gully Road.
26.	**New Green Street, Redwood Drive extension** Deliver new local east-west 'Green Street' extending Redwood Drive to Ferntree Gully Road (Redwood Drive Extension).

Ref.	Urban Design Initiatives / Recommendations
	Green Streets improvements Enable streetscape improvements to existing local streets that support pedestrian connectivity and access to recreation facilities, enhanced environmental/biodiversity outcomes, and/or the potential to accommodate cycle and bus routes as appropriate at: • Arnott St • Bayview Avenue • Beddoe Ave • Business Park Dr • Duerdin St • Finch St • Ferntree Pl • Gardiner Road • Howleys Road (north of Samada St) • Normanby Road • Redwood Dr • Samada St • Westerfield Dr • Woodside Ave
	New local pedestrian links Investigate new local pedestrian links (Local Key Links) within development sites to improve permeability and local walking access.
	Built form planning provisions Provide built form provisions to achieve future character, public realm amenity and off-site amenity outcomes.
	Public realm amenity planning provisions Provide design provisions to achieve public realm amenity outcomes.