



Contents



Introduction

The role of the city centre's public realm Purpose of this document How this document should be used



Strategic context

Auckland Plan 2050

Future Development Strategy

Ngā Hapori Momoho Thriving Communities Strategy 2022 - 2032

Waitematā Local Board Plan 2023

Auckland City Centre Masterplan 2020

Hīkina te Wero – Environment Action Plan 2020-2030

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan 2020

Waitematā Urban Ngahere Action Plan 2019 The Auckland Water Strategy 2022 - 2050

Roads and Street Framework and the Transport Design Manual

4.

Greening

Introduction

Greening categories



Furniture

Seating

Other furniture (Bollards, bike rack, drinking fountain, bins, tree guards)

Lighting

Street dining



Paving

Introduction

Stone paving

Concrete paving

Kerbstones and place mats



Public art

Introduction

Things to think about for public art investment Council processes to follow



Adaptive and tactical urbanism approaches

Introduction

Monitoring and evaluation

Example projects

Tactical urbanism palette



Appendix A: Paving and furniture specifications

Seating

Other Furniture

Lighting

Paving



Appendix B: Greening specifications

B.1 Benefits of greening elements

B.2 Calculating canopy tree and permeability

B.3 Tree species



Overarching principles

Overarching principles





Introduction

The role of the city centre's public realm **Purpose of this document** How this document should be used





The role of the city centre's public realm

The public realm is defined as the spaces that are accessible and useable by people travelling on foot, experiencing a place from a pedestrian perspective. For the purposes of this document the public realm includes:

- Footpaths along streets
- Shared spaces
- Pedestrian only laneways
- Pedestrian through site links
- Squares, plazas and public open spaces

The public realm is generally on publicly owned land but can also be on privately owned land where the landowner has afforded the public with pedestrian access. The footpaths, shared spaces and pedestrian laneways located within Auckland Transport's road network constitutes approximately 50% of the public realm in the city centre.

The city centre's public realm is the glue that holds the city centre together. It is the canvas for public life and it needs to work well for everyone that spends time in Tāmaki Makaurau / Auckland to feel safe and comfortable, and to experience enjoyment when in the city centre.



Image 1.1: Christmas pavilion and installations decorating the Te Komititanga square

A high quality and engaging public realm is critical to the vibrancy, identity, legibility and economic health of Tāmaki Makaurau. It provides a network of distinctive places that people want to visit and move through from one destination to the next. It creates places that support retail, businesses, hospitality and cultural experiences that together ensure an attractive destination in which to live, work and play.

A high quality, green and well-maintained public realm plays a critical role in encouraging modal shift from private vehicles to walking as a primary mode of movement. This is because it creates an enjoyable and comfortable walking environment, and instils a strong sense of ownership and safety where people can walk freely without fear.

In 2008 Auckland City Council embarked on a journey to transform the city centre's public realm through a series of high quality and easily maintainable upgrades that would assist with offering world-class experiences and increase modal shift towards pedestrian movement. This process of public realm transformation has continued under Auckland Council and has lead to the revitalisation of the city centre, moving it from being car dominated to a vibrant place for people, with a strong sense of identity and commitment to the natural environment. There is still much work to do and this document is to guide the design process to ensure that key greening, coherency, and place based outcomes are achieved through future public realm upgrades.



Image 1.2: The Waharoa on Aotea Square



Purpose of this document

The purpose of the City Centre Public Realm Design document is to assist with achieving a number of the strategic directions that have been identified for the city centre. These are identified in Section 2.

'Great Streets: A Streetscape Design Guide for the CBD' (2009) (Great Streets) was prepared to support the programme of public realm upgrades that began in 2008.

The City Centre Public Realm Design document continues the legacy of Great Streets by retaining the specifications for furniture and paving to ensure coherency and legibility across the city centre's public realm and create efficiencies and cost savings in maintenance and procurement.

The document also identifies where more bespoke and place responsive design approaches to furniture and paving might be appropriate, particularly within special streets and spaces. The current special streets and spaces have been identified on the maps in the Furniture and Paving sections. They comprise the streets and spaces that have been upgraded to provide a strong sense of place and create visitor attractions and destinations. They are predominantly in the Queen Street Valley, Downtown area, Wynyard Quarter and along Karanga a Hape Road. The special streets and spaces will continue to

grow and evolve as more are upgraded to strengthen their sense of place and contribute to the vibrancy and destination offering within the city centre. Where bespoke and customised design approaches are adopted, these should embrace opportunities for co-design with mana whenua and utilise sustainable solutions to carbon and waste minimisation.

The City Centre Public Realm Design document provides guidance on greening in the city centre, recognising the significant shift towards the need to be resilient to the effects of climate change, including increasing heat and rainfall events. It also recognises the role that greening plays in creating shaded and enjoyable streets and spaces where people choose to walk as their mode of transport as well as to linger for enjoyment and social interaction.

The document also provides guidance on public art, recognising the critical role that public art plays in creating vibrant and unique places and spaces within the public realm.

The sections that relate to furniture and paving identify the key requirements for these aspects of public realm design. The sections that relate to greening and public art are guidance based and identify opportunities and things to think about.

The City Centre Public Realm Design document does not provide guidance on the spatial arrangement aspects of streets and spaces including street function, footpath width, and placement of furniture. Guidance on this is provided in the Auckland Transport guidance - Roads and Streets Framework¹ and the Transport Design Manual². Where key sections in the Transport Design Manual are of relevance to the content of the respective sections in this document, these are identified.

Whilst the City Centre Public Realm Design document provides guidance on key aspects of public realm design, it does not replace the need for a full place-based analysis of the local and cultural context and character that is required to inform a robust design process. Public realm can express and display culture, heritage, nature and the overall character of Auckland to residents and visitors, particularly in special streets and spaces. Designers will still need to understand the physical, social, cultural, and functional context of the streets and spaces that they're working in to inform their design and engagement processes.

Engagement with key stakeholders and with mana whenua will also need to play a fundamental role in the design process and in the development of the design narrative.

Any placed-based plans for the city centre such as framework or precinct plans should also inform the design process for public realm projects.

Image 1.3 provides a summary of the key components that should form part of the public realm design process, alongside the use of this document.

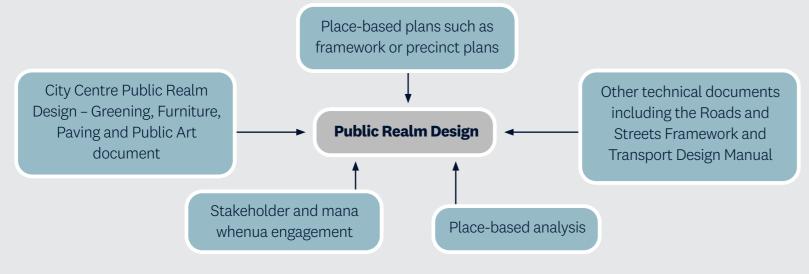


Image 1.3: Summary of the public realm design process



Link

- 1. Roads and Streets Framework
- 2. Transport Design Manual

Introduction

How this document should be used

The City Centre Public Realm Design document is guidance for project managers and designers delivering public realm projects on the greening, furniture, paving and public art aspects of their projects.

To ensure consistency in materials and approach across the city centre the document should be used by the Council family including Auckland Council, Auckland Transport and Eke Panuku, as well as by private developers that are delivering public realm projects on public land, or on private land where public access is being afforded.

Where this document should be used alongside other relevant technical documents including the Transport Design Manual, this is identified in each section.

This document should be used to assist with the following stages of a project:

Business case

Identifying the project's objectives, outcomes, costs (including procurement and long term maintenance costs) and the appropriate budgets

Project inception

Writing the briefs for the design and engagement teams

Design process

Carrying out opportunities and constraints analysis, and preparing and reviewing the concept and detailed designs

Engagement

Stakeholder engagement including communicating the project's objectives, analysis and design options

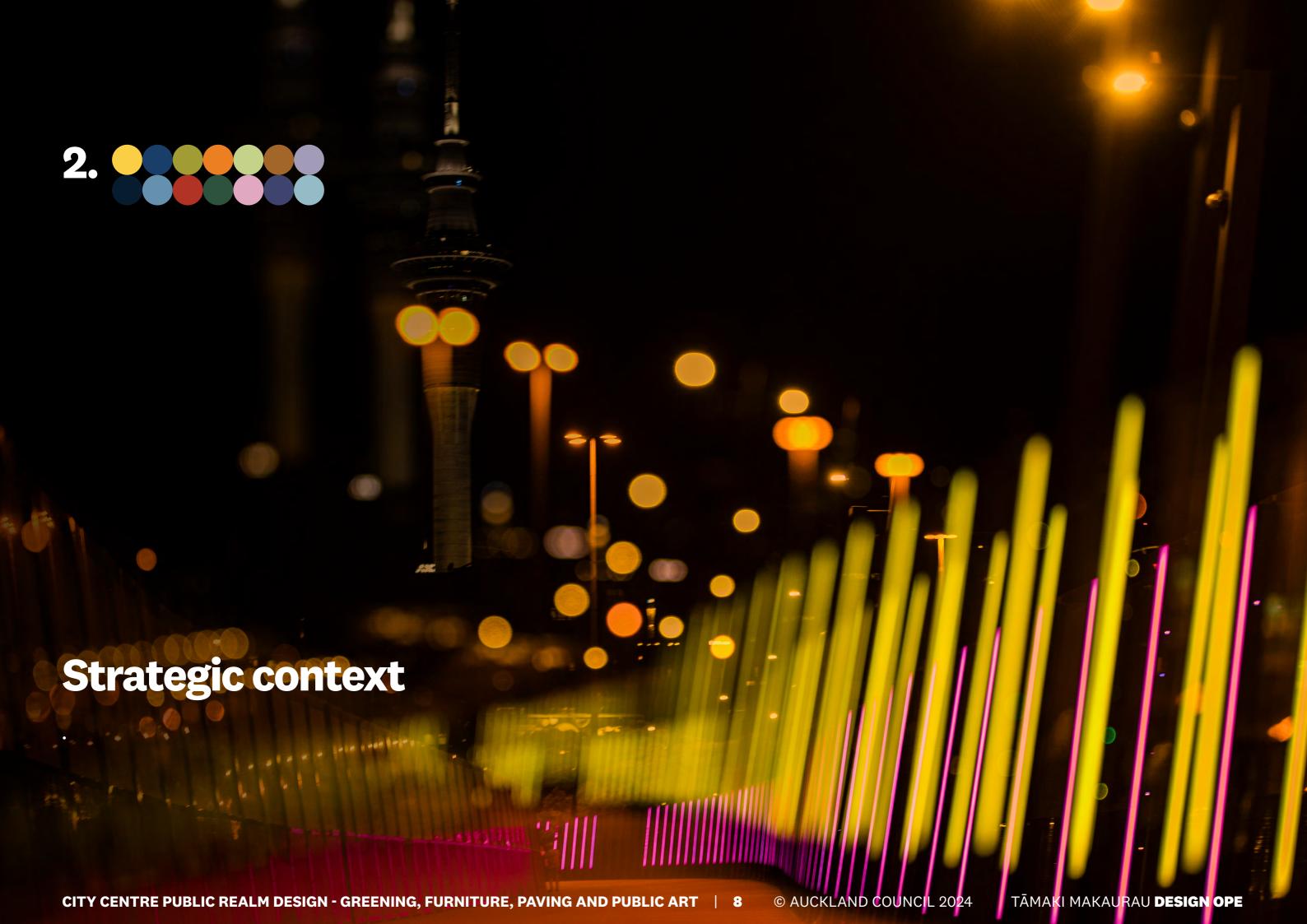
Implementation

Assist with efficiencies with procurement and construction methodologies

Management and maintenance

Assist with efficiencies in long term maintenance and management processes and costs





2.

Strategic context

Auckland Plan 2050

Future Development Strategy

Ngā Hapori Momoho Thriving Communities Strategy 2022 - 2032

Waitematā Local Board Plan 2023

Auckland City Centre Masterplan 2020

Hīkina te Wero - Environment Action Plan 2020-2030

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan 2020

Waitematā Urban Ngahere Action Plan 2019

The Auckland Water Strategy 2022 - 2050

Roads and Streets Framework and the Transport Design Manual



Auckland Plan 2050

The Auckland Plan 2050 (The Plan) is the long-term spatial plan for Tāmaki Makaurau / Auckland. It identifies that the city centre is critical to the success of Tamaki Makaurau and of Aotearoa New Zealand. The Plan identifies that a quarter of all jobs are located in the city centre, it contributes seven per cent to national GDP, and there are around 80,000 residents currently residing there.

The City Centre Public Realm Design document provides the tools for project managers and designers to ensure that the city centre public realm is attractive, safe and comfortable, where all people can experience enjoyment. By giving guidance towards "embedding good design" in accordance with the Auckland Plan 2050, the document supports the city centre's growth and prosperity.

Future Development Strategy

The draft Future Development Strategy is Auckland Council's plan to manage growth across Tāmaki Makaurau for the next 30 years. It identifies that the city centre plays a critical role in the success of both Tāmaki Makaurau and New Zealand – it is the main location for business, tourism, educational, cultural and civic activities in Tamaki Makaurau.

The strategy identifies the city centre as a node for investment priority and that significant projects and investments are needed on an on-going basis.

The City Centre Public Realm Design document provides guidance and direction for the planning and design of significant public realm projects to ensure value for money and a return on the investment for the city centre and wider region.

Ngā Hapori Momoho Thriving **Communities Strategy 2022 - 2032**

Ngā Hapori Momoho sets out the outcomes the council wants to achieve over the next 10 years, to ensure all of Auckland's communities can thrive, now and into the future:

- Manaakitanga All Aucklanders enjoy the essentials of a good life and fulfil their potential
- Whanaungatanga All Aucklanders are connected and feel as though they belong
- Kotahitanga All Aucklanders can participate and take collective action to meet common goals
- Kaitiakitanga Aucklanders are connected to and care for the natural environment

The City Centre Public Realm Design document aligns to the Ngā Hapori Momoho principle to invest to improve the wellbeing of people and planet through providing guidance for a city centre public realm that delivers multiple outcomes which benefit Aucklander's wellbeing (social, environmental, cultural and economic).

This is achieved by creating a city centre public realm which:

- reinforces our bicultural foundation,
- enables health and wellbeing,
- provides opportunities to connect and take action,
- creates opportunities for exploration and delight through the integration of arts and culture,
- connects people to nature, and
- is accessible for everyone.

Waitematā Local Board Plan 2023

The Waitematā Local Board Plan 2023 focuses on five outcomes that guide the work of the Waitematā Local Board to help make Waitematā a better community for all. The City Centre Public Realm Design document assists project managers and designers with achieving the outcomes in the Waitematā Local Board Plan 2023 when working on public realm projects.

Outcomes

- 1 All our people are thriving and have what they need to live a good life.
- 2 Our built and natural environment is resilient to natural hazards and the effects of climate change. Our natural environment is rich in biodiversity and provides clean waterways.
- 3 Our community is resilient and have places and activities to connect and foster a sense of belonging.
- 4 Waitematā is a great place to live, work, learn and play. Our neighbourhoods are well designed to be sustainable, wellconnected, and celebrate our heritage and unique identities.
- **5** Our city centre and fringe town centres are thriving and support a resilient diverse economy that embraces new opportunities and drives prosperity.



Auckland City Centre Masterplan 2020

The Auckland City Centre Masterplan (CCMP) 2020 sets out 10 outcomes that provide the overall strategic direction and vision for the city centre and articulate the city centre that we want for Auckland. The City Centre Public Realm Design document assists with ensuring that all public realm projects contribute towards achieving these outcomes.

Outcomes



A sense of place informed by the past and looking to the future. We seek a thriving and authentic tangata whenua identity and culture that is genuinely visible throughout the city centre.



Enable safe, healthy and sustainable travel options to improve people's access and choice of transport modes into and around the city centre.



A city centre that is inclusive and welcoming to all. The key to creating an inclusive city centre is to use a universal design approach. This means that we need to consider the needs of all users right at the start of the design process.



A network of new and enhanced living green corridors, open spaces, walls, roofs and urban farms that are accessible throughout the city centre.



Better public spaces in Auckland's well-known locations and streets and improve user experiences through the development of an extensive, continuous, safe and accessible pedestrian laneway network.



Outcomes



Increase the quality and variety of new public space supporting the city centre's residential buildings and neighbourhoods and a reduction in actual crime levels and fear of crime.



Deliver a well-designed and planned city centre and continue to develop the city centre in a way that reinforces its unique context, cityscape, streetscapes and heritage.



Actively recognise and celebrate Auckland's historic heritage as a driver of positive change and placemaking. Create public realm, street and open space upgrades that are informed by and enhance our heritage and special character values.



Address the challenges of global climate change and urban growth via urban design. Zero-emissions areas focused on Wai Horotiu / Queen Street Valley and the Wynyard Quarter support the move towards the city centre having the cleanest air of any million-plus city anywhere in the world. Water as taonga (treasured item) with improvements to the Waitematā Harbour's water quality and through the application of water sensitive design features in public realm schemes.



Enable business and urban development through streets and public spaces that support connectivity, job density and quality of life.

Hīkina te Wero - Environment **Action Plan 2020-2030**

Auckland Transport's Hīkina te Wero – Environment Action Plan provides outcomes, targets and actions towards protecting and restoring the environment. Targets include increasing canopy cover along road corridors to on average 12 per cent and, increasing pervious surfaces along corridors that connect areas of high ecological value by 10 per cent through planting, green roofs and paving. The City Centre Public Realm Design document assists project managers and designers to achieve these targets in the city centre by giving guidance on enhancing greening outcomes.

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan 2020

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan is Auckland Council's roadmap to a zero-emissions, resilient and healthier region that is better connected to the environment and able to thrive in the face of ongoing change and disruption. Auckland's Climate Plan identifies growing ngahere and implementing nature-based solutions such as green infrastructure as two of the priority action areas towards achieving this goal. The City Centre Public Realm Design document assists project managers and designers with planning and designing greening outcomes to improve climate resilience in the city centre.

Auckland is a signatory of the C40 Green and Healthy Streets Declaration, committing to transform Auckland's streets into greener, healthier and more prosperous places to live. The City Centre Public Realm Design document provides guidance to help achieve these outcomes in the city centre by creating quality streets and spaces that are accessible and feel safe for everybody, improve air quality and reduce greenhouse gas emissions. This document encourages greener streets that are enjoyable for pedestrians to use.

Waitematā Urban Ngahere Action Plan 2019

The Waitematā Urban Ngahere Action Plan provides the Waitematā Local Board's goals, objectives and actions in relation to the assessment, protection, management and development of the urban forest within the Waitematā local board area that includes the city centre. The Action Plan is established in accordance with Auckland's Urban Ngahere (Forest) Strategy, which identifies the following benefits from Auckland's urban ngahere.

The Action Plan identifies that the existing tree canopy cover in the city centre is approximately 10%, and the total canopy cover in the Waitematā local board area is 19 per cent. The City Centre Public Realm Design document assists project managers and designers to help achieve the Waitematā Local Board's target of 30 per cent tree canopy cover in the Waitematā local board area by 2050.



Image 2.2: Hikina te Wero



Image 2.3: Te Taruke-a-Tawhiri

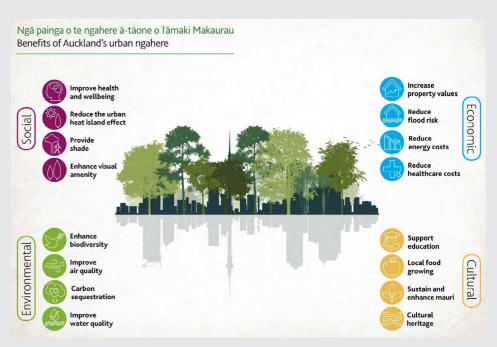


Image 2.4: Excerpt from the Waitematā Urban Naghere Action Plan - Benefits of Auckland's urban ngahere





The Auckland Water Strategy 2022 - 2050

The Auckland Water Strategy (the Water Strategy) commits the council to a bold new relationship with water to protect and enhance te mauri o te wai, the life-sustaining capacity of water. The vision encapsulates five values for water:

- 1 ecosystems healthy water ecosystems nourish the natural environment and people
- water use we meet our everyday water needs safely, reliably, and efficiently
- **3** recreation and amenity we enjoy being in, on and near the water
- 4 culture water contributes to our identities and beliefs, as individuals and as part of communities
- **5** resilience our communities, catchments and coastlines are resilient to natural hazards and the impacts of climate change.

The Water Strategy acknowledges the need for Aucklanders to transform urban development and adopt innovative restoration methods to safeguard and improve waterbodies and ecosystems. Instead of traditional piped and underground systems, the council aims to offer services through eco-friendly and community-based infrastructure.

Over time, the mauri of city centre waterbodies has declined as the city has developed. The City Centre Public Realm Design document mirrors the Water strategy goal that infrastructure solutions are nature-based, regenerative, resilient, low or zero-emissions, circular in resource use and built so that Aucklanders can connect with water.

This document pinpoints the awa flowing through the city centre, currently underground, and the Waitematā coastal edge as opportunities for ecological corridors. and provides examples of how these corridors can be enhanced through 'green' infrastructure solutions (Table 4.1). Water Sensitive Design (WSD) is a highlighted 'green' category in the Manual, offering guidance for WSD implementation in the city center and connecting with the council's technical advice.

Roads and Street Framework and the Transport Design Manual

The Roads and Streets Framework and the Transport Design Manual are complementary documents that together provide Auckland Transport's requirements for the planning, design, construction and management of the road and street network, and the vesting of assets that will be managed by Auckland Transport. They should be used alongside this document when planning and designing for streets and spaces in the city centre.

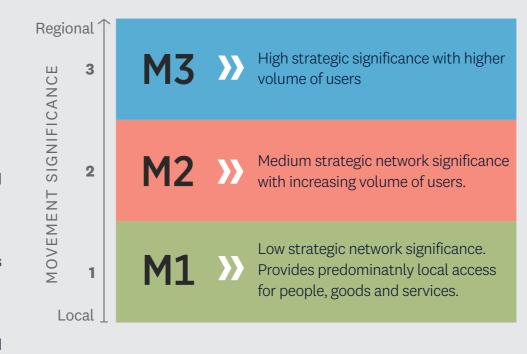
The Roads and Streets Framework (RASF) provides a methodology for identifying the different functions of roads and streets. It uses the concepts of 'Place' and 'Movement' to reflect the strategic role of each function within a street and identifies their level of significant for a particular street.

The RASF does not provide solutions or design guidance, but is the first step in a process to identify the issues that must be addressed by a street based project. The detailed design of a project is informed by the Transport Design Manual as well as, this document.

The Transport Design Manual (TDM) is Auckland Transport's design guidance and engineering requirements for the development and delivery of transport projects and their operation. The TDM has three sections - design principles, engineering standards and specifications.

The TDM design principles for designing in streets are supported and align with the principles in the City Centre Masterplan and this document. These include:

- create a street network that supports communities and places,
- maximise transport choice,
- integrate the street network with natural systems at all scale,
- prioritise walking as a fundamental unit of movement,
- integrate transport networks, and
- respect the existing natural and built environment.



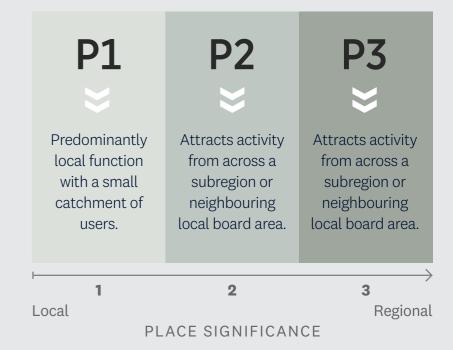


Image 2.5: The Roads and Streets Framework's Movement and Place Matrix Source: Auckland Transport



3.

Overarching principles



Overarching principles

Overarching principles

The following principles provide the overall direction for the City Centre Public Realm Design document. They build on the design principles in Great Streets, give reference to the City Centre Masterplan's outcomes and reflect recent and future changes impacting the city centre's public realm.



P1. Create an inclusively designed public realm that is accessible to all.



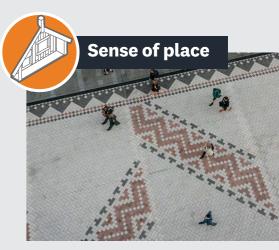
P2. Create a public realm that is attractive and feels safe and comfortable for people to enjoy.



P3. Enhance greening in all parts of the public realm to restore biodiversity and ecological systems (Mauri Tū), build resilience to the effects of climate change and to support wellbeing.



P4. Create a cohesive and legible public realm through a standardised approach to the design and detailing of furniture and paving in most streets and spaces.



P5. Create a public realm that recognises and celebrates a sense of place by providing opportunities for customised and bespoke furniture and paving design, as well as public art, in special streets and space, and encouraging mana whenua co-design opportunities.



P6. Enable the efficient maintenance and replacement of furniture and paving assets by taking a standardised approach to their design and materials.



P7. Consider the climate impacts of design and promote low-carbon and sustainable innovation where bespoke approaches to design and materials are used.



P8. Enhance vitality and vibrancy in the public realm by enabling space for street trading, activation and events.



P9. Use tactical urbanism initiatives (TUI) as a people-centred, trial-based approach to deliver creative, low-risk, low-cost improvements to the public realm.





Greening

Introduction

Greening categories

- Parks, open spaces, ecological areas and connectivity
- Canopy trees (existing and new)
- Water Sensitive Design
- Low planting
- Green roofs and vertical greening



Principles:

P3. Green and climate resilient

P6. Well maintained

P7. Sustainable



Introduction

This section provides guidance for project and programme managers and designers to enhance greening in all parts of the public realm, restore biodiversity and ecological systems (Mauri Tū), build resilience to the effects of climate change and to support wellbeing.

Map 4.1 illustrates the existing green network and includes a mix of parks and open spaces and revegetation corridors (along motorways and some streets). Currently the extent of greening is fragmented and has inequitable distribution across the city centre. With current and future projects, there is potential to create an interconnected green and blue network within and around the city centre.

Map 4.2 indicates the city centre's aspirational green-blue network. This builds on the existing greening **Map 4.1** and introduces initiatives from the City Centre Masterplan including the green link (Te Hā Noa and Te Ara Tukutuku), green streets and the Harbour Stitch outcome. Other initiatives include Waitematā greenways and opportunities for greening identified in existing development plans and masterplans. This map identifies the historic stream alignment (predominantly piped below ground), and a coastal ecological connection along the waterfront that builds on current design interventions in Quay Street and in Wynard Quarter.

The guidance in this chapter is divided into five broad categories for greening opportunities:

- 1 Parks, open spaces and ecological corridors.
- Canopy trees and green streets.
- Water Sensitive Design.
- Low planting (shrubs, groundcovers and container planting).
- 5 Green roofs and vertical greening.

The guidance is provided in advice points and covers matters relating to the opportunities under each category and factors to be considered

in respect of location (the 'where') and implementation (the 'how'). The advice points are supported with case studies and further technical guidance found in Appendix B.

This advice is related back to maps of the city centre with different information layers, identifying:

- Parks, open space, ecological areas and connectivity.
- Tree canopy distribution and equitability.
- Hydrology patterns and extent of permeability.

The spatial information on these maps helps to demonstrate how individual projects can collectively reach the aspirational green-blue network in Map 4.2.

Additional inputs

In addition to the guidance provided in this section, it is anticipated that other detailed guidance towards greening, including plant species selection and procurement, design layout and operational considerations, will be sought from Mana Whenua. These considerations should also be informed by any relevant design standards, including the Landscaping section in the Auckland Transport Code of Practice¹, as well as the plans and technical guidance referenced throughout this section.

Street greening targets

This green-blue network can also be realised through individual projects meeting street greening targets for tree canopy and permeability (**Table 4.1**). The tree canopy targets ensure that all streets except service lanes have a level of tree canopy commensurate with its role within the green-blue network identified in Map 4.2. Whilst the permeability targets can be met through the various greening opportunities identified in the greening categories in this

chapter, including rain gardens, container planting and green roofs and walls, as well as amenity grass areas and permeable paving.

Table 10.1 in Appendix B.1 identifies the various ecological services that different greening opportunities provide. It is encouraged that the greening targets are met by those opportunities that provide the most ecological services where possible.

As there are a number of underground and spatial constraints for planting trees in the city centre, it is encouraged that all projects in the city centre undertake a survey of underground infrastructure at the earliest stage possible. If after considering all the guidance under the canopy tree section it is found that the canopy tree targets cannot be met by a design, it is encouraged that the shortfall is made up by the inclusion of a commensurate level of alternative greening opportunities - in addition to the permeability targets listed in **Table 4.1**. Refer to the Calculating canopy tree and permeability diagrams for further guidance in Appendix B.2.

	Tree canopy target (mature)	Permeability target
Identified green street	40-60%	15-20%
Identified greenway	30-40%	10-15%
All streets, except service lanes	20-30%	5-10%

Table 4.1: Public realm targets (as a proportion of the pedestrian street area).



1. Auckland Transport Code of Practice: Chapter 14 Landscaping







Greening categories



Parks, open spaces, ecological areas and connectivity

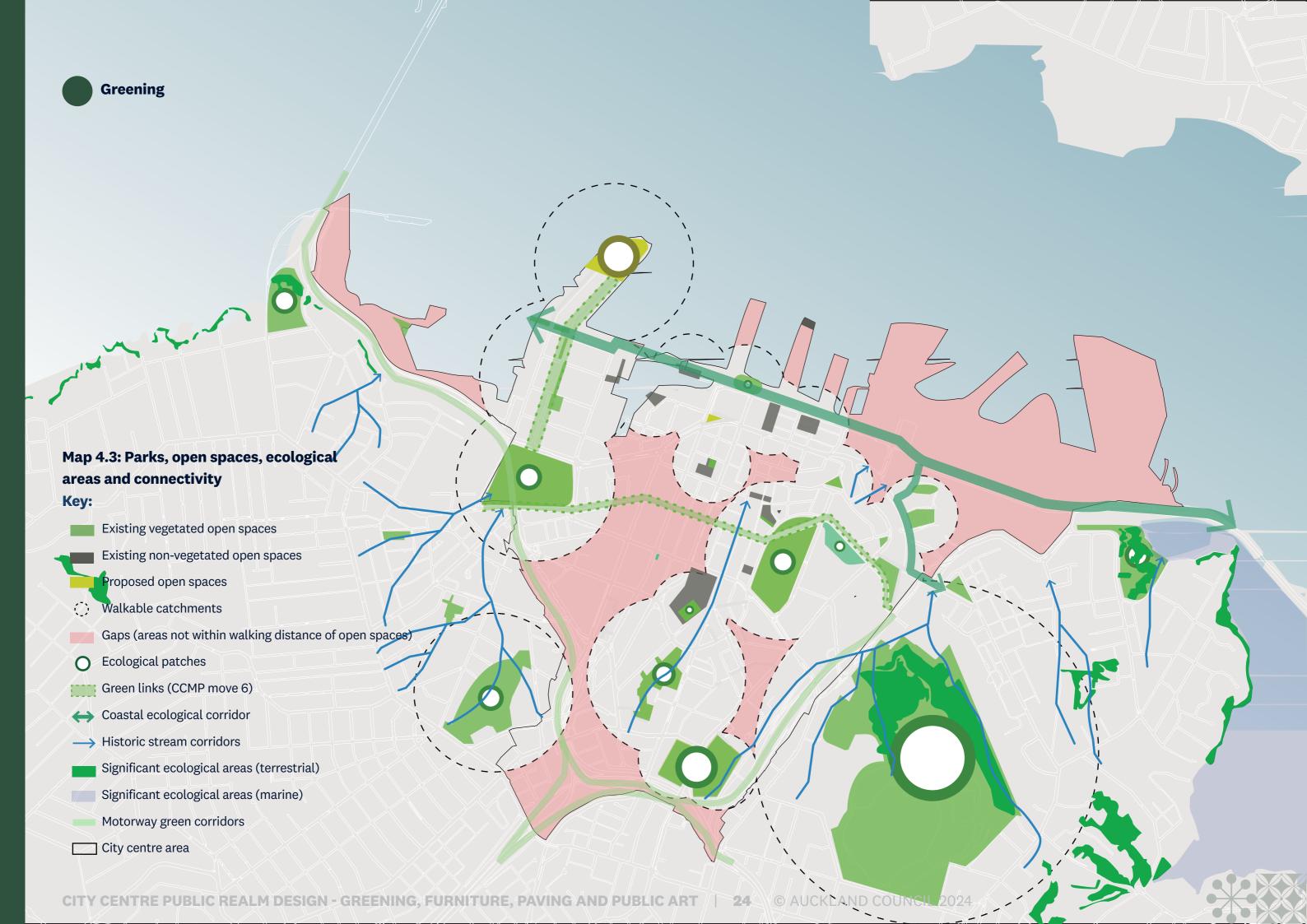
Map analysis

Guidelines

- What
- Where
- How

Case study: Myers Park and Wai Horotiu / **Queen Street Valley ecological corridor** Case study: Regenerative urban farm







Map analysis

Map 4.3 shows:

- the distribution of parks and open spaces;
- walking distances (catchments) to parks and open spaces within and around the city centre;
- ecological patches and significant ecological areas in and around the city centre; and
- existing and aspirational ecological corridors.

Parks and open spaces currently in the planning or design stage include:

- Te Ara Tukutuku / Wynyard Point (in design stage)
- Sturdee Park extension on Fanshawe and Customs Streets (in design stage)

Attached to these parks and open spaces are their respective walkable catchments. Larger, destination parks service an area of 800-1200m (10-15 minute walk) as people are willing to walk greater distances to get to them. While typical urban parks service people within a 400m catchment (five minute walk).

Smaller 'parklets' service immediate neighbours. Though not identified in Map 4.3, design guidance is also provided for them in this section.

Areas in red indicate gaps outside of reasonable walking distance to parks and open spaces and signal opportunities for open space development.

Open spaces play a key social and recreational role for people. However it is possible to retain this important function whilst realising the ecological potential these spaces can have for various native species, and to improve biodiversity. Map 4.3 shows each park and open space with an ecological 'patch'. These patches represent areas that support biodiversity, strengthen ecosystems (Mauri Tū), and build climate resistance through an abundant provision of forest and fauna. The size of these patches represents their relative value to the overall ecological network. Image 4.1 indicates how these ecological patches are connected into the wider isthmus.

Larger patches align with significant ecological areas identified in the Auckland Unitary Plan such as the Auckland Domain. Medium patches represent existing or future native forest canopy cover not identified as significant such as the Symonds Street Cemetery and Te Ara Tukutuku. Smaller patches represent existing, or future mass sub-canopy native vegetation and/or native canopy tree clusters such as Albert Park, Myers Park and Western Park. Though many of these ecological patches in **Map 4.3** are existing, efforts should be made to

improve and expand their existing ecological condition

The existing corridors are where there are continuous areas of native vegetation such as the motorway green corridors. The aspirational ecological corridors are situated along the historic stream alignments -Tuna Mau, Wai Horotiu / Queen Street Valley and Waipapa, the coastal ecological corridor, and the City Centre Masterplan's green link.

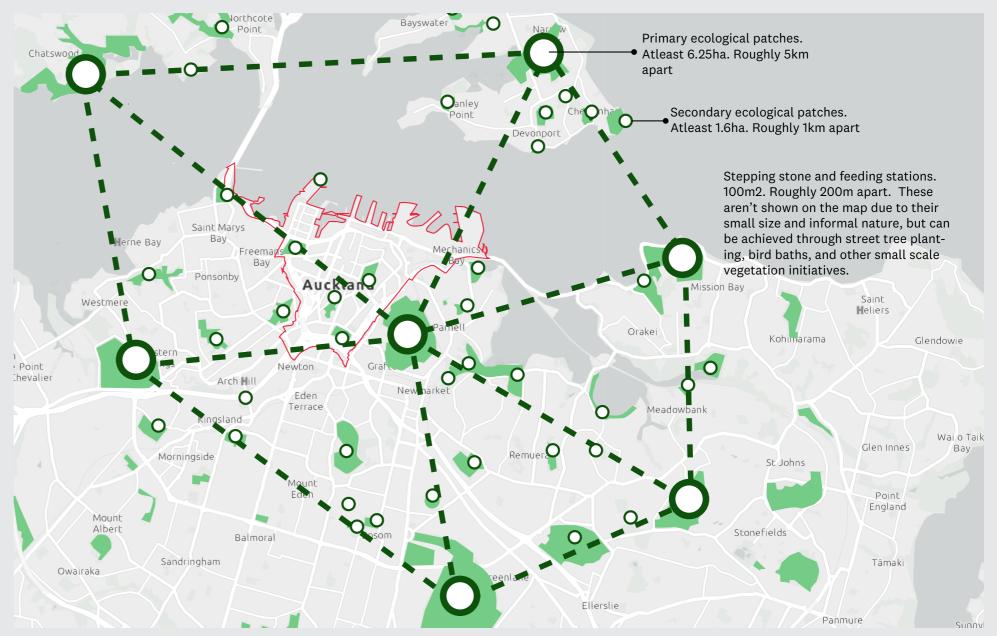


Image 4.1: Forest Patch Diagram



Guidelines

What

Parks and open spaces are the primary way people interact with natural elements. They can range in size:

- Parklets (generally less than 200m²).
- Urban parks (between 200m and 1,500m²).
- Destination parks (over 1,500m²).

They all contribute to people's wellbeing by functioning as spaces for respite from busy city life, supporting people's physical health and acting as democratic spaces for gatherings and events.

The general design principles for larger parks, as highlighted in their masterplans and development plans (links provided in **Table 4.2**) are:

- 1 Design in accordance with agreed Mana Whenua design principles.
- Maintain and enhance the natural environment through mechanisms such as daylighting streams, protecting mature trees and introducing a variety of native species appropriate to the location of each park.
- 3 Improve safety and accessibility through mechanisms such as lighting, signage, universal design and connected corridors.
- Offer places for peaceful respite through mechanisms such as using the natural environment to protect people from wind, noise pollution, and providing cooling during hot weather, furniture and other amenities.
- 5 Facilitate active and passive recreation, and education and discovery for children through mechanisms such as playgrounds, lawned areas for sport and nature trails.

These design principles reflect the City Centre Masterplan outcomes, and similar design practice should be applied to smaller open spaces.

The larger the space, the greater the ecological and social design opportunities i.e. functioning as soakage pits and adding substantial amounts of biodiversity through appropriate native planting and supporting the recreational needs of many.

These spaces have the ability to draw from the other greening elements discussed in the document. In general:

- · Parklets can include greening via fixed or container vegetation, lawned areas and green walls.
- Smaller parks and open spaces can include greening via fixed or container vegetation and green walls.
- Larger parks and open spaces should include large canopy trees, water sensitive design features, and lawned areas for recreation.

Growing community through parks

Parks have the capacity to uplift communities and can be successful when there are bottom-up initiatives allowing people to take ownership of their local parks and open spaces (such as community gardens, and urban farms), and establish more informal types of communal spaces (such as parklets outside a business, container planting in streets). Additionally, there are opportunities for such spaces to be established temporarily in unused lots such as car parking spaces and empty building sites.

These spaces can act as a form of social and ecological infrastructure - bringing people together with a shared goal or interest, such as growing and harvesting local food, living healthier and more sustainable lives.

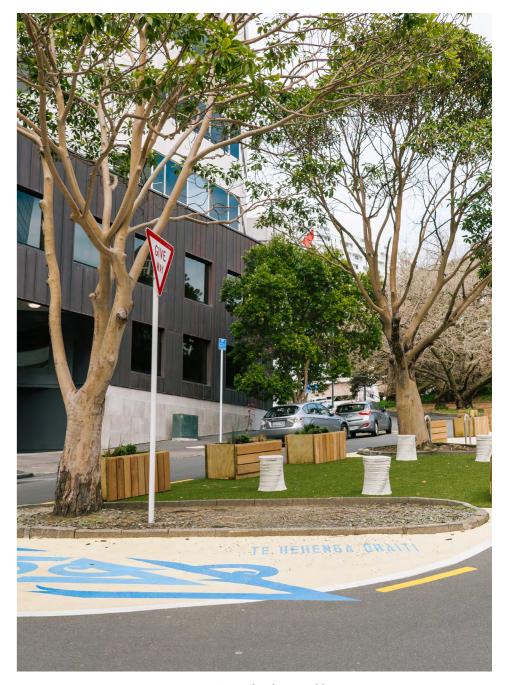


Image 4.2: Emily Place Parklet Image Source: Bryan Lowe





Guidelines

Where

- All areas in the city, particularly residential areas, should be within appropriate walking distance from an open space. Map 4.3 indicates current gaps in the areas of the city centre that are poorly serviced by open spaces.
- Refer to **Table 4.2** for areas where greening could strengthen ecological connections and outcomes.
- Due to land ownership in the city centre, it may be difficult to introduce larger parks and open spaces into the area. Parklets are an effective and localised solution that can help bring more greening into the area.
- Urban farms in dense areas require significant initial capital investment to secure land but can become self-sufficient within two years of starting up by selling the produce grown (based on a 1000m² site). In contrast, community gardens are run purely by volunteers and don't have the same economic output. However, the cumulative impact of many small-scale community gardens (that are on unused carparks, in parks, in containers on streets etc), can have significant social and ecological benefits and should be considered in the place shaping engagement with communities.



Image 4.3: Series of communal gardens. Daldy Street, Wynyard Quarter

How

- 1 To ensure parks and open spaces connect ecologically, include or enhance ecological patches (refer to **Image 4.1**) containing suitable native forest and/or fauna for wildlife habitat.
- 2 Due to the large portion of city centre land being privately owned, it is encouraged that designers, developers, planners, programme and project managers facilitate private-public partnerships to dedicate more space to be accessible to the public. These can be on the ground level, though innovative solutions can also occur on rooftops or podiums.
- 3 Create green spaces within existing spaces e.g. streetscapes and public squares.
- 4 Open spaces can be delivered through repurposing of street space by shifting use from car parking to spaces for people.
- **5** Consider opportunities to extend the greening treatment of existing open spaces into the surrounding streets
- 4 7 8

Image 4.4: A parklet in Wellington city as part of their 'apply for a parklet' scheme.

Image source: Wellington City Council, 2022.

- **6** To assess whether a space will be well-used, consider the existing and potential extent of shelter from wind and pollution, and access to sunlight.
- **7** Designers, developers and planners should encourage and support informal open space iniatives such as community gardens and parklets wherever possible.
- 8 The scale and nature of parklets allow them to be relatively easy to establish. Businesses shopfront parking space would benefit from turning these few spaces into space activated parklets. International studies on street activation has shown these types of installments to increase foot traffic and improve businesses financial gain contrary to perception around removing carparks.
- **9 Table 4.2** highlights current projects and examples of potential opportunities to support an interconnected green-blue network.



Image 4.5: Khartoum place is enhanced by several mature trees.





Aspirational ecological corridor	Description	Recent initiatives	Examples of potential opportunities to enhance corridor
Green link	The green link is a transformational move identified in the City Centre Masterplan ¹ .	 Current build of Te Hā Noa on Victoria Street East between Elliot Street and Kitchener Street² Daldy Street linear park³ Design of Te Ara Tukutuku⁴ 	 Retrofit greening into the City Rail Link upgraded section of Victoria Street East between Elliot Street and Federal Street Design and implement Te Hā Noa in Victoria Street West Implement Te Ara Tukutuku / Wynard Point Reduce flooding and enhance biodiversity in the Victoria Quarter through green infrastructure and water sensitive design interventions
Tuna Mau Stream	Tuna Mau is currently piped below ground. However, there is potential to daylight part of it through Western Park ⁵ . There are opportunities for greening initiatives along its alignment to restore biodiversity and ecological systems, and to reduce the impacts of flooding.	 Above stream planting in Western Park along alignment of Tuna Mau Gully slope revegetation in Western Park Sale Street Māori design intervention 	 Investigate the feasibility of daylighting and enhancing Tuna Mau through Western Park Enhance biodiversity and improve stormwater detention and treatment by creating green infrastructure and water sensitive design along the Tuna Mau alignment
Wai Horotiu / Queen Street Valley	Wai Horotiu is the name of the waterway that runs from Karangahape to Waitematā through Myers Park, Aotea Square and Queen Street ⁶ .	 Wai Horotiu / Queen Street tree and container planting Te Komititanga / Lower Queen Street tree planting Aotea Square tree planting Myers Park gully slope and detention 	 Investigate the feasibility of daylighting and enhancing Wai Horotiu through Myers Park Investigate permanent greening opportunities to replace the Pohutukawa in Aotea Square Provide a continuity of greening between Myers Park and Aotea Square through the future days lapment of the appa Greys Avanua.

area planting

Table 4.2: Aspirational Ecological Corridors



1. <u>City Centre Masterplan -</u>

2. <u>Te Hā Noa Victoria Street</u> 3. <u>Daldy Street linear park</u>

Green Link

4. <u>Te Ara Tukutuku</u>

Transformational move 6 - the

5. Waitematā Local Board Western

6. Waitematā Local Board Myers Park

Park Development Plan

future development of the open Greys Avenue

car park site



Aspirational ecological corridor	Description	Recent initiatives	Examples of potential opportunities to enhance corridor
Waipapa / Waiparuru	Waipapa and Waiparuru is the name of the river that runs from the Pukekawa / Auckland Domain volcanic crater down to the Waitematā through Grafton Gully. Parts of the river remain in its natural condition and can be experienced along walking tracks in the Auckland Domain/Pukekawa. It is then piped below the Grafton Gully to the Waitematā Harbour. ⁷		Reduce flooding and enhance biodiversity in the Grafton Gully through green infrastructure and water sensitive design interventions
Coastal	The coastal ecological corridor is a new design initiative that draws on the Waterfront Plan (2012), the Harbour Stitch transformational move in the City Centre Masterplan (CCMP) and recent design interventions.8 It looks to provide a secondary east-west green link along the Waitematā Harbour edge via Quay Street, Eastern Viaduct and Jellicoe Street. In doing so, it forms another connection with CCMP's green link at Te Ara Tukutuku and, through new interventions in the Grafton Gully, it can also link with the Auckland Domain/Pukekawa and Albert Park/Rangipuke. This enables a 'green loop' to be developed and enjoyed in the city centre.	 Te Wānanga Quay Street west section between Eastern Viaduct and Commerce Street Jellicoe Street Karanga Plaza Silo Park / coastal wetland 	 Enhance greening along the Eastern Viaduct Continue the existing greening initiatives in the Quay Street west section between Eastern Viaduct and Commerce Street through to Tapora Street Enhance greening at the Queen's Wharf entrance Ehance greening between Quay Street and Grafton Gully (at Constitution Hill) via additional native planting on Tapora Street, Mahuhu Crescent, Te Taou Crescent and Beach Road Enhance biodiversity and reduce flooding risk through green infrastructure and water sensitive design interventions in the lower Grafton Gully along Beach Road, Parnell Rise and The Strand

Table 4.2: Aspirational Ecological Corridors continued



Links

8. Waterfront Plan

7. <u>Auckland Domain Masterplan</u>



Case study: Myers Park and Wai Horotiu / Queen Street Valley ecological corridor

Myers Park is located within a gully that drops from the Karangahape Road ridge along the course of Wai Horotiu, which is piped below the surface.

Wai Horotiu has cultural significance to mana whenua and prior to European colonisation was used by Māori for its rich resources. As European settlements were established along the banks of Wai Horotiu, it was used as an informal rubbish tip before Mayor Arthur Myers, inspired by the City Beautiful Movement, turned it into a park in 1913, declaring "Nature should be brought as near to our citizens and their children as possible in a town".

In 2012, the Waitematā Local Board adopted the Myers Park Development Plan prepared by Auckland Council in time for the park's centenary.

The design intervention of the planted stormwater basin and Mayoral Drive underpass is designed by Boffa Miskell. The public artwork by Graham Tipene (Ngāti Whātua Ōrākei), Waimahara, seeks to awaken the senses of visitors to the presence of ancient waters, now flowing beneath the ground, in this inner-city valley. Through this site intervention, the narrative links through Aotea Square to Wai Horotiu / Queen Street down to Te Komititanga, following the natural path of Wai Horotiu and enhancing its biodiversity and ecology (Mauri Tū).

Case study: Regenerative urban farm

The urban farm, run by 'For the Love of Bees', with land provided by city rail link, on Symonds Street, converted a 450m² space into a space to practice regenerative agriculture. Currently the site serves 30 households in the uptown/Eden Terrace area, providing locally grown fruit and vegetables which contributes to healthier, low carbon diets.

The space is run by two full time workers and volunteers. The space acts as more than just a farm, but is also a learning hub, with guided tours, school programs, facilitating tertiary student research, urban farmer internships, and horticulture 101 classes, allowing communities to have a deeper connection, understanding, and care of the land.



Image 4.6: Myers Park boardwalk and stormwater detention planting Source: Newsroom, Photo: Matthew Scott

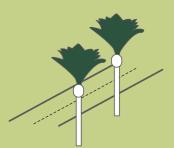


Image 4.7: Symonds Street urban garden Source: City Rail Link





Greening categories



Canopy trees (existing and new)

Map analysis

Guidelines

- What
- Where
- How

Case study: Quay Street Enhancement (QSE) project







Map analysis

Map 4.4 identifies the tree canopy distribution within the city centre mapped most recently between 2016 and 2018 and represents all vegetation above three metres in height.

Existing green streets have contiguous or near contiguous canopy cover due to their maturity. These include:

- Greys Avenue
- Vincent Street
- Alfred Street
- Parliament Street
- Mayoral Drive
- Symonds Street

In addition, recently upgraded streets in the city centre that have incorporated tree planting and other greening initiatives that align with the greening - tree canopy and permeability - targets (Table 4.1) are also included as existing green streets. These include:

- Daldy Steet
- Halsey Street
- Jellicoe Street
- **Oueen Street**
- Quay Street west

Karangahape Road was also recently upgraded incorporating additional tree planting and Water Sensitive Design and is now a much 'greener' street than before it was upgraded. However, due to the spatial constraints to providing more greening because of the requirements for various transport functions, it does not meet the greening targets to be identified as a green street.

The map also reflects the aspirational green streets identified in the City Centre Masterplan (CCMP), which includes:

- Fanshawe Street
- **Customs Street**
- Wellesley Street
- **Hobson Street**
- **Nelson Street**
- Wellesley Street
- Symonds Street
- The Strand (Grafton Gully)
- Quay Street east

The Green Link is also identified on the map by green streets along Victoria Street and Daldy Street.

In addition to the green streets identified in the City Centre Masterplan, it is recommended that Cook Street, Bowen Avenue, Waterloo Quadrant and Grafton Road are enhanced as green streets due to their potential to build on their existing tree canopy and link with existing and aspirational green streets and ecological corridors.

The aspirational greenways identified in the Waitematā Greenways Plan connect open spaces and existing cycleways through new greening and cycling initiatives¹. These greenways include:

- Pitt Street
- Beresford Square
- Hopetoun Street
- Wakefield Street

Map 4.4 identifies gaps in tree provision. To reach a more equitable and beneficial distribution of tree canopy, these streets must be investigated for tree planting potential. In addition, opportunities to interplant native tree, shrub and groundcover species amongst existing canopy trees should be carried out to create multi-layered vegetation that reflects our pre-colonial ecology and helps restore biodiversity. This design approach is particularly relevant for the green streets and greenways identified in Map 4.4 and follows the precedence of recent design interventions along Quay Street west and Queen Street (refer case studies).

The following design guidance includes considerations for increasing tree canopy that promotes multi-functional benefits and identifies opportunities where infrastructure and modal-conflicts are present. This is supplemented by further design guidance for ground cover and shrub planting (refer Low Planting section) to support the design of multilayered biodiversity and multi-functional ecological systems (Mauri Tū).



Image 4.8: Daldy Street greening example



1. Waitematā Local Board Plan 2020





Guideline

What

Canopy trees have sufficient growth capacity to produce a 'crown' above-ground at maturity. The benefits of trees include, but are not limited to:

- Sequestering carbon from the atmosphere;
- Trapping and filtering air pollutants;
- · Assisting in stormwater management;
- Reducing urban heat island effects;
- Improving biodiversity by acting as a 'host' for a range of species;
- Dispersing wind energy (critical where tall buildings are present, creating wind tunnels);
- · Contributing positively to peoples wellbeing; and
- Building resilience to climate change.

In the context of climate change in Tāmaki Makaurau, it is expected to experience 80 extra hot days per year by 2100. Urbanised areas will feel this the most due to having a heavily modified and 'hard', or impermeable landscape. Tree canopy has been proven to significantly reduce temperatures in urban environments, and is effective mitigation against urban heat island effects, which is of critical importance (refer to **Image 4.9**).

The Auckland Urban Ngahere (Forest) Strategy sets a target of 30 per cent canopy cover across the urban Auckland region. The city centre is currently sitting at approximately 10 per cent while the Waitematā Local Board area that includes the city centre is approximately 19 per cent. It is the aspiration of the Waitematā Local Board to increase canopy cover in the local board area to 30 per cent.

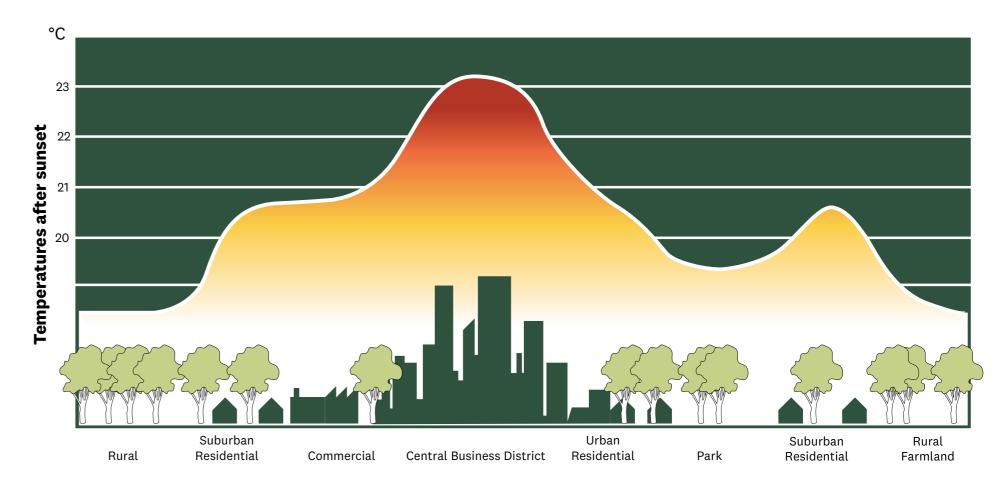


Image 4.9: Urban Heat Island Profile

At the same time, a report that studied canopy changes over a tenyear period between 2006 and 2016, found that over 60 hectares of tree canopy was removed from the private realm in the Waitematā Local Board area over this period¹. To meet the 30 per cent canopy target requires significant investment in tree planting within the public realm, including in the city centre.



Links

1. Waitemata Local Board Urban Ngahere Action Plan





Guideline

Where

Prior to human modification, the ecological extent of the city centre was primarily a kauri, podocarp, and broadleaved forest ecosystem, with a section of puriri forest ecosystem between Beach Road and Wellesley Street (**image 4.10**).

To move towards the restoration of the natural systems and biodiversity of the city centre, trees reflecting our pre-colonial history should be planted on every street in the city centre¹. The exception to this are streets identified as service lanes, due to their narrowness and dedicated service function.

Streets identified as green streets in **Map 4.4** are anticipated to have an extensive tree canopy. Refer to **Table 4.1** on page 23 of the Greening chapter for a guide to tree canopy provision.

1. Plant for your ecosystem



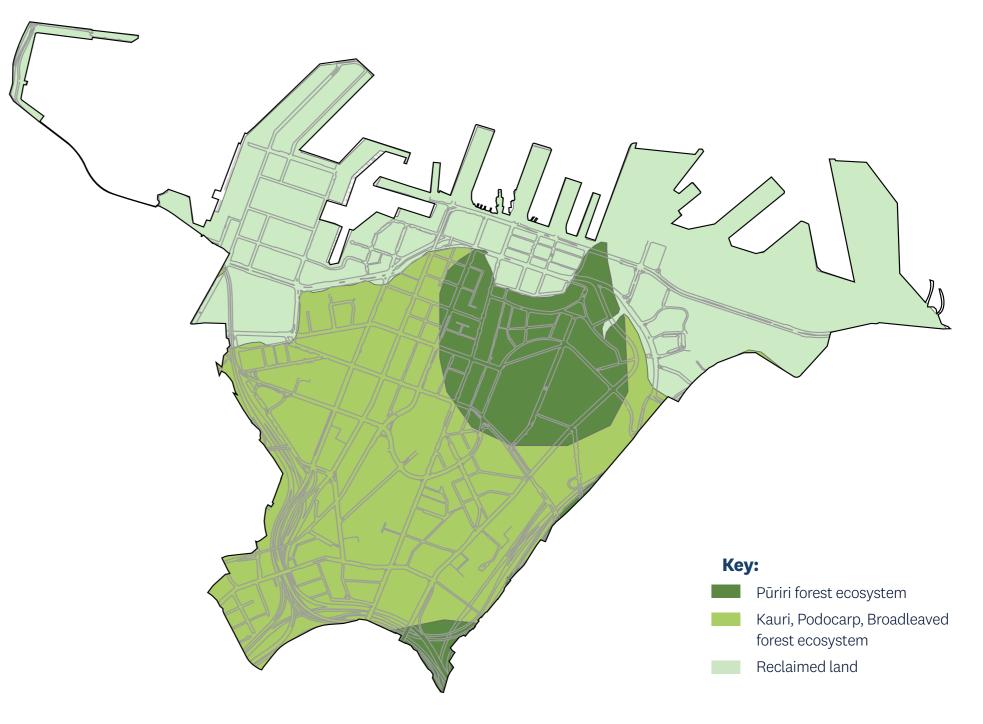


Image 4.10: Pre-colonial ecosystem extent



Greening

Guideline

How

- 1 Include canopy trees early on in the design and decision making process. Utility upgrades should have dedicated corridors for tree space allocation
- 2 Use trees to ecologically connect spaces together and act as a network for other habitats such as native birds, bees, and insects. Refer to **Map 4.3**.
- 3 Retain all existing trees in the city centre's public realm that are non-invasive. Larger, mature trees have the greatest capacity to sequester carbon, infiltrate stormwater, and improve the microclimate.
- 4 Utilise a range of species to increase urban ngahere resilience to disease and a changing climate.
- **5** Ensure trees are eco-sourced through sustainable nurseries and are of species that were found in the ecosystem prior to colonisation. Refer to **Image 4.10** and **Appendix B.3.**
- 6 Collaborate with Auckland Council's urban ngahere specialists to ensure trees have appropriate infrastructure and irrigation (use recycled stormwater where practicable) to ensure their optimum health and longevity.
- 7 Consider tree species and placement for shade and canopy massing to create cool islands.

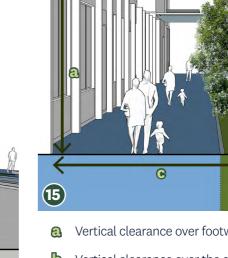
- **8** When possible, include tree planting along catchment and subcatchment boundaries, as these boundaries are defined by where rain and run-off is collected. These boundaries can be found on **Map 4.5**.
- 9 Where there is heavy vehicular movement, separate trees from live lanes, for example through a cycle lane, to allow tree canopies to grow without interfering with movement of buses or trucks.
- Where streets include infrastructure upgrades, underground services should be located underneath the carriageway to avoid conflict with tree roots.
- Where existing underground services prevent trees being installed, consider trees in large containers or above ground tree pits that have a multi-functional benefit such as seating areas.
- Move towards a more sustainable future, redundant car parking spaces can be converted as spaces for trees, other vegetation, and space for people.
- 13 Utilise underused green spaces such as berms to host new trees.
- Where verandahs are required on buildings, design them in a way that protects existing trees and enables future tree planting in identified green streets, greenways or in streets where there are no existing trees.

- Tree selection should be appropriate as to not interfere with other uses of the street. For example, use tall, narrow-forming canopies in streets where there is potential that spreading canopies could obstruct the path of a double decker bus.
- When street trees are fronting a heritage building, carfeful consideration of tree form and placement should be used to help give visual weight to the building. Use trees to frame a building or in a way that reflects the building's verticality.
- Investigate and trial the installation of 'Stockholm tree pits' to provide multi-functional benefits, including stormwater detention and treatment¹.



Links

1. Stockholm Treepits



- Vertical clearance over footways for pedestrians (e.g. 2.5 3m)
- Vertical clearance over the carriageway for tall vehicles (e.g. 4.5m)
- Horizontal clearance on footways to accomodate a wheelchair or buggy
- Horizontal clearance to accomodate vehicle DKE: (e.g. 0.6m)

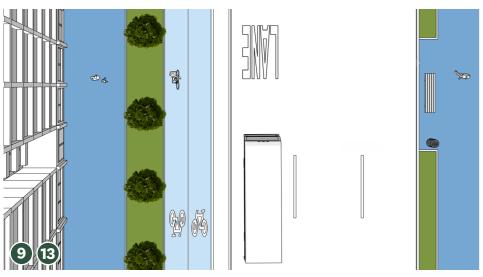




Image 4.11, 4.12, 4.13: Guidelines derived from the Trees and Design Action Group

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Case study: Quay Street Enhancement (QSE) project

Quay Street is situated in the downtown area on the Waitematā Harbour edge, which is on reclaimed land that extends the city centre northwards beyond the historic coastline. The Quay Street Enhancement (QSE) project transformed Quay Street west from a busy arterial road into a distinctive people-focused place at the edge of Waitematā Harbour. The design of this project was built on a foundation of mātauranga Māori principles, linking the coast to the urban ecology. The native ecology will help restore biodiversity to the area, reinforcing the Mauri 'life force' of the waterfront.

Underpinning the QSE project was a collaborative design process between Mana Whenua, Auckland Council, Auckland Transport and a collection of local design firms. This collaborative design process strengthened and elevated design outcomes to deliver a project that expresses local identity, culture and history that reflects Tāmaki Makaurau / Auckland and the downtown / waterfront area.

Image 4.14: Cross section Image source: Auckland Transport

Fundamental to this transformation was the enhancement of biodiversity and ecological systems (Mauri Tū) that has transformed the western end of Quay Street into a green street. This was accomplished through the following design interventions:

- large scale native tree planting supported by underground infrastructure, which has had an immediate impact on canopy cover and will increase canopy as the trees continue to mature.
- Rain gardens to collect, detain and treat stormwater runoff.
- Multi-level, clustered planting of native canopy and sub-canopy species that are associated with the coastal ecology of Tāmaki Makaurau, which help restore and enhance biodiversity.

The QSE project sets the benchmark and provides an exemplar for the creation of future green streets that are identified in the City Centre Masterplan and the Design Manual. This includes establishing the direction for the potential greening enhancement of Quay Street further towards the east to Tapora Street. This extension of the green street would build on the existing pohutukawa along Quay Street and help to realise the potential for a coastal ecological corridor that connects with the City Centre Masterplan's green link, thereby implementing a 'green loop' in the city centre.



Image 4.15: Quay Street following completion Image source: NZILA





Greening categories



Water Sensitive Design

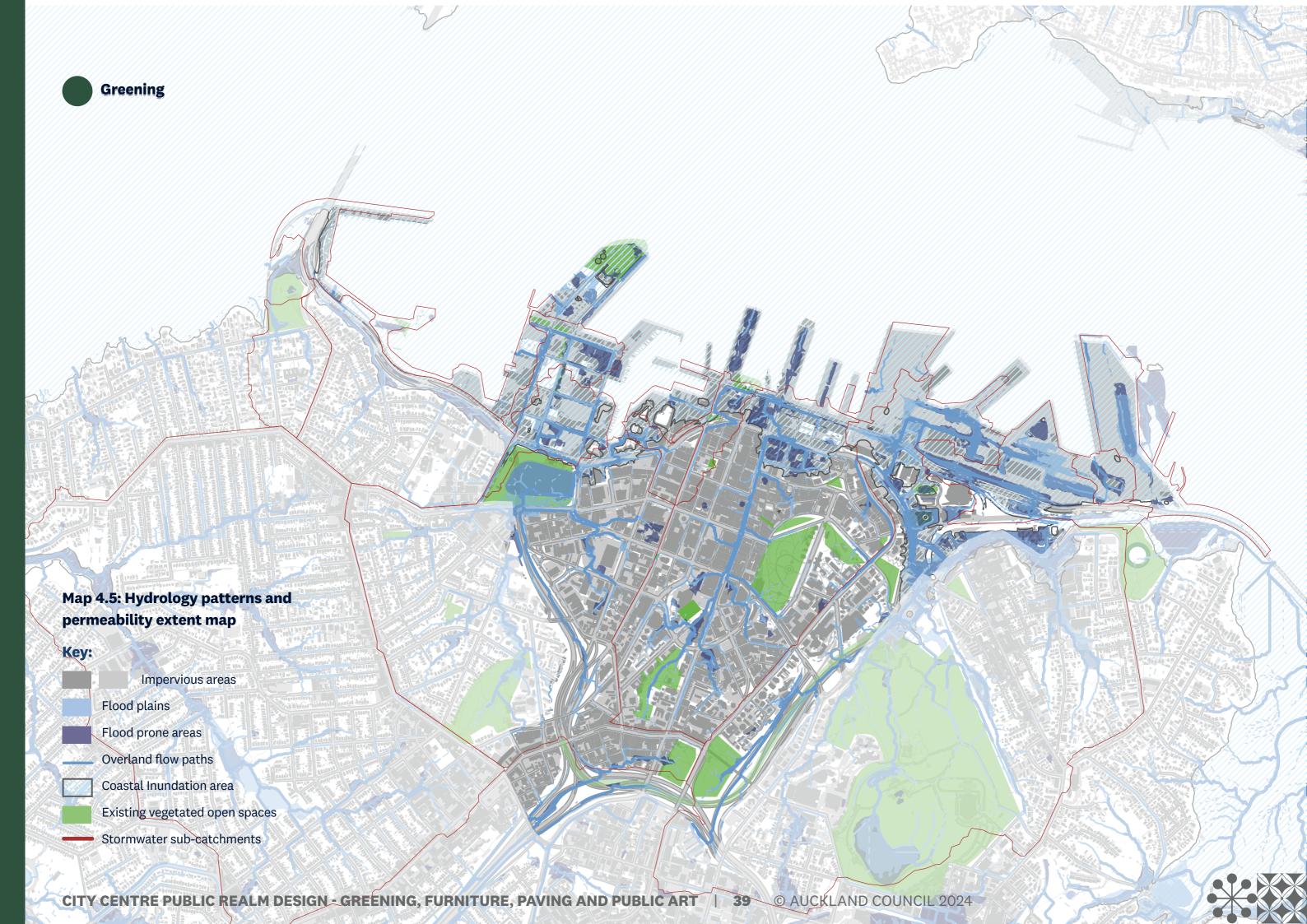
Map analysis

Guidelines

- What
- Where
- How

Case Study: Daldy Street Linear Park, Wynyard Quarter







Map analysis

As the city centre has developed, the coast has been reclaimed, wetlands and waterways have been drained and piped, and buildings and impermeable surfaces have been created on mass. This has led to increased flood risk, particularly during heavy rainfall events as experienced in 2023. Many low-lying areas of the city centre flooded significantly during the Auckland anniversary floods. Motor vehicle use has also contributed to heavy metal pollution in the Waitematā Harbour.

Map 4.5 identifies the surface hydrology patterns in the city centre. These patterns reflect where water travels and collects and is exacerbated by the extent of impervious surfaces.



Image 4.16: Aftermath of 2023 heavy rainfall



Image 4.17: Aftermath of 2023 heavy rainfall

Guideline

What

Water Sensitive Design (WSD) aims to protect and enhance the ecological integrity of urban areas by linking land, water, air, plant and animal life through design, to create a healthier ecosystem¹.

WSD aims to work with the natural functions of the ecosystem. Design features include:

- rain gardens;
- drain gardens;
- daylighting streams;
- bioswales;
- constructed wetlands;
- permeable pavers; and
- · other porous 'hard' materials.

Where

Aligning WSD interventions with the hydrology patterns of overland flow paths and flood plains and flood prone areas will help to ensure they capture and treat the maximum volume of stormwater and provide the most benefit in terms of building resilience to flooding and improving water quality.

Water flows downstream, picking up particles and debris on its journey. It is always good to treat the water at multiple points through its journey before it enters the wider receiving environment (Waitematā harbour). Image 4.18 indicates where water flows and illustrates the concept of treating it at multiple points along its course (places shown are indicative).



Image 4.18: Diagram illustrating where WSD initiatives could take place

Key:

- Indicative direction of stormwater flow, based on topography
- Indicative WSD intervention locations
- Vegetated open spaces
- Non-vegetated open spaces



1. Design guidance of stormwater management devices

Greening

How

- 1 Increasing the 'spongy-ness' of our city will always be of benefit to people and the wider environment¹. Where possible, aim to install Water Sensitive Design (WSD) measures in the public realm where it overlaps with features of the hydrology network (refer to Map **4.5**).
- The short-term cost of delivering a project tends to be the singular most important decision-making criteria, hence why WSD is sometimes overlooked. These decision-making financial models do not consider the avoided costs of environmental remediation, flood remediation and property clean-up or repair costs. Nor do they assess projects or infrastructure delivery in terms of cost effectiveness indicators such as water quality and other hydrological, ecological, and social resilience benefits².

Image 4.19: Coromandel Place

The extent (importance, level and reliability) of these WSD benefits can be determined for projects using the 'More than Water' tool developed by Landcare Research³. The tool provides a framework for identifying and assessing the full range of WSD benefits and economic outcomes by repositioning WSD as a concept that is about 'more than water'. The use of this tool can help with business cases to ensure long-term cost effectiveness and multi-benefits are considered at project planning stage.



Image 4.20: Details of Auckland City Library living roof at time of instalment.

- 3 Consider replacing existing impermeable surfaces with permeable areas (de-paving) where there is no need for surfaces to be impermeable. For example, where there is a low movement function associated with a street or space, or a part thereof. This can be part of an individual public realm project or part of a programme of temporal and 'quick win' interventions (tactical urban initiatives). Projects with identified overland flow paths, flood plains or flood prone areas should also aim to make these areas permeable.
- 4 Trial new pervious surface innovations to ensure continual improvement in available products.
- **5** Nearby downpipes and drainage channels could be used to water trees and plants using stormwater. This is particularly helpful to bring green elements into smaller open spaces with walled edges.
- 6 Install drain gardens around downpipes to function as stormwater mitigation and urban landscape treatments.
- **7** Green roofs are another way to absorb and treat stormwater and are discussed later in this section.



Links

- Guidance on water sensitive design for stormwater (GD04)
- 2. Activating WSUD Aotearoa NZ Understanding costs and maintenance of WSUD in New Zealand
- 3. The 'More Than Water' WSUD Assessment Tool





Case study: Daldy Street linear park, Wynard Quarter

Water Sensitive Design (WSD) is essential to support the vision of The Auckland Plan 2050. The guideline document, Water Sensitive Design for Stormwater 2015 (GD04), introduces the principles and objectives for WSD and guides the practitioner through a design programme for land development. WSD can be applied to development scenarios in both greenfield (undeveloped) and brownfield (previously developed) situations.

In a brownfield situation, WSD promotes the integration of ecosystem services into the existing built form. Opportunities may include the construction of raingardens, living roofs and swales, mass tree planting, remediation of existing or contaminated soils, rehabilitation of

Image 4.21: Daldy Street linear park design

watercourses and wetlands and stream daylighting. Many of these opportunities have been implemented through the development of the Wynard Quarter. This area includes a constructed coastal wetland at Silo Park and, the transformation of Daldy Street to a linear park that includes rain gardens, swales, stormwater basins (also functions as

usable spaces), extensive native tree and sub-canopy planting. Wynard Quarter is a low-lying area on reclaimed land at the bottom of a water catchment, and WSD has important functions in reducing risk of flooding and treating water before it reaches the Waitematā Harbour.

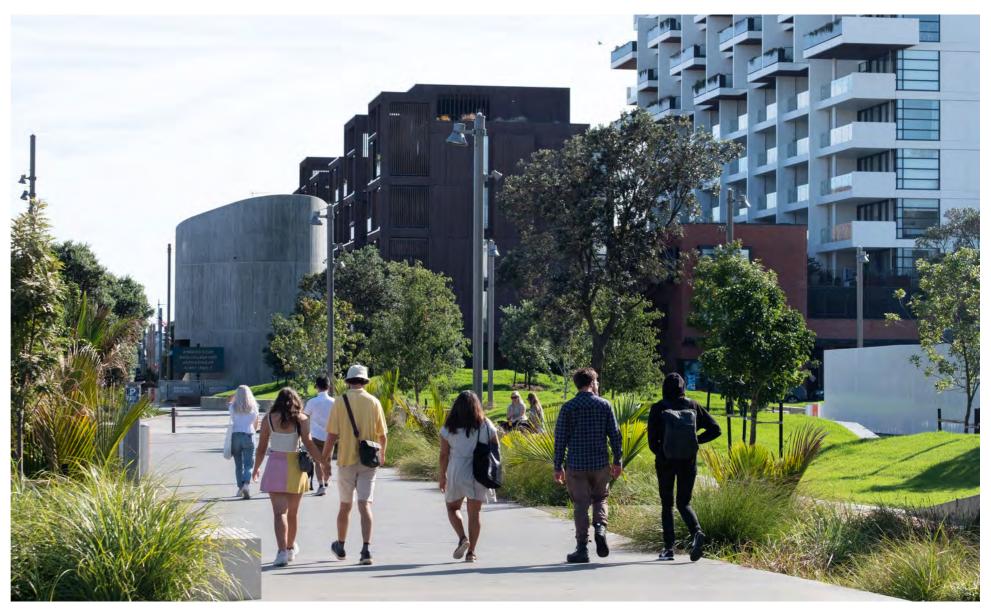


Image 4.22: Water Sensitive Design in Daldy Street linear park





Greening categories



Guidelines

- What
- Where
- How

Case study: Queen Street upgrade





Guideline

What

Low-lying vegetation (groundcover, shrubs, small trees) help add biodiversity to the city centre as well as providing nutrients to support adjacent tree growth. They can also help filter pollutants from the atmosphere.

Low planting can be installed directly into the ground to help provide nutrients to other plants and in containers.

Container planting provides a simple, cheap and easy to install method of greening the city centre.

Where

Co-locate with larger trees. Where trees cannot be installed, have more intensive low planting.

Compared with other greening elements that require some level of investment and programme, low planting offers informal and less programmed greening initiatives to take place. For example, installing pot plants outside shops or on balconies. Partnerships with property owners, residents and businesses can help amplify this.

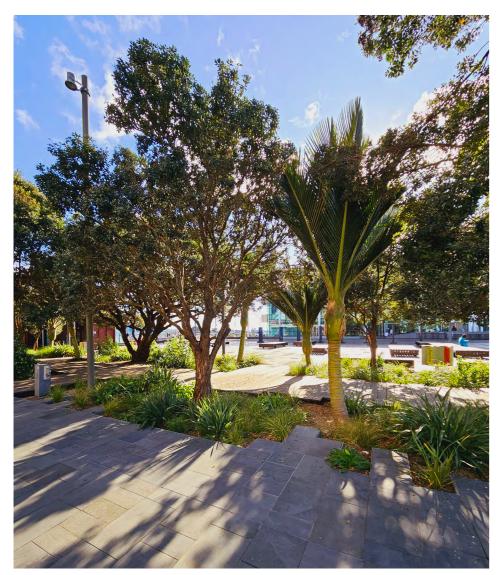


Image 4.23: Berm planting along Quay Street



Image 4.24: Container planting along Queen Street



Greening

Guideline

How

- 1 Ensure plants are eco-sourced through sustainable nurseries and are of species that were found in the ecosystem pre-colonisation¹. Refer to Image 4.10 and Appendix B.3 for ecotones and planting selection.
- 2 Support and encourage communities to become 'stewards of nature' in public and communal spaces through local greening initiatives. These can include informal spaces such as community gardens.
- Identify opportunities to combine low planting with canopy trees.
- 4 Consider adding greening through low planting in-ground or in pots or containers in these situations:
 - underneath the canopy of existing trees or clustered with future tree planting;
 - where there are underground infrastructure constraints that make digging prohibitive;
 - where the projects are temporal, such as Tactical Urban Initiatives (TUI) projects;
 - where spaces are constrained such as laneways; and
 - where spaces need to be delineated to reduce conflicts between different transport modes.

- **5** Ensure plant species have low irrigation requirements and are appropriately irrigated as required to ensure their long-term health.
- **6** Use rainwater run off or collection for irrigation.
- 7 Ensure the size of containers is of appropriate volume to support plant growth and longevity.
- 8 Ensure shrubs and ground cover do not exceed 600mm in height to enable visibility between vehicle and people. This is particularly critical at key crossing routes.
- 9 Replace paved median strips, and other unused and impermeable surfaces, with low planting, as well as trees where possible.
- **10** Ensure low planting does not obstruct the accessible movement of pedestrians by keeping clear routes to tactiles and kerb ramps



1. Plant for your ecosystem



Image 4.25: Community garden in Wynyard Quarter



Image 4.26: Berm planting along Quay Street



Image 4.27: Tangihua Street, Auckland City Centre. Mansons TCLM Limited





Case study: Queen Street upgrade

Low planting (ground covers and shrubs) is the most low-cost and flexible greening category, and can be applied to almost all situations. Whether underplanting existing canopy trees, planting grass berms, de-paving existing impermeable surfaces and seeding, or growing plants, including vegetables, medicinal plants and herbs in pots, containers or raised gardens beds, there are a variety of techniques that can be used to increase greening of the public realm by low planting.

The upgrade of Queen Street involved a 'no dig' policy and has underground infrastructure that is prohibitive for further investment of in-ground planting techniques. The design response by LandLAB in collaboration with Ngāti Whātua Ōrākei, Auckland Transport and Auckland Council, was to install container pots with eco-sourced native low planting along the length of the Queen Street upgrade. This provides a narrative for Wai Horotiu that runs below the surface and enhances biodiversity. The planting also enhances the street's amenity and provides for the wellbeing of the people who use it.

As with the Queen Street upgrade, container planting can add greening to projects where there are underground infrastructure constraints that make digging prohibitive and where the projects are temporal, such as Tactical Urban Initiatives (TUI) projects. Container or pot planting is ideal where spaces are constrained such as laneways, and can help to delineate spaces and reduce conflicts between different transport modes.



Image 4.28: Container planting on Queen Street creates safe pathways for people walking and cycling



Image 4.29: Birds eye view of the Queen Street upgrade with multi-level planting



Greening categories



Green roofs and vertical greening

Guidelines

- What
- Where
- How

Case study: Central city library living roof





Guideline

What

Green roofs are partially or completely covered in vegetation. The vegetation varies in quality from roofs planted with lawns to thicker vegetation and to trees (where the substrate depth allows it). Similarly, vertical greening are walls covered in vegetation. The vertical nature of them typically restricts the plant selection to smaller species. Both of these methods help to manage stormwater, regulate microclimates, and act as hosts for smaller wildlife such as bees, insects and some birds, to thrive.

Where

As this is concerned with the built form, greening buildings will occur within the private realm primarily. Though there are some opportunities on publicly owned infrastructure such as on bus stops, libraries, public toilets, civic buildings, and town halls. It is important greening is present in both the public and private realms for more cohesive greening outcomes.



Image 4.30: Green Roof on the Auckland City Library



Image 4.31: Green Roof on the Hundertwasser Arts Centre



Greening

Guideline

How

- The majority of buildings in the city centre are privately owned. To see more green roofs and walls requires negotiations and partnerships with private landowners and developers.
- 2 Implement green roofs on public buildings and structures, such as bus stops and community facilities where possible.
- Avoid installing in deep shade as this may limit greening potential.
- 4 Image 4.34 provides guidance on what type of green wall and roof elements are best fit for the project.
- 5 Refer to Guideline Document 2017/001 for design guidance of stormwater management devices.
- 6 Where canopy or below ground space is constrained, consider co-locating vertical greening with infrastructure such as light poles.
- 7 Support and encourage developers, businesses and residents to become 'stewards of nature' by greening spaces that have a public realm interface, such as balconies and verandahs.



Image 4.32: Cashel Mall, Christchurch CBD. RNZ Photo 123RF.



Image 4.33: Vulcan Lane, Auckland City Centre. Greater Auckland, October 25, 2013.

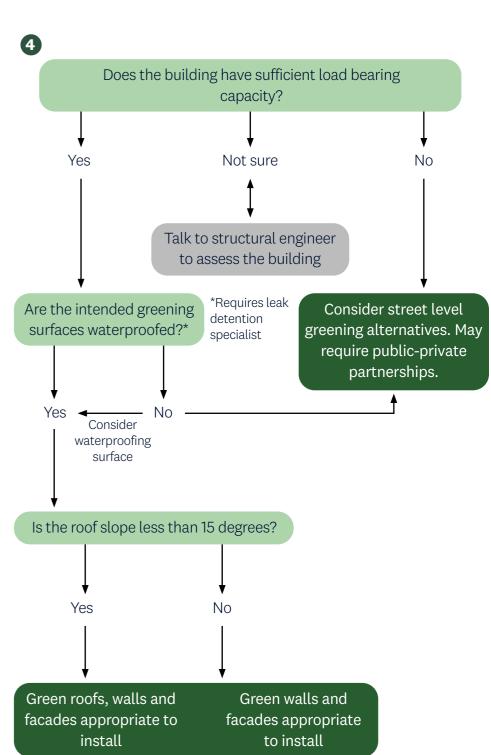


Image 4.34: Guidance for owners to assess what green elements are appropriate for their building.





Case study: Central City Library living roof

This Auckland Council project, in partnership with Ngāti Whātua Ōrākei and Natural Habitat Landscapes installed 2,050 low maintenance, native plants on the roof initially and an additional 350 plants installed over the later months. The plants selected reflect the ecological heritage of the area prior to development. The pattern they were planted in is known as 'poutama' representing education, progress and ascension, paying homage to the function of the library as a place.

Living infrastructure contributes to Auckland's climate change goals, including reduced runoff and better water quality (through storing and treating stormwater) and more resilient buildings.

With the library building dating back to the 1970's, the roof needed repair. This then became an opportunity to utilise the roof space for plants as an alternative to the usual stone ballast.



Image 4.35: Close up view of the Central City Library Living Roof

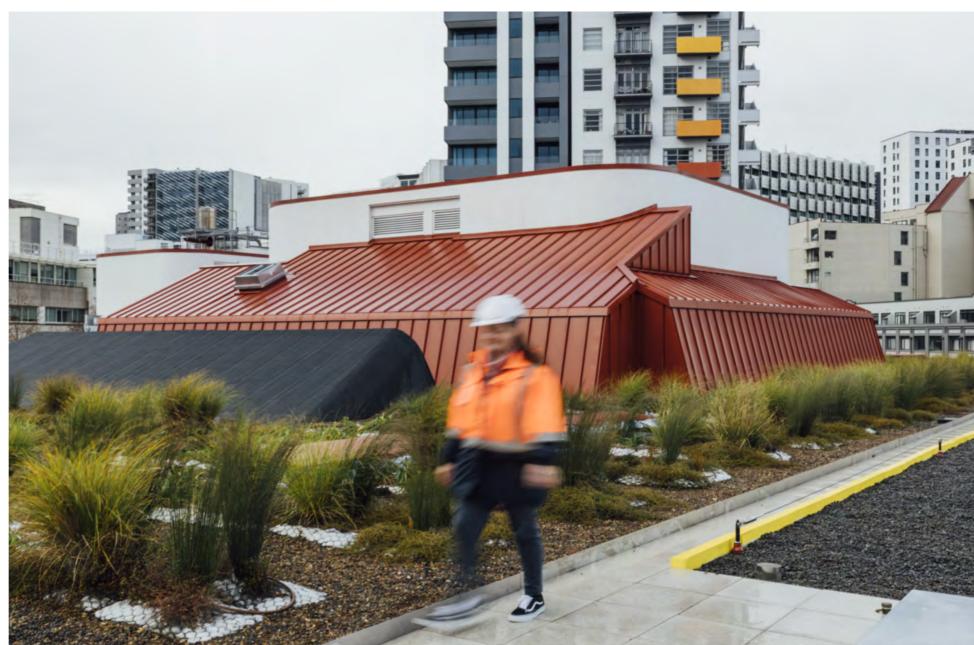


Image 4.36: Perspective of the Central City Library Living Roof







Seating

Other Furniture (Bollards, bike racks, drinking fountains, bins, tree guards)

Lighting

Street Dining

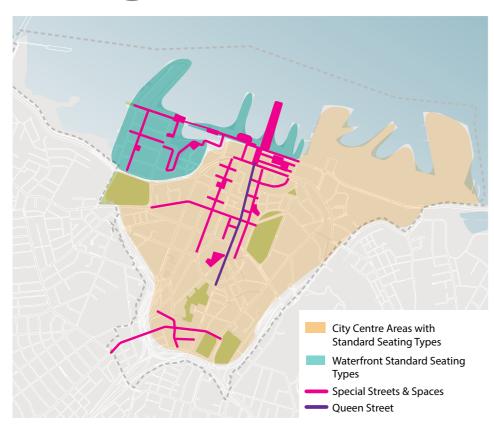


Principles:

- P1. Universally designed
- P2. Enjoyable and safe
- P4. Cohesive and legible
- P5. Sense of place
- P6. Maintenance



Seating



Map 5.1: Where to locate standard and bespoke seating

Overall approach

- The standard seating types identified in this document are to be used in most streets and spaces to ensure legibility and coherency throughout the public realm, and to manage procurement and long-term maintenance and replacement costs.
- The use of customised and bespoke approaches to seating can be used in the Special Streets and Spaces identified in Map 5.1 in accordance with the guidelines below.
- Where customised and bespoke approaches to seating are used, this should include opportunities for co-design with mana whenua, supporting sense of identity, and reduced embodied carbon.

Standard seating

- The standard seating types are identified in **Appendix A** of this document. There are three categories of seats:
 - City centre
 - Waterfront
 - Queen Street

- The City Centre standard seating type should be used across the city centre, with the exception of the waterfront and Queen Street. They comprise three variants:
 - Seat with back rest
 - Bench
 - Slim bench
- The waterfront standard seat type represents the prevailing seat types that have been installed across the Wynyard Quarter and now in use in Quay Street / downtown harbour edge spaces and within the Viaduct Harbour. They should continue to be used across the waterfront in future including in Westhaven, Wynyard Quarter, Viaduct Harbour and Central Wharves. They comprise three variants:
 - Full back
 - Half back
 - Bench style
- For Queen Street, a standard bench seat was developed specifically for this street and continues to be the standard seat type for use on Queen Street.



Image 5.1: Khartoum Place - example of city centre standard seat type 1



Image 5.2: Vulcan Lane - example of city centre standard seat type 2

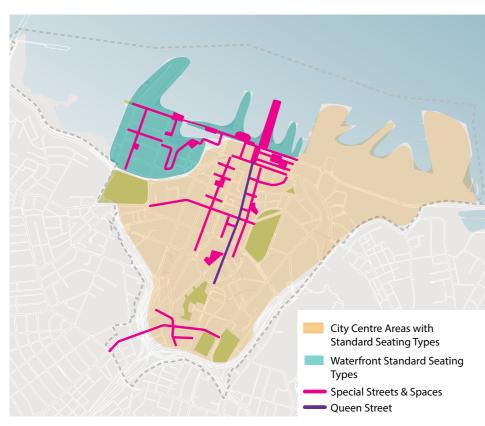


Image 5.3: Quay Street - example of waterfront standard seat type





Shared spaces and other kerbless streets with vehicle traffic



Map 5.2: Where to locate standard and bespoke seating

- The City Centre standard seat types remain the standard seat type for use in shared spaces and other kerbless streets within the city centre (excluding waterfront areas).
- For future streetscape upgrades and seating replacement / additional seating in these streets, consideration should be given to installing non-standard seating types that are more robust and less likely to be damaged by vehicles moving through the space than the City Centre standard seats have proven over time. Ensure seating is placed in locations protected from damage caused by reversing and turning vehicles.
- For these streets the advantages of a stronger and more resilient design outweigh the departure from the standard seat type. An example of this is Federal Street Stage 2 where a bespoke seating arrangement on top of a concrete block structure was designed to better withstand damage from manoeuvring vehicles. The guidance on custom and bespoke seating below is applicable.

Custom and bespoke seating

- Custom and bespoke seating may be appropriate for special streets and spaces. Standard seat types are still appropriate in these contexts and are expected to continue to be widely used where they readily integrate with public realm designs.
- The preference is for customised seating over fully bespoke elements to ensure the benefits of consistency and coherency throughout the public realm. It also retains ease of replacement of standard components in future and ensures that the seating suite remains visually cohesive with the standard suite.
- Examples of this customised approach to seating are found on Quay Street where the downtown programme has modified the waterfront standard seat type to attach it to stone block structures.
- Design of fully bespoke seating elements should generally be avoided and should be limited to fully pedestrianised special streets and spaces and limited other locations where seating is being incorporated into walls, terraces, raised planters and other structures.
- Customised and bespoke seating should incorporate opportunities for co-design with mana whenua and support the special character and identify of the place, and are visually cohesive with the standard seating palette to ensure coherency across the public realm.
- Customised and bespoke seating should ensure they are working towards an inclusively designed public realm accessible to all.
- Any departures from standard seating types must be designed to reduce ongoing maintenance costs and issues. Robust, proven and durable materials and construction methodologies should be used to ensure a long-life span and that they are fit for purpose.
- Reference should be made to the overarching design principles in

- this guide as well as ensuring non-standard seating types meet relevant technical specifications and functional requirements.
- Those tasked with subsequent maintenance and management of any customised and bespoke seating types should be included in the design development and specification processes and ensure that expectations for ongoing maintenance performance levels are appropriate.
- When designing custom and bespoke seating, consider utilising "low carbon" design elements by incorporating recycled materials, reducing the reliance on conventional concrete and steel, and maximising the use of biosourced materials, especially wood. Consider how alternative designs can allow for easier repurposing at the end of the seating's life cycle.



- 1. Transport Design Manual Engineering Design Code -Footpaths and the Public Realm - Chapter 05: Street Furniture
 - 5.3: Seating and tables (fixed) (page 50)



City centre standard seating types



• Name: CBD Suite seat



• Name: CBD Suite bench



• Name: CBD Suite narrow bench

Waterfront standard seating types



• Name: Waterfront Standard seat - Full back



• Name: Waterfront Standard seat - Half back



• Name: Waterfront Standard bench

Queen Street standard seating types



Queen Street Standard bench

Best practice examples of customised & bespoke seating types



Daldy Street - example 1 of customised seat



• Quay Street - example 2 of customised seat



 Te Wananga downtown public space - example 1 of bespoke seat



• Te Komititanga - example 2 of bespoke seat



• Te Ha Noa - example 3 of bespoke seat



• Federal Street Stage 2 - example 4 of bespoke seat



Other furniture (Bollards, bike rack, drinking fountain, bins, tree guards)



Map 5.3: Where to locate other furniture

Image 5.4: Takutai Square - example of standard bollard

- There is one standard suite of other furniture for use across the whole of the city centre with all future upgrades and asset renewals, including within the waterfront area. These are identified in **Appendix A**. This applies to the following items:
 - Bollards
 - Bike racks
 - Drinking fountains

 - Tree Guards
- These furniture items are not expected to be the subject of custom or bespoke design treatments anywhere in the city centre, including within special streets and spaces.
- For direction and guidance on surface treatments for tree pits please refer to the council arborist. Blue or green infrastructure solutions, low planting, and/or low carbon, sustainable materials should be generally preferred. For instances where tree guards and grills continue to be appropriate, the standard suite should continue to be used.



Image 5.5: Queen Street - example of bike rack



Links

- Transport Design Manual Engineering Design Code -Footpaths and the Public Realm - Chapter 05: Street Furniture
 - 5.2: Cycle racks and locker (page 49)
 - 5.12: Drinking fountains (page 66)
 - 5.16: Barriers, railings, fences and bollards (page 72)
 - 5.19: Litter bins (fixed) (page 78)
- Transport Design Manual Cycling Standard Engineering Details



Image 5.6: Queen Street - example of standard bin



City centre standard bollards, bike racks, drinking fountains, bins & tree guards



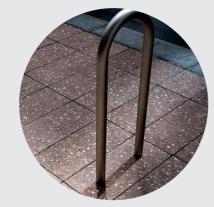
• Name: CBD Standard bollard (fixed & retractable)



• Name: CBD Standard retractable bollard



• Name: CBD Standard drinking fountain



• Name: CBD Standard bike rack



• Name: CBD Standard twin bin



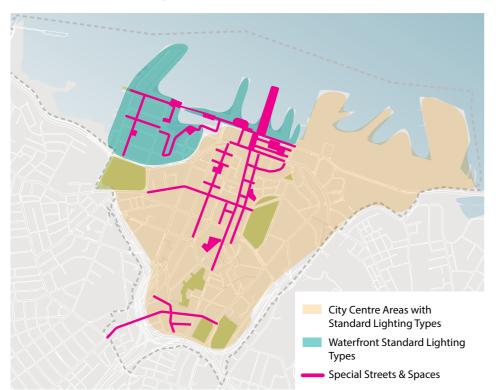
• Name: CBD Integrated tree guard system (ITGS)



 Name: Queen Street integrated tree guard system (ITGS)

Lighting

Standard light poles



Map 5.4: Where to locate standard and bespoke lighting

- City Centre standard multi-functional poles (MFPs) are the standard light pole type for use across the city centre, with the exception of the Waterfront area. The specification for this light pole is in Appendix A. The use of standard MFPs will ensure a high level of consistency and coherency across the city centre's public realm.
- Multi-functional poles (MFPs) are designed for multiple fixtures and should be used within the majority of the city centre's streets and spaces to reduce and minimise the proliferation of ancillary signage poles and other poles within city centre streets and spaces, including instances where additional signage is being added over time.
- City Centre standard MFPs are the standard pole type that should be used for dedicated light poles, signage poles, and traffic signal poles in the city centre, as well as for multi-functional poles. Variations in pole height and lighting fixtures are required to meet lighting, traffic signal and signage requirements as determined at the project level.

- For the Waterfront area the waterfront standard light pole should be used, which is a circular pole of mid-grey metallic finish. The specification for this light pole is in **Appendix A**. While different to the City Centre standard MFP it retains a cohesive visual identity, look and feel with this light pole.
- The Waterfront standard light pole should be the standard type for use across the waterfront in future including in Westhaven, Wynyard Quarter, Viaduct Harbour and Central Wharves.



Image 5.7: Albert Street - example of standard city centre street lighting type 1



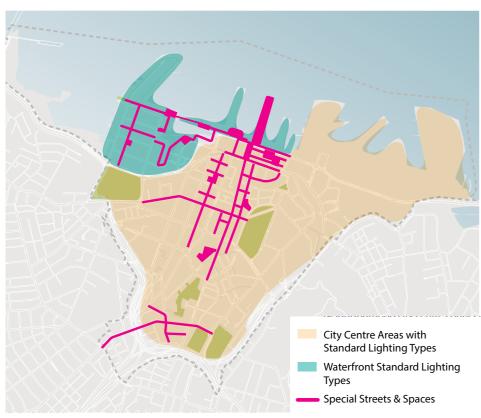
Image 5.8: Karangahape Road - example of standard city centre street lighting type 2



Image 5.9: Daldy Street - example of waterfront street lighting type



Custom and bespoke light poles



Map 5.5: Where to locate standard and bespoke lighting

- Custom and bespoke Multi-Functional Poles (MFPs) and light poles should be the very rare exception even within special streets and spaces. Where custom or bespoke poles are developed and installed, continued use of mid-grey metallic finishes are encouraged to retain a degree of cohesion and visual identity, look and feel with standard MFPs and light poles extensively in use across the city
- Appropriate custom treatments to standard MFP and light poles include the addition of cultural patterns to standard components designed by or in partnership with mana whenua.
- Customised and bespoke light poles should incorporate opportunities for co-design with mana whenua and support the special character and identify of the place, and be visually cohesive with the standard seating palette to ensure coherency across the public realm.
- Any departures from standard light poles must be designed to reduce ongoing maintenance costs and issues. Robust, proven and durable materials and construction methodologies should be used to ensure a long-life span and that they are fit for purpose.
- Those tasked with subsequent maintenance and management of any customised and bespoke seating types should be included in the design development and specification processes and ensure that expectations for ongoing maintenance performance levels are appropriate.
- Consider opportunities to reduce the costs and environmental impacts of lighting through means such as adaptive lighting and sensors, and reduced lighting where this is an appropriate response to the night time context and activity.



- 1. Transport Design Manual Engineering Design Code -Footpaths and the Public Realm - Chapter 05: Street Furniture
 - 5.14: Pedestrian Lighting (page 68)
- 2. Transport Design Manual Engineering Design Code Street Lighting
- 3. Transport Design Manual Street Lighting Standard **Engineering Details**



City centre standard MFP & lighting poles



Image 5.12: Albert Street - example 1 of standard lighting pole

- Name: City centre MFP pole example 1
- Description: Single 3m light outreach, single banner outreach, powdercoated mild steel upper pole, aluminium corrugated base cladding

City centre standard MFP & lighting poles



Image 5.13: Albert Street - example 2 of standard lighting pole

- Name: City centre MFP pole example 2 (Traffic signal on pole)
- Description: 250 Extruded Base Cladding, 220 Upper Pole - Steel or Aluminium, 4.3m Pole, Pole Top and Base LED Feature Lights

City centre standard MFP & lighting poles



Image 5.14: Example 3 of standard lighting pole

- Name: City centre MFP pole example 3 (with
- Description: 250 Extruded Base Cladding, 220 Upper Pole - Steel or Aluminium, 3m Single Streetlight Outreach, 11.5m Pole, 10m Streetlight Height. 1.5m Banner Outreach, Pole Top and Base LED Feature Lights

Waterfront standard light poles



Image 5.15: Wynyard Quarter - example 3 of bespoke lighting pole

- Name: Waterfront street light
- Description: Mid-Grey



Best practice examples of customised & bespoke light poles



Image 5.16, 5.17: Quay Street - example 1 of bespoke lighting pole



Image 5.18: Brigham Street - example 2 of bespoke lighting pole

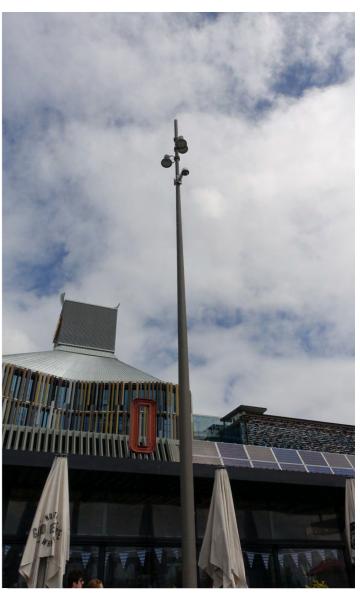


Image 5.19: North Wharf - example 3 of bespoke lighting pole



Up-lighting and feature lighting



Map 5.6: Where to locate standard lighting

- Up-lighting (e.g. of heritage buildings and features) is considered a standard element that is often appropriate for use within upgraded streetscapes everywhere within the city centre.
- Up-lighting of heritage buildings and features may be appropriate and should be worked through at the design phase with the relevant authorities including the Council's Built Heritage team and Pouhere Taonga Heritage New Zealand (where applicable).
- Up-lighting and feature lighting of trees and planting is no longer favoured and should generally be avoided given effects on tree and plant health and the biodiversity that planting supports in the city centre.
- There are no standard up-lighting types. When working through detailed design and specifications, reference should be made to up-lighting that exists within the street, space or nearby streets and spaces or, that have been recently installed in comparable streets and spaces.
- Feature lighting which can take many forms, should be limited to special streets and spaces only.

- All up-lighting and feature lighting must be designed to reduce ongoing maintenance costs and issues. Robust, proven and durable materials and construction methodologies should be used to ensure a long-life span and that they are fit for purpose.
- Those tasked with subsequent maintenance and management of up-lighting and feature lighting should be included in the design development and specification processes and ensure that expectations for ongoing maintenance performance levels are appropriate.
- Consider opportunities to reduce the costs and environmental impacts of lighting through means such as adaptive lighting and sensors, and reduced lighting where this is an appropriate response to the night time context and activity



Up-lighting and feature lighting

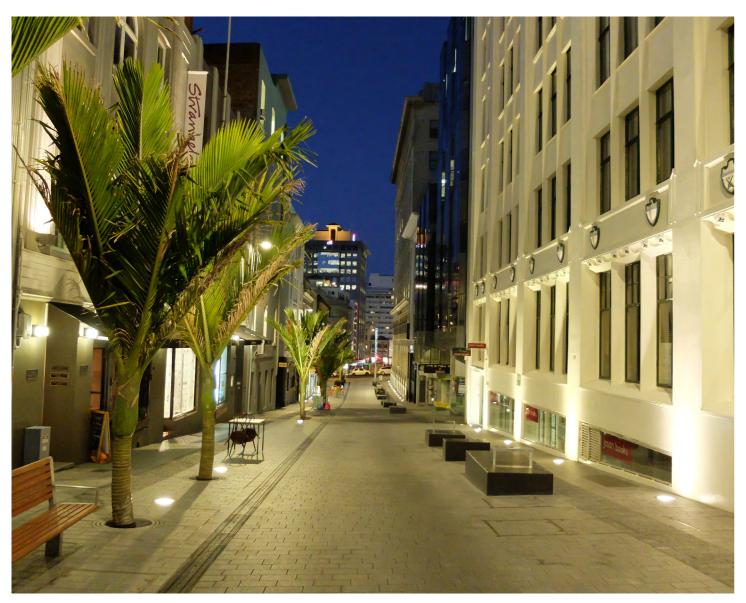


Image 5.20: O'Connell Street - example 1 of heritage building up-lighting

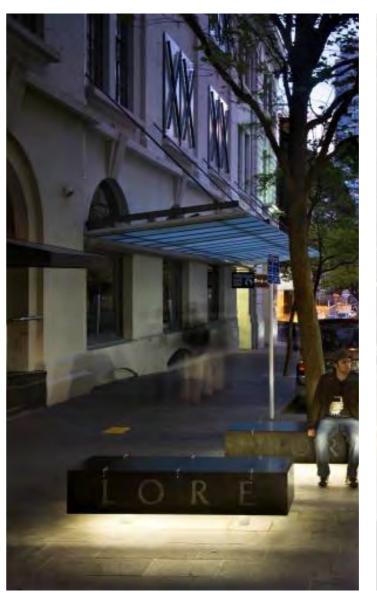


Image 5.21: Lorne Street - example 1 of feature lighting



Image 5.22: Federal Street Stage 2 - example 2 of feature lighting



Street dining

Introduction

Street dining for the purpose of this document relates to outdoor dining in streets and spaces and is supported throughout the city centre as it:

- adds to the variety and vibrancy of the street.
- Enhances the safety of streets and spaces by bringing 'eyes to the street'.
- Boosts the attractiveness of the city centre as a place to visit, work and invest.

Where a food and beverage offer exists, street dining areas should be provided for during streetscape upgrade works. The design and location of these areas need to be carefully considered to ensure that:

- there are no negative impacts on people's personal safety.
- There are no adverse effects on the quality of the street environment.
- Universal access is maintained.
- Any potential for conflict between all street users is addressed.



Image 5.23: Wynyard Pavilion's Outdoor Dining

Street design consideration

To enable and encourage street dining throughout the city centre, the following points should be considered when designing streets and spaces.

Preferred configuration

- 1. It is preferred that street dining spaces are located away from the building edge within the street's furniture zone to align with universal design guidelines.
- 2. Clear space within the furniture zone should be reserved for moveable dining furniture in front of or in close proximity to existing food and dining premises.
- 3 Where there is no furniture zone, maintain a clear pedestrian movement zone, at least 1.8m wide, either adjacent to the building edge or buffer zone. Street dining furniture should be located on the kerb side of this movement zone.

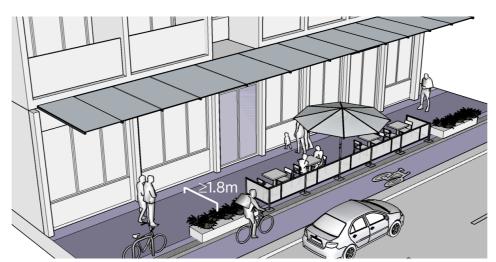


Image 5.24: Preferred configuration

- A 600mm clearance from the edge of the kerb should be provided.¹
- 5. The designated street dining areas should be demarcated using stainless steel tactile dots.
- 6. Where required, buffers in the form of planting or furniture items should be provided to protect dining areas from vehicles.
- 7. Weather protection measures should be considered in more exposed locations.
- 8. Where possible, bike parking should be provided in close proximity to street dining to enhance accessibility.



Links

Transport Design Manual - Engineering Design Code -Footpaths and the Public Realm



Alternative configuration

- 1 If the preferred configuration is not possible, there is an alternative option to locate the street dining area against the building edge.
- 2. A clear pedestrian movement zone should be maintained at least 1.8m wide, between the edge of the dining area and the
- 3. The designated street dining areas should be demarcated using stainless steel tactile dots.
- Where required, buffers in the form of planting or furniture items should be provided to demarcate the dining area.

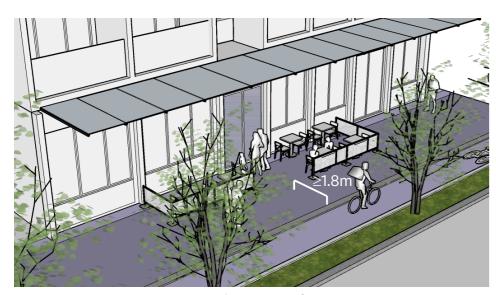


Image 5.25: Alternative configuration



- Trading and Events in Public Places Bylaw
- 2. Licences and regulations
- Alcohol on-licence

Tactical and flexible approaches

Outdoor dining parklets:

- 1 The transformation of car parks into street dining zones has surged in popularity across the world as a result of COVID-19 and the need to support businesses in providing open-air dining space.
- 2. Locating dining areas on the road reserve as parklets can be an effective way of providing short-medium term dining where the street has no furniture zone or no available width on the footpath.
 - Note: appropriate permissions must be sought in advance from the relevant authority such as Auckland Transport.
- In this option the parklet is located adjacent to an existing parking space and must not hinder the path for vehicular travel. The parklet should be at the same level as the footpath to reduce trip/fall hazards and increase accessibility for all users.

Flexible programming:

On streets where permanent furniture zones are unavailable, consider flexible programming of space to support day and night-time activities. For example, early morning loading zones can be converted to outdoor dining space for day / evening use by both on-street food and beverage premises and mobile street vendors.

Further information

Refer to the Trading and Events in Public Places Bylaw¹ for further Information. Refer to the Auckland Council website for licensing guidance on outdoor dining, mobile trading² and alcohol on-license³.

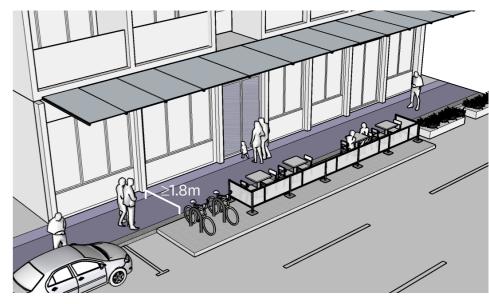


Image 5.26: Parklet configuration



Image 5.27: Pancake parklet, Lorne Street







Paving

Introduction **Stone paving Concrete paving Kerbstones and place mats**



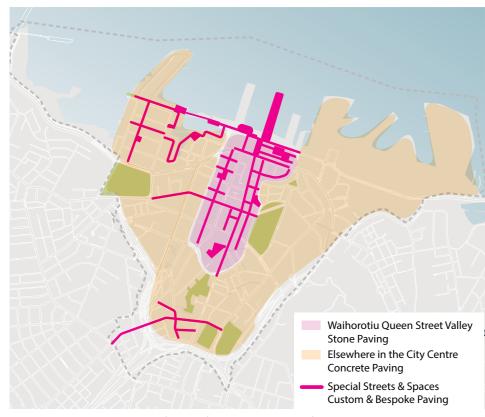
Principles:

- P1. Universally designed
- P2. Enjoyable and safe
- P4. Cohesive and legible
- P5. Sense of place
- P6. Well maintained
- P7. Sustainable





Paving: Introduction



Map 6.1: Where to locate concrete and stone paving

Overall approach

- The overall approach to paving is to maintain a growing network of upgraded, quality footpaths and pedestrian surfaces with a high level of standardisation to realise the benefits of a high level of cohesiveness, legibility and ease of maintenance across the city centre.
- Standard materials vary by location, with stone paving the standard paving material within the Queen Street Valley, and concrete the standard paving material for footpaths and pedestrian areas everywhere else in the city centre including the waterfront.
- The standard stone and concrete paving palettes identified in this document are to be used in most streets and spaces to ensure legibility and coherency throughout the public realm and, to manage procurement and long-term maintenance costs.

- The use of customised and bespoke approaches to the stone and concrete palettes is appropriate for Special Streets and Spaces, as identified in **Map 6.1**. Such approaches should be developed in accordance with the guidelines below and, should include opportunities for co-design with mana whenua, enhanced sense of place and, reduced embodied carbon.
- Heritage basalt bluestone kerb and Kassel Kerb are two city centre standard kerbstone types. Considerations for custom and bespoke kerb treatments can be applied to special streets and spaces.

Which paving treatment and where?

Stone paving

- Stone paving should be considered standard and the predominant paving material within the Wai Horotiu Queen Street Valley area as identified in Map 6.1.
- This reflects the role of the network of streets and spaces in this central core in supporting destination areas of regional significance that are highly frequented by visitors, shoppers, workers and residents. Use of stone paving assists with wayfinding and legibility of these special places and maintains a high-quality appearance in the most frequented areas of the city centre. It also reflects that stone paving is now the prevailing paving material within this area following successive streetscape upgrades over the last 20 years.

Concrete paving

• Concrete paving is the standard paving material for all areas of the city centre, including the waterfront, outside of the Wai Horotiu / Queen Street Valley area, as identified in Map 6.1. This provides a high quality and cost effective paving solution.

Custom and bespoke paving

• The use of custom and bespoke paving, that departs from standard stone or concrete paving, is reserved for Special Streets and Spaces as identified in **Map 6.1**. These have been concentrated within the Queen Street Valley and waterfront areas of the city centre. There are likely to be further such streets and spaces elsewhere across the city centre as investment in these areas occurs in accordance with the City Centre Masterplan and, other guiding documents and programmes of investment.

Paving hierarchy

- Queen Street sits at the top of the city centre street hierarchy and takes priority over all intersecting streets. Second only to Queen Street, Quay Street and Te Ha Noa / Victoria Street are identified as special streets and should take priority over all intersecting streets and spaces except for Queen Street.
- Beyond this, the general principles are that:
 - 1 major streets take priority over minor streets, including laneways.
 - Surface treatments for special streets and spaces as defined by this guide should generally meet the edge of the adjacent streets rather than extending surface treatments into the adjoining streets.
 - Where a project is resulting in only a very limited area of new or re-surfaced pavement, it may be appropriate to continue to use non-standard existing materials or source similar to tie in with existing even where this is not one of the standard palettes.





Stone paving

Standard stone paving



Map 6.2: Where to locate standard stone paving and bespoke paving

- Standard paving palettes should be used for all stone paving streets except for special streets and spaces where place-specific paving palettes already exist (e.g. Queen Street, Quay Street, Te Hā Noa / Victoria Street Linear Park) or are developed in future.
- Shared spaces have their own standard stone paving palette (300x150mm paver modules) as well as features such as stone paved tactile delineator strips. This palette was developed specifically for the use of shared spaces with Blind Low Vision New Zealand to address safety and wayfinding. Future use of the 300x150mm modules should be confined to shared spaces only to ensure consistency, safety and wayfinding, particularly for people who are visually impaired.
- There are a number of other stone pavers used historically (e.g. Timaru bluestone in High and Lorne Streets) that are no longer standard. Future use of these should relate only to maintenance and upkeep of or tie in with existing.
- The standard stone paving palettes are the primary paving modules that apply within the city centre. Refer to **Appendix A** for full details of all paving modules and related surface treatment elements, including setts, kerbstones, channels, place mats etc.



Image 6.1: Queen Street - example of city centre standard stone paving palette (for Queen Street only)



Image 6.2: Elliott Street - example of city centre standard stone paving palette for shared Spaces



Image 6.3: Lorne Street - example of city centre standard stone paving palette



Paving

Custom and bespoke stone paving



Map 6.3: Where to locate standard stone paving and bespoke paving

- Customising the surface treatment of standard stone pavers to vary their appearance and qualities or create patterns e.g. through sandblasting or etching, is an appropriate variation for special streets and spaces, where they present opportunities for codesign with mana whenua and, support the special character and identity of the place while also having the benefit of maintaining a high degree of cohesiveness with the standard palette. Customised stone paving should be restricted to Special Streets and Spaces as indicatively identified on Map 6.3.
- Bespoke stone paving, where alternative stone palettes to the standard palettes are used, may be appropriate for Special Streets and Spaces where they present opportunities for co-design with mana whenua and support the special character and identity of the place. Bespoke stone paving is restricted to Special Streets and Spaces as indicatively identified on **Map 6.3.** The expectation is that fully bespoke stone paving is the exception not the rule even for special streets and spaces, with customised treatments used more extensively as described above.
- All customised and bespoke stone paving palettes need to ensure they are visually cohesive with the standard stone paving palette to ensure a high level of coherency and legibility is maintained with public realm surfaces across the city centre.
- Seek out lower carbon materials when selecting and specifying custom and bespoke paving.
- Custom and bespoke paving to consider opportunity to re-use existing.materials or utilise recycled materials.
- Any departures from standard materials must be designed to reduce ongoing maintenance costs and issues including slipresistance. Robust, proven and durable materials and construction methodologies should be used to ensure a long life space and that they are fit for purpose.

- Reference should be made to the overarching design principles in this guide as well as ensuring non-standard stone paving materials meet relevant technical specifications and functional requirements.
- Those tasked with subsequent maintenance and management of any customised or bespoke stone paving materials should be included in the design development and specification processes and, ensure that expectations for ongoing maintenance performance levels are appropriate.
- Refer to **Appendix A** for the detailed paving specifications.



Links

- 1. Transport Design Manual Engineering Design Code -Footpaths and the Public Realm - Chapter 03: Footpaths & Pedestrian Facilities (page 12)
- 2. Transport Design Manual Footpaths Standard Engineering Details





Stone paving palettes

City centre standard paver modules



- Type: Granite / Asian Basalt G3027
- Dimension: A:703x350

B:525x350

C:350x350

• Application: City centre standards streets & spaces (within Waihorotiu Queen Street Valley).



- Type: Granite / Asian Basalt G3027
- Dimension: 695 X 345
- Application: City centre standards streets & spaces (within Waihorotiu Queen Street Valley).

Shared space paving palette



- Type: Granite (PT Black & G654)
- Dimension: 150x300
- Application: Shared spaces

Best practice examples of customised paving

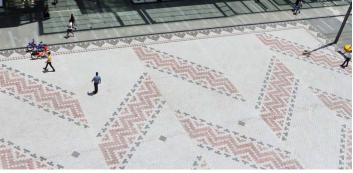




Quay Street

• St Patrick's Square

Best practice examples of bespoke paving



• Te Komititanga





Stone Setts



- Type: Granite / Asian Basalt G3027
- Dimension: 97x97
- Application: Setts are to be used only in instances where there is a need to accommodate for any required level changes and to respond to threshold modifications.

Queen Street



- Type: Granite / Asian Basalt G3027
- Dimension: 900x450
- Application: Queen Street only









Paving

Concrete paving

Standard concrete paving



Map 6.4: Where to locate standard concrete paving and bespoke paving

- A standard concrete treatment has been defined, reflecting the growing use of high quality concrete footpaths in many parts of the city centre in recent years.
- This standard concrete paving is an oxidised aggregate with black oxide and white pebble in the mix to reflect Auckland's volcanic terrain and blend sympathetically with heritage basalt kerbstones and stone paving palettes where concrete and stone meet.
- This is intended to reflect the success of recently delivered examples of high-quality concrete paving such as at Karangahape Road and Federal Street Stage 2 and extensively across the Wynyard Quarter.
- This is to be the standard paving treatment for future use everywhere in the city centre outside of the Queen Street Valley.
- Upgrades of streets and spaces where asphalt footpaths currently exist should be replaced with this standard concrete paving.
- There are a number of other concrete treatments that have been specified and implemented on city centre pavements historically that differ from this standard. Future use of these should relate only to maintenance and upkeep of or limited tie in with existing.

- The standard concrete treatments included here are not technical specifications and are intended to define at a high level the treatment and mix to be used to achieve the intended look and feel of the pavement.
- Development of city centre standard technical guidance, specifications and standards may be developed in due course. For now, designers should refer to detailed design and specifications of comparable concrete treatments for city centre streets and spaces.
- Refer to the detailed technical guidance in **Appendix A** for details of other surface treatment elements that may be incorporated into concrete surface treatment designs, including kerbstones, channels, place mats etc.



Image 6.4: Madden Street - example of waterfront standard concrete footpath palette



Image 6.5: Federal Street Stage 2 - example 1 of city centre standard concrete footpath



Image 6.6: Karangahape Road- example 2 of city centre standard concrete footpath



Paving

Custom and bespoke concrete paving



Map 6.5: Where to locate standard concrete paving and bespoke paving

- Customising the surface treatment of standard concrete paving to vary the aggregate mix or surface treatment to change appearance and qualities and create patterns e.g. through sandblasting, or the use of fully bespoke concrete paving present opportunities for co-design with mana whenua and could support the special character and identity of the place. This is appropriate for Special Streets and Spaces where concrete is the standard palette (outside of the Queen Street Valley), as indicatively indicated on Map 6.5.
- All customised and bespoke concrete treatments need to ensure they are visually cohesive with the standard concrete treatments to ensure a high level of consistency and legibility across the public realm.
- Seek out lower carbon materials when selecting and specifying custom and bespoke paving.
- Custom and bespoke paving to consider opportunity to re-use existing materials or utilise recycled materials.
- Any departures from the standard concrete treatments must be designed to reduce ongoing mainteance costs and issues including slip resistance. Robust, proven and durable materials and construction methodologies should be used to ensure a long life span and that they are fit for purpose.
- Reference should be made to the overarching design principles in this guide as well as ensuring non-standard concrete paving materials meet relevant technical specifications and functional requirements.
- Those tasked with subsequent maintenance and management of any bespoke concrete paving materials should be included in the design development and specification processes and ensure that expectations for ongoing maintenance performance levels are appropriate.



- Transport Design Manual Engineering Design Code -Footpaths and the Public Realm - Chapter 03: Footpaths & Pedestrian Facilities (page 12)
- 2. Transport Design Manual Footpaths Standard Engineering Details



Paving

City centre standard concrete paving palettes

City centre standard concrete footpath palettes



- Type: Exposed aggregate concrete
- Description: Standard aggregate concrete mix with black oxide and lightly exposed finish.
- Application: City centre standard streets and spaces (outside Waihorotiu Queen Street Valley).



- Type: Acid washed concrete
- Description: Standard aggregate concrete mix with black oxide and acid washed finish.
- Application: City centre standard streets and spaces (outside Waihorotiu Queen Street Valley).

Best practice examples of customised & bespoke treatments



Tiramarama Way - example of waterfront standard concrete mix with custom surface treatment (sandblasted finish) with site specific pattern.



• Te Wananga Downtown Public Space - example of bespoke concrete mix with shells, and custom surface treatment with site specific pattern.



Daldy Street Linear Park - example of use of recycled concrete as crazy paving, providing more porous, greener low carbon solution.





Kerbstones and place mats

- Heritage basallt bluestone kerbs are the standard kerbstones for use everywhere in city centre.
- Retention and re-use of existing heritage bluestone kerbs should be undertaken wherever possible.
- Kassel kerbs are required for streets with kerbside bus movements and boarding, as per AT Metro requirements.
- Special streets and spaces may have placespecific kerb stones, such as the extra wide Asian basalt kerbstones on Queen Street. These should only be used for streets where they have been specified.
- Standard basalt place mats for place names and heritage interpretation - are appropriate to use across the city centre including within concrete footpaths.materials should be included in the design development and specification processes and ensure that expectations for ongoing maintenance performance levels are appropriate.
- Refer to **Appendix A** for the detailed specifications.

City centre standard kerbstones



- Type: Heritage basalt 'bluestone' kerb
- Application: City centre standard (Stone paving and concrete footpaths)



- Type: Kassel kerb
- Application: Streets with bus boarding zones and kerbside bus lanes/routes

Custom & bespoke kerbs



- Type: Asian basalt ZM kerb
- Application: use on Queen Street only

City centre standard place mats



- Type: Heritage mat, timaru basalt
- Application: City centre standard (Stone paving and concrete footpaths)



- Type: Place / artwork text mat, timaru basalt
- Application: City centre standard (Stone paving and concrete footpaths)





Public art

Introduction Things to think about for public art investment **Council processes to follow**



Principles:

- P1. Universally designed
- P2. Enjoyable and safe
- P5. Sense of place
- P7. Sustainable
- P8. Vibrant and activated
- P9. Tactical urbanism





Introduction

Public art is an important aspect of city building. It enriches a city, brings to life, and transforms how people experience the public realm. It contributes to the beautification of cities and is essential to creating a sense of place, helping us to achieve streets and public spaces that are unique to Tāmaki Makaurau / Auckland.

This section focuses on permanent public art. It looks at how to bring forward public art opportunities and where to locate art in streets and public spaces within Auckland's city centre. It provides direction and inspiration for public art investment and responds to:

- The principles informing this document.
- The strategic direction of the Auckland Council Public Art Policy and City Centre Art Plan.
- The vision and outcomes of the City Centre Masterplan (CCMP) 2020.

The CCMP identifies a place-based focus for the revitalisation and growth of the city centre organised around 10 outcomes. Public art is intrinsic to and has touchpoints with all of these outcomes.

This can be used alongside Auckland Council documents that are relevant to public art including:

- Toi Whītiki Arts and Culture Strategic Action Plan¹
- Public Art Policy²
- City Centre Public Art Plan³
- Temporary Public Art Toolkit (draft)⁴
- Murals Toolkit, A Practical guide for Aucklanders⁵



- Toi Whītiki
- 2. Auckland Council Public Art Policy
- 3. City Centre Public Art Plan
- Temporary Public Art Toolkit*
- 5. Murals Toolkit

Public art

Public art is defined for the purposes of this document as creative work in the public realm by an artist or group of artists within the built and natural environment. It can be permanent or temporary and, includes forms or approaches that are:

1. integrated into the overall design of buildings or built elements such as train stations, bridges, cycleways, shared paths, community facilities etc.



Image 7.1: Point Resolution Bridge / Taurarua Footbridge, 2013. A collaboration between artist Henriata Nicholas (Te Arawa) and Warren and Mahoney Architects. Tāmaki Drive Auckland.

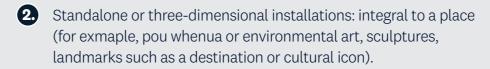




Image 7.2: The Lighthouse / Τū Whenuα-α-kurα, 2017. Michael Parekōwhai (Ngā Ariki Rotoawe, Ngāti Whakarongo). Queen's Wharf.

Features applied to an exterior surface such as murals and mosaics.



Image 7.3: Untitled, 1958. Milan Mrkusich. 35 Graham Street and Hardinge Street, Auckland Central.

Creative activation that may be transitory in nature such as performance / digital / moving image art.



Image 7.4: Te Ara I Whiti The Lightpath, 2015. Arekatera Katz Maihi (Ngāti Whātua), iion Limited, Monk Mackenzie Architects, LandLAB, GHD. Nelson Street Cycleway.





Benefits of public art

Public art is freely accessible to everyone. It adds interest and energy to the public realm and provides many benefits. Public art:

Improves the look and feel of the built environment.



Image 7.5: KnockKnock, 2010. Seung Yul Oh. Osbourne & Teed Streets Newmarket.

• Contributes to safe, vibrant streets and public spaces.



Image 7.6: Eyelight Lane, 2014. David Svensson. Fort Lane.

• Reflects the multi-cultural diversity of Tamaki Makaurau / Auckland, contributing to a sense of place and responds to Auckland's distinctive Māori identity and culture.



Image 7.7: Don't Dream It's Over, 2017. Janet Lilo (Ngā puhi). Karangahape Road Overbridge.

• Creates a memorable part of the public realm.



Image 7.8: E & F and Home, 1999. John Radford, Western Park, Ponsonby.

• Strengthens the function of public places, making them more hospitable and providing a means to perceive and experience them in new ways.



Image 7.9: Byword, 2007. Mary-Louise Browne. Lorne Street

• Delivers creative solutions to urban design challenges.



Image 7.10: Colours of our History, 2012. Miriam van Wezel. Victoria Park. Source: Architecture Now, Patrick Reynolds, 21.09.2012

What are we seeking to achieve?

Public Art by nature is variable and subjective, eliciting different responses from people. When it comes to public art there is no 'one size fits all' approach however projects should consider:

- 1. Visibility for example, located at key gateways, intersections, parks, plazas, and streets, where there are maximum opportunities for public engagement.
- 2. Integrated with many elements of the public realm and distributed across the city centre, i.e. access to art for residents and visitors. The Public Art website illustrates the spatial distribution of public art across the city centre¹.
- 3. Have a transformational impact on the experience of public spaces.
- 4. Inclusion at the early stages or onset of a design process as part of a collaborative, multi-disciplinary approach by all parties involved in the planning, design, implementation, maintenance and management of streets and spaces.
- 5. Supporting co-design and partnering approaches to design with mana whenua.

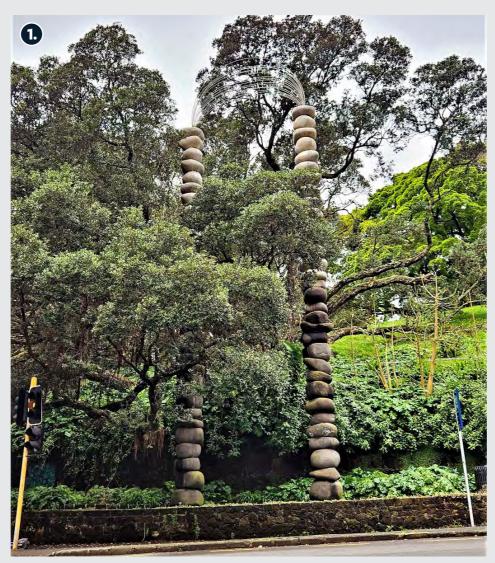


Image 7.11: Gateway, 1990. Chris Booth. Albert Park



Image 7.14: Sounds of Sea, 2009-2011. Company. North Wharf, Wynyard Quarter



Image 7.12: Ehara taku toa i te toa takitahi engari he toa takitini, 2005. Graeme Tipene (Ngāti Whātua Ōrākei) with Thomas Barter.



Image 7.13: Daldy Street Play Structure, 2014. Hana Maihi (Ngāti Whātua Ōrākei), Delani Brown (Ngāti Tūwharetoa, Raukawa) with LandLAB.



Auckland Public Art

Public art

The Public Art Policy and City Centre Public Art Plan inform and guide investment in public art initiatives whether delivered by council, council-controlled organisations or when we work in partnership with other parties. These are explained below:

Public Art Policy

Aims to ensure that everyone can experience thought-provoking, culturally vibrant, enjoyable, and challenging public art and space. In doing so, investment in public art must contribute to one (or more) of the four outcome areas:

- Public art that is unique and distinctive, reflecting Auckland's character, people, places, and stories.
- Public art that delights, welcomes, challenges and inspires.
- Public art that is artistically strong and innovative with an outstanding reputation for quality, variety, and depth.
- Public art that transforms Auckland's public places.

City Centre Public Art Plan

A plan for investment in public art in the Auckland city centre aligned with the outcomes of the City Centre Masterplan and the Public Art Policy. The Plan articulates principles to be considered when planning and delivering for public art. These are explained below:

Principle 1:

Transformational Tāmaki – achieve a transformational impact on perceptions, experiences, and expectations by people. For example:

- High-value, high impact works being distinctive must-see, must-do, must photograph features of the city centre.
- Artworks as identifiers of the city centre.
- Signature work (s) expressing Te Ao Māori as Auckland's point of difference.

• Use of approaches which are authentic to this place and its peoples, enacted in ways that are distinctive and stand out globally.



Image 7.15: Te Ara I Whiti The Lightpath, 2015. Arekatera Katz Maihi (Ngāti Whātua), iion Limited, Monk Mackenzie Architects, LandLAB, GHD. Nelson Street Cycleway.

Principle 2:

People-centric - characteristics of public art must be activating, connecting, welcoming, interacting, inciting, and disrupting.

Artworks are more than just 'look but don't touch objects in space' meant for just passive observation. They encompass the spaces they are situated within, they are thought-provoking, memorable, invite engagement and interaction from the public.



Image 7.16: Rainbow Machine, 2018. Sarosh Mulla, Patrick Loo, Shahriar Ashdollah-Zadeh. Silo Park, Wynyard Quarter.

Principle 3:

Environmentally positive and sustainable. Responds to the challenge of climate change through sustainable design and fabrication. For example:

- Carbon neutral, use of renewable energies, mitigating light, air, and water pollution levels as appropriate.
- Considers life-cycle impacts, utilising materials and technologies that are sustainable (having appropriate longevity, being renewable, robust, responsive to change).
- Use of sustainable lighting for longevity and efficiency.

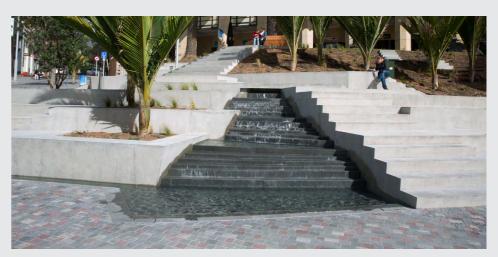


Image 7.17: Untitled, 2017. Graham Tipene (Ngāti Whātua, Ngāti Kahu, Ngāti Hine, Ngāti Haua, Ngāti Manu) John Reynolds, Isthmus Landscape Architects. Freyberg Place.



Things to think about for public art investment

Where and how to locate public art

The City Centre Masterplan (CCMP) promotes opportunities to transform, revitalise and improve streets and public spaces across the city centre. These are framed around eight transformational moves which provide critical context for public art opportunities across the city centre. Notably within:

- Capital improvement projects to the city's streets and public spaces.
- Major infrastructure projects funded by Council e.g. bridges, cycleways.
- Existing parks and new parklets and greenspaces across the city centre.

When planning for permanent public art, it is important that it will be delivered where it will have the greatest benefit and is most likely to meet the outcomes identified for the work.

It is important to consider places which are accessible, inviting, safe, well-maintained and, may include amenities such as shelter, shade, and seating to encourage people to stay and appreciate the work.

Things to think about for sites where public art may be installed:

- 1 Be prominent and of value and interest to residents and
- 2. Be relevant to the topic or theme of the artwork to encourage a sense of place.
- 3. Opportunities to consider embedding art within play elements in parks or playgrounds to encourage a sense of discovery and physical interaction with the work.
- 4. Experiences high levels of pedestrian traffic.
- **5.** Refrains from blocking windows, entranceways, and interference with accessible footpaths for pedestrians.
- Must not create blind spots where illegal or anti-social behaviour can take place nor be located on a site that is inhospitable, unsafe or presents concerns from a crime prevention perspective.
- 7. Provides a place of congregation for people to pause, ponder and interact with the work.
- 8. Be publicly accessible 24 hours a day and provide safe, easy access for people viewing the artwork.



Image 7.18: Pipi Beds, 2003. Chaz Doherty (Ngai Tuhoe), Renata Blair (Ngāti Whātua), Bernard Makoare (Ngāti Whātua, Te Uri o Hau, Te Waiariki, Te Kaitūtae). Takutai Square.



Image 7.19: Loafers, 2012. Francis Upritchard. Symonds Street.



Image 7.20: The Women's Suffrage Mural, 1993. Jan Morrison, Claudia Pond Eyley. Te Hā O Hine / Khartoum Place.



Cynthia Nikitin, 2012





Things to consider for murals

Murals can transform an empty of graffitied wall into a canvas for a colourful and stimulating artwork. They are typically temporary in nature. Things to consider include:

- Well-produced murals in well-considered locations often become neighbourhood icons.
- They can turn a bland, blank wall into something that adds to the quality and attractiveness of a street or space.
- Can have a dramatic impact on neighbours and passers-by.
- Allows people to shape and create a sense of place.
- Can discourage anti-social behaviour.
- Must be a high-quality, relevant to the community and have a memorable design with a clear message.
- Must be well prepared and cared for with budget allocated for maintenance as well as commissioning.
- Must be safe, easy to access for the creative team and those viewing it.
- Good visibility is vital you want people to see it!
- A surface that is in good condition and is suitable for painting and can be thoroughly cleaned.
- Surrounding environment that will be genuinely improved by the mural.
- Will not add 'visual noise' to a location and is not in direct proximity to an existing artwork.
- It is vital to establish who owns the surface you want to use and to get written permission from the legal owner or controlling institution before you begin.
- See Murals Toolkit for further guidance.1



Image 7.21: Maunga. 2020. Shane Cotton (Ngāti Rangi, Ngāti Hine, Te Uri Taniwha). Ross Liew Artist Collaborator. Britomart Excelsior House.



Mural Toolkit

Things to think about regarding maintenance for public art:

- The artwork can be affected by environmental conditions including rain, wind, sun exposure which impacts the longevity of the artwork. Think about materials that are resilient which will withstand these conditions and be structurally robust.
- At some point people may tag, vandalise, or interfere with the artwork causing damage. Materials and methods of construction are very important as well as provision for and upfront agreement on method and funding for ongoing maintenance.
- Security i.e. Increased lighting, locating the artwork in an open area visible to the public, and CCTV surveillance can help. Ensure that parts can be easily replaced and areas re-painted if damaged.
- Engagement with relevant Auckland Council maintenance and asset owner groups should be carried out at the beginning of the design process.

Council processes to follow

Refer to Auckland Council Public Art Policy (p. 18-20) for a full description of the roles and responsibilities in terms of public art decision making.

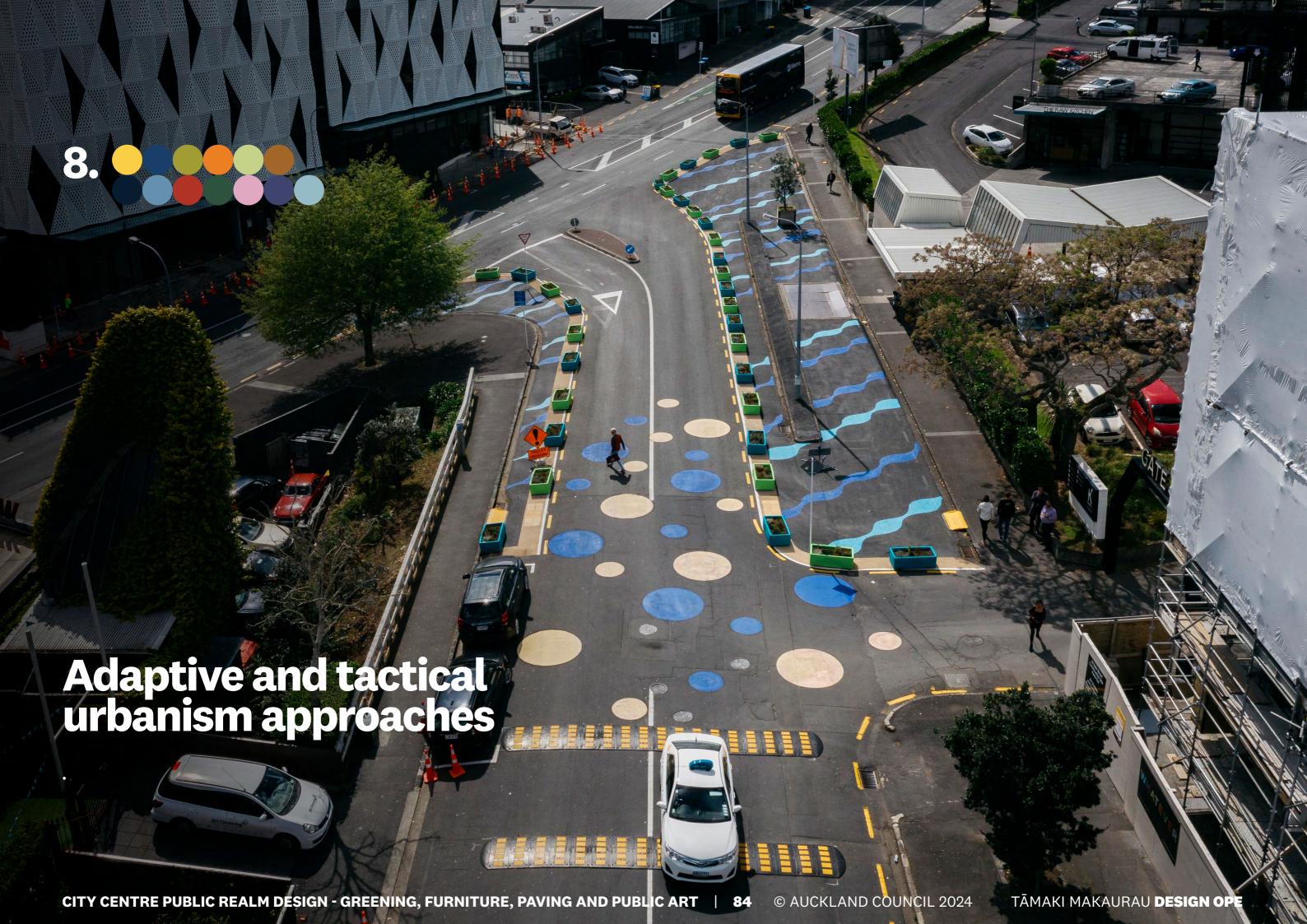
Resources



Links

- Public Art Website
- 2. Public Art Advisory Panel
- 3. Te Paparahi, Toi Māori Walks in the City
- Asset and Management Plan







Adaptive and tactical urbanism approaches

Introduction **Monitoring and evaluation Example projects Tactical urbanism palette**



Principles:

- P1. Universally designed
- P2. Enjoyable and safe
- P3. Green and climate resilient
- P5. Sense of place
- P8. Vibrant and activated
- P9. Tactical urbanism



Adaptive and tactical urbanism approaches

Introduction

The Tactical Urbanism Initiatives (TUI) programme, funded by the City Centre Targeted Rate, is a people-centred, trial-based approach to continually improving our city centre spaces and streets. It seeks to achieve change quickly, cost-effectively, and creatively.

The intent of the programme is to be agile and responsive to issues and opportunities rather than waiting for larger scale projects and, to make progressive step changes and maintain momentum towards shared strategic goals.

Tactical urbanism provides a space for testing innovative ideas where valuable learnings are made from both successes and failures.

TUI utilises a 'lighter, quicker, cheaper' approach which can deliver low-risk, low-cost improvements that are able to capitalise on the creative energy of the city centre communities.

When to Consider a Tactical Approach

A tactical approach to streetscape and public realm improvements can be applied in various conditions including:

- A gap filler where longer term change is already planned but not imminent, a tactical project can bridge the gap providing a safer, more amenity-rich environment.
- A trial or pilot where new methods or new ideas can be temporarily tested and assessed before any major capital commitment.
- An adaptive approach where it may be beneficial to test change incrementally, learning from each stage.
- A rapid response where there is a public safety issue and tactical safety measures can be installed quicker than traditional responses.

Pathway to Permanence

When designing a tactical urbanism project, it is important to consider if a permanent version of the project is possible. If the tactical phase is successful, there should be a planned way forward to avoid disappointment with communities involved with the project.



Image 8.1: Shortland Street traffic calming



Image 8.2: Emily Place plaza



Image 8.3: Alfred Street placekit

Maintenance

Project maintenance should be considered and budgeted for from the onset, with the aim of keeping the project looking fresh and tidy and with low maintenance requirements. This could include design features such as planter boxes with reservoirs to minimise watering requirements.

Monitoring and evaluation

A critical part of tactical urbanism projects is their monitoring and evaluation. A monitoring and evaluation plan, that includes both qualitative and quantitative data, should be established early on. Monitoring can be achieved through a series of data collection techniques which will help to form a picture of the project's level of success. The following are some examples of typical data collection methods that should be gathered before and after installation:

- Traffic speed and volume counts (tube counts)
- Public life surveying and observational data
- Pedestrian or bike counts manual or via camera or counters
- User surveys and interviews





Adaptive and tactical urbanism approaches

Example projects

The following are some examples of the types of tactical urbanism projects that have been installed in the city centre which all contribute to making the city centre a safer, more pedestrian-focused place to be:

- 1 Parklets where on-street car parking is removed and the space used to create a people-focused space. For example, outdoor dining, seating, planting, bike racks etc.
- 2 Pedestrian plazas
- Bike lane trials
- Pop-up community spaces
- New intersection layouts
- 6 Pedestrian crossing and traffic calming



Image 8.4: Parklets - St Paul Street



Image 8.7: Pop-up community spaces - High Street



Image 8.5: Pedestrian plaza - Emily Place



Image 8.8: Intersection layouts - Sale Street



Image 8.6: Bike lane trials - Federal Street



Image 8.9: Pedestrian crossing / traffic calming - Shortland Street



Adaptive and tactical urbanism approaches

Tactical urbanism palette

The Tactical Urbanism Initiative (TUI) palette has grown and evolved from the original suite of PlaceKit units to include timber, weathered steel and concrete planters.

The programme offers an opportunity to test and trial new and innovative materials and fabrication methods such as 3D concrete printing.

Typical interventions also include:

- Ground paint
- Artificial turf
- Seating
- Street furniture

Resource Links

Reshaping Streets

Top Tips

- Permission from Auckland Transport will be required for any work in the street corridor.
- Additional guidance can be provided by Tāmaki Makaurau Design Ope (TMDO) and the Placemaking and Activation teams.

Waka Kotahi Tactical Urbanism Handbook

Ground paint



Image 8.10: St Paul Street



Image 8.11: Lower Queen Street



Image 8.12: Federal Street

Artificial turf



Image 8.13: Lorne Street



Image 8.14: Emily Place



Image 8.15: High Street

Seating, street furniture



Image 8.16: Emily Place



Image 8.17: Federal Street



Image 8.18: Emily Place







Appendix A: Paving and Furniture Specifications

Seating

Other Furniture

Lighting

Paving





Appendix A: Paving and furniture specifications

Seating

CBD Suite Seat

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Eucalyptus Saligna

Finish

Seat End Casting - Bead Blasted

Armrest - 2No. Penetrating Oil and 2 No. Max Wax

Wood - Eucalyptus Saligna

Preferred Supplier

Walkspace

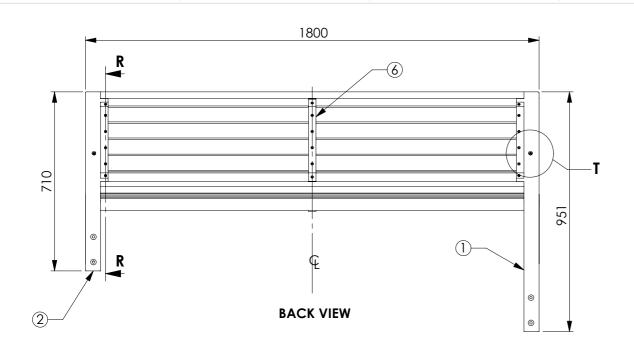
Rendering/ Image





Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment

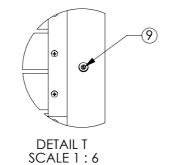


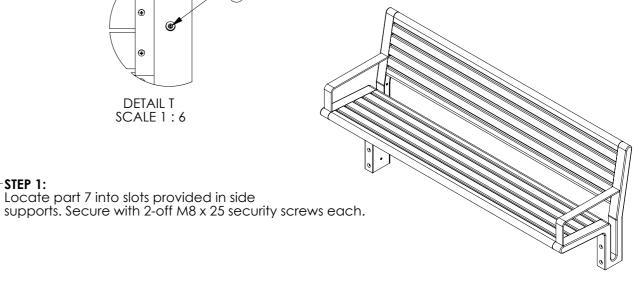


• DETAIL S

SCALE 1:6

(10)





ISSUE DESCRIPTION

ВС

Initial Release

DRAWN

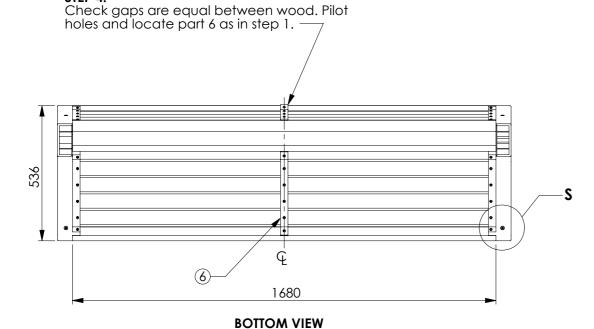
TW 28/11/2006 TW 08/02/2007 A

TW 30/03/2007

DATE

С

STEP 4:



Fix all screws 12 guage x 25 through

Loosely assemble slats and ends ensuring ends are vertical. Sash clamp seat. Pilot holes angled towards & of seat using 1/8" drill bit.

TIMBER NOTES :

All timber to be KILN DRIED , A-Gade.
 All lengths to be free from defects
 knots, warps, twisting, bends.
 Tolerance on docking of specified lengths ± 0.5mm.
 All edges to be arrised - except where radii are indicated.
 All stimber treatment to take place prior to fixing.
 All surfaces to be treated.
 Cross grain cuts to be sanded to remove burred edges.

ASSEMBLY NOTES:

All fasteners to be included in supply of assembly unless otherwise indicated by HUB.
 All surfaces to be free from marks and scratches.

GENERAL NOTES:

1. All dimensions in millimetres unless otherwise shown.
2. Tolerances
2. Linear are ± 1.0mm unless marked with * then ±0.5mm
3. Angular are ±0.5 °unless specified otherwise.
3. No deviation from drawing will be accepted without prior written approval.
4. Do not scale from drawings. Use dimensions provided if this is insufficient or ambiguous contact HUB for clarification

Material: N/A Finish:

N/A

Seat GA

Product: ACC CBD Seat

Dwg No HUB 01365

> Scale: 1:15

Project No: 8190 Date Drawn: 28/11/2006

STREET EQUIPMENT AUSTRALIA 10 Regent St Chippendale NSW 2008

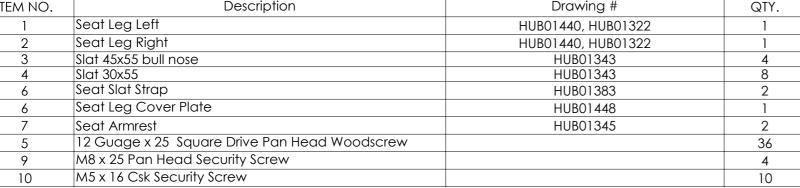
Zone 23, Unit G13 23 Edwin St, Mt Eden, Auckland

Ph: +61 2 9212 7144 Fx: +61 29212 6899 Ph: +64 2 9638 8818 Fx: +64 2 9638 8819

Sheet: Part Location:

X:\AUCKLAND\Activities\8190-ACC CBD\CAD\3D CAD
Part Name:
spigot mounting

ITEM NO.	Description	Drawing #	QTY.
1	Seat Leg Left	HUB01440, HUB01322	1
2	Seat Leg Right	HUB01440, HUB01322	1
3	Slat 45x55 bull nose	HUB01343	4
4	Slat 30x55	HUB01343	8
6	Seat Slat Strap	HUB01383	2
6	Seat Leg Cover Plate	HUB01448	1
7	Seat Armrest	HUB01345	2
5	12 Guage x 25 Square Drive Pan Head Woodscrew		36
9	M8 x 25 Pan Head Security Screw		4
10	M5 x 16 Csk Security Screw		10

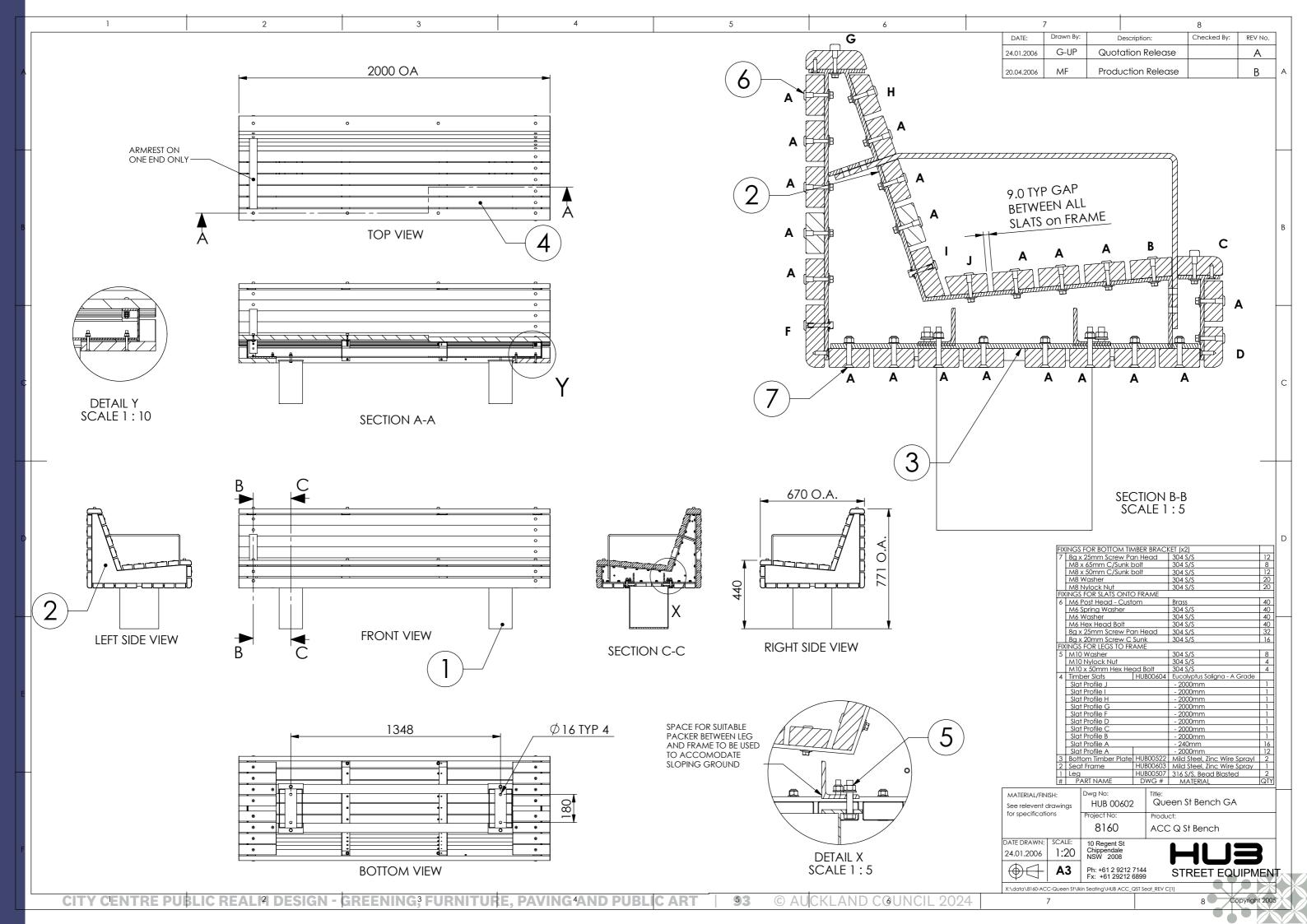


ends into slats.

Locate and fix part 6 to side supports and secure with M5 x 16 security screws.

NEW ZEALAND

SECTION R-R SCALE 1 : 6





Appendix A: Paving and furniture specifications

CBD Suite Bench

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Eucalyptus Saligna

Finish

Seat End Casting - Bead Blasted

Armrest - 2No. Penetrating Oil and 2 No. Max Wax

Wood - Eucalyptus Saligna

Preferred Supplier

Walkspace

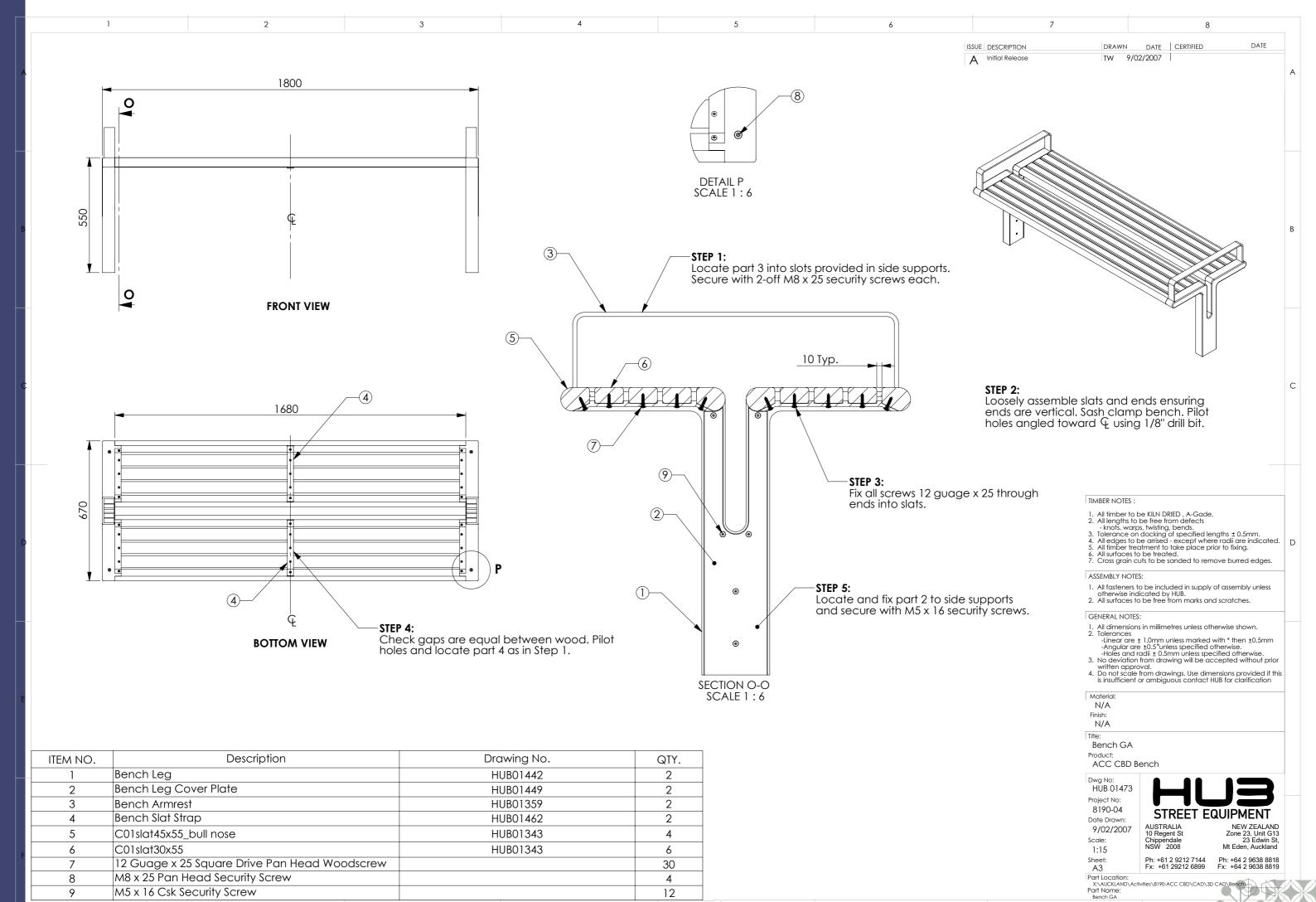




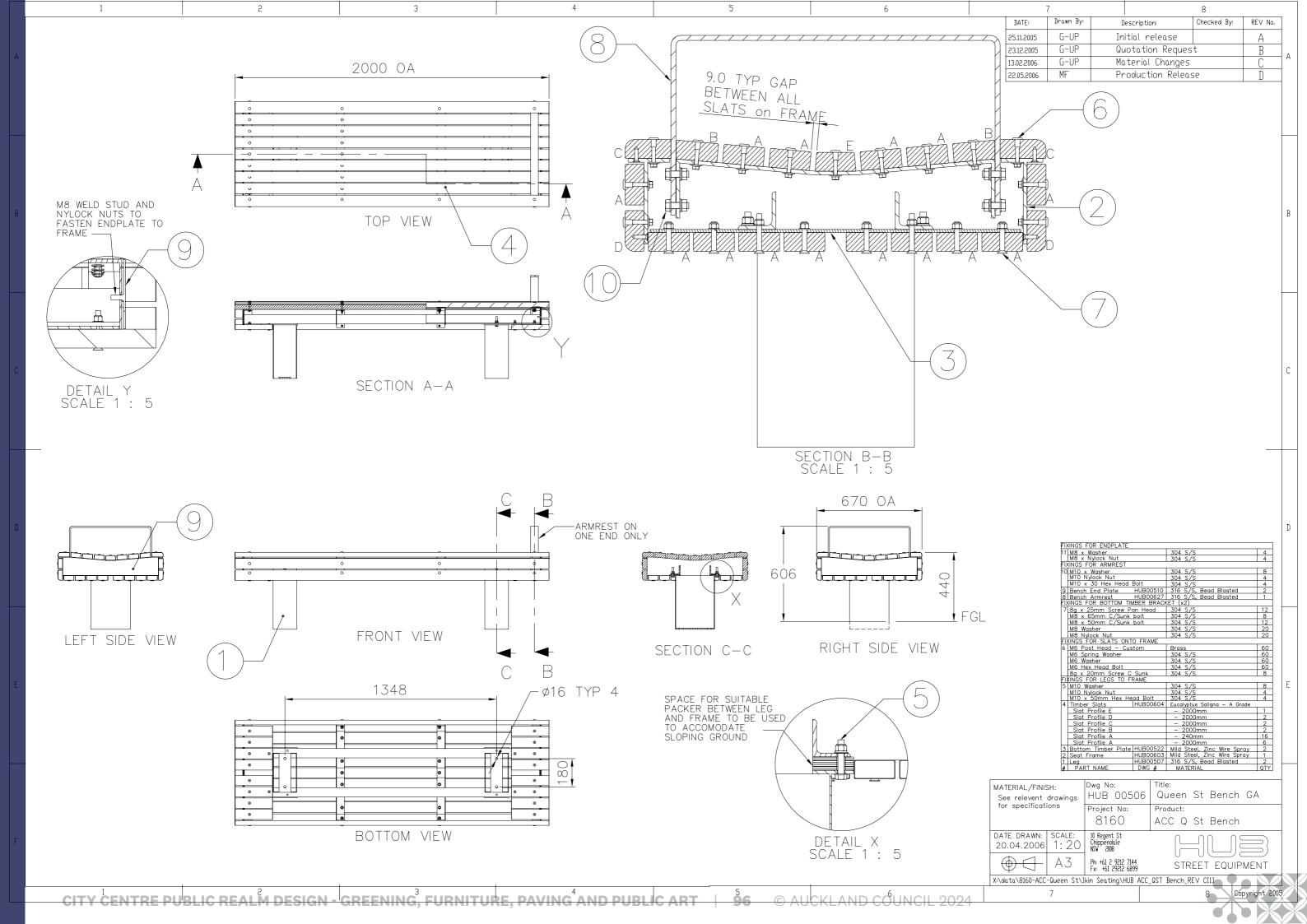


Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment





CENTRE PUBLIC REALPI DESIGN - GREENING; FURNITURE, PAVING AND PUBLIC ART





Appendix A: Paving and furniture specifications

CBD Suite Narrow Bench

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Eucalyptus Saligna

Finish

Seat End Casting - Bead Blasted

Armrest - 2No. Penetrating Oil and 2 No. Max Wax

Wood - Eucalyptus Saligna

Preferred Supplier

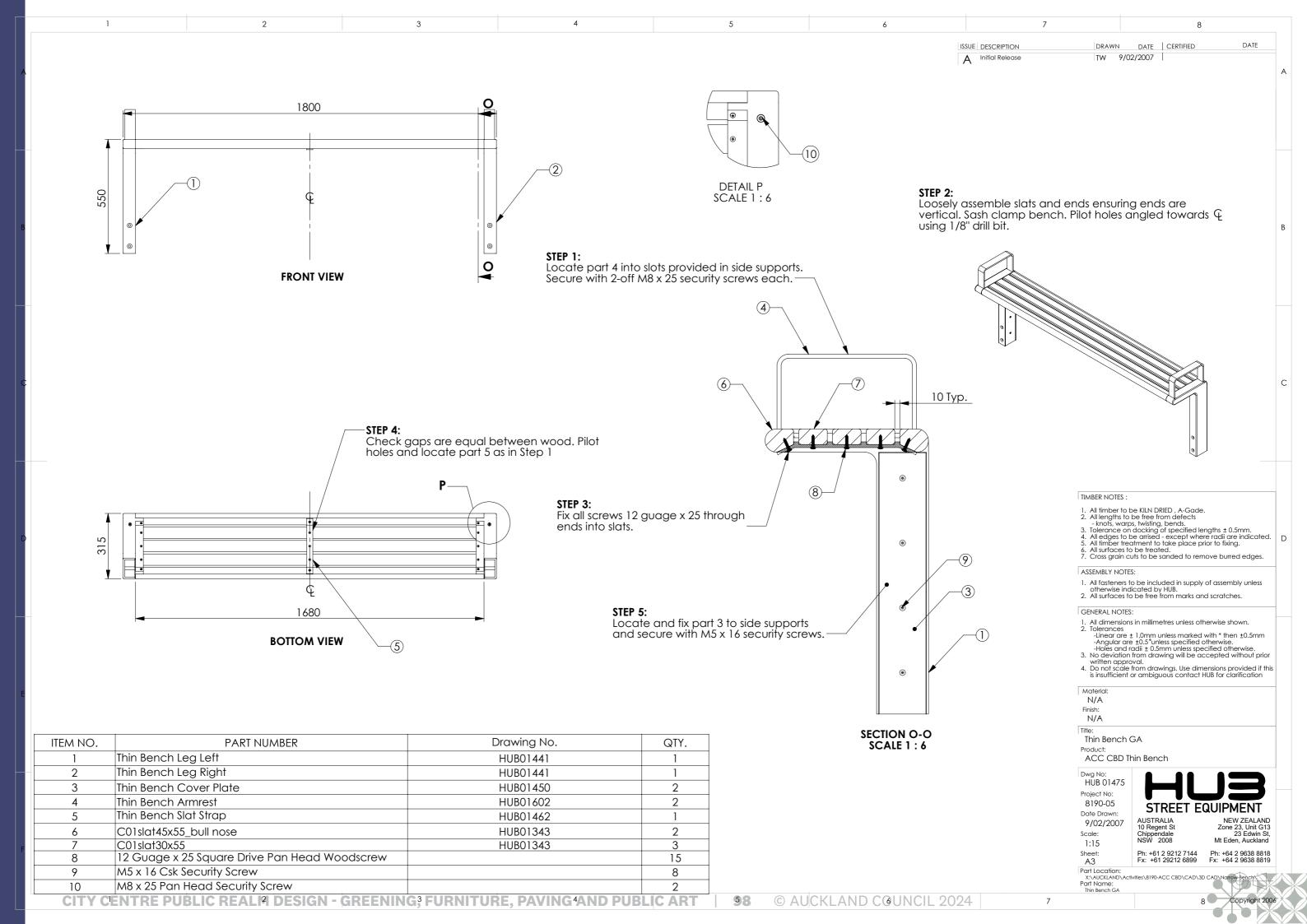
Walkspace





Narrow bench on Custom Street West in front of Commercial Bay







Appendix A: Paving and furniture specifications

CBD Suite Leaner

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Eucalyptus Saligna

Finish

Seat End Casting - Bead Blasted

Armrest - 2No. Penetrating Oil and 2 No. Max Wax

Wood - Eucalyptus Saligna

Preferred Supplier

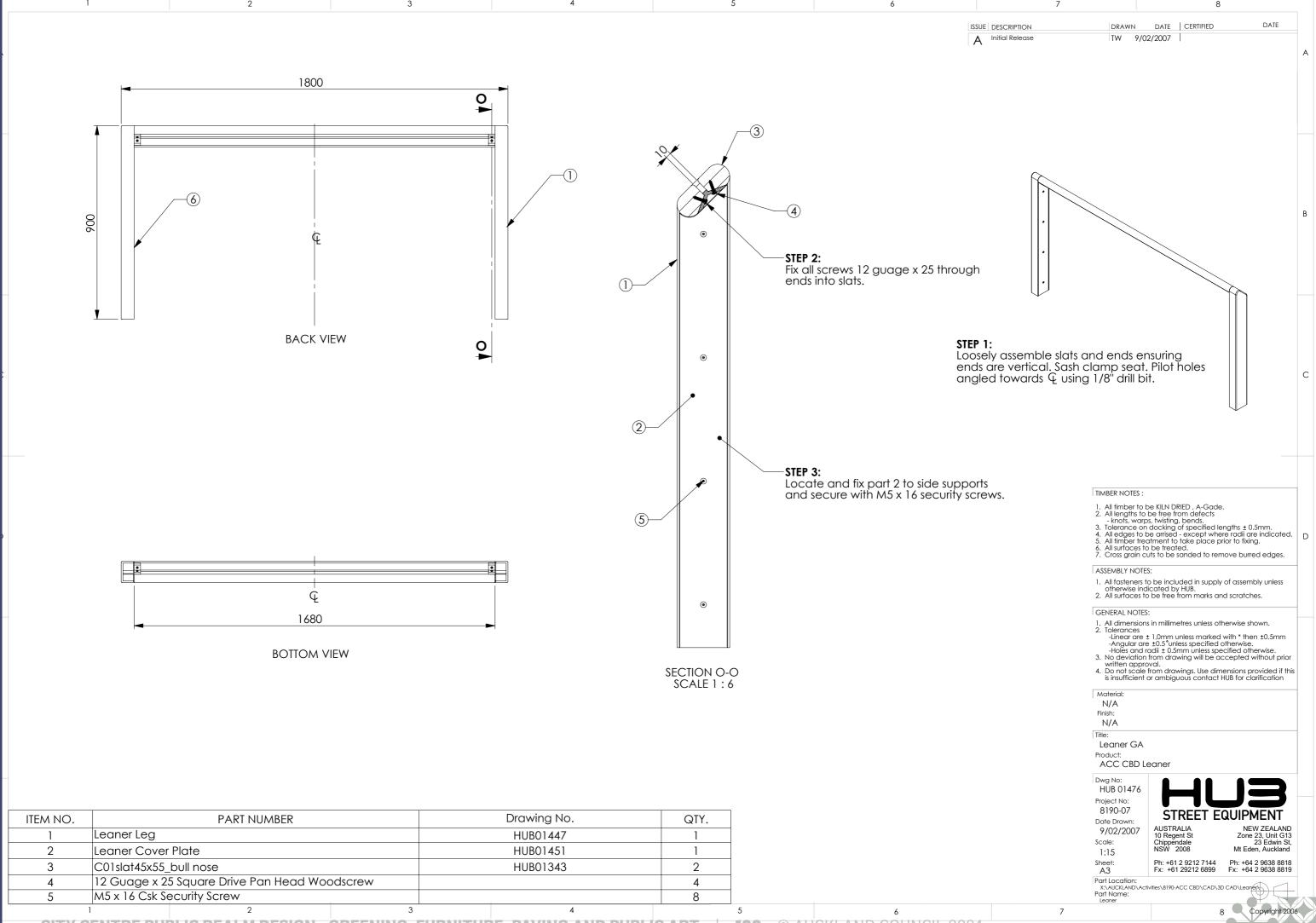
Walkspace

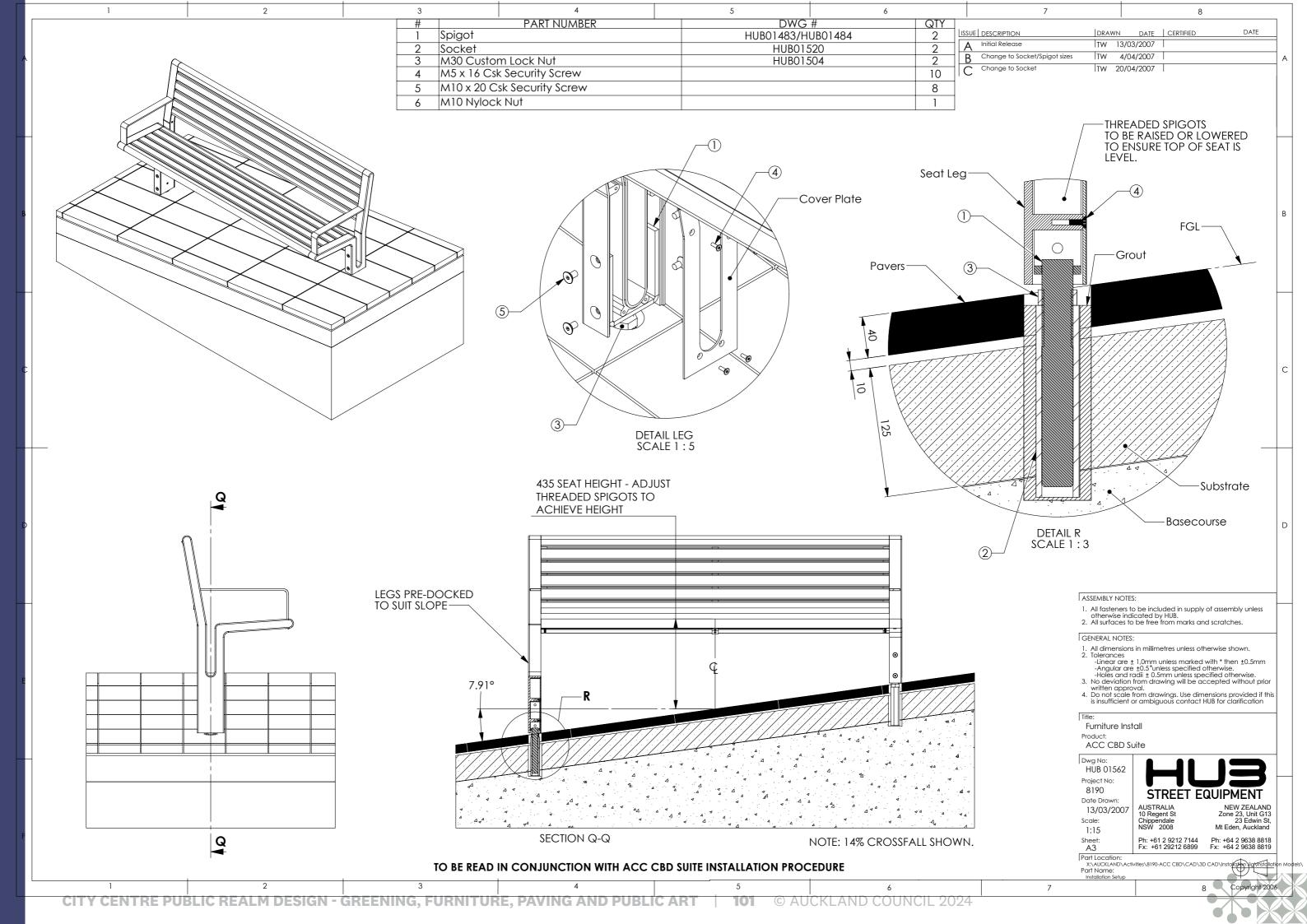




Leaner on Symonds Street's bus stop







Waterfront Standard Bench

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Timber Hardwood purpleheart as standard

Finish

Seat End Casting - Bead Blasted

Wood - un-sealed (Natural) as standard

Preferred Supplier

Walkspace





Bench in Wynyard Quarter





Waterfront Standard Seat - Half Back

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Timber Hardwood purpleheart as standard

Finish

Seat End Casting - Bead Blasted

Wood - un-sealed (Natural) as standard

Preferred Supplier

Walkspace





Half back seat in Wynyard Quarter

Waterfront Standard Seat - Full Back

Material

Seat End Casting - S/S 316

Armrest - S/S 316

Wood - Timber Hardwood purpleheart as standard

Finish

Seat End Casting - Bead Blasted

Wood - un-sealed (Natural) as standard

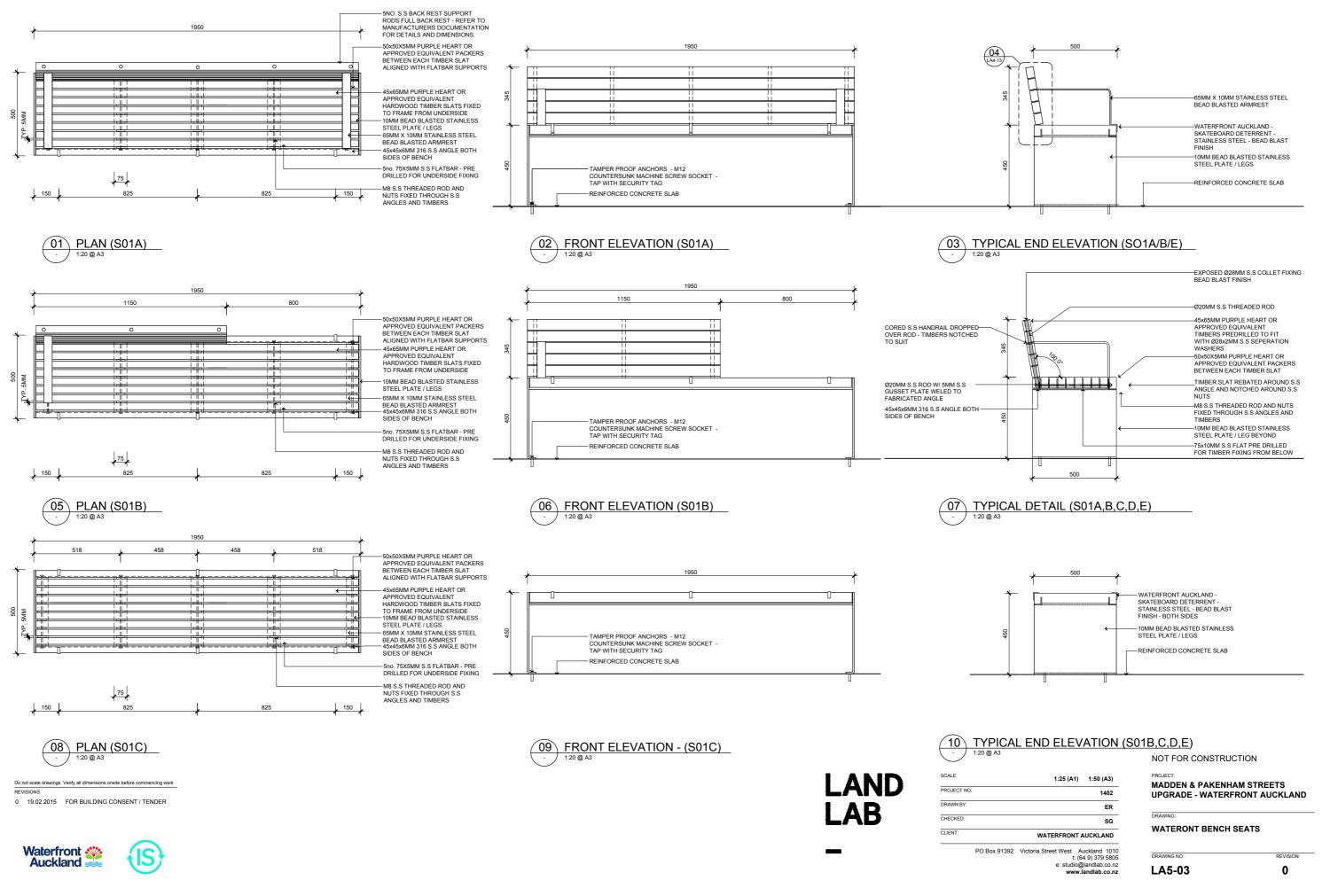
Preferred Supplier

Walkspace





Full back seat in Wynyard Quarter



Other Furniture

CBD Suite Bike Rack

MaterialSheffieldS/S 304 Pipe

Dia 50 x W 1000 x H 900mm

Harrogate S/S 304 Pipe

Dia 50 x W 300 x H 900mm

Finish Sheffield Bead Blasted

Walkspace

Harrogate Satin Linish

Preferred Supplier





Harrogate cycle stand on Queen Street



Cycle stand on Vulcan Lane



Bike Rack BR_02 - Sheffield

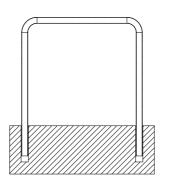
MATERIALS S/S 304 Pipe

DIMENSIONS Dia 50 x W 1000 x H 900mm

FINISH Bead Blasted

OPTIONS S/S 316 Construction Mild Steel & Galvanised Hairline Linear Linish Surface or Sub Surface Mounting Logo / Badging options are available This Bike Rack is made to order so all aspects can be modified to suit client requirements







MATERIALS S/S 304 Pipe

DIMENSIONS

Dia 50 x W 300 x H 900mm

FINISH

Satin Linish

OPTIONS

S/S 316 Construction

Mild Steel & Galvanised

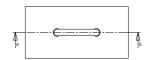
Hairline Linear Linish

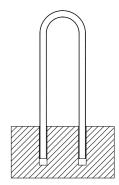
Surface or Sub Surface Mounting

Logo / Badging options are available

This Bike Rack is made to order so all aspects can be modified

to suit client requirements















Appendix A: Paving and furniture specifications

S11 Bollard

Material

Milled Aluminium or Stainless Steel Cap Stainless Steel (316 grade) Barrier Ram

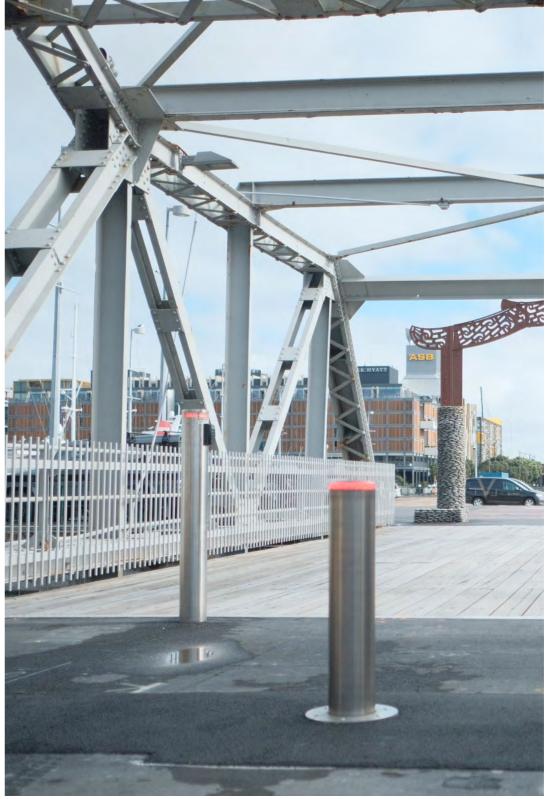
Finish

Brushed 316 Stainless Steel

Supplier

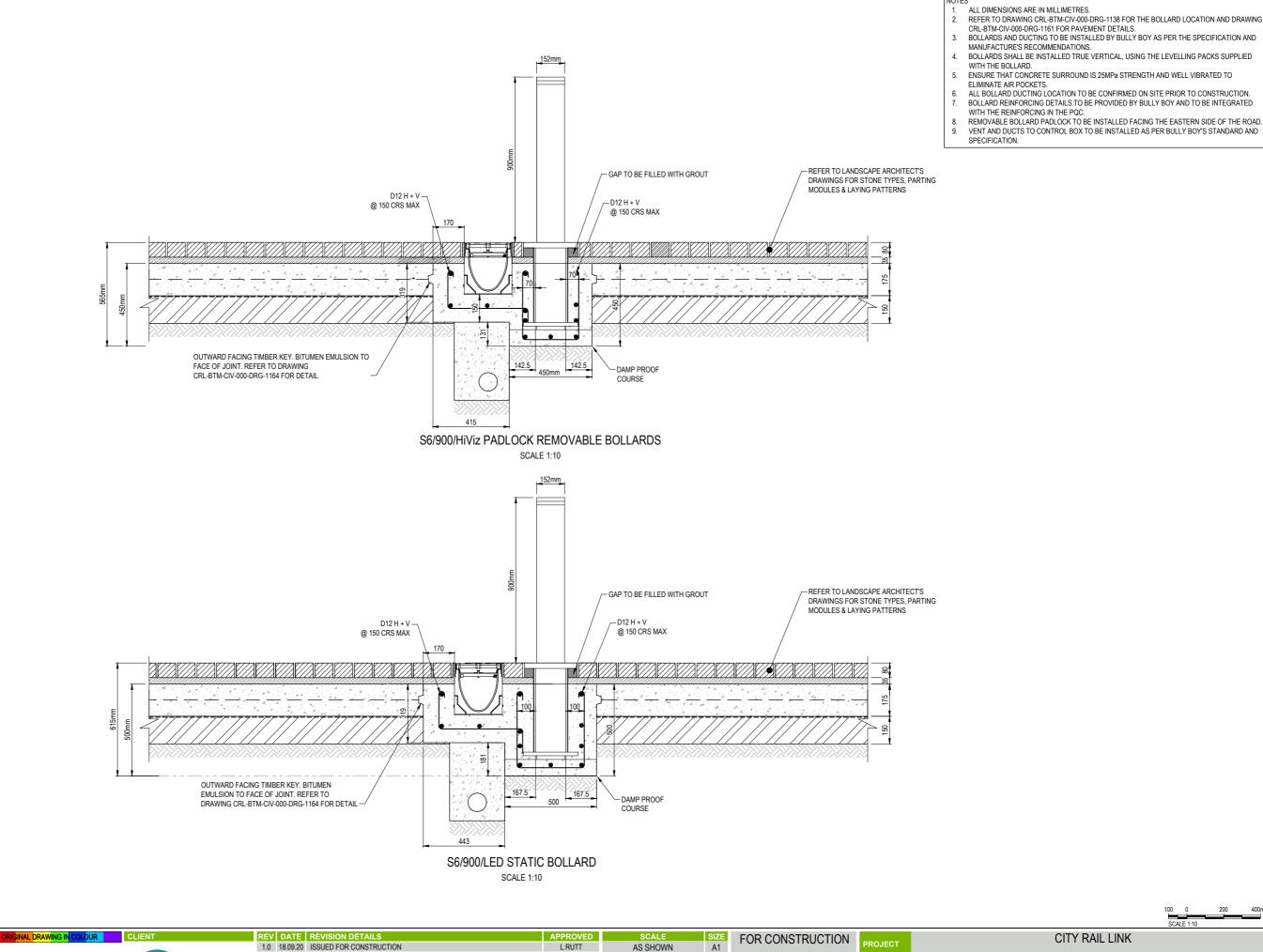
Bully Boy





Half back seat in Wynyard Quarter





M KAUR

J.CORSIGA

L.RUTT

L.RUTT

urecon

ARUP

CENTRE PUBLIC REALM DESIGN

CityRailLink

CITY RAIL LINK

C1 BRITOMART STATION SURROUNDS - URBAN REALM FOUNDATION DETAIL SHEET 1 OCUMENT CRL - BTM - CIV

- 000 - DRG - 1404



Appendix A: Paving and furniture specifications

CBD Suite Bollard

Material

Black Granite G3072

Finish

Polished with Micro Inviso Shield solvent pre-seal

Preferred Supplier

Walkspace





Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment





CBD Suite - Drinking Fountain

Material

S/S 316

Finish

Garnet Blasted

Preferred Supplier

Walkspace





Drinking fountian in Wynyard Quarter



CBD Suite Twin Bin - Litter and Recycling

Material S/S

Extruded Aluminium

UV Stable Black Rubber

Rotational Moulded Plastic

Finish

N/A

Preferred Supplier

Walkspace







Twin bins in city centre





Appendix A: Paving and furniture specifications

CBD Suite Tree Guard

Material

S/S 316

Finish

Garnet Blasted/Bead Blasted

Preferred Supplier

Walkspace

Rendering/ Image







Tree guard on Queen Street

Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



CBD Suite Tree Surround - ITG Grate

Material

Upper Visual Grate - Cast Aluminium CC601 Base - Ductile Cast Iron AS1931-500-7

Finish

Upper Visual Grate - Sand Blasted

Preferred Supplier

Walkspace

Rendering/ Image







ITG grate on Queen Street

Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



CBD Suite Tree Surround - Stone Porous Paving

Material

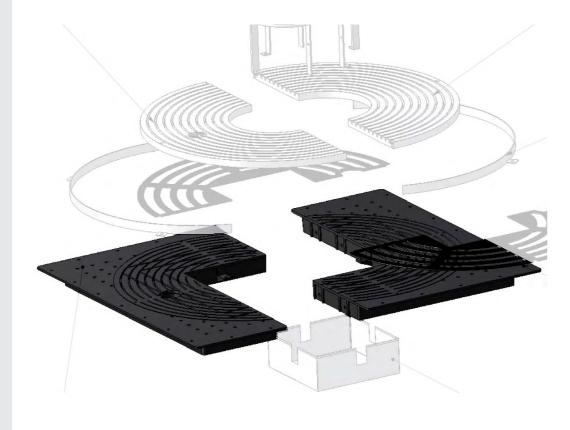
Paving Surface - Stone Paving with 10mm Chamfered Vertical Edges
Base - Ductile Cast Iron AS1831-500-7

Finish

N/A

Preferred Supplier

Walkspace







Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



Lighting

CBD Suite MFP - Traffic Signal on Pole

Material

300Ø Extruded Base Cladding

200Ø Upper Pole - Steel or Aluminium

3m Single Streetlight Outreach

11.5m Pole

10m Streetlight Height

Pole Top and Base LED Feature Lights

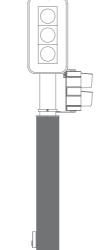
Finish

Mid-grey metallic finish

Preferred Supplier

Walkspace

Rendering/ Image



Traffic Signal on pole on

Queen Street



Source (Left): Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



CBD Suite MFP - with 1.5m Banner Outreach

Material 250Ø Extruded Base Cladding

220Ø Upper Pole - Steel or Aluminium

3m Single Streetlight Outreach

11.5m Pole

10m Streetlight Height

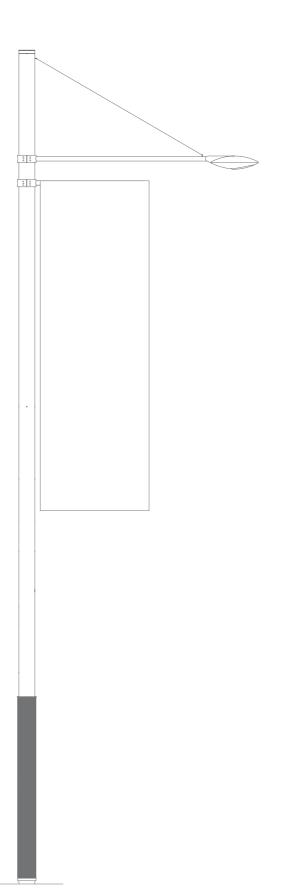
Pole Top and Base LED Feature Lights

Finish Mid-grey metallic finish

Preferred Supplier

Walkspace

Rendering/ Image





Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



CBD Suite MFP - Pole-mounted ACC Bin

Material

250Ø Extruded Base Cladding

220Ø Upper Pole - Steel or Aluminium

2m Single Streetlight Outreach

10.2m Pole

10m Streetlight Height

Streetsign

Pole Top and Base LED Feature Lights

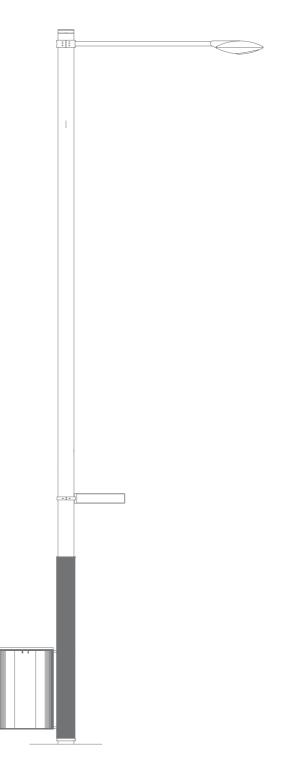
Finish

Mid-grey metallic finish

Preferred Supplier

Walkspace

Rendering/ Image



Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment



CBD Suite MFP - Pole-mounted Bicycle Rack

Material

250Ø Extruded Base Cladding

220Ø Upper Pole - Steel or Aluminium

1m Single Streetlight Outreach

9.2m Pole

9m Streetlight Height

4m Pedestrian Light Height

Pole Top and Base LED Feature Lights

Finish

Mid-grey metallic finish

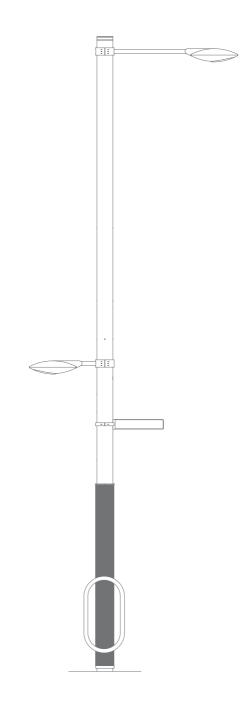
Preferred

Supplier

Image

Rendering/

Walkspace



Source: Auckland CBD Suite Design References and Indicative costs. Hub Street Equipment





CBD Suite MFP - Traffic Signal on Pole

Material 250Ø Extruded Base Cladding

220Ø Upper Pole - Steel or Aluminium

4.3m Pole

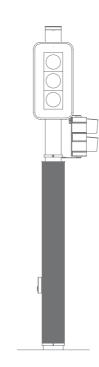
Pole Top and Base LED Feature Lights

Finish Mid-grey metallic finish

Preferred Supplier

Walkspace

Rendering/ Image



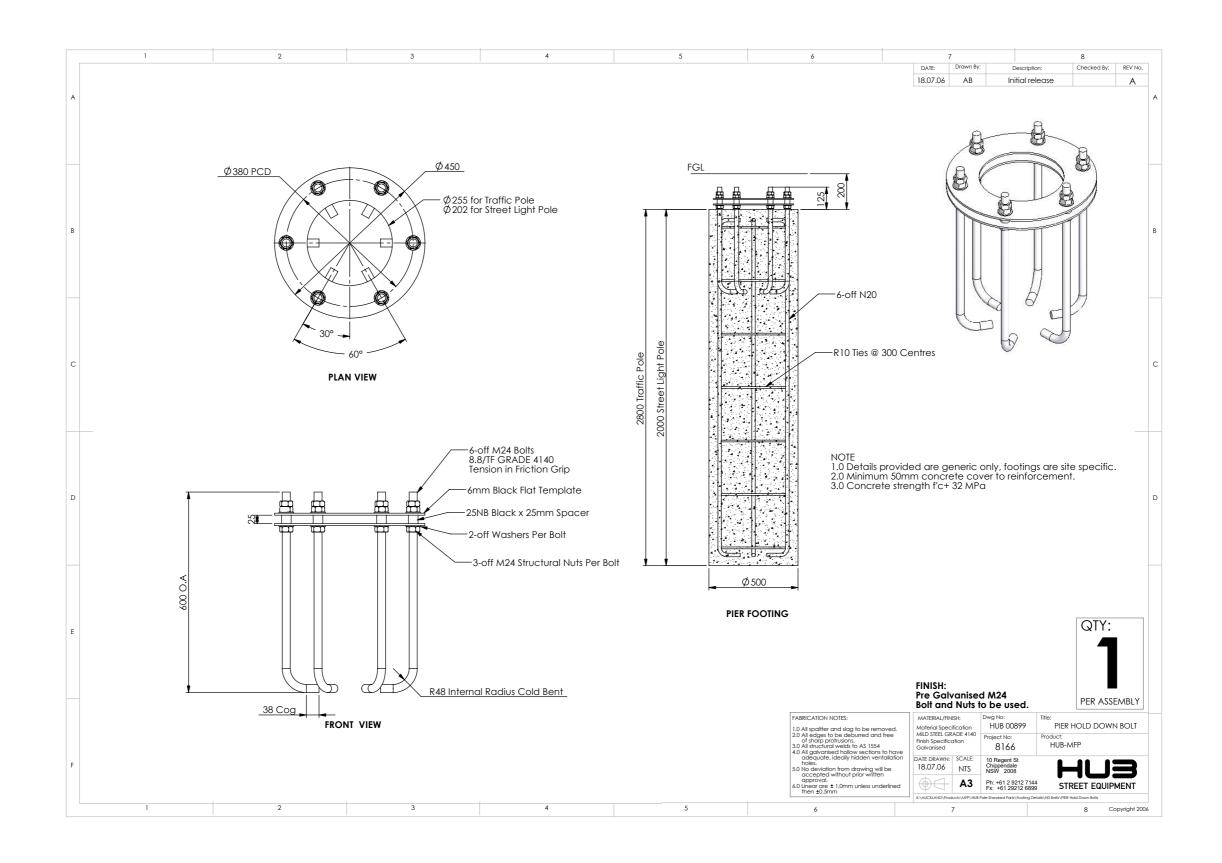
Traffic Signal on pole on Queen Street

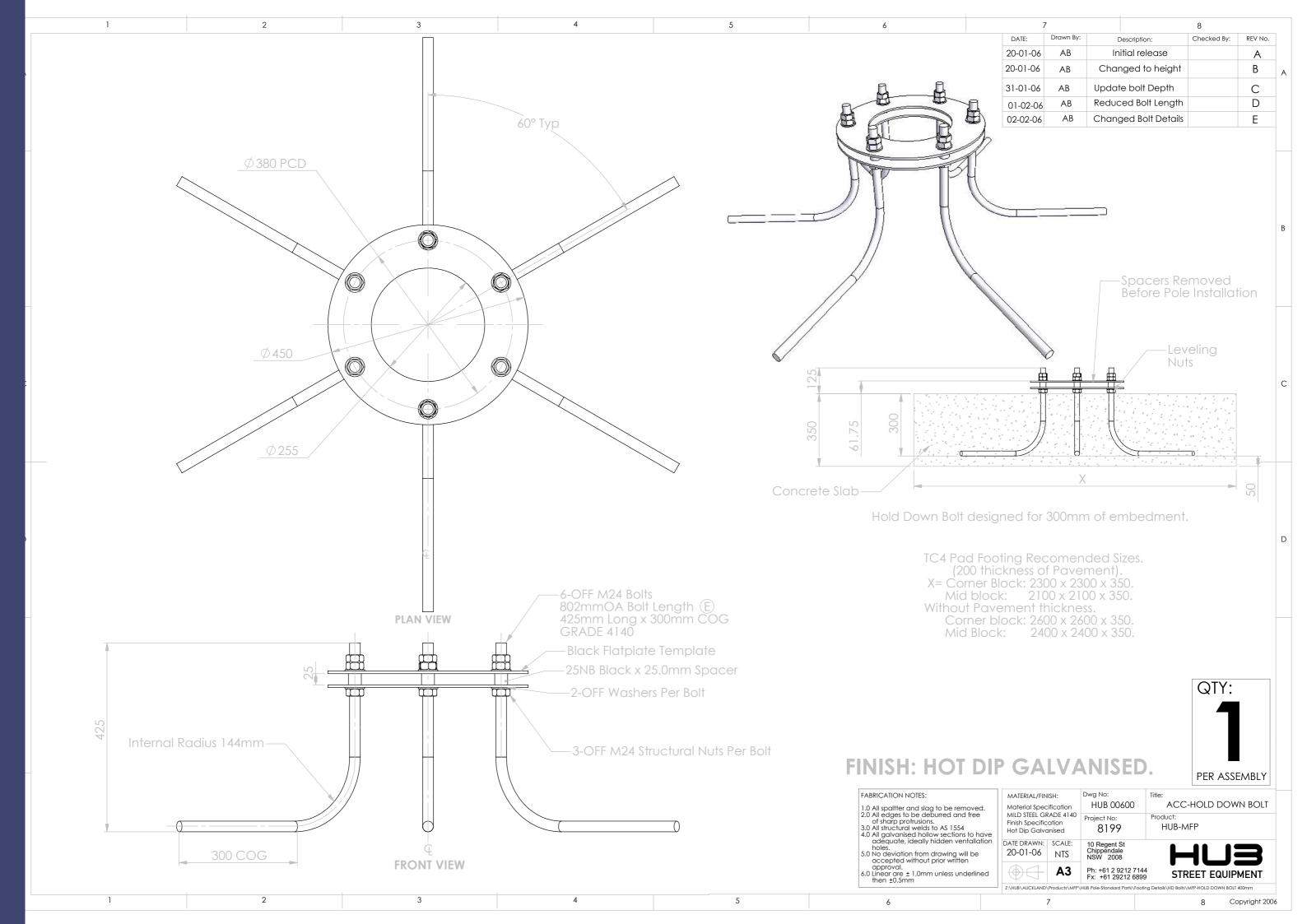




Source (Left): Auckland CBD Suite

Design References and Indicative costs. Hub Street Equipment







Waterfront Light Pole - Madden Street

Material

170Ø CHS Pole

2no. LED Iguzzini Maxi Woody Luminaires with Road Optic and Bracket

2no. LED Iguzzini Woody Luminaires

Finish

Paint Finish

Preferred Supplier

Walkspace





Light pole on Madden Street





Waterfront Light Pole - Pakenham Street

Material

170Ø CHS Pole

1no. LED Iguzzini Maxi Woody Luminaires with Road Optic and Bracket

2no. LED Iguzzini Woody Luminaires

Finish

Paint Finish

Preferred Supplier

Walkspace

Rendering/ Image





Light pole on Pakenham Street





Appendix A: Paving and furniture specifications

Waterfront Light Pole - Ped crossing

Material

170Ø CHS Pole

Typically 4no. LED Iguzzini Maxi Woody Luminaires with Road Optic and

Bracket

Reflectorised pedestrian crossing disc to NZTA standards

Finish

Paint Finish

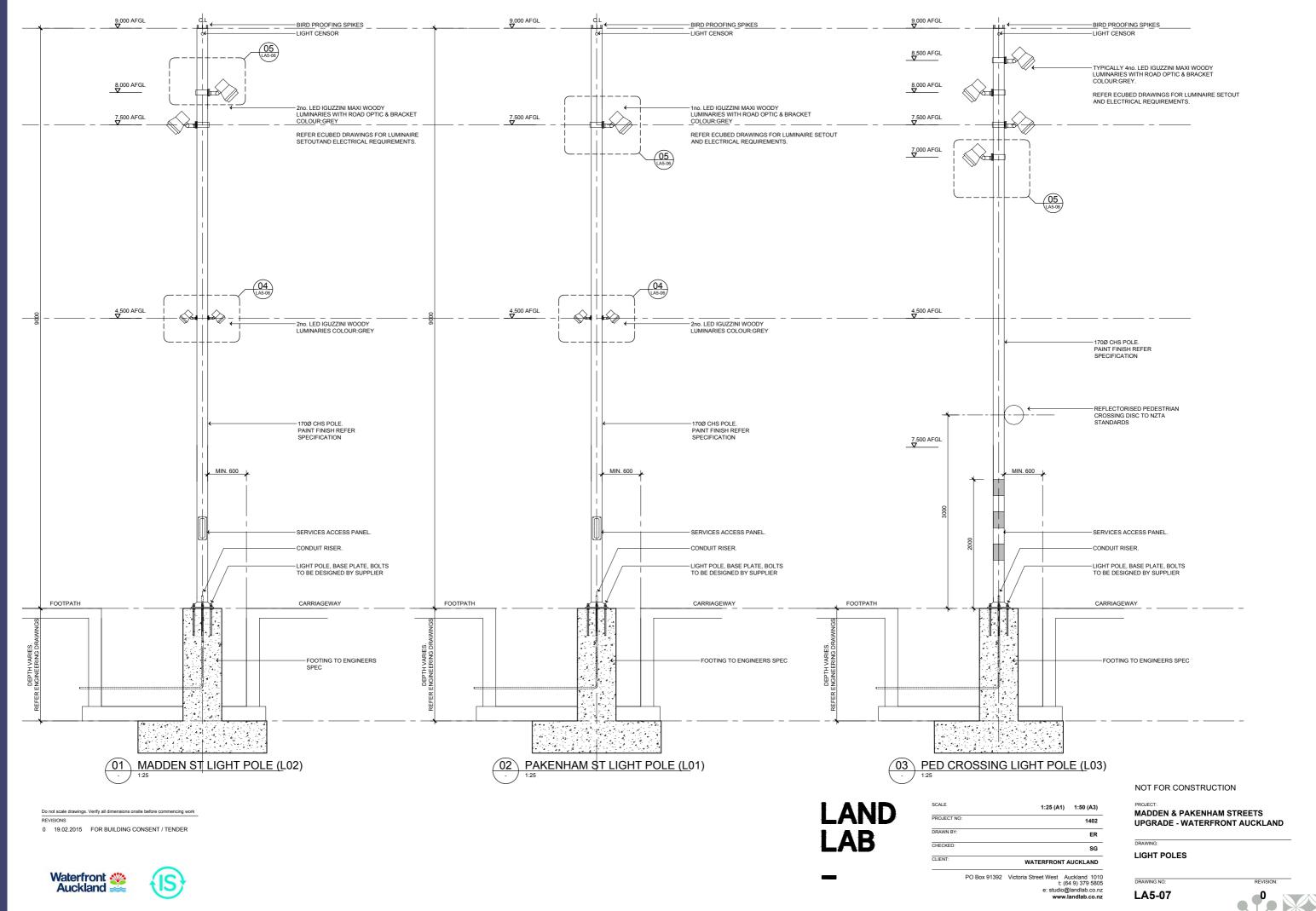
Preferred Supplier

Walkspace



Light pole on Pakenham Street







Paving

Asian Basalt G3027 Paving Slabs Random Module

Material Asian Basalt G3027

Dimension 3 different slab sizes used in combination to provide a 5 course wide random

module comprising of 17No. slabs:

Slab A:703x350x40mm thick (47% of module)

Slab B:525x350x40mm thick (29.5% of module

Slab C:350x350x40mm thick (23.5% of module)

Finish Flamed

Laying Bond Random Stretcher Bond applied over 5 course width

Sealant Micro Inviso Shield

Jointing 3mm wide – charcoal polymer river sand with Micro Inviso

Shield solvent pre-seal

Bedding 6mm Trade Mortar with 30% Megalastic additive

Sub-base 125mm reinforced concrete slab

Basecourse 100mm AP40

Key Notes:

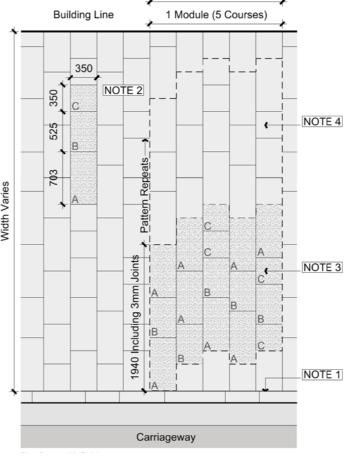
NOTE 1 10mm ASA Sanded Grout Charcoal colour

joint to rear of kerb

NOTE 2 Paving slab dimensions

NOTE 3 Random Module

OTE 4 Random Module repeats



1765 Including 3mm Joints

Plan scale: 1:50 @ A3

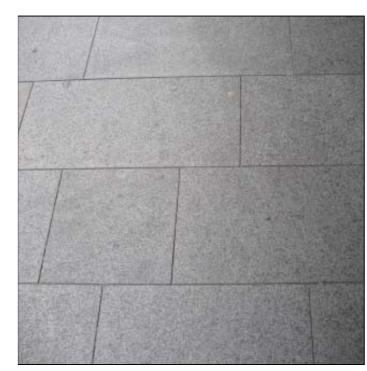
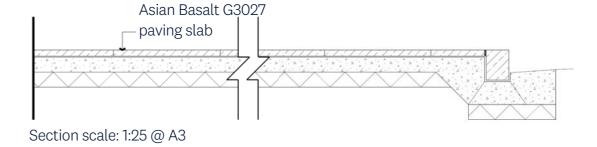


Photo showing real-life example



Source: Great Streets



Asian Basalt G3027 Setts - Pedestrian Use

Asian Basalt G3027 Material

Dimension 97x97x40mm thick

Finish Flamed

Laying Bond Regular Stretcher

Micro Inviso Shield Sealant

Jointing 3mm wide - charcoal polymer river sand with Micro Inviso

Shield solvent pre-seal

Bedding 6mm Trade Mortar with 30% Megalastic additive

125mm reinforced concrete slab **Sub-base**

100mm AP40 **Basecourse**

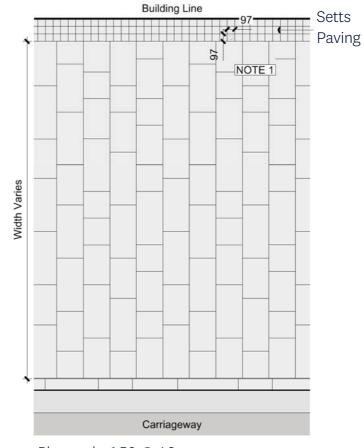
1. Setts to be used only where the ability to respond to required paving level **Notes** changes immediately adjacent to the building line precludes the use of **Asian**

> **Basalt G3027 Paving Slabs Random Module.** Generally **Asian Basalt** G3027 Paving Slabs Random Module to be used across the full width of the

footpath and up to the building line.

2. Where setts are used they are generally to be laid in a band of 3 courses wide, unless additional courses are required to fill a recess in the building line, with the exception of Queen Street.

3. Where setts are used in Queen Street they are generally to be laid in a band of 5 courses wide, unless additional courses are required to fill a recess in the building line.



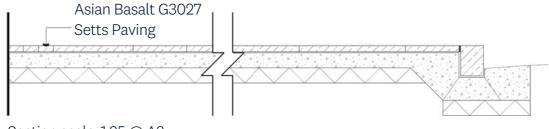
Plan scale: 1:50 @ A3

Key Notes:

NOTE 1 Paving sett dimensions



Photo showing real-life example



Section scale: 1:25 @ A3

Source: Great Streets





Asian Basalt G3027 Paving Slabs Large Module

Material Asian Basalt G3027

Dimension 900x450x40mm thick

Finish Flamed

Laying Bond Regular Stretcher

Sealant Micro Inviso Shield

Jointing 3mm wide – charcoal polymer river sand with Micro Inviso Shield

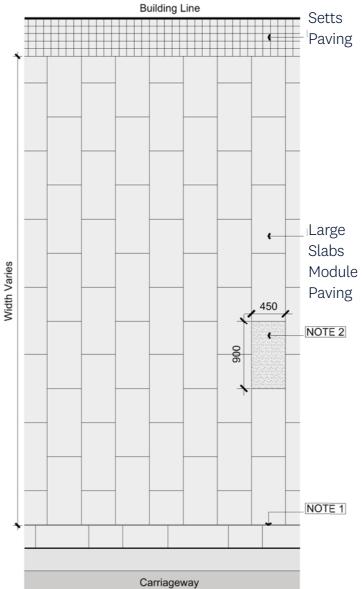
solvent pre-seal

Bedding 6mm Trade Mortar with 30% Megalastic additive

Sub-base 125mm reinforced concrete slab

Basecourse 100mm AP40

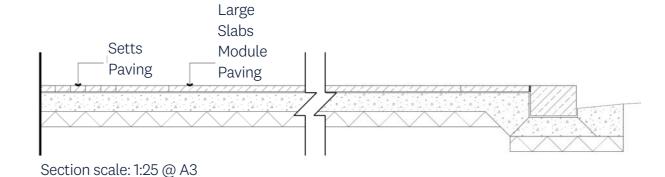
Notes1. This detail is specific to Queen Street only.



Plan scale: 1:50 @ A3

Key Notes: 10mm ASA Sanded Grout Charcoal colour joint to rear of kerb Note 2 Paving sett dimensions

Photo showing real-life example



Source: Great Streets







- **B.1 Benefits of greening elements**
- **B.2 Calculating canopy tree and permeability**
- **B.3 Tree species**



B.1 Benefits of greening elements

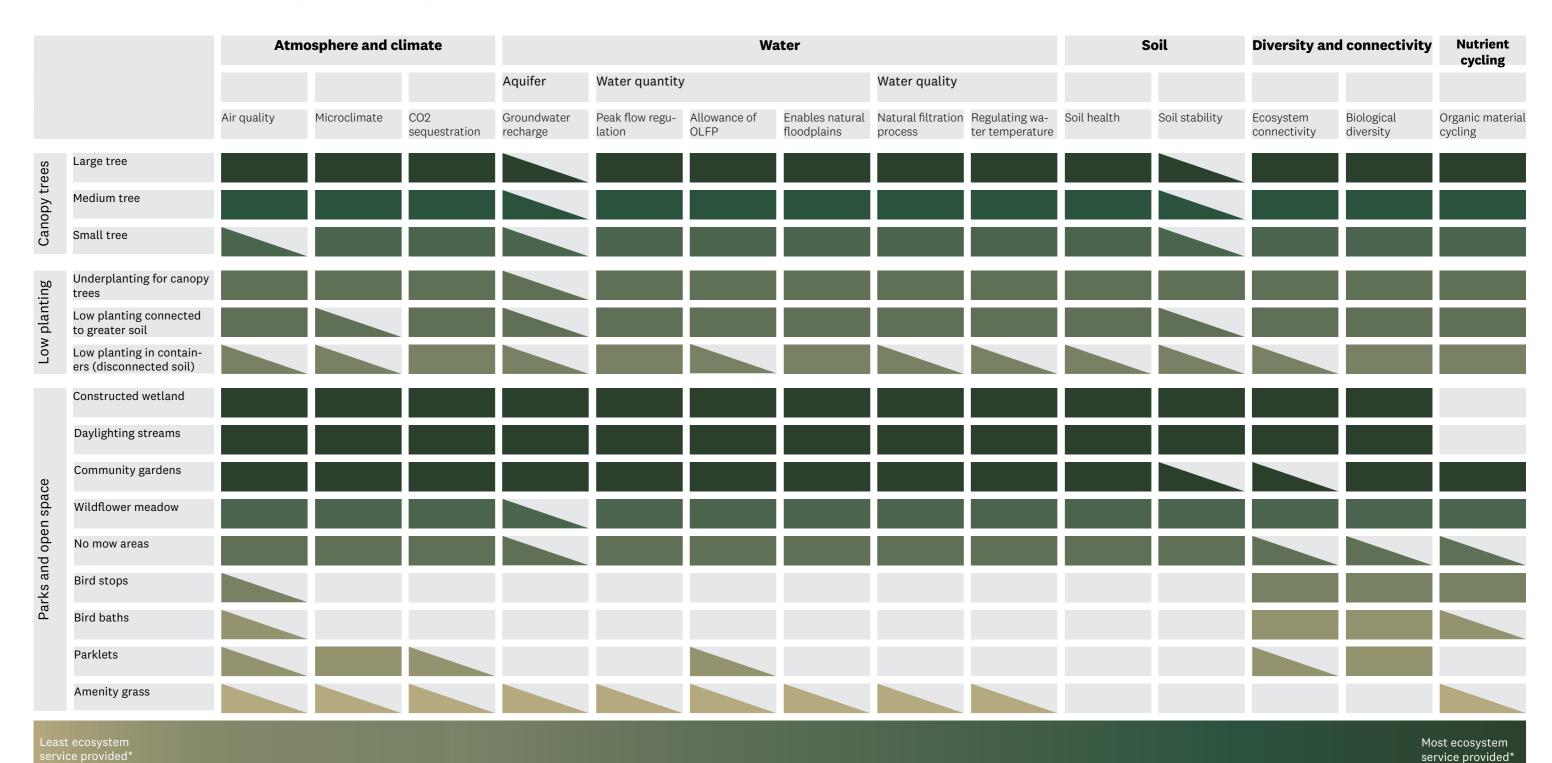


Table 10.1: Benefits of greening elements

*Not all greening elements have the same ecosystem services. Table illustrates the comparative benefits of the different types of greening



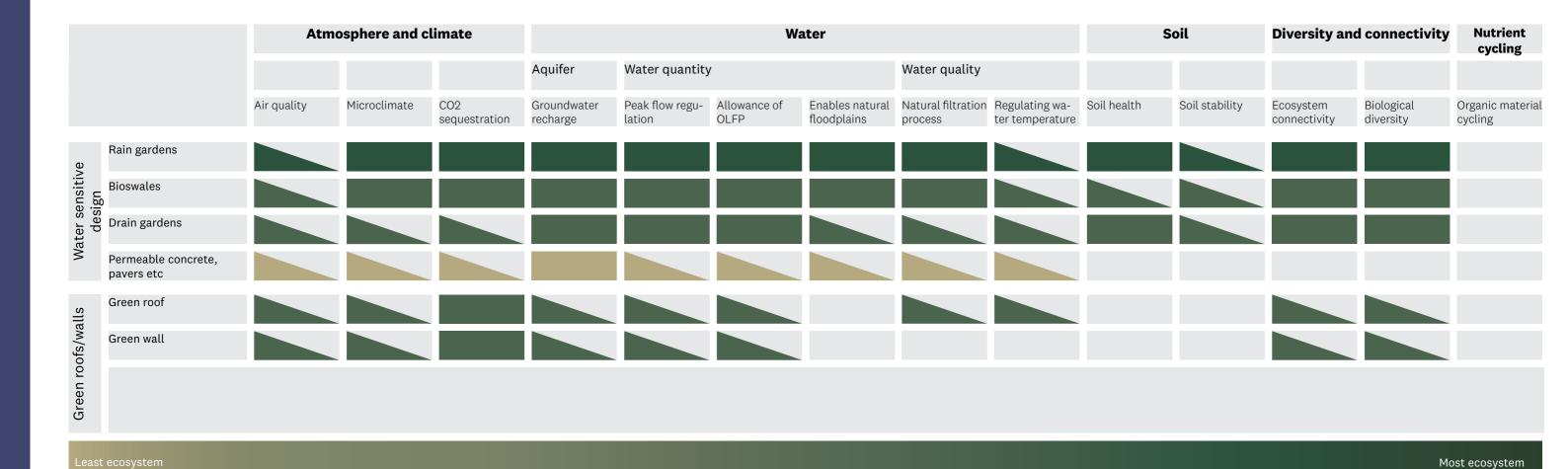


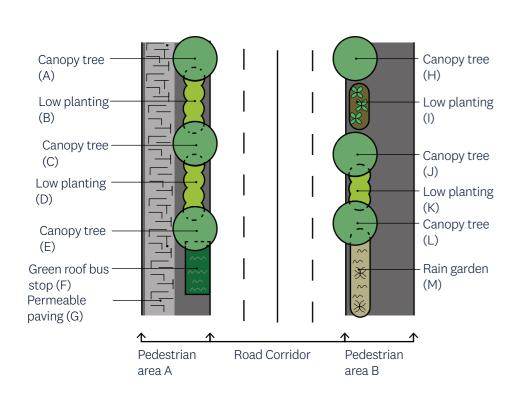
Table 10.1: Benefits of greening elements (cont.)

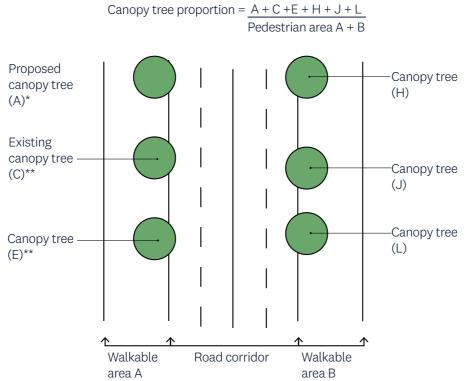
*Not all greening elements have the same ecosystem services. Table illustrates the comparative benefits of the different types of greening

service provided*

B.2 Calculating canopy tree and permeability

The diagrams below demonstrates how greening is to be measured to meet the targets in **Table 4.1** (page 23) of the document. The pedestrian street area excludes vehicle lanes, and car parks, however includes planted medians, berms, and repurposed carparks. For shared spaces, targets measured as a proportion of the total area of street.



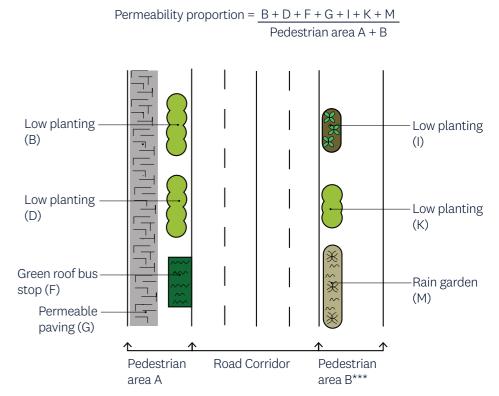


*Future tree canopy estimate at maturity (20-30 years+) for each species.

 ** Existing mature trees to be retained and measured by existing canopy area.

Image 10.1: Calculating canopy and permeability targets - overall diagram

Image 10.2: Calculating canopy and permeability targets - canopy diagram



*** Pedestrian area includes planted medians, berms, and repurposed car parks.

Image 10.2: Calculating canopy and permeability targets - permeability diagram



B.3 Tree species

Species (Natives)	Typical dimensions at maturity	Typical tree form at maturity	Canopy area at maturity	Notes for planting in the city centre
Akeake	10m tall, 30cm diameter trunk		5m2	Plant in full sunlight. Tolerates all conditions except waterlogged soils.
Black Maire	25m tall, 1.5m diamter trunk		100m2	Reasonably tolerant to range of soil conditions. Available through contract growing arrangements
Coastal Maire	10m tall		50m2	
Houpara	6m tall, 10cm+ diameter trunk		5m2	Plant in half sunlight. Tolerant to wind and exposed conditions and dry soils
Kahikatea	60m tall, 1.5-2.5m diameter trunk	8 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	225m2	Performs well in swampy, clay soils. Tolerates cold conditions
Kohekohe	15m tall, 1m diameter trunk		100m2	Tolerates wet and dry conditions. Sensitive to cold
Kōwhai	25m, 60cm diamter trunk		36m2	Shade tolerant. Will grow in almost all soil conditions. Tolerant to wet and dry conditions
Māhoe	10m tall, 80cm diameter trunk		5m2	Tolerates most conditions, including wet and dry
Manatu	15m tall, 1m diameter trunk		64m2	
Nīkau	10m tall, 30cm diameter trunk		12m2	Tolerant to urban conditions. Slow growing, not suitable for screen planting
Pohutukawa Mistral	20m tall, often wider		225m2	
Puka	8m tall, often as wide		50m2	
Pukatea	35m tall, 2m diameter trunk	3 S	13m2	Requires shade and consistently damp soil to establish
Pūriri	20m tall, 1.5m+ diameter trunk		50m2	Requires shade to establish. Tolerant once established

Table 10.2: Tree species



Species (Natives)	Typical dimensions at maturity	Typical tree form at maturity	Canopy area at maturity	Notes for planting in the city centre
Rangiora	6m+ tall		25m2	Short lifespan, good for temporary projects
Tawa	30+m tall, 1.2 diameter trunk		20m2	
Tawapou	18m tall, 1m diameter trunk		100m2	Shade tolerant. Will grow in almost all soil conditions. Tolerant to wet and dry conditions
Tī kōuka	12m tall, 2m diameter trunk	**	25m2	Tolerates most conditions
Tītoki	10m tall, 50cm diameter trunk		100m2	Requires full sun to partial shade. Requires deep soil. Drought tolerant once established
Tōtara	30-40m tall, 2-4m diameter trunk		50m2	Shade tolerant. Will grow in almost all soil conditions. Tolerant to wet and dry conditions
Turepo	12m tall, 80cm trunk		100m2	Shade tolerant. Will grow in almost all soil conditions. Tolerant to wet and dry conditions
White Maire	20m tall, 1m diameter trunk		100m2	Tolerant to range of soil conditions

Table 10.2: Tree species (cont.)



