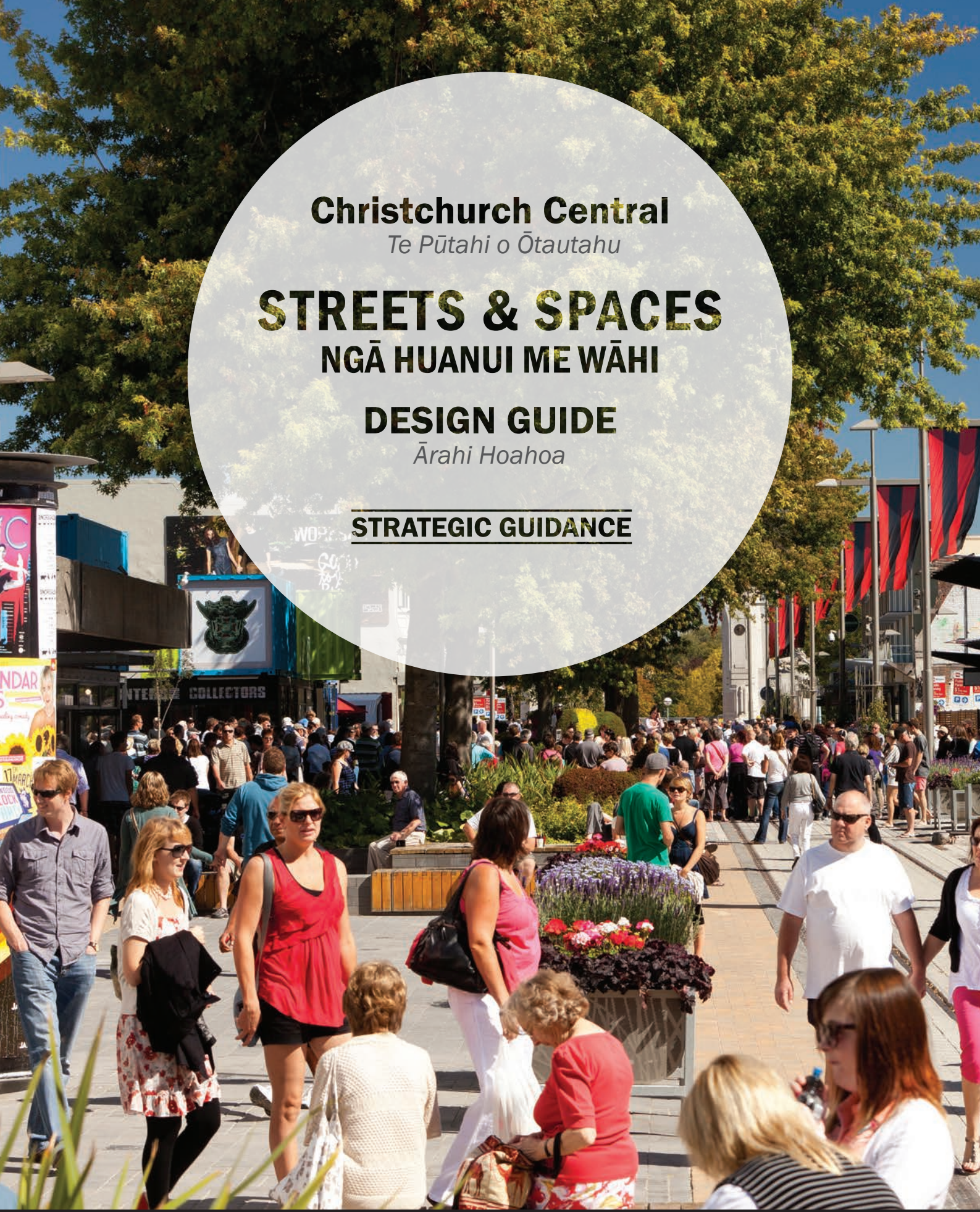

Christchurch Central
Te Pūtahi o Ōtautahu

STREETS & SPACES
NGĀ HUANUI ME WĀHI

DESIGN GUIDE
Ārahi Hoahoa

STRATEGIC GUIDANCE

CERA Canterbury Earthquake Recovery Authority
Te Mana Haumanu ki Waitaha

Christchurch Central Development Unit
Te Uepū Whakahiato

Christchurch City Council

Te Rūnanga o NGĀI TAHU

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Vision

"By 2025 central Christchurch streets and public places will be greener, easier to move around and full of people enjoying a vibrant city life."

Streets & Spaces Design Guide Vision, 2014

Mō tātau, a mō ka uri, a mauri ake nei.

[For us, and our children after us.]

Foreword

Everyone who visits Christchurch experiences the central city's public realm in some form, through either the streets as they move across the city or the public spaces they visit.

The term 'public realm' is often used to describe the space between buildings that is publicly accessible.

The quality of the experience of the public realm forms an integral part of what makes the great cities of the world successful and memorable.

In the aftermath of the Canterbury earthquakes in 2010 and 2011, a significant portion of the central city public realm will be reconstructed. The **Streets & Spaces Design Guide** has been developed by the Canterbury Earthquake Recovery Authority (CERA) and Christchurch City Council (CCC) in partnership with Te Rūnanga o Ngāi Tahu to support the delivery of the Christchurch Central Recovery Plan (Recovery Plan) by:

- providing a framework to lead the reconstruction of a public realm network that is people focused, has a strong sense of place and generates community pride
- bringing together public realm projects in the central city in a coherent and coordinated manner as the city redevelops.

The **Streets & Spaces Design Guide** sets out an agreed long-term vision for the network of streets and public spaces in central Christchurch. It also provides the design principles, criteria and standards for public realm improvements. This Design Guide aims to ensure all the recovery projects will contribute to a memorable experience of the central city for visitors and residents alike.

A high-quality public realm network will contribute not only to the objectives of the Christchurch Central Recovery Plan but, in the long term, to the ongoing social and economic vitality of greater Christchurch.

Illustrative public realm network vision

"By 2025 central Christchurch streets and public places will be greener, easier to move around and full of people enjoying a vibrant city life."

Mō tātau, a mō ka uri, a mauri ake nei.

SQUARES

1. Cathedral Square *
2. Victoria Square +

PARKS

3. Hagley Park and Botanic Gardens +
4. Te Papa Ōtākaro/Avon River Precinct *
5. Cranmer Square +
6. Latimer Square +
7. Margaret Mahy Family Playground ·
8. East Frame Central Park ·
9. Neighbourhood parks +

PEDESTRIAN PRIORITY STREETS

10. City Mall +
11. The South Frame Greenway ·

SHARED STREETS

12. Ōtākaro/Avon River Promenade ·
13. East Frame links ·
14. South Frame links ·

AXIS STREETS

15. Colombo Street
16. Worcester Street

GATEWAY STREETS

17. Victoria Street
18. High Street

PLAZAS, LANES AND COURTYARDS

19. Christchurch City Council Civic Offices plaza +
20. Art Gallery plaza +
21. Victoria Street triangular plazas +
22. High Street triangular plazas +
23. Bus Interchange entry plaza ·
24. Metro Sports Facility plaza (indicative) ·
25. New Regent Street +
26. Press Lane +
27. His Lordships and Struthers lanes *
28. Woolsack Lane *
29. Strand Lane +
30. Tattersalls Lane +
31. Tramway Lane +
32. SOL Square
33. Justice and Emergency Services Precinct courtyard and plaza +
34. Arts Centre courtyards and plaza +
35. Christchurch Polytechnic Institute of Technology (CPIT) courtyards and plazas +
36. Performing Arts Precinct lane and courtyard (indicative) ·

Retail Precinct plazas, lanes and courtyards

37. The Terrace ·
38. Cashel Square ·
39. South West End ·
40. South Central ·
41. South East End ·
42. Stranges Lane +

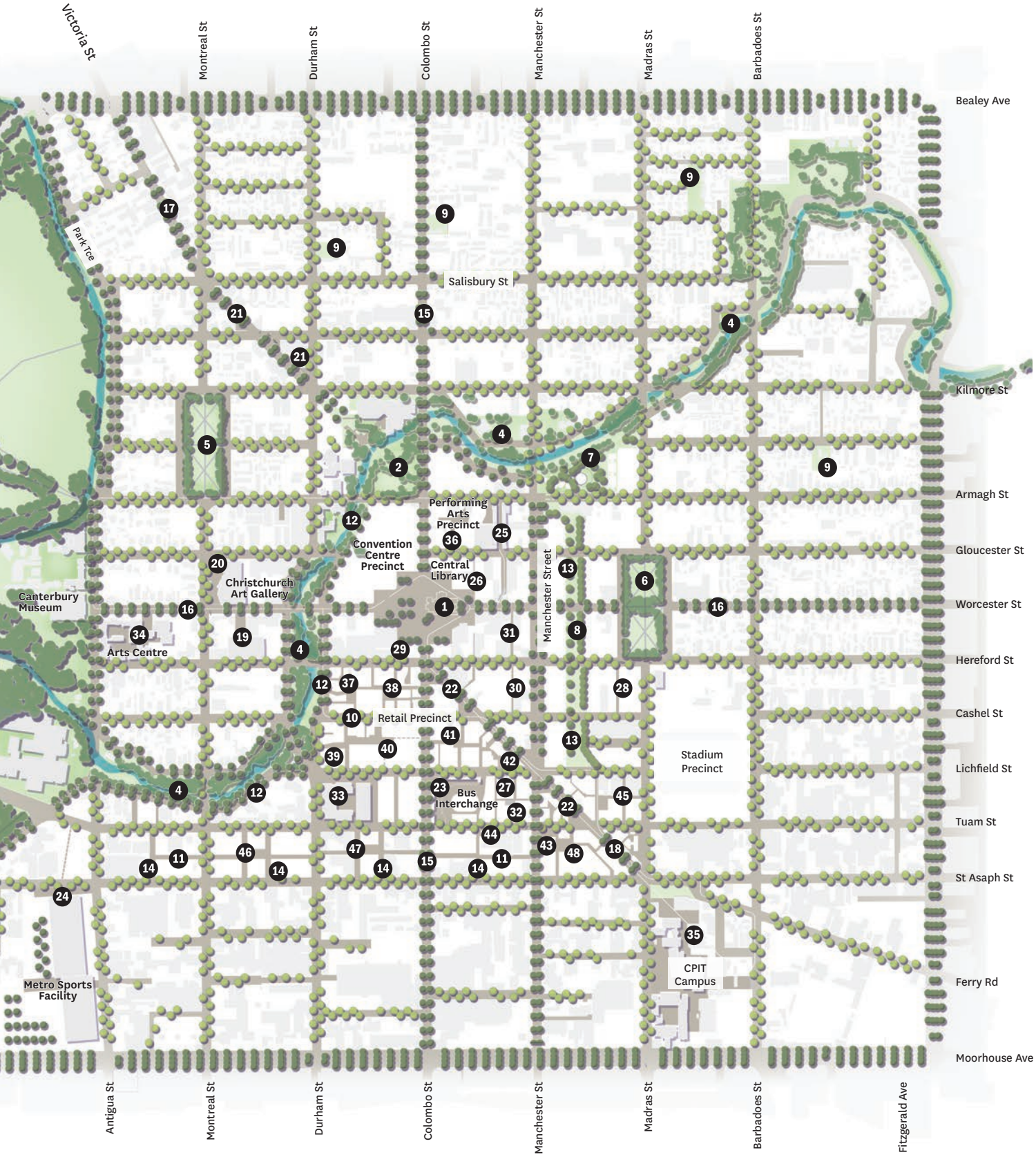
South Frame plazas, lanes and courtyards

43. Innovation plaza ·
44. Scoular Park ·
45. Innovation Precinct - Poplar and Ash lanes and courtyard *
46. South courtyard ·
47. Mollett Street courtyard ·
48. Innovation courtyard ·

+ Existing

* Existing design to change

· Proposed


Victoria St
Montreal St
Durham St
Colombo St
Manchester St
Madras St
Barbadoes St
Bealey Ave
Kilmore St
Armagh St
Gloucester St
Worcester St
Hereford St
Cashel St
Lichfield St
Tuam St
St Asaph St
Ferry Rd
Moorhouse Ave
Park Tce
Salisbury St
Manchester Street
Performing Arts Precinct
Convention Centre Precinct
Central Library
Christchurch Art Gallery
Canterbury Museum
Arts Centre
Retail Precinct
Bus Interchange
Stadium Precinct
CPIT Campus
Metro Sports Facility
Antigua St
Montreal St
Durham St
Colombo St
Manchester St
Madras St
Barbadoes St
Fitzgerald Ave

Purpose

The overarching purpose of this Design Guide is to provide a unified and comprehensive reference document for the design and delivery of public realm improvement projects in the central city.

These projects include public realm works delivered through:

- the Christchurch Central Recovery Plan anchor projects
- Accessible City transport projects
- Christchurch City Council's Long Term and Annual Plans.

Crucial to the Streets & Spaces Design Guide is that it supports the delivery of the Christchurch Central Recovery Plan. This includes delivering *An Accessible City*, the transport chapter of the Recovery Plan, and embracing Ngāi Tahu cultural values. With this in mind, the Streets & Spaces Design Guide has been developed to:

- ensure CERA, CCC and Te Rūnanga o Ngāi Tahu take a consistent approach to public space works across the central city
- outline the expectations that CERA, CCC and Te Rūnanga o Ngāi Tahu have regarding the quality of public realm improvement works
- provide clarity to investors, developers, designers and organisations regarding long-term strategies, principles and criteria for the design and delivery of public realm projects
- provide tools and a reference source of key guidance to deliver high-quality public realm outcomes.

The expectations from the implementation of the Streets & Spaces Design Guide include that it will:

- bring the community aspirations for the city alive
- leverage the Crown's and Christchurch City Council's investment in anchor projects and promote confidence in the central city's recovery and rebuild
- add value to the anchor projects and attract private investment and development
- highlight the opportunities in and long-term value of the Recovery Plan.

As a long-term and visionary document, the Streets & Spaces Design Guide includes public spaces that:

- at the time of publishing are being designed and/or constructed such as Te Papa Ōtākaro/Avon River Precinct and Manchester Street
- have been identified as projects but on which design work has not yet started, such as The Square and many of the central city streets.

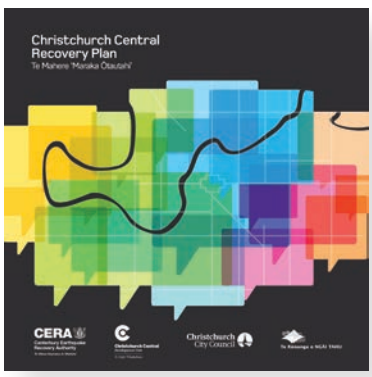
Consequently, a number of the public spaces shown in this Design Guide will still require design and funding approval.

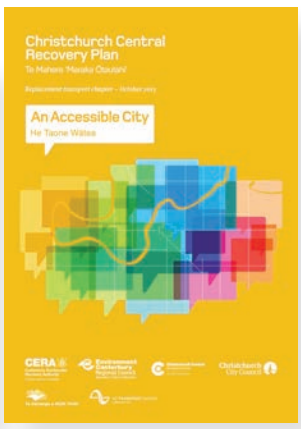
Who is this document for?

Specifically, the Streets & Spaces Design Guide has been developed to guide CERA, CCC, Te Rūnanga o Ngāi Tahu, Environment Canterbury and New Zealand Transport Agency, and anyone involved in designing and delivering public realm projects in the central city, in particular consultant teams and design professionals.

More generally, this Design Guide will be helpful for anybody who is interested in understanding the network of public spaces in central Christchurch.

In addition to setting out the vision, design principles and criteria, the Streets & Spaces Design Guide provides technical information at a conceptual level. The main purpose of this information is to promote a consistent approach to the design and delivery of public realm projects. These concepts are provided as a tool and will require the skilled interpretation of designers at the detailed design stage of projects. This may involve adapting the concepts to suit and integrate the specific conditions of each location; for example, existing facilities and infrastructure.





How to use this document

The Streets & Spaces Design Guide is set out in two books.

- This **Strategic Guidance** book provides the vision, design principles and criteria, along with general concepts that should guide the design of the public realm projects for the central city.
- The **Technical Guidance** book will provide the suite of materials, construction details and street furniture to be used in public realm projects in the central city. It will be issued after the Strategic Guidance book is approved.

During the rebuild period the city is subject to regular changes. The Streets & Spaces Design Guide is therefore a 'living' document which is intended to be updated and reviewed as the city evolves.

For convenience, the public realm of the central city has been divided into two groups:

- the **street network**, consisting of places that have a key role in the delivery of the transport chapter of the Recovery Plan, *An Accessible City*
- the **gathering places**, which often have key interdependencies with the design of the anchor projects identified in the Recovery Plan.

Most gathering places are adjacent to streets, and most building projects will need to address both streets and gathering places. Therefore both groups should relate to and complement each other to create a cohesive public realm network.

This **Strategic Guidance** book has seven chapters.

Chapter 1 provides the vision and design principles for the central city's public realm network. It also outlines the value, components and general structure of this network.

Chapter 2 identifies strategic matters that have informed the development of the guidance and concepts set out in this Design Guide.

Chapter 3 outlines the design criteria that should inform the design of public realm projects in the central city.

Chapter 4 identifies and provides an overview of the gathering places in the central city and how they relate to the anchor projects.

Chapter 5 explains and illustrates plans and design concepts for the central city street network and how they contribute to the implementation of Accessible City.

Chapter 6 describes the public realm component of the anchor projects and identifies important relationships with other anchor projects, gathering places and the street network.

Chapter 7 briefly outlines key aspects for the implementation of public realm projects in the central city.

To make this document as easy as possible to navigate, cross-references to specific topics and interdependencies are included through the document.

For example, there is a three-step process to apply the Streets & Spaces Design Guide to individual projects.

1. Understand the strategic approach outlined in Chapter 2 and review the design criteria in Chapter 3 of this document. Use these criteria to guide the design process.
2. Identify the public space typology for gathering places in Chapter 4 or the relevant street hierarchy in Chapter 5 of this document. Apply relevant design considerations and standards to the design.
3. Use Book 2, Technical Guidance, to select materials, construction details and street furniture.

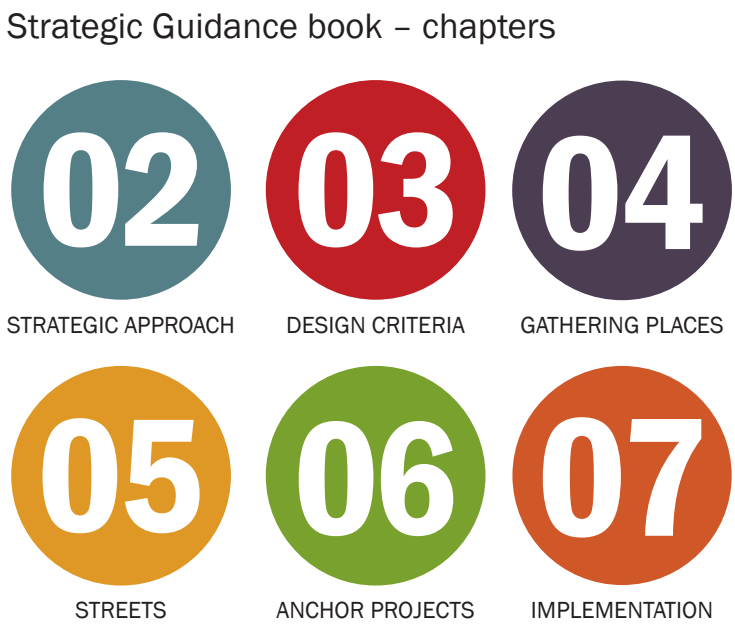


Figure 1 *Icon that highlights key chapters related to a topic under discussion in this Strategic Guidance book*

Figure 2 *Reference elements in a standard page of the Strategic Guidance book*


“First we shape cities, then they shape us.”
Jan Gehl

01

INTRODUCTION
Kōrero Whakataki

What is the public realm?

The term 'public realm' is often used to describe the spaces between buildings that are publicly accessible.

Cities are places where people come together, exchange, trade and enjoy sharing time and ideas with each other. The public realm provides the stage for these exchanges and the everyday activities of a city.

Key aspects that influence the attractiveness of the public realm are:

- the **people** who use it and the **activities** that take place in the public realm
- how people **move** through it or **pause** within it
- the historical, cultural and natural landscape **context**
- the **elements** within the space and the way it is **designed**
- the **buildings** that shape it.

People use and experience the public realm in different ways and at different speeds. Activities such as commuting, recreating, socialising, exercising, trading, walking, pausing, cycling, watching other people, and travelling by car or public transport all take place in the public realm.

The most intimate experiences of the public realm are generally from the perspective of pedestrians. It is from this perspective that the success of the public realm is most often judged.

When each *space* is thoughtfully designed with respect to the human experience and the immediate physical and cultural context, it becomes a *place*. The best places entice people to use them, invite them to stay and beckon them to return.

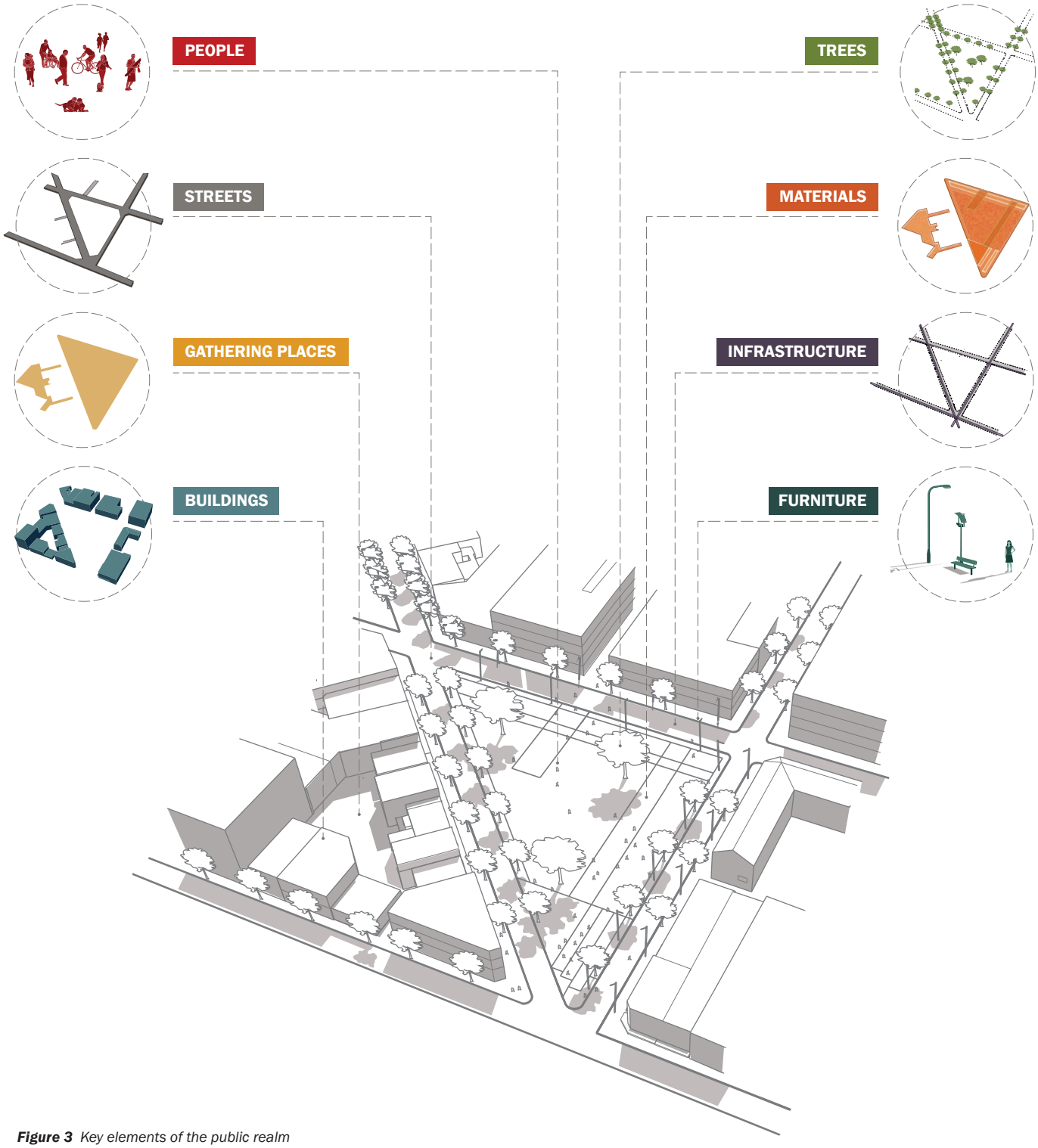


Figure 3 *Key elements of the public realm*

Value and benefits of the public realm

The public realm has a significant influence on how we use and perceive a city. A common feature of the great cities of the world is that they have a high-quality public realm.

The value of the public realm relates to its ability to raise the quality of life in urban centres and contribute to happier, healthier and more productive communities. There is a growing body of research focused on identifying and measuring the benefits of high-quality public realm.[1] These benefits include the following.

Increased economic value and activity

- Well-designed cities are better placed to attract the companies, employees, services, customers and investment required for a competitive economy.
- High-quality public realm increases property values.
- An engaging public realm increases foot traffic in retail areas.

Urban amenity

- A well-designed public realm network creates ease of movement, improved accessibility and comfort. These qualities, in turn, increase safety and productivity and reduce the economic cost of congestion.

Social cohesion and sense of community

- The public realm provides places and opportunities for social interaction for all age groups and social backgrounds. Social cohesion makes communities more productive and resilient.

Health and wellbeing

- A well-designed public realm helps us enjoy healthier lifestyles by providing opportunities for physical activity. This translates into fewer resources needed to deal with illnesses related to obesity and sedentary lifestyles.
- Public spaces provide opportunities to relax and unwind, contributing to people's mental wellbeing.

Environmental resilience

- The way the public realm is designed can significantly contribute to better air and water quality, more effective stormwater management, reduced carbon emissions, increased biodiversity and adaptation to climate change.
- A public realm that is well integrated with local landscapes and ecological systems preserves future access to natural resources. It also promotes self-sufficient and more sustainable food economies.

Identity and image of a city

- The design of the public realm is a powerful tool to shape the image, perception and cultural awareness of a city. Cities with a strong sense of place create civic pride and a sense of belonging. They also attract more visitors and are sought-after locations for living and doing business in.

Safety

- A high-quality public realm attracts more people and activity, by day and by night, which in turn positively contributes to the perception of safety and reduced crime.
- A well-designed public realm creates a more accessible and welcoming city for all.

[1] Social Cities, Grattan Institute, 2012

The Value of Public Realm, Commission for Architecture and the Built Environment, 2003

The Walkable City, Jeff Speck, 2013

Public Space in the Global Agenda for Sustainable Urban Development: The "Global Public Space Toolkit", UN Habitat, 2014

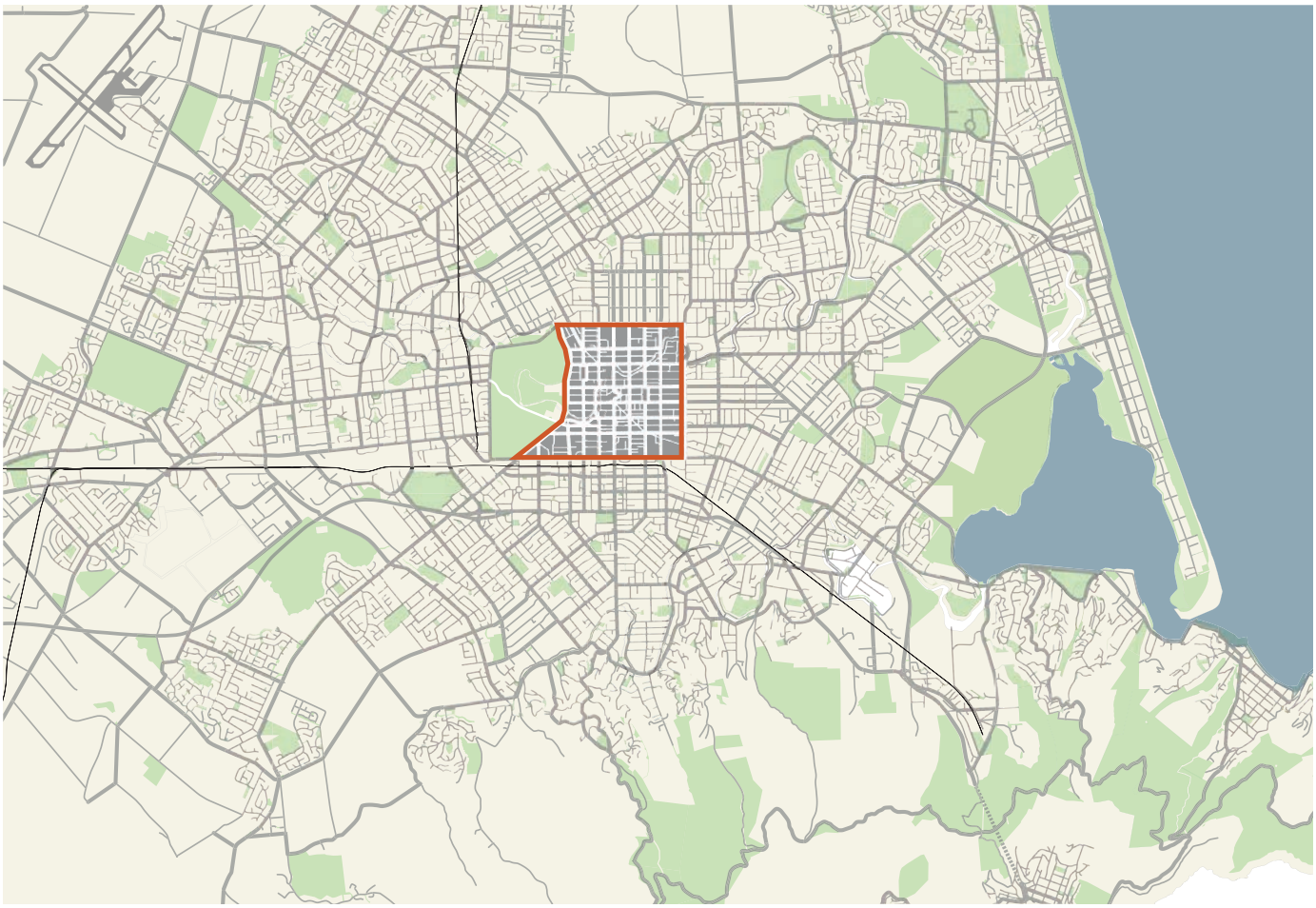

BAIT SHOP


TOHU
TOHU
Karaoke Cafe
Kāore e whakaae ana
te inu waipiro
ki tua o tēnei tohu
NO ALCOHOL PAST THIS POINT

Scope

The Streets & Spaces Design Guide has been prepared for the area bounded by Park Terrace and Rolleston, Bealey, Fitzgerald, Moorhouse and Hagley avenues. The Streets & Spaces Design Guide does not include Hagley Park. The area to which this Design Guide applies is referred to as the central city or central Christchurch.

While the Streets & Spaces Design Guide focuses specifically on the central city, it has been prepared with regard to the context of greater Christchurch and the values of Ngāi Tahu.



Legend

Application area

Figure 4 *Streets & Spaces Design Guide application area*

Central city public realm

Out of the 420 hectares that comprise the central city, around 120 hectares is spread throughout the area as public realm; this is approximately three-quarters the size of Hagley Park.

The plans in Figures 5, 6 and 7 illustrate existing and proposed public realm in the central city. They include:

- established places that will be renewed as part of the rebuild process, such as Ōtākaro/Avon River and the street network
- proposed new places such as the Central Park in the East Frame residential precinct and the new public realm network in the South Frame
- existing places such as Latimer and Cranmer squares
- privately owned but publicly accessible places, such as the courtyards in the Arts Centre.

Some of these places are redevelopment projects that are at different stages in the planning, design or funding approval process. Consequently, a number of the public spaces shown still require design and funding approval and may be subject to change of location or design. However, the purpose of mapping them all on one plan is to illustrate how they may work together as a **network**.

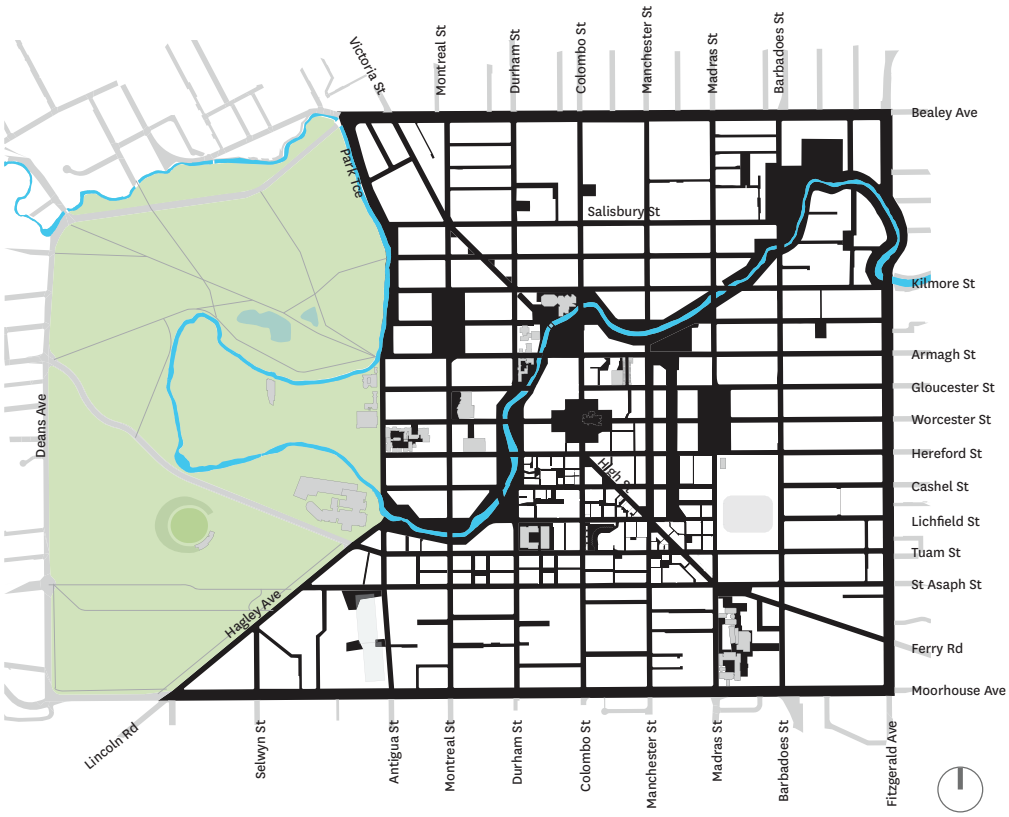


Figure 5 *Existing and proposed public realm network*

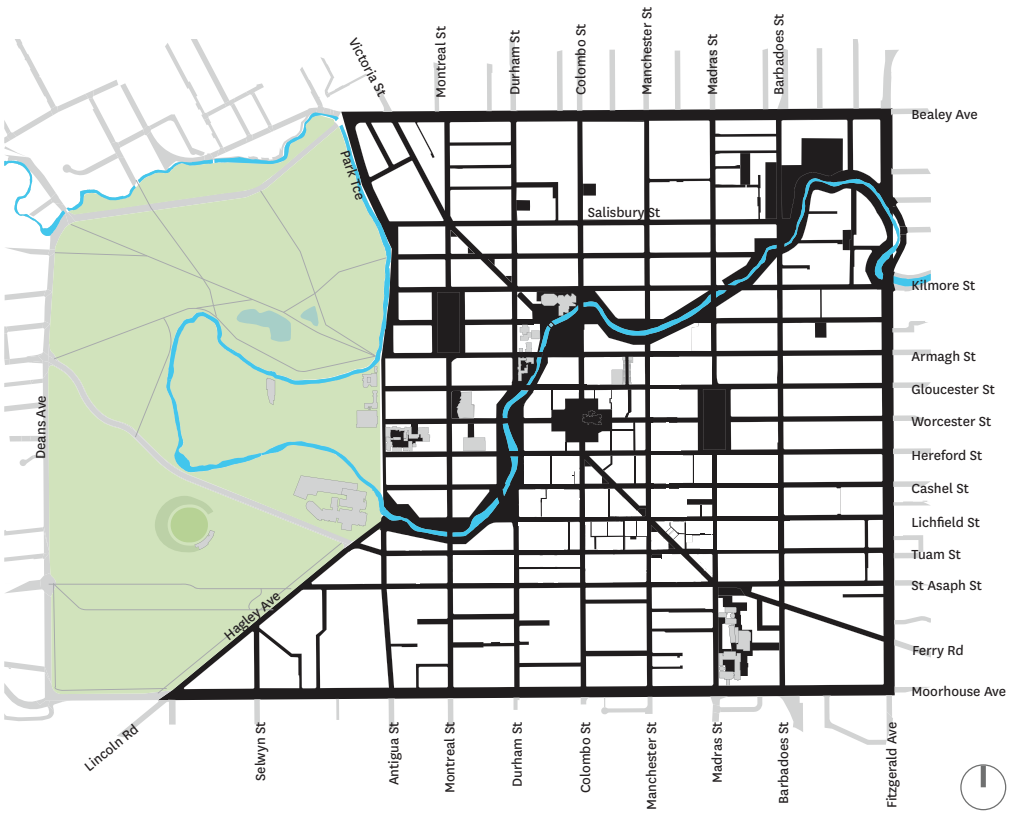


Figure 6 *Existing public realm network*

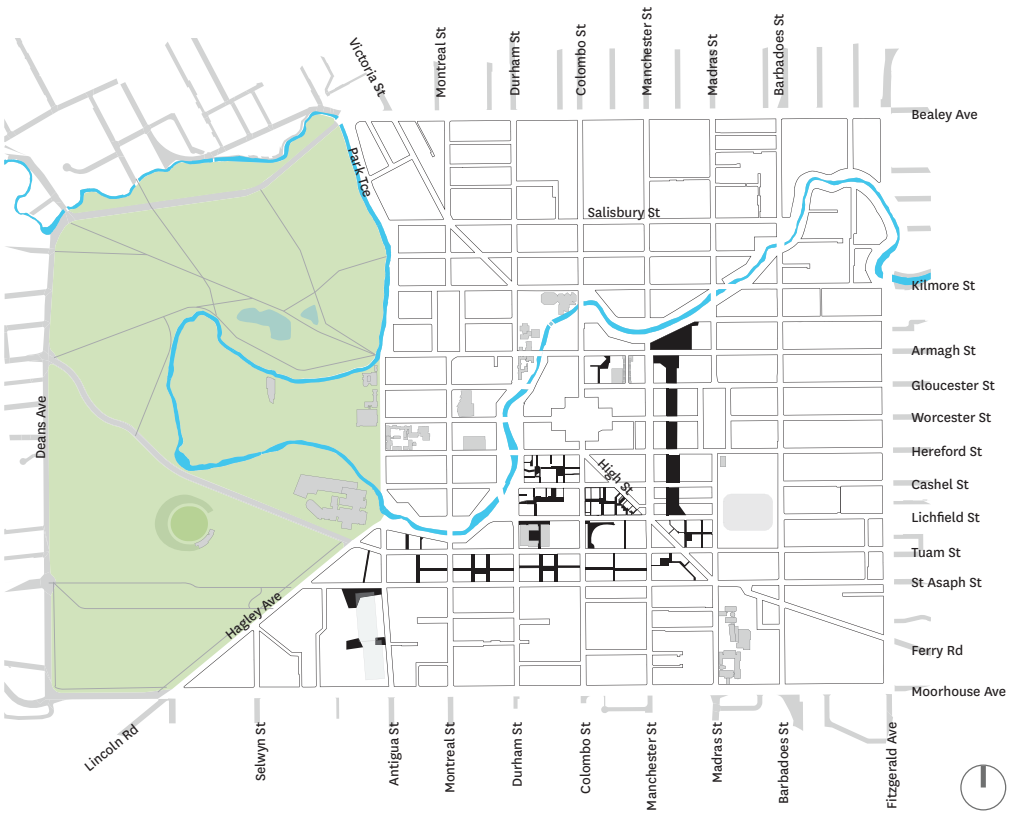


Figure 7 *Proposed new public realm spaces*

Central city public realm

For the purpose of this document, the public realm network is organised into two major groups: the gathering places and the street network.

The **gathering places** include parks and gardens, plazas, squares, markets, forecourts, waterfronts, civic and open spaces and publicly accessible internal courtyards, gardens and squares. Detailed information on these spaces is provided in Chapter 4.

The **street network** includes streets, boulevards, avenues, arcades, lanes, alleys and bridges. The street network has a key role in the delivery of *An Accessible City*, the transport chapter of the Christchurch Central Recovery Plan (Recovery Plan). The street network is discussed in detail in Chapter 5.

The design criteria that should inform the design of both the gathering places and the street network are outlined in Chapter 3.

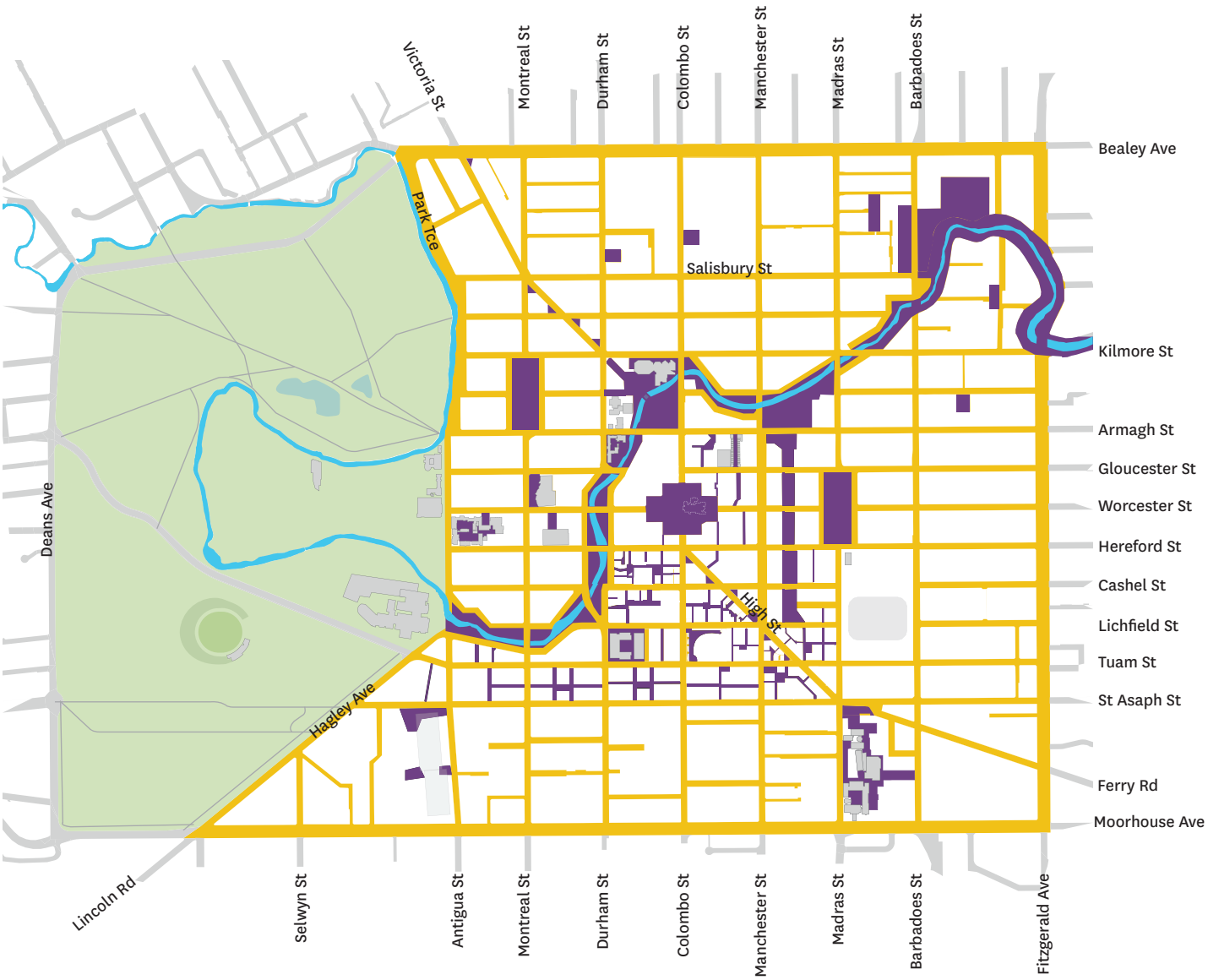


Figure 8 *Central city gathering places and street network*

Central city public realm

The urban fabric of Christchurch has distinct elements that are unique to this city. Because they are unique to central Christchurch, part of the city's DNA, they play a key role in shaping the 'ethos' of the city, its sense of place, its identity.

The uniqueness of central Christchurch can be strengthened and celebrated by highlighting these elements of the public realm.

Natural and cultural landscape

These landscapes are the places of significance for Ngāi Tahu.

The grid

The colonial settlement pattern of 220-metre by 100-metre blocks defines long east–west and short north–south streets. Latimer and Cranmer squares are differentiated within the grid by their north–south orientation.

Ōtākaro/Avon River

The river breaks the regularity of the grid, traversing the city diagonally from the northeast to the southwest. It brings water and greenery to the city.

The axis

The grid is symmetrically divided by central east–west and north–south axial streets: Colombo and Worcester streets.

Cathedral Square

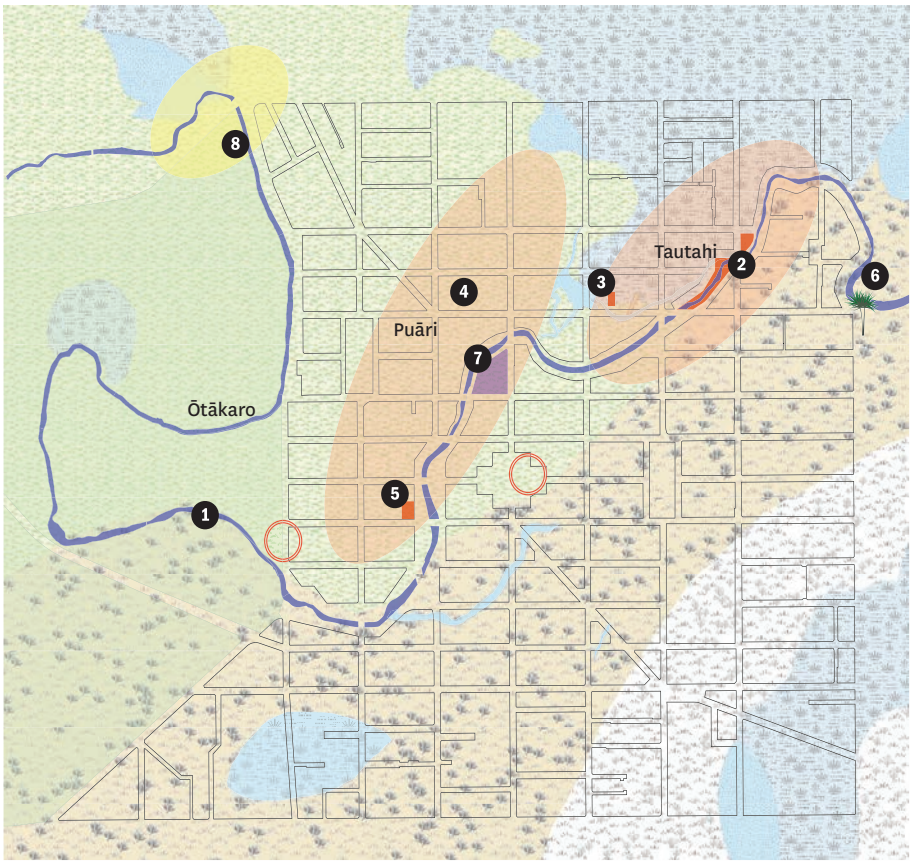
At the geographical centre of the grid where the two axes intersect, Cathedral Square creates the heart of the city.

The diagonals

Victoria and High streets break the grid in an opposite direction to the river. Traditionally the routes to the outskirts of the settlement, they still are distinctive gateways to the city.

The lanes and courtyards

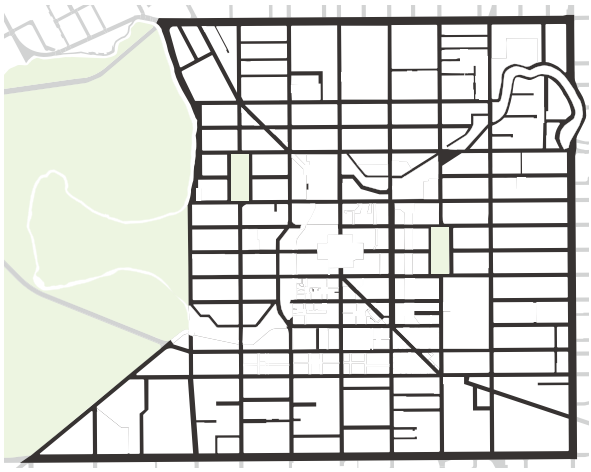
Originally provided to service the blocks, the central lanes have evolved over time. Together with an emerging network of courtyards, they now provide an additional layer of discovery and intimacy to the contemporary city.



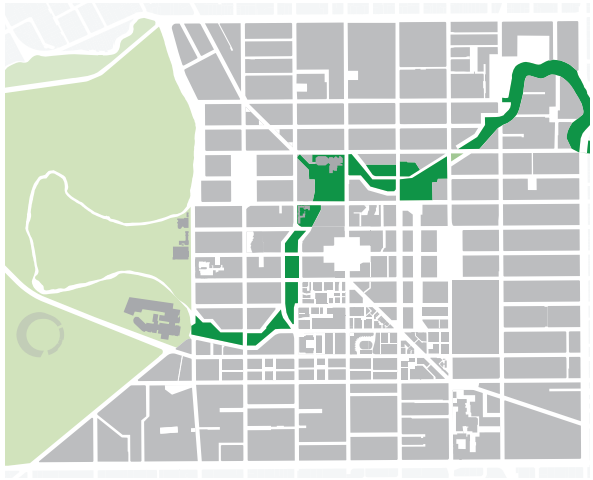
NATURAL AND CULTURAL LANDSCAPE

1. Ōtākaro (Avon River) and Ōpāwaho (Heathcote River), mahinga kai (food and resource gathering place)
2. Tautahi, mahinga kai and kainga nohoanga (village settlement)
3. Tautahi Rua Kōiwi, kōiwi tangata (human remains)
4. Puāri, mahinga kai and kainga nohoanga
5. Puāri Pā Urupā, urupā (burial place)
6. Tī Kouka (fishing marker), a tī kouka (cabbage tree)
7. Market Square (currently known as Victoria Square), early trading site between Ngāi Tahu and European settlers
8. Little Hagley Park, meeting and resting place for Ngāi Tahu, mostly Ngāi Tūāhuriri

○ New Zealand Archaeological Association Māori archeaological sites



THE GRID



ŌTĀKARO/AVON RIVER

THE AXIS

CATHEDRAL SQUARE

THE DIAGONALS

THE LANES AND COURTYARDS

Figure 9 *Elements of the public realm that can highlight Christchurch's uniqueness*

Vision

"By 2025 central Christchurch streets and public places will be greener, easier to move around and full of people enjoying a vibrant city life."

Mō tātau, a mō ka uri, a mauri ake nei.
[For us, and our children after us.]

Legend

1. Cathedral Square
2. Victoria Square
3. Te Papa Ōtākaro/Avon River Precinct
4. Cranmer Square
5. Latimer Square
6. East Frame Central Park
7. City Mall
8. The South Frame Greenway
9. Retail Precinct plazas, lanes and courtyards
10. South Frame plazas, lanes and courtyards

Figure 10 *Illustrative public realm network vision*

Design principles

The design principles identify key attributes that public realm projects should have so that they contribute to delivering the vision for the public realm network of central Christchurch.

Under each design principle, the Streets & Spaces Design Guide provides specific design criteria, which are outlined in Chapter 3. The design criteria should inform all public realm projects in the central city.

CHRISTCHURCH CENTRAL RECOVERY PLAN

↓

STREETS & SPACES DESIGN GUIDE VISION

↓

GUIDING THEMES
Vibrant, Distinctive, Accessible, Green

↓

DESIGN PRINCIPLES
Comfort, Legible, Green, Sense of Place, Creative and Inviting, Walkable, Resilient and Flexible, Safe

↓

DESIGN CRITERIA
Streets and Gathering Places

COMFORT
He wāhi āhurutanga

Design public places and streets with high standards of pedestrian comfort and convenience.

CREATIVE AND INVITING
He wāhi pōwhiri tāngata

Foster a sense of interest and surprise in the everyday experience of the central city.

SENSE OF PLACE
He tūrangawaewae

Design the public realm to reflect the context and identity of Christchurch, its character, culture, history, values and aspirations.

SAFE
He wāhi haumaru

Design the public realm to positively contribute and respond to the actual and perceived sense of safety in the central city.

WALKABLE
He wāhi hīkoi

Create a consistently high-quality and well-connected pedestrian and cycling network that attracts people of all ages to spend time in the central city streets and public places.

RESILIENT AND FLEXIBLE
He hangore

Design the public realm network as a system that can adapt to change and evolve with the needs and functions of the city.

LEGIBLE
He tuhinga mārama

Contribute to a city centre that is easy to understand and to navigate for locals and visitors alike, including those with mobility needs.

GREEN
He whenua haumako

Introduce more trees, landscaping and gardens into the city centre; improve water management and air quality to foster a healthier natural and urban environment.

Figure 11 *Design principles*

"Biking is the most efficient form of transportation yet invented. Using the same amount of energy you get 3 times as far as walking (and 60 times as far as driving a car)."

Cities for People, 2010

02

STRATEGIC APPROACH

Mahere Rautaki

Who are we designing for?

The Christchurch Central Recovery Plan (Recovery Plan) promotes a bold vision for the future of the central city. Essential to this vision is attracting more people to central Christchurch as a place to live, work and visit.

It is estimated that by 2041:

- the central city will be home to 60,000 jobs, up from around 50,000 pre-quakes, which will be the largest concentration of employment in the region
- there could be up to 20,000 people (around 10,000 households) living within the four avenues, an increase of nearly 12,000 on pre-quake levels

Central Christchurch has been experiencing a steady increase in the number of tourists and students in the city. In 2014, the student population reached pre-quake numbers with over 5,000 full-time equivalent students in the central city, primarily at the Christchurch Polytechnic Institute of Technology.

Changes in the demographics and land uses in the central city will necessarily influence how the city is used.

The public realm can play a key role in shaping central Christchurch as a welcoming and vibrant place for all.

To realise this potential, it is important that the streets and public places in the city centre function in these three key ways.

- Cater for different user and age groups.
- Support a wide and well-distributed range of social, recreational and leisure activities.
- Meet the transport needs of people and businesses.

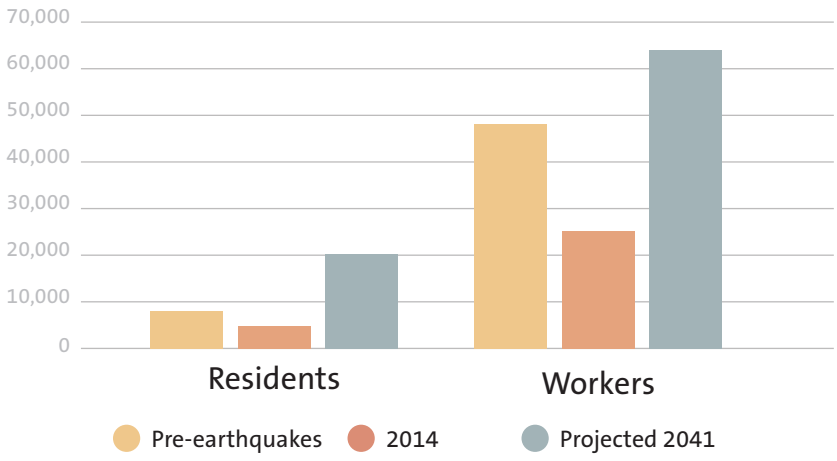


Figure 12 *Pre-earthquake, current and projected resident and worker populations in the central city*

The plan below illustrates the indicative distribution of land uses across the city as expected in the Recovery Plan. To create a welcoming and inclusive central city, the public realm network needs to be planned and designed with the likely users of these places in mind.

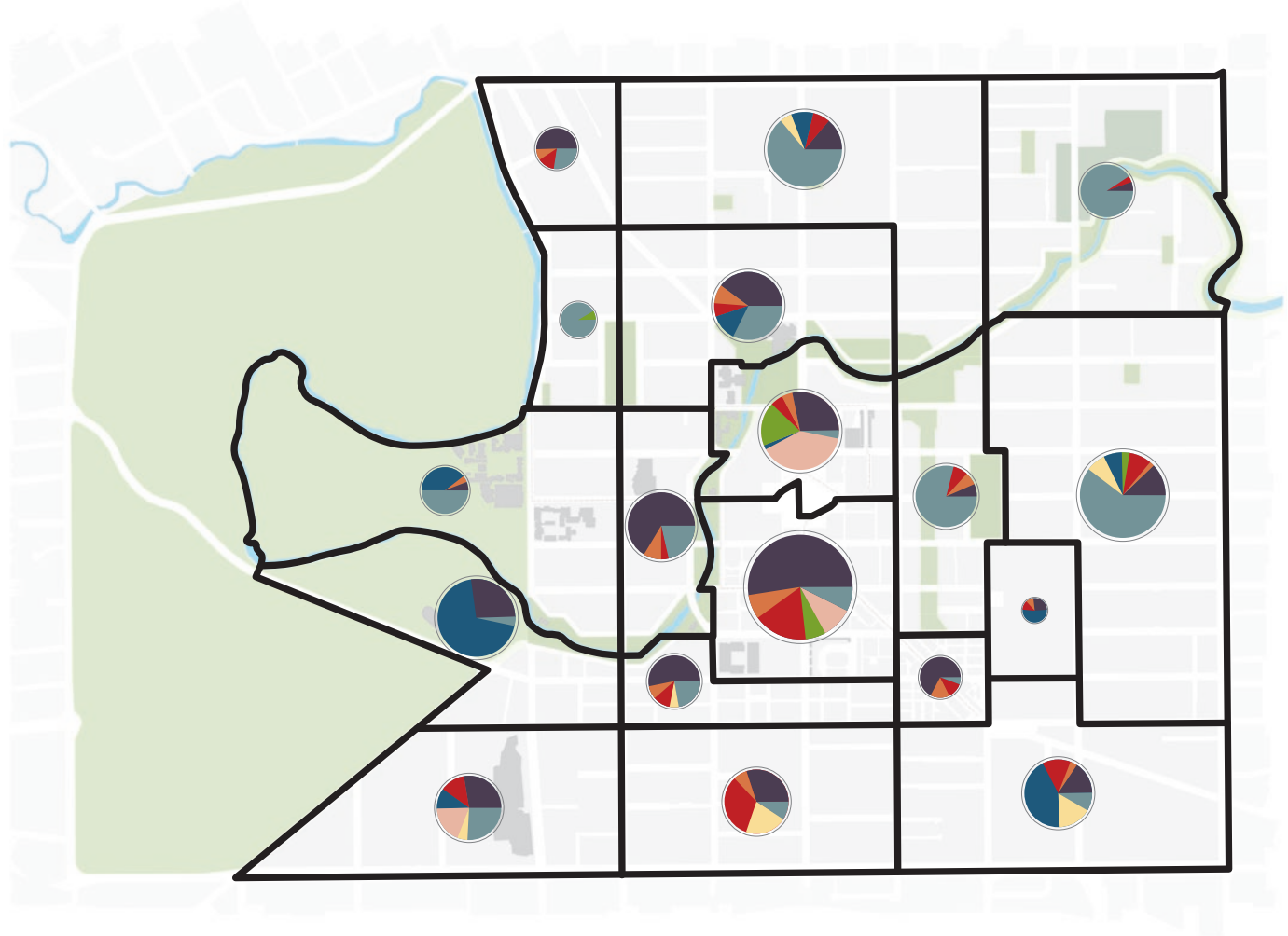


Figure 13 *Indicative distribution of land uses across the city as expected in the Christchurch Recovery Recovery Plan*

Supporting the implementation of Accessible City

***An Accessible City* is the transport chapter of the Christchurch Central Recovery Plan. Its role is to support the Recovery Plan through a rebalanced transport system for the central city.**

The Recovery Plan promotes a significant increase in the number of people living and working in and visiting the central city. Achieving this goal will increase movement activity. Accessible City acknowledges that, as part of the recovery process, by 2041 traffic volumes may return to pre-earthquake levels. Accessible City supports the Recovery Plan by:

- enabling increased activity in the central city without worsening traffic congestion
- increasing travel choices
- providing more enjoyable journeys.

It does this by prioritising routes for different travel modes – walking, cycling, public transport and general traffic.

Accessible City supports the economic, social and environmental recovery of the central city by:

- defining how the different modes of travel will be distributed in the street network
- promoting increased pedestrian movements as part of overall journeys
- promoting the tripling of bus patronage and cycling to and from the central city
- significantly reducing the amount of through traffic in the central city.

Key initiatives to meet these objectives include:

- creating the conditions for a more pedestrian-friendly city Core
- providing improved and well-connected walking, cycling and public transport routes and facilities
- creating lower speed zones and reducing speed limits on a number of key streets, especially in the Core
- redirecting traffic without a destination in the central city to make better use of the surrounding avenues
- improving the four avenues to accommodate increased movement.

For further detail on Accessible City, visit: http://ccdu.govt.nz/the-plan

Chapter 5 provides guidance on how Accessible City informs the design of the street network.

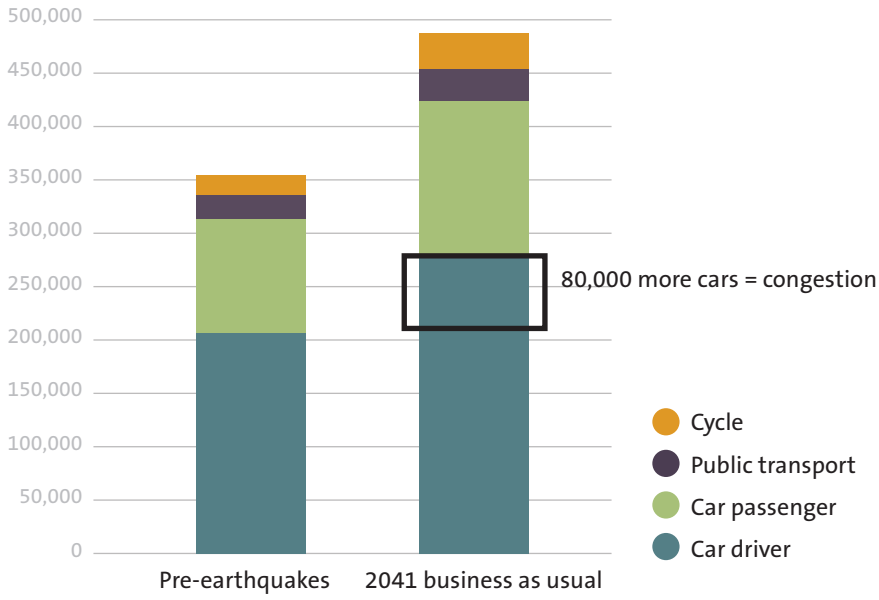


Figure 14 *Traffic congestion in the central city is likely to increase without Accessible City initiatives*

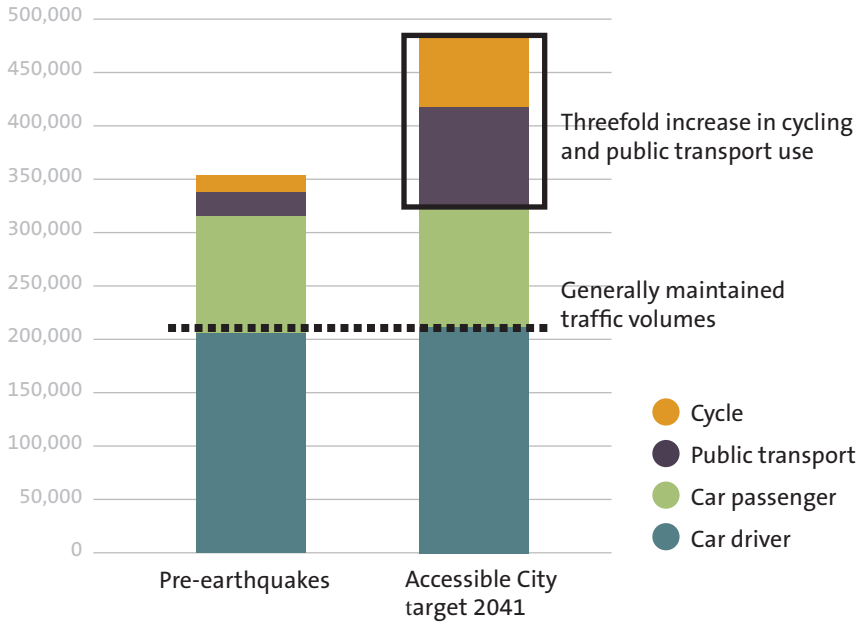


Figure 15 *Accessible City seeks to support increased activity and movement without worsening traffic congestion*

Capitalising on existing infrastructure

This approach aims to reshape the quality and functionality of the public realm network while making the most of what exists now. This work includes the repairs being completed by the Stronger Christchurch Infrastructure Rebuild Team (SCIRT).

The rationale for this approach is to create a fit-for-purpose network that:

- delivers the best value for money
- allows for the continued recovery of the central city streets
- provides flexibility to be implemented in stages.

This approach involves: maintaining most of the existing alignments of street kerbs; introducing an amenity zone; and integrating existing underground infrastructure.

Maintaining the existing alignment of street kerbs in most places

Relocating kerbs is a costly exercise in itself. It also has associated costs, including the costs involved in relocating underground services and utilities, stormwater and drainage systems and in regrading pavement surfaces.

In some selected locations, however, relocating kerbs may be justifiable. Examples are when the overall benefits of a wider footpath outweigh the cost of the works or where a full earthquake repair is needed but has not yet been undertaken.

Introducing an 'amenity zone' to the street corridor

Part of the existing carriageway will be used to relocate or introduce elements that improve the experience of the street for all users. The amenity zone can be created within the existing street layout and provides a number of services.

- **Improved walking conditions.** The existing footpaths in the central city are generally 3 metres wide. This area is often reduced by elements such as tree pits and street furniture. Relocating these elements in the amenity zone frees up the area of existing footpaths, especially where these are likely to be busy.
- **Improved cycling conditions.** The amenity zone provides separation for cyclists along the streets identified as key cycling routes.
- **Increased greenery.** The amenity zone allows for the introduction of street trees with good growing conditions and at more regular intervals. These help to rationalise and landscape street parking areas. As the tree pits are flush with the pavement, integrated water management can be explored.
- **Improved conditions for slower, pedestrian-friendly streets.** The amenity zone visually narrows the street corridor, which helps to slow down vehicles.

Integrating existing underground infrastructure

Relocating underground infrastructure can significantly increase the cost and timeframes of streetscape works. In some instances, however, relocating various underground facilities in a more efficient way may be justifiable to ensure the future performance of facility networks. Some overhead utilities may also warrant undergrounding.

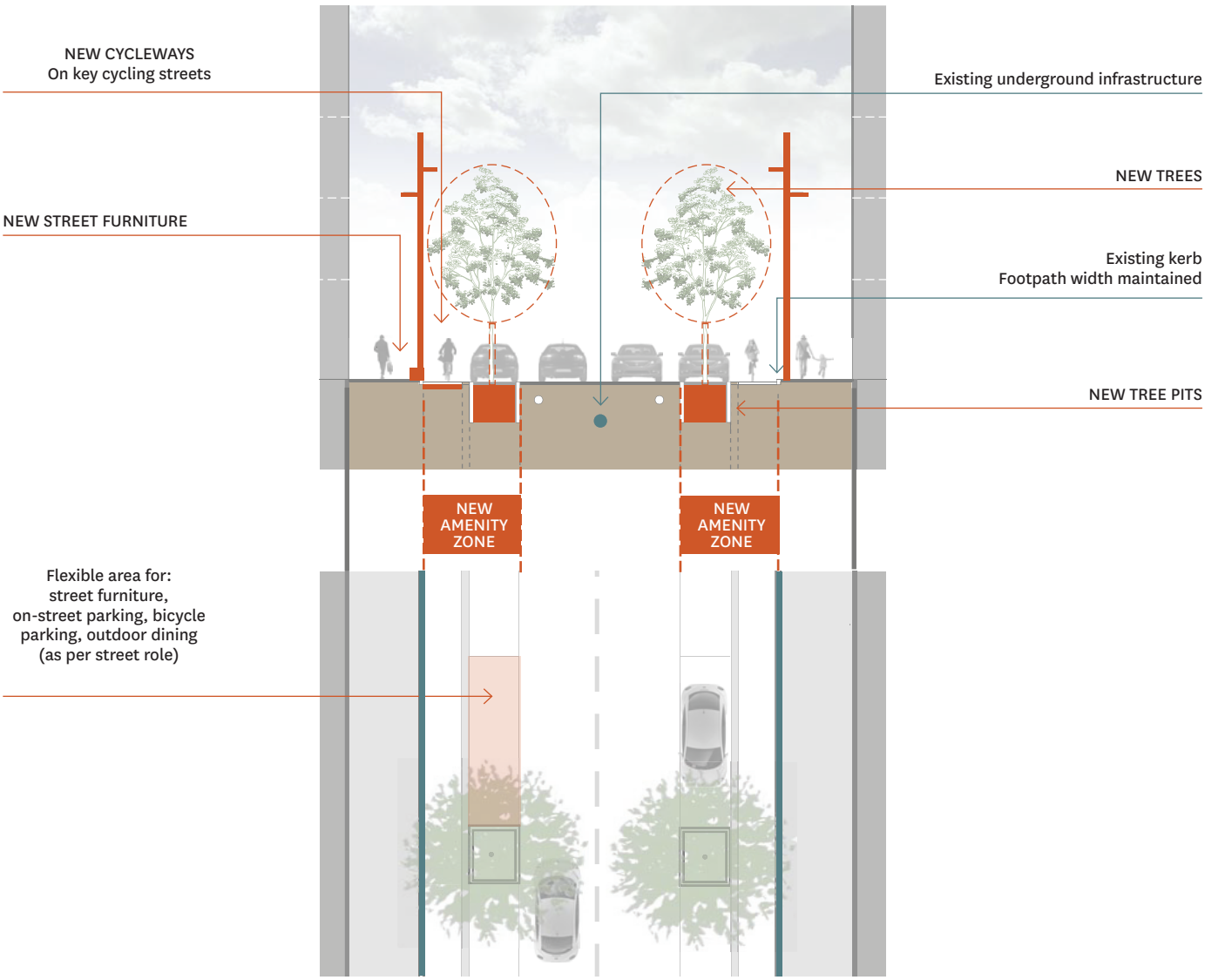


Figure 16 *Indicative diagram showing integration of existing and new infrastructure*

Strengthening the central city's green infrastructure network

Green infrastructure refers to natural elements such as street trees, rain gardens, planting and grassed areas that can be integrated into the public realm to create a 'greener city'.

This is something Christchurch people asked for through the 'Share an Idea' consultation in 2011 and is part of the model for the sustainable central city envisaged in the Recovery Plan.

A robust green infrastructure network can provide significant environmental, economic, social and cultural benefits to the central city by:

- improving air and water quality
- strengthening the city's sense of place, including its Garden City heritage and its Ngāi Tahu /Ngāi Tūāhuriri cultural identity.
- supporting tourism
- creating attractive spaces to encourage customers to linger in retail and commercial areas
- increasing property values through increased amenity
- attracting new residents and businesses to the central city
- increasing biodiversity through restored ecosystems
- improving stormwater management
- contributing to climate adaptation, carbon storage and urban heat reduction
- creating conditions for increased physical activity and improved health outcomes
- improving wellbeing through enhanced connectedness to elements of the natural landscape
- restoring cultural values by re-establishing mahinga kai in the central city's green public spaces.

Green infrastructure also provides an effective way of addressing the targets in the Christchurch Climate Smart Strategy (2010–2025) and the Christchurch Transport Strategic Plan (2012–2042) for reducing transport-related greenhouse gas emissions.

In addition to providing the environmental, social and economic benefits listed above, introducing trees into the existing carriageway:

- supports the proposed low-speed zone by reducing the visual width of key streets
- creates a better human scale, thereby improving the overall experience of the city.

The streets and places that make up the public realm network constitute a significant proportion of the total land area in the central city. Integrating a robust green infrastructure into the public realm is an essential part of creating a sustainable and green central city.

The City of Melbourne* investigated the value of environmental benefits of trees through the tool i-Tree Eco. It established that 982 trees along five of its key streets:

- **remove 0.5 metric tonnes of air pollution per year at a dollar value of $3,820**
- **store 838 metric tonnes of carbon at a dollar value of $19,100**
- **sequester 24 metric tonnes of carbon each year at a dollar value of $548 per year**
- **save $6,370 in energy costs each year through shading buildings in summer and providing solar access in winter**
- **avoid carbon emissions by reducing energy use by $114 per year.**

When extrapolated across the entire population of trees in Melbourne (70,000 trees), these findings provided measured evidence that trees are a very valuable environmental asset.

**Melbourne Urban Forest Strategy 2012–2032*

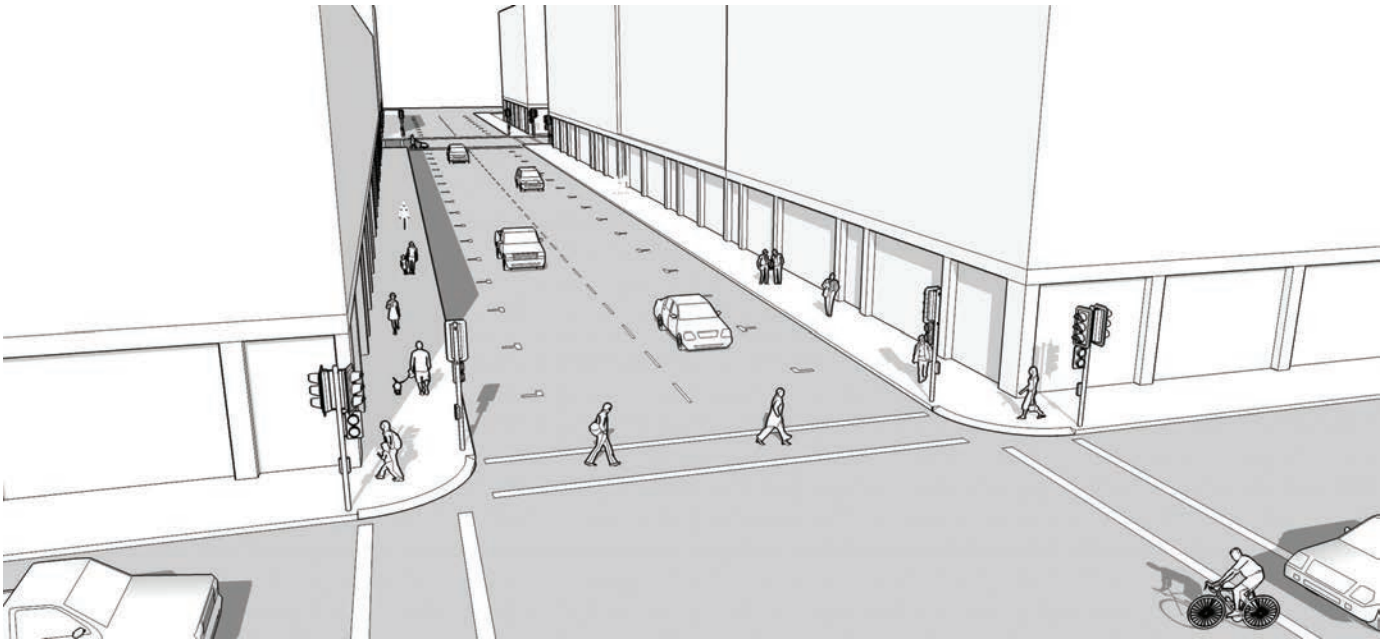


Figure 17 *Example of a typical street in the central city: wide carriageways, lack of pedestrian scale and amenity*

PROPOSED CHANGE

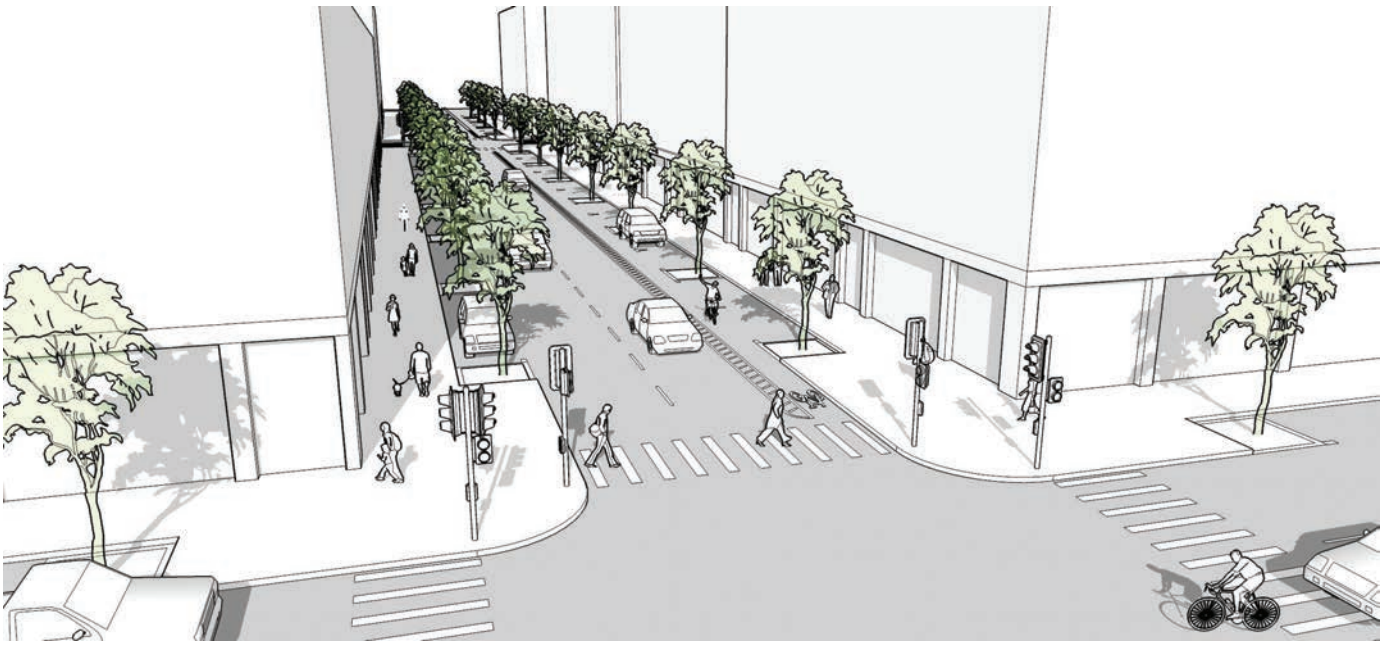


Figure 18 *Example of proposed change: street where trees have been introduced in the carriageway, improved amenity for all users*

Embracing Ngāi Tahu cultural values

One of the aspirations of the Christchurch Central Recovery Plan is to rebuild a city that speaks to our sense of place, our identity and our shared cultural heritage.

Māori culture and identity underline New Zealand's point of difference in the world. Ngāi Tahu values therefore provide Christchurch with an opportunity to rebuild the central city with a strong and unique sense of place and identity.

Ngāi Tahu people and their ancestors have been part of the fabric of the Ōtautahi/Christchurch landscape for many centuries. Ngāi Tahu lived on a vast area of waterways and tributaries that branched off from the main rivers of Ōtākaro (Avon), Ōpāwaho (Heathcote) and Pūharakekenui (Styx). These waterways and catchments provided locations for food harvesting, rituals and community life.

The local Ngāi Tahu sub-tribe that holds mana whenua (customary rights and responsibilities) for the central Christchurch area is Ngāi Tūāhuriri. Their responsibilities include protecting and enhancing sites of significance such that they can provide for the prosperity and enjoyment of present and future generations.

Strategic Ngāi Tūāhuriri objectives in contributing to the Streets & Spaces Design Guide for the central city are:

- restoring the visibility of Ngāi Tūāhuriri and Ngāi Tahu values and narratives in the central city public realm
- identifying and promoting urban design solutions for the central city public realm that satisfy the cultural and practical needs of the Māori community.

Accordingly, the Streets & Spaces Design Guide includes guidance on meaningful and practical ways of celebrating and integrating Ngāi Tahu values in the central city public realm. These values include:

- **rangatiratanga:** community leadership; authority to make decisions
- **manaakitanga:** looking after others, especially guests (manuhiri)
- **kaitiakitanga:** sustainable management of the natural environment
- **mātauranga:** knowledge and understanding of cultural traditions and values
- **whanaungatanga:** community identity, pride and participation
- **wairuatanga:** spiritual wellbeing.

The following are specific ways of expressing these values in the central city public realm.

- **Use te reo Māori** (the Māori language). Ensure written, oral and other forms of communication in the public realm are bilingual. Examples are wayfinding signage, place naming and site interpretation boards.
- **Protect and enhance mahinga kai** (foods and other natural resources, the habitats where they are sourced from, as well as the practices and philosophies that have developed over generations to ensure their sustainable management). Examples are food forests, rain gardens and indigenous planting strategies.
- **Integrate Ngāi Tahu values, cultural expressions and narratives into the design of public realm projects**. Examples are respectfully acknowledging sites and landscapes of cultural significance, incorporating authentic Ngāi Tahu artworks and involving Ngāi Tahu artists and designers.

These values and concepts have been threaded throughout this document.

"The value of a place's distinctive features is sure to increase over time as globalisation renders our cities more generic."

Our Cities Ourselves, 2010

03

DESIGN CRITERIA
Paearu Hoahoa

Places for people

He wāhi tāngata

The design criteria outlined on the following pages should be used to inform the design of streets and gathering places in the central city.

The criteria identify key design considerations that will assist in making the vision for the public realm network of central Christchurch a reality. These design considerations should form an integral part of the design process.

The rationale behind each of the criteria is to create places that the people of Christchurch will cherish because people are at the centre of how these places are experienced.

Comfort

He wāhi āhurutanga

Design public places and streets with high standards of pedestrian comfort and convenience.

- [ ] Design for comfort of people experiencing different weather conditions by including access to sun (Tama-nui-te-rā) and shade, shelter from wind (te hā o Tāwhiri) and rain, and noise reduction. Consider orientation of spaces where possible, and the appropriate provision of trees and awnings for shade.
- [ ] Provide ample opportunities for formal and informal seating so people are invited to pause and rest, or stop and relax.
- [ ] Provide lighting to create safe and attractive spaces for people at night.
- [ ] Encourage diverse, interesting, engaging and high-quality interfaces at the ground and upper levels of buildings that sit directly adjacent to pedestrian spaces.
- [ ] Apply barrier-free and universal design principles in the design of streets and gathering places. These principles promote spaces that are usable to the greatest extent possible by eveyone, regardless of their age, ability or status in life.
- [ ] Provide sufficient and comfortable facilities and amenities for commuters, shoppers and visitors, such as bike racks, water fountains, public toilets, wayfinding and a variety of seating options.

Legible

He tuhinga mārama

Contribute to a city centre that is easy to understand and to navigate for locals and visitors alike, including those with mobility needs.

- [ ] Support the appropriate travel modes and their appropriate hierarchy as identified in Accessible City.
- [ ] Design direct and predictable routes for each of the key modes of travel.
- [ ] Use a consistent and complementary palette of design details, materials and street furniture in streets and public places, which assist various users and modes of transport to easily navigate the city.
- [ ] Create a sense of arrival at gateways and thresholds into key public spaces. Integrate ngā ngutu (cultural markers) at entry points and other locations associated with the story of mana whenua.
- [ ] Provide effective links between the central city and the wider region for various travel modes.
- [ ] Integrate into the design of the public realm visual cues that signal a transition into slower-speed environments.
- [ ] Provide clear and consistent wayfinding for all travel modes throughout the city, including direction to key destinations, north orientation and travel distances.
- [ ] Integrate Māori place names and te reo in wayfinding panels, street and place name signs.
- [ ] Involve Ngāi Tahu designers and artists in the production of interpretation panels that provide educational information, for example, on Ngāi Tahu history and mythology.
- [ ] Introduce memorable urban moments and points of recognition to assist in natural orientation and wayfinding.
- [ ] Ngā maunga kōrero. Frame and protect key views to the mountains to enshrine their majestic stories and assist with wayfinding.
- [ ] Provide spaces and features that educate and inform people of the traditional values of a place.
- [ ] Ensure boundaries between private and public spaces are well defined.
- [ ] Design streets and spaces to avoid potential conflict between different user groups.

Green

He whenua haumako

Mana atua, mana tangata *(design with and within the environment)*

Introduce more trees, landscaping and gardens into the city centre. Improve water management and air quality to foster a healthier natural and urban environment.

- ☐ Introduce street tree planting and landscaping in all new streetscape projects.
- ☐ Use species selection to reinforce and contribute to the character and role of streets and gathering places.
- ☐ Use trees and plants that are suitable for Christchurch's climate and will grow in the urban environment while minimising ongoing maintenance and operating costs.
- ☐ Support biodiversity clusters and corridors and promote the ecological restoration of the native flora and fauna in the Ōtautahi/ Christchurch area.
- ☐ Provide safe, attractive and efficient streets that encourage people to choose to use the healthier and cleaner travel modes such as walking, cycling and public transport.
- ☐ Use environmentally responsive materials and promote energy efficiency in the use and management of the public realm.
- ☐ Promote the integration of surface stormwater treatment into the design of the public realm. Reduce large impermeable surfaces and promote the use of semi-permeable surface treatments.
- ☐ Design streets and gathering places to provide a sense of connection with nature.
- ☐ Promote, protect and restore places for mahinga kai, for example, orchards and native plantings.
- ☐ Protect the night sky and reduce lighting pollution. Avoid unnecessary light at night. Protect and promote the cultural, educational, scientific and recreational value of Christchurch nightscape.
- ☐ Where appropriate, encourage edible plantings, in accordance with current Christchurch City Council policy and Edible Canterbury Charter.

Sense of place

He tūrangawaewae

Design the public realm to reflect the context and identity of greater Christchurch – its character, culture, history, values and aspirations.

- ☐ Create distinct and unique places that are memorable and enticing for a wide range of users.
- ☐ Draw on the positive and intrinsic elements of each place such as heritage, history, landscape, activity, land uses, built form and views.
- ☐ Reinforce and celebrate the simplicity of the central city grid.
- ☐ Ngā Tūpuna: acknowledge and integrate wāhi tapu and sites of cultural significance through:
  - spatial connections in the form of walkways and view shafts
  - dual names and signage
  - art, sculpture and other cultural expressions such as pou whenua and whakairo (carvings) and raranga (paving treatments).
- ☐ Draw on Ngāi Tahu historical narratives for the design of the public realm. Detailed Ngāi Tahu historical narratives can be obtained from the Council or developed in consultation with mandated Ngāi Tūāhuriri representatives.
- ☐ Use a consistent and complementary set of materials, furniture and street elements across the central city.
- ☐ Select street trees and planting to support and strengthen the desired character for spaces.
- ☐ Use lighting to contribute to the character of the public realm network.
- ☐ Promote well-integrated and place-responsive public art.
- ☐ Promote temporary activation of space.
- ☐ Provide opportunities for people to engage with natural processes and for children to learn about nature through observation. For example, provide safe areas to investigate in stream habitats, boardwalks, bird watch areas, contemplative seating, nature play spaces, community orchards, areas to harvest and work with harakeke and other fibre plants.
- ☐ Provide for Ngāi Tahu customary use of plants for rongoā (medicinal purposes), weaving and other crafts.
- ☐ Ensure all ground-level interfaces enhance the character and experience of public spaces.
- ☐ Permit non-standard treatments where appropriate to reinforce identity, distinctiveness and character.

Creative and inviting

He wāhi pōwhiri tāngata

Foster a sense of interest and surprise in the everyday experience of the central city.

- [ ] Create meaningful and inclusive places that provide safe and easy access for all user groups including; children, youth, elderly and people with disabilities or limited mobility.
- [ ] Design streets and gathering places for a variety of functions including commuting, relaxation, play, social interaction, whānau gathering, recreation, business, art and architecture.
- [ ] Integrate spaces and facilities for Ngāi Tahu whānui cultural activities and ceremonies such as pōwhiri (welcoming).
- [ ] Encourage creative designs that engage and stimulate people of all ages.
- [ ] Provide opportunities for the community to harvest local kai (produce) from orchards, community gardens and access to waterways and other mahinga kai (food and resource gathering) for customary harvesting.
- [ ] Design buildings to support interesting experiences for people throughout the city.
- [ ] Use planting and hard landscaping to introduce variety, colour and texture to the public realm network.
- [ ] Design the street network to support a transport system that is efficient and attractive, provides high amenity and integrates with its surrounds.
- [ ] Support an increased use of cycling by providing bicycle-friendly facilities and amenities along key designated routes.
- [ ] Design the public realm network to provide a choice of routes and travel modes throughout the city.
- [ ] Provide an appropriate quantity and location of on-street car parking.
- [ ] Foster a network of slow-speed streets towards the heart of the city centre that support a wide range of activities.
- [ ] Provide active play and recreation opportunities for children's development and senior enjoyment.
- [ ] Promote environmental custodianship through communal activities and environments such as community orchards and gardens and ecological enhancement projects.
- [ ] Promote well-integrated public art, which is responsive to both culture and place, including by collaborating with and engaging Ngāi Tahu artists.
- [ ] Promote a child-friendly city. Improve the accessibility, quality and quantity of structured and unstructured play spaces and play opportunities in the central city.
- [ ] Support the Transitional City Programme.
- [ ] Encourage innovative, fun features that enhance the experience of being in a creative and vibrant central city.

Walkable

He wāhi hīkoi

Create a consistently high-quality and well-connected pedestrian and cycling network that attracts people of all ages to spend time in the central city streets and gathering places.

- ☐ Promote a walking network within the Core that provides a variety of walking experiences.
- ☐ Provide and maintain attractive, well-defined and direct pedestrian routes through gathering places.
- ☐ Ensure lowest levels of buildings are designed to support a human-scaled and walkable city. Consider appropriate levels of transparency, frequent and active entrances, engaging ground floor uses, awnings and increased architectural articulation to add interest and variation along the edge of footpaths and gathering places.
- ☐ Provide continuous variety along the length of building walls that sit on the edge of public places. Breaking down the length of building frontages into smaller segments by considering vertical articulations, variations in materials, patterns or window alignments will make the walking experience more interesting, and the distances seem shorter.
- ☐ Provide clear paths of travel for visually impaired pedestrians, in particular in front of building frontages.
- ☐ When buildings are set back from public places, carefully consider landscaping and buffers to soften and improve the pedestrian experience.
- ☐ Facilitate walking for seniors and those with different abilities by providing frequent opportunities for seating and moments of pause and rest.
- ☐ Prioritise pedestrians in the inner zone, supported by low speeds, attractive footpaths, accessible public spaces and convenient, frequent street crossings.
- ☐ Design footpaths and intersections to provide sufficient clear path widths, minimal crossing distances, ease of access and safety.
- ☐ Minimise vehicular crossings or driveways along key pedestrian and cycling routes.
- ☐ Manage vehicle access into key gathering places and promote pedestrian priority.
- ☐ Use traffic management methods to minimise waiting times at street crossings on key walking and cycle routes.
- ☐ Define a choice of protected pedestrian routes for inclement weather conditions.
- ☐ Reduce clutter and co-locate street elements where possible (signage, poles, etc).

Resilient and flexible

He hangore

Design the public realm network as a system that can adapt to change and evolve with the needs and functions of the city.

- ☐ Design streets and spaces that can integrate with and adapt to alternative transport options and public space needs in the future.
- ☐ Design for cost-effectiveness and provide the greatest possible value to the public.
- ☐ Consider full lifecycle costs and benefits. Balance the initial capital with the long-term safety, economic, environmental and other benefits of a high-quality public realm.
- ☐ Design streets and gathering places to minimise impacts on underground services and utilities.
- ☐ Design spaces for flexibility and multi-purpose use for people on their own, in pairs or in groups of varying sizes.
- ☐ Ensure accessibility for oversized and emergency service vehicles, particularly where spaces are used for major public events and performances.
- ☐ Adopt a restrained palette of materials that are robust, age well, are easily maintained and are cost-efficient to source and manage.
- ☐ Design streets and gathering places that respond to the needs of an ageing population.
- ☐ Design streets and spaces that function predictably and consistently in everyday use, and that adapt to large planned activities or unexpected events.
- ☐ Design streets and traffic signals to allow for different travel modes at different times of day.
- ☐ Design the street network to support consistent and predictable travel times to key destinations, especially for public transport.

Safe

He wāhi haumaru

Design the public realm to positively contribute and respond to the actual and perceived sense of safety in the central city.

- ☐ Design the public realm network as a safe system for all users, particularly more vulnerable groups (children, the elderly, those with disabilities) as well as the more vulnerable transport modes (walking, bicycling) – by day and by night.
- ☐ Apply Crime Prevention through Environmental Design (CPTED) principles. Ensure spaces are overlooked, well lit and maintained.
- ☐ Encourage active use of spaces by a range of different groups throughout the day.
- ☐ Define the street cross-section to induce the desired slower vehicular speeds.

Building edges

He pātū hanga whare

The ground level of buildings is predominantly what pedestrians perceive, interact with and remember when walking in the city.[1]

This is because:

- the ground level façade is naturally perceived by the human field of vision when walking on the street
- people walk at an average pace of 5 kilometres per hour. At this pace the human eye has the capacity to appreciate detail
- people prefer to stay at the edges of space, where their presence is more discreet and they command a good view of the space
- people prefer to stand or sit at a fixed point, rather than stand without any support.

The ground floor is where "buildings and city meet."

Jan Gehl

[1] Close Encounters with Buildings, Jan Gehl, Lotte Johansen Kaefer and Solvejg Reigstad, URBAN DESIGN International (2006) 11, 29–47.


VILLA
bar & lounge


rejuice
OPEN


Darac


rejuice


the element

Building edges

He pātū hanga whare

Because the ground level of a building has the greatest potential to support activity and enliven the street life, special care should be taken in its design. In particular, the design should take account of the following aspects.

Vertical rhythm

Vertical rhythm refers to narrow-fronted buildings or vertical elements in the façades such as frequent doors and windows. The vertical emphasis gives rhythm to the streets; it makes walking more appealing by changing the sense of distance as one walks from one column, door or window to the next. To create this effect, vertical elements should be placed every 3 to 5 metres along the façade.

Texture

The texture of a façade refers to the sensorial experience it provides to the pedestrian through the use of architectural articulation, materials and detail. A façade with quality materials and creative details engages the senses, making the walking experience appealing and stimulating.

Depth

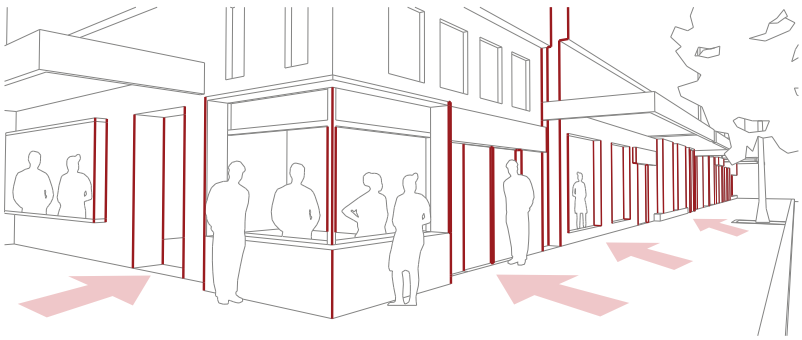
'Thick' façades with 'in-and-outs' such as canopies, balconies, bay windows, plinths and defined thresholds become attractive places for people to be and prolong activity on the street. These elements also assist in providing 'vertical rhythm' to the façade.

Transparency

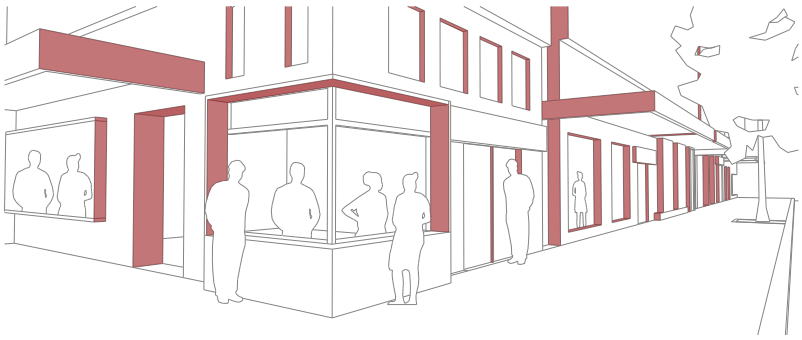
Allowing visual contact between the interior and the exterior of a building extends the experience of the public space and of the buildings themselves.

Glass used for ground floor façades should be clear rather than mirrored or frosted glass.

While transparency is encouraged, it is also important to acknowledge and make provision in the design of façades for areas that require privacy or uses that will result in unsightly views from the street. In all instances, however, completely blank façades must be avoided.



Vertical rhythm



Depth

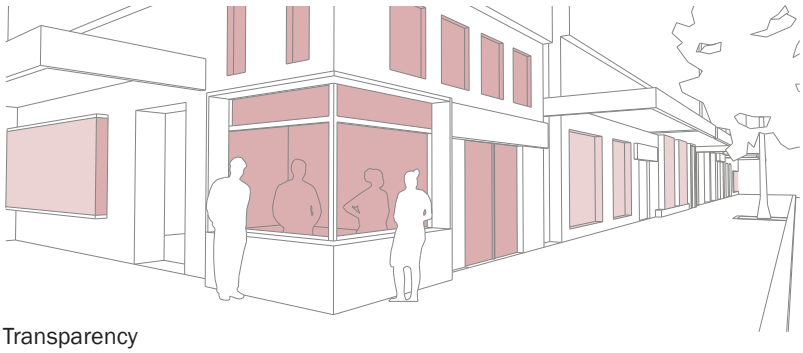
Activity and diversity

It is ultimately people who bring vibrancy and life to a city. Active uses, particularly along major pedestrian routes, will foster a sense of urbanity and increase patronage and the perception of safety. An active use provides physical and/or visual opportunities for interaction between the inside and the outside of the building during most parts of the day. Frequent doors and windows provide points of exchange between the outside and the inside, encouraging activity on and surveillance of the street.

Flexibility

Active uses are varied, including retail, entertainment, residential, services and businesses. Some of these uses, such as retail, require minimum levels of patronage to be viable. In practice, this means that some uses in certain locations will become viable only as the project matures and visitation increases. For this reason the ground floor should be designed so that different uses can be accommodated equally well throughout the life of the building. Design considerations should include:

- floor to ceiling heights above 3 metres at the ground level
- flexible and adaptable floor plates that provide options for short- and long-term occupation.
- construction systems that allow changes to the façade at a later date
- avoiding major level changes between the street and the ground level.



Transparency

Texture

Activity

Figure 19 *Design characteristics of good quality ground floor façades*

"Great cities give you a sense of movement, vitality and enterprise. They are alert and alive to opportunity."

Charles Landry

04

GATHERING PLACES
Wāhi Huihuinga
Tāngata

Overview

Gathering places in the central city will be destinations catering mostly for pedestrians. They are places where both small and large groups can meet informally or for planned events and other activities.

They include parks, plazas, squares, the riverfront, markets, civic and open spaces and publicly accessible lanes, courtyards and gardens.

Gathering places play a vital role in supporting the social, cultural and economic life of the central city. They contribute to the vibrancy of the city by providing amenity for workers, residents, visitors and tourists.

Gathering places not only enliven the city but can also raise the city's profile nationally and internationally. Interesting gathering places that have a strong sense of place will help to attract investment, development, businesses and residents to re-establish in the central city.

Figure 20 illustrates existing and proposed gathering places in the central city. They include:

- established places that will be renewed as part of the rebuild process, such as Ōtākaro/Avon River and Cathedral Square
- proposed new places such as the Central Park in the East Frame residential precinct and the new public realm network in the South Frame
- existing places such as Hagley Park and Cranmer Square
- privately owned but publicly accessible places, such as the courtyards in the Arts Centre.

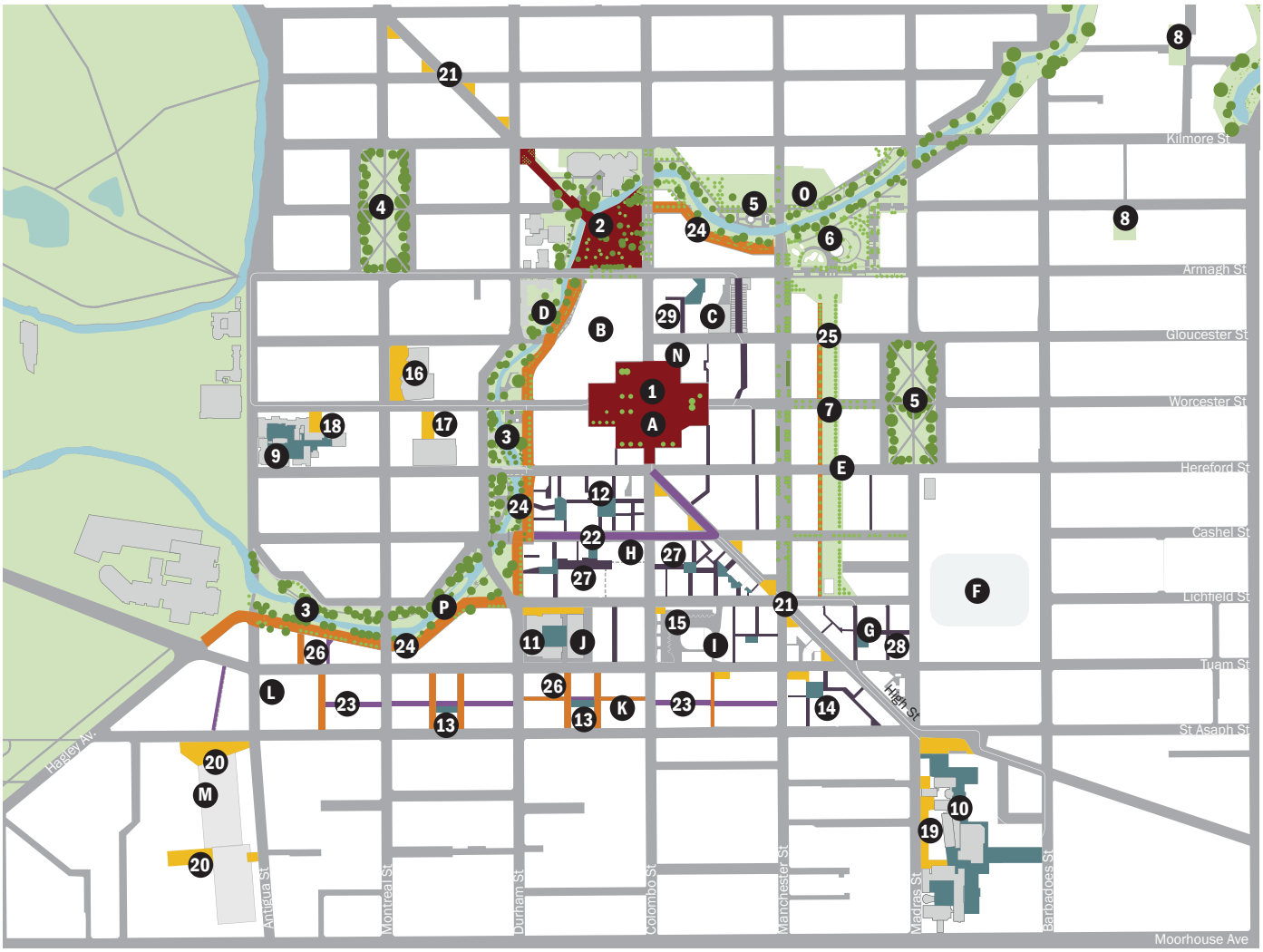
Some of these places are redevelopment projects that are at different stages in the planning, design or funding approval process, and may be subject to change of location or design. However, the purpose of mapping them all on one plan is to illustrate how they may work together *as a network.*

This chapter provides an overview of the general context and role of central city gathering places that share common purposes, such as parks or lanes.

The main objectives are to describe how each place relates to the wider context and to promote a diverse series of gathering places that:

- enable a connected city, where synergies between places are maximised
- attract a broad population profile to the central city by providing a wide and well-distributed selection of activities
- create a city that is interesting to explore through their varying character and scale.

Design guidance applicable to individual gathering places associated with anchor projects is provided in Chapter 6.



Legend

SQUARES

1. Cathedral Square *
2. Victoria Square +

PARKS AND OTHER GREEN OPEN SPACES

3. Ōtākaro/Avon River *
4. Cranmer Square +
5. Latimer Square +
6. Margaret Mahy Family Playground ·
7. East Frame Central Park ·
8. Neighbourhood parks +

COURTYARDS

9. Arts Centre +
10. CPIT campus +
11. Justice and Emergency Services Precinct ·
12. Retail Precinct ·
13. South Frame ·
14. Innovation Precinct·

PLAZAS

15. Bus Interchange ·
16. Christchurch Art Gallery +
17. Christchurch City Council Civic Offices +
18. Arts Centre +
19. CPIT campus +
20. Metro Sports Facility ·
21. Victoria and High Street triangles +

PEDESTRIAN PRIORITY STREETS

22. City Mall +
23. The Greenway ·

SHARED STREETS

24. Ōtākaro/Avon River Promenade ·
25. East Frame links ·
26. South Frame links ·

LANES

27. Retail Precinct ·
28. South Frame Innovation Precinct ·
29. Performing Arts Precinct ·

ANCHOR PROJECTS ·

A. The Square
B. Convention Centre Precinct
C. Performing Arts Precinct
D. Te Papa Ōtākaro/Avon River Precinct
E. East Frame Residential Precinct
F. The Stadium Precinct
G. Innovation Precinct
H. Retail Precinct
I. Bus Interchange
J. Justice and Emergency Services Precinct
K. South Frame
L. Health Precinct
M. Metro Sports Facility
N. Central Library
O. North Frame
P. Earthquake Memorial

Note:

+ Existing
* Existing design to change
· Proposed

Figure 20 *Central Christchurch existing and proposed gathering places*

The squares

Cathedral Square and Victoria Square are central Christchurch's most prominent civic places, where people come to meet and celebrate significant events.

Both squares were key features of the original town plan for Christchurch created by Edward Jollie in 1849–50.

With their central location, historic character and civic role, the squares contribute substantially to everyday life in the central city and are important tourist destinations.

These two squares will provide key public interfaces with the Convention Centre and Te Papa Ōtākaro/Avon River precincts, and the Central Library.

Cathedral Square

Located at the intersection of the city's two main axial streets, Worcester and Colombo streets, Cathedral Square is at the geographic and civic heart of Christchurch.

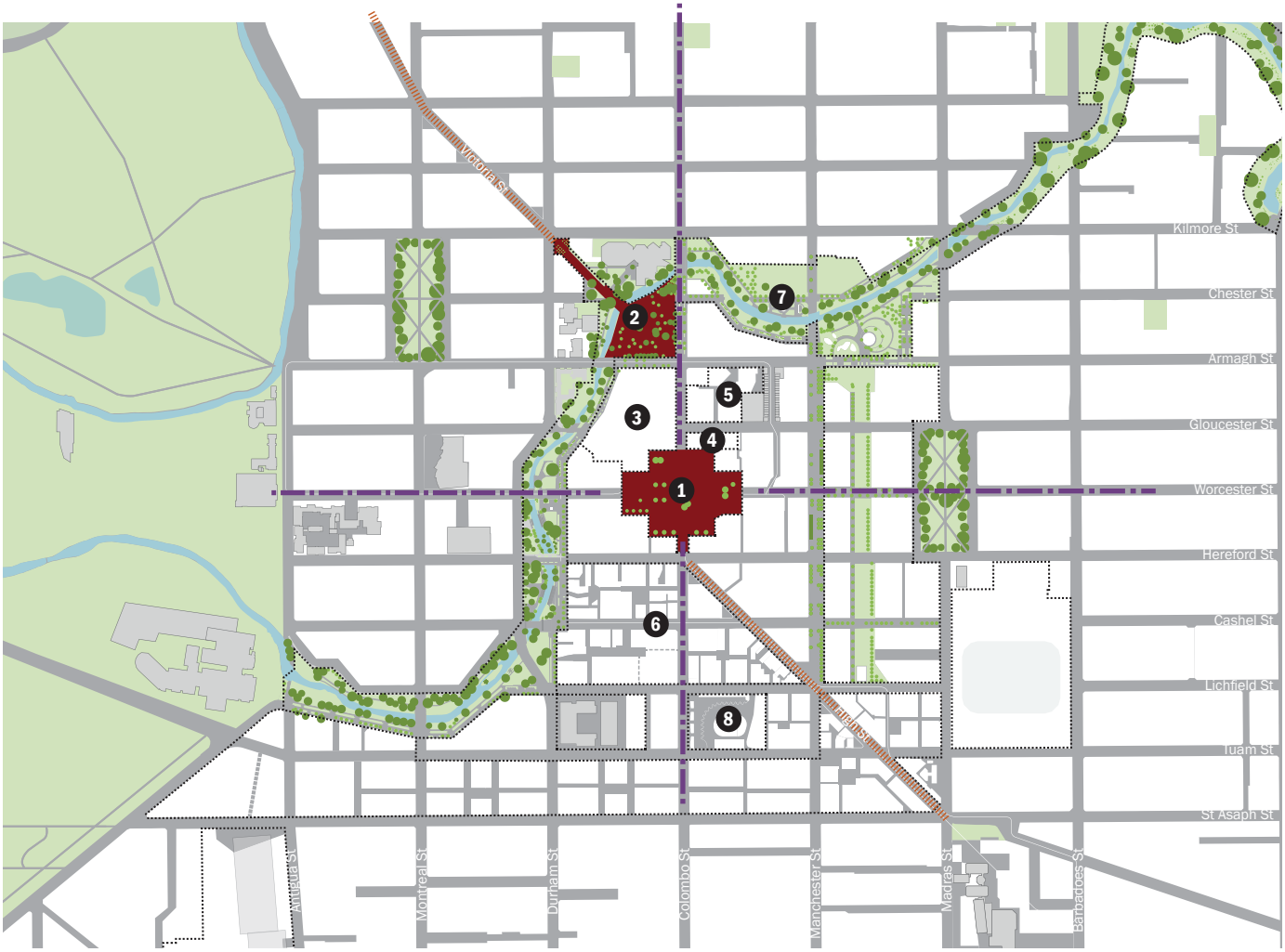
The Recovery Plan identifies Cathedral Square as a key anchor project. The vision is to re-establish The Square as Christchurch's main civic gathering place. It will be more vibrant, more comfortable, more accessible, safer and greener. The design process is yet to commence; however, key objectives for its design are provided in Chapter 6.

Victoria Square

Victoria Square, first known as Market Square or Market Place, was the centre of town life until the 1870s. It sits in a prominent location along Ōtākaro/Avon River at the confluence of a number of existing and proposed major movement routes. Victoria Square has a strong diagonal north–west axis which provides a bookend to Victoria Street.

Victoria Square's setting, its historic market activities and existing monuments provide strong associations with the heritage of Te Rūnanga o Ngāi Tahu and European culture.

As a predominantly green space, Victoria Square offers a counterpoint to the largely hard surfaces of Cathedral Square. Victoria Square will continue to be a natural gathering point in the central city.



Legend

SQUARES

1. Cathedral Square *
2. Victoria Square +

AXIS STREETS

Colombo * and Worcester + streets

GATEWAY STREETS

Victoria and High streets +

RELATED ANCHOR PROJECTS •

3. Convention Centre Precinct
4. Central Library
5. Performing Arts Precinct
6. Retail Precinct
7. Te Papa Ōtākaro/Avon River Precinct
8. Bus Interchange

Note:

+ Existing

* Existing design to change

• Proposed

Figure 21 *Central Christchurch existing squares*

Parks

The central city parks provide space for relaxation, physical activity, recreation and cultural activities of varied scales. They also make a key contribution to the city's visual amenity, air and water quality, and diversity of flora and fauna.

Central Christchurch parks offer a foretaste of the city's beautiful natural surroundings. Their landscapes and environmental features are essential components of the city's distinctive sense of place and its 'Garden City' heritage.

A number of new open spaces and connections in the central city, in particular to the east and south, will help to consolidate a green corridor around the city Core and link the city's main parks.

Hagley Park

Hagley Park is the largest park in the central city, one of the city's main landmarks and a popular destination. With its strong pattern of deciduous trees and broad open spaces, the park supports major sporting and cultural events. It includes the Christchurch Botanic Gardens and offers a diverse range of passive and active recreational opportunities.

In its early days Hagley Park was used for horse racing; South Hagley Park was used for the Great Industrial Exhibition of 1882, the New Zealand International Exhibition in 1906–1907 and the Australasian Tennis Championships in 1906. Today the park supports cricket, model boat sailing, golf, tennis, netball, croquet, hockey, rugby and soccer, as well as open-air concerts, festivals and the like.

Ōtākaro/Avon River

The main natural feature traversing central Christchurch, Ōtākaro/Avon River, is a key component of the city's cultural, physical and aesthetic identity.

Ōtākaro/Avon River holds great significance for Ngāi Tūāhuriri. The 14-kilometre-long river served as a transport route and source of mahinga kai (food and resource gathering), and was the place by which they lived and traded.

The visual contrast between the curving river and the European linear street grid, introduced by Edward Jollie's plan of central Christchurch, is a key characteristic of the city's urban form.

Te Papa Ōtākaro/Avon River Precinct, a 3.2-kilometre-long anchor project, aims to help re-establish a healthy river and better integrate the river with the surrounding urban fabric. The Precinct has key interfaces with other anchor projects including the Convention Centre Precinct, Retail Precinct and East Frame. Further information on this project is provided in Chapter 6.

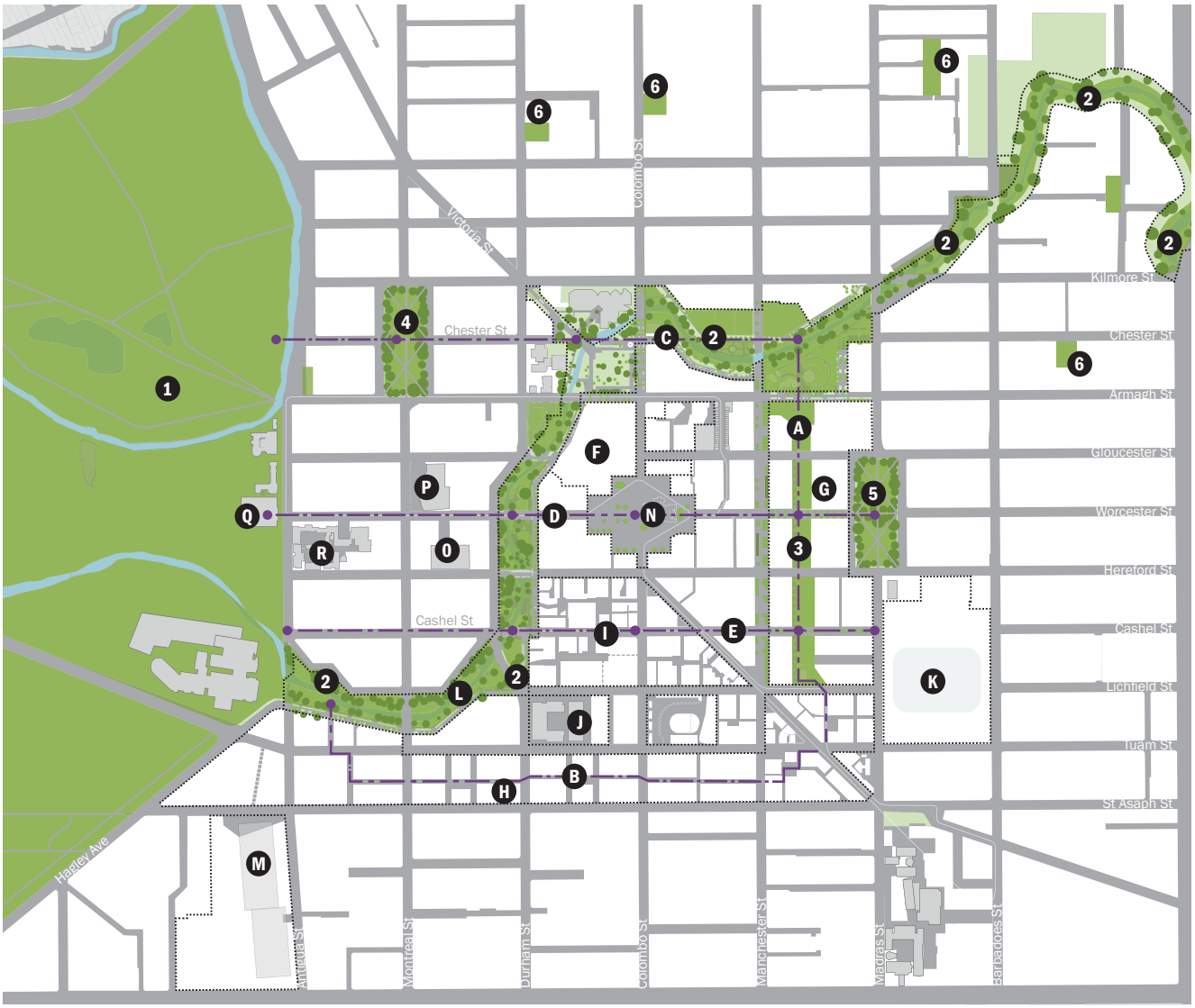
East Frame residential precinct - Central Park

The Central Park in the East Frame anchor project is the open space spine for the new inner–city residential precinct.

At the city scale, the park will be an important extension of the city's green, open spaces to the east and a key element of the pedestrian and cycling networks. When completed, the Central Park will be the third-largest park in the central city.

At the local scale, the park is designed to support and attract inner city living and provide a focal point for the new community.

The vision for the park is to create a contemporary and flexible linear open space that builds on Christchurch's urban form and Ngāi Tūāhuriri values. Further detail on the park is provided in Chapter 6.



Legend

PARKS AND OTHER GREEN OPEN SPACES

1. Hagley Park +
2. Te Papa Ōtākaro/Avon River Precinct*
3. East Frame Central Park ·
4. Cranmer Square +
5. Latimer Square +
6. Neighbourhood parks +

KEY CONNECTIONS

- A. East Frame north–south link ·
- B. The South Frame Greenway ·
- C. Chester Street +
- D. Worcester Street +
- E. Cashel Street +

RELATED ANCHOR PROJECTS ·

- F. Convention Centre Precinct
- G. East Frame Residential Precinct
- H. South Frame
- I. Retail Precinct
- J. Justice and Emergency Services Precinct
- K. The Stadium Precinct
- L. Earthquake Memorial
- M. Metro Sports Facility

KEY RELATED DESTINATIONS

- N. Cathedral Square *
- O. Christchurch City Council Civic Offices +
- P. Christchurch Art Gallery +
- Q. Canterbury Museum +
- R. Arts Centre +

Note:

+ Existing

* Existing design to change

· Proposed

Figure 22 *Central Christchurch existing and proposed parks*

Parks

Latimer and Cranmer squares

Latimer and Cranmer squares form part of the original town plan for Christchurch. The size of each is the same as a typical city block but their north–south orientation provides a counterpoint to the other east–west city blocks. Their strong heritage character is reinforced by lines of mature trees and formal lawns.

Latimer and Cranmer squares make a key contribution to the urban amenity and character of the surrounding neighbourhoods. They have great potential to provide a more diverse range of activities and events that support the established and emerging communities in their local areas and the city centre more generally.

Cranmer Square is at the western edge of the Core, mid-way between Hagley Park, Victoria Square and Ōtākaro/Avon River. Chester, Armagh and Kilmore streets provide convenient pedestrian, cycle, tram and vehicular connections between these notable green, open spaces. In recent times, residential land uses – including a number of hotels and other accommodation – have become more prominent around Cranmer Square. These generally maintain the traditional urban pattern of stand-alone buildings with relatively generous front and/or back yards.

Latimer Square provides an entry point from the east to the city Core along its main east–west axis, Worcester Street. The urban fabric around Latimer Square will undergo significant change with the introduction of more contemporary and compact forms of residential uses, in particular along the East Frame.

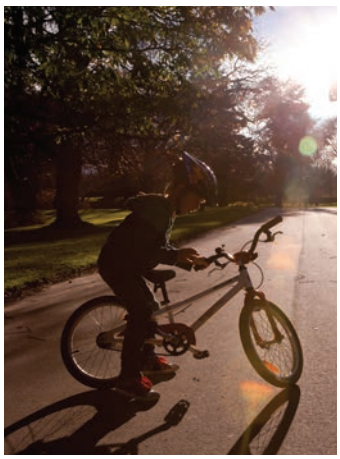
The Transitional Cathedral to the south of Latimer Square attracts numerous visitors and tourists to the area.

Neighbourhood parks

Neighbourhood parks are typically small green spaces, with trees and soft landscaping, tucked into and scattered throughout the urban fabric. In the central city they are located predominantly in the northeast among established residential areas.

Neighbourhood parks generally serve the needs of the immediate population. They can play an important role in fostering a sense of ownership and community. These small spaces are used for small local events and play areas for children, or simply as places for informal socialising and relaxation. Neighbourhood parks also provide opportunities to increase the amount of permeable surfaces through the city and provide habitat for plant and birdlife.

The role of neighbourhood parks as outdoor communal spaces will become increasingly important as central residential areas become more compact and dense. New neighbourhood parks should be sited in visible areas of high pedestrian footfall, so that they are safe and convenient to get to.



Courtyards

Through the rebuild process, courtyard spaces are becoming a more prominent feature of the central city's urban fabric, particularly within and around anchor projects. New courtyard spaces draw on successful local precedents such as the quadrangles in the Arts Centre and SOL (South-of-Lichfield) courtyard.

Courtyards are small open spaces typically located towards the interior of blocks and enclosed by buildings. Their small scale and inward location create sheltered and comfortable spaces which provide places of respite in the midst of the activity of the city. Their discreet locations make them places to be discovered; access is often via laneways or through existing buildings.

In some instances, courtyards are privately managed and maintained but provide public access for most of the day.

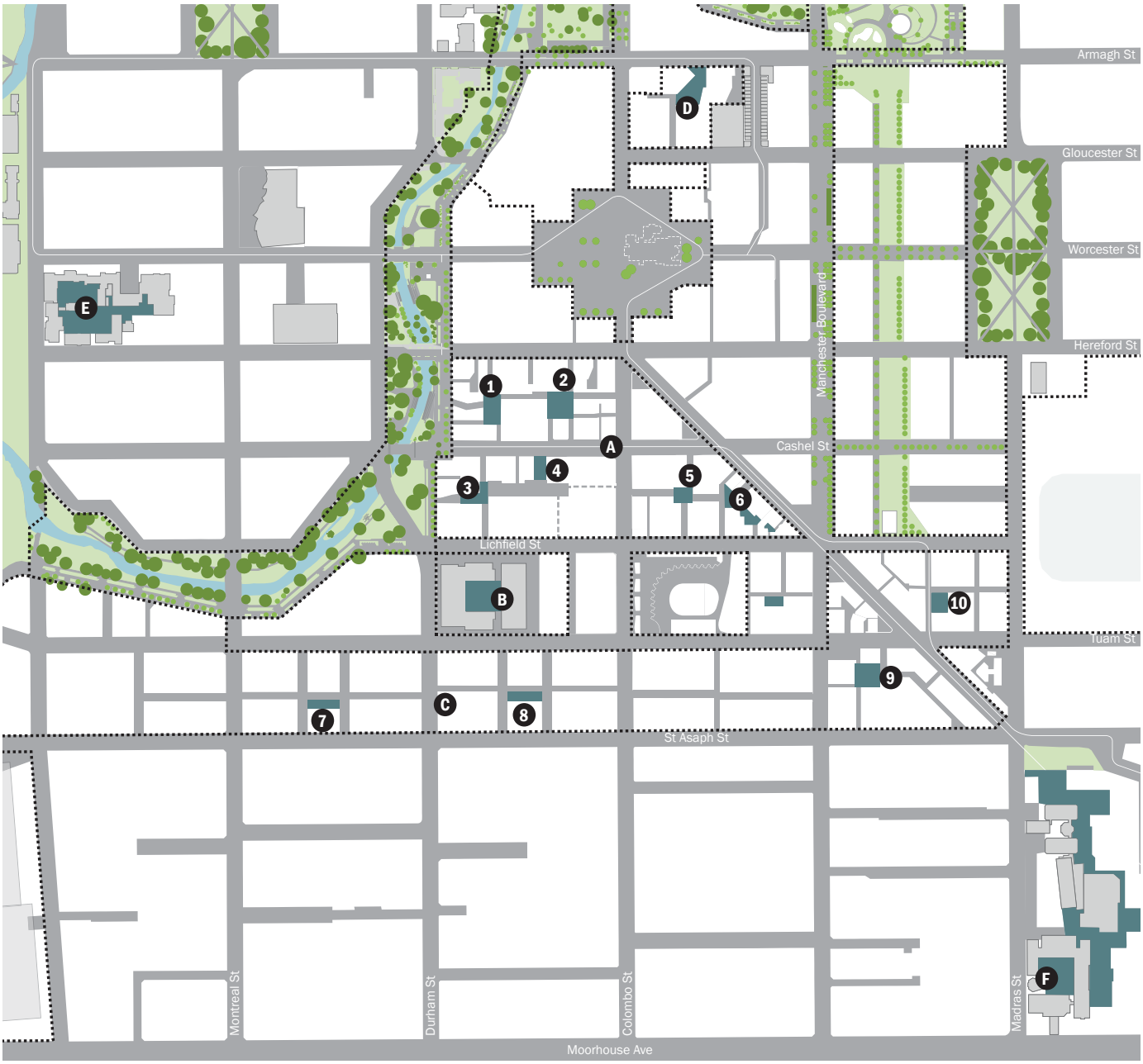
Courtyard spaces offer a wide range of design possibilities. The following are some of the key matters to consider when designing courtyards.

- **Size of space.** Good courtyards are deceptively small.
- **Connections.** Courtyards work best with three or more connections from different origins, preferably activating the corners and edges of the space.
- **Sense of enclosure.** The height and bulk of surrounding buildings, on at least three sides, should be of a scale proportional to the courtyard space.
- **Solar access.** Determined by surrounding buildings, solar access should be allowed at least at key times of the day, in particular to north- and west-facing frontages.
- **Activity and surveillance.** Locating active uses overlooking or fronting the space will ensure courtyards are welcoming and safe places to be.

Creating courtyards of varied and distinct character will contribute to a central city that is interesting to explore. The new anchor projects and uses in the central city should be reflected in the design and character of courtyard spaces.

- The courtyards in the Retail Precinct will support the shopping and hospitality offer of the Precinct by creating contemporary and elegant spaces.
- The courtyards in the South Frame can draw on the industrial tradition of the area and the new uses proposed for it. They offer opportunities for the creative expression of local artists and use of new technologies.
- The courtyards around the Performing Arts Precinct can extend the cultural activities and character of the Precinct into the public realm. Drama, sounds, music and performance are among the themes that can inform their design.
- The courtyard in the Justice and Emergency Services Precinct will provide a civic space for visitors and workers in the Precinct.
- The existing courtyards at the Arts Centre have a well-established role and character that support the architecture and activities in the area.
- The courtyard spaces in the CPIT campus bookend the journey from Cathedral Square along High Street. They can become an exemplar of a 'city campus' that is well integrated into the city's urban fabric. These courtyard spaces can extend the learning and collegiate environment of the lecture and tutorial facilities into the public realm.

Some general guidance on designing courtyards in the central city is included in Christchurch City Council's *Central City Lanes Report – Lanes Design Guide*. The guide can be accessed at: www.ccc.govt.nz/urbandesignguides



Legend

COURTYARDS

A. Retail Precinct

1. The Terrace ·
2. Cashel Square ·
3. South West End ·
4. South Central ·
5. South East End – courtyard 1 ·
6. South East End – courtyard 2 ·

B. Justice and Emergency Services Precinct courtyard +

C. South Frame

7. South courtyard ·
8. Mollett Street courtyard ·
9. Innovation courtyard ·
10. Poplar–Ash courtyard ·

D. Performing Arts Precinct courtyard (indicative) ·

E. Arts Centre courtyards +

F. CPIT campus courtyards +

Note:

+ Existing/under construction

* Existing design to change

· Proposed

Figure 23 *Central Christchurch existing and proposed courtyards*

Plazas

Plaza spaces in the central city are generally associated with significant public or civic buildings. Plazas provide a transition space between the street and the building entrance, reinforcing the civic or public nature of the building.

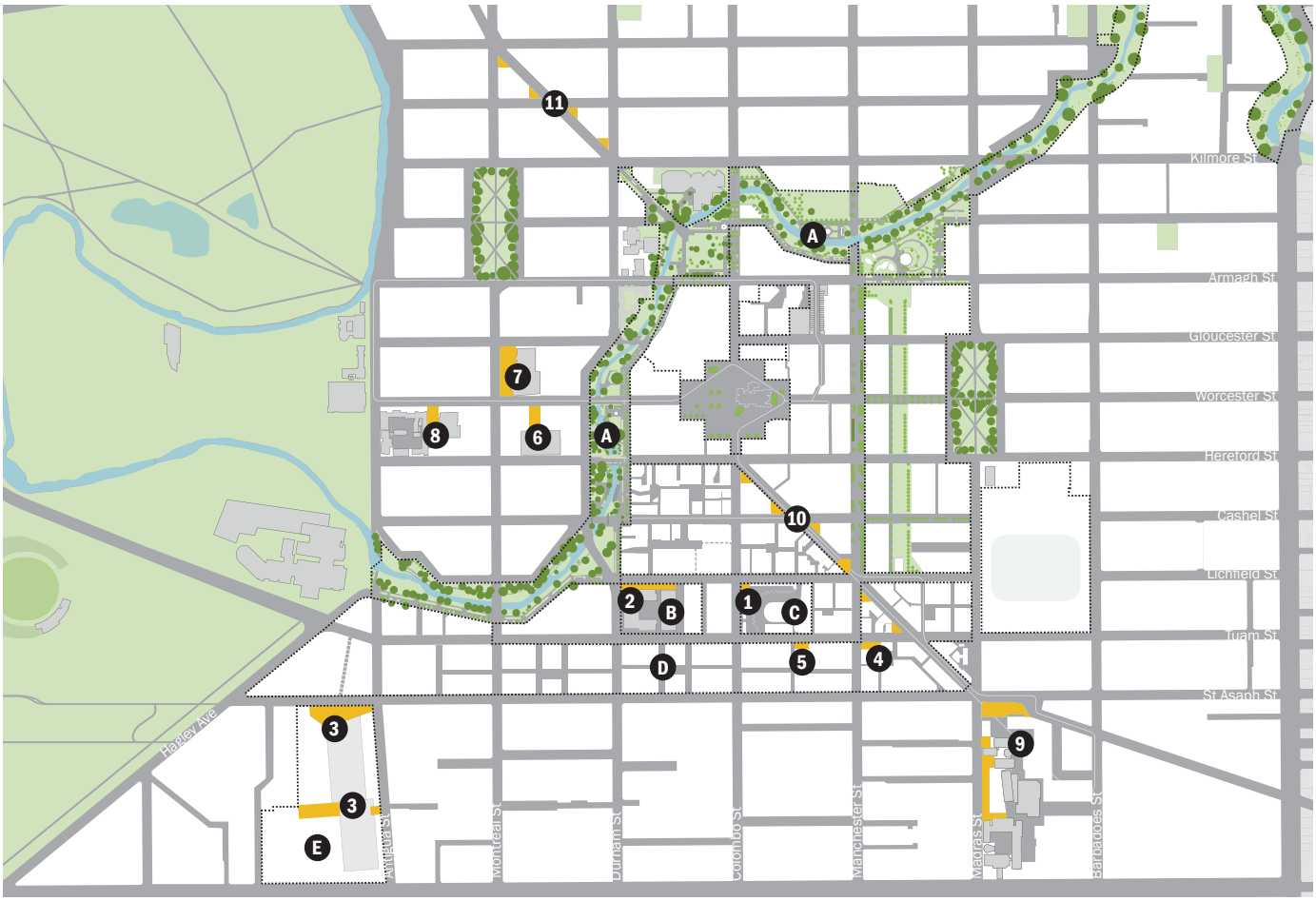
Plazas can add a sense of procession and ceremony to entering an important building. As easily recognisable places, they are popular meeting points. On special occasions, plazas can host events that range from civic functions to political rallies and demonstrations. Plazas often display major public artworks.

Existing and proposed plazas in the central city include the following.

- The existing plaza north of Christchurch City Council Civic Offices and the proposed plaza for the Justice and Emergency Services Precinct both serve as marae ātea where formal welcome ceremonies take place.
- The plaza in front of the Christchurch Art Gallery Te Puna o Waiwhetu provides opportunities for outdoor exhibition space and events.
- The proposed plaza at the corner of Colombo and Lichfield streets will provide the main pedestrian access to the new Bus Interchange.
- There are potential opportunities for new plazas associated with the Metro Sports Facility.

There is a series of small triangular spaces formed where the diagonals of High Street and Victoria Street intersect with the city grid. Although not associated with civic buildings, they are distinctively Christchurch public spaces, providing gardens and small meeting points along these main streets. The triangular plazas complement the retail and hospitality uses of the street and provide a vantage point for appreciation of the acute forms of buildings on adjacent corners.

The triangles have heritage significance and are protected under the Christchurch City (Reserves) Empowering Act 1971. Several of the triangles showcase public artworks such as Nucleus (2006, Phil Price) and Flourpower (2008, Regan Gentry) or items of historical significance such as the Jubilee Clock at the intersection of Victoria and Montreal streets.



Legend

PLAZAS

Proposed

1. Bus Interchange entry plaza
2. Justice and Emergency Services Precinct plaza
3. Metro Sports Facility plazas (indicative)
4. South Frame Innovation plaza
5. South Frame Scoular Park

Existing

6. Christchurch City Council Civic Offices plaza
7. Art Gallery plaza
8. Arts Centre plaza
9. CPIT campus plazas
10. High Street triangular plazas
11. Victoria Street triangular plazas

RELATED ANCHOR PROJECTS

A. Te Papa Ōtākaro/Avon River Precinct
B. Justice and Emergency Services Precinct
C. Bus Interchange
D. South Frame
E. Metro Sports Facility

Figure 24 *Central Christchurch existing and proposed plazas*

Pedestrian-focused streets

One of the changes that the rebuild process will bring to the central city experience is more pedestrian-focused streets.

These streets have a prominent role in creating a more walkable and pedestrian-friendly city Core. This was a feature that Christchurch people asked for through the 'Share an Idea' consultation in 2011 and a key objective of the Recovery Plan.

Pedestrian-focused streets integrate most travel modes, yet they are designed to welcome people on foot. These streets support stationary activities and, on occasion, small events such as temporary markets and displays. For this reason, pedestrian-focused streets are considered part of the gathering places in the central city.

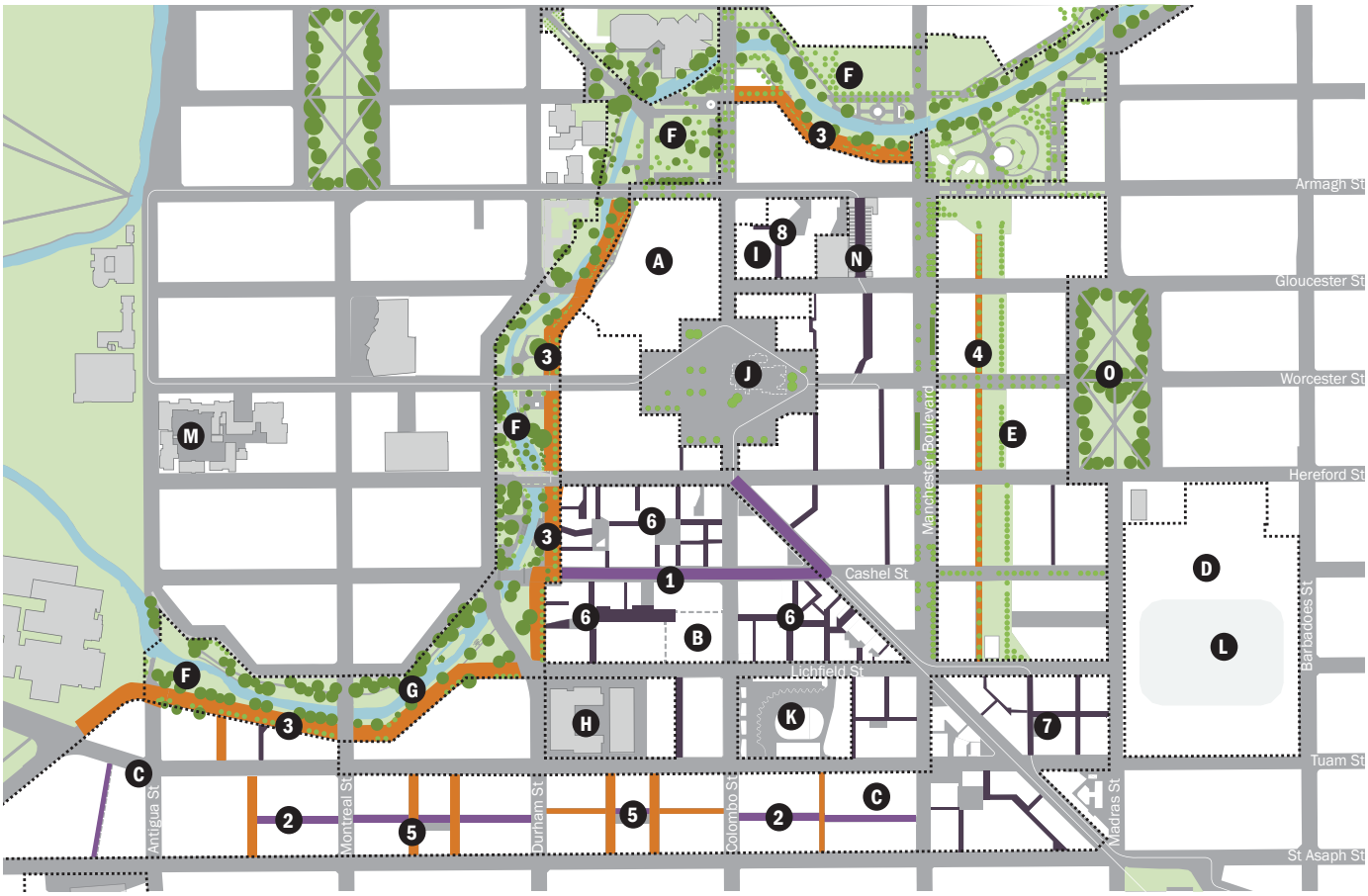
Pedestrian-focused streets in central Christchurch are associated with precincts and other areas where pedestrian activity is central to their vibrancy, character and activity. Table 1 outlines the different types of pedestrian-focused streets in the central city and the key features of each of them.

The pedestrian-focused streets in the central city complement the slow streets in the city Core. These streets cater for the travel modes identified in the central city road use hierarchy, as illustrated in Figure 28 (page 81). Their varied cross-sections and layouts are explained in detail in Chapter 5.

TYPE	KEY FEATURES	TRAVEL MODE					EXAMPLES
		Walk	Cycle	Tram	General traffic	Service vehicle	
PEDESTRIAN PRIORITY STREET	• Continuous surface level from building line to building line • Distinct pavement material or landscape treatments • Vehicular access is only for emergency vehicles and service vehicles, at restricted hours • Cycles are allowed but they don't have dedicated lanes • Average speed 10km/h or less	✓	✓	✓	X	✓*	City Mall and The South Frame Greenway
SHARED STREET	• Continuous surface level from building line to building line • Distinct pavement material or landscape treatments • Cycles are allowed, but they don't have dedicated lanes • Average speed 10km/h or less	✓	✓	✓	✓	✓	The Promenade in Te Papa Ōtākaro/Avon River Precinct and East Frame north–south links
LANE	• Spatial proportion: taller than wide at a minimum ratio of 1:3 • Lanes are open to the sky and the elements • May be used for street trading or outdoor dining on a temporary or permanent basis • May use standard or distinct pavement materials • Vehicular access, if required, is only for local access to car park entries or service vehicles. • Cycles are allowed but they don't have dedicated lanes • Average speed 10km/h or less	✓	✓	✓	✓*	✓*	Lanes in the Retail and Innovation precincts

Table 1 *Pedestrian-focused street types*

✓* Only if required; restricted hours may apply



Legend

PEDESTRIAN PRIORITY STREETS

1. City Mall +
2. The Greenway •

SHARED STREETS

3. Ōtākaro/Avon River Promenade •
4. East Frame links •
5. South Frame links •

LANES

6. Retail Precinct •
7. South Frame Innovation Precinct •
8. Performing Arts Precinct (indicative) •

RELATED ANCHOR PROJECTS •

- A. Convention Centre Precinct
- B. Retail Precinct
- C. South Frame
- D. The Stadium Precinct
- E. East Frame
- F. Te Papa Ōtākaro/Avon River Precinct
- G. Earthquake Memorial
- H. Justice and Emergency Services Precinct
- I. Performing Arts Precinct

KEY RELATED DESTINATIONS

- J. Cathedral Square *
- K. Bus Interchange •
- L. The Stadium Precinct •
- M. Arts Centre +
- N. New Regent Street +
- O. Latimer Square +

Note:

+ Existing

* Existing design to change

• Proposed

Figure 25 *Central Christchurch existing and proposed pedestrian-focused streets*

Pedestrian-focused streets
Pedestrian priority and shared streets

Ōtākaro/Avon River Promenade

The Promenade is a key component of the design for Te Papa Ōtākaro/Avon River Precinct. It runs primarily on the existing alignment of Oxford Terrace between Christchurch Hospital, southwest of the Core, and Manchester Street, northeast of the Core.

The Promenade aims to redefine the interface between the river and the city. This new shared street will provide an urban edge to the more natural character of the river.

The Promenade corridor provides an interface between the river and key anchor projects including the Health Precinct in the South Frame, the Retail and Convention Centre precincts and the East Frame residential precinct.

East Frame residential precinct – shared streets

As part of the new public spaces in the East Frame, a group of shared streets to the west boundary of the Central Park will be delivered. These north–south shared streets will provide an important pedestrian and cycle connection between Te Papa Ōtākaro/Avon River Precinct and the south of the central city. They will also enable local vehicular access to the new development parcels to the west of the park.

City Mall

City Mall is the main pedestrian shopping street in the central city and the public spine of the new Retail Precinct. It runs along Cashel Street from the Bridge of Remembrance in the west to the High Street intersection in the east. It also includes the section of High Street between Colombo and Cashel streets.

The existing tram route, established trees, planters and sitting areas contribute to a distinctive and popular destination for locals and tourists alike.

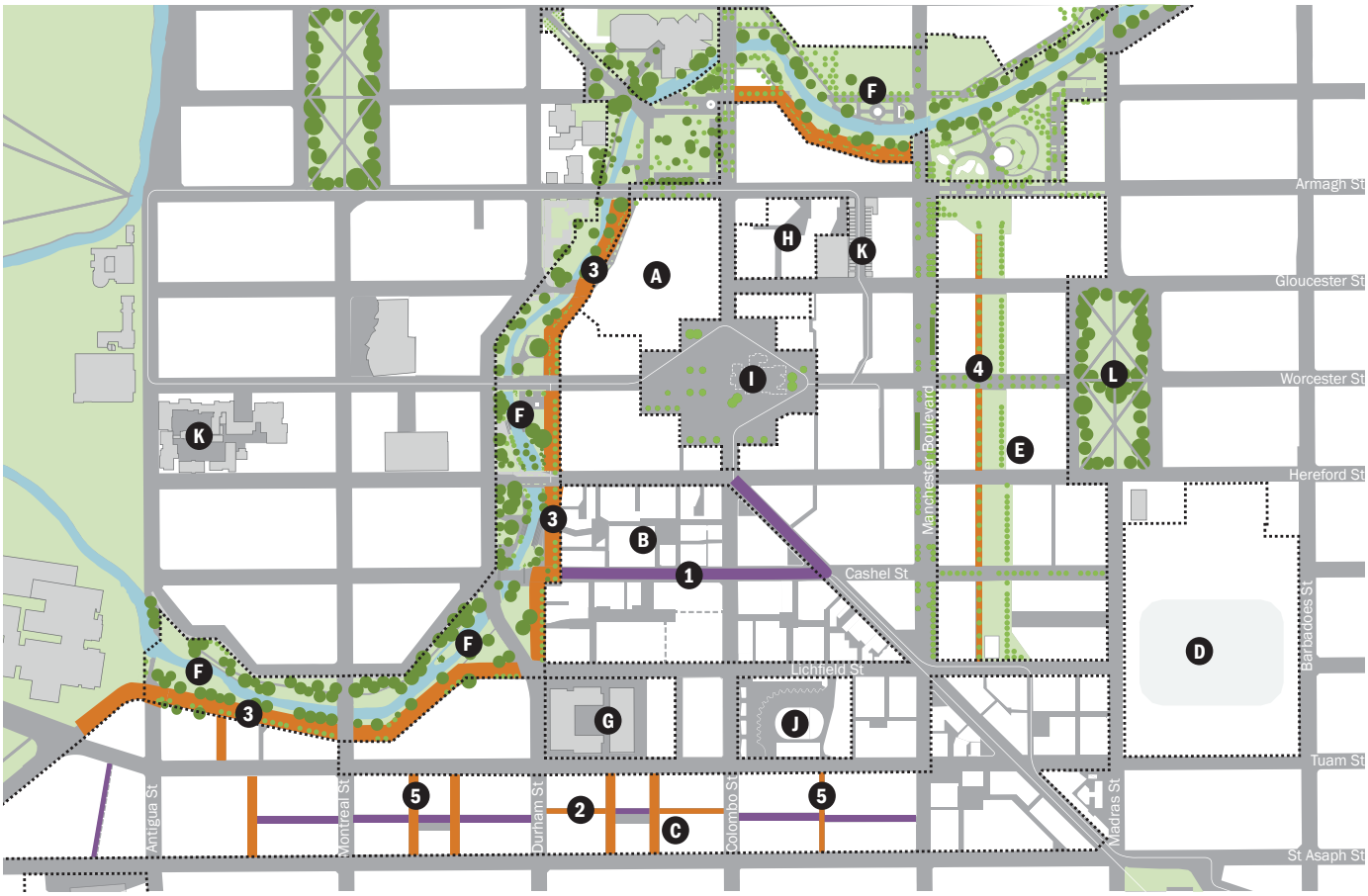
City Mall will become the main connector for the network of lanes and courtyards emerging within the Retail Precinct.

South Frame links

The South Frame anchor project will deliver a new network of public spaces within the project area, which include shared and pedestrian priority streets, as follows.

- **The Greenway** will provide a pedestrian priority street between the Innovation and Health precincts. The Greenway will be characterised by generous and innovative landscape treatments and an intimate scale.
- **North–south links.** A number of shared streets between St Asaph and Tuam streets will be created to enhance the urban amenity, permeability and connectivity of the South Frame.

Further information on these types of streets is provided in Chapter 6.



Legend

PEDESTRIAN PRIORITY STREETS

1. City Mall +
2. The Greenway ·

SHARED STREETS

3. Ōtākaro/Avon River Promenade ·
4. East Frame links ·
5. South Frame links ·

RELATED ANCHOR PROJECTS ·

- A. Convention Centre Precinct
- B. Retail Precinct
- C. South Frame
- D. The Stadium Precinct
- E. East Frame Residential Precinct
- F. Te Papa Ōtākaro/Avon River Precinct
- G. Justice and Emergency Services Precinct
- H. Performing Arts Precinct

KEY RELATED DESTINATIONS

- I. Cathedral Square *
- J. Bus Interchange ·
- K. New Regent Street +
- L. Latimer Square +

Note:

+ Existing

* Existing design to change

· Proposed

Figure 26 *Central Christchurch existing and proposed pedestrian priority and shared streets*

Pedestrian-focused streets

Lanes

The lanes in the central city were originally created to service many of Christchurch's early warehouses and factories. Over time their role and character have evolved to form a network of intimate and connected spaces with an eclectic atmosphere.

The central city lanes have become a special element of the city's pedestrian network, while many still provide service access to buildings.

The laneways contribute to the vibrancy, interest and distinctiveness of the central city in varied ways, such as by:

- increasing walkability and connectivity by providing mid-block linkages and pedestrian-friendly environments
- introducing a sense of discovery to the city through its discreet locations, intimate scale and varied character
- providing opportunities to express the local character and creativity through bespoke design.

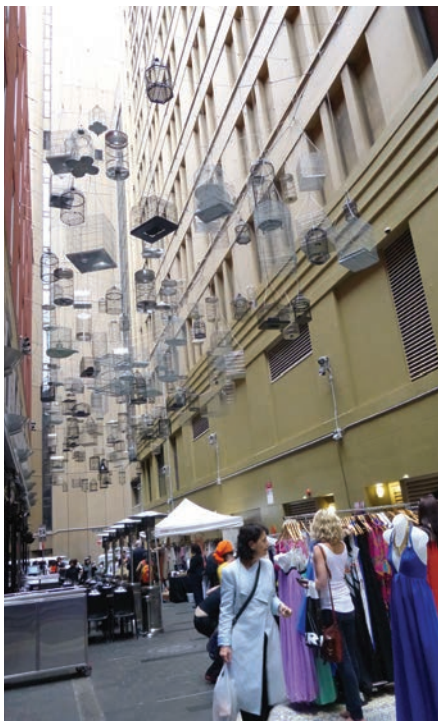
They also provide settings for affordable lease spaces and small tenancies for emerging local businesses and creative enterprises.

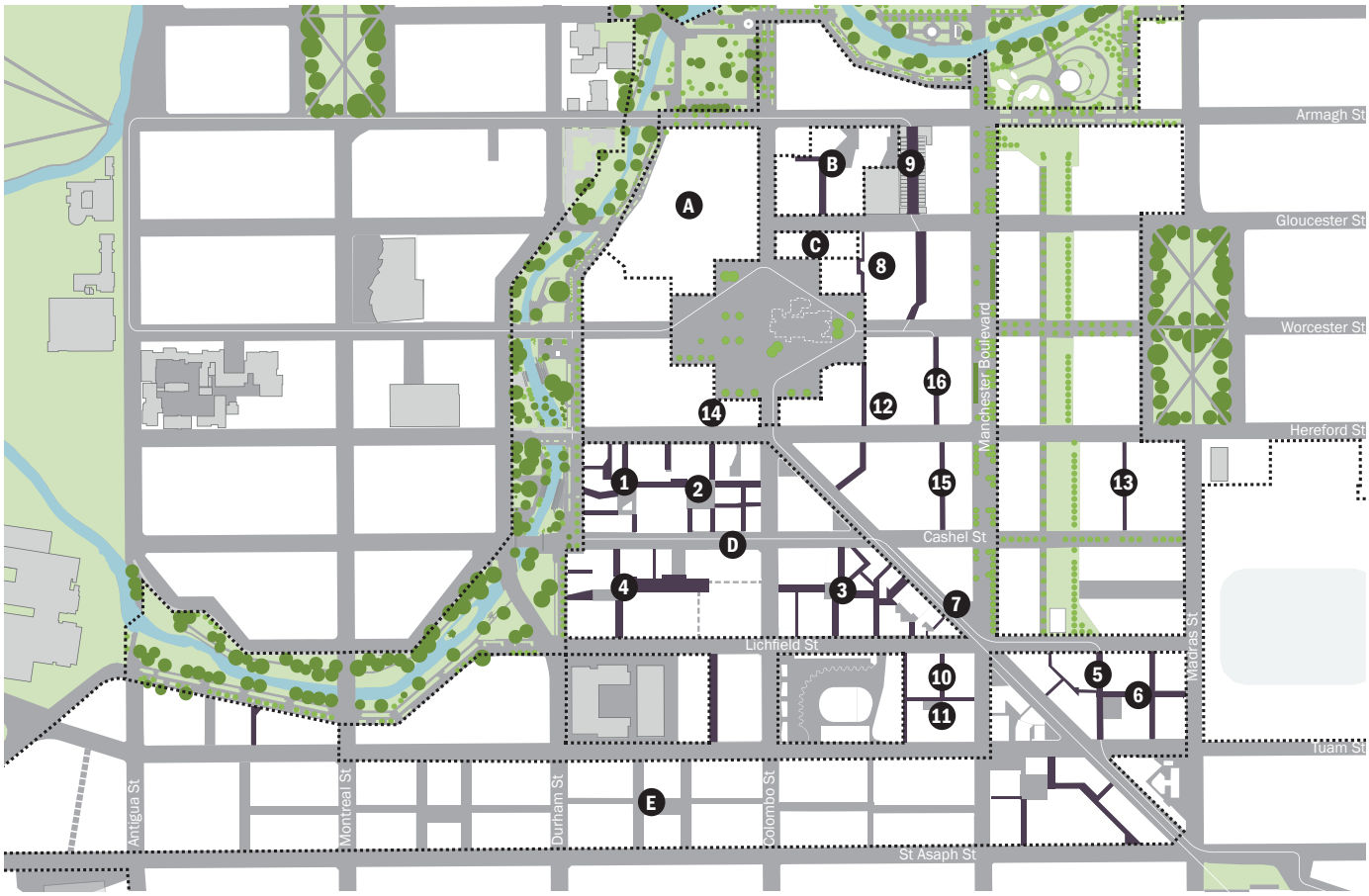
Lanes have specific spatial characteristics: they are always taller than they are wide, which provides a special intimacy and sense of enclosure to the space. This narrowness, however, is balanced by the direct access they give to the elements and views to the sky.

As a result of the recovery process, the network of lanes in the central city is being redefined. New opportunities for laneways in the new city precincts are being identified, including:

- the Retail Precinct lanes
- the Innovation Precinct lanes in the South Frame
- potential new lanes within the Performing Arts and Convention Centre precincts.

The *Central City Lanes Report – Lanes Design Guide*, commissioned by Christchurch City Council prior to the earthquakes, provides valuable **general guidance** for the design of lanes in the central city. As a result of earthquake damage, some of the information related to specific locations or precincts is no longer applicable. Chapter 6 of this document provides guidance and recommendations on the character and design of emerging lanes that are part of the anchor projects. The guidance should be read in conjunction with the general guidance developed in the *Central City Lanes Report*, which can be accessed at: www.ccc.govt.nz/urbandesignguides





Legend

LANES

Retail Precinct

1. The Terrace ·
2. Cashel Square ·
3. South East End ·
4. South West End ·

South Frame

5. Innovation Precinct – Poplar Lane *
6. Innovation Precinct – Ash Street *

Other lanes

7. Stranges Lane +
8. Press Lane +
9. New Regent Street +
10. His Lordships Lane *
11. Struthers Lane *
12. Westpac Lane +
13. Woolsack Lane *
14. Strand Lane +
15. Tattersalls Lane +
16. Tramway Lane +

RELATED ANCHOR PROJECTS ·

A. Convention Centre Precinct
B. Performing Arts Precinct
C. Central Library
D. Retail Precinct
E. South Frame

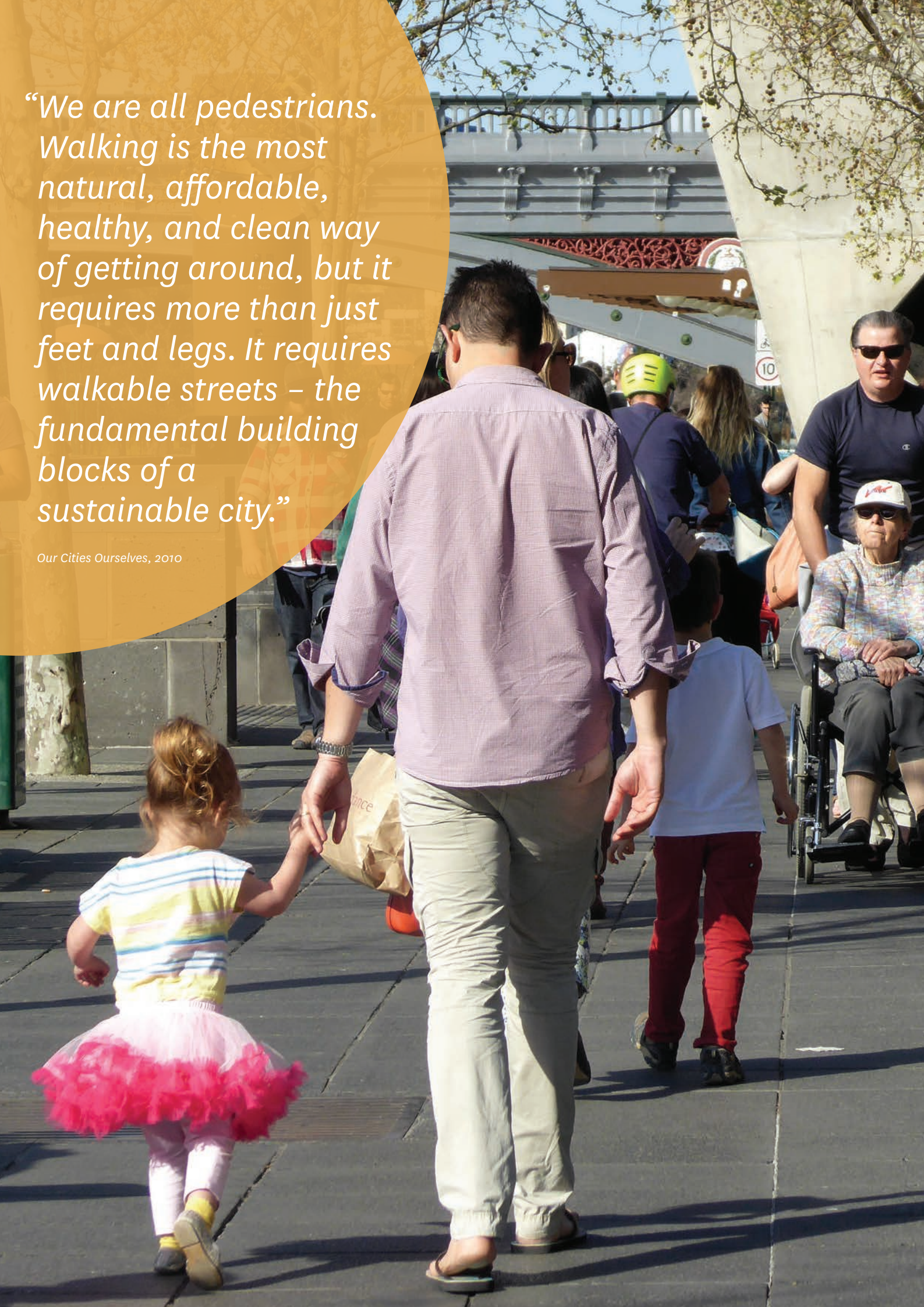
Note:

+ Existing

* Existing design to change

· Proposed

Figure 27 *Central Christchurch existing and proposed lanes*



"We are all pedestrians. Walking is the most natural, affordable, healthy, and clean way of getting around, but it requires more than just feet and legs. It requires walkable streets – the fundamental building blocks of a sustainable city."

Our Cities Ourselves, 2010

05

STREETS
Ngā Huanui

Central city road use hierarchy

***An Accessible City* is the transport chapter of the Christchurch Central Recovery Plan (Recovery Plan). Accessible City considers how the different modes of travel should be distributed in the street network to support the economic, social and environmental recovery of the central city.**

The Accessible City central city road use hierarchy illustrates the priority for the various modes of travel across the central city street network and how each mode relates to the others. This Streets & Spaces Design Guide provides the backbone to the structure of the street network in the central city and informs all design decisions about the functionality of the streets.

The way this Design Guide informs the design of the central city street network is illustrated on the following pages.

A brief outline of Accessible City is provided on page 34. For detailed information, visit:
http://ccdu.govt.nz/the-plan

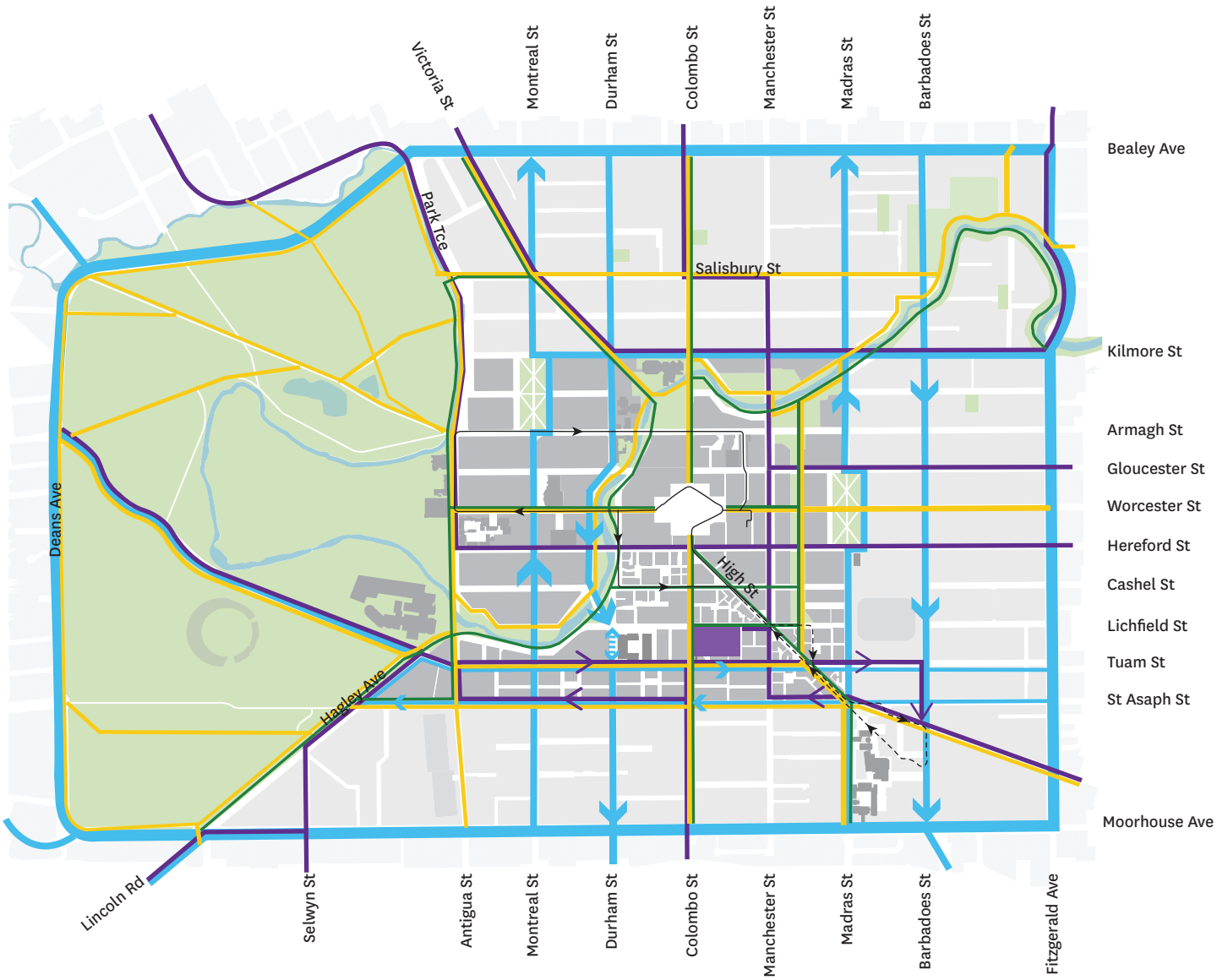


Figure 28 *Accessible City's central city road use hierarchy*

Sharing the street

The street network is the largest component of the entire public realm network in the central city.

Streets carry the lifeblood of the city each day, catering for people using different modes of transport including walking, cycling, public transport and private and service vehicles. These travel modes have different space requirements for their operation, as illustrated in Figure 29. With limited space between buildings, the space within the street needs to be shared efficiently. How each street is used in the central city relates to their specific context and the larger network for navigating the city, as set out in Accessible City's central city road use hierarchy (Figure 28).

While streets are designed to ensure effective and efficient mobility for people using different transport modes, they should also be places where people can enjoy and absorb the city. Streets are the welcome mat for local business, the outdoor dining spot for local cafés and an opportunity to connect with nature and better manage our water. Sharing the street differently by promoting and supporting public transport, walking and cycling will also contribute to minimising greenhouse emissions and clearing our air.

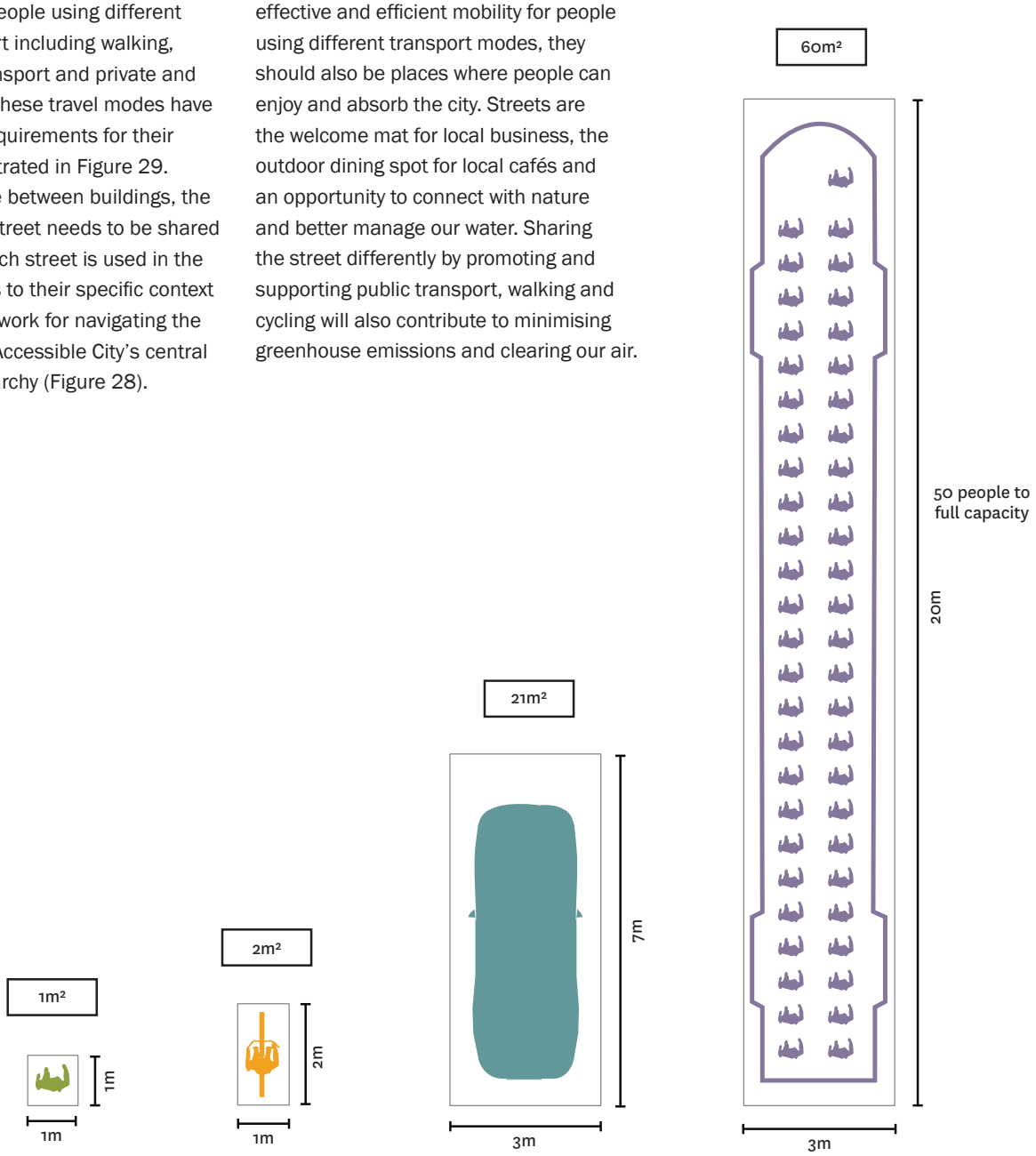


Figure 29 *Spatial area distribution using different modes of transport – ONE PERSON*

484 PEOPLE

14 cars x 4 lanes = 56 cars
56 x 1.5 people per car = 84 people
400 people on footpath [max.capacity]

734 PEOPLE

14 cars x.1.5 people per car (21)
9 parked cars x 1.5 people per car (13.5)
50 people per bus (150)
150 people on cycles
400 people on footpaths

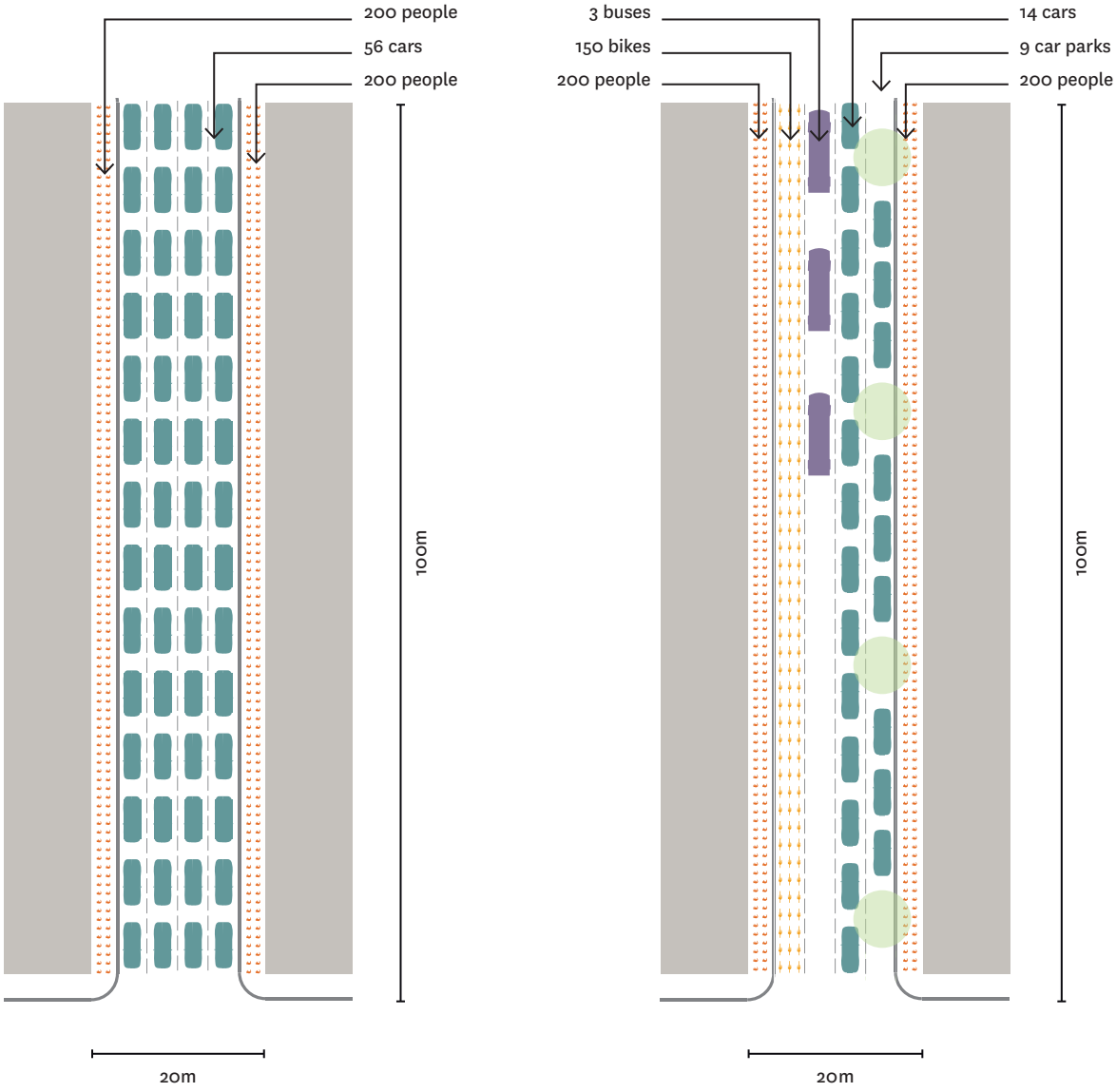


Figure 30 *Spatial area distribution using different modes of transport – ONE STREET, maximum capacity*

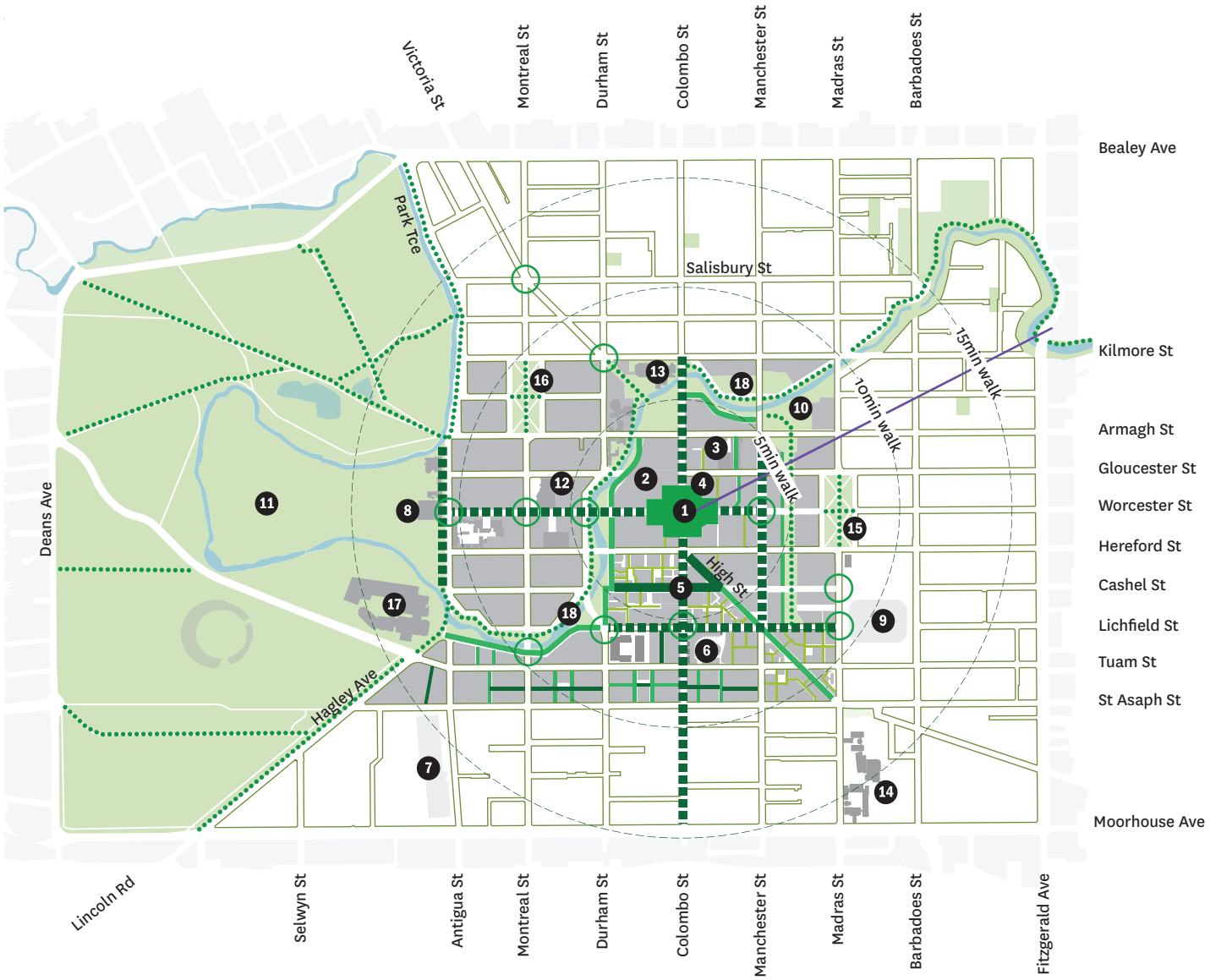
Walking

Attracting more people to work, live and recreate in the central city is essential for the successful recovery of central Christchurch.

A key factor in attracting more people is providing the conditions for a more walkable city centre, accessible by everyone.

Most of the existing and proposed amenities and facilities in the central city are generally located within five to ten minutes' walk within the inner zone. Initiatives to make the most of this convenience and improve the quality of the walking network include:

- reducing vehicular speeds in the inner zone and other designated low-speed streets
- creating a varied range of walking experiences and routes with good access to the river and open spaces
- creating high-quality journeys, in particular when linking key destinations
- introducing more greenery in the street network
- increasing the effective width of standard footpaths where possible, by relocating street elements and trees outside the footpath
- providing widened footpaths along key routes and activity corridors such as retail areas
- providing a range of seating opportunities for people to stop, rest or socialise.



Legend

WALKING

- Pedestrian priority streets
- Wide footpaths
- Park walkway
- Shared street
- Lanes
- Standard footpath
- Key pedestrian crossings
- Inner zone (maximum 30 km/h)

KEY DESTINATIONS

1. Cathedral Square
2. Convention Centre Precinct
3. Performing Arts Precinct
4. Central Library
5. Retail Precinct
6. Bus Interchange
7. Metro Sports Facility
8. Canterbury Museum
9. Stadium Precinct
10. Margaret Mahy Family Playground
11. Hagley Park and Botanic Gardens
12. Art Gallery
13. Town Hall
14. CPIT campus
15. Latimer Square
16. Cramner Square
17. Christchurch Hospital
18. Te Papa Ōtākaro/Avon River Precinct

Figure 31 *Walking network*

Cycling

Increased cycling in the central city is at the core of the travelling mode shift required to create a city that is easy and enjoyable to move around and where congestion is managed.

Improved cycling facilities on a number of key streets are a feature of the central city public realm network, offering a range of options for different levels of confidence.

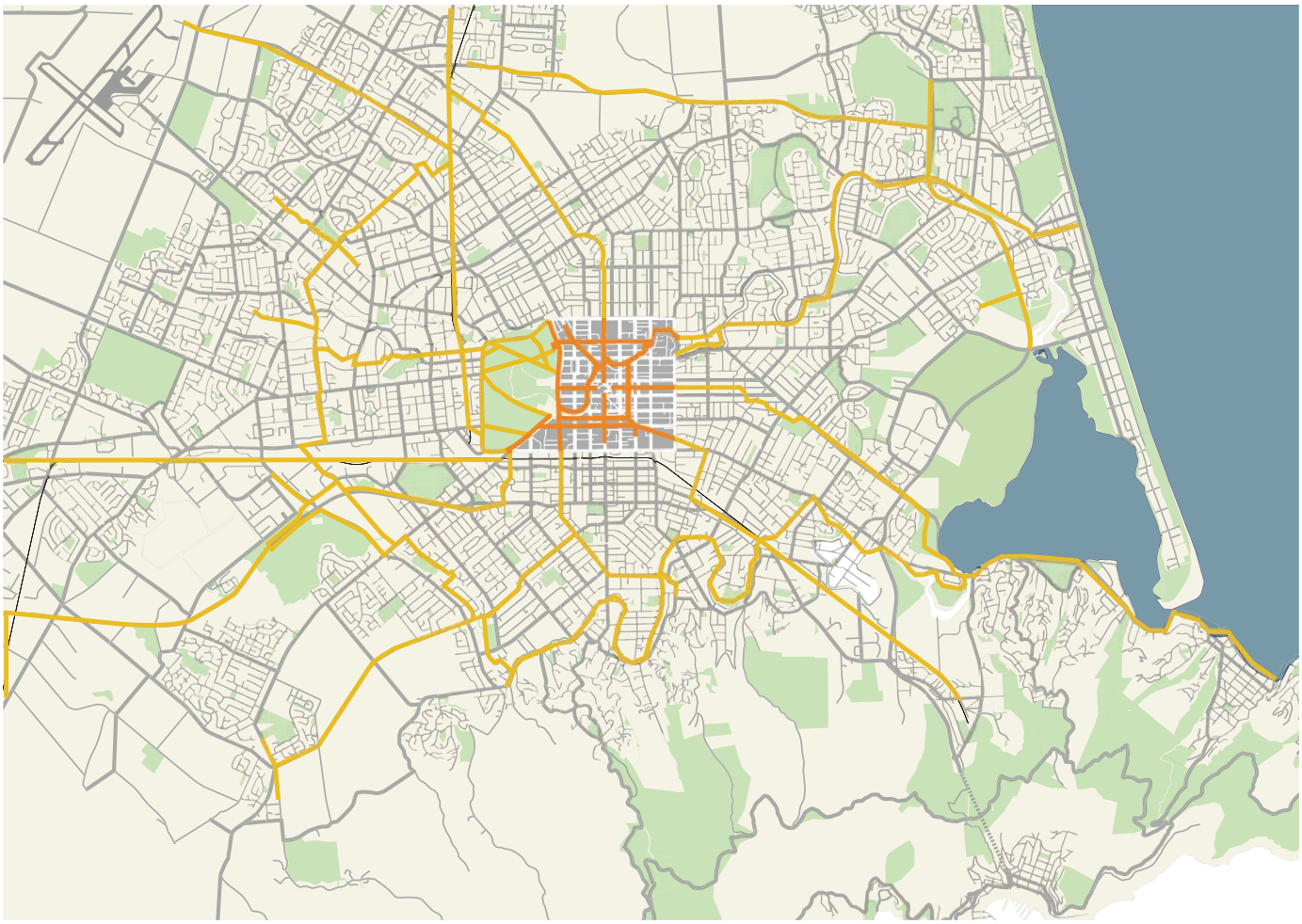
The streets identified in Accessible City as key cycle routes provide continuity to the Major Cycleways network envisaged by Christchurch City Council's Christchurch Major Cycleways programme (see Figure 32). This programme seeks to:

- establish a high-quality cycle network for the city, providing safe and attractive links to popular destinations and key activity centres
- reinforce the city's cycle status
- encourage more people to take up cycling.

The Major Cycleways routes aim to cater for both adults and children (10 years and over), and generally people who are curious about cycling but are afraid to ride or ride very infrequently.

Accessible City sets out to deliver matching facilities within the central city wherever possible.

For detailed information on the Major Cycleways Programme, visit: www.ccc.govt.nz/cityleisure/projectstoimprovechristchurch/transport/cycleways/index.aspx



Legend

- Key cycleways in the central city
- Major cycleways outside the central city

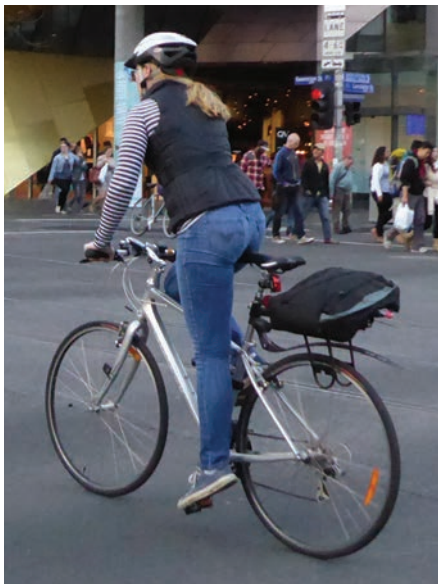
Figure 32 *Proposed cycleways network for greater Christchurch and connections with central city's key cycleways*

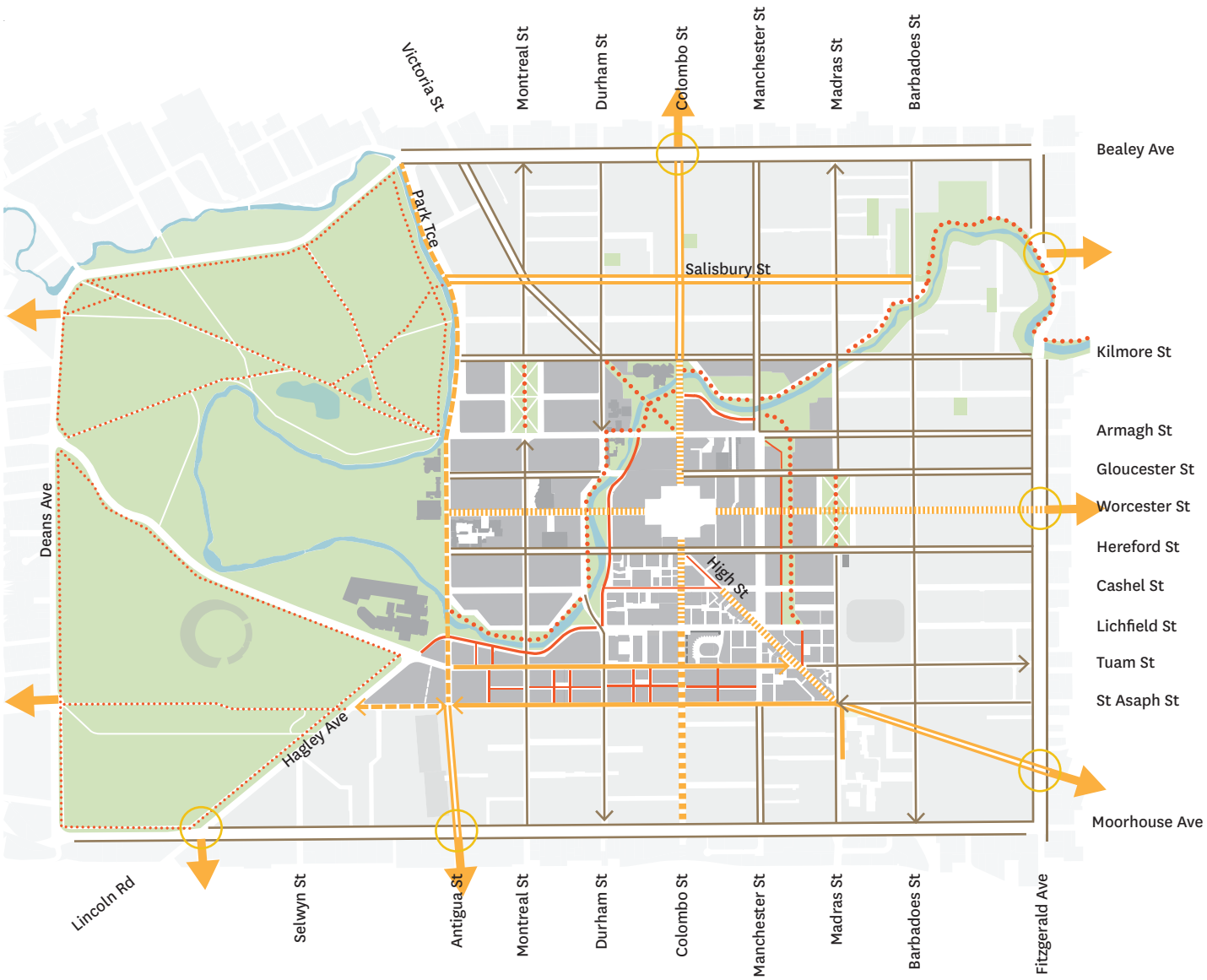
A key aspect of integration is designing safe cycle crossings at entry points to the central city across the avenues.

Cycling

The proposed cycle network in the central city includes:

- continuity with the Major Cycleways routes planned outside the central city
- separated bicycle facilities on most key routes identified in Accessible City where streets are not otherwise slow streets
- shared routes in the slow Core, where key streets are designed as an environment conducive to sharing street space and cycle separation is less important
- on-road cycle lanes wherever possible elsewhere
- intersection treatments at key locations
- on-street bicycle parking facilities at key locations. Specific locations will be determined as part of the detailed streetscape design for each street. Provision of additional public cycling facilities is being investigated in the Christchurch Central Parking Plan
- encouraging the incremental provision of supporting facilities such as shared schemes.





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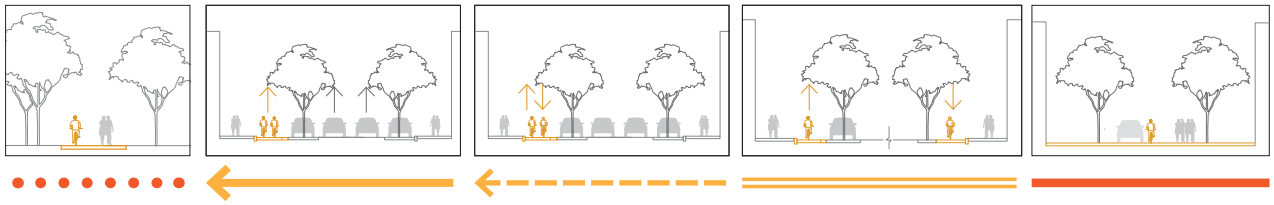


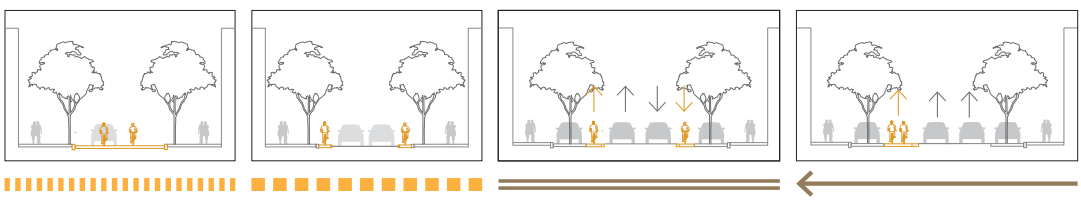
Shared path (pedestrian and cycles)

Separated cycleway/ one-way street

Separated bidirectional cycleway

Separated cycleway/ two-way street

Pedestrian priority and shared streets (max. 10km/h)



Slow street

Separated cycleway/ Copenhagen style

On-road cycle lane/ two-way street

On-road cycle lane/ one-way street

Connections to Major Cycleways network

Key intersection

Figure 33 *Cycle network*

Public transport

Increased bus patronage to access the central city is another key shift in travelling patterns required for a more efficient, sustainable and productive central city.

To support this shift while managing congestion, the number of bus routes entering the city will be reduced while the frequency of buses on those routes will increase. There will be a network of core bus routes coming through the central city from connected suburban interchanges, which is part of Christchurch's city-wide operational plan for bus services.

In addition:

- the bus routes will generally travel around the edge of the Core. Main routes will be provided at expected peak frequencies of six buses per hour and other routes at four buses per hour
- the network will be supported by the new Bus Interchange (an anchor project of the Recovery Plan) on the city block bounded by Lichfield, Colombo and Tuam streets. The Interchange will be supported by high-quality 'super stops' on Manchester Street and on the west end of Tuam Street, near the hospital
- intercity services will operate on street from the same location as the Bus Interchange, sharing its passenger facilities
- allowance of design clearance for double-decker buses is required on all bus routes
- bus pre-emption of traffic signals will be implemented from major super stops and on major bus routes
- opportunities for smart technologies to support the operation of the network are being investigated
- shuttle services linking the different routes within the Core and key destinations will be investigated once the main network is established and the reconstruction of the central city and its anchor projects progresses.

The wider Christchurch bus network is illustrated at www.metroinfo.co.nz/map

Figure 34 *Public transport network*

Trams

Trams provide the central city streets with a special character and an enjoyable way to reach key destinations.

The Christchurch City Tram links major central city destinations including Hagley Park, Cathedral Square, the Canterbury Museum, the Art Gallery and the Retail, Convention Centre and Innovation precincts.

The re-establishment of the tram infrastructure and operation has been planned in stages.

The original loop along New Regent Street, Cathedral Square, Worcester Street, Rolleston Avenue and Armagh Street is complete.

Stage 1 corresponds to the extension of the loop to the Retail Precinct. This stage has been completed and is now in full operation.

Stage 2 corresponds to the extension of the route along High Street to the CPIT campus. Implementation of this stage is subject to further planning and funding approvals.

The tram infrastructure and fittings such as poles and stops contribute to the character of each stage. The loop has a heritage character with many infrastructure elements dating from 1905. Stages 1 and 2 will have a contemporary character and complement the many new buildings along the route.

Legend

- Tram route loop and stage 1
- Tram route stage 2
- Existing tram stop
- Proposed tram stop*
- Inner zone (maximum 30 km/h)

* Subject to approval

KEY DESTINATIONS

1. Cathedral Square
2. Central Library
3. Art Gallery
4. Arts Centre
5. Canterbury Museum
6. Botanic Gardens
7. Hagley Park
8. Cranmer Square
9. Victoria Square
10. Convention Centre Precinct
11. Performing Arts Precinct
12. New Regent Street
13. Te Papa Ōtākaro/Avon River Precinct
14. Retail Precinct
15. Innovation Precinct
16. CPIT campus

Figure 35 *Tram network*

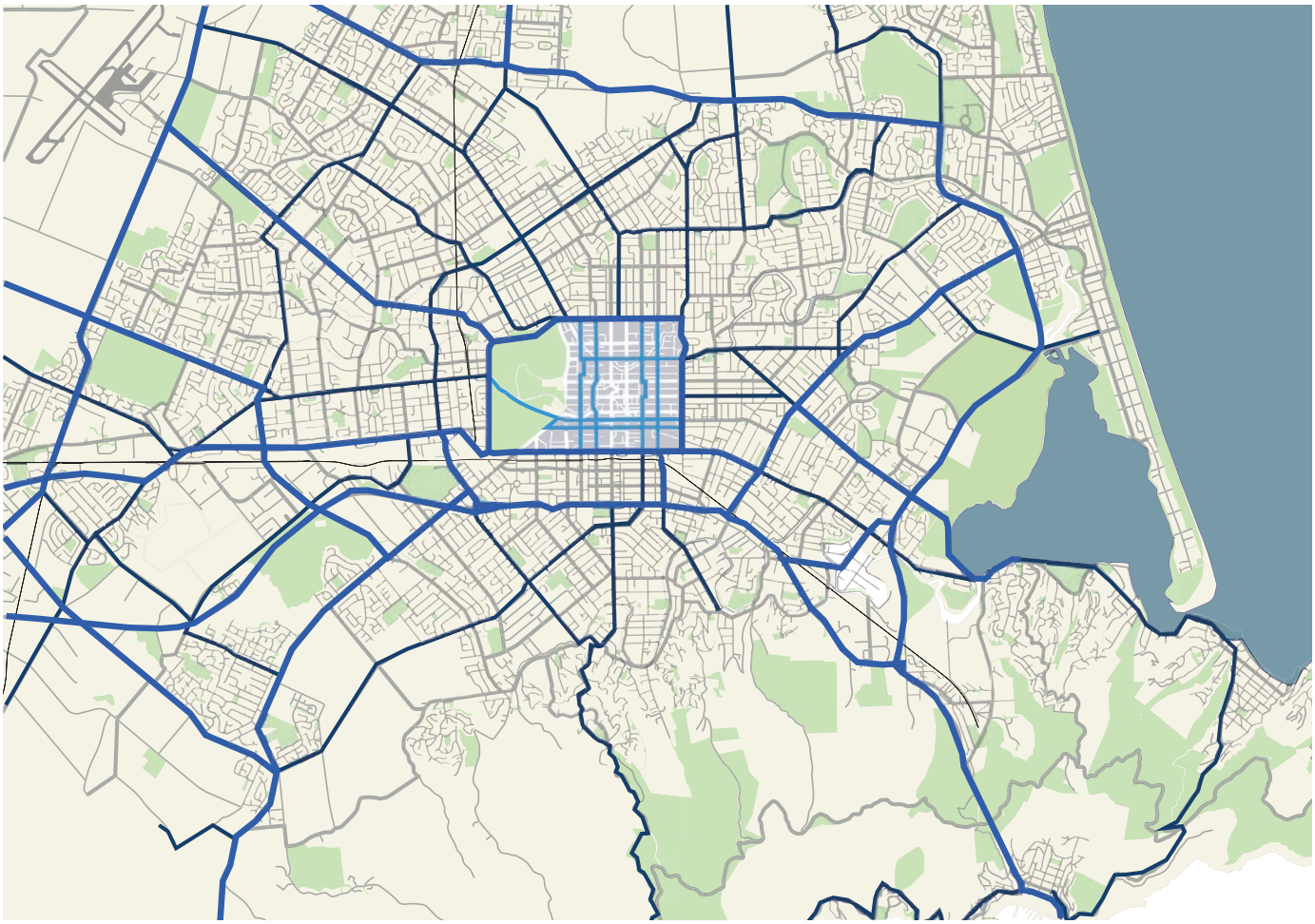
General traffic

The streets identified in Accessible City as preferred vehicle routes are called *main distributor streets*.

These streets are connected to the wider network of arterial roads through the avenues that surround the central city.

The main objectives for vehicle movements in the central city are to:

- reduce conflicts with other modes of travel prioritised in specific streets
- support increasing activity and accessibility by maintaining efficient vehicle access to the central city on key routes for general traffic, servicing and emergency vehicles.



Legend

- Main distributor streets in the central city
- Major arterial roads outside the central city
- Minor arterial roads outside the central city

Figure 36 *Christchurch's major arterial road network*

General traffic

Achieving the objectives for the general traffic network involves:

- redirecting traffic without a destination in the central city to travel around the avenues (Bealey, Fitzgerald, Moorhouse, Deans and Harper) and therefore discouraging through movements. This involves progressively changing some key intersections around the perimeter of the central city
- using the avenues as a ring road for radial access to the city centre
- encouraging vehicles travelling into the central city and the Core to use main distributor streets that lead off the avenues and then to use local distributors with direct access into the Core and key parking facilities
- decreasing speed limits to no more than 30km/h in the inner zone. This speed reduction will support safer streets and a pedestrian- and cycle-friendly central city
- encouraging freight, as far as practicable, to use the avenues for cross-city movements
- encouraging delivery and service vehicles to use main distributor streets for accessing the Core (prioritised outside peak and inter-peak periods) and local streets or lanes to access buildings
- coordinating traffic signals to enable reliable travel times and speed management.

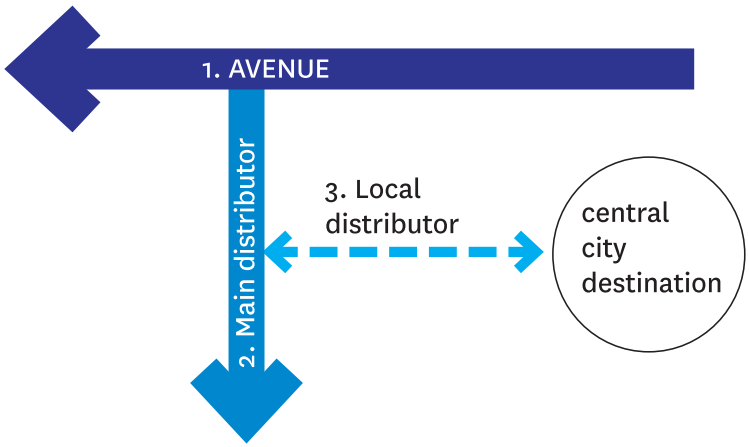


Figure 37 *Design of traffic network in and around the central city*

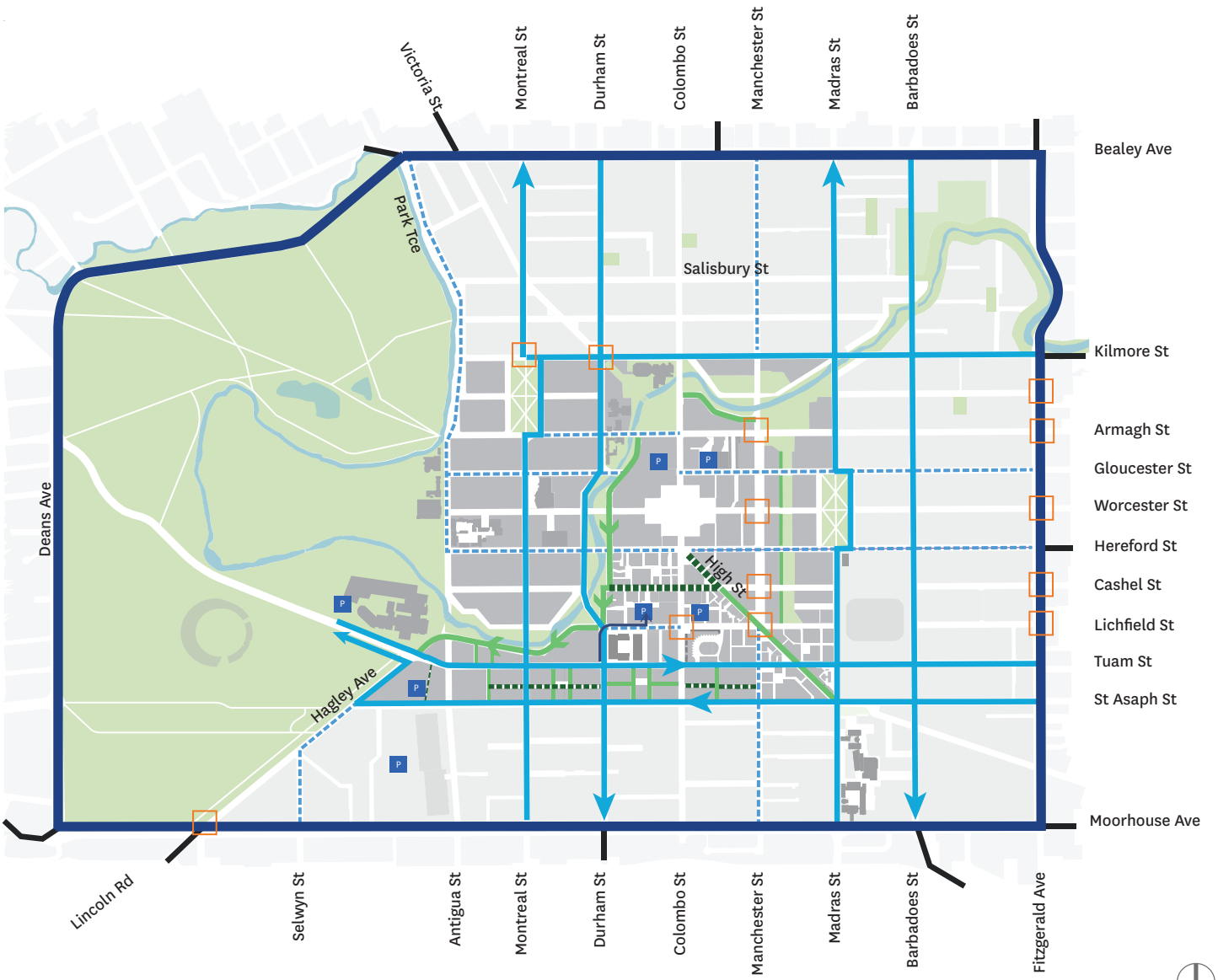


Figure 38 *Central city general traffic network*

Over-dimensional routes

The over-dimensional routes plan identifies streets in and around the central city that can accommodate large loads, such as large prefabricated construction materials or construction machinery.

The over-dimensional routes should be able to accommodate loads that fit within an envelope of 10 metres wide and 6 metres high.

Given the infrequency of this type of load, the over-dimensional envelope can project outside the carriageway and may straddle low street furniture and central medians. However, a clear corridor is required, as illustrated in Figure 40. This requirement has some implications for the selection of street furniture and tree locations and species.

Prior to the Canterbury earthquakes some of the over-dimensional routes used the central city street network on cross-city routes to reach destinations elsewhere. These routes have been reviewed and rationalised to align with Accessible City objectives of redirecting traffic without a destination in the central city and discouraging traffic movements through the city.

Figure 39 illustrates the streets that remain as over-dimensional routes to travel around the central city or to access the city centre from the avenues, mainly from the north and south.

The criteria for selecting these streets as over-dimensional routes included that they:

- coincide, in most cases, with the main distributor streets and the surrounding avenues
- can also take overweight vehicles.

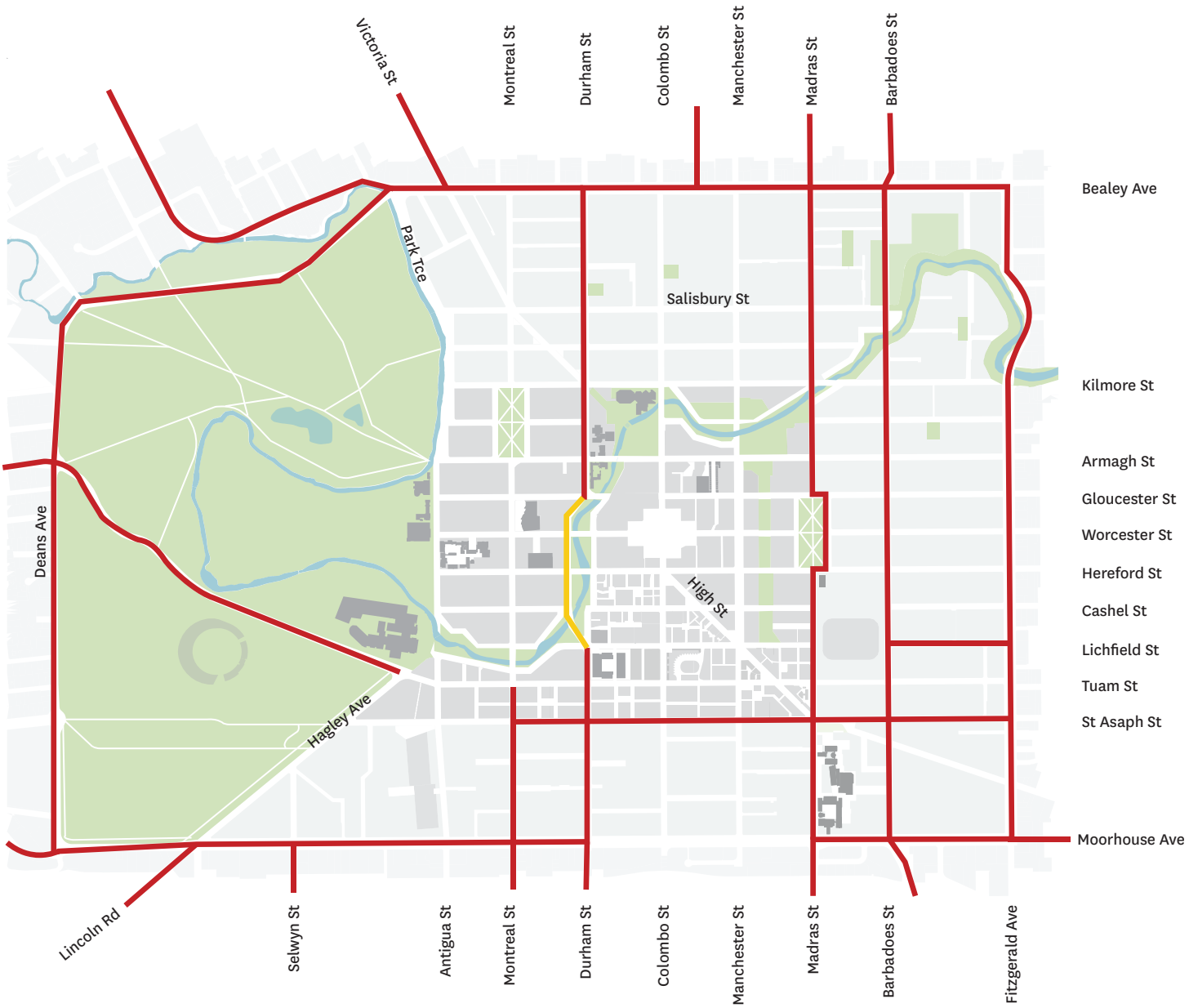


Figure 39 *Central city over-dimensional routes*

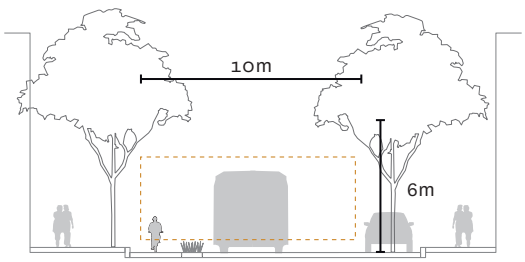


Figure 40 *Over-dimensional envelope*

Street trees

Christchurch has established, and much cherished and admired, tree-lined avenues. Most existing trees are located within Hagley Park or on the banks of Ōtākaro/Avon River, in wide central medians and along some of the street edges.

The reconstruction of the central city provides a one-off opportunity to extend this key feature beyond the city's avenues and through open spaces in a consistent manner.

In addition to providing the economic, environmental and social benefits outlined in Chapter 2, trees:

- contribute to the character of streets and public spaces
- bring formality, structure and a sense of 'procession' to the city
- provide strong, visual cues that orientate people throughout the city
- create an attractive, comfortable and changing environment for people
- increase real estate values and encourage investment
- mitigate the effects of traffic.

Trees are a key element for delivering a 'greener city'. They are integral to the vision, themes, design principles and strategic approach of the Streets & Spaces Design Guide, as outlined in Chapters 1 and 2.

Figure 41 shows the tree species selected for the central city street network. These species have been selected to strengthen the hierarchy and purpose of each street.

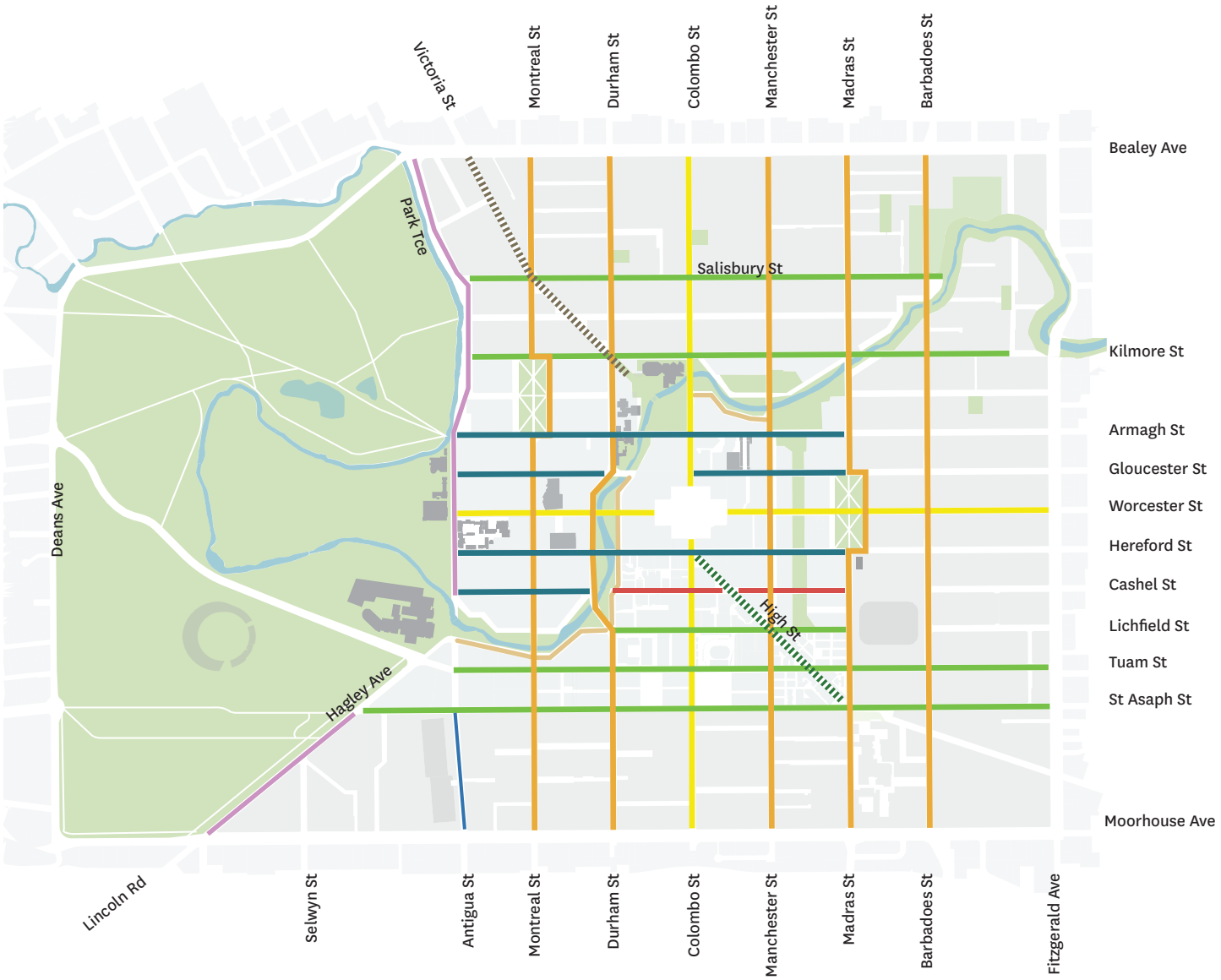
The selection is consistent with the objectives and criteria of the Draft Christchurch City Council Tree Policy. In addition, these species generally are:

- frost and wind hardy
- tolerant of city soils and pollution
- drought tolerant
- of high visual impact, with attractive foliage and/or bark
- fast growing
- not prone to structural issues, such as falling branches or fragile trunks
- effective at mitigating transport-related greenhouse gases and urban heating.

Establishment of tree species is dependent on site-specific water table depth and therefore species may vary if conditions are inadequate. The Technical Guidance book of this Design Guide provides technical specifications for street trees, including tree pits and integrated water management practices.

"The best time to plant a tree was 20 years ago. The second best time is now."

Ancient proverb



Legend

AXIS STREETS

Colombo Street, *Quercus palustris* 'Pin oak'

Worcester Street, *Tilia platyphyllos* 'Broad-leaved lime'

NORTH–SOUTH STREETS

Cambridge Terrace and Montreal, Durham, Madras, Barbadoes and Manchester streets, *Liriodendron tulipifera* 'Tulip tree'

EAST–WEST CENTRAL STREETS (Inner zone)

Armagh, Gloucester, Hereford and Cashel streets, *Corylus colurna* 'Turkish hazel'

EAST–WEST STREETS

Tuam, St Asaph, Salisbury, Kilmore and Lichfield streets, *Tilia platyphyllos*, 'Broad-leaved lime'

ŌTĀKARO/AVON RIVER PROMENADE

Oxford Terrace, *Acer rubrum* 'Red maple' and *Sophora microphylla* 'Kōwhai'

NORTH GATEWAY

Victoria Street, *Acer platanoides* 'Norway maple'

SOUTH GATEWAY

High Street, *Quercus robur fastigiata* 'Upright English oak'

PEDESTRIAN MALL

Cashel Street, *Acer rubrum columnare* 'Upright red maple'

METRO SPORTS FACILITY

Antigua Street, *Liriodendron tulipifera fastigiata* 'Upright tulip tree'

HAGLEY PARK EDGE

Park Terrace, *Quercus robur* 'English oak'
Rolleston Avenue, various existing trees
Hagley Avenue, *Prunus x yedoensis* 'Cherry'

Figure 41 *Proposed street trees*

Street trees

Quercus palustris ‘Pin oak’

Axis street: **Colombo Street**

- Copper red in autumn
- Very hardy

Tilia platyphyllos ‘Broad-leaved lime’

Axis street: **Worcester Street**

East–west streets: **Tuam, St Asaph, Lichfield, Salisbury and Kilmore streets**

- Iconic trees that reflect the grid pattern of the city and have a historical association for Christchurch
- Great for form and scale of streets
- Well-established tress exist on many of these streets
- autumn colours, large leaves

Liriodendron tulipifera ‘Tulip tree’

North–south streets: **Cambridge Terrace and Durham, Montreal, Madras, Barbadoes and Manchester streets**

- Bright yellow in autumn
- Tulip-shaped greenish flowers
- Fragrant
- Fast growing

Sophora microphylla ‘Kōwhai’

Ōtākaro/Avon River Promenade: **Oxford Terrace**

- Yellow flowers
- New Zealand native

Acer platanoides ‘Norway maple’

North gateway: **Victoria Street**

- Yellow (occasionally red/orange) in autumn
- Deciduous, allow light through in winter
- Attractive seed

Quercus robur fastigiata ‘Upright English oak’

South gateway: **High Street**

- Great for form and scale of the street
- Well-established trees exist on High Street

Corylus colurna ‘Turkish hazel’

East–west central streets: **Hereford, Gloucester, Armagh and Cashel streets**

- Yellow in autumn
- Upright juvenile form, turning more rounded as they mature
- Deciduous, allow light through in winter
- Fruit can attract birds
- Well established trees in Cashel Street

Quercus robur ‘English oak’

Hagley Park edge: **Park Terrace**

- Broad spreading
- Iconic tree to Christchurch
- Will tie in to Hagley Park landscape

Acer rubrum columnare ‘Upright red maple’

Cashel Street between Oxford Terrace and Madras Street

- Vibrant red in autumn
- Appropriate form in close proximity to tram lines
- Deciduous, allow light through in winter
- Exist in Cashel Mall already

Liriodendron tulipifera fastigiata ‘Upright tulip tree’

Metro Sports Facility edge: **Antigua Street**

- Lime-coloured leaves – yellow in autumn
- Yellow-green flowers with orange markings

Acer rubrum ‘Red maple’

Ōtākaro/Avon River Promenade: **Oxford Terrace**

- Vibrant red in autumn
- Fast growing
- Tolerant to a wide range of soils

Footpath surfaces

Footpath surfaces are an important element influencing the character of streets and public places.

Figure 42 identifies the preferred surface treatments for specific areas in the central city.

The Technical Guidance book of this Design Guide provides technical specifications, application and details for each footpath treatment.

Figure 42 *Proposed footpath treatments*

Street metrics

Most of the road corridors in the central city are 20.1m wide, which is a chain in the imperial measurement system.

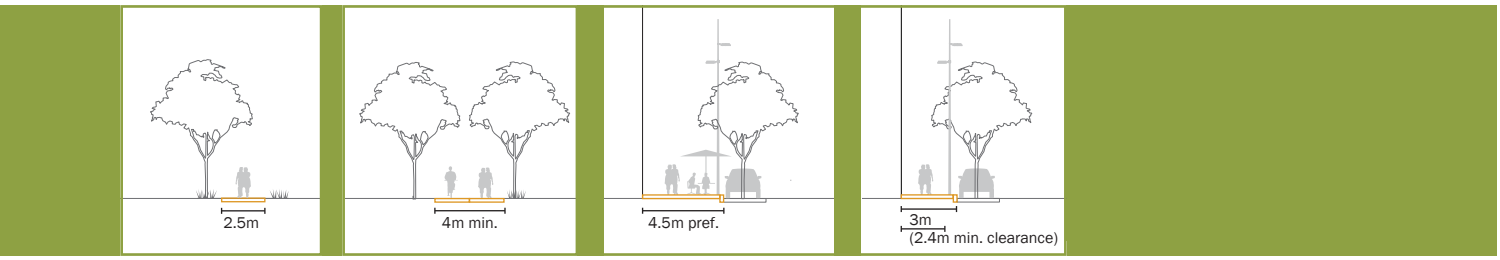
Accommodating all the various travel modes and public realm needs within the existing corridor is often a challenging exercise.

The level of service (width) to be provided for each travel mode should be weighted according to the road use hierarchy of each street. Figure 43 indicates the various provisions for each of the key elements in a street cross-section and the preferred dimensions for each mode or feature in order to deliver a good level of service.

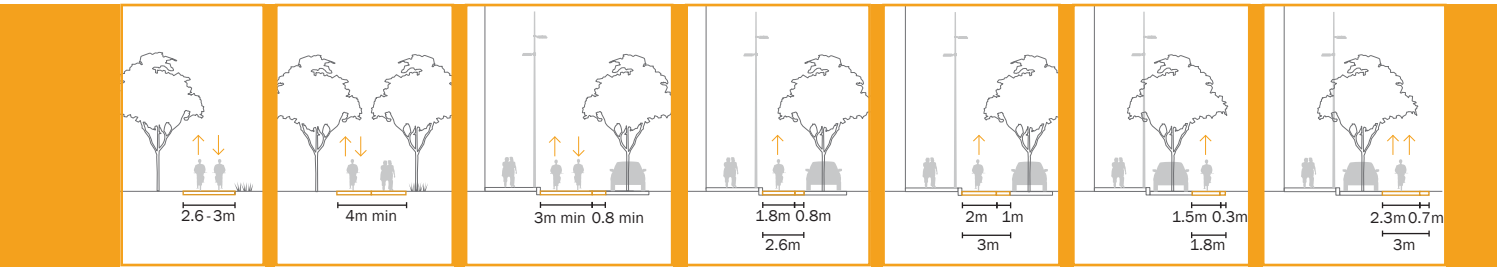
The proposed cross-sections for the central city street network have been developed by cross-referencing the user priority established in Accessible City's central city road user hierarchy (Figure 28, page 81) and the measurements on Figure 43.

These metrics have been used to inform the recommended street cross-sections for groups of streets featuring in the following pages.

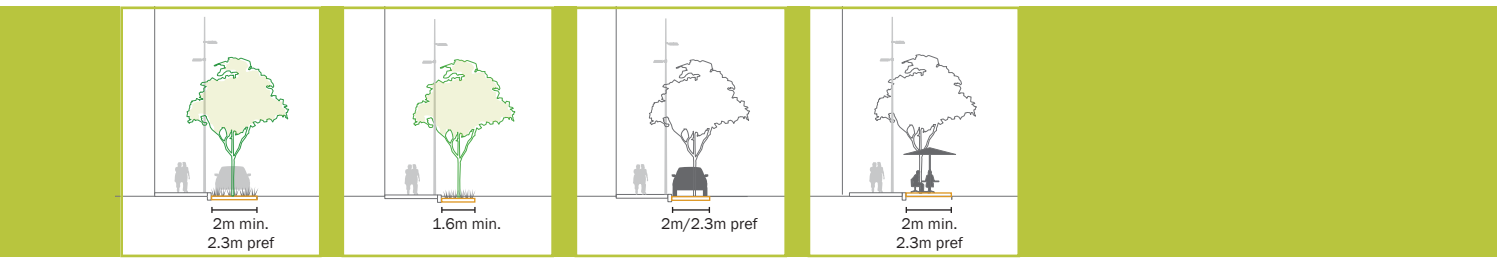
As a general principle, when defining the widths for the various modes of travel within a corridor, a minimum width should not be located beside another minimum width.



park walkway | park shared path | wide footpath | standard footpath

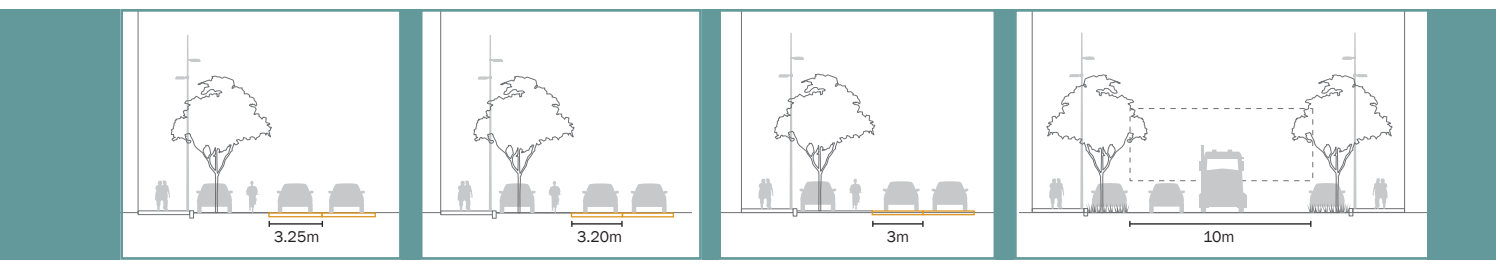


park/ bidirectional bike track | park/shared path | bidirectional separated bike lanes/two-way street | unidirectional separated bike lane/ two-way street | unidirectional separated bike lane/ one-way street | unidirectional on-road bike lane/two-way street | unidirectional on-road bike lane/one-way street



trees and on-street parking | only trees in carriageway (long tree pit) | on-street car parking, taxi ranks and loading bays | footpath extension/ outdoor dining -trading

bus lane | bus bay at super stop | tram



main distributor road | local distributor road | local street | over-dimensional vehicle

Figure 43 *Widths and clearances for street cross-sections*

KEY STREETS

Recommended street cross-sections

For the purpose of this Design Guide, the *street cross-sections* illustrate the functional space allocation for groups of street corridors in the central city that have a similar role or function. These groups of cross-sections are mapped in Figure 44.

The selected cross-sections:

- interpret the Accessible City's central city road user hierarchy for the different travel modes (walking, cycling, public transport, car travel)
- provide a structure for streets that contributes to the delivery of the vision for the public realm network of central Christchurch outlined in Chapter 1
- apply the thinking and technical considerations discussed in Chapter 2
- provide a robust 'canvas' for different street characters to emerge. Each street character will be largely informed by emerging uses along the street corridors and the selection of materials, planting and street elements
- will be used to inform future streetscape design projects for central city streets, ensuring each project conforms to the key design principles of this Streets & Spaces Design Guide.

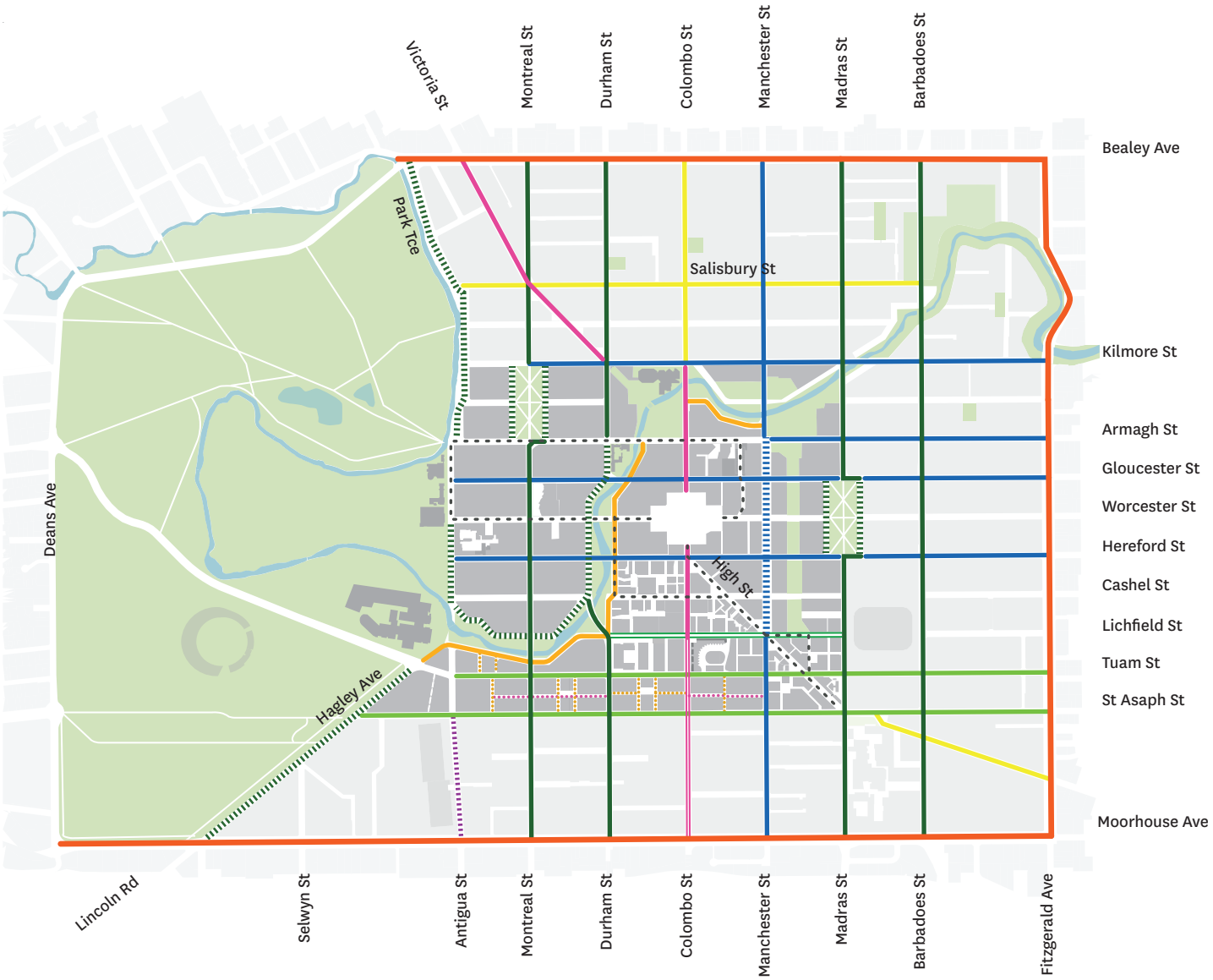
The cross-sections are conceptual in nature and will always require the skilled interpretation of designers at the detailed design stage of projects to respond to specific site conditions.

A correct interpretation of the cross-sections should generally maintain the basic structure proposed for the street. Maintaining the basic structure maximises functionality for the preferred mode(s) of travel and facilitates consistency of treatments across the central city. Consistent treatments are essential for creating a street network that is easy to understand and navigate, a chief objective for the public realm network in the central city.

Significant departures from the concept cross-sections will need to be assessed and approved on a case-by-case basis.

Detailed designs for streetscapes in the central city should be developed to address the design criteria outlined in Chapter 3.

Some streets have not been included in this chapter. These are mainly local streets where little change in functionality or street form is expected in the foreseeable future.



Legend

MAIN STREETS
Colombo Street (30km/h zone) and Victoria Street, pages 110–113

MOVING NORTH AND SOUTH
Montreal, Durham, Madras and Barbadoes streets, pages 114–115

MOVING EAST AND WEST
Tuam and St Asaph streets, pages 116–119

CONNECTING THE CYCLE NETWORK
Colombo Street (north), Salisbury Street and Ferry Road, pages 120–121

MOVING WITHIN THE CITY
Kilmore, Gloucester, Hereford and Manchester streets (outer zone), pages 122–123

PUBLIC TRANSPORT ROUTE
Manchester Street, pages 124–125

ŌTĀKARO/AVON RIVER PROMENADE
Oxford Terrace, pages 126–127

PROVIDING PUBLIC TRANSPORT AND VEHICULAR ACCESS
Lichfield Street (Core), pages 128–129

CONNECTING CYCLES TO THE SOUTH
Antigua Street, pages 130–131

STREETS ADJACENT TO OPEN SPACES
Cambridge and Park terraces, Rolleston and Hagley avenues, Montreal and Madras streets, pages 132–139

TRAM STREETS
Worcester Boulevard, High and Armagh streets, City Mall and Rolleston Avenue, pages 140–145

SOUTH FRAME
The Greenway, pages 146–147
North-south links, pages 148–151

THE AVENUES
Moorhouse, Bealey and Fitzgerald avenues, pages 152–153

Figure 44 *Recommended street cross-sections*

MAIN STREETS

Colombo and Victoria streets

Key features

- Main routes for walking and cycling
- Significant shopping and business streets
- Link major civic destinations
- Pedestrian-friendly 'maximum 30km/h' streets, except the section of Colombo Street north of Kilmore Street (refer to pages 122–123)
- Public transport integrated in some sections
- Two-way streets
- Increased urban amenity through new street trees and some rationalisation of on-street parking

Characteristic tree

Colombo Street: *Quercus palustris* 'Pin oak'

Victoria Street: *Acer platanoides* 'Norway maple'

Context

'Main streets' stand out from other streets in the city grid in terms of their location, uses along their length and lively street activity. The uniqueness of these streets helps people to orientate themselves in the city.

Colombo Street is the grid's main north–south axis which leads into the city's main civic place, Cathedral Square. **Victoria Street** breaks the grid diagonally and is a gateway to the city from the north.

As strategic routes into the heart of the city, they have consolidated as major shopping streets with a mix of retail and hospitality at ground level and commercial uses above. They link major civic destinations including Victoria Square, the Convention Centre, Performing Arts and Retail precincts, the Central Library and Cathedral Square. The uses and activities along these main streets will generate significant pedestrian activity.

Colombo Street has three distinctive areas which are represented in different concept cross-sections.

The stretch between Kilmore and Lichfield streets is within the slow inner zone. It has wider footpaths, cycles and vehicles share the road and on-street car parking is provided in selected locations.

The section south of Lichfield Street is within the slow zone, is a bus route and provides an access route to a number of off-street car parking facilities. This section will have separated cycle lanes in a 'Copenhagen' style. Wider footpaths and/or on-street car parking will be provided only where space is available.

The section north of Kilmore Street is a bus route outside the slow inner zone and a key cycling route. The cross-section for this area is illustrated on pages 120–121.

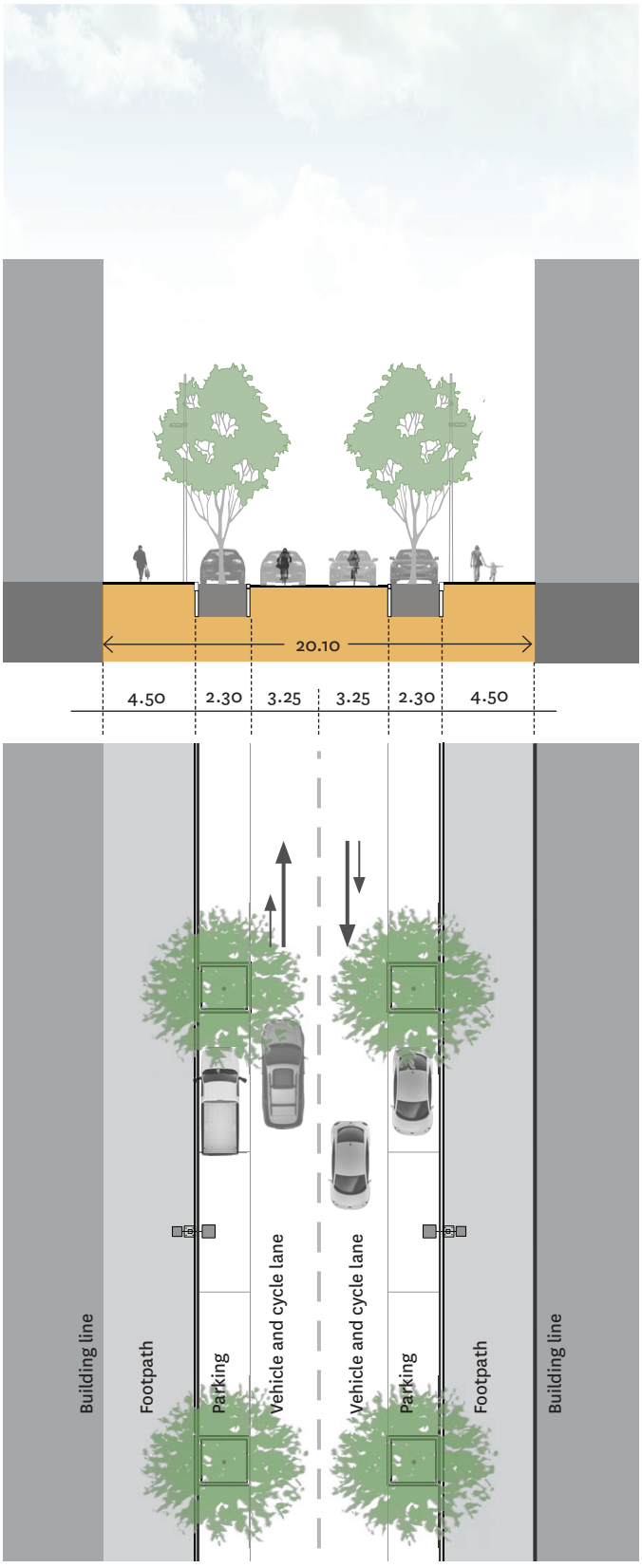


Figure 45 *Colombo Street (inner zone)*

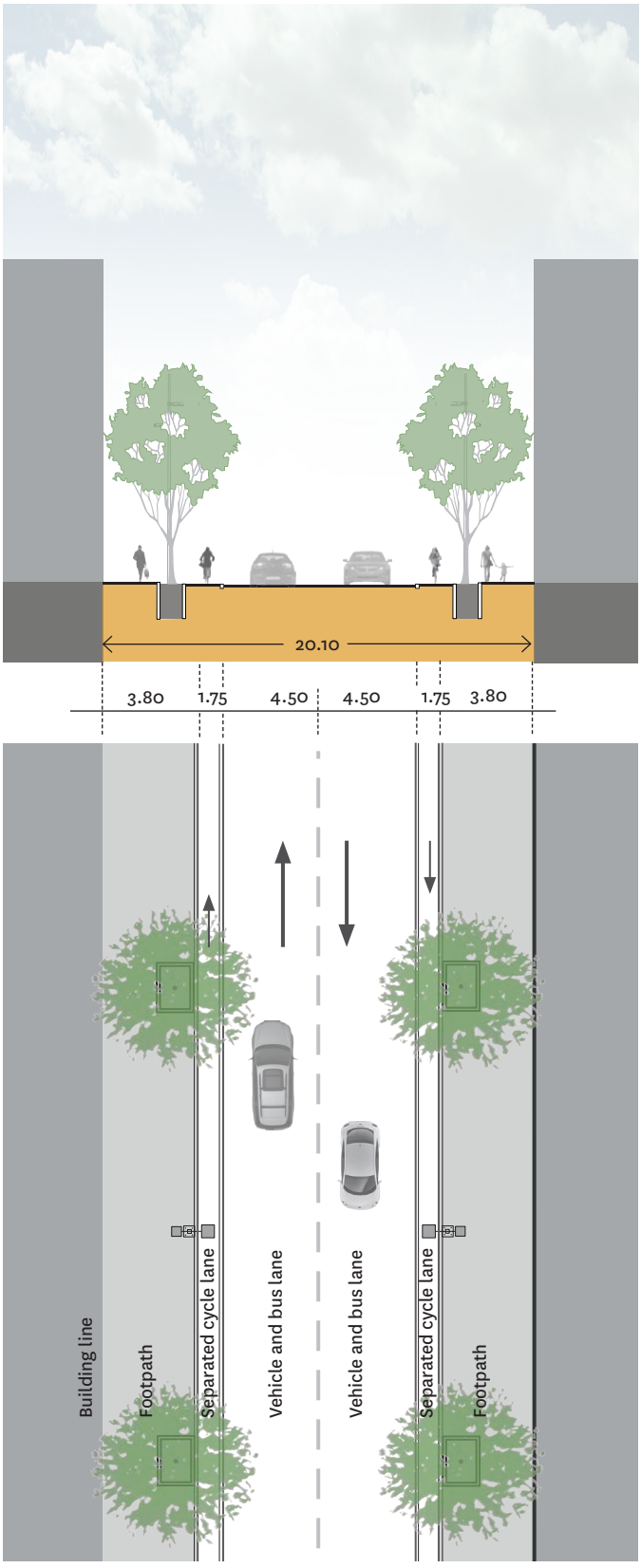


Figure 46 *Colombo Street south of Lichfield Street*

MAIN STREETS

Colombo and Victoria streets

Victoria Street is a street lined by new buildings of contemporary architecture. The street is within the maximum 30km/h zone and is also a bus route. The concept cross-section provides for dedicated on-road cycle lanes and allows flexibility to use the amenity zone for either on-street parking or areas for outdoor dining. These uses could alternate depending on the time of the day and the season.

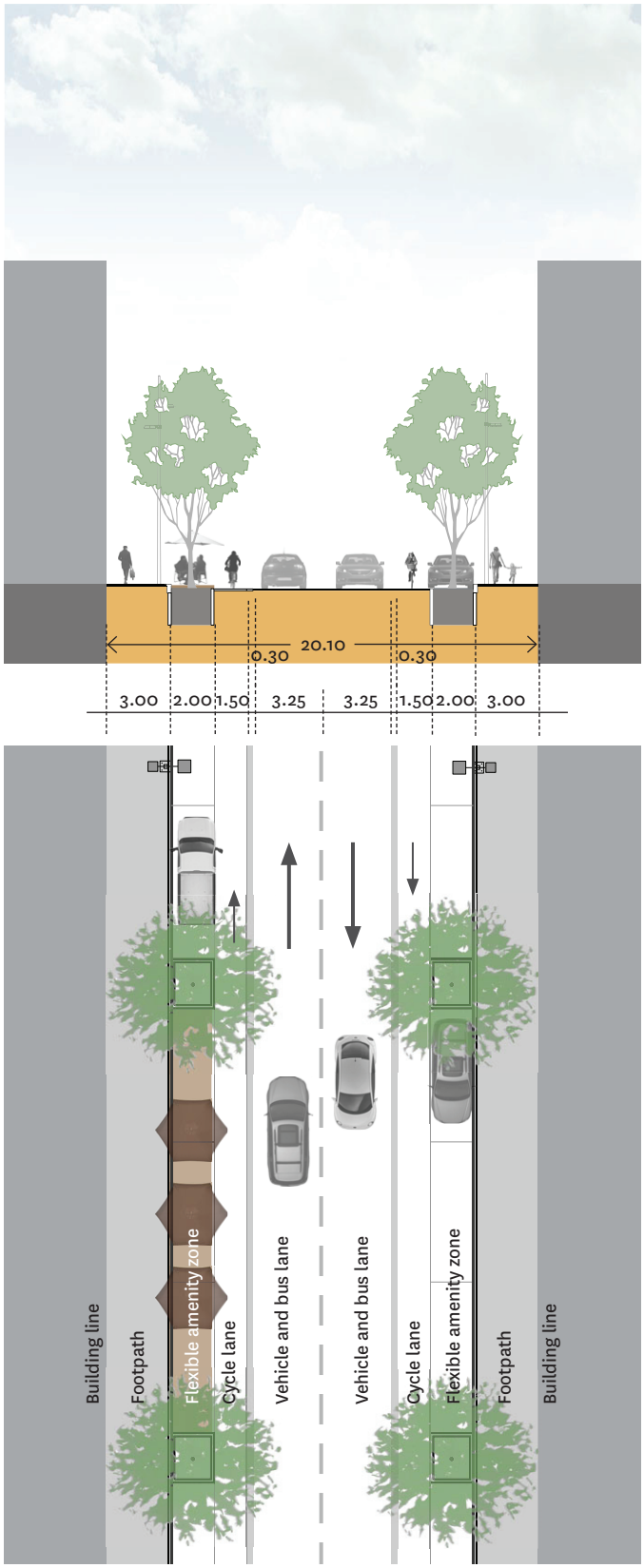
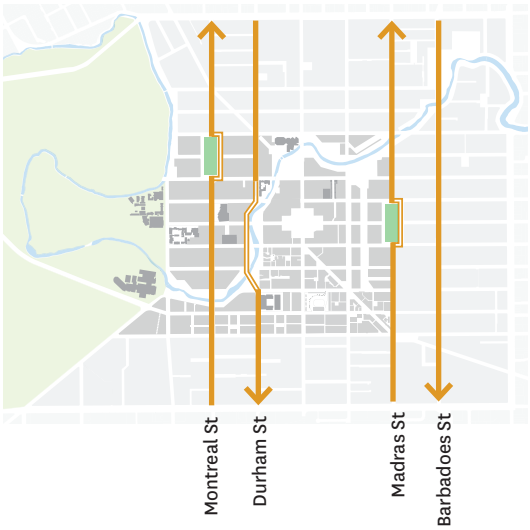


Figure 47 *Victoria Street*

MOVING NORTH AND SOUTH

Montreal, Durham, Madras and Barbadoes streets



Key features

- Main distributor one-way, north–south streets that connect the four avenues to the local network and distribute road users through the central city
- Key routes for moving vehicles
- Preferred routes for freight servicing and deliveries (outside peak hours)
- On-road cycle lanes on the left side of the street (relative to the direction of traffic)
- Increased urban amenity through new street trees and some rationalisation of on-street parking

Characteristic tree

Liriodendron tulipifera 'Tulip tree'

Context

The concept for these streets aims to create efficient, functional and effective access routes, especially for general traffic, while enhancing the urban amenity for all users. These north–south streets are focused on moving people driving from the avenues to the local network. They interface with some of the anchor projects and key public spaces in the central city.

Montreal Street, a north-bound route, crosses the South Frame and Health Precinct and defines the east side of Cranmer Square. The cross-section around Cranmer Square varies to integrate this important public space. This variation is illustrated on pages 138–139.

Durham Street enjoys a varied and changing aspect as it moves south-bound. It fronts the main pedestrian and cycle access route to Victoria Square from the northwest at the intersection with Kilmore Street. It then forms the main address for the Provincial Chambers and becomes Cambridge Terrace as it follows Te Papa Ōtākaro/Avon River Precinct to the south. The concept cross-section for Cambridge Terrace is provided on pages 132–133.

The section between Lichfield and Tuam streets will be a two-way street to enable easy access to the off-street car park facilities in the Retail Precinct. This section also defines the west boundary of the Justice and Emergency Services Precinct and intersects with the new Promenade of Te Papa Ōtākaro/Avon River Precinct. Information on these anchor projects is provided in Chapter 6.

Madras Street is a north-bound street. It defines the east boundary of the East Frame and Innovation Precinct and the west boundary of the future Stadium. This street provides a key address to the new East Frame residential precinct. Madras Street also provides access to the Transitional Cathedral and defines the east boundary of Latimer Square, where the cross-section varies to integrate this public space. This variation is shown on pages 138–139.

Barbadoes Street is a south-bound street. It defines the east boundary of the Stadium Precinct and is the only street in this group that does not enter the slow inner zone (maximum 30km/h).

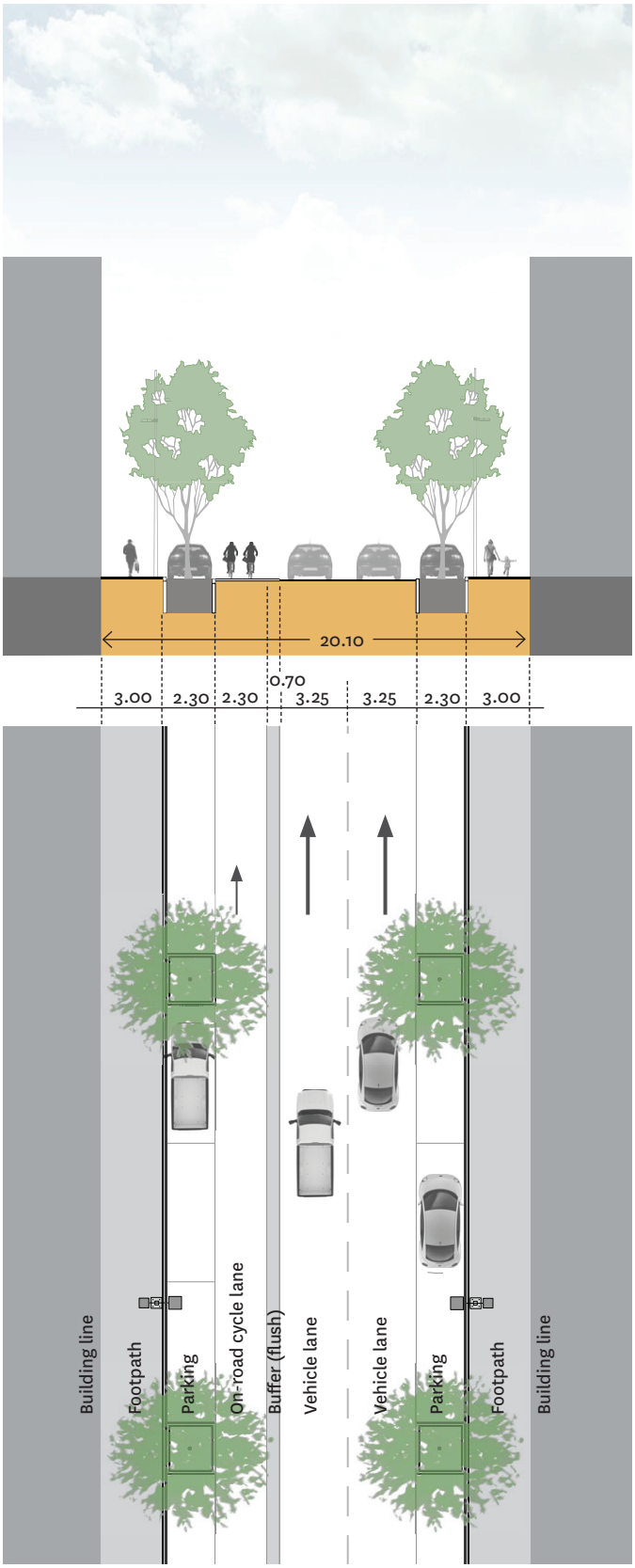
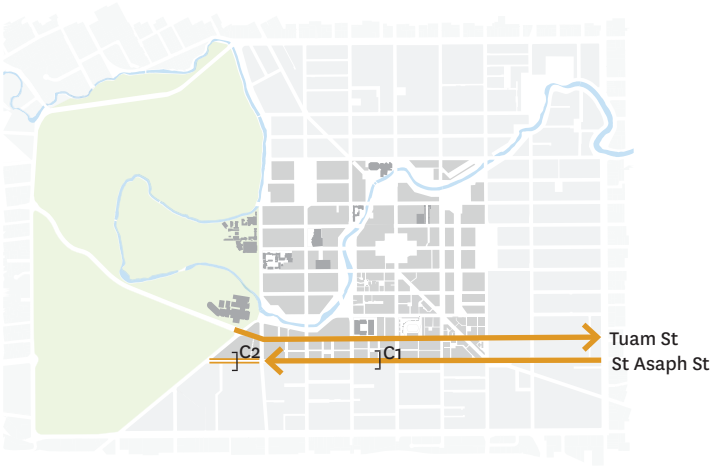


Figure 48 *Montreal, Durham, Madras and Barbadoes streets*

MOVING EAST AND WEST

Tuam and St Asaph streets



Key features

- Main distributor, one-way, east–west streets
- Key public transport routes
- Separated one-way cycle lanes on the left side of the street (relative to the direction of traffic, between Antigua and High streets) connecting with the Major Cycleways network outside the central city
- Key routes for general traffic access to the local network
- Pedestrian- and cycle-friendly 'inner zone' (maximum 30km/h) between Hagley Avenue and Madras Street
- Increased urban amenity through new street trees and some rationalisation of on-street parking

Characteristic tree

Tilia platyphyllos 'Broad-leaved lime'

Context

Tuam and St Asaph streets are planned as one-way streets that will accommodate significant traffic flows, key public transport routes and priority cycle connections. They will link public realm areas in the South Frame, the Metro Sports Facility and the Stadium Precinct, providing a green gateway to Hagley Park from the east.

Both streets are proposed to accommodate separated cycle lanes connecting with the wider cycle network to the west via Hagley Park and the south via High Street and Ferry Road. East of High Street, cycle continuity is provided by on-road cycle lanes.

Tuam Street has an essential role in providing high-quality, attractive and inviting access to the busy western-corridor bus route into the central city. It flows east-bound, connecting Hagley Park, the Health Precinct, the South Frame and the Justice and Emergency Services Precinct. Tuam Street is the primary entrance from the west to the new Bus Interchange and connects through the heart of the Innovation Precinct to the future Stadium's southern boundary. There will be one super stop located between Hagley Avenue and Antigua Street, where provision has been made to allow for buses travelling west-bound through to Riccarton Road.

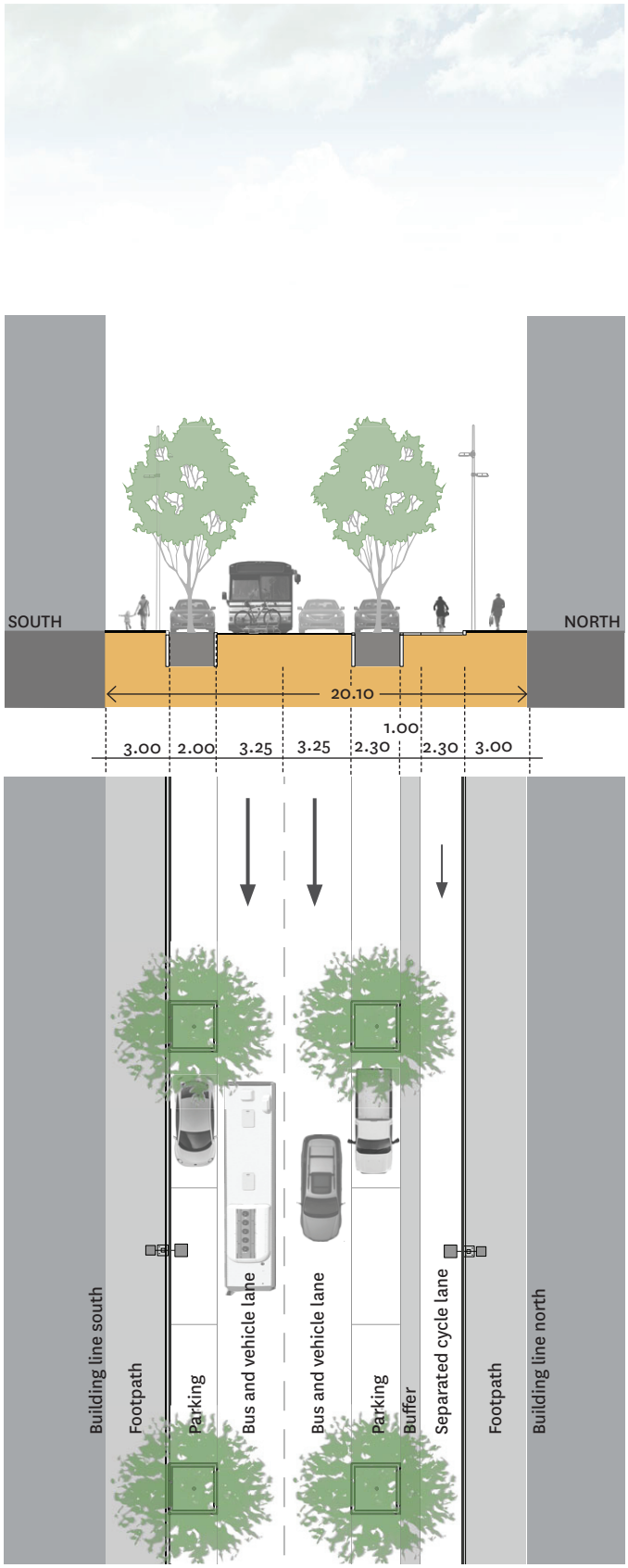
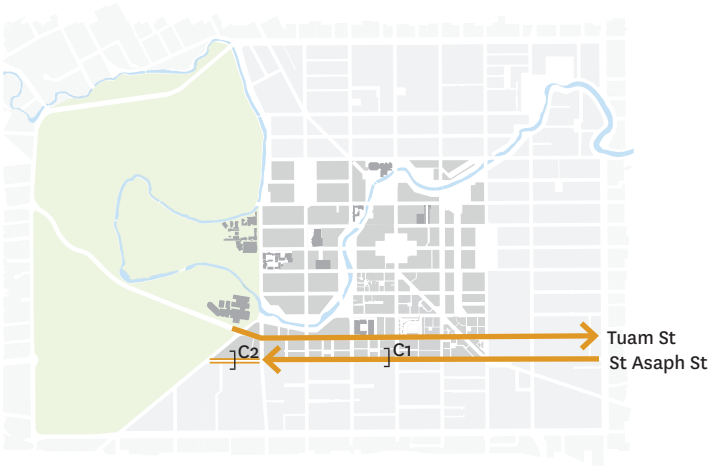


Figure 49 *Tuam Street, west of High Street*

MOVING EAST AND WEST

Tuam and St Asaph streets



St Asaph Street defines the south boundary of the South Frame, including the Health and Innovation precincts. It complements Tuam Street by moving road users westward. It provides the interface between the South Frame and the Health Precinct, and the northern boundary of the Metro Sports Facility. The intersection with High Street creates a key gateway to the city centre and a main access point to the CPIT campus.

Most of St Asaph Street is an over-dimensional route. To address this requirement and provide a separated cycleway, on-street car parking is only provided on the north side of the street. The section of St Asaph Street between Antigua Street and Hagley Avenue has a shared path on the south side of the street. This section provides a key cycle connection to Hagley Park, the Metro Sports Facility and the priority cycle route along Antigua Street.

As part of the South Frame's new public realm network, there will be a series of north–south connections between Tuam and St Asaph streets in the form of shared streets. The connections and interface between these shared streets and Tuam and St Asaph streets provide a great opportunity to maximise the South Frame's public realm asset. Managing the interface between pedestrians, vehicles and cyclists is very important.

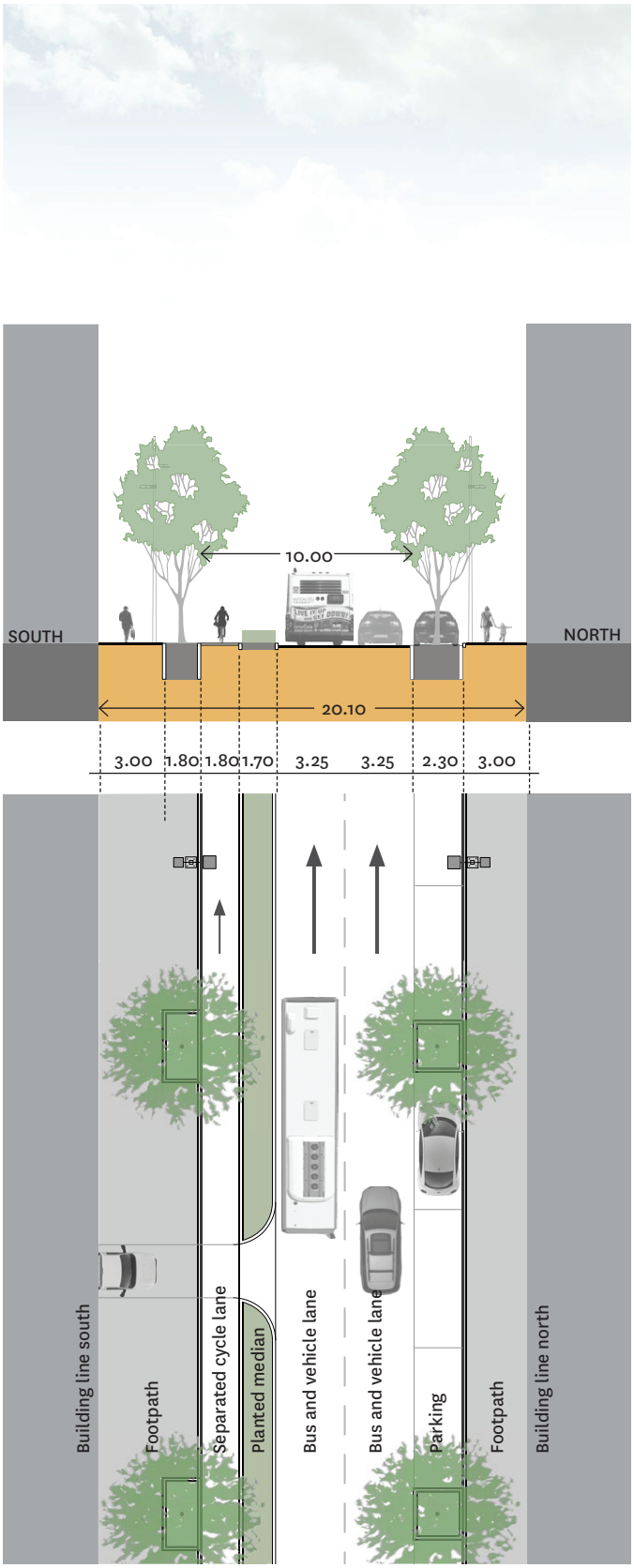


Figure 50 *C1 – St Asaph Street, west of High Street*

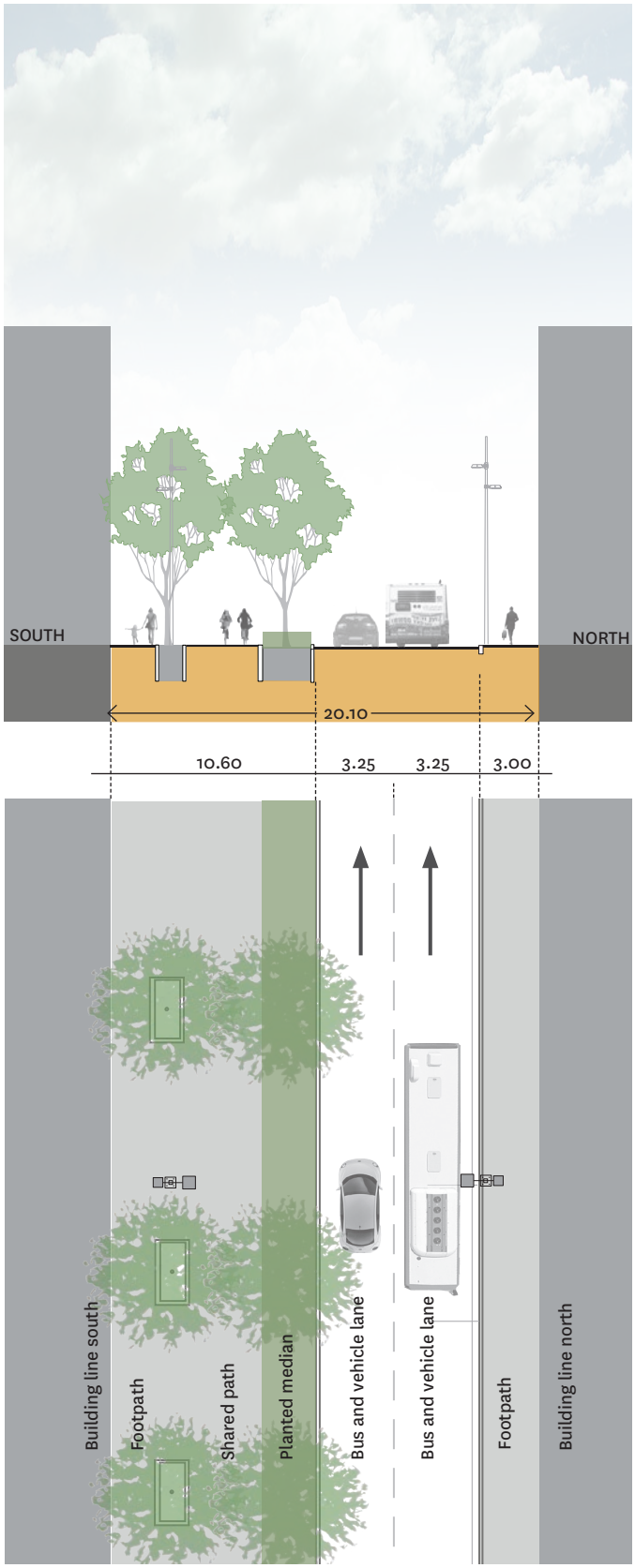


Figure 51 *C2 – St Asaph Street at Metro Sports Facility*

Colombo Street (north), Salisbury Street and Ferry Road

Key features

- Two-way streets
- Cycle priority routes outside the central city low-speed zone, with separated cycle lanes in both directions
- Connect the heart of the city centre with the Major Cycleway network to the north, east and west
- Accommodate public transport routes along Colombo Street, Ferry Road and a small section of Salisbury Street
- Colombo Street is a key pedestrian connection to Cathedral Square
- Increased urban amenity through new street trees and some rationalisation of on-street parking

Characteristic trees

Colombo Street: *Quercus palustris* 'Pin oak'

Salisbury Street: *Tilia platyphyllos* 'Broad-leaved lime'

Ferry Road: Existing underground services impede tree planting

Context

Colombo Street is the primary north–south pedestrian and cycling route through the heart of the city. The uses along this section are mainly small-scale commercial, residential and hospitality, which contrast with the large civic and retail activity to the south of the corridor. The design concept of the cross-section focuses on integrating separated cycle lanes and on increasing the pedestrian amenity for local land uses.

Salisbury Street connects Hagley Park with Te Papa Ōtākaro/Avon River Precinct and is the main east–west cycle connection in the north of the central city. This street provides access to a range of local hospitality, residential and commercial uses.

The junction with Victoria Street is one of the gateways into the city from the north. Salisbury Street will return to a two-way street and the proposed cycle facilities will be introduced at that time. The new separated cycle lanes will integrate with the improved carriageway of those sections of Salisbury Street that have been repaired since the earthquakes.

Ferry Road provides continuity to the High Street gateway corridor to the southwest. It accommodates key cycle and public transport routes and provides access to the CPIT campus.

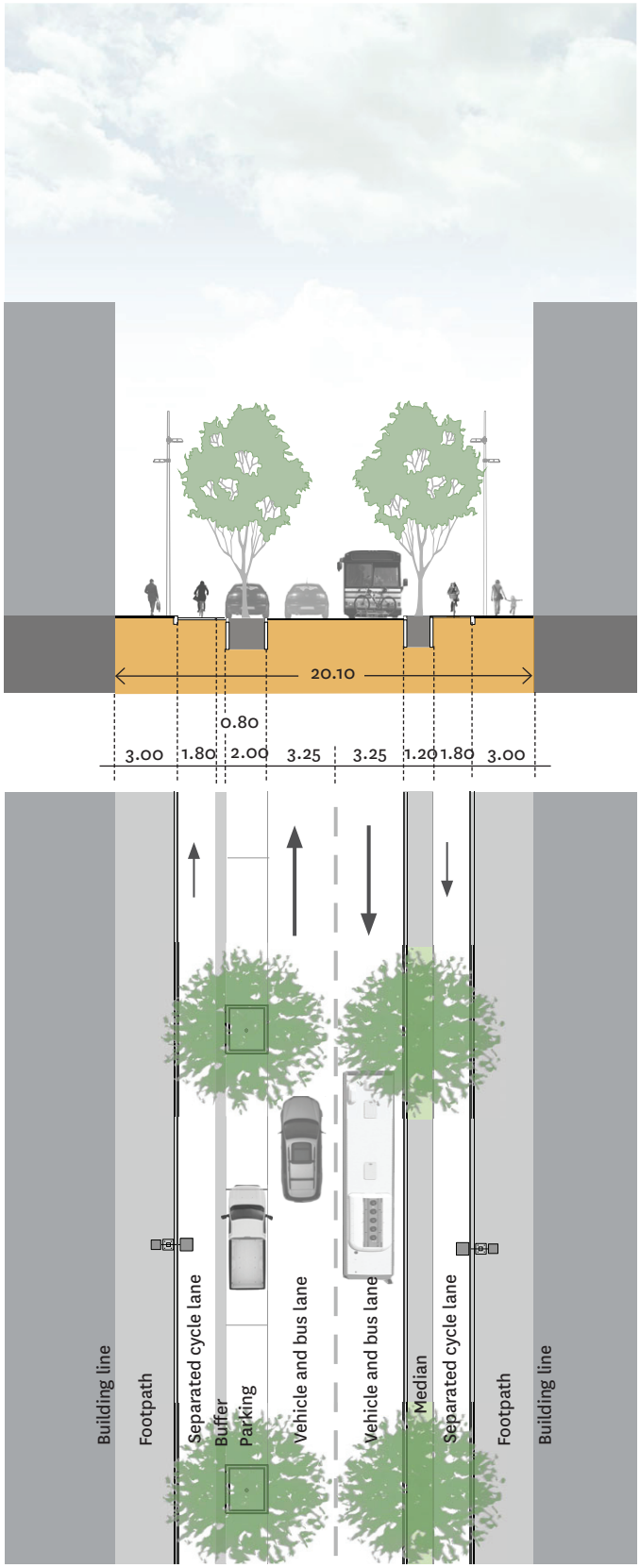


Figure 52 *Colombo Street (north), Salisbury Street and Ferry Road*

MOVING WITHIN THE CITY

Kilmore, Gloucester and Hereford streets and Manchester Street (outer zone)

Key features

- Two-way streets
- Public transport accommodated in some sections
- Include sections of pedestrian-friendly 'inner zone' slow streets (maximum 30km/h)
- Connect many of the city's cultural, event, retail and residential venues and precincts
- On-road cycle lanes
- Provide vehicular access from the north–south main distributor streets into the finer grain of the city Core
- Increased urban amenity through new street trees and some rationalisation of on-street parking
- Kilmore Street will change to a two-way street

Characteristic trees

Kilmore Street: *Tilia platyphyllos* 'Broad-leaved lime'

Gloucester and Hereford streets: *Corylus colurna* 'Turkish hazel'

Manchester Street: *Liriodendron tulipifera* 'Tulip tree'

Context

These streets connect established and new areas in the central city, including the well-known Botanic Gardens, Canterbury Museum and New Regent Street; the new Te Papa Ōtākaro/Avon River, Retail, Convention Centre and Performing Arts precincts; the new Central Library; and the East Frame residential precinct.

With the range of uses, quality of the amenities and the connectivity these streets offer, pedestrian demands on these spaces will be high. Tourists, city workers, visitors and inner city residents alike will use these streets to move around the city. It is important, therefore, that these streets provide an environment that supports people's enjoyment of the public and private spaces in the city.

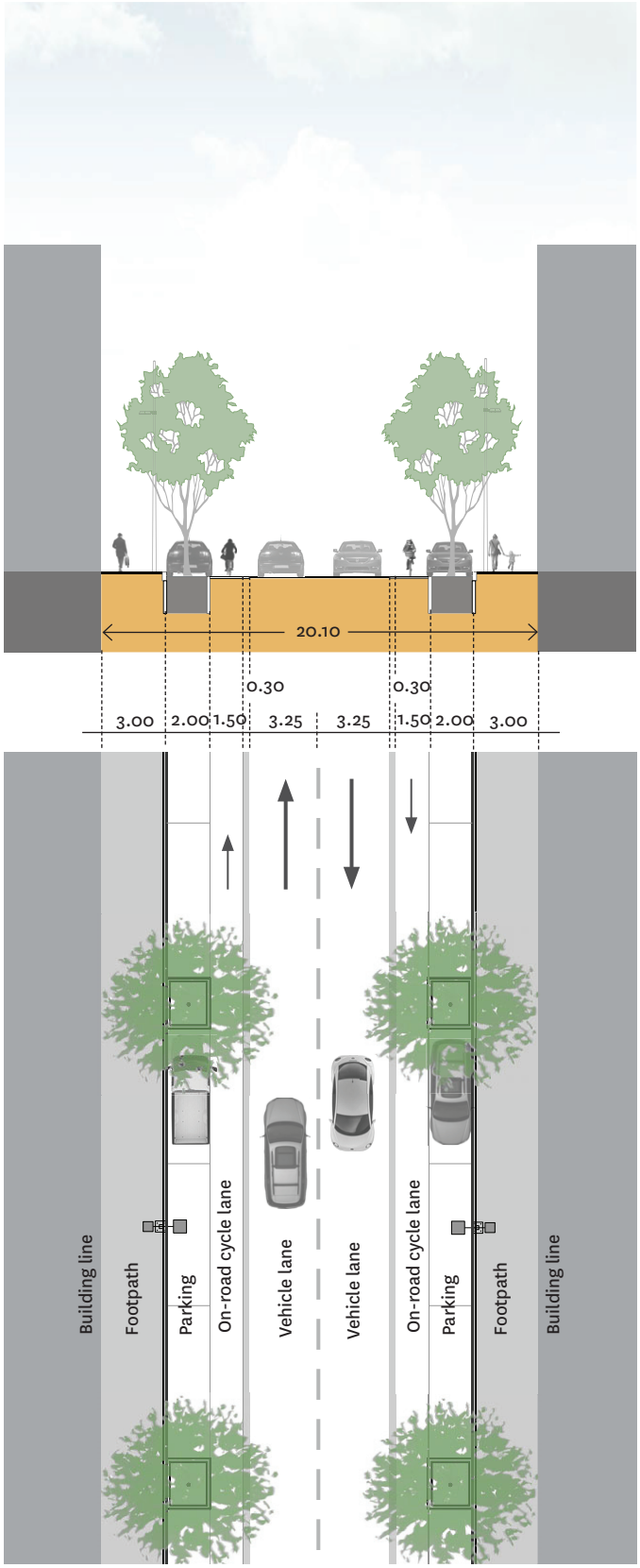
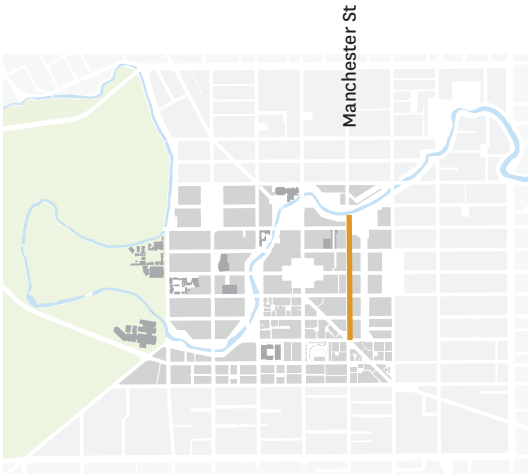


Figure 53 *Kilmore, Gloucester and Hereford streets and Manchester Street (outer zone)*

PUBLIC TRANSPORT ROUTE

Manchester Street



Key features

- Bus priority route into the city with priority bus lanes and a super stop located between Gloucester and Hereford streets
- Tree-lined, two-way street
- Widened road corridor
- Wide footpaths
- Pedestrian-friendly 30km/h 'inner zone' between Kilmore and St Asaph streets

Characteristic tree

Liriodendron tulipifera 'Tulip tree'

Context

Manchester Street is the main north–south public transport corridor in the central city. The section between Armagh and Lichfield streets will be widened to create a distinctive tree-lined street. Buses will have priority lanes and signal pre-emption, and pedestrians will enjoy wide footpaths

Manchester Street is within the slow inner zone and provides a main address to the new East Frame residential precinct.

The concept cross-section for Manchester Street will have slight variations from block to block to integrate specific site conditions and movement requirements. A new bus super stop will be located between Gloucester and Hereford streets, with easy access to Worcester Boulevard, a main east–west pedestrian and cycling route.

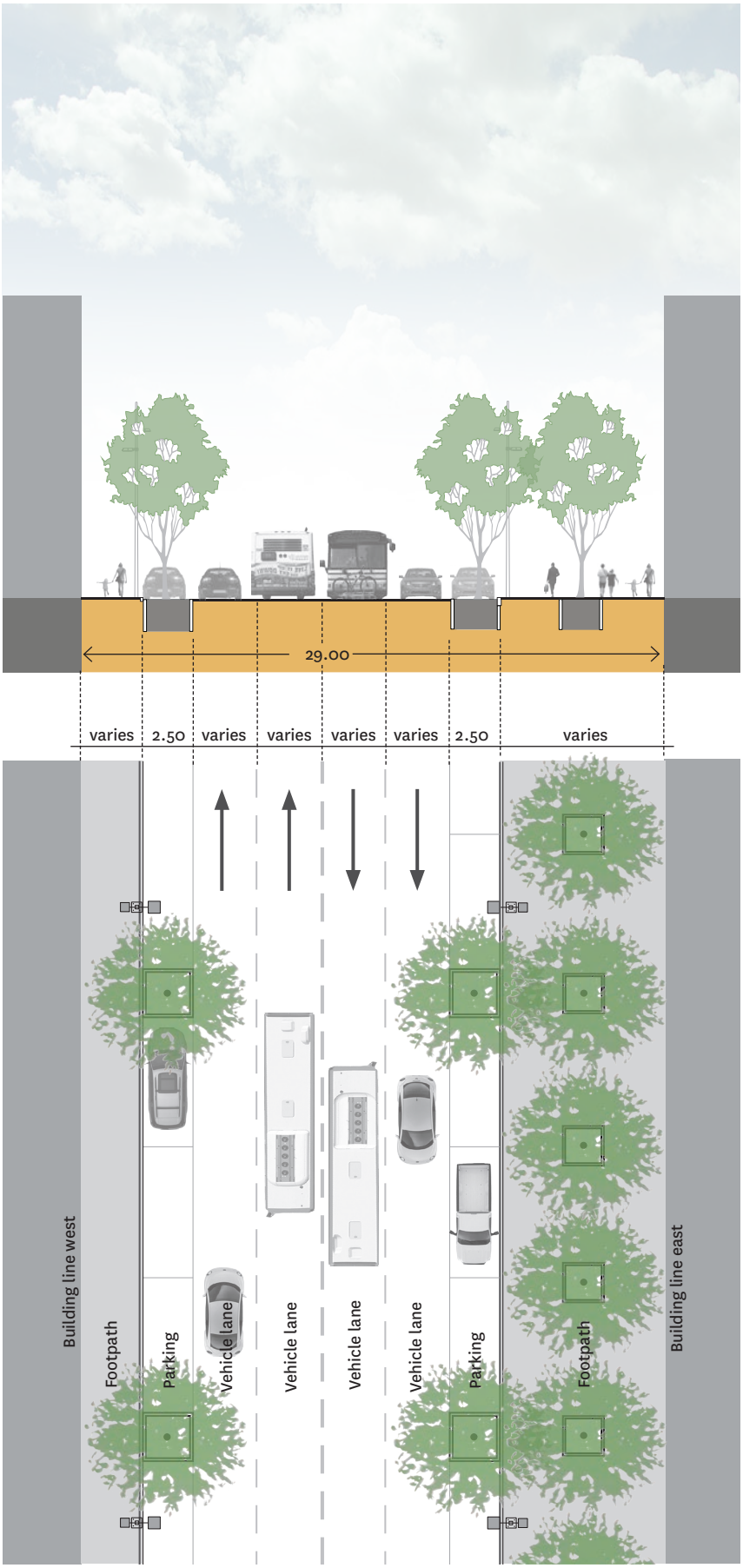


Figure 54 *Manchester Street (inner zone)*

THE ŌTĀKARO/AVON RIVER PROMENADE

Oxford Terrace

Key features

- Provides a new interface between the Ōtākaro/Avon River corridor and the city
- One-way, shared street
- Designed for slow speed (maximum 10km/h) to enable pedestrian and cycling priority
- River-side section of the tram route between Worcester Street and Cashel Mall
- Increased urban amenity through new street trees and rain gardens
- Distinctive pavement treatments and materials
- Access for private and servicing vehicles provided

Characteristic trees

Acer rubrum 'Red maple' and *Sophora microphylla* 'Kōwhai'

Context

The Ōtākaro/Avon River Promenade follows the existing alignment of Oxford Terrace and is one of the main components of the design for Te Papa Ōtākaro/Avon River Precinct. The Promenade will redefine the interface between the city and the east side of the river corridor in the form of a shared street. The design for this street emphasises the amenity of the river and prioritises pedestrians and cyclists while maintaining vehicular access. It will offer an attractive, slow-speed environment to enjoy the river's open space along with the retail, cafés, bars and activities on the urban edge of the corridor.

The Promenade is one of the few streets in the central city that meanders alongside the river, off the grid, and enjoys a significant number of established trees. These features will be strengthened and complemented by the Promenade design, new trees, rain gardens and special pavement treatments. The overall design aims to consolidate Ōtākaro/Avon River as a real asset, attraction and draw-card for the city.

The Promenade will provide a main address to the Convention Centre and Retail precincts and to the Health Precinct in the South Frame. Detailed information on Te Papa Ōtākaro/Avon River Precinct is provided in Chapter 6.

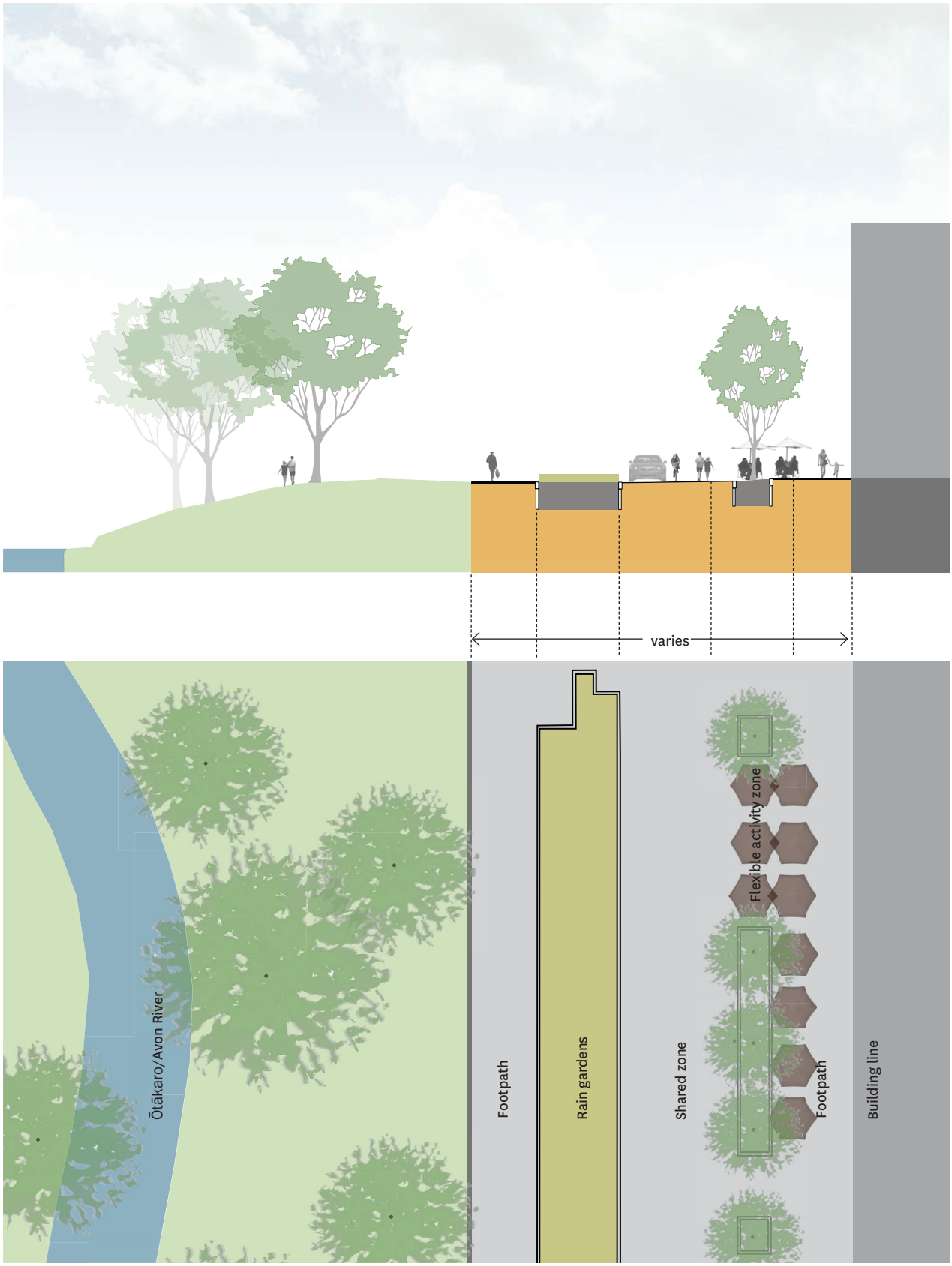


Figure 55 *Oxford Terrace – The Ōtākaro/Avon River Promenade*

PROVIDING PUBLIC TRANSPORT AND VEHICULAR ACCESS

Lichfield Street (Core)

Key features

- Two-way, east–west street within the pedestrian-friendly 'inner zone'
- Main bus access route from Manchester Street into the new Bus Interchange
- Accommodates main entrances and public space in front of the Bus Interchange and the Justice and Emergency Services Precinct
- Key pedestrian connections across and along the street
- Wide footpath on the south side of the street
- A 'Barnes dance' pedestrian crossing at the Colombo Street intersection
- Integrates location for taxi rank and intercity coaches in front of the Bus Interchange
- Vehicle access route to parking facilities servicing the Retail and Justice and Emergency Services precincts
- For safety, there are no designated cycle lanes on this street
- Increased urban amenity through new street trees
- Some on-street parking on selected locations, together with coach stops and taxi ranks adjacent to the Bus Interchange

Characteristic tree

Tilia platyphyllos 'Broad-leaved lime'

Context

Lichfield Street defines significant street frontages for the new Bus Interchange, the Retail, Justice and Emergency Services and Innovation precincts, and the East Frame. The street is bookended to the west by Te Papa Ōtākaro/Avon River Precinct and to the east by the future Stadium.

Lichfield Street is a key access route to the new Bus Interchange and to a number of off-street parking buildings servicing the Retail and Justice and Emergency Services precincts. Accordingly, the concept cross-section seeks to provide for vehicular access while ensuring bus movements are unimpeded.

The south side of the street has a widened footpath which provides a congregating space for commuters using the Bus Interchange and visitors to SOL Square and the Justice and Emergency Services Precinct.

A pedestrian priority crossing at the intersection with Colombo Street, along with other secondary crossing points, enables easy pedestrian access to the Retail Precinct to the north of the street.

A taxi rank and the intercity coach pick-up and drop-off points are located in front of the Bus Interchange, making the most of the north-facing frontage.

The section east of Manchester Street provides access to the new East Frame residential precinct and the Innovation Precinct. This section accommodates the tram route and therefore a specific design will need to be prepared to accommodate this feature.

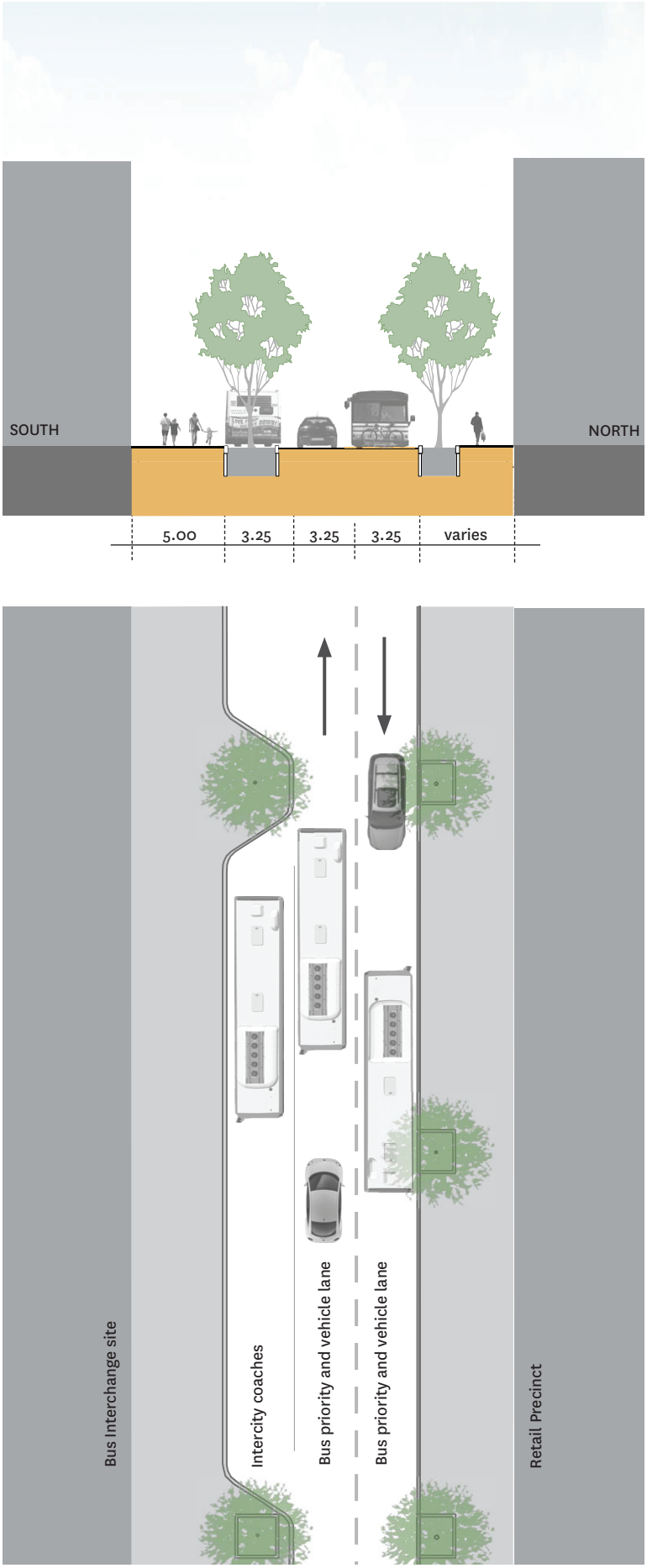
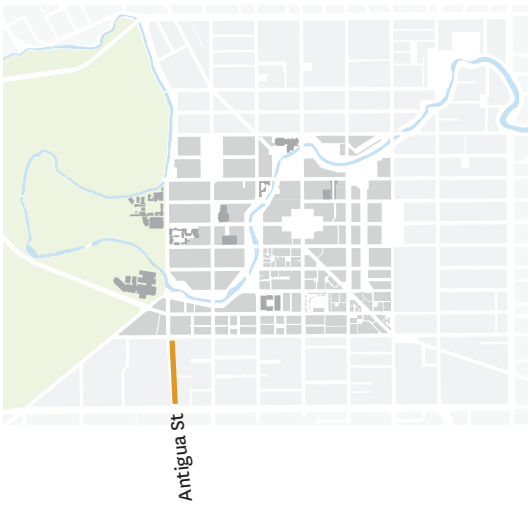


Figure 56 *Lichfield Street at Bus Interchange*

CONNECTING CYCLES TO THE SOUTH

Antigua Street

(between St Asaph Street and Moorhouse Avenue)



Key features

- Two-way street
- Priority cycle street with separated cycle lanes in both directions
- On-street parallel parking integrated with street trees, including provision for coach drop-off for the Metro Sports Facility
- Key frontage for the Metro Sports Facility
- Wide footpath in front of the Metro Sports Facility
- Increased urban amenity through new street trees

Characteristic tree

Liriodendron tulipifera fastigiata 'Upright tulip tree'

Context

Antigua Street will provide a green frontage to the east boundary of the new Metro Sports Facility.

This street is a priority cycleway linking the cycleway along Park Terrace and Ōtākaro/Avon River to the north with the major cycleway south of Moorhouse Avenue.

The Metro Sports Facility building along this frontage is set back from the title boundary, allowing for additional space for pedestrians and street trees. The streetscape concept integrates with the proposed landscaped areas in front of the building.

The streetscape and amenity of the street provide a fitting and attractive address for this world-class facility.

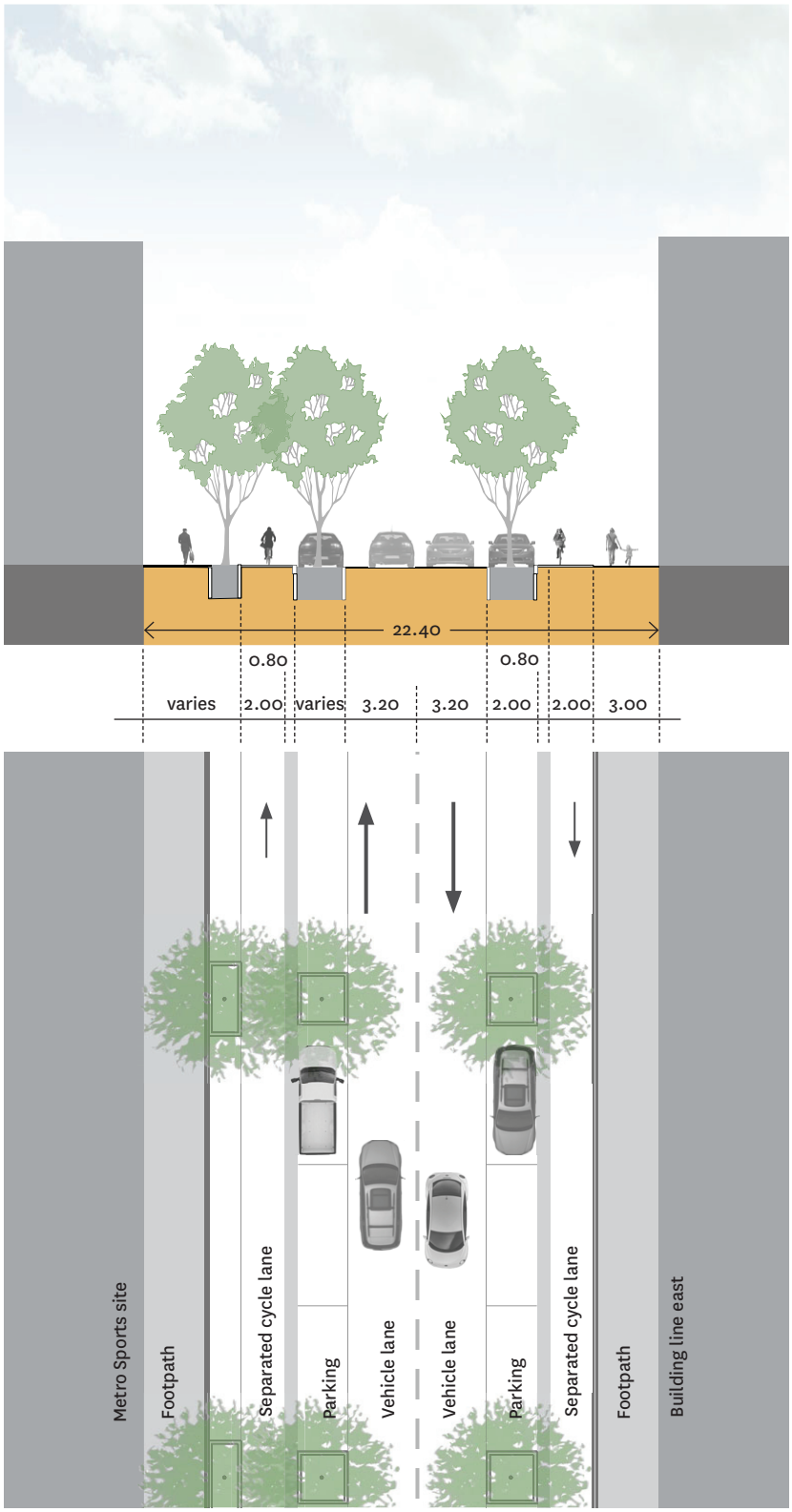
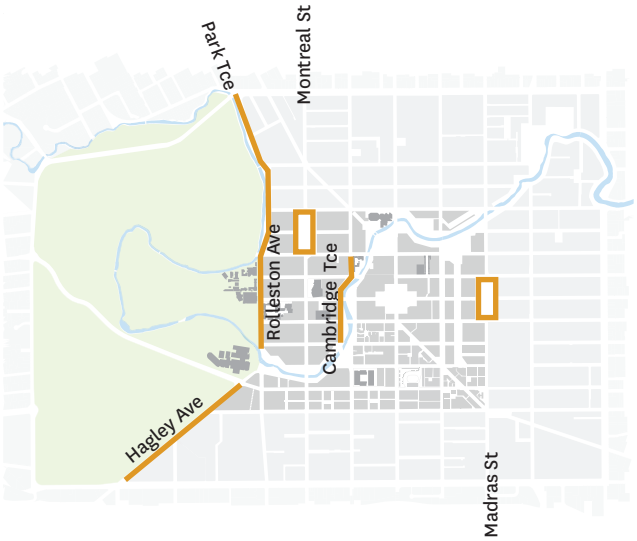


Figure 57 *Antigua Street at Metro Sports Facility*

STREETS ADJACENT TO OPEN SPACES

Cambridge and Park terraces, Rolleston and Hagley avenues, and Montreal and Madras streets



The cross-sections in this group are streets adjacent to or connecting key green public open spaces; however, they differ in their layouts and space allocations.

They provide visual and physical integration between the street network and key green public spaces.

They are major contributors to the delivery of 'a green city', a key theme guiding the Recovery Plan.

Cambridge Terrace interface with Ōtākaro/Avon River

Characteristic tree: *Liriodendron tulipifera* 'Tulip tree'

This one-way, south-bound main distributor street is adjacent to Ōtākaro/Avon River.

Between Cashel and Gloucester streets there is a two-way separated cycleway integrated into the design for Te Papa Ōtākaro/Avon River Precinct. This cycle lane continues to the north (between Gloucester and Armagh streets) as a shared path in front of the Provincial Chambers. No on-road cycle lane is provided along this section.

Street trees and on-street parking are accommodated along the west side of the street.

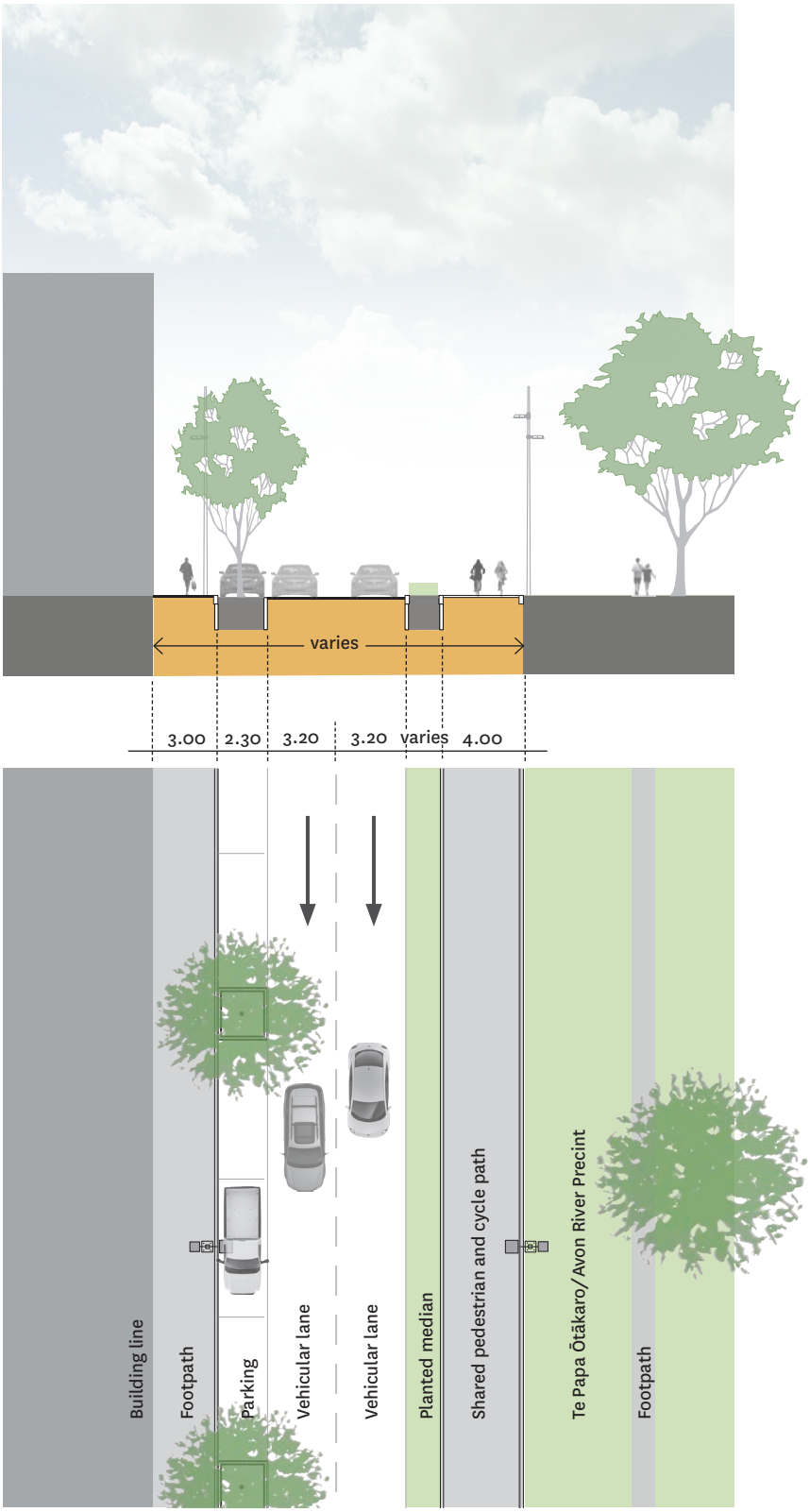
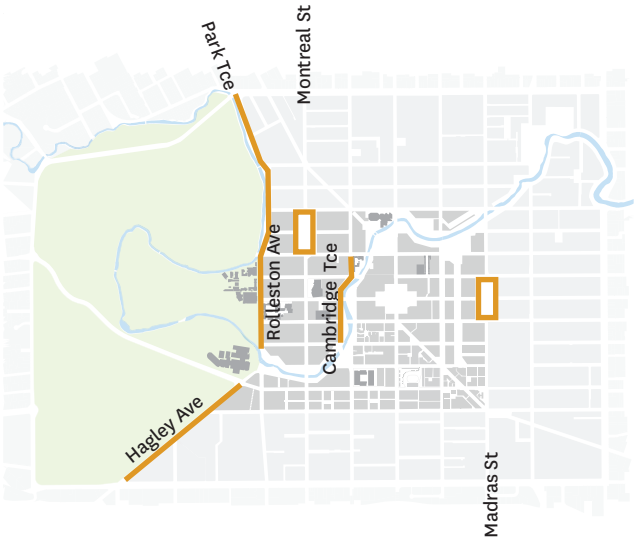


Figure 58 *Cambridge Terrace*

STREETS ADJACENT TO OPEN SPACES

Cambridge and Park terraces, Rolleston and Hagley avenues, and Montreal and Madras streets



Park Terrace and Rolleston and Hagley avenues interface with Hagley Park

These streets define the east boundary of Hagley Park.

Park Terrace

Characteristic tree: *Quercus robur* 'English oak'

- Park Terrace is a two-way local access street.
- This cycle priority street has separated, bidirectional cycle lanes on its west side.
- Street trees are integrated with on-street parking on both sides.
- The footpath is integrated with the park area.

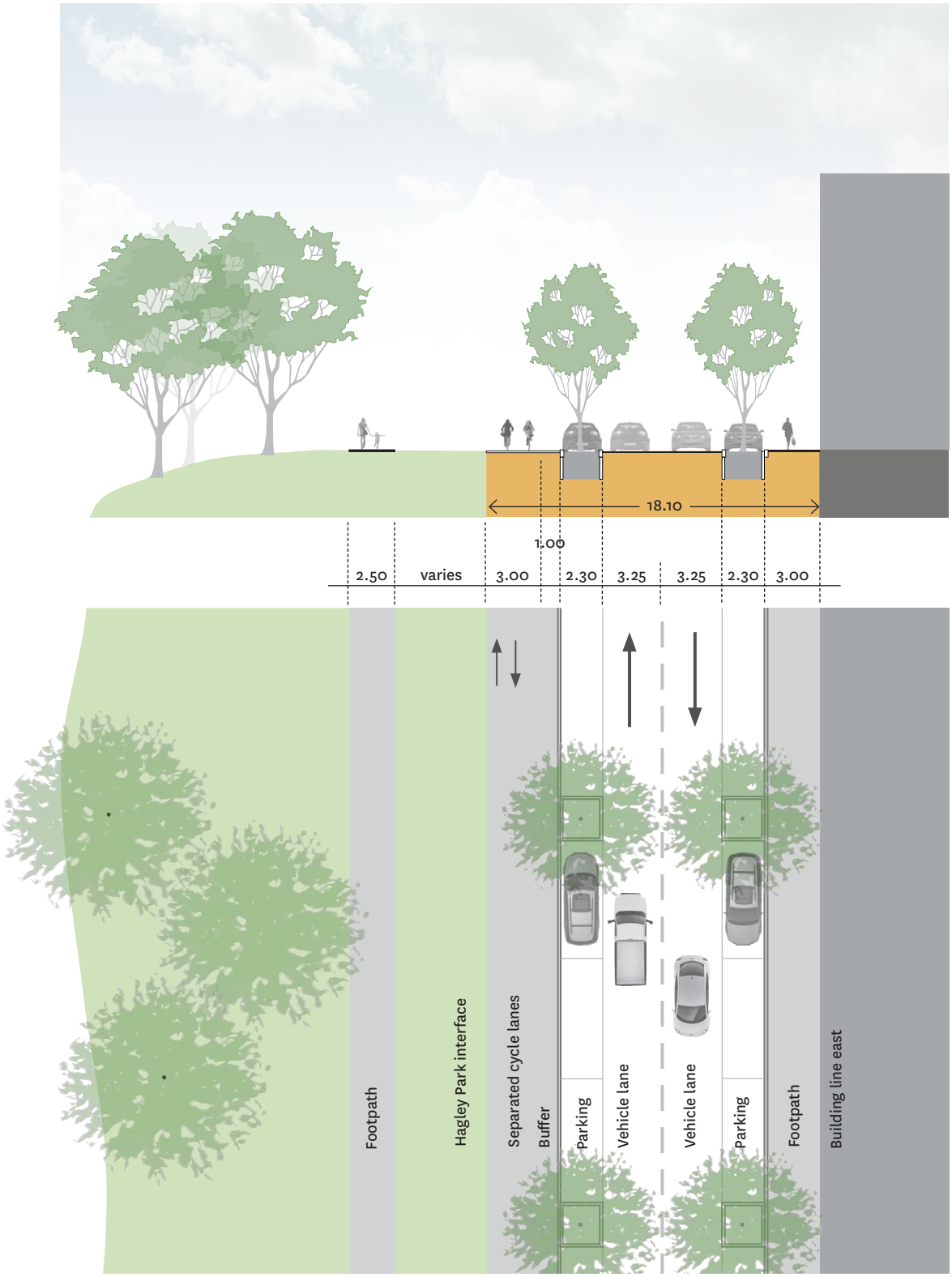
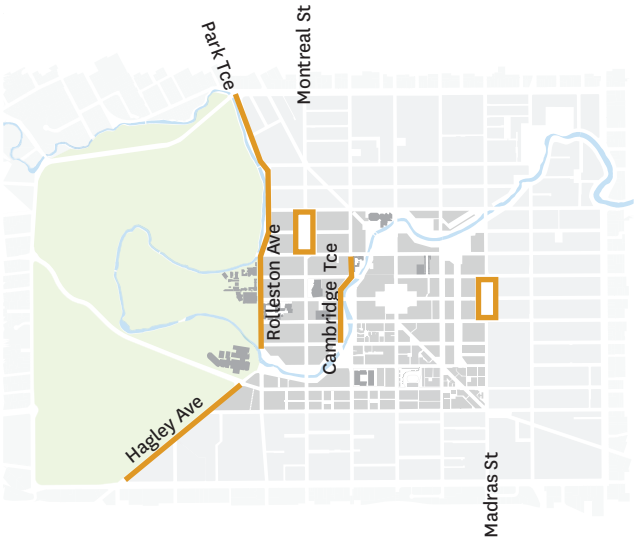


Figure 59 *Park Terrace, north of Armagh Street*

STREETS ADJACENT TO OPEN SPACES

Cambridge and Park terraces, Rolleston and Hagley avenues, and Montreal and Madras streets



Rolleston Avenue

Characteristic tree: to be defined

Rolleston Avenue is the continuation of Park Terrace from Armagh Street to the Ōtākaro/Avon River.

This street requires a tailored design to accommodate the existing tram tracks and space requirements for the operation of tourist coaches. In addition, the design should integrate the space in front of the Canterbury Museum and the Botanic Gardens. The concept design is to be developed.

Hagley Avenue

Characteristic tree: *Prunus x yedoensis* 'Cherryk'

Hagley Avenue has two main sections.

The section between Selwyn Street and Moorhouse Avenue:

- is a one-way, south-bound, local access street
- accommodates on-street car parking, angled on the west side and parallel on the east side
- integrates new street trees with on-street parking on both sides.

The section between Tuam and Selwyn streets is:

- a two-way street
- a key bus route.

A widened shared path for cycling and walking will be provided within Hagley Park, parallel to Hagley Avenue, between Moorhouse Avenue and Tuam Street.

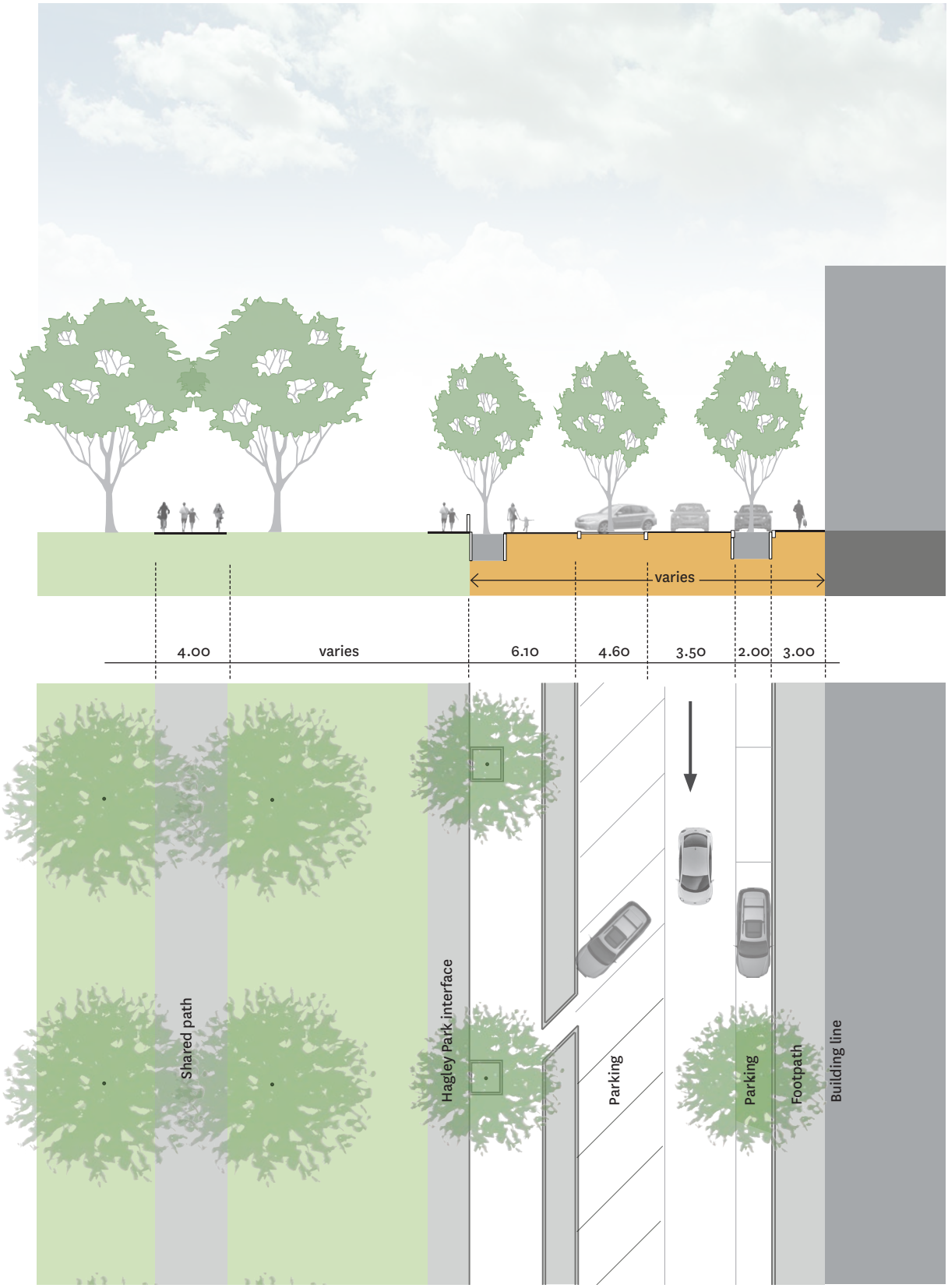
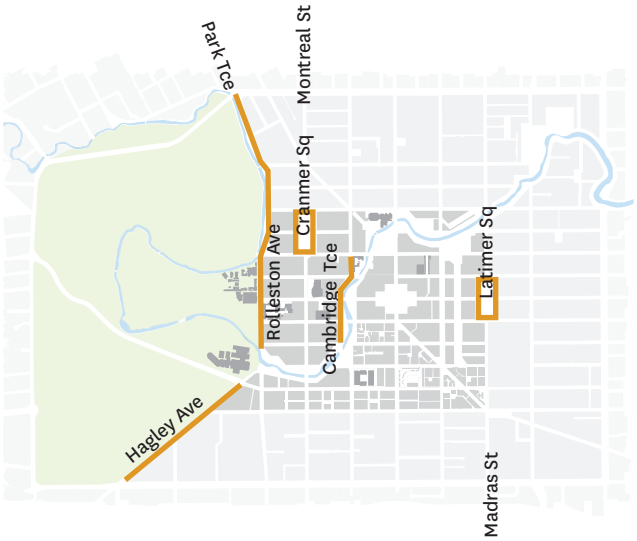


Figure 60 *Hagley Avenue, south of Selwyn Street*

STREETS ADJACENT TO OPEN SPACES

Cambridge and Park terraces, Rolleston and Hagley avenues, and Montreal and Madras streets



Latimer and Cranmer squares

Latimer and Cranmer squares are bounded by main distributor streets to the east and local access streets to the west.

Latimer and Cranmer squares interface with Madras and Montreal streets

Features of this boundary are:

- one-way, north-bound, main distributor streets
- on-street parallel parking to both sides
- new landscaping along the eastern footpath, which extends the visual boundary of the squares
- shared path and landscaped strip to the west side.

West boundary of Latimer and Cranmer squares

Features of this boundary are:

- two-way local access streets
- street trees integrated with on-street parking
- parallel parking along built edge and right-angled parking along park edge
- no designated on-street cycle lane.

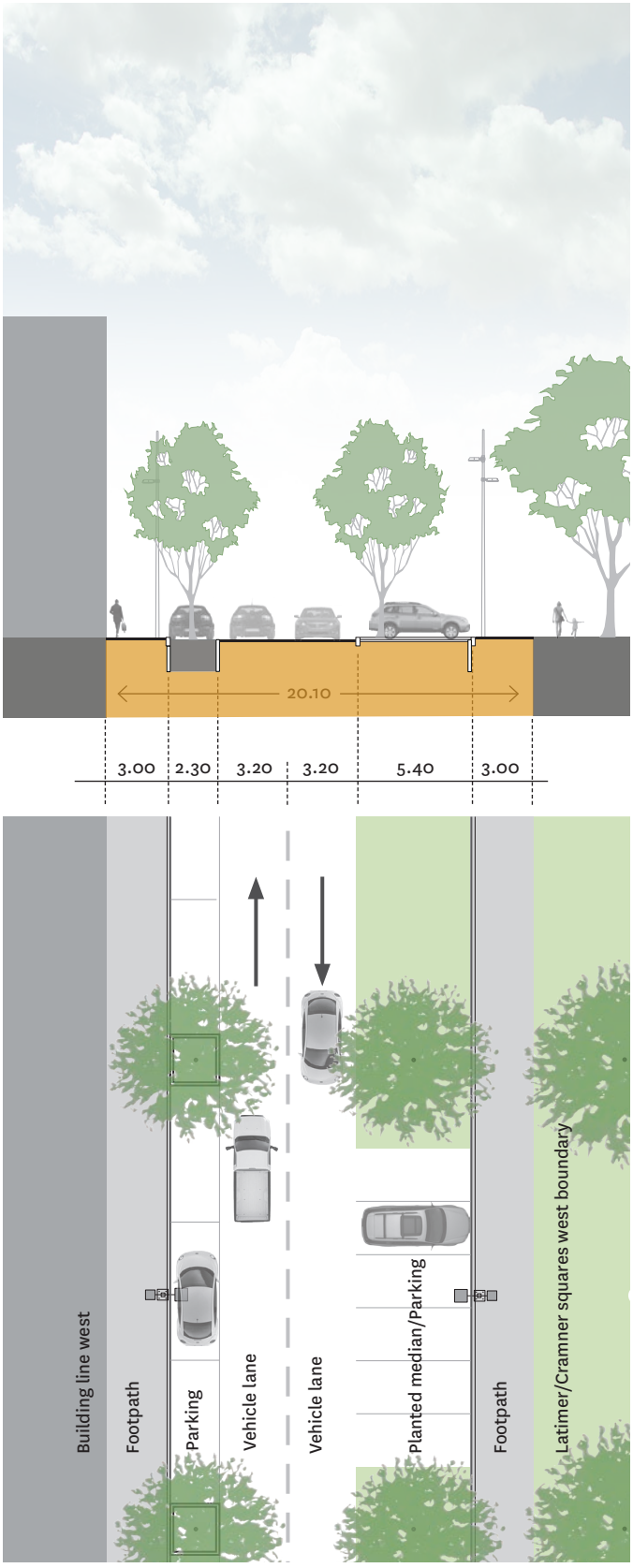


Figure 61 *Latimer and Cranmer squares, west boundary*

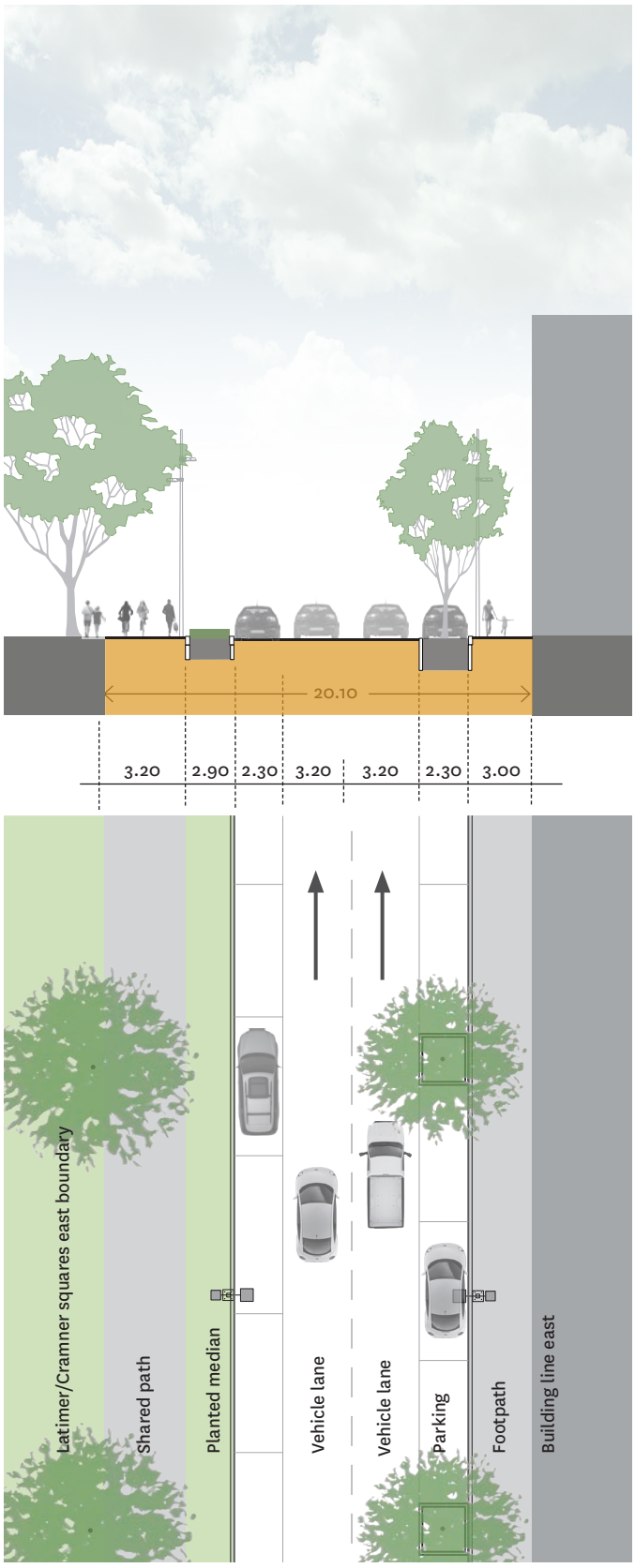


Figure 62 *Latimer and Cranmer squares, east boundary (Montreal and Barbadoes streets)*

TRAM STREETS

Worcester Boulevard (west), High Street, Armagh Street, City Mall, Rolleston Avenue

A standard concept cross-section for central city streets that accommodate a tram route is not applicable because often the alignment of the tram tracks varies within the block and from block to block. These streets therefore require customised designs to integrate the varying tram alignment and respond to specific site conditions. The illustrations in this section show some of the existing configuration of tram streets.

General key features

- Within the pedestrian-friendly, slow (maximum 30km/h) 'inner zone', tram operates at a slower speed of 6km/h
- Tourist routes
- A variety of roles and functions as identified in Accessible City's central city road use hierarchy (Figure 28, page 81)
- Worcester Boulevard, High Street and City Mall are key walking routes; Armagh Street (west) is a local access street

Context

Tram streets differ in their roles in the street network, but all benefit from the character and charm the tram brings to the public realm.

The tram route connects a series of streets, open spaces and anchor projects including the Botanic Gardens, Canterbury Museum, Arts Centre, Ōtākaro/Avon River, Cathedral Square, New Regent Street, and the Performing Arts and Convention Centre precincts.

In general, tram streets should:

- celebrate the trams and related infrastructure as assets for the street and the city
- integrate tram infrastructure to create safe, attractive and functional streets
- accommodate a clear zone of a minimum of 2 metres from the centre of tracks.

City Mall (Cashel Street between Oxford Terrace and High Street)

Characteristic tree: *Acer rubrum columnare* 'Upright red maple'

- City Mall is a pedestrian priority street (refer to page 72 for the characteristics of this type of street).
- As the central spine of the Retail Precinct, it connects a new network of laneways and courtyards.
- It is bookended by Te Papa Ōtākaro/ Avon River Precinct and the Bridge of Remembrance to the west and the future Stadium Precinct to the east.
- Figure 63 shows the existing configuration.

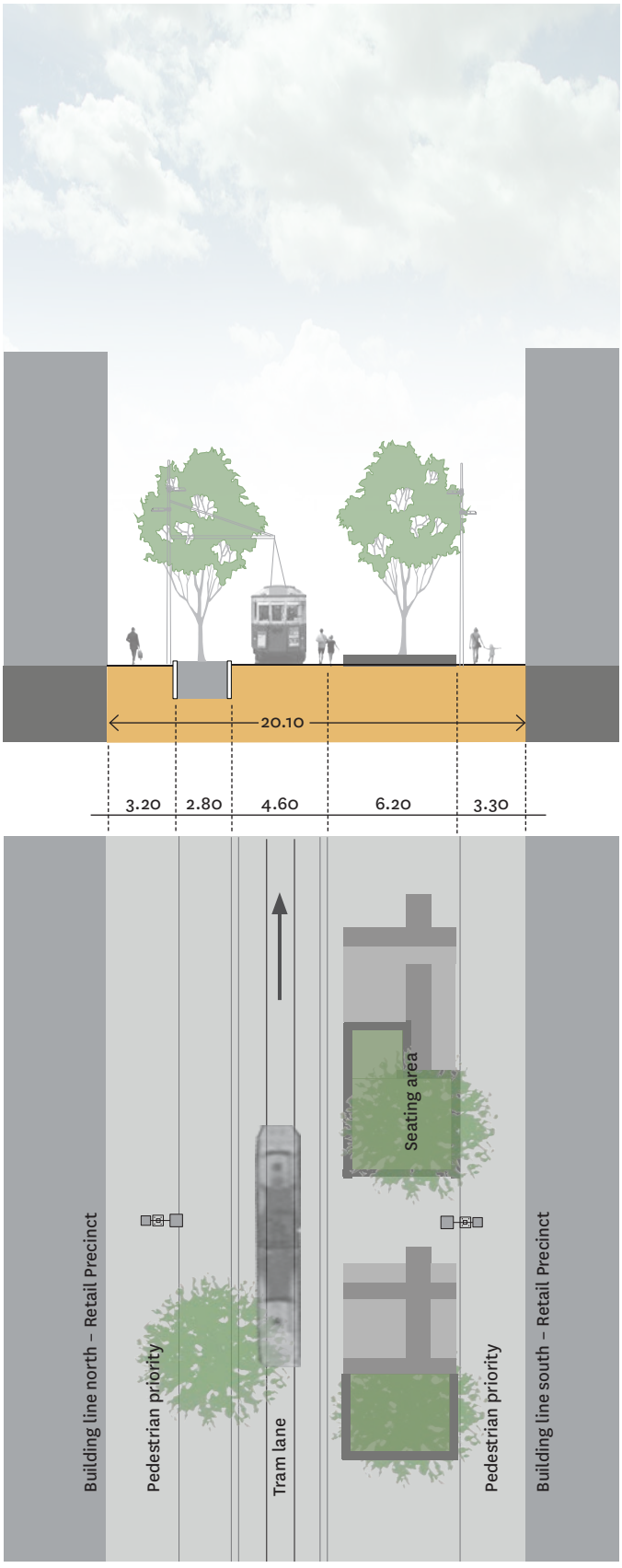


Figure 63 *B1 – Existing cross-section of City Mall*

TRAM STREETS

Worcester Boulevard (west), High Street, Armagh Street, City Mall, Rolleston Avenue

Worcester Boulevard

Characteristic tree: *Tilia platyphyllos* 'Broad-leaved lime'

Worcester Boulevard is the main east–west axis of the city grid. This civic spine links Cathedral Square to Latimer Square; the East Frame to the east of the city; and Te Papa Ōtākaro/Avon River Precinct, Council Civic Offices, the Art Gallery, the Arts Centre and the Canterbury Museum to the west of the city.

- It is a slow street and key pedestrian route.
- It provides a key cycling connection to the Major Cycleways network outside the central city.
- The section west of Cathedral Square is one-way, east-bound. This section is in a relatively good state and changes to its layout are unlikely in the short term. A mechanism to allow cyclists to ride westwards will be investigated.
- Figure 64 shows the existing configuration.

Armagh Street

Characteristic tree: *Corylus colurna* 'Turkish hazel'

- Armagh Street is a local access street.
- It connects the anchor projects of the East Frame and the Performing Arts, Convention Centre and Te Papa Ōtākaro/Avon River precincts.
- It provides a green corridor between the green spaces of the Margaret Mahy Family Playground, Victoria Square, Cranmer Square and Hagley Park.
- Figure 65 shows the potential to provide a wider footpath in the north-facing frontage of the future Performing Arts Precinct.

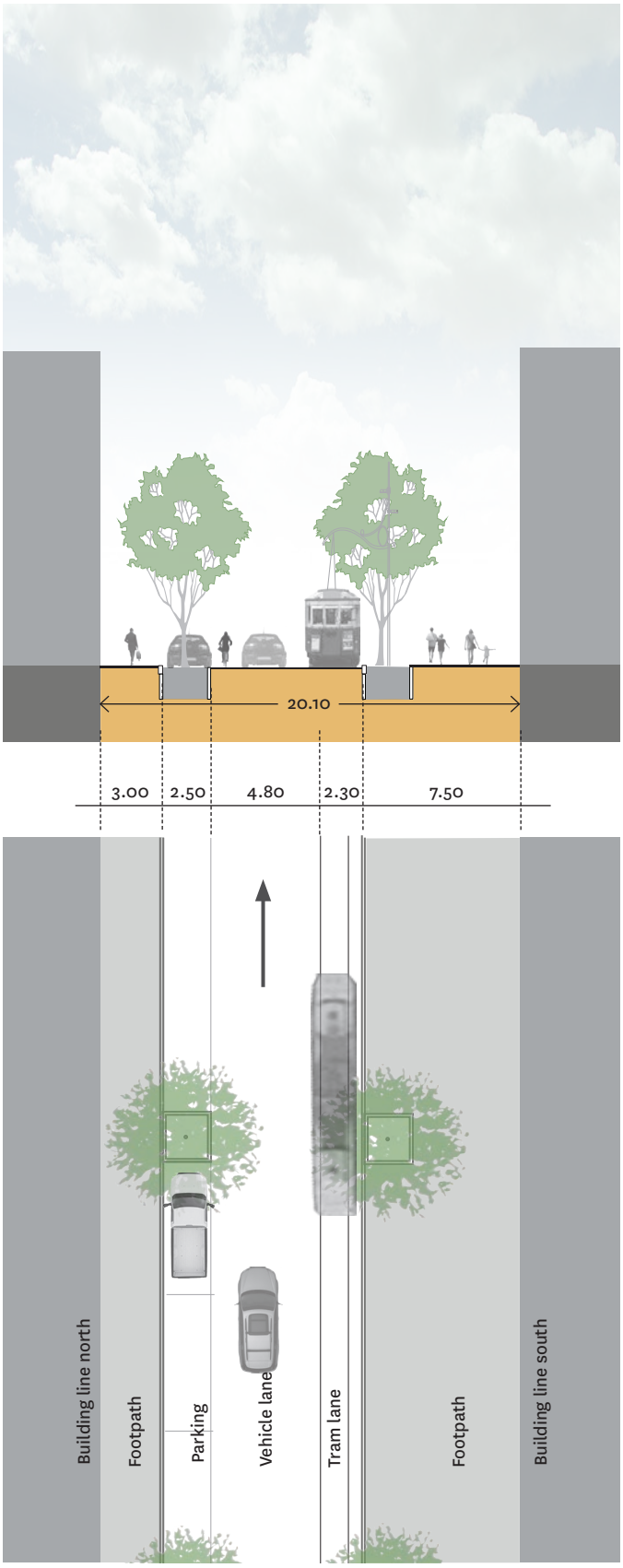


Figure 64 *B2 – Existing cross-section of Worcester Boulevard*

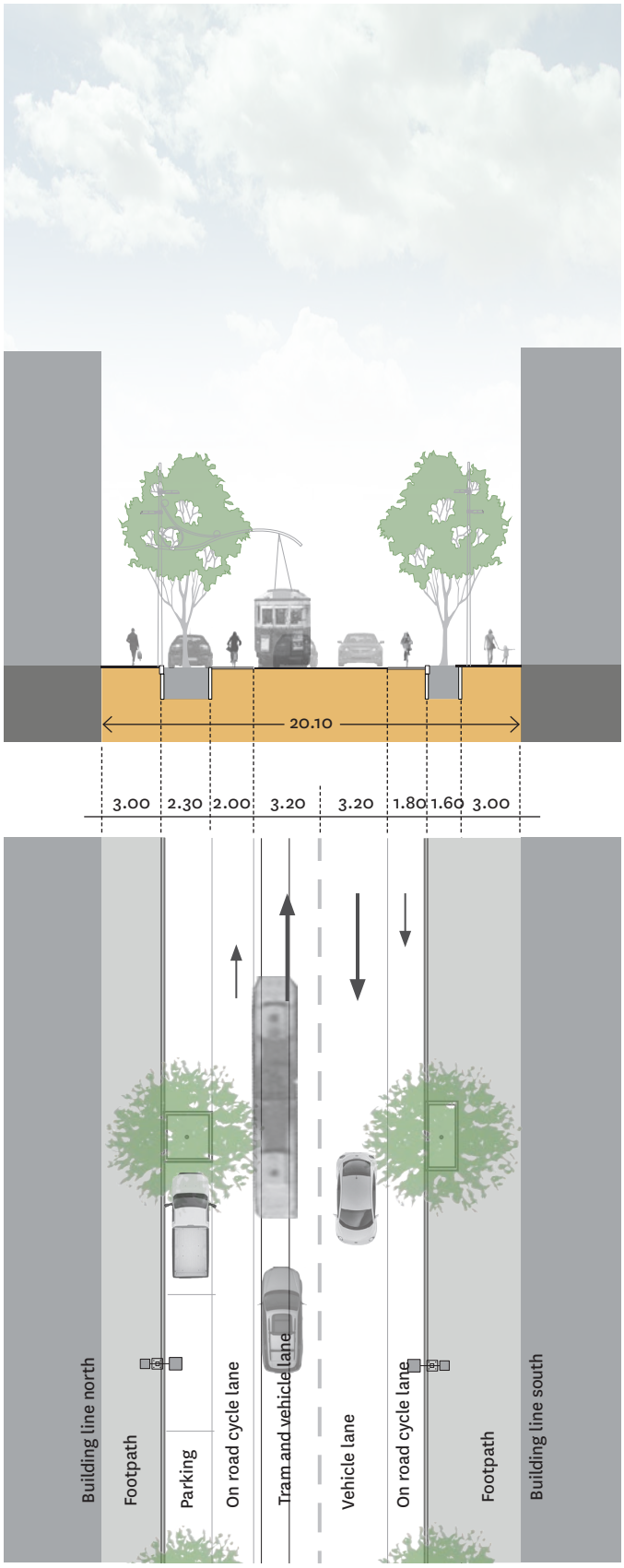


Figure 65 *B3 – Proposed cross-section of Armagh Street, east of Colombo Street*

TRAM STREETS

Worcester Boulevard (west), High Street, Armagh Street, City Mall, Rolleston Avenue

High Street

Characteristic tree: *Quercus robur fastigiata* 'Upright English oak'

- High Street is a key walking and cycling street.
- It is a pedestrian priority street between Hereford and Cashel streets (refer to page 72 for the characteristics of this type of street).
- It is a traditional shopping destination.
- Its diagonal alignment breaks the city grid and provides a civic spine to the Innovation Precinct.
- Originally established to connect the city to the port, it is a gateway street.
- The view to the south frames the Port Hills.
- It is bookended to the south by the CPIT campus.
- Figures 66 and 67 show the existing configuration.

Other tram streets

- **Oxford Terrace:** refer to page 126
- **Lichfield Street:** refer to page 128
- **Rolleston Avenue:** refer to page 136

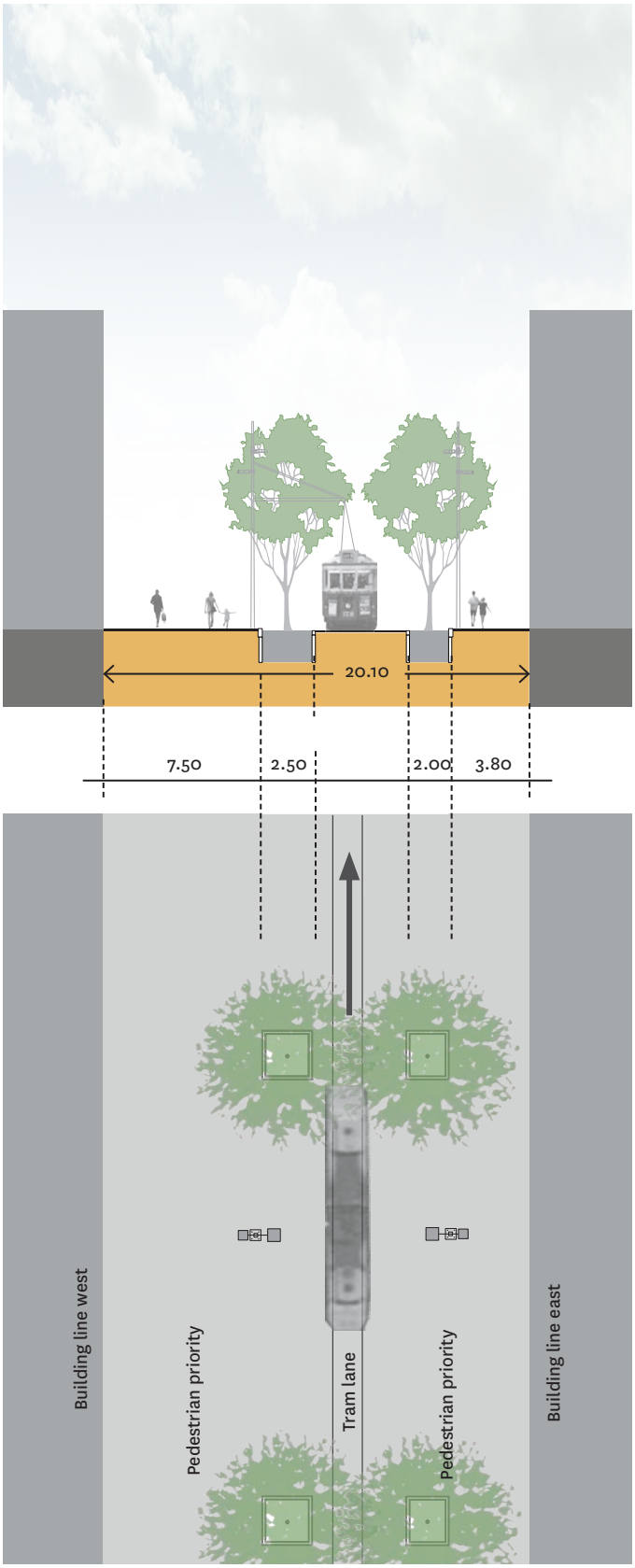


Figure 66 *B4 – Existing cross-section of High Street north of City Mall*

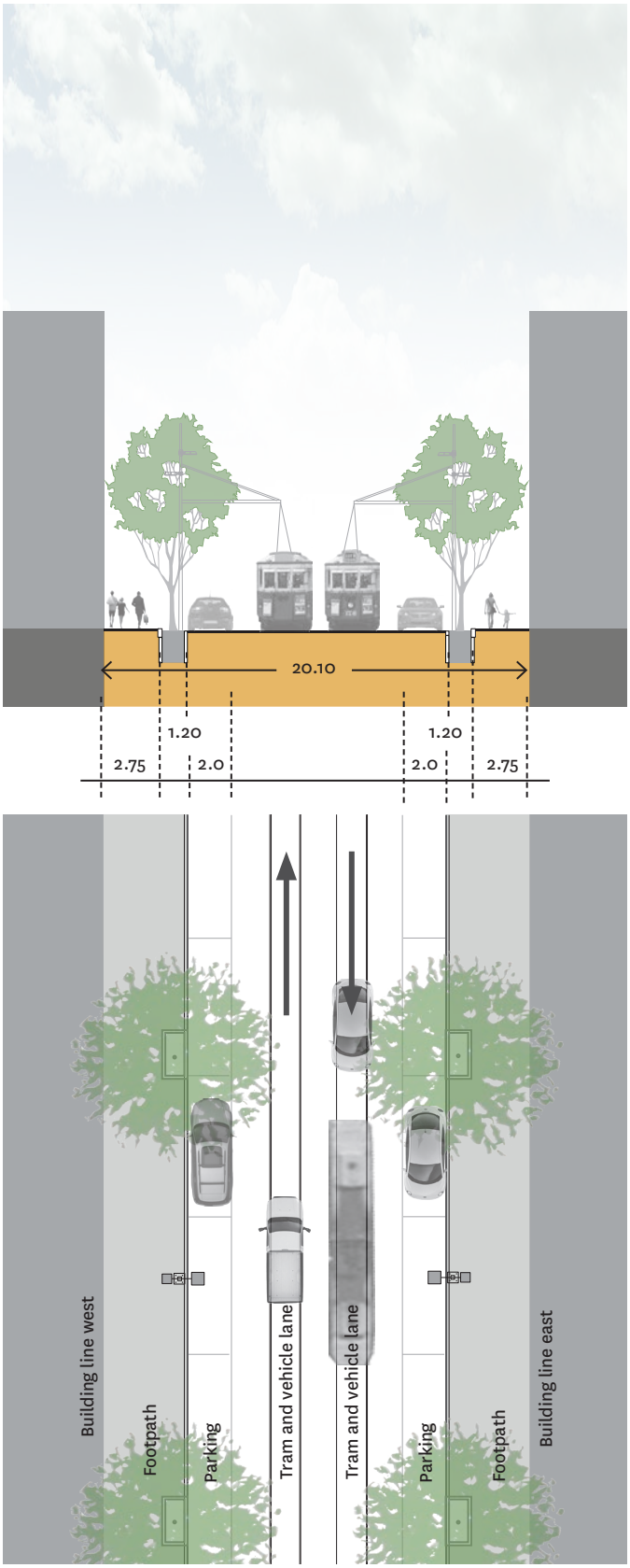


Figure 67 *B5 – Existing cross-section of High Street south of Tuam Street*

SOUTH FRAME

The Greenway

Key features

- New mid-block east–west pedestrian priority or shared streets (refer to page 72 for descriptions of these street types)
- Generously landscaped corridor
- 9 to 11 metres wide

Context

The Greenway is a core component of the new public realm network to be delivered in the South Frame. It will provide an east–west green corridor along the South Frame between the Innovation and Health precincts. The Greenway will provide for onward connections to Hagley Park, Te Papa Ōtākaro/Avon River Precinct and the East Frame.

The layout of the Greenway will vary from block to block to reflect each block's distinctive features. Figure 68 provides an example of how the corridor may be laid out. The elements that will provide cohesiveness to this entire corridor include:

- a design language and material palette of an industrial aesthetic, referencing the South Frame industrial tradition
- use of horizontal and vertical landscaping elements to emphasise the green character of the corridor
- integrated seating and lighting that accentuate the longitudinal nature of the space
- kerb build-outs at intersections with north–south streets to ease crossing
- active building frontages and courtyards fronting the corridor. Guidance on creating high-quality building frontages is provided on pages 54–57.

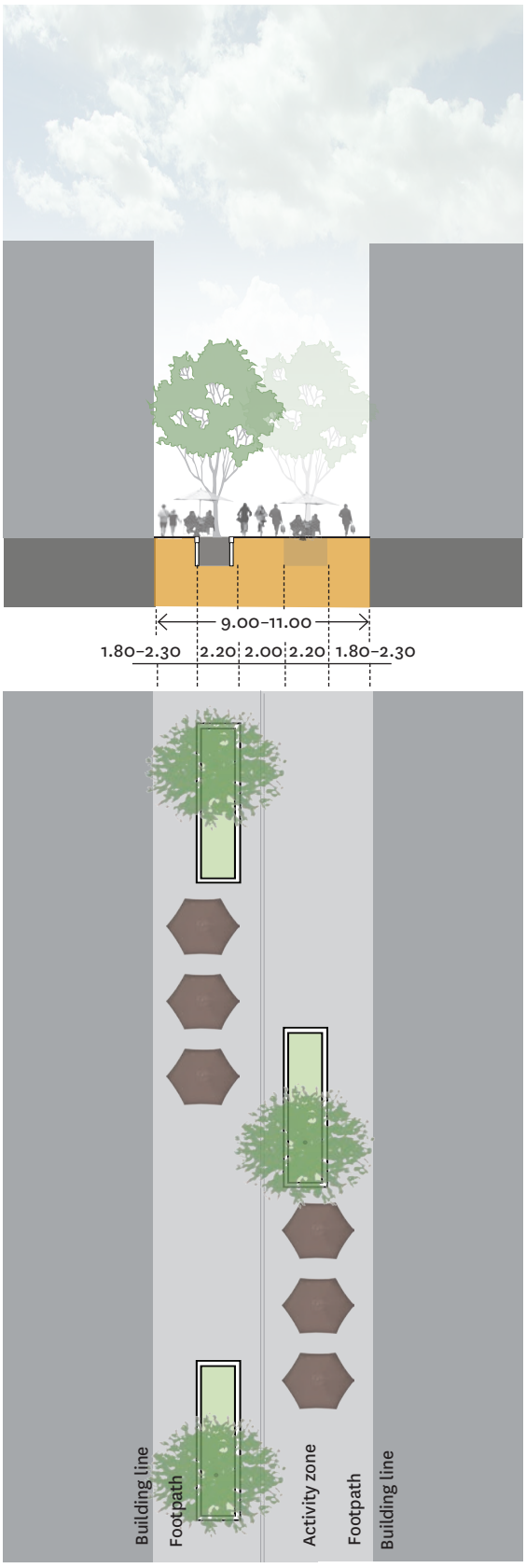


Figure 68 *South Frame – Greenway*

SOUTH FRAME

South Frame shared streets

Key features

- New mid-block north–south shared streets (refer to page 72 for description of this street type)
- Narrow streets, between 6.5 and 12.5 metres wide.
- Provide integrated seating and landscape strips on either side of the street corridor, where possible.

Context

The shared streets in the South Frame are new north–south streets between Tuam and St Asaph streets. They will improve permeability and access to the South Frame blocks and provide access to the Greenway. Design elements common to these streets are:

- continuity to the material palette of industrial aesthetic used in the Greenway
- integrated spill-out zones for cafés and other street activities
- design that gives way to and prioritises the 'east–west' movement along the Greenway
- intersection design that maintains east-bound traffic flow along Tuam and St Asaph streets
- well-defined building corners that contribute to the definition of the street and its character. Visibility and safety at the corners are provided though glazed treatments. Building splays should be avoided.

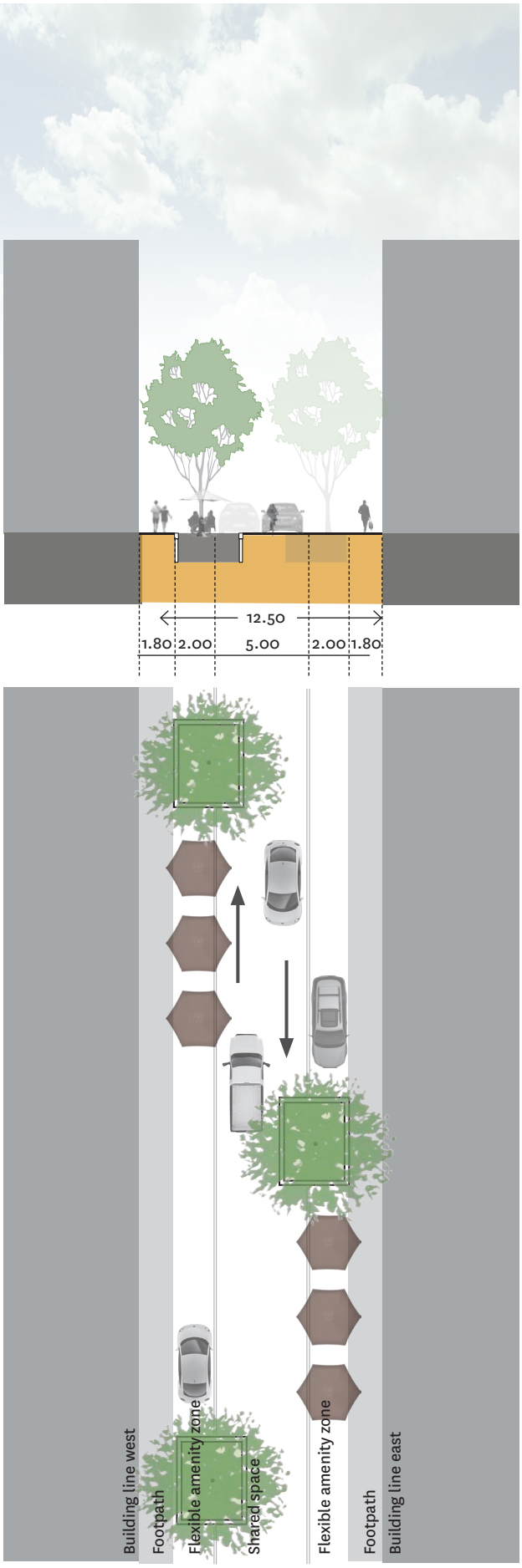


Figure 69 *South Frame two-way shared street (indicative)*

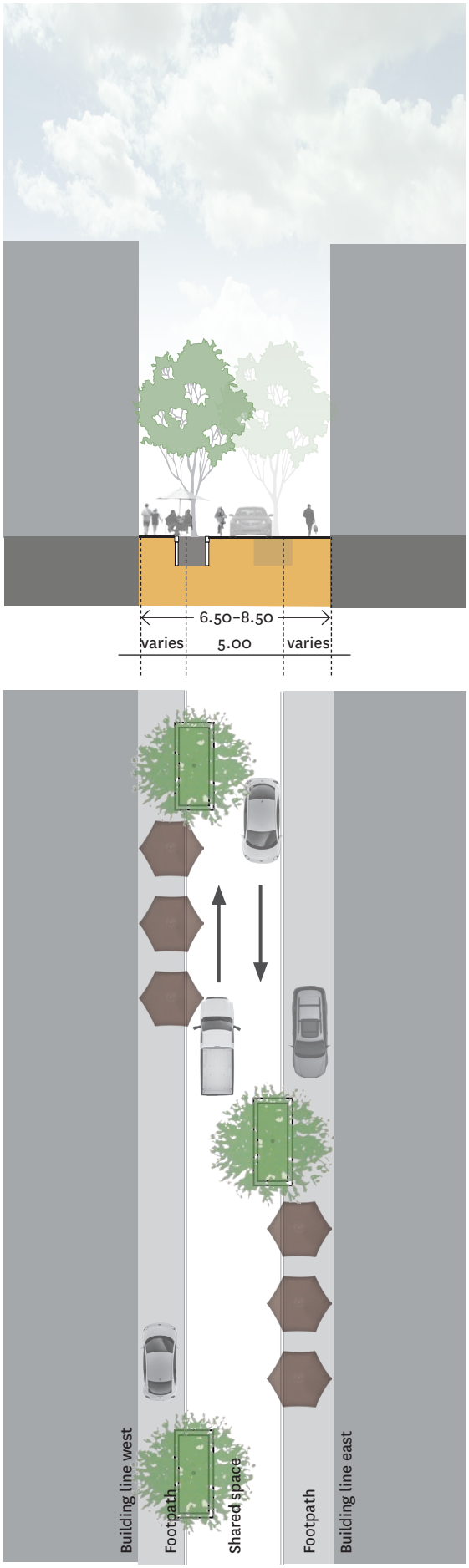


Figure 70 *South Frame two-way shared street (indicative)*

SOUTH FRAME

Innovation Precinct lanes

Key features

- Mid-block connections in the form of a shared street (refer to page 72 for description of this street type)
- Narrow streets, between 6.8 and 7.3 metres wide
- Taller than wide with access to the elements and views to the sky

Context

This group of lanes is an important element defining the character and amenity of the Innovation Precinct. They will reflect the higher density of development anticipated in the area, create opportunities for urban life and improve pedestrian connectivity and access. Vertical greening elements will be encouraged as a distinctive design element. These lanes will complement the emerging network of lanes in the central city, which is illustrated in Figure 27 (page 77).

This guidance should be read in conjuction with the general guidance developed in the *Central City Lanes Report*, which can be accessed at: www.ccc.govt.nz/urbandesignguides

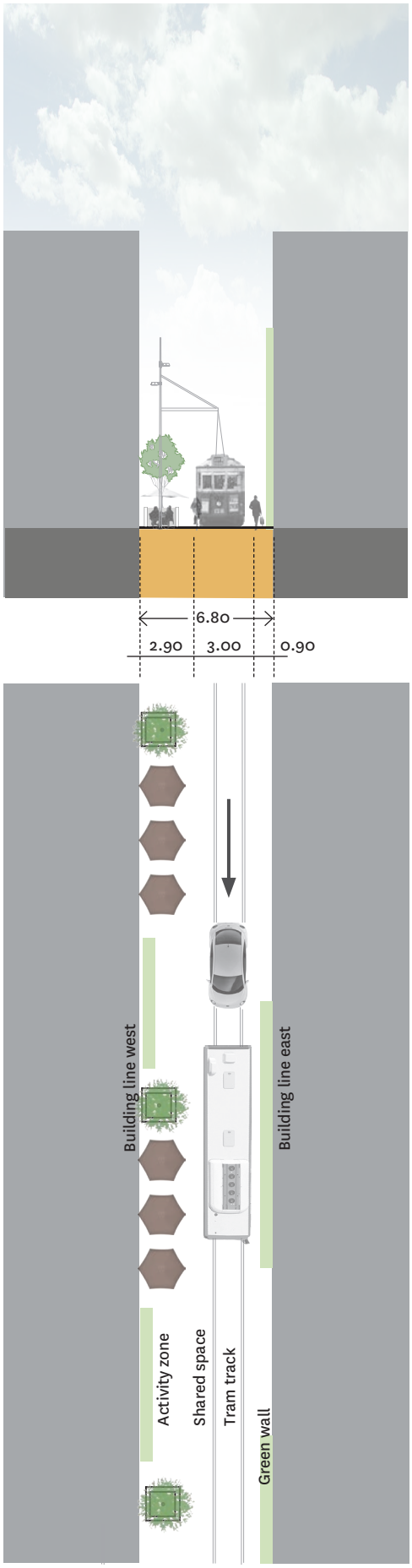


Figure 71 *Poplar Street, one-way lane*

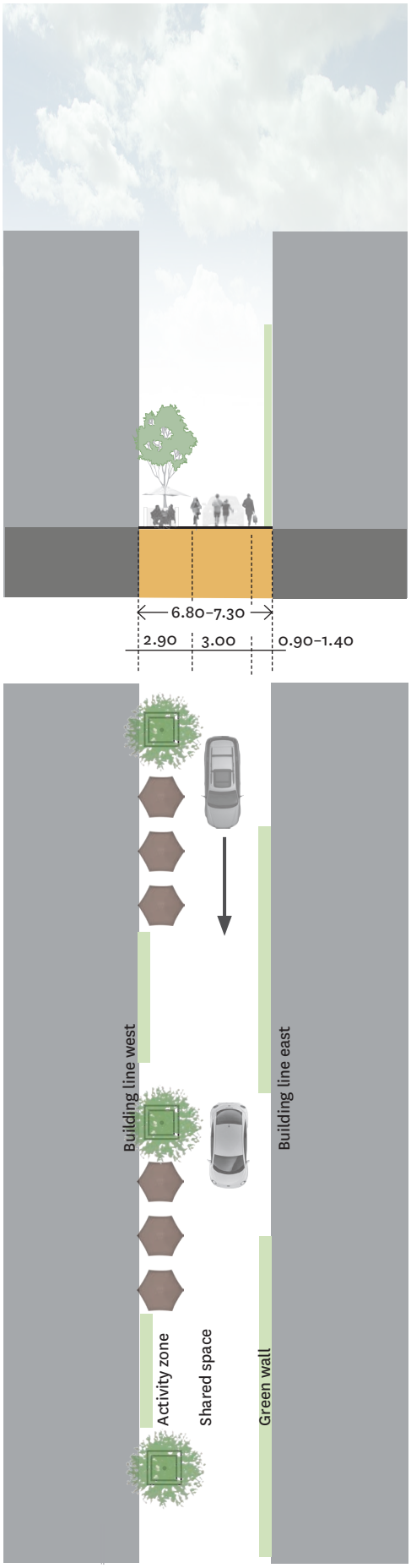


Figure 72 *Innovation Precinct, one-way lane*

THE AVENUES

Moorhouse, Bealey and Fitzgerald avenues

Key features

- Major arterial routes primarily for vehicle movement around the perimeter of the city centre
- Provide key connections to main distributor streets into the central city
- Two-way streets, mostly three lanes each way
- Key routes for moving vehicles
- Typically 40m-wide corridor, boundary to boundary
- Existing layout allows for on-road cycle lanes
- Large-scale trees of varied species

Context

The avenues offer the opportunity to move around the city easily and access central city streets at multiple locations. They have a key role in protecting the pedestrian and cycle amenity of a number of streets in the central city by carrying large traffic volumes that otherwise would go through the city Core. In future, some movement restrictions will be progressively proposed at intersections along the avenues to maximise efficient connections to key distributor streets and manage traffic pressures on other local streets into the central city.

While the avenues should provide for efficient traffic movements, their character and role should not be limited by this important function. As the point of entry to the central city, they also provide the first impression of central Christchurch and should showcase what the city is all about.

Currently these wide streets with significant traffic flows cater well for vehicles, but amenity for pedestrians and cyclists is limited. The avenues present a great opportunity to substantially improve the urban amenity for pedestrians, cyclists and the uses that front them.

These opportunities can be realised through introducing street trees to create a ‘green belt’ around the central city and reviewing the space allocation of the existing carriageways. Opportunities to improve key cycle and pedestrian connections across the avenues will inform future enhancements. This is a significant undertaking that requires careful consideration to effectively resolve all the requirements for these streets. Figure 73 indicatively illustrates the general existing conditions along these streets.

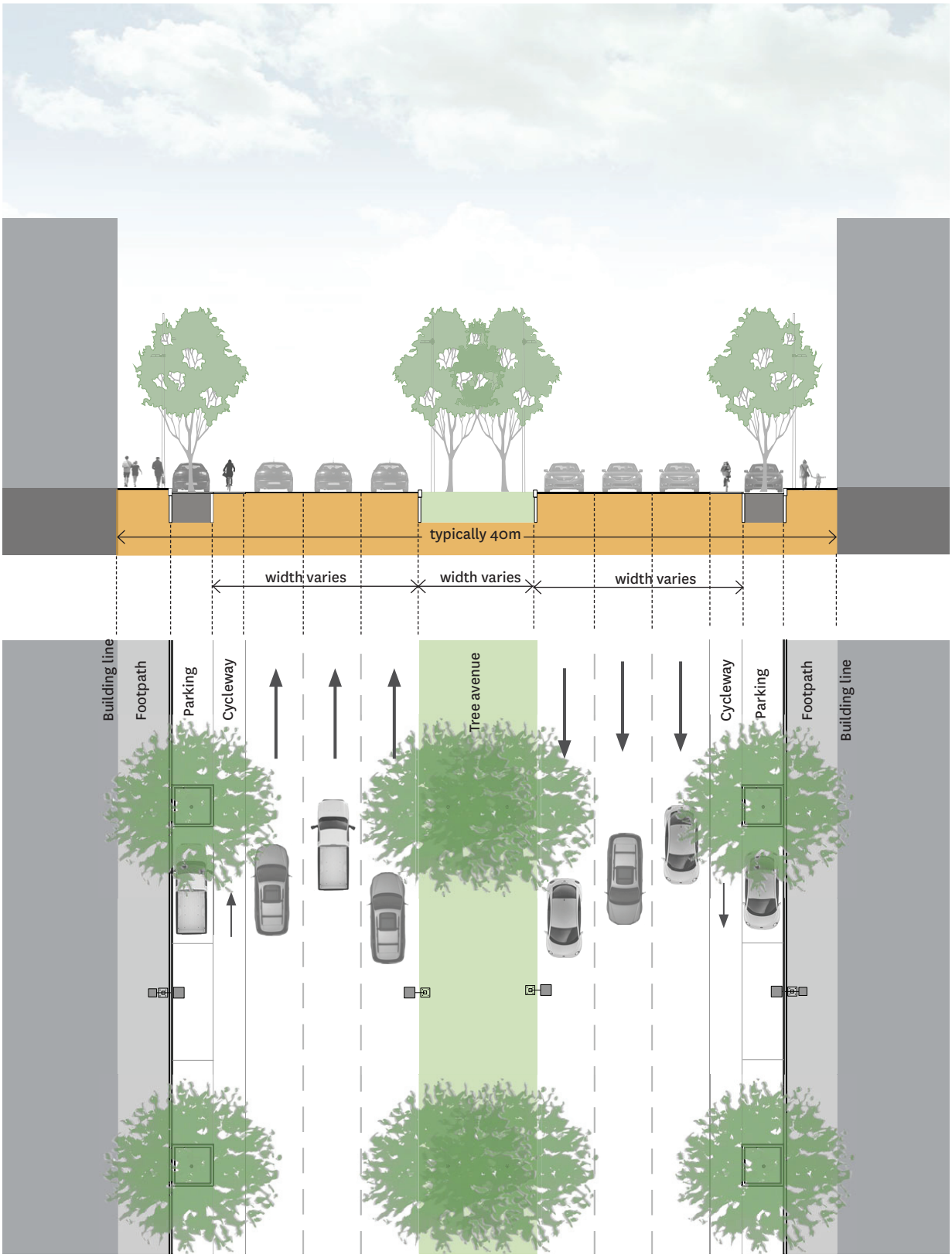


Figure 73 *Moorhouse, Bealey and Fitzgerald avenues – typical existing cross-section*

“Architecture is about public space held by buildings.”

Richard Rogers

06

ANCHOR PROJECTS
He Hinonga Matua

Overview

This chapter focuses on the public realm component of the anchor projects in the central city.

The anchor projects are each at a different stage of the delivery process, which covers planning, design, approval and construction. To reflect this divergence, this chapter provides two kinds of information.

- For each anchor project that is at an advanced stage, it describes the main features of the project's public realm.
- For each anchor project that is at an early stage or is yet to commence, it identifies key objectives that will inform the design of public realm areas within the project.

The information has been prepared to:

- explain how the anchor projects relate to existing and proposed public realm areas across the central city, in particular to those areas that are adjacent to each of the anchor projects
- identify ways in which each anchor project will contribute to the vision for the central city public realm network as outlined in Chapter 1.

The information for each anchor project identifies important relationships with:

- adjacent gathering places, as explained in Chapter 4
- the immediate street network, as illustrated in Chapter 5
- other anchor projects, as described in this chapter.

Guidance in this chapter should be read in conjunction with:

- the **design criteria** for public realm projects outlined in Chapter 3
- the **design brief** prepared independently for each anchor project.

For ease of use, references to specific pages are provided throughout the text.

Legend

ANCHOR PROJECTS

1. The Square
2. Convention Centre Precinct
3. Performing Arts Precinct
4. Central Library
5. Te Papa Ōtākaro/Avon River Precinct
6. East Frame Residential Precinct
7. The Stadium Precinct
8. Innovation Precinct
9. Retail Precinct
10. Bus Interchange
11. Justice and Emergency Services Precinct
12. South Frame
13. Health Precinct
14. Metro Sports Facility
15. Earthquake Memorial

GATHERING PLACES

- Parks
- Squares
- Plazas
- Courtyards

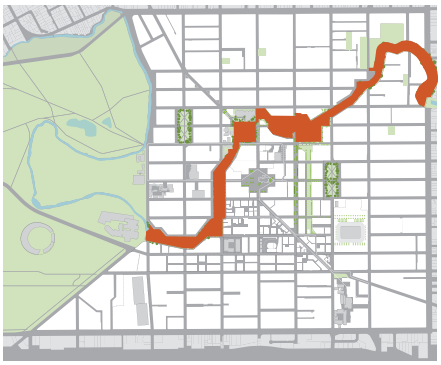
- Pedestrian priority streets
- Shared streets
- Lanes

Figure 74 *The Recovery Plan anchor projects*

Avon River Precinct

Te Papa Ōtākaro

Te Papa Ōtākaro/Avon River Precinct anchor project aims to help re-establish a healthy river, reconnect people with the river and better integrate the river with the surrounding city centre.



Context

The Ōtākaro/Avon River is a unique feature that traverses the central city.

The visual contrast between its meandering course and the orthogonal grid is a key characteristic of the central city's urban form. Its landscape character and cultural and built heritage are important elements of the cultural and aesthetic identity of central Christchurch.

Te Papa Ōtākaro/Avon River Precinct interfaces with a number of other anchor projects including the Health Precinct in the South Frame; the Justice and Emergency Services, Retail and Convention Centre precincts; and the East Frame residential precinct.

The design proposal

The design of Te Papa Ōtākaro/Avon River Precinct builds on Christchurch's 'Garden City' heritage, enhances the ecological values of the river and celebrates the city's Māori and European heritage.

Ngāi Tūāhuriri narratives are woven into the Precinct through varied design strategies including the naming of places, the selection of native aquatic and terrestrial plant species, and interpretative and artistic interventions.

The river is the organising element of the Precinct. The design defines four continuous *journeys* along its length, as follows.

The Promenade: As the most urban section of the corridor, it provides the interface between the city and the true right side of the river corridor largely in the form of shared streets (refer pages 74–75).

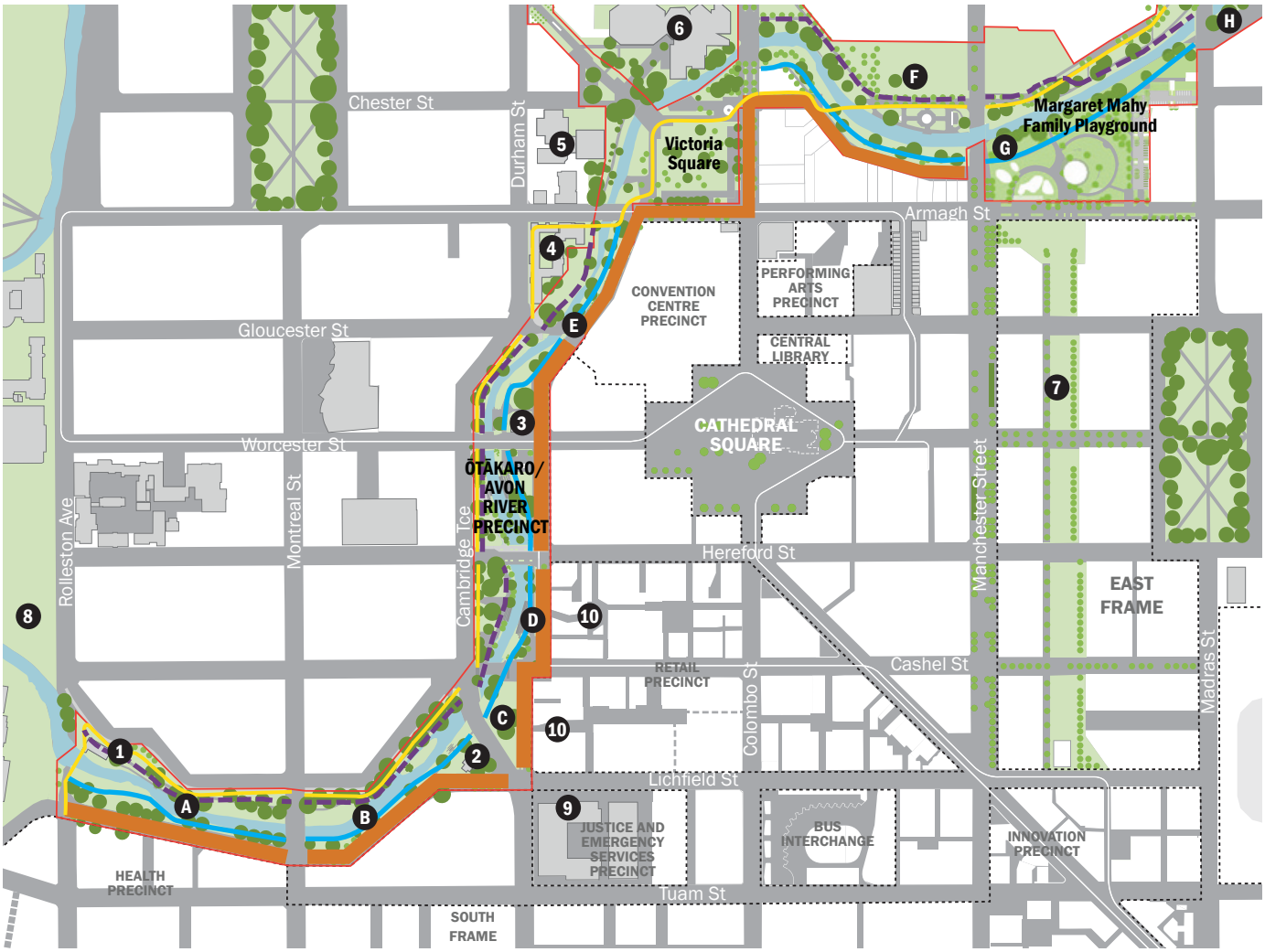
The Promenade follows the existing alignment of Oxford Terrace. It provides a major address to the Convention Centre Precinct, the Retail Precinct and the South Frame's Health Precinct.

Ōtākaro/Art by the river walk: This journey follows the river's meandering alignment and topography, linking artworks created to highlight the unique histories and features of the city. It provides a less formal route along the east bank, and offers formal and informal opportunities to sit and enjoy the riverbank.

The left bank: This journey is the counterpart to the **river walk**. It provides a meandering and informal route for pedestrians to enjoy the lawns, shrub planting and mature trees.

The cycle path: The cycle path is generally located on the external side of the left bank. It provides a continuous and enjoyable recreational cycling route which connects with the city's Major Cycleways network. The Christchurch Major Cycleways Programme is explained on pages 86–89.

Figure 75 *Artist's impression, the Promenade*



Legend

JOURNEYS

- The Promenade
- Ōtākaro/Art by the river walk
- The left bank
- Shared path

ZONES

- A. Antigua Boat Sheds
- B. Earthquake Memorial
- C. Friendship Corner
- D. The Terraces
- E. Convention Centre Precinct
- F. North Frame
- G. Margaret Mahy Family Playgound
- H. Avon Loop

EXISTING BUILDINGS

1. Antigua Boatsheds
2. Regatta on Avon
3. Our City O-Tautahi
4. Canterbury Provincial Council Buildings
5. Law Courts
6. Town Hall

RELATED PUBLIC PLACES

7. East Frame Central Park
8. Botanic Gardens
9. Justice and Emergency Services Precinct Plaza
10. Retail Precinct lanes

RELATED ANCHOR PROJECTS

OTHER

- Tram route
- Other significant buildings

Figure 76 *Te Papa Ōtākaro/Avon River Precinct*

Avon River Precinct

Te Papa Ōtākaro

The river corridor and its journeys are punctuated by a series of distinct zones.

Antigua Boat Sheds: The area between Antigua and Durham streets extends the park character of the Botanic Gardens and enhances the heritage setting of the Antigua Boat Sheds.

Canterbury Earthquake National Memorial: The Memorial will be located along the stretch between Montreal Street Bridge and Rhododendron Island. It will be the site where small groups or individuals can pay respects to those who lost their lives or were injured in the 2010–2011 earthquakes. It will be a place to reflect, remember, acknowledge and celebrate.

Friendship Corner: Where Cashel Street meets the Promenade (Oxford Terrace) and adjacent to the Retail Precinct, the design consolidates a commemorative space that integrates the trees representing Christchurch's sister cities.

The Terraces: West of the Retail Precinct, this section of the Promenade is designed as a hospitality destination. A prime riverfront location, it is set to become a social hub in the central city. The design provides opportunities to touch the water and integrates a refurbished Bridge of Remembrance.

Convention Centre Precinct: The continuation of **the Promenade** provides an iconic Christchurch location between Worcester Bridge and Armagh Street for events hosted in the city's new Convention Centre Precinct.

Victoria Square: Formerly known as Market Square or Market Place, it was the centre of town life until the 1870s. It sits in a prominent location at the confluence of a number of major existing and proposed movement routes. Victoria Square bookends the southeast end of Victoria Street.

Victoria Square provides an important address to the future Convention Centre precinct along Armagh Street. Victoria Square will continue to be a natural gathering place in the central city.

Margaret Mahy Family Playground: The Family Playground is a play space in a regional catchment of approximately 1.5 hectares which will offer child- and family-focused play and recreational activities.

The design is inspired by the Māori name for the river – 'Ōtākaro' – and the traditional activity of poi swinging. In te reo Māori (Māori language), 'tākaro' is a verb meaning play. Both these elements are manifest in the design as a path in the form of a poi playfully wending through the site. The design references typical Canterbury landscapes including wetlands, costal dunes and highlands.

The Family Playground connects Te Papa Ōtākaro/Avon River Precinct to the East Frame Central Park.

North Frame: On the true left bank of the river, the North Frame extends from Colombo Street to the east of Manchester Street. The design draws on a collection of traditional elements and historical items located in the area, including the Edmonds Band Rotunda and the Avenue of Poplars.

The Avon Loop: Along this stretch east of Madras Street to Fitzgerald Avenue, the design takes a naturalistic approach. It strengthens the cultural significance of the area through native planting and an enhanced landscape.

Figure 77 *Artist's impression, the Promenade*

Figure 79 *Artist's impression, the river walk (Avon Loop)*

Figure 78 *Artist's impression, the Promenade (Retail Precinct)*

Figure 80 *Artist's impression, Margaret Mahy Family Playground*

Canterbury Earthquake National Memorial

He Whakamaumaharatanga o te Rū Whenua

The Canterbury Earthquake National Memorial will provide a place where people can reflect, and where they can honour the people who died as well as those who were injured in the Canterbury earthquakes.

Context

The Canterbury Earthquake National Memorial will be located along the Ōtākaro/Avon River in the stretch between Montreal Street Bridge and Rhododendron Island. This location was selected because it is easily accessible and can accommodate one person seeking quiet reflection or ceremonial events with many people. It also fits well with the wishes from families of people who died in the February 2011 earthquake and those who were severely injured. Feedback showed they wish for the Memorial to incorporate water and greenery.

The Memorial will be integrated with the design for Te Papa Ōtākaro/Avon River Precinct. A meandering pathway along the left river bank will link the Memorial to the Bridge of Remembrance in the north and to the Botanic Gardens and Hagley Park in the west.

The design

The design of the Canterbury Earthquake National Memorial was selected through an open call for ideas process named *Ideas to Remember.* The selection process involved feedback from the general public, the bereaved families, the severely injured, recovery leaders and key stakeholders.

Ideas to Remember sought a memorial design that:

- honours the 185 people who lost their lives, as well as those who were injured in the earthquakes
- remembers and gives thanks to the many organisations from around the country and around the world that assisted in the rescue and recovery
- recognises the shared human experiences of those involved in the events, and the effects of the earthquakes on the city and Canterbury, including the loss of many treasured heritage buildings, as well as the familiar everyday cityscape
- provides a space for hosting formal civic events, such as an annual memorial gathering on 22 February
- allows for reflection and contemplation by small groups or individuals on a day-to-day basis
- becomes the anchor point in the central city and Canterbury for remembering the impact of the earthquakes.

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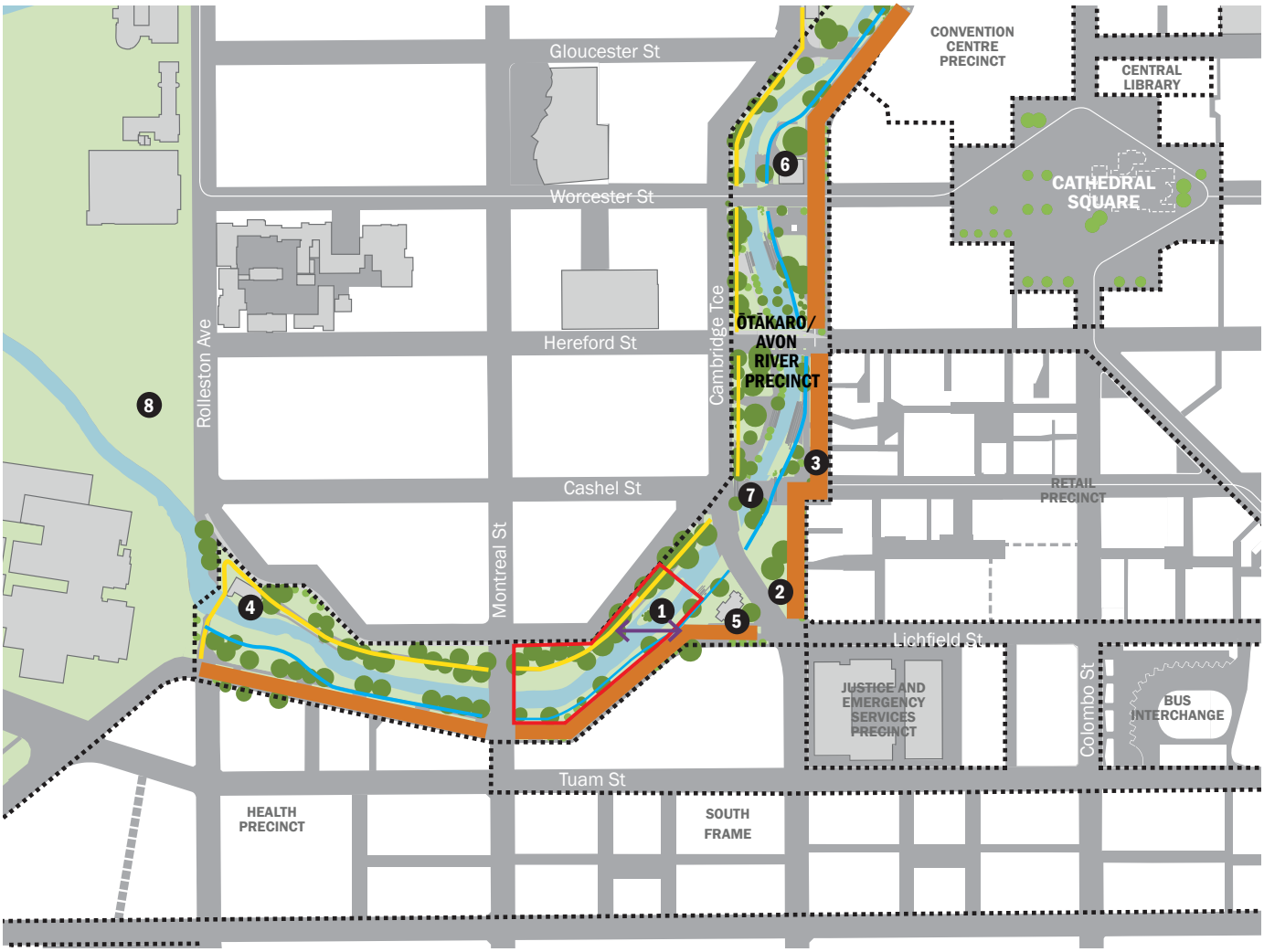
05 06 07



Legend

- Earthquake Memorial site
1. Rhododendron Island
- Potential link (indicative)

TE PAPA ŌTĀKARO/ AVON RIVER PRECINCT

- The Promenade
- Art by the river walk
- Shared path

2. Friendship Corner
3. The Terraces

EXISTING BUILDINGS

4. Antigua Boat Sheds
5. Regatta on Avon
6. Our City O-Tautahi

RELATED PUBLIC PLACES

7. Bridge of Remembrance
8. Botanic Gardens

RELATED ANCHOR PROJECTS

OTHER

- Tram route
- Other significant buildings

Figure 81 *Canterbury Earthquake National Memorial*

East Frame Central Park

Ngā Wāhanga

The vision for the East Frame Central Park is to create a contemporary and flexible linear open space that builds on Christchurch's urban form and Ngāi Tūāhuriri values. The park will function as a connector through the east of the central city.

Context

The Central Park will be the third-largest open space in the central city, creating a significant extension of the city's green spaces to the east of the Core. It will also enable pedestrian and cycle connections between Te Papa Ōtākaro/Avon River Precinct and the Innovation Precinct and beyond.

This linear park will be flanked by new medium-density residential development on both sides, providing an open space spine for the East Frame. The park has an important role in supporting a new model for inner city living that is attractive, convenient and sustainable.

The design proposal

The park extends the Ōtākaro/Avon River corridor into the structure of the city grid. Its design creates an ordered and constructed landscape which contrasts with the organic alignment of the river.

Sustainable design strategies form an integral part of the functional, ecological and visual amenity of the park. They provide a contemporary expression of Ngāi Tūāhuriri cultural values and include stormwater management, natural habitat creation, and food production (mahinga kai). These strategies are expressed in the park through rain gardens, the planting selection and spaces for future community gardens.

The linear park has the following distinct components.

North–south links: This group of shared streets located on the western edge of the park provides a pedestrian and cycle link between Ōtākaro/Avon River and the South Frame. These streets also allow for local vehicular access to the new development parcels on the west side of the park.

Rain gardens: A series of linear swale gardens along the park's length will collect, clean and hold water from the adjacent catchment area.

Green rooms: These open, flexible spaces will be able to support a variety of recreational activities.

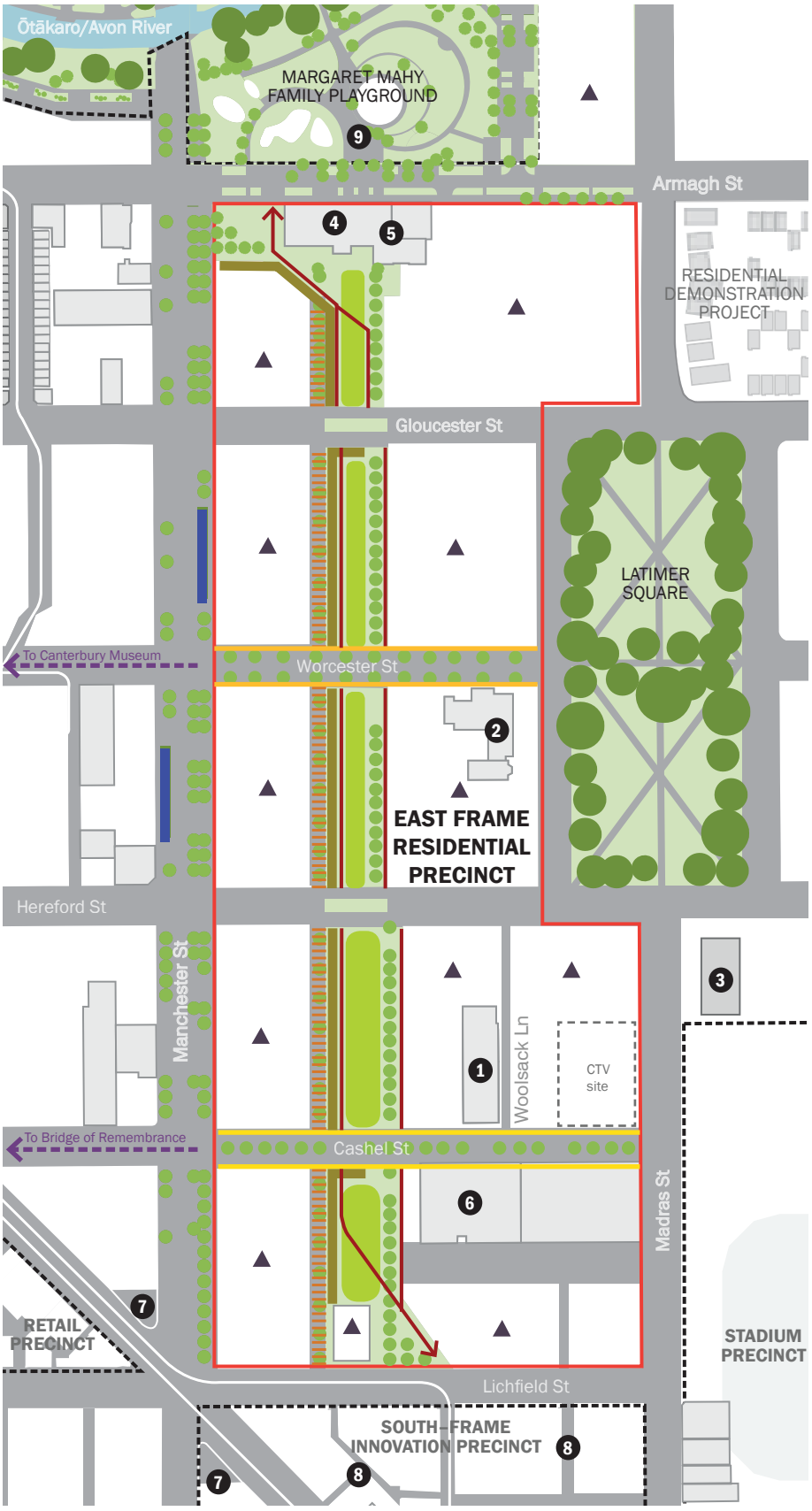
Parkland walks: Slow, north–south paths will stretch along the east and west sides of the park.

Civic links: These two east–west streets of distinctive character are:

- **Worcester Street**, which will extend the civic route between the Canterbury Museum and Cathedral Square to Latimer Square
- **Cashel Street**, which will extend the character of City Mall to the east, linking Te Papa Ōtākaro/Avon River and Retail precincts to the future Stadium Precinct.

Trees: With various arrangements of exotic and native species, the trees define the spaces along the park and provide bird habitat, shelter, shade and seasonal interest.

Figure 82 *Artist's impression, East Frame Central Park*



Legend

- North–south links
- Rain gardens
- Green rooms
- Parkland walks
- Civic links
- Trees
- Future medium-density residential

EXISTING BUILDINGS

1. Les Mills
2. The Christchurch Club
3. Transitional Cathedral
4. Former Municipal Electricity Department (MED) building
5. Orion substation
6. IRD building and Cashel Chambers

RELATED PUBLIC PLACES

7. Triangular plazas
8. Innovation Precinct lanes
9. Margaret Mahy Family Playground

RELATED ANCHOR PROJECTS

OTHER

- Tram route
- Manchester Street bus super stop

Figure 83 *East Frame Central Park*

Justice and Emergency Services Precinct

Te Manatū Ture me Te Kāhui Whakamarumaru

The Justice and Emergency Services Precinct will co-house facilities for all justice and emergency services in one innovative, purpose-built complex.

Context

The Justice and Emergency Services Precinct is located in the city block bounded by Lichfield, Durham, Tuam and Colombo streets.

Lichfield Street presents the primary pedestrian entrance to the Precinct and provides a secondary vehicular access route. The Precinct benefits from ready access to the distributor road network for emergency vehicles through Durham and Tuam streets. Its proximity to Christchurch Hospital and the Health Precinct in the South Frame provides the added advantage of supporting the coordination of related acute hospital services.

This Precinct is within walking distance of a number of amenities, including Te Papa Ōtākaro/Avon River Precinct, the new Bus Interchange, the Retail Precinct and the future network of public spaces in the South Frame. An estimated 2,000 people will work in or use the Precinct daily, stimulating recovery by supporting retail and commercial activity in the area.

The design proposal

The design of the Precinct comprises three buildings organised around a central courtyard. The pedestrian entries and courtyard are elevated one level above the ground to allow for internal basement connections between buildings.

The buildings are set back from the site's boundary. Receding the buildings enables a smooth transition from the street to the entrance level and creates a special setting for this civic building.

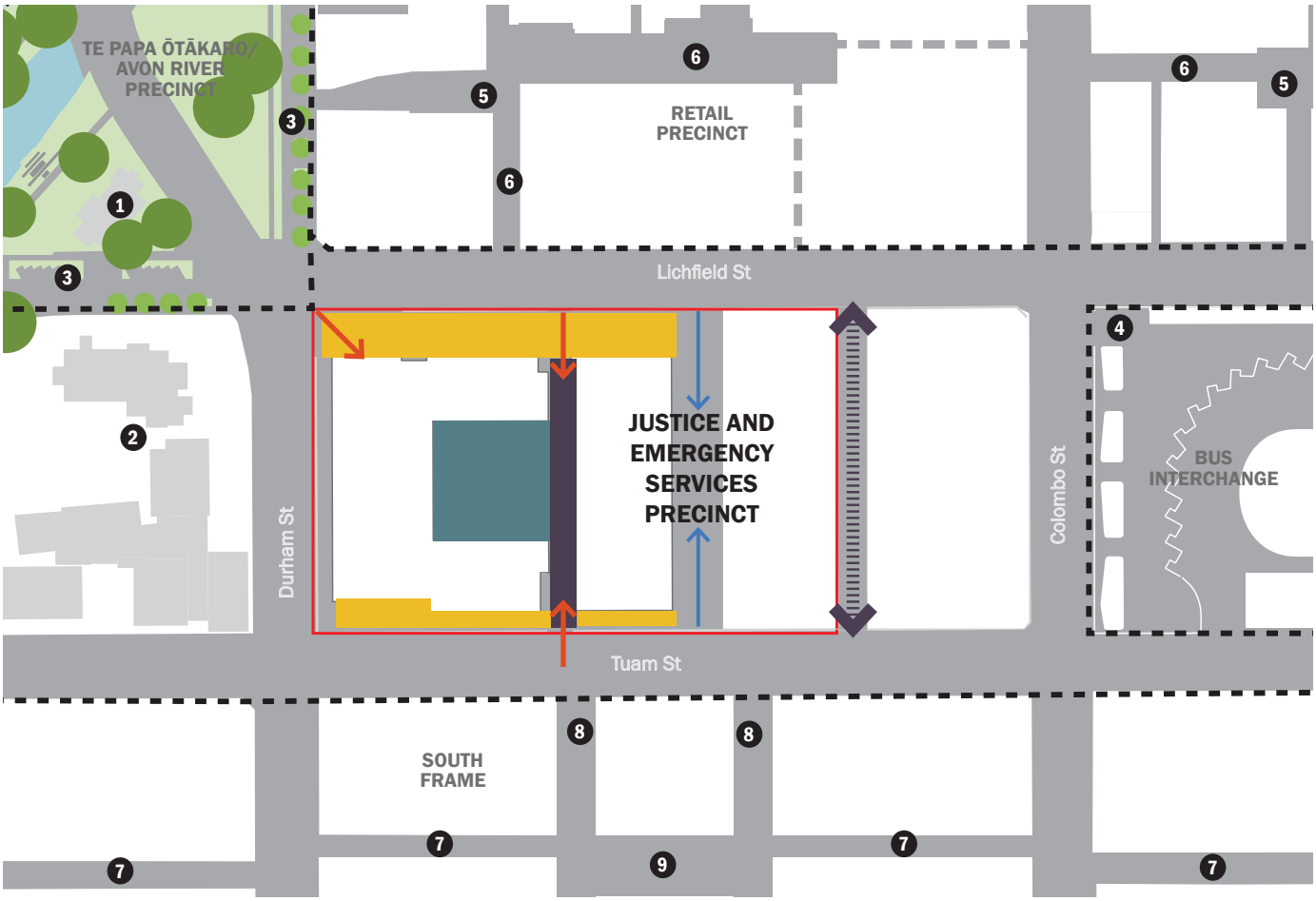
The following are some of the main features of the Precinct's public spaces.

Plaza: A civic plaza at the corner of Durham and Lichfield streets provides the foreground to the Precinct's main entrance. Directly opposite Te Papa Ōtākaro/Avon River Precinct, the plaza will provide a fitting marae ātea for formal welcoming ceremonies. The contemporary architecture framing the plaza will contrast with the heritage character of St Michael's Church on Durham Street and the Regatta on Avon restaurant building on the opposite corner. Other plazas in the central city are illustrated on page 71.

Courtyard: The courtyard will provide an internal open space for employees and visitors to the Precinct. Its design consists of a reticular structure which is softened by natural elements, including trees, planting and water. This combination creates intimate sub-spaces suited for small gatherings or quiet conversations. The use of landscape and materials references elements of the Cantabrian landscape and provides colour, sound, texture and scents. Other courtyards in the central city are illustrated on page 69.

Pedestrian link: A north–south link will provide a pedestrian connection between the Precinct's courtyard and adjacent streets through to the South Frame and the Retail Precinct.

Figure 84 *Artist's impression, Justice and Emergency Services Precinct plaza*



Legend

- Plaza
- Courtyard
- Pedestrian link
- Potential lane
- Pedestrian access
- Vehicular access

BUILDINGS OF HERITAGE INTEREST

1. Regatta on Avon
2. St Michael's Church

RELATED PUBLIC PLACES

3. Ōtākaro/Avon River Promenade
4. Bus Interchange plaza
5. Retail Precinct courtyards
6. Retail Precinct lanes and arcades
7. The Greenway
8. South Frame shared streets
9. South Frame courtyards

RELATED ANCHOR PROJECTS

Figure 85 *Justice and Emergency Services Precinct*

Bus Interchange
Whakawhitinga Pahi

Christchurch's Bus Interchange will offer an attractive, safe and efficient transport hub that supports public transport as a convenient and desirable alternative way of travelling to and from the central city.

Context

The Bus Interchange is conveniently located at the edge of the city's Core, within walking distance of key destinations including Cathedral Square, the Retail Precinct, the East and South frames and the Stadium Precinct.

The Bus Interchange has direct access off Tuam and Lichfield streets, which are bus priority routes. Lichfield Street provides a key connection to Manchester Street, the major new bus priority street in the central city. Colombo Street, as a slow street and one of the central city civic axes, provides the main address for patrons accessing the Bus Interchange by either walking or cycling.

The design proposal

Inherently, the Bus Interchange is a place of people moving, coming and going. By 2041 it will be used by an estimated 70,000 people per day.

The design of the Bus Interchange consists of perimeter buildings around an internal concourse for passenger pick-up and drop-off. The public realm associated with these buildings will have a significant impact on the quality of the experience of patrons using this facility. It includes the following elements.

Access plaza: At the corner of Colombo and Lichfield streets, the plaza is recessed under the building canopy, creating the main access point to the Bus Interchange. The eye-catching roof and façade treatment of this corner will establish an architectural landmark for pedestrians and passengers to get their bearings, meet or socialise.

This intersection will be signalised to give priority to pedestrians, allowing them to cross straight or diagonally at the same time (i.e. a Barnes dance crossing).

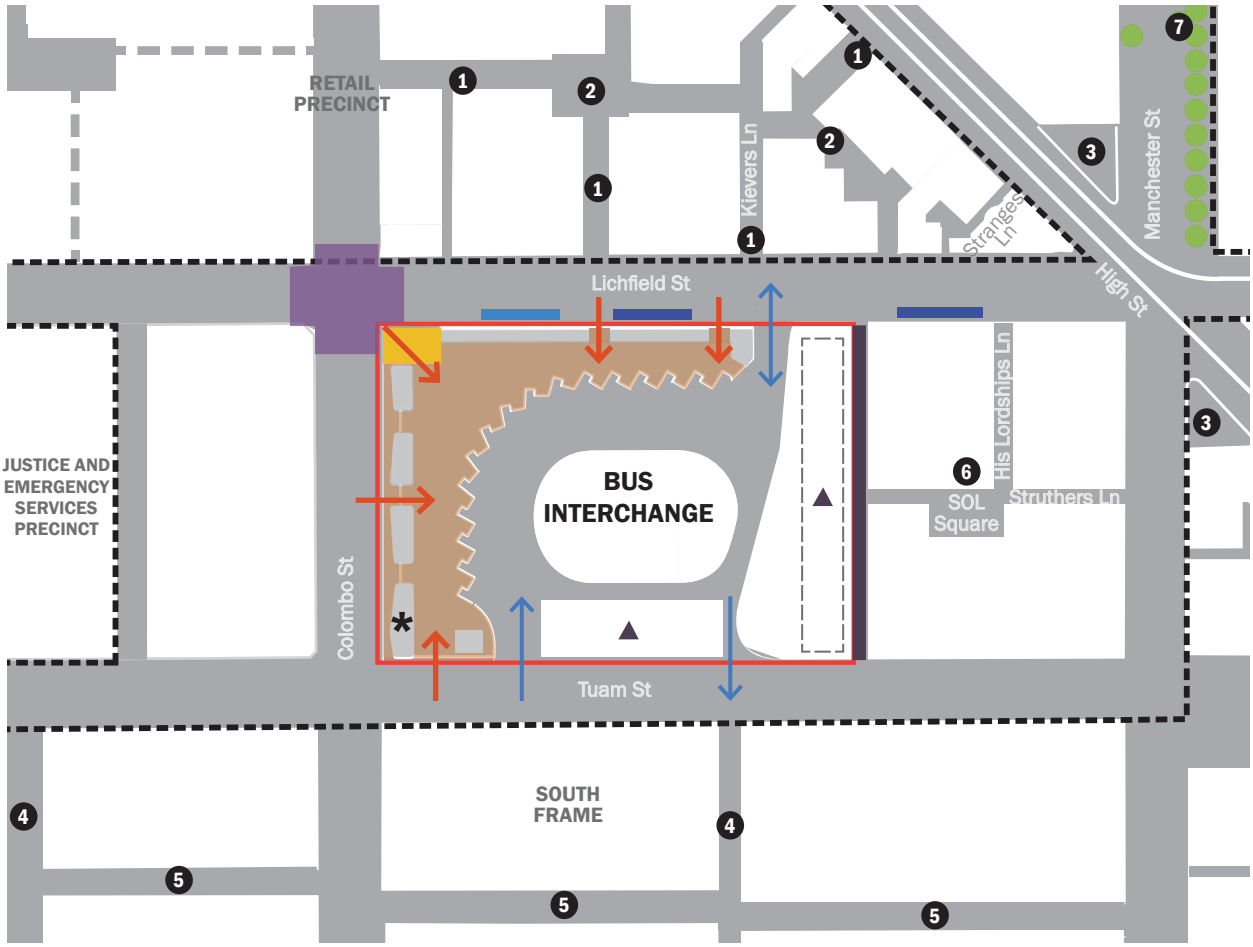
Colombo and Lichfield street frontages: These frontages will provide alternative entry points to the Bus Interchange. They will be lined by passenger services and facilities arranged in an airport lounge style. These include ticketing and waiting areas, and convenience and food shops.

Both frontages will have wide footpaths and integrated trees. Intercity coaches will be provided for along Lichfield Street, where passengers will have convenient access to all the amenities and comforts of the Interchange. A mid-block pedestrian crossing will connect with the Retail Precinct to the north. Secure bicycle parking will be provided inside the Bus Interchange near the corner of Colombo and Tuam streets.

East lane: This north–south lane will link Tuam and Lichfield streets and provide an interface between SOL Square and a new development parcel to the east of the Bus Interchange.

The public character of the Bus Interchange's concourse will generate a connection between the interior and exterior of the building, creating a truly civic building.

Figure 86 *Artist's impression, Bus Interchange plaza*



Legend

- Plaza and main pedestrian entry
- Bus Interchange concourse
- Other pedestrian entries
- Barnes dance crossing
- East lane
- Intercity coaches
- Taxi rank
- Public bicycle parking
- Bus access points

RELATED PUBLIC PLACES

1. Retail Precinct lanes and arcades
2. Retail Precinct courtyards
3. Triangular plazas
4. South Frame shared streets
5. The Greenway
6. SOL Square and related lanes
7. Manchester Street

RELATED ANCHOR PROJECTS

OTHER

- Future development sites
- Tram route

Figure 87 Bus Interchange

Retail Precinct

Wāhi Hokohoko

The Retail Precinct will offer compelling shopping, hospitality and cultural experiences that are distinctively of contemporary Canterbury.

Context

The Retail Precinct is bounded by Oxford Terrace and Hereford, High and Lichfield streets. It has a prominent frontage onto Te Papa Ōtākaro/Avon River Precinct and neighbours the Bus Interchange and the Justice and Emergency Services Precinct.

The Retail Precinct has a strategic central location within walking distance of future major office, employment and entertainment activities. These uses will help generate increased footfall and expenditure in the Precinct.

The Retail Precinct is a privately developed and operated precinct within various ownerships. The ownership pattern provides a great base to create a varied and interesting precinct. It will also require greater levels of coordination and collaboration between stakeholders. The Crown has facilitated the development of a Retail Precinct Plan to provide an option for coordinating the development of the Precinct.

The Retail Precinct Plan provides a spatial framework that integrates the various existing development proposals. It also identifies design opportunities and offers design guidance. This section provides an overview of matters in the Retail Precinct Plan related to the public realm.

Overview

Delivering the vision for the Retail Precinct involves creating a precinct that offers a unique atmosphere, a unique retail mix and many compelling reasons to visit.

The Retail Precinct will offer a distinctive central city shopping experience, attractive to locals and tourists alike. The shopping offer will be complemented by interesting entertainment, cultural, art and community activities. The retail and hospitality uses at ground level will be complemented by commercial, accommodation and residential uses above. This mix of uses will support activation and variety in the Precinct at different times of the day and night.

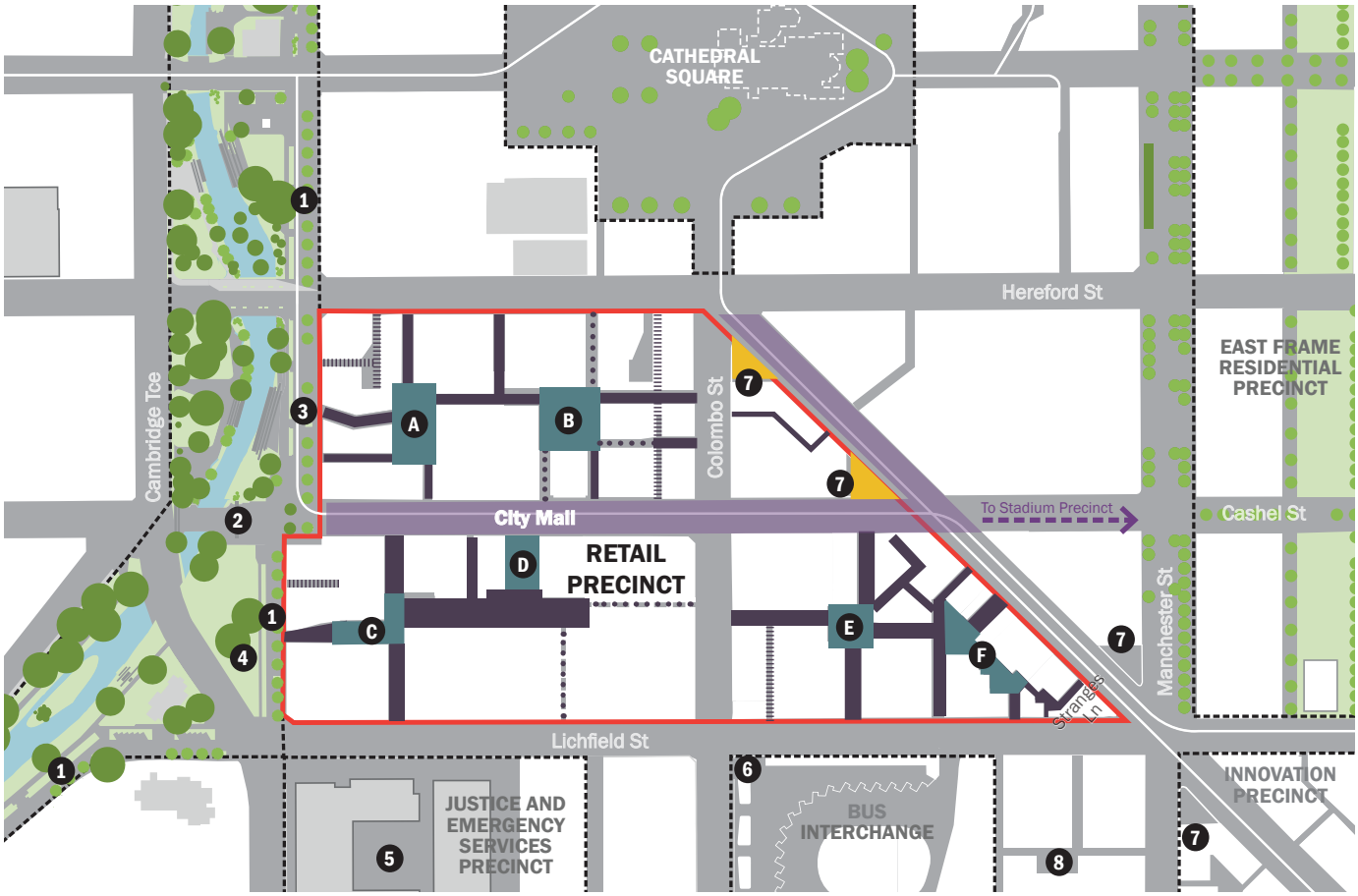
The Retail Precinct Plan proposes a precinct of distinctive and vibrant **courtyards, lanes** and **streets**.

Design objectives

Pedestrian experience

- Promote ground floor frontages that positively contribute to the quality and vitality of the Precinct's public realm.

  In general, the design of the ground floor of buildings has a key influence on the vibrancy of a city. In the Retail Precinct, in particular, this aspect is of prime importance. People are more strongly attracted to well-designed, interesting and varied façades and they tend to spend more time in these locations. The **design criteria** on pages 54–57 provide helpful guidance on creating attractive ground floor façades.
- Celebrate key views into the Ōtākaro/Avon River and the Precinct's new lanes and courtyards.



Legend

LANES

- Lanes
- Arcades
- Service lanes
- Pedestrian priority streets

COURTYARDS

A. The Terrace – hospitality and retail courtyard

B. Cashel Square – office and retail courtyard

C. South West End – garden courtyard

D. South Central – retail courtyard

E. South East End – movement/ junction courtyard

F. South East End – service and hospitality courtyard

RELATED PUBLIC PLACES

1. Ōtākaro/Avon River Promenade
2. Bridge of Remembrance
3. The Terraces
4. Friendship Corner
5. Justice and Emergency Services Precinct – courtyard
6. Bus Interchange – entry plaza
7. Triangular plazas
8. SOL Square and arcades

RELATED ANCHOR PROJECTS

OTHER

- Tram route

Figure 88 *Retail Precinct*

Retail Precinct

Wāhi Hokohoko

The Retail Precinct Plan proposes a precinct of distinctive and vibrant courtyards, lanes and streets.

Design objectives (continued)

- Promote a palette of materials and street elements that strengthens the continuity of the laneway network and contributes to wayfinding.

Courtyards

- Enhance the Precinct's shopping and hospitality offer with courtyard spaces of varied and distinct scales and characters. The proposed courtyards and their characters are mapped In Figure 88 (page 171).

The emerging network of courtyards in the central city and related design guidance are set out on pages 68–69.

Lanes

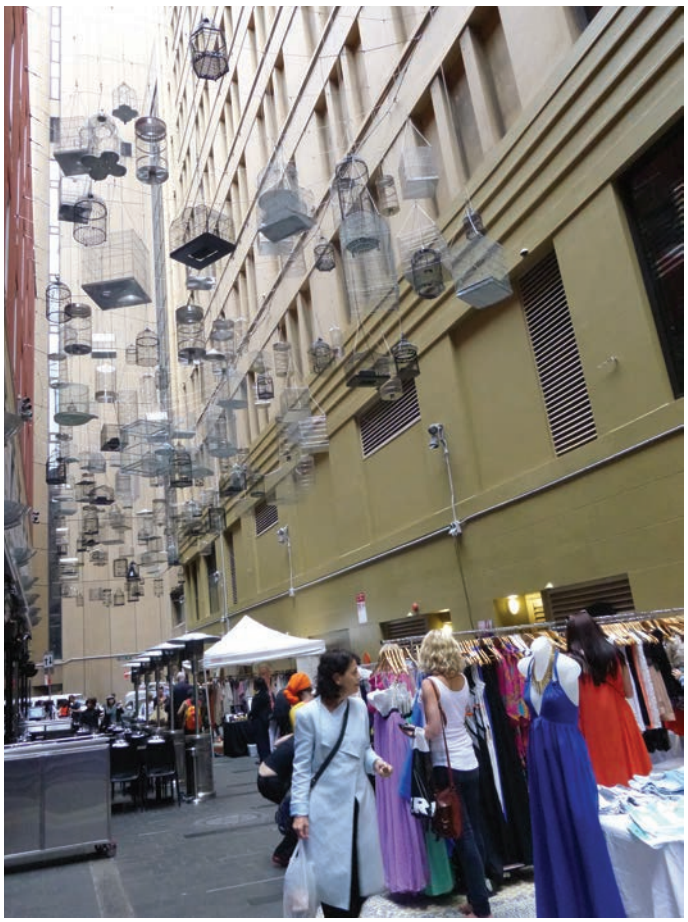
- Capitalise on the spatial quality of lanes to accommodate a retail offer that is distinctly different from that on the streets. These may be smaller specialty and boutique retailers to be discovered while exploring the Precinct.
- Create lanes with a distinctive character and design from other lanes in the central city. Design considerations that may assist in achieving this objective include:
  - using the design of lighting and business signage to express and reinforce the individual character of each lane. Lighting should be consistent for the full length of each lane. Fixtures should be fixed to walls to minimise clutter and high enough to clear service vehicles
  - using fixed street furniture sparingly and only on wide lanes
  - avoiding planting trees in narrow lanes as they will block light
  - ensuring any awnings will allow access for natural light and views to the sky.

The emerging network of lanes in the central city and related design guidance are set out on pages 76–77.

Streets

- City Mall (Cashel Street) and Colombo and High streets will have high pedestrian flows and therefore will be suitable for the most intensive 'main street' retailing. City Mall will continue to be the Precinct's main street and will connect the new network of lanes and courtyards.
- The Ōtākaro/Avon River Promenade (Oxford Terrace) is the Retail Precinct's riverfront address. The zone in front of the Retail Precinct has been designed as a hospitality and entertainment destination. Promoting these types of uses on this frontage is essential to realise the vision for the area.
- Lichfield and Hereford streets have a greater vehicle and public transport orientation and a closer relationship to other institutional and commercial activities. These street frontages integrate the commercial and residential addresses within the Precinct and provide opportunities for fringe retail.

Design concepts proposed for these streetscapes are set out in Chapter 5.




WINE BAR

Convention Centre Precinct

Whare Rūnanga

The Convention Centre Precinct will be a world-class venue that attracts business, events and conferences to Christchurch and New Zealand.

Context

The Convention Centre Precinct has a prime location with frontages onto the city's main public places: Cathedral Square, Victoria Square, Colombo Street and Te Papa Ōtākaro/Avon River Precinct.

The Performing Arts Precinct and new Central Library will be located on the opposite side of the Colombo Street address. Together with the Convention Centre Precinct, these venues will define a civic route to Cathedral Square.

Public transport access will be conveniently located approximately 200 metres to the east of the Precinct at the Manchester Street bus super stop. The existing city tram route runs along Armagh and Worcester streets and around Cathedral Square.

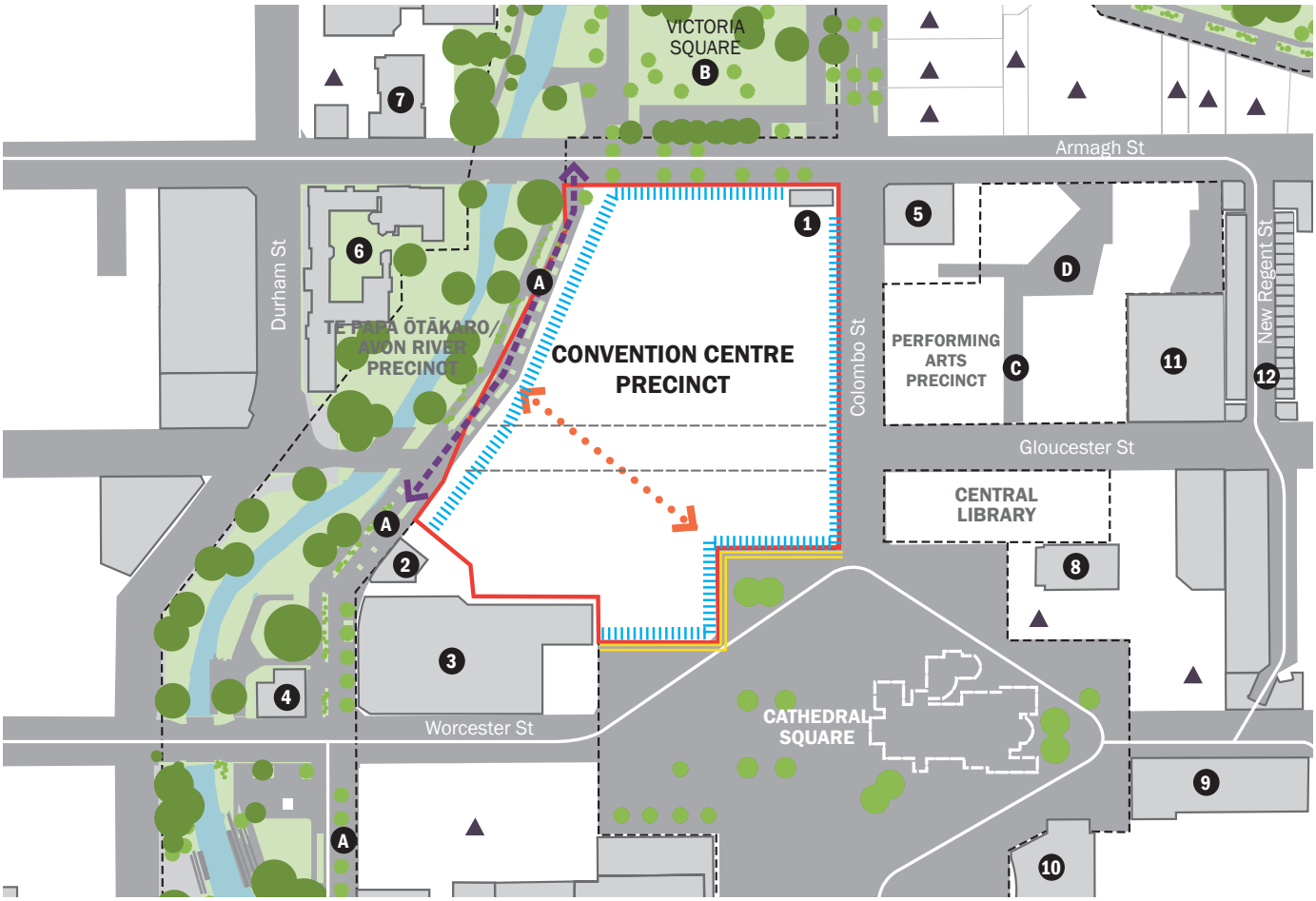
The site for the Convention Centre Precinct is bounded by the Ōtākaro/Avon River Promenade (Oxford Terrace) and Armagh, Colombo and Worcester streets. The section of Gloucester Street between Oxford Terrace and Colombo Street has been integrated into the Precinct's site. The Isaac House building at the corner of Armagh and Colombo streets has heritage significance.

Overview

The Convention Centre Precinct will consist of a series of venues for small and large conferences, events and exhibitions. It will be designed to host concurrent events. The Precinct will also provide offices, hotel and residential accommodation, retail and hospitality activities.

Design objectives

- Promote an architecture and public realm design that will become an important component of the image of Christchurch as a distinctive, progressive and people-focused city.
- Create street frontages that positively contribute to the vitality of the important public places in the surrounds: Cathedral Square, Victoria Square, Colombo Street and Te Papa Ōtākaro/Avon River Precinct. The location and design of vehicular access points and service areas should minimise any negative effects on the pedestrian amenity of the public spaces around the Precinct.
- Maintain and clearly define the characteristic cruciform shape of Cathedral Square.
- Maintain public access to the river corridor, extending the Ōtākaro/Avon River Promenade across the site. Design this interface to create a distinctive zone that complements other zones along Te Papa Ōtākaro/Avon River Precinct.
- Provide pedestrian lane(s) between Cathedral Square and Te Papa Ōtākaro/Avon River Precinct. Refer to pages 76–77 for guidance on laneway design.
- Design the Armagh Street frontage to integrate with and complement the design and activities envisaged for Victoria Square.



Legend

- Indicative future pedestrian link
- Active frontage
- Provide continuity to the Ōtākaro/Avon River Promenade
- Clearly define the cruciform shape of Cathedral Square
- Former Gloucester Street alignment

EXISTING BUILDINGS

1. Isaac House (Heritage)
2. Caffe Roma
3. Former Rydges Hotel
4. Our City O-Tautahi
5. New Crown Plaza
6. Canterbury Provincial Council Buildings
7. Environment Court (temporary buildings)
8. Novotel Hotel
9. Heritage Christchurch Hotel
10. Former Millennium Hotel
11. Isaac Theatre Royal
12. New Regent Street

RELATED PUBLIC PLACES

A. Ōtākaro/Avon River Promenade
B. Victoria Square
C. Performing Arts Precinct lane (indicative)
D. Performing Arts Precinct courtyard (indicative)

RELATED ANCHOR PROJECTS

OTHER

- Future development site
- Tram route

Figure 89 *Convention Centre Precinct*

Performing Arts Precinct

Te Whare Tapere

The Performing Arts Precinct will offer a cluster of performing arts venues and training facilities where the culture and creative potential of Cantabrians are fostered and celebrated.

Context

The Performing Arts Precinct sits opposite the future Convention Centre Precinct and new Central Library.

The restored Isaac Theatre Royal and New Regent Street define the east boundary of the Precinct. A new bus super stop will be located approximately 100 metres to the east of the Precinct on Manchester Street. The Precinct is within five minutes' walk of Cathedral Square, Te Papa Ōtākaro/ Avon River Precinct and the East Frame residential precinct.

Overview

The Performing Arts Precinct will provide an important venue for Christchurch's calendar of cultural events, drawing local and tourist visitation to the central city. It will offer facilities for theatre, music, dance and other expressive forms.

The Performing Arts Precinct will be the permanent home for the Music Centre of Christchurch and other existing cultural institutions, which could include the Court Theatre and the Christchurch Symphony Orchestra. The co-location of these institutions would create opportunities for collaboration and sharing of ideas and resources, and for arts programmes to complement each other.

In a similar way, the Precinct's proximity to the Isaac Theatre Royal, Victoria Square, the Convention Centre Precinct and the new Central Library provides opportunities for cultural activities to extend beyond the Precinct's boundaries. The Precinct will offer a hub and meeting place for the arts community and creative industries of Christchurch.

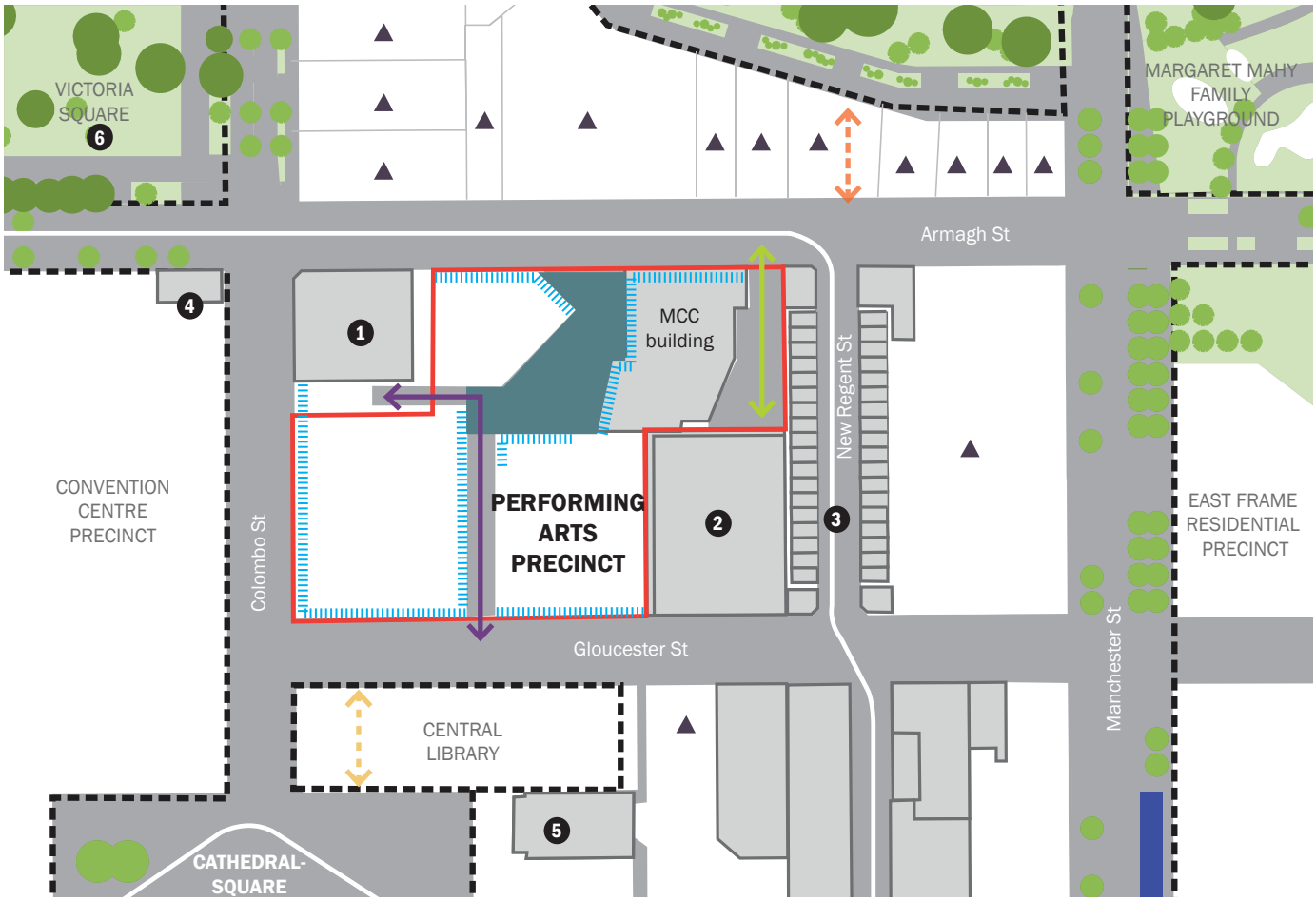
Design objectives

The initial scheme for the Precinct's public realm consists of a shared courtyard and connecting laneways. Among the key objectives for these spaces are to:

- create an arts-focused environment that reflects the Precinct's creative nature and where diverse cultural expressions can take place
- contribute to a vibrant precinct by day and night
- integrate infrastructure that supports cultural events – for example, power outlets, chair storage areas, screens, stage trusses, and lighting
- balance the inward nature of some of the uses with strategically located, outward-looking uses and activities that contribute to the vitality and surveillance of the Precinct
- contribute to the vitality and civic role of Colombo Street
- promote Gloucester Street as 'a street of theatres' that supports and complements the Isaac Theatre Royal.

The Performing Arts Precinct has frontages onto Armagh, Colombo and Gloucester streets. The design concepts for these streets are described in Chapter 5.

The wider network of lanes and courtyards in the central city and related design guidance are set out in Chapter 4.



Legend

KEY FEATURES

- Indicative courtyard layout
- Indicative vehicle and pedestrian lane
- Indicative service area
- Active frontage

EXISTING BUILDINGS

1. New Crown Plaza
2. Isaac Theatre Royal
3. New Regent Street
4. Isaac House
5. Novotel Hotel

RELATED PUBLIC PLACES

6. Victoria Square

RELATED ANCHOR PROJECTS

OTHER

- Potential future link
- Manchester Street bus super stop
- Internal pedestrian link (indicative)
- Future development site
- Tram route

Figure 90 *Performing Arts Precinct, indicative spatial plan*

Metro Sports Facility

Taiwhanga Rēhia

The Metro Sports Facility will be the premium destination for the city's sporting and recreational activity, accessible to people of all ages and abilities.

Context

The Metro Sports Facility will be conveniently located close to other sport venues in Hagley Park, including the new Cricket Oval and the existing netball courts. Its proximity to the new Health Precinct provides a unique opportunity for collaborations in areas such as sports medicine, sports science and research programmes.

The Metro Sports Facility site is bounded by Moorhouse Avenue and Antigua and St Asaph streets. Antigua and St Asaph streets are two of the priority cycling routes in the central city, offering cycle lanes separated from traffic.

The Facility is within walking distance of the new bus super stop on Tuam Street, as well as of Te Papa Ōtākaro/Avon River Precinct and the South Frame.

Overview

The Metro Sports Facility will be a leading destination for recreational, educational and high-performance sport, accessible to people of all ages, abilities and sporting skills. It will provide a range of aquatic and indoor sporting facilities, complemented by retail, food and beverage amenities.

One of the design intents for the Metro Sports Facility is to 'put sports on display' by providing visual connections from the street to the internal sporting activities.

The initial scheme for the Facility's public realm consists of three main elements: **plazas, circuits** and **landscaped areas**.

The **plazas** mark the entries to the Facility, with the northern plaza being the main civic access and the plazas towards the middle of the block providing day-to-day access points.

The **circuits** consist of informal fitness loops around the perimeter of the site, integrating the Facility with its immediate context in a unique and engaging way. They create opportunities for active recreation and additional exercising options.

The **landscaped areas** correspond primarily to the car parking zones. They provide skilfully distributed large- and medium-scale vegetation and also integrate water management strategies.

This treatment helps diffuse the scale of the Facility, break up the extent of car parking areas, and collect, treat and distribute stormwater run-off.

Design objectives

- Contribute to the vitality of surrounding streets and public places.
- Integrate the Facility's public realm design with the proposed streetscape concepts for adjacent streets. Concepts for St Asaph and Antigua streets are illustrated In Figure 51 (page 119) and Figure 57 (page 131) respectively.
- Create plazas of civic character that provide a meeting point and a welcoming place for visitors to the Facility. Provide flexibility to host sport ceremonies and events. The network of plazas in the central city is explained on pages 70–71.
- Provide opportunities for formal and informal seating areas throughout the Facility's public realm.
- Articulate the building façades to break up the scale of the building and contribute to the pedestrian scale of adjacent public realm areas.

Legend

KEY FEATURES
- Civic plaza
- Access plazas
- Circuits
- Landscaped areas
- Active frontage
- Future link
- Potential connection
- Coach drop-off (indicative)

EXISTING BUILDINGS
1. Christchurch Hospital
2. Antigua Boat Sheds
3. Hagley Community College

RELATED PUBLIC PLACES
4. Cricket Oval
5. Ōtākaro/Avon River Promenade
6. Netball courts

RELATED ANCHOR PROJECTS
7. South Frame – Health Precinct
8. Te Papa Ōtākaro/Avon River Precinct

OTHER
- Tuam Street bus super stop
- Major cycleways

Figure 91 *Metro Sports Facility*

Central Library

The new Central Library will be the primary library facility in Christchurch, a 21st century hub of knowledge and research in the heart of the city.

Context

At the intersection of Colombo and Gloucester streets, the Central Library will have a prominent address onto Cathedral Square, the city's main civic place.

The Central Library will be directly opposite the Convention Centre Precinct to the west and the Performing Arts Precinct on the north side of Gloucester Street.

The Library will be within walking distance of the bus super stop on Manchester Street.

Overview

The Central Library will be a distinctive civic building, offering state-of-the-art learning and information services and facilities for metropolitan Christchurch. It will provide a place for ideas and learning where people of all ages, abilities and cultures can be inspired and connected.

The design of the Library is being informed by the community's needs and aspirations, as identified by both 'Share an Idea' (2011) and 'Your Library Your Voice' (2014).

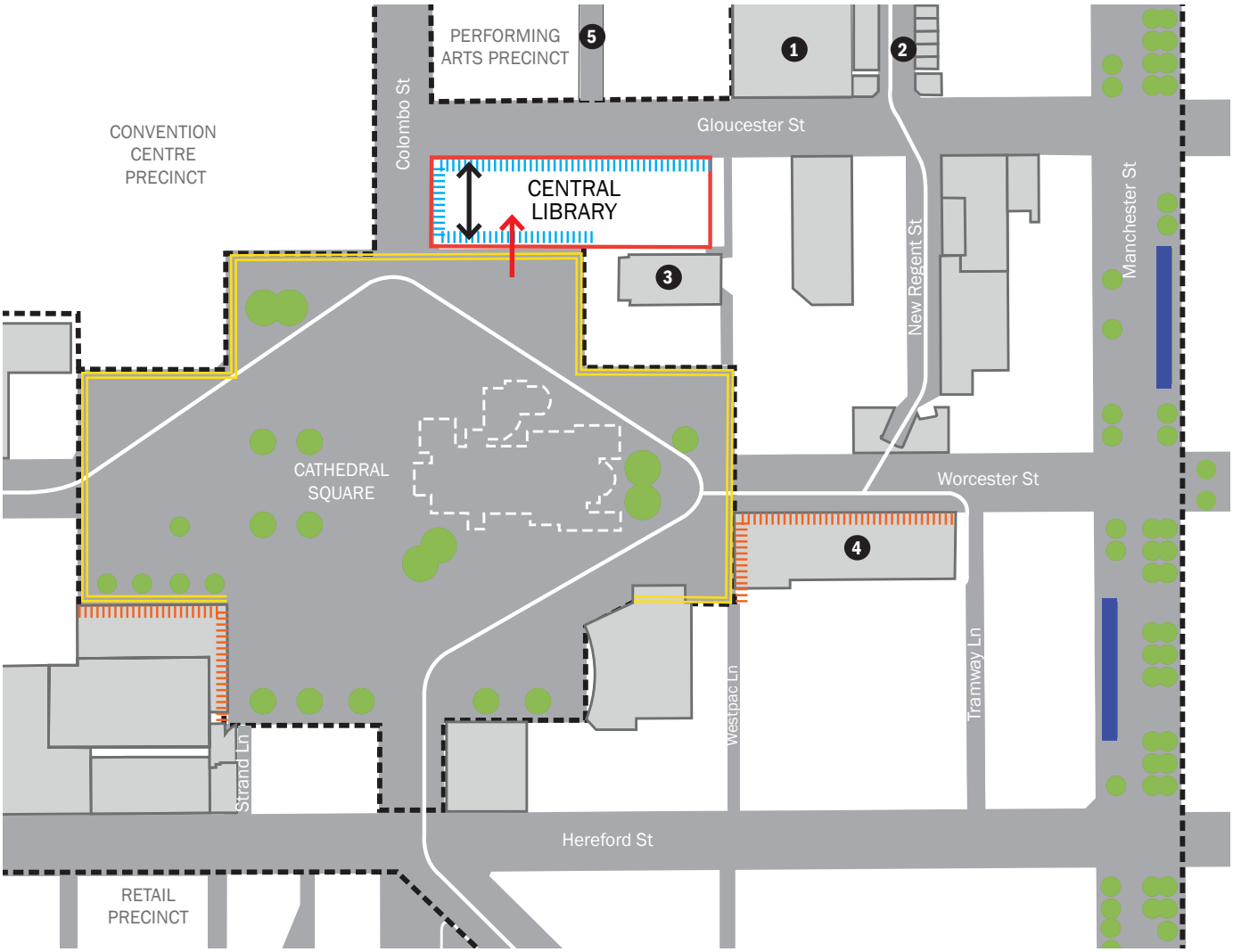
This project aims to attain international standing as a model for a contemporary library. Digital technology will be an integral part of the design along with interactive spaces, including performance, exhibition, research, learning and entertainment areas.

The design of the building will make an important contribution to the quality and character of adjacent public spaces. The civic and social nature of the Library provides ideal conditions for integration with adjacent anchor projects and areas of the public realm, in particular Cathedral Square.

Design objectives

- Design building frontages to enhance the pedestrian amenity and civic character of Colombo Street and Cathedral Square.
- Select and locate uses at the ground and lower levels of the building to contribute to the vitality, surveillance and activation of Cathedral Square and adjacent streets.
- Define the building boundary to maintain the characteristic cruciform shape of Cathedral Square.
- Strategically locate entry points to the building to generate movement patterns that activate Cathedral Square.
- Promote and allow for spill-out of activities in the Library onto Cathedral Square.
- Locate vehicular access points and service areas to minimise any negative effects on the pedestrian amenity of the surrounding public spaces.
- Use façade articulation and material treatments to add to the visual amenity and attractiveness of Cathedral Square.

Design concepts for Colombo and Gloucester streets are illustrated in Chapter 5.



Legend

- High-quality frontage/active uses
- Clearly define the cruciform shape of Cathedral Square
- Preferrred pedestrian entrance
- Façades of heritage interest
- Ground floor connection

EXISTING BUILDINGS

1. Isaac Theatre Royal
2. New Regent Street
3. Novotel Hotel
4. Heritage Christchurch Hotel

RELATED ANCHOR PROJECTS

5. Performing Arts Precinct indicative lane

OTHER

- Manchester Street bus super stop
- Other buildings
- Tram route

Figure 92 *Central Library*

South Frame

Pūtahi Whakatetonga

The South Frame will provide definition to the Core through city blocks with an 'urban campus' character organised around a new network of green public spaces.

Context

The South Frame consists of eight city blocks south of the city Core between Hagley Avenue and Madras Street. This area is made of sites of varying sizes and shapes held in multiple ownerships.

The existing urban fabric in the South Frame is relatively sparse, with a number of vacant sites and remaining buildings dispersed throughout. Existing buildings consist of pre-earthquake warehouse and industrial buildings, small office buildings and car-sales centres.

The South Frame neighbours with a number of the anchor projects including the Metro Sports Facility, Te Papa Ōtākaro/Avon River, Justice and Emergency Services and Stadium precincts, the Bus Interchange and the East Frame.

Tuam and St Asaph streets are the major movement and access routes to the area. There will be a bus super stop on Tuam Street between Hagley Avenue and Antigua Street.

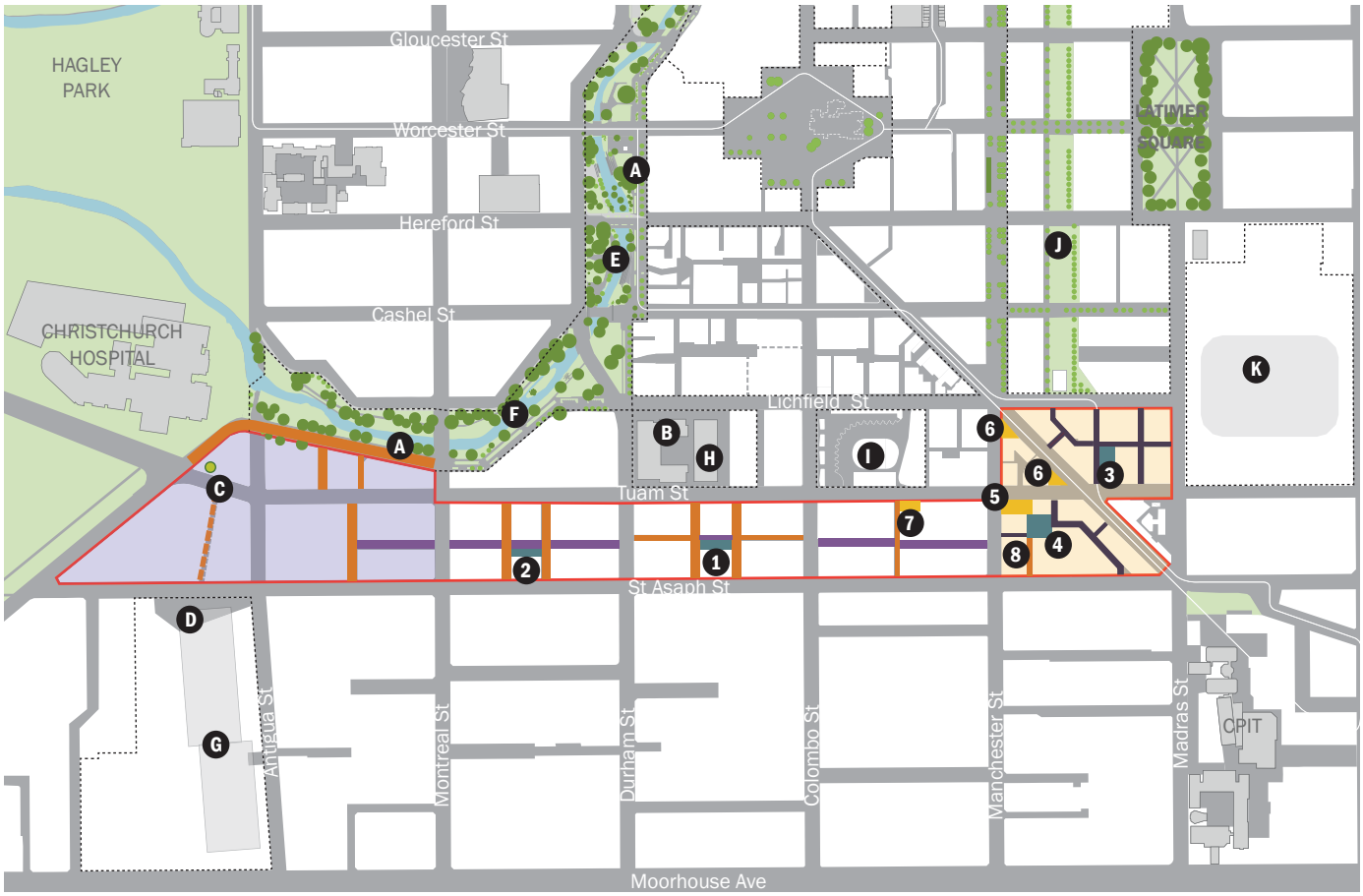
Overview

The South Frame anchor project consists of creating a new network of public realm in what have historically been large and inaccessible city blocks. This new network will generate a permeable and green urban environment and establish a foundation for private sector redevelopment.

The new public realm is designed to support an 'urban campus' character which consists of well-delineated city blocks where buildings define and enclose inner-block open spaces.

The South Frame has three distinct areas, as illustrated in Figure 93.

- **The Health Precinct** will bring together key institutions involved in health services, education, research and professional development near Christchurch Hospital. The co-location of these institutions seeks to link the health system more effectively with private research, services and industry to commercialise health technology products and services.
- **The Innovation Precinct** aims to establish a technology-based industry and research precinct to attract new business and employment opportunities in high-value industry sectors. This Precinct brings together commercial, creative and entrepreneurial uses such as the information technology hub, Enterprise Precinct and Innovation Campus (EPIC).
- **The blocks between Montreal and Manchester streets** will promote residential, educational and small-scale office and studio-style spaces and generally activities and uses that do not compete with the uses planned for the city Core. These blocks will connect and support the Health and Innovation precincts with a reconfigured bold and green urban fabric that celebrates the area's industrial past.



Legend

- Health Precinct
- Innovation Precinct

NEW PUBLIC REALM

- The Greenway
- Shared streets
- Indicative link
- Innovation Precinct lanes

COURTYARDS

1. Mollett Street courtyard
2. South courtyard
3. Poplar–Ash courtyard
4. Innovation courtyard

PLAZAS

5. Innovation plaza
6. Triangular plazas
7. Scoular Park

- Protected tree

8. Enterprise Precinct and Innovation Campus (EPIC)

RELATED PUBLIC PLACES

A. Ōtākaro/Avon River Promenade
B. Justice and Emergency Services Precinct plaza and courtyard
C. Tuam Street bus super stop
D. Metro Sports Facility plaza (indicative)

RELATED ANCHOR PROJECTS

E. Te Papa Ōtākaro/Avon River Precinct
F. Earthquake Memorial
G. Metro Sports Facility
H. Justice and Emergency Services Precinct
I. Bus Interchange
J. East Frame Residential Precinct
K. The Stadium Precinct

OTHER

- Tram route

Figure 93 *South Frame Precinct*

South Frame

Pūtahi Whakatetonga

The proposed new public spaces within the South Frame consist of a network of streets, lanes, courtyards and plazas that connect to the city's wider public realm network.

The Greenway: This series of generously landscaped east–west pedestrian and low-speed cycling links creates a green corridor between the East Frame, Hagley Park and Te Papa Ōtākaro/Avon River Precinct.

North–south links: A number of new shared streets between Tuam and St Asaph streets improve the permeability and access to the South Frame blocks.

Lanes: Pedestrian and cycle connections through the Innovation Precinct.

Further detail on the Greenway, the north–south links and lanes is provided on Chapter 5.

Courtyards

- **Mollett Street courtyard:** This courtyard will provide a meeting and socialising place for local office workers, residents and visitors to the city. Key features of the courtyard will be ample formal and informal sitting options and generous vertical and horizontal landscaping. Mixed-use residential development is a desirable use to establish in this area. The courtyard should provide amenity for potential residents including after hours and weekend activities.
- **South courtyard:** This courtyard will be popular as an informal socialising place, especially among office workers. Its design will look to accommodate food trucks, street traders and events.
- **Poplar–Ash courtyard:** Located at the junction of Poplar Lane and Ash Street, it will provide a fitting entrance to adjacent office buildings. The courtyard will provide an 'outdoor meeting room' for surrounding offices and businesses.
- **Innovation courtyard:** This courtyard will have multiple access points through the extensive and intricate laneways network in the area. The intimate scale of this courtyard is a point of distinction. Its design and activities should emphasise containment. This space will work well with strung installations and projections on the walls. Activities will celebrate innovation, creativity and ideas.

The emerging network of lanes and courtyards in the central city and related design guidance are set out in Chapter 4.

Plazas

Plazas will signal main entry points to the Innovation Precinct.

- **Triangular plazas:** These are two of the triangular plazas identified in Chapter 4 that mark the intersection of the city grid with the diagonal 'gateway streets' in the central city, namely High and Victoria streets. As highly visible places, they are well suited for statement elements and public art. Their design should be flexible to allow for relocatable elements and regular changes to their layout.
- **Innovation plaza:** This is a transitional place at the intersection of Tuam and Manchester streets.

The emerging network of plazas in the central city is explained on pages 70–71.

Streets: The South Frame interfaces with many of the streets in the central city. The design concepts for streetscapes in the central city are illustrated in Chapter 5.


Mini Monet Cupcakes

The Square

Te Rīpeka

Cathedral Square will be re-established as the civic heart of Christchurch. It will be more vibrant, comfortable and accessible, as well as safer and greener.

Context

Located at the junction of Colombo and Worcester streets, the two main axes of the city grid, Cathedral Square is the geographic and civic centre of Christchurch.

Traditionally the buildings around The Square have defined its unique cruciform shape. Only a few of these buildings remain, as illustrated in Figure 94. The new Convention Centre Precinct and the Central Library will redefine part of the northern boundary of The Square.

The Cathedral building, at the centre of the space, has been another distinctive feature of The Square. It is proposed that the Cathedral will be either rebuilt or replaced and integrated into The Square.

Overview

A specific design proposal for The Square is yet to be developed. The transformation of the most significant civic place in the central city requires a thorough public engagement process to meet the collective expectations for The Square.

Design objectives

- Maintain and strengthen the civic character of The Square, reinstating it as the natural place for citizens to congregate and celebrate.
- Reflect the ethos of the city, its heritage and culture, and its resurgence as an inclusive, contemporary and progressive city.
- Create a vibrant place for people, by day and night, all year round.

Access and movement

- Create a pedestrian-oriented place, while integrating the various modes of travel that converge at The Square.
- Maintain access to individual properties and businesses, and connectivity for travel modes.
- Promote pedestrian links into The Square to improve pedestrian access and activate the corners of the space.
- Create a setting for the Cathedral, Central Library and Convention Centre Precinct.

Edges

- Ensure buildings around The Square continue to define its characteristic cruciform shape.
- Promote building frontages that open onto The Square to support increased activity and improved public safety through passive surveillance of the space.
- Promote well-articulated building frontages, which use quality materials that contribute to the visual amenity and attractiveness of The Square.

Uses and activities

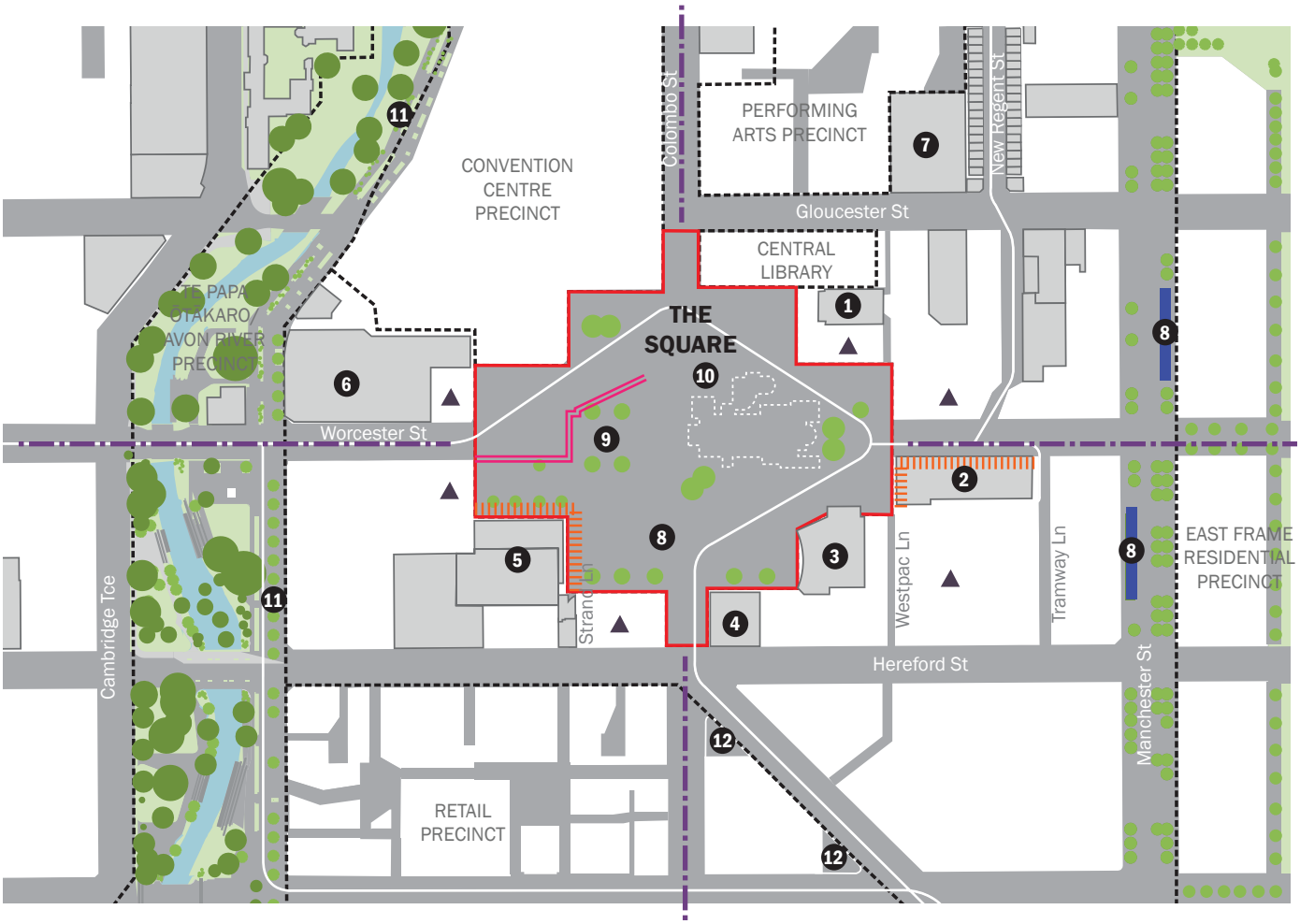
- Design The Square to support large events such as New Year's Eve celebrations and everyday activities such as outdoor dining, sightseeing, buskers, markets and displays.
- Provide opportunities for adjacent anchor projects to extend their activities into The Square on a regular basis.
- Create a coherent and inspiring place made of a series of sub-spaces that work well individually.
- Integrate facilities that support large and small events, such as storage space and power and water outlets.
- Provide ample formal and informal seating opportunities.
- Consider the addition of small pavilions, such as food pavilions, which activate the space and provide sheltered west-facing spaces.

Scale and enclosure

- Ensure surrounding buildings positively contribute to the climatic comfort of The Square, allowing for solar access and avoiding induced wind draughts.

Landscape

- Increase opportunities for greenery, while maintaining The Square's capacity to host large-scale civic events and performances.
- Integrate into the design the long views along Colombo and Worcester streets, and the short views to buildings of heritage interest.
- Allow for sunny, shaded, sheltered and open areas that support activity throughout the seasons.



Legend

EXISTING FEATURES

- Existing level change
- Existing tree
- Tram route
- Façades of heritage interest
- Civic axis

EXISTING BUILDINGS

1. Novotel Hotel
2. Heritage Christchurch Hotel
3. Former Millennium Hotel
4. BNZ building
5. Visitors Centre building
6. Former Rydges Hotel
7. Isaac Theatre Royal

EXISTING PUBLIC ARTWORKS

8. Chalice (Neil Dawson, 2000)
9. Godley Statue (Thomas Woolner, 1865)
10. The Cenotaph (William Trethewey, 1937)

RELATED PUBLIC PLACES

11. Ōtākaro/Avon River Promenade
12. Triangular plazas

RELATED ANCHOR PROJECTS

OTHER

- Future development site
- Manchester Street bus super stop

Figure 94 *The Square anchor project*

The Stadium Precinct

Taiwhanga Hākinakina

The Stadium Precinct will provide a multipurpose, state-of-the-art, sports and entertainment venue for local, regional and international events.

Context

The Stadium Precinct will be located to the east of the Frame over two-and-a-half city blocks between Hereford, Tuam, Madras and Barbadoes streets. It neighbours the South Frame Innovation Precinct and the East Frame residential precinct. The Transitional Cathedral is located within the same city block.

The location for the Stadium was strategically selected for its proximity to public transport and vehicular access routes. The new Bus Interchange on Lichfield Street and the bus super stop on Manchester Street are both within walking distance of the Stadium. There is opportunity for a local bus stop on Hereford Street. Madras and Barbadoes streets are main distributor streets which have general traffic priority.

The Precinct bookends the east section of Cashel Street, providing a civic counterpoint to the Bridge of Remembrance, the Ōtākaro/Avon River and Hagley Park in the west.

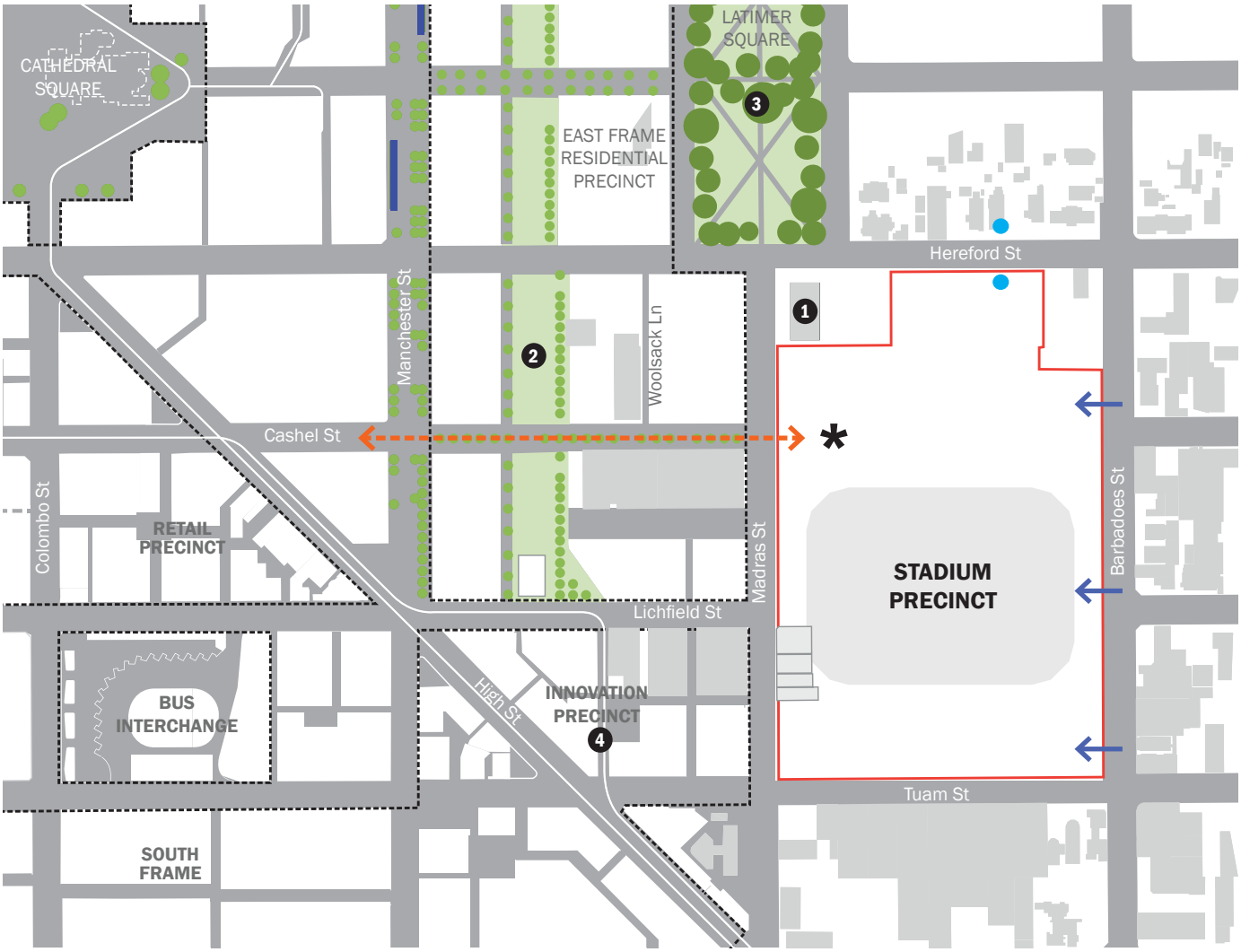
Food and entertainment venues along High Street and the Retail Precinct will enhance the overall experience of patrons of the Stadium, offering nearby pre- and post-event activity choices.

Overview

The Stadium Precinct will assist in positioning Christchurch as the number one venue for sporting and entertainment events in the South Island.

Design objectives

- Create a precinct that reflects and integrates with the central city context and is a positive addition to the city's civic infrastructure.
- Create a landmark and civic termination to the Cashel Street axis from the Bridge of Remembrance. This axis forms a waharoa (gateway), signifying a wero (challenge) from past warriors to modern-day gladiators.
- Provide a location for pōwhiri (welcoming ceremonies).
- Design the precinct's public realm to be interesting and welcoming during event and non-event modes. The public realm should be able to accommodate large crowds but also be intimate for small events or during off-season periods.
- Provide visible and distinct elements in public realm areas that people can use for wayfinding and as meeting points.
- Consider areas for shelter during inclement weather.
- Provide ample formal and informal sitting options.
- Ensure a seamless transition and integration with the proposed streetscapes for surrounding streets. The streetscape concept designs for adjacent streets are illustrated in Chapter 5.
- Use main distributor roads for vehicular and service access points to the Precinct
- Consider compatible uses and activities in the Precinct that do not compete with the uses planned for the city Core.



Legend

KEY FEATURES

- Civic termination
- Indicative car parking entrance (preferred location)
- Bus stop (potential location)
- Connection to the Bridge of Remembrance

EXISTING BUILDINGS

1. Transitional Cathedral

RELATED PUBLIC PLACES

2. East Frame Central Park
3. Latimer Square
4. Innovation Precinct lanes

RELATED ANCHOR PROJECTS

OTHER

- Manchester Street bus super stop
- Tram route

Figure 95 *The Stadium Precinct*

"The rebuilding of the central city provides an exceptional opportunity to improve the quality of life for the people of Christchurch for generations to come."

Skye Duncan

07

IMPLEMENTATION
Te Whakatinantanga

Implementation

A high-quality network of streets and public spaces is essential to support the successful implementation of the Christchurch Central Recovery Plan, and the economic and social recovery of the central city in general.

The Streets & Spaces Design Guide is a non-statutory document providing strategic and technical guidance for anyone involved in the design and delivery of public realm improvement projects in the central city–both during the recovery phase and into the future.

In the early stages of the central city rebuild, this plan will be instrumental in influencing the public realm outcomes of the anchor projects and the first phase of the Accessible City transport projects.

Christchurch City Council and the Crown have committed to the delivery of the anchor projects and the first-phase Accessible City projects.

Subsequent phases of work required to give effect to the Accessible City objectives are subject to Council and Crown Business Case processes, which include funding.

Funding for 11 first-phase projects has been achieved; these projects have been prioritised to align with the delivery of key anchor projects and essential transport network projects.

Along with Council and Crown funding, Accessible City projects will have contributions from the New Zealand Transport Agency according to the National Land Transport Fund criteria.

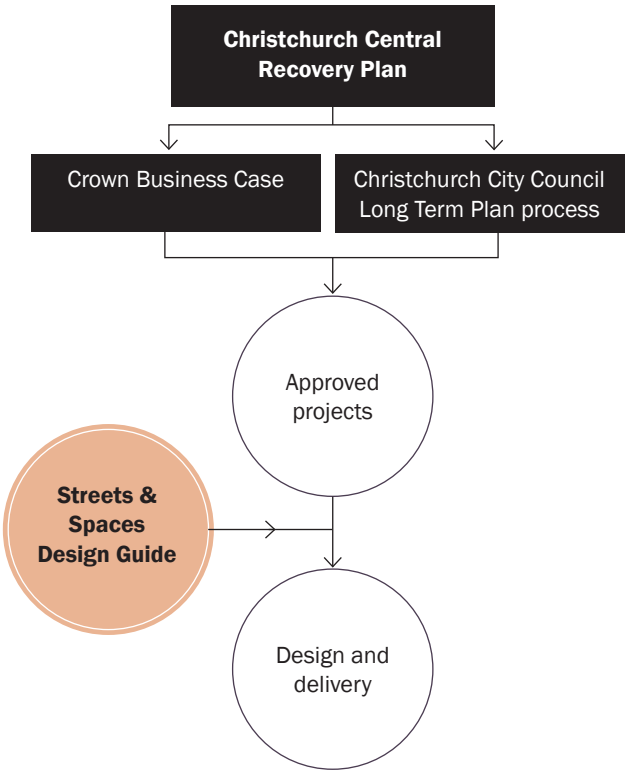
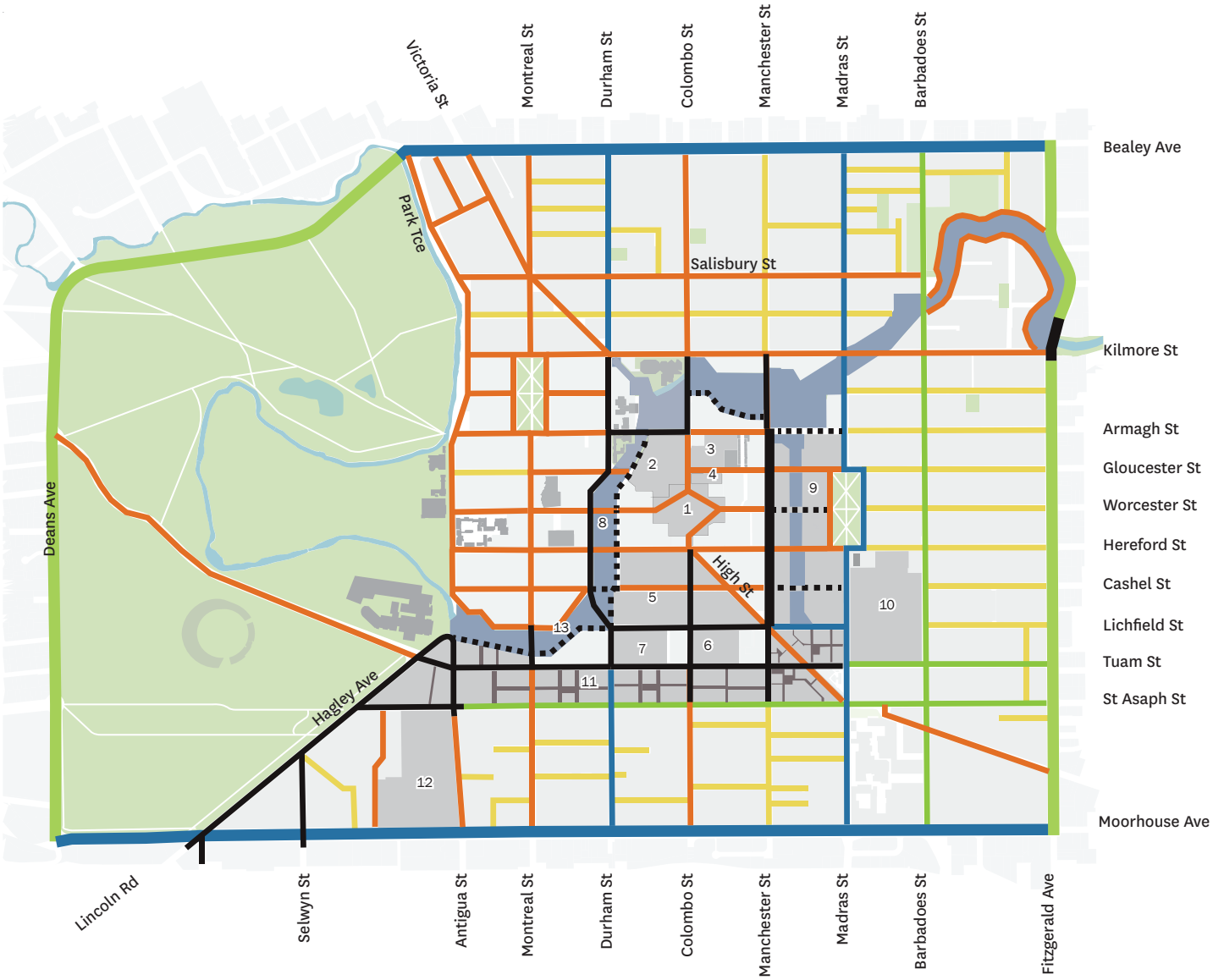


Figure 96 *Public realm improvement implementation process*



Legend

FIRST PHASE

- Accessible City Phase 1 transport projects
- Anchor project–Te Papa Ōtākaro/Avon River Precinct & East Frame public realm
- Anchor project–South Frame public realm

LATER ACCESSIBLE CITY PHASES

- Phase 2 projects
- Phase 3 projects
- Phase 4 projects
- Phase 5 projects

ANCHOR PROJECTS

1. The Square
2. Convention Centre Precinct
3. Performing Arts Precinct
4. Central Library
5. Retail Precinct
6. Bus Interchange
7. Justice and Emergency Services Precinct
8. Te Papa Ōtākaro/ Avon River Precinct
9. East Frame residential precinct
10. The Stadium Precinct
11. South Frame
12. Metro Sports Facility
13. Earthquake Memorial

Figure 97 *Public realm projects–indicative phases of delivery*

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Photography

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Page 86 **Melbourne (Australia)** Melizza Morales-Hoyos, 2014

Page 88 **Melbourne (Australia)** Melizza Morales-Hoyos, 2014

Page 90 **Christchurch (New Zealand)** Alistair Marshall, 2014

Page 92 **Christchurch (New Zealand)** CERA, 2014

Page 94 **Christchurch (New Zealand)** Alistair Marshall, 2014

Page 102 **Pin oak and Broad-leaved lime.** CERA, 2014

Tulip tree. www.whatgrowsthere.com/grow/wp-content/uploads/2011/06/Liriodendron-tulipifera-11.jpg

Kōwhai. http://static.panoramio.com/photos/large/7495396.jpg

Norway maple. http://plants.makeitgreen.ca/Content/Images/Photos/A247-18.jpg

Upright English oak. http://upload.wikimedia.org/wikipedia/en/thumb/4/4b/Quercus_robur_%E2%80%98Fastigiata%E2%80%99.JPG/768px-Quercus_robur_%E2%80%98Fastigiata%E2%80%99.JPG

Page 103 **Turkish hazel.** www.plantoregon.com/images/products/CoryluscolurnaTREE.jpg

English oak. http://s0.geograph.org.uk/geophotos/04/03/89/4038950_17e2bd23.jpg

Upright red maple. CERA, 2014

Upright tulip tree. www.lappen.de/en/assortment/?tx_sksimplegallery_pi1%5Bid%5D=8&tx_sksimplegallery_pi1%5Bsingle%5D=136&cHash=629993dbce

Red maple. www.wunderground.com/wximage/ronbweather/18?gallery=

Page 104 **Pavement surfaces (3)** CERA, 2014

Page 154 **Melbourne (Australia)** Melizza Morales-Hoyos, 2014

Page 170 **Christchurch (New Zealand)** CERA, 2014

Page 173 Clockwise, from top left
Stranges Lane Christchurch (New Zealand) CERA, 2014
Sydney (Australia) Melizza Morales-Hoyos, 2014
Stranges Lane Christchurch (New Zealand) CERA, 2014
Sydney (Australia) Melizza Morales-Hoyos, 2014
Melbourne (Australia) Melizza Morales-Hoyos, 2014

Page 176 ***Ballerina Mural* (Owen Dippie), Christchurch (New Zealand)** Melizza Morales-Hoyos, 2014

Page 180 **Christchurch (New Zealand)** CERA, 2014

Page 182 **New York (USA)** Melizza Morales Hoyos, 2009

Page 185 Left to right, by row
Sydney (Australia) Sophie Connell, 2012
Wellington (New Zealand) Sophie Connell, 2011
Melbourne (Australia) Melizza Morales-Hoyos, 2014
New York (USA) Skye Duncan, 2013
Melbourne (Australia) Melizza Morales-Hoyos, 2014

Page 190 **City Mall, Christchurch (New Zealand)** Melizza Morales-Hoyos, 2013