

# Plan Change 14

*Section 32: Part 2, Appendix 45*

*Background information in support of the City Spine  
Transport Corridor*

*Christchurch City Council*

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Date: 16 February 2023

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**DISCLAIMER:**

Christchurch City Council has taken every care to ensure the correctness of all the information contained in this report. All information has been obtained by what are considered to be reliable sources, and Christchurch City Council has no reason to doubt its accuracy. It is however the responsibility of all parties acting on information contained in this report to make their own enquiries to verify correctness.

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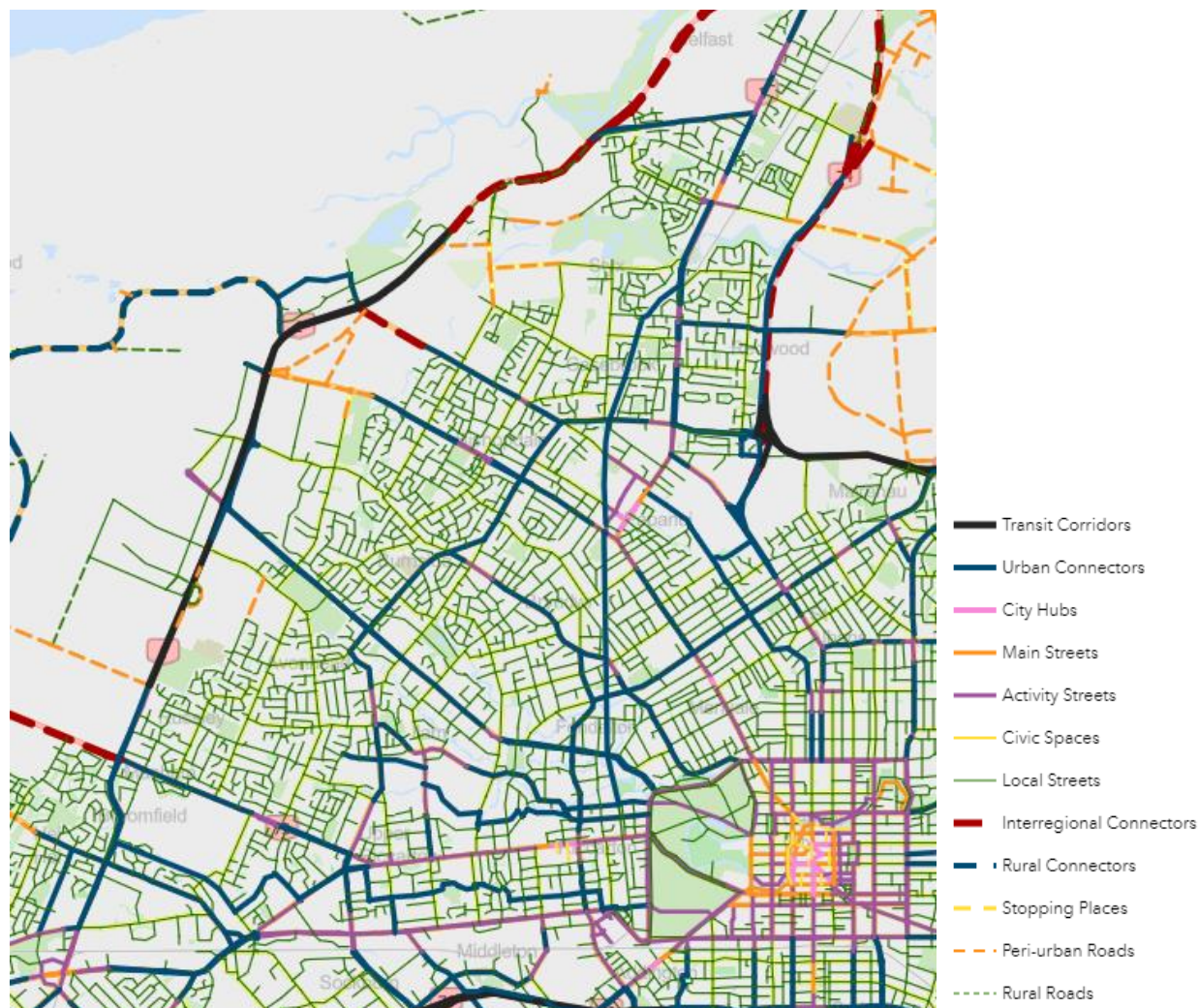
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## 1. Introduction to the City Spine Transport Corridor

Planning is underway for Ōtautahi Christchurch to cater for a population of one million people, over the long term. A developing and central feature of the city's urban form is its main transport corridors that form essential the spine of the city, connecting the north to the west, through the Central City. The following information

## 2. One Network Framework

Christchurch City Council and Waka Kotahi Transport Agency have collaborated to classify all roads in Christchurch City using the One Network Framework<sup>1</sup>. The City Spine Transport Corridor constitute a mixture of City Hubs, Main Streets, Activity Streets and Urban Connectors.

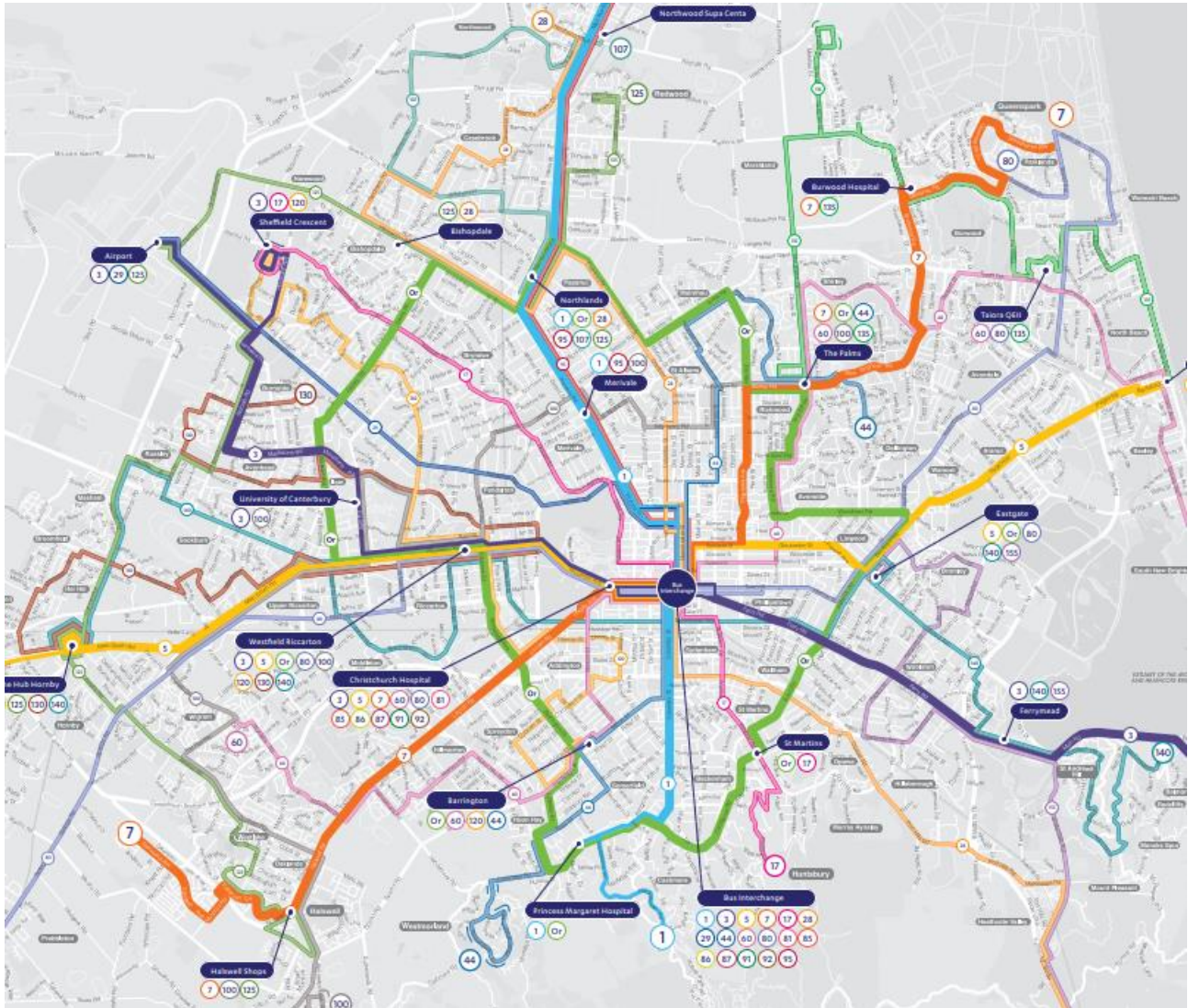


<sup>1</sup> Maps available internally here:

<https://gis.ccc.govt.nz/portal/apps/webappviewer/index.html?id=f5d8cbcdc3674ca5a28b4397ca7eac42>

### 3. Public Transport Network

The corridor from the city centre to Hornby via Riccarton and Main South Roads is Christchurch's busiest public transport corridor: through Riccarton it carries approximately 10,000 passengers per day<sup>2</sup>, on 790<sup>3</sup> buses across 9 routes. The corridor from city centre to Belfast via Papanui and Main North Roads is Christchurch's second busiest: through Papanui it carries approximately 4,900 passengers per day, on 430 buses across 6 routes.

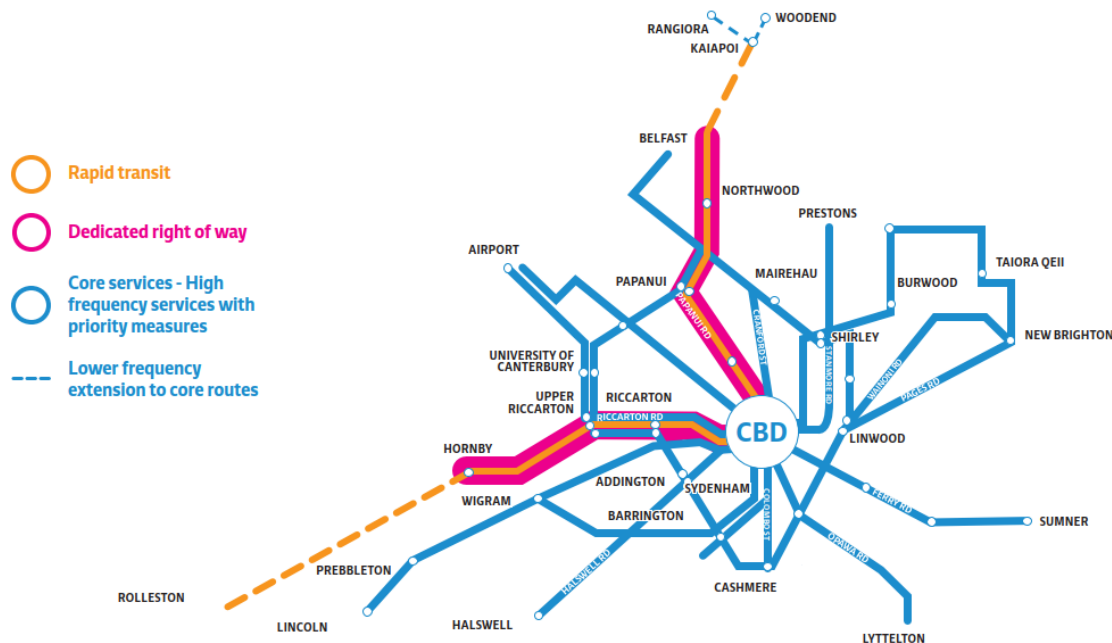


<sup>2</sup> Taken from Christchurch Transport Model outputs

<sup>3</sup> Taken from metroinfo website: <https://www.metroinfo.co.nz/>

#### 4. Regional Public Transport Plan

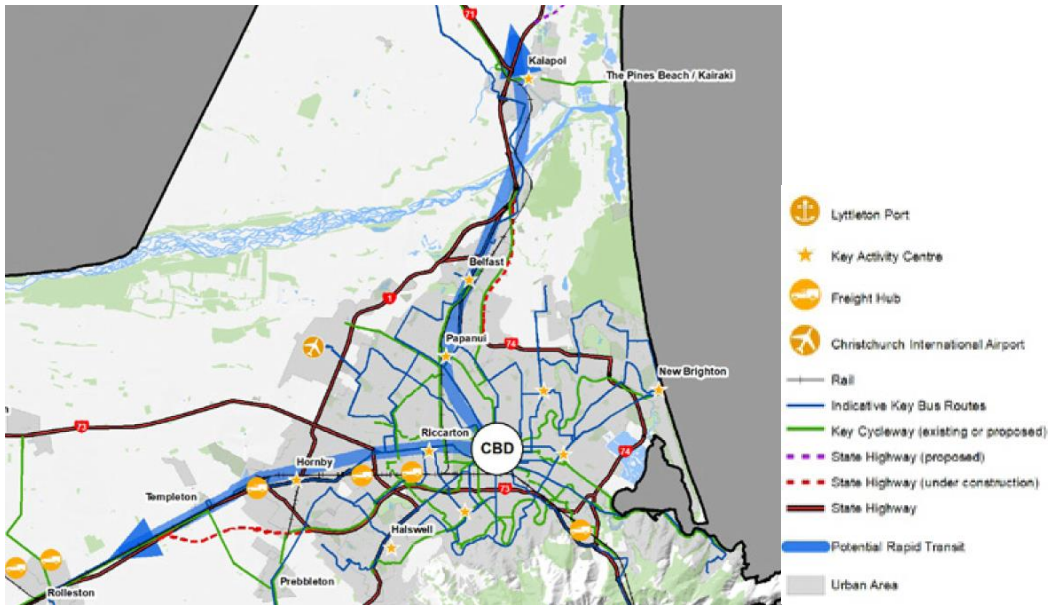
In 2018 the Regional Public Transport Plan was adopted<sup>4</sup>. This identified these two corridors as the highest level of provision for the city, and set out a plan for dedicated right of way and eventually rapid transit. One of the actions for the medium-term (2018-2028) was to “Protect rapid transit corridors and begin construction of infrastructure that will separate public transport from traffic congestion (i.e. rapid public transport systems)”



#### 5. Our Space 2018-2048

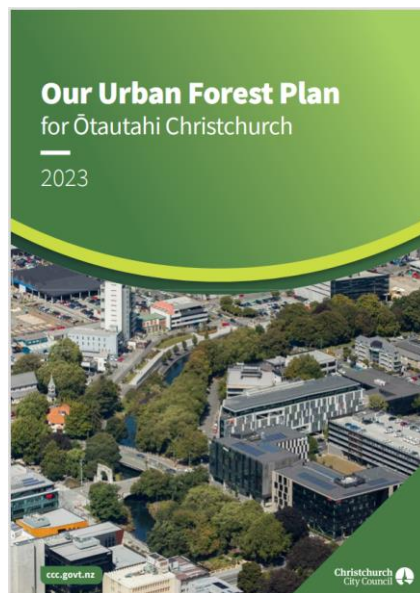
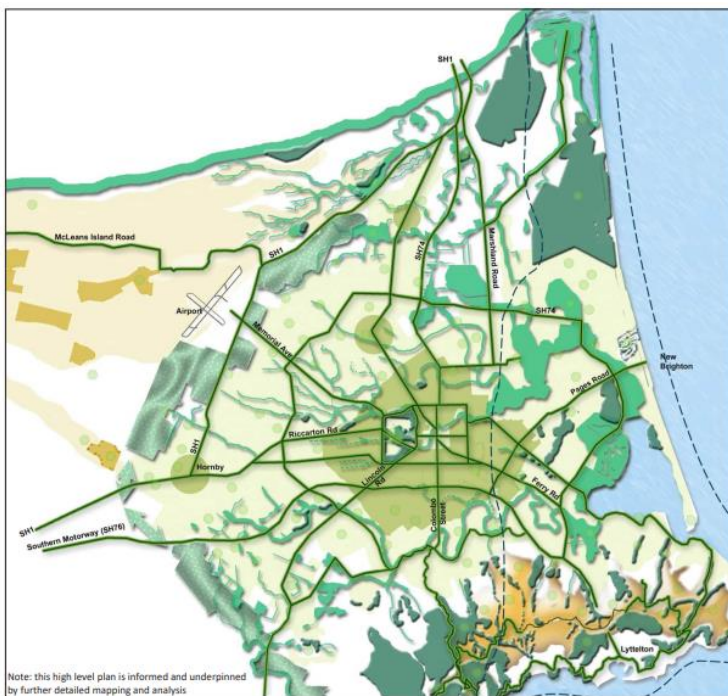
Our Space is the Greater Christchurch Settlement Pattern Update. It includes the map below showing the two routes as “potential rapid transit” and the statement: “A settlement pattern approach that encourages greater urban densities, particularly along key public transport corridors, provides the greatest opportunity for people to live in close proximity to proposed new rapid transit routes, increasing the likelihood and attractiveness for people to adopt these transport modes”.

<sup>4</sup> Available here: <https://www.ecan.govt.nz/your-region/living-here/transport/public-transport-services/future-public-transport/>



## 6. City spine and greenway concept

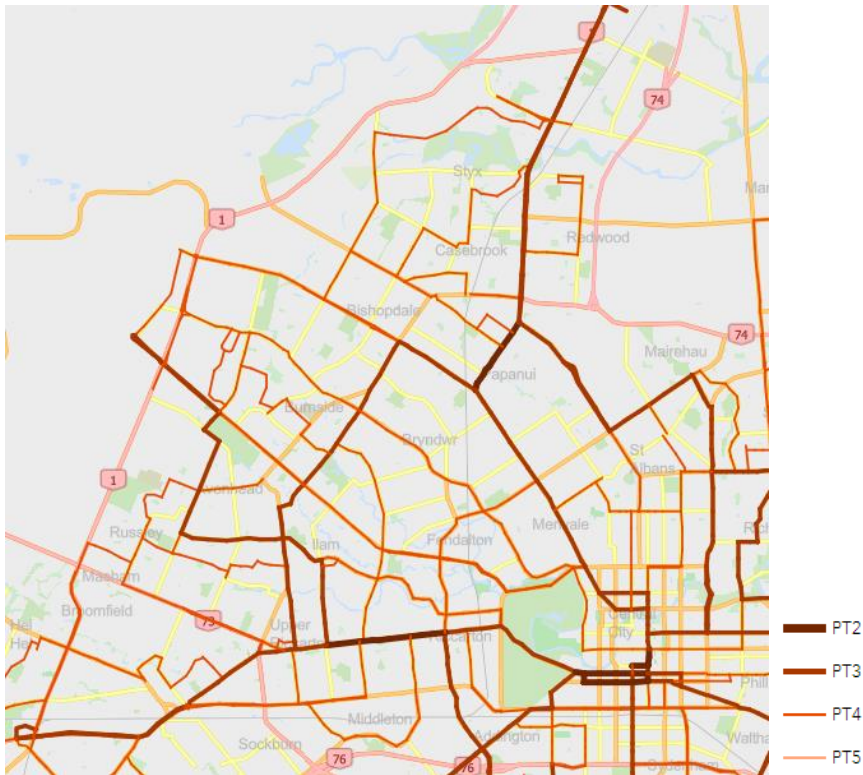
The concept of a city greenways is supported under the Council’s draft Ōtautahi Christchurch Plan and draft Urban Forest Plan<sup>5</sup> (neither adopted by Council to date). Central to this is ensuring adequate space is provided to enable outcomes to be achieved. Trees provide a range of social, environmental, cultural ecological and economic benefits and services that enrich the quality of urban life. This includes; providing shade in summer and shielding us from cold in winter; removes pollutants from air and water; contributes to a more walkable, liveable and sustainable city; creates greener, vibrant and more enjoyable neighbourhoods; improves urban ecology and help mitigate climate change; and provides engaging community, recreational and social spaces.



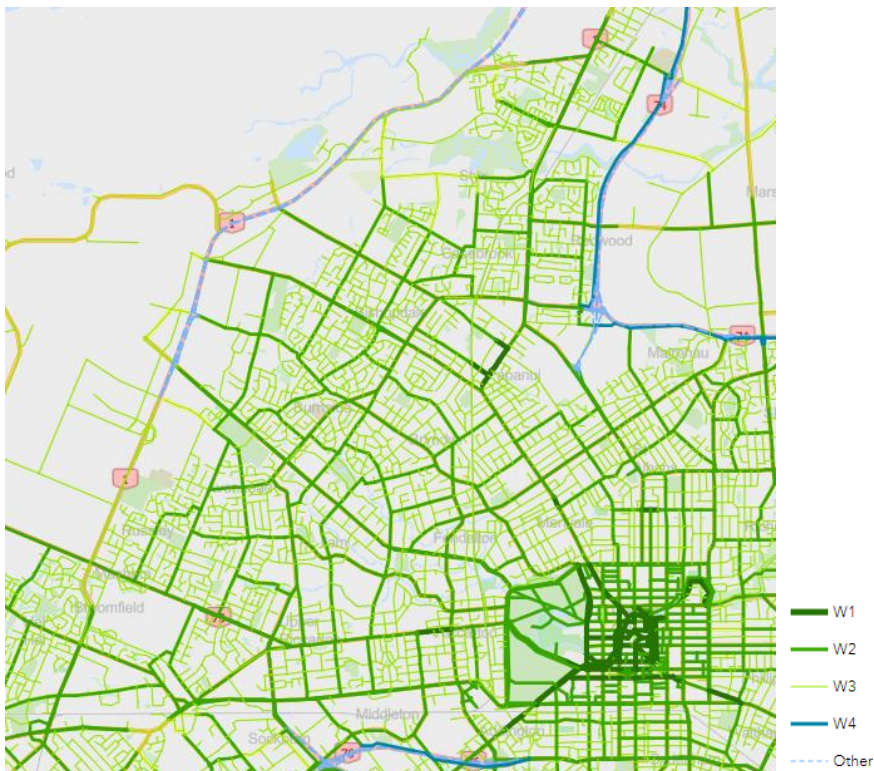
<sup>5</sup> [Urban forests : Christchurch City Council \(ccc.govt.nz\)](https://ccc.govt.nz)

## 7. Christchurch Transport Plan

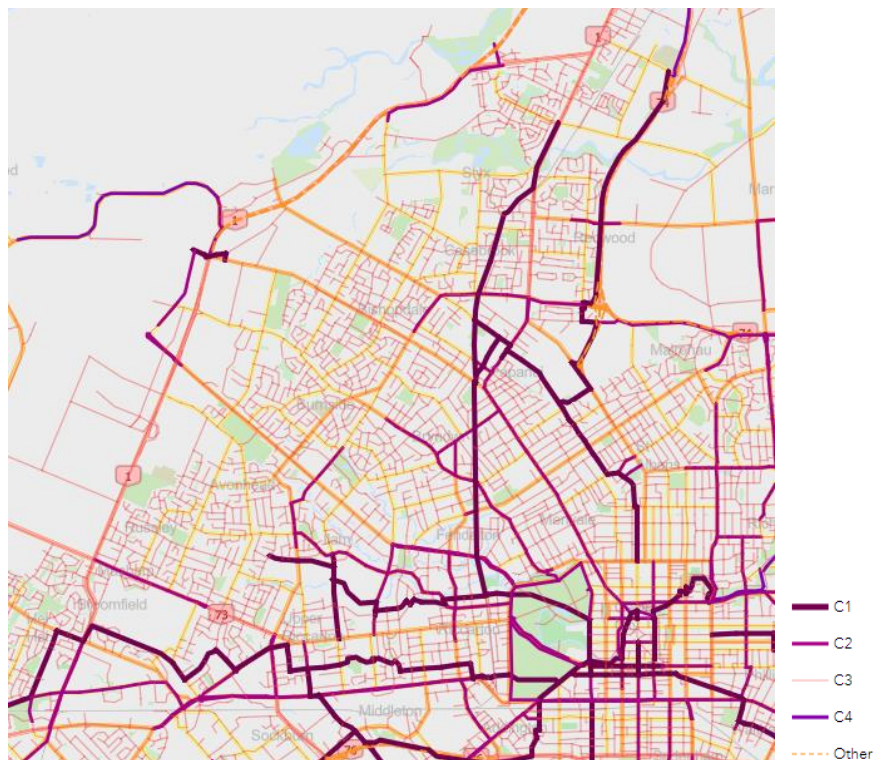
This corridor is highly prioritised for public transport, especially through the activity centres where multiple routes converge.



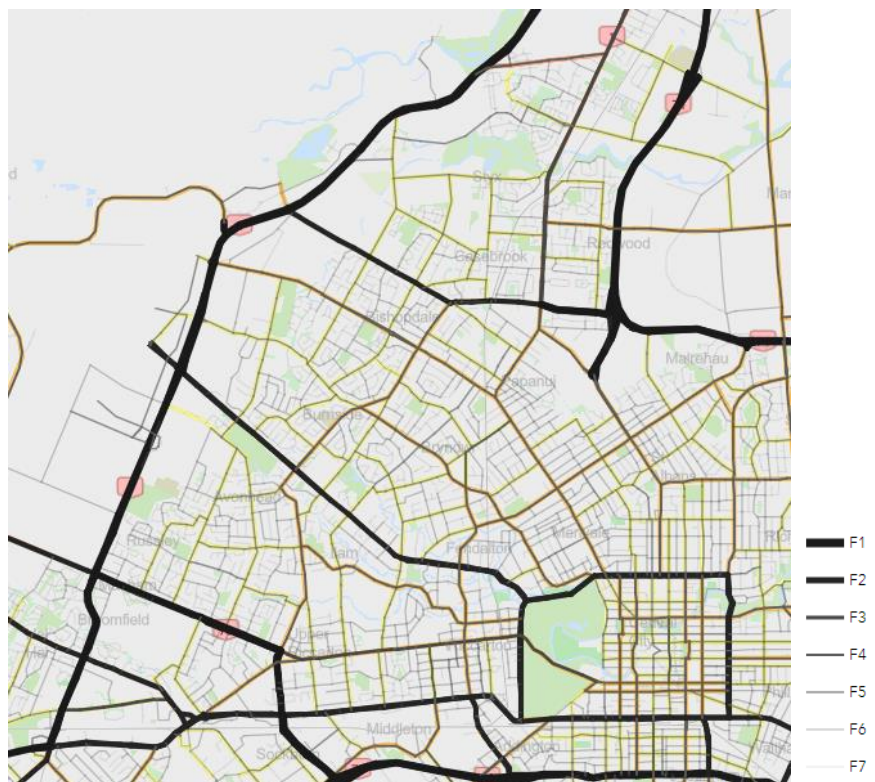
Both routes are highly prioritised for walking, especially through the activity centres of Riccarton and Papanui.



Riccarton Road is not highly prioritised for cycling. Main South Road is for the section between Church Corner and Springs Road. The Papanui corridor generally is except for a short section between Northcote Road and the railway line.

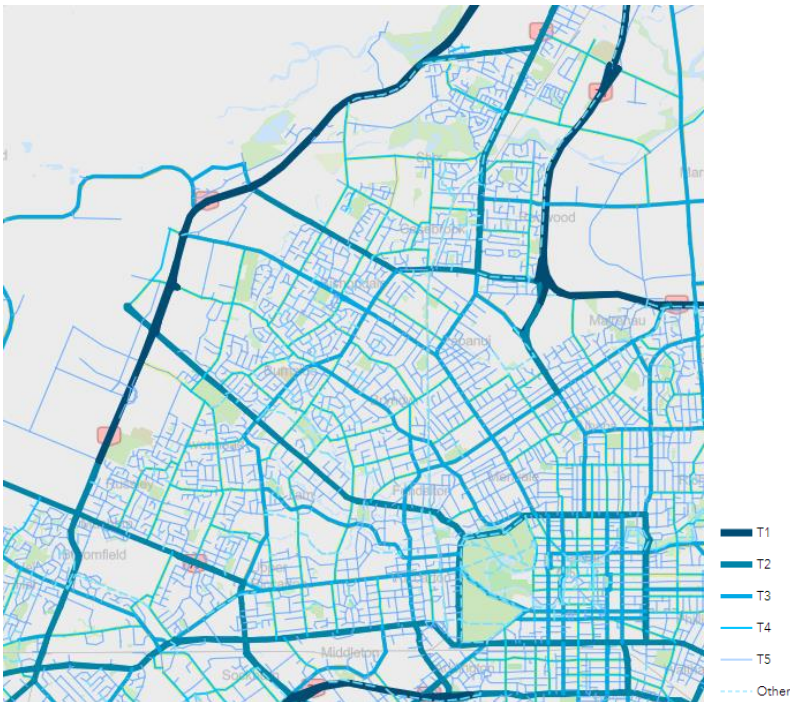


The routes are generally not prioritised for freight, other than Main South Road between Hornby and Blenheim Road, and to a lesser extent Main North Road.



The inner portions of the routes are not prioritised for traffic, but their outer portions are (Main South Road and Main North Road).





## 8. Public Transport Futures

In 2017 a Strategic Business Case was endorsed which set out the case for more investment in public transport in greater Christchurch<sup>6</sup>. In 2018 a Programme Business Case was endorsed which built on this and recommended that the nature of that investment be threefold: (i) improving the core bus routes (ii) improving other bus routes and (iii) mass rapid transit along the Riccarton and Papanui corridors<sup>7</sup>.

In 2021 a Combined Business Case was endorsed setting out more details of the first two of these investments to the bus network<sup>8</sup>. Some of these are now being implemented, others are undergoing further analysis and design as part of a detailed business case (ongoing). Also in 2021 an Indicative Business Case for mass rapid transit commenced in conjunction with a Greater Christchurch Spatial Plan. Completion of this business case is due early 2023. Depending on the findings, the next step would likely be a Detailed Business Case.

The preferred Mass Rapid Transit (MRT) corridor identified by Waka Kotahi in association with the MRT Business Case (see diagram below) extends from Hornby to Belfast, via but excluding the Christchurch central city and includes:

- Main South Road (Carmen/Shands to Riccarton Roads)
- Riccarton Road (Yaldhurst to Deans Avenue)
- Papanui Road (Bealey Avenue to Harewood Road)
- Main North Road (Harewood to Northcote Roads).

Below are further excerpts from the Mass Rapid Transit Business Case

<sup>6</sup> Available here: <https://api.ecan.govt.nz/TrimPublicAPI/documents/download/3130109>

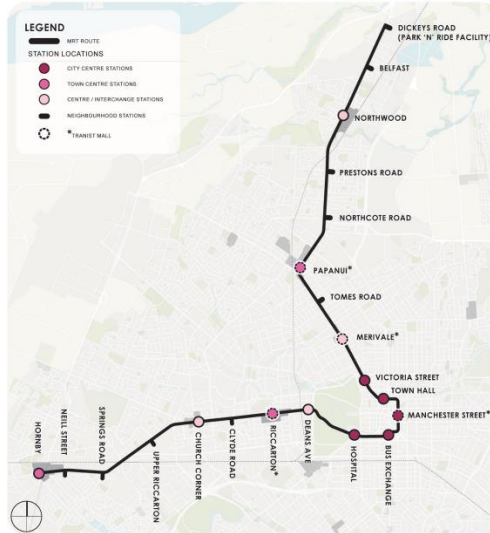
<sup>7</sup> Available here: [https://christchurch.infocouncil.biz/Open/2018/12/GCPC\\_20181214\\_AGN\\_2529\\_AT.PDF](https://christchurch.infocouncil.biz/Open/2018/12/GCPC_20181214_AGN_2529_AT.PDF)

<sup>8</sup> Available here: <https://api.ecan.govt.nz/TrimPublicAPI/documents/download/4106274>

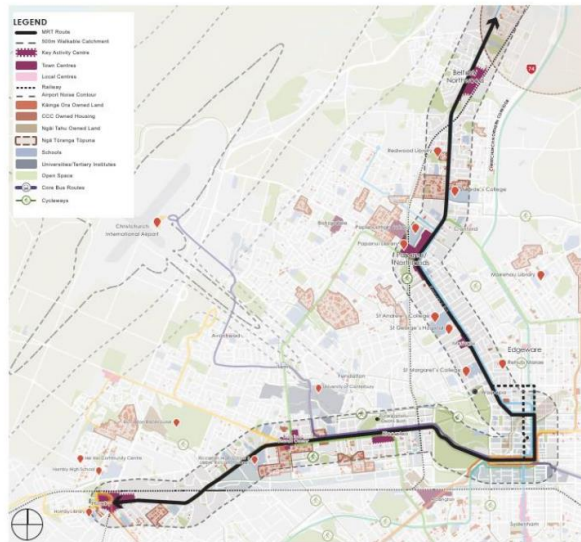
Route

### Preferred Route & Station Locations

- Street running
- Maximizes accessibility opportunities along corridor
- 21 stations

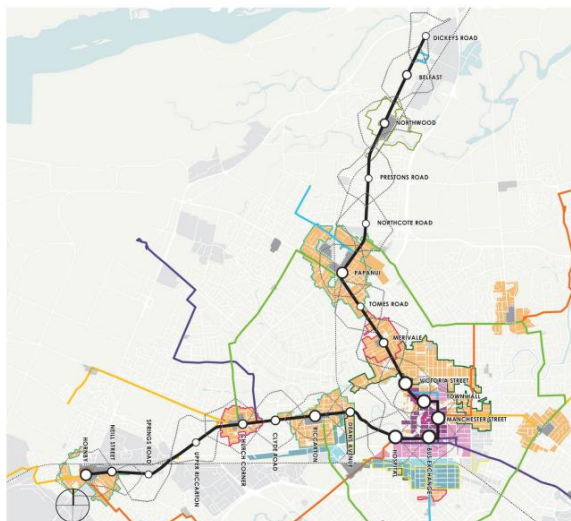


### Emerging Route



Scenario 1

### Scenario 1 – 2051 Baseline



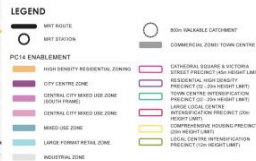
A total of **36,689** households within the corridor by 2051

**27%** of CCC household growth\*

A total of **128,483** jobs within the corridor by 2051

**57%** of CCC total job growth

\*CCC 28,154 assigned growth share within Greater Christchurch

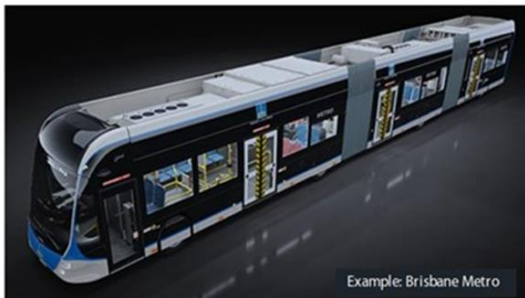


## Land Use Scenario 3 – MRT Focused Growth 2051



They clarified that this business case won't specify the mode, other than that it will be one of these two:

### Bus Metro

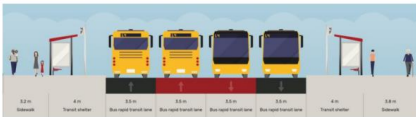


### Light Rail



# Manchester Street

## A-A Allocation of Space

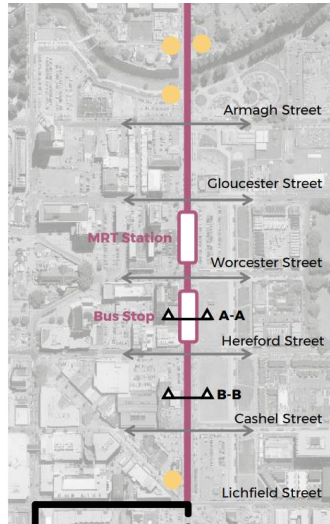


Indented stations to allow PT to pass MRT and vice versa

## B-B Allocation of Space



Generous footpaths to allow for high quality urban place and movement, maintain existing shared path to east



# Victoria Street

## Current Allocation of Space:

- Two traffic lanes (PT shared)
- On-road cycle lane
- On-road parking

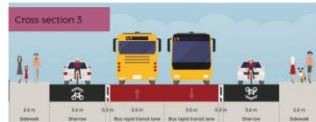


## MRT Allocation of Space:

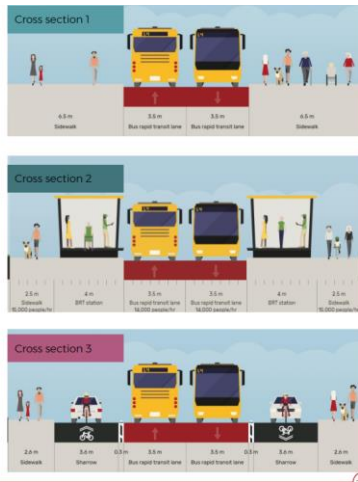
- Two traffic lanes (shared with cyclists)
- 7.0m wide MRT corridor
- No on-street parking



# Victoria Street - Option 1



## Victoria Street - Option 2



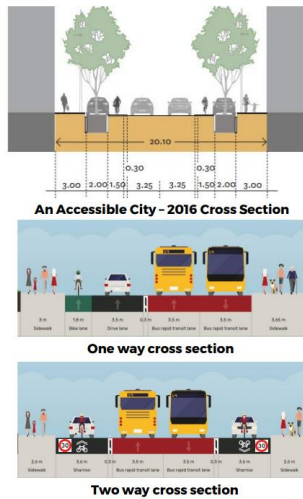
## Kilmore Street

### Current Allocation of Space:

- Kilmore Street will change to a two-way street under the Salisbury St & Kilmore St Two Way project
- On-road cycle lane
- On-road parking

### MRT Allocation of Space:

- One-way vs two-way private vehicle traffic
- Indicative station proposed near Town Hall



## Riccarton Avenue

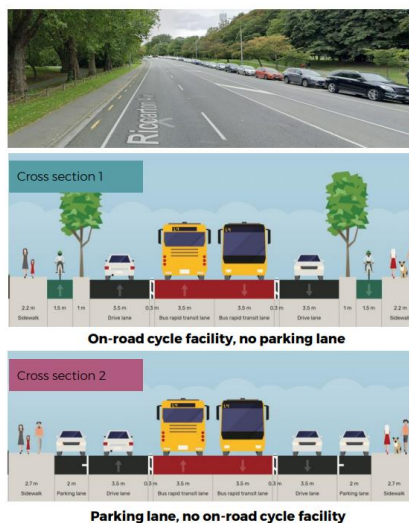
### Current Allocation of Space:

- Two laned east / city bound, one laned west bound
- On-road cycle lane
- Flush median
- On-road parking

Note: Shared paths are located within Hagley Park

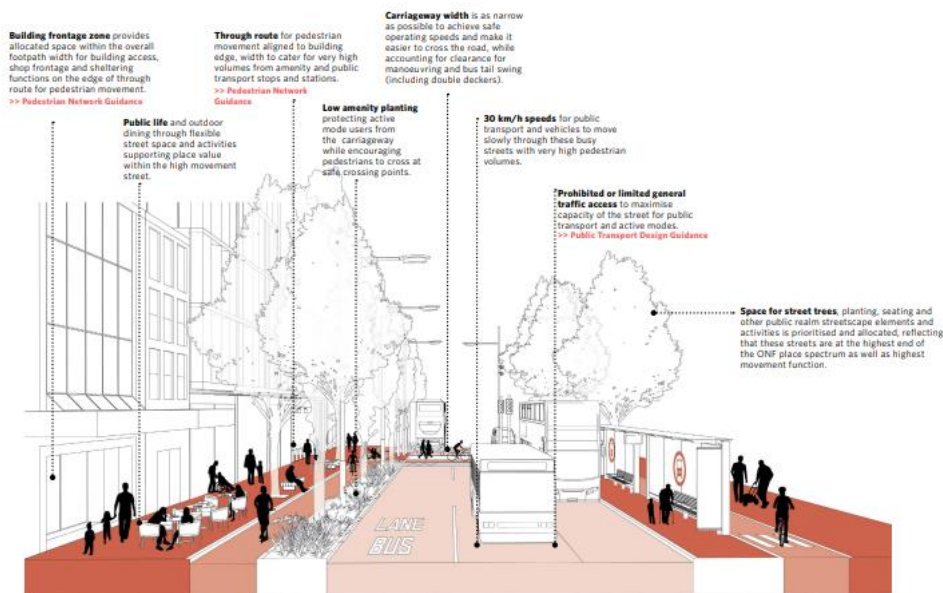
### MRT Allocation of Space:

- One lane in each direction
- 7.0m wide MRT corridor
- Option to remove on-road cycle lane to include parking lane instead



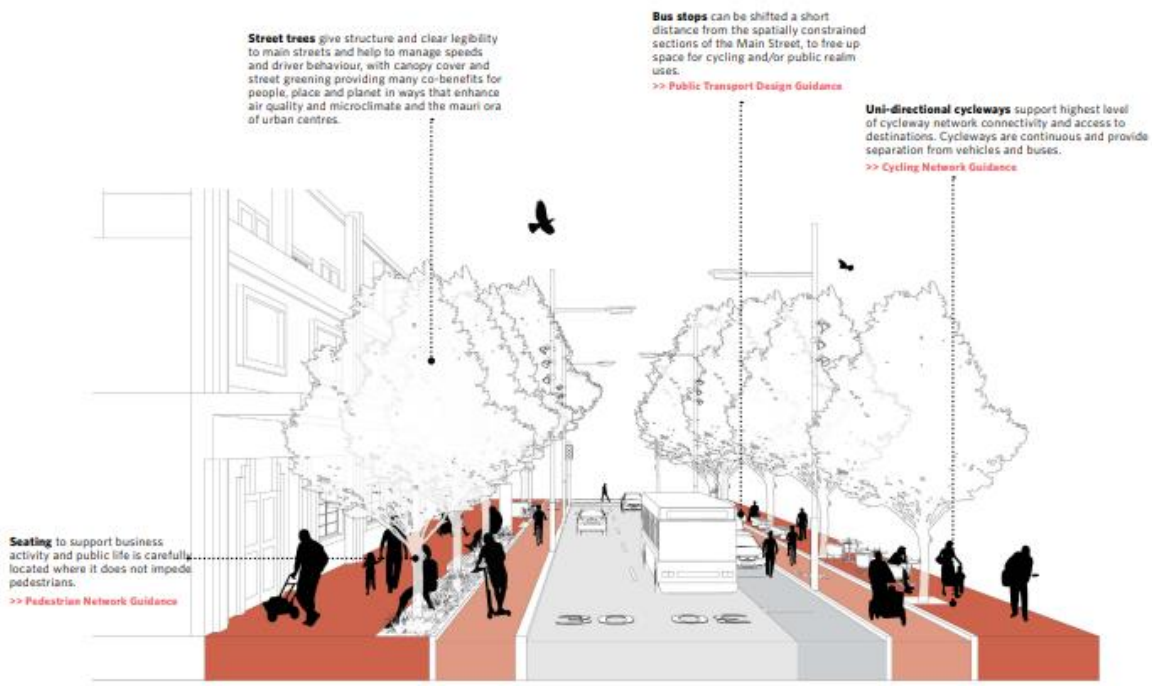
## 9. Towards a more visionary outcomes

The assessment and analysis is to be drawn from the Aotearoa Urban Street Planning and Design Guide<sup>9</sup> and based upon the One Network Framework classification. For City Hubs, which is the classification through Riccarton and Papanui, it recommends the type of street environment shown in the diagram below, with a typical street width being 20m.



For Main Streets, which is the classification on either side of the City Hubs, it recommends this type of street environment, which can fit within a 20m corridor.

<sup>9</sup> Available here: <https://nzta.govt.nz/about-us/about-waka-kotahi-nz-transport-agency/environmental-and-social-responsibility/urban-street-guide/>



For Activity Streets and Urban Connectors there are two designs given, one for a 20m corridor (left) and one for a 27-30m corridor (right).

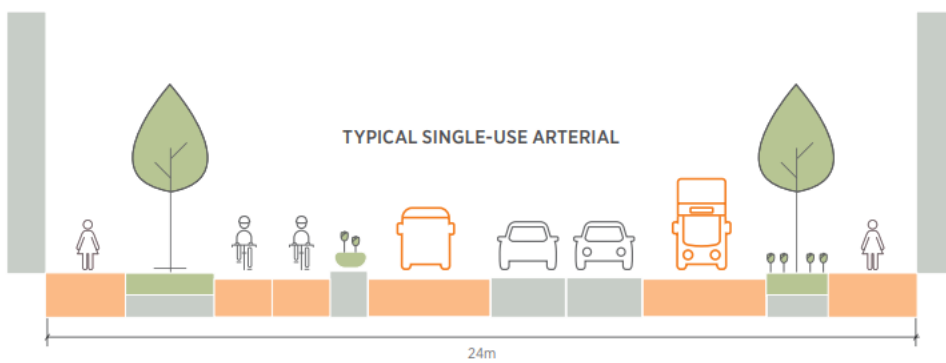
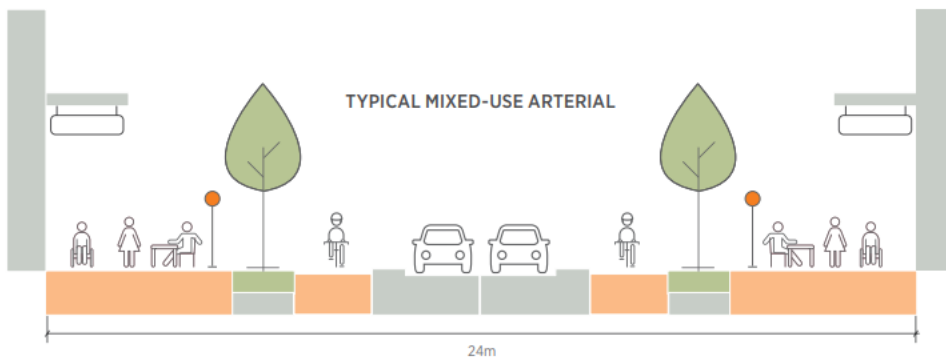


In the context of the Riccarton and Papanui corridors, where bus priority is essential but retaining general traffic lanes is also important (along most of the routes at least), the design for a 27-30m Activity Street or Urban Connector (above right) is considered the only one that would adequately fulfil the required functions of the corridor.

Whilst the MRT business case is considering provision within the current road widths, this project may also have regard to other more city shaping and visionary examples as proposed and achieved in other major cities - see Auckland Road and Street Framework 2018 and the Urban Streets and Roads Design Guide



For a more detailed account of the framework, please refer to the Roads and Street Framework Strategy (2018).







Green streets, rain gardens



Swale street



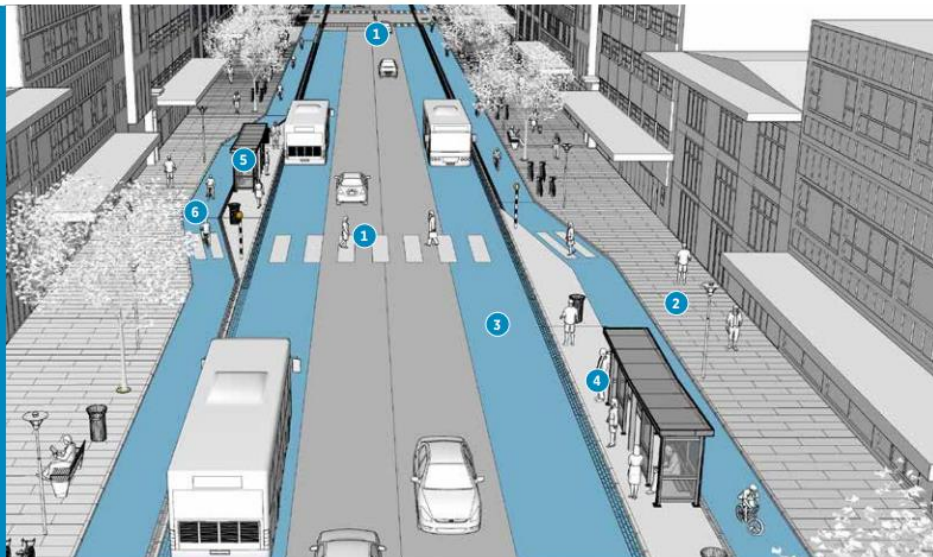
Green alley

## Public transport street



Typically located in urban and town centres, public transport streets have high volumes of both pedestrians and public transport vehicles due to a concentration of destinations and the convergence of public transport routes.

Public transport streets have dedicated lanes for public transport services. This separation from general traffic is necessary in order to remove delays from general vehicle congestion and provide reliable service. Public transport streets integrate dedicated on-street facilities with stops, stations,



1 PEDESTRIAN/PASSENGER

2 DESIGN FOR CONTEXT

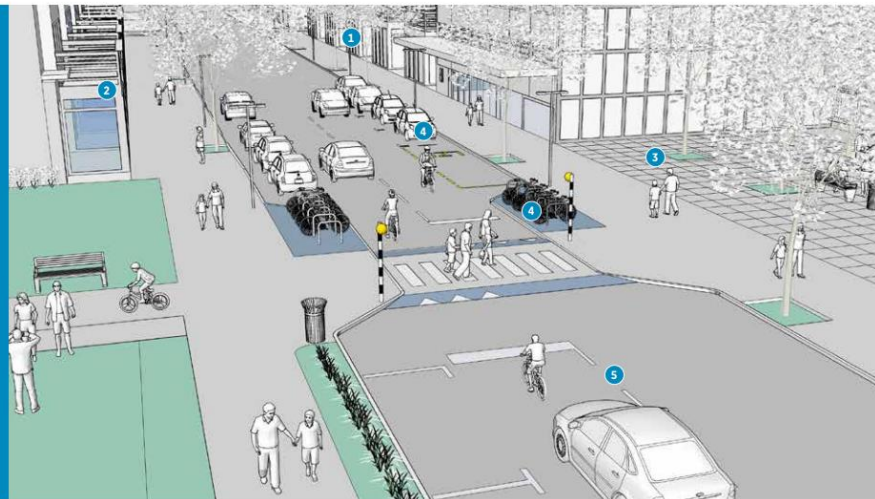
3 DEDICATED LANES

## Residential street - high density



Higher density residential streets are neighbourhood streets that serve as urban living rooms. They have a higher requirement for public realm amenity, kerbside management and pedestrian accommodation.

Public realm amenity can come in the form of added street seating, public art, street trees, plantings, as well as public plazas (ideally in combination with civic buildings such as libraries) and parks. Because vehicle ownership tends to be lower in denser urban areas, the need for on-street parking becomes less pressing. Kerbside space might be used for bike bays (marked cycle parking areas in re-purposed parking spaces), vehicle hire or car share stations, as well as limited on-street parking. Pedestrian accommodation should cater to the increased volumes of pedestrians that are expected in denser areas, which means that footpaths are wide enough to accommodate small groups coming from opposing directions and passing one another.

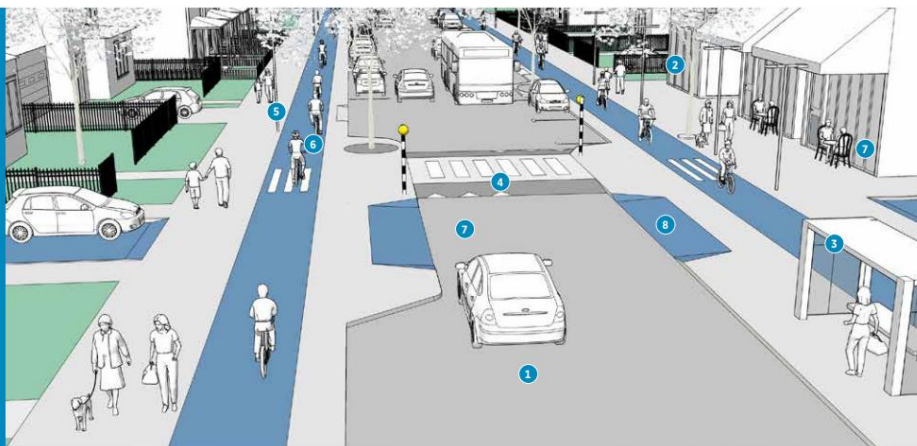


## Neighbourhood collector



Neighbourhood collectors are long, contiguous streets that have higher levels of vehicle traffic. These streets connect quiet, local residential streets with streets that connect neighbourhoods to one another, such as Richmond Road in Grey Lynn.

Where connector roads intersect, various shops might be clustered together, forming a small neighbourhood retail centre. Outside of these neighbourhood centres, neighbourhood collectors are lined with apartments, townhouses and single-family homes. Neighbourhood collectors typically run through the heart of residential neighbourhoods. Because of their function as a local centre, higher densities are acceptable and preferred along residential connectors.



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1 APPROPRIATE

2 MIXED USE

3 PUBLIC TRANSPORT

4 CROSSING POINTS

5 STREET TREES