

**MACAULAY  
STRUCTURE PLAN  
2021**



## **Acknowledgement of Traditional Owners**

The City of Melbourne respectfully acknowledges the Traditional Owners of the land, the Wurundjeri Woi Wurrung and Bunurong Boon Wurrung peoples of the Eastern Kulin and pays respect to their Elders past, present and emerging. We are committed to our reconciliation journey, because at its heart, reconciliation is about strengthening relationships between Aboriginal and non-Aboriginal peoples, for the benefit of all Victorians.

## Council Plan 2021-25

The Council Plan 2021-25 sets out our strategic direction and commitment to the community for the next four years. Based on six strategic objectives for our city, this is our detailed plan for our city's revitalisation and considers the needs of all people who access and experience the City of Melbourne municipality. For more information visit [melbourne.vic.gov.au/council-plan](https://melbourne.vic.gov.au/council-plan)



### Melbourne's unique identity and place

Melbourne is a city defined by its places, people, cultures and assets that we want to celebrate and protect. Driven by our creative, entertainment and education sectors, we will ensure Melbourne remains a unique, vibrant and creative city with world-leading liveability.

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Issue 4 - Endorsed Macaulay Structure Plan 2021

May 2022

Cover Image: Heritage industrial warehouse at 85-105 Sutton Street. Photo Credit: City of Melbourne

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Building on the corner of Thompson and Robertson Streets

# FOREWORD FROM THE LORD MAYOR OF MELBOURNE AND DEPUTY LORD MAYOR



## Macaulay Structure Plan

The Macaulay urban renewal area spans 90 hectares of diverse urban environment within North Melbourne and Kensington. It has a distinct and eclectic history, and includes an array of worker's cottages, factories, public housing, and residential and commercial development.

The Macaulay Structure Plan establishes the vision and framework for the next chapter of this unique part of our municipality, one which will honour its character and environmental features, while delivering a high-quality climate-ready renewal precinct.

Macaulay will be home to a growing and diverse community, and is expected to accommodate more than 10,000 residents and 9500 jobs by 2051.

As a mid-rise, mixed-use precinct, we want to achieve diverse housing options that support people to live and work locally. This will include affordable housing, as well as a vibrant mix of shops, offices, spaces for small and medium-sized enterprises and start-ups.

Integrating seamlessly into our neighbouring precincts, residents and visitors will be supported by new community services – including two community hubs and a secondary school – to foster an inclusive and connected local community.

The delivery of new open spaces will provide more opportunities for recreation, and allow residents and visitors to refresh and connect. The revitalisation of the Moonee Ponds Creek will see it transformed into a thriving corridor that connects the community and contributes to Macaulay's sense of place.

The Macaulay Structure Plan celebrates the area's natural environment and incorporates extensive integrated water management to ensure the landscape remains resilient to extreme weather events and changing climates. This in-depth planning ensures Macaulay will be a climate-ready precinct that supports City of Melbourne's goal of zero emissions by 2040.

A reimagined, high-quality public realm will improve access to public transport services, and revitalise walking and bike riding paths to support active and sustainable travel.

The structure plan charts a brilliant future for Macaulay, one that seeks to recognise and celebrate its Aboriginal heritage and deliver a strong identity and sense of place built upon its diverse and distinct urban fabric.

Cities of possibility are built piece by piece through structure plans such as this. We thank each person who lent their voice and shared their vision to ensure this budding inner-city neighbourhood is welcoming to all people and accommodates extraordinary futures.

A handwritten signature in black ink, reading 'Sally Capp'.

Sally Capp  
**Lord Mayor**

A handwritten signature in black ink, reading 'Nicholas Reece'.

Nicholas Reece  
**Deputy Lord Mayor and City Planning portfolio lead**

# PART ONE: INTRODUCTION

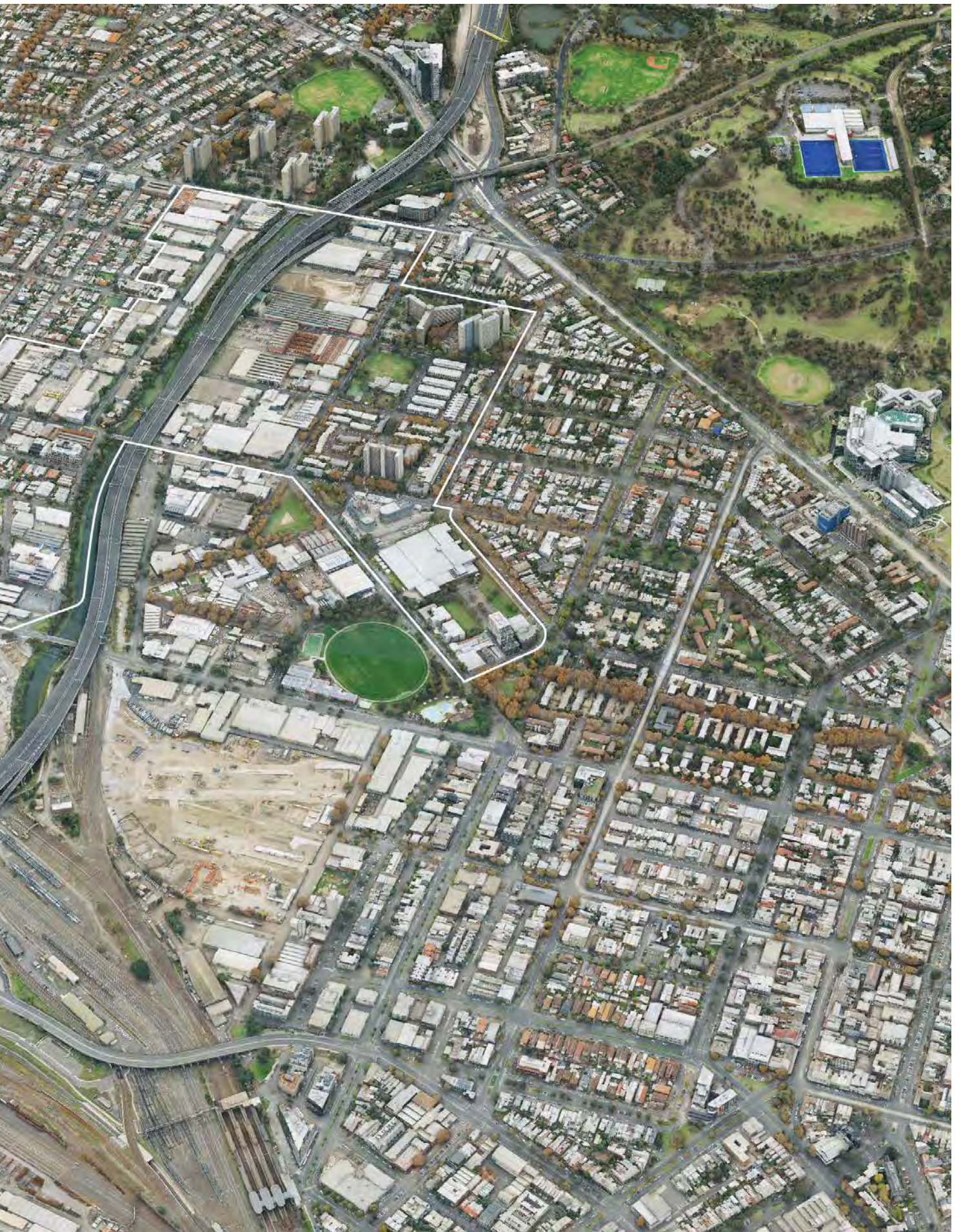
The Macaulay Structure Plan provides a framework to guide development and investment in the Macaulay urban renewal area.

This section includes:

- Urban context and study area
- About Macaulay and drivers for change
- Developing the Macaulay Structure Plan
- The vision for Macaulay and key moves.



Image 1: Aerial view of the Macaulay urban renewal area that is located within the suburbs of North Melbourne and Kensington



# 1.1 URBAN CONTEXT AND STUDY AREA

## The structure plan area

The Macaulay urban renewal area covers approximately 90 hectares of land north-west of central Melbourne incorporating parts of Kensington and North Melbourne.

Macaulay is one of several renewal precincts in inner metropolitan Melbourne that is planned for or under development. It is located directly north of the Arden Precinct and in close proximity to the Parkville National Employment and Innovation Cluster, Melbourne Innovation District City North, Dynon, E-Gate, West Melbourne and the central city.

## Why a refreshed structure plan?

The City of Melbourne adopted the Arden-Macaulay Structure Plan in 2012 to guide future growth and development. It identified the preferred land use, building design, open space, transport and infrastructure outcomes to deliver a thriving and liveable precinct.

Since adopting the structure plan there have been changes to the planning context affecting the area. The Minister for Planning has asked Council to review the planning controls (see page 21). In response to these changes the refreshed structure plan for Macaulay:

- Maintains the vision for future growth and development from the 2012 structure plan as a mixed-use, mid-rise precinct.
- Sets out how the precinct will accommodate population growth, manage land use and development, enhance movement and access, and increase the quantity and quality of open space.

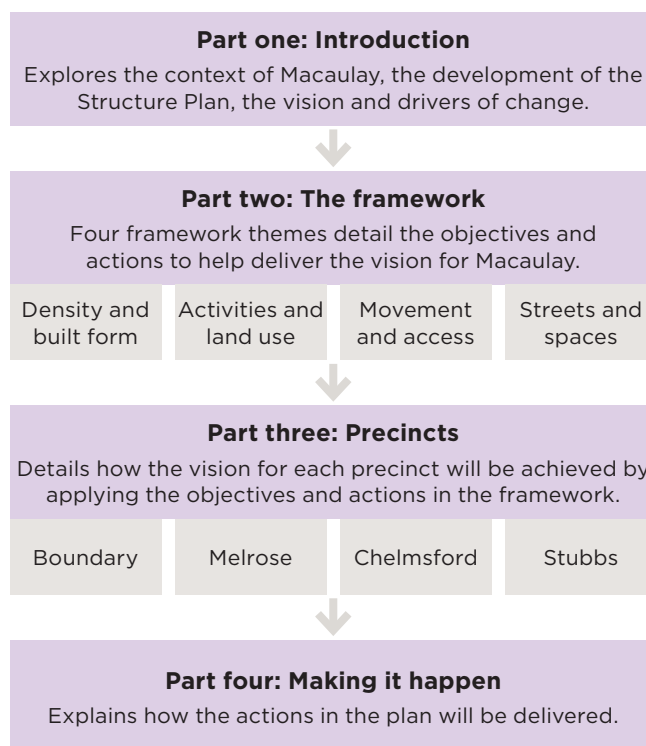
## Objectives of the structure plan

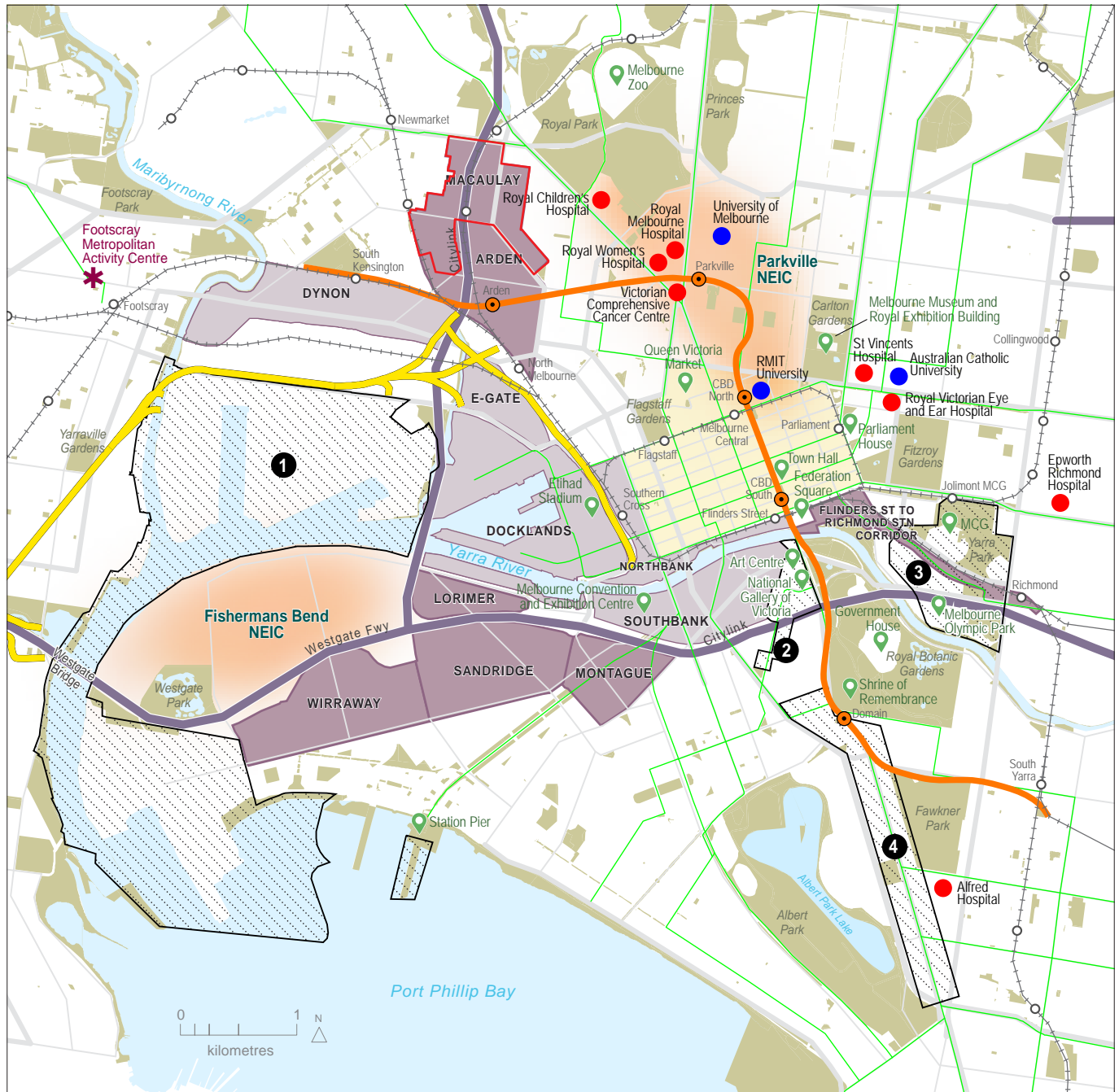
Structure plans develop a shared vision for an area, and identify the type and scope of change projected to occur over time.

There are five key objectives of the Macaulay Structure Plan 2021:

- To reinforce and consolidate the vision and framework for the long-term future growth, development and character of Macaulay.
- To give clarity and certainty about the level and type of development that can occur in the area by establishing a framework for land use and built form.
- To ensure that the provision of community infrastructure, open space and transport meets the needs of a growing population.
- To help deliver City of Melbourne and Victorian Government strategies and policies related to Macaulay.
- To identify actions to deliver the vision and framework for the future development of Macaulay, including amendment to the Melbourne Planning Scheme and capital works projects.

## Format of the structure plan





- Central Business District
- National employment and innovation cluster (NEIC)
- Major urban renewal precinct (2015 - 2051+)
- Priority precinct<sup>(1)</sup>
- Other precinct
- Health facility
- Education facility

- Key precinct
- 1** Port of Melbourne
- 2** Arts precinct
- 3** Sports precinct
- 4** St Kilda Road precinct
- Landmark
- Public open space

- Metro Tunnel (rail)
- New station
- State-significant road corridor
- Western Distributor (potential alignment)
- Rail network
- Train station
- Tram network
- Road network
- Waterway
- Waterbody

- (1) Priority precincts:
- 1 Fishermans Bend (Lorimer, Montague, Sandridge, Wirraway)
  - 2 Arden and Macaulay
  - 3 Flinders Street Station to Richmond Station Corridor
- Source: Department of Environment, Land, Water and Planning

Map 1: Key features in and around Melbourne's central city from Plan Melbourne, and the Victorian Government's Metropolitan Planning Strategy. The Macaulay Structure Plan area is outlined in red. (Image source: Victorian Government)

# 1.2 ABOUT MACAULAY

## Snapshot of Macaulay

The area now known as North Melbourne and Kensington is on the traditional lands of the Wurundjeri Woi Wurrung. It has been subject to fluctuating sea levels across deep-time. Six to eight thousand years ago sea levels stabilised to approximately where they are now, the landscape that emerged was one of gently undulating land. What is now the Moonee Ponds Creek was a chain of ponds and a salt water lagoon was situated near what is now the South Dynon Railway Yards. During high rainfall events, the chain of ponds would connect and the area became a floodplain.

The chain of ponds was a travel route as well as a source of water, food and medicine for the Aboriginal peoples of the Kulin Nation. Plants that formerly grew in the area included a variety of river reeds and grasses which were used for making baskets, nets and fish traps, and the Yam Daisy, which was a staple food source.

In the decades after 1835, following colonisation, everything changed and the creek’s cultural importance to local Aboriginal people was ignored. For much of the next 150 years, the creek and surrounding land served as an industrial and warehousing hub around Melbourne’s port and railway facilities. Storehouses and manufacturing centres were located next to workers’ cottages.

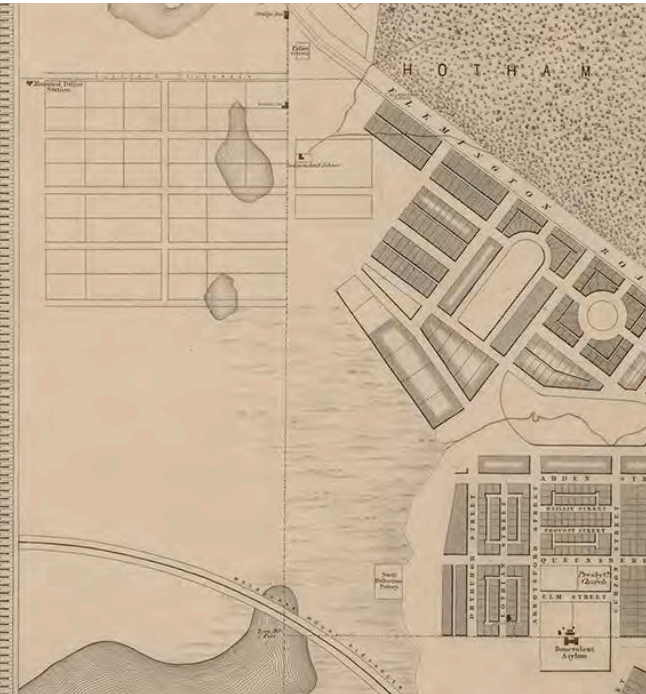


Image 2: A map published by Andrew Clarke, Surveyor General in 1855 showing the former chain of ponds (Image source: Melbourne and its suburbs, compiled by James Kearney, David Tulloch and James D. Brown, State Library of Victoria)

## Timeline

Macaulay is the country of the Wurundjeri and Boon Wurrung people of the Kulin Nations and has been for tens of thousands of years.	
Europeans arrive in Melbourne.	1835
Robert Hoddle lays down the town grid.	1837
Royal Park set aside by Superintendent La Trobe as an area of open space for Melbourne.	1845
Hotham Ward is incorporated into the City of Melbourne.	1855
Maribyrnong River experiences 1 in 20 year flood.	1871
Macaulay Railway Station opens on Macaulay Road.	1887
The town of North Melbourne, along with the Boroughs of Flemington and Kensington, become the Hopetoun Ward of the City of Melbourne.	1905
Maribyrnong River experiences a 1 in 100 year flood, among the largest on record with the Maribyrnong gauge measuring waters at 5.18 metres.	1906
Maribyrnong River experiences a 1 in 25 year flood.	1916
Slum reclamation area declared between Molesworth and Haines streets.	1940
Abbotsford Street estate completed.	1950s
Boundary Road and Melrose Street estates completed.	1960s
Maribyrnong River experiences 1 in 40 year flood.	1974
CityLink completed.	1999
Public Record Office Victoria opens on the former sites of the Victorian Government Printing Office and Melbourne Gas Company.	2000

The Arden-Macaulay Structure Plan was completed in 2012 and informed the existing planning controls for the area. The area was rezoned to encourage residential development and allow other uses. Interim built form controls were introduced to facilitate medium density development with lower building heights near existing low-rise neighbourhoods.

Macaulay has evolved as a mixed-use area, supporting a diverse community of residents and businesses. Workers' cottages, brick factories and industrial units are found side by side, reflecting the varied history of the area.

Buildings are predominantly low-rise, with the exception of the public housing towers near Boundary Road. Lot sizes vary, with pockets of residential lots under 500 square metres, to larger industrial land holdings of more than 10,000 square metres. There are a small number of recent residential and commercial developments of varying scale underway or completed throughout the precinct. Some developments have incorporated existing heritage buildings which have been repurposed for residential and business uses. The retention and adaptation of heritage buildings contributes to the character of the area.

Streets are generally wide and have been planted with native and exotic trees. On-street parking is provided throughout the precinct. There is limited quality open space within Macaulay, reflecting the industrial history of the locality.

The land in Macaulay slopes gently towards the Moonee Ponds Creek, Upfield Rail Line and CityLink, which bisect the precinct and create a barrier to east-west movement. The raised infrastructure of CityLink is a dominating presence while the Moonee Ponds Creek is channelised and often hidden from view.

Melbourne is experiencing a number of economic changes influencing the way we work, including a shift to jobs focused on knowledge, retail and service sectors. There is a greater demand for online trade and flexible working, arrangements which has been compounded by COVID-19 conditions. Macaulay is undergoing transition from traditional manufacturing and industry. There is increasing pressure to redevelop land for high market values uses, including residential and office space.

### Population

Around 3150 people currently live in Macaulay (2016 Census). The average household size is 2.2 people in Kensington and 2.1 in North Melbourne. These are lower than the Greater Melbourne average of 2.7. The median age in Kensington is 33 and 29 in North Melbourne. These are also lower than the Greater Melbourne average of 36.

### Employment

There are around 3580 jobs in Macaulay (2018 Census of Land Use and Employment). The number of jobs has increased by around 18 per cent over the past 10 years. Service industry, construction, and health care and social assistance jobs have grown, while jobs in manufacturing, wholesale trade, public administration and safety, and transport, postal and storage have decreased.

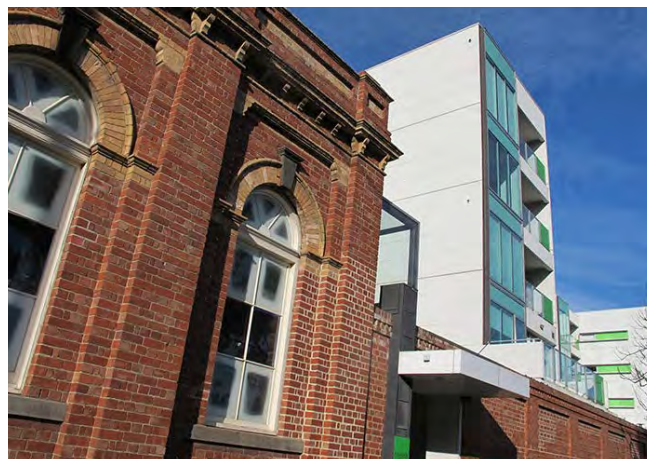


Image 3: A selection of images showing diverse buildings, streets and places in Macaulay.

## 1.3 DEVELOPING THE MACAULAY STRUCTURE PLAN

The Macaulay Structure Plan has been developed using a place-based approach. The Structure Plan identifies four distinct precincts in Macaulay, each with its own character and qualities. These four precincts are referred to as Boundary, Melrose, Chelmsford and Stubbs.

The study area for Macaulay is different to the boundaries identified in the Arden-Macaulay Structure Plan 2012 and Planning Scheme Amendment C190. The area excludes the Allied Mills site in Kensington and has been altered to adopt the boundaries identified in the Arden Vision 2018, which sets out the key directions guiding the future planning of the Arden Precinct.

The Victorian Planning Authority is leading the development of the Arden Structure Plan in consultation with Victorian Government agencies and the City of Melbourne. Arden and Macaulay each have a distinct role and character. Both plans

are being developed to be complementary and coordinated in their delivery. Other major projects relevant to Macaulay include:

- Metro Tunnel
- West Gate Tunnel and associated mitigation impacts
- Melbourne Innovation Districts
- West Melbourne Structure Plan
- E-Gate and Dynon
- Moonee Ponds Creek Strategic Opportunities Plan
- Racecourse Road Strategic Opportunities Plan.



Image 4: A map of Macaulay showing the study area and the four precincts identified in the Plan.

## Engaging with the community and stakeholders

Several phases of stakeholder and community engagement have informed the development of the Macaulay Structure Plan. This includes consultation in 2019 on the Outcomes for Macaulay Discussion Paper and in 2020 about the draft Macaulay Structure Plan Refresh.

Summary reports of the outcomes of community and stakeholder engagement can be accessed online at [participate.melbourne.vic.gov.au/macaulay-refresh](https://participate.melbourne.vic.gov.au/macaulay-refresh)

Further consultation will be undertaken as part of the implementation of the Macaulay Structure Plan, including through the planning scheme amendment process and the design and delivery of infrastructure projects.



Image 5: Timeline of development of the Macaulay Structure Plan

## Feedback on the draft Macaulay Structure Plan Refresh

Consultation on the draft Macaulay Structure Plan Refresh was held from July to September 2020 and included distribution to residents, workers, neighbourhood associations, Traditional Custodian groups, landowners, property and planning groups, Victorian Government agencies and local government. Overall, 12 online events were hosted with further information provided online at Participate Melbourne, including an online survey. Consultation resulted in more than 120,000 people being reached and 177 responses received, including more than 100 survey responses, 43 focus group attendees and more than 30 written submissions.

Survey responses indicated high levels of support for the key themes in the draft Macaulay Structure Plan Refresh.

Topics emerging as key issues through the surveys and focus groups include:

- Open spaces and green spaces are highly valued.
- Cycling and walking should be prioritised.
- Future buildings should fit with the area's character and respond to amenity.
- Traffic congestion should be eased.

Written submissions included more detailed feedback, for example:

- Proposed density is too high / too low.
- Built form guidelines are not strict enough, particularly at sensitive residential interfaces.
- Built form guidelines are too prescriptive and onerous.
- Affordable housing requirements are too onerous.
- Requirements for developments to include non-residential uses are too onerous and restrictive.
- Greater protection of amenity and character is needed.
- Vehicle movements for businesses should be safeguarded.
- More clarity on community services and open space provision is needed.

## Engagement with Traditional Custodians

Consultation with Traditional Custodians identified the following Aboriginal cultural values to underpin planning for Macaulay, including:

- Caring for Country
- Connections to Country
- Traditional knowledge
- Celebrating community
- Respect for Ancestors
- Celebrating culture
- Stories of survival
- New knowledge.

These values will guide future work in the area. At the time of the consultation process there was no formally recognised Traditional Owner group for the study area. Traditional Custodians refers to the three Traditional Owner organisations that had a declared interest in the area at the time, the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation, Bunurong Land Council Aboriginal Corporation and Boon Wurrung Foundation. As of 1 July 2021, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation is the Registered Aboriginal Party (RAP) for the area, and the Wurundjeri Woi Wurrung are the formally recognised Traditional Owners. Future consultation regarding Traditional Owner cultural values must occur through the RAP. Continued engagement with Traditional Owners is crucial to ensure values are appropriately and respectfully embedded within planning policy and future work.

## Background studies

Background studies and technical analyses were undertaken to support and inform the finalisation of the Structure Plan, including:

- community infrastructure
- transport and access
- population and employment forecasts
- development feasibility
- built form
- affordable housing
- retail demand
- land use and flooding.

## Victorian Design Review Panel

An independent design review of the draft Structure Plan was undertaken by the Victorian Design Review Panel (VDRP), guided by the Office of the Victorian Government Architect (OVGA). The purpose of this review was to ensure that the proposals of the draft Structure Plan (particularly those focused around built form) were well considered and would achieve the vision for Macaulay and its four distinct precincts.

Feedback from the VDRP review supported key themes of the draft Structure Plan, including the vision to create a mid-rise, mixed-use precinct and the use of mandatory floor area ratios as a tool to guide built form.

The review identified several opportunities to improve the clarity of content within the Structure Plan. Some of this advice included discussion around the need for clear street wall heights and overall building heights, and suggested built form testing and feasibility testing be undertaken. More clarity in terms of open space provision was called for, as well as clearer identification of the location of new streets through larger land holdings.

The review noted constraints in terms of limited opportunity in the Melrose precinct, which is predominantly Victorian Government owned housing, and suggested including a clearer narrative of why this precinct is different.

This feedback was welcomed and taken into consideration in finalising the Macaulay Structure Plan.

# 1.4 VISION AND KEY MOVES

## Vision

**Macaulay will transition into a mixed use, mid-rise neighbourhood with a distinct inner urban character.**

**New development will be of high quality and deliver amenity for residents, workers and visitors.**

**Improvements to public transport services and walking and cycling infrastructure will be prioritised to support sustainable modes of travel.**

**Greening of streets, enhancing the Moonee Ponds Creek corridor, and the delivery of new open spaces will provide connections, forming a network of local places.**

**Public and private investment will deliver community infrastructure to meet the needs of a growing and diverse neighbourhood.**

**Macaulay will be a climate ready precinct that supports accelerated action in reaching the City of Melbourne's goal of zero emissions by 2040.**

## Key moves

- Celebrate the unique existing and future character of Macaulay's four distinct precincts.
- Improve built form controls to achieve the vision of a climate ready, well designed mid-rise neighbourhood.
- Deliver land use and built form controls to ensure that Macaulay provides a mix of uses and is able to accommodate population targets.
- Prioritise walking, cycling and public transport and improve connectivity through new streets and laneways.
- Revitalise the Moonee Ponds Creek and reconnect the creek corridor to its Aboriginal heritage.
- Deliver new open space and expand and enhance existing open space by closing roads and consolidating open space contributions from new developments.
- Ensure adequate provision and good access to community infrastructure within and around Macaulay, and help to deliver affordable and diverse housing.
- Support the delivery of new local activity centres and the redevelopment of recreation and community facilities.

The vision for Macaulay consolidates and simplifies visions from the Arden-Macaulay Structure Plan (2012). The vision will be delivered through a number of objectives and actions that relate to density and built form, activities and land use, movement and access and streets and spaces (see Part Two: The Framework).

**'Unlike other renewal areas in Melbourne, this part of Arden-Macaulay is not an extension of the CBD. The area has a future as a mid-rise precinct that is part of the broader North Melbourne and Kensington areas.'**

Planning Scheme Amendment C190 Panel Report



Figure 1: Indicative future urban structure plan for Macaulay (indicative only for illustrative purposes)

## Changes to the planning context

Since adoption of the Arden-Macaulay Structure Plan (2012), there have been a number of changes to the planning context affecting the Macaulay area.

### Opportunity to review and improve built form controls

The Minister for Planning requested a review of the built form controls and identified a number of improvements to be made (see Appendix B for more detail). These include better management of density through the development of a Floor Area Ratio control.

### Separate planning processes for Arden and Macaulay

The Victorian Planning Authority is leading the planning for Arden in consultation with the City of Melbourne, whereas the City of Melbourne is leading the planning for Macaulay. New structure plans were prepared concurrently that recognise the different futures expected for these two distinct areas. These plans supersede the Arden-Macaulay Structure Plan (2012).

### Metro Tunnel is under construction

The 2012 Structure Plan was developed with the assumption that Metro Tunnel would be built. Construction commenced in 2016 and the tunnel is due to open in 2025. While the project will deliver a direct benefit for Arden, it will also improve public transport options in Macaulay.

### Revised population targets

The 2012 structure plan forecast 20,500 residents and 22,500 jobs by beyond 2040 for both Arden and Macaulay. The Victorian Government has subsequently revised targets for the area as part of the background to the Metro Tunnel project.

POPULATION (2051)	ARDEN	MACAULAY	TOTAL
Residents	15,000	10,000	25,000
Workers	34,000	9500	43,500
<b>TOTAL</b>	<b>49,000</b>	<b>19,500</b>	<b>68,500</b>

### New approaches to flood mitigation

The precinct is located in low-lying, flood prone land and is bisected by the Moonee Ponds Creek. More extreme rainfall events and sea level rise will exacerbate flooding and water management issues in the area.

Growth and development in the area offers an opportunity to celebrate the presence of water so that it is part of the future character of Macaulay. This will be achieved by developing an integrated approach to water management in the public realm and private developments.

### Development contributions

Ministerial Amendment C295 introduced an interim Development Contributions Plan Overlay (DCPO2) for Macaulay. Under DCPO2, a developer is required to make development contributions at a set rate to help fund future infrastructure. Development contributions are the payments or works in kind and land, provided by developers towards the supply of infrastructure that will be required to meet the needs of the expanding community.

A Development Contributions Plan (DCP) identifying infrastructure required to support future population growth will be finalised to support the delivery objectives of this Structure Plan. The DCP will be implemented through the planning scheme amendment and as part of this process Development Contributions Plan Overlay 2 (DCPO2) will be updated to reflect the contribution rates identified in the DCP.

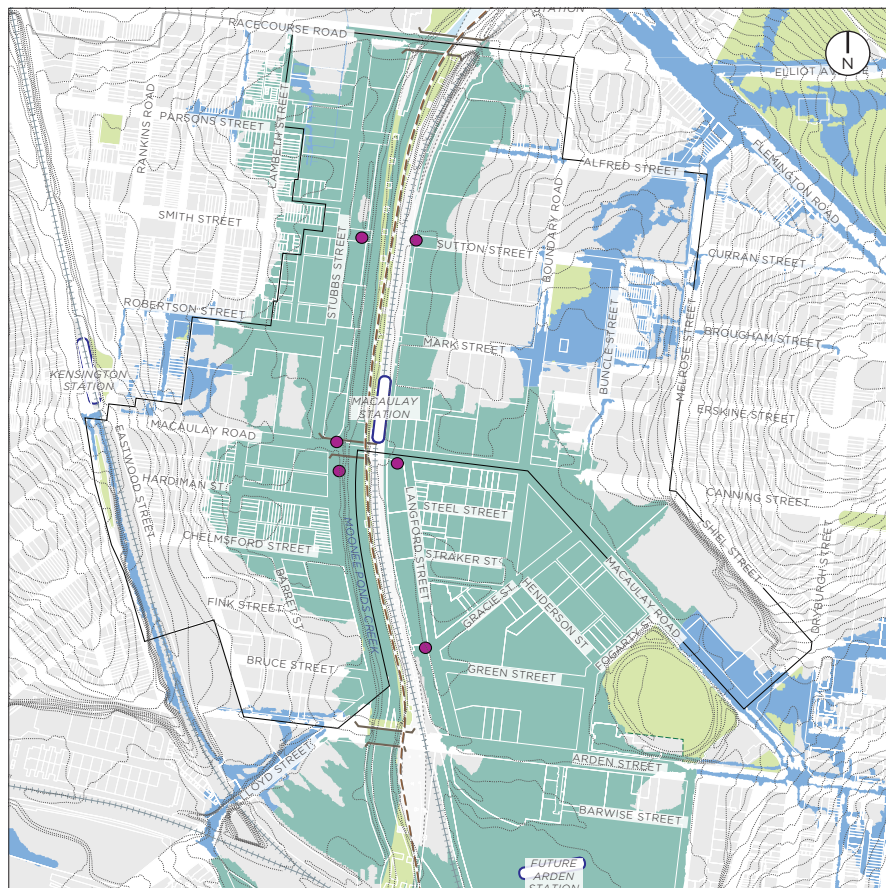
The major flood management works required in the precinct will be funded through Melbourne Water's Urban Renewal Cost Recovery Scheme (URCRS) for Macaulay. The URCRS will collect financial contributions from developers as development occurs.

### Affordable housing

Affordable housing is essential infrastructure for our city and improves social and economic resilience. Affordable housing allows people to participate fully in the community.

The City of Melbourne Affordable Housing Strategy identifies a shortfall of 5500 affordable homes across the municipality. By 2036 there is expected to be approximately 27,100 people in need of social and affordable housing. Demand for affordable housing is likely to increase in the immediate and short term due to COVID-19.

Responding to this need, a coordinated response across governments, the private sector, the community housing sector, industry groups and the community is critical. The Affordable Housing Strategy is focused on the mechanisms to increase the supply of affordable rental housing in the municipality which can be managed through registered community housing organisations.



#### Key

- Macaulay study area
- CityLink
- Contour lines
- Moonee Ponds Creek
- ↔ Capital City Trail
- Existing open space
- Existing rail network
- Updated Land Subject to Inundation Overlay - modelled 1% Annual Exceedance Probability (AEP) riverine flood event
- Updated Special Building Overlay (flooding from drains)
- Pumping stations

Map 2: Flooding is a significant issue in Macaulay. This map shows areas affected by the Special Building Overlay and the Land Subject to Inundation Overlay as identified in updated modelling considered in Amendment C384 Inundation overlays.

## Flooding in Macaulay

Flooding and water management are significant issues in Macaulay. The precinct is located in low-lying, flood prone land and is bisected by the Moonee Ponds Creek. Flooding in the area is caused by:

- stormwater runoff from upstream catchments flowing into the Moonee Ponds Creek and overtopping the levee bank
- stormwater runoff being trapped behind levees along the creek
- local pump stations not having capacity for large rainfall events
- lack of permeable surfaces to absorb water.

In 2018 Melbourne experienced an extreme rainfall event with 50 mm of rain falling in 15 minutes, much higher than Council's required level of service for drainage. This resulted in flash flooding, train lines suspended and power outages across the city.

Climate change impacts will result in more intense rainfall events, increasing the magnitude of flooding, waterway levels and storm surges.



Image 7: Flooding in Chelmsford Street, Kensington, during a high rainfall event.

## Economic role

Macaulay is adjacent to Arden and in close proximity to the Parkville National Employment and Innovation Cluster, Melbourne Innovation District City North and the central city. These adjoining areas will attract large numbers of residents, jobs and businesses, with a focus on supporting higher-order technology, research and advanced manufacturing jobs. The Metro Tunnel is a major transport project, delivering a new station in Arden, increasing accessibility of the area.

Macaulay's position provides a competitive advantage in accommodating demand for lower-cost space for small and medium sized enterprises and startups that are seeking to link with businesses and institutions in Arden and the surrounding areas.

## Urban renewal areas: places for growth and change

Macaulay is one of several urban renewal precincts being planned to accommodate future growth and change in inner-city Melbourne. These precincts are transitioning from industrial and manufacturing uses to mixed-use neighbourhoods.

Each urban renewal area has its own vision, role and character that will contribute to the city's vision of a highly liveable and prosperous city. Each will accommodate different levels of growth and change with corresponding built form and public realm outcomes influenced by the existing and future character, transport connectivity and local assets.

**Macaulay will transition to a mid-rise, mixed use neighbourhood** in comparison to places like Arden which will accommodate higher levels of growth supported by the new Metro Tunnel station. A vision and framework will be developed for future renewal areas in proximity to Macaulay including Dynon and E-Gate.

## Future of Macaulay

Macaulay is home to a diverse population of workers and residents. Macaulay and surrounding areas, including Arden, are undergoing a period of significant change, which is projected to continue into the future. This is part of a broader trend in Australian cities as former industrial and manufacturing uses transition to mixed use areas with new residential, commercial and retail development. It is reflected in the shifting profile of Macaulay's population, household size and structure, and allocation of floor space.

Macaulay's changing profile must be managed to ensure that the existing community can flourish and social equity is realised. Long-term affordability will be a key success factor. Without appropriate provision of affordable housing, households experiencing housing stress face increased risk of homelessness.

### Forecasts

The Victorian Government has established a population target of 10,000 residents and 9500 jobs for Macaulay by 2051. City of Melbourne forecasts indicate that Macaulay could accommodate approximately 9300 residents and 7500 workers by 2040, indicating substantial growth over the medium term.

### Impacts of COVID-19

The COVID-19 pandemic has shaken economies across the world since early 2020 and its impacts are ongoing. Public health responses to manage the pandemic including closed borders and restricted movement have resulted in unprecedented loss of employment and economic output and reduced national population growth. However, recovery has been more rapid than typical recessions due to government stimulus, social safety-net measures, and the fact that the recession was not driven by underlying weakness in the economy or financial markets. It is unclear whether the economy can return as quickly from recurring outbreaks.

There are particular challenges for the City of Melbourne, including:

- deeper recession and slower recovery than elsewhere in Victoria and Australia.
- abrupt cessation of international migration (particularly students) which has had a disproportionate effect on residential vacancy in the City of Melbourne.
- rapid adoption of work-from-home practices during lockdown periods, resulting in a slower return to office workplaces and a spike in office vacancy rates.

Reduced demand has been linked to lower revenues on residential and commercial developments compared to pre-pandemic levels. This has reduced the overall feasibility of developments in the short term. Longer-term effects are less clear, however, they are less likely to affect the overall development of the precinct over time.

## Urban resilience

Urban resilience is the capacity of individuals, communities, institutions, businesses and systems within a city to adapt, survive and thrive no matter what kind of chronic stresses and acute shocks we experience, and to positively transform as a result. Resilience planning promotes investment and actions that support places to prosper in good times and respond more effectively when challenged. Resilience planning takes a long-term view and encourages integrated, inclusive decision-making, with an emphasis on understanding risk and meeting the needs of the most vulnerable populations.

The effects of climate change, globalisation and urbanisation will continue to have an immense impact on cities and communities worldwide. This can be felt at the local level in Macaulay, as the area is exposed to precinct-specific challenges, such as flood risk and limits to open space as a result of its history and ecology.

Future resilience planning for Macaulay will be undertaken collaboratively with the community and key partners from the precinct, seeking to identify opportunities for ongoing resilience.



Image 8: Buncle Street Community Garden next to the North Melbourne Community Centre.

# PART TWO: THE FRAMEWORK

The framework has four themes:

- 2.1 Density and built form
- 2.2 Activities and uses
- 2.3 Movement and access
- 2.4 Streets and spaces

Each of these themes is supported by objectives and actions that provide the framework for achieving the vision for Macaulay.

Objectives and actions will be achieved in the short, medium or long term. Many actions will be delivered following more detailed design work or investigation, working with key stakeholders and partners.

## Overview of the objectives and actions

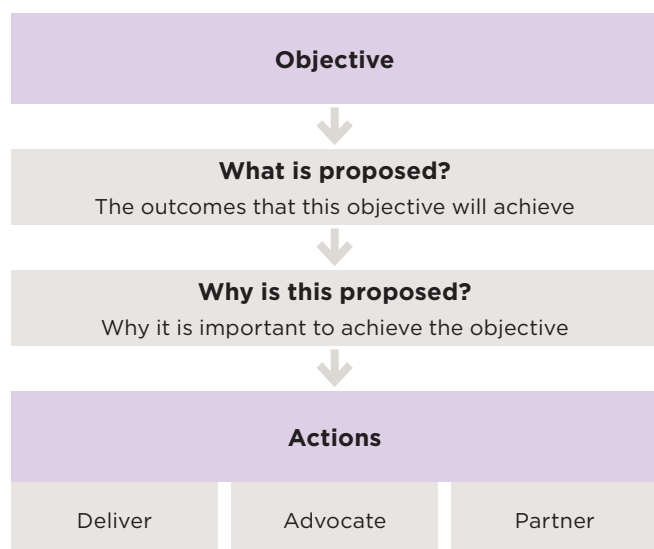


Image 9: Looking east along Parsons Street in Kensington towards CityLink.





## 2.1 DENSITY AND BUILT FORM

High-quality built form outcomes will help to deliver the vision for Macaulay and provide greater certainty for the community, landowners and developers. This will be achieved through updated planning controls.

### Context

#### What did the 2012 Arden-Macaulay Structure Plan outline?

The plan introduced a series of strategies to deliver high-quality urban design, including:

- improving walkability by introducing a finer grain network of streets and laneways
- integrating new developments with the character and scale of adjacent areas
- ensuring new developments contribute positively to the public realm
- ensuring buildings are designed to be flexible in use and achieve best practice sustainable design.

#### What do we know?

- One of the key messages from the community engagement confirmed the need for greater certainty from the planning process, particularly related to built form controls.
- City of Melbourne and Victorian Government planning policy, including Plan Melbourne, identifies and supports urban renewal in Macaulay to accommodate future housing and employment growth.
- Flooding and water management are significant issues in Macaulay. The precinct is located in low-lying, flood prone land and is bisected by the Moonee Ponds Creek.
- Macaulay has a varied local character influenced by its historic mix of industrial, commercial and residential land uses.
- In approving the interim built form controls, the Minister for Planning identified a number of improvements which could be made including better management of density through development of a Floor Area Ratio control.
- Interim built form controls in Macaulay are resulting in developments with high densities. If this trend continues the cumulative effect would lead to a future population that is significantly higher than current population targets. This would place additional pressure on existing and proposed infrastructure and services.

- There are different sized sites, building typologies and heritage assets across Macaulay which contribute to the area's character and its potential to develop as a place with a local identity, diversity of building types and uses.
- Some of the interim building height and setback controls fail to respond to this diversity and character. The controls also result in reduced amenity including increased overshadowing, poor outlook and impacts on equitable development for neighbouring sites.
- There are few examples of independently assessed high-quality sustainable developments in Macaulay, particularly across residential developments.
- Building servicing requirements sometimes dominate street frontages. This has a detrimental impact on the quality of the public realm in Macaulay.
- Developments with 100 per cent site coverage result in poor environmental performance. This is due to reduced site permeability and a lack of opportunity to plant trees on private land.
- There are more than 2700 dwellings in the development pipeline for Macaulay, the majority of which are one and two bedroom apartments. If all these dwellings are built, this could more than double Macaulay's dwelling stock, without providing a variety of housing choices to cater for a diverse population.

### What are we proposing?

The objectives and actions in this section will help deliver the vision for Macaulay by:

- ensuring that development is responsive to local context and character (Objective 1)
- ensuring high-quality building design in flood affected areas (Objective 2)
- improving the climate change adaptation and mitigation performance of new and existing buildings (Objective 3)
- recognising and celebrating the valued history, cultural values and character of Macaulay (Objective 4)
- ensuring design excellence is achieved for key strategic sites (Objective 5).



Image 10: The Oxford and Peel apartment building in Collingwood is an example of high-quality design and the type of density and built form outcomes that would be appropriate in areas of Macaulay (Project: Jackson Clements Burrows Architects. Photo: Peter Clarke)

## Objective 1: Ensure that development is responsive to local context and character

New development will deliver high-quality urban design outcomes. It will respond positively to the valued existing character of the area and contribute to the future character of places undergoing greater change.

There are two strategies identified to deliver the objective:

1. Develop new density controls
2. Update built form controls

These strategies will be implemented via revisions to the Design and Development Overlay schedules within the Melbourne Planning Scheme.

### Develop new density controls

#### What is proposed?

Application of a Floor Area Ratio (FAR) is proposed. This planning control determines the amount of development that can occur on a site. When combined with other built form controls, it allows for variety in the design, height and shape of buildings. The introduction of a FAR will help ensure that new development is more responsive to its site context and to the characteristics of the area. Figure 2 explains the concept of Floor Area Ratios in more detail.

Floor Area Ratios identified for Macaulay respond to the area's local context. The FARs range from 2.5:1 at sensitive interfaces with residential areas to 4:1 in areas where increased density and taller built form is appropriate. The controls have been determined based on finished floor levels.

#### Why is this proposed?

Revised density and built form controls will encourage development that is able to better respond to its context, including heritage fabric, neighbourhood character and other conditions that impact on amenity and surrounding land uses. They will also provide more certainty, with a set quantum of development that can be accommodated on each site.

#### Interim built form controls

The current controls, Design and Development Overlay 63 (DDO63), are based on building heights and setbacks. Under these controls, the density of many developments has been high. If this trend continues the cumulative effect could lead to:

- reduced amenity within developments and the public realm including lack of daylight, sunlight, outlook and increased overshadowing.
- a future population that is significantly higher than current population targets.
- additional pressure on existing and proposed infrastructure, including open space and community facilities, being planned based on current population forecasts.

Under DDO63 building heights for all of Macaulay, except for North Melbourne public housing towers, are expressed as either a preferred maximum height or absolute maximum height. Any development that exceeds the preferred maximum height must provide a demonstrable benefit to the broader community, including:

- exceptional quality of design
- a positive contribution to the quality of the public realm
- high-quality pedestrian links where needed
- good solar access to the public realm.

There are issues with how the benefits have been defined and applied. This includes a lack of measurable criteria, use of subjective terms and benefits which are minimum design requirements under the Melbourne Planning Scheme.

### Benefits of Floor Area Ratios

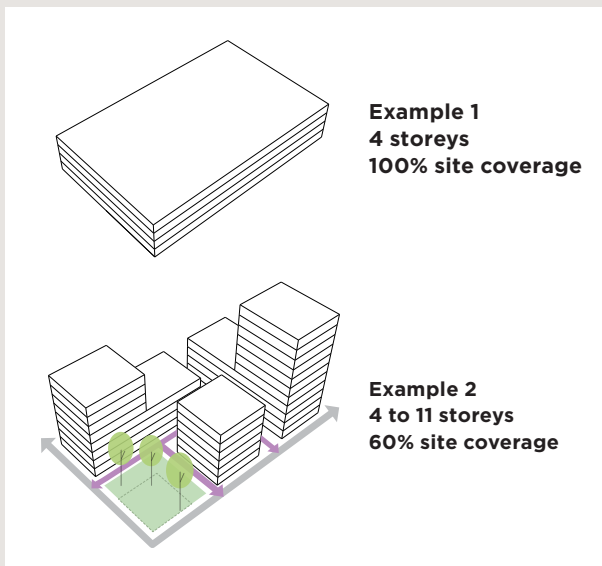
Floor Area Ratios are used in many cities across the world, including in Melbourne's central city, Sydney, Hong Kong, New York and Vancouver. When used alongside design objectives, Floor Area Ratios create a balance between promoting a suitable scale of development and adding positively to the amenity and character of an area.

The benefits of FAR controls in Macaulay are that they:

- Set clear expectations about the potential development yield of each site to provide greater certainty regarding development outcomes.
- Provide greater certainty on future population and job growth to ensure that supporting infrastructure meets the needs of residents and workers in Macaulay.
- Facilitate the delivery of streets and open spaces on larger land holdings to support active transport and contribute to the provision of new open space and a climate ready precinct.
- Facilitate built form outcomes that deliver a range of building typologies, are responsive to varying property sizes, address surrounding interfaces and reflect the relevant place vision.
- Enable a context driven response with the ability to better manage amenity impacts such as overshadowing.

### Accommodating future population growth

Capacity modelling demonstrates that the FARs proposed for Macaulay have ample capacity to provide the gross floor area required for the Victorian Government target population of 10,000 residents and 9500 workers.



### Understanding Floor Area Ratio controls

These diagrams explain the concept of FARs and how application of the control can result in different building types. For example, a FAR of 4:1 allows for a total floor area up to four times the size of the site itself. This could be up to four storeys if 100 per cent of the site's area is developed (see example 1) or eight storeys if only half the site's area is developed. FARs do not include basement levels and are to be calculated from finished floor levels.

For larger sites, a FAR combined with other built form controls allows for variety in the massing, height and shape of buildings, enabling a more context driven response that can better manage amenity impacts, while also enabling the delivery of new streets and open spaces. This will help to ensure that the future street network is better connected and supports walking and cycling in the area (see example 2).

Figure 2: An example of a 4:1 Floor Area Ratio control

## Update the existing built form controls

### What is proposed?

Design recommendations have been developed to inform the updated built form controls. These achieve the vision for Macaulay.

### Why is this proposed?

#### Improving the existing controls

The revised controls will deliver outcomes for Macaulay consistent with the vision for Macaulay and the improvements identified in the directions issued by the Minister for Planning (refer to Appendix B for Minister's Letter). The controls include guidance on built form requirements for FARs, building heights, street wall heights, overshadowing, setbacks and interface controls. Note that heights are measured from finished floor levels, and heights set within the Structure Plan recognise raised floor levels in flood affected areas.

Additional outcomes specific to each area are included in Part Three: Precincts, including information on street wall heights.

#### Interfaces

Interfaces are the relationship of buildings to the site, street, neighbouring buildings and open spaces surrounding it. The varied interfaces in Macaulay reflect the diverse character of the area including:

- low-rise residential areas
- heritage buildings
- streets with varying widths
- open spaces
- Moonee Ponds Creek
- rail corridors
- CityLink.

Interfaces require careful consideration to ensure that new buildings in Macaulay give positive definition to streets and spaces, provide an appropriate transition to low-rise residential areas, allow taller built form in appropriate locations and limit the impact of overshadowing on open spaces.

#### Active frontages

Active frontages are crucial to add interest, vitality and safety to streets, while helping to encourage walking. This means building frontages should have openings (frequent doors and windows), articulated facades and limited blank walls. Lively internal uses should be visible from the street. Any vehicle access and services should be provided off existing or proposed laneways rather than main streets, and car parking within buildings should not be visible from the street.

Many of the different uses in Macaulay can contribute to creating active interfaces on all streets, particularly along Macaulay, Boundary and Racecourse roads.

## Design recommendations

These design recommendations are proposed in order to help deliver the vision for Macaulay. The recommendations will inform the proposed Design and Development Overlays for Macaulay.

- To ensure development responds to the valued attributes of Macaulay and contributes positively to the existing and future vision and character of the four identified precincts - Boundary, Melrose, Chelmsford and Stubbs.
- To provide for a medium density, mid-rise, human-scaled neighbourhood with a diverse range of building types and some higher built form in specified areas.
- To maintain and enhance the valued built and social heritage characteristics of Macaulay and to ensure buildings retain their three dimensional form as viewed from the public realm to avoid 'facadism'.
- To ensure development responds appropriately to the hierarchy of main streets (Racecourse, Boundary, and Macaulay roads), local streets and laneways in its address, activation and management of services.
- To achieve variable building heights, including street wall heights, that contribute positively to the specific character of each site and the surrounding context.
- To ensure larger sites are broken up into a series of building forms that relate and contribute positively to their context.
- To ensure sufficient building separation between sites and within a site to deliver high-quality amenity within buildings having regard to outlook, daylight and overlooking.
- To provide a highly walkable neighbourhood by increasing permeability with new streets and laneways that are open to the sky.
- To ensure that new development delivers a safe and secure public realm through activation of ground floors and open spaces.
- To ensure development appropriately considers the amenity impacts on neighbouring development and achieves a high standard of internal amenity within the development.
- To ensure that new development respects the scale and height of adjoining residential and heritage buildings and does not overwhelm the existing building.
- To ensure that new development at the interface of stable residential and heritage areas respects the scale of buildings at those interfaces.
- To ensure that development considers solar access to adjoining properties and the location of solar panels.
- To encourage the retention of existing buildings of character (including non-heritage) and the reuse of existing materials in new developments.
- To ensure that new development does not cast any additional shadow over Buncle Street Reserve, Canning Street and Macaulay Road Reserve, North Melbourne Recreation Reserve, Gardiner Reserve and Robertson Street Reserve from 10:00am to 3:00pm on 21 June, from buildings built to the maximum street wall height, as per the Sunlight Access to Public Parks requirements.
- To ensure developments are set back from side and rear boundaries to provide adequate daylight in streets and internal spaces, comfortable wind conditions in the public and private realm, views to the sky and privacy.
- To support equitable development by ensuring primary outlook is secured to the street or within development sites.
- To provide for fine grain adaptable tenancies within the lower levels of buildings.
- To ensure development is adaptable to changes in future land use by requiring adequate floor to ceiling heights (above and below ground).
- To encourage deep soil planting that increases permeability and supports tree planting in the private realm.
- To ensure the design of new development conceals servicing from the street frontage to minimise the loss of active frontage.
- To ensure that the design of services, loading and parking areas are well integrated into buildings and adopt best practice approaches to contribute to a high-quality public realm.

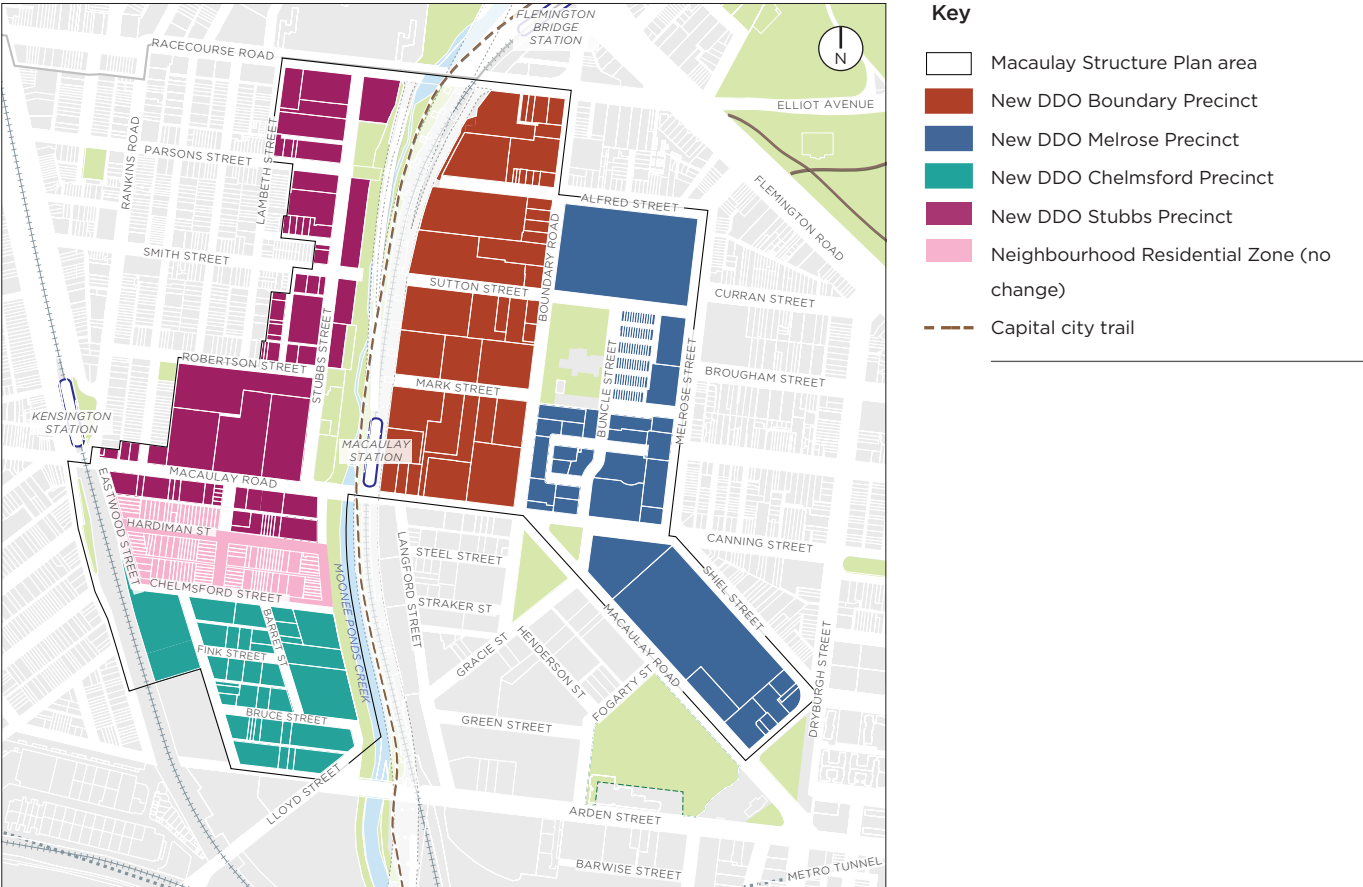
# Revised Design and Development Overlays (DDOs)

The revised built form and density controls will be implemented through schedules to the DDO. The DDO schedules will correspond to the four precincts, Stubbs, Melrose, Boundary and Chelmsford.

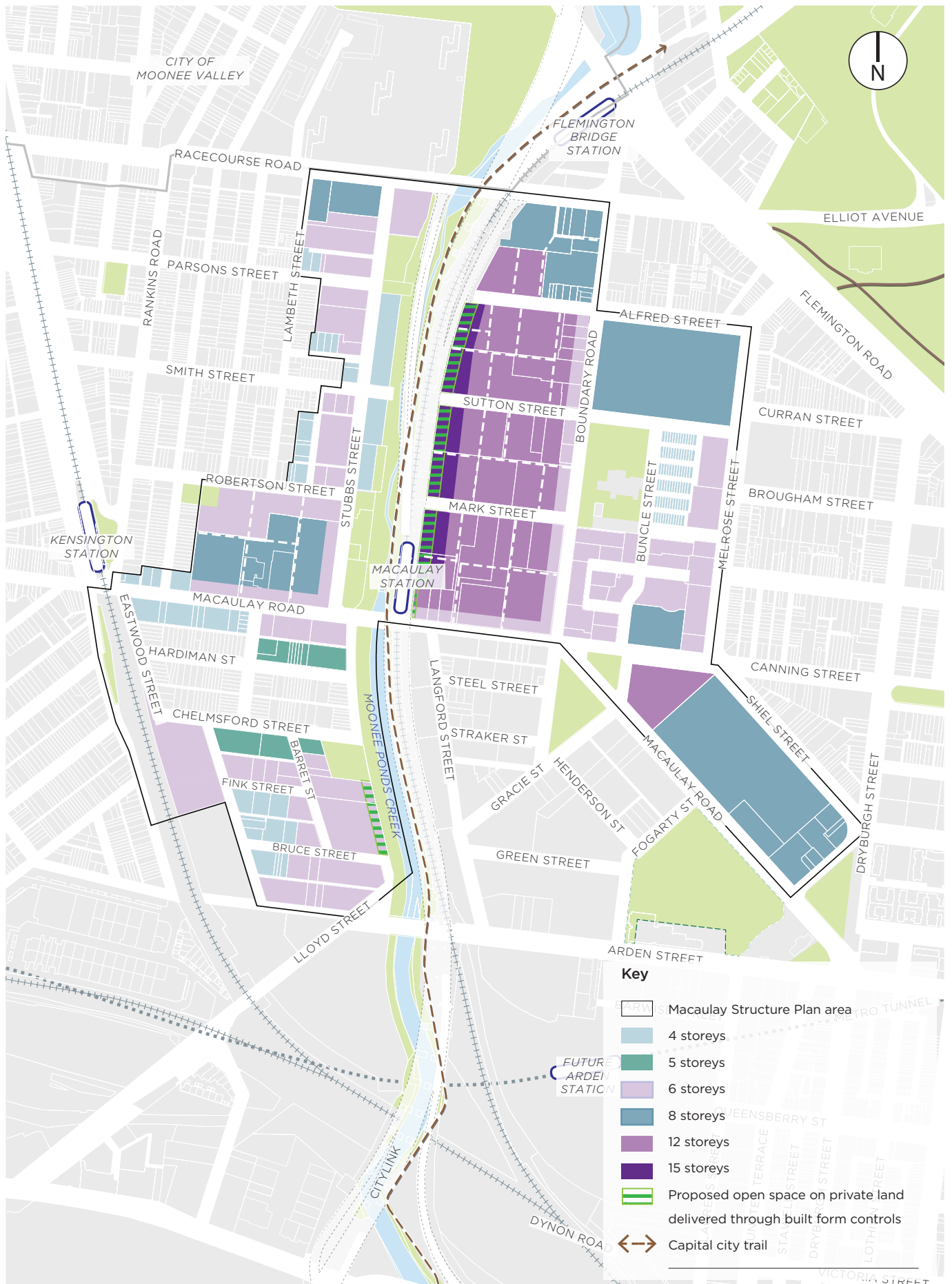
No change is proposed to the residential area in Chelmsford which is subject to the Neighbourhood Residential Zone.

The proposed design and development overlay areas are shown in map 3 below. The proposed controls, building heights and floor area ratios are shown in the table opposite and described spatially in maps 4 and 5 on pages 34 - 36.

ACTIONS
DELIVER
<b>Action 1:</b> Prepare a planning scheme amendment to implement the Macaulay Structure Plan, including the implementation of the built form controls and design recommendations.
<b>Action 2:</b> Improve the quality of urban design in Macaulay through the planned review of Clause 22.17 Urban Design Outside the Capital City Zone in the Melbourne Planning Scheme.



Map 3: Proposed Design and Development Overlay schedules in Macaulay

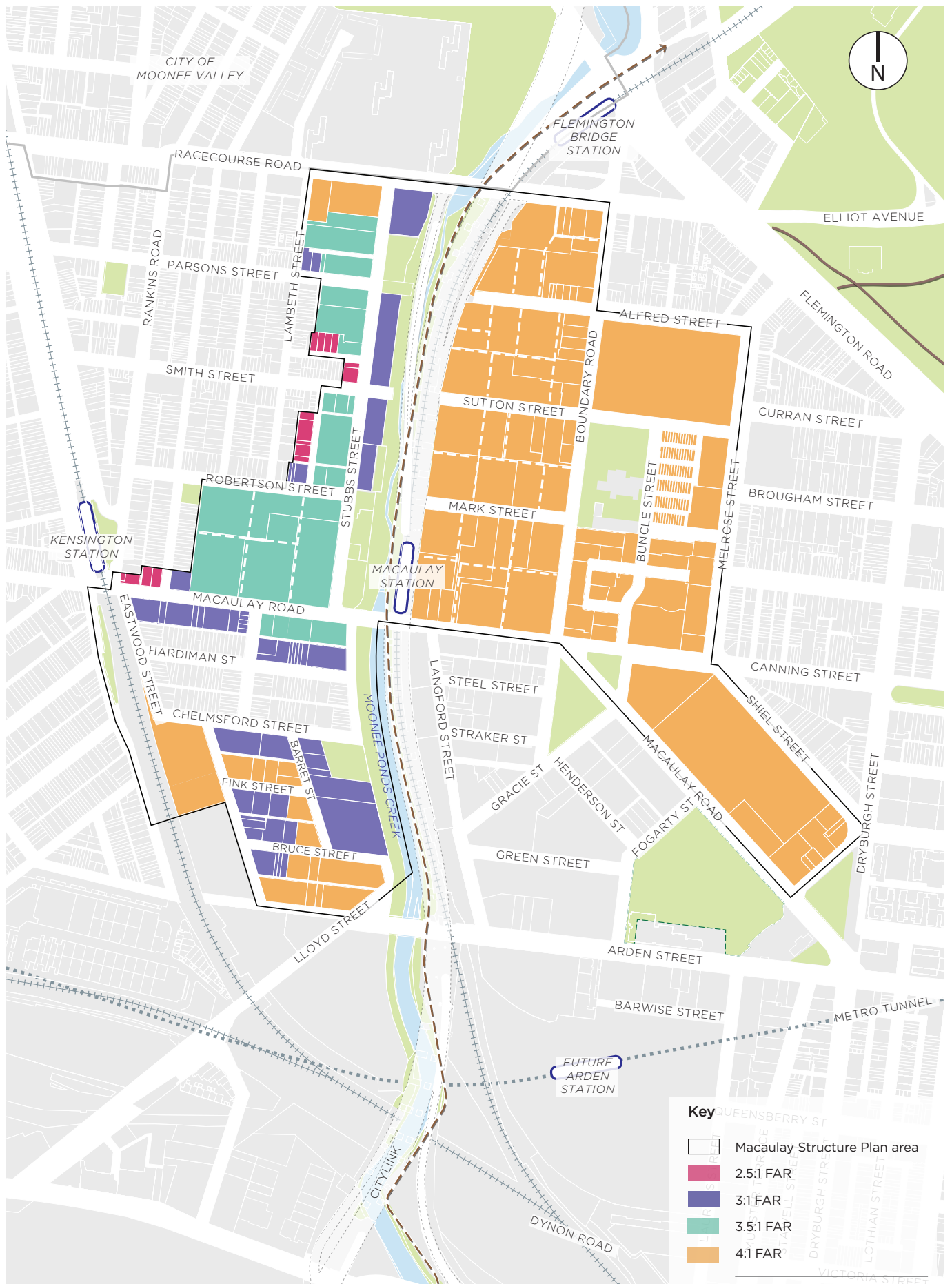


Map 4: Proposed preferred maximum building heights in Macaulay

## Proposed Design and Development Overlays

PRECINCT OR AREA	MANDATORY FLOOR AREA RATIO	DISCRETIONARY BUILDING HEIGHTS
New DDO Boundary Precinct	4:1 as per Map 5	6-15 storeys as per Map 4
New DDO Melrose Precinct	4:1 as per Map 5	4-12 storeys as per Map 4
New DDO Chelmsford Precinct	3:1 - 4:1 as per Map 5	4-6 storeys as per Map 4
New DDO Stubbs Precinct	2.5:1 - 4:1 as per Map 5	4-8 storeys as per Map 4
Neighbourhood Residential Zone (part of Chelmsford Precinct)	N/A (not subject to proposed DDO)	N/A (not subject to proposed DDO)

Further information on street wall heights and floor to ceiling heights within Part Three: Precincts



Map 5: Proposed Floor Area Ratios (FARs) for Macaulay

# Objective 2: Ensure high-quality building design in flood affected areas

Clear guidelines for buildings in flood affected areas will ensure that flood risk requirements are met, high-quality urban design outcomes are achieved and equitable access is provided.

## What is proposed?

Updates to the planning controls will ensure that site and context specific design responses manage flooding.

This will be informed by a context analysis that considers the type and extent of flooding, site considerations, building typology, access and egress options and use, street activation and interfaces. The site design response will meet the guidelines from the Good Design Guide for Buildings in Flood Affected Areas for flood risk, urban design and access.

## Why is this proposed?

### Flooding in Macaulay

Flooding and water management are significant issues in Macaulay (see breakout box in Section 1: Page 22).

### The need for improved design responses

Current design responses to flooding leads to poor outcomes including:

- significant level change between the street and raised ground floor, which results in a poor interface to the public realm
- external ramps that disrupt the building edge and preclude active frontages to the street
- platform lifts in the public realm that require a high degree of maintenance and act as litter traps
- low floor-to-floor heights at ground level creating dark entrances and emphasise the level change from the street to the ground floor
- external steps that become physical barriers separating the building from the public realm.

### Good Design Guide for Buildings in Flood Affected Areas

A partnership between the City of Melbourne, Melbourne Water and the City of Port Phillip, the Good Design Guide for Buildings in Flood Affected Areas supports the building design process to respond to the challenges of managing flood risk in Fishermans Bend, Arden and Macaulay. The guide supports the creation of human-centred spaces and provides guidance on how development in flood prone areas can achieve flood responsive design.

The guide supports the delivery of the established visions for Victorian Government significant urban renewal areas and provides guidance on how development in flood prone areas can achieve flood responsive design, good built form outcomes, equitable access and universal design.

## ACTIONS

### DELIVER

**Action 3:** Amend the Melbourne Planning Scheme to apply the Good Design Guide for Buildings in Flood Affected Areas to Macaulay.



Image 11: The ground floor design successfully addresses the transition in floor levels by incorporating a ramp, stairs, seating and planting. The double height ground floor further improves street activation and improves the level of daylight to the tenancies. (Project and photo: SJB).

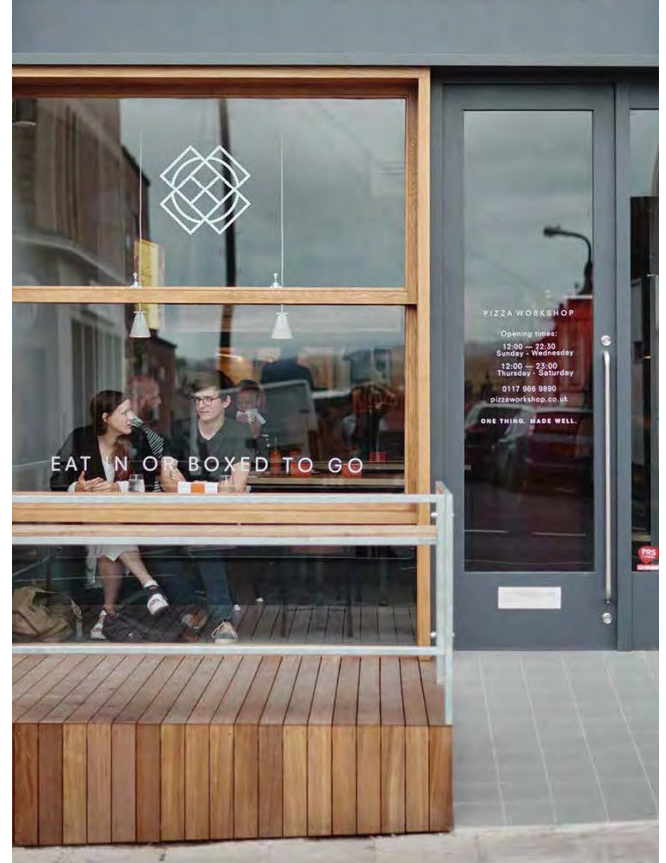
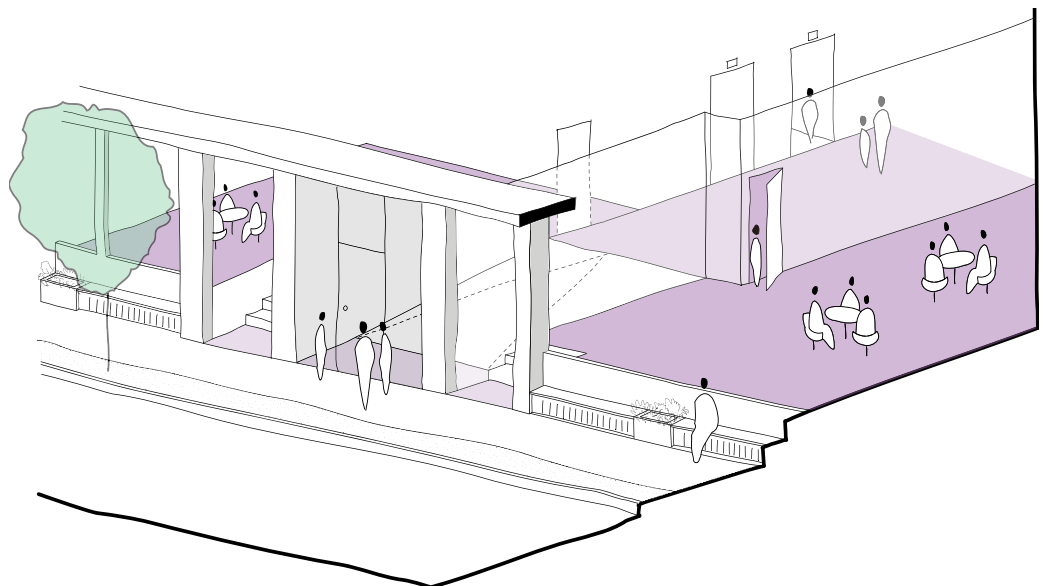


Image 12: A short ramp addresses the transition in floor levels and provides an opportunity to include a raised area for outdoor dining.

Image 13: An example of a design solution where there are multiple small ground floor tenancies. Sharing ramp access may be a more efficient design response, particularly for tenancies with a small floor area and narrow frontages. This example is taken from the Good Design Guide for Buildings in Flood Affected Areas.



## Objective 3: Improve the climate change adaptation and mitigation performance of new and existing buildings

The City of Melbourne declared a climate and biodiversity emergency in July 2019. We know that immediate action to reduce emissions and adapt to the impacts of climate change is needed if Melbourne is to remain a liveable city for future generations. In our response to the declaration we have committed to reaching Council's zero emissions target for the municipality, by 2040. Ten priority areas have been identified for the City of Melbourne where accelerated action will make the most impact including the delivery of climate ready precincts and buildings.

### What is proposed?

To ensure a sustainable and resilient Macaulay, new and existing buildings should be designed or retrofitted to the highest standards for:

- energy efficiency
- embodied energy
- water efficiency and integrated water management
- green infrastructure and urban ecology
- waste management and resource recovery.

Larger sites and Floor Area Ratio controls further support the delivery of sustainability measures by enabling:

- integrated site-wide approaches to water management, energy, and waste services on larger land holdings with multiple buildings
- solar panels on buildings with good access to sunlight allowing more of the community's energy demand to be met through renewable energy
- deep soil planting for large canopy trees and green infrastructure at ground level.

### Why is this proposed?

Urbanisation will continue to compound the effects of climate change with higher temperatures, greater risks of flooding, and increased pressure on air quality as vehicle congestion worsens, affecting more residents and visitors in Macaulay. Two-thirds of the municipality's emissions are due to energy use in commercial and residential buildings. Future development must improve the climate change adaptation and mitigation performance of new and existing buildings to reduce the negative social, health, environmental and economic effects of climate change, particularly considering impacts on vulnerable populations.

#### Energy efficiency

Melbourne's buildings are not as efficient as they could be and benchmarks for measuring the performance of buildings aren't fully developed. This means residents don't have information about a building's energy performance

before moving in. Similarly, in commercial office buildings, landlords can pass on the costs of higher energy bills to tenants. Energy efficient buildings provide healthier and more comfortable environments, particularly during cold weather and extreme heat. Cost savings could be reinvested to provide better facilities for residents and tenants.

#### Embodied energy

In addition to energy used within a building's operational phase, there are also significant emissions associated with material used within the manufacture, construction and end of life of the building. Unlike operational energy and emissions, embodied energy and emissions occur upstream of the building and are largely invisible to builders and architects. Upfront consideration of the materials used in construction can have a significant impact across the environmental sustainability of the whole life cycle of a building. The embodied emissions of materials should be considered, with selection prioritising materials based on their content, production, durability, end-of-use repurposing or recyclability.

#### Water efficiency and integrated stormwater management

Melbourne is a city of droughts and floods. Buildings should be designed with efficient fixtures and fittings. Alternative water sources such as rainwater tanks and greywater recycling can be used for green infrastructure irrigation and toilet flushing. This will result in reduced use of potable water. Best-practice stormwater management is particularly important in flood affected areas such as Macaulay. This will provide benefits including passive irrigation of green infrastructure and reduce nutrient discharges to the Moonee Ponds Creek. It also reduces pressure on the stormwater drainage system, which is over capacity. Such events can have direct economic impact, including effects on businesses' ability to operate.

#### Green infrastructure and urban ecology

Increasing the quantity and quality of green infrastructure in the private realm will contribute to addressing climate change impacts and help connect people to nature. Green roofs, vertical greening and onsite tree planting should be included on new buildings or retrofitted to existing buildings in line with the City of Melbourne's Green Factor Tool. This supports developers and designers to optimise the delivery of green infrastructure based on their contribution to the urban fabric.

#### Waste management and resource recovery

The waste and resource recovery system in Victoria is facing serious challenges. We need to improve waste management in the city to reduce congestion, odour, and noise, encourage sustainable practices, improve safety and amenity. Apartment buildings require innovative solutions to make recycling convenient and effective. Longer-term challenges include reducing greenhouse gas emissions by reducing truck movements and landfill methane.

Our vision is for Melbourne to transition toward a circular economy with zero waste to landfill. We imagine a future where people and businesses avoid generating waste where possible, and appreciate waste as a valuable resource.

New buildings must follow the City of Melbourne's Guidelines for Preparing a Waste Management Plan 2021 and must consider how the buildings will comply with the Victorian Government's Recycling Victoria Strategy. Other opportunities for improving waste management and resource recovery include ensuring alignment with the City of Melbourne Waste and Resource Recovery Strategy and a precinct waste management plan, and expanding trials into better management of food waste.

### Flexible design

Sustainability practices are continuously changing. Flexibility and adaptability are important to enable 'future proofing' of buildings to ensure they can accommodate changes in lifestyle and the introduction of new technologies, such as decentralised energy generation and trading, waste management, potable water usage and transition away from fossil fuels.



### Green Factor Tool

The Green Factor Tool has been developed to help design and construct new buildings that are environmentally friendly and include green infrastructure. It forms part of our work to respond to the climate and biodiversity emergency. Green Factor Tool is free and available for anyone to benchmark their designs. The tool is currently voluntary but we are asking that all planning applications for new buildings (except single dwellings) submit a green factor scorecard, aiming to achieve a score of 0.55 or 0.25 for industrial buildings.

Image 14: The Venny adventure playground, Kensington

## Planning Scheme Amendment C376 Sustainable Building Design

There is a wider opportunity to improve the climate change adaptation and mitigation performance of new and retrofitted buildings in Macaulay. Planning Scheme Amendment C376 Sustainable Building Design seeks to mandate greening and zero emissions building requirements through the Melbourne Planning Scheme. These requirements are also proposed to be implemented in Macaulay.

### ACTIONS

#### DELIVER

**Action 4:** Prepare planning controls for Macaulay to ensure development delivers best practice environmentally sustainable design including:

- energy efficient buildings and use of renewable energy sources
- increasing the amount and quality of urban greening, including green roofs, vertical greening and deep soil planting, assessed against the Green Factor Tool
- reducing the urban heat island effect
- water efficient buildings and integrated stormwater management
- reducing the embodied energy of materials used in construction
- facilitating high levels of active, sustainable and low-emissions transport use, including provision for off-street charging of electric vehicles.

**Action 5:** Expand the existing resource recovery hub network to urban renewal areas.

**Action 6:** Develop a Precinct Waste Management Plan that sets principles for waste management and delivers on the Waste Management Guidelines.

**Action 7:** Investigate ways to support residential or community solar, battery storage and / or smartgrids for new and existing buildings.

#### PARTNER

**Action 8:** Explore incentives to increase canopy cover and tree protection and support nature in the private realm throughout Macaulay, including via the Urban Forest Fund.

**Action 9:** Encourage flexible design of buildings to accommodate current and future building and precinct scale technologies and infrastructure that contribute to the precinct's net zero carbon emission target, minimise water use and waste generation, and improve operational costs.

## Objective 4: Recognise and celebrate the valued history, cultural values and character of Macaulay

Heritage is integral to a place's identity and connection of people to place. This includes both physical heritage and intangible aspects of heritage such as social heritage, memories and rituals.

### What is proposed?

Increased awareness and celebration of Aboriginal culture and heritage in consultation with Traditional Owners will be provided. For example, the importance of the Moonee Ponds Creek to Aboriginal peoples can be highlighted through projects that reconnect the creek corridor to its Aboriginal heritage. There is also an opportunity for recognising Traditional Owners through the naming of streets, parks, public buildings and community infrastructure.

The restoration and retention of heritage buildings in Macaulay will be encouraged. This can be achieved by supporting developers and landowners to access heritage grants. In addition to buildings and places covered by a heritage overlay, character buildings have been identified and should be retained where possible.

### Why is this proposed?

#### Aboriginal heritage

The area is on the traditional lands of the Wurundjeri Woi Wurrung. What is now the Moonee Ponds Creek was a chain of ponds and a salt water lagoon that was situated near what is now the South Dynon Railway Yards. The chain of ponds was a travel route, as well as a source of water, food and medicine for the Aboriginal peoples of the Kulin Nation. Following colonisation, everything changed and the creek's cultural importance to local Aboriginal people was ignored.

There is an opportunity to acknowledge the continuing connection of Wurundjeri Woi Wurrung to the Land, as well as to highlight the landscape that existed prior to colonisation.

#### Heritage buildings and places

Heritage buildings and places in Macaulay have been identified and protected through the Melbourne Planning Scheme.

These sites tell an important story of Macaulay's former industries and the area's contribution to shaping Melbourne's economy. Retained buildings and complexes include former wool stores, flour mills and biscuit makers, stables, warehouses, manufacturing complexes and the cottages which housed workers for these industries. Painted ghost signs tell the stories of businesses that used to occupy these sites. Railway infrastructure and the bridges represent the response to increased transport needs of suburban residential growth. Pump stations along the creek reflect earlier flood management works and remain operational today.

#### Moonee Ponds Creek

The Moonee Ponds Creek is protected as one of the early water courses of central Melbourne, however in the decades after 1835 the creek's cultural importance to local Aboriginal people was ignored. The saltwater lake was turned into a tip, then filled in. For much of the next 150 years, Moonee Ponds Creek was treated as an industrial drain and transport corridor.

More recently, the creek has become a popular active transport route from north to south, with the Capital City Trail giving cyclists and pedestrians direct access to/from the central city.

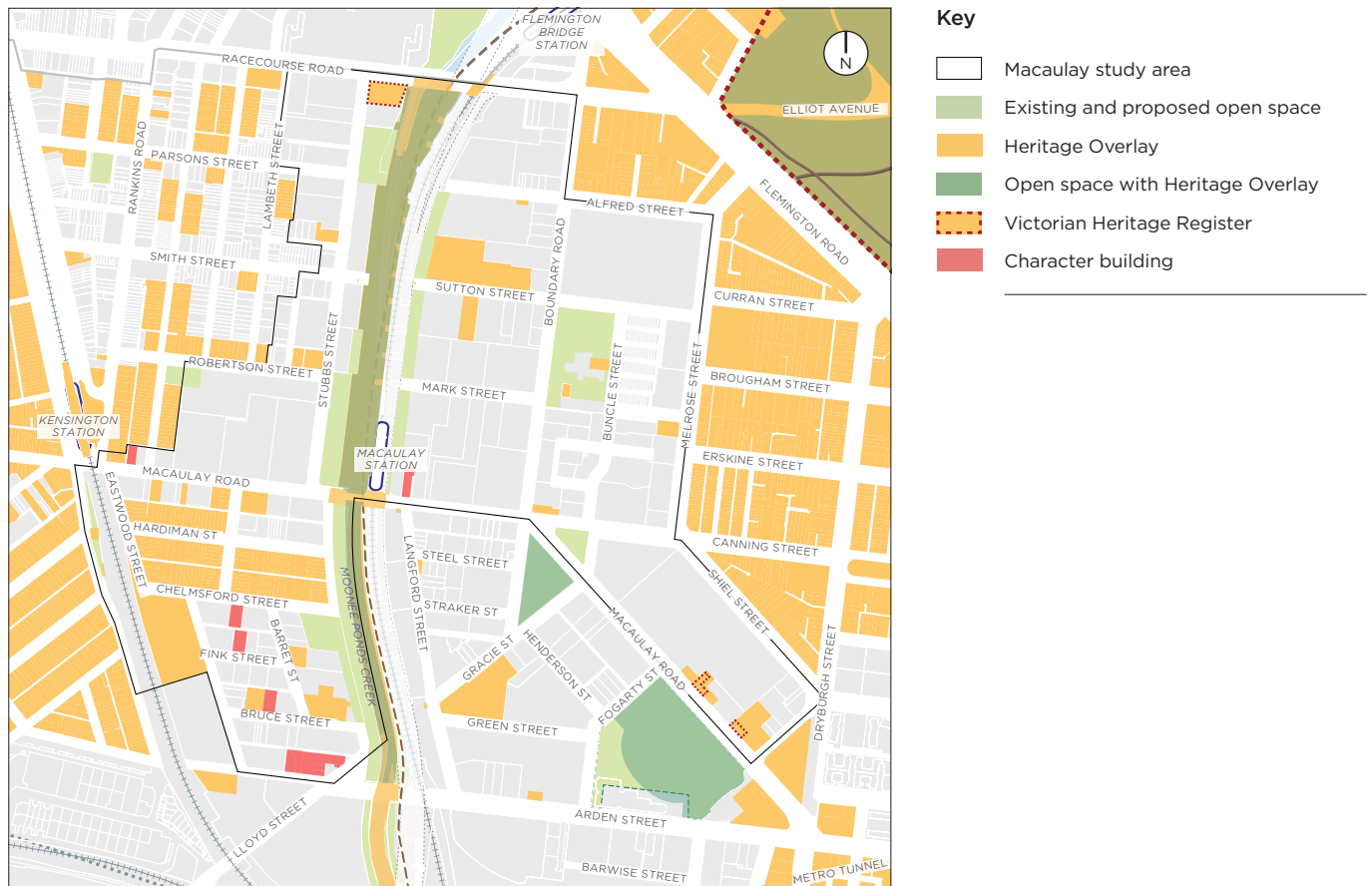
#### Character buildings

A number of buildings within Macaulay contribute to the precinct character. These are currently not protected in the Melbourne Planning Scheme.

These buildings should be retained where possible, ensuring that the visual identity of Macaulay is celebrated and continues to contribute to the narrative of place (see map 6).

Special character buildings were identified using the following criteria:

- the building is architecturally distinct
- the building is an older brick warehouse that demonstrates a link to the industrial history of the area
- the building is located adjacent to a laneway, the side elevation is intact and the three dimensional form of the building can be seen from the public domain
- the front elevation of the building contains interesting detailing and provides visual interest at street level
- the building has large window openings, with potential for a positive interface with the public domain
- the building has a large floorplate.



Map 6: Macaulay heritage, including sites subject to a Heritage Overlay and identified character buildings



Image 15: Aerial view of factories, warehouses and residential streets taken between 1950 and 1960. Macaulay Station is in the right foreground with the old gasometer in the background next to North Melbourne Recreation Reserve.  
(Source: State Library Victoria)

## ACTIONS

### DELIVER

**Action 10:** Support the Aboriginal naming of streets, parks, public buildings and community infrastructure.

**Action 11:** Support projects along the Moonee Ponds Creek that reconnect the creek corridor to its Aboriginal heritage including revitalisation of the creek, public art and naming opportunities.

**Action 12:** Identify character buildings and encourage their retention through amendment to local policy in the Melbourne Planning Scheme.

**Action 13:** Encourage developers and landowners to use heritage grants including the Melbourne Heritage Restoration Fund to assist in the restoration of heritage buildings.

# Objective 5: Ensure design excellence is achieved for key strategic sites in Macaulay

Design excellence describes projects that demonstrate exceptional standards of architecture, landscape architecture and urban design, befitting of the intended role of Macaulay.

## What is proposed?

A standard of design excellence will be expected for strategic sites in Macaulay as defined by criteria or attributes. Design excellence will be measured by the quality, function, liveability, sustainability and public contribution of buildings and urban spaces. This could include the following:

### Development scale

Where a development exceeds:

- threshold scale (measured in gross floor area)
- capital investment (measured in gross realisation value)
- building height (measured in metres above natural ground level)
- allotment size (measured in square metres).

### Sensitivity criteria

Where a development is:

- an identified gateway location
- located on, or adjacent to, a heritage property or identified character building
- adjacent to sensitive interface
- masterplanned, comprising multiple stages
- adjacent to public spaces, community uses or major public infrastructure including railway stations and civic buildings.

The final criteria and/or provisions that trigger the requirement for design excellence and identification of key strategic sites in Macaulay will be implemented through a planning scheme amendment.

In the future, achieving a standard of design excellence may require that one of either design competitions or design review panel has taken place prior to planning application assessment.

### Design competitions

A well-managed competitive design process can enable the testing of options to ensure the best development outcome for a given site.

### Design review panel

Independent expert design review enables peer-to-peer assessment by design experts whose knowledge, experience and industry credibility provide leverage to support outcomes that achieve design excellence.

Independent expert panel review of projects on key strategic sites could be required at pre-lodgement and at key approval phases where the impact is greatest. Early engagement of the panel provides the best opportunity to increase the quality of a design proposal.

## Why is this proposed?

Design excellence ensures that buildings on key strategic sites in Macaulay demonstrate an exceptional standard of innovation and creativity. Buildings of outstanding quality and character have an enduring legacy, influencing the character of an area, its liveability, attractiveness and quality of place.

ACTIONS
DELIVER
<b>Action 14:</b> Launch a 12-month trial of a City of Melbourne Design Review Panel for the review of key projects in Macaulay.
<b>Action 15:</b> Prepare and release City of Melbourne Design Competition Guidelines for use in private developments in Macaulay.
<b>Action 16:</b> Require the achievement of design excellence at key strategic sites through either a design competition or design review panel through amendment to the Melbourne Planning Scheme.



Image 16: Sydney's competitive design competition process has resulted in buildings that deliver higher design quality, innovation and an improved public realm. Arkadia comprises 152 dwellings across four buildings, each with their own communal spaces and productive garden, a shared rooftop and new park (Project: Breathe Architecture and DKO Architecture. Photo: Martin Siegner).

## 2.2 ACTIVITIES AND USES

Macaulay will continue to evolve as a mixed use, inner city neighbourhood, providing a range of shops, services and jobs close to homes. This promotes local living options, supports more sustainable transport options, improves quality of life and encourages a vibrant and interesting neighbourhood, with activity day and night.

The area will accommodate activities that benefit from Macaulay's proximity to Arden, the Parkville National Employment and Innovation Cluster, Melbourne Innovation District City North and the central city.

Land use and development will respond to key challenges in Macaulay including flooding and the affordable housing crisis.

### Context

#### What did the 2012 Arden-Macaulay Structure Plan outline?

Land uses within Arden and Macaulay are generally underutilised, considering the proximity to the central city and to existing and future transport infrastructure.

There is the need for a greater supply of affordable, accessible and diverse housing. The plan acknowledged that Arden and Macaulay should be contributing towards the provision of affordable housing.

The plan identified limited community and cultural facilities in Arden and the need to upgrade existing community facilities, establish a new community centre and select a suitable location for a new school.

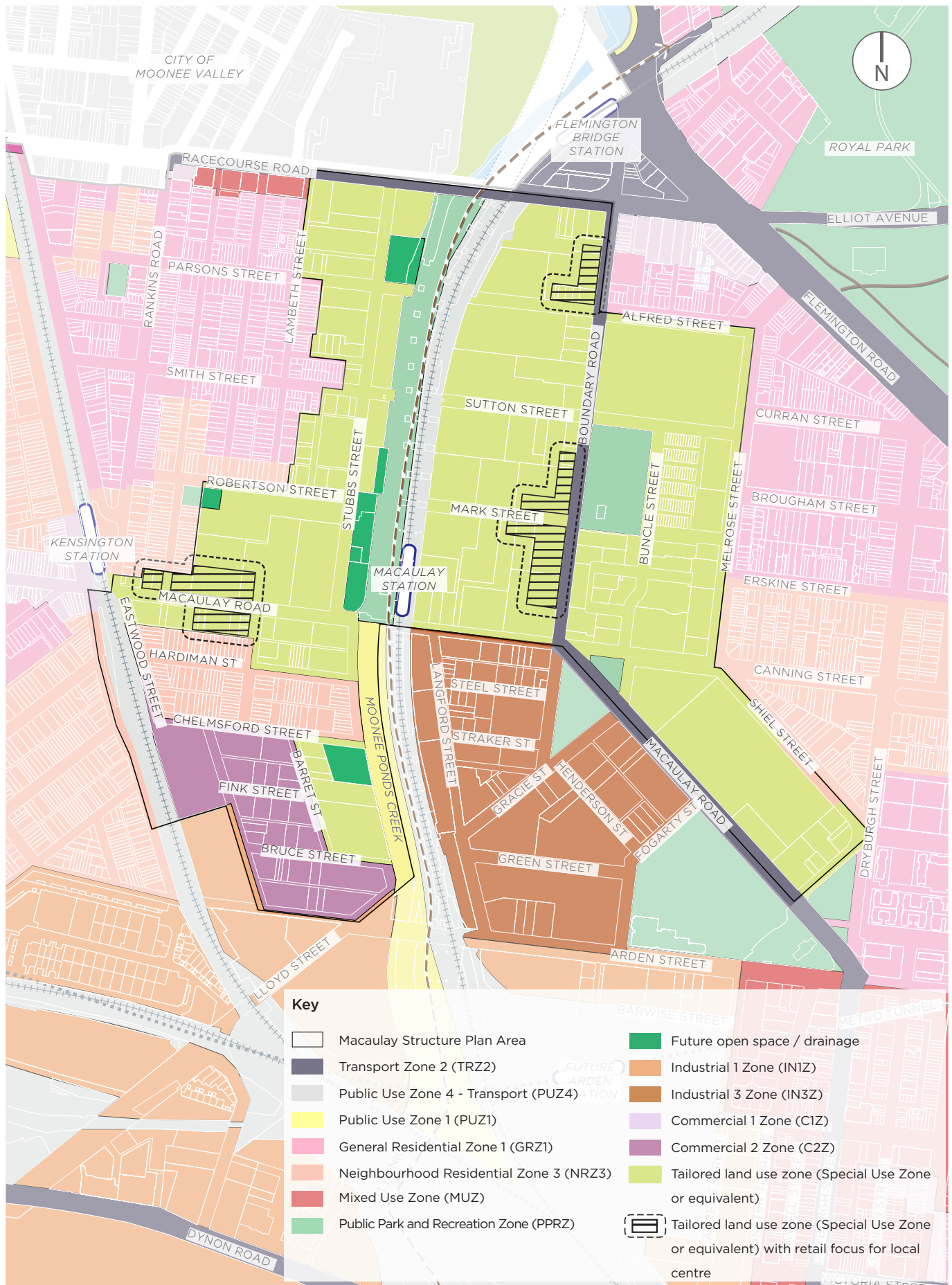
#### What do we know?

- Macaulay accommodates a diverse mix of land uses including housing, commercial, creative, retail and industrial uses, as well as community facilities.
- A mix of land use zones currently control activity in Macaulay. These are the Mixed Use Zone, Industrial 1 Zone, Commercial 1 and 2 Zones, and the Neighbourhood Residential Zone.
- Current development activity within the Mixed Use Zone has been predominantly residential and has not delivered a genuine mix of uses. If this trend continues, it will undermine the vision to achieve a mixed use precinct.
- Community engagement indicated continued community support for a true mix of uses in Macaulay.

### What are we proposing?

The objectives and actions in this section will help deliver the vision for Macaulay by:

- supporting mixed use development to facilitate a range of residential, business and employment opportunities (Objective 6)
- strengthening existing local activity centres (Objective 7)
- ensuring provision and access to community infrastructure (Objective 8)
- helping to deliver affordable and diverse housing (Objective 9).



Map 7: Proposed land use zoning in Macaulay

## Objective 6: Support mixed use development to facilitate a range of residential, business and employment opportunities

Macaulay will continue to accommodate a mix of land uses and activities, including a diversity of housing, community uses and a vibrant mix of commercial, creative and retail uses.

### What is proposed?

To achieve the vision for Macaulay and better align with Victorian Government targets, a tailored land use zone (such as the Special Use Zone or an equivalent) is proposed for a majority of properties.

### Why is this proposed?

Macaulay has a history of providing housing and jobs with a mix of uses across the precinct. Plan Melbourne 2017-50 supports creating mixed use neighbourhoods that support living locally (Principle 5), enabling people to meet most of their daily needs close to home. Proximity to Arden, Parkville National Employment and Innovation Cluster, Melbourne Innovation District City North and the central city will underpin Macaulay's competitive advantage in accommodating demand for low-cost space for small and medium sized enterprises (SMEs) and start-ups that are seeking to link to these nearby places.

Currently, the Mixed Use Zone applies to the majority of properties in Macaulay. While the application of this zone was intended to support a genuine mix of uses, this has not been realised and predominately residential development has been delivered.

A tailored land use zone (such as the Special Use Zone or an equivalent) is considered to be the most appropriate zone to achieve this vision. A tailored land use zone enables a 20 per cent non-residential (employment) use requirement to be set for a property's gross floor area.

Land use zoning is key to achieving the mix of residential and employment uses to meet the Victorian Government target of 10,000 workers and 9500 jobs. The realisation of a mixed use precinct will deliver a more inclusive, vibrant and healthy neighbourhood.

### Land uses in flood-prone areas

Flooding is a major issue affecting Macaulay. This is expected to intensify over the coming years as the effects of climate change continue to be felt. Planning controls can play a role in ensuring that appropriate consideration is given to sensitive uses. Controls can help minimise exposure to flood risk, particularly for those most vulnerable, taking into account a person or entity's ability to prepare for, safely respond to, and recover from an emergency. This approach places community health, wellbeing and safety at the forefront of decision-making.

A tailored land use zone also allows for the accommodation of detailed land use requirements associated with use of land in flood affected areas, ensuring appropriate consideration of land uses in these areas.

### Creative spaces

There is a need for more creative spaces including studio, workshop and rehearsal spaces and for more live music venues that can accommodate between 500 and 800 patrons. Supporting and protecting all aspects of the city's music ecosystem is also a priority identified in the City of Melbourne's Economic Development Strategy 2031. Due to the warehouse buildings and industrial land in Macaulay and the existing noise attenuation controls (DD026) applying to much of this precinct, there is potential for more creative spaces, particularly music rehearsal, recording and live music venues in parts of Macaulay.

Planning controls will be used to consider accommodating creative spaces in Macaulay.

A tailored land use zone (such as the Special Use Zone or an equivalent) is proposed as there is no appropriate combination of other currently available planning zones, overlays and local policies to give effect to the desired objective to facilitate a range of business and employment opportunities, and manage land uses in flood affected areas within this context.



**Case study: Innovative mixed use development**

Bernard Works in South Tottenham, London, will comprise 100 apartments and 26 creative workspace studios providing 2300 square metres of affordable commercial space that will be prioritised to local businesses. 12 of the apartments will be tethered to the creative workspace, incorporating a substantial discount over market levels.

The scheme guarantees and enshrines affordable workspace for the next 50 years and will provide employment opportunities for the local community. In addition to workspace and living space, it is about fostering and cultivating genuine community engagement.

Image 17: View of the proposed Bernard Works mixed use development

ACTIONS
DELIVER
<b>Action 17:</b> Ensure Macaulay develops as a mixed use precinct by rezoning Mixed Use Zone areas to a tailored land use zone (such as the Special Use Zone or an equivalent) with a requirement for 20 per cent of floor space for non-residential (employment) use.
<b>Action 18:</b> Amend the Planning Scheme to include provisions that manage land use and built form requirements for developments in flood affected areas.
<b>Action 19:</b> Further investigate the potential for more creative spaces, including live music venues and performance spaces, recording spaces and music rehearsal spaces, in Macaulay.

## Objective 7: Strengthen existing local activity centres in Macaulay

Local activity centres will be enhanced with retail and commercial uses. This will support local access to goods, services and jobs.

### What is proposed?

Three activity centres are proposed. This will contribute to the vision for Macaulay as a vibrant, active, mixed-use neighbourhood that supports local businesses and provides for local needs. Neighbourhoods that support local living should have access to local employment opportunities, shops and services, schools and other learning opportunities, parks, sport and recreation facilities, affordable and inclusive housing and a range of transport options including walking, cycling and public transport. These features are important to deliver more inclusive, vibrant and healthy neighbourhoods.

Activity centres in Macaulay will cater for the basic daily needs of residents, complementing the surrounding retail offer. This offer includes Arden Gardens, the small group of shops on Melrose Street and the strip centres of Kensington, Flemington and North Melbourne.

The activity centres include:

- Macaulay Road, Kensington
- Central Macaulay (Boundary Road)
- Racecourse Road/Boundary Road (north)

### Why is this proposed?

The proposed local activity centres respond to changes in the planning context of the Macaulay area since 2012.

The proposed local activity centres respond to:

- retail and commercial demand analysis and local needs
- impact from flooding
- local context such as traffic conditions
- trends in commercial and retail activity following endorsement of the 2012 Structure Plan



Map 8: Existing and proposed local activity centres

### 1. Macaulay Road, Kensington

Consolidating the local centre to Macaulay Road close to Kensington Station will strengthen the connection with the existing centre and expand and complement the role of the centre in providing a retail and services offering. The presence of larger sites in this area (or in the Central Macaulay Activity Centre) provides the opportunity for a potential additional supermarket.

Consolidation of the centre in this location will also ensure that buildings can provide good connections to the street as it avoids severely flood affected land further east along Macaulay Road, where flood risk measures would result in challenges providing good connection with the street.

### 2. Central Macaulay (Boundary Road)

Parts of Macaulay Road between Boundary Road and Stubbs Street are flood affected. The amenity of this area is also affected by CityLink and is unlikely to encourage retail or commercial activity, even in the long term. Reorienting the centre from Macaulay Road further up Boundary Road locates the activity centre outside of flood affected areas and provides retail in closer proximity to development in the Boundary precinct, enhancing the centre's retail, commercial and services offering. The presence of larger sites in this area (or in the Macaulay Road Activity Centre) provides the opportunity for a potential additional supermarket.

### 3. Racecourse Road / Boundary Road (north)

The creation of an activity centre on Racecourse Road has not eventuated. Racecourse Road carries large volumes of traffic and provides access to and from CityLink. The hostile environment of traffic, noise and arterial roads is less likely to attract high levels of retail foot traffic. With close proximity to Flemington Bridge Station, tram stops and the Capital City Trail, the area is better suited to office and residential buildings, which are present within the Commercial 1 Zone area.

Shifting the centre to Boundary Road provides an opportunity for a small local retail node to service local residential demand and future employment uses.

## ACTIONS

### DELIVER

**Action 20:** Encourage retail and commercial activity on ground floors in local activity centres through an amendment to the Melbourne Planning Scheme.

**Action 21:** Update planning controls to require active ground floor frontages in local activity centres through an amendment to the Melbourne Planning Scheme.

**Action 22:** Provide opportunities for place creation, place making and economic activity that foster a strong sense of place and community identity, including through detailed design of streets and spaces in Macaulay.



### Case study: Ground floor activation

Active ground floor frontages of buildings play an essential role in creating streets that feel comfortable, safe and interesting. Good design should present well to the street, include high-quality materials and offer a sense of activity such as places to sit or large windows to enable views of the internal space.

Image 18: Shortstop cafe in Melbourne  
(Project: Foolscape Studio, Photo: Tom Blachford)

## Objective 8: Ensure provision and access to community infrastructure within and around Macaulay

Access to community infrastructure will be provided to meet the needs of the growing population in Macaulay.

### What is proposed?

Three community hubs are recommended to service the needs of the Macaulay population, including:

- An intergenerational hub is proposed within North Melbourne to provide new and expanded services currently being provided by the North Melbourne Community Centre, Hotham Hub and Jean McKendry Neighbourhood Centre. Consolidating and expanding these facilities will improve operations and provide a one-stop shop of services for a range of age cohorts. The intergenerational hub will likely include general community spaces, youth spaces, flexible working space and computer facilities, ageing and inclusion support services.
- Deliver a new community hub on or near Macaulay Road to the west of Moonee Ponds Creek. This will likely comprise a family hub, including community meeting spaces, maternal and child health services, family services and kindergarten facilities.
- Deliver a new community hub on Arden Street to the west of North Melbourne Recreation Reserve. This will likely comprise of library services and creative and artist maker spaces, multi-purpose bookable rooms, Aboriginal cultural interpretation space, ancillary lettable space for health services and Aboriginal businesses.

These local community hubs will be supported by new community facilities, including passive and active recreation facilities, a government primary school in Arden Central and a government secondary school in Macaulay.

### Why is this proposed?

Community infrastructure refers to public places and spaces that accommodate community facilities and services that help people meet their social needs, maximise their potential and enhance community wellbeing. Analysis of community infrastructure requirements for Arden and Macaulay recommended the delivery of several community hubs over the next 20 years. The majority of existing community infrastructure in Macaulay is located around Buncle Street and Melrose Street in North Melbourne.

Existing facilities are at capacity and are unable to meet current demand. There is also a lack of local services co-located with these facilities.

#### North Melbourne Community Centre

Existing services include:

- gym with personal trainers and fitness classes
- outdoor synthetic soccer pitch, stadium and playground
- community spaces available for use and hire including a community hall, kitchen, meeting and games room
- maternal, child and family health services

#### Hotham Hub Children's Centre

Existing services include:

- child care, long day care and an integrated kindergarten program

#### Jean McKendry Neighbourhood Centre

Existing services include:

- aged services and activities
- a large bookable main hall, kitchen and separate meeting rooms

#### Additional community infrastructure

Existing infrastructure includes:

- Buncle Street Reserve
- Buncle Street Community Garden

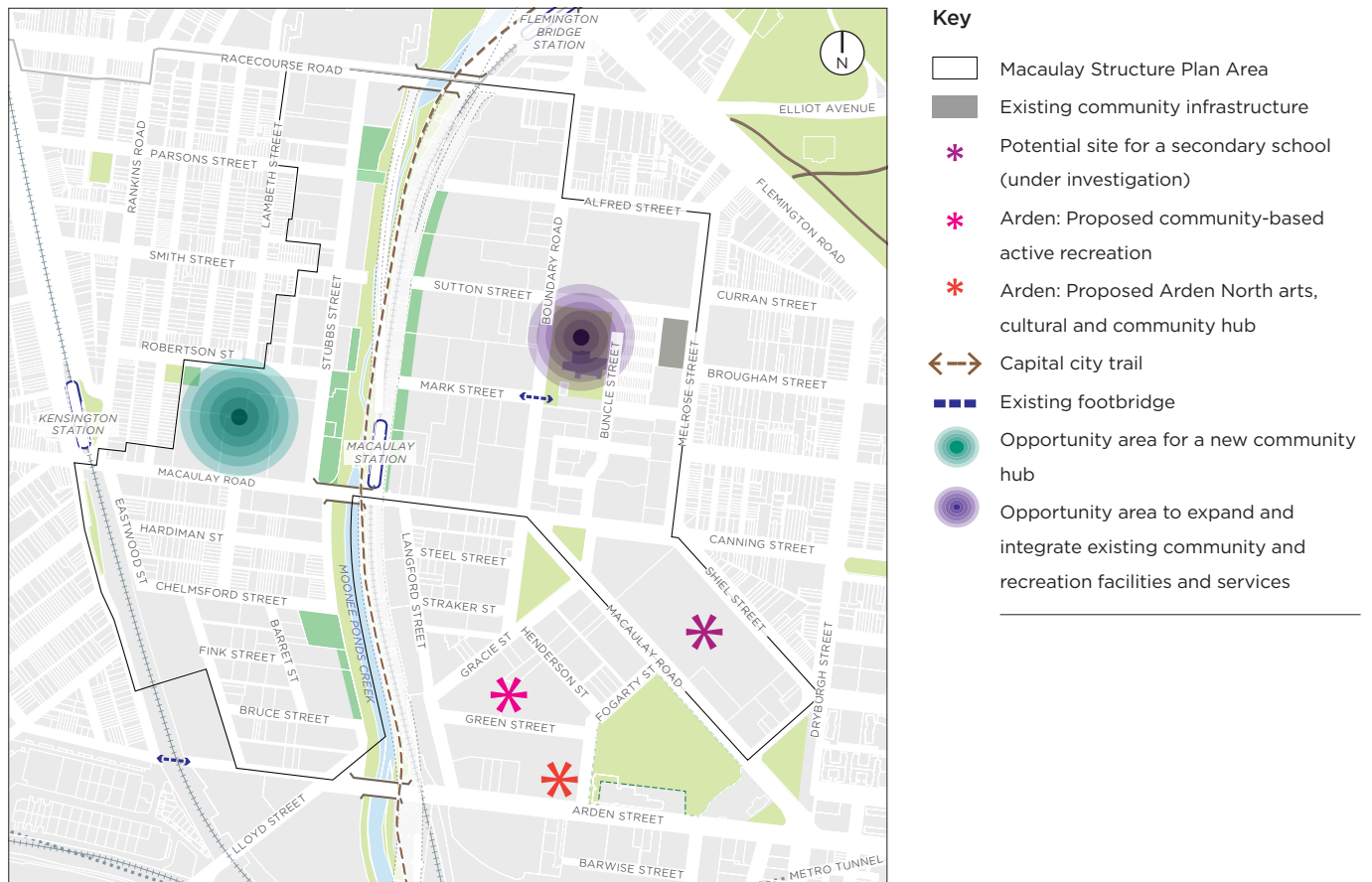
Future population growth in Macaulay will place further pressure on existing facilities and services. With higher land values in the inner city there is a need for innovative approaches to delivering community infrastructure including shared facilities and partnerships between government and the private sector. This is particularly relevant for any future community infrastructure in the Kensington area of Macaulay where land is privately owned.

#### School provision

The Department of Education and Training is responsible for delivery of new schools to service the needs of inner Melbourne. City of Melbourne will continue to advocate for the delivery of a secondary school within the precinct that meets the needs of our community.

#### Community infrastructure in Arden

Community hubs will be delivered in the Arden precinct to service the needs of the growing Arden and Macaulay population. It is important to ensure that Arden and Macaulay are well connected by walking and cycling routes and public transport to enable easy access to community facilities.



Map 9: Existing and proposed community infrastructure



Image 19: The existing North Melbourne Community Centre. Development of a new community hub in North Melbourne is needed to expand and better integrate existing community and recreation facilities and services.

## ACTIONS

### DELIVER

**Action 23:** Investigate renewal opportunities for the North Melbourne Community Centre including a potential future community hub in proximity and upgrading the Boundary Road Reserve recreation offerings.

**Action 24:** Investigate opportunities to deliver a new Macaulay West community hub in partnership with the private sector.

**Action 25:** Provide access to a broader range of community facilities by contributing towards the regional scaled Arden North and Macaulay Arts, Cultural and Community Hub.

### ADVOCATE

**Action 26:** Work with the Department of Education and Training to identify a site and deliver a secondary school in Macaulay east.

## Objective 9: Help deliver affordable and diverse housing in Macaulay

Affordable and diverse housing is required in Macaulay to provide housing for very low, low and low to moderate income households within close proximity to transport and a wide range of jobs. This includes public housing, but also extends to include social and affordable housing.

### What is proposed?

The provision of affordable housing contributions at a rate of 3 per cent to 6 per cent of all floor space (or alternative mix of contribution and discount of an equivalent value as agreed). A cash contribution is considered appropriate for the development of commercial floorspace. It is proposed that this requirement will be delivered through a tailored land use zone (such as a Special Use Zone or an equivalent).

### Why is this proposed?

City of Melbourne's Affordable Housing Strategy 2020–2030 (the Housing Strategy) seeks to increase the supply of appropriate, accessible and affordable rental housing in the municipality. The Housing Strategy endorses the introduction of a higher affordable housing requirement in all urban renewal precincts when land increases in value due to government intervention, such as rezoning or improved transport infrastructure.

The Housing Strategy has identified a current shortfall of 5500 affordable homes across the municipality. By 2036 there is expected to be approximately 27,100 people in need of social and affordable housing. These figures were modelled before the COVID-19 pandemic, therefore the real housing need may be higher than previously estimated. To address the shortfall in the provision of affordable housing in Macaulay, 10 per cent to 15 per cent of new housing stock should be affordable housing. This should be delivered by contributions from all levels of government and the private and not-for-profit sectors.

Affordable housing is essential infrastructure to our city. A wide spectrum of professionals including nurses, administration officers, child care workers, artists, hospitality and service industry workers contribute directly to our local community and economy. Without affordable housing options, many of these people cannot afford to live in, and be part of, our communities.

Our focus is on mechanisms to increase the supply of affordable rental housing in the municipality which can be owned and managed by registered community housing organisations. Rental housing is more accessible than ownership, it doesn't require people to have a substantial deposit to access the housing, it provides certainty over the ongoing affordability of the housing, and it can affordably house people for the length of time they need it.

There is a need for sustained investment in the supply of safe, high-quality affordable rental housing offering secure tenure to residents. Urban renewal areas such as Macaulay will experience the highest levels of population growth and development in the municipality. Macaulay presents a key opportunity for resolving existing gaps and meeting the future demand for affordable housing.

### Affordable housing on City of Melbourne land

The Housing Strategy commits City of Melbourne to deliver up to 25 per cent affordable housing where land that Council owns is used to develop housing, with potential to increase this target in urban renewal areas, where appropriate.

### Affordable housing on Victorian Government land

Existing public housing is owned and managed by the Victorian Government. While the City of Melbourne does not have direct control over its future development, we can advocate for the protection and improvement of public housing stock. The City of Melbourne Housing Strategy advocates for the Victorian Government to develop government-owned land for affordable housing.

We know there is a significant amount of government-owned land that is currently not being used efficiently, and is close to transport, services and employment which makes it well suited to affordable housing. We must ensure that new public housing stock is increased and old stock is kept fit for purpose. We advocate for additional public housing in our municipality, for Council to play a strategic role in the renewal of public housing sites, and for existing public housing tenants and communities to be supported through future renewal projects.

### Affordable housing on private land

The Housing Strategy identifies the key role that the private sector plays in helping to deliver affordable housing with the not-for-profit sector and community housing organisations and associations.

### Victorian Government Big Housing Build

In November 2020, the Victorian Government announced the \$5.3 billion Big Housing Build initiative. Of the total budget, \$1.38 billion sits within the Social Housing Growth Fund and can be accessed by community housing providers to fund new projects. The initiative will be delivered through Homes Victoria, the new government agency established to manage Victoria's social housing system.

The City of Melbourne will work with Homes Victoria to identify sites suitable for inclusion in the program and support communities as part of future renewal projects.



#### Case study: Delivering inner city affordable housing

A mix of private and affordable housing is provided in this 59 unit development in Gipps Street, Abbotsford on the site of a former boot factory.

Using a co-operative housing model, not-for-profit developer Common Equity Housing Limited invested profits from the sale of the project's 34 private dwellings to ensure its 25 social housing dwellings are affordable to low-income tenants.

205 Gipps Street won the Victoria Affordable Development award in 2014 from the Urban Development Institute of Australia and provides a model for similar scale and mixed tenure housing in Macaulay.

Image 20: 205 Gipps Street, Abbotsford.  
(Project: Kann Finch. Photo: Emma Cross)

#### ACTIONS

##### DELIVER

**Action 27:** Amend the planning scheme to require the provision of affordable housing contributions at a rate of 3 per cent to 6 per cent of all floor space (or alternative mix of contribution and discount of an equivalent value as agreed).

**Action 28:** Deliver up to 25 per cent affordable housing where land owned by the City of Melbourne is used to develop housing, and investigate opportunities to exceed this.

##### PARTNER

**Action 29:** Support, enable and strengthen the partnership between registered community housing organisations, governments, industry, peak bodies and the community to increase the supply of affordable rental housing.

##### ADVOCATE

**Action 30:** Advocate to the Victorian and Australian governments to increase the supply of affordable housing in Macaulay, through:

- The inclusion of Macaulay within the 10-year 'Homes Victoria Strategy' which will support development of social housing through the \$5.3 billion Big Housing Build.
- Funding and policy initiatives that will increase the supply of affordable housing in Macaulay.

## 2.3 MOVEMENT AND ACCESS

Macaulay's movement and access network will evolve to create a 20-minute neighbourhood. The transport system will move more people more efficiently in the future. Walking, cycling, and public transport will be prioritised.

### Context

#### What did the 2012 Arden-Macaulay Structure Plan outline?

The plan emphasised the need for high-quality public transport infrastructure, streets designed to prioritise people walking and riding bikes, in addition to trams and buses, safe and effective traffic management and limited car parking provision.

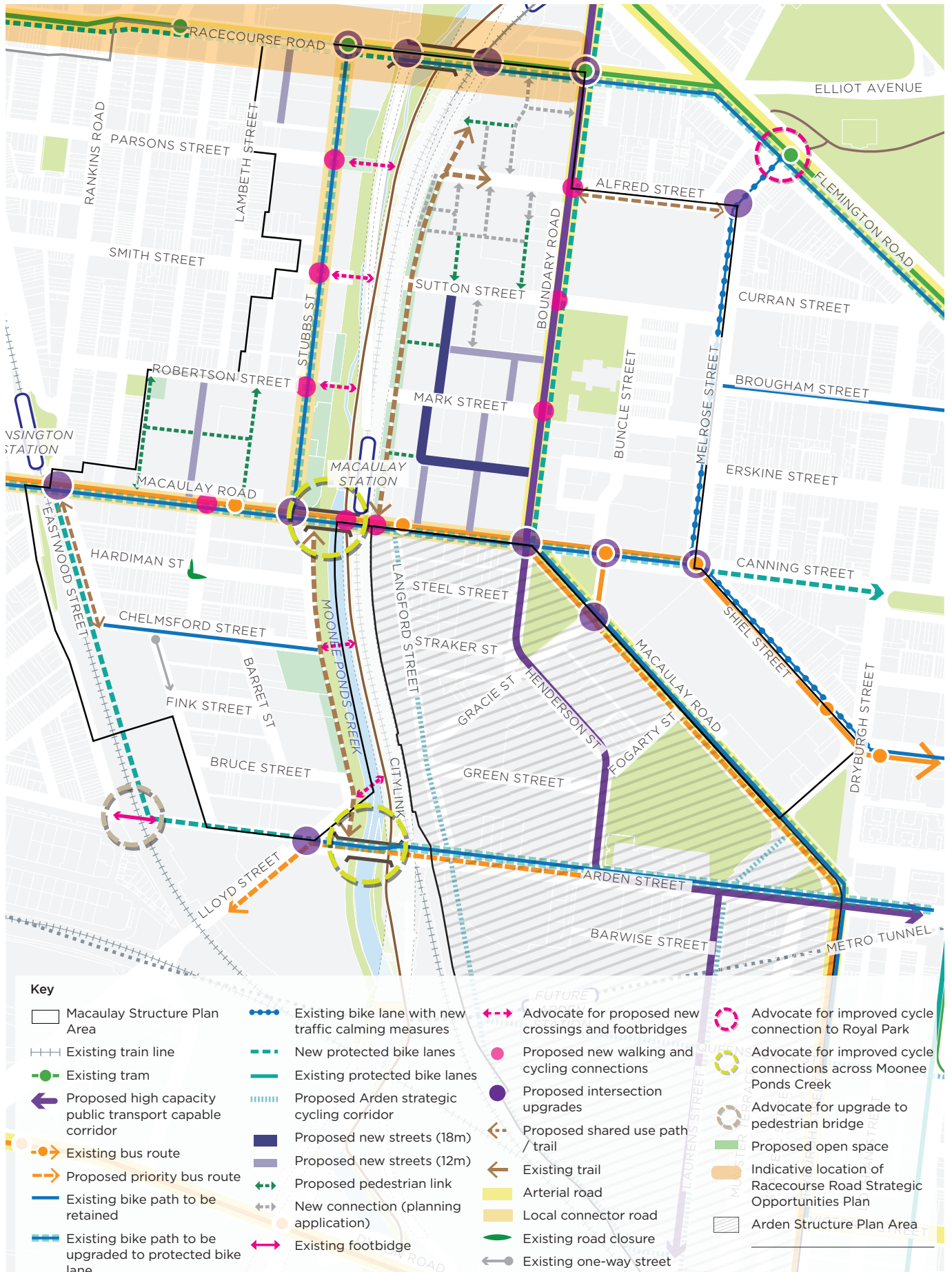
#### What do we know?

- The Upfield rail line, CityLink and Moonee Ponds Creek divide the area and create a barrier to movement. Racecourse and Macaulay roads and Arden Street are the only crossing points.
- Walking and cycling access through Macaulay can be difficult and unsafe. Speed limits are high on main streets and pedestrian and cyclist priority is low.
- Streets are currently designed to prioritise motor vehicles ahead of other modes of transport.
- Local streets have been observed to be used as 'short cuts' for vehicles to avoid congestion. This reduces safety and amenity for other road users.
- The West Gate Tunnel (under construction) will have residual traffic impacts in Macaulay as motor vehicles will be directed towards Macaulay and Boundary roads.
- Racecourse Road connects to CityLink encouraging high volumes of through-traffic. CityLink also provides a corridor for traffic to bypass the precinct.
- The Metro Tunnel station in Arden will increase public transport options.
- Macaulay is relatively well serviced by public transport routes, however service frequency is low at all times.
- Stations are perceived to have access, amenity and safety issues.
- 78 per cent of people travelling to Macaulay for work typically arrive by car. City of Melbourne has a goal to increase the total mode share of people walking, riding bikes, and using public transport to 70 per cent of all trips.
- On-street parking is generally unrestricted and recent developments have been providing off-street parking.
- Community engagement showed support for prioritising cycling and walking.

### What are we proposing?

The objectives and actions in this section will help deliver the vision for Macaulay by:

- prioritising active transport by designing streets that are safe and accessible for people walking and riding bikes (Objective 10)
- helping deliver, public transport that meets the needs of the Macaulay population (Objective 11)
- improving car parking requirements to support a less car dependent transport system (Objective 12).



Map 10: Future Macaulay transport network

## Objective 10: Prioritise active transport by designing streets that are safe and accessible for people walking and riding bikes

Travel by foot and bicycle will be designed and prioritised to ensure good access to destinations in Macaulay and surrounding areas. Streets will be safe and accessible for everyone and provide high levels of amenity.

### What is proposed?

Walking will be encouraged through wider footpaths, increased amenity and making crossing streets easier and safer. Increased amenity will be provided through the use of high-quality materials, increased street tree planting and urban greening, and active uses adjoining streets. Frequent crossing points will be provided on busier roads such as Macaulay, Boundary, and Racecourse roads and Stubbs Street.

Riding bikes in Macaulay will be made safer and more attractive by expanding the existing network and providing high-quality protected bicycle lanes and intersections. This aligns with the City of Melbourne Transport Strategy 2030 policy to make every street safer for cycling.

Key routes for future protected lanes include Racecourse, Boundary and Macaulay roads and Canning and Stubbs streets. Safe cycling facilities, including protected lanes and traffic-calming treatments, will be included on other corridors.

The Planning Scheme will require an increased amount of bicycle parking in new developments. On-street bicycle parking will be expanded, particularly outside local retailers, businesses and community facilities.

New walking and bicycle connections across the Moonee Ponds Creek will better connect the west of Macaulay with the Capital City Trail. We will advocate for improved connectivity between the Capital City Trail and areas east of the creek as part of potential future grade separation of the Upfield rail line. Existing rail and creek crossings on Macaulay and Racecourse roads will be modified to enable safe and comfortable access for people walking and riding bikes, prior to grade separation. This will greatly improve local access between Kensington and North Melbourne.

Through-vehicle movements on local streets will be discouraged and a safer environment will be provided by lowering motor vehicle speeds. This will be achieved by working with the Department of Transport.

### Why is this proposed?

Population growth and increased economic activity will generate more trips by foot and bicycle. The current design of streets prioritises motor vehicles and does not adequately support people walking and riding bikes.

Improvements to public transport services and amenity (see Objective 11) will also encourage more people to walk, cycle and to use public transport.

Macaulay and Boundary roads, and Stubbs Street are the most direct routes through Macaulay, but they are dominated by motor-vehicle traffic and on-street car parking. They do not provide a sufficient level of safety and amenity to encourage walking and riding bikes.

Improvements to active transport delivers a range of additional benefits. Cities with streets that enable walking and bike riding have healthier populations and more sustainable environments. Walkable streets support business and activity, which is dependent on face-to-face interaction. Streets, laneways and other in-between spaces can also provide additional places for recreation.



Image 21: Existing poor quality cycling infrastructure on Macaulay Road provides an opportunity to improve the safety, comfort and convenience of cycling.

## ACTIONS

### DELIVER

**Action 31:** Prioritise walking on Macaulay Road, Boundary Road, and Stubbs Street with wide, unobstructed footpaths. Provide raised continuous footpaths across intersections with side streets where possible.

**Action 32:** Minimise the number of vehicle crossovers from all streets and encourage the servicing of buildings via service laneways.

**Action 33:** Provide regular crossings of main streets for people walking and riding bikes, especially at intersections with side streets, and incorporate these crossings into public transport stops where applicable.

**Action 34:** Discourage through-vehicle movement on the local street network.

**Action 35:** Make streets safer for bikes and deliver the protected bicycle network shown in Map 10 on page 56.

**Action 36:** Develop a prioritisation and delivery plan for two new pedestrian and bicycle crossings of the Moonee Ponds Creek.

### PARTNER

**Action 37:** Work with the City of Moonee Valley and Department of Transport to develop and deliver the Racecourse Road Strategic Opportunities Plan to increase safety and amenity on Racecourse Road.

### ADVOCATE

**Action 38:** Advocate for new and improved pedestrian and bike crossings of the Moonee Ponds Creek.

**Action 39:** Advocate that any future grade separation of the Upfield rail line provides improved walking and cycling connections from North Melbourne and areas to the east of Moonee Ponds Creek to the Capital City Trail.

**Action 40:** Advocate for secure bicycle parking to be installed at Macaulay Station.

**Action 41:** Advocate for signal changes and physical works on Racecourse Road to increase safety and amenity, while the Racecourse Road Strategic Opportunities Plan is under development.

**Action 42:** Advocate for reduced speed limits across Macaulay.

## Objective 11: Help to deliver public transport that meets the needs of the Macaulay population

High-quality, frequent, and reliable public transport will service Macaulay. This will provide a convenient option for residents, workers, and visitors to move around.

### What is proposed?

In the short term, amenities at Macaulay Station should be upgraded including lighting, accessible and Disability Discrimination Act (DDA) compliant access, and signalised crossings immediately adjacent to the level crossing on the eastern and western sides. Increased services to 10-minute frequencies on the Upfield and Craigieburn lines and 402 bus would make public transport a more convenient and viable alternative to car use.

High amenity pedestrian-priority crossings to public transport stops and short traffic signal cycle times at intersections should also be implemented.

In the longer term, the proposed high capacity public transport capable corridor through Arden should be extended north along Boundary Road. Grade separation of the Upfield rail line at Arden Street and Macaulay Road should be delivered, along with provision of a new station with a higher level of amenity and facilities.

As these projects are focussed on public transport, they are subject to Victorian Government approval and funding. City of Melbourne will continue to advocate for greater outcomes for the Macaulay population.

### Why is this proposed?

As Macaulay's population grows, the public transport system will need to evolve alongside redevelopment to influence the travel behaviour of residents, workers and visitors. Macaulay's existing public transport services offer a strong basis for improvement. The Upfield and Craigieburn rail lines provide access to the north and south, and the 402 bus and 57 tram allow people to travel east and west.

Extending the proposed high capacity public transport capable corridor in Arden along Boundary Road will facilitate increased local movements by public transport and provide a more direct connection to the Arden Station and north to Flemington Bridge Station.

With limited crossing points, the Upfield rail corridor is a significant barrier to east-west movement. Future grade separation of the Upfield rail line at Arden Street and Macaulay Road would improve connections between North Melbourne and Kensington over the Moonee Ponds Creek, also improving the creek corridor by making land available for flood mitigation and open space. Grade separation would also provide a new station with a higher level of amenity and facilities, making public transport a more comfortable and convenient choice.

## ACTIONS

### ADVOCATE

**Action 43:** Advocate for grade separation of the Upfield line and upgrades to Macaulay and Flemington Bridge stations.

**Action 44:** Advocate for the extension of the high capacity public transport corridor through Arden along Boundary Road to Flemington Bridge Station (and points further north and / or west).

**Action 45:** Advocate for frequencies of 10 minutes or less from 6am to midnight 7 days a week, on key public transport capable corridors, including the Upfield and Craigieburn rail lines, the 402 bus and the 57 tram.

**Action 46:** Advocate for greater traffic signal priority for buses and trams, such as at the intersection of Macaulay and Boundary roads.

**Action 47:** Advocate for short-term accessibility, amenity and safety upgrades at Macaulay and Flemington Bridge stations.

**Action 48:** Advocate for high capacity trams and Disability Discrimination Act (DDA) compliant platform stops on Racecourse Road.



Image 22: Case study of the new Rosanna Station as part of the Victorian Government's Level Crossing Removal Project (Project: MGS Architects, Photo: Andrew Latreille).



Image 23: View of Macaulay Station looking north. While most areas of Macaulay are within 10 minutes' walk of Macaulay or Flemington Bridge train stations, community feedback indicates these stations are perceived to have poor safety and amenity.

## Objective 12: Improve car parking requirements to support a less car-dependent transport system

Parking controls and supply will be managed to efficiently and fairly prioritise street space allocation. This will encourage walking, cycling and use of public transport while minimising motor vehicle dependency. Some on-street car parking spaces will be prioritised for businesses and existing residences.

### What is proposed?

On-street car parking supply and controls will be reviewed to provide space for wider footpaths, protected bike lanes, street tree planting and improved amenity. Demand-based parking controls will be implemented to ensure equitable access to local services, businesses and amenity in addition to loading access availability, vehicle turnover and to avoid 'overspill' from new developments. This will likely include time-restricted parking, loading and drop-off bays and demand-based paid parking. These changes will be rolled out based on parking demand. On-street parking pricing will respond to demand, with the aim of ensuring 15 per cent parking availability. Pricing, rather than time limits, will encourage turnover.

Off-street parking requirements in the planning scheme will be replaced by maximum car parking rates. We will also investigate consolidated parking solutions, including precinct parking facilities and/or 'unbundling' of car parking from land titles in private development. These measures will prevent the oversupply of parking and allow floor space in developments to be used more efficiently. This will be further supported by requirements for ample bicycle parking and end-of-trip facilities.

Opportunities for publicly accessible car-share vehicles will be integrated into development.

### Why is this proposed?

All public space in Macaulay, including the space set aside for car parking, will be under increased pressure as the population, number of jobs and activity grows. The larger industrial and commercial land holdings will be divided into smaller lots with new streets that connect into the existing street network in Kensington and North Melbourne. Parking space will need to be managed to provide the highest value use to residents, businesses, and visitors.

On-street parking is generally unrestricted and uncontrolled except where it is adjacent to residences where parking permits are available. Unrestricted parking incentivises driving and storing of vehicles for long periods. It also inflates parking demand as some who have the option to travel without a car may choose to drive because they know unrestricted parking is available. These factors increase road congestion and reduce the space available for other transport modes. Better managing kerbside space exposes excess parking supply that can be transitioned to higher value uses.

Currently, the Planning Scheme requires developments in Macaulay to provide a minimum number of parking spaces. However, this can be waived at City of Melbourne or the planning authorities' discretion. Applying a maximum car parking rate in Macaulay and ensuring the appropriate provision of bicycle parking facilities will help optimise the use of space. Bicycle parking facilities should be secure, easy to use and include suitable end-of-trip facilities to ensure cycling is a convenient transport option.

Unbundling off-street parking space from property titles establishes a market for car parking. This allows unused and underused car parking bays in a building to cater for external demand or facilitate conversion of car parking space to other uses, including commercial or residential space. Supporting the inclusion of shared mobility services, such as car share, will also give greater transport choice and make it easier to live in the area without needing to own a car.

Off-street car parking spaces in private buildings have other impacts on the surrounding area including poor building design and public realm outcomes due to multiple crossovers and vehicle movements.



Image 24: Car share programs reduce car ownership and travel. Every car share vehicle in the municipality takes nine private vehicles off the road, while car share members drive half as many kilometres each year as non-members. This image shows an example of car share on Wellington Parade in East Melbourne.

## ACTIONS

### DELIVER

**Action 49:** Introduce on-street parking controls on Macaulay Road, Boundary Road and Stubbs Street to encourage short-stay use that supports local businesses.

**Action 50:** Extend on-street parking controls to other streets in Macaulay in consultation with existing residents, businesses, and land owners.

**Action 51:** Transition excess on-street parking to higher value uses including wider foot paths, safer bike lanes and new open space.

**Action 52:** Apply a maximum off-street parking rate for new development. Benchmark the rate with international best practice and the rates applied in Fishermans Bend, Arden and West Melbourne.

**Action 53:** Investigate mechanism/s and locations to consolidate parking supply and avoid an oversupply of off-street parking.

**Action 54:** Require the inclusion of publicly accessible car share vehicles in private developments.

**Action 55:** Ensure new development provides secure and easy-to-use bicycle parking and end-of-trip facilities at a rate higher than the statewide standard.

## 2.4 STREETS AND SPACES

Macaulay's streets and public spaces will be green, vibrant and diverse places for the community. Local streets, larger land holdings, Buncle Street Reserve and the Moonee Ponds Creek corridor present the greatest opportunities for increasing the quantity and quality of open space, and achieving other sustainability goals.

### Context

#### What did the 2012 Arden-Macaulay Structure Plan outline?

The plan identified how Macaulay's streets and spaces can improve the quality of the public realm, including:

- introducing five new local parks
- revitalising existing open spaces like the Moonee Ponds Creek
- the role of the future street network in strengthening the local ecosystem as well as prioritising access for people walking and riding bikes
- delivery of new streets and open space on large sites
- building design that contributes positively to the public realm to create safe and inviting spaces for the community.

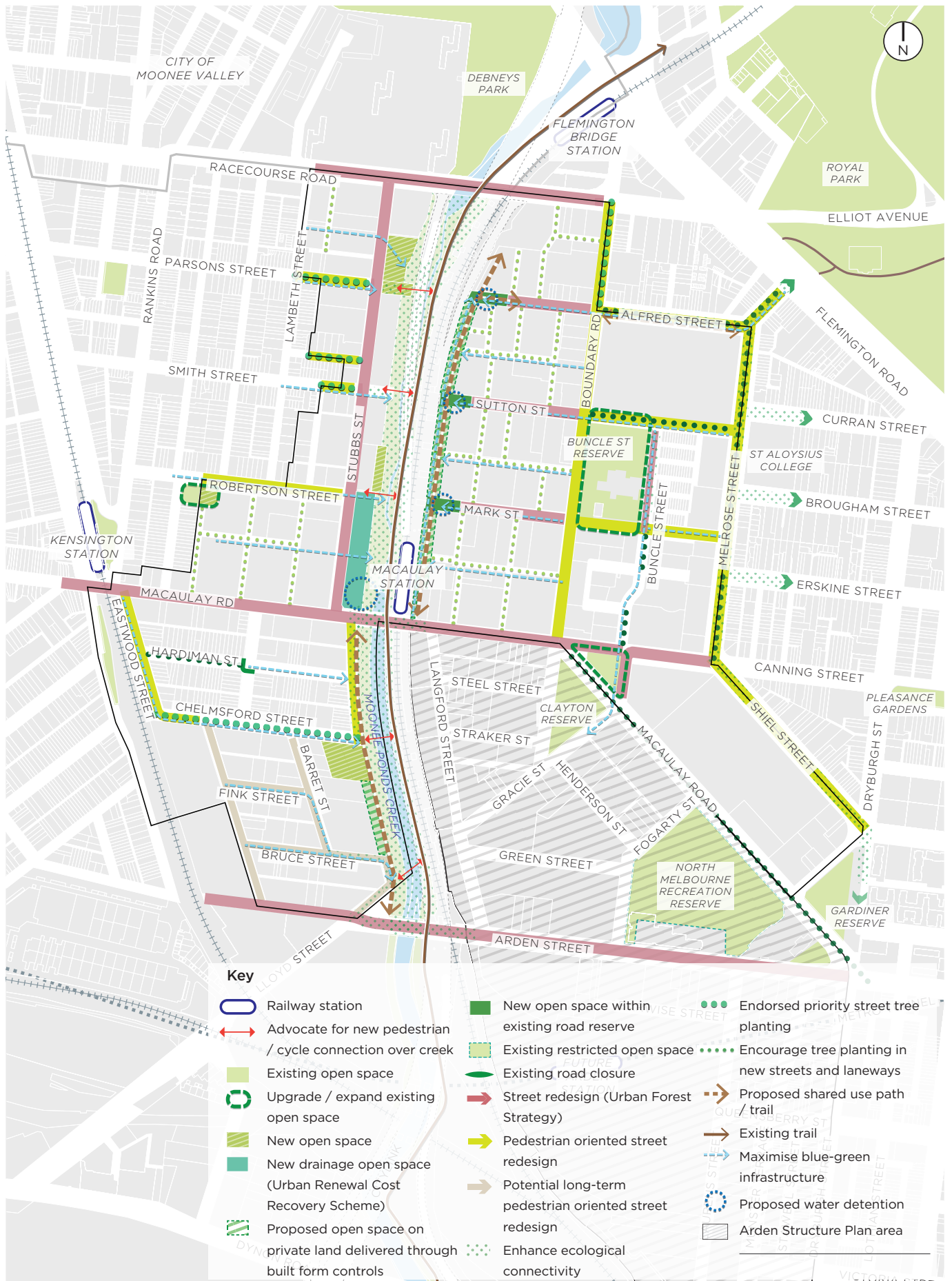
#### What do we know?

- The industrial history of Macaulay means there are few open spaces and many large land holdings. This makes for a poor walking environment with limited connectivity across the precinct.
- Open space within Macaulay is limited to the Buncle Street Reserve, Canning Street and Macaulay Road Reserve and the Moonee Ponds Creek corridor, however the precinct is in close proximity to a number of adjoining open spaces. These include Clayton Reserve, Gardiner Reserve and Royal Park.
- The oval at the North Melbourne Recreation Reserve has limited community use as it is leased to the North Melbourne Football Club.
- There is a higher concentration of open space to the east of the rail corridor in North Melbourne, with less open space to the west in Kensington.
- Connections and access to open space is often poor due to the quality of the public realm and infrastructure barriers. This includes the rail corridors and crossing Flemington Road to access Royal Park.
- Community engagement highlighted that open space is highly valued by the community, noting that open space facilities and provision should keep pace with population growth.

### What are we proposing?

The objectives and actions in this section will help deliver the vision for Macaulay, improving streets and spaces by:

- creating a network of high-quality open spaces in Macaulay (Objective 13)
- upgrading existing streets to enhance urban ecology and urban forest outcomes, while supporting improved amenity in the public realm for pedestrians and cyclists (Objective 14)
- delivering high-quality new streets on larger land holdings to enhance the permeability of the transport network and support a high-quality public realm (Objective 15)
- ensuring integrated water management is incorporated into Macaulay to support a resilient and liveable neighbourhood (Objective 16)
- enhancing the Moonee Ponds Creek to become a thriving corridor that connects the community (Objective 17).



Map 11: Proposed changes to the public realm in Macaulay

## Objective 13: Create a network of high-quality open spaces in Macaulay

A high-quality open space network will be delivered in Macaulay by improving and expanding existing open spaces, revitalising the Moonee Ponds Creek corridor, providing new open space on larger land holdings and reallocating space within the street network.

### What is proposed?

Improved open spaces in Macaulay will provide a range of benefits to the existing and future residential and worker population. Benefits will be influenced by the size and location of open space, in addition to the surrounding land uses, and may include:

- Providing places for participation in passive and active recreation for people of different ages and abilities.
- Supporting mental health, wellbeing and social connectedness.
- Mitigating the urban heat island effect through tree planting and increased permeability.
- Connecting streets and open spaces with new landscaping to create biodiversity corridors.
- Co-locating with complementary uses where possible to maximise amenity and range of recreational benefits.

The ambitions for the open space network in Macaulay include:

- **Upgrade and expand existing open spaces:** including Buncle Street Reserve, Canning Street and Macaulay Road Reserve and Robertson Reserve. Buncle Street Reserve will be upgraded as part of the proposed development of a new community hub in the Melrose Precinct.
- **Three new local open spaces adjacent to Moonee Ponds Creek** supporting improved pedestrian access to revitalised creek environs (see Objective 16). These new open spaces will be delivered through the rezoning of land and establishing land management arrangements with VicTrack.
- **Implement road closures** where vehicle access is no longer required from a transport network perspective, for new open spaces and improved pedestrian connectivity framed by active frontages from new mixed use development. Mark, Sutton and Alfred streets to the west of Boundary Road will comprise new public open space at the western end of the street. The southern side of these streets will be widened and incorporate water sensitive design, expanded footpaths and shaded seating areas. These open spaces will be connected by linear open space running north to south.

- **Encourage new development** to provide building setbacks to accommodate new streets and publicly accessible open spaces which are carefully sited and designed to complement the surrounding street and open space network. This includes a new linear open space to the east of the rail corridor between Macaulay Road and Alfred Street by implementing a 20 metre setback on sites. The open space will support active and passive recreation while providing an important pedestrian and cycle connection between Moonee Ponds Creek and Royal Park.
- **Continue to investigate opportunities** to acquire larger land holdings for new open spaces, with an emphasis to the west of Moonee Ponds Creek where there is currently a deficiency in the provision of open space for the existing residential population.

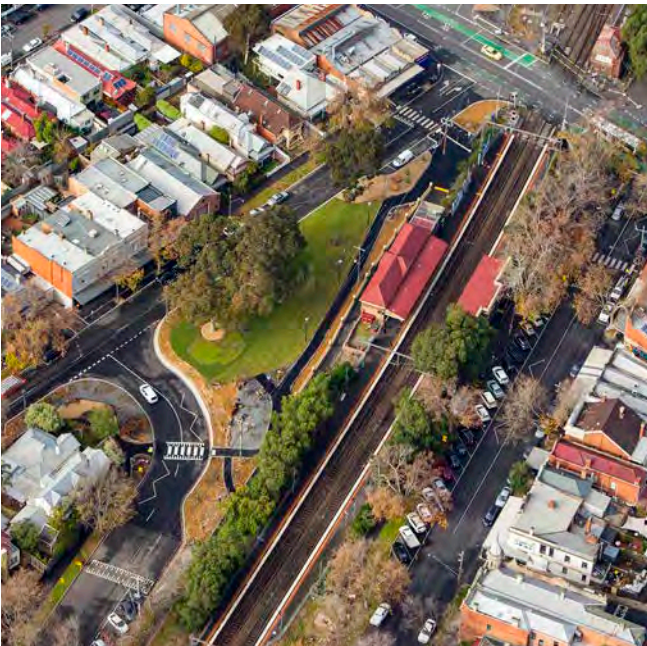
Due to the risk of flooding in the precinct many of the open spaces in Macaulay must serve a water management and treatment role based on their proximity to Moonee Ponds Creek. These open spaces may require wetlands, water storage areas and other water sensitive urban design interventions to improve the function and condition of Moonee Ponds Creek. The design of open spaces will integrate water management requirements with passive and active recreation functions to allow users to acknowledge the creek's history as an important environmental corridor and provide opportunities to celebrate water within the landscape.

### Why is this proposed?

Macaulay currently contains 5.77 hectares of open space, which equates to approximately 8 per cent of the total land area. This includes Buncle Street Reserve and Canning Street Reserve in North Melbourne and the Moonee Ponds Creek Corridor. Robertson Street Reserve in Kensington, is located adjacent to the study area to the west. Currently 3150 people live in Macaulay (2016 Census) and there are around 3580 jobs (2018 CLUE). The total area of open space equates to approximately 8.6m<sup>2</sup> of open space per resident and worker. As Macaulay grows, more open space will be required to meet the needs of the growing residential and worker population.

The Open Space Strategy (2012) provides the overarching framework and strategic direction for open space planning in the City of Melbourne. The strategy demonstrates the need for the City to achieve a minimum of 7.1m2 of open space per person. The Strategy identifies a hierarchy of different types and sizes of open spaces that can be achieved throughout the city, and highlights areas where new open spaces are needed. In Macaulay, the directions for open space include:

- Two new neighbourhood open spaces to the west of the rail corridor of a minimum 1 hectare in size.
- Three new local open spaces of 0.26 to 0.9 hectares in size including one to the west of the rail corridor and two between the rail corridor and Boundary Road.
- Upgrade Buncle Street Reserve to improve active recreation and other facilities to complement the community hub.



Case study: Eastwood and Rankins Road Reserve, Kensington

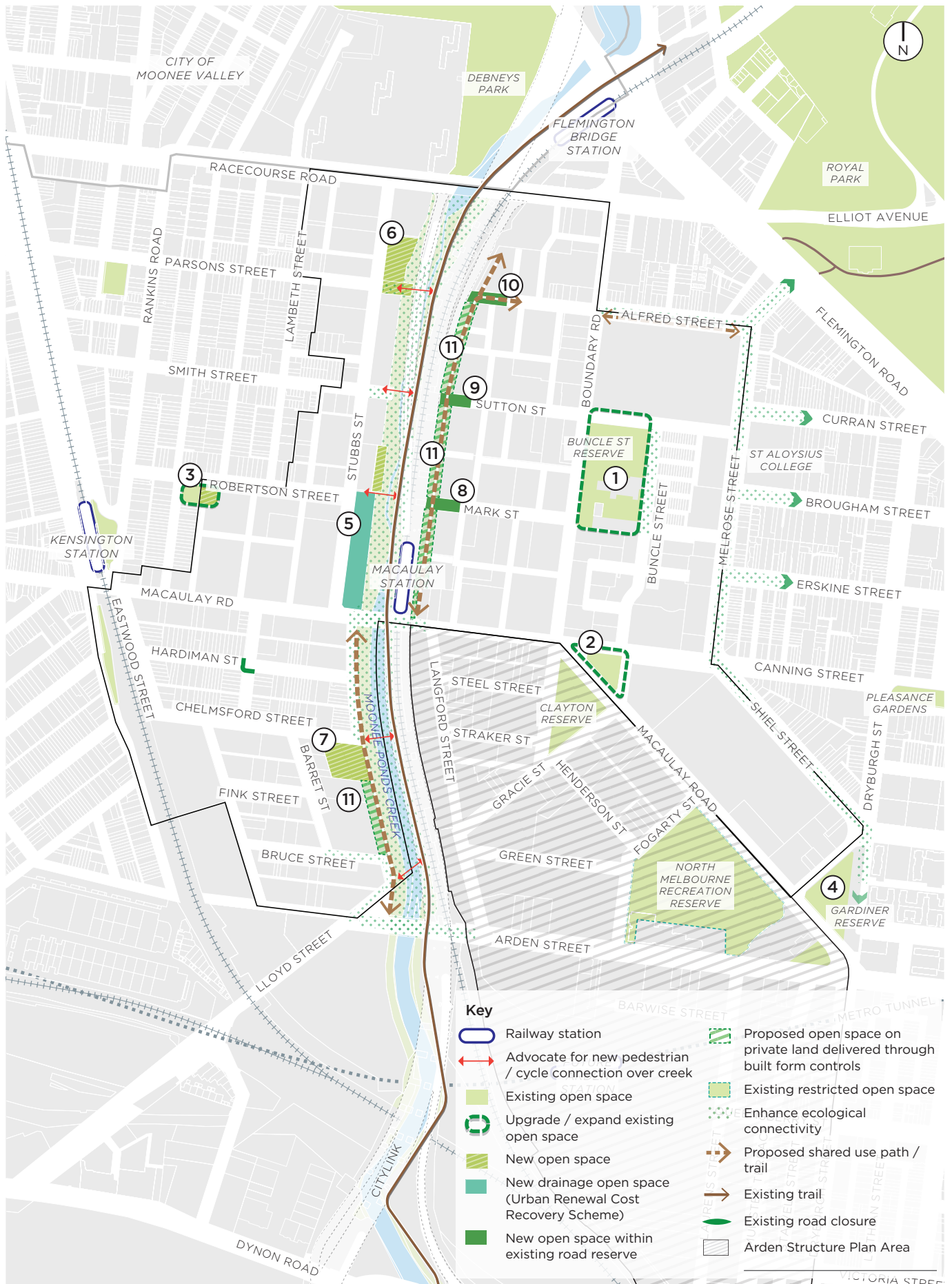
By expanding two small traffic islands and closing part of Eastwood Street the amount of green open space has more than doubled, providing much needed open space for the residents of Kensington.

Image 25: Aerial view of Eastwood and Rankins Road Reserve

ACTIONS
DELIVER
<p><b>Action 56:</b> Deliver additional open space through the expansion of Robertson Street Reserve.</p>
<p><b>Action 57:</b> Deliver additional new open space at the western end of Alfred, Sutton and Mark streets incorporating integrated water management.</p>
<p><b>Action 58:</b> Deliver new public open space adjacent to the Moonee Ponds Creek corridor incorporating integrated water management within Stubbs and Chelmsford precincts.</p>
<p><b>Action 59:</b> Rezone acquired land for proposed public open spaces to Public Park and Recreation Zone (PPRZ) and ensure new open space is protected from overshadowing, in winter, in line with City of Melbourne’s Sunlight to public parks policy.</p>
<p><b>Action 60:</b> Undertake detailed design for open spaces, ensuring that caring for Country principles are embedded both in the design and management of open spaces.</p>
<p><b>Action 61:</b> Update built form controls to require setbacks to the Moonee Ponds Creek corridor east of the railway line to encourage the provision of open space.</p>
<p><b>Action 62:</b> Investigate opportunities for larger open space west of the rail corridor.</p>

Based on the Open Space Strategy, the following table identifies existing and proposed open spaces in Macaulay. This also includes a high level description of potential functions and uses to meet the needs of the existing and future community.

NO.	OPEN SPACE	APPROX. SIZE (M <sup>2</sup> )	ROLE (OPEN SPACE STRATEGY)	PREFERRED FUNCTION
<b>Existing open space</b>				
1	Upgrade and expand Buncle Street Reserve	14,311	Neighbourhood Open Space	Prepare a design plan to guide the future design and upgrades of this open space <ul style="list-style-type: none"> <li>• Large open grassed areas for structured and unstructured use</li> <li>• Courts for structured and unstructured use</li> <li>• Garden beds and trees</li> <li>• Seating and shelters</li> <li>• BBQ and picnic facilities</li> <li>• Improved pedestrian paths</li> <li>• Playground</li> <li>• Public toilets</li> </ul>
2	Upgrade and expand Canning Street and Macaulay Road Reserve	1762	Local open space	<ul style="list-style-type: none"> <li>• Prepare a design plan to guide major upgrade of open space to address future redevelopment and integrate water sensitive urban design</li> </ul>
3	Upgrade and expand Robertson Street Reserve	900	Small local	<ul style="list-style-type: none"> <li>• Prepare a design plan to guide the future upgrade of open space to cater to the increased population</li> </ul>
4	Gardiner Reserve	5285	Local open space	<ul style="list-style-type: none"> <li>• Recently upgraded and expanded to accommodate new planting and playground.</li> </ul>
<b>Proposed open space</b>				
5	Macaulay Terraces		Local open space	<ul style="list-style-type: none"> <li>• Playground</li> </ul>
6	Stubbs Street		Local open space	<ul style="list-style-type: none"> <li>• Unstructured recreation facilities</li> </ul>
7	Chelmsford Street		Local open space	<ul style="list-style-type: none"> <li>• Skate facilities</li> <li>• Seating and rubbish bins</li> <li>• Water features/wetlands</li> <li>• BBQ and picnic facilities</li> <li>• Garden beds and trees</li> </ul>
8	Mark Street closure		Small local	<ul style="list-style-type: none"> <li>• Seating and rubbish bins</li> </ul>
9	Sutton Street closure		Small local	<ul style="list-style-type: none"> <li>• Garden beds and trees</li> </ul>
10	Alfred Street closure		Small local	<ul style="list-style-type: none"> <li>• Water sensitive urban design infrastructure</li> </ul>
11	Linear Open Space		N/A	<ul style="list-style-type: none"> <li>• Shared user path</li> <li>• Informal active recreation</li> <li>• Garden beds and trees</li> <li>• Drinking fountains and bike parking</li> <li>• Seating and rubbish bins</li> </ul>



Map 12: Open space opportunities in Macaulay

## Objective 14: Upgrade existing streets to enhance urban ecology and urban forest outcomes, while supporting improved amenity in the public realm for pedestrians and cyclists

High-quality green streets will be delivered to implement the design principles of the Urban Forest Strategy and the Nature in the City Strategy, while improving access for people walking and riding bikes.

### What is proposed?

#### Urban ecology

Many streets and open spaces in Macaulay are suitable for increased understorey planting and landscape improvements to support urban ecology, as per the Nature in the City Strategy (2017). Understorey plants include small trees, shrubs, vines and grasses and have multiple benefits, including:

- ecological connectivity and increased habitat Alfred Street (west of Boundary Road): creating new
- linear open space on the south side to provide an
- important east-west link between open space along the
- rail corridor and Royal Park. Street upgrades can also
- support water sensitive urban design (WSUD) and new
- landscape,
- improved amenity for humans
- key contributor to a healthy ecosystem
- providing important habitat for small birds and insects

Opportunity exists in a number of streets to better connect to open spaces, with a focus on enhancing biodiversity corridors between Moonee Ponds Creek and Royal Park. Streets identified for landscape upgrades includes Shiel Street, Melrose Street, Alfred Street, Buncle Street, Arden Street (west), Bruce Street, Bent Street and Macaulay Road (at Moonee Ponds Creek).

The siting and design of new landscape should optimise habitat corridors through linear corridors along footpaths with minimal disruptions. New development can play a critical role in providing urban greening benefits to the public realm through street setbacks for trees and garden beds and/or vertical landscaping on facades.

Moonee Ponds Creek is identified as a significant biodiversity corridor that can support landscape improvements including new planting at the creek edge to improve habitat connectivity.

#### Urban forest

Streets and open spaces in Macaulay have the potential for increased tree planting, particularly along footpaths and medians. Additional trees in streets and public spaces have multiple benefits, including:

- establishing a more resilient and diverse urban forest
- improving thermal comfort by shading and cooling the environment
- increasing surface permeability
- mitigating the impacts of a changing climate
- improving biodiversity and enabling people to connect with nature

The North and West Melbourne and Kensington Urban Forest Precinct Plans provide guidance for future tree planting in Macaulay to 2024. It sets a target of 40 per cent canopy cover by 2040.

#### Opportunities for street redesign and upgrades

There are a number of opportunities within Macaulay for street redesign and upgrades to increase urban greening and improve ecological connectivity, including:

- Arterial and local connector roads including Racecourse Road, Arden Street, Stubbs Street, Macaulay Road and Canning Street.
- The broad, industrial east-west streets of Alfred, Sutton and Mark streets to the east of the rail corridor.
- Buncle Street with an emphasis on expanding the open space as part of an upgrade of recreation functions and facilities.
- In the Commercial 2 Zone area including Fink and Bruce streets, street upgrades will be considered in the longer-term given the loading and servicing needs of existing commercial businesses currently in operation.
- Replacement tree planting to the north of Boundary Road, Buncle Street (large deciduous) and Eastwood Street (medium-small deciduous).
- New tree planting on Chelmsford Street (medium-small deciduous), Scarborough Place (medium-small deciduous) and Smith Street (large deciduous).

It is important that any street redesign protects, and where possible, enhances the growing conditions of existing street trees. If any trees need to be replaced, the City of Melbourne Tree Retention and Removal Policy (2012) will ensure the replacement process is aligned with community expectations.

To ensure the long term healthy growth of street trees it will be important to ensure good quality soil and sufficient soil volume.

There are a number of streets recognised for significant enhancement to support a high-quality public realm in response to the future needs of people walking and riding bikes, as well as future redevelopment of adjoining sites. Key streets identified for upgrades include:

- Boundary Road: prioritising the widening of footpaths, particularly on the west side of the road to complement active frontages of new mixed use development and potential future public transport stops.
- Alfred Street (east of Boundary Road): creating new linear open space on the south side to provide an important east-west link between open space along the rail corridor and Royal Park. Street upgrades can also support water sensitive urban design (WSUD) and new landscape.
- Sutton Street: creating new open space as part of the expansion of Buncle Street Reserve and supporting a green pedestrian connection between Boundary Road and community uses along Melrose Street.
- Eastwood Street: widening the footpath along the west side of the street to improve connectivity from Kensington Station to Chelmsford Precinct. Street upgrades can also support WSUD and new landscape through the expansion of the existing verge.
- Bent Street: Implementing a new pedestrian pathway along the east side of the street to improve pedestrian connectivity for people walking to open space on Chelmsford Street and provide additional WSUD interventions to mitigate flooding.

## ACTIONS

### DELIVER

**Action 63:** Deliver street planting priorities in the North and West Melbourne and Kensington Urban Forest Precinct plans to increase tree canopy cover to 40 per cent by 2040 and increase urban forest diversity.

**Action 64:** Deliver a 20 per cent increase in understorey habitat on land managed by the City of Melbourne to support ecological connectivity across the city.

**Action 65:** Establish green streets through new street trees and understorey landscape, to strengthen biodiversity corridors between Royal Park and the Moonee Ponds Creek while providing improved amenity for people walking and riding bikes.

**Action 66:** Continue to engage, involve and collaborate with the Macaulay community in the process of planning and growing the urban forest.

## Why is this proposed?

When compared with other neighbourhoods in the municipality, Macaulay has relatively few parks, gardens and green streetscapes. This contributes to poor biodiversity which impacts on critical ecosystem services such as climate regulation and the provision of clean air and water.

The impacts of climate change through the urban heat island effect are also a significant concern for Macaulay.

There is a need to increase tree canopy cover to help cool streets and mitigate the impacts of climate change. The Nature in the City Strategy outlines the need to create a more diverse, connected, and resilient natural environment.

Macaulay's lack of green spaces also limits opportunities for people to connect with nature. A connection with nature is not only vital for community health and wellbeing, but is central to many cultural values.

Streets which feature trees, understorey plants and sufficient space for people facilitate a comfortable public realm and can encourage people to choose walking and riding bikes over private vehicle use. High-quality streets also support great places for people to spend time in, creating character and vitality, which contribute to a vibrant economy.



### Case study: Howard Street, North Melbourne

Part of the roadway in Howard Street was closed and turned into parkland. The public open space includes three rain gardens that capture and clean stormwater runoff. Two large rain gardens at the intersection of Howard and Rosslyn streets capture water running down the gutters on Howard Street before it reaches the stormwater drains. The third rain garden captures runoff from William Street.

Image 26: Water sensitive urban design in Howard Street, North Melbourne

## Objective 15: Deliver high-quality new streets on larger land holdings to enhance the permeability of the transport network and support a high-quality public realm.

The industrial history of Macaulay has resulted in a varied pattern of subdivision with many larger land holdings. As larger private sites are developed, new public streets and laneways must be delivered to improve connectivity and permeability of Macaulay's public realm network and respond to the scale of new mixed use developments. The objectives of new streets are to:

- improve north-south movement for people walking, particularly between Macaulay Road and Racecourse Road
- improve connectivity to Macaulay Station and open spaces for people walking
- maximise active building frontages and diverse land uses to activate the public realm
- ensure their function as priority streets for people walking by minimising traffic and vehicle crossovers while enabling access for site servicing and local vehicles
- support water storage, conveyance and treatment
- provide building separation and setbacks between developments to enable positive amenity outcomes.

The design and delivery of new streets should achieve high-quality public realm outcomes through the integration of new trees and high-quality materials, furniture and fixtures in accordance with City of Melbourne Design and Construction Standards.

### What is proposed?

#### Preferred location of new streets

A number of existing blocks in Macaulay have uninterrupted frontages that exceed 100 metres with some blocks exceeding 200 metres. This does not reflect the future of Macaulay as a walkable, precinct with a permeable street network.

To achieve the ambitions of delivering a permeable street network, one new street connection should be provided on a site where the average length of a block exceeds 100 metres. Where a block exceeds 200 metres, two new street connections should be provided. New streets should be located a maximum of 70 metres from the nearest parallel connection. This benchmark is applied in the central city and is considered relevant to the Macaulay context, having regard to the anticipated level of future development.

New streets will be delivered through setbacks on private land, and will be endorsed through planning permit applications for new development. Map 10 on page 56 illustrates the preferred alignment of new streets on private landholdings in Macaulay. The purpose of identifying the location of new streets is to establish a cohesive site planning response across different land owners as well as providing certainty on the function of new and existing streets in catering for people walking, riding bikes and vehicle movement. These streets and connections will be delivered through the planning controls and endorsed at permit application stage.

The preferred alignment of new streets is determined by the following parameters:

- identifying existing development approvals and the location of any proposed public connections
- identifying the location of heritage buildings which will be retained as part of any development application
- aligning new streets within one property (where possible) to ensure the entire connection can be delivered during construction
- aligning new streets across sites to form straight, continuous connections where possible
- ensuring feasible building envelopes can be achieved as a result of the land required for new streets and laneways
- the preferred role of the street to cater to pedestrians and/or vehicle movement
- the likely location of future vehicle crossovers away from existing local and neighbourhood streets.

#### New street types

Two new street types will support the broader street network by providing access to people walking, riding bikes and using vehicles while delivering high-quality public realm outcomes. New streets and lanes will provide two-way bike access and one-way or two-way vehicle access.

Direct vehicle access to arterial and collector streets (such as Macaulay and Boundary roads) may be full-time, only at certain times or permanently prohibited. This will be determined through detailed design. Access arrangements may change as Macaulay develops.

The street types include:

#### New Street (18 metres)

- Facilitates the primary vehicle circulation through an urban block.
- Provides footpath widths to enable active frontages, people movement and new street trees.
- Manages water conveyance, storage and treatment through blue-green infrastructure.
- Facilitates servicing and vehicle access to basement levels.

#### New Lane (12 metres)

- Facilitates servicing and local vehicle access to sites.
- Provides paths to both sides of the street to enable access to building entries.
- Manages water conveyance, storage and treatment through WSUD.
- Opportunity for connections to new linear public open spaces for people walking.

#### Pedestrian link (under 12 metres)

- Provides connections for people walking and cycling with limited vehicle access.

#### Why is this proposed?

Historically, Macaulay has served as an industrial and warehousing area serviced by nearby port and railway infrastructure. This has resulted in an irregular subdivision pattern with many large sites and broad urban blocks. This doesn't support permeability and accessibility through the precinct. New streets and laneways are necessary to support community movement.

ACTIONS
DELIVER
<b>Action 67:</b> Encourage applicants to include trees and understory planting in new developments to provide urban cooling and amenity benefits to new streets.
<b>Action 68:</b> Deliver a network of new links, laneways and streets on larger land holdings through an amendment to the Melbourne Planning Scheme and in consultation with developers.
<b>Action 69:</b> Deliver a Public Realm Plan for Arden and Macaulay that guides the preferred programming and design of streets and public spaces across these urban renewal areas.

#### New street



Figure 3: Potential new street section for larger land holdings

#### New laneway

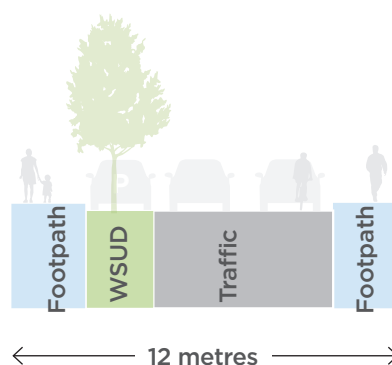


Figure 4: Potential new laneway section for larger land holdings

#### New pedestrian link

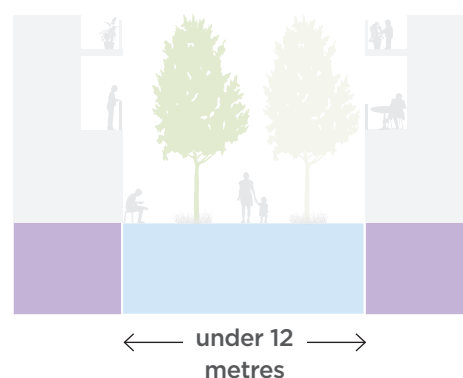


Figure 5: Potential new pedestrian link

## Objective 16: Ensure integrated water management is incorporated into Macaulay to support a resilient and liveable neighbourhood

Water will be celebrated as a feature of Macaulay. This can be achieved by incorporating stormwater treatment and reuse into streets and open space.

### What is proposed?

Streets and spaces in Macaulay will need to play a greater role in stormwater management and flood mitigation. This means embracing water as part of the identity of the area through:

- streets and open spaces with blue-green infrastructure designed to manage, treat and reuse stormwater
- use of alternative (non-potable) water sources including potential stormwater harvesting in Arden and the use of water sensitive urban design to provide passive irrigation
- reducing the volume of pollution that enters our waterways
- upgrades to existing infrastructure including pump stations, levees and stormwater drains
- updated funding mechanisms to help fund required works.

### Why is this proposed?

Flooding and water management are significant issues in Macaulay. The precinct is located in low-lying, flood prone land and is bisected by the Moonee Ponds Creek. Flood mitigation measures in the area currently include six pumping stations and levees located on both sides of the creek corridor and the existing network of stormwater drains. Flooding in the area is caused by:

- stormwater runoff being trapped behind levees along the creek corridor
- overtopping of the levees along Moonee Ponds Creek during extreme rainfall events
- local pump stations failing to keep up with the volume of stormwater runoff
- stormwater runoff from upstream catchments flowing into the creek
- lack of permeable surfaces to absorb water.

Modelling indicates that, by 2100, flooding risks will significantly increase in Macaulay. This is due predominantly to increasing runoff from urban densification, more extreme rainfall events, and rising sea levels due to climate change.



### Case study: Celebrating water in the landscape

Tanner Springs Wetland Park has been designed to be a natural landscape with infrastructure to manage flooding in this former wetland area of Portland, Oregon. This working wetland attracts birds, showcases native species and stormwater runoff is fed into a natural water feature with a spring and natural cleansing system. The park serves the surrounding neighbourhood as well as visitors to the area, creating a refuge for people and wildlife in this bustling downtown neighbourhood.

Image 27: Tanner Springs Wetland Park in Portland, Oregon

### Managing flood risk in the Melbourne Planning Scheme

The Melbourne Planning Scheme contains two overlays to manage flood risk in Macaulay:

- The Land Subject to Inundation Overlay applies to land affected by flooding associated with waterways and open drainage systems.
- The Special Building Overlay identifies areas prone to overland flooding. The overlay sets appropriate conditions and floor levels to address any flood risk to developments.

The purpose of the overlays is to protect life, assets and the environment and to minimise flood damage. They set appropriate conditions and floor levels to address any flood risk to developments.

### Drainage contribution rates

A flood infrastructure plan to manage the impacts of flooding in Macaulay has been prepared by Melbourne Water. The major flood management works (including pump stations, levees, large pipes and storages) will be funded through Melbourne Water's Urban Renewal Cost Recovery Scheme (URCRS). The URCRS will collect financial contributions from developers as development occurs.

### ACTIONS

#### DELIVER

**Action 70:** Investigate and pursue opportunities for the integration of water sensitive urban design in streets and open spaces to provide for passive irrigation of street trees and urban greening.

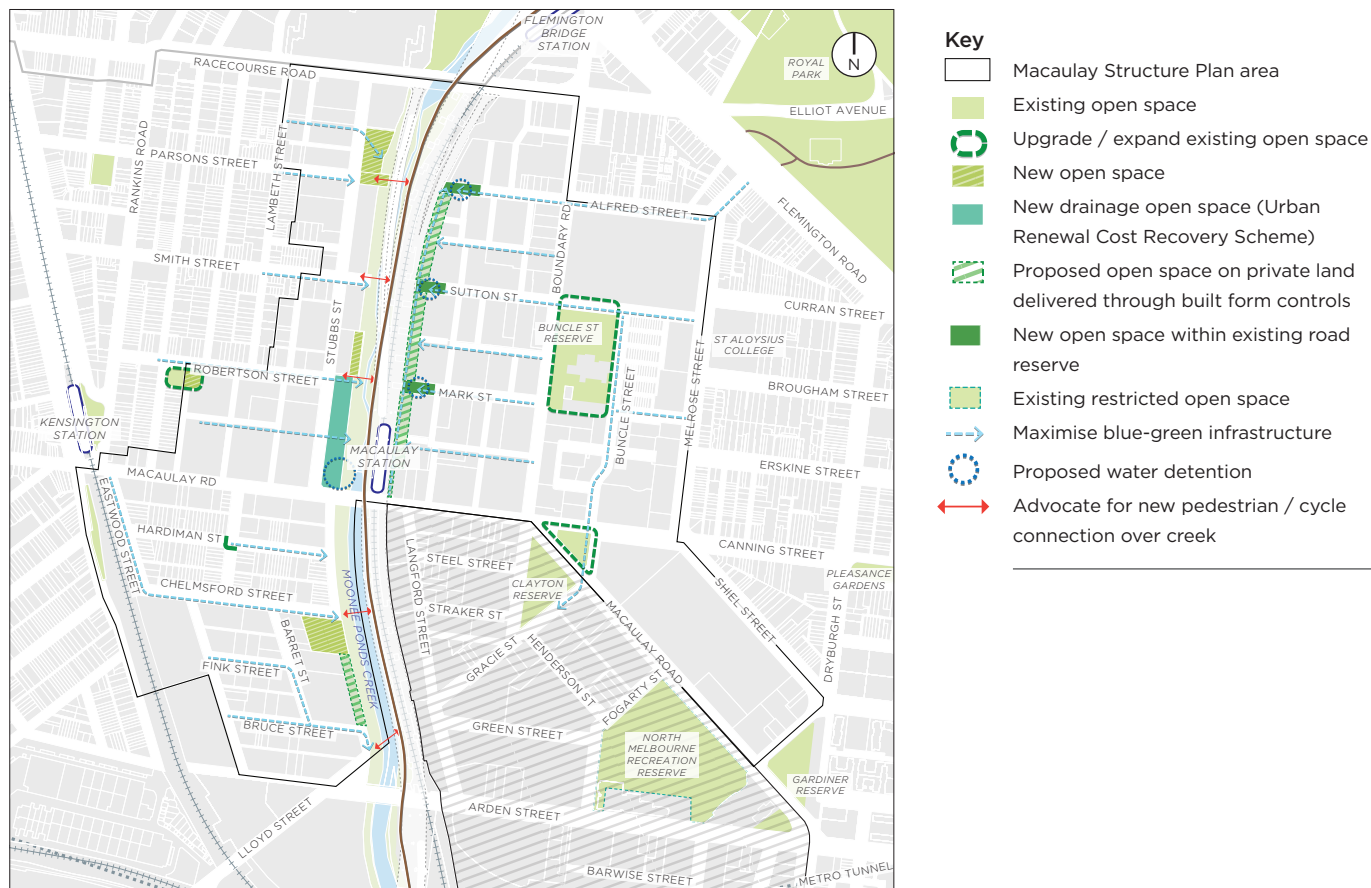
**Action 71:** Investigate and pursue the use of blue-green infrastructure to manage, treat and use stormwater in the street network.

**Action 72:** Investigate whether potential stormwater harvesting in Arden could also be used to irrigate open spaces in Macaulay.

#### PARTNER

**Action 73:** Work in partnership with Melbourne Water and the Victorian Government to update the Land Subject to Inundation Overlay and Special Building Overlay.

**Action 74:** Work in partnership with Melbourne Water to deliver an Urban Renewal Cost Recovery Scheme for Macaulay to manage drainage, flooding and water quality.



Map 13: Proposed open space network including integrated water management

## Objective 17: Enhance the Moonee Ponds Creek to become a thriving corridor that connects the community

The Moonee Ponds Creek will be revitalised to connect and support the growing communities to the east and west of the creek.

### What is proposed?

The ecological, cultural and recreational values of the Moonee Ponds Creek will be enhanced to transform the creek corridor and realise the Moonee Ponds Creek Strategic Opportunities Plan.

These opportunities have influenced the future character of Boundary, Chelmsford and Stubbs precincts.

The creek corridor is largely controlled by Victorian Government agencies. City of Melbourne will advocate for current and future residents and communities by working in partnership with the Victorian Government and its agencies, neighbouring councils, community groups and other partners to revitalise the Moonee Ponds Creek.



Image 28: Flooding along Moonee Ponds Creek along the Capital City Trail.

### Why is this proposed?

Renewing the creek corridor will ensure the creek can meet current and future requirements for:

#### Water management

Ensure that increased flooding risk caused by urban densification as well as climate change induced sea level rise and more frequent extreme weather events is appropriately managed.

#### Open space

Create a diverse network of open spaces to cater to a rapidly-growing population.

#### Biodiversity

Revitalise the creek so that it becomes a rich corridor of biodiversity and a thriving habitat for native flora and fauna.

#### Movement

Create safe, accessible paths that connect people walking and riding bikes to local communities and facilities on either side of the creek, as well as the central city.

#### History and culture

Ensure that the revitalised creek corridor celebrates and connects to its Aboriginal heritage and local history, and provides new spaces for creativity and public art.

### ACTIONS

#### DELIVER

**Action 75:** Explore opportunities to improve access and passive recreation opportunities along the western creek bank, south of Macaulay Road.

#### ADVOCATE

**Action 76:** Call on the Victorian Government to publish and pursue its Implementation Plan for the Moonee Ponds Creek corridor.

#### PARTNER

**Action 77:** Continue to work within the Chain of Ponds Catchment Collaboration Group to support a whole of creek approach and the Moonee Ponds Creek Strategic Opportunities Plan.



Image 29: Macaulay Terrace on a sunny afternoon (above) and during a major rain event (below). The project could provide a major new open space connecting to the Moonee Ponds Creek Trail, Macaulay railway station and surrounding neighbourhoods.